



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

2040 S. PACHECO  
SANTA FE, NEW MEXICO 87505  
(505) 827-7131

July 14, 1997

**Phillips Petroleum Company**  
**5525 Highway 64 - NBU 3004**  
**Farmington, New Mexico 87401**  
**Attention: Patrick H. Noah**

*Administrative Order DD-186(NSBHL)*

Dear Mr. Noah:

Reference is made to your application dated November 18, 1996 authorizing Phillips Petroleum Company's ("Phillips") recent recompletion of its San Juan "29-6" Unit Well No. 15 (API No. 30-039-07692) by side tracking off of the existing vertical wellbore and directionally drilling to a pre-determined unorthodox bottomhole gas well location in order to further develop the Blanco-Mesaverde Pool underlying the existing standard 319.13-acre gas spacing and proration unit ("GPU") comprising Lots 7 and 8, the S/2 NW/4, and the SW/4 (W/2 equivalent) of Section 2, Township 29 North, Range 6 West, NMPM, Rio Arriba County, New Mexico.

**The Division Director Finds That:**

- (1) By Order No. R-8170, as amended, the Division promulgated the "*General Rules For The Prorated Gas Pools of New Mexico/Special Rules and Regulations For The Blanco-Mesaverde Pool*", which includes provisions for 320-acre gas spacing and proration units ("GPU") and well location requirements whereby the initial well drilled on a GPU shall be located be no closer than 790 feet to the outer boundary of the quarter section on which the well is located and not closer than 130 feet to any quarter-quarter section line or subdivision inner boundary and the infill well drilled on an existing GPU shall be in the quarter section not containing a Mesaverde gas well and shall be located with respect to the restrictions as previously described;
- (2) The San Juan "29-6" Unit Well No. 15, located at a standard surface gas well location 1657 feet from the South line and 1650 feet from the West line (Unit K) of said Section 2, was originally drilled to and completed in the Blanco-Mesaverde Pool in 1955;
- (3) The infill well for the subject GPU is the San Juan "29-6" Unit Well No. 15-A (API No. 30-039-21120), located at a standard gas well location 1040 feet from the North line and 1465 feet from the West line (Lot 7/Unit C) of said Section 2;
- (4) This application has been duly filed under the applicable provisions of said special pool rules and **Rules 111.D and E** of the General Rules and Regulations of the New Mexico Oil Conservation Division ("Division"), revised by Division Order No. R-10388, issued by



Phillips. 1

Rec: 11-20-96  
Susp: 12-9-96  
Release: 7-14-96

July 14, 1997

**Phillips Petroleum Company  
5525 Highway 64 - NBU 3004  
Farmington, New Mexico 87401**

**Attention: Patrick H. Noah**

186  
**Administrative Order DD-\*\*\*\*\* (NSBHL)**

Dear Mr. Noah:

Reference is made to your application dated November 18, 1996 authorizing Phillips Petroleum Company's ("Phillips") recent recompletion of its San Juan "29-6" Unit Well No. 15 (API No. 30-039-07692) by side tracking off of the existing vertical wellbore and directionally drilling to a pre-determined unorthodox bottomhole gas well location in order to further develop the Blanco-Mesaverde Pool underlying the existing standard 319.13-acre gas spacing and proration unit ("GPU") comprising Lots 7 and 8, the S/2 NW/4, and the SW/4 (W/2 equivalent) of Section 2, Township 29 North, Range 6 West, NMPM, Rio Arriba County, New Mexico.

**The Division Director Finds That:**

- (1) By Order No. R-8170, as amended, the Division promulgated the "*General Rules For The Prorated Gas Pools of New Mexico/Special Rules and Regulations For The Blanco-Mesaverde Pool*", which includes provisions for 320-acre gas spacing and proration units ("GPU") and well location requirements whereby the initial well drilled on a GPU shall be located be no closer than 790 feet to the outer boundary of the quarter section on which the well is located and not closer than 130 feet to any quarter-quarter section line or subdivision inner boundary and the infill well drilled on an existing GPU shall be in the quarter section not containing a Mesaverde gas well and shall be located with respect to the restrictions as previously described;
- (2) The San Juan "29-6" Unit Well No. 15, located at a standard surface gas well location 1657 feet from the South line and 1650 feet from the West line (Unit K) of said Section 2, was originally drilled to and completed in the Blanco-Mesaverde Pool in 1955;
- (3) The infill well for the subject GPU is the San Juan "29-6" Unit Well No. 15-A (API No. 30-039-21120), located at a standard gas well location 1040 feet from the North line and 1465 feet from the West line (Lot 7/Unit C) of said Section

2;

- (4) This application has been duly filed under the applicable provisions of said special pool rules and **Rules 111.D and E** of the General Rules and Regulations of the New Mexico Oil Conservation Division ("Division"), revised by Division Order No. R-10388, issued by the New Mexico Oil Conservation Commission in Case 11,274 on June 13, 1995;
- (5) As indicated by the directional survey, dated November 5, 1996, on file with the Division, the actual bottomhole location for this well within the Blanco-Mesaverde is now 1571 feet from the South line and 1415 feet from the West line (Unit K) of said Section 2; and,
- (6) It appearing the applicant has satisfied all of the appropriate requirements prescribed in said Rule 111.D and E and **Rule 2(d)** of said special pool rules, the subject application should be approved.

**IT IS THEREFORE ORDERED THAT:**

(1) The recompletion by Phillips Petroleum Company of its San Juan "29-6" Unit Well No. 15 (API No. 30-039-07692), located at a standard surface gas well location 1657 feet from the South line and 1650 feet from the West line (Unit K) of Section 2, Township 29 North, Range 6 West, NMPM, Rio Arriba County, New Mexico, by side tracking off of the existing vertical wellbore and directionally drilling to its present unorthodox bottomhole gas well location within the Blanco-Mesaverde Pool 1571 feet from the South line and 1415 feet from the West line (Unit K) of said Section 2, is hereby approved.

(2) Blanco-Mesaverde gas production from both the existing San Juan "29-6" Unit Well No. 15-A (API No. 30-039-21120), located at a standard infill gas well location 1040 feet from the North line and 1465 feet from the West line (Lot 7/Unit C) of said Section 2, and said San Juan "29-6" Unit Well No. 15, as described above, shall be attributed to the existing 319.13-acre standard gas spacing and proration unit ("GPU") comprising Lots 7 and 8, the S/2 NW/4, and the SW/4 (W/2 equivalent) of said Section 2.

(3) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

**WILLIAM J. LEMAY**  
Director

**S E A L**

**WJL/MES/kv**

**cc: Oil Conservation Division - Aztec**  
**New Mexico State Land Office - Santa Fe**

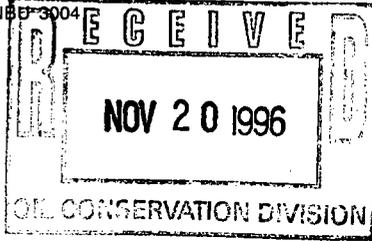
DD 12/9/96  
Phillips.1



**PHILLIPS PETROLEUM COMPANY**

FARMINGTON, NEW MEXICO 87401  
5525 HWY. 64 NE B-3004

November 18, 1996



State of New Mexico  
Oil Conservation Division  
204 South Pacheco  
Santa Fe, New Mexico 87505

ATTN: MR. WILLIAM J. LEMAY

**RE: EXCEPTION FOR UNORTHODOX LOCATION AND FIELD RULES AND  
ADMINISTRATIVE APPROVAL OF INTENTIONAL WELL DEVIATION  
SAN JUAN 29-6 UNIT #15 WELL  
SW/4 SECTION 2-T29N-R6W,  
RIO ARRIBA COUNTY, NEW MEXICO  
PHILLIPS' G.F.-5396, LCN 650112**

Gentlemen:

Phillips Petroleum Company ("Phillips"), as Operator of the San Juan 29-6 Unit, requests administrative approval of the unorthodox location of the above-described #15 Well due to intentional deviation of the well.

The San Juan 29-6 Unit #15 Well was originally drilled in 1955 and completed as a Blanco Mesaverde Pool well at a location of 1657' FSL and 1650' FWL.

Phillips has abandoned the existing Blanco Mesaverde interval in this well, sidetracked and completed in the Blanco Mesaverde at a bottom-hole location of 1571' FSL and 1415' FWL Section 10-T31N-R8W. Enclosed are three copies of a new well location and acreage dedication plat and sub-surface directional survey confirming the well's bottom-hole location.

A copy of this notice has been furnished to Burlington Resources, as operator of the offsetting Blanco Mesaverde Pool wells.

Please advise if additional information is required.

Very truly yours,

Patrick H. Noah  
Senior Land Specialist  
San Juan Basin  
(505) 599-3410

cc: J.L. Mathis (r) G.F. 5396  
Ernie Busch-OCD, Aztec  
Burlington Resources

District I  
 PO 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-102  
 Revised October 18, 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**

1 API Number 30-039-07692		2 Pool Code 72319		3 Pool Name Blanco Mesaverde	
4 Property Code 009257		5 Property Name San Juan 29-6 Unit			6 Well Number #15
7 OGRID No. 017654		8 Operator Name Phillips Petroleum Company			9 Elevation

10 Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
K	2	29N	6W		1657	South	1650	West	Rio Arriba

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
K	2	29N	6@		1571	South	1415	West	Rio Arriba

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
319.13	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 E-289-31  1650' 1415' Surface location Bottomhole location 1571' 1657'	17 OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief</i>  Signature Richard Allred Printed Name Production Superintendent Title 11-14-96 Date	
	18 SURVEYOR CERTIFICATION <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> Date of Survey Signature and Seal of Professional Surveyer:	
	Certificate Number	

NSL (ASH)



1700 Broadway Suite 1450 Denver Colorado 80290  
(303) 860-0509 Fax (303) 830-2546

# REPORT OF SUB-SURFACE DIRECTIONAL SURVEY

Phillips Petroleum  
COMPANY

San Juan Unit 29-6 #15  
WELL NAME

Rio Arriba County, New Mexico  
LOCATION

JOB NUMBER  
410-80535

TYPE OF SURVEY  
MSS

DATE  
November 3, 1996

SURVEYED BY  
Max Lund

OFFICE  
DENVER



1700 Broadway Suite 1450 Denver Colorado 80290  
(303) 860-0509 Fax (303) 830-2546

### SURVEY CERTIFICATION SHEET

Phillips Petroleum

410-80535

November 3, 1996

Company

Job #

Date

Sec-2-T29N-R6W

San Juan Unit 29-6 #15

Rio Arriba County, New Mexico

Lease

Well #

County and State

Surveyed from a depth of 3,400 feet to 3,774 feet MD  
Type of Survey MSS  
Directional Supervisor/Surveyor Max Lund

The data and calculations for this survey have been checked by me and conform to the standards and procedures set forth by Baker Hughes INTEQ. This report represents a true and correct Directional Survey of this well based on the original data obtained at the well site. Wellbore Coordinates are calculated using minimum curvature.

John Stoddard  
John Stoddard  
Operations Manager

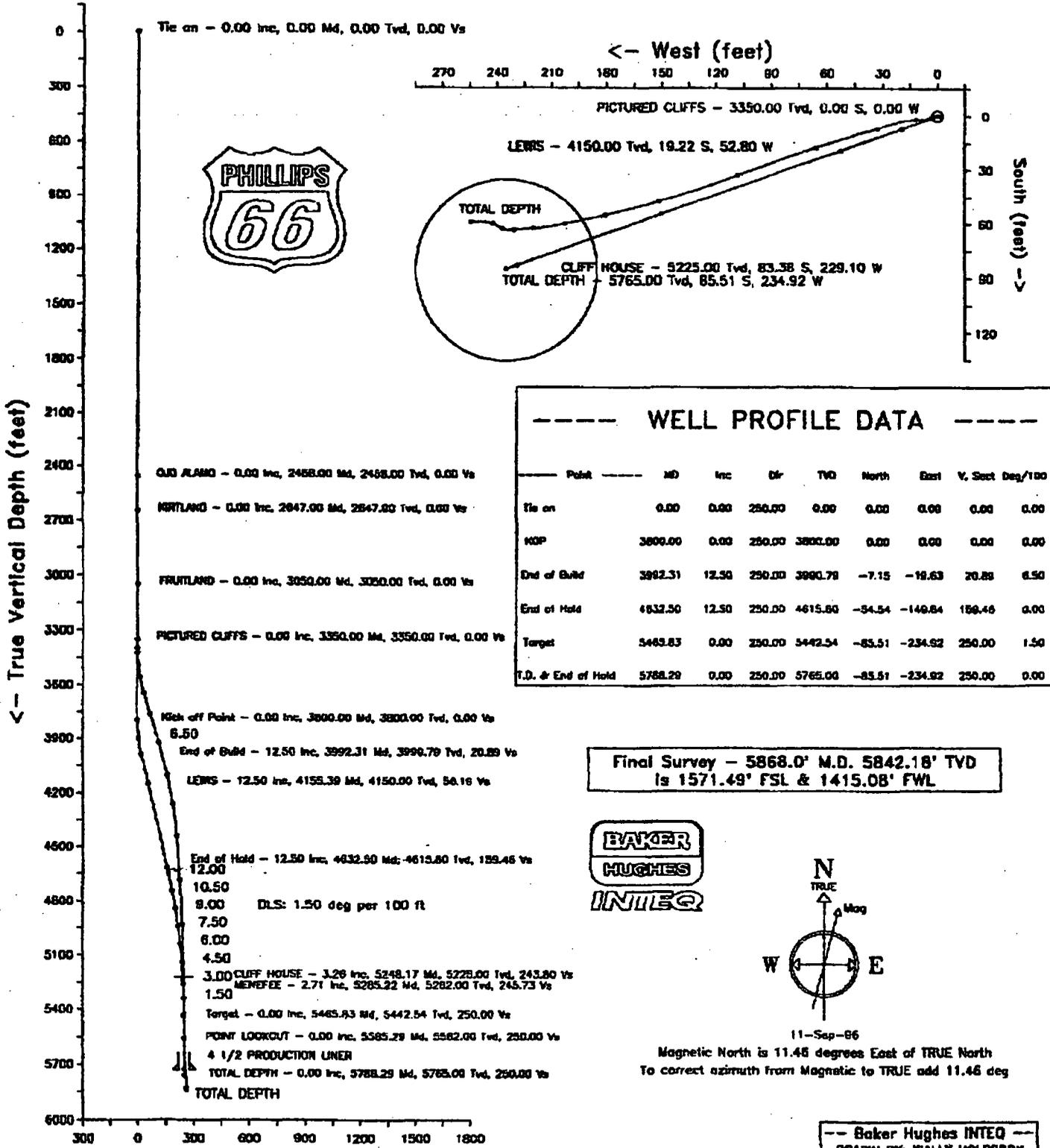
This document has been subscribed and affirmed, or sworn to before me in the county of Denver, state of Colorado, this 12th day of November, 1996.

Joyce A. Baker My commission expires August 4, 2000  
Notary

Certification Number: 438  
Certification Date: November 12, 1996

# PHILLIPS PETROLEUM

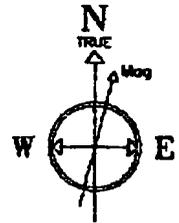
Structure : SEC.2-T29N-R6W Well : SAN JUAN UNIT 29-6 #15  
 Field : RIO ARRIBA COUNTY Location : NEW MEXICO



----- WELL PROFILE DATA -----

Point	MD	Inc	Dir	TVD	North	East	V. Sect	Deg/100
Tie on	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00
KOP	3800.00	0.00	250.00	3800.00	0.00	0.00	0.00	0.00
End of Build	3992.31	12.50	250.00	3990.79	-7.15	-19.63	20.88	6.50
End of Hold	4632.50	12.50	250.00	4615.80	-54.54	-149.84	189.46	0.00
Target	5465.83	0.00	250.00	5442.54	-85.51	-234.92	250.00	1.50
T.D. & End of Hold	5788.29	0.00	250.00	5765.00	-85.51	-234.92	250.00	0.00

Final Survey - 5868.0' M.D. 5842.18' TVD  
 Is 1571.49' FSL & 1415.08' FWL



11-Sep-86  
 Magnetic North is 11.46 degrees East of TRUE North  
 To correct azimuth from Magnetic to TRUE add 11.46 deg

--- Baker Hughes INTEQ ---  
 DRAWN BY: WALLY HOLBROOK  
 DATE: NOV. 13, 1986  
 TVD REFERENCED RKB  
 DENVER, COLORADO  
 PHONE: (303) 860-0509

Vertical Section (feet) -->

Azimuth 250.00 with reference 0.00 N, 0.00 E from SLO1 #2

PHILLIPS PETROLEUM  
SEC.2-T29N-R6W

SAN JUAN UNIT 29-6 #15  
SLOT #2  
RIO ARriba COUNTY  
NEW MEXICO

S U R V E Y L I S T I N G

by  
Baker Hughes INTEQ

Your ref : Single Shot Survey  
Our ref : svy3771  
License :

Date printed : 12-Nov-96  
Date created : 5-Nov-96  
Last revised : 12-Nov-96

Field is centred on n36 0 0.000,w107 0 0  
Structure is centred on n36 44 38.002,w107 25 12

Slot location is n36 44 54.386,w107 24 51.727  
Slot Grid coordinates are N 2091957.352, E 622746.247  
Slot local coordinates are 1657.00 N 1650.00 E

Projection type: mercator - New Mexico West (3003), Spheroid: Clarke - 1866

Reference North is True North

PHILLIPS PETROLEUM  
 SEC.2-T29N-R6W,SAN JUAN UNIT 29-6 #15  
 RIO ARRIBA COUNTY,NEW MEXICO

SURVEY LISTING Page 1  
 Your ref : Single Shot Survey  
 Last revised : 12-Nov-96

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/100ft	Vert Sect
0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00	0.00
3400.00	0.00	0.00	3400.00	0.00 N	0.00 E	0.00	0.00
3425.00	0.56	259.50	3425.00	0.02 S	0.12 W	2.24	0.12
3495.00	5.13	254.00	3494.89	0.95 S	3.47 W	6.53	3.58
3558.00	10.00	266.00	3557.33	2.11 S	11.64 W	8.09	11.65
3651.00	17.00	252.50	3647.73	6.76 S	32.69 W	8.21	33.03
3774.00	16.00	251.50	3765.66	17.55 S	65.91 W	0.85	67.94
3941.00	15.50	248.50	3926.39	33.03 S	108.50 W	0.57	113.26
4126.00	13.00	254.50	4105.70	47.66 S	151.56 W	1.57	158.72
4284.00	8.75	256.50	4260.82	55.21 S	180.39 W	2.70	188.39
4469.00	5.25	258.50	4444.42	60.19 S	202.37 W	1.90	210.75
4713.00	3.00	267.50	4687.77	62.69 S	219.69 W	0.96	227.88
4960.00	2.00	261.50	4934.53	63.61 S	230.41 W	0.42	238.27
5207.00	1.25	299.50	5181.44	62.92 S	237.02 W	0.52	244.24
5456.00	1.50	291.50	5430.37	60.39 S	242.41 W	0.13	248.45
5857.00	2.00	263.50	5831.19	59.26 S	254.25 W	0.24	259.18
5868.00	2.00	263.50	5842.18	59.30 S	254.63 W	0.00	259.56 TOTAL DEPTH

All data is in feet unless otherwise stated.  
 Coordinates from SLOT #2 and TVD from RKB (6438.00 Ft above mean sea level).  
 Bottom hole distance is 261.45 on azimuth 256.89 degrees from wellhead.  
 Vertical section is from wellhead on azimuth 250.00 degrees.  
 Calculation uses the minimum curvature method.  
 Presented by Baker Hughes INTEQ

PHILLIPS PETROLEUM  
 SEC. 2-T29N-R6W, SAN JUAN UNIT 29-6 #15  
 RIO ARRIBA COUNTY, NEW MEXICO

SURVEY LISTING Page 2  
 Your ref : Single Shot Survey  
 Last revised : 12-Nov-96

				Comments in wellpath
				=====
MD	TVD	Rectangular Coords.		Comment
-----				
5868.00	5842.18	59.30 S	254.63 W	TOTAL DEPTH

Targets associated with this wellpath

=====				
Target name	Geographic Location	T.V.D.	Rectangular Coordinates	Revised
-----				
CLIFF HOUSE 29-6 #15		5225.00	85.51S 234.92W	16-Aug-96

CMD :  
OG5SECT

ONGARD  
INQUIRE LAND BY SECTION

07/11/97 16:47:30  
OGOMES -EMDZ  
PAGE NO: 2

Sec : 02 Twp : 29N Rng : 06W Section Type : NORMAL

L 40.00 CS E00289 52 05/55 PHILLIPS PETROLEU U	K 40.00 CS E00289 50 05/55 PHILLIPS PETROLEU U A A	J 40.00 CS E00289 3 05/55 WISER OIL COMPANY U	I 40.00 CS E00289 3 05/55 WISER OIL COMPANY U
M 40.00 CS E00289 52 05/55 PHILLIPS PETROLEU U A	N 40.00 CS E00289 50 05/55 PHILLIPS PETROLEU U	O 40.00 CS E00289 3 05/55 WISER OIL COMPANY U	P 40.00 CS E00289 3 05/55 WISER OIL COMPANY U A A

PF01 HELP      PF02              PF03 EXIT      PF04 GoTo      PF05              PF06  
PF07 BKWD      PF08 FWD          PF09 PRINT      PF10 SDIV      PF11              PF12

Sec : 02 Twp : 29N Rng : 06W Section Type : NORMAL

8 39.55 CS E00289 52 05/55 PHILLIPS PETROLEU U	7 39.58 CS E00289 52 05/55 PHILLIPS PETROLEU U A	6 39.60 CS E00289 51 05/55 PHILLIPS PETROLEU U A A	5 39.63 CS E00289 51 05/55 PHILLIPS PETROLEU U
E 40.00 CS E00289 52 05/55 PHILLIPS PETROLEU U	F 40.00 CS E00289 52 05/55 PHILLIPS PETROLEU U	G 40.00 CS E00289 52 05/55 PHILLIPS PETROLEU U	H 40.00 CS E00289 51 05/55 PHILLIPS PETROLEU U

PF01 HELP    PF02            PF03 EXIT    PF04 GoTo    PF05            PF06  
PF07 BKWD   PF08 FWD      PF09 PRINT   PF10 SDIV     PF11            PF12

1 1 1  
79.58  
79.55  

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159.13  
  
16  

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319.13

**Mike Stogner**

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**From:** Ernie Busch  
**To:** Mike Stogner  
**Subject:** PHILLIPS PETROLEUM CO S J 29-6 UNIT #15 (NSBHL)  
**Date:** Friday, November 22, 1996 11:34AM  
**Priority:** High

SAN JUAN 29-6 UNIT #15  
1571' FSL; 1415' FWL  
K-02-29N-06W  
RECOMMEND: APPROVAL



**PHILLIPS PETROLEUM COMPANY**

FARMINGTON, NEW MEXICO 87401  
5525 HWY. 64 NBU 3004

November 18, 1996

State of New Mexico  
Oil Conservation Division  
204 South Pacheco  
Santa Fe, New Mexico 87505

ATTN: MR. WILLIAM J. LEMAY

**RE: EXCEPTION FOR UNORTHODOX LOCATION AND FIELD RULES AND  
ADMINISTRATIVE APPROVAL OF INTENTIONAL WELL DEVIATION  
SAN JUAN 29-6 UNIT #15 WELL  
SW/4 SECTION 2-T29N-R6W,  
RIO ARRIBA COUNTY, NEW MEXICO  
PHILLIPS' G.F.-5396, LCN 650112**

Gentlemen:

Phillips Petroleum Company ("Phillips"), as Operator of the San Juan 29-6 Unit, requests administrative approval of the unorthodox location of the above-described #15 Well due to intentional deviation of the well.

The San Juan 29-6 Unit #15 Well was originally drilled in 1955 and completed as a Blanco Mesaverde Pool well at a location of 1657' FSL and 1650' FWL.

Phillips has abandoned the existing Blanco Mesaverde interval in this well, sidetracked and completed in the Blanco Mesaverde at a bottom-hole location of 1571' FSL and 1415' FWL Section 10-T31N-R8W. Enclosed are three copies of a new well location and acreage dedication plat and sub-surface directional survey confirming the well's bottom-hole location.

A copy of this notice has been furnished to Burlington Resources, as operator of the offsetting Blanco Mesaverde Pool wells.

Please advise if additional information is required.

Very truly yours,

Patrick H. Noah  
Senior Land Specialist  
San Juan Basin  
(505) 599-3410

cc: J.L. Mathis (r) G.F. 5396  
Ernie Busch-OCD, Aztec  
Burlington Resources

District I  
PO 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-102  
Revised October 18, 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

1 API Number 30-039-07692		2 Pool Code 72319		3 Pool Name Blanco Mesaverde	
4 Property Code 009257		5 Property Name San Juan 29-6 Unit			6 Well Number #15
7 OGRID No. 017654		8 Operator Name Phillips Petroleum Company			9 Elevation

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
K	2	29N	6W		1657	South	1650	West	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
K	2	29N	6@		1571	South	1415	West	Rio Arriba

12 Dedicated Acres 319.13	13 Joint or Infill Y	14 Consolidation Code U	15 Order No.
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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>16</p> <p>E-289-31</p> <p>1650'</p> <p>1415'</p> <p>Surface location</p> <p>Bottomhole location</p> <p>1571'</p> <p>1657'</p>	<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>Richard Allred</i></p> <p>Signature Richard Allred</p> <p>Printed Name Production Superintendent</p> <p>Title 11-14-96</p> <p>Date</p>
	<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</p> <p>Signature and Seal of Professional Surveyer:</p> <p>Certificate Number</p>



1700 Broadway Suite 1450 Denver Colorado 80290  
(303) 860-0509 Fax (303) 830-2546

# REPORT OF SUB-SURFACE DIRECTIONAL SURVEY

Phillips Petroleum  
COMPANY

San Juan Unit 29-6 #15  
WELL NAME

Rio Arriba County, New Mexico  
LOCATION

JOB NUMBER  
410-80535

TYPE OF SURVEY  
MSS

DATE  
November 3, 1996

SURVEYED BY  
Max Lund

OFFICE  
DENVER



1700 Broadway Suite 1450 Denver Colorado 80290  
(303) 860-0509 Fax (303) 830-2546

### SURVEY CERTIFICATION SHEET

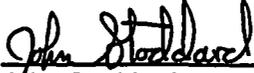
Phillips Petroleum  
Company  
Sec-2-T29N-R6W  
Lease

410-80535  
Job #  
San Juan Unit 29-6 #15  
Well #

November 3, 1996  
Date  
Rio Arriba County, New Mexico  
County and State

Surveyed from a depth of 3,400 feet to 3,774 feet MD  
Type of Survey MSS  
Directional Supervisor/Surveyor Max Lund

The data and calculations for this survey have been checked by me and conform to the standards and procedures set forth by Baker Hughes INTEQ. This report represents a true and correct Directional Survey of this well based on the original data obtained at the well site. Wellbore Coordinates are calculated using minimum curvature.

  
\_\_\_\_\_  
John Stoddard  
Operations Manager

This document has been subscribed and affirmed, or sworn to before me in the county of Denver, state of Colorado, this 12th day of November, 1996.

  
\_\_\_\_\_  
Notary My commission expires August 4, 2000

Certification Number: 438  
Certification Date: November 12, 1996



PHILLIPS PETROLEUM  
SEC.2-T29N-R6W

SAN JUAN UNIT 29-6 #15  
SLOT #2  
RIO ARRIBA COUNTY  
NEW MEXICO

S U R V E Y L I S T I N G

by  
Baker Hughes INTEQ

Your ref : Single Shot Survey  
Our ref : svy3771  
License :

Date printed : 12-Nov-96  
Date created : 5-Nov-96  
Last revised : 12-Nov-96

Field is centred on n36 0 0.000,w107 0 0  
Structure is centred on n36 44 38.002,w107 25 12

Slot location is n36 44 54.386,w107 24 51.727  
Slot Grid coordinates are N 2091957.352, E 622746.247  
Slot local coordinates are 1657.00 N 1650.00 E

Projection type: mercator - New Mexico West (3003), Spheroid: Clarke - 1866

Reference North is True North

PHILLIPS PETROLEUM  
 SEC.2-T29N-R6W,SAN JUAN UNIT 29-6 #15  
 RIO ARRIBA COUNTY,NEW MEXICO

SURVEY LISTING Page 1  
 Your ref : Single Shot Survey  
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Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/100ft	Vert Sect
0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00	0.00
3400.00	0.00	0.00	3400.00	0.00 N	0.00 E	0.00	0.00
3425.00	0.56	259.50	3425.00	0.02 S	0.12 W	2.24	0.12
3495.00	5.13	254.00	3494.89	0.95 S	3.47 W	6.53	3.58
3558.00	10.00	266.00	3557.33	2.11 S	11.64 W	8.09	11.65
3651.00	17.00	252.50	3647.73	6.76 S	32.69 W	8.21	33.03
3774.00	16.00	251.50	3765.66	17.55 S	65.91 W	0.85	67.94
3941.00	15.50	248.50	3926.39	33.03 S	108.50 W	0.57	113.26
4126.00	13.00	254.50	4105.70	47.66 S	151.56 W	1.57	158.72
4284.00	8.75	256.50	4260.82	55.21 S	180.39 W	2.70	188.39
4469.00	5.25	258.50	4444.42	60.19 S	202.37 W	1.90	210.75
4713.00	3.00	267.50	4687.77	62.69 S	219.69 W	0.96	227.88
4960.00	2.00	261.50	4934.53	63.61 S	230.41 W	0.42	238.27
5207.00	1.25	299.50	5181.44	62.92 S	237.02 W	0.52	244.24
5456.00	1.50	291.50	5430.37	60.39 S	242.41 W	0.13	248.45
5857.00	2.00	263.50	5831.19	59.26 S	254.25 W	0.24	259.18
5868.00	2.00	263.50	5842.18	59.30 S	254.63 W	0.00	259.56 TOTAL DEPTH

All data is in feet unless otherwise stated.  
 Coordinates from SLOT #2 and TVD from RKB (6438.00 Ft above mean sea level).  
 Bottom hole distance is 261.45 on azimuth 256.89 degrees from wellhead.  
 Vertical section is from wellhead on azimuth 250.00 degrees.  
 Calculation uses the minimum curvature method.  
 Presented by Baker Hughes INTEQ

PHILLIPS PETROLEUM  
 SEC.2-T29N-R6W,SAN JUAN UNIT 29-6 #15  
 RIO ARRIBA COUNTY,NEW MEXICO

SURVEY LISTING Page 2  
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				<u>Comments in wellpath</u>
MD	TVD	Rectangular Coords.		Comment
5868.00	5842.18	59.30 S	254.63 W	TOTAL DEPTH

<u>Targets associated with this wellpath</u>					
Target name	Geographic Location		T.V.D.	Rectangular Coordinates	Revised
CLIFF HOUSE 29-6 #15			5225.00	85.51S 234.92W	16-Aug-96