RCVD APR 13 '12
OIL CONS. DIV.

DIST. 3

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

"As Drilled Plat"

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 7 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-039-31033	71599/72319	BASIN DAKOTA / BLANCO MESAVERDE

4 Property Code	5 Property Name	6 Well Number
6999	FEDERAL	13N

7 OGRID No.	8 Operator Name	9 Elevation
217817	CONOCOPHILLIPS COMPANY	6688

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
M	21	26-N	6-W		711	SOUTH	777	WEST	RIO ARRIBA

11 Bottom Hole Location If Different From Surface

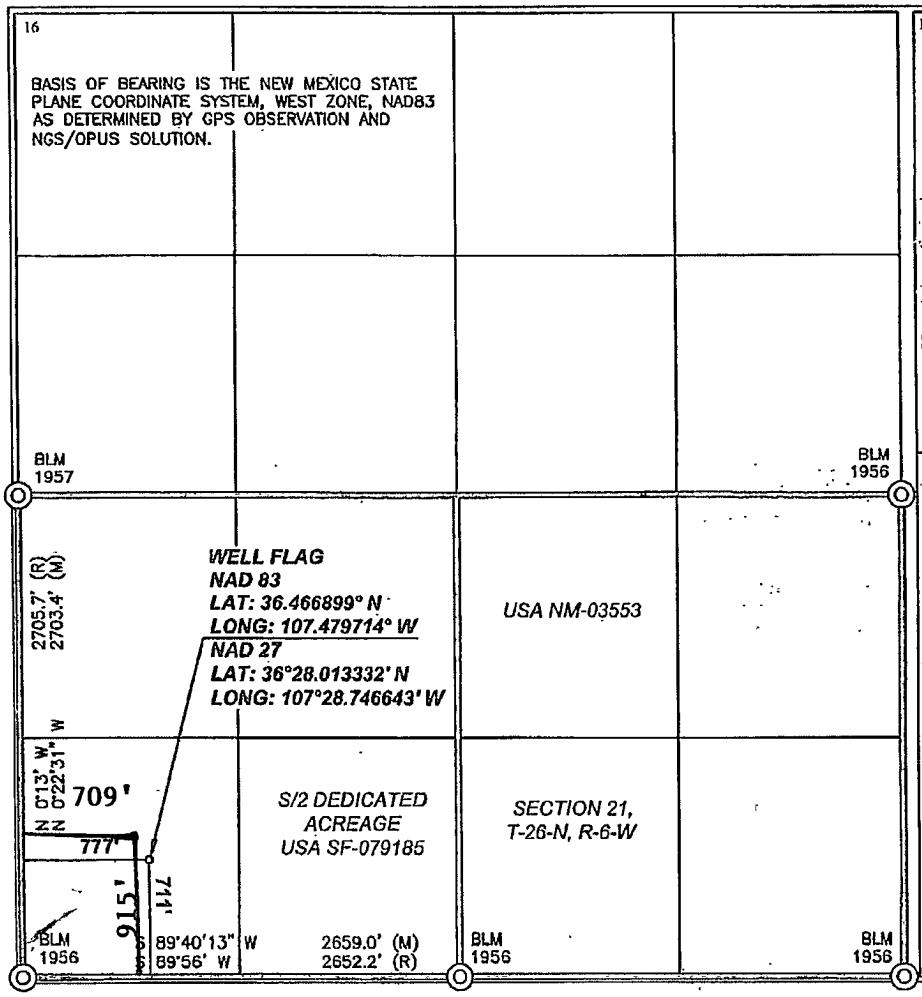
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	21	26N	6W		915	SOUTH	709	WEST	RIO ARRIBA

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
320.0 S/2			

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

BASIS OF BEARING IS THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, WEST ZONE, NAD83 AS DETERMINED BY GPS OBSERVATION AND NGS/OPUS SOLUTION.



17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature

DENISE JOURNEY
Printed Name

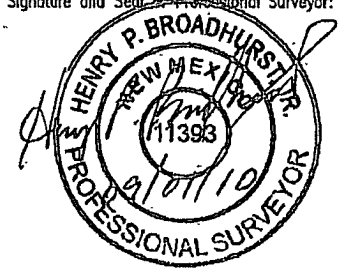
Regulatory Technician
Title and E-mail Address

4/12/12
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.

Date of Survey: 8/26/10
Signature and Seal of Professional Surveyor:



Certificate Number: NM 11393

COP Deviation Report

ConocoPhillips

FEDERAL #13N

Operator	Legal WellName	API / UWI	County	State/Province
CONOCOPHILLIPS COMPANY	FEDERAL #13N	3003931033	RIO ARRIBA	NEW MEXICO

Surface Legal Location	N/S Dist (ft)	N/S Ref	E/W Dist (ft)	E/W Ref
021-026N-006W-M	711.00	FSL	777.00	FWL

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	Method	Survey Company
3/5/2012	130.00	0.50		Inc-WL	MO TE DRILLING INC
3/5/2012	235.00	0.75		Inc-WL	MO TE DRILLING INC
3/11/2012	281.00	0.59	93.66	IncAzi-MWD	Scientific Drilling
3/11/2012	342.00	0.31	18 77	IncAzi-MWD	Scientific Drilling
3/11/2012	403.00	0.61	10.90	IncAzi-MWD	Scientific Drilling
3/11/2012	465.00	1.56	356.85	IncAzi-MWD	Scientific Drilling
3/11/2012	526.00	2.02	343.66	IncAzi-MWD	Scientific Drilling
3/11/2012	588.00	2.05	337.77	IncAzi-MWD	Scientific Drilling
3/11/2012	649.00	2.84	339.38	IncAzi-MWD	Scientific Drilling
3/11/2012	710.00	3.48	330.01	IncAzi-MWD	Scientific Drilling
3/11/2012	772.00	4.36	330.47	IncAzi-MWD	Scientific Drilling
3/11/2012	834.00	4.38	329.44	IncAzi-MWD	Scientific Drilling
3/11/2012	895.00	4.45	330.97	IncAzi-MWD	Scientific Drilling
3/11/2012	955.00	4.15	331.96	IncAzi-MWD	Scientific Drilling
3/11/2012	1,017.00	4.30	333.74	IncAzi-MWD	Scientific Drilling
3/12/2012	1,079.00	4.84	331.46	IncAzi-MWD	Scientific Drilling
3/12/2012	1,142.00	4.68	330.51	IncAzi-MWD	Scientific Drilling
3/12/2012	1,206.00	4.31	331.76	IncAzi-MWD	Scientific Drilling
3/12/2012	1,269.00	4.30	330.26	IncAzi-MWD	Scientific Drilling
3/12/2012	1,333.00	4.26	333.70	IncAzi-MWD	Scientific Drilling
3/12/2012	1,396.00	4.67	340.45	IncAzi-MWD	Scientific Drilling
3/12/2012	1,459.00	4.51	337.64	IncAzi-MWD	Scientific Drilling
3/12/2012	1,523.00	4.42	338.07	IncAzi-MWD	Scientific Drilling
3/12/2012	1,586.00	4.64	338.49	IncAzi-MWD	Scientific Drilling
3/12/2012	1,649.00	4.71	338.71	IncAzi-MWD	Scientific Drilling
3/12/2012	1,713.00	4.93	334.00	IncAzi-MWD	Scientific Drilling
3/12/2012	1,776.00	4.72	337.70	IncAzi-MWD	Scientific Drilling
3/12/2012	1,839.00	5.43	332.52	IncAzi-MWD	Scientific Drilling
3/12/2012	1,902.00	5.99	334.06	IncAzi-MWD	Scientific Drilling
3/12/2012	2,029.00	5.61	331.70	IncAzi-MWD	Scientific Drilling
3/12/2012	2,097.00	5.52	331.62	IncAzi-MWD	Scientific Drilling
3/12/2012	2,156.00	5.75	327.86	IncAzi-MWD	Scientific Drilling
3/12/2012	2,219.00	5.66	327.40	IncAzi-MWD	Scientific Drilling
3/12/2012	2,282.00	5.88	329.93	IncAzi-MWD	Scientific Drilling
3/12/2012	2,345.00	6.13	330.95	IncAzi-MWD	Scientific Drilling
3/12/2012	2,409.00	6.34	331.38	IncAzi-MWD	Scientific Drilling

I, the undersigned, certify that I acting in my capacity as _____ for ConocoPhillips Company, am authorized by said Company to make this report; and that said report was prepared under my supervision and directions, and that the facts stated herein are true to the best of my knowledge and belief.

_____

RCVD APR 13 '12

OIL CONS. DIV.

DIST. 3

Subcribed and sworn to me this _____

_____

Notary Public in and for San Juan County, New Mexico

My Commission expires _____

ConocoPhillips

COP Deviation Report

FEDERAL #13N

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	Method	Survey Company
3/12/2012	2,473.00	6.44	329.90	IncAzi-MWD	Scientific Drilling
3/12/2012	2,535.00	5.96	331.39	IncAzi-MWD	Scientific Drilling
3/12/2012	2,599.00	5.61	330.03	IncAzi-MWD	Scientific Drilling
3/12/2012	2,662.00	5.36	329.31	IncAzi-MWD	Scientific Drilling
3/12/2012	2,726.00	4.86	333 66	IncAzi-MWD	Scientific Drilling
3/12/2012	2,789.00	4.49	344.58	IncAzi-MWD	Scientific Drilling
3/12/2012	2,852.00	4.13	342.22	IncAzi-MWD	Scientific Drilling
3/12/2012	2,916.00	3.93	344.20	IncAzi-MWD	Scientific Drilling
3/12/2012	2,978.00	4.00	347.08	IncAzi-MWD	Scientific Drilling
3/13/2012	3,042.00	4.10	349.41	IncAzi-MWD	Scientific Drilling
3/13/2012	3,105.00	3.81	336.08	IncAzi-MWD	Scientific Drilling
3/13/2012	3,168.00	3.38	330.57	IncAzi-MWD	Scientific Drilling
3/13/2012	3,232.00	2.89	327.30	IncAzi-MWD	Scientific Drilling
3/13/2012	3,295.00	1.94	327.47	IncAzi-MWD	Scientific Drilling
3/13/2012	3,359.00	1.15	316.00	IncAzi-MWD	Scientific Drilling
3/13/2012	3,422.00	1.11	352.04	IncAzi-MWD	Scientific Drilling
3/13/2012	3,485.00	0.92	344.64	IncAzi-MWD	Scientific Drilling
3/13/2012	3,548.00	0.08	352.37	IncAzi-MWD	Scientific Drilling
3/13/2012	3,611.00	0.05	14.63	IncAzi-MWD	Scientific Drilling
3/13/2012	3,675.00	0.42	335.09	IncAzi-MWD	Scientific Drilling
3/13/2012	3,739.00	0.61	338.55	IncAzi-MWD	Scientific Drilling
3/13/2012	3,802.00	0.34	34.67	IncAzi-MWD	Scientific Drilling
3/13/2012	3,866.00	0.21	342.70	IncAzi-MWD	Scientific Drilling
3/13/2012	3,929.00	0.07	226 75	IncAzi-MWD	Scientific Drilling
3/13/2012	3,993.00	0.75	120.33	IncAzi-MWD	Scientific Drilling
3/13/2012	4,056.00	1.69	118.09	IncAzi-MWD	Scientific Drilling
3/13/2012	4,119.00	1.75	114.67	IncAzi-MWD	Scientific Drilling
3/13/2012	4,182.00	2.03	124.00	IncAzi-MWD	Scientific Drilling
3/13/2012	4,245.00	3.09	93.28	IncAzi-MWD	Scientific Drilling
3/13/2012	4,309.00	3.09	93.28	IncAzi-MWD	Scientific Drilling
3/13/2012	4,372.00	3.85	96.16	IncAzi-MWD	Scientific Drilling
3/13/2012	4,435.00	3.86	91.20	IncAzi-MWD	Scientific Drilling
3/13/2012	4,499.00	3.53	96.74	IncAzi-MWD	Scientific Drilling
3/14/2012	4,562.00	1.99	104.93	IncAzi-MWD	Scientific Drilling
3/14/2012	4,626.00	1.57	108.15	IncAzi-MWD	Scientific Drilling
3/14/2012	4,689.00	1.49	104.42	IncAzi-MWD	Scientific Drilling
3/14/2012	4,753.00	1.30	120.96	IncAzi-MWD	Scientific Drilling
3/14/2012	4,778.00	1.04	127.90	IncAzi-MWD	Scientific Drilling
3/14/2012	4,830.00	1.04	127.90	Projection	Scientific Drilling

I, the undersigned, certify that I acting in my capacity as _____ for ConocoPhillips Company, am authorized by said Company to make this report; and that said report was prepared under my supervision and directions, and that the facts stated herein are true to the best of my knowledge and belief.

_____

Subcribed and sworn to me this _____

RCVD APR 13 '12

OIL CONS. DIV.

DIST. 3

_____

Notary Public in and for San Juan County, New Mexico

My Commission expires _____

COP Deviation Report

ConocoPhillips

FEDERAL #13N

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	Method	Survey Company
3/16/2012	5,330.00	1.00		Inc-MWD	TELE-DRIFT
3/16/2012	5,813.00	0.50		Inc-MWD	TELE-DRIFT
3/17/2012	6,313.00	0.50		Inc-MWD	TOTCO
3/17/2012	6,813.00	0.50		Inc-MWD	TELE-DRIFT
3/17/2012	7,301.00	0.50		Inc-MWD	TELE-DRIFT
3/17/2012	7,396.00	0.50		Inc-MWD	TELE-DRIFT
3/17/2012	7,470.00	0.50		Inc-Drop	TOTCO

RCVD APR 13 '12

OIL CONS. DIV.
DIST. 3

I, the undersigned, certify that I acting in my capacity as Drilling Engineer for ConocoPhillips Company, am authorized by said Company to make this report; and that said report was prepared under my supervision and directions, and that the facts stated herein are true to the best of my knowledge and belief.

Subcribed and sworn to me this 4/12/12

Notary Public in and for San Juan County, New Mexico

My Commission expires 2/8/16

ConocoPhillips

ConocoPhillips

SJB (NM Central)
SEC 21-T26N-R6W
Federal #13N

OH

Design: OH

Standard Survey Report

21 March, 2012

This survey is correct to the best of my knowledge and is supported by actual field data.

Notarized this date 21 of March, 2012.

Crystal D Wollerman

Notary Signature
County of Natrona
State of Wyoming

NOTARY PUBLIC
CHRYSTAL D. WOLLERMAN
STATE OF WYOMING
COUNTY OF NATRONA
My Commission Expires Oct 20, 2013

Scientific Drilling

ConocoPhillips

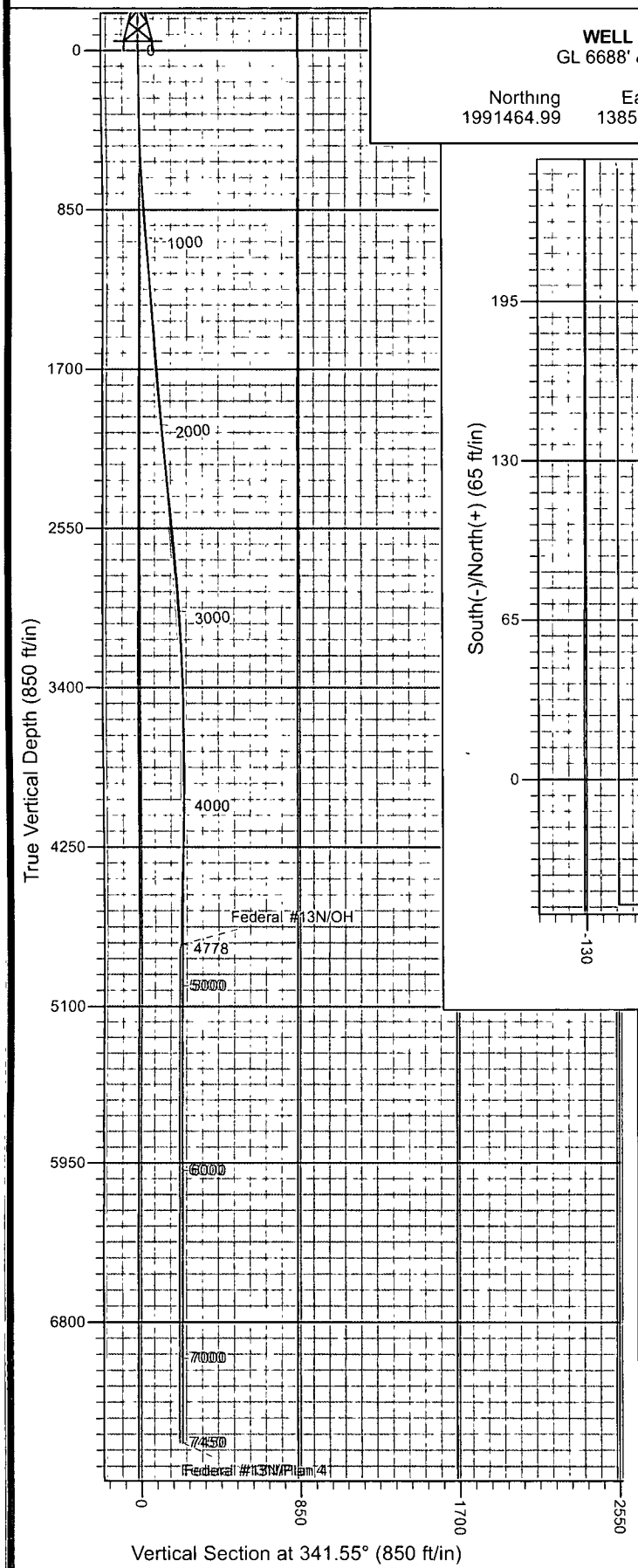
Project: SJB (NM Central)
Site: SEC 21-T26N-R6W
Well: Federal #13N
Wellbore: OH
Design: OH

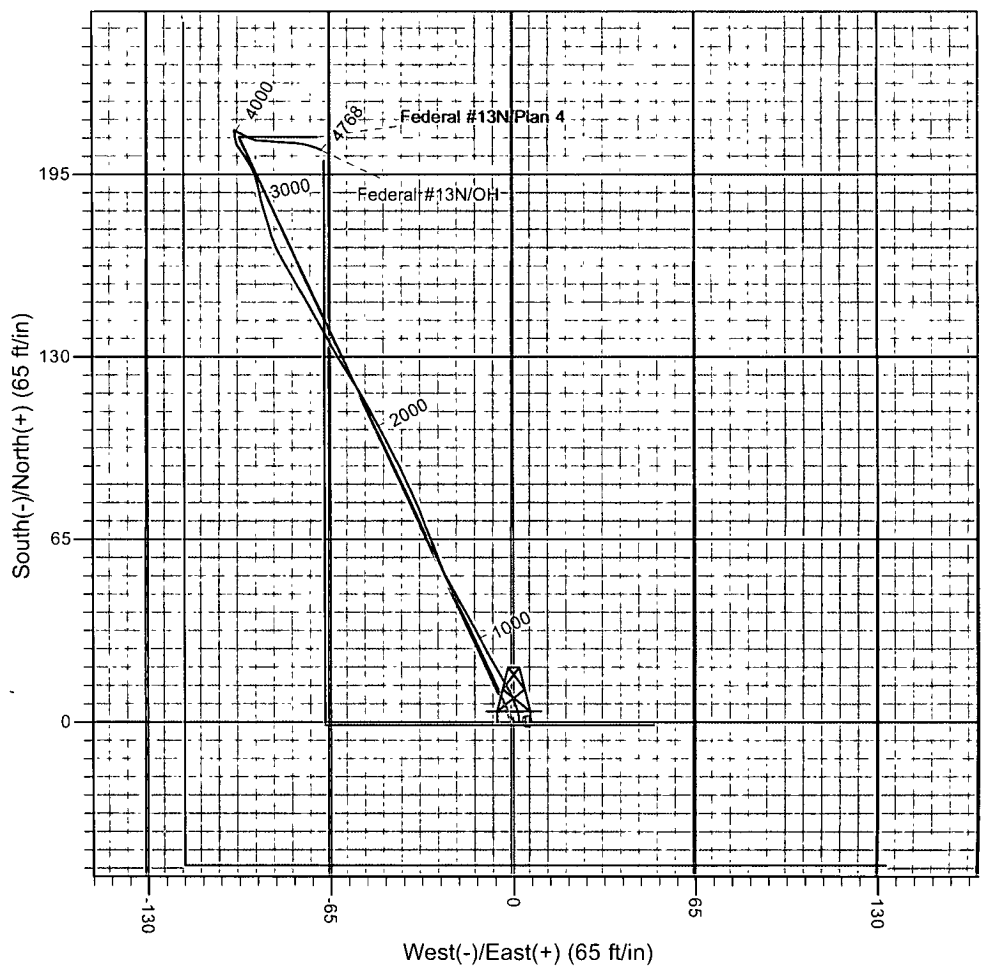
Scientific Drilling
Directional Drilling Operations

WELL DETAILS: Federal #13N
GL 6688' & KB 15' @ 6703.0ft (AWS 711)
Ground Level:6688.0

Northing	Easting	Latitude	Longitude
1991464.99	138588.67	36° 28' 0.800 N	107° 28' 44.799 W

Azimuths to True North
Magnetic North: 9.65°
Magnetic Field
Strength: 50510.1snT
Dip Angle: 63.26°
Date: 2012/03/07
Model: BGGM2011





REFERENCE INFORMATION
Co-ordinate (N/E) Reference: Well Federal #13N, True North
Vertical (TVD) Reference: GL 6688' & KB 15' @ 6703.0ft (AWS 711)
Section (VS) Reference: Slot - (0.0N, 0.0E)
Measured Depth Reference: GL 6688' & KB 15' @ 6703.0ft (AWS 711)
Calculation Method: Minimum Curvature

PROJECT DETAILS: SJB (NM Central)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico Central 3002
System Datum: Mean Sea Level

ConocoPhillips

Scientific Drilling
Survey Report

Scientific Drilling

Company:	ConocoPhillips	**Local Co-ordinate Reference:**	Well Federal #13N
Project:	SJB (NM Central)	**TVD Reference:**	GL 6688' & KB 15' @ 6703.0ft (AWS 711)
Site:	SEC 21-T26N-R6W	**MD Reference:**	GL 6688' & KB 15' @ 6703.0ft (AWS 711)
Well:	Federal #13N	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 2003.21 Single User Db

Project	SJB (NM Central), New Mexico, S-Type MV/DK Wells		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		Using Well Reference Point
Map Zone:	New Mexico Central 3002		Using geodetic scale factor

Site	SEC 21-T26N-R6W				
Site Position:		**Northing:**	1,991,516.03 ft	**Latitude:**	36° 28' 1.311 N
From:	Lat/Long	**Easting:**	138,639.24 ft	**Longitude:**	107° 28' 44 188 W
Position Uncertainty:	0.0 ft	**Slot Radius:**	"	**Grid Convergence:**	-0.73 °

Well	Federal #13N, 711' FSL 777' FWL				
Well Position	**+N/-S** 0 0 ft	**Northing:**	1,991,464.99 ft	**Latitude:**	36° 28' 0.800 N
	+E/-W 0.0 ft	**Easting:**	138,588.67 ft	**Longitude:**	107° 28' 44.799 W
Position Uncertainty	0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	6,688.0 ft

Wellbore	OH			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	BGGM2011	2012/03/07	9.65	63.26	50,510

Design	OH				
Audit Notes:					
Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0 0
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**	
	0 0	0.0	0.0	341.55	

Survey Program		**Date** 2012/03/21		
From (ft)	**To (ft)**	**Survey (Wellbore)**	**Tool Name**	**Description**
281 0	4,778 0	Survey #1 (OH)	MWD SDI	MWD - Standard ver 1.0.1

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0 0	0.00	0.00	0 0	0.0	0.0	0.0	0.00	0.00	0.00
281 0	0 59	93 66	281 0	-0.1	1.4	-0.5	0.21	0.21	0.00
First SDI MWD Survey									
342 0	0 31	18.77	342 0	0 0	1.8	-0 5	0.97	-0.46	-122.77
403 0	0 61	10 90	403 0	0.5	1.9	-0 1	0.50	0.49	-12.90
465 0	1.56	356 85	465 0	1.7	1.9	1.0	1 58	1.53	-22.66
526 0	2.02	343 66	526 0	3.5	1.6	2.9	1 01	0 75	-21.62
588 0	2.05	337 77	587 9	5.6	0.9	5.1	0.34	0.05	-9.50
649 0	2.84	339.38	648 9	8 0	-0.1	7.7	1.30	1.30	2.64
710 0	3.48	330 01	709 8	11 1	-1 5	11 0	1.34	1.05	-15.36
772 0	4.36	330.47	771 6	14.7	-3 6	15.1	1.42	1 42	0.74
834 0	4 38	329 44	833 4	18 8	-6 0	19 8	0.13	0.03	-1.66
895 0	4 45	330 97	894 3	22 9	-8 3	24.4	0.22	0.11	2.51

Company:	ConocoPhillips	**Local Co-ordinate Reference:**	Well Federal #13N
Project:	SJB (NM Central)	**TVD Reference:**	GL 6688' & KB 15' @ 6703.0ft (AWS 711)
Site:	SEC 21-T26N-R6W	**MD Reference:**	GL 6688' & KB 15' @ 6703.0ft (AWS 711)
Well:	Federal #13N	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 2003 21 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
955.0	4.15	331.96	954.1	26.9	-10.5	28.8	0.52	-0.50	1.65
1,017.0	4.30	333.74	1,015.9	30.9	-12.6	33.3	0.32	0.24	2.87
1,079.0	4.84	331.46	1,077.7	35.3	-14.8	38.2	0.92	0.87	-3.68
1,142.0	4.68	330.51	1,140.5	39.9	-17.4	43.3	0.28	-0.25	-1.51
1,206.0	4.31	331.76	1,204 3	44.3	-19 8	48.3	0.60	-0.58	1.95
1,269.0	4.30	330.26	1,267.1	48 4	-22.1	52.9	0.18	-0.02	-2.38
1,333.0	4.26	333.70	1,331.0	52.6	-24.3	57.6	0.41	-0.06	5.38
1,396.0	4.67	340.45	1,393 8	57 1	-26.2	62.5	1 06	0.65	10.71
1,459.0	4.51	337.64	1,456 6	61.8	-28.0	67.5	0.44	-0.25	-4.46
1,523.0	4.42	338.07	1,520.4	66.5	-29.9	72.5	0.15	-0.14	0.67
1,586.0	4.64	338.49	1,583.2	71.1	-31.8	77.5	0.35	0.35	0.67
1,649.0	4.71	338.71	1,646.0	75.9	-33.6	82.6	0.11	0.11	0.35
1,713.0	4.93	334.00	1,709.7	80.8	-35.8	88.0	0.71	0.34	-7.36
1,776.0	4.72	337.70	1,772.5	85.6	-38.0	93.2	0 60	-0 33	5.87
1,839.0	5.43	332.52	1,835 3	90 7	-40.3	98.8	1.34	1.13	-8 22
1,902.0	5 99	334.06	1,897.9	96 3	-43.1	105.0	0.92	0.89	2.44
1,965 0	5 75	331.95	1,960.6	102 0	-46.1	111.3	0.51	-0.38	-3.35
2,029 0	5.61	331.70	2,024.3	107.6	-49.0	117.6	0.22	-0.22	-0.39
2,092 0	5 52	331.62	2,087.0	113.0	-51.9	123 6	0 14	-0 14	-0.13
2,156.0	5.75	327.86	2,150.7	118.4	-55.1	129.7	0.68	0.36	-5.88
2,219 0	5.66	327.40	2,213 4	123.7	-58.5	135.8	0.16	-0.14	-0.73
2,282 0	5.88	329.93	2,276 1	129.1	-61 8	142.0	0.53	0 35	4.02
2,345 0	6.13	330.95	2,338 7	134.8	-65.0	148.5	0.43	0.40	1.62
2,409 0	6 34	331.38	2,402.3	140 9	-68.4	155.3	0.34	0 33	0.67
2,473 0	6 44	329.90	2,465.9	147 1	-71.9	162.3	0.30	0 16	-2 31
2,535 0	5.96	331 39	2,527 6	152.9	-75.1	168.9	0.82	-0 77	2 40
2,599.0	5 61	330 03	2,591.3	158 6	-78.3	175.2	0.59	-0.55	-2.13
2,662 0	5.36	329.31	2,654.0	163.8	-81.3	181 1	0.41	-0.40	-1.14
2,726 0	4.86	333.66	2,717.7	168.8	-84.1	186.7	0.99	-0.78	6.80
2,789.0	4.49	344 58	2,780.5	173 5	-85.9	191.8	1.53	-0.59	17.33
2,852.0	4.13	342.22	2,843.3	178 1	-87.2	196.5	0.64	-0.57	-3.75
2,916 0	3.93	344.20	2,907.2	182.4	-88.5	201.0	0.38	-0.31	3.09
2,978.0	4.00	347.08	2,969 0	186.5	-89.6	205 3	0.34	0.11	4.65
3,042.0	4 10	349.41	3,032.9	191.0	-90 5	209 8	0.30	0.16	3 64
3,105.0	3 81	336 08	3,095.7	195.1	-91 8	214 1	1.53	-0.46	-21.16
3,168.0	3 38	330.57	3,158.6	198.6	-93.6	218.0	0.87	-0.68	-8 75
3,232 0	2.89	327.30	3,222.5	201.6	-95 4	221.4	0.81	-0.77	-5.11
3,295 0	1 94	327.47	3,285.4	203 9	-96.8	224.0	1.51	-1.51	0.27
3,359.0	1 15	316.00	3,349.4	205.2	-97 8	225.6	1.32	-1.23	-17 92
3,422.0	1.11	352 04	3,412 4	206.3	-98.3	226.8	1.11	-0.06	57.21
3,485 0	0.92	344 64	3,475 4	207.4	-98 6	227 9	0.37	-0.30	-11 75
3,548.0	0.84	352 37	3,538 4	208.3	-98 8	228.9	0.23	-0.13	12.27
3,611 0	0.55	14 63	3,601.4	209 1	-98 7	229 6	0.62	-0.46	35.33
3,675 0	0.42	335.09	3,665.4	209.6	-98 8	230 1	0.55	-0 20	-61.78
3,739.0	0.61	338.55	3,729.4	210 1	-99 0	230.6	0.30	0.30	5.41
3,802 0	0 34	34.67	3,792.4	210.6	-99 0	231.1	0.80	-0.43	89.08
3,866.0	0.21	342.70	3,856.4	210.8	-98.9	231.3	0.42	-0.20	-81.20
3,929 0	0.07	226.75	3,919.4	210.9	-99.0	231.4	0.39	-0.22	-184.05
3,993 0	0.75	120 33	3,983 4	210.7	-98.7	231.1	1.21	1.06	-166.28
4,056.0	1.69	118.09	4,046.4	210.0	-97.5	230.1	1.49	1.49	-3.56
4,119.0	1.75	114.67	4,109.3	209.2	-95.8	228.8	0.19	0.10	-5 43
4,182.0	2.03	124.00	4,172.3	208.2	-94.0	227.2	0.66	0.44	14.81
4,245.0	2.64	99 40	4,235.2	207.3	-91.6	225 7	1.84	0.97	-39.05
4,309.0	3.09	93.28	4,299.2	207.0	-88.5	224.3	0.85	0.70	-9.56

Company:	ConocoPhillips	**Local Co-ordinate Reference:**	Well Federal #13N
Project:	SJB (NM Central)	**TVD Reference:**	GL 6688' & KB 15' @ 6703 0ft (AWS 711)
Site:	SEC 21-T26N-R6W	**MD Reference:**	GL 6688' & KB 15' @ 6703.0ft (AWS 711)
Well:	Federal #13N	**North Reference:**	True
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 2003 21 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,372.0	3 85	96.16	4,362 0	206.7	-84.7	222.8	1.24	1.21	4.57
4,435.0	3 86	91 20	4,424.9	206.4	-80.4	221.2	0.53	0.02	-7.87
4,499.0	3.53	96.74	4,488 8	206.1	-76.3	219.7	0.76	-0.52	8.66
4.562.0	1.99	104.93	4,551 7	205.6	-73 3	218 2	2.52	-2.44	13.00
4,626 0	1.57	108.15	4,615.7	205.0	-71 4	217.1	0.67	-0.66	5.03
4,689.0	1.49	104.42	4,678.6	204.6	-69.8	216 1	0 20	-0.13	-5.92
4,753 0	1.30	120.96	4,742.6	204.0	-68.4	215.1	0.69	-0.30	25 84
4,778.0	1.04	127.90	4,767.6	203.7	-68.0	214.7	1 18	-1.04	27 76
Last SDI MWD Survey									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Federal 13N ICP2	0 00	0 00	4,801.0	208 4	-69.3	1,991,674.27	138,522 03	36° 28' 2 861 N	107° 28' 45.647 W
- actual wellpath misses target center by 33 7ft at 4778 0ft MD (4767.6 TVD, 203 7 N, -68 0 E)									
- Point									
Federal 13N PCP2	0 00	0.00	7,440.0	208.5	-69 0	1,991,674.32	138,522 34	36° 28' 2.861 N	107° 28' 45 644 W
- actual wellpath misses target center by 2672 4ft at 4778.0ft MD (4767 6 TVD, 203.7 N, -68 0 E)									
- Point									
Federal 13N PCP	0 00	0 00	7,440.0	208 4	-97.2	1,991,674 67	138,494 13	36° 28' 2.861 N	107° 28' 45.989 W
- actual wellpath misses target center by 2672 5ft at 4778.0ft MD (4767.6 TVD, 203.7 N, -68.0 E)									
- Point									

Checked By: _____ Approved By: _____ Date: _____