

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

MAR 29 2011

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

Farmington Field Office
Bureau of Land Management

1a. Type of Work Recompleting into a Fee well, crossing Federal minerals, adding 2 laterals to existing wellbore	5. Lease Number NM 8F-04207 / FEE Unit Reporting Number NM NM-79372C-FC
1b. Type of Well GAS	6. If Indian, All. or Tribe ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS
2. Operator BURLINGTON RESOURCES Oil & Gas Company, LP	7. Unit Agreement Name Allison Unit (PA)
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name Allison Unit 9. Well Number 145H RCVD SEP 6 '11
4. Location of Well Surface: Unit M(SWSW), 880' FSL & 925' FWL BHL: Unit C(NENW), 100' FNL & 1800' FWL Surface: Latitude: 36.989992 N (NAD83) Longitude: 107.505966 W BHL: Latitude: 36.999819 N (NAD83) Longitude: 107.502980 W	10. Field, Pool, Wildcat Basin Fruitland Coal. 3 11. Sec., Twn, Rge, Mer. (NMPM) Sec. 7, T32N, R6W API # 30-045-29363
14. Distance in Miles from Nearest Town 16.4 miles from Ignacio, CO	12. County San Juan 13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 100'	
16. Acres in Lease FEE	17. Acres Assigned to Well FC 272.85 acres W/2
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease 72' from Allison Unit 24 - MV/DK	
19. Proposed Depth +/- 6780' (MD)	20. Rotary or Cable Tools Rotary
21. Elevations (DF, FT, GR, Etc.) 6519' GL	22. Approx. Date Work will Start
23. Proposed Casing and Cementing Program See Operations Plan attached	
24. Authorized by: <u>Dollie L. Busse</u> Dollie L. Busse (Staff Regulatory Tech)	<u>March 29, 2011</u> Date

Hold C104
for Directional Survey
and "As Drilled" plat

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

Archaeological Report attached

A gas recovery unit may or may not be used on this location.

Threatened and Endangered Species Report attached

NOTE: This format is issued in lieu of U.S. BLM Form 3160-3

Title 18 U.S.C. Section 1001, makes 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 presentations as to any matter within its jurisdiction.

Bond Numbers NMB-000015 and NMB-000089

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

Hold C104
for Directional Survey
and "As Drilled" plat

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

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

SEP 20 2011

NMOCD

DISTRICT I
1625 N. French Dr., Hobbs, N.M. 88240

DISTRICT II
1301 West Grand Avenue, Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 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 July 16, 2010

Submit one copy to Appropriate
District Office

MAR 29 2011

Farmington Field Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION

¹ API Number 30-045-29363	² Pool Code 71629	³ Pool Name BASIN FRUITLAND COAL
⁴ Property Code 6784	⁵ Property Name ALLISON UNIT	⁶ Well Number 145H
⁷ OGED No. 14538	⁸ Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY LP	⁹ Elevation 6519'

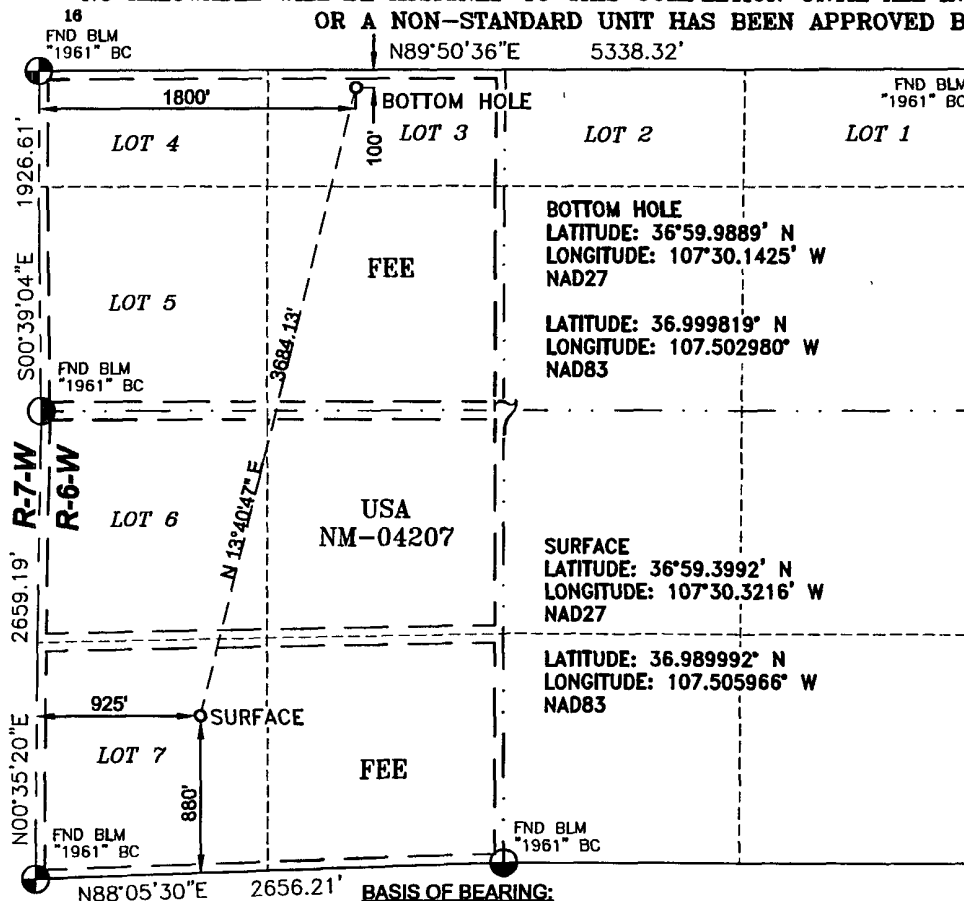
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	7	32-N	6-W		880	SOUTH	925	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
C	7	32-N	6-W		100	NORTH	1800	WEST	SAN JUAN
¹² Dedicated Acres FC 272.85 ACRES W/2			¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No. R-8993-A		

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



BASIS OF BEARING:

BETWEEN FOUND MONUMENTS AT THE SOUTHWEST CORNER AND THE WEST
QUARTER CORNER OF SECTION 7, TOWNSHIP 32 NORTH, RANGE 6 WEST,
N.M.P.M. SAN JUAN COUNTY, NEW MEXICO.

LINE BEARS: N 00°35'20\"

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
a working interest, or to a voluntary pooling agreement
or a compulsory pooling order heretofore entered by the
division.

Patsy Clugston 3/15/11
Signature Date

Patsy Clugston
Printed Name

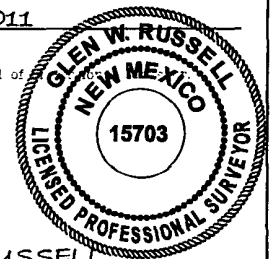
Patsy.L.Clugston@conocophillips.
E-mail Address com

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.

Jan. 11, 2011
Date of Survey

Signature and Seal of



GLEN W. RUSSELL
Certificate Number

15703

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

ALLISON UNIT 145H LATERAL

DEVELOPMENT

Lease:		AFE #: WAN.CDR.9320				AFE \$: 561,510.00	
Field Name: SAN JUAN		Rig: Aztec Rig 730		State: NM	County: SAN JUAN		API #:
Geologist:		Phone:		Geophysicist:		Phone:	
Geoscientist:		Phone:		Prod. Engineer:		Phone:	
Res. Engineer:		Phone:		Proj. Field Lead:		Phone:	
Primary Objective (Zones):							
Zone	Zone Name						
JCV	BASIN FRUITLAND COAL (GAS)						
Location: Surface Datum Code: NAD 27 Horizontal							
Latitude: 36.989987	Longitude: -107.505360	X:	Y:	Section: 07	Range: 006W		
Footage X: 925 FWL	Footage Y: 880 FSL	Elevation: 6519	(FT)	Township: 032N			
Tolerance:							
Location: Bottom Hole Datum Code: NAD 27 Horizontal							
Latitude: 36.999814	Longitude: -107.502374	X:	Y:	Section: 07	Range: 006W		
Footage X: 1800 FWL	Footage Y: 100 FNL	Elevation:	(FT)	Township: 032N			
Tolerance:							
Location Type: Restricted		Start Date (Est.): 1/1/2011		Completion Date:		Date In Operation:	
Formation Data: Assume KB = 6534 Units = FT							
Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	MD (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Total Depth	0	6534		☐			
Surface Casing	155	6379		☐			155' MD: Existing 9-5/8" surface casing set @ 155'
NACIMIENTO	813	5721		☐			813' MD
OJO ALAMO	2245	4289		☐			2245' MD
KIRTLAND	2354	4180		☐			2354' MD
FRUITLAND	2776	3758		☐	650		2776' MD
EXIT MAIN BORE UPPER LATERAL	2793	3741		☐			2793' MD: Casing Exit for Lateral B
EXIT MAIN BORE LOWER LATERAL	2826	3708		☐			2826' MD: Casing Exit for Lateral A
Intermediate Casing	2969	3565		☐			2969' MD: Existing vertical 7" Intermediate casing. Laterals will be drilled out of casing exits from 7" casing
PATH AT BH LATERAL B	2997	3537		☐			6586' MD: Lateral B TD, Will be lined with 4-1/2" 11.6 ppf L-80 BTC pre-perforated casing. No cement or stimulation
PATH 3500' F/SHL LATERAL B	3000	3534		☐			6403' MD: Path of Lateral B 3500' from surface location
PATH 3000' F/SHL LATERAL B	3009	3525		☐			5902' MD: Path of Lateral B 3000' from surface location
PATH 2500' F/SHL LATERAL B	3013	3521		☐			5403' MD: Path of Lateral B 2500' from surface location
PATH 2000' F/SHL LATERAL B	3017	3517		☐			4903' MD: Path of Lateral B 2000' from surface location
PATH 1500' F/SHL LATERAL B	3020	3514		☐			4403' MD: Path of Lateral B 1500' from surface location
PATH 1000' F/SHL LATERAL B	3022	3512		☐			3903' MD: Path of Lateral B 1000' from surface location
PATH 500' F/SHL LATERAL B	3024	3510		☐			3403' MD: Path of Lateral B 500' from surface location
PATH AT BH LATERAL A	3093	3441		☐			6673' MD: Lateral A TD, Will be lined with 4-1/2" 11.6 ppf L-80 BTC pre-perforated casing. No cement or stimulation
PATH 3500' F/SHL LATERAL A	3097	3437		☐			6490' MD: Path of Lateral A 3500' from surface location

PROJECT PROPOSAL - New Drill / Sidetrack

ALLISON UNIT 145H LATERAL

DEVELOPMENT

PATH 3000' F/SHL LATERAL A	3107	3427	☐	6990' MD: Path of Lateral A 3000' from surface location
PATH 2500' F/SHL LATERAL A	3110	3424	☐	5490' MD: Path of Lateral A 2500' from surface location
PATH 500' F/SHL LATERAL A	3112	3422	☐	3490' MD: Path of Lateral A 500' from surface location
PATH 1500' F/SHL LATERAL A	3113	3421	☐	4490' MD: Path of Lateral A 1500' from surface location
PATH 1000' F/SHL LATERAL A	3113	3421	☐	3990' MD: Path of Lateral A 1000' from surface location
PATH 2000' F/SHL LATERAL A	3114	3420	☐	4990' MD: Path of Lateral A 2000' from surface location

Reference Wells:

Reference Type	Well Name	Comments
Production	Allison Unit 13M	32N 7W 12 NE SW SE
Production	Allison Unit 61M	32N 6W 7 NE SW NW
Production	Allison Unit 24	32N 6W 7 SW SW

Logging Program:

Intermediate Logs: ☐ Log only if show ☐ GR/ILD ☐ Triple Combo

TD Logs: ☐ Triple Combo ☐ Dipmeter ☐ RFT ☐ Sonic ☐ VSP ☐ TDT ☒ Other

MWD - Gamma Ray from start of open hole section to TD
Mudlog from kick off point to TD

Additional Information:

Log Type	Stage	From (Ft)	To (Ft)	Tool Type/Name	Remarks
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Eight Point Technical Plan

1. Geologic Tops -

Formation	Top- TVD	Substance
Nacimiento	813'	Possible water flows
Ojo Alamo	2245'	Water
Kirtland	2354'	
Fruitland	2776'	Gas/Water
Casing Exit Lat B	2793'	Gas/Water
Casing Exit Lat A	2826'	Gas/Water
TD (Lateral B)	2997'(6586' MD)	Gas/Water
TD (Lateral A)	3039'(6673' MD)	Gas/Water

2. Pressure control equipment – See attached diagram

- Estimated vertical depth = 2997 ft TVD.
- Bottom Hole Pressure = 650 psi (estimated).
- Minimum BOP Working Pressure = 650 psi - .1 psi/ft * 2997 ft = 350 psi
- Assumes worse case of estimated BHP with evacuated annulus
- BOPE of 2,000 psi (2M) working pressure is required, but well will be drilled with 3M stack.
- See attached BOP diagram

3. Complete information on the drilling equipment, casing and cementing program

Proposed Casing And Cementing Program				
Size of Hole	Size of Casing	Weight/Foot	Proposed Setting Depth (MD)	Quantity of Cement
Lat A 6-1/4"	4-1/2" liner	11.6#, L-80, BTC, New	2826-6673'	Pre-perforated liners left un-cemented
Lat B 6-1/4"	4-1/2" liner	11.6#, L-80, BTC, New	2793-6586'	Pre-perforated liners left un-cemented

4. Information on Mud System -

Mud Program				
Interval (MD)	Mud Type	Weight (ppg)	Water/Fluid Loss	Additives
All Drilling out of casing exit	LSND	8.4-8.7	Some control	Polymer, and LCM as required

5. Testing, Logging, Coring -

- Logs: Cased hole GR-CCL-CBL will be run in existing 7" casing
- MWD LWD(GR) outside casing exit to both laterals TD
- Mudlog from KOP to TD, taking samples every 10'
- Coring: No coring is planned
- DST: No planned drill stem test

6. Expected BHP, abnormal temperatures and pressures, and hazards -

- No overpressured intervals expected
- No H2S anticipated
- Possible lost circulation in Fruitland to be handled if it occurs with standard LCM products

7. Other information -

This is a dual lateral Horizontal re-entry out of existing 7" casing. Both laterals will be drilled out of separate casing exits in different target coal seams in the same direction. Both liners will be tied back to the 7" casing or dropped off right outside the window.



Project: SJB (NM West)
 Site: SEC 7-T32N-R6W
 Well: Allison Unit #145 Lateral
 Wellbore: Lateral A
 Design: Plan #1



REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Allison Unit #145 Lateral, True North
 Vertical (TVD) Reference: DFE @ 6534 0ft (AWS 730)
 Section (VS) Reference: Slot - (0 0N, 0 0E)
 Measured Depth Reference: DFE @ 6534 0ft (AWS 730)
 Calculation Method: Minimum Curvature

PROJECT DETAILS

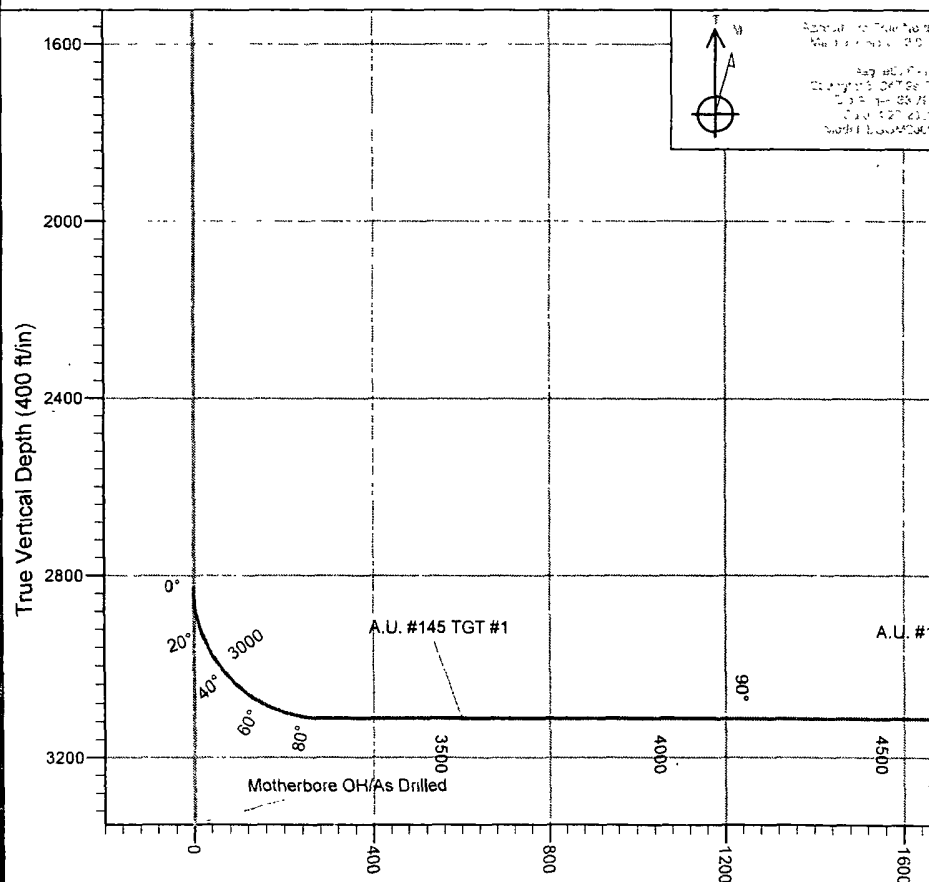
Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico West 3003
 System Datum: Mean Sea Level

WELL DETAILS: Allison Unit #145 Lateral

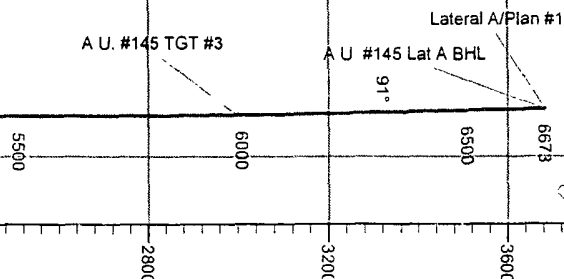
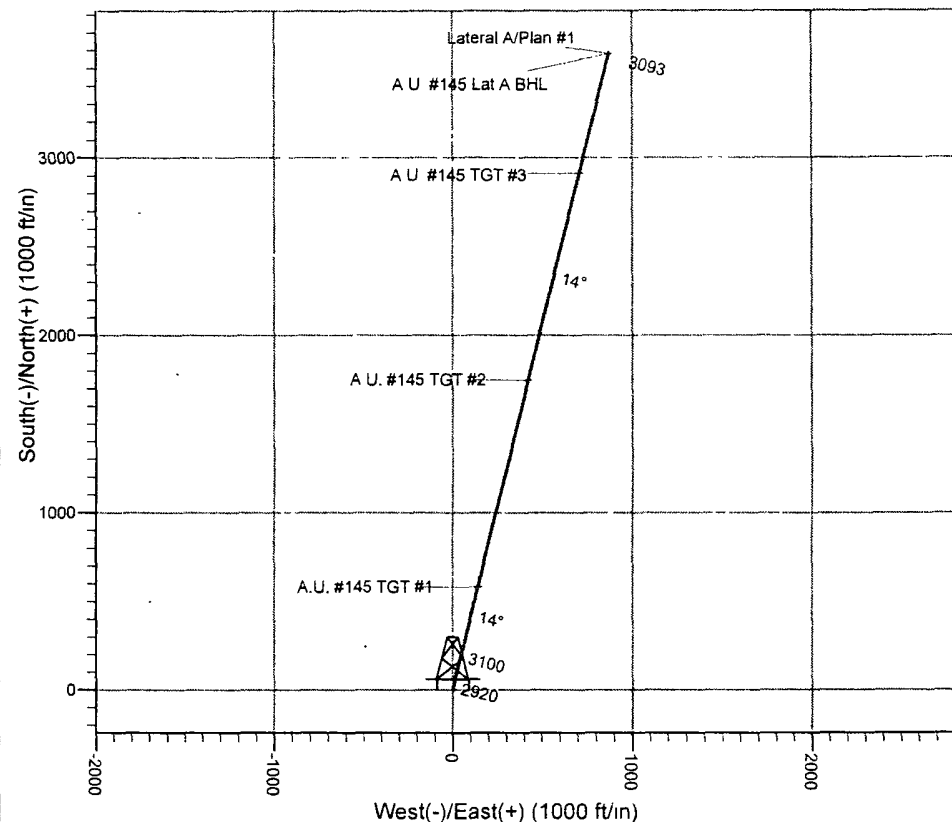
Ground Level: 6519.0
 +N/-S: 0.0 +E/-W: 0.0 Northing: 2179789.17 Easting: 595785.91 Latitude: 36° 59' 23.952 N Longitude: 107° 30' 19.296 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	2826.0	0.00	0.00	2826.0	0.0	0.0	0.00	0.00	0.0	
2	3276.0	90.00	13.69	3112.5	278.3	67.8	20.00	13.69	286.5	
3	3282.9	90.00	13.55	3112.5	285.0	69.4	2.00	-91.59	293.3	
4	3588.8	90.00	13.55	3112.5	582.4	141.1	0.00	0.00	599.2	A U #145 TGT #1
5	3596.4	89.93	13.69	3112.5	589.8	142.9	2.00	116.43	606.9	
6	4789.0	89.93	13.69	3114.0	1748.5	425.1	0.00	0.00	1799.5	A U #145 TGT #2
7	4809.5	90.34	13.69	3114.0	1768.4	430.0	2.00	-0.06	1819.9	
8	5989.2	90.34	13.69	3107.0	2914.6	709.2	0.00	0.00	2999.7	A U #145 TGT #3
9	6032.5	91.20	13.76	3106.4	2956.7	719.5	2.00	4.87	3043.0	
10	6672.8	91.20	13.76	3093.0	3578.4	871.7	0.00	0.00	3683.1	A U #145 Lat A BHL



Vertical Section at 13.69° (400 ft/in)





SDI
Planning Report

ConocoPhillips

Database: EDM 2003.21 Single User Db
Company: ConocoPhillips
Project: SJB (NM West)
Site: SEC 7-T32N-R6W
Well: Allison Unit #145 Lateral
Wellbore: Lateral A
Design: Plan #1

Local Co-ordinate Reference: Well Allison Unit #145 Lateral
TVD Reference: DFE @ 6534 0ft (AWS 730)
MD Reference: DFE @ 6534 0ft (AWS 730)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project: SJB (NM West), 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 West 3003 Using geodetic scale factor

Site SEC 7-T32N-R6W

Site Position: Northing: 2,179,789.17 ft Latitude: 36° 59' 23.952 N
From: Lat/Long Easting: 595,785.91 ft Longitude: 107° 30' 19.296 W
Position Uncertainty: 0 0 ft Slot Radius: 6-1/8" Grid Convergence: 0 20°

Well Allison Unit #145 Lateral, Dual Stacked CBM Horizontal

Well Position +N/-S 0.0 ft Northing: 2,179,789.17 ft Latitude: 36° 59' 23.952 N
+E/-W 0.0 ft Easting: 595,785.91 ft Longitude: 107° 30' 19.296 W
Position Uncertainty 3.5 ft Wellhead Elevation: ft Ground Level: 6,519 0ft

Wellbore Lateral A

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	4/27/2010	9.94	63.79	51,048

Design Plan #1

Audit Notes:

Version: Phase: PLAN Tie On Depth: 2,826.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0 0	0 0	0.0	13.69

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
2,826.0	0.00	0.00	2,826.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,276.0	90.00	13.69	3,112.5	278.3	67.8	20.00	20.00	0.00	13.69	
3,282.9	90.00	13.55	3,112.5	285.0	69.4	2.00	-0.06	-2.00	-91.59	
3,588.8	90.00	13.55	3,112.5	582.4	141.1	0.00	0.00	0.00	0.00	A.U. #145 TGT #1
3,596.4	89.93	13.69	3,112.5	589.8	142.9	2.00	-0.89	1.79	116.43	
4,789.0	89.93	13.69	3,114.0	1,748.5	425.1	0.00	0.00	0.00	0.00	A.U. #145 TGT #2
4,809.5	90.34	13.69	3,114.0	1,768.4	430.0	2.00	2.00	0.00	-0.06	
5,989.2	90.34	13.69	3,107.0	2,914.6	709.2	0.00	0.00	0.00	0.00	A.U. #145 TGT #3
6,032.5	91.20	13.76	3,106.4	2,956.7	719.5	2.00	1.99	0.17	4.87	
6,672.8	91.20	13.76	3,093.0	3,578.4	871.7	0.00	0.00	0.00	0.00	A.U. #145 Lat A BH



SDI
Planning Report

ConocoPhillips

Database: EDM 2003 21 Single User Db
Company: ConocoPhillips
Project: SJB (NM West)
Site: SEC 7-T32N-R6W
Well: Allison Unit #145 Lateral
Wellbore: Lateral A
Design: Plan #1

Local Co-ordinate Reference: Well Allison Unit #145 Lateral
TVD Reference: DFE @ 6534.0ft (AWS 730)
MD Reference: DFE @ 6534 0ft (AWS 730)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned 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
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,826.0	0.00	0.00	2,826.0	0.0	0.0	0.0	0.00	0.00	0.00
2,850.0	4.80	13.69	2,850.0	1.0	0.2	1.0	20.00	20.00	0.00
2,875.0	9.80	13.69	2,874.8	4.1	1.0	4.2	20.00	20.00	0.00
2,900.0	14.80	13.69	2,899.2	9.2	2.2	9.5	20.00	20.00	0.00
2,925.0	19.80	13.69	2,923.0	16.5	4.0	16.9	20.00	20.00	0.00
2,950.0	24.80	13.69	2,946.2	25.7	6.3	26.4	20.00	20.00	0.00
2,975.0	29.80	13.69	2,968.4	36.8	9.0	37.9	20.00	20.00	0.00
3,000.0	34.80	13.69	2,989.5	49.8	12.1	51.2	20.00	20.00	0.00
3,025.0	39.80	13.69	3,009.4	64.5	15.7	66.4	20.00	20.00	0.00
3,050.0	44.80	13.69	3,027.9	80.8	19.7	83.2	20.00	20.00	0.00
3,075.0	49.80	13.69	3,044.8	98.7	24.0	101.6	20.00	20.00	0.00
3,100.0	54.80	13.69	3,060.1	117.9	28.7	121.3	20.00	20.00	0.00
3,125.0	59.80	13.69	3,073.6	138.3	33.7	142.4	20.00	20.00	0.00
3,150.0	64.80	13.69	3,085.2	159.8	38.9	164.5	20.00	20.00	0.00
3,175.0	69.80	13.69	3,094.9	182.2	44.4	187.6	20.00	20.00	0.00
3,200.0	74.80	13.69	3,102.5	205.4	50.0	211.4	20.00	20.00	0.00
3,225.0	79.80	13.69	3,108.0	229.1	55.8	235.7	20.00	20.00	0.00
3,250.0	84.80	13.69	3,111.3	253.1	61.7	260.5	20.00	20.00	0.00
3,276.0	90.00	13.69	3,112.5	278.3	67.8	286.5	20.00	20.00	0.00
3,282.9	90.00	13.55	3,112.5	285.0	69.4	293.3	2.00	-0.06	-2.00
3,300.0	90.00	13.55	3,112.5	301.7	73.4	310.5	0.00	0.00	0.00
3,400.0	90.00	13.55	3,112.5	398.9	96.9	410.5	0.00	0.00	0.00
3,500.0	90.00	13.55	3,112.5	496.1	120.3	510.5	0.00	0.00	0.00
3,588.8	90.00	13.55	3,112.5	582.4	141.1	599.2	0.00	0.00	0.00
A.U. #145 TGT #1									
3,596.4	89.93	13.69	3,112.5	589.8	142.9	606.9	2.00	-0.89	1.79
3,600.0	89.93	13.69	3,112.5	593.3	143.8	610.5	0.00	0.00	0.00
3,700.0	89.93	13.69	3,112.6	690.5	167.4	710.5	0.00	0.00	0.00
3,800.0	89.93	13.69	3,112.8	787.6	191.1	810.5	0.00	0.00	0.00
3,900.0	89.93	13.69	3,112.9	884.8	214.8	910.5	0.00	0.00	0.00
4,000.0	89.93	13.69	3,113.0	981.9	238.4	1,010.5	0.00	0.00	0.00
4,100.0	89.93	13.69	3,113.1	1,079.1	262.1	1,110.5	0.00	0.00	0.00
4,200.0	89.93	13.69	3,113.3	1,176.3	285.8	1,210.5	0.00	0.00	0.00
4,300.0	89.93	13.69	3,113.4	1,273.4	309.4	1,310.5	0.00	0.00	0.00
4,400.0	89.93	13.69	3,113.5	1,370.6	333.1	1,410.5	0.00	0.00	0.00
4,500.0	89.93	13.69	3,113.6	1,467.7	356.8	1,510.5	0.00	0.00	0.00
4,600.0	89.93	13.69	3,113.8	1,564.9	380.4	1,610.5	0.00	0.00	0.00
4,700.0	89.93	13.69	3,113.9	1,662.1	404.1	1,710.5	0.00	0.00	0.00
4,789.0	89.93	13.69	3,114.0	1,748.5	425.1	1,799.5	0.00	0.00	0.00
A.U. #145 TGT #2									
4,809.5	90.34	13.69	3,114.0	1,768.4	430.0	1,819.9	2.00	2.00	0.00
4,900.0	90.34	13.69	3,113.4	1,856.4	451.4	1,910.5	0.00	0.00	0.00
5,000.0	90.34	13.69	3,112.8	1,953.5	475.1	2,010.5	0.00	0.00	0.00
5,100.0	90.34	13.69	3,112.2	2,050.7	498.7	2,110.5	0.00	0.00	0.00
5,200.0	90.34	13.69	3,111.7	2,147.9	522.4	2,210.5	0.00	0.00	0.00
5,300.0	90.34	13.69	3,111.1	2,245.0	546.1	2,310.5	0.00	0.00	0.00
5,400.0	90.34	13.69	3,110.5	2,342.2	569.7	2,410.5	0.00	0.00	0.00
5,500.0	90.34	13.69	3,109.9	2,439.3	593.4	2,510.5	0.00	0.00	0.00

Database: EDM 2003.21 Single User Db
Company: ConocoPhillips
Project: SJB (NM West)
Site: SEC 7-T32N-R6W
Well: Allison Unit #145 Lateral
Wellbore: Lateral A
Design: Plan #1

Local Co-ordinate Reference: Well Allison Unit #145 Lateral
TVD Reference: DFE @ 6534.0ft (AWS 730)
MD Reference: DFE @ 6534.0ft (AWS 730)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned 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)
5,600.0	90.34	13.69	3,109.3	2,536.5	617.1	2,610.5	0.00	0.00	0.00
5,700.0	90.34	13.69	3,108.7	2,633.6	640.7	2,710.5	0.00	0.00	0.00
5,800.0	90.34	13.69	3,108.1	2,730.8	664.4	2,810.5	0.00	0.00	0.00
5,900.0	90.34	13.69	3,107.5	2,828.0	688.1	2,910.5	0.00	0.00	0.00
5,989.2	90.34	13.69	3,107.0	2,914.6	709.2	2,999.7	0.00	0.00	0.00
A.U. #145 TGT #3									
6,000.0	90.55	13.71	3,106.9	2,925.1	711.7	3,010.5	2.00	1.99	0.17
6,032.5	91.20	13.76	3,106.4	2,956.7	719.5	3,043.0	2.00	1.99	0.17
6,100.0	91.20	13.76	3,105.0	3,022.2	735.5	3,110.4	0.00	0.00	0.00
6,200.0	91.20	13.76	3,102.9	3,119.3	759.3	3,210.4	0.00	0.00	0.00
6,300.0	91.20	13.76	3,100.8	3,216.4	783.1	3,310.4	0.00	0.00	0.00
6,400.0	91.20	13.76	3,098.7	3,313.5	806.9	3,410.4	0.00	0.00	0.00
6,500.0	91.20	13.76	3,096.6	3,410.7	830.6	3,510.3	0.00	0.00	0.00
6,600.0	91.20	13.76	3,094.5	3,507.8	854.4	3,610.3	0.00	0.00	0.00
6,672.8	91.20	13.76	3,093.0	3,578.4	871.7	3,683.1	0.00	0.00	0.00
A.U. #145 Lat A BHL									

Design Targets

Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Shape										
A.U. #145 Lat A BHL										
- plan hits target center										
- Point										
A.U. #145 TGT #3										
- plan hits target center										
- Point										
A.U. #145 TGT #1										
- plan hits target center										
- Point										
A.U. #145 TGT #2										
- plan hits target center										
- Point										



Project SJB (NM West)
Site SEC 07-T32N-R6W
Well Allison Unit #145 Lateral
Wellbore Lateral B
Design Plan #1



REFERENCE INFORMATION

Co-ordinate (N/E) Reference Well Allison Unit #145 Lateral, True North
Vertical (TVD) Reference DFE @ 6534.0ft (AWS 730)
Section (VS) Reference Slot - (0.0N, 0.0E)
Measured Depth Reference DFE @ 6534.0ft (AWS 730)
Calculation Method Minimum Curvature

PROJECT DETAILS

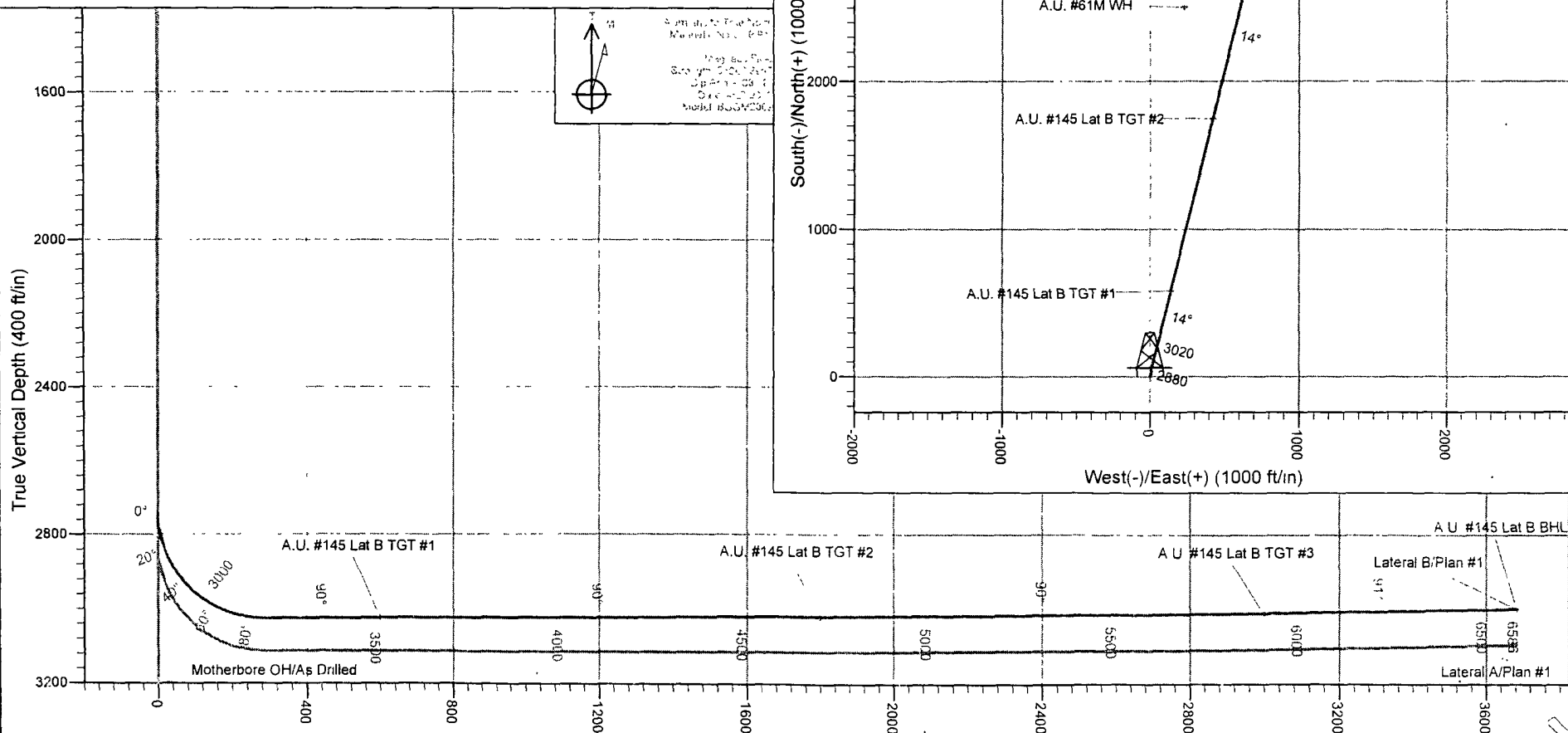
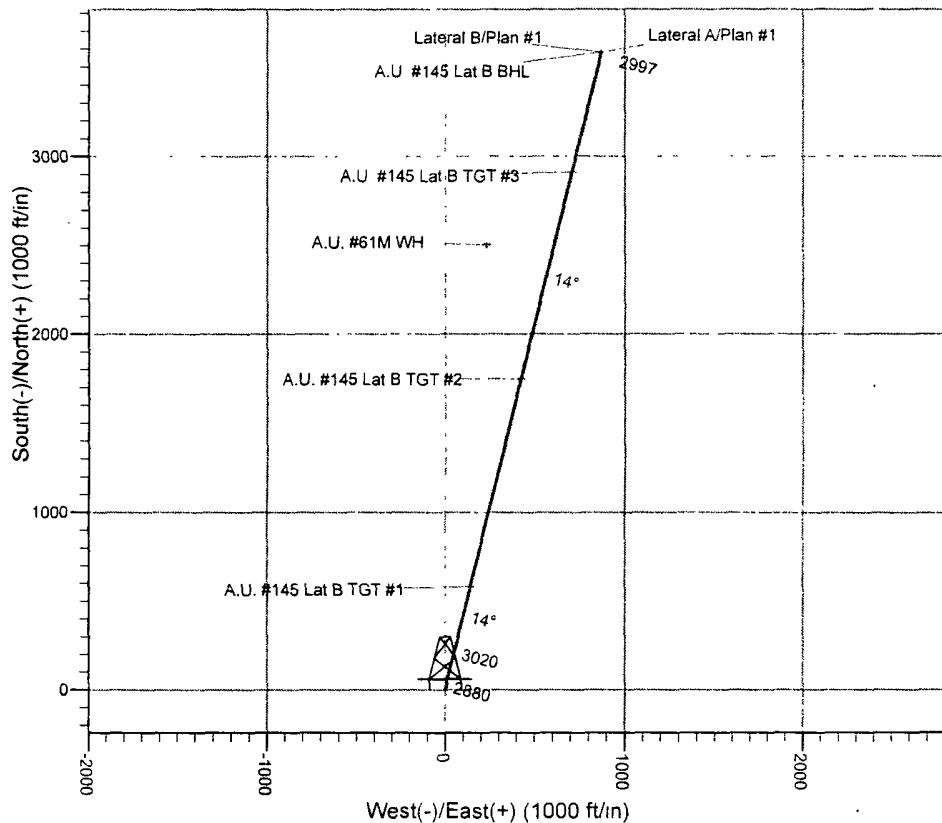
Geodetic System US State Plane 1927 (Exact solution)
Datum NAD 1927 (NADCON CONUS)
Ellipsoid Clarke 1866
Zone New Mexico West 3003
System Datum Mean Sea Level

WELL DETAILS Allison Unit #145 Lateral

Ground Level 6519.0
+N/-S +E/-W Northing Easting Latitude Longitude
0.0 0.0 2179789.17 595785.91 36° 59' 23.952 N 107° 30' 19.296 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	2739.0	0.00	0.00	2739.0	0.0	0.0	0.00	0.00	0.0	
2	3190.2	90.27	13.69	3025.5	279.7	68.1	20.00	13.69	287.8	
3	3197.2	90.27	13.55	3025.4	286.3	69.7	2.00	-89.32	294.7	
4	3501.8	90.27	13.55	3024.0	582.4	141.1	0.00	0.00	599.2	A.U. #145 Lat B TGT #1
5	3508.7	90.26	13.69	3024.0	589.1	142.7	2.00	93.79	606.1	
6	4702.0	90.26	13.69	3018.5	1748.5	425.1	0.00	0.00	1799.5	A.U. #145 Lat B TGT #2
7	4711.6	90.45	13.69	3018.4	1757.8	427.4	2.00	-0.12	1809.0	
8	5902.2	90.45	13.69	3009.0	2914.6	709.2	0.00	0.00	2999.7	A.U. #145 Lat B TGT #3
9	5932.8	91.06	13.76	3008.6	2944.3	716.4	2.00	6.84	3030.2	
10	6585.8	91.06	13.76	2996.5	3578.4	871.7	0.00	0.00	3683.1	A.U. #145 Lat B BHL



Vertical Section at 13.69° (400 ft/in)

Database: EDM 2003 21 Single User Db
Company: ConocoPhillips
Project: SJB (NM West)
Site: SEC 7-T32N-R6W
Well: Allison Unit #145 Lateral
Wellbore: Lateral B
Design: Plan #1

Local Co-ordinate Reference: Well Allison Unit #145 Lateral
TVD Reference: DFE @ 6534.0ft (AWS 730)
MD Reference: DFE @ 6534.0ft (AWS 730)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project:	SJB (NM West), 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 West 3003		Using geodetic scale factor

Site SEC 7-T32N-R6W

Site Position:		Northing:	2,179,789.17 ft	Latitude:	36° 59' 23.952 N
From:	Lat/Long	Easting:	595,785.91 ft	Longitude:	107° 30' 19.296 W
Position Uncertainty:	0.0 ft	Slot Radius:	6-1/8"	Grid Convergence:	0.20 °

Well: Allison Unit #145 Lateral, Dual Stacked CBM Horizontal

Well Position	+N-S	0.0 ft	Northing:	2,179,789.17 ft	Latitude:	36° 59' 23.952 N
	+E-W	0.0 ft	Easting:	595,785.91 ft	Longitude:	107° 30' 19.296 W
Position Uncertainty		3.5 ft	Wellhead Elevation:	ft	Ground Level:	6,519.0 ft

Wellbore Lateral B

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2009	4/27/2010	9.94	63.79	51,048

Design Plan #1

Audit Notes:

Version: Phase: PLAN Tie On Depth: 2,739.0

Vertical Section:	Depth From (TVD) (ft)	+N-S (ft)	+E-W (ft)	Direction (°)
	0.0	0.0	0.0	13.69

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
2,739.0	0.00	0.00	2,739.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,190.4	90.27	13.69	3,025.5	279.7	68.1	20.00	20.00	0.00	13.69	
3,197.2	90.27	13.55	3,025.4	286.3	69.7	2.00	0.02	-2.00	-89.32	
3,501.8	90.27	13.55	3,024.0	582.4	141.1	0.00	0.00	0.00	0.00	A.U. #145 Lat B TG
3,508.7	90.26	13.69	3,024.0	589.1	142.7	2.00	-0.13	2.00	93.79	
4,702.0	90.26	13.69	3,018.5	1,748.5	425.1	0.00	0.00	0.00	0.00	A.U. #145 Lat B TG
4,711.6	90.45	13.69	3,018.4	1,757.8	427.4	2.00	2.00	0.00	-0.12	
5,902.2	90.45	13.69	3,009.0	2,914.6	709.2	0.00	0.00	0.00	0.00	A.U. #145 Lat B TG
5,932.8	91.06	13.76	3,008.6	2,944.3	716.4	2.00	1.99	0.24	6.84	
6,585.8	91.06	13.76	2,996.5	3,578.4	871.7	0.00	0.00	0.00	0.00	A.U. #145 Lat B BH



Database: EDM 2003 21 Single User Db
Company: ConocoPhillips
Project: SJB (NM West)
Site: SEC 7-T32N-R6W
Well: Allison Unit #145 Lateral
Wellbore: Lateral B
Design: Plan #1

Local Co-ordinate Reference: Well Allison Unit #145 Lateral
TVD Reference: DFE @ 6534.0ft (AWS 730)
MD Reference: DFE @ 6534.0ft (AWS 730)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned 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
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,739.0	0.00	0.00	2,739.0	0.0	0.0	0.0	0.00	0.00	0.00
2,750.0	2.20	13.69	2,750.0	0.2	0.0	0.2	20.00	20.00	0.00
2,775.0	7.20	13.69	2,774.9	2.2	0.5	2.3	20.00	20.00	0.00
2,800.0	12.20	13.69	2,799.5	6.3	1.5	6.5	20.00	20.00	0.00
2,825.0	17.20	13.69	2,823.7	12.4	3.0	12.8	20.00	20.00	0.00
2,850.0	22.20	13.69	2,847.2	20.6	5.0	21.2	20.00	20.00	0.00
2,875.0	27.20	13.69	2,869.9	30.8	7.5	31.7	20.00	20.00	0.00
2,900.0	32.20	13.69	2,891.7	42.8	10.4	44.1	20.00	20.00	0.00
2,925.0	37.20	13.69	2,912.2	56.6	13.8	58.3	20.00	20.00	0.00
2,950.0	42.20	13.69	2,931.4	72.1	17.6	74.3	20.00	20.00	0.00
2,975.0	47.20	13.69	2,949.2	89.2	21.7	91.8	20.00	20.00	0.00
3,000.0	52.20	13.69	2,965.4	107.7	26.2	110.9	20.00	20.00	0.00
3,025.0	57.20	13.69	2,979.8	127.6	31.1	131.3	20.00	20.00	0.00
3,050.0	62.20	13.69	2,992.4	148.5	36.2	152.9	20.00	20.00	0.00
3,075.0	67.20	13.69	3,003.1	170.5	41.5	175.5	20.00	20.00	0.00
3,100.0	72.20	13.69	3,011.8	193.3	47.1	198.9	20.00	20.00	0.00
3,125.0	77.20	13.69	3,018.4	216.7	52.8	223.0	20.00	20.00	0.00
3,150.0	82.20	13.69	3,022.8	240.6	58.6	247.6	20.00	20.00	0.00
3,175.0	87.20	13.69	3,025.1	264.7	64.5	272.5	20.00	20.00	0.00
3,190.4	90.27	13.69	3,025.5	279.7	68.1	287.8	20.00	20.00	0.00
3,197.2	90.27	13.55	3,025.4	286.3	69.7	294.7	2.00	0.02	-2.00
3,200.0	90.27	13.55	3,025.4	289.0	70.4	297.5	0.00	0.00	0.00
3,300.0	90.27	13.55	3,025.0	386.2	93.8	397.5	0.00	0.00	0.00
3,400.0	90.27	13.55	3,024.5	483.5	117.3	497.5	0.00	0.00	0.00
3,501.8	90.27	13.55	3,024.0	582.4	141.1	599.2	0.00	0.00	0.00
A.U. #145 Lat B TGT #1									
3,508.7	90.26	13.69	3,024.0	589.1	142.7	606.1	2.00	-0.13	2.00
3,600.0	90.26	13.69	3,023.5	677.8	164.3	697.5	0.00	0.00	0.00
3,700.0	90.26	13.69	3,023.1	775.0	188.0	797.5	0.00	0.00	0.00
3,800.0	90.26	13.69	3,022.6	872.2	211.7	897.5	0.00	0.00	0.00
3,900.0	90.26	13.69	3,022.2	969.3	235.3	997.5	0.00	0.00	0.00
4,000.0	90.26	13.69	3,021.7	1,066.5	259.0	1,097.5	0.00	0.00	0.00
4,100.0	90.26	13.69	3,021.3	1,163.6	282.7	1,197.5	0.00	0.00	0.00
4,200.0	90.26	13.69	3,020.8	1,260.8	306.3	1,297.5	0.00	0.00	0.00
4,300.0	90.26	13.69	3,020.3	1,357.9	330.0	1,397.5	0.00	0.00	0.00
4,400.0	90.26	13.69	3,019.9	1,455.1	353.7	1,497.5	0.00	0.00	0.00
4,500.0	90.26	13.69	3,019.4	1,552.3	377.3	1,597.5	0.00	0.00	0.00
4,600.0	90.26	13.69	3,019.0	1,649.4	401.0	1,697.5	0.00	0.00	0.00
4,702.0	90.26	13.69	3,018.5	1,748.5	425.1	1,799.5	0.00	0.00	0.00
A.U. #145 Lat B TGT #2									
4,711.6	90.45	13.69	3,018.4	1,757.8	427.4	1,809.0	2.00	2.00	0.00
4,800.0	90.45	13.69	3,017.7	1,843.7	448.3	1,897.5	0.00	0.00	0.00
4,900.0	90.45	13.69	3,016.9	1,940.9	472.0	1,997.5	0.00	0.00	0.00
5,000.0	90.45	13.69	3,016.2	2,038.0	495.7	2,097.5	0.00	0.00	0.00
5,100.0	90.45	13.69	3,015.4	2,135.2	519.3	2,197.4	0.00	0.00	0.00
5,200.0	90.45	13.69	3,014.6	2,232.4	543.0	2,297.4	0.00	0.00	0.00
5,300.0	90.45	13.69	3,013.8	2,329.5	566.7	2,397.4	0.00	0.00	0.00
5,400.0	90.45	13.69	3,013.0	2,426.7	590.3	2,497.4	0.00	0.00	0.00

Database: EDM 2003.21 Single User Db
Company: ConocoPhillips
Project: SJB (NM West)
Site: SEC 7-T32N-R6W
Well: Allison Unit #145 Lateral
Wellbore: Lateral B
Design: Plan #1

Local Co-ordinate Reference: Well Allison Unit #145 Lateral
TVD Reference: DFE @ 6534.0ft (AWS 730)
MD Reference: DFE @ 6534.0ft (AWS 730)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned 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)
5,500.0	90.45	13.69	3,012.2	2,523.8	614.0	2,597.4	0.00	0.00	0.00
5,600.0	90.45	13.69	3,011.4	2,621.0	637.7	2,697.4	0.00	0.00	0.00
5,700.0	90.45	13.69	3,010.6	2,718.1	661.3	2,797.4	0.00	0.00	0.00
5,800.0	90.45	13.69	3,009.8	2,815.3	685.0	2,897.4	0.00	0.00	0.00
5,902.2	90.45	13.69	3,009.0	2,914.6	709.2	2,999.7	0.00	0.00	0.00
A.U. #145 Lat B TGT #3									
5,932.8	91.06	13.76	3,008.6	2,944.3	716.4	3,030.2	2.00	1.99	0.24
6,000.0	91.06	13.76	3,007.4	3,009.6	732.4	3,097.4	0.00	0.00	0.00
6,100.0	91.06	13.76	3,005.5	3,106.7	756.2	3,197.4	0.00	0.00	0.00
6,200.0	91.06	13.76	3,003.6	3,203.8	780.0	3,297.4	0.00	0.00	0.00
6,300.0	91.06	13.76	3,001.8	3,300.9	803.8	3,397.4	0.00	0.00	0.00
6,400.0	91.06	13.76	2,999.9	3,398.0	827.6	3,497.3	0.00	0.00	0.00
6,500.0	91.06	13.76	2,998.1	3,495.1	851.3	3,597.3	0.00	0.00	0.00
6,585.8	91.06	13.76	2,996.5	3,578.4	871.7	3,683.1	0.00	0.00	0.00
A.U. #145 Lat B BHL									

Design Targets

Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
A.U. #145 Lat B BHL	- plan hits target center	0.00	0.00	2,996.5	3,578.4	871.7	2,183,370.30	596,645.26	36° 59' 59.334 N	107° 30' 8.550 W
- Point										
A.U. #145 Lat B TGT	- plan hits target center	0.00	0.00	3,009.0	2,914.6	709.2	2,182,706.00	596,485.00	36° 59' 52.771 N	107° 30' 10.554 W
- Point										
A.U. #145 Lat B TGT	- plan hits target center	0.00	0.00	3,018.5	1,748.5	425.1	2,181,539.00	596,205.00	36° 59' 41.241 N	107° 30' 14.056 W
- Point										
A.U. #145 Lat B TGT	- plan hits target center	0.00	0.00	3,024.0	582.4	141.1	2,180,372.00	595,925.00	36° 59' 29.711 N	107° 30' 17.557 W
- Point										

Directional Plan lateral A (Plan No. 1) accompanies this document
 Directional Plan Lateral B (Plan No. 1) accompanies this document

GL 6519'
 KB 6534' (Aztec 730)

Surface location:	State of New Mexico, San Juan County	MD	TVD	
Lateral B (upper lateral), beginning of prod. interval	T32N, R06W, Section 7, 880' FSL, 925' FWL	NA	NA	
Lateral B (upper lateral), end of prod. interval	T32N, R06W, Section 7, 1159' FSL, 993' FWL	3190'	3026'	landed at 90° in the upper coal
Lateral A (lower lateral), beginning of prod. interval	T32N, R06W, Section 7, 100' FNL, 1800' FWL	6586'	2997'	lateral total depth & 4-1/2" casing depth
Lateral A (lower lateral), end of prod. interval	T32N, R06W, Section 7, 1158' FNS, 993' FWL	3276'	3113'	landed at 90° in the lower coal
	T32N, R06W, Section 7, 100' FNL, 1800' FWL	6673'	3093'	lateral total depth & 4-1/2" casing depth

— solid lines indicate present wellbore
 dashed lines indicate laterals to be added

12-1/4" Hole and 9-5/8" Casing set at 155' MD
 Casing description: 9-5/8" 36 #/ft, K-55, STC
 Cemented to surface, 1.5 bbls cement to surface

casing exits at:
 2793' & 2826'

8-3/4" Hole & 7" Casing set at 2969' MD
 casing description: 7", 20#/ft, K-55, STC
 Cemented to surface, 8 bbls cement to surface

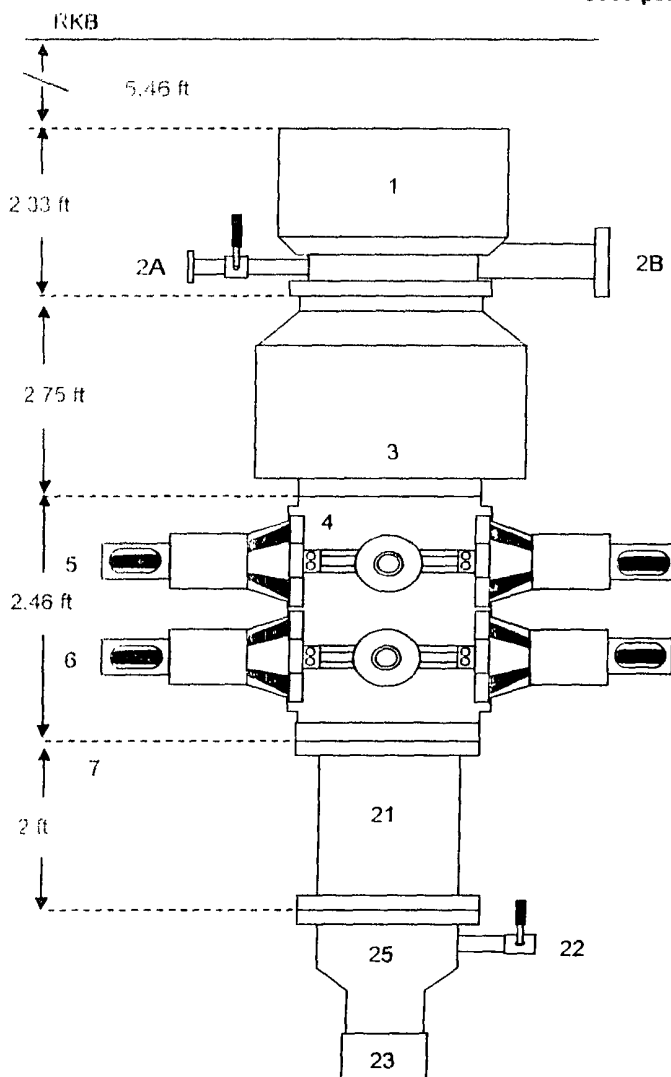
6-1/4" Hole, 4-1/2" Liner at 3127' MD
 casing description: 4-1/2" 10.5#/ft K-55
 no cement, liner top @ 2907'

Lateral B

Lateral A

Two Laterals, Upper and Lower
 each consisting of 6-1/4" Hole & 4-1/2" Liner
 casing description: 4-1/2" 11.6#/ft, L-80, BTC
 uncemented, pre-drilled and plugged, with two holes per joint

BOP program and drilling mud program will be per basin-wide standards for top-set coal wells.



Stack Height Including Spacer Spool= 9 54ft

Pressure Test

Annular 250 / 3500 psi 3/10 min (70% working pressure)

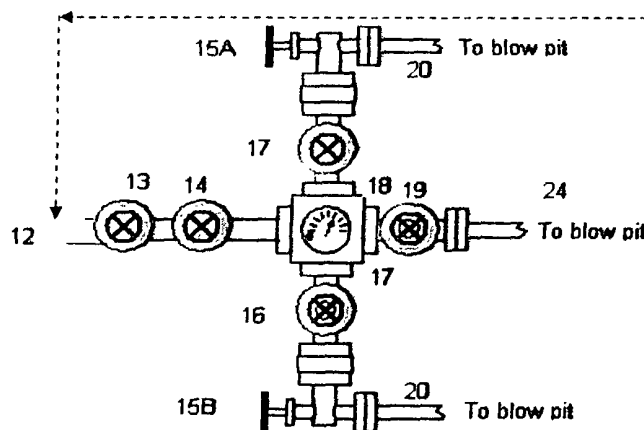
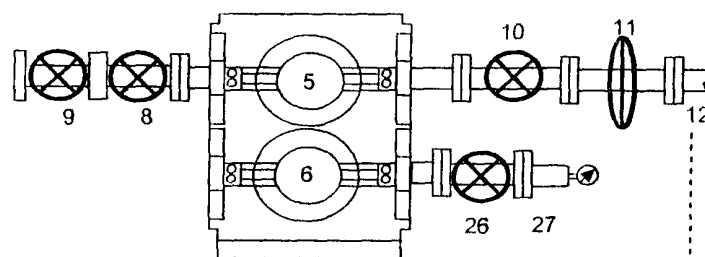
Rams 250 / 5000 psi 3/10 min

Choke Manifold 250 / 5000 psi 3/10 min

Surface casing 600 psi 30 min

Intermediate 1500 psi 30 min

Side View of BOP



- 1 Williams Rotating Head
- 2A. Fill-up Line & valve
- 2B. Flowline
3. Annular Preventor (11", 5000 psi) Rucker Schaffer
4. Double Ram BOP Townsend Type 82/ 4"
5. Blind Rams (11", 5000 psi)
6. Pipe Rams (11", 5000 psi)
7. Kill Line Connection
8. Kill Line Valve (2-1/16") 5000 psi
9. Kill Line Gate Valve (2-1/16") 5000 psi
10. Inner Choke Line Valve (3-1/8") 5000 psi
11. Hydraulic HCR Choke Line Valve (3-1/8") 5000 psi
12. Choke Line (3", 8 ft between valves)
13. Choke Line Valve (3-1/8") 5000 psi
14. Choke Line Valve (3-1/8") 5000 psi
- 15A Variable Choke Line Valve (2-1/16") 5000 psi
16. Choke Line Valve (2-1/16") 5000 psi
17. Choke Line Valve (2-1/16") 5000 psi
18. Choke Manifold Pressure Gauge
19. Choke Line Valve (3-1/8") 5000 psi
20. Choke Line (2") 5000 psi
21. Spacer Spool 5000 psi
22. Casing Head Valve
23. 9 5/8" Casing Collar
24. Panic Line (3")
25. 11" Casing Head
26. Gate Valve - 2-1/16" 5000 psi
27. 2" XXX Bull Plug w/ 1/2" port and 5000 psi Gauge

Frazer Little - 14 June 2010
Edited by: Cedeno 21 FEB 2011

Directions from the Intersection of Hwy. 172 & Hwy 151
in Ignacio, CO

To:

Burlington Resources Oil & Gas Company LP

ALLISON UNIT #145 H

880' FSL & 925' FWL,

Section 7, T32N, R6W, N.M.P.M., San Juan County,

New Mexico

Latitude: 36° 59' 23.971" N

Longitude: 107° 30' 21.477"W

Nad 83

Go East on Hwy 151 for 11.9 miles to CR 330,
turn right (southerly) for 1.9 miles,
turn right (westerly) for 0.7 miles,
continue (southerly) for 1.2 miles to Self Ranch gate,
turn left (easterly) thru Self Ranch gate for 0.5 miles,
turn left (northerly) for 0.2 miles,
to the newly staked location twinned on existing well pad,
ALLISON UNIT #145 & ALLISON UNIT #24.