

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

NOV 08 2012

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

Farmington Field Office
Bureau of Land Management

1a. Type of Work DRILL	5. Lease Number NM-02707 Unit Reporting Number	
1b. Type of Well GAS	6. If Indian, All. or Tribe	
2. Operator BURLINGTON RESOURCES Oil & Gas Company, LP	7. Unit Agreement Name RCVD JAN 9 '13 OIL CONS. DIV. DIST. 3	
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name TOMMY BOLACK 9. Well Number 1P	
Location of Well Surface: Unit K (NE/SW), 1855' FSL & 1353' FWL BHL : Unit K (NE/SW), 1930' FSL & 2130' FWL Surface: Latitude: 36.8390095° N (NAD83) Longitude: 108.0539766° W BHL : Latitude: 36.8391438° N (NAD83) Longitude: 108.0513243° W	10. Field, Pool, Wildcat BASIN DK, BASIN MNCS BLANCO MV 11. Sec., Twn, Rge, Mer. (NMPM) SUR: Sec. 1, T30N, R12W BHL: Sec. 1, T30N, R12W API # 30-045- 33436	
14. Distance in Miles from Nearest Town 4 MILES FROM AZTEC	12. County SAN JUAN	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 1353'		
16. Acres in Lease 160.000	17. Acres Assigned to Well S/2 (320.00) DK S/2 (315.35) MV/MC	
18. Distance from Proposed Location to Nearest Well, Drlg, Compl, or Applied for on this Lease +/- 296' FROM HAZEL BOLACK 1 (FRUITLAND COAL) XTO ENERGY, INC.		
19. Proposed Depth 6780' This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 5745' GL	22. Approx. Date Work will Start 11/8/12	
23. Proposed Casing and Cementing Program See Operations Plan attached	DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".	
24. Authorized by: Marie E. Jaramillo (Staff Regulatory Tech)	Date	

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.

Example Master Plan Type 3

Bond Numbers NMB-000015 and NMB-000089

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT

NMOCD

JAN 17 2013

BLM'S APPROVAL OR ACCEPTANCE OF THIS
ACTION DOES NOT RELIEVE THE LESSEE AND
OPERATOR FROM OBTAINING ANY OTHER
AUTHORIZATION REQUIRED FOR OPERATIONS
ON FEDERAL AND INDIAN LAND

PC

Certificate Number

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

TOMMY BOLACK 1P

DEVELOPMENT

Lease:		AFE #: WAN.CDR.0153				AFE \$:	
Field Name: SAN JUAN		Rig: Aztec Rig 730		State: NM	County: SAN JUAN		API #:
Geologist:		Phone:		Geophysicist:		Phone:	
Geoscientist: Nez, Sharon E		Phone: 505-599-4033		Prod. Engineer:		Phone:	
Res. Engineer:		Phone:		Proj. Field Lead:		Phone:	
Primary Objective (Zones):							
Zone	Zone Name						
R20076	DAKOTA(R20076)						
R20002	MESAVERDE(R20002)						
Location: Surface		Datum Code: NAD 27				Directional:	
Latitude: 36.839006	Longitude: -108.053351	X:	Y:	Section: 01	Range: 012W		
Footage X: 1353 FWL	Footage Y: 1855 FSL	Elevation: 5745	(FT)	Township: 030N			
Tolerance:							
Location: Bottom Hole		Datum Code: NAD 27				Directional:	
Latitude: 36.839141	Longitude: -108.050699	X:	Y:	Section: 01	Range: 012W		
Footage X: 2130 FWL	Footage Y: 1930 FSL	Elevation:	(FT)	Township: 030N			
Tolerance:							
Location Type: Year Round		Start Date (Est.): 1/1/2013		Completion Date:		Date In Operation:	
Formation Data: Assume KB = 5760		Units = .FT					
Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	MD (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	200	5560		☐			12-1/4 hole. 200' 9 5/8" 32.3 ppf, H-40, STC casing. Cement with 159 cuft. Circulate cement to surface.
OJO ALAMO	553	5207		☐			
KIRTLAND	669	5091		☐			
FRUITLAND	1539	4221		☐			Possible Gas
PICTURED CLIFFS	2133	3627		☐			
LEWIS	2316	3444		☐			
HUERFANITO BENTONITE	2865	2895		☐			
CHACRA	3181	2579		☐			
MASSIVE CLIFF HOUSE	3772	1988		☐	630		Gas; Cliffhouse could be wet.
MENELEE	3890	1870		☐			
Intermediate Casing	4040	1720		☐			8 3/4" Hole. 7", 23 ppf, J-55, LTC Casing. Cement with 940 cuft. Circulate cement to surface.
POINT LOOKOUT	4454	1306		☐			
MANCOS	4794	966		☐			
UPPER GALLUP	5721	39		☐			
GREENHORN	6474	-714		☐			
GRANEROS	6531	-771		☐			
TWO WELLS	6593	-833		☐	2401		Gas
PAGUATE	6656	-896		☐			
CUBERO	6691	-931		☐			
ENCINAL	6739	-979		☐			Est bottom perf ~15' above TD

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TOMMY BOLACK 1P

DEVELOPMENT

Total Depth	6780	-1020	☐	200	6-1/4" hole, 4-1/2" 11.6 ppf, L-80, LTC/BTC casing. Cement w/ 363 cuft. Circulate cement a minimum of 100' inside the previous casing string.
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Reference Wells:		
Reference Type	Well Name	Comments

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

TD Logs:	☐ Triple Combo	☐ Dipmeter	☐ RFT	☐ Sonic	☐ VSP	☐ TDT	☒ Other
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mudlog = 100' above upper Gallup ^{to TD} mud loggers will call final TD

Additional Information:					
Log Type	Stage	From (Ft)	To (Ft)	Tool Type/Name	Remarks

ConocoPhillips or its affiliates

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Tommy Bolack 1P
Company:	ConocoPhillips SJB	TVD Reference:	WELL @ 5760.0ft (Original Well Elev)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	WELL @ 5760.0ft (Original Well Elev)
Site:	Other Named Wells	North Reference:	True
Well:	Tommy Bolack 1P	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	APD Plan		

Project:	San Juan Basin - New Mexico West Wells, New Mexico, Directional "S"		
Map System:	US State Plane 1927 (Exact Solution)	System Datum:	Ground Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico West 3003		Using geodetic scale factor

Site:	Other Named Wells		
Site Position:		Northing:	2,063,826.04 ft
From:	Lat/Long	Easting:	504,691.02 ft
Position Uncertainty:	15.0 ft	Slot Radius:	6-1/8"
		Latitude:	36° 40' 18.848 N
		Longitude:	107° 49' 2.415 W
		Grid Convergence:	0.01 °

Well:	Tommy Bolack 1P		
Well Position	+N/-S	0.0 ft	Northing:
	+E/-W	0.0 ft	Easting:
Position Uncertainty	0.0 ft	Wellhead Elevation:	
			Latitude:
			Longitude:
			Ground Level:

Wellbore:	Wellbore #1		
Magnetics:	Model Name	Sample Date	Declination
			(°)
	BGGM2011	7/13/2012	9.90
			Dip Angle
			(°)
			Field Strength
			(nT)
			50,610

Design:	APD Plan		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.0	0.0	0.0
			Direction
			(°)
			86.39

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,565.4	23.31	86.39	1,533.5	14.7	233.3	2.00	2.00	0.00	86.39	
2,546.2	23.31	86.39	2,434.3	39.1	620.7	0.00	0.00	0.00	0.00	
3,323.2	0.00	0.00	3,190.0	48.9	776.2	3.00	-3.00	0.00	180.00	
4,173.2	0.00	0.00	4,040.0	48.9	776.2	0.00	0.00	0.00	0.00	Tommy Bolack 1P ICI
6,913.2	0.00	0.00	6,780.0	48.9	776.2	0.00	0.00	0.00	0.00	Tommy Bolack 1P PC

ConocoPhillips or its affiliates

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Site:	Other Named Wells	North Reference:	True
Well:	Tommy Bolack 1P	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	APD Plan		

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
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
SCP									
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	2.00	86.39	500.0	0.1	1.7	1.7	2.00	2.00	0.00
553.1	3.06	86.39	553.0	0.3	4.1	4.1	2.00	2.00	0.00
Ojo Alamo									
600.0	4.00	86.39	599.8	0.4	7.0	7.0	2.00	2.00	0.00
669.4	5.39	86.39	669.0	0.8	12.6	12.7	2.00	2.00	0.00
Kirtland									
700.0	6.00	86.39	699.5	1.0	15.7	15.7	2.00	2.00	0.00
800.0	8.00	86.39	798.7	1.8	27.8	27.9	2.00	2.00	0.00
900.0	10.00	86.39	897.5	2.7	43.4	43.5	2.00	2.00	0.00
1,000.0	12.00	86.39	995.6	3.9	62.5	62.6	2.00	2.00	0.00
1,100.0	14.00	86.39	1,093.1	5.4	84.9	85.1	2.00	2.00	0.00
1,200.0	16.00	86.39	1,189.6	7.0	110.8	111.0	2.00	2.00	0.00
1,300.0	18.00	86.39	1,285.3	8.8	139.9	140.2	2.00	2.00	0.00
1,400.0	20.00	86.39	1,379.8	10.9	172.4	172.8	2.00	2.00	0.00
1,500.0	22.00	86.39	1,473.2	13.1	208.2	208.6	2.00	2.00	0.00
1,565.4	23.31	86.39	1,533.5	14.7	233.3	233.8	2.00	2.00	0.00
1,571.4	23.31	86.39	1,539.0	14.9	235.7	236.2	0.00	0.00	0.00
Fruitland									
1,600.0	23.31	86.39	1,565.3	15.6	247.0	247.5	0.00	0.00	0.00
1,700.0	23.31	86.39	1,657.1	18.1	286.5	287.1	0.00	0.00	0.00
1,800.0	23.31	86.39	1,749.0	20.5	326.0	326.6	0.00	0.00	0.00
1,900.0	23.31	86.39	1,840.8	23.0	365.5	366.2	0.00	0.00	0.00
2,000.0	23.31	86.39	1,932.7	25.5	405.0	405.8	0.00	0.00	0.00
2,100.0	23.31	86.39	2,024.5	28.0	444.4	445.3	0.00	0.00	0.00
2,200.0	23.31	86.39	2,116.3	30.5	483.9	484.9	0.00	0.00	0.00
2,218.2	23.31	86.39	2,133.0	31.0	491.1	492.1	0.00	0.00	0.00
Picture Cliffs									
2,300.0	23.31	86.39	2,208.2	33.0	523.4	524.5	0.00	0.00	0.00
2,400.0	23.31	86.39	2,300.0	35.5	562.9	564.0	0.00	0.00	0.00
2,417.4	23.31	86.39	2,316.0	35.9	569.8	570.9	0.00	0.00	0.00
Lewis									
2,500.0	23.31	86.39	2,391.8	38.0	602.4	603.6	0.00	0.00	0.00
2,546.2	23.31	86.39	2,434.3	39.1	620.7	621.9	0.00	0.00	0.00
2,600.0	21.70	86.39	2,484.0	40.4	641.2	642.5	3.00	-3.00	0.00
2,700.0	18.70	86.39	2,577.8	42.6	675.6	677.0	3.00	-3.00	0.00
2,800.0	15.70	86.39	2,673.3	44.4	705.1	706.5	3.00	-3.00	0.00
2,900.0	12.70	86.39	2,770.3	46.0	729.6	731.1	3.00	-3.00	0.00
2,996.6	9.80	86.39	2,865.0	47.2	748.4	749.9	3.00	-3.00	0.00
Huerfano Benteite									
3,000.0	9.70	86.39	2,868.4	47.2	749.0	750.5	3.00	-3.00	0.00
3,100.0	6.70	86.39	2,967.3	48.1	763.2	764.7	3.00	-3.00	0.00
3,200.0	3.70	86.39	3,066.9	48.7	772.3	773.8	3.00	-3.00	0.00
3,300.0	0.70	86.39	3,166.8	48.9	776.1	777.6	3.00	-3.00	0.00
3,314.2	0.27	86.39	3,181.0	48.9	776.2	777.7	3.00	-3.00	0.00
Chacra									
3,323.2	0.00	0.00	3,190.0	48.9	776.2	777.8	3.00	-3.00	0.00
3,400.0	0.00	0.00	3,266.8	48.9	776.2	777.8	0.00	0.00	0.00

ConocoPhillips or its affiliates

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Tommy Bolack 1P
Company:	ConocoPhillips SJBU	TVD Reference:	WELL @ 5760.0ft (Original Well Elev)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	WELL @ 5760.0ft (Original Well Elev)
Site:	Other Named Wells	North Reference:	True
Well:	Tommy Bolack 1P	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	APD Plan		

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)	
3,500.0	0.00	0.00	3,366.8	48.9	776.2	777.8	0.00	0.00	0.00	
3,600.0	0.00	0.00	3,466.8	48.9	776.2	777.8	0.00	0.00	0.00	
3,700.0	0.00	0.00	3,566.8	48.9	776.2	777.8	0.00	0.00	0.00	
3,800.0	0.00	0.00	3,666.8	48.9	776.2	777.8	0.00	0.00	0.00	
3,900.0	0.00	0.00	3,766.8	48.9	776.2	777.8	0.00	0.00	0.00	
3,905.2	0.00	0.00	3,772.0	48.9	776.2	777.8	0.00	0.00	0.00	
Massive Cliff House										
4,000.0	0.00	0.00	3,866.8	48.9	776.2	777.8	0.00	0.00	0.00	
4,023.2	0.00	0.00	3,890.0	48.9	776.2	777.8	0.00	0.00	0.00	
Menefee										
4,100.0	0.00	0.00	3,966.8	48.9	776.2	777.8	0.00	0.00	0.00	
4,173.2	0.00	0.00	4,040.0	48.9	776.2	777.8	0.00	0.00	0.00	
ICP - Tommy Bolack 1P ICP										
4,200.0	0.00	0.00	4,066.8	48.9	776.2	777.8	0.00	0.00	0.00	
4,300.0	0.00	0.00	4,166.8	48.9	776.2	777.8	0.00	0.00	0.00	
4,400.0	0.00	0.00	4,266.8	48.9	776.2	777.8	0.00	0.00	0.00	
4,500.0	0.00	0.00	4,366.8	48.9	776.2	777.8	0.00	0.00	0.00	
4,587.2	0.00	0.00	4,454.0	48.9	776.2	777.8	0.00	0.00	0.00	
Point Lookout										
4,600.0	0.00	0.00	4,466.8	48.9	776.2	777.8	0.00	0.00	0.00	
4,700.0	0.00	0.00	4,566.8	48.9	776.2	777.8	0.00	0.00	0.00	
4,800.0	0.00	0.00	4,666.8	48.9	776.2	777.8	0.00	0.00	0.00	
4,900.0	0.00	0.00	4,766.8	48.9	776.2	777.8	0.00	0.00	0.00	
4,927.2	0.00	0.00	4,794.0	48.9	776.2	777.8	0.00	0.00	0.00	
Mancoas										
5,000.0	0.00	0.00	4,866.8	48.9	776.2	777.8	0.00	0.00	0.00	
5,100.0	0.00	0.00	4,966.8	48.9	776.2	777.8	0.00	0.00	0.00	
5,200.0	0.00	0.00	5,066.8	48.9	776.2	777.8	0.00	0.00	0.00	
5,300.0	0.00	0.00	5,166.8	48.9	776.2	777.8	0.00	0.00	0.00	
5,400.0	0.00	0.00	5,266.8	48.9	776.2	777.8	0.00	0.00	0.00	
5,500.0	0.00	0.00	5,366.8	48.9	776.2	777.8	0.00	0.00	0.00	
5,600.0	0.00	0.00	5,466.8	48.9	776.2	777.8	0.00	0.00	0.00	
5,700.0	0.00	0.00	5,566.8	48.9	776.2	777.8	0.00	0.00	0.00	
5,800.0	0.00	0.00	5,666.8	48.9	776.2	777.8	0.00	0.00	0.00	
5,854.2	0.00	0.00	5,721.0	48.9	776.2	777.8	0.00	0.00	0.00	
Upper Gallup										
5,900.0	0.00	0.00	5,766.8	48.9	776.2	777.8	0.00	0.00	0.00	
6,000.0	0.00	0.00	5,866.8	48.9	776.2	777.8	0.00	0.00	0.00	
6,100.0	0.00	0.00	5,966.8	48.9	776.2	777.8	0.00	0.00	0.00	
6,200.0	0.00	0.00	6,066.8	48.9	776.2	777.8	0.00	0.00	0.00	
6,300.0	0.00	0.00	6,166.8	48.9	776.2	777.8	0.00	0.00	0.00	
6,400.0	0.00	0.00	6,266.8	48.9	776.2	777.8	0.00	0.00	0.00	
6,500.0	0.00	0.00	6,366.8	48.9	776.2	777.8	0.00	0.00	0.00	
6,600.0	0.00	0.00	6,466.8	48.9	776.2	777.8	0.00	0.00	0.00	
6,607.2	0.00	0.00	6,474.0	48.9	776.2	777.8	0.00	0.00	0.00	
Greenhorn										
6,664.2	0.00	0.00	6,531.0	48.9	776.2	777.8	0.00	0.00	0.00	
Graneros										
6,700.0	0.00	0.00	6,566.8	48.9	776.2	777.8	0.00	0.00	0.00	
6,726.2	0.00	0.00	6,593.0	48.9	776.2	777.8	0.00	0.00	0.00	
Two Wells										
6,789.2	0.00	0.00	6,656.0	48.9	776.2	777.8	0.00	0.00	0.00	

ConocoPhillips or its affiliates

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Tommy Bolack 1P
Company:	ConocoPhillips SJB	TVD Reference:	WELL @ 5760.0ft (Original Well Elev)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	WELL @ 5760.0ft (Original Well Elev)
Site:	Other Named Wells	North Reference:	True
Well:	Tommy Bolack 1P	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	APD Plan		

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)
Paguate									
6,800.0	0.00	0.00	6,666.8	48.9	776.2	777.8	0.00	0.00	0.00
6,824.2	0.00	0.00	6,691.0	48.9	776.2	777.8	0.00	0.00	0.00
Cubero									
6,872.2	0.00	0.00	6,739.0	48.9	776.2	777.8	0.00	0.00	0.00
Encinal									
6,900.0	0.00	0.00	6,766.8	48.9	776.2	777.8	0.00	0.00	0.00
6,913.2	0.00	0.00	6,780.0	48.9	776.2	777.8	0.00	0.00	0.00
Tommy Bolack 1P PCP									

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Tommy Bolack 1P ICP	0.00	0.00	4,040.0	48.9	776.2	2,124,780.32	436,392.47	36° 50' 20.906 N	108° 3' 2.516 W
- plan hits target center									
- Point									
Tommy Bolack 1P PCP	0.00	0.00	6,780.0	48.9	776.2	2,124,780.30	436,392.45	36° 50' 20.906 N	108° 3' 2.516 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
4,173.2	4,040.0	ICP	7	8-3/4	
200.0	200.0	SCP	9-5/8	12-1/4	
6,913.2	6,780.0	PCP	4-1/2	6-1/4	

ConocoPhillips or its affiliates

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well Tommy Bolack 1P
Company:	ConocoPhillips SJBU	TVD Reference:	WELL @ 5760.0ft (Original Well Elev)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	WELL @ 5760.0ft (Original Well Elev)
Site:	Other Named Wells	North Reference:	True
Well:	Tommy Bolack 1P	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	APD Plan		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
6,789.2	6,656.0	Paguate		0.00		
6,726.2	6,593.0	Two Wells		0.00		
553.1	553.0	Ojo Alamo		0.00		
2,218.2	2,133.0	Picture Cliffs		0.00		
3,905.2	3,772.0	Massive Cliff House		0.00		
4,927.2	4,794.0	Mancos		0.00		
6,824.2	6,691.0	Cubero		0.00		
6,607.2	6,474.0	Greenhorn		0.00		
669.4	669.0	Kirtland		0.00		
2,996.6	2,865.0	Huerfano Bente		0.00		
2,417.4	2,316.0	Lewis		0.00		
5,854.2	5,721.0	Upper Gallup		0.00		
4,587.2	4,454.0	Point Lookout		0.00		
6,872.2	6,739.0	Encinal		0.00		
1,571.4	1,539.0	Fruitland		0.00		
4,023.2	3,890.0	Menefee		0.00		
6,664.2	6,531.0	Graneros		0.00		
3,314.2	3,181.0	Chacra		0.00		

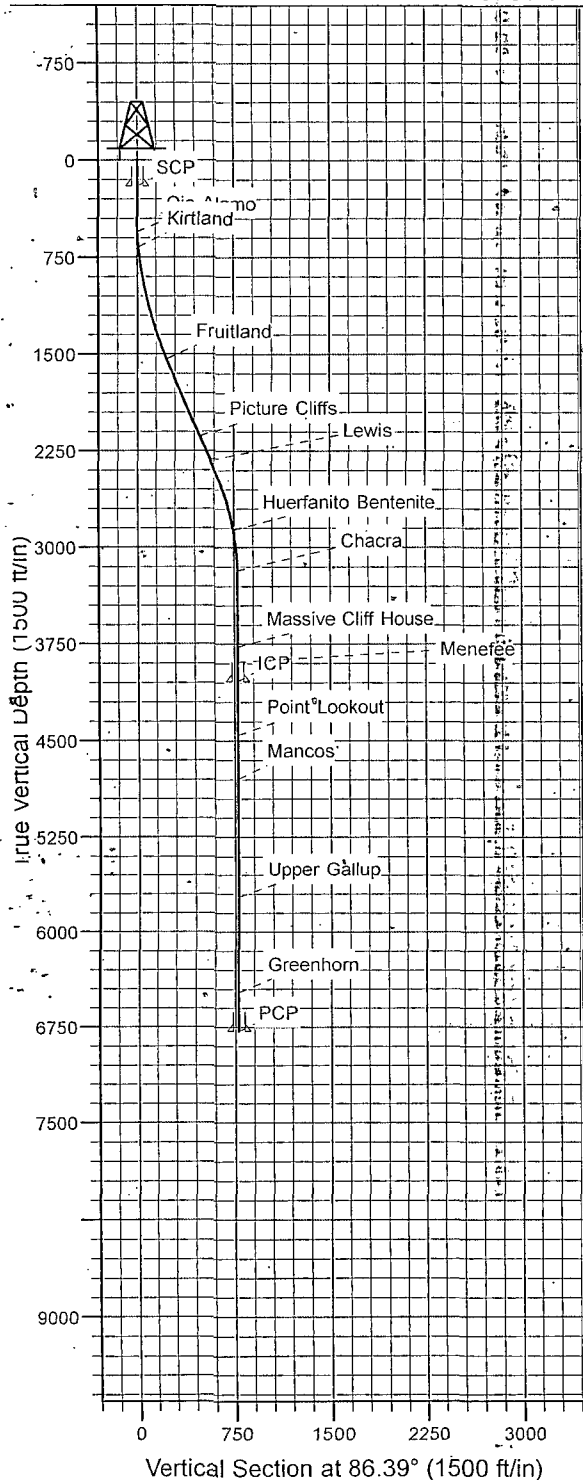
REFERENCE INFORMATION

VELL @ 5760.0ft (Original Well Elev)
 Ground Elevation 5745.0
 Reference Lat: 36° 50' 20.423 N
 Reference Long: 108° 3' 12.064 W

Project: San Juan Basin - New Mexico West
 Site: Other Named Wells
 Well: Tommy Bolack 1P
 Wellbore: Wellbore #1
 Design: APD Plan

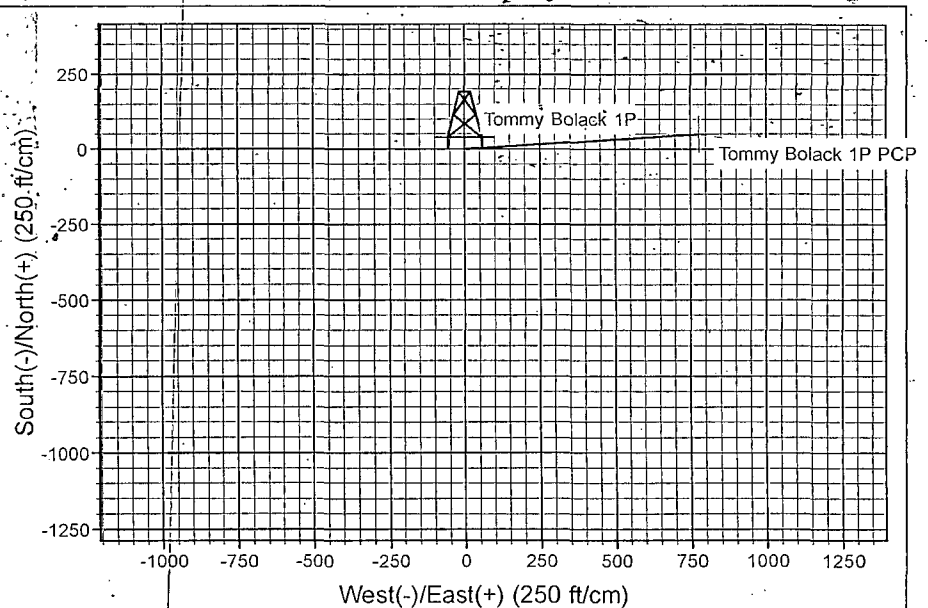
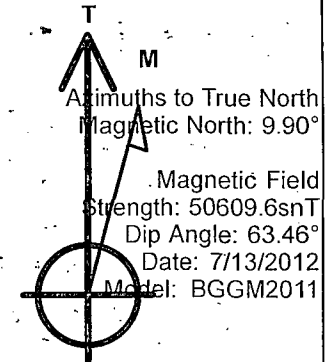
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	1565.4	23.31	86.39	1533.5	14.7	233.3	2.00	86.39	233.8	
4	2546.2	23.31	86.39	2434.3	39.1	620.7	0.00	0.00	621.9	
5	3323.2	0.00	0.00	3190.0	48.9	776.2	3.00	180.00	777.8	
6	4173.2	0.00	0.00	4040.0	48.9	776.2	0.00	0.00	777.8	Tommy Bolack 1P ICP
7	6913.2	0.00	0.00	6780.0	48.9	776.2	0.00	0.00	777.8	Tommy Bolack 1P PCP



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
553.0	553.1	Ojo Alamo
669.0	669.4	Kirtland
1539.0	1571.4	Fruitland
2133.0	2218.2	Picture Cliffs
2316.0	2417.4	Lewis
2865.0	2996.6	Huerfano Bentenite
3181.0	3314.2	Chacra
3772.0	3905.2	Massive Cliff House
3890.0	4023.2	Menefee
4454.0	4587.2	Point Lookout
4794.0	4927.2	Mancos
5721.0	5854.2	Upper Gallup
6474.0	6607.2	Greenhorn
6531.0	6664.2	Graneros
6593.0	6726.2	Two Wells
6656.0	6789.2	Paguate
6691.0	6824.2	Cubero
6739.0	6872.2	Encinal



BURLINGTON RESOURCES OIL & GAS COMPANY LP

TOMMY BOLACK 1P

1855' FSL & 1353' FWL (SURFACE)

1930' FSL & 2130' FWL (BOTTOM HOLE)

LATITUDE: 36.8390095° N

LONGITUDE: 108.0539766° W

NAD 83

SECTION 1, T-30-N, R-12-W, N.M.P.M.

SAN JUAN COUNTY, NEW MEXICO

FROM THE INTERSECTION OF NEW MEXICO STATE HIGHWAY 516 AND
NORTH LIGHT PLANT ROAD (N.M. STATE HIGHWAY 574) IN AZTEC, NEW MEXICO.

TRAVEL NORTHERLY ON NORTH LIGHT PLANT ROAD 1.8 MILES.
TURN LEFT ONTO A DIRT ROAD AND TRAVEL SOUTHWESTERLY 1.2 MILES
TO A "4-WAY" INTERSECTION.

CONTINUE TRAVELING SOUTHWESTERLY 1.1 MILES
TO PROPOSED TOMMY BOLACK 1P ACCESS AND WELL LOCATION.