

District III
1000 Rio Brazos Rd, Aztec, NM 87410
Phone (505) 334-6178 Fax (505) 334-6170

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-101
Permit-132885



APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1 Operator Name and Address CONOCOPHILLIPS COMPANY 3401 E. 30th Street Farmington, NM 87402		2 OGRID Number 217817 3 API Number 30-045-35292
4 Property Code 38677	5 Property Name SAN JUAN 32-5 UNIT	6 Well No 118H

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
G	21	32N	06W	G	2140	N	2305	E	SAN JUAN

8. Pool Information

BASIN FRUITLAND COAL (GAS)	71629
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Additional Well Information

9 Work Type New Well	10 Well Type GAS	11 Cable/Rotary	12 Lease Type State	13 Ground Level Elevation 6385
14 Multiple N	15 Proposed Depth 8783	16 Formation Fruitland Coal	17 Contractor	18 Spud Date
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water
Pit Liner Synthetic ☐ mls thick Clay ☐ Pit Volume bbls Drilling Method Closed Loop System ☐ Fresh Water ☒ Brine ☐ Diesel/Oil-based ☐ Gas/Air ☐				

19. Proposed Casing and Cement Program

Type	Hole Size	Casing Type	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	12.25	9.625	32.3	200	94	0
Int1	8.75	7	23	2972	992	0
Prod	6.25	4.5	11.6	8783	0	0

Casing/Cement Program: Additional Comments

This is a Type 1 well as indicated in the BR/COPC Master Drilling Plan. Cement volumes are indicated in cubic feet instead of sacks. The C144 will be submitted after the APD is approved. The Directional Plan, Project Proposal and plat (C102) will be hand delivered to the OCD. A copy of the designation of agent will also be delivered to the OCD. This well will only have one lateral with the producing interval will be entirely from section 16. See details in DD plan.

Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	2000	2000	Schafer

I hereby certify that the information given above is true and complete to the best of my knowledge and belief
 I further certify that the drilling pit will be constructed according to NMOC guidelines ☐, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.

Printed Name: Dollie L. Busse

Title: STAFF REG. TECH.

Email Address: dollie.l.busse@conocophillips.com

Date: 6/13/11 Phone: 505-334-6104

OIL CONSERVATION DIVISION

Approved By: [Signature]

Title: **SUPERVISOR DISTRICT # 3**

Approved Date: JUL 11 2011 Expiration Date: JUL 11 2012

Hold C104

for Directional Survey
and "As Drilled" plat

A COMPLETE C-144 MUST BE SUBMITTED TO AND APPROVED BY THE NMOC FOR: A PIT, CLOSED LOOP SYSTEM, BELOW GRADE TANK, OR PROPOSED ALTERNATIVE METHOD, PURSUANT TO NMOC PART 19.15.17, PRIOR TO THE USE OR CONSTRUCTION OF THE ABOVE APPLICATIONS.

JUL 11 2011

**NOTIFY AZTEC OCD 24-HRS.
PRIOR TO CASING & CEMENT**

Permit Comments

Operator: CONOCOPHILLIPS COMPANY , 217817

Well: SAN JUAN 32-5 UNIT #118H

API:

Created By	Comment	Comment Date
bussedl	ConocoPhillips will operate this well for Energen as stated in the attached Designation of Agent.	6/9/2011
bussedl	The designation of Agent will be hand delivered with DD plan, Project proposal and C102 plat	6/10/2011

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

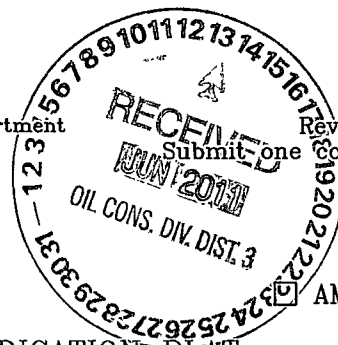
DISTRICT II
1301 West Grand Avenue, Artesia, N.M. 88210

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

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35292	² Pool Code 71629	³ Pool Name Basin FRUITLAND COAL
⁴ Property Code 38677	⁵ Property Name SAN JUAN 32-5 UNIT	⁶ Well Number 118H
⁷ OGRID No. 217817	⁸ Operator Name CONOCOPHILLIPS COMPANY	⁹ Elevation 6385'

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
G	21	32-N	6-W		2140	NORTH	2305	EAST	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
A	16	32-N	6-W		710	NORTH	710	EAST	SAN JUAN

¹² Dedicated Acres FC 320.00 ACRES E/2	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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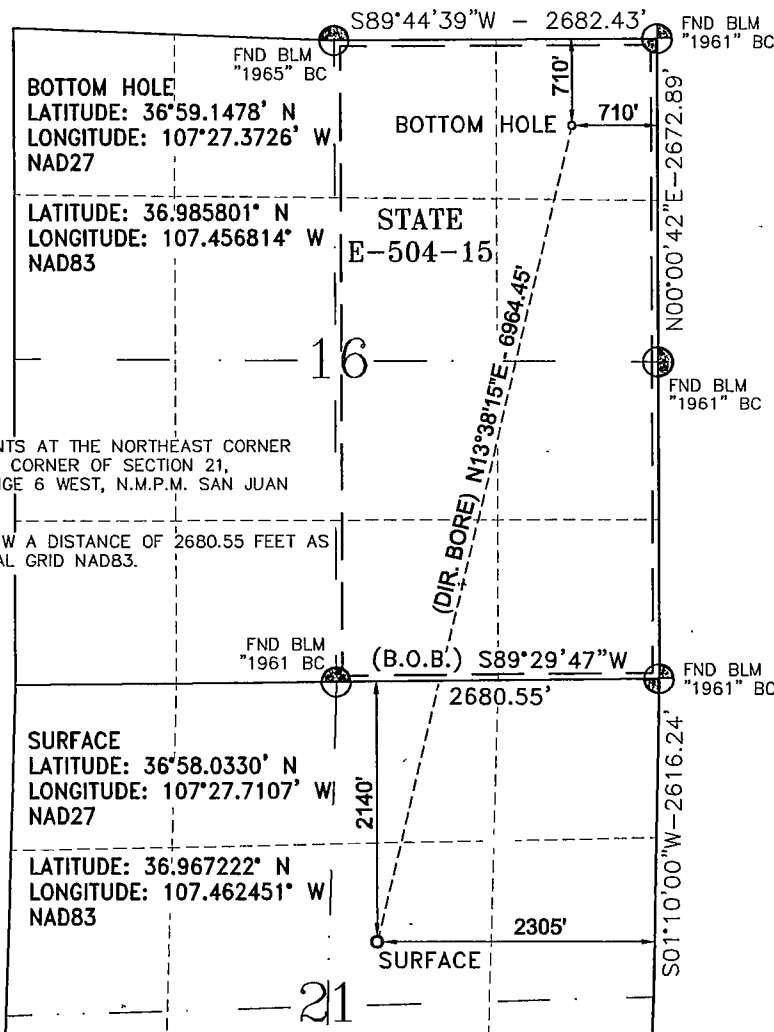
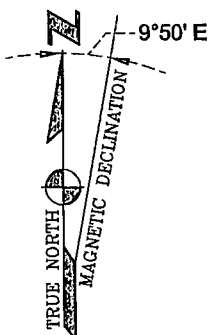
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16

BASIS OF BEARING:

BETWEEN FOUND MONUMENTS AT THE NORTHEAST CORNER AND THE NORTH QUARTER CORNER OF SECTION 21, TOWNSHIP 32 NORTH, RANGE 6 WEST, N.M.P.M. SAN JUAN COUNTY, NEW MEXICO.

LINE BEARS: S 89°29'47" W A DISTANCE OF 2680.55 FEET AS MEASURED BY G.P.S. LOCAL GRID NAD83.



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.

Brandie Blakley 3-7-11

Signature Date

Brandie Blakley

Printed Name

blaklb@conocophillips.com

E-mail Address

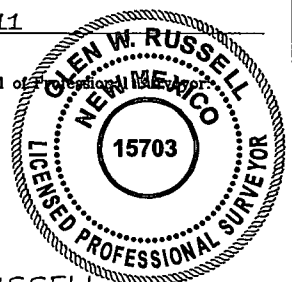
18 SURVEYOR CERTIFICATION

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.

March 3, 2011

Date of Survey

Signature and Seal of Professional Surveyor



GLEN W. RUSSELL

Certificate Number

15703

PROJECT PROPOSAL - New Drill / Sidetrack

San Juan Business Unit

SAN JUAN 32-5 UNIT 118H

DEVELOPMENT

Lease:		AFE #: WAN.CDR.0149				AFE \$: 0.00	
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						
R20001	FRUITLAND COAL(R20001)						
Location: Surface Datum Code: NAD 27 Horizontal							
Latitude: 36.967217	Longitude: -107.461846	X:	Y:	Section: 021		Range: 006W	
Footage X: 2305 FEL	Footage Y: 2140 FNL	Elevation: 6385	(FT)	Township: 032N			
Tolerance:							
Location: Bottom Hole Datum Code: NAD 27 Horizontal							
Latitude: 36.985796	Longitude: -107.456209	X:	Y:	Section: 016		Range: 006W	
Footage X: 710 FEL	Footage Y: 710 FNL	Elevation:	(FT)	Township: 032N			
Tolerance:							
Location Type: Restricted		Start Date (Est.): 1/1/2011		Completion Date:		Date In Operation:	
Formation Data: Assume KB = 6400 Units = FT							
Formation Call & Casing Points	Depth (TVD in Ft)	SS (Ft)	MD (Ft)	Depletion (Yes/No)	BHP (PSIG)	BHT	Remarks
Surface Casing	200	6200		☐			12-1/4" hole, 9-5/8" 32.3 ppf, H-40, STC casing. Cement w/ 94 cuft. Circulated Cmt to surface.
NACIMIENTO	773	5627		☐			
OJO ALAMO	2223	4177		☐			
KIRTLAND	2323	4077		☐			
FRUITLAND	2728	3672		☐			
PATH AT BH LATERAL	2944	3456		☐			
PATH 6500' F/SHL LATERAL	2946	3454		☐			
PATH 6000' F/SHL LATERAL	2951	3450		☐			
PATH 5500' F/SHL LATERAL	2956	3445		☐			
PATH 5000' F/SHL LATERAL	2959	3442		☐			
PATH 4500' F/SHL LATERAL	2962	3439		☐			
PATH 4000' F/SHL LATERAL	2965	3436		☐			
PATH 3500' F/SHL LATERAL	2967	3434		☐			
PATH 3000' F/SHL LATERAL	2970	3431		☐			
PATH 2500' F/SHL LATERAL	2972	3429		☐			
TOP TARGET COAL	2972	3428		☐			
Intermediate Casing	2972	3428		☐			8 3/4" hole, 7" 23# J-55 LTC CSG, Cement with 992 cu. ft. Circulate cement to surface.
PATH 2000' F/SHL LATERAL	2975	3426		☐			
PATH 1500' F/SHL LATERAL	2978	3422		☐			
PATH 1000' F/SHL LATERAL	2981	3419		☐			
PATH 500' F/SHL LATERAL	2985	3416		☐			

ConocoPhillips or its affiliates

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well SJ 32-5 #118H
Company:	ConocoPhillips SJB	TVD Reference:	RKB @ 6400.0ft (AWS 730)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	RKB @ 6400.0ft (AWS 730)
Site:	San Juan 32 Wells	North Reference:	True
Well:	SJ 32-5 #118H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan #1		

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

Site	San Juan 32 Wells		
Site Position:		Northing:	2,159,823.69 ft
From:	Lat/Long	Easting:	546,813.37 ft
Position Uncertainty:	15.0 ft	Slot Radius:	"
		Latitude:	36° 56' 7.765 N
		Longitude:	107° 40' 23.366 W
		Grid Convergence:	0.10 °

Well	SJ 32-5 #118H, Horizontal New Drill		
Well Position	+N/-S	0.0 ft	Northing: 2,171,546.17 ft
	+E/-W	0.0 ft	Easting: 608,526.53 ft
Position Uncertainty	3.5 ft	Wellhead Elevation:	6,385.0 ft
		Latitude:	36° 58' 1.980 N
		Longitude:	107° 27' 42.648 W
		Ground Level:	6,385.0 ft

Wellbore	Original Hole		
Magnetics	Model Name	Sample Date	Declination
			(°)
	BGGM2011	6/7/2011	9.80
			Dip Angle
			(°)
			63.72
			Field Strength
			(nT)
			50,887

Design	Plan #1		
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
			(°)
			13.63

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(ft)	(ft)	Rate	Rate	Rate	(°)	
(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	
282.1	0.00	0.00	282.1	0.0	0.0	0.00	0.00	0.00	0.00	
4,507.4	90.00	13.63	2,972.0	2,614.2	633.9	2.13	2.13	0.00	13.63	
4,749.5	90.00	13.63	2,972.0	2,849.4	690.9	0.00	0.00	0.00	0.00	Vs Coal Entry 2932
8,782.6	90.80	13.63	2,944.0	6,768.8	1,641.3	0.02	0.02	0.00	0.00	TD Target

ConocoPhillips or its affiliates

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well SJ 32-5 #118H
Company:	ConocoPhillips SJB	TVD Reference:	RKB @ 6400.0ft (AWS 730)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	RKB @ 6400.0ft (AWS 730)
Site:	San Juan 32 Wells	North Reference:	True
Well:	SJ 32-5 #118H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan #1		

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
Surf CSG									
282.1	0.00	0.00	282.1	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.38	13.63	300.0	0.1	0.0	0.1	2.13	2.13	0.00
Plan @ 300.0 (SJ 32-5 #118H Original Hole Plan #1)									
400.0	2.51	13.63	400.0	2.5	0.6	2.6	2.13	2.13	0.00
500.0	4.64	13.63	499.8	8.6	2.1	8.8	2.13	2.13	0.00
600.0	6.77	13.63	599.3	18.2	4.4	18.8	2.13	2.13	0.00
700.0	8.90	13.63	698.3	31.5	7.6	32.4	2.13	2.13	0.00
775.8	10.52	13.63	773.0	43.9	10.6	45.2	2.13	2.13	0.00
Nacimiento									
800.0	11.03	13.63	796.8	48.3	11.7	49.7	2.13	2.13	0.00
900.0	13.16	13.63	894.6	68.7	16.7	70.7	2.13	2.13	0.00
1,000.0	15.29	13.63	991.5	92.6	22.4	95.2	2.13	2.13	0.00
1,100.0	17.42	13.63	1,087.5	119.9	29.1	123.4	2.13	2.13	0.00
1,200.0	19.55	13.63	1,182.3	150.7	36.6	155.1	2.13	2.13	0.00
1,300.0	21.68	13.63	1,275.9	185.0	44.8	190.3	2.13	2.13	0.00
1,400.0	23.81	13.63	1,368.1	222.5	54.0	229.0	2.13	2.13	0.00
1,500.0	25.94	13.63	1,458.8	263.4	63.9	271.0	2.13	2.13	0.00
1,600.0	28.07	13.63	1,547.9	307.5	74.6	316.5	2.13	2.13	0.00
1,700.0	30.20	13.63	1,635.2	354.9	86.0	365.1	2.13	2.13	0.00
1,800.0	32.33	13.63	1,720.7	405.3	98.3	417.0	2.13	2.13	0.00
1,900.0	34.46	13.63	1,804.2	458.8	111.2	472.1	2.13	2.13	0.00
2,000.0	36.59	13.63	1,885.6	515.3	124.9	530.2	2.13	2.13	0.00
2,100.0	38.72	13.63	1,964.7	574.6	139.3	591.3	2.13	2.13	0.00
2,200.0	40.85	13.63	2,041.6	636.8	154.4	655.3	2.13	2.13	0.00
2,300.0	42.98	13.63	2,116.0	701.7	170.2	722.1	2.13	2.13	0.00
2,400.0	45.11	13.63	2,187.9	769.3	186.5	791.6	2.13	2.13	0.00
2,450.3	46.18	13.63	2,223.0	804.2	195.0	827.5	2.13	2.13	0.00
Ojo Alamo									
2,500.0	47.24	13.63	2,257.1	839.4	203.5	863.7	2.13	2.13	0.00
2,599.1	49.35	13.63	2,323.0	911.3	221.0	937.7	2.13	2.13	0.00
Kirtland									
2,600.0	49.37	13.63	2,323.6	912.0	221.1	938.4	2.13	2.13	0.00
2,700.0	51.50	13.63	2,387.3	986.9	239.3	1,015.5	2.13	2.13	0.00
2,800.0	53.63	13.63	2,448.1	1,064.1	258.0	1,094.9	2.13	2.13	0.00
2,900.0	55.76	13.63	2,505.9	1,143.4	277.2	1,176.5	2.13	2.13	0.00
3,000.0	57.89	13.63	2,560.6	1,224.7	297.0	1,260.2	2.13	2.13	0.00
3,100.0	60.02	13.63	2,612.1	1,308.0	317.2	1,345.9	2.13	2.13	0.00
3,200.0	62.15	13.63	2,660.5	1,393.0	337.8	1,433.4	2.13	2.13	0.00
3,300.0	64.28	13.63	2,705.5	1,479.8	358.8	1,522.7	2.13	2.13	0.00
3,352.8	65.41	13.63	2,728.0	1,526.3	370.1	1,570.5	2.13	2.13	0.00
Fruitland									
3,400.0	66.41	13.63	2,747.2	1,568.1	380.2	1,613.6	2.13	2.13	0.00
3,500.0	68.54	13.63	2,785.6	1,657.9	402.0	1,705.9	2.13	2.13	0.00
3,600.0	70.67	13.63	2,820.4	1,749.0	424.1	1,799.6	2.13	2.13	0.00
3,700.0	72.80	13.63	2,851.7	1,841.2	446.5	1,894.6	2.13	2.13	0.00
3,800.0	74.93	13.63	2,879.5	1,934.6	469.1	1,990.7	2.13	2.13	0.00
3,900.0	77.06	13.63	2,903.7	2,028.9	492.0	2,087.7	2.13	2.13	0.00
4,000.0	79.19	13.63	2,924.3	2,124.0	515.0	2,185.5	2.13	2.13	0.00
4,100.0	81.32	13.63	2,941.2	2,219.8	538.2	2,284.1	2.13	2.13	0.00

ConocoPhillips or its affiliates

Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well SJ 32-5 #118H
Company:	ConocoPhillips SJB	TVD Reference:	RKB @ 6400.0ft (AWS 730)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	RKB @ 6400.0ft (AWS 730)
Site:	San Juan 32 Wells	North Reference:	True
Well:	SJ 32-5 #118H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan #1		

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)
4,200.0	83.45	13.63	2,954.5	2,316.1	561.6	2,383.2	2.13	2.13	0.00
4,300.0	85.58	13.63	2,964.0	2,412.8	585.1	2,482.7	2.13	2.13	0.00
4,400.0	87.71	13.63	2,969.9	2,509.8	608.6	2,582.6	2.13	2.13	0.00
4,500.0	89.84	13.63	2,972.0	2,607.0	632.1	2,682.5	2.13	2.13	0.00
4,507.4	90.00	13.63	2,972.0	2,614.2	633.9	2,689.9	2.13	2.13	0.00
4,600.0	90.00	13.63	2,972.0	2,704.2	655.7	2,782.5	0.00	0.00	0.00
4,700.0	90.00	13.63	2,972.0	2,801.4	679.3	2,882.5	0.00	0.00	0.00
4,749.0	90.00	13.63	2,972.0	2,849.0	690.8	2,931.5	0.00	0.00	0.00
Int CSG									
4,749.5	90.00	13.63	2,972.0	2,849.4	690.9	2,932.0	0.00	0.00	0.00
Vs Coal Entry 2932									
4,800.0	90.01	13.63	2,972.0	2,898.5	702.8	2,982.5	0.02	0.02	0.00
4,817.5	90.01	13.63	2,972.0	2,915.5	707.0	3,000.0	0.02	0.02	0.00
3000 Vs									
4,900.0	90.03	13.63	2,972.0	2,995.7	726.4	3,082.5	0.02	0.02	0.00
5,000.0	90.05	13.63	2,971.9	3,092.9	750.0	3,182.5	0.02	0.02	0.00
5,100.0	90.07	13.63	2,971.8	3,190.1	773.5	3,282.5	0.02	0.02	0.00
5,200.0	90.09	13.63	2,971.7	3,287.3	797.1	3,382.5	0.02	0.02	0.00
5,300.0	90.11	13.63	2,971.5	3,384.5	820.7	3,482.5	0.02	0.02	0.00
5,317.5	90.11	13.63	2,971.4	3,401.4	824.8	3,500.0	0.02	0.02	0.00
3500 Vs									
5,400.0	90.13	13.63	2,971.3	3,481.6	844.2	3,582.5	0.02	0.02	0.00
5,500.0	90.15	13.63	2,971.0	3,578.8	867.8	3,682.5	0.02	0.02	0.00
5,600.0	90.17	13.63	2,970.8	3,676.0	891.4	3,782.5	0.02	0.02	0.00
5,700.0	90.19	13.63	2,970.4	3,773.2	914.9	3,882.5	0.02	0.02	0.00
5,800.0	90.21	13.63	2,970.1	3,870.4	938.5	3,982.5	0.02	0.02	0.00
5,817.5	90.21	13.63	2,970.0	3,887.4	942.6	4,000.0	0.02	0.02	0.00
4000 Vs									
5,900.0	90.23	13.63	2,969.7	3,967.6	962.1	4,082.5	0.02	0.02	0.00
6,000.0	90.25	13.63	2,969.3	4,064.7	985.6	4,182.5	0.02	0.02	0.00
6,100.0	90.27	13.63	2,968.9	4,161.9	1,009.2	4,282.5	0.02	0.02	0.00
6,200.0	90.29	13.63	2,968.4	4,259.1	1,032.7	4,382.5	0.02	0.02	0.00
6,300.0	90.31	13.63	2,967.9	4,356.3	1,056.3	4,482.5	0.02	0.02	0.00
6,317.5	90.31	13.63	2,967.8	4,373.3	1,060.4	4,500.0	0.02	0.02	0.00
4500 Vs									
6,400.0	90.33	13.63	2,967.3	4,453.5	1,079.9	4,582.5	0.02	0.02	0.00
6,500.0	90.35	13.63	2,966.7	4,550.7	1,103.4	4,682.5	0.02	0.02	0.00
6,600.0	90.37	13.63	2,966.1	4,647.8	1,127.0	4,782.5	0.02	0.02	0.00
6,700.0	90.38	13.63	2,965.5	4,745.0	1,150.6	4,882.5	0.02	0.02	0.00
6,800.0	90.40	13.63	2,964.8	4,842.2	1,174.1	4,982.5	0.02	0.02	0.00
6,817.5	90.41	13.63	2,964.6	4,859.2	1,178.3	5,000.0	0.02	0.02	0.00
5000 Vs									
6,900.0	90.42	13.63	2,964.0	4,939.4	1,197.7	5,082.5	0.02	0.02	0.00
7,000.0	90.44	13.63	2,963.3	5,036.6	1,221.3	5,182.5	0.02	0.02	0.00
7,100.0	90.46	13.63	2,962.5	5,133.7	1,244.8	5,282.5	0.02	0.02	0.00
7,200.0	90.48	13.63	2,961.7	5,230.9	1,268.4	5,382.5	0.02	0.02	0.00
7,300.0	90.50	13.63	2,960.8	5,328.1	1,292.0	5,482.5	0.02	0.02	0.00
7,317.5	90.51	13.63	2,960.6	5,345.1	1,296.1	5,500.0	0.02	0.02	0.00
5500 Vs									
7,400.0	90.52	13.63	2,959.9	5,425.3	1,315.5	5,582.5	0.02	0.02	0.00
7,500.0	90.54	13.63	2,959.0	5,522.5	1,339.1	5,682.5	0.02	0.02	0.00
7,600.0	90.56	13.63	2,958.0	5,619.6	1,362.6	5,782.5	0.02	0.02	0.00

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Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well SJ 32-5 #118H
Company:	ConocoPhillips SJB	TVD Reference:	RKB @ 6400.0ft (AWS 730)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	RKB @ 6400.0ft (AWS 730)
Site:	San Juan 32 Wells	North Reference:	True
Well:	SJ 32-5 #118H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan #1		

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)
7,700.0	90.58	13.63	2,957.0	5,716.8	1,386.2	5,882.5	0.02	0.02	0.00
7,800.0	90.60	13.63	2,956.0	5,814.0	1,409.8	5,982.5	0.02	0.02	0.00
7,817.6	90.61	13.63	2,955.8	5,831.1	1,413.9	6,000.1	0.02	0.02	0.00
6000 Vs									
7,900.0	90.62	13.63	2,954.9	5,911.2	1,433.3	6,082.5	0.02	0.02	0.00
8,000.0	90.64	13.63	2,953.8	6,008.4	1,456.9	6,182.5	0.02	0.02	0.00
8,100.0	90.66	13.63	2,952.7	6,105.5	1,480.5	6,282.5	0.02	0.02	0.00
8,200.0	90.68	13.63	2,951.5	6,202.7	1,504.0	6,382.5	0.02	0.02	0.00
8,300.0	90.70	13.63	2,950.3	6,299.9	1,527.6	6,482.4	0.02	0.02	0.00
8,317.6	90.70	13.63	2,950.1	6,317.0	1,531.7	6,500.1	0.02	0.02	0.00
6500' Vs									
8,400.0	90.72	13.63	2,949.1	6,397.1	1,551.2	6,582.4	0.02	0.02	0.00
8,500.0	90.74	13.63	2,947.8	6,494.2	1,574.7	6,682.4	0.02	0.02	0.00
8,600.0	90.76	13.63	2,946.5	6,591.4	1,598.3	6,782.4	0.02	0.02	0.00
8,700.0	90.78	13.63	2,945.1	6,688.6	1,621.8	6,882.4	0.02	0.02	0.00
8,775.0	90.79	13.63	2,944.1	6,761.5	1,639.5	6,957.4	0.02	0.02	0.00
Perforated Liner									
8,782.6	90.80	13.63	2,944.0	6,768.8	1,641.3	6,965.0	0.02	0.02	0.00
TD Target									

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Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well SJ 32-5 #118H
Company:	ConocoPhillips SJBU	TVD Reference:	RKB @ 6400.0ft (AWS, 730)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	RKB @ 6400.0ft (AWS 730)
Site:	San Juan 32 Wells	North Reference:	True
Well:	SJ 32-5 #118H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan #1		

Targets									
Target Name	- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	
- Shape		(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	
									Latitude Longitude
Vs Coal Entry 2932		0.00	0 00	2,972.0	2,849.4	690.9	2,174,398.07	609,206.30	36° 58' 30.154 N 107° 27' 34.134 W
- plan hits target center									
- Point									
4000 Vs		0 00	0 00	2,965.0	3,887.4	942.6	2,175,436.89	609,453.91	36° 58' 40.417 N 107° 27' 31.032 W
- plan misses target center by 5.0ft at 5817.5ft MD (2970.0 TVD, 3887.4 N, 942.6 E)									
- Point									
3500 Vs		0 00	0 00	2,967.0	3,401.4	824.8	2,174,950.55	609,337.99	36° 58' 35.612 N 107° 27' 32.484 W
- plan misses target center by 4.4ft at 5317.5ft MD (2971.4 TVD, 3401.4 N, 824.8 E)									
- Point									
5000 Vs		0.00	0 00	2,959.0	4,859.2	1,178.3	2,176,409.57	609,685.75	36° 58' 50.026 N 107° 27' 28.127 W
- plan misses target center by 5.6ft at 6817.5ft MD (2964.6 TVD, 4859.2 N, 1178.3 E)									
- Point									
6000 Vs		0.00	0 00	2,951.0	5,831.0	1,413.9	2,177,382.26	609,917.60	36° 58' 59.635 N 107° 27' 25.222 W
- plan misses target center by 4.8ft at 7817.6ft MD (2955.8 TVD, 5831.1 N, 1413.9 E)									
- Point									
Plan @ 300.0 (SJ 32-				300.0	0.0	0.0	2,171,546.17	608,526.53	36° 58' 1.980 N 107° 27' 42.648 W
- plan hits target center									
- Point									
6500' Vs		0.00	0 00	2,946.0	6,316.9	1,531.7	2,177,868.60	610,033.52	36° 59' 4.440 N 107° 27' 23.770 W
- plan misses target center by 4.1ft at 8317.6ft MD (2950.1 TVD, 6317.0 N, 1531.7 E)									
- Point									
TD Target		0.00	0 00	2,944.0	6,768.8	1,641.3	2,178,320.89	610,141.32	36° 59' 8.908 N 107° 27' 22.419 W
- plan hits target center									
- Circle (radius 20.0)									
4500 Vs		0.00	0 00	2,962.0	4,373.3	1,060.4	2,175,923.23	609,569.83	36° 58' 45.221 N 107° 27' 29.580 W
- plan misses target center by 5.8ft at 6317.5ft MD (2967.8 TVD, 4373.3 N, 1060.4 E)									
- Point									
3000 Vs		0.00	0 00	2,970.0	2,915.5	707.0	2,174,464.21	609,222.06	36° 58' 30.808 N 107° 27' 33.936 W
- plan misses target center by 2.0ft at 4817.5ft MD (2972.0 TVD, 2915.5 N, 707.0 E)									
- Point									
5500 Vs		0 00	0 00	2,956.0	5,345.1	1,296.1	2,176,895.91	609,801.67	36° 58' 54.830 N 107° 27' 26.675 W
- plan misses target center by 4.6ft at 7317.5ft MD (2960.6 TVD, 5345.1 N, 1296.1 E)									
- Point									

Casing Points					
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter	
(ft)	(ft)		(")	(")	
4,749.0	2,972.0	Int CSG	7	8-3/4	
8,775.0	2,944.1	Perforated Liner	4-1/2	6-1/4	
200.0	200.0	Surf CSG	9-5/8	12-1/4	

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Planning Report

Database:	EDM Central Planning	Local Co-ordinate Reference:	Well SJ 32-5 #118H
Company:	ConocoPhillips SJBU	TVD Reference:	RKB @ 6400.0ft (AWS 730)
Project:	San Juan Basin - New Mexico West Wells	MD Reference:	RKB @ 6400.0ft (AWS 730)
Site:	San Juan 32 Wells	North Reference:	True
Well:	SJ 32-5 #118H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	Plan #1		

Formations						
	Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	775.8	773.0	Nacimiento		0.00	
	3,352.8	2,728.0	Fruitland		0.00	
	2,599.1	2,323.0	Kirtland		0.00	
	2,450.3	2,223.0	Ojo Alamo		0.00	

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San Juan 32-5 118H

