

Lowe, Leonard, EMNRD

From: Lowe, Leonard, EMNRD
Sent: Thursday, March 29, 2018 11:25 AM
To: 'Sandoz, Christopher'
Cc: Powell, Brandon, EMNRD (Brandon.Powell@state.nm.us); Jones, William V, EMNRD
Subject: RE: BP America Production Company - Northeast Blanco Unit 605 Com 1H - API 30-045-35851

Importance: High

Mr. Christopher Sandoz,

The OCD Engineering Bureau has concluded that NO NSL amendment is required for this well. The Well is to be drilled in a more orthodox location and there are no new affected tracts.

Please provide an updated Form C-102 to the OCD field office to be placed in the Well File.

Thank you,

Leonard Lowe

Engineering Bureau
Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St. Frances
Santa Fe, New Mexico 87004
Office: 505-476-3492
Cell: 505-930-6717
Fax: 505-476-3462
E-mail: leonard.lowe@state.nm.us
Website: <http://www.emnrd.state.nm.us/ocd/>

From: Sandoz, Christopher <Christopher.Sandoz@bp.com>
Sent: Thursday, March 29, 2018 10:10 AM
To: Lowe, Leonard, EMNRD <Leonard.Lowe@state.nm.us>
Subject: RE: BP America Production Company - Northeast Blanco Unit 605 Com 1H - API 30-045-35851

Mr. Lowe – that is correct with the exception of LTP which is 700' FSL & 250' FEL. Also, use of a drilling buffer 100' toward the south line would result in an FTP of 603' FSL, an LTP of 600' FSL and a BHL of 600' FSL.

Thanks,
Chris

From: Lowe, Leonard, EMNRD [<mailto:Leonard.Lowe@state.nm.us>]
Sent: Thursday, March 29, 2018 9:58 AM
To: Sandoz, Christopher
Subject: RE: BP America Production Company - Northeast Blanco Unit 605 Com 1H - API 30-045-35851

Mr. Christopher Sandoz,

Good morning.

From what I could make out of your submitted information.

This is what I concluded to be the location of the well.

SL: 440' FSL & 805' FEL
FTP: 703' FSL & 855' FEL
LTP: 700' FSL & 50' FEL
BL: 700' FSL & 50' FEL

Correct?

Prior to determining my reply, I want to ensure that all information I need is sufficient to conclude.

THANKS!

Leonard Lowe

Engineering Bureau

Oil Conservation Division

Energy Minerals and Natural Resources Department

1220 South St. Frances

Santa Fe, New Mexico 87004

Office: 505-476-3492

Cell: 505-930-6717

Fax: 505-476-3462

E-mail: leonard.lowe@state.nm.us

Website: <http://www.emnrd.state.nm.us/ocd/>

From: Sandoz, Christopher <Christopher.Sandoz@bp.com>

Sent: Thursday, March 29, 2018 8:52 AM

To: Lowe, Leonard, EMNRD <Leonard.Lowe@state.nm.us>

Subject: BP America Production Company - Northeast Blanco Unit 605 Com 1H - API 30-045-35851

Mr. Lowe,

We have received NMOCD District Office approval to sidetrack our Northeast Blanco Unit 605 Com 1H well. The original lateral was unorthodox (NSL-7611) and was dilled as planned, however a problem occurred during cementing of the production casing resulting in the original hole being filled with cement. The replacement sidetrack will be drilled and completed ~260' north of the original lateral which is an orthodox location (or less exceptional than the previously authorized NSL if a +/- 100' drilling buffer is used).

Per the note below from the NMOCD Aztec District Office, I am seeking your guidance on whether it is necessary to modify the previously approved NSL. I have attached a copy of the revised location plat, C-102, directional drilling plan and a copy of the previously approved NSL Order.

Any guidance or direction you can provide is much appreciated. Please let me know if you have any question or if you need additional information.

Thank you,
Chris

Chris Sandoz

Regulatory Engineer
BP America Production Co – Lower 48 Onshore
832-619-6423 (office)
225-235-5230 (mobile)

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From: Powell, Brandon, EMNRD [<mailto:Brandon.Powell@state.nm.us>]
Sent: Thursday, March 29, 2018 8:07 AM
To: Sandoz, Christopher
Cc: Colvin, Toya; Perrin, Charlie, EMNRD; Pickford, Katherine, EMNRD
Subject: RE: Well NEBU 605 COM 1H

Good morning Chris,

You have our approval to proceed as approved by the BLM with the below conditions;

- Notify Aztec OCD 24hrs prior to casing & cement.
- Notify the OCD Engineering Bureau of the change in setbacks to see if an amended NSL will be necessary prior to C-104 approval.
- Adhere to any other previously issued conditions.

These conditions will be added to the application once it is received from the BLM. You may proceed using this email as approval until the application is approved and scanned in.

Thank You

Brandon Powell
Office: (505) 334-6178 ext. 116
"He who wishes to gain knowledge is wiser than he who thinks he has knowledge (unknown)"

From: Sandoz, Christopher <Christopher.Sandoz@bp.com>
Sent: Tuesday, March 27, 2018 10:58 AM
To: Powell, Brandon, EMNRD <Brandon.Powell@state.nm.us>
Cc: Colvin, Toya <Toya.Colvin@bp.com>
Subject: FW: Well NEBU 605 COM 1H

Brandon,
Please see attached BLM approved procedure to sidetrack our Northeast Blanco 605 Com 1H well. We had a problem cementing the liner and the original hole is full of cement. We are currently finishing up drilling on the 605 2H and the rig should be ready to skid back to the 605 1H on Friday 3/30. Please let me know if you have any questions or if you need additional information. Our drilling engineer, Steven Herrin, and I are available to discuss at your convenience.
Thank you,
Chris

Chris Sandoz

Regulatory Engineer
BP America Production Co – Lower 48 Onshore
832-619-6423 (office)
225-235-5230 (mobile)

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From: Colvin, Toya
Sent: Tuesday, March 27, 2018 10:32 AM
To: Sandoz, Christopher
Cc: Clutter, Heather J
Subject: FW: Well NEBU 605 COM 1H

BLM Approval for Sidetrack

Toya Colvin
Regulatory Analyst
BP America Production Company
Lower 48 - West Business Unit - SJS
(281) 892-5369

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-----Original Message-----

From: jwsavage@blm.gov [<mailto:jwsavage@blm.gov>]
Sent: Tuesday, March 27, 2018 10:05 AM
To: Colvin, Toya
Subject: Well NEBU 605 COM 1H

The sundry for Change to Original APD you submitted has been approved by the BLM. Your original Electronic Commerce (EC) transmission was assigned ID 409083. Please be sure to open and save all attachments to this message, since they contain important information.

District I

1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

District II

811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III

1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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 August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-35851	² Pool Code 97232	³ Pool Name Mancos Gas
⁴ Property Code 319806	⁵ Property Name Northeast Blanco Unit 605 Com	
⁷ OGRID No. 000778	⁸ Operator Name BP America Production Company	⁶ Well Number 1H
		⁹ Elevation 6471

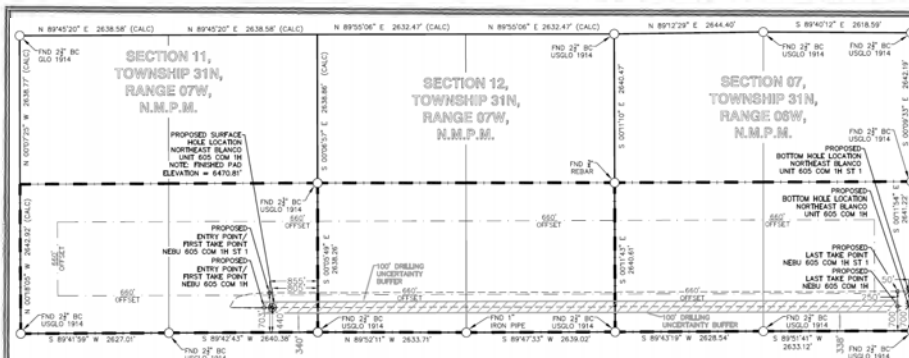
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	11	31N	07W		440	South	805	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
P	07	31N	06W		700	South	50	East	San Juan

¹² Dedicated Acres 960.00 -	S/2 - SEC. 11, T31N, R07W S/2 - SEC. 12, T31N, R07W S/2 - SEC. 07, T31N, R06W	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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.				



LEGEND

FOUND MONUMENT O
PROPOSED SURFACE HOLE LOCATION *
PROPOSED BOTTOM HOLE LOCATION X

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: Randall Marshall Date: 03/23/2018

Randall Marshall

Printed Name

randall.marshall@bp.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.

Date of Survey: 6-13-17

Signature and Seal of Professional Surveyor

Certificate Number

17078



NEBU 605 COM 1H	NMWZ NAD'83	NAD'83	TIES
PROPOSED SURFACE HOLE LOCATION (SHL)	N (Y) = 2,149,972.24' E (X) = 2,810,585.35'	LAT. = 36.90798961°N LON. = 107.53406636°W	FSL = 440' FEL = 805'
PROPOSED ENTRY POINT (EP)/FIRST TAKE POINT (FTP)	N (Y) = 2,149,973.34' E (X) = 2,810,438.71'	LAT. = 36.90799390°N LON. = 107.53456792°W	FSL = 441' FEL = 952'
PROPOSED LAST TAKE POINT (LTP)	N (Y) = 2,149,996.79' E (X) = 2,821,674.14'	LAT. = 36.90795545°N LON. = 107.49613808°W	FSL = 438' FEL = 250'
PROPOSED BOTTOM HOLE LOCATION (BHL)	N (Y) = 2,149,997.24' E (X) = 2,821,874.14'	LAT. = 36.90795474°N LON. = 107.49545400°W	FSL = 438' FEL = 50'
PROPOSED ENTRY POINT (EP)/FIRST TAKE POINT (FTP) ST 1	N (Y) = 2,150,235.34' E (X) = 2,810,535.40'	LAT. = 36.90871271°N LON. = 107.53423439°W	FSL = 703' FEL = 855'
PROPOSED LAST TAKE POINT (LTP) ST 1	N (Y) = 2,150,258.82' E (X) = 2,821,673.23'	LAT. = 36.90867519°N LON. = 107.49613802°W	FSL = 700' FEL = 250'
PROPOSED BOTTOM HOLE LOCATION (BHL) ST 1	N (Y) = 2,150,259.24' E (X) = 2,821,873.23'	LAT. = 36.90867440°N LON. = 107.49545394°W	FSL = 700' FEL = 50'

E-mail
Attachment
THREE



Company: B.P.
Project: San Juan County, NM NAD83
Site: NEBU 605 Pad
Well: NEBU 605 1H
Wellbore: Lateral Re-Drill
Design: Plan #2

PROJECT DETAILS: San Juan County, NM NAD83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Western Zone
System Datum: Mean Sea Level
Local North: Grid



Azimuths to Grid North
True North: -0.18°
Magnetic North: 8.84°

Magnetic Field
Strength: 49959.4snT
Dip Angle: 63.50°
Date: 3/16/2018
Model: HDGM

WELL DETAILS: NEBU 605 1H

+N/-S	+E/-W	GL 6471' & RKB 25' @ 6496.00usft (Aztec 1000)	Northing	Easting	Latitude	Longitude
0.00	0.00		2149972.24	2810585.35	36.9079896	-107.5340664

Plan: Plan #2 (NEBU 605 1H/Lateral Re-Drill)

Created By: Janie Collins Date: 9:18, March 22 2018

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
605 1H LP	7255.00	263.10	-49.95	2150235.34	2810535.40
605 1H RD BHL	7295.00	287.00	11287.88	2150259.24	2821873.23
605 1H First Prod	7255.00	263.10	-147.21	2150235.34	2810438.14
605 1H RD Last Prod	7295.00	286.58	11087.88	2150258.82	2821673.23

SECTION DETAILS

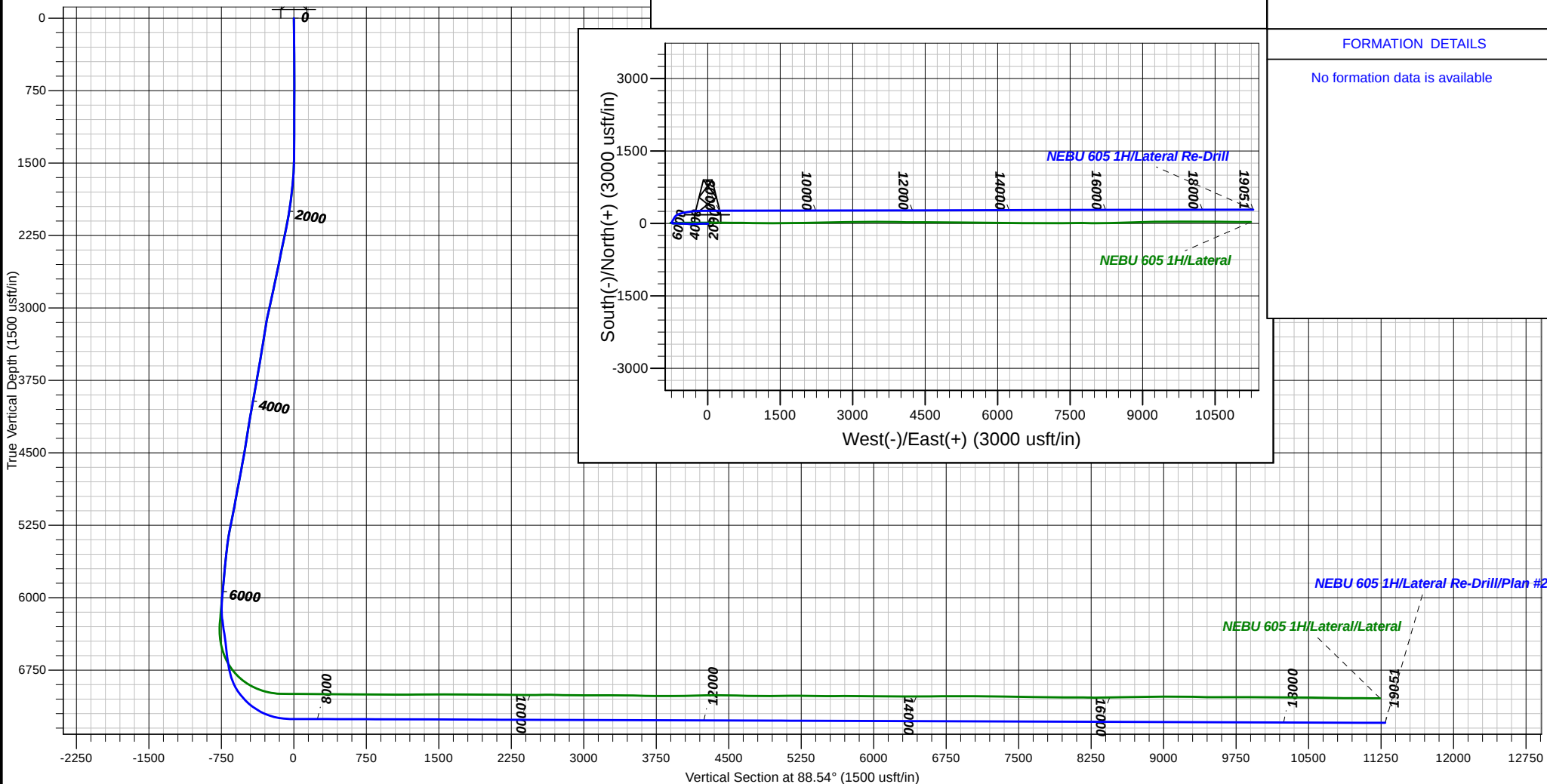
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
6008.00	5.07	279.22	5942.85	5.08	-738.63	0.00	0.00	-738.26	
6098.00	5.07	279.22	6032.49	6.35	-746.47	0.00	0.00	-746.07	
6287.30	14.59	29.84	6219.75	28.54	-742.83	9.00	126.40	-741.87	
6795.99	14.59	29.84	6712.03	139.73	-679.06	0.00	0.00	-675.29	
7713.49	89.80	89.88	7255.00	263.10	-49.95	9.00	60.90	-43.25	605 1H LP
19051.41	89.80	89.88	7295.00	287.00	11287.88	0.00	0.00	11291.53	605 1H RD BHL

CASING DETAILS

No casing data is available

FORMATION DETAILS

No formation data is available





B.P.

San Juan County, NM NAD83

NEBU 605 Pad

NEBU 605 1H

Lateral Re-Drill

Plan: Plan #2

Standard Planning Report

22 March, 2018





Database:	Grand Junction District	Local Co-ordinate Reference:	Well NEBU 605 1H
Company:	B.P.	TVD Reference:	GL 6471' & RKB 25' @ 6496.00usft (Aztec 1000)
Project:	San Juan County, NM NAD83	MD Reference:	GL 6471' & RKB 25' @ 6496.00usft (Aztec 1000)
Site:	NEBU 605 Pad	North Reference:	Grid
Well:	NEBU 605 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral Re-Drill		
Design:	Plan #2		

Project	San Juan County, NM NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site		NEBU 605 Pad			
Site Position:		Northing:	2,149,972.24 usft	Latitude:	36.9079896
From:	Map	Easting:	2,810,585.35 usft	Longitude:	-107.5340664
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.18 °

Well	NEBU 605 1H					
Well Position	+N/-S	0.00 usft	Northing:	2,149,972.24 usft	Latitude:	36.9079896
	+E/-W	0.00 usft	Easting:	2,810,585.35 usft	Longitude:	-107.5340664
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,471.00 usft

Wellbore	Lateral Re-Drill				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/16/2018	9.02	63.50	49,959

Design	Plan #2				
Audit Notes:					
Version:	Phase:	PLAN		Tie On Depth:	6,008.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	88.54	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
6,008.00	5.07	279.22	5,942.85	5.08	-738.63	0.00	0.00	0.00	0.00	
6,098.00	5.07	279.22	6,032.49	6.35	-746.47	0.00	0.00	0.00	0.00	
6,287.30	14.59	29.84	6,219.75	28.54	-742.83	9.00	5.03	58.44	126.40	
6,795.99	14.59	29.84	6,712.03	139.73	-679.06	0.00	0.00	0.00	0.00	
7,713.49	89.80	89.88	7,255.00	263.10	-49.95	9.00	8.20	6.54	60.90	605 1H LP
19,051.42	89.80	89.88	7,295.00	287.00	11,287.88	0.00	0.00	0.00	0.00	605 1H RD BHL



Database:	Grand Junction District	Local Co-ordinate Reference:	Well NEBU 605 1H
Company:	B.P.	TVD Reference:	GL 6471' & RKB 25' @ 6496.00usft (Aztec 1000)
Project:	San Juan County, NM NAD83	MD Reference:	GL 6471' & RKB 25' @ 6496.00usft (Aztec 1000)
Site:	NEBU 605 Pad	North Reference:	Grid
Well:	NEBU 605 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral Re-Drill		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,008.00	5.07	279.22	5,942.85	5.08	-738.63	-738.26	0.00	0.00	0.00
6,098.00	5.07	279.22	6,032.49	6.35	-746.47	-746.07	0.00	0.00	0.00
6,100.00	4.96	280.89	6,034.49	6.38	-746.64	-746.24	9.00	-5.23	83.77
6,200.00	7.39	12.39	6,134.09	13.49	-749.52	-748.93	9.00	2.43	91.49
6,287.30	14.59	29.84	6,219.75	28.54	-742.83	-741.87	9.00	8.25	19.99
6,300.00	14.59	29.84	6,232.04	31.32	-741.24	-740.20	0.00	0.00	0.00
6,400.00	14.59	29.84	6,328.82	53.17	-728.70	-727.12	0.00	0.00	0.00
6,500.00	14.59	29.84	6,425.59	75.03	-716.17	-714.03	0.00	0.00	0.00
6,600.00	14.59	29.84	6,522.36	96.89	-703.63	-700.94	0.00	0.00	0.00
6,700.00	14.59	29.84	6,619.14	118.75	-691.09	-687.85	0.00	0.00	0.00
6,795.99	14.59	29.84	6,712.03	139.73	-679.06	-675.29	0.00	0.00	0.00
6,800.00	14.77	31.07	6,715.91	140.60	-678.55	-674.75	9.00	4.46	30.84
6,900.00	20.79	53.44	6,811.20	162.14	-657.67	-653.34	9.00	6.01	22.37
7,000.00	28.37	65.23	6,902.12	182.71	-621.77	-616.92	9.00	7.59	11.78
7,100.00	36.57	72.21	6,986.45	201.80	-571.73	-566.41	9.00	8.19	6.99
7,200.00	45.04	76.90	7,062.09	218.96	-508.77	-503.05	9.00	8.47	4.69
7,300.00	53.65	80.36	7,127.20	233.75	-434.46	-428.38	9.00	8.61	3.46
7,400.00	62.34	83.13	7,180.16	245.81	-350.62	-344.26	9.00	8.69	2.77
7,500.00	71.07	85.49	7,219.67	254.85	-259.32	-252.76	9.00	8.74	2.36
7,600.00	79.84	87.61	7,244.76	260.64	-162.80	-156.12	9.00	8.76	2.12
7,616.61	81.29	87.94	7,247.48	261.28	-146.42	-139.74	9.00	8.77	2.04
605 1H First Prod									
7,700.00	88.61	89.61	7,254.81	263.04	-63.44	-56.73	9.00	8.78	2.00
7,713.49	89.80	89.88	7,255.00	263.10	-49.95	-43.25	9.00	8.78	1.98
605 1H LP									
7,800.00	89.80	89.88	7,255.31	263.28	36.56	43.24	0.00	0.00	0.00
7,900.00	89.80	89.88	7,255.66	263.49	136.56	143.21	0.00	0.00	0.00
8,000.00	89.80	89.88	7,256.01	263.70	236.56	243.18	0.00	0.00	0.00
8,100.00	89.80	89.88	7,256.36	263.91	336.56	343.16	0.00	0.00	0.00
8,200.00	89.80	89.88	7,256.72	264.13	436.56	443.13	0.00	0.00	0.00
8,300.00	89.80	89.88	7,257.07	264.34	536.56	543.10	0.00	0.00	0.00
8,400.00	89.80	89.88	7,257.42	264.55	636.56	643.07	0.00	0.00	0.00
8,500.00	89.80	89.88	7,257.77	264.76	736.55	743.05	0.00	0.00	0.00
8,600.00	89.80	89.88	7,258.13	264.97	836.55	843.02	0.00	0.00	0.00
8,700.00	89.80	89.88	7,258.48	265.18	936.55	942.99	0.00	0.00	0.00
8,800.00	89.80	89.88	7,258.83	265.39	1,036.55	1,042.96	0.00	0.00	0.00
8,900.00	89.80	89.88	7,259.19	265.60	1,136.55	1,142.93	0.00	0.00	0.00
9,000.00	89.80	89.88	7,259.54	265.81	1,236.55	1,242.91	0.00	0.00	0.00
9,100.00	89.80	89.88	7,259.89	266.02	1,336.55	1,342.88	0.00	0.00	0.00
9,200.00	89.80	89.88	7,260.24	266.23	1,436.55	1,442.85	0.00	0.00	0.00
9,300.00	89.80	89.88	7,260.60	266.44	1,536.55	1,542.82	0.00	0.00	0.00
9,400.00	89.80	89.88	7,260.95	266.66	1,636.55	1,642.80	0.00	0.00	0.00
9,500.00	89.80	89.88	7,261.30	266.87	1,736.55	1,742.77	0.00	0.00	0.00
9,600.00	89.80	89.88	7,261.66	267.08	1,836.54	1,842.74	0.00	0.00	0.00
9,700.00	89.80	89.88	7,262.01	267.29	1,936.54	1,942.71	0.00	0.00	0.00
9,800.00	89.80	89.88	7,262.36	267.50	2,036.54	2,042.68	0.00	0.00	0.00
9,900.00	89.80	89.88	7,262.71	267.71	2,136.54	2,142.66	0.00	0.00	0.00
10,000.00	89.80	89.88	7,263.07	267.92	2,236.54	2,242.63	0.00	0.00	0.00
10,100.00	89.80	89.88	7,263.42	268.13	2,336.54	2,342.60	0.00	0.00	0.00
10,200.00	89.80	89.88	7,263.77	268.34	2,436.54	2,442.57	0.00	0.00	0.00
10,300.00	89.80	89.88	7,264.13	268.55	2,536.54	2,542.55	0.00	0.00	0.00
10,400.00	89.80	89.88	7,264.48	268.76	2,636.54	2,642.52	0.00	0.00	0.00



Database:	Grand Junction District	Local Co-ordinate Reference:	Well NEBU 605 1H
Company:	B.P.	TVD Reference:	GL 6471' & RKB 25' @ 6496.00usft (Aztec 1000)
Project:	San Juan County, NM NAD83	MD Reference:	GL 6471' & RKB 25' @ 6496.00usft (Aztec 1000)
Site:	NEBU 605 Pad	North Reference:	Grid
Well:	NEBU 605 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral Re-Drill		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,500.00	89.80	89.88	7,264.83	268.97	2,736.54	2,742.49	0.00	0.00	0.00
10,600.00	89.80	89.88	7,265.18	269.18	2,836.54	2,842.46	0.00	0.00	0.00
10,700.00	89.80	89.88	7,265.54	269.40	2,936.54	2,942.43	0.00	0.00	0.00
10,800.00	89.80	89.88	7,265.89	269.61	3,036.53	3,042.41	0.00	0.00	0.00
10,900.00	89.80	89.88	7,266.24	269.82	3,136.53	3,142.38	0.00	0.00	0.00
11,000.00	89.80	89.88	7,266.59	270.03	3,236.53	3,242.35	0.00	0.00	0.00
11,100.00	89.80	89.88	7,266.95	270.24	3,336.53	3,342.32	0.00	0.00	0.00
11,200.00	89.80	89.88	7,267.30	270.45	3,436.53	3,442.30	0.00	0.00	0.00
11,300.00	89.80	89.88	7,267.65	270.66	3,536.53	3,542.27	0.00	0.00	0.00
11,400.00	89.80	89.88	7,268.01	270.87	3,636.53	3,642.24	0.00	0.00	0.00
11,500.00	89.80	89.88	7,268.36	271.08	3,736.53	3,742.21	0.00	0.00	0.00
11,600.00	89.80	89.88	7,268.71	271.29	3,836.53	3,842.18	0.00	0.00	0.00
11,700.00	89.80	89.88	7,269.06	271.50	3,936.53	3,942.16	0.00	0.00	0.00
11,800.00	89.80	89.88	7,269.42	271.71	4,036.53	4,042.13	0.00	0.00	0.00
11,900.00	89.80	89.88	7,269.77	271.93	4,136.53	4,142.10	0.00	0.00	0.00
12,000.00	89.80	89.88	7,270.12	272.14	4,236.52	4,242.07	0.00	0.00	0.00
12,100.00	89.80	89.88	7,270.48	272.35	4,336.52	4,342.05	0.00	0.00	0.00
12,200.00	89.80	89.88	7,270.83	272.56	4,436.52	4,442.02	0.00	0.00	0.00
12,300.00	89.80	89.88	7,271.18	272.77	4,536.52	4,541.99	0.00	0.00	0.00
12,400.00	89.80	89.88	7,271.53	272.98	4,636.52	4,641.96	0.00	0.00	0.00
12,500.00	89.80	89.88	7,271.89	273.19	4,736.52	4,741.93	0.00	0.00	0.00
12,600.00	89.80	89.88	7,272.24	273.40	4,836.52	4,841.91	0.00	0.00	0.00
12,700.00	89.80	89.88	7,272.59	273.61	4,936.52	4,941.88	0.00	0.00	0.00
12,800.00	89.80	89.88	7,272.95	273.82	5,036.52	5,041.85	0.00	0.00	0.00
12,900.00	89.80	89.88	7,273.30	274.03	5,136.52	5,141.82	0.00	0.00	0.00
13,000.00	89.80	89.88	7,273.65	274.24	5,236.52	5,241.80	0.00	0.00	0.00
13,100.00	89.80	89.88	7,274.00	274.45	5,336.52	5,341.77	0.00	0.00	0.00
13,200.00	89.80	89.88	7,274.36	274.67	5,436.51	5,441.74	0.00	0.00	0.00
13,300.00	89.80	89.88	7,274.71	274.88	5,536.51	5,541.71	0.00	0.00	0.00
13,400.00	89.80	89.88	7,275.06	275.09	5,636.51	5,641.68	0.00	0.00	0.00
13,500.00	89.80	89.88	7,275.41	275.30	5,736.51	5,741.66	0.00	0.00	0.00
13,600.00	89.80	89.88	7,275.77	275.51	5,836.51	5,841.63	0.00	0.00	0.00
13,700.00	89.80	89.88	7,276.12	275.72	5,936.51	5,941.60	0.00	0.00	0.00
13,800.00	89.80	89.88	7,276.47	275.93	6,036.51	6,041.57	0.00	0.00	0.00
13,900.00	89.80	89.88	7,276.83	276.14	6,136.51	6,141.54	0.00	0.00	0.00
14,000.00	89.80	89.88	7,277.18	276.35	6,236.51	6,241.52	0.00	0.00	0.00
14,100.00	89.80	89.88	7,277.53	276.56	6,336.51	6,341.49	0.00	0.00	0.00
14,200.00	89.80	89.88	7,277.88	276.77	6,436.51	6,441.46	0.00	0.00	0.00
14,300.00	89.80	89.88	7,278.24	276.98	6,536.51	6,541.43	0.00	0.00	0.00
14,400.00	89.80	89.88	7,278.59	277.19	6,636.50	6,641.41	0.00	0.00	0.00
14,500.00	89.80	89.88	7,278.94	277.41	6,736.50	6,741.38	0.00	0.00	0.00
14,600.00	89.80	89.88	7,279.30	277.62	6,836.50	6,841.35	0.00	0.00	0.00
14,700.00	89.80	89.88	7,279.65	277.83	6,936.50	6,941.32	0.00	0.00	0.00
14,800.00	89.80	89.88	7,280.00	278.04	7,036.50	7,041.29	0.00	0.00	0.00
14,900.00	89.80	89.88	7,280.35	278.25	7,136.50	7,141.27	0.00	0.00	0.00
15,000.00	89.80	89.88	7,280.71	278.46	7,236.50	7,241.24	0.00	0.00	0.00
15,100.00	89.80	89.88	7,281.06	278.67	7,336.50	7,341.21	0.00	0.00	0.00
15,200.00	89.80	89.88	7,281.41	278.88	7,436.50	7,441.18	0.00	0.00	0.00
15,300.00	89.80	89.88	7,281.77	279.09	7,536.50	7,541.16	0.00	0.00	0.00
15,400.00	89.80	89.88	7,282.12	279.30	7,636.50	7,641.13	0.00	0.00	0.00
15,500.00	89.80	89.88	7,282.47	279.51	7,736.50	7,741.10	0.00	0.00	0.00
15,600.00	89.80	89.88	7,282.82	279.72	7,836.49	7,841.07	0.00	0.00	0.00



Database:	Grand Junction District	Local Co-ordinate Reference:	Well NEBU 605 1H
Company:	B.P.	TVD Reference:	GL 6471' & RKB 25' @ 6496.00usft (Aztec 1000)
Project:	San Juan County, NM NAD83	MD Reference:	GL 6471' & RKB 25' @ 6496.00usft (Aztec 1000)
Site:	NEBU 605 Pad	North Reference:	Grid
Well:	NEBU 605 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral Re-Drill		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,700.00	89.80	89.88	7,283.18	279.94	7,936.49	7,941.04	0.00	0.00	0.00
15,800.00	89.80	89.88	7,283.53	280.15	8,036.49	8,041.02	0.00	0.00	0.00
15,900.00	89.80	89.88	7,283.88	280.36	8,136.49	8,140.99	0.00	0.00	0.00
16,000.00	89.80	89.88	7,284.23	280.57	8,236.49	8,240.96	0.00	0.00	0.00
16,100.00	89.80	89.88	7,284.59	280.78	8,336.49	8,340.93	0.00	0.00	0.00
16,200.00	89.80	89.88	7,284.94	280.99	8,436.49	8,440.91	0.00	0.00	0.00
16,300.00	89.80	89.88	7,285.29	281.20	8,536.49	8,540.88	0.00	0.00	0.00
16,400.00	89.80	89.88	7,285.65	281.41	8,636.49	8,640.85	0.00	0.00	0.00
16,500.00	89.80	89.88	7,286.00	281.62	8,736.49	8,740.82	0.00	0.00	0.00
16,600.00	89.80	89.88	7,286.35	281.83	8,836.49	8,840.79	0.00	0.00	0.00
16,700.00	89.80	89.88	7,286.70	282.04	8,936.49	8,940.77	0.00	0.00	0.00
16,800.00	89.80	89.88	7,287.06	282.25	9,036.48	9,040.74	0.00	0.00	0.00
16,900.00	89.80	89.88	7,287.41	282.46	9,136.48	9,140.71	0.00	0.00	0.00
17,000.00	89.80	89.88	7,287.76	282.68	9,236.48	9,240.68	0.00	0.00	0.00
17,100.00	89.80	89.88	7,288.12	282.89	9,336.48	9,340.66	0.00	0.00	0.00
17,200.00	89.80	89.88	7,288.47	283.10	9,436.48	9,440.63	0.00	0.00	0.00
17,300.00	89.80	89.88	7,288.82	283.31	9,536.48	9,540.60	0.00	0.00	0.00
17,400.00	89.80	89.88	7,289.17	283.52	9,636.48	9,640.57	0.00	0.00	0.00
17,500.00	89.80	89.88	7,289.53	283.73	9,736.48	9,740.54	0.00	0.00	0.00
17,600.00	89.80	89.88	7,289.88	283.94	9,836.48	9,840.52	0.00	0.00	0.00
17,700.00	89.80	89.88	7,290.23	284.15	9,936.48	9,940.49	0.00	0.00	0.00
17,800.00	89.80	89.88	7,290.59	284.36	10,036.48	10,040.46	0.00	0.00	0.00
17,900.00	89.80	89.88	7,290.94	284.57	10,136.48	10,140.43	0.00	0.00	0.00
18,000.00	89.80	89.88	7,291.29	284.78	10,236.47	10,240.41	0.00	0.00	0.00
18,100.00	89.80	89.88	7,291.64	284.99	10,336.47	10,340.38	0.00	0.00	0.00
18,200.00	89.80	89.88	7,292.00	285.21	10,436.47	10,440.35	0.00	0.00	0.00
18,300.00	89.80	89.88	7,292.35	285.42	10,536.47	10,540.32	0.00	0.00	0.00
18,400.00	89.80	89.88	7,292.70	285.63	10,636.47	10,640.29	0.00	0.00	0.00
18,500.00	89.80	89.88	7,293.05	285.84	10,736.47	10,740.27	0.00	0.00	0.00
18,600.00	89.80	89.88	7,293.41	286.05	10,836.47	10,840.24	0.00	0.00	0.00
18,700.00	89.80	89.88	7,293.76	286.26	10,936.47	10,940.21	0.00	0.00	0.00
18,800.00	89.80	89.88	7,294.11	286.47	11,036.47	11,040.18	0.00	0.00	0.00
18,851.42	89.80	89.88	7,294.29	286.58	11,087.88	11,091.58	0.00	0.00	0.00
605 1H RD Last Prod									
18,900.00	89.80	89.88	7,294.47	286.68	11,136.47	11,140.16	0.00	0.00	0.00
19,000.00	89.80	89.88	7,294.82	286.89	11,236.47	11,240.13	0.00	0.00	0.00
19,051.42	89.80	89.88	7,295.00	287.00	11,287.88	11,291.53	0.00	0.00	0.00
605 1H RD BHL									



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Company:	B.P.	TVD Reference:	GL 6471' & RKB 25' @ 6496.00usft (Aztec 1000)
Project:	San Juan County, NM NAD83	MD Reference:	GL 6471' & RKB 25' @ 6496.00usft (Aztec 1000)
Site:	NEBU 605 Pad	North Reference:	Grid
Well:	NEBU 605 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral Re-Drill		
Design:	Plan #2		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
605 1H First Prod - plan misses target center by 7.77usft at 7616.61usft MD (7247.48 TVD, 261.28 N, -146.42 E) - Point	0.00	0.00	7,255.00	263.10	-147.21	2,150,235.34	2,810,438.14	36.9087135	-107.5345671
605 1H LP - plan hits target center - Point	0.00	0.00	7,255.00	263.10	-49.95	2,150,235.34	2,810,535.40	36.9087127	-107.5342344
605 1H RD BHL - plan hits target center - Point	0.00	0.00	7,295.00	287.00	11,287.88	2,150,259.24	2,821,873.23	36.9086744	-107.4954540
605 1H RD Last Prod - plan misses target center by 0.71usft at 18851.42usft MD (7294.29 TVD, 286.58 N, 11087.88 E) - Point	0.00	0.00	7,295.00	286.58	11,087.88	2,150,258.82	2,821,673.23	36.9086752	-107.4961381

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

Ken McQueen
Cabinet Secretary

Matthias Sayer
Deputy Cabinet Secretary

David R. Catanach, Division Director
Oil Conservation Division



November 23, 2017

BP America Production Company
Attn: Ms. Toya Colvin

ADMINISTRATIVE NON-STANDARD LOCATION

Administrative Order NSL-7611

BP America Production Company
OGRID 778
Northeast Blanco Unit 605 Com Well No. 1H
API No. 30-045-35851

Non-Standard Location

Proposed Location:

	<u>Footages</u>	<u>Unit</u>	<u>Sec.</u>	<u>Twsp</u>	<u>Range</u>	<u>County</u>
Surface	440' FSL & 805' FEL	P	11	31N	7W	San Juan
Penetration Point	441' FSL & 952' FEL	P	11	31N	7W	San Juan
Final perforation	438' FSL & 250' FEL	P	7	31N	6W	San Juan
Terminus	438' FSL & 50' FEL	P	7	31N	6W	San Juan

Proposed Project Area:

<u>Description</u>	<u>Acres</u>	<u>Pool</u>	<u>Pool Code</u>
S/2 of Section 11, T-31N, R-7W	320	Basin Mancos, Gas Pool	97232
S/2 of Section 12, T-31N, R- 7W	320		
S/2 of Section 7, T-31N, R-6W	320		

Reference is made to your application received on November 2, 2017.

You have requested to drill and produce this horizontal well at an unorthodox gas well location described above in the referenced pool or formation. This location is governed by the Special Rules for the Basin Mancos Gas Pool, which provide for 320-acre units with wells to be located at least 660 feet from outer unit boundaries

Your application has been duly filed under the provisions of Division Rules 19.15.15.13 NMAC and 19.15.4.12.A (2) NMAC.

It is our understanding that the applicant is seeking this location to avoid existing vertical well surface locations and to allow for conservative and consistent spacing between future planned wells.

It is also understood that you have given due notice of this application to all operators or owners who are "affected persons," as defined in Rule 19.15.4.12 A (2) NMAC, in all adjoining units towards which the proposed location encroaches.

Pursuant to the authority conferred by Division Rule 19.15.15.13 (B) NMAC, the above-described unorthodox location is hereby approved.

The above approvals are subject to your being in compliance with all other applicable Division rules, including, but not limited to Division Rule 19.15.5.9 NMAC.

Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.



DAVID R. CATANACH
Director

DRC/lrl

cc: Oil Conservation Division – Aztec District Office
Bureau of Land Management – Farmington Field Office