

12-28-24 DATE IN	SUSPENSE	LP ENGINEER	12-28-24 LOGGED IN	NSL TYPE	PMAM1636357759 APP NO.
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Simultaneous Dedication
☒ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

- [D] Other: Specify _____

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☐ Does Not Apply

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners

- [B] ☒ Offset Operators, Leaseholders or Surface Owner

- [C] ☐ Application is One Which Requires Published Legal Notice

- [D] ☒ Notification and/or Concurrent Approval by BLM or SLO
 U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

- [E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or, -BUSINESS

- [F] ☐ Waivers are Attached

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] CERTIFICATION: I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Toya Colvin

Print or Type Name

Toya Colvin
Signature

Regulatory Analyst

Title

12/22/2016

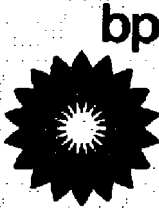
Date

Toya.Colvin@bp.com
e-mail Address

NSL 7446
-BP America Production Company
778

RECEIVED OCM
2016 DEC 28 P 3:07

LC11
-NE BLA unit
602 Comp #14
30-045-Pending
Pod
97232



BP America Production Company

Toya Colvin
Regulatory Analyst
737 North Eldridge Pkwy, 12.181A
Houston, Texas 77079
281-892-5369

December 22, 2016

CERTIFIED MAIL:
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Application for Administrative Approval for Non-Standard Location
Northeast Blanco Unit 602 Com #1H
API 30-045-35775
Surface 674' FNL and 825' FWL Section 12-T31N-R07W
Bottom Hole 704' FNL and 50' FEL Section 07-T31N-R06W
San Juan County, New Mexico
Basin Mancos Pool Formation (97232)

Dear Sir or Madam,

BP America respectfully requests administrative approval for a non-standard location for the above referenced well. Attached for your reference are the following exhibits:

1. Administrative Application Checklist
2. Well Location Plat (C-102)
3. List of Offset Operators

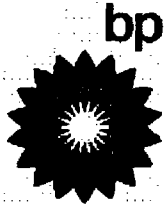
The above captioned horizontal Basin Mancos Gas well is planned to be drilled sometime in the 4th quarter of 2016. The initial take point of this well will meet the 660' lease line setback rule as required by the NMOCD. It is anticipated the deepest take point of the lateral will be 250' from the east lease line of Section 7-T31N-R06W. Since the deepest take point does not meet the required 660' setback for a Basin Mancos Gas well, BP America, as Operator of this well, must apply for an exception to this set back rule as it applies to the last take point. Below, I have provided you with the names and addresses of the off-set owner/operator that offset the last take point of the lateral that need to be notified of this lease line exception request.

WPX Energy Production, LLC is the sole offset operator for this well that offsets the last take point of the lateral, therefore notification of the non-standard location application is required and has been sent & signed by WPX. Please see the attached signed letter from WPX Energy Production, LLC accepting our NSL for the subject well.

With the signed agreement from WPX, BP respectfully requests to waive the 21-day hold and request expedited approval of this NSL application.

Sincerely,

Toya Colvin-Regulatory Analyst



BP America Production Co.
Lower 48 Onshore

Craig T. Ferguson
craig.ferguson@bp.com
281-892-5743 (direct)

E3, 12.173B
737 N. Eldridge Parkway
Houston, Texas 77079

August 22, 2016

Ms. Toya Colvin – Regulatory Analyst
BP America Production Company
737 N Eldridge Pkwy
Houston, TX 77079

RE: Northeast Blanco Unit 602 Com 1H (API 30-045-xxxxx)
Surface Hole Location ("SHL"): 674' FNL 825' FWL Section 12-T31N-R07W

Ms. Colvin:

The above captioned horizontal Basin Mancos Gas well is planned to be drilled sometime in the 4th quarter of 2016. The initial take point of this well will meet the 660' lease line setback rule as required by the NMOCD. It is anticipated the deepest take point of the lateral will be 250' from the east lease line of Section 7-T31N-R06W. Since the deepest take point does not meet the required 660' setback for a Basin Mancos Gas well, BP America, as Operator of this well, must apply for an exception to this set back rule as it applies to the last take point. Below, I have provided you with the names and addresses of the off-set owner/operator that offset the last take point of the lateral that need to be notified of this lease line exception request.

East Offset (NW/4 Section 6-T31N-R06W):

Operator / Rosa Unit - WPX Energy Production, LLC
Attn: Brennan West
3500 One Williams Center
Tulsa, OK 74172-0135

I believe this letter should satisfy your offset information request. Please contact me at 281.892.5743 if you have any questions concerning this topic.

Sincerely,

A handwritten signature in black ink that reads "Craig T. Ferguson".

Craig Ferguson
Land Negotiator – San Juan Asset



Debra Bacon
Land Manager West
BP America Production Company
737 North Eldridge Parkway
Houston, Texas 77079

281-892-4830 Office
713.825.7571 Cell
debra.bacon@bp.com

Sent: Via email (Brennan.west@wpxenergy.com)

August 22, 2016

WPX Energy Production, LLC
ATTN: Brennan West
3500 One Williams Center
Tulsa, OK 74172-0135

RE: Northeast Blanco Unit 602 Com 1H (API 30-045-xxxxx)
Surface Hole Location ("SHL"): 674' FNL 825' FWL Section 12-T31N-R07W
Bottom Hole Location ("BHL"): 720' FNL & 710' FEL Section 7-T31N-R06W

Brennan:

Please be advised that the above captioned horizontal Mancos Gas well is planned to be drilled in 4th Qtr. 2016. It is anticipated that the horizontal well bore will be west to east from the SHL in NW/4 of Section 12-T31N-R07W to the BHL in NE/4 of Section 7-T31N-R06W. At this time we have a filed a C-102 for a BHL approximately 710' from the East Section line of Section 7-T31N-R06W as noted above. Although the NMOCD has not approved the C-102 we have decided to continue easterly with drilling to a TD approximately 50' FEL of Section 7 with the deepest take point no closer than 250' FEL of Section 7. We will submit a sundry to reflect the change. Since the deepest take point of this horizon does not meet the required 660' setback for a Mancos Gas well, BP America Production Company, as Operator of this well, must apply for an exception to this set back rule as it applies to the Mancos Gas horizon.

BP respectfully requests your approval for our non-standard location in the event we decide to proceed with drilling to a final BHL 50' FEL of Section 7-T31N-R06W. In return, BP would be willing to reciprocate with a similar exception request on an east to west horizontal well to a location within the Rosa Unit to a take point no closer than 250' from said NEBU/ROSA Unit boundary. Please signify your approval by signing and dating in the spaces provided below and return to Craig Ferguson at craig.ferguson@bp.com.

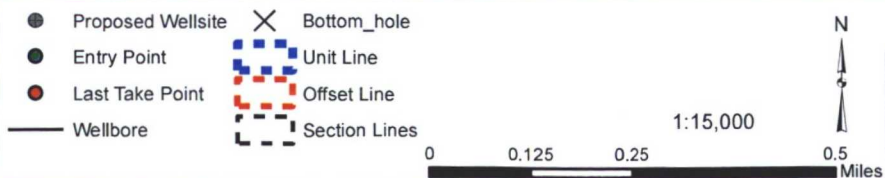
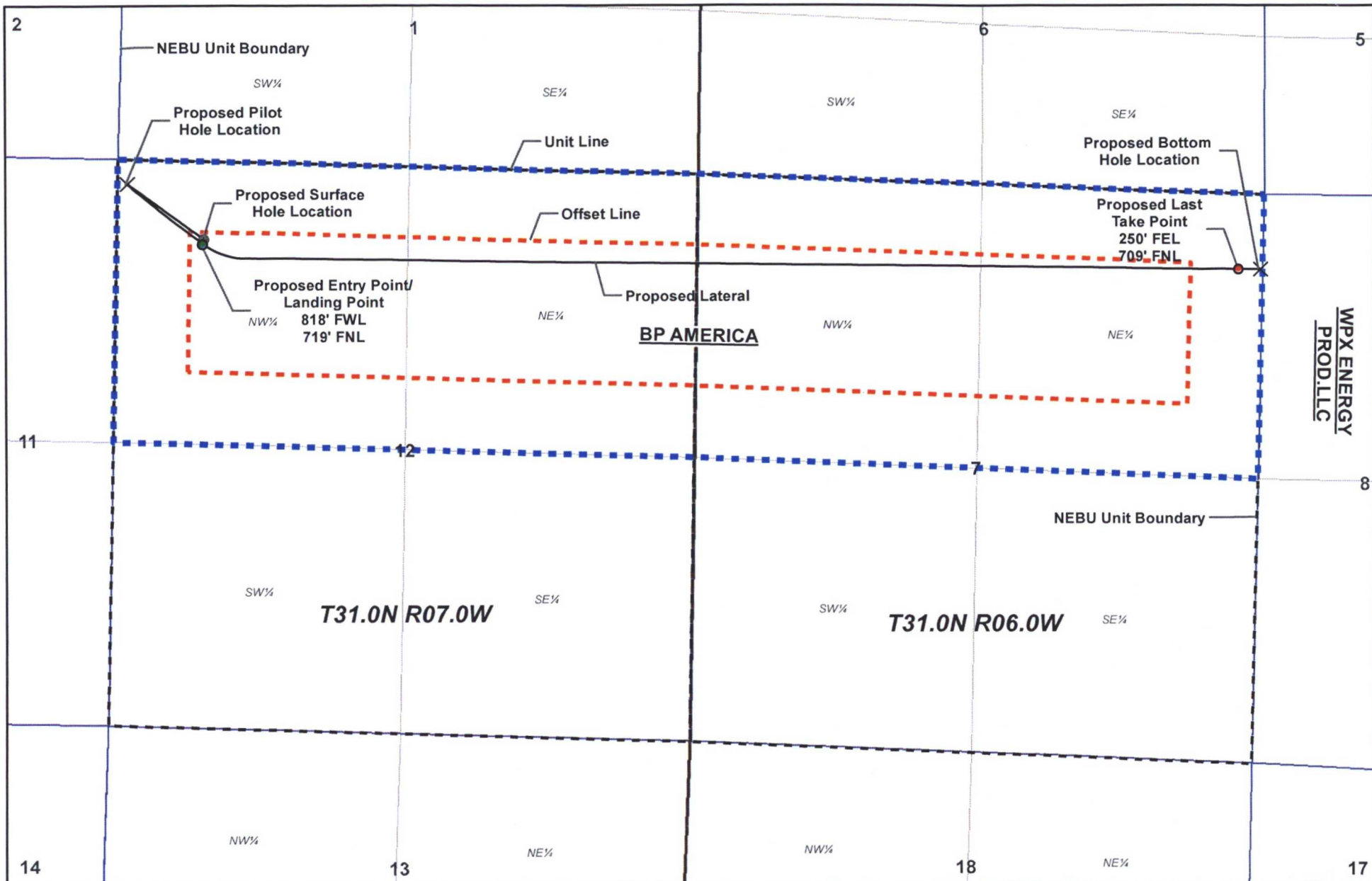
Sincerely,

Debra Bacon
Land Manager - West BU
San Juan Basin

WPX Energy Production, LLC has been notified and approves the non-standard location for above mentioned well.

By:
Title: LANDMAN

9/7/2016
Date



NON-STANDARD LOCATION EXHIBIT
BP AMERICA PRODUCTION COMPANY
NEBU BP 602 COM 1H

EXHIBIT "A"

10/6/2016

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) 748-1293 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 30-045-39775		² Pool Code 97232	³ Pool Name Mancos Gas
⁴ Property Code	⁵ Property Name Northeast Blanco Unit 602 Com		⁶ Well Number 1H
⁷ OGRID No. 000778	⁸ Operator Name BP America Production Company		⁹ Elevation 6521

Surface Location

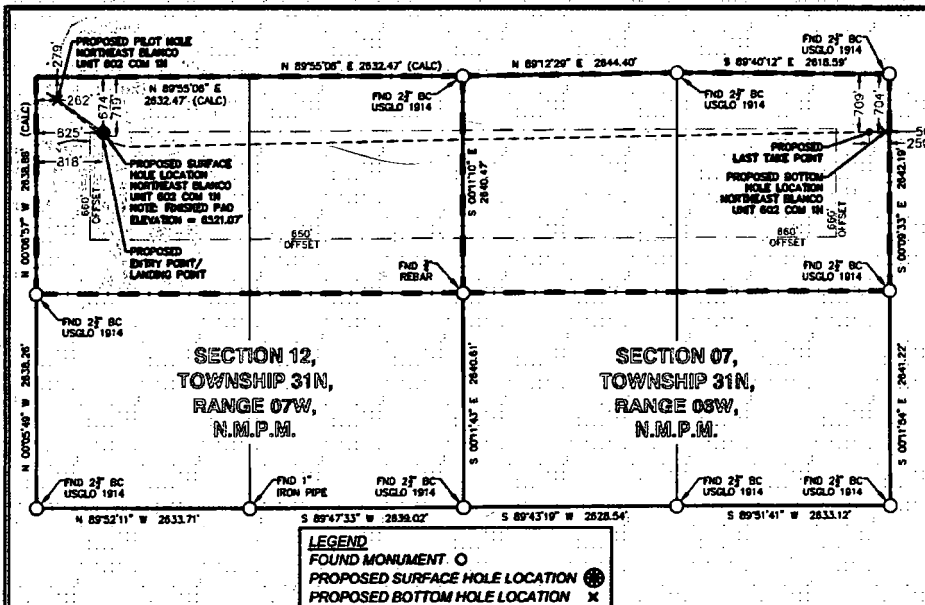
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	12	31N	07W		674	North	825	West	San Juan

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	07	31N	06W		704	North	50	East	San Juan

¹² Dedicated Acres 640.02	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.



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 undivided 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.

Toya Colvin 10/24/16
Signature Date

Toya Colvin

Printed Name

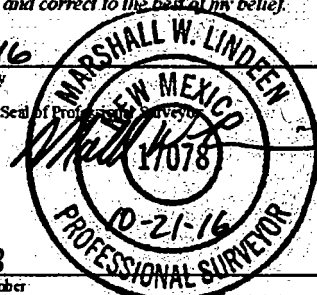
toya.colvin@bp.com

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.

6-1-16
Date of Survey
Signature and Seal of Professional Surveyor



17078
Certificate Number

NEBU 602 COM 1H	NMWZ NAD'83	NAD'83	TIES
PROPOSED SURFACE HOLE LOCATION (SHL)	N (Y) = 2,154,140.58' E (X) = 2,812,207.47'	LAT. = 36.91942483°N LON. = 107.52847250°W	FNL = 674' FWL = 825'
PROPOSED PILOT HOLE	N (Y) = 2,154,535.23' E (X) = 2,811,643.85'	LAT. = 36.92051376°N LON. = 107.53039631°W	FNL = 279' FWL = 262'
PROPOSED ENTRY POINT (EPV) LANDING POINT (LP)	N (Y) = 2,154,095.91' E (X) = 2,812,200.75'	LAT. = 36.91930219°N LON. = 107.52849598°W	FNL = 719' FWL = 818'
PROPOSED LAST TAKE POINT (LTP)	N (Y) = 2,154,135.22' E (X) = 2,821,661.12'	LAT. = 36.91932271°N LON. = 107.49613254°W	FNL = 709' FEL = 250'
PROPOSED BOTTOM HOLE LOCATION (BHL)	N (Y) = 2,154,138.88' E (X) = 2,821,861.12'	LAT. = 36.91933082°N LON. = 107.49544835°W	FNL = 704' FEL = 50'

OFFSET OPERATOR-NORTHEAST BLANCO UNIT 602 COM #1H

Operator / Rosa Unit -

WPX Energy Production, LLC

Attn: Brennan West

3500 One Williams Center

Tulsa, OK 74172-0135

McMillan, Michael, EMNRD

From: Colvin, Toya <Toya.Colvin@bp.com>
Sent: Wednesday, January 11, 2017 9:41 AM
To: McMillan, Michael, EMNRD
Cc: Lowe, Leonard, EMNRD
Subject: RE: NEBU 602 Com 1H 3004535775- NSL Application
Attachments: NEBU_602_COM_1H_C-102_FINAL.PDF; NEBU_602_COM_1H_WLP_FINAL.pdf; NEBU 602 Com 1H Lateral Plan 6-Grid North.pdf; SUNDRY NEBU 602 COM 1H DRILL PLAN FINAL.pdf; NEBU 602 Com 1H Pilot Plan-Grid North.pdf

Hello Michael,

The surface location for both the pilot hole and lateral is 674' FNL and 825 FWL'. The bottom hole location for the pilot hole is 279' FNL and 262' FWL and we are cementing/plugging off the pilot hole. No perforations will be taken from the pilot hole and it will not be produced. I have attached the directional plan of the lateral & pilot for you above with the C-102 showing our correct surface hole.

We are only requesting the NSL for the lateral of the well because again the pilot hole will be plugged. BP is requesting an unorthodox location for the toe of the NEBU 602 Com 1H lateral to avoid stranding reserves. The Mancos shale is a low permeability formation which we believe is incapable of production without stimulation. This well has been planned in an East-West orientation to take advantage of an anticipated North-South fracture orientation. As a result, extending the toe allows us to capture additional reserves to the north and south of the wellbore. At the same time, we expect the very little stimulated area to the east of the toe and consequently very little drainage in this direction.

Please let me know if anything else is needed for our request.

Thank You,

Toya Colvin

Toya Colvin

Regulatory Analyst
BP America Production Company
Lower 48 - San Juan South
737 N Eldridge Pkwy, 12.181A
(281) 892-5369

This email and any attachments are intended only for the addressee(s) listed above and may contain confidential, proprietary, and/or privileged information. If you are not an intended recipient, please immediately advise the sender by return email, delete this email and any attachments, and destroy any copies of same. Any unauthorized review, use, copying disclosure or distribution of this email and any attachments is prohibited.

From: McMillan, Michael, EMNRD [mailto:Michael.McMillan@state.nm.us]
Sent: Wednesday, January 11, 2017 8:56 AM
To: Colvin, Toya
Cc: Lowe, Leonard, EMNRD
Subject: RE: NEBU 602 Com 1H 3004535775- NSL Application

Toya:



Company: B.P.
Project: San Juan County, NM NAD83
Site: NEBU 602 Pad
Well: NEBU 602 #1H



"Pilot Hole"

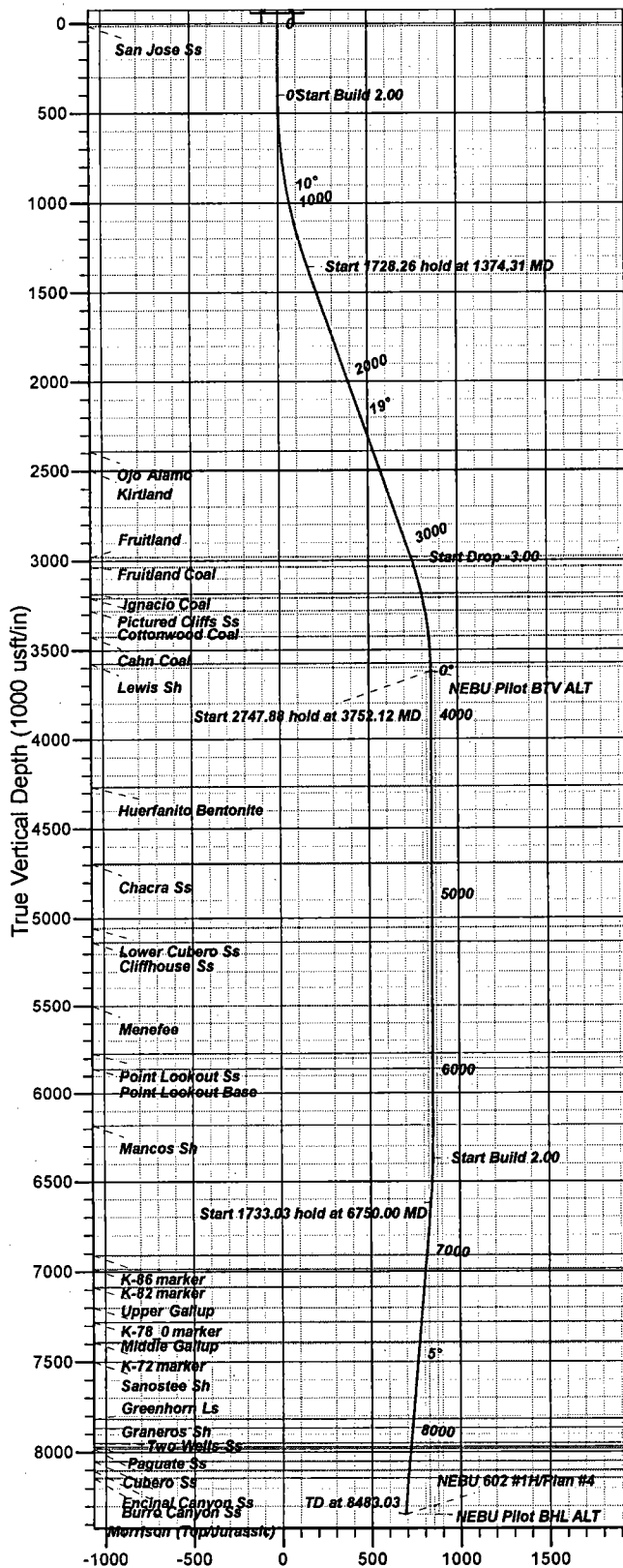
Well Details: NEBU 602 #1H

+N/-S 0.00 +E/-W 0.00 Northing 2154140.58 Easting 2812207.47 Latitude 36.9194248 Longitude -107.5284725 Slot 602 #1H

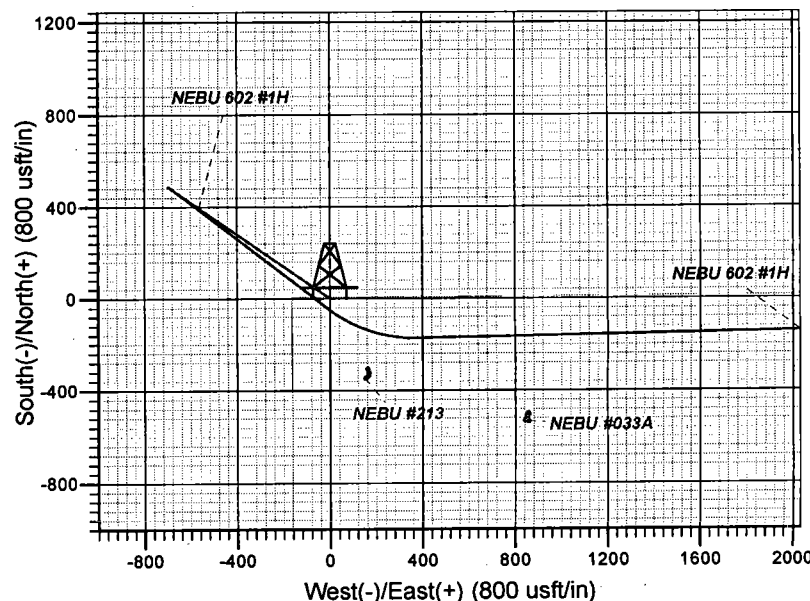


Azimuths to Grid North
True North: -0.18°
Magnetic North: 9.00°

Magnetic Field
Strength: 50175.8nT
Dip Angle: 63.57°
Date: 5/12/2016
Model: HDGM



Vertical Section at 305.00° (1000 usf/in)



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
15.00	15.00	San Jose Ss
2391.00	2472.58	Ojo Alamo
2496.00	2583.96	Kirtland
2981.00	3098.43	Fruitland
3036.00	3156.51	Fruitland Coal
3186.00	3312.24	Ignacio Coal
3210.00	3336.85	Pictured Cliffs Ss
3281.00	3409.28	Cottonwood Coal
3426.00	3555.77	Cahn Coal
3576.00	3706.11	Lewis Sh
4266.00	4396.12	Huerfano Bentonite
4696.00	4826.12	Chacra Ss
5056.00	5186.12	Lower Cubero Ss
5136.00	5266.12	Cliffhouse Ss
5501.00	5631.12	Manefee
5771.00	5901.12	Point Lookout Ss
5861.00	5991.12	Point Lookout Base
6181.00	6311.12	Mancos Sh
6911.00	7042.55	K-86 marker
6986.00	7117.83	K-82 marker
7086.00	7218.22	Upper Gallup
7201.00	7333.65	K-78 0 marker
7281.00	7413.96	Middle Gallup
7391.00	7524.38	K-72 marker
7501.00	7634.80	Sanostee Sh
7816.00	7951.00	Greenhorn Ls
7866.00	8001.19	Graneros Sh
7951.00	8086.52	Two Wells Ss
7971.00	8106.60	Paguate Ss
7981.00	8116.63	Cubero Ss
8051.00	8186.90	Encinal Canyon Ss
8106.00	8242.11	Burro Canyon Ss
8146.00	8282.26	Morrison (Top/Jurassic)

Plan: Plan #4

1:06, October 20 2016

Created By: Janie Collins

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

CASING DETAILS

No casing data is available

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
3	1374.31	19.49	305.00	1355.64	94.12	-134.42	2.00	305.00	164.09	
4	3102.57	19.49	305.00	2984.91	424.79	-606.67	0.00	0.00	740.61	
5	3752.12	0.00	0.00	3622.00	487.54	-696.28	3.00	180.00	850.00	NEBU Pilot BTV ALT
6	6500.00	0.00	0.00	6369.88	487.54	-696.28	0.00	0.00	850.00	
7	6750.00	5.00	125.00	6619.56	481.29	-687.35	2.00	125.00	839.10	
8	8483.03	5.00	125.00	8346.00	394.65	-563.62	0.00	0.00	688.05	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
NEBU Pilot BTV ALT	3822.00	487.54	-696.28	2154628.12	2811511.19	36.9207701	-107.5308491	Circle (Radius: 25.00)
- plan hits target center								
NEBU Pilot BHL ALT	8346.00	487.54	-696.28	2154628.12	2811511.19	36.9207701	-107.5308491	Point
- plan misses target center by 161.33usft at 8468.81usft MD (8331.94 TVD, 395.36 N, -584.83 E)								



Company: B.P.
Project: San Juan County, NM NAD83
Site: NEBU 602 Pad
Well: NEBU 602 #1H
Wellbore: Lateral
Design: Plan #6

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: 9.00°

Magnetic Field
Strength: 50176.2snT
Dip Angle: 63.57°
Date: 5/11/2016
Model: HDGM

WELL DETAILS: NEBU 602 #1H

GL 6521' & RKB 15' @ 6536.00usft

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	2154140.58	2812207.47	36.9194248	-107.5284725

Plan: Plan #6 (NEBU 602 #1H/Lateral)

Created By: Janie Collins Date: 1:16, October 20 2016

DESIGN TARGET DETAILS

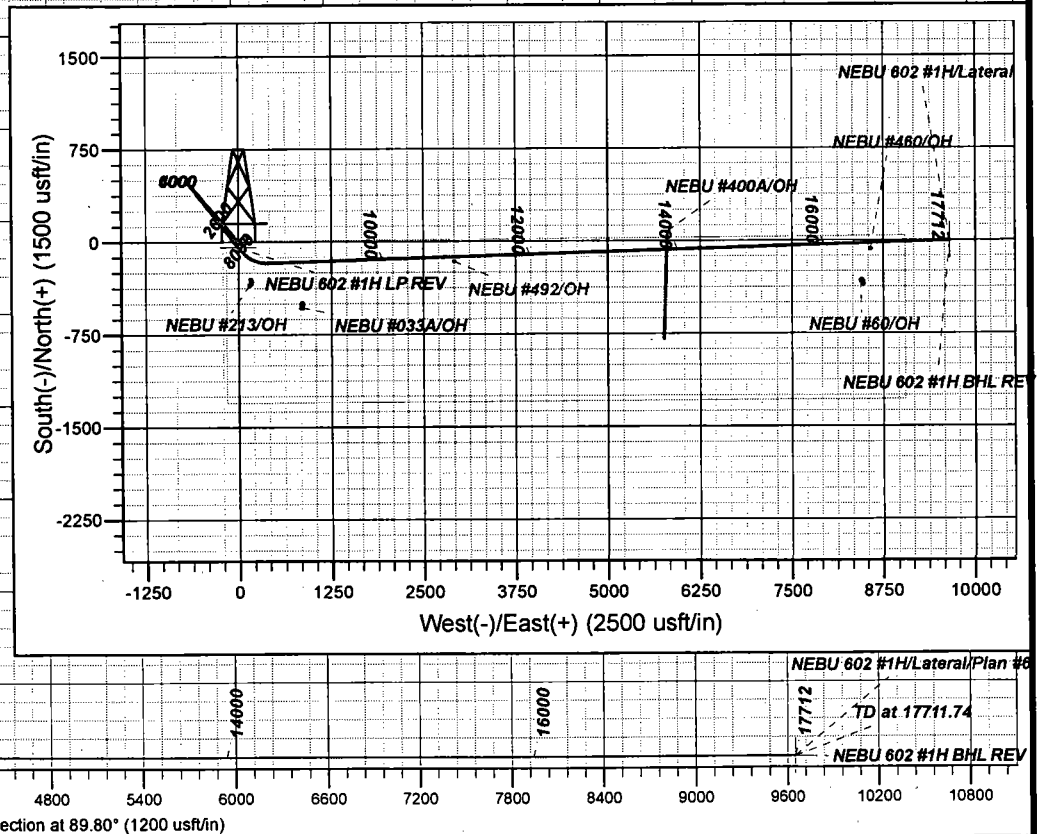
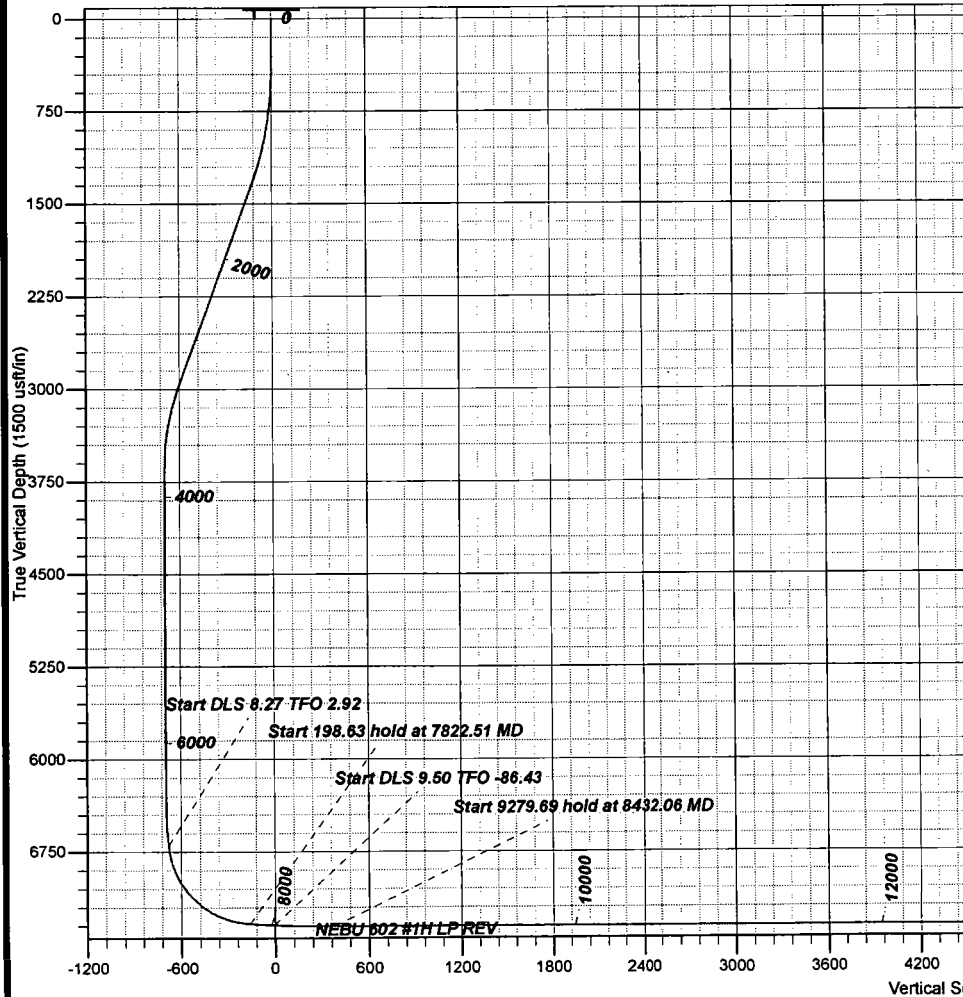
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
NEBU 602 #1H LP REV	7341.00	-44.67	-6.72	2154095.91	2812200.75	36.9193022	-107.5284960
NEBU 602 #1H BHL REV	7356.00	-1.70	9653.65	2154138.88	2821861.12	36.9193308	-107.4954484

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
6830.00	5.00	125.00	6699.26	477.29	-681.64	0.00	0.00	-679.97	
7822.51	87.07	127.90	7330.86	77.17	-163.26	8.27	2.92	-162.99	
8021.15	87.07	127.90	7341.00	-44.67	-6.72	0.00	0.00	-6.88	NEBU 602 #1H LP REV
8432.06	89.98	88.95	7352.00	-171.89	375.52	9.50	-86.43	374.92	
17711.74	89.98	88.95	7356.00	-1.70	9653.65	0.00	0.00	9653.59	NEBU 602 #1H BHL REV

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
6911.00	7049.19	K-86 marker
6986.00	7133.11	K-82 marker
7086.00	7255.54	Upper Gallup





B.P.

San Juan County, NM NAD83

NEBU 602 Pad

NEBU 602 #1H - Slot 602 #1H

Lateral

Plan: Plan #6

Standard Planning Report

20 October, 2016



www.scientificdrilling.com



Planning Report



Database:	Grand Junction District	Local Co-ordinate Reference:	Well NEBU 602 #1H - Slot 602 #1H
Company:	B.P.	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Project:	San Juan County, NM NAD83	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site:	NEBU 602 Pad	North Reference:	Grid
Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #6		

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 602 Pad		
Site Position:		Northing:	2,154,140.58 usft
From:	Map	Easting:	2,812,207.47 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in
		Latitude:	36.9194248
		Longitude:	-107.5284725
		Grid Convergence:	0.18 °

Well	NEBU 602 #1H - Slot 602 #1H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	36.9194248
		Longitude:	-107.5284725
		Ground Level:	6,521.00 usft

Wellbore	Lateral		
Magnetics	Model Name	Sample Date	Declination
			(°)
	HDGM	5/11/2016	9.18
			Dip Angle
			(°)
			63.57
			Field Strength
			(nT)
			50,176

Design	Plan #6		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			6,830.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			89.80

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
6,830.00	5.00	125.00	6,699.26	477.29	-681.64	0.00	0.00	0.00	0.00	
7,822.51	87.07	127.90	7,330.86	77.17	-163.26	8.27	8.27	0.29	2.92	
8,021.15	87.07	127.90	7,341.00	-44.67	-6.72	0.00	0.00	0.00	0.00	NEBU 602 #1H LP R
8,432.06	89.98	88.95	7,352.00	-171.89	375.52	9.50	0.71	-9.48	-86.43	
17,711.74	89.98	88.95	7,356.00	-1.70	9,653.65	0.00	0.00	0.00	0.00	NEBU 602 #1H BHL F



Planning Report



Database:	Grand Junction District	Local Co-ordinate Reference:	Well NEBU 602 #1H - Slot 602 #1H
Company:	B.P.	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Project:	San Juan County, NM NAD83	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site:	NEBU 602 Pad	North Reference:	Grid
Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #6		

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)
6,830.00	5.00	125.00	6,699.26	477.29	-681.64	-679.97	0.00	0.00	0.00
6,900.00	10.79	126.57	6,768.57	471.63	-673.87	-672.22	8.27	8.27	2.25
7,000.00	19.05	127.17	6,865.11	456.17	-653.32	-651.72	8.27	8.27	0.60
7,049.19	23.12	127.31	6,911.00	445.46	-639.23	-637.67	8.27	8.27	0.29
K-86 marker									
7,100.00	27.32	127.42	6,956.96	432.32	-622.03	-620.51	8.27	8.27	0.20
7,133.11	30.06	127.47	6,986.00	422.65	-609.40	-607.93	8.27	8.27	0.16
K-82 marker									
7,200.00	35.59	127.55	7,042.18	400.58	-580.65	-579.25	8.27	8.27	0.13
7,255.54	40.19	127.61	7,086.00	379.78	-553.63	-552.30	8.27	8.27	0.10
Upper Gallup									
7,300.00	43.86	127.64	7,119.03	361.61	-530.06	-528.80	8.27	8.27	0.08
7,400.00	52.13	127.71	7,185.88	316.23	-471.30	-470.19	8.27	8.27	0.07
7,500.00	60.40	127.76	7,241.37	265.37	-405.59	-404.66	8.27	8.27	0.05
7,600.00	68.67	127.81	7,284.32	210.10	-334.30	-333.56	8.27	8.27	0.05
7,700.00	76.94	127.85	7,313.85	151.56	-258.91	-258.38	8.27	8.27	0.04
7,800.00	85.21	127.89	7,329.35	90.97	-180.99	-180.67	8.27	8.27	0.04
7,822.51	87.07	127.90	7,330.86	77.17	-163.26	-162.99	8.27	8.27	0.04
7,900.00	87.07	127.90	7,334.82	29.64	-102.19	-102.09	0.00	0.00	0.00
8,000.00	87.07	127.90	7,339.92	-31.70	-23.38	-23.49	0.00	0.00	0.00
8,011.45	87.07	127.90	7,340.51	-38.72	-14.36	-14.50	0.00	0.00	0.00
NEBU 602 #1H LP									
8,021.15	87.07	127.90	7,341.00	-44.67	-6.72	-6.88	0.00	0.00	0.00
NEBU 602 #1H LP REV									
8,100.00	87.57	120.41	7,344.69	-88.86	58.42	58.11	9.50	0.62	-9.49
8,200.00	88.25	110.93	7,348.36	-132.10	148.38	147.92	9.50	0.68	-9.48
8,300.00	88.97	101.46	7,350.79	-159.94	244.28	243.72	9.50	0.73	-9.47
8,400.00	89.73	91.98	7,351.92	-171.63	343.47	342.87	9.50	0.76	-9.47
8,432.06	89.98	88.95	7,352.00	-171.89	375.52	374.92	9.50	0.76	-9.47
8,500.00	89.98	88.95	7,352.03	-170.65	443.46	442.86	0.00	0.00	0.00
8,600.00	89.98	88.95	7,352.08	-168.81	543.44	542.85	0.00	0.00	0.00
8,700.00	89.98	88.95	7,352.12	-166.98	643.42	642.84	0.00	0.00	0.00
8,800.00	89.98	88.95	7,352.16	-165.14	743.41	742.82	0.00	0.00	0.00
8,900.00	89.98	88.95	7,352.20	-163.31	843.39	842.81	0.00	0.00	0.00
9,000.00	89.98	88.95	7,352.25	-161.48	943.37	942.80	0.00	0.00	0.00
9,100.00	89.98	88.95	7,352.29	-159.64	1,043.35	1,042.79	0.00	0.00	0.00
9,200.00	89.98	88.95	7,352.33	-157.81	1,143.34	1,142.78	0.00	0.00	0.00
9,300.00	89.98	88.95	7,352.38	-155.97	1,243.32	1,242.77	0.00	0.00	0.00
9,400.00	89.98	88.95	7,352.42	-154.14	1,343.30	1,342.76	0.00	0.00	0.00
9,500.00	89.98	88.95	7,352.46	-152.31	1,443.29	1,442.75	0.00	0.00	0.00
9,600.00	89.98	88.95	7,352.51	-150.47	1,543.27	1,542.74	0.00	0.00	0.00
9,700.00	89.98	88.95	7,352.55	-148.64	1,643.25	1,642.73	0.00	0.00	0.00
9,800.00	89.98	88.95	7,352.59	-146.80	1,743.24	1,742.71	0.00	0.00	0.00
9,900.00	89.98	88.95	7,352.64	-144.97	1,843.22	1,842.70	0.00	0.00	0.00
10,000.00	89.98	88.95	7,352.68	-143.14	1,943.20	1,942.69	0.00	0.00	0.00
10,100.00	89.98	88.95	7,352.72	-141.30	2,043.19	2,042.68	0.00	0.00	0.00
10,200.00	89.98	88.95	7,352.76	-139.47	2,143.17	2,142.67	0.00	0.00	0.00
10,300.00	89.98	88.95	7,352.81	-137.63	2,243.15	2,242.66	0.00	0.00	0.00
10,400.00	89.98	88.95	7,352.85	-135.80	2,343.14	2,342.65	0.00	0.00	0.00
10,500.00	89.98	88.95	7,352.89	-133.97	2,443.12	2,442.64	0.00	0.00	0.00
10,600.00	89.98	88.95	7,352.94	-132.13	2,543.10	2,542.63	0.00	0.00	0.00
10,700.00	89.98	88.95	7,352.98	-130.30	2,643.09	2,642.61	0.00	0.00	0.00
10,800.00	89.98	88.95	7,353.02	-128.46	2,743.07	2,742.60	0.00	0.00	0.00
10,900.00	89.98	88.95	7,353.07	-126.63	2,843.05	2,842.59	0.00	0.00	0.00



Planning Report

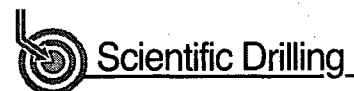


Database:	Grand Junction District	Local Co-ordinate Reference:	Well NEBU 602 #1H - Slot 602 #1H
Company:	B.P	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Project:	San Juan County, NM NAD83	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site:	NEBU 602 Pad	North Reference:	Grid
Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #8		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)
11,000.00	89.98	88.95	7,353.11	-124.80	2,943.04	2,942.58	0.00	0.00	0.00
11,100.00	89.98	88.95	7,353.15	-122.96	3,043.02	3,042.57	0.00	0.00	0.00
11,200.00	89.98	88.95	7,353.20	-121.13	3,143.00	3,142.56	0.00	0.00	0.00
11,300.00	89.98	88.95	7,353.24	-119.29	3,242.98	3,242.55	0.00	0.00	0.00
11,400.00	89.98	88.95	7,353.28	-117.46	3,342.97	3,342.54	0.00	0.00	0.00
11,500.00	89.98	88.95	7,353.32	-115.63	3,442.95	3,442.53	0.00	0.00	0.00
11,600.00	89.98	88.95	7,353.37	-113.79	3,542.93	3,542.52	0.00	0.00	0.00
11,700.00	89.98	88.95	7,353.41	-111.96	3,642.92	3,642.50	0.00	0.00	0.00
11,800.00	89.98	88.95	7,353.45	-110.12	3,742.90	3,742.49	0.00	0.00	0.00
11,900.00	89.98	88.95	7,353.50	-108.29	3,842.88	3,842.48	0.00	0.00	0.00
12,000.00	89.98	88.95	7,353.54	-106.46	3,942.87	3,942.47	0.00	0.00	0.00
12,100.00	89.98	88.95	7,353.58	-104.62	4,042.85	4,042.46	0.00	0.00	0.00
12,200.00	89.98	88.95	7,353.63	-102.79	4,142.83	4,142.45	0.00	0.00	0.00
12,300.00	89.98	88.95	7,353.67	-100.95	4,242.82	4,242.44	0.00	0.00	0.00
12,400.00	89.98	88.95	7,353.71	-99.12	4,342.80	4,342.43	0.00	0.00	0.00
12,500.00	89.98	88.95	7,353.76	-97.29	4,442.78	4,442.42	0.00	0.00	0.00
12,600.00	89.98	88.95	7,353.80	-95.45	4,542.77	4,542.41	0.00	0.00	0.00
12,700.00	89.98	88.95	7,353.84	-93.62	4,642.75	4,642.39	0.00	0.00	0.00
12,800.00	89.98	88.95	7,353.88	-91.78	4,742.73	4,742.38	0.00	0.00	0.00
12,900.00	89.98	88.95	7,353.93	-89.95	4,842.72	4,842.37	0.00	0.00	0.00
13,000.00	89.98	88.95	7,353.97	-88.12	4,942.70	4,942.36	0.00	0.00	0.00
13,100.00	89.98	88.95	7,354.01	-86.28	5,042.68	5,042.35	0.00	0.00	0.00
13,200.00	89.98	88.95	7,354.06	-84.45	5,142.66	5,142.34	0.00	0.00	0.00
13,300.00	89.98	88.95	7,354.10	-82.61	5,242.65	5,242.33	0.00	0.00	0.00
13,400.00	89.98	88.95	7,354.14	-80.78	5,342.63	5,342.32	0.00	0.00	0.00
13,500.00	89.98	88.95	7,354.19	-78.94	5,442.61	5,442.31	0.00	0.00	0.00
13,600.00	89.98	88.95	7,354.23	-77.11	5,542.60	5,542.29	0.00	0.00	0.00
13,700.00	89.98	88.95	7,354.27	-75.28	5,642.58	5,642.28	0.00	0.00	0.00
13,800.00	89.98	88.95	7,354.32	-73.44	5,742.56	5,742.27	0.00	0.00	0.00
13,900.00	89.98	88.95	7,354.36	-71.61	5,842.55	5,842.26	0.00	0.00	0.00
14,000.00	89.98	88.95	7,354.40	-69.77	5,942.53	5,942.25	0.00	0.00	0.00
14,100.00	89.98	88.95	7,354.44	-67.94	6,042.51	6,042.24	0.00	0.00	0.00
14,200.00	89.98	88.95	7,354.49	-66.11	6,142.50	6,142.23	0.00	0.00	0.00
14,300.00	89.98	88.95	7,354.53	-64.27	6,242.48	6,242.22	0.00	0.00	0.00
14,400.00	89.98	88.95	7,354.57	-62.44	6,342.46	6,342.21	0.00	0.00	0.00
14,500.00	89.98	88.95	7,354.62	-60.60	6,442.45	6,442.20	0.00	0.00	0.00
14,600.00	89.98	88.95	7,354.66	-58.77	6,542.43	6,542.18	0.00	0.00	0.00
14,700.00	89.98	88.95	7,354.70	-56.94	6,642.41	6,642.17	0.00	0.00	0.00
14,800.00	89.98	88.95	7,354.75	-55.10	6,742.40	6,742.16	0.00	0.00	0.00
14,900.00	89.98	88.95	7,354.79	-53.27	6,842.38	6,842.15	0.00	0.00	0.00
15,000.00	89.98	88.95	7,354.83	-51.43	6,942.36	6,942.14	0.00	0.00	0.00
15,100.00	89.98	88.95	7,354.88	-49.60	7,042.35	7,042.13	0.00	0.00	0.00
15,200.00	89.98	88.95	7,354.92	-47.77	7,142.33	7,142.12	0.00	0.00	0.00
15,300.00	89.98	88.95	7,354.96	-45.93	7,242.31	7,242.11	0.00	0.00	0.00
15,400.00	89.98	88.95	7,355.00	-44.10	7,342.29	7,342.10	0.00	0.00	0.00
15,500.00	89.98	88.95	7,355.05	-42.26	7,442.28	7,442.09	0.00	0.00	0.00
15,600.00	89.98	88.95	7,355.09	-40.43	7,542.26	7,542.07	0.00	0.00	0.00
15,700.00	89.98	88.95	7,355.13	-38.60	7,642.24	7,642.06	0.00	0.00	0.00
15,800.00	89.98	88.95	7,355.18	-36.76	7,742.23	7,742.05	0.00	0.00	0.00
15,900.00	89.98	88.95	7,355.22	-34.93	7,842.21	7,842.04	0.00	0.00	0.00
16,000.00	89.98	88.95	7,355.26	-33.09	7,942.19	7,942.03	0.00	0.00	0.00
16,100.00	89.98	88.95	7,355.31	-31.26	8,042.18	8,042.02	0.00	0.00	0.00
16,200.00	89.98	88.95	7,355.35	-29.43	8,142.16	8,142.01	0.00	0.00	0.00
16,300.00	89.98	88.95	7,355.39	-27.59	8,242.14	8,242.00	0.00	0.00	0.00



Planning Report



Database:	Grand Junction District	Local Co-ordinate Reference:	Well NEBU 602 #1H - Slot 602 #1H
Company:	B.P.	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Project:	San Juan County, NM NAD83	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site:	NEBU 602 Pad	North Reference:	Grid
Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #8		

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)	
16,400.00	89.98	88.95	7,355.44	-25.76	8,342.13	8,341.99	0.00	0.00	0.00	
16,500.00	89.98	88.95	7,355.48	-23.92	8,442.11	8,441.97	0.00	0.00	0.00	
16,600.00	89.98	88.95	7,355.52	-22.09	8,542.09	8,541.96	0.00	0.00	0.00	
16,700.00	89.98	88.95	7,355.56	-20.26	8,642.08	8,641.95	0.00	0.00	0.00	
16,800.00	89.98	88.95	7,355.61	-18.42	8,742.06	8,741.94	0.00	0.00	0.00	
16,900.00	89.98	88.95	7,355.65	-16.59	8,842.04	8,841.93	0.00	0.00	0.00	
17,000.00	89.98	88.95	7,355.69	-14.75	8,942.03	8,941.92	0.00	0.00	0.00	
17,051.61	89.98	88.95	7,355.72	-13.81	8,993.63	8,993.53	0.00	0.00	0.00	
NEBU 602 #1H BHL										
17,100.00	89.98	88.95	7,355.74	-12.92	9,042.01	9,041.91	0.00	0.00	0.00	
17,200.00	89.98	88.95	7,355.78	-11.09	9,141.99	9,141.90	0.00	0.00	0.00	
17,300.00	89.98	88.95	7,355.82	-9.25	9,241.98	9,241.89	0.00	0.00	0.00	
17,400.00	89.98	88.95	7,355.87	-7.42	9,341.96	9,341.88	0.00	0.00	0.00	
17,500.00	89.98	88.95	7,355.91	-5.58	9,441.94	9,441.86	0.00	0.00	0.00	
17,600.00	89.98	88.95	7,355.95	-3.75	9,541.92	9,541.85	0.00	0.00	0.00	
17,700.00	89.98	88.95	7,356.00	-1.92	9,641.91	9,641.84	0.00	0.00	0.00	
17,711.74	89.98	88.95	7,356.00	-1.70	9,653.65	9,653.59	0.00	0.00	0.00	
NEBU 602 #1H BHL REV										

Design Targets										
Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
NEBU 602 #1H LP REV	- plan hits target center	0.00	0.00	7,341.00	-44.67	-6.72	2,154,095.91	2,812,200.75	36.9193022	-107.5284960
	- Point									
NEBU 602 #1H BHL RE	- plan hits target center	0.00	0.00	7,356.00	-1.70	9,653.65	2,154,138.88	2,821,861.12	36.9193308	-107.4954484
	- Point									



Database:	Grand Junction District	Local Co-ordinate Reference:	Well NEBU 602 #1H - Slot 602 #1H
Company:	B.P.	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Project:	San Juan County, NM NAD83	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site:	NEBU 602 Pad	North Reference:	Grid
Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #6		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
15.00	15.00	San Jose Ss	Empty	0.00	0.00	
2,472.58	2,391.00	Ojo Alamo	Empty	0.00	0.00	
2,583.96	2,496.00	Kirtland	Empty	0.00	0.00	
3,098.43	2,981.00	Fruitland	Empty	0.00	0.00	
3,156.51	3,036.00	Fruitland Coal	Empty	0.00	0.00	
3,312.24	3,186.00	Ignacio Coal	Empty	0.00	0.00	
3,336.85	3,210.00	Pictured Cliffs Ss	Empty	0.00	0.00	
3,409.28	3,281.00	Cottonwood Coal	Empty	0.00	0.00	
3,555.77	3,426.00	Cahn Coal	Empty	0.00	0.00	
3,706.11	3,576.00	Lewis Sh	Empty	0.00	0.00	
4,396.12	4,266.00	Huerfanito Bentonite	Empty	0.00	0.00	
4,826.12	4,696.00	Chacra Ss	Empty	0.00	0.00	
5,266.12	5,136.00	Cliffhouse Ss	Empty	0.00	0.00	
5,631.12	5,501.00	Menefee	Empty	0.00	0.00	
5,901.12	5,771.00	Point Lookout Ss	Empty	0.00	0.00	
5,991.12	5,861.00	Point Lookout Base	Empty	0.00	0.00	
6,311.12	6,181.00	Mancos Sh	Empty	0.00	0.00	
7,049.19	6,911.00	K-86 marker	Empty	0.00	0.00	
7,133.11	6,986.00	K-82 marker	Empty	0.00	0.00	
7,255.54	7,086.00	Upper Gallup	Empty	0.00	0.00	