

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



New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-3 APD form.

Operator Signature Date: 6.13.16

Well information:

Operator BP, Well Name and Number NEBU 602 COM #14

API# 30045-35775, Section 12, Township 31 N/S, Range 7 E/W

Conditions of Approval: (See the below checked and handwritten conditions)

- ☒ Notify Aztec OCD 24hrs prior to casing & cement.
- ☒ Hold C-104 for directional survey & "As Drilled" Plat Submit survey to extend surface casing to 320'
- ☒ Hold C-104 for NSL, NSP, DHC see change of plans - change requires NSL
- ☐ Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- ☐ Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
 - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
 - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
 - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- ☐ Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ☐ Submit Gas Capture Plan form prior to spudding or initiating recompletion operations
- ☒ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ☒ Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.
- ☒ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

Charles L. Lora
NMOCD Approved by Signature

1-20-2017
Date

65

HBP-actual
lessee BP America
onsite 5/13/16

Form 3160-3
(March 2012)

NOR: 5/19/16
APDP: 5
MP: BLM
SMA: WY2924
BOND: WY2924
CA/PA:

10400001596
ATS-F010-16-143

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

5. Lease Serial No.
NMNM03358

6. If Indian, Allottee or Tribe Name

7. If Unit or CA Agreement, Name and No.

8. Lease Name and Well No.
NEBU 602 COM / 1H

9. API Well No.
30-045-3575

10. Field and Pool, or Exploratory
BASIN MANCOS

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 12 / T31N / R07W / NMP

12. County or Parish
SAN JUAN

13. State
NM

1a. Type of work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☐ Single Zone ☒ Multiple Zone

2. Name of Operator
BP AMERICA PROD CO

3a. Address
737 North Eldridge Pkwy Houston TX 77079

3b. Phone No. (include area code)
(281)366-7148

4. Location of Well (Report location clearly and in accordance with any State requirements.)*

At surface: NWNW / 674 FNL / 825 FWL / LAT 36.919424 / LONG -107.528472

At proposed prod. zone: NENE / 720 FNL / 710 FEL / LAT 36.919314 / LONG -107.497706

14. Distance in miles and direction from nearest town or post office*
27.1 miles

15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any)
710 feet

16. No. of acres in lease
2396.77

17. Spacing Unit dedicated to this well
640.02

18. Distance from proposed location*
to nearest well, drilling, completed, 470 feet
applied for, on this lease, ft.

19. Proposed Depth
7356 feet / 16833 feet

20. BLM/BIA Bond No. on file
FED: WY2924

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
6521 feet

22. Approximate date work will start*
09/01/2016

23. Estimated duration
30 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.

2. A Drilling Plan.

3. A Surface Use Plan (if the location is on National Forest System Lands, the
SUPO must be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see
Item 20 above).

5. Operator certification

6. Such other site specific information and/or plans as may be required by the
BLM.

25. Signature
(Electronic Submission)

Name (Printed/Typed)
Toya Colvin / Ph: (281)366-7148

Date
06/13/2016

Title
Regulatory Analyst

Approved by (Signature)

Name (Printed/Typed)

Date

Title

Office
FARMINGTON

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to
conduct operations thereon.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make 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 representations as to any matter within its jurisdiction.

(Continued on page 2)

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 LANDS

*(Instructions on page 2)

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

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

NMOCDV

Form C-102
1625 N. Beach Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax (575) 393-0720
Form C-102
1115 First St., Azusa, NM 87410
Phone (575) 748-1281 Fax (575) 748-0720
Form C-102
1000 E. Benson Road, Azusa, NM 87410
Phone (505) 334-6176 Fax (505) 334-6176
Form C-102
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 30-045-35775	2 Pool Code 97232	3 Pool Name Mancos Gas
4 Property Code 317302	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

10 Surface Location

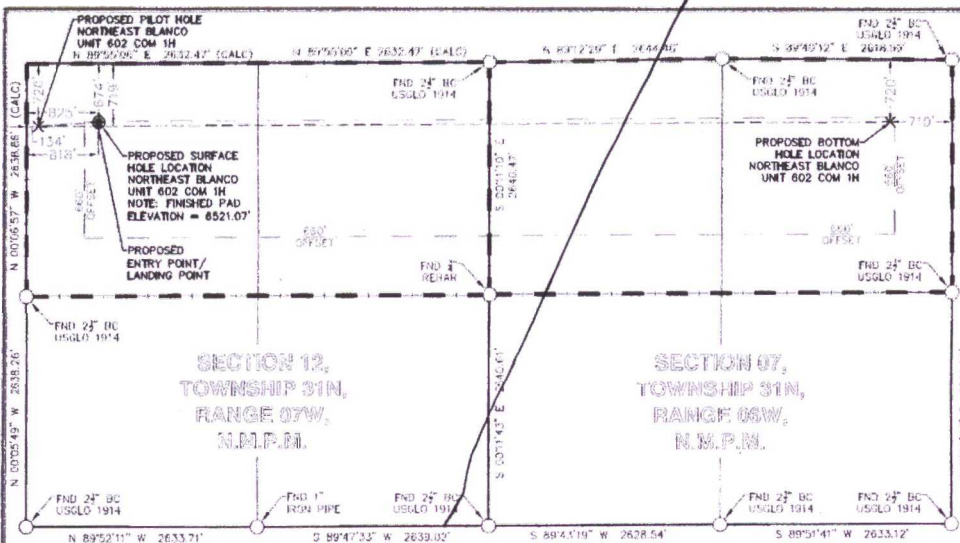
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	12	31N	07W		674	North	825	West	San Juan

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	07	31N	06W		720	North	710	East	San Juan

12 Dedicated Acres 640.02	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

NEBU 602 COM 1H	NWZ 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) = 2,154,093.53' E (X) = 2,811,517.48'	LAT. = 36.91930163°N LON. = 107.53083341°W	FNL = 720' FWL = 134'
PROPOSED ENTRY POINT (EP)/LANDING POINT (LP)	N (Y) = 2,154,095.89' E (X) = 2,812,200.75'	LAT. = 36.91930214°N LON. = 107.52849598°W	FNL = 719' FWL = 818'
PROPOSED BOTTOM HOLE LOCATION (BHL)	N (Y) = 2,154,127.00' E (X) = 2,821,201.15'	LAT. = 36.91930459°N LON. = 107.49770618°W	FNL = 720' FEL = 710'

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 or other owner 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, under the authority of the division.

Signature: *Soja Nori* Date: *6/07/14*

Printed Name

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.

6-01-16

Date of Survey

Signature and Seal of



17078

Certificate Number

* Incorrect C-102 See change of Plans

SECTION – 1 – GEOLOGIC FORMATIONS AND CONTENTS

Marker	TVD	MD	Comments	BHP PSI/FT
Tertiary/San Jose Ss	25	25	Wet/aquifer	0.43
Ojo Alamo Ss	2,391	2,439	wet/aquifer	0.43
Kirtland (Top/Cretaceous)	2,496	2,547	Gas & water-bearing	0.43
Fruitland	2,981	3,046	Gas & water-bearing	0.15
Fruitland Coal	3,036	3,103	Gas & water-bearing	0.07
Ignacio coal zone	3,186	3,257	Gas & water-bearing	0.07
Pictured Cliffs Ss	3,210	3,282	Wet	0.12
Cotton Wood Coal	3,281	3,355	Gas & water-bearing	0.12
Cahn Coal	3,426	3,503	Gas & water-bearing	0.35
Lewis Sh	3,576	3,654	Gas & water-bearing	0.35
Huerfanito Bentonite	4,266	4,344	Gas & water-bearing	0.35
Chacra Ss	4,696	4,774	Gas & water-bearing	0.35
Lower Cubero Ss	5,056	5,134	Gas- & water-bearing	0.35
Cliffhouse Ss	5,136	5,214	Gas- & water-bearing	0.35
Menefee	5,501	5,579	Gas- & water-bearing	0.30
Point Lookout SS	5,771	5,849	Gas-bearing	0.30
Point Lookout Base	5,861	5,939	Gas-bearing	0.30
Mancos sh	6,181	6,259	Gas-bearing	0.43
K-86 marker	6,911	6,989	Gas-bearing	0.43
K-82 marker	6,986	7,064	Gas-bearing	0.43
"Upper Gallup"	7,086	7,164	Gas-bearing	0.43
K-78_0 marker	7,201	7,279	Gas-bearing	0.43
"Middle Gallup"	7,281	7,359	Gas-bearing	0.43
K-72 marker	7,391	7,469	Gas-bearing	0.43
Sanostee Sh	7,501	7,579	Gas-bearing	0.43
Greenhorn Ls	7,816	7,894	Gas-bearing	0.43
Graneros Sh	7,866	7,944	Gas-bearing	0.43
Two Wells Ss	7,951	8,029	Gas-bearing	0.30
Paguate Ss	7,971	8,049	Gas & water-bearing	0.30

Cubero Ss	7,981	8,059	Gas & water-bearing	0.30
Encinal Canyon Ss	8,051	8,129	Gas & water-bearing	0.30
Burro Canyon Ss	8,106	8,184	Gas & water-bearing	0.30
Morrison	8,146	8,224	Gas- & water bearing	0.30

Possible Aquifers: San Jose and Ojo Alamo

Oil Shale: None Expected.

Oil & Gas: Primary objective is the Mancos formation from 7,341' TVD (heel) to 7,356' TVD (toe). Landing point is expected to be in the Mancos at 7,341' TVD.

Protection of oil, gas, water, or other mineral bearing formations: Protection shall be accomplished by setting surface casing below base of possible aquifer and cementing surface casing to surface.

SECTION – 2 BOPE

BOP equipment and accessories will meet or exceed BLM requirements outlined in 43 CFR Part 3160.

A 16 3/4" 2M BOPE and 13 5/8" 5M BOPE will be utilized to drill this well. Maximum anticipated surface pressure for the 16 3/4" 2M BOPE is 1365 psi, maximum anticipated surface pressure for 13 5/8" 5M BOPE is 1670 psi. The 16 3/4" BOPE will be tested 250 psi (Low) for 5 minutes and 2000 psi (High) for 10 minutes. The 13 5/8" BOPE will be tested 250 psi (Low) for 5 minutes and 5000 psi (High) for 10 minutes. Pressure test surface and intermediate casing(s) to 1500 psi for 30 minutes. All preventers and surface casing will be tested before drilling out of surface casing. BOP equipment will be tested every 30 days, after any repairs are made to the BOP equipment, and after the BOP equipment is subjected to pressure. Annular preventers will be functionally operated at least once per week. Pipe rams will be activated daily and blind rams shall be activated each trip or at least weekly. The New Mexico Oil & Gas Conservation Commission and the BLM will be notified 24 hours in advance of testing of BOPE.

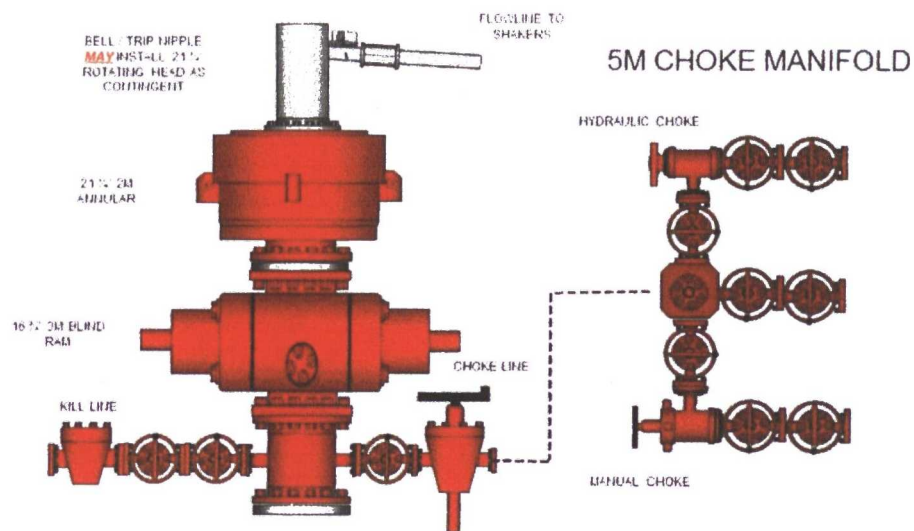
		BHP	MASP
16 3/4" 2M BOPE	6,500' TVD	2,795	1,365
13 5/8" 5M BOPE	7,950' TVD	3,419	1,670

*Highest Bottom Hole Pressure encountered at 7,950' tvd. Total depth had less BHP.

*Gradient used to calculate BHP 0.43 psi/ft

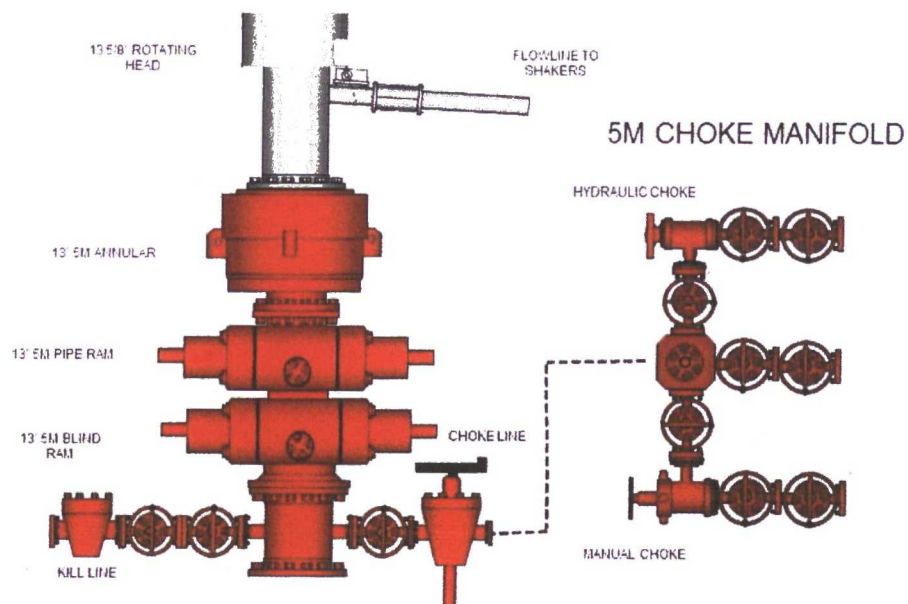
16-3/4" BOPE

Class 2 (AR 2M) BOP



13-5/8" BOPE

Class 3 (ARR 5M) BOP



SECTION – 3 Casing

Bit Program

20" Surface Hole = Surface to 300'

14 3/4" = 300' to 3,300' / 4,500' MD = *11 3/4" (TO ACCOMMODATE CONTINGENCY STRING IF REQUIRED)

10 5/8" = 4,500 to 6,400' MD = 8 5/8" casing point. (Above KOP)

7-7/8" Pilot Hole = 6,400' MD to 8,424 MD (Pilot hole will be cored and plugged back to KOP)

7-7/8" Curve and Lateral = 6,785' MD (KOP) to 16,833' MD

Casing Program – all casing strings are new casing

Casing & Hole Size	Weight	Grade	Coupling	Setting Depth (MD)	Comments
16" (20")	65 ppf	J-55	BT&C	0' - 300'	New casing. Cement to surface. *Surface Casing maybe preset
*11-3/4" (14-3/4")	*47 ppf	*J-55	*BT&C	*0' – 3,300'/4,500'	*New Casing. Two Stage Cement *Contingency String
8-5/8" (10-5/8")	32 ppf	N-80	LT&C	0' – 6,400' MD	New Casing. Two Stage Cement to surface
5-1/2" (7-7/8")	20 ppf	P-110	DQX TMK or equivalent	0' – 16,833' MD	New Casing – Single Stage Cement to overlap previous casing shoe.

Design Factor Table

Casing & Hole Size	Burst	Collapse	Axial	Tri-axial
16" (20") 65 ppf, J55, BTC	10.61	4.88	3.45	5.25
*11-3/4" (14-3/4") 47 ppf, J55, BTC	2.48	1.03	1.85	1.84
8-5/8" (10-5/8") 32 ppf, N80, LTC	1.35	1.05	2.18	1.71
5-1/2" (7-7/8") 20 ppf, P110, DQX TMK	1.10	2.92	2.16	1.39

Casing strings below the conductor casing will be tested to .22 psi per foot of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield.

Minimum casing design factors used:

Collapse -	1.0
Burst -	1.1
Jt. Strength -	1.40

*Design factor for 11 3/4" casing string based on 4,500'. Contingency string will be set at 3,300' or 4,500' depending on casing availability.

Surface Casing – Centralizers shall be placed on the first 4 (bottom 4) joints of casing (1 per joint) and 1 every 3rd joint to surface.

Intermediate casing – Centralizers shall be placed on first 3 (bottom 3) joints of casing (1 per joint) and 1 every 3rd joint to surface. (*contingency string will use the same centralizer placement)

Production String – Centralizers will be placed at discretion in lateral to achieve adequate standoff for quality cement job. A toe sleeve will be placed 2 joints above shoe track.

*BP respectfully request to have option to set an 11 ¾" contingency string if severe losses occur while drilling fruitland coal interval. The casing string will cover the fruitland coal interval and shoe will be set between 3,300' and 4,500'. A two stage cement job will be utilized with stage tool at +/- 2700' MD. The following 8 5/8" casing string will have a two stage cement job with stage too at +/- 4,600' MD.

NOTE: If contingency string is not required the 8 5/8" casing will be ran to setting depth and a two stage cement job will be utilized with stage tool at +/- 2700' MD.

NOTE: DV tool placement is described in cement section and will be used at the discretion of the operator if there is evidence of heavy losses and we are concerned that cement will not make it to surface.

*Surface casing maybe preset with a preset rig.

SECTION – 4 Cement

The proposed cementing program has been designed to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use. The casing setting depth shall be calculated to position the casing seat opposite a competent formation which will contain the maximum pressure to which it will be exposed during normal drilling operations. All indications of useable water shall be reported.

- Pea Gravel or other material shall not be used to fill up around the surface casing in the event cement fall back occurs.
- The surface casing shall in all cases be cemented back to surface. In the event cement does not circulate to surface or fall back of the cement column occurs, remedial cementing shall be done to cement the casing back to surface. No more than the top 100' will be remediated with 1" line if fall back occurs. Anything more than 100' will require plan approval to remediate.
- Top plugs shall be used to reduce contamination of cement by displacement fluid. A bottom plug or other acceptable technique, such as a pre-flush fluid, inner string cement method, etc. shall be utilized to help isolate the cement from contamination by the mud fluid being displaced ahead of the cement slurry.
- Cement Volumes may be adjusted based on hole conditions.

Surface Casing Single Stage Job – (0-300'MD/TVD): 20" hole x 16" casing – 100% XS

Cement will be circulated to surface with 405 sx of Class G cement, 15.8 ppg, 1.174 ft3/sk, 94 lbm/sk, 2% CaCl, 0.1250 lbm/sk Poly E Flake, 5.13 Gal/sk fresh water.

Intermediate Casing – Two Stage (0-6,400'MD/6,321'TVD): 14.75" (300' to 4,500') hole x 10.625" (4500' to 6500') hole x 8.625" casing Stage tool @ +/- 2,700' MD

Cement will be circulated to surface. Stage 1 Lead – 1075 sx of Poz 12.3 ppg, 1.958 ft3/sk, 61.10 lbm/sk, 0.1250 lbm/sk Poly E Flake, 10.42 Gal/sk fresh water. Tail – 220 sx 15.8 ppg, 1.147 ft3/sk, 94 lbm/sk, 0.10% Halad, 0.150 lbm/sk Poly E Flake, 4.96 Gal/sk freshwater. Stage 2 Lead – 1225 sx of Poz

12.3 ppg, 2.005 ft³/sk, 61.10 lbm/sk, 2% CaCl, 0.1250 lbm/sk Poly E Flake, 10.74 Gal/sk. Tail – 270 sx 15.8 ppg, 1.147 ft³/sk, 94 lbm/sk, 4.99 Gal/sk.

CONTINGENCY – 11.75" string will be run if we see excessive losses.

Intermediate 1 Casing – Two Stage (0-4,500' MD/4,421' TVD) 14.75" hole X 11.75" casing Stage tool @ +/- 2,700' MD: Contingency String

Cement will be circulated to surface. Stage 1 Lead – 235 sx of Poz 12.3 ppg, 1.958 ft³/sk, 61.10 lbm/sk, 0.1250 lbm/sk Poly E Flake, 10.42 Gal/sk fresh water. Tail – 450 sx 13.5 ppg, 1.317 ft³/sk, 94 lbm/sk, 0.10% Halad, 0.150 lbm/sk Poly E Flake, 4.96 Gal/sk fresh water. Stage 2 Lead – 670 sx of Poz 12.3 ppg, 2.005 ft³/sk, 61.10 lbm/sk, 2% CaCl, 0.1250 lbm/sk Poly E Flake, 10.74 Gal/sk. Tail – 150 sx 15.8 ppg, 1.147 ft³/sk, 94 lbm/sk, 4.99 Gal/sk.

Intermediate 2 Casing – Two Stage (0-6,400' MD/6,321' TVD) 10.625" hole x 8.625" casing Stage tool @ +/- 4,600' MD:

Cement will overlap previous casing shoe at 4,000' MD. Stage 1 Lead – 130 sx of Poz 12.3 ppg, 1.959 ft³/sk, 61.10 lbm/sk, 0.10% HR-5, 0.1250 lbm/sk Poly E Flake, 10.42 Gal/sk fresh water. Tail – 220 sx 13.5 ppg, 1.317 ft³/sk, 47 lbm/sk, 0.10% HR-5, 0.1250 lbm/sk Poly E Flake, 5.95 Gal/sk fresh water. Stage 2 – Lead – 145 sx of Poz 12.3 ppg, 1.959 ft³/sk, 61.10 lbm/sk, 0.10% HR-5, 0.1250 lbm/sk Poly E Flake, 10.42 Gal/sk fresh water. Tail – 70 sx 15.8 ppg, 1.147 ft³/sk, 94 lbm/sk, 0.10 Halad(R) – 9, 4.98 Gal/sk.

Production Casing – Single Stage Conventional Cement (0' - 16,833' MD/ 7356' TVD) 7.825" hole x 5.5" casing:

Cement will overlap previous 8.625" casing shoe. 1650 sx of Class G cement, 15.8 ppg, 1.174 ft³/sk, 94 lbm/sk, 2% CaCl, 0.1250 lbm/sk Poly E Flake, 5.13 Gal/sk fresh water. Estimated top of cement at 5,500' MD.

Cement calculations are used for volume estimation. Well conditions will dictate final cement job design.

Actual volumes will be calculated and determined by conditions onsite. All cement slurries will meet or exceed minimum BLM and New Mexico Oil Conservation Division requirements. Slurries used will be the slurries listed above or equivalent slurries depending on service provider selected. Cement yields may change depending on slurries selected.

All waiting on cement times shall be a minimum of 8 hours or adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

SECTION – 5 Circulating Medium (Mud Program)

CLOSED-LOOP SYSTEM DESIGN PLAN

The closed-loop system will consist of a series of temporary above-ground storage tanks and/or haul-off bins suitable for holding the cuttings and fluids from drilling operations. The closed-loop system will not entail temporary pits, below-grade storage tanks, below-grade sumps, or drying pads.

Design considerations include:

- The closed-loop system will be signed in accordance with 19.15.17.11 NMAC.
- The closed-loop system storage tanks will be of adequate volume to ensure confinement of all fluids and provide sufficient freeboard to prevent uncontrolled releases.
- Topsoil will be salvaged and stored for use in reclamation activities.

CLOSED-LOOP SYSTEM OPERATING & MAINTENANCE PLAN

✓ The closed-loop system will be operated and maintained to contain liquids and solids; minimize the amount of drilling fluids and cuttings that require disposal; maximize the amount of drilling fluid recycled and reused in the drilling process; isolate drilling wastes from the environment; prevent contamination of fresh water; and protect public health and the environment.

Operation and maintenance considerations include:

- Fluid levels will be maintained to provide sufficient freeboard to prevent over-topping.
- Visual inspections will be conducted on a daily basis to identify any potential leaks and to ensure that the closed-loop system storage tanks have sufficient freeboard to prevent over-topping.
- Only drilling fluids or cuttings intrinsic to, used by, or generated from, drilling operations will be stored in the closed-loop system storage tanks. Hazardous waste, miscellaneous solid waste, and/or debris will not be stored in the storage tanks.
- The OCD District Office will be notified within 48 hours of discovery of a leak in the closed-loop drilling system. If a leak is discovered, all liquid will be removed within 48 hours and the damage repaired.

CLOSED-LOOP SYSTEM CLOSURE PLAN

The closed-loop system will be closed in accordance with 19.15.17.13 NMAC. Closure

considerations include:

- Drilling fluids will be recycled and transferred to other permitted closed-loop systems or returned to the vendor for reuse, as practical.
- Residual fluids will be pulled from the storage tanks, mixed with saw dust or similar absorbent material, and disposed of at Industrial Envirotech, Inc. waste disposal facilities.
- Remaining cuttings or sludges will be vacuumed from the storage tanks and disposed of at the Envirotech, Inc and/or Industrial Ecosystem, Inc. waste disposal facilities.
- Storage tanks will be removed from the well location during the rig move.
- The well pad will be reclaimed and seeded in accordance with subsections G, Hand I of 19.15.17.13NMAC.

Mud Tables

Interval (MD)	Hole Section	Hole Size	Type	MW	FL	PV	YP	PH	REMARKS
0'-300'	Surface	20"	FW/Gel	8.4-9.0	NC	8	12	9.0	Spud Mud
300'-6,400'	Intermediate	14 3/4" x 10 5/8"	LSND	8.6-9.0	<8	4-6	12-15	10.0	Fresh Water
6,400' to 8,427'	Pilot for Core	7 7/8"	OBM	9.0-12.0	<8	14-20	8-14	11.0	OBM
6,400'-16,833	Production	7-7/8"	OBM	9.0-12.0	<8	14-20	8-14	11.0	OBM

Contingency

Interval (MD)	Hole Section	Hole Size	Type	MW	FL	PV	YP	PH	REMARKS
300'-4,500'	Intermediate 1	14 3/4 "	LSND	8.6-9.0	<8	4-6	12-15	10.0	Fresh Water
4,500'-6,400'	Intermediate 2	10-5/8"	AIR	NC	NC	NC	NC	NC	

Sufficient weighting material will be on hand to weight mud up to 1 PPG over, if required.

The formula for weight up with barite is listed below:

$$\text{Sacks of Barite per 100 bbl of mud} = 1470 \times (W2 - W1) \div (35 - W2)$$

Where; W1 = current mud weight

W2 = new mud weight

$$\text{Sacks} = 1470 \times (10 - 9) / (35 - 10) = 59 \text{ sx} \times 5 \text{ (500bbls minimum)} = 294 \text{sx}$$

Pason Pit Volume Totalizer (PVT) equipment (or equivalent) will be on each pit to monitor pit levels. A trip tank equipped with a Pason PVT will be used to monitor trip volumes.

✓ A closed-loop system will be used to recover drilling fluid and dry cuttings in both phases of the well and on all hole intervals, including fresh water and oil-based operations. Above-ground tanks will be utilized to hold cuttings and fluids for rig operations. A frac tank will be on location to store fresh water. Waste will be disposed of properly at an EPA-approved hazardous waste facility. Fresh water cuttings will be disposed of as outlined is surface use plane location will be lined in accordance with the Surface Use Plan of Operations.

SECTION – 6 Test, Logging & Coring

Testing: None planned.

Logging:

GR – Surface Casing shoe to Pilot Hole TD

Quad Combo – Vertical: Pilot Hole TD to +/- 6,400' casing point

Quad Combo – Lateral TD to end of curve

Azimuthal and Radial GR – Drilling curve and lateral

Mud Logging:

Geologist & a manned mud-logging unit will be operational @ +/- 3,000' on the Pilot Hole to TD and of the horizontal hole.

Gas detecting equipment shall be installed in the mud return system for exploratory wells and hydrocarbon gas shall be monitored for pore pressure changes from base of surface casing to TD.

Visual mud monitoring equipment shall be in place to detect volume changes indicating loss or gain of circulating fluid volume.

Coring: +/- 900' of core from Mancos Sh to Dakota Ss

Cement Bond Log:

BP will run a cement bond log (CBL) if cement returns are not observed on the surface and first intermediate casing strings. The CBL will confirm the quality of cement and the actual top of cement.

SECTION – 7 Pressure

Normal to subnormal pressure gradient to TD.

MASP and casing design parameters determined using 0.43 psi/ft.

Maximum expected BHP @ 7951' TVD: 3,419 psi

Maximum expected BHT @ 8146' TVD: ~160° F

Possible lost circulation in the Fruitland Coal to Mesa Verde (3,036' to 5,051'). Lost circulation has been successfully mitigated with lost circulation materials in concentrations of up to 30% by volume. Intermediate casing will be set through this interval to +/- 6,400'.

No hydrogen sulfide gas is anticipated, however, if H₂S is encountered, the guidelines in Onshore Order No. 6 will be followed.

Directional Plans: Horizontal directional well, directional plans attached.

Completion:

- **Pressure test**
 - Pressure test production casing to allowable frac pressure or as per BLM requirements
- **Stimulation**
 - well will be stimulated with approximately 35,000,000 pound of proppant in 775,000 bbls of water; the number of stages and the amount of proppant will be adjusted based on the petrophysical properties of the target zone
 - stages will be isolated with plugs
 - plugs will be drilled out
 - flowback well
- **Turn well to production**
 - It is intended to produce the well up the casing, without installing tubing, for at least 60 days or until tubing is needed to unload the well

Timing: BP plans to drill this well in September, 2016

It is anticipated that the drilling of this well will take approximately 30 days.

It is anticipated that completion operations will begin immediately after the well has been drilled depending on stimulation company availability.

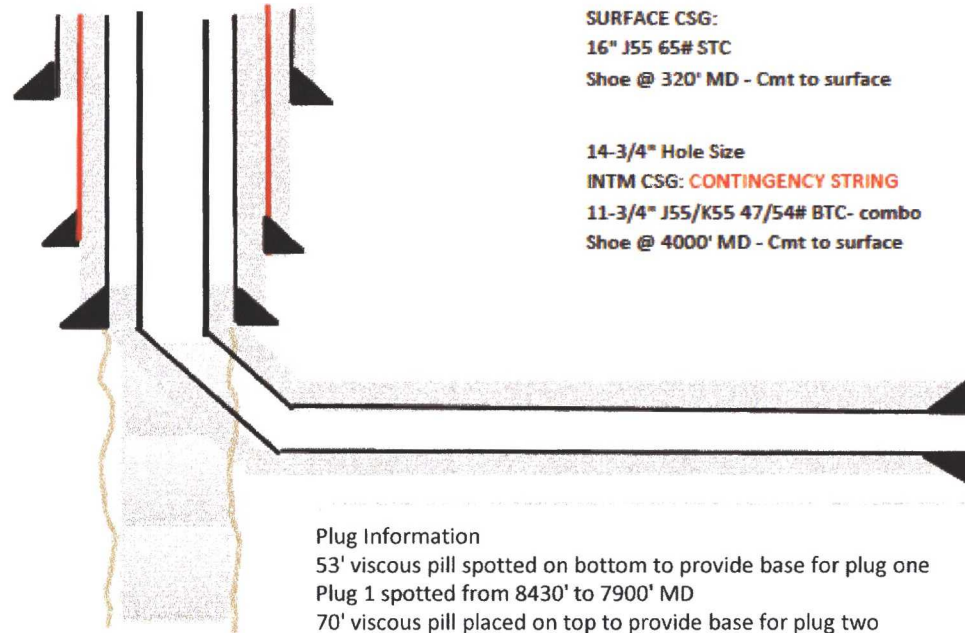
BP

NEBU 602-1H PILOT HOLE WBD

Depths referenced to GL of 6521' & RKB 15' @ 6536'

Marker	TVD	MD
Animas	15	15
Ojo Alamo	2391	2472
Kirtland	2496	2583
Fruitland Coal	3036	3156
Pictured Cliffs	3210	3336
Lewis	3576	3706
Chacra	4696	4826
Cliffhouse	5136	5266
Menefee	5501	5631
Mancos	6181	6311
Upper Gallup	7086	7218
Greenhorn	7816	7951
Morrison	8146	8282
Total Depth	8346	8483

Coring Interval ~900' Length 6500-7400'
Mancos and Dakota



20" Hole Size

SURFACE CSG:

16" J55 65# STC

Shoe @ 320' MD - Cmt to surface

14-3/4" Hole Size

INTM CSG: **CONTINGENCY STRING**

11-3/4" J55/K55 47/54# BTC- combo

Shoe @ 4000' MD - Cmt to surface

10-5/8" Hole Size

INTM. CSG:

8-5/8" N80HC 32# BTC

Shoe @ 6500' MD - Cmt to surface

7-7/8" Hole Size

Prod Csg:

5-1/2" P110 20# VARoughneck

Shoe @ 17,711' MD -

Cmt to overlap 8-5/8" shoe @ ~5500'

Plug Information

53' viscous pill spotted on bottom to provide base for plug one

Plug 1 spotted from 8430' to 7900' MD

70' viscous pill placed on top to provide base for plug two

Plug 2 spotted from 7830' to 7330' MD

100' viscous pill placed on top to provide base for plug three

Plug 3 spotted from 7230 to 6630' MD

Cement for these plugs will be Class B or G, 15.6-15.8 ppg . Plug tops will be adjusted based on log data.

Pilot Coring: After coring operations and open hole logging have been completed three cement plugs with viscous gel spacers will be pumped and the top of cement will be 6,630', approximately 200' above planned KOP(6,830' MD) for the lateral. Will utilize cement plugs to kick off from and drill the production interval.

OIL CONS. DIV DIST. 3
JAN 20 2017



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



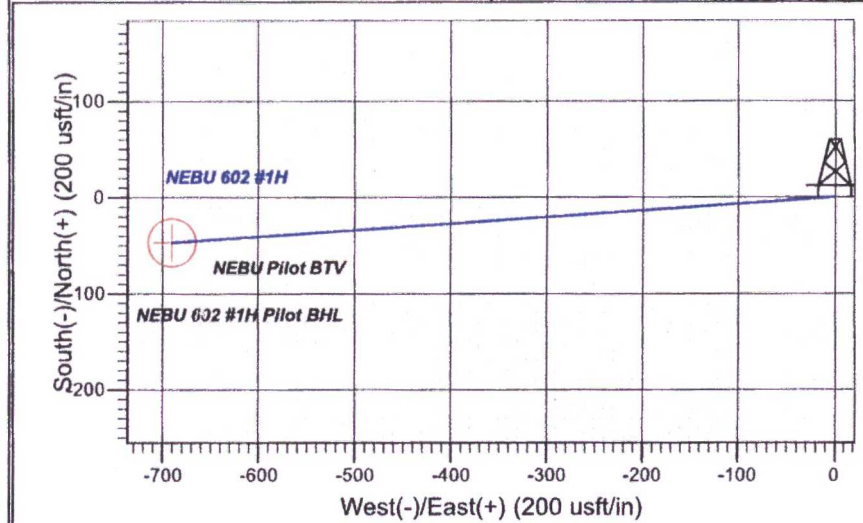
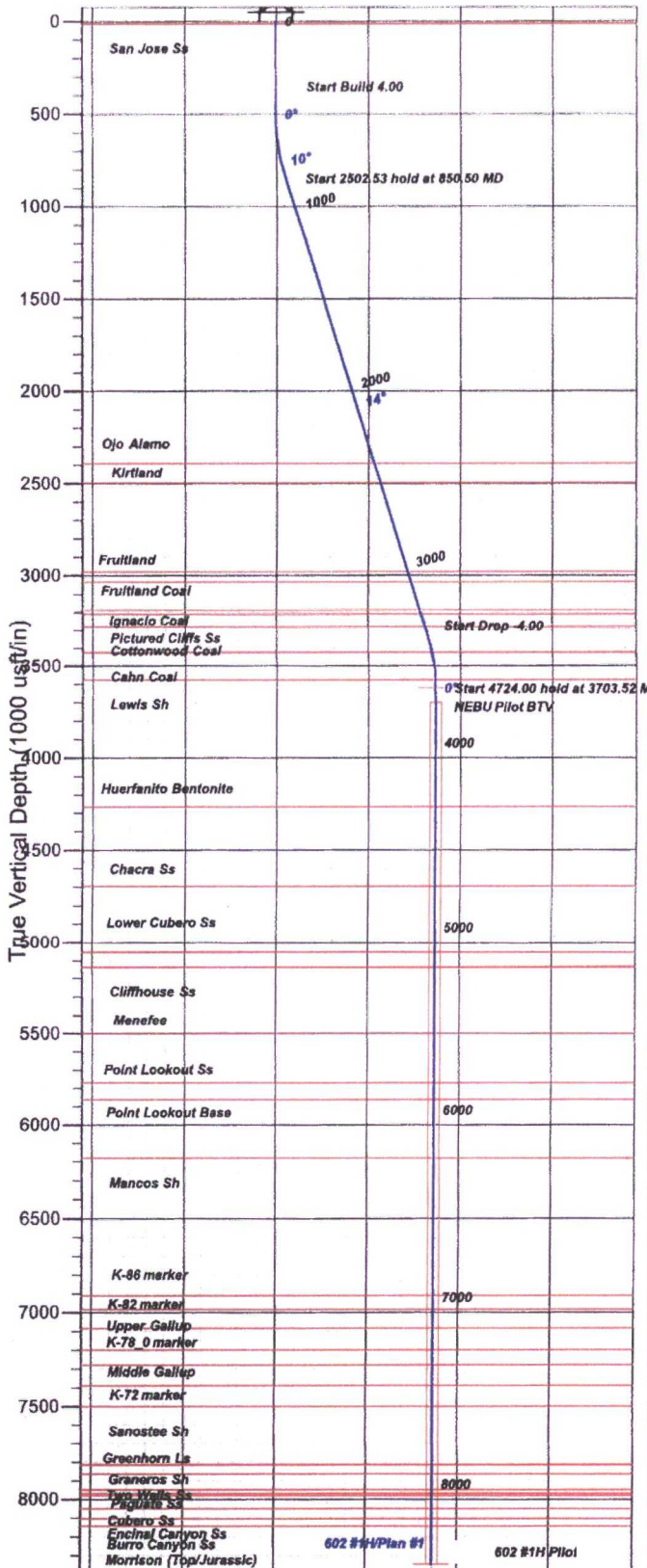
Well Details: NEBU 602 #1H

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



Azimuths to Grid North
True North: -0.18°
Magnetic North: 8.98°

Magnetic Field
Strength: 50166.1nT
Dip Angle: 63.57°
Date: 5/12/2016
Model: HDGM



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
15.00	15.00	San Jose Ss
2391.00	2441.89	Ojo Alamo
2496.00	2550.12	Kirtland
2981.00	3050.01	Fruitland
3036.00	3106.69	Fruitland Coal
3186.00	3261.30	Ignacio Coal
3210.00	3286.04	Pictured Cliffs Ss
3281.00	3359.21	Cottonwood Coal
3426.00	3506.90	Cahn Coal
3576.00	3657.51	Lewis Sh
4266.00	4347.52	Huerfano Bentonite
4696.00	4777.52	Chacra Ss
5056.00	5137.52	Lower Cubero Ss
5136.00	5217.52	Cliffhouse Ss
5501.00	5582.52	Menefee
5771.00	5852.52	Point Lookout Ss
5861.00	5942.52	Point Lookout Base
6181.00	6262.52	Mancos Sh
6911.00	6992.52	K-86 marker
6986.00	7067.52	K-82 marker
7086.00	7167.52	Upper Gallup
7201.00	7282.52	K-78 0 marker
7281.00	7362.52	Middle Gallup
7391.00	7472.52	K-72 marker
7501.00	7582.52	Sanostee Sh
7816.00	7897.52	Greenhorn Ls
7866.00	7947.52	Graneros Ls
7951.00	8032.52	Two Wells Ss
7971.00	8052.52	Paguate Ss
7981.00	8062.52	Cubero Ss
8051.00	8132.52	Encinal Canyon Ss
8106.00	8187.52	Burro Canyon Ss
8146.00	8227.52	Morrison (Top/Jurassic)

Plan: Plan #1

12:50, May 31 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	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	
3	850.50	14.02	266.10	847.01	-2.90	-42.57	4.00	266.10	42.67	
4	3353.02	14.02	266.10	3274.99	-44.15	-647.42	0.00	0.00	648.92	
5	3703.52	0.00	0.00	3622.00	-47.05	-689.99	4.00	180.00	691.59	NEBU Pilot BTV
6	8427.52	0.00	0.00	8346.00	-47.05	-689.99	0.00	0.00	691.59	NEBU 602 #1H Pilot BHL

TARGET DETAILS

Name TVD +N/-S +E/-W Northing Easting Latitude Longitude Shape



B.P.

San Juan County, NM NAD83

NEBU 602 Pad

NEBU 602 #1H

Pilot

Plan: Plan #1

Standard Planning Report

31 May, 2016



Scientific Drilling

www.scientificdrilling.com



Planning Report



Database:	Grand Junction District	Local Co-ordinate Reference:	Well NEBU 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:	Pilot		
Design:	Plan #1		

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

Well	NEBU 602 #1H					
Well Position	+N/-S	0.00 usft	Northing:	2,154,140.58 usft	Latitude:	36.9194248
	+E/-W	0.00 usft	Easting:	2,812,207.47 usft	Longitude:	-107.5284725
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,521.00 usft	

Wellbore	Pilot				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/12/2016	9.17	63.57	50,166

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	266.10

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
850.50	14.02	266.10	847.01	-2.90	-42.57	4.00	4.00	0.00	266.10	
3,353.02	14.02	266.10	3,274.99	-44.15	-647.42	0.00	0.00	0.00	0.00	
3,703.52	0.00	0.00	3,622.00	-47.05	-689.99	4.00	-4.00	0.00	180.00	NEBU Pilot BTW
8,427.52	0.00	0.00	8,346.00	-47.05	-689.99	0.00	0.00	0.00	0.00	NEBU 602 #1H Pilot E



Planning Report



Database: Grand Junction District
 Company: B.P.
 Project: San Juan County, NM NAD83
 Site: NEBU 602 Pad
 Well: NEBU 602 #1H
 Wellbore: Pilot
 Design: Plan #1

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:

Well NEBU 602 #1H
 GL 6521' & RKB 15' @ 6536.00usft
 GL 6521' & RKB 15' @ 6536.00usft
 Grid
 Minimum Curvature

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15.00	0.00	0.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00
San Jose Ss									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	4.00	266.10	599.92	-0.24	-3.48	3.49	4.00	4.00	0.00
700.00	8.00	266.10	699.35	-0.95	-13.91	13.94	4.00	4.00	0.00
800.00	12.00	266.10	797.81	-2.13	-31.23	31.30	4.00	4.00	0.00
850.50	14.02	266.10	847.01	-2.90	-42.57	42.67	4.00	4.00	0.00
900.00	14.02	266.10	895.04	-3.72	-54.53	54.66	0.00	0.00	0.00
1,000.00	14.02	266.10	992.06	-5.37	-78.70	78.89	0.00	0.00	0.00
1,100.00	14.02	266.10	1,089.08	-7.01	-102.87	103.11	0.00	0.00	0.00
1,200.00	14.02	266.10	1,186.10	-8.66	-127.04	127.34	0.00	0.00	0.00
1,300.00	14.02	266.10	1,283.12	-10.31	-151.21	151.56	0.00	0.00	0.00
1,400.00	14.02	266.10	1,380.14	-11.96	-175.38	175.79	0.00	0.00	0.00
1,500.00	14.02	266.10	1,477.17	-13.61	-199.55	200.02	0.00	0.00	0.00
1,600.00	14.02	266.10	1,574.19	-15.26	-223.72	224.24	0.00	0.00	0.00
1,700.00	14.02	266.10	1,671.21	-16.90	-247.89	248.47	0.00	0.00	0.00
1,800.00	14.02	266.10	1,768.23	-18.55	-272.06	272.69	0.00	0.00	0.00
1,900.00	14.02	266.10	1,865.25	-20.20	-296.23	296.92	0.00	0.00	0.00
2,000.00	14.02	266.10	1,962.27	-21.85	-320.40	321.14	0.00	0.00	0.00
2,100.00	14.02	266.10	2,059.29	-23.50	-344.57	345.37	0.00	0.00	0.00
2,200.00	14.02	266.10	2,156.31	-25.14	-368.74	369.60	0.00	0.00	0.00
2,300.00	14.02	266.10	2,253.34	-26.79	-392.91	393.82	0.00	0.00	0.00
2,400.00	14.02	266.10	2,350.36	-28.44	-417.08	418.05	0.00	0.00	0.00
2,441.89	14.02	266.10	2,391.00	-29.13	-427.20	428.20	0.00	0.00	0.00
Ojo Alamo									
2,500.00	14.02	266.10	2,447.38	-30.09	-441.25	442.27	0.00	0.00	0.00
2,550.12	14.02	266.10	2,496.00	-30.91	-453.36	454.41	0.00	0.00	0.00
Kirtland									
2,600.00	14.02	266.10	2,544.40	-31.74	-465.42	466.50	0.00	0.00	0.00
2,700.00	14.02	266.10	2,641.42	-33.38	-489.59	490.72	0.00	0.00	0.00
2,800.00	14.02	266.10	2,738.44	-35.03	-513.76	514.95	0.00	0.00	0.00
2,900.00	14.02	266.10	2,835.46	-36.68	-537.93	539.18	0.00	0.00	0.00
3,000.00	14.02	266.10	2,932.48	-38.33	-562.10	563.40	0.00	0.00	0.00
3,050.01	14.02	266.10	2,981.00	-39.15	-574.18	575.52	0.00	0.00	0.00
Fruitland									
3,100.00	14.02	266.10	3,029.50	-39.98	-586.27	587.63	0.00	0.00	0.00
3,106.69	14.02	266.10	3,036.00	-40.09	-587.88	589.25	0.00	0.00	0.00
Fruitland Coal									
3,200.00	14.02	266.10	3,126.53	-41.63	-610.44	611.85	0.00	0.00	0.00
3,261.30	14.02	266.10	3,186.00	-42.64	-625.25	626.70	0.00	0.00	0.00
Ignacio Coal									
3,286.04	14.02	266.10	3,210.00	-43.04	-631.23	632.70	0.00	0.00	0.00
Pictured Cliffs Ss									
3,300.00	14.02	266.10	3,223.55	-43.27	-634.60	636.08	0.00	0.00	0.00
3,353.02	14.02	266.10	3,274.99	-44.15	-647.42	648.92	0.00	0.00	0.00
3,359.21	13.77	266.10	3,281.00	-44.25	-648.90	650.41	4.00	-4.00	0.00
Cottonwood Coal									
3,400.00	12.14	266.10	3,320.75	-44.87	-658.03	659.56	4.00	-4.00	0.00



Planning Report



Database:	Grand Junction District	Local Co-ordinate Reference:	Well NEBU 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:	Pilot		
Design:	Plan #1		

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)
3,500.00	8.14	266.10	3,419.16	-46.07	-675.59	677.16	4.00	-4.00	0.00
3,506.90	7.86	266.10	3,426.00	-46.13	-676.55	678.12	4.00	-4.00	0.00
Cahn Coal									
3,600.00	4.14	266.10	3,518.57	-46.80	-686.26	687.85	4.00	-4.00	0.00
3,657.51	1.84	266.10	3,576.00	-47.00	-689.25	690.85	4.00	-4.00	0.00
Lewis Sh									
3,700.00	0.14	266.10	3,618.48	-47.05	-689.99	691.59	4.00	-4.00	0.00
3,703.52	0.00	0.00	3,622.00	-47.05	-689.99	691.59	4.00	-4.00	2,667.98
NEBU Pilot BTV									
3,800.00	0.00	0.00	3,718.48	-47.05	-689.99	691.59	0.00	0.00	0.00
3,900.00	0.00	0.00	3,818.48	-47.05	-689.99	691.59	0.00	0.00	0.00
4,000.00	0.00	0.00	3,918.48	-47.05	-689.99	691.59	0.00	0.00	0.00
4,100.00	0.00	0.00	4,018.48	-47.05	-689.99	691.59	0.00	0.00	0.00
4,200.00	0.00	0.00	4,118.48	-47.05	-689.99	691.59	0.00	0.00	0.00
4,300.00	0.00	0.00	4,218.48	-47.05	-689.99	691.59	0.00	0.00	0.00
4,347.52	0.00	0.00	4,266.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Huerfano Bentonite									
4,400.00	0.00	0.00	4,318.48	-47.05	-689.99	691.59	0.00	0.00	0.00
4,500.00	0.00	0.00	4,418.48	-47.05	-689.99	691.59	0.00	0.00	0.00
4,600.00	0.00	0.00	4,518.48	-47.05	-689.99	691.59	0.00	0.00	0.00
4,700.00	0.00	0.00	4,618.48	-47.05	-689.99	691.59	0.00	0.00	0.00
4,777.52	0.00	0.00	4,696.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Chacra Ss									
4,800.00	0.00	0.00	4,718.48	-47.05	-689.99	691.59	0.00	0.00	0.00
4,900.00	0.00	0.00	4,818.48	-47.05	-689.99	691.59	0.00	0.00	0.00
5,000.00	0.00	0.00	4,918.48	-47.05	-689.99	691.59	0.00	0.00	0.00
5,100.00	0.00	0.00	5,018.48	-47.05	-689.99	691.59	0.00	0.00	0.00
5,137.52	0.00	0.00	5,056.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Lower Cubero Ss									
5,200.00	0.00	0.00	5,118.48	-47.05	-689.99	691.59	0.00	0.00	0.00
5,217.52	0.00	0.00	5,136.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Cliffhouse Ss									
5,300.00	0.00	0.00	5,218.48	-47.05	-689.99	691.59	0.00	0.00	0.00
5,400.00	0.00	0.00	5,318.48	-47.05	-689.99	691.59	0.00	0.00	0.00
5,500.00	0.00	0.00	5,418.48	-47.05	-689.99	691.59	0.00	0.00	0.00
5,582.52	0.00	0.00	5,501.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Menefee									
5,600.00	0.00	0.00	5,518.48	-47.05	-689.99	691.59	0.00	0.00	0.00
5,700.00	0.00	0.00	5,618.48	-47.05	-689.99	691.59	0.00	0.00	0.00
5,800.00	0.00	0.00	5,718.48	-47.05	-689.99	691.59	0.00	0.00	0.00
5,852.52	0.00	0.00	5,771.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Point Lookout Ss									
5,900.00	0.00	0.00	5,818.48	-47.05	-689.99	691.59	0.00	0.00	0.00
5,942.52	0.00	0.00	5,861.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Point Lookout Base									
6,000.00	0.00	0.00	5,918.48	-47.05	-689.99	691.59	0.00	0.00	0.00
6,100.00	0.00	0.00	6,018.48	-47.05	-689.99	691.59	0.00	0.00	0.00
6,200.00	0.00	0.00	6,118.48	-47.05	-689.99	691.59	0.00	0.00	0.00
6,262.52	0.00	0.00	6,181.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Mancos Sh									
6,300.00	0.00	0.00	6,218.48	-47.05	-689.99	691.59	0.00	0.00	0.00
6,400.00	0.00	0.00	6,318.48	-47.05	-689.99	691.59	0.00	0.00	0.00
6,500.00	0.00	0.00	6,418.48	-47.05	-689.99	691.59	0.00	0.00	0.00



Database:	Grand Junction District	Local Co-ordinate Reference:	Well NEBU 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:	Pilot		
Design:	Plan #1		

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)
6,600.00	0.00	0.00	6,518.48	-47.05	-689.99	691.59	0.00	0.00	0.00
6,700.00	0.00	0.00	6,618.48	-47.05	-689.99	691.59	0.00	0.00	0.00
6,800.00	0.00	0.00	6,718.48	-47.05	-689.99	691.59	0.00	0.00	0.00
6,900.00	0.00	0.00	6,818.48	-47.05	-689.99	691.59	0.00	0.00	0.00
6,992.52	0.00	0.00	6,911.00	-47.05	-689.99	691.59	0.00	0.00	0.00
K-86 marker									
7,000.00	0.00	0.00	6,918.48	-47.05	-689.99	691.59	0.00	0.00	0.00
7,067.52	0.00	0.00	6,986.00	-47.05	-689.99	691.59	0.00	0.00	0.00
K-82 marker									
7,100.00	0.00	0.00	7,018.48	-47.05	-689.99	691.59	0.00	0.00	0.00
7,167.52	0.00	0.00	7,086.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Upper Gallup									
7,200.00	0.00	0.00	7,118.48	-47.05	-689.99	691.59	0.00	0.00	0.00
7,282.52	0.00	0.00	7,201.00	-47.05	-689.99	691.59	0.00	0.00	0.00
K-78_0 marker									
7,300.00	0.00	0.00	7,218.48	-47.05	-689.99	691.59	0.00	0.00	0.00
7,362.52	0.00	0.00	7,281.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Middle Gallup									
7,400.00	0.00	0.00	7,318.48	-47.05	-689.99	691.59	0.00	0.00	0.00
7,472.52	0.00	0.00	7,391.00	-47.05	-689.99	691.59	0.00	0.00	0.00
K-72 marker									
7,500.00	0.00	0.00	7,418.48	-47.05	-689.99	691.59	0.00	0.00	0.00
7,582.52	0.00	0.00	7,501.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Sanostee Sh									
7,600.00	0.00	0.00	7,518.48	-47.05	-689.99	691.59	0.00	0.00	0.00
7,700.00	0.00	0.00	7,618.48	-47.05	-689.99	691.59	0.00	0.00	0.00
7,800.00	0.00	0.00	7,718.48	-47.05	-689.99	691.59	0.00	0.00	0.00
7,897.52	0.00	0.00	7,816.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Greenhorn Ls									
7,900.00	0.00	0.00	7,818.48	-47.05	-689.99	691.59	0.00	0.00	0.00
7,947.52	0.00	0.00	7,866.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Graneros Sh									
8,000.00	0.00	0.00	7,918.48	-47.05	-689.99	691.59	0.00	0.00	0.00
8,032.52	0.00	0.00	7,951.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Two Wells Ss									
8,052.52	0.00	0.00	7,971.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Paguate Ss									
8,062.52	0.00	0.00	7,981.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Cubero Ss									
8,100.00	0.00	0.00	8,018.48	-47.05	-689.99	691.59	0.00	0.00	0.00
8,132.52	0.00	0.00	8,051.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Encinal Canyon Ss									
8,187.52	0.00	0.00	8,106.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Burro Canyon Ss									
8,200.00	0.00	0.00	8,118.48	-47.05	-689.99	691.59	0.00	0.00	0.00
8,227.52	0.00	0.00	8,146.00	-47.05	-689.99	691.59	0.00	0.00	0.00
Morrison (Top/Jurassic)									
8,300.00	0.00	0.00	8,218.48	-47.05	-689.99	691.59	0.00	0.00	0.00
8,400.00	0.00	0.00	8,318.48	-47.05	-689.99	691.59	0.00	0.00	0.00
8,427.52	0.00	0.00	8,346.00	-47.05	-689.99	691.59	0.00	0.00	0.00
NEBU 602 #1H Pilot BHL									



Planning Report



Database:	Grand Junction District	Local Co-ordinate Reference:	Well NEBU 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:	Pilot		
Design:	Plan #1		

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
NEBU Pilot BTV - plan hits target center - Point	0.00	0.00	3,622.00	-47.05	-689.99	2,154,093.53	2,811,517.48	36.9193016	-107.5308335
NEBU 602 #1H Pilot BH - plan hits target center - Circle (radius 25.00)	0.00	0.00	8,346.00	-47.05	-689.99	2,154,093.53	2,811,517.48	36.9193016	-107.5308335

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
15.00	15.00	San Jose Ss		0.00	0.00
2,441.89	2,391.00	Ojo Alamo		0.00	0.00
2,550.12	2,496.00	Kirtland		0.00	0.00
3,050.01	2,981.00	Fruitland		0.00	0.00
3,106.69	3,036.00	Fruitland Coal		0.00	0.00
3,261.30	3,186.00	Ignacio Coal		0.00	0.00
3,286.04	3,210.00	Pictured Cliffs Ss		0.00	0.00
3,359.21	3,281.00	Cottonwood Coal		0.00	0.00
3,506.90	3,426.00	Cahn Coal		0.00	0.00
3,657.51	3,576.00	Lewis Sh		0.00	0.00
4,347.52	4,266.00	Huerfano Bentonite		0.00	0.00
4,777.52	4,696.00	Chacra Ss		0.00	0.00
5,137.52	5,056.00	Lower Cubero Ss		0.00	0.00
5,217.52	5,136.00	Cliffhouse Ss		0.00	0.00
5,582.52	5,501.00	Menefee		0.00	0.00
5,852.52	5,771.00	Point Lookout Ss		0.00	0.00
5,942.52	5,861.00	Point Lookout Base		0.00	0.00
6,262.52	6,181.00	Mancos Sh		0.00	0.00
6,992.52	6,911.00	K-86 marker		0.00	0.00
7,067.52	6,986.00	K-82 marker		0.00	0.00
7,167.52	7,086.00	Upper Gallup		0.00	0.00
7,282.52	7,201.00	K-78_0 marker		0.00	0.00
7,362.52	7,281.00	Middle Gallup		0.00	0.00
7,472.52	7,391.00	K-72 marker		0.00	0.00
7,582.52	7,501.00	Sanostee Sh		0.00	0.00
7,897.52	7,816.00	Greenhorn Ls		0.00	0.00
7,947.52	7,866.00	Graneros Sh		0.00	0.00
8,032.52	7,951.00	Two Wells Ss		0.00	0.00
8,052.52	7,971.00	Paguate Ss		0.00	0.00
8,062.52	7,981.00	Cubero Ss		0.00	0.00
8,132.52	8,051.00	Encinal Canyon Ss		0.00	0.00
8,187.52	8,106.00	Burro Canyon Ss		0.00	0.00
8,227.52	8,146.00	Morrison (Top/Jurassic)		0.00	0.00



Company: B.P.
Project: San Juan County, NM NAD83
Site: NEBU 602 Pad
Well: NEBU 602 #1H
Wellbore: Lateral
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: 8.98°

Magnetic Field
Strength: 50166.5nT
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 #2 (NEBU 602 #1H/Lateral)

Created By: Janie Collins Date: 9:22, June 08 2016

DESIGN TARGET DETAILS

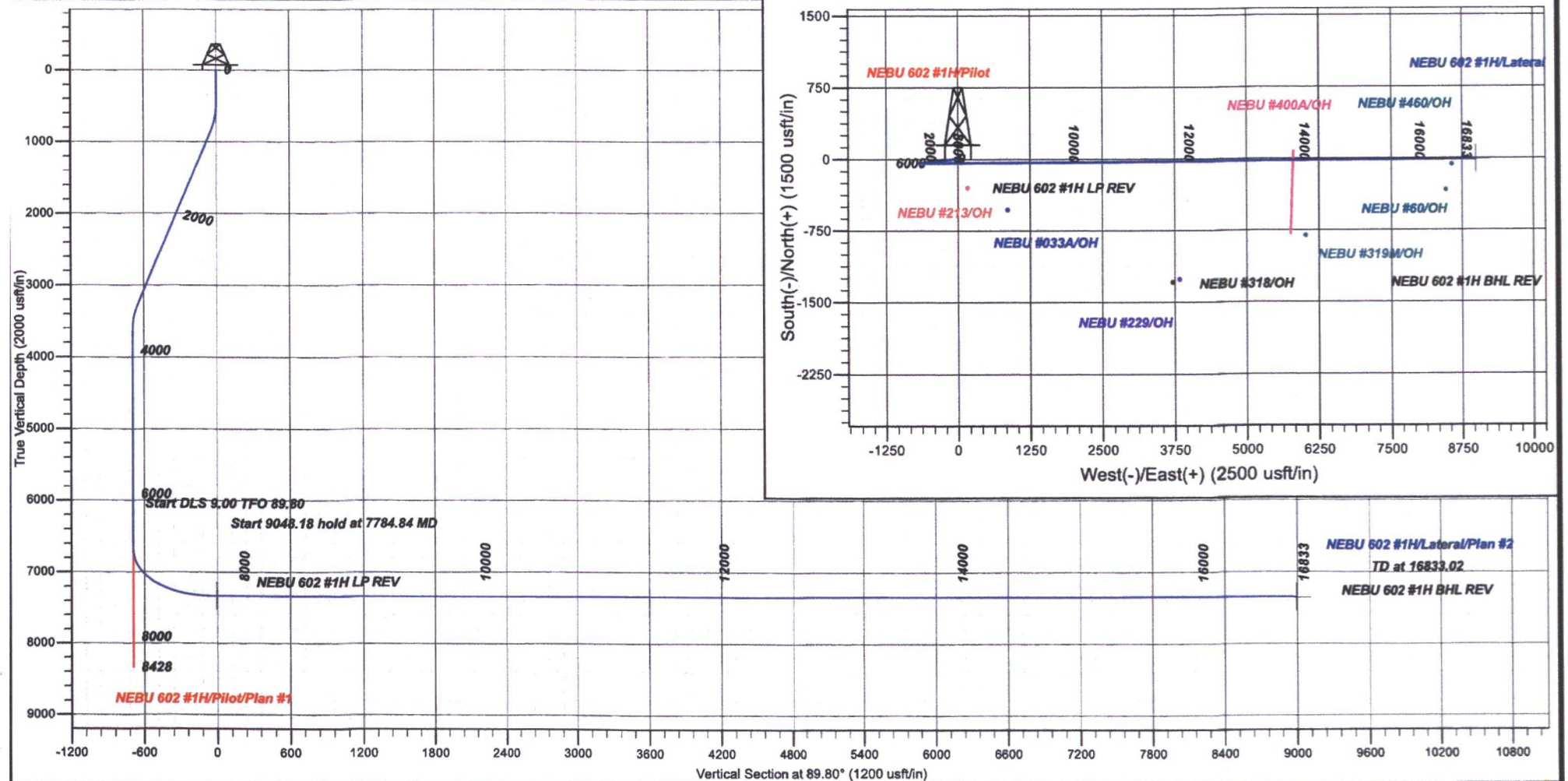
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
NEBU 602 #1H BHL REV	7356.00	-13.58	8993.68	2154127.00	281201.15	36.9193046	-107.4977062
NEBU 602 #1H LP REV	7341.00	-44.67	-6.72	2154095.91	2812200.75	36.9193022	-107.5284960

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
6785.90	0.00	0.00	6704.38	-47.05	-889.99	0.00	0.00	-690.15	
7784.84	89.91	89.80	7341.00	-44.85	-54.43	9.00	89.80	-54.59	
16633.02	89.91	89.80	7356.00	-13.58	8993.68	0.00	0.00	8993.58	NEBU 602 #1H BHL REV

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
6911.00	6996.33	K-86 marker
6986.00	7077.62	K-82 marker
7066.00	7195.13	Upper Gallup





B.P.

San Juan County, NM NAD83

NEBU 602 Pad

NEBU 602 #1H

Lateral

Plan: Plan #2

Standard Planning Report

08 June, 2016



www.scientificdrilling.com



Planning Report



Database:	Grand Junction District	Local Co-ordinate Reference:	Well NEBU 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 #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 602 Pad			
Site Position:		Northing:	2,154,140.58 usft	Latitude:	36.9194248
From:	Map	Easting:	2,812,207.47 usft	Longitude:	-107.5284725
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	0.18 °

Well	NEBU 602 #1H					
Well Position	+N/-S	0.00 usft	Northing:	2,154,140.58 usft	Latitude:	36.9194248
	+E/-W	0.00 usft	Easting:	2,812,207.47 usft	Longitude:	-107.5284725
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,521.00 usft

Wellbore	Lateral				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/11/2016	9.17	63.57	50,167

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	6,785.90
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	89.80

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
6,785.90	0.00	0.00	6,704.38	-47.05	-689.99	0.00	0.00	0.00	0.00	
7,784.84	89.91	89.80	7,341.00	-44.85	-54.43	9.00	9.00	8.99	89.80	
16,833.02	89.91	89.80	7,356.00	-13.58	8,993.68	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
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 #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)
6,785.90	0.00	0.00	6,704.38	-47.05	-689.99	-690.15	0.00	0.00	0.00
6,800.00	1.27	89.80	6,718.48	-47.05	-689.83	-689.99	9.00	9.00	0.00
6,900.00	10.27	89.80	6,817.87	-47.01	-679.79	-679.95	9.00	9.00	0.00
6,996.33	18.94	89.80	6,911.00	-46.93	-655.53	-655.69	9.00	9.00	0.00
K-86 marker									
7,000.00	19.27	89.80	6,914.47	-46.93	-654.33	-654.49	9.00	9.00	0.00
7,077.62	26.25	89.80	6,986.00	-46.82	-624.31	-624.47	9.00	9.00	0.00
K-82 marker									
7,100.00	28.27	89.80	7,005.89	-46.79	-614.06	-614.22	9.00	9.00	0.00
7,195.13	36.83	89.80	7,086.00	-46.61	-562.93	-563.09	9.00	9.00	0.00
Upper Gallup									
7,200.00	37.27	89.80	7,089.89	-46.60	-559.99	-560.15	9.00	9.00	0.00
7,300.00	46.27	89.80	7,164.40	-46.37	-493.45	-493.61	9.00	9.00	0.00
7,400.00	55.27	89.80	7,227.58	-46.10	-416.07	-416.23	9.00	9.00	0.00
7,500.00	64.27	89.80	7,277.87	-45.80	-329.76	-329.92	9.00	9.00	0.00
7,600.00	73.27	89.80	7,314.05	-45.48	-236.64	-236.80	9.00	9.00	0.00
7,700.00	82.27	89.80	7,335.21	-45.15	-139.01	-139.17	9.00	9.00	0.00
7,784.84	89.91	89.80	7,341.00	-44.85	-54.43	-54.59	9.00	9.00	0.00
7,800.00	89.91	89.80	7,341.02	-44.80	-39.27	-39.43	0.00	0.00	0.00
7,832.24	89.91	89.80	7,341.08	-44.69	-7.04	-7.19	0.00	0.00	0.00
NEBU 602 #1H LP									
7,832.55	89.91	89.80	7,341.08	-44.69	-6.72	-6.88	0.00	0.00	0.00
NEBU 602 #1H LP REV									
7,900.00	89.91	89.80	7,341.19	-44.46	60.73	60.57	0.00	0.00	0.00
8,000.00	89.91	89.80	7,341.36	-44.11	160.72	160.57	0.00	0.00	0.00
8,100.00	89.91	89.80	7,341.52	-43.76	260.72	260.57	0.00	0.00	0.00
8,200.00	89.91	89.80	7,341.69	-43.42	360.72	360.57	0.00	0.00	0.00
8,300.00	89.91	89.80	7,341.85	-43.07	460.72	460.57	0.00	0.00	0.00
8,400.00	89.91	89.80	7,342.02	-42.73	560.72	560.57	0.00	0.00	0.00
8,500.00	89.91	89.80	7,342.19	-42.38	660.72	660.57	0.00	0.00	0.00
8,600.00	89.91	89.80	7,342.35	-42.04	760.72	760.57	0.00	0.00	0.00
8,700.00	89.91	89.80	7,342.52	-41.69	860.72	860.57	0.00	0.00	0.00
8,800.00	89.91	89.80	7,342.68	-41.34	960.72	960.57	0.00	0.00	0.00
8,900.00	89.91	89.80	7,342.85	-41.00	1,060.72	1,060.57	0.00	0.00	0.00
9,000.00	89.91	89.80	7,343.01	-40.65	1,160.72	1,160.57	0.00	0.00	0.00
9,100.00	89.91	89.80	7,343.18	-40.31	1,260.72	1,260.57	0.00	0.00	0.00
9,200.00	89.91	89.80	7,343.35	-39.96	1,360.72	1,360.57	0.00	0.00	0.00
9,300.00	89.91	89.80	7,343.51	-39.62	1,460.71	1,460.57	0.00	0.00	0.00
9,400.00	89.91	89.80	7,343.68	-39.27	1,560.71	1,560.57	0.00	0.00	0.00
9,500.00	89.91	89.80	7,343.84	-38.93	1,660.71	1,660.57	0.00	0.00	0.00
9,600.00	89.91	89.80	7,344.01	-38.58	1,760.71	1,760.57	0.00	0.00	0.00
9,700.00	89.91	89.80	7,344.17	-38.23	1,860.71	1,860.57	0.00	0.00	0.00
9,800.00	89.91	89.80	7,344.34	-37.89	1,960.71	1,960.57	0.00	0.00	0.00
9,900.00	89.91	89.80	7,344.51	-37.54	2,060.71	2,060.57	0.00	0.00	0.00
10,000.00	89.91	89.80	7,344.67	-37.20	2,160.71	2,160.57	0.00	0.00	0.00
10,100.00	89.91	89.80	7,344.84	-36.85	2,260.71	2,260.57	0.00	0.00	0.00
10,200.00	89.91	89.80	7,345.00	-36.51	2,360.71	2,360.57	0.00	0.00	0.00
10,300.00	89.91	89.80	7,345.17	-36.16	2,460.71	2,460.57	0.00	0.00	0.00
10,400.00	89.91	89.80	7,345.34	-35.81	2,560.71	2,560.57	0.00	0.00	0.00
10,500.00	89.91	89.80	7,345.50	-35.47	2,660.71	2,660.57	0.00	0.00	0.00
10,600.00	89.91	89.80	7,345.67	-35.12	2,760.71	2,760.57	0.00	0.00	0.00
10,700.00	89.91	89.80	7,345.83	-34.78	2,860.70	2,860.57	0.00	0.00	0.00
10,800.00	89.91	89.80	7,346.00	-34.43	2,960.70	2,960.57	0.00	0.00	0.00
10,900.00	89.91	89.80	7,346.16	-34.09	3,060.70	3,060.57	0.00	0.00	0.00



Planning Report



Database:	Grand Junction District	Local Co-ordinate Reference:	Well NEBU 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 #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)	
11,000.00	89.91	89.80	7,346.33	-33.74	3,160.70	3,160.57	0.00	0.00	0.00	
11,100.00	89.91	89.80	7,346.50	-33.40	3,260.70	3,260.57	0.00	0.00	0.00	
11,200.00	89.91	89.80	7,346.66	-33.05	3,360.70	3,360.57	0.00	0.00	0.00	
11,300.00	89.91	89.80	7,346.83	-32.70	3,460.70	3,460.56	0.00	0.00	0.00	
11,400.00	89.91	89.80	7,346.99	-32.36	3,560.70	3,560.56	0.00	0.00	0.00	
11,500.00	89.91	89.80	7,347.16	-32.01	3,660.70	3,660.56	0.00	0.00	0.00	
11,600.00	89.91	89.80	7,347.32	-31.67	3,760.70	3,760.56	0.00	0.00	0.00	
11,700.00	89.91	89.80	7,347.49	-31.32	3,860.70	3,860.56	0.00	0.00	0.00	
11,800.00	89.91	89.80	7,347.66	-30.98	3,960.70	3,960.56	0.00	0.00	0.00	
11,900.00	89.91	89.80	7,347.82	-30.63	4,060.70	4,060.56	0.00	0.00	0.00	
12,000.00	89.91	89.80	7,347.99	-30.28	4,160.70	4,160.56	0.00	0.00	0.00	
12,100.00	89.91	89.80	7,348.15	-29.94	4,260.69	4,260.56	0.00	0.00	0.00	
12,200.00	89.91	89.80	7,348.32	-29.59	4,360.69	4,360.56	0.00	0.00	0.00	
12,300.00	89.91	89.80	7,348.49	-29.25	4,460.69	4,460.56	0.00	0.00	0.00	
12,400.00	89.91	89.80	7,348.65	-28.90	4,560.69	4,560.56	0.00	0.00	0.00	
12,500.00	89.91	89.80	7,348.82	-28.56	4,660.69	4,660.56	0.00	0.00	0.00	
12,600.00	89.91	89.80	7,348.98	-28.21	4,760.69	4,760.56	0.00	0.00	0.00	
12,700.00	89.91	89.80	7,349.15	-27.86	4,860.69	4,860.56	0.00	0.00	0.00	
12,800.00	89.91	89.80	7,349.31	-27.52	4,960.69	4,960.56	0.00	0.00	0.00	
12,900.00	89.91	89.80	7,349.48	-27.17	5,060.69	5,060.56	0.00	0.00	0.00	
13,000.00	89.91	89.80	7,349.65	-26.83	5,160.69	5,160.56	0.00	0.00	0.00	
13,100.00	89.91	89.80	7,349.81	-26.48	5,260.69	5,260.56	0.00	0.00	0.00	
13,200.00	89.91	89.80	7,349.98	-26.14	5,360.69	5,360.56	0.00	0.00	0.00	
13,300.00	89.91	89.80	7,350.14	-25.79	5,460.69	5,460.56	0.00	0.00	0.00	
13,400.00	89.91	89.80	7,350.31	-25.45	5,560.68	5,560.56	0.00	0.00	0.00	
13,500.00	89.91	89.80	7,350.47	-25.10	5,660.68	5,660.56	0.00	0.00	0.00	
13,600.00	89.91	89.80	7,350.64	-24.75	5,760.68	5,760.56	0.00	0.00	0.00	
13,700.00	89.91	89.80	7,350.81	-24.41	5,860.68	5,860.56	0.00	0.00	0.00	
13,800.00	89.91	89.80	7,350.97	-24.06	5,960.68	5,960.56	0.00	0.00	0.00	
13,900.00	89.91	89.80	7,351.14	-23.72	6,060.68	6,060.56	0.00	0.00	0.00	
14,000.00	89.91	89.80	7,351.30	-23.37	6,160.68	6,160.56	0.00	0.00	0.00	
14,100.00	89.91	89.80	7,351.47	-23.03	6,260.68	6,260.56	0.00	0.00	0.00	
14,200.00	89.91	89.80	7,351.63	-22.68	6,360.68	6,360.56	0.00	0.00	0.00	
14,300.00	89.91	89.80	7,351.80	-22.33	6,460.68	6,460.56	0.00	0.00	0.00	
14,400.00	89.91	89.80	7,351.97	-21.99	6,560.68	6,560.56	0.00	0.00	0.00	
14,500.00	89.91	89.80	7,352.13	-21.64	6,660.68	6,660.56	0.00	0.00	0.00	
14,600.00	89.91	89.80	7,352.30	-21.30	6,760.68	6,760.56	0.00	0.00	0.00	
14,700.00	89.91	89.80	7,352.46	-20.95	6,860.68	6,860.56	0.00	0.00	0.00	
14,800.00	89.91	89.80	7,352.63	-20.61	6,960.67	6,960.56	0.00	0.00	0.00	
14,900.00	89.91	89.80	7,352.80	-20.26	7,060.67	7,060.56	0.00	0.00	0.00	
15,000.00	89.91	89.80	7,352.96	-19.92	7,160.67	7,160.56	0.00	0.00	0.00	
15,100.00	89.91	89.80	7,353.13	-19.57	7,260.67	7,260.56	0.00	0.00	0.00	
15,200.00	89.91	89.80	7,353.29	-19.22	7,360.67	7,360.56	0.00	0.00	0.00	
15,300.00	89.91	89.80	7,353.46	-18.88	7,460.67	7,460.56	0.00	0.00	0.00	
15,400.00	89.91	89.80	7,353.62	-18.53	7,560.67	7,560.56	0.00	0.00	0.00	
15,500.00	89.91	89.80	7,353.79	-18.19	7,660.67	7,660.56	0.00	0.00	0.00	
15,600.00	89.91	89.80	7,353.96	-17.84	7,760.67	7,760.56	0.00	0.00	0.00	
15,700.00	89.91	89.80	7,354.12	-17.50	7,860.67	7,860.56	0.00	0.00	0.00	
15,800.00	89.91	89.80	7,354.29	-17.15	7,960.67	7,960.56	0.00	0.00	0.00	
15,900.00	89.91	89.80	7,354.45	-16.80	8,060.67	8,060.56	0.00	0.00	0.00	
16,000.00	89.91	89.80	7,354.62	-16.46	8,160.67	8,160.56	0.00	0.00	0.00	
16,100.00	89.91	89.80	7,354.78	-16.11	8,260.67	8,260.56	0.00	0.00	0.00	
16,200.00	89.91	89.80	7,354.95	-15.77	8,360.66	8,360.56	0.00	0.00	0.00	
16,300.00	89.91	89.80	7,355.12	-15.42	8,460.66	8,460.56	0.00	0.00	0.00	



Planning Report



Database:	Grand Junction District	Local Co-ordinate Reference:	Well NEBU 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 #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)
16,400.00	89.91	89.80	7,355.28	-15.08	8,560.66	8,560.56	0.00	0.00	0.00
16,500.00	89.91	89.80	7,355.45	-14.73	8,660.66	8,660.56	0.00	0.00	0.00
16,600.00	89.91	89.80	7,355.61	-14.39	8,760.66	8,760.56	0.00	0.00	0.00
16,700.00	89.91	89.80	7,355.78	-14.04	8,860.66	8,860.56	0.00	0.00	0.00
16,800.00	89.91	89.80	7,355.95	-13.69	8,960.66	8,960.56	0.00	0.00	0.00
16,832.81	89.91	89.80	7,356.00	-13.58	8,993.46	8,993.36	0.00	0.00	0.00
NEBU 602 #1H BHL									
16,833.02	89.91	89.80	7,356.00	-13.58	8,993.68	8,993.58	0.00	0.00	0.00
NEBU 602 #1H BHL REV									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
NEBU 602 #1H LP	0.00	0.00	7,151.00	-44.67	-6.72	2,154,095.91	2,812,200.75	36.9193022	-107.5284960
- plan misses target center by 190.08usft at 7832.24usft MD (7341.08 TVD, -44.69 N, -7.04 E)									
- Point									
NEBU 602 #1H BHL	0.00	0.00	7,226.00	-13.58	8,993.68	2,154,127.00	2,821,201.15	36.9193046	-107.4977062
- plan misses target center by 130.00usft at 16832.80usft MD (7356.00 TVD, -13.58 N, 8993.46 E)									
- Point									
NEBU 602 #1H LP REV	0.00	0.00	7,341.00	-44.67	-6.72	2,154,095.91	2,812,200.75	36.9193022	-107.5284960
- plan misses target center by 0.08usft at 7832.55usft MD (7341.08 TVD, -44.69 N, -6.72 E)									
- Point									
NEBU 602 #1H BHL RE'	0.00	0.00	7,356.00	-13.58	8,993.68	2,154,127.00	2,821,201.15	36.9193046	-107.4977062
- plan hits target center									
- Point									



Planning Report



Database:	Grand Junction District	Local Co-ordinate Reference:	Well NEBU 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 #2		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
15.00	15.00	San Jose Ss	Empty	0.00	0.00
2,441.89	2,391.00	Ojo Alamo	Empty	0.00	0.00
2,550.12	2,496.00	Kirtland	Empty	0.00	0.00
3,050.01	2,981.00	Fruitland	Empty	0.00	0.00
3,106.69	3,036.00	Fruitland Coal	Empty	0.00	0.00
3,261.30	3,186.00	Ignacio Coal	Empty	0.00	0.00
3,286.04	3,210.00	Pictured Cliffs Ss	Empty	0.00	0.00
3,359.21	3,281.00	Cottonwood Coal	Empty	0.00	0.00
3,506.90	3,426.00	Cahn Coal	Empty	0.00	0.00
3,657.51	3,576.00	Lewis Sh	Empty	0.00	0.00
4,347.52	4,266.00	Huerfano Bentonite	Empty	0.00	0.00
4,777.52	4,696.00	Chacra Ss	Empty	0.00	0.00
5,217.52	5,136.00	Cliffhouse Ss	Empty	0.00	0.00
5,582.52	5,501.00	Menefee	Empty	0.00	0.00
5,852.52	5,771.00	Point Lookout Ss	Empty	0.00	0.00
5,942.52	5,861.00	Point Lookout Base	Empty	0.00	0.00
6,262.52	6,181.00	Mancos Sh	Empty	0.00	0.00
6,996.33	6,911.00	K-86 marker	Empty	0.00	0.00
7,077.62	6,986.00	K-82 marker	Empty	0.00	0.00
7,195.13	7,086.00	Upper Gallup	Empty	0.00	0.00



B.P.

San Juan County, NM NAD83

NEBU 602 Pad

NEBU 602 #1H

Lateral

Plan #2

Anticollision Report

08 June, 2016



Scientific Drilling

www.scientificdrilling.com



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Reference	Plan #2
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD Interval 100.00usft
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 30,000.00 usft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic
Casing Method:	Not applied

Survey Tool Program		Date	6/8/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	6,785.90	Plan #1 (Pilot)	SDI MWD	SDI MWD - Standard ver 1.0.1	
6,785.90	16,833.02	Plan #2 (Lateral)	SDI MWD	SDI MWD - Standard ver 1.0.1	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
NEBU 602 Pad						
NEBU #033A - OH - OH	8,696.53	7,343.51	492.48	155.50	1.461	Monitor, CC
NEBU #033A - OH - OH	8,700.00	7,343.52	492.49	155.44	1.461	Monitor, ES, SF
NEBU #213 - OH - OH	500.00	502.58	346.36	327.26	18.136	CC
NEBU #213 - OH - OH	600.00	602.50	347.79	324.49	14.925	ES
NEBU #213 - OH - OH	3,800.00	3,644.00	894.14	735.74	5.645	SF
NEBU #229 - OH - OH	3,900.00	3,780.00	4,687.46	4,523.41	28.572	SF
NEBU #229 - OH - OH	11,663.34	3,780.00	3,851.07	3,748.90	37.691	CC
NEBU #229 - OH - OH	11,700.00	3,780.00	3,851.24	3,748.68	37.551	ES
NEBU #318 - OH - OH	11,549.52	7,428.24	1,264.81	839.20	2.972	CC
NEBU #318 - OH - OH	11,600.00	7,428.32	1,265.82	838.95	2.965	ES
NEBU #318 - OH - OH	11,700.00	7,428.49	1,273.73	843.80	2.963	SF
NEBU #319M - OH - OH	13,850.21	7,268.06	788.08	298.22	1.609	CC, ES
NEBU #319M - OH - OH	13,900.00	7,268.14	789.65	298.54	1.608	SF
NEBU #400A - OH - OH	13,646.56	3,679.00	3,771.87	3,724.96	80.405	CC
NEBU #400A - OH - OH	13,700.00	3,679.00	3,772.25	3,724.94	79.744	ES
NEBU #400A - OH - OH	15,900.00	3,679.00	4,393.75	4,330.25	69.196	SF
NEBU #460 - OH - OH	16,403.25	3,326.00	3,877.29	3,807.74	55.742	CC, ES
NEBU #460 - OH - OH	16,833.02	3,326.00	3,901.04	3,828.30	53.632	SF
NEBU #60 - OH - OH	16,298.60	5,842.00	1,532.76	1,393.91	11.038	CC
NEBU #60 - OH - OH	16,300.00	5,842.00	1,532.76	1,393.89	11.037	ES
NEBU #60 - OH - OH	16,500.00	5,842.00	1,545.94	1,405.05	10.973	SF
NEBU 602 #1H - Pilot - Plan #1	6,800.00	6,800.00	0.16	0.10	2.793	CC, ES, SF

Offset Design	NEBU 602 Pad - NEBU #033A - OH - OH										Offset Site Error:	0.00 usft
Survey Program:	100-UNKNOWN										Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Warning
0.00	0.00	1.00	0.00	0.00	0.02	121.88	-534.18	858.95	1,011.51			
100.00	100.00	101.00	100.00	0.10	2.04	121.88	-534.18	858.95	1,011.51	1,009.37	2.14	473.658
200.00	200.00	201.00	200.00	0.32	6.04	121.88	-534.18	858.95	1,011.51	1,005.15	6.36	159.035
300.00	300.00	301.00	300.00	0.55	10.04	121.88	-534.18	858.95	1,011.51	1,000.92	10.59	95.580
400.00	400.00	401.00	400.00	0.77	14.04	121.88	-534.18	858.95	1,011.51	996.70	14.81	68.300

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Company: B.P.
Project: San Juan County, NM NAD83
Reference Site: NEBU 602 Pad
Site Error: 0.00 usft
Reference Well: NEBU 602 #1H
Well Error: 0.00 usft
Reference Wellbore: Lateral
Reference Design: Plan #2

Local Co-ordinate Reference: Well NEBU 602 #1H
TVD Reference: GL 6521' & RKB 15' @ 6536.00usft
MD Reference: GL 6521' & RKB 15' @ 6536.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Grand Junction District
Offset TVD Reference: Reference Datum

Offset Design NEBU 602 Pad - NEBU #033A - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
500.00	500.00	501.00	500.00	0.99	18.04	121.88	-534.18	858.95	1,011.51	992.48	19.03	53.141	
600.00	599.92	600.92	599.92	1.21	22.04	-144.27	-534.18	858.95	1,014.34	991.12	23.22	43.687	
700.00	699.35	700.35	699.35	1.44	26.01	-144.41	-534.18	858.95	1,022.85	995.55	27.30	37.464	
800.00	797.81	798.81	797.81	1.73	29.95	-144.64	-534.18	858.95	1,037.07	1,005.81	31.25	33.183	
900.00	895.04	896.04	895.04	2.11	33.84	-145.15	-534.18	858.95	1,056.34	1,021.13	35.21	30.001	
1,000.00	992.06	993.06	992.06	2.54	37.72	-145.88	-534.18	858.95	1,076.50	1,037.18	39.32	27.378	
1,100.00	1,089.08	1,090.08	1,089.08	3.00	41.60	-146.58	-534.18	858.95	1,096.82	1,053.38	43.44	25.249	
1,200.00	1,186.10	1,187.10	1,186.10	3.47	45.48	-147.26	-534.18	858.95	1,117.30	1,069.73	47.57	23.489	
1,300.00	1,283.12	1,284.12	1,283.12	3.96	49.36	-147.91	-534.18	858.95	1,137.93	1,086.23	51.69	22.013	
1,400.00	1,380.14	1,381.14	1,380.14	4.45	53.25	-148.54	-534.18	858.95	1,158.69	1,102.87	55.82	20.757	
1,500.00	1,477.17	1,478.17	1,477.17	4.94	57.13	-149.15	-534.18	858.95	1,179.59	1,119.64	59.95	19.678	
1,600.00	1,574.19	1,575.19	1,574.19	5.44	61.01	-149.74	-534.18	858.95	1,200.61	1,136.54	64.07	18.740	
1,700.00	1,671.21	1,672.21	1,671.21	5.94	64.89	-150.31	-534.18	858.95	1,221.75	1,153.57	68.19	17.918	
1,800.00	1,768.23	1,769.23	1,768.23	6.44	68.77	-150.86	-534.18	858.95	1,243.01	1,170.70	72.30	17.192	
1,900.00	1,865.25	1,866.25	1,865.25	6.95	72.65	-151.39	-534.18	858.95	1,264.37	1,187.95	76.42	16.546	
2,000.00	1,962.27	1,963.27	1,962.27	7.45	76.53	-151.90	-534.18	858.95	1,285.83	1,205.31	80.53	15.968	
2,100.00	2,059.29	2,060.29	2,059.29	7.96	80.41	-152.40	-534.18	858.95	1,307.39	1,222.76	84.63	15.448	
2,200.00	2,156.31	2,157.31	2,156.31	8.47	84.29	-152.88	-534.18	858.95	1,329.04	1,240.31	88.73	14.978	
2,300.00	2,253.34	2,254.34	2,253.34	8.98	88.17	-153.35	-534.18	858.95	1,350.78	1,257.94	92.83	14.550	
2,400.00	2,350.36	2,351.36	2,350.36	9.49	92.05	-153.80	-534.18	858.95	1,372.60	1,275.67	96.93	14.161	
2,500.00	2,447.38	2,448.38	2,447.38	10.00	95.94	-154.24	-534.18	858.95	1,394.50	1,293.48	101.03	13.803	
2,600.00	2,544.40	2,545.40	2,544.40	10.51	99.82	-154.66	-534.18	858.95	1,416.48	1,311.36	105.12	13.475	
2,700.00	2,641.42	2,642.42	2,641.42	11.02	103.70	-155.07	-534.18	858.95	1,438.53	1,329.32	109.21	13.173	
2,800.00	2,738.44	2,739.44	2,738.44	11.53	107.58	-155.47	-534.18	858.95	1,460.65	1,347.35	113.29	12.893	
2,900.00	2,835.46	2,836.46	2,835.46	12.04	111.46	-155.86	-534.18	858.95	1,482.83	1,365.45	117.38	12.633	
3,000.00	2,932.48	2,933.48	2,932.48	12.55	115.34	-156.23	-534.18	858.95	1,505.08	1,383.62	121.46	12.392	
3,100.00	3,029.50	3,030.50	3,029.50	13.06	119.22	-156.60	-534.18	858.95	1,527.38	1,401.85	125.54	12.167	
3,200.00	3,126.53	3,127.53	3,126.53	13.57	123.10	-156.95	-534.18	858.95	1,549.75	1,420.13	129.61	11.957	
3,300.00	3,223.55	3,224.55	3,223.55	14.08	126.98	-157.29	-534.18	858.95	1,572.17	1,438.48	133.69	11.760	
3,400.00	3,320.57	3,321.57	3,320.57	14.56	130.87	-157.77	-534.18	858.95	1,593.94	1,455.39	138.56	11.504	
3,500.00	3,419.16	3,420.16	3,419.16	14.86	134.81	-158.26	-534.18	858.95	1,610.30	1,466.32	143.99	11.184	
3,600.00	3,518.57	3,519.57	3,518.57	15.08	138.78	-158.54	-534.18	858.95	1,620.26	1,471.33	148.93	10.880	
3,700.00	3,618.48	3,619.48	3,618.48	15.22	142.78	-158.64	-534.18	858.95	1,623.73	1,470.44	153.30	10.592	
3,800.00	3,718.48	3,719.48	3,718.48	15.32	146.78	-158.74	-534.18	858.95	1,623.74	1,462.36	161.38	10.062	
3,900.00	3,818.48	3,819.48	3,818.48	15.44	150.78	-158.74	-534.18	858.95	1,623.74	1,458.24	165.49	9.811	
4,000.00	3,918.48	3,919.48	3,918.48	15.55	154.78	-158.74	-534.18	858.95	1,623.74	1,454.12	169.61	9.573	
4,100.00	4,018.48	4,019.48	4,018.48	15.67	158.78	-158.74	-534.18	858.95	1,623.74	1,450.00	173.74	9.346	
4,200.00	4,118.48	4,119.48	4,118.48	15.79	162.78	-158.74	-534.18	858.95	1,623.74	1,445.88	177.86	9.129	
4,300.00	4,218.48	4,219.48	4,218.48	15.91	166.78	-158.74	-534.18	858.95	1,623.74	1,441.75	181.99	8.922	
4,400.00	4,318.48	4,319.48	4,318.48	16.03	170.78	-158.74	-534.18	858.95	1,623.74	1,437.62	186.12	8.724	
4,500.00	4,418.48	4,419.48	4,418.48	16.16	174.78	-158.74	-534.18	858.95	1,623.74	1,433.49	190.25	8.535	
4,600.00	4,518.48	4,519.48	4,518.48	16.29	178.78	-158.74	-534.18	858.95	1,623.74	1,429.36	194.38	8.353	
4,700.00	4,618.48	4,619.48	4,618.48	16.42	182.78	-158.74	-534.18	858.95	1,623.74	1,425.22	198.52	8.179	
4,800.00	4,718.48	4,719.48	4,718.48	16.55	186.78	-158.74	-534.18	858.95	1,623.74	1,421.08	202.66	8.012	
4,900.00	4,818.48	4,819.48	4,818.48	16.68	190.78	-158.74	-534.18	858.95	1,623.74	1,416.94	206.79	7.852	
5,000.00	4,918.48	4,919.48	4,918.48	16.82	194.78	-158.74	-534.18	858.95	1,623.74	1,412.80	210.94	7.698	
5,100.00	5,018.48	5,019.48	5,018.48	16.96	198.78	-158.74	-534.18	858.95	1,623.74	1,408.66	215.08	7.549	
5,200.00	5,118.48	5,119.48	5,118.48	17.10	202.78	-158.74	-534.18	858.95	1,623.74	1,404.51	219.22	7.407	
5,300.00	5,218.48	5,219.48	5,218.48	17.24	206.78	-158.74	-534.18	858.95	1,623.74	1,400.37	223.37	7.269	
5,400.00	5,318.48	5,319.48	5,318.48	17.38	210.78	-158.74	-534.18	858.95	1,623.74	1,396.22	227.52	7.137	
5,500.00	5,418.48	5,419.48	5,418.48	17.53	214.78	-158.74	-534.18	858.95	1,623.74	1,392.07	231.67	7.009	
5,600.00	5,518.48	5,519.48	5,518.48	17.68	218.78	-158.74	-534.18	858.95	1,623.74	1,387.91	235.82	6.885	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #033A - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,700.00	5,618.48	5,619.48	5,618.48	17.82	222.78	107.46		-534.18	858.95	1,623.74	1,383.76	239.98	6.766	
5,800.00	5,718.48	5,719.48	5,718.48	17.97	226.78	107.46		-534.18	858.95	1,623.74	1,379.61	244.13	6.651	
5,900.00	5,818.48	5,819.48	5,818.48	18.13	230.78	107.46		-534.18	858.95	1,623.74	1,375.45	248.29	6.540	
6,000.00	5,918.48	5,919.48	5,918.48	18.28	234.78	107.46		-534.18	858.95	1,623.74	1,371.29	252.45	6.432	
6,100.00	6,018.48	6,019.48	6,018.48	18.43	238.78	107.46		-534.18	858.95	1,623.74	1,367.13	256.61	6.328	
6,200.00	6,118.48	6,119.48	6,118.48	18.59	242.78	107.46		-534.18	858.95	1,623.74	1,362.97	260.77	6.227	
6,300.00	6,218.48	6,219.48	6,218.48	18.75	246.78	107.46		-534.18	858.95	1,623.74	1,358.81	264.93	6.129	
6,400.00	6,318.48	6,319.48	6,318.48	18.91	250.78	107.46		-534.18	858.95	1,623.74	1,354.64	269.09	6.034	
6,500.00	6,418.48	6,419.48	6,418.48	19.07	254.78	107.46		-534.18	858.95	1,623.74	1,350.48	273.26	5.942	
6,600.00	6,518.48	6,519.48	6,518.48	19.23	258.78	107.46		-534.18	858.95	1,623.74	1,346.31	277.42	5.853	
6,700.00	6,618.48	6,619.48	6,618.48	19.39	262.78	107.46		-534.18	858.95	1,623.74	1,342.15	281.59	5.766	
6,800.00	6,718.48	6,719.48	6,718.48	19.54	266.78	17.66		-534.18	858.95	1,623.59	1,340.84	282.75	5.742	
6,900.00	6,817.87	6,818.87	6,817.87	19.47	270.75	18.04		-534.18	858.95	1,614.02	1,331.58	282.44	5.715	
7,000.00	6,914.47	6,915.47	6,914.47	19.28	274.62	19.04		-534.18	858.95	1,589.79	1,313.94	275.85	5.763	
7,100.00	7,005.89	7,006.89	7,005.89	19.01	278.28	20.81		-534.18	858.95	1,551.56	1,287.93	263.63	5.885	
7,200.00	7,089.89	7,090.89	7,089.89	18.71	281.64	23.59		-534.18	858.95	1,500.38	1,252.79	247.59	6.060	
7,300.00	7,164.40	7,165.40	7,164.40	18.44	284.62	27.81		-534.18	858.95	1,437.69	1,205.96	231.73	6.204	
7,400.00	7,227.58	7,228.58	7,227.58	18.29	287.14	34.17		-534.18	858.95	1,385.25	1,141.50	223.75	6.102	
7,500.00	7,277.87	7,278.87	7,277.87	18.34	289.15	43.70		-534.18	858.95	1,285.13	1,050.73	234.39	5.483	
7,600.00	7,314.05	7,315.05	7,314.05	18.68	290.60	57.40		-534.18	858.95	1,199.65	932.48	267.17	4.490	
7,700.00	7,335.21	7,336.21	7,335.21	19.34	291.45	74.78		-534.18	858.95	1,111.35	808.11	303.24	3.665	
7,800.00	7,341.02	7,342.02	7,341.02	20.28	291.68	89.83		-534.18	858.95	1,022.89	707.11	315.79	3.239	
7,900.00	7,341.19	7,342.19	7,341.19	21.48	291.69	89.85		-534.18	858.95	936.48	618.92	317.56	2.949	
8,000.00	7,341.36	7,342.36	7,341.36	22.90	291.69	89.87		-534.18	858.95	853.05	533.49	319.56	2.669	
8,100.00	7,341.52	7,342.52	7,341.52	24.50	291.70	89.88		-534.18	858.95	773.56	451.83	321.73	2.404	
8,200.00	7,341.69	7,342.69	7,341.69	26.24	291.71	89.90		-534.18	858.95	699.34	375.29	324.05	2.158	
8,300.00	7,341.85	7,342.85	7,341.85	28.11	291.71	89.92		-534.18	858.95	632.28	305.79	326.49	1.937	
8,400.00	7,342.02	7,343.02	7,342.02	30.07	291.72	89.94		-534.18	858.95	574.87	245.84	329.02	1.747	
8,500.00	7,342.19	7,343.19	7,342.19	32.11	291.73	89.96		-534.18	858.95	530.25	198.61	331.64	1.599	
8,600.00	7,342.35	7,343.35	7,342.35	34.21	291.73	89.98		-534.18	858.95	501.85	167.53	334.32	1.501	
8,696.53	7,342.51	7,343.51	7,342.51	36.30	291.74	90.00		-534.18	858.95	492.48	155.50	336.98	1.461 Monitor, CC	
8,700.00	7,342.52	7,343.52	7,342.52	36.37	291.74	90.00		-534.18	858.95	492.49	155.44	337.06	1.461 Monitor, ES, SF	
8,800.00	7,342.68	7,343.68	7,342.68	38.58	291.75	90.02		-534.18	858.95	503.23	163.40	339.83	1.481 Monitor	
8,900.00	7,342.85	7,343.85	7,342.85	40.82	291.75	90.04		-534.18	858.95	532.86	190.21	342.65	1.555	
9,000.00	7,343.01	7,344.01	7,343.01	43.09	291.76	90.06		-534.18	858.95	578.47	232.97	345.50	1.674	
9,100.00	7,343.18	7,344.18	7,343.18	45.39	291.77	90.08		-534.18	858.95	636.65	288.28	348.37	1.827	
9,200.00	7,343.35	7,344.35	7,343.35	47.71	291.77	90.10		-534.18	858.95	704.29	353.01	351.27	2.005	
9,300.00	7,343.51	7,344.51	7,343.51	50.06	291.78	90.12		-534.18	858.95	778.92	424.73	354.19	2.199	
9,400.00	7,343.68	7,344.68	7,343.68	52.42	291.79	90.14		-534.18	858.95	858.72	501.60	357.13	2.405	
9,500.00	7,343.84	7,344.84	7,343.84	54.79	291.79	90.15		-534.18	858.95	942.39	582.31	360.08	2.617	
9,600.00	7,344.01	7,345.01	7,344.01	57.18	291.80	90.17		-534.18	858.95	1,028.98	665.94	363.04	2.834	
9,700.00	7,344.17	7,345.17	7,344.17	59.58	291.81	90.19		-534.18	858.95	1,117.80	751.79	366.01	3.054	
9,800.00	7,344.34	7,345.34	7,344.34	61.99	291.81	90.21		-534.18	858.95	1,208.38	839.38	369.00	3.275	
9,900.00	7,344.51	7,345.51	7,344.51	64.41	291.82	90.23		-534.18	858.95	1,300.33	928.34	371.99	3.496	
10,000.00	7,344.67	7,345.67	7,344.67	66.84	291.83	90.25		-534.18	858.95	1,393.40	1,018.41	374.99	3.716	
10,100.00	7,344.84	7,345.84	7,344.84	69.27	291.83	90.27		-534.18	858.95	1,487.36	1,109.36	378.00	3.935	
10,200.00	7,345.00	7,346.00	7,345.00	71.71	291.84	90.29		-534.18	858.95	1,582.07	1,201.05	381.02	4.152	
10,300.00	7,345.17	7,346.17	7,345.17	74.16	291.85	90.31		-534.18	858.95	1,677.39	1,293.35	384.04	4.368	
10,400.00	7,345.34	7,346.34	7,345.34	76.61	291.85	90.33		-534.18	858.95	1,773.23	1,386.16	387.06	4.581	
10,500.00	7,345.50	7,346.50	7,345.50	79.06	291.86	90.35		-534.18	858.95	1,869.50	1,479.40	390.10	4.792	
10,600.00	7,345.67	7,346.67	7,345.67	81.53	291.87	90.37		-534.18	858.95	1,966.14	1,573.01	393.13	5.001	
10,700.00	7,345.83	7,346.83	7,345.83	83.99	291.87	90.39		-534.18	858.95	2,063.11	1,666.94	396.17	5.208	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company: B.P.
 Project: San Juan County, NM NAD83
 Reference Site: NEBU 602 Pad
 Error: 0.00 usft
 Reference Well: NEBU 602 #1H
 Error: 0.00 usft
 Reference Wellbore: Lateral
 Reference Design: Plan #2

Local Co-ordinate Reference: Well NEBU 602 #1H
 TVD Reference: GL 6521' & RKB 15' @ 6536.00usft
 MD Reference: GL 6521' & RKB 15' @ 6536.00usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: Grand Junction District
 Offset TVD Reference: Reference Datum

Offset Design NEBU 602 Pad - NEBU #033A - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
10,800.00	7,346.00	7,347.00	7,346.00	86.46	291.88	90.41	-534.18	858.95	2,160.35	1,761.13	399.21	5.412	
10,900.00	7,346.16	7,347.16	7,346.16	88.93	291.89	90.42	-534.18	858.95	2,257.83	1,855.57	402.26	5.613	
11,000.00	7,346.33	7,347.33	7,346.33	91.40	291.89	90.44	-534.18	858.95	2,355.52	1,950.21	405.31	5.812	
11,100.00	7,346.50	7,347.50	7,346.50	93.88	291.90	90.46	-534.18	858.95	2,453.40	2,045.04	408.36	6.008	
11,200.00	7,346.66	7,347.66	7,346.66	96.36	291.91	90.48	-534.18	858.95	2,551.44	2,140.03	411.41	6.202	
11,300.00	7,346.83	7,347.83	7,346.83	98.85	291.91	90.50	-534.18	858.95	2,649.63	2,235.16	414.47	6.393	
11,400.00	7,346.99	7,347.99	7,346.99	101.33	291.92	90.52	-534.18	858.95	2,747.95	2,330.43	417.53	6.581	
11,500.00	7,347.16	7,348.16	7,347.16	103.82	291.93	90.54	-534.18	858.95	2,846.39	2,425.80	420.59	6.768	
11,600.00	7,347.32	7,348.32	7,347.32	106.31	291.93	90.56	-534.18	858.95	2,944.93	2,521.28	423.65	6.951	
11,700.00	7,347.49	7,348.49	7,347.49	108.80	291.94	90.58	-534.18	858.95	3,043.57	2,616.85	426.72	7.133	
11,800.00	7,347.66	7,348.66	7,347.66	111.29	291.95	90.60	-534.18	858.95	3,142.30	2,712.51	429.78	7.311	
11,900.00	7,347.82	7,348.82	7,347.82	113.78	291.95	90.62	-534.18	858.95	3,241.10	2,808.25	432.85	7.488	
12,000.00	7,347.99	7,348.99	7,347.99	116.28	291.96	90.64	-534.18	858.95	3,339.97	2,904.05	435.92	7.662	
12,100.00	7,348.15	7,349.15	7,348.15	118.77	291.97	90.66	-534.18	858.95	3,438.91	2,999.92	438.99	7.834	
12,200.00	7,348.32	7,349.32	7,348.32	121.27	291.97	90.68	-534.18	858.95	3,537.91	3,095.85	442.06	8.003	
12,300.00	7,348.49	7,349.49	7,348.49	123.77	291.98	90.69	-534.18	858.95	3,636.96	3,191.83	445.13	8.170	
12,400.00	7,348.65	7,349.65	7,348.65	126.27	291.99	90.71	-534.18	858.95	3,736.06	3,287.86	448.21	8.336	
12,500.00	7,348.82	7,349.82	7,348.82	128.77	291.99	90.73	-534.18	858.95	3,835.21	3,383.93	451.28	8.498	
12,600.00	7,348.98	7,349.98	7,348.98	131.28	292.00	90.75	-534.18	858.95	3,934.41	3,480.05	454.36	8.659	
12,700.00	7,349.15	7,350.15	7,349.15	133.78	292.01	90.77	-534.18	858.95	4,033.64	3,576.20	457.44	8.818	
12,800.00	7,349.31	7,350.31	7,349.31	136.28	292.01	90.79	-534.18	858.95	4,132.91	3,672.40	460.51	8.975	
12,900.00	7,349.48	7,350.48	7,349.48	138.79	292.02	90.81	-534.18	858.95	4,232.21	3,768.62	463.59	9.129	
13,000.00	7,349.65	7,350.65	7,349.65	141.29	292.03	90.83	-534.18	858.95	4,331.55	3,864.88	466.67	9.282	
13,100.00	7,349.81	7,350.81	7,349.81	143.80	292.03	90.85	-534.18	858.95	4,430.92	3,961.17	469.75	9.433	
13,200.00	7,349.98	7,350.98	7,349.98	146.31	292.04	90.87	-534.18	858.95	4,530.31	4,057.48	472.83	9.581	
13,300.00	7,350.14	7,351.14	7,350.14	148.82	292.05	90.89	-534.18	858.95	4,629.73	4,153.82	475.91	9.728	
13,400.00	7,350.31	7,351.31	7,350.31	151.33	292.05	90.91	-534.18	858.95	4,729.17	4,250.18	478.99	9.873	
13,500.00	7,350.47	7,351.47	7,350.47	153.83	292.06	90.93	-534.18	858.95	4,828.64	4,346.57	482.07	10.016	
13,600.00	7,350.64	7,351.64	7,350.64	156.34	292.07	90.95	-534.18	858.95	4,928.13	4,442.98	485.16	10.158	
13,700.00	7,350.81	7,351.81	7,350.81	158.86	292.07	90.96	-534.18	858.95	5,027.64	4,539.40	488.24	10.298	
13,800.00	7,350.97	7,351.97	7,350.97	161.37	292.08	90.98	-534.18	858.95	5,127.17	4,635.85	491.32	10.435	
13,900.00	7,351.14	7,352.14	7,351.14	163.88	292.09	91.00	-534.18	858.95	5,226.71	4,732.31	494.40	10.572	
14,000.00	7,351.30	7,352.30	7,351.30	166.39	292.09	91.02	-534.18	858.95	5,326.28	4,828.79	497.49	10.706	
14,100.00	7,351.47	7,352.47	7,351.47	168.90	292.10	91.04	-534.18	858.95	5,425.86	4,925.28	500.57	10.839	
14,200.00	7,351.63	7,352.63	7,351.63	171.42	292.11	91.06	-534.18	858.95	5,525.45	5,021.79	503.66	10.971	
14,300.00	7,351.80	7,352.80	7,351.80	173.93	292.11	91.08	-534.18	858.95	5,625.06	5,118.32	506.74	11.100	
14,400.00	7,351.97	7,352.97	7,351.97	176.44	292.12	91.10	-534.18	858.95	5,724.68	5,214.85	509.83	11.229	
14,500.00	7,352.13	7,353.13	7,352.13	178.96	292.13	91.12	-534.18	858.95	5,824.32	5,311.40	512.92	11.355	
14,600.00	7,352.30	7,353.30	7,352.30	181.47	292.13	91.14	-534.18	858.95	5,923.97	5,407.96	516.00	11.481	
14,700.00	7,352.46	7,353.46	7,352.46	183.99	292.14	91.16	-534.18	858.95	6,023.63	5,504.54	519.09	11.604	
14,800.00	7,352.63	7,353.63	7,352.63	186.50	292.15	91.18	-534.18	858.95	6,123.30	5,601.12	522.17	11.727	
14,900.00	7,352.80	7,353.80	7,352.80	189.02	292.15	91.20	-534.18	858.95	6,222.98	5,697.72	525.26	11.847	
15,000.00	7,352.96	7,353.96	7,352.96	191.53	292.16	91.22	-534.18	858.95	6,322.67	5,794.32	528.35	11.967	
15,100.00	7,353.13	7,354.13	7,353.13	194.05	292.17	91.23	-534.18	858.95	6,422.37	5,890.93	531.44	12.085	
15,200.00	7,353.29	7,354.29	7,353.29	196.57	292.17	91.25	-534.18	858.95	6,522.08	5,987.56	534.52	12.202	
15,300.00	7,353.46	7,354.46	7,353.46	199.08	292.18	91.27	-534.18	858.95	6,621.80	6,084.19	537.61	12.317	
15,400.00	7,353.62	7,354.62	7,353.62	201.60	292.18	91.29	-534.18	858.95	6,721.52	6,180.83	540.70	12.431	
15,500.00	7,353.79	7,354.79	7,353.79	204.12	292.19	91.31	-534.18	858.95	6,821.26	6,277.47	543.79	12.544	
15,600.00	7,353.96	7,354.96	7,353.96	206.63	292.20	91.33	-534.18	858.95	6,921.00	6,374.13	546.87	12.656	
15,700.00	7,354.12	7,355.12	7,354.12	209.15	292.20	91.35	-534.18	858.95	7,020.75	6,470.79	549.96	12.766	
15,800.00	7,354.29	7,355.29	7,354.29	211.67	292.21	91.37	-534.18	858.95	7,120.51	6,567.46	553.05	12.875	
15,900.00	7,354.45	7,355.45	7,354.45	214.19	292.22	91.39	-534.18	858.95	7,220.27	6,664.13	556.14	12.983	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #033A - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
16,000.00	7,354.62	7,355.62	7,354.62	216.71	292.22	91.41	-534.18	858.95	7,320.04	6,760.81	559.23	13.090		
16,100.00	7,354.78	7,355.78	7,354.78	219.23	292.23	91.43	-534.18	858.95	7,419.82	6,857.50	562.32	13.195		
16,200.00	7,354.95	7,355.95	7,354.95	221.74	292.24	91.45	-534.18	858.95	7,519.60	6,954.20	565.41	13.299		
16,300.00	7,355.12	7,356.12	7,355.12	224.26	292.24	91.47	-534.18	858.95	7,619.39	7,050.89	568.50	13.403		
16,400.00	7,355.28	7,356.28	7,355.28	226.78	292.25	91.49	-534.18	858.95	7,719.18	7,147.60	571.58	13.505		
16,500.00	7,355.45	7,356.45	7,355.45	229.30	292.26	91.50	-534.18	858.95	7,818.98	7,244.31	574.67	13.606		
16,600.00	7,355.61	7,356.61	7,355.61	231.82	292.26	91.52	-534.18	858.95	7,918.79	7,341.02	577.76	13.706		
16,700.00	7,355.78	7,356.78	7,355.78	234.34	292.27	91.54	-534.18	858.95	8,018.59	7,437.74	580.85	13.805		
16,800.00	7,355.95	7,356.95	7,355.95	236.86	292.28	91.56	-534.18	858.95	8,118.41	7,534.47	583.94	13.903		
16,833.02	7,356.00	7,357.00	7,356.00	237.69	292.28	91.57	-534.18	858.95	8,151.37	7,566.41	584.96	13.935		



Anticollision Report



Company: B.P.
 Project: San Juan County, NM NAD83
 Reference Site: NEBU 602 Pad
 Error: 0.00 usft
 Reference Well: NEBU 602 #1H
 Error: 0.00 usft
 Reference Wellbore: Lateral
 Reference Design: Plan #2

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:
 Output errors are at
 Database:
 Offset TVD Reference:

Well NEBU 602 #1H
 GL 6521' & RKB 15' @ 6536.00usft
 GL 6521' & RKB 15' @ 6536.00usft
 Grid
 Minimum Curvature
 2.00 sigma
 Grand Junction District
 Reference Datum

Offset Design NEBU 602 Pad - NEBU #213 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	2.58	0.00	0.00	0.05	152.04	-305.94	162.37	346.36				
100.00	100.00	102.58	100.00	0.10	2.10	152.04	-305.94	162.37	346.36	344.16	2.20	157.526	
200.00	200.00	202.58	200.00	0.32	6.10	152.04	-305.94	162.37	346.36	339.83	6.42	53.920	
300.00	300.00	302.58	300.00	0.55	10.10	152.04	-305.94	162.37	346.36	335.71	10.65	32.527	
400.00	400.00	402.58	400.00	0.77	14.10	152.04	-305.94	162.37	346.36	331.48	14.87	23.288	
500.00	500.00	502.58	500.00	0.99	18.10	152.04	-305.94	162.37	346.36	327.26	19.10	18.136	CC
600.00	599.92	602.50	599.92	1.21	22.10	-114.53	-305.94	162.37	347.79	324.49	23.30	14.925	ES
700.00	699.35	701.93	699.35	1.44	26.08	-115.91	-305.94	162.37	352.27	324.79	27.48	12.821	
800.00	797.81	800.39	797.81	1.73	30.02	-118.08	-305.94	162.37	360.25	328.63	31.62	11.393	
900.00	895.04	897.62	895.04	2.11	33.90	-121.00	-305.94	162.37	372.00	336.24	35.76	10.402	
1,000.00	992.06	994.64	992.06	2.54	37.79	-124.02	-305.94	162.37	385.31	345.35	39.95	9.644	
1,100.00	1,089.08	1,091.66	1,089.08	3.00	41.67	-126.85	-305.94	162.37	399.64	355.50	44.14	9.053	
1,200.00	1,186.10	1,188.68	1,186.10	3.47	45.55	-129.48	-305.94	162.37	414.89	366.57	48.32	8.587	
1,300.00	1,283.12	1,285.70	1,283.12	3.96	49.43	-131.92	-305.94	162.37	430.96	378.49	52.48	8.213	
1,400.00	1,380.14	1,382.72	1,380.14	4.45	53.31	-134.20	-305.94	162.37	447.77	391.16	56.62	7.909	
1,500.00	1,477.17	1,479.75	1,477.17	4.94	57.19	-136.31	-305.94	162.37	465.24	404.49	60.75	7.659	
1,600.00	1,574.19	1,576.77	1,574.19	5.44	61.07	-138.26	-305.94	162.37	483.28	418.43	64.86	7.451	
1,700.00	1,671.21	1,673.79	1,671.21	5.94	64.95	-140.08	-305.94	162.37	501.85	432.89	68.96	7.277	
1,800.00	1,768.23	1,770.81	1,768.23	6.44	68.83	-141.77	-305.94	162.37	520.89	447.84	73.05	7.131	
1,900.00	1,865.25	1,867.83	1,865.25	6.95	72.71	-143.35	-305.94	162.37	540.33	463.20	77.13	7.005	
2,000.00	1,962.27	1,964.85	1,962.27	7.45	76.59	-144.81	-305.94	162.37	560.16	478.95	81.20	6.898	
2,100.00	2,059.29	2,061.87	2,059.29	7.96	80.47	-146.18	-305.94	162.37	580.31	495.05	85.27	6.806	
2,200.00	2,156.31	2,158.89	2,156.31	8.47	84.36	-147.45	-305.94	162.37	600.77	511.44	89.33	6.726	
2,300.00	2,253.34	2,255.92	2,253.34	8.98	88.24	-148.65	-305.94	162.37	621.50	528.12	93.38	6.656	
2,400.00	2,350.36	2,352.94	2,350.36	9.49	92.12	-149.76	-305.94	162.37	642.47	545.04	97.43	6.594	
2,500.00	2,447.38	2,449.96	2,447.38	10.00	96.00	-150.81	-305.94	162.37	663.66	562.19	101.47	6.540	
2,600.00	2,544.40	2,546.98	2,544.40	10.51	99.88	-151.79	-305.94	162.37	685.06	579.54	105.51	6.493	
2,700.00	2,641.42	2,644.00	2,641.42	11.02	103.76	-152.71	-305.94	162.37	706.64	597.08	109.55	6.450	
2,800.00	2,738.44	2,741.02	2,738.44	11.53	107.64	-153.58	-305.94	162.37	728.38	614.79	113.59	6.412	
2,900.00	2,835.46	2,838.04	2,835.46	12.04	111.52	-154.40	-305.94	162.37	750.28	632.65	117.63	6.378	
3,000.00	2,932.48	2,935.06	2,932.48	12.55	115.40	-155.17	-305.94	162.37	772.31	650.65	121.66	6.348	
3,100.00	3,029.50	3,032.08	3,029.50	13.06	119.28	-155.90	-305.94	162.37	794.48	668.78	125.69	6.321	
3,200.00	3,126.53	3,129.11	3,126.53	13.57	123.16	-156.59	-305.94	162.37	816.76	687.03	129.73	6.296	
3,300.00	3,223.55	3,226.13	3,223.55	14.08	127.05	-157.25	-305.94	162.37	839.14	705.39	133.76	6.274	
3,400.00	3,320.57	3,323.15	3,320.57	14.56	130.93	-158.00	-305.94	162.37	860.93	722.35	138.59	6.212	
3,500.00	3,419.16	3,421.74	3,419.16	14.86	134.87	-158.67	-305.94	162.37	877.33	733.33	144.00	6.093	
3,600.00	3,518.57	3,521.15	3,518.57	15.08	138.85	-159.07	-305.94	162.37	887.32	738.38	148.93	5.958	
3,700.00	3,618.48	3,621.06	3,618.48	15.22	142.84	-159.20	-305.94	162.37	890.81	737.50	153.30	5.811	
3,800.00	3,718.48	3,644.00	3,641.42	15.32	143.76	106.90	-305.94	162.37	894.14	735.74	158.39	5.645	SF
3,900.00	3,818.48	3,644.00	3,641.42	15.44	143.76	106.90	-305.94	162.37	908.24	749.73	158.51	5.730	
4,000.00	3,918.48	3,644.00	3,641.42	15.55	143.76	106.90	-305.94	162.37	932.90	774.27	158.63	5.881	
4,100.00	4,018.48	3,644.00	3,641.42	15.67	143.76	106.90	-305.94	162.37	967.32	808.57	158.75	6.093	
4,200.00	4,118.48	3,644.00	3,641.42	15.79	143.76	106.90	-305.94	162.37	1,010.51	851.63	158.88	6.360	
4,300.00	4,218.48	3,644.00	3,641.42	15.91	143.76	106.90	-305.94	162.37	1,061.39	902.38	159.00	6.675	
4,400.00	4,318.48	3,644.00	3,641.42	16.03	143.76	106.90	-305.94	162.37	1,118.91	959.78	159.13	7.031	
4,500.00	4,418.48	3,644.00	3,641.42	16.16	143.76	106.90	-305.94	162.37	1,182.10	1,022.84	159.26	7.422	
4,600.00	4,518.48	3,644.00	3,641.42	16.29	143.76	106.90	-305.94	162.37	1,250.11	1,090.71	159.40	7.843	
4,700.00	4,618.48	3,644.00	3,641.42	16.42	143.76	106.90	-305.94	162.37	1,322.19	1,162.66	159.53	8.288	
4,800.00	4,718.48	3,644.00	3,641.42	16.55	143.76	106.90	-305.94	162.37	1,397.71	1,238.04	159.67	8.754	
4,900.00	4,818.48	3,644.00	3,641.42	16.68	143.76	106.90	-305.94	162.37	1,476.15	1,316.34	159.81	9.237	
5,000.00	4,918.48	3,644.00	3,641.42	16.82	143.76	106.90	-305.94	162.37	1,557.06	1,397.11	159.95	9.735	
5,100.00	5,018.48	3,644.00	3,641.42	16.96	143.76	106.90	-305.94	162.37	1,640.07	1,479.98	160.09	10.245	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #213 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Reference	Offset	Reference	Offset	Reference	Offset		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,200.00	5,118.48	3,644.00	3,641.42	17.10	143.76	106.90	-305.94	162.37	1,724.89	1,564.65	160.24	10.765	
5,300.00	5,218.48	3,644.00	3,641.42	17.24	143.76	106.90	-305.94	162.37	1,811.26	1,650.88	160.38	11.293	
5,400.00	5,318.48	3,644.00	3,641.42	17.38	143.76	106.90	-305.94	162.37	1,898.97	1,738.43	160.53	11.829	
5,500.00	5,418.48	3,644.00	3,641.42	17.53	143.76	106.90	-305.94	162.37	1,987.83	1,827.15	160.68	12.371	
5,600.00	5,518.48	3,644.00	3,641.42	17.68	143.76	106.90	-305.94	162.37	2,077.71	1,916.88	160.83	12.918	
5,700.00	5,618.48	3,644.00	3,641.42	17.82	143.76	106.90	-305.94	162.37	2,168.48	2,007.49	160.99	13.470	
5,800.00	5,718.48	3,644.00	3,641.42	17.97	143.76	106.90	-305.94	162.37	2,260.03	2,098.88	161.14	14.025	
5,900.00	5,818.48	3,644.00	3,641.42	18.13	143.76	106.90	-305.94	162.37	2,352.26	2,190.96	161.30	14.583	
6,000.00	5,918.48	3,644.00	3,641.42	18.28	143.76	106.90	-305.94	162.37	2,445.11	2,283.65	161.46	15.144	
6,100.00	6,018.48	3,644.00	3,641.42	18.43	143.76	106.90	-305.94	162.37	2,538.50	2,376.88	161.62	15.707	
6,200.00	6,118.48	3,644.00	3,641.42	18.59	143.76	106.90	-305.94	162.37	2,632.37	2,470.59	161.78	16.272	
6,300.00	6,218.48	3,644.00	3,641.42	18.75	143.76	106.90	-305.94	162.37	2,726.68	2,564.74	161.94	16.838	
6,400.00	6,318.48	3,644.00	3,641.42	18.91	143.76	106.90	-305.94	162.37	2,821.38	2,659.28	162.10	17.405	
6,500.00	6,418.48	3,644.00	3,641.42	19.07	143.76	106.90	-305.94	162.37	2,916.44	2,754.17	162.27	17.973	
6,600.00	6,518.48	3,644.00	3,641.42	19.23	143.76	106.90	-305.94	162.37	3,011.81	2,849.38	162.43	18.542	
6,700.00	6,618.48	3,644.00	3,641.42	19.39	143.76	106.90	-305.94	162.37	3,107.48	2,944.88	162.60	19.111	
6,800.00	6,718.48	3,644.00	3,641.42	19.54	143.76	15.90	-305.94	162.37	3,203.37	3,043.74	159.62	20.068	
6,900.00	6,817.87	3,644.00	3,641.42	19.47	143.76	10.84	-305.94	162.37	3,296.38	3,139.78	156.60	21.050	
7,000.00	6,914.47	3,644.00	3,641.42	19.28	143.76	8.05	-305.94	162.37	3,383.33	3,233.39	149.94	22.584	
7,100.00	7,005.89	3,644.00	3,641.42	19.01	143.76	6.56	-305.94	162.37	3,462.61	3,322.83	139.68	24.790	
7,200.00	7,089.89	3,644.00	3,641.42	18.71	143.76	5.62	-305.94	162.37	3,532.85	3,406.79	126.06	28.026	
7,300.00	7,164.40	3,644.00	3,641.42	18.44	143.76	4.99	-305.94	162.37	3,592.89	3,483.46	109.43	32.833	
7,400.00	7,227.58	3,644.00	3,641.42	18.29	143.76	4.57	-305.94	162.37	3,641.79	3,551.52	90.27	40.344	
7,500.00	7,277.87	3,644.00	3,641.42	18.34	143.76	4.29	-305.94	162.37	3,678.81	3,609.61	69.20	53.161	
7,600.00	7,314.05	3,644.00	3,641.42	18.68	143.76	4.12	-305.94	162.37	3,703.41	3,656.26	47.15	78.541	
7,700.00	7,335.21	3,644.00	3,641.42	19.34	143.76	4.05	-305.94	162.37	3,715.23	3,689.31	25.92	143.325	
7,800.00	7,341.02	3,644.00	3,641.42	20.28	143.76	4.05	-305.94	162.37	3,714.29	3,699.25	15.03	247.066	
7,900.00	7,341.19	3,644.00	3,641.42	21.48	143.76	4.05	-305.94	162.37	3,710.39	3,694.68	15.71	236.181	
7,994.61	7,341.35	3,644.00	3,641.42	22.82	143.76	4.05	-305.94	162.37	3,709.19	3,692.81	16.38	226.479	
8,000.00	7,341.36	3,644.00	3,641.42	22.90	143.76	4.05	-305.94	162.37	3,709.19	3,692.78	16.41	225.985	
8,100.00	7,341.52	3,644.00	3,641.42	24.50	143.76	4.05	-305.94	162.37	3,710.68	3,693.55	17.14	216.543	
8,200.00	7,341.69	3,644.00	3,641.42	26.24	143.76	4.05	-305.94	162.37	3,714.87	3,697.00	17.87	207.858	
8,300.00	7,341.85	3,644.00	3,641.42	28.11	143.76	4.05	-305.94	162.37	3,721.74	3,703.12	18.62	199.895	
8,400.00	7,342.02	3,644.00	3,641.42	30.07	143.76	4.05	-305.94	162.37	3,731.27	3,711.90	19.37	192.608	
8,500.00	7,342.19	3,644.00	3,641.42	32.11	143.76	4.05	-305.94	162.37	3,743.46	3,723.33	20.13	185.943	
8,600.00	7,342.35	3,644.00	3,641.42	34.21	143.76	4.05	-305.94	162.37	3,758.27	3,737.37	20.90	179.849	
8,700.00	7,342.52	3,644.00	3,641.42	36.37	143.76	4.05	-305.94	162.37	3,775.66	3,754.00	21.66	174.275	
8,800.00	7,342.68	3,644.00	3,641.42	38.58	143.76	4.05	-305.94	162.37	3,795.62	3,773.18	22.44	169.174	
8,900.00	7,342.85	3,644.00	3,641.42	40.82	143.76	4.05	-305.94	162.37	3,818.09	3,794.88	23.21	164.502	
9,000.00	7,343.01	3,644.00	3,641.42	43.09	143.76	4.05	-305.94	162.37	3,843.03	3,819.04	23.99	160.222	
9,100.00	7,343.18	3,644.00	3,641.42	45.39	143.76	4.05	-305.94	162.37	3,870.39	3,845.63	24.76	156.296	
9,200.00	7,343.35	3,644.00	3,641.42	47.71	143.76	4.05	-305.94	162.37	3,900.13	3,874.59	25.54	152.693	
9,300.00	7,343.51	3,644.00	3,641.42	50.06	143.76	4.05	-305.94	162.37	3,932.19	3,905.87	26.32	149.385	
9,400.00	7,343.68	3,644.00	3,641.42	52.42	143.76	4.05	-305.94	162.37	3,966.51	3,939.40	27.10	146.345	
9,500.00	7,343.84	3,644.00	3,641.42	54.79	143.76	4.05	-305.94	162.37	4,003.03	3,975.15	27.89	143.549	
9,600.00	7,344.01	3,644.00	3,641.42	57.18	143.76	4.05	-305.94	162.37	4,041.70	4,013.03	28.67	140.977	
9,700.00	7,344.17	3,644.00	3,641.42	59.58	143.76	4.05	-305.94	162.37	4,082.45	4,053.00	29.45	138.609	
9,800.00	7,344.34	3,644.00	3,641.42	61.99	143.76	4.05	-305.94	162.37	4,125.23	4,094.99	30.24	136.427	
9,900.00	7,344.51	3,644.00	3,641.42	64.41	143.76	4.05	-305.94	162.37	4,169.96	4,138.94	31.02	134.417	
10,000.00	7,344.67	3,644.00	3,641.42	66.84	143.76	4.05	-305.94	162.37	4,216.59	4,184.79	31.81	132.583	
10,100.00	7,344.84	3,644.00	3,641.42	69.27	143.76	4.05	-305.94	162.37	4,265.06	4,232.47	32.59	130.854	
10,200.00	7,345.00	3,644.00	3,641.42	71.71	143.76	4.05	-305.94	162.37	4,315.30	4,281.92	33.38	129.276	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company: B.P.
 Project: San Juan County, NM NAD83
 Reference Site: NEBU 602 Pad
 Site Error: 0.00 usft
 Reference Well: NEBU 602 #1H
 Well Error: 0.00 usft
 Reference Wellbore: Lateral
 Reference Design: Plan #2

Local Co-ordinate Reference: Well NEBU 602 #1H
 TVD Reference: GL 6521' & RKB 15' @ 6536.00usft
 MD Reference: GL 6521' & RKB 15' @ 6536.00usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: Grand Junction District
 Offset TVD Reference: Reference Datum

Offset Design NEBU 602 Pad - NEBU #213 - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	Offset Wellbore Centre +E-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,300.00	7,345.17	3,644.00	3,641.42	74.16	143.76	4.05	-305.94	162.37	4,367.25	4,333.09	34.17	127.820	
10,400.00	7,345.34	3,644.00	3,641.42	76.61	143.76	4.05	-305.94	162.37	4,420.86	4,385.90	34.95	126.475	
10,500.00	7,345.50	3,644.00	3,641.42	79.06	143.76	4.05	-305.94	162.37	4,476.05	4,440.31	35.74	125.233	
10,600.00	7,345.67	3,644.00	3,641.42	81.53	143.76	4.05	-305.94	162.37	4,532.78	4,496.25	36.53	124.086	
10,700.00	7,345.83	3,644.00	3,641.42	83.99	143.76	4.05	-305.94	162.37	4,590.99	4,553.67	37.32	123.026	
10,800.00	7,346.00	3,644.00	3,641.42	86.46	143.76	4.05	-305.94	162.37	4,650.62	4,612.52	38.11	122.046	
10,900.00	7,346.16	3,644.00	3,641.42	88.93	143.76	4.05	-305.94	162.37	4,711.62	4,672.73	38.89	121.140	
11,000.00	7,346.33	3,644.00	3,641.42	91.40	143.76	4.05	-305.94	162.37	4,773.93	4,734.25	39.68	120.304	
11,100.00	7,346.50	3,644.00	3,641.42	93.88	143.76	4.05	-305.94	162.37	4,837.51	4,797.04	40.47	119.530	
11,200.00	7,346.66	3,644.00	3,641.42	96.36	143.76	4.05	-305.94	162.37	4,902.31	4,861.05	41.26	118.815	
11,300.00	7,346.83	3,644.00	3,641.42	98.85	143.76	4.05	-305.94	162.37	4,968.27	4,926.22	42.05	118.154	
11,400.00	7,346.99	3,644.00	3,641.42	101.33	143.76	4.05	-305.94	162.37	5,035.35	4,992.51	42.84	117.543	
11,500.00	7,347.16	3,644.00	3,641.42	103.82	143.76	4.05	-305.94	162.37	5,103.51	5,059.88	43.63	116.979	
11,600.00	7,347.32	3,644.00	3,641.42	106.31	143.76	4.05	-305.94	162.37	5,172.71	5,128.29	44.42	116.458	
11,700.00	7,347.49	3,644.00	3,641.42	108.80	143.76	4.05	-305.94	162.37	5,242.90	5,197.69	45.21	115.977	
11,800.00	7,347.66	3,644.00	3,641.42	111.29	143.76	4.05	-305.94	162.37	5,314.05	5,268.05	46.00	115.532	
11,900.00	7,347.82	3,644.00	3,641.42	113.78	143.76	4.05	-305.94	162.37	5,386.11	5,339.32	46.79	115.123	
12,000.00	7,347.99	3,644.00	3,641.42	116.28	143.76	4.05	-305.94	162.37	5,459.05	5,411.47	47.58	114.744	
12,100.00	7,348.15	3,644.00	3,641.42	118.77	143.76	4.05	-305.94	162.37	5,532.84	5,484.47	48.37	114.398	
12,200.00	7,348.32	3,644.00	3,641.42	121.27	143.76	4.05	-305.94	162.37	5,607.44	5,558.28	49.16	114.075	
12,300.00	7,348.49	3,644.00	3,641.42	123.77	143.76	4.05	-305.94	162.37	5,682.82	5,632.88	49.95	113.780	
12,400.00	7,348.65	3,644.00	3,641.42	126.27	143.76	4.05	-305.94	162.37	5,758.95	5,708.22	50.74	113.508	
12,500.00	7,348.82	3,644.00	3,641.42	128.77	143.76	4.05	-305.94	162.37	5,835.81	5,784.28	51.53	113.259	
12,600.00	7,348.98	3,644.00	3,641.42	131.28	143.76	4.05	-305.94	162.37	5,913.35	5,861.03	52.32	113.031	
12,700.00	7,349.15	3,644.00	3,641.42	133.78	143.76	4.05	-305.94	162.37	5,991.56	5,938.45	53.11	112.821	
12,800.00	7,349.31	3,644.00	3,641.42	136.28	143.76	4.05	-305.94	162.37	6,070.41	6,016.51	53.90	112.629	
12,900.00	7,349.48	3,644.00	3,641.42	138.79	143.76	4.05	-305.94	162.37	6,149.87	6,095.19	54.69	112.455	
13,000.00	7,349.65	3,644.00	3,641.42	141.29	143.76	4.05	-305.94	162.37	6,229.93	6,174.45	55.48	112.295	
13,100.00	7,349.81	3,644.00	3,641.42	143.80	143.76	4.05	-305.94	162.37	6,310.55	6,254.29	56.27	112.150	
13,200.00	7,349.98	3,644.00	3,641.42	146.31	143.76	4.05	-305.94	162.37	6,391.73	6,334.67	57.06	112.019	
13,300.00	7,350.14	3,644.00	3,641.42	148.82	143.76	4.05	-305.94	162.37	6,473.43	6,415.58	57.85	111.900	
13,400.00	7,350.31	3,644.00	3,641.42	151.33	143.76	4.05	-305.94	162.37	6,555.63	6,496.99	58.64	111.793	
13,500.00	7,350.47	3,644.00	3,641.42	153.83	143.76	4.05	-305.94	162.37	6,638.33	6,578.90	59.43	111.697	
13,600.00	7,350.64	3,644.00	3,641.42	156.34	143.76	4.05	-305.94	162.37	6,721.49	6,661.27	60.22	111.612	
13,700.00	7,350.81	3,644.00	3,641.42	158.86	143.76	4.05	-305.94	162.37	6,805.11	6,744.10	61.01	111.536	
13,800.00	7,350.97	3,644.00	3,641.42	161.37	143.76	4.05	-305.94	162.37	6,889.17	6,827.37	61.80	111.468	
13,900.00	7,351.14	3,644.00	3,641.42	163.88	143.76	4.05	-305.94	162.37	6,973.65	6,911.05	62.59	111.410	
14,000.00	7,351.30	3,644.00	3,641.42	166.39	143.76	4.05	-305.94	162.37	7,058.53	6,995.14	63.39	111.359	
14,100.00	7,351.47	3,644.00	3,641.42	168.90	143.76	4.05	-305.94	162.37	7,143.80	7,079.82	64.18	111.315	
14,200.00	7,351.63	3,644.00	3,641.42	171.42	143.76	4.05	-305.94	162.37	7,229.45	7,164.48	64.97	111.278	
14,300.00	7,351.80	3,644.00	3,641.42	173.93	143.76	4.05	-305.94	162.37	7,315.47	7,249.71	65.76	111.248	
14,400.00	7,351.97	3,644.00	3,641.42	176.44	143.76	4.05	-305.94	162.37	7,401.83	7,335.28	66.55	111.223	
14,500.00	7,352.13	3,644.00	3,641.42	178.96	143.76	4.05	-305.94	162.37	7,488.54	7,421.20	67.34	111.204	
14,600.00	7,352.30	3,644.00	3,641.42	181.47	143.76	4.05	-305.94	162.37	7,575.57	7,507.44	68.13	111.190	
14,700.00	7,352.46	3,644.00	3,641.42	183.99	143.76	4.05	-305.94	162.37	7,662.92	7,594.00	68.92	111.181	
14,800.00	7,352.63	3,644.00	3,641.42	186.50	143.76	4.05	-305.94	162.37	7,750.58	7,680.86	69.71	111.177	
14,900.00	7,352.80	3,644.00	3,641.42	189.02	143.76	4.05	-305.94	162.37	7,838.53	7,768.02	70.50	111.177	
15,000.00	7,352.96	3,644.00	3,641.42	191.53	143.76	4.05	-305.94	162.37	7,926.76	7,855.47	71.30	111.181	
15,100.00	7,353.13	3,644.00	3,641.42	194.05	143.76	4.05	-305.94	162.37	8,015.28	7,943.19	72.09	111.188	
15,200.00	7,353.29	3,644.00	3,641.42	196.57	143.76	4.05	-305.94	162.37	8,104.06	8,031.18	72.88	111.200	
15,300.00	7,353.46	3,644.00	3,641.42	199.08	143.76	4.05	-305.94	162.37	8,193.10	8,119.43	73.67	111.214	
15,400.00	7,353.62	3,644.00	3,641.42	201.60	143.76	4.05	-305.94	162.37	8,282.39	8,207.92	74.46	111.231	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #213 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
15,500.00	7,353.79	3,644.00	3,641.42	204.12	143.76	4.05	-305.94	162.37	8,371.92	8,296.66	75.25	111.251		
15,600.00	7,353.96	3,644.00	3,641.42	206.63	143.76	4.05	-305.94	162.37	8,461.68	8,385.64	76.04	111.274		
15,700.00	7,354.12	3,644.00	3,641.42	209.15	143.76	4.05	-305.94	162.37	8,551.68	8,474.84	76.83	111.300		
15,800.00	7,354.29	3,644.00	3,641.42	211.67	143.76	4.05	-305.94	162.37	8,641.89	8,564.26	77.63	111.327		
15,900.00	7,354.45	3,644.00	3,641.42	214.19	143.76	4.05	-305.94	162.37	8,732.31	8,653.90	78.42	111.357		
16,000.00	7,354.62	3,644.00	3,641.42	216.71	143.76	4.05	-305.94	162.37	8,822.95	8,743.74	79.21	111.389		
16,100.00	7,354.78	3,644.00	3,641.42	219.23	143.76	4.05	-305.94	162.37	8,913.78	8,833.78	80.00	111.422		
16,200.00	7,354.95	3,644.00	3,641.42	221.74	143.76	4.05	-305.94	162.37	9,004.81	8,924.02	80.79	111.458		
16,300.00	7,355.12	3,644.00	3,641.42	224.26	143.76	4.05	-305.94	162.37	9,096.02	9,014.44	81.58	111.494		
16,400.00	7,355.28	3,644.00	3,641.42	226.78	143.76	4.05	-305.94	162.37	9,187.42	9,105.05	82.37	111.533		
16,500.00	7,355.45	3,644.00	3,641.42	229.30	143.76	4.05	-305.94	162.37	9,279.00	9,195.83	83.17	111.573		
16,600.00	7,355.61	3,644.00	3,641.42	231.82	143.76	4.05	-305.94	162.37	9,370.74	9,286.79	83.96	111.614		
16,700.00	7,355.78	3,644.00	3,641.42	234.34	143.76	4.05	-305.94	162.37	9,462.66	9,377.91	84.75	111.656		
16,800.00	7,355.95	3,644.00	3,641.42	236.86	143.76	4.05	-305.94	162.37	9,554.74	9,469.20	85.54	111.699		
16,833.02	7,356.00	3,644.00	3,641.42	237.69	143.76	4.05	-305.94	162.37	9,585.18	9,499.38	85.80	111.714		



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #229 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	80.00	0.00	0.00	1.80	108.29	-1,267.12	3,834.35	4,038.30				
100.00	100.00	180.00	100.00	0.10	5.20	108.29	-1,267.12	3,834.35	4,038.30	4,033.00	5.30	762.587	
200.00	200.00	280.00	200.00	0.32	9.20	108.29	-1,267.12	3,834.35	4,038.30	4,028.78	9.52	424.178	
300.00	300.00	380.00	300.00	0.55	13.20	108.29	-1,267.12	3,834.35	4,038.30	4,024.55	13.75	293.800	
400.00	400.00	480.00	400.00	0.77	17.20	108.29	-1,267.12	3,834.35	4,038.30	4,020.33	17.97	224.727	
500.00	500.00	580.00	500.00	0.99	21.20	108.29	-1,267.12	3,834.35	4,038.30	4,016.10	22.19	181.950	
600.00	599.92	679.92	599.92	1.21	25.20	-157.78	-1,267.12	3,834.35	4,041.53	4,015.17	26.36	153.303	
700.00	699.35	779.35	699.35	1.44	29.17	-157.69	-1,267.12	3,834.35	4,051.21	4,020.82	30.39	133.312	
800.00	797.81	877.81	797.81	1.73	33.11	-157.54	-1,267.12	3,834.35	4,067.30	4,033.08	34.22	118.853	
900.00	895.04	975.04	895.04	2.11	37.00	-157.50	-1,267.12	3,834.35	4,088.96	4,050.90	38.07	107.413	
1,000.00	992.06	1,072.06	992.06	2.54	40.88	-157.62	-1,267.12	3,834.35	4,111.45	4,069.33	42.13	97.596	
1,100.00	1,089.08	1,169.08	1,089.08	3.00	44.76	-157.75	-1,267.12	3,834.35	4,133.96	4,087.76	46.20	89.477	
1,200.00	1,186.10	1,266.10	1,186.10	3.47	48.64	-157.88	-1,267.12	3,834.35	4,156.49	4,106.20	50.28	82.660	
1,300.00	1,283.12	1,363.12	1,283.12	3.96	52.52	-158.00	-1,267.12	3,834.35	4,179.03	4,124.66	54.37	76.858	
1,400.00	1,380.14	1,460.14	1,380.14	4.45	56.41	-158.12	-1,267.12	3,834.35	4,201.60	4,143.13	58.47	71.863	
1,500.00	1,477.17	1,557.17	1,477.17	4.94	60.29	-158.25	-1,267.12	3,834.35	4,224.18	4,161.62	62.56	67.518	
1,600.00	1,574.19	1,654.19	1,574.19	5.44	64.17	-158.37	-1,267.12	3,834.35	4,246.78	4,180.12	66.66	63.706	
1,700.00	1,671.21	1,751.21	1,671.21	5.94	68.05	-158.49	-1,267.12	3,834.35	4,269.40	4,198.64	70.76	60.334	
1,800.00	1,768.23	1,848.23	1,768.23	6.44	71.93	-158.60	-1,267.12	3,834.35	4,292.03	4,217.17	74.86	57.332	
1,900.00	1,865.25	1,945.25	1,865.25	6.95	75.81	-158.72	-1,267.12	3,834.35	4,314.69	4,235.72	78.96	54.641	
2,000.00	1,962.27	2,042.27	1,962.27	7.45	79.69	-158.84	-1,267.12	3,834.35	4,337.36	4,254.29	83.07	52.216	
2,100.00	2,059.29	2,139.29	2,059.29	7.96	83.57	-158.95	-1,267.12	3,834.35	4,360.05	4,272.88	87.17	50.019	
2,200.00	2,156.31	2,236.31	2,156.31	8.47	87.45	-159.07	-1,267.12	3,834.35	4,382.75	4,291.48	91.27	48.020	
2,300.00	2,253.34	2,333.34	2,253.34	8.98	91.33	-159.18	-1,267.12	3,834.35	4,405.47	4,310.10	95.37	46.194	
2,400.00	2,350.36	2,430.36	2,350.36	9.49	95.21	-159.29	-1,267.12	3,834.35	4,428.21	4,328.74	99.47	44.518	
2,500.00	2,447.38	2,527.38	2,447.38	10.00	99.10	-159.40	-1,267.12	3,834.35	4,450.96	4,347.39	103.57	42.975	
2,600.00	2,544.40	2,624.40	2,544.40	10.51	102.98	-159.51	-1,267.12	3,834.35	4,473.72	4,366.05	107.67	41.550	
2,700.00	2,641.42	2,721.42	2,641.42	11.02	106.86	-159.61	-1,267.12	3,834.35	4,496.51	4,384.74	111.77	40.230	
2,800.00	2,738.44	2,818.44	2,738.44	11.53	110.74	-159.72	-1,267.12	3,834.35	4,519.30	4,403.44	115.87	39.004	
2,900.00	2,835.46	2,915.46	2,835.46	12.04	114.62	-159.83	-1,267.12	3,834.35	4,542.12	4,422.15	119.97	37.862	
3,000.00	2,932.48	3,012.48	2,932.48	12.55	118.50	-159.93	-1,267.12	3,834.35	4,564.94	4,440.88	124.06	36.795	
3,100.00	3,029.50	3,109.50	3,029.50	13.06	122.38	-160.04	-1,267.12	3,834.35	4,587.78	4,459.62	128.16	35.797	
3,200.00	3,126.53	3,206.53	3,126.53	13.57	126.26	-160.14	-1,267.12	3,834.35	4,610.64	4,478.38	132.26	34.862	
3,300.00	3,223.55	3,303.55	3,223.55	14.08	130.14	-160.24	-1,267.12	3,834.35	4,633.51	4,497.16	136.35	33.982	
3,400.00	3,320.57	3,400.57	3,320.57	14.56	134.03	-160.47	-1,267.12	3,834.35	4,655.68	4,514.39	141.29	32.950	
3,500.00	3,419.16	3,499.16	3,419.16	14.86	137.97	-160.77	-1,267.12	3,834.35	4,672.32	4,525.49	146.83	31.822	
3,600.00	3,518.57	3,598.57	3,518.57	15.08	141.94	-160.95	-1,267.12	3,834.35	4,682.43	4,530.60	151.83	30.841	
3,700.00	3,618.48	3,698.48	3,618.48	15.22	145.94	-161.01	-1,267.12	3,834.35	4,685.96	4,529.74	156.22	29.997	
3,799.75	3,688.23	3,768.23	3,688.23	15.29	148.73	-161.01	-1,267.12	3,834.35	4,686.07	4,526.95	159.11	29.451	
3,800.00	3,718.48	3,798.00	3,700.00	15.32	149.20	105.09	-1,267.12	3,834.35	4,686.00	4,522.06	163.94	28.584	
3,900.00	3,818.48	3,780.00	3,700.00	15.44	149.20	105.09	-1,267.12	3,834.35	4,687.46	4,523.41	164.06	28.572 SF	
4,000.00	3,918.48	3,780.00	3,700.00	15.55	149.20	105.09	-1,267.12	3,834.35	4,691.05	4,526.88	164.17	28.574	
4,100.00	4,018.48	3,780.00	3,700.00	15.67	149.20	105.09	-1,267.12	3,834.35	4,696.77	4,532.48	164.30	28.587	
4,200.00	4,118.48	3,780.00	3,700.00	15.79	149.20	105.09	-1,267.12	3,834.35	4,704.61	4,540.19	164.42	28.613	
4,300.00	4,218.48	3,780.00	3,700.00	15.91	149.20	105.09	-1,267.12	3,834.35	4,714.56	4,550.01	164.55	28.652	
4,400.00	4,318.48	3,780.00	3,700.00	16.03	149.20	105.09	-1,267.12	3,834.35	4,726.60	4,561.93	164.67	28.703	
4,500.00	4,418.48	3,780.00	3,700.00	16.16	149.20	105.09	-1,267.12	3,834.35	4,740.72	4,575.92	164.80	28.766	
4,600.00	4,518.48	3,780.00	3,700.00	16.29	149.20	105.09	-1,267.12	3,834.35	4,756.91	4,591.97	164.94	28.841	
4,700.00	4,618.48	3,780.00	3,700.00	16.42	149.20	105.09	-1,267.12	3,834.35	4,775.13	4,610.06	165.07	28.928	
4,800.00	4,718.48	3,780.00	3,700.00	16.55	149.20	105.09	-1,267.12	3,834.35	4,795.37	4,630.16	165.21	29.026	
4,900.00	4,818.48	3,780.00	3,700.00	16.68	149.20	105.09	-1,267.12	3,834.35	4,817.60	4,652.25	165.35	29.136	
5,000.00	4,918.48	3,780.00	3,700.00	16.82	149.20	105.09	-1,267.12	3,834.35	4,841.79	4,676.30	165.49	29.258	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #229 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error:	0.00 usft
Reference	Offset		Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipse (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,018.48	3,780.00	3,700.00	16.86	149.20	105.09	-1,267.12	3,834.35	4,867.92	4,702.29	165.63	29.390		
5,200.00	5,118.48	3,780.00	3,700.00	17.10	149.20	105.09	-1,267.12	3,834.35	4,895.95	4,730.18	165.77	29.534		
5,300.00	5,218.48	3,780.00	3,700.00	17.24	149.20	105.09	-1,267.12	3,834.35	4,925.85	4,759.93	165.92	29.688		
5,400.00	5,318.48	3,780.00	3,700.00	17.38	149.20	105.09	-1,267.12	3,834.35	4,957.59	4,791.53	166.07	29.853		
5,500.00	5,418.48	3,780.00	3,700.00	17.53	149.20	105.09	-1,267.12	3,834.35	4,991.14	4,824.92	166.22	30.028		
5,600.00	5,518.48	3,780.00	3,700.00	17.68	149.20	105.09	-1,267.12	3,834.35	5,026.44	4,860.07	166.37	30.213		
5,700.00	5,618.48	3,780.00	3,700.00	17.82	149.20	105.09	-1,267.12	3,834.35	5,063.48	4,896.96	166.52	30.408		
5,800.00	5,718.48	3,780.00	3,700.00	17.97	149.20	105.09	-1,267.12	3,834.35	5,102.21	4,935.53	166.67	30.612		
5,900.00	5,818.48	3,780.00	3,700.00	18.13	149.20	105.09	-1,267.12	3,834.35	5,142.59	4,975.76	166.83	30.825		
6,000.00	5,918.48	3,780.00	3,700.00	18.28	149.20	105.09	-1,267.12	3,834.35	5,184.58	5,017.60	166.99	31.048		
6,100.00	6,018.48	3,780.00	3,700.00	18.43	149.20	105.09	-1,267.12	3,834.35	5,228.16	5,061.01	167.15	31.279		
6,200.00	6,118.48	3,780.00	3,700.00	18.59	149.20	105.09	-1,267.12	3,834.35	5,273.26	5,105.96	167.31	31.519		
6,300.00	6,218.48	3,780.00	3,700.00	18.75	149.20	105.09	-1,267.12	3,834.35	5,319.87	5,152.40	167.47	31.767		
6,400.00	6,318.48	3,780.00	3,700.00	18.91	149.20	105.09	-1,267.12	3,834.35	5,367.93	5,200.30	167.63	32.022		
6,500.00	6,418.48	3,780.00	3,700.00	19.07	149.20	105.09	-1,267.12	3,834.35	5,417.42	5,249.62	167.79	32.286		
6,600.00	6,518.48	3,780.00	3,700.00	19.23	149.20	105.09	-1,267.12	3,834.35	5,468.28	5,300.32	167.96	32.557		
6,700.00	6,618.48	3,780.00	3,700.00	19.39	149.20	105.09	-1,267.12	3,834.35	5,520.49	5,352.36	168.13	32.835		
6,800.00	6,718.48	3,780.00	3,700.00	19.54	149.20	15.08	-1,267.12	3,834.35	5,573.87	5,408.87	168.30	33.119		
6,900.00	6,817.87	3,780.00	3,700.00	19.69	149.20	13.90	-1,267.12	3,834.35	5,628.26	5,468.02	168.47	33.403		
7,000.00	6,914.47	3,780.00	3,700.00	19.84	149.20	13.14	-1,267.12	3,834.35	5,684.19	5,529.47	168.64	33.691		
7,100.00	7,005.89	3,780.00	3,700.00	19.99	149.20	12.71	-1,267.12	3,834.35	5,741.45	5,592.47	168.81	33.983		
7,200.00	7,089.89	3,780.00	3,700.00	20.14	149.20	12.56	-1,267.12	3,834.35	5,800.14	5,657.26	168.98	34.280		
7,300.00	7,164.40	3,780.00	3,700.00	20.29	149.20	12.68	-1,267.12	3,834.35	5,860.26	5,723.40	169.15	34.583		
7,400.00	7,227.58	3,780.00	3,700.00	20.44	149.20	13.08	-1,267.12	3,834.35	5,921.81	5,790.85	169.32	34.891		
7,500.00	7,277.87	3,780.00	3,700.00	20.59	149.20	13.80	-1,267.12	3,834.35	5,984.79	5,859.63	169.49	35.204		
7,600.00	7,314.05	3,780.00	3,700.00	20.74	149.20	14.94	-1,267.12	3,834.35	6,049.14	5,929.81	169.66	35.521		
7,700.00	7,335.21	3,780.00	3,700.00	20.89	149.20	16.63	-1,267.12	3,834.35	6,114.95	5,999.96	169.83	35.842		
7,800.00	7,341.02	3,780.00	3,700.00	21.04	149.20	18.72	-1,267.12	3,834.35	6,182.22	6,069.12	170.00	36.167		
7,900.00	7,341.19	3,780.00	3,700.00	21.19	149.20	18.72	-1,267.12	3,834.35	6,250.95	6,138.29	170.17	36.495		
8,000.00	7,341.36	3,780.00	3,700.00	21.34	149.20	18.72	-1,267.12	3,834.35	6,320.14	6,207.46	170.34	36.826		
8,100.00	7,341.52	3,780.00	3,700.00	21.49	149.20	18.72	-1,267.12	3,834.35	6,390.79	6,276.63	170.51	37.159		
8,200.00	7,341.69	3,780.00	3,700.00	21.64	149.20	18.72	-1,267.12	3,834.35	6,461.89	6,345.80	170.68	37.494		
8,300.00	7,341.85	3,780.00	3,700.00	21.79	149.20	18.72	-1,267.12	3,834.35	6,533.44	6,414.97	170.85	37.830		
8,400.00	7,342.02	3,780.00	3,700.00	21.94	149.20	18.72	-1,267.12	3,834.35	6,605.54	6,484.14	171.02	38.167		
8,500.00	7,342.19	3,780.00	3,700.00	22.09	149.20	18.72	-1,267.12	3,834.35	6,678.19	6,553.31	171.19	38.505		
8,600.00	7,342.35	3,780.00	3,700.00	22.24	149.20	18.72	-1,267.12	3,834.35	6,751.29	6,622.48	171.36	38.843		
8,700.00	7,342.52	3,780.00	3,700.00	22.39	149.20	18.72	-1,267.12	3,834.35	6,824.84	6,691.65	171.53	39.182		
8,800.00	7,342.68	3,780.00	3,700.00	22.54	149.20	18.72	-1,267.12	3,834.35	6,898.94	6,760.82	171.70	39.522		
8,900.00	7,342.85	3,780.00	3,700.00	22.69	149.20	18.72	-1,267.12	3,834.35	6,973.59	6,830.00	171.87	39.863		
9,000.00	7,343.01	3,780.00	3,700.00	22.84	149.20	18.72	-1,267.12	3,834.35	7,048.79	6,899.17	172.04	40.205		
9,100.00	7,343.18	3,780.00	3,700.00	22.99	149.20	18.72	-1,267.12	3,834.35	7,124.54	6,968.34	172.21	40.548		
9,200.00	7,343.35	3,780.00	3,700.00	23.14	149.20	18.72	-1,267.12	3,834.35	7,200.84	7,037.51	172.38	40.892		
9,300.00	7,343.51	3,780.00	3,700.00	23.29	149.20	18.72	-1,267.12	3,834.35	7,277.69	7,106.68	172.55	41.237		
9,400.00	7,343.68	3,780.00	3,700.00	23.44	149.20	18.72	-1,267.12	3,834.35	7,355.09	7,175.85	172.72	41.583		
9,500.00	7,343.84	3,780.00	3,700.00	23.59	149.20	18.72	-1,267.12	3,834.35	7,432.94	7,245.02	172.89	41.930		
9,600.00	7,344.01	3,780.00	3,700.00	23.74	149.20	18.72	-1,267.12	3,834.35	7,511.34	7,314.19	173.06	42.278		
9,700.00	7,344.17	3,780.00	3,700.00	23.89	149.20	18.72	-1,267.12	3,834.35	7,590.29	7,383.36	173.23	42.626		
9,800.00	7,344.34	3,780.00	3,700.00	24.04	149.20	18.72	-1,267.12	3,834.35	7,669.79	7,452.53	173.40	42.975		
9,900.00	7,344.51	3,780.00	3,700.00	24.19	149.20	18.72	-1,267.12	3,834.35	7,749.84	7,521.70	173.57	43.325		
10,000.00	7,344.67	3,780.00	3,700.00	24.34	149.20	18.72	-1,267.12	3,834.35	7,830.44	7,590.87	173.74	43.675		
10,100.00	7,344.84	3,780.00	3,700.00	24.49	149.20	18.72	-1,267.12	3,834.35	7,911.59	7,660.04	173.91	44.026		
10,200.00	7,345.00	3,780.00	3,700.00	24.64	149.20	18.72	-1,267.12	3,834.35	8,000.00	7,730.00	174.08	44.377		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	Sari Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #229 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,300.00	7,345.17	3,780.00	3,700.00	74.16	149.20	18.72		-1,267.12	3,834.35	4,085.27	3,999.96	85.31	47.885	
10,400.00	7,345.34	3,780.00	3,700.00	76.61	149.20	18.72		-1,267.12	3,834.35	4,052.99	3,966.45	86.54	46.834	
10,500.00	7,345.50	3,780.00	3,700.00	79.06	149.20	18.72		-1,267.12	3,834.35	4,022.95	3,935.18	87.77	45.837	
10,600.00	7,345.67	3,780.00	3,700.00	81.53	149.20	18.72		-1,267.12	3,834.35	3,995.18	3,906.18	88.99	44.892	
10,700.00	7,345.83	3,780.00	3,700.00	83.99	149.20	18.72		-1,267.12	3,834.35	3,969.73	3,879.51	90.22	43.998	
10,800.00	7,346.00	3,780.00	3,700.00	86.46	149.20	18.72		-1,267.12	3,834.35	3,946.66	3,855.20	91.45	43.154	
10,900.00	7,346.16	3,780.00	3,700.00	88.93	149.20	18.72		-1,267.12	3,834.35	3,925.99	3,833.31	92.69	42.358	
11,000.00	7,346.33	3,780.00	3,700.00	91.40	149.20	18.72		-1,267.12	3,834.35	3,907.78	3,813.86	93.92	41.608	
11,100.00	7,346.50	3,780.00	3,700.00	93.88	149.20	18.72		-1,267.12	3,834.35	3,892.05	3,796.90	95.15	40.904	
11,200.00	7,346.66	3,780.00	3,700.00	96.36	149.20	18.72		-1,267.12	3,834.35	3,878.84	3,782.46	96.38	40.243	
11,300.00	7,346.83	3,780.00	3,700.00	98.85	149.20	18.72		-1,267.12	3,834.35	3,868.17	3,770.55	97.62	39.625	
11,400.00	7,346.99	3,780.00	3,700.00	101.33	149.20	18.72		-1,267.12	3,834.35	3,860.06	3,761.21	98.85	39.048	
11,500.00	7,347.16	3,780.00	3,700.00	103.82	149.20	18.72		-1,267.12	3,834.35	3,854.53	3,754.44	100.09	38.511	
11,600.00	7,347.32	3,780.00	3,700.00	106.31	149.20	18.72		-1,267.12	3,834.35	3,851.59	3,750.27	101.33	38.012	
11,663.34	7,347.43	3,780.00	3,700.00	107.88	149.20	18.72		-1,267.12	3,834.35	3,851.07	3,748.90	102.18	37.691 CC	
11,700.00	7,347.49	3,780.00	3,700.00	108.80	149.20	18.72		-1,267.12	3,834.35	3,851.24	3,748.68	102.56	37.551 ES	
11,800.00	7,347.66	3,780.00	3,700.00	111.29	149.20	18.72		-1,267.12	3,834.35	3,853.49	3,749.70	103.80	37.125	
11,900.00	7,347.82	3,780.00	3,700.00	113.78	149.20	18.72		-1,267.12	3,834.35	3,858.34	3,753.30	105.04	36.734	
12,000.00	7,347.99	3,780.00	3,700.00	116.28	149.20	18.72		-1,267.12	3,834.35	3,865.78	3,759.48	106.27	36.376	
12,100.00	7,348.15	3,780.00	3,700.00	118.77	149.20	18.72		-1,267.12	3,834.35	3,875.75	3,768.24	107.51	36.050	
12,200.00	7,348.32	3,780.00	3,700.00	121.27	149.20	18.72		-1,267.12	3,834.35	3,888.28	3,779.53	108.75	35.754	
12,300.00	7,348.49	3,780.00	3,700.00	123.77	149.20	18.72		-1,267.12	3,834.35	3,903.34	3,793.35	109.99	35.489	
12,400.00	7,348.65	3,780.00	3,700.00	126.27	149.20	18.72		-1,267.12	3,834.35	3,920.89	3,809.67	111.23	35.251	
12,500.00	7,348.82	3,780.00	3,700.00	128.77	149.20	18.72		-1,267.12	3,834.35	3,940.91	3,828.44	112.47	35.041	
12,600.00	7,348.98	3,780.00	3,700.00	131.28	149.20	18.72		-1,267.12	3,834.35	3,963.34	3,849.64	113.71	34.856	
12,700.00	7,349.15	3,780.00	3,700.00	133.78	149.20	18.72		-1,267.12	3,834.35	3,988.16	3,873.21	114.95	34.696	
12,800.00	7,349.31	3,780.00	3,700.00	136.28	149.20	18.72		-1,267.12	3,834.35	4,015.31	3,899.13	116.19	34.559	
12,900.00	7,349.48	3,780.00	3,700.00	138.79	149.20	18.72		-1,267.12	3,834.35	4,044.76	3,927.33	117.43	34.445	
13,000.00	7,349.65	3,780.00	3,700.00	141.29	149.20	18.72		-1,267.12	3,834.35	4,076.45	3,957.78	118.67	34.352	
13,100.00	7,349.81	3,780.00	3,700.00	143.80	149.20	18.72		-1,267.12	3,834.35	4,110.32	3,990.41	119.91	34.279	
13,200.00	7,349.98	3,780.00	3,700.00	146.31	149.20	18.72		-1,267.12	3,834.35	4,146.33	4,025.18	121.15	34.225	
13,300.00	7,350.14	3,780.00	3,700.00	148.82	149.20	18.72		-1,267.12	3,834.35	4,184.42	4,062.03	122.39	34.189	
13,400.00	7,350.31	3,780.00	3,700.00	151.33	149.20	18.72		-1,267.12	3,834.35	4,224.54	4,100.91	123.63	34.170	
13,500.00	7,350.47	3,780.00	3,700.00	153.83	149.20	18.72		-1,267.12	3,834.35	4,266.62	4,141.75	124.87	34.168	
13,600.00	7,350.64	3,780.00	3,700.00	156.34	149.20	18.72		-1,267.12	3,834.35	4,310.62	4,184.50	126.11	34.180	
13,700.00	7,350.81	3,780.00	3,700.00	158.86	149.20	18.72		-1,267.12	3,834.35	4,356.46	4,229.10	127.36	34.207	
13,800.00	7,350.97	3,780.00	3,700.00	161.37	149.20	18.72		-1,267.12	3,834.35	4,404.10	4,275.50	128.60	34.247	
13,900.00	7,351.14	3,780.00	3,700.00	163.88	149.20	18.72		-1,267.12	3,834.35	4,453.47	4,323.63	129.84	34.300	
14,000.00	7,351.30	3,780.00	3,700.00	166.39	149.20	18.72		-1,267.12	3,834.35	4,504.52	4,373.44	131.08	34.364	
14,100.00	7,351.47	3,780.00	3,700.00	168.90	149.20	18.72		-1,267.12	3,834.35	4,557.20	4,424.87	132.33	34.439	
14,200.00	7,351.63	3,780.00	3,700.00	171.42	149.20	18.72		-1,267.12	3,834.35	4,611.44	4,477.87	133.57	34.525	
14,300.00	7,351.80	3,780.00	3,700.00	173.93	149.20	18.72		-1,267.12	3,834.35	4,667.20	4,532.39	134.81	34.621	
14,400.00	7,351.97	3,780.00	3,700.00	176.44	149.20	18.72		-1,267.12	3,834.35	4,724.41	4,588.36	136.05	34.725	
14,500.00	7,352.13	3,780.00	3,700.00	178.96	149.20	18.72		-1,267.12	3,834.35	4,783.03	4,645.74	137.30	34.837	
14,600.00	7,352.30	3,780.00	3,700.00	181.47	149.20	18.72		-1,267.12	3,834.35	4,843.01	4,704.47	138.54	34.958	
14,700.00	7,352.46	3,780.00	3,700.00	183.99	149.20	18.72		-1,267.12	3,834.35	4,904.29	4,764.51	139.78	35.085	
14,800.00	7,352.63	3,780.00	3,700.00	186.50	149.20	18.72		-1,267.12	3,834.35	4,966.83	4,825.80	141.02	35.220	
14,900.00	7,352.80	3,780.00	3,700.00	189.02	149.20	18.72		-1,267.12	3,834.35	5,030.58	4,888.31	142.27	35.360	
15,000.00	7,352.96	3,780.00	3,700.00	191.53	149.20	18.72		-1,267.12	3,834.35	5,095.49	4,951.98	143.51	35.506	
15,100.00	7,353.13	3,780.00	3,700.00	194.05	149.20	18.72		-1,267.12	3,834.35	5,161.53	5,016.78	144.75	35.657	
15,200.00	7,353.29	3,780.00	3,700.00	196.57	149.20	18.72		-1,267.12	3,834.35	5,228.64	5,082.65	146.00	35.813	
15,300.00	7,353.46	3,780.00	3,700.00	199.08	149.20	18.72		-1,267.12	3,834.35	5,296.80	5,149.56	147.24	35.974	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #229 - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
15,400.00	7,353.62	3,780.00	3,700.00	201.60	149.20	18.72	-1,267.12	3,834.35	5,365.95	5,217.46	148.49	36.138	
15,500.00	7,353.79	3,780.00	3,700.00	204.12	149.20	18.72	-1,267.12	3,834.35	5,436.06	5,286.33	149.73	36.306	
15,600.00	7,353.96	3,780.00	3,700.00	206.63	149.20	18.72	-1,267.12	3,834.35	5,507.09	5,356.12	150.97	36.477	
15,700.00	7,354.12	3,780.00	3,700.00	209.15	149.20	18.72	-1,267.12	3,834.35	5,579.01	5,426.80	152.22	36.652	
15,800.00	7,354.29	3,780.00	3,700.00	211.67	149.20	18.72	-1,267.12	3,834.35	5,651.79	5,498.33	153.46	36.829	
15,900.00	7,354.45	3,780.00	3,700.00	214.19	149.20	18.72	-1,267.12	3,834.35	5,725.39	5,570.68	154.70	37.009	
16,000.00	7,354.62	3,780.00	3,700.00	216.71	149.20	18.72	-1,267.12	3,834.35	5,799.77	5,643.83	155.95	37.190	
16,100.00	7,354.78	3,780.00	3,700.00	219.23	149.20	18.72	-1,267.12	3,834.35	5,874.92	5,717.73	157.19	37.374	
16,200.00	7,354.95	3,780.00	3,700.00	221.74	149.20	18.72	-1,267.12	3,834.35	5,950.80	5,792.37	158.44	37.560	
16,300.00	7,355.12	3,780.00	3,700.00	224.26	149.20	18.72	-1,267.12	3,834.35	6,027.39	5,867.71	159.68	37.747	
16,400.00	7,355.28	3,780.00	3,700.00	226.78	149.20	18.72	-1,267.12	3,834.35	6,104.65	5,943.72	160.92	37.935	
16,500.00	7,355.45	3,780.00	3,700.00	229.30	149.20	18.72	-1,267.12	3,834.35	6,182.56	6,020.39	162.17	38.124	
16,600.00	7,355.61	3,780.00	3,700.00	231.82	149.20	18.72	-1,267.12	3,834.35	6,261.10	6,097.69	163.41	38.314	
16,700.00	7,355.78	3,780.00	3,700.00	234.34	149.20	18.72	-1,267.12	3,834.35	6,340.25	6,175.59	164.66	38.506	
16,800.00	7,355.95	3,780.00	3,700.00	236.86	149.20	18.72	-1,267.12	3,834.35	6,419.97	6,254.07	165.90	38.697	
16,833.02	7,356.00	3,780.00	3,700.00	237.69	149.20	18.72	-1,267.12	3,834.35	6,446.42	6,280.11	166.31	38.761	



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #318 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	81.00	0.00	0.00	1.62	109.24	-1,296.65	3,714.59	3,934.40					
100.00	100.00	181.00	100.00	0.10	5.24	109.24	-1,296.65	3,714.59	3,934.40	3,929.06	5.34	737.397		
200.00	200.00	281.00	200.00	0.32	9.24	109.24	-1,296.65	3,714.59	3,934.40	3,924.84	9.56	411.536		
300.00	300.00	381.00	300.00	0.55	13.24	109.24	-1,296.65	3,714.59	3,934.40	3,920.62	13.79	285.410		
400.00	400.00	481.00	400.00	0.77	17.24	109.24	-1,296.65	3,714.59	3,934.40	3,916.39	18.01	218.459		
500.00	500.00	581.00	500.00	0.99	21.24	109.24	-1,296.65	3,714.59	3,934.40	3,912.17	22.23	176.950		
600.00	599.92	680.92	599.92	1.21	25.24	-156.83	-1,296.65	3,714.59	3,937.61	3,911.21	26.40	149.131		
700.00	699.35	780.35	699.35	1.44	29.21	-156.73	-1,296.65	3,714.59	3,947.22	3,916.79	30.43	129.707		
800.00	797.81	878.81	797.81	1.73	33.15	-156.58	-1,296.65	3,714.59	3,963.20	3,928.93	34.27	115.647		
900.00	895.04	976.04	895.04	2.11	37.04	-156.54	-1,296.65	3,714.59	3,984.72	3,946.60	38.12	104.523		
1,000.00	892.06	1,073.06	892.06	2.54	40.92	-156.68	-1,296.65	3,714.59	4,007.06	3,964.87	42.19	94.983		
1,100.00	1,089.08	1,170.08	1,089.08	3.00	44.80	-156.81	-1,296.65	3,714.59	4,029.42	3,983.15	46.27	87.094		
1,200.00	1,186.10	1,267.10	1,186.10	3.47	48.68	-156.95	-1,296.65	3,714.59	4,051.80	4,001.45	50.35	80.468		
1,300.00	1,283.12	1,364.12	1,283.12	3.96	52.56	-157.08	-1,296.65	3,714.59	4,074.20	4,019.76	54.45	74.829		
1,400.00	1,380.14	1,461.14	1,380.14	4.45	56.45	-157.21	-1,296.65	3,714.59	4,096.63	4,038.08	58.54	69.974		
1,500.00	1,477.17	1,558.17	1,477.17	4.94	60.33	-157.34	-1,296.65	3,714.59	4,119.07	4,056.42	62.65	65.752		
1,600.00	1,574.19	1,655.19	1,574.19	5.44	64.21	-157.47	-1,296.65	3,714.59	4,141.53	4,074.78	66.75	62.047		
1,700.00	1,671.21	1,752.21	1,671.21	5.94	68.09	-157.60	-1,296.65	3,714.59	4,164.02	4,093.16	70.85	58.770		
1,800.00	1,768.23	1,849.23	1,768.23	6.44	71.97	-157.72	-1,296.65	3,714.59	4,186.52	4,111.56	74.96	55.852		
1,900.00	1,865.25	1,946.25	1,865.25	6.95	75.85	-157.85	-1,296.65	3,714.59	4,209.04	4,129.98	79.06	53.237		
2,000.00	1,962.27	2,043.27	1,962.27	7.45	79.73	-157.97	-1,296.65	3,714.59	4,231.58	4,148.41	83.17	50.880		
2,100.00	2,059.29	2,140.29	2,059.29	7.96	83.61	-158.09	-1,296.65	3,714.59	4,254.14	4,166.87	87.27	48.745		
2,200.00	2,156.31	2,237.31	2,156.31	8.47	87.49	-158.21	-1,296.65	3,714.59	4,276.72	4,185.34	91.38	46.802		
2,300.00	2,253.34	2,334.34	2,253.34	8.98	91.37	-158.33	-1,296.65	3,714.59	4,299.32	4,203.83	95.48	45.027		
2,400.00	2,350.36	2,431.36	2,350.36	9.49	95.25	-158.45	-1,296.65	3,714.59	4,321.93	4,222.34	99.59	43.398		
2,500.00	2,447.38	2,528.38	2,447.38	10.00	99.14	-158.57	-1,296.65	3,714.59	4,344.56	4,240.87	103.69	41.899		
2,600.00	2,544.40	2,625.40	2,544.40	10.51	103.02	-158.68	-1,296.65	3,714.59	4,367.21	4,259.41	107.79	40.514		
2,700.00	2,641.42	2,722.42	2,641.42	11.02	106.90	-158.80	-1,296.65	3,714.59	4,389.87	4,277.97	111.90	39.231		
2,800.00	2,738.44	2,819.44	2,738.44	11.53	110.78	-158.91	-1,296.65	3,714.59	4,412.55	4,296.55	116.00	38.040		
2,900.00	2,835.46	2,916.46	2,835.46	12.04	114.66	-159.02	-1,296.65	3,714.59	4,435.25	4,315.15	120.10	36.930		
3,000.00	2,932.48	3,013.48	2,932.48	12.55	118.54	-159.13	-1,296.65	3,714.59	4,457.96	4,333.76	124.20	35.893		
3,100.00	3,029.50	3,110.50	3,029.50	13.06	122.42	-159.24	-1,296.65	3,714.59	4,480.69	4,352.39	128.30	34.923		
3,200.00	3,126.53	3,207.53	3,126.53	13.57	126.30	-159.35	-1,296.65	3,714.59	4,503.44	4,371.04	132.40	34.014		
3,300.00	3,223.55	3,304.55	3,223.55	14.08	130.18	-159.46	-1,296.65	3,714.59	4,526.20	4,389.70	136.50	33.160		
3,400.00	3,320.57	3,401.57	3,320.57	14.56	134.07	-159.57	-1,296.65	3,714.59	4,548.27	4,406.84	141.43	32.158		
3,500.00	3,419.16	3,500.16	3,419.16	14.86	138.01	-160.01	-1,296.65	3,714.59	4,564.83	4,417.88	146.95	31.063		
3,600.00	3,518.57	3,599.57	3,518.57	15.08	141.98	-160.20	-1,296.65	3,714.59	4,574.89	4,422.95	151.94	30.109		
3,700.00	3,618.48	3,699.48	3,618.48	15.22	145.98	-160.26	-1,296.65	3,714.59	4,578.41	4,422.08	156.33	29.287		
3,800.00	3,718.48	3,799.48	3,718.48	15.32	149.98	105.84	-1,296.65	3,714.59	4,578.41	4,413.74	164.68	27.803		
3,900.00	3,818.48	3,899.48	3,818.48	15.44	153.98	105.84	-1,296.65	3,714.59	4,578.41	4,409.62	168.79	27.125		
4,000.00	3,918.48	3,999.48	3,918.48	15.55	157.98	105.84	-1,296.65	3,714.59	4,578.41	4,405.50	172.91	26.478		
4,100.00	4,018.48	4,099.48	4,018.48	15.67	161.98	105.84	-1,296.65	3,714.59	4,578.41	4,401.38	177.03	25.862		
4,200.00	4,118.48	4,199.48	4,118.48	15.79	165.98	105.84	-1,296.65	3,714.59	4,578.41	4,397.25	181.16	25.273		
4,300.00	4,218.48	4,299.48	4,218.48	15.91	169.98	105.84	-1,296.65	3,714.59	4,578.41	4,393.13	185.28	24.710		
4,400.00	4,318.48	4,399.48	4,318.48	16.03	173.98	105.84	-1,296.65	3,714.59	4,578.41	4,389.00	189.41	24.172		
4,500.00	4,418.48	4,499.48	4,418.48	16.16	177.98	105.84	-1,296.65	3,714.59	4,578.41	4,384.87	193.54	23.656		
4,600.00	4,518.48	4,599.48	4,518.48	16.29	181.98	105.84	-1,296.65	3,714.59	4,578.41	4,380.74	197.68	23.161		
4,700.00	4,618.48	4,699.48	4,618.48	16.42	185.98	105.84	-1,296.65	3,714.59	4,578.41	4,376.60	201.81	22.687		
4,800.00	4,718.48	4,799.48	4,718.48	16.55	189.98	105.84	-1,296.65	3,714.59	4,578.41	4,372.46	205.95	22.231		
4,900.00	4,818.48	4,899.48	4,818.48	16.68	193.98	105.84	-1,296.65	3,714.59	4,578.41	4,368.33	210.09	21.793		
5,000.00	4,918.48	4,999.48	4,918.48	16.82	197.98	105.84	-1,296.65	3,714.59	4,578.41	4,364.19	214.23	21.372		
5,100.00	5,018.48	5,099.48	5,018.48	16.96	201.98	105.84	-1,296.65	3,714.59	4,578.41	4,360.04	218.37	20.966		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company: B.P.
 Project: San Juan County, NM NAD83
 Reference Site: NEBU 602 Pad
 Site Error: 0.00 usft
 Reference Well: NEBU 602 #1H
 Error: 0.00 usft
 Reference Wellbore: Lateral
 Reference Design: Plan #2

Local Co-ordinate Reference:
 TVD Reference: GL 6521' & RKB 15' @ 6536.00usft
 MD Reference: GL 6521' & RKB 15' @ 6536.00usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: Grand Junction District
 Offset TVD Reference: Reference Datum

Offset Design NEBU 602 Pad - NEBU #318 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
5,200.00	5,118.48	5,199.48	5,118.48	17.10	205.98	105.84	-1,296.65	3,714.59	4,578.41	4,355.90	222.51	20.576	
5,300.00	5,218.48	5,299.48	5,218.48	17.24	209.98	105.84	-1,296.65	3,714.59	4,578.41	4,351.75	226.66	20.199	
5,400.00	5,318.48	5,399.48	5,318.48	17.38	213.98	105.84	-1,296.65	3,714.59	4,578.41	4,347.60	230.81	19.836	
5,500.00	5,418.48	5,499.48	5,418.48	17.53	217.98	105.84	-1,296.65	3,714.59	4,578.41	4,343.45	234.96	19.486	
5,600.00	5,518.48	5,599.48	5,518.48	17.68	221.98	105.84	-1,296.65	3,714.59	4,578.41	4,339.30	239.11	19.148	
5,700.00	5,618.48	5,699.48	5,618.48	17.82	225.98	105.84	-1,296.65	3,714.59	4,578.41	4,335.15	243.26	18.821	
5,800.00	5,718.48	5,799.48	5,718.48	17.97	229.98	105.84	-1,296.65	3,714.59	4,578.41	4,331.00	247.42	18.505	
5,900.00	5,818.48	5,899.48	5,818.48	18.13	233.98	105.84	-1,296.65	3,714.59	4,578.41	4,326.84	251.57	18.199	
6,000.00	5,918.48	5,999.48	5,918.48	18.28	237.98	105.84	-1,296.65	3,714.59	4,578.41	4,322.68	255.73	17.903	
6,100.00	6,018.48	6,099.48	6,018.48	18.43	241.98	105.84	-1,296.65	3,714.59	4,578.41	4,318.52	259.89	17.617	
6,200.00	6,118.48	6,199.48	6,118.48	18.59	245.98	105.84	-1,296.65	3,714.59	4,578.41	4,314.36	264.05	17.339	
6,300.00	6,218.48	6,299.48	6,218.48	18.75	249.98	105.84	-1,296.65	3,714.59	4,578.41	4,310.20	268.21	17.070	
6,400.00	6,318.48	6,399.48	6,318.48	18.91	253.98	105.84	-1,296.65	3,714.59	4,578.41	4,306.04	272.37	16.809	
6,500.00	6,418.48	6,499.48	6,418.48	19.07	257.98	105.84	-1,296.65	3,714.59	4,578.41	4,301.87	276.54	16.556	
6,600.00	6,518.48	6,599.48	6,518.48	19.23	261.98	105.84	-1,296.65	3,714.59	4,578.41	4,297.71	280.70	16.310	
6,700.00	6,618.48	6,699.48	6,618.48	19.39	265.98	105.84	-1,296.65	3,714.59	4,578.41	4,293.54	284.87	16.072	
6,800.00	6,718.48	6,799.48	6,718.48	19.54	269.98	16.04	-1,296.65	3,714.59	4,578.26	4,292.44	285.82	16.018	
6,900.00	6,817.87	6,898.87	6,817.87	19.47	273.95	16.32	-1,296.65	3,714.59	4,568.61	4,283.23	285.38	16.009	
7,000.00	6,914.47	6,995.47	6,914.47	19.28	277.82	17.07	-1,296.65	3,714.59	4,544.15	4,265.78	278.39	16.323	
7,100.00	7,005.89	7,086.89	7,005.89	19.01	281.48	18.37	-1,296.65	3,714.59	4,505.49	4,240.20	265.28	16.984	
7,200.00	7,089.89	7,170.89	7,089.89	18.71	284.84	20.41	-1,296.65	3,714.59	4,453.62	4,206.22	247.40	18.002	
7,300.00	7,164.40	7,245.40	7,164.40	18.44	287.82	23.52	-1,296.65	3,714.59	4,389.85	4,162.19	227.67	19.282	
7,400.00	7,227.58	7,308.58	7,227.58	18.29	290.34	28.28	-1,296.65	3,714.59	4,315.81	4,103.52	212.29	20.329	
7,500.00	7,277.87	7,358.87	7,277.87	18.34	292.35	35.80	-1,296.65	3,714.59	4,233.37	4,020.67	212.70	19.903	
7,600.00	7,314.05	7,395.05	7,314.05	18.68	293.80	48.07	-1,296.65	3,714.59	4,144.60	3,902.60	242.00	17.127	
7,700.00	7,335.21	7,416.21	7,335.21	19.34	294.65	67.74	-1,296.65	3,714.59	4,051.73	3,757.68	294.06	13.779	
7,800.00	7,341.02	7,422.02	7,341.02	20.28	294.88	89.72	-1,296.65	3,714.59	3,957.10	3,638.12	318.98	12.405	
7,900.00	7,341.19	7,422.19	7,341.19	21.48	294.89	89.73	-1,296.65	3,714.59	3,862.48	3,541.72	320.76	12.042	
8,000.00	7,341.36	7,422.36	7,341.36	22.90	294.89	89.73	-1,296.65	3,714.59	3,768.13	3,445.38	322.75	11.675	
8,100.00	7,341.52	7,422.52	7,341.52	24.50	294.90	89.74	-1,296.65	3,714.59	3,674.09	3,349.16	324.93	11.307	
8,200.00	7,341.69	7,422.69	7,341.69	26.24	294.91	89.75	-1,296.65	3,714.59	3,580.37	3,253.12	327.25	10.941	
8,300.00	7,341.85	7,422.85	7,341.85	28.11	294.91	89.76	-1,296.65	3,714.59	3,486.99	3,157.31	329.69	10.577	
8,400.00	7,342.02	7,423.02	7,342.02	30.07	294.92	89.76	-1,296.65	3,714.59	3,394.00	3,061.78	332.22	10.216	
8,500.00	7,342.19	7,423.19	7,342.19	32.11	294.93	89.77	-1,296.65	3,714.59	3,301.41	2,966.58	334.84	9.860	
8,600.00	7,342.35	7,423.35	7,342.35	34.21	294.93	89.78	-1,296.65	3,714.59	3,209.27	2,871.75	337.52	9.508	
8,700.00	7,342.52	7,423.52	7,342.52	36.37	294.94	89.79	-1,296.65	3,714.59	3,117.61	2,777.36	340.25	9.163	
8,800.00	7,342.68	7,423.68	7,342.68	38.58	294.95	89.79	-1,296.65	3,714.59	3,026.49	2,683.45	343.03	8.823	
8,900.00	7,342.85	7,423.85	7,342.85	40.82	294.95	89.80	-1,296.65	3,714.59	2,935.93	2,590.09	345.85	8.489	
9,000.00	7,343.01	7,424.01	7,343.01	43.09	294.96	89.81	-1,296.65	3,714.59	2,846.02	2,497.32	348.70	8.162	
9,100.00	7,343.18	7,424.18	7,343.18	45.39	294.97	89.82	-1,296.65	3,714.59	2,756.79	2,405.22	351.57	7.841	
9,200.00	7,343.35	7,424.35	7,343.35	47.71	294.97	89.82	-1,296.65	3,714.59	2,668.33	2,313.86	354.47	7.528	
9,300.00	7,343.51	7,424.51	7,343.51	50.06	294.98	89.83	-1,296.65	3,714.59	2,580.72	2,223.33	357.39	7.221	
9,400.00	7,343.68	7,424.68	7,343.68	52.42	294.99	89.84	-1,296.65	3,714.59	2,494.03	2,133.71	360.32	6.922	
9,500.00	7,343.84	7,424.84	7,343.84	54.79	294.99	89.85	-1,296.65	3,714.59	2,408.38	2,045.10	363.28	6.630	
9,600.00	7,344.01	7,425.01	7,344.01	57.18	295.00	89.85	-1,296.65	3,714.59	2,323.87	1,957.63	366.24	6.345	
9,700.00	7,344.17	7,425.17	7,344.17	59.58	295.01	89.86	-1,296.65	3,714.59	2,240.64	1,871.43	369.21	6.089	
9,800.00	7,344.34	7,425.34	7,344.34	61.99	295.01	89.87	-1,296.65	3,714.59	2,158.84	1,786.64	372.20	5.800	
9,900.00	7,344.51	7,425.51	7,344.51	64.41	295.02	89.88	-1,296.65	3,714.59	2,078.62	1,703.43	375.19	5.540	
10,000.00	7,344.67	7,425.67	7,344.67	66.84	295.03	89.88	-1,296.65	3,714.59	2,000.19	1,622.00	378.20	5.289	
10,100.00	7,344.84	7,425.84	7,344.84	69.27	295.03	89.89	-1,296.65	3,714.59	1,923.76	1,542.56	381.20	5.047	
10,200.00	7,345.00	7,426.00	7,345.00	71.71	295.04	89.90	-1,296.65	3,714.59	1,849.58	1,465.36	384.22	4.814	
10,300.00	7,345.17	7,426.17	7,345.17	74.16	295.05	89.91	-1,296.65	3,714.59	1,777.94	1,390.69	387.24	4.591	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company: B.P.
 Project: San Juan County, NM NAD83
 Reference Site: NEBU 602 Pad
 Error: 0.00 usft
 Reference Well: NEBU 602 #1H
 Error: 0.00 usft
 Reference Wellbore: Lateral
 Reference Design: Plan #2

Local Co-ordinate Reference: Well NEBU 602 #1H
 TVD Reference: GL 6521' & RKB 15' @ 6536.00usft
 MD Reference: GL 6521' & RKB 15' @ 6536.00usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: Grand Junction District
 Offset TVD Reference: Reference Datum

Offset Design NEBU 602 Pad - NEBU #318 - OH - OH														Offset Site Error: 0.00 usft
Survey Program: 100-UNKNOWN														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N-S (usft)	+E-W (usft)				Between Centres (usft)	Between Ellipses (usft)	
10,400.00	7,345.34	7,426.34	7,345.34	76.61	295.05	89.91	-1,296.65	3,714.59	1,709.14	1,318.87	390.27	4.379		
10,500.00	7,345.50	7,426.50	7,345.50	79.06	295.06	89.92	-1,296.65	3,714.59	1,643.55	1,250.25	393.30	4.179		
10,600.00	7,345.67	7,426.67	7,345.67	81.53	295.07	89.93	-1,296.65	3,714.59	1,581.56	1,185.23	396.34	3.990		
10,700.00	7,345.83	7,426.83	7,345.83	83.99	295.07	89.94	-1,296.65	3,714.59	1,523.63	1,124.25	399.38	3.815		
10,800.00	7,346.00	7,427.00	7,346.00	86.46	295.08	89.94	-1,296.65	3,714.59	1,470.22	1,067.80	402.42	3.653		
10,900.00	7,346.16	7,427.16	7,346.16	88.93	295.09	89.95	-1,296.65	3,714.59	1,421.84	1,016.37	405.47	3.507		
11,000.00	7,346.33	7,427.33	7,346.33	91.40	295.09	89.96	-1,296.65	3,714.59	1,379.03	970.51	408.52	3.376		
11,100.00	7,346.50	7,427.50	7,346.50	93.88	295.10	89.97	-1,296.65	3,714.59	1,342.32	930.75	411.57	3.261		
11,200.00	7,346.66	7,427.66	7,346.66	96.36	295.11	89.97	-1,296.65	3,714.59	1,312.22	897.59	414.63	3.165		
11,300.00	7,346.83	7,427.83	7,346.83	98.85	295.11	89.98	-1,296.65	3,714.59	1,289.19	871.51	417.68	3.087		
11,400.00	7,346.99	7,427.99	7,346.99	101.33	295.12	89.99	-1,296.65	3,714.59	1,273.62	852.88	420.74	3.027		
11,500.00	7,347.16	7,428.16	7,347.16	103.82	295.13	90.00	-1,296.65	3,714.59	1,265.78	841.98	423.81	2.987		
11,549.52	7,347.24	7,428.24	7,347.24	105.05	295.13	90.00	-1,296.65	3,714.59	1,264.81	839.20	425.61	2.972 CC		
11,600.00	7,347.32	7,428.32	7,347.32	106.31	295.13	90.00	-1,296.65	3,714.59	1,265.82	838.95	426.87	2.965 ES		
11,700.00	7,347.49	7,428.49	7,347.49	108.80	295.14	90.01	-1,296.65	3,714.59	1,273.73	843.80	429.94	2.963 SF		
11,800.00	7,347.66	7,428.66	7,347.66	111.29	295.15	90.02	-1,296.65	3,714.59	1,289.38	856.37	433.00	2.978		
11,900.00	7,347.82	7,428.82	7,347.82	113.78	295.15	90.03	-1,296.65	3,714.59	1,312.47	876.40	436.07	3.010		
12,000.00	7,347.99	7,428.99	7,347.99	116.28	295.16	90.03	-1,296.65	3,714.59	1,342.64	903.50	439.14	3.057		
12,100.00	7,348.15	7,429.15	7,348.15	118.77	295.17	90.04	-1,296.65	3,714.59	1,379.41	937.20	442.22	3.119		
12,200.00	7,348.32	7,429.32	7,348.32	121.27	295.17	90.05	-1,296.65	3,714.59	1,422.28	976.99	445.29	3.194		
12,300.00	7,348.49	7,429.49	7,348.49	123.77	295.18	90.06	-1,296.65	3,714.59	1,470.70	1,022.34	448.36	3.280		
12,400.00	7,348.65	7,429.65	7,348.65	126.27	295.19	90.06	-1,296.65	3,714.59	1,524.16	1,072.72	451.44	3.376		
12,500.00	7,348.82	7,429.82	7,348.82	128.77	295.19	90.07	-1,296.65	3,714.59	1,582.14	1,127.62	454.52	3.481		
12,600.00	7,348.98	7,429.98	7,348.98	131.28	295.20	90.08	-1,296.65	3,714.59	1,644.16	1,186.56	457.59	3.593		
12,700.00	7,349.15	7,430.15	7,349.15	133.78	295.21	90.09	-1,296.65	3,714.59	1,709.78	1,249.11	460.67	3.711		
12,800.00	7,349.31	7,430.31	7,349.31	136.28	295.21	90.09	-1,296.65	3,714.59	1,778.61	1,314.86	463.75	3.835		
12,900.00	7,349.48	7,430.48	7,349.48	138.79	295.22	90.10	-1,296.65	3,714.59	1,850.28	1,383.45	466.83	3.963		
13,000.00	7,349.65	7,430.65	7,349.65	141.29	295.23	90.11	-1,296.65	3,714.59	1,924.48	1,454.57	469.91	4.095		
13,100.00	7,349.81	7,430.81	7,349.81	143.80	295.23	90.12	-1,296.65	3,714.59	2,000.93	1,527.94	472.99	4.230		
13,200.00	7,349.98	7,430.98	7,349.98	146.31	295.24	90.12	-1,296.65	3,714.59	2,079.38	1,603.30	476.08	4.368		
13,300.00	7,350.14	7,431.14	7,350.14	148.82	295.25	90.13	-1,296.65	3,714.59	2,159.61	1,680.45	479.16	4.507		
13,400.00	7,350.31	7,431.31	7,350.31	151.33	295.25	90.14	-1,296.65	3,714.59	2,241.43	1,759.19	482.24	4.648		
13,500.00	7,350.47	7,431.47	7,350.47	153.83	295.26	90.15	-1,296.65	3,714.59	2,324.67	1,839.34	485.33	4.790		
13,600.00	7,350.64	7,431.64	7,350.64	156.34	295.27	90.15	-1,296.65	3,714.59	2,409.19	1,920.78	488.41	4.933		
13,700.00	7,350.81	7,431.81	7,350.81	158.86	295.27	90.16	-1,296.65	3,714.59	2,494.85	2,003.35	491.50	5.076		
13,800.00	7,350.97	7,431.97	7,350.97	161.37	295.28	90.17	-1,296.65	3,714.59	2,581.55	2,086.96	494.58	5.220		
13,900.00	7,351.14	7,432.14	7,351.14	163.88	295.29	90.18	-1,296.65	3,714.59	2,669.17	2,171.50	497.67	5.363		
14,000.00	7,351.30	7,432.30	7,351.30	166.39	295.29	90.18	-1,296.65	3,714.59	2,757.64	2,256.88	500.76	5.507		
14,100.00	7,351.47	7,432.47	7,351.47	168.90	295.30	90.19	-1,296.65	3,714.59	2,846.87	2,343.02	503.85	5.650		
14,200.00	7,351.63	7,432.63	7,351.63	171.42	295.31	90.20	-1,296.65	3,714.59	2,936.79	2,429.86	506.93	5.793		
14,300.00	7,351.80	7,432.80	7,351.80	173.93	295.31	90.21	-1,296.65	3,714.59	3,027.35	2,517.33	510.02	5.936		
14,400.00	7,351.97	7,432.97	7,351.97	176.44	295.32	90.21	-1,296.65	3,714.59	3,118.48	2,605.37	513.11	6.078		
14,500.00	7,352.13	7,433.13	7,352.13	178.96	295.33	90.22	-1,296.65	3,714.59	3,210.15	2,693.95	516.20	6.219		
14,600.00	7,352.30	7,433.30	7,352.30	181.47	295.33	90.23	-1,296.65	3,714.59	3,302.29	2,783.00	519.29	6.359		
14,700.00	7,352.46	7,433.46	7,352.46	183.99	295.34	90.24	-1,296.65	3,714.59	3,394.88	2,872.50	522.38	6.499		
14,800.00	7,352.63	7,433.63	7,352.63	186.50	295.35	90.24	-1,296.65	3,714.59	3,487.88	2,962.41	525.47	6.638		
14,900.00	7,352.80	7,433.80	7,352.80	189.02	295.35	90.25	-1,296.65	3,714.59	3,581.26	3,052.70	528.56	6.775		
15,000.00	7,352.96	7,433.96	7,352.96	191.53	295.36	90.26	-1,296.65	3,714.59	3,674.98	3,143.33	531.65	6.912		
15,100.00	7,353.13	7,434.13	7,353.13	194.05	295.37	90.27	-1,296.65	3,714.59	3,769.03	3,234.29	534.74	7.048		
15,200.00	7,353.29	7,434.29	7,353.29	196.57	295.37	90.27	-1,296.65	3,714.59	3,863.38	3,325.54	537.83	7.183		
15,300.00	7,353.46	7,434.46	7,353.46	199.08	295.38	90.28	-1,296.65	3,714.59	3,958.00	3,417.08	540.93	7.317		
15,400.00	7,353.62	7,434.62	7,353.62	201.60	295.38	90.29	-1,296.65	3,714.59	4,052.89	3,508.87	544.02	7.450		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	B.P	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #318 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
15,500.00	7,353.79	7,434.79	7,353.79	204.12	295.39	90.30	-1,296.65	3,714.59	4,148.01	3,600.90	547.11	7.582		
15,600.00	7,353.96	7,434.96	7,353.96	206.63	295.40	90.30	-1,296.65	3,714.59	4,243.36	3,693.15	550.20	7.712		
15,700.00	7,354.12	7,435.12	7,354.12	209.15	295.40	90.31	-1,296.65	3,714.59	4,338.91	3,785.62	553.29	7.842		
15,800.00	7,354.29	7,435.29	7,354.29	211.67	295.41	90.32	-1,296.65	3,714.59	4,434.66	3,878.28	556.39	7.970		
15,900.00	7,354.45	7,435.45	7,354.45	214.19	295.42	90.33	-1,296.65	3,714.59	4,530.60	3,971.12	559.48	8.098		
16,000.00	7,354.62	7,435.62	7,354.62	216.71	295.42	90.33	-1,296.65	3,714.59	4,626.71	4,064.13	562.57	8.224		
16,100.00	7,354.78	7,435.78	7,354.78	219.23	295.43	90.34	-1,296.65	3,714.59	4,722.98	4,157.31	565.67	8.349		
16,200.00	7,354.95	7,435.95	7,354.95	221.74	295.44	90.35	-1,296.65	3,714.59	4,819.40	4,250.64	568.76	8.474		
16,300.00	7,355.12	7,436.12	7,355.12	224.26	295.44	90.36	-1,296.65	3,714.59	4,915.97	4,344.11	571.86	8.597		
16,400.00	7,355.28	7,436.28	7,355.28	226.78	295.45	90.36	-1,296.65	3,714.59	5,012.66	4,437.72	574.95	8.718		
16,500.00	7,355.45	7,436.45	7,355.45	229.30	295.46	90.37	-1,296.65	3,714.59	5,109.49	4,531.45	578.04	8.839		
16,600.00	7,355.61	7,436.61	7,355.61	231.82	295.46	90.38	-1,296.65	3,714.59	5,206.44	4,625.30	581.14	8.959		
16,700.00	7,355.78	7,436.78	7,355.78	234.34	295.47	90.39	-1,296.65	3,714.59	5,303.50	4,719.26	584.23	9.078		
16,800.00	7,355.95	7,436.95	7,355.95	236.86	295.48	90.39	-1,296.65	3,714.59	5,400.66	4,813.34	587.33	9.195		
16,833.02	7,356.00	7,437.00	7,356.00	237.69	295.48	90.40	-1,296.65	3,714.59	5,432.77	4,844.42	588.35	9.234		



Anticollision Report



Company: B.P.
 Project: San Juan County, NM NAD83
 Reference Site: NEBU 602 Pad
 Site Error: 0.00 usft
 Reference Well: NEBU 602 #1H
 Well Error: 0.00 usft
 Reference Wellbore: Lateral
 Reference Design: Plan #2

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:
 Output errors are at
 Database:
 Offset TVD Reference:

Well NEBU 602 #1H
 GL 6521' & RKB 15' @ 6536.00usft
 GL 6521' & RKB 15' @ 6536.00usft
 Grid
 Minimum Curvature
 2.00 sigma
 Grand Junction District
 Reference Datum

Offset Design NEBU 602 Pad - NEBU #319M - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	Offset Wellbore Centre +E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	83.00	0.00	0.00	97.69	-811.97	6,013.61	6,068.75				
100.00	100.00	17.00	100.00	0.10	0.34	97.69	-811.97	6,013.61	6,068.18	6,067.75	0.44	N/A	
200.00	200.00	117.00	200.00	0.32	2.68	97.69	-811.97	6,013.61	6,068.18	6,065.18	3.00	2,022.530	
300.00	300.00	217.00	300.00	0.55	6.68	97.69	-811.97	6,013.61	6,068.18	6,060.96	7.23	839.880	
400.00	400.00	317.00	400.00	0.77	10.68	97.69	-811.97	6,013.61	6,068.18	6,056.73	11.45	529.980	
500.00	500.00	417.00	500.00	0.99	14.68	97.69	-811.97	6,013.61	6,068.18	6,052.51	15.67	387.135	
600.00	599.92	516.92	599.92	1.21	18.68	-168.39	-811.97	6,013.61	6,071.60	6,051.75	19.85	305.827	
700.00	699.35	616.35	699.35	1.44	22.65	-168.33	-811.97	6,013.61	6,081.84	6,057.94	23.90	254.459	
800.00	797.81	714.81	797.81	1.73	26.59	-168.22	-811.97	6,013.61	6,098.85	6,071.09	27.75	219.740	
900.00	895.04	812.04	895.04	2.11	30.48	-168.17	-811.97	6,013.61	6,121.74	6,090.15	31.59	193.793	
1,000.00	992.06	909.06	992.06	2.54	34.36	-168.22	-811.97	6,013.61	6,145.48	6,109.87	35.61	172.581	
1,100.00	1,089.08	1,006.08	1,089.08	3.00	38.24	-168.26	-811.97	6,013.61	6,169.23	6,129.58	39.64	155.626	
1,200.00	1,186.10	1,103.10	1,186.10	3.47	42.12	-168.31	-811.97	6,013.61	6,192.98	6,149.29	43.68	141.774	
1,300.00	1,283.12	1,200.12	1,283.12	3.96	46.00	-168.35	-811.97	6,013.61	6,216.73	6,169.00	47.73	130.252	
1,400.00	1,380.14	1,297.14	1,380.14	4.45	49.89	-168.40	-811.97	6,013.61	6,240.49	6,188.71	51.78	120.520	
1,500.00	1,477.17	1,394.17	1,477.17	4.94	53.77	-168.44	-811.97	6,013.61	6,264.25	6,208.41	55.83	112.193	
1,600.00	1,574.19	1,491.19	1,574.19	5.44	57.65	-168.49	-811.97	6,013.61	6,288.01	6,228.12	59.89	104.990	
1,700.00	1,671.21	1,588.21	1,671.21	5.94	61.53	-168.53	-811.97	6,013.61	6,311.78	6,247.83	63.95	98.697	
1,800.00	1,768.23	1,685.23	1,768.23	6.44	65.41	-168.57	-811.97	6,013.61	6,335.55	6,267.54	68.01	93.154	
1,900.00	1,865.25	1,782.25	1,865.25	6.95	69.29	-168.62	-811.97	6,013.61	6,359.32	6,287.25	72.07	88.234	
2,000.00	1,962.27	1,879.27	1,962.27	7.45	73.17	-168.66	-811.97	6,013.61	6,383.10	6,306.97	76.14	83.837	
2,100.00	2,059.29	1,976.29	2,059.29	7.96	77.05	-168.70	-811.97	6,013.61	6,406.88	6,326.68	80.20	79.886	
2,200.00	2,156.31	2,073.31	2,156.31	8.47	80.93	-168.74	-811.97	6,013.61	6,430.67	6,346.40	84.26	76.315	
2,300.00	2,253.34	2,170.34	2,253.34	8.98	84.81	-168.79	-811.97	6,013.61	6,454.46	6,366.13	88.33	73.073	
2,400.00	2,350.36	2,267.36	2,350.36	9.49	88.69	-168.83	-811.97	6,013.61	6,478.25	6,385.85	92.39	70.115	
2,500.00	2,447.38	2,364.38	2,447.38	10.00	92.58	-168.87	-811.97	6,013.61	6,502.04	6,405.58	96.46	67.407	
2,600.00	2,544.40	2,461.40	2,544.40	10.51	96.46	-168.91	-811.97	6,013.61	6,525.84	6,425.31	100.53	64.917	
2,700.00	2,641.42	2,558.42	2,641.42	11.02	100.34	-168.95	-811.97	6,013.61	6,549.64	6,445.05	104.59	62.621	
2,800.00	2,738.44	2,655.44	2,738.44	11.53	104.22	-168.99	-811.97	6,013.61	6,573.44	6,464.79	108.66	60.497	
2,900.00	2,835.46	2,752.46	2,835.46	12.04	108.10	-169.03	-811.97	6,013.61	6,597.25	6,484.53	112.72	58.526	
3,000.00	2,932.48	2,849.48	2,932.48	12.55	111.98	-169.07	-811.97	6,013.61	6,621.06	6,504.27	116.79	56.692	
3,100.00	3,029.50	2,946.50	3,029.50	13.06	115.86	-169.11	-811.97	6,013.61	6,644.87	6,524.02	120.86	54.982	
3,200.00	3,126.53	3,043.53	3,126.53	13.57	119.74	-169.15	-811.97	6,013.61	6,668.69	6,543.77	124.92	53.383	
3,300.00	3,223.55	3,140.55	3,223.55	14.08	123.62	-169.19	-811.97	6,013.61	6,692.51	6,563.52	128.99	51.885	
3,400.00	3,320.57	3,237.57	3,320.57	14.56	127.51	-169.23	-811.97	6,013.61	6,715.59	6,581.64	133.95	50.135	
3,500.00	3,417.59	3,334.59	3,417.59	14.86	131.45	-169.26	-811.97	6,013.61	6,739.31	6,593.36	139.54	48.250	
3,600.00	3,514.61	3,431.61	3,514.61	15.08	135.42	-169.29	-811.97	6,013.61	6,763.42	6,598.85	144.57	46.644	
3,700.00	3,611.64	3,528.64	3,611.64	15.22	139.42	-169.32	-811.97	6,013.61	6,787.10	6,598.13	149.97	45.291	
3,800.00	3,708.66	3,625.66	3,708.66	15.32	143.42	-169.35	-811.97	6,013.61	6,810.71	6,588.55	158.55	42.555	
3,900.00	3,805.68	3,722.68	3,805.68	15.44	147.42	-169.38	-811.97	6,013.61	6,834.31	6,584.44	162.66	41.479	
4,000.00	3,902.70	3,819.70	3,902.70	15.55	151.42	-169.41	-811.97	6,013.61	6,857.91	6,580.32	166.78	40.455	
4,100.00	4,000.00	3,917.00	4,000.00	15.67	155.42	-169.44	-811.97	6,013.61	6,881.51	6,576.20	170.90	39.480	
4,200.00	4,097.42	4,014.42	4,097.42	15.79	159.42	-169.47	-811.97	6,013.61	6,905.11	6,572.08	175.02	38.551	
4,300.00	4,194.84	4,111.84	4,194.84	15.91	163.42	-169.50	-811.97	6,013.61	6,928.71	6,567.96	179.14	37.663	
4,400.00	4,292.26	4,209.26	4,292.26	16.03	167.42	-169.53	-811.97	6,013.61	6,952.31	6,563.83	183.27	36.816	
4,500.00	4,389.68	4,306.68	4,389.68	16.16	171.42	-169.56	-811.97	6,013.61	6,975.91	6,559.71	187.40	36.005	
4,600.00	4,487.10	4,404.10	4,487.10	16.29	175.42	-169.59	-811.97	6,013.61	6,999.51	6,555.58	191.52	35.228	
4,700.00	4,584.52	4,501.52	4,584.52	16.42	179.42	-169.62	-811.97	6,013.61	7,023.11	6,551.44	195.66	34.484	
4,800.00	4,681.94	4,598.94	4,681.94	16.55	183.42	-169.65	-811.97	6,013.61	7,046.71	6,547.31	199.79	33.771	
4,900.00	4,779.36	4,696.36	4,779.36	16.68	187.42	-169.68	-811.97	6,013.61	7,070.31	6,543.18	203.93	33.086	
5,000.00	4,876.78	4,793.78	4,876.78	16.82	191.42	-169.71	-811.97	6,013.61	7,093.91	6,539.04	208.06	32.428	
5,100.00	5,018.48	4,935.48	5,018.48	16.96	195.42	-169.74	-811.97	6,013.61	7,117.51	6,534.90	212.20	31.795	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #319M - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,118.48	5,035.48	5,118.48	17.10	199.42	96.51	-811.97	6,013.61	6,747.10	6,530.76	216.35	31.187	
5,300.00	5,218.48	5,135.48	5,218.48	17.24	203.42	96.51	-811.97	6,013.61	6,747.10	6,526.61	220.49	30.601	
5,400.00	5,318.48	5,235.48	5,318.48	17.38	207.42	96.51	-811.97	6,013.61	6,747.10	6,522.47	224.63	30.036	
5,500.00	5,418.48	5,335.48	5,418.48	17.53	211.42	96.51	-811.97	6,013.61	6,747.10	6,518.32	228.78	29.492	
5,600.00	5,518.48	5,435.48	5,518.48	17.68	215.42	96.51	-811.97	6,013.61	6,747.10	6,514.17	232.93	28.966	
5,700.00	5,618.48	5,535.48	5,618.48	17.82	219.42	96.51	-811.97	6,013.61	6,747.10	6,510.02	237.08	28.459	
5,800.00	5,718.48	5,635.48	5,718.48	17.97	223.42	96.51	-811.97	6,013.61	6,747.10	6,505.87	241.23	27.970	
5,900.00	5,818.48	5,735.48	5,818.48	18.13	227.42	96.51	-811.97	6,013.61	6,747.10	6,501.72	245.38	27.496	
6,000.00	5,918.48	5,835.48	5,918.48	18.28	231.42	96.51	-811.97	6,013.61	6,747.10	6,497.56	249.54	27.038	
6,100.00	6,018.48	5,935.48	6,018.48	18.43	235.42	96.51	-811.97	6,013.61	6,747.10	6,493.41	253.69	26.595	
6,200.00	6,118.48	6,035.48	6,118.48	18.59	239.42	96.51	-811.97	6,013.61	6,747.10	6,489.25	257.85	26.167	
6,300.00	6,218.48	6,135.48	6,218.48	18.75	243.42	96.51	-811.97	6,013.61	6,747.10	6,485.09	262.01	25.751	
6,400.00	6,318.48	6,235.48	6,318.48	18.91	247.42	96.51	-811.97	6,013.61	6,747.10	6,480.93	266.17	25.349	
6,500.00	6,418.48	6,335.48	6,418.48	19.07	251.42	96.51	-811.97	6,013.61	6,747.10	6,476.77	270.33	24.959	
6,600.00	6,518.48	6,435.48	6,518.48	19.23	255.42	96.51	-811.97	6,013.61	6,747.10	6,472.61	274.49	24.580	
6,700.00	6,618.48	6,535.48	6,618.48	19.39	259.42	96.51	-811.97	6,013.61	6,747.10	6,468.44	278.66	24.213	
6,800.00	6,718.48	6,635.48	6,718.48	19.54	263.42	6.71	-811.97	6,013.61	6,746.95	6,468.25	278.69	24.209	
6,900.00	6,817.87	6,734.87	6,817.87	19.47	267.39	6.83	-811.97	6,013.61	6,736.97	6,458.96	278.01	24.232	
7,000.00	6,914.47	6,831.47	6,914.47	19.28	271.26	7.14	-811.97	6,013.61	6,711.88	6,441.36	270.32	24.829	
7,100.00	7,005.89	6,922.89	7,005.89	19.01	274.92	7.69	-811.97	6,013.61	6,671.70	6,416.05	255.65	26.097	
7,200.00	7,089.89	7,006.89	7,089.89	18.71	278.28	8.57	-811.97	6,013.61	6,618.01	6,383.58	234.43	28.230	
7,300.00	7,164.40	7,081.40	7,164.40	18.44	281.26	9.94	-811.97	6,013.61	6,551.95	6,344.27	207.68	31.549	
7,400.00	7,227.58	7,144.58	7,227.58	18.29	283.78	12.15	-811.97	6,013.61	6,475.13	6,297.38	177.75	36.428	
7,500.00	7,277.87	7,194.87	7,277.87	18.34	285.79	15.98	-811.97	6,013.61	6,389.47	6,238.43	151.05	42.302	
7,600.00	7,314.05	7,231.05	7,314.05	18.68	287.24	23.66	-811.97	6,013.61	6,297.08	6,149.57	147.51	42.690	
7,700.00	7,335.21	7,252.21	7,335.21	19.34	288.09	43.61	-811.97	6,013.61	6,200.23	5,983.70	216.52	28.635	
7,800.00	7,341.02	7,258.02	7,341.02	20.28	288.32	89.27	-811.97	6,013.61	6,101.31	5,788.91	312.40	19.530	
7,900.00	7,341.19	7,258.19	7,341.19	21.48	288.33	89.28	-811.97	6,013.61	6,002.16	5,687.98	314.18	19.104	
8,000.00	7,341.36	7,258.36	7,341.36	22.90	288.33	89.29	-811.97	6,013.61	5,903.04	5,586.87	316.17	18.670	
8,100.00	7,341.52	7,258.52	7,341.52	24.50	288.34	89.31	-811.97	6,013.61	5,803.95	5,485.61	318.35	18.232	
8,200.00	7,341.69	7,258.69	7,341.69	26.24	288.35	89.32	-811.97	6,013.61	5,704.89	5,384.23	320.67	17.791	
8,300.00	7,341.85	7,258.85	7,341.85	28.11	288.35	89.33	-811.97	6,013.61	5,605.87	5,282.76	323.11	17.350	
8,400.00	7,342.02	7,259.02	7,342.02	30.07	288.36	89.34	-811.97	6,013.61	5,506.88	5,181.24	325.64	16.911	
8,500.00	7,342.19	7,259.19	7,342.19	32.11	288.37	89.36	-811.97	6,013.61	5,407.93	5,079.67	328.26	16.475	
8,600.00	7,342.35	7,259.35	7,342.35	34.21	288.37	89.37	-811.97	6,013.61	5,309.02	4,978.08	330.94	16.042	
8,700.00	7,342.52	7,259.52	7,342.52	36.37	288.38	89.38	-811.97	6,013.61	5,210.15	4,876.47	333.67	15.614	
8,800.00	7,342.68	7,259.68	7,342.68	38.58	288.39	89.39	-811.97	6,013.61	5,111.32	4,774.87	336.45	15.192	
8,900.00	7,342.85	7,259.85	7,342.85	40.82	288.39	89.40	-811.97	6,013.61	5,012.54	4,673.27	339.27	14.774	
9,000.00	7,343.01	7,260.01	7,343.01	43.09	288.40	89.42	-811.97	6,013.61	4,913.81	4,571.69	342.12	14.363	
9,100.00	7,343.18	7,260.18	7,343.18	45.39	288.41	89.43	-811.97	6,013.61	4,815.13	4,470.13	345.00	13.957	
9,200.00	7,343.35	7,260.35	7,343.35	47.71	288.41	89.44	-811.97	6,013.61	4,716.51	4,368.61	347.90	13.557	
9,300.00	7,343.51	7,260.51	7,343.51	50.06	288.42	89.45	-811.97	6,013.61	4,617.94	4,267.13	350.81	13.163	
9,400.00	7,343.68	7,260.68	7,343.68	52.42	288.43	89.46	-811.97	6,013.61	4,519.44	4,165.69	353.75	12.776	
9,500.00	7,343.84	7,260.84	7,343.84	54.79	288.43	89.48	-811.97	6,013.61	4,421.01	4,064.31	356.70	12.394	
9,600.00	7,344.01	7,261.01	7,344.01	57.18	288.44	89.49	-811.97	6,013.61	4,322.65	3,962.98	359.66	12.019	
9,700.00	7,344.17	7,261.17	7,344.17	59.58	288.45	89.50	-811.97	6,013.61	4,224.36	3,861.72	362.64	11.649	
9,800.00	7,344.34	7,261.34	7,344.34	61.99	288.45	89.51	-811.97	6,013.61	4,126.16	3,760.54	365.63	11.285	
9,900.00	7,344.51	7,261.51	7,344.51	64.41	288.46	89.52	-811.97	6,013.61	4,028.05	3,659.43	368.62	10.927	
10,000.00	7,344.67	7,261.67	7,344.67	66.84	288.47	89.54	-811.97	6,013.61	3,930.03	3,558.41	371.62	10.575	
10,100.00	7,344.84	7,261.84	7,344.84	69.27	288.47	89.55	-811.97	6,013.61	3,832.11	3,457.48	374.63	10.229	
10,200.00	7,345.00	7,262.00	7,345.00	71.71	288.48	89.56	-811.97	6,013.61	3,734.31	3,356.66	377.65	9.888	
10,300.00	7,345.17	7,262.17	7,345.17	74.16	288.49	89.57	-811.97	6,013.61	3,636.62	3,255.95	380.67	9.553	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company: B.P.
Project: San Juan County, NM NAD83
Reference Site: NEBU 602 Pad
Site Error: 0.00 usft
Reference Well: NEBU 602 #1H
Well Error: 0.00 usft
Reference Wellbore: Lateral
Reference Design: Plan #2

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Output errors are at
Database:
Offset TVD Reference:
Well NEBU 602 #1H
GL 6521' & RKB 15' @ 6536.00usft
GL 6521' & RKB 15' @ 6536.00usft
Grid
Minimum Curvature
2.00 sigma
Grand Junction District
Reference Datum

Offset Design NEBU 602 Pad - NEBU #319M - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Between Centres (usft)	Between Ellipses (usft)					
10,400.00	7,345.34	7,262.34	7,345.34	76.61	288.49	89.58	-811.97	6,013.61	3,539.06	3,155.36	383.70	9.224	
10,500.00	7,345.50	7,262.50	7,345.50	79.06	288.50	89.60	-811.97	6,013.61	3,441.65	3,054.92	386.73	8.899	
10,600.00	7,345.67	7,262.67	7,345.67	81.53	288.51	89.61	-811.97	6,013.61	3,344.38	2,954.61	389.77	8.580	
10,700.00	7,345.83	7,262.83	7,345.83	83.99	288.51	89.62	-811.97	6,013.61	3,247.28	2,854.48	392.81	8.267	
10,800.00	7,346.00	7,263.00	7,346.00	86.46	288.52	89.63	-811.97	6,013.61	3,150.37	2,754.51	395.85	7.958	
10,900.00	7,346.16	7,263.16	7,346.16	88.93	288.53	89.64	-811.97	6,013.61	3,053.65	2,654.75	398.90	7.655	
11,000.00	7,346.33	7,263.33	7,346.33	91.40	288.53	89.66	-811.97	6,013.61	2,957.15	2,555.20	401.95	7.357	
11,100.00	7,346.50	7,263.50	7,346.50	93.88	288.54	89.67	-811.97	6,013.61	2,860.89	2,455.89	405.00	7.064	
11,200.00	7,346.66	7,263.66	7,346.66	96.36	288.55	89.68	-811.97	6,013.61	2,764.90	2,356.84	408.06	6.776	
11,300.00	7,346.83	7,263.83	7,346.83	98.85	288.55	89.69	-811.97	6,013.61	2,669.20	2,258.08	411.12	6.493	
11,400.00	7,346.99	7,263.99	7,346.99	101.33	288.56	89.70	-811.97	6,013.61	2,573.82	2,159.65	414.18	6.214	
11,500.00	7,347.16	7,264.16	7,347.16	103.82	288.57	89.72	-811.97	6,013.61	2,478.82	2,061.58	417.24	5.941	
11,600.00	7,347.32	7,264.32	7,347.32	106.31	288.57	89.73	-811.97	6,013.61	2,384.22	1,963.91	420.31	5.673	
11,700.00	7,347.49	7,264.49	7,347.49	108.80	288.58	89.74	-811.97	6,013.61	2,290.08	1,866.71	423.37	5.409	
11,800.00	7,347.66	7,264.66	7,347.66	111.29	288.59	89.75	-811.97	6,013.61	2,196.45	1,770.01	426.44	5.151	
11,900.00	7,347.82	7,264.82	7,347.82	113.78	288.59	89.76	-811.97	6,013.61	2,103.42	1,673.91	429.51	4.897	
12,000.00	7,347.99	7,264.99	7,347.99	116.28	288.60	89.78	-811.97	6,013.61	2,011.05	1,578.47	432.58	4.649	
12,100.00	7,348.15	7,265.15	7,348.15	118.77	288.61	89.79	-811.97	6,013.61	1,919.45	1,483.80	435.65	4.406	
12,200.00	7,348.32	7,265.32	7,348.32	121.27	288.61	89.80	-811.97	6,013.61	1,828.73	1,390.00	438.73	4.168	
12,300.00	7,348.49	7,265.49	7,348.49	123.77	288.62	89.81	-811.97	6,013.61	1,739.03	1,297.23	441.80	3.936	
12,400.00	7,348.65	7,265.65	7,348.65	126.27	288.63	89.83	-811.97	6,013.61	1,650.51	1,205.63	444.88	3.710	
12,500.00	7,348.82	7,265.82	7,348.82	128.77	288.63	89.84	-811.97	6,013.61	1,563.37	1,115.42	447.95	3.490	
12,600.00	7,348.98	7,265.98	7,348.98	131.28	288.64	89.85	-811.97	6,013.61	1,477.87	1,026.84	451.03	3.277	
12,700.00	7,349.15	7,266.15	7,349.15	133.78	288.65	89.86	-811.97	6,013.61	1,394.29	940.18	454.11	3.070	
12,800.00	7,349.31	7,266.31	7,349.31	136.28	288.65	89.87	-811.97	6,013.61	1,313.01	855.82	457.19	2.872	
12,900.00	7,349.48	7,266.48	7,349.48	138.79	288.66	89.89	-811.97	6,013.61	1,234.49	774.22	460.27	2.682	
13,000.00	7,349.65	7,266.65	7,349.65	141.29	288.67	89.90	-811.97	6,013.61	1,159.28	695.93	463.35	2.502	
13,100.00	7,349.81	7,266.81	7,349.81	143.80	288.67	89.91	-811.97	6,013.61	1,088.06	621.63	466.43	2.333	
13,200.00	7,349.98	7,266.98	7,349.98	146.31	288.68	89.92	-811.97	6,013.61	1,021.69	552.17	469.52	2.176	
13,300.00	7,350.14	7,267.14	7,350.14	148.82	288.69	89.93	-811.97	6,013.61	961.15	488.55	472.60	2.034	
13,400.00	7,350.31	7,267.31	7,350.31	151.33	288.69	89.95	-811.97	6,013.61	907.61	431.93	475.68	1.908	
13,500.00	7,350.47	7,267.47	7,350.47	153.83	288.70	89.96	-811.97	6,013.61	862.39	383.62	478.77	1.801	
13,600.00	7,350.64	7,267.64	7,350.64	156.34	288.71	89.97	-811.97	6,013.61	826.85	345.00	481.85	1.716	
13,700.00	7,350.81	7,267.81	7,350.81	158.86	288.71	89.98	-811.97	6,013.61	802.27	317.33	484.94	1.654	
13,800.00	7,350.97	7,267.97	7,350.97	161.37	288.72	89.99	-811.97	6,013.61	789.68	301.66	488.03	1.618	
13,850.21	7,351.06	7,268.06	7,351.06	162.63	288.72	90.00	-811.97	6,013.61	788.08	298.22	489.86	1.609 CC, ES	
13,900.00	7,351.14	7,268.14	7,351.14	163.88	288.73	90.01	-811.97	6,013.61	789.65	298.54	491.11	1.608 SF	
14,000.00	7,351.30	7,268.30	7,351.30	166.39	288.73	90.02	-811.97	6,013.61	802.19	307.99	494.20	1.623	
14,100.00	7,351.47	7,268.47	7,351.47	168.90	288.74	90.03	-811.97	6,013.61	826.72	329.44	497.29	1.662	
14,200.00	7,351.63	7,268.63	7,351.63	171.42	288.75	90.04	-811.97	6,013.61	862.22	361.85	500.38	1.723	
14,300.00	7,351.80	7,268.80	7,351.80	173.93	288.75	90.05	-811.97	6,013.61	907.41	403.94	503.46	1.802	
14,400.00	7,351.97	7,268.97	7,351.97	176.44	288.76	90.07	-811.97	6,013.61	960.91	454.36	506.55	1.897	
14,500.00	7,352.13	7,269.13	7,352.13	178.96	288.77	90.08	-811.97	6,013.61	1,021.42	511.78	509.64	2.004	
14,600.00	7,352.30	7,269.30	7,352.30	181.47	288.77	90.09	-811.97	6,013.61	1,087.78	575.05	512.73	2.122	
14,700.00	7,352.46	7,269.46	7,352.46	183.99	288.78	90.10	-811.97	6,013.61	1,158.97	643.15	515.82	2.247	
14,800.00	7,352.63	7,269.63	7,352.63	186.50	288.79	90.11	-811.97	6,013.61	1,234.17	715.26	518.91	2.378	
14,900.00	7,352.80	7,269.80	7,352.80	189.02	288.79	90.13	-811.97	6,013.61	1,312.68	790.68	522.00	2.515	
15,000.00	7,352.96	7,269.96	7,352.96	191.53	288.80	90.14	-811.97	6,013.61	1,393.95	868.86	525.09	2.655	
15,100.00	7,353.13	7,270.13	7,353.13	194.05	288.81	90.15	-811.97	6,013.61	1,477.52	949.33	528.19	2.797	
15,200.00	7,353.29	7,270.29	7,353.29	196.57	288.81	90.16	-811.97	6,013.61	1,563.01	1,031.74	531.28	2.942	
15,300.00	7,353.46	7,270.46	7,353.46	199.08	288.82	90.17	-811.97	6,013.61	1,650.14	1,115.77	534.37	3.088	
15,400.00	7,353.62	7,270.62	7,353.62	201.60	288.82	90.19	-811.97	6,013.61	1,738.66	1,201.20	537.46	3.235	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #319M - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
15,500.00	7,353.79	7,270.79	7,353.79	204.12	288.83	90.20	-811.97	6,013.61	1,828.36	1,287.80	540.55	3.382		
15,600.00	7,353.96	7,270.96	7,353.96	206.63	288.84	90.21	-811.97	6,013.61	1,919.07	1,375.43	543.65	3.530		
15,700.00	7,354.12	7,271.12	7,354.12	209.15	288.84	90.22	-811.97	6,013.61	2,010.67	1,463.93	546.74	3.678		
15,800.00	7,354.29	7,271.29	7,354.29	211.67	288.85	90.24	-811.97	6,013.61	2,103.04	1,553.21	549.83	3.825		
15,900.00	7,354.45	7,271.45	7,354.45	214.19	288.86	90.25	-811.97	6,013.61	2,196.07	1,643.14	552.92	3.972		
16,000.00	7,354.62	7,271.62	7,354.62	216.71	288.86	90.26	-811.97	6,013.61	2,289.69	1,733.67	556.02	4.118		
16,100.00	7,354.78	7,271.78	7,354.78	219.23	288.87	90.27	-811.97	6,013.61	2,383.83	1,824.72	559.11	4.264		
16,200.00	7,354.95	7,271.95	7,354.95	221.74	288.88	90.28	-811.97	6,013.61	2,478.42	1,916.22	562.20	4.408		
16,300.00	7,355.12	7,272.12	7,355.12	224.26	288.88	90.30	-811.97	6,013.61	2,573.43	2,008.13	565.30	4.552		
16,400.00	7,355.28	7,272.28	7,355.28	226.78	288.89	90.31	-811.97	6,013.61	2,668.80	2,100.41	568.39	4.695		
16,500.00	7,355.45	7,272.45	7,355.45	229.30	288.90	90.32	-811.97	6,013.61	2,764.50	2,193.01	571.49	4.837		
16,600.00	7,355.61	7,272.61	7,355.61	231.82	288.90	90.33	-811.97	6,013.61	2,860.49	2,285.91	574.58	4.978		
16,700.00	7,355.78	7,272.78	7,355.78	234.34	288.91	90.34	-811.97	6,013.61	2,956.75	2,379.08	577.68	5.118		
16,800.00	7,355.95	7,272.95	7,355.95	236.86	288.92	90.36	-811.97	6,013.61	3,053.25	2,472.48	580.77	5.257		
16,833.02	7,356.00	7,273.00	7,356.00	237.69	288.92	90.36	-811.97	6,013.61	3,085.16	2,503.37	581.79	5.303		



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #400A - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 302-MWD												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	83.00	0.00		97.86	-794.64	5,756.30	5,811.49				
100.00	100.00	18.38	101.38	0.10		97.86	-794.64	5,756.30	5,810.89	5,810.80	0.10	N/A	
200.00	200.00	126.51	209.51	0.32		97.86	-794.54	5,756.21	5,810.80	5,810.48	0.32	N/A	
300.00	300.00	234.64	317.64	0.55		97.86	-794.28	5,755.99	5,810.56	5,810.02	0.55	N/A	
400.00	400.00	332.00	415.00	0.77		97.85	-793.84	5,755.68	5,810.18	5,809.41	0.77	7,545.459	
500.00	500.00	560.40	642.78	0.99		97.71	-778.95	5,755.42	5,809.65	5,808.65	0.99	5,840.075	
532.71	532.71	580.37	662.60	1.06		-168.42	-776.43	5,755.29	5,809.25	5,808.18	1.07	5,449.295	
600.00	599.92	702.00	782.57	1.21		-168.61	-756.59	5,754.98	5,810.79	5,809.57	1.22	4,762.303	
700.00	699.35	738.40	818.19	1.44		-168.63	-749.13	5,755.02	5,818.45	5,816.99	1.46	3,989.095	
800.00	797.81	794.00	872.37	1.73		-168.65	-736.68	5,755.98	5,834.12	5,832.40	1.72	3,394.056	
900.00	895.04	794.00	872.37	2.11		-168.57	-736.68	5,755.98	5,856.60	5,854.63	1.98	2,963.726	
1,000.00	992.06	853.31	929.85	2.54		-168.74	-722.20	5,758.01	5,880.90	5,878.68	2.23	2,643.062	
1,100.00	1,089.08	1,079.40	1,144.57	3.00		-169.54	-652.54	5,767.51	5,906.03	5,903.55	2.48	2,380.354	
1,200.00	1,186.10	1,290.43	1,337.34	3.47		-170.47	-567.08	5,773.32	5,928.66	5,925.91	2.74	2,162.747	
1,300.00	1,283.12	1,351.00	1,390.98	3.96		-170.77	-539.00	5,774.72	5,950.45	5,947.44	3.01	1,976.709	
1,400.00	1,380.14	1,437.78	1,466.17	4.45		-171.23	-495.75	5,777.18	5,972.81	5,969.53	3.28	1,820.590	
1,500.00	1,477.17	1,547.18	1,558.76	4.94		-171.83	-437.57	5,780.26	5,995.38	5,991.83	3.55	1,688.533	
1,600.00	1,574.19	1,615.25	1,615.98	5.44		-172.21	-400.74	5,782.16	6,018.38	6,014.56	3.82	1,573.585	
1,700.00	1,671.21	1,708.59	1,702.35	5.94		-173.16	-307.98	5,785.54	6,041.13	6,037.04	4.09	1,477.246	
1,800.00	1,768.23	1,854.81	1,818.52	6.44		-173.52	-272.89	5,786.40	6,064.01	6,059.65	4.36	1,389.519	
1,900.00	1,865.25	1,908.00	1,864.11	6.95		-173.79	-245.52	5,787.29	6,087.69	6,083.05	4.64	1,311.843	
2,000.00	1,962.27	1,958.49	1,907.99	7.45		-174.05	-220.58	5,788.35	6,112.23	6,107.31	4.92	1,242.873	
2,100.00	2,059.29	2,026.70	1,968.40	7.96		-174.37	-188.95	5,790.11	6,137.58	6,132.39	5.19	1,181.736	
2,200.00	2,156.31	2,122.21	2,054.58	8.47		-174.78	-147.84	5,792.28	6,163.08	6,157.61	5.47	1,127.282	
2,300.00	2,253.34	2,184.00	2,111.21	8.98		-175.03	-123.19	5,793.87	6,189.17	6,183.42	5.74	1,077.418	
2,400.00	2,350.36	2,372.00	2,286.49	9.49		-175.71	-55.42	5,797.68	6,215.14	6,209.13	6.01	1,034.019	
2,500.00	2,447.38	2,411.21	2,323.64	10.00		-175.84	-42.88	5,798.07	6,240.56	6,234.27	6.29	992.070	
2,600.00	2,544.40	2,464.00	2,374.05	10.51		-175.99	-27.31	5,799.77	6,267.50	6,260.93	6.57	954.029	
2,700.00	2,641.42	2,670.56	2,574.59	11.02		-176.49	21.76	5,803.82	6,294.00	6,287.16	6.84	920.274	
2,800.00	2,738.44	2,757.80	2,660.42	11.53		-176.65	37.37	5,804.67	6,319.32	6,312.20	7.12	887.806	
2,900.00	2,835.46	2,922.00	2,823.55	12.04		-176.84	55.57	5,805.73	6,344.34	6,336.94	7.40	857.858	
3,000.00	2,932.48	2,980.47	2,881.89	12.55		-176.88	59.48	5,805.83	6,368.88	6,361.20	7.68	829.556	
3,100.00	3,029.50	3,049.68	2,951.02	13.06		-176.92	62.59	5,806.62	6,394.19	6,386.23	7.96	803.321	
3,200.00	3,126.53	3,156.71	3,058.02	13.57		-176.95	64.91	5,807.75	6,419.43	6,411.19	8.24	778.853	
3,300.00	3,223.55	3,253.42	3,154.71	14.08		-176.98	66.86	5,808.75	6,444.66	6,436.14	8.52	755.980	
3,400.00	3,320.75	3,350.32	3,251.59	14.56		-177.03	68.82	5,809.75	6,469.15	6,460.35	8.79	735.632	
3,500.00	3,419.16	3,448.51	3,349.75	14.86		-177.10	70.80	5,810.76	6,487.78	6,478.80	8.98	722.556	
3,600.00	3,518.57	3,547.77	3,448.98	15.08		-177.14	72.81	5,811.79	6,499.52	6,490.43	9.10	714.384	
3,700.00	3,618.48	3,647.61	3,548.79	15.22		-177.17	74.82	5,812.82	6,504.32	6,495.17	9.16	710.260	
3,800.00	3,718.48	3,679.00	3,580.18	15.32		88.92	75.46	5,813.15	6,505.76	6,490.46	15.30	425.142	
3,900.00	3,818.48	3,679.00	3,580.18	15.44		88.92	75.46	5,813.15	6,508.65	6,493.24	15.42	422.228	
4,000.00	3,918.48	3,679.00	3,580.18	15.55		88.92	75.46	5,813.15	6,513.08	6,497.55	15.53	419.390	
4,100.00	4,018.48	3,679.00	3,580.18	15.67		88.92	75.46	5,813.15	6,519.04	6,503.39	15.65	416.627	
4,200.00	4,118.48	3,679.00	3,580.18	15.79		88.92	75.46	5,813.15	6,526.53	6,510.76	15.77	413.941	
4,300.00	4,218.48	3,679.00	3,580.18	15.91		88.92	75.46	5,813.15	6,535.54	6,519.65	15.89	411.333	
4,400.00	4,318.48	3,679.00	3,580.18	16.03		88.92	75.46	5,813.15	6,546.06	6,530.05	16.01	408.802	
4,500.00	4,418.48	3,679.00	3,580.18	16.16		88.92	75.46	5,813.15	6,558.09	6,541.95	16.14	406.348	
4,600.00	4,518.48	3,679.00	3,580.18	16.29		88.92	75.46	5,813.15	6,571.62	6,555.35	16.27	403.972	
4,700.00	4,618.48	3,679.00	3,580.18	16.42		88.92	75.46	5,813.15	6,586.64	6,570.25	16.40	401.674	
4,800.00	4,718.48	3,679.00	3,580.18	16.55		88.92	75.46	5,813.15	6,603.15	6,586.61	16.53	399.452	
4,900.00	4,818.48	3,679.00	3,580.18	16.68		88.92	75.46	5,813.15	6,621.12	6,604.45	16.67	397.306	
5,000.00	4,918.48	3,679.00	3,580.18	16.82		88.92	75.46	5,813.15	6,640.55	6,623.74	16.80	395.237	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #400A - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 302-MWD													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,018.48	3,679.00	3,580.18	16.96		88.92	75.46	5,813.15	6,681.42	6,644.48	16.94	393.242		
5,200.00	5,118.48	3,679.00	3,580.18	17.10		88.92	75.46	5,813.15	6,683.72	6,666.64	17.08	391.321		
5,300.00	5,218.48	3,679.00	3,580.18	17.24		88.92	75.46	5,813.15	6,707.45	6,690.22	17.22	389.473		
5,400.00	5,318.48	3,679.00	3,580.18	17.38		88.92	75.46	5,813.15	6,732.57	6,715.20	17.37	387.697		
5,500.00	5,418.48	3,679.00	3,580.18	17.53		88.92	75.46	5,813.15	6,759.08	6,741.57	17.51	385.992		
5,600.00	5,518.48	3,679.00	3,580.18	17.68		88.92	75.46	5,813.15	6,786.96	6,769.30	17.66	384.356		
5,700.00	5,618.48	3,679.00	3,580.18	17.82		88.92	75.46	5,813.15	6,816.19	6,798.39	17.81	382.789		
5,800.00	5,718.48	3,679.00	3,580.18	17.97		88.92	75.46	5,813.15	6,846.76	6,828.80	17.96	381.288		
5,900.00	5,818.48	3,679.00	3,580.18	18.13		88.92	75.46	5,813.15	6,878.65	6,860.54	18.11	379.852		
6,000.00	5,918.48	3,679.00	3,580.18	18.28		88.92	75.46	5,813.15	6,911.83	6,893.57	18.26	378.480		
6,100.00	6,018.48	3,679.00	3,580.18	18.43		88.92	75.46	5,813.15	6,946.30	6,927.89	18.42	377.171		
6,200.00	6,118.48	3,679.00	3,580.18	18.59		88.92	75.46	5,813.15	6,982.03	6,963.46	18.57	375.923		
6,300.00	6,218.48	3,679.00	3,580.18	18.75		88.92	75.46	5,813.15	7,019.00	7,000.27	18.73	374.733		
6,400.00	6,318.48	3,679.00	3,580.18	18.91		88.92	75.46	5,813.15	7,057.20	7,038.31	18.89	373.602		
6,500.00	6,418.48	3,679.00	3,580.18	19.07		88.92	75.46	5,813.15	7,096.60	7,077.55	19.05	372.527		
6,600.00	6,518.48	3,679.00	3,580.18	19.23		88.92	75.46	5,813.15	7,137.19	7,117.97	19.21	371.506		
6,700.00	6,618.48	3,679.00	3,580.18	19.39		88.92	75.46	5,813.15	7,178.93	7,159.56	19.37	370.538		
6,800.00	6,718.48	3,679.00	3,580.18	19.54		-0.87	75.46	5,813.15	7,221.68	7,208.83	19.54	369.619		
6,900.00	6,817.87	3,679.00	3,580.18	19.67		-0.82	75.46	5,813.15	7,266.44	7,241.90	19.67	368.750		
7,000.00	6,914.47	3,679.00	3,580.18	19.82		-0.80	75.46	5,813.15	7,277.41	7,263.73	19.82	367.929		
7,100.00	7,005.89	3,679.00	3,580.18	19.91		-0.79	75.46	5,813.15	7,284.19	7,271.70	19.91	367.156		
7,200.00	7,089.89	3,679.00	3,580.18	18.71		-0.80	75.46	5,813.15	7,276.67	7,265.64	11.02	660.096		
7,300.00	7,164.40	3,679.00	3,580.18	18.44		-0.82	75.46	5,813.15	7,254.97	7,245.65	9.33	777.939		
7,400.00	7,227.58	3,679.00	3,580.18	18.29		-0.88	75.46	5,813.15	7,219.52	7,212.03	7.49	964.370		
7,500.00	7,277.87	3,679.00	3,580.18	18.34		-0.96	75.46	5,813.15	7,170.98	7,165.32	5.66	1,266.227		
7,600.00	7,314.05	3,679.00	3,580.18	18.68		-1.08	75.46	5,813.15	7,110.30	7,106.13	4.17	1,703.749		
7,700.00	7,335.21	3,679.00	3,580.18	19.34		-1.27	75.46	5,813.15	7,038.68	7,035.01	3.67	1,915.787		
7,800.00	7,341.02	3,679.00	3,580.18	20.28		-1.52	75.46	5,813.15	6,957.68	6,953.23	4.45	1,564.679		
7,900.00	7,341.19	3,679.00	3,580.18	21.48		-1.52	75.46	5,813.15	6,873.86	6,868.77	5.09	1,351.005		
8,000.00	7,341.36	3,679.00	3,580.18	22.90		-1.52	75.46	5,813.15	6,790.48	6,784.73	5.75	1,180.518		
8,100.00	7,341.52	3,679.00	3,580.18	24.50		-1.52	75.46	5,813.15	6,707.56	6,701.12	6.43	1,042.826		
8,200.00	7,341.69	3,679.00	3,580.18	26.24		-1.52	75.46	5,813.15	6,625.10	6,617.98	7.12	930.053		
8,300.00	7,341.85	3,679.00	3,580.18	28.11		-1.52	75.46	5,813.15	6,543.14	6,535.32	7.82	836.406		
8,400.00	7,342.02	3,679.00	3,580.18	30.07		-1.52	75.46	5,813.15	6,461.69	6,453.16	8.53	757.636		
8,500.00	7,342.19	3,679.00	3,580.18	32.11		-1.52	75.46	5,813.15	6,380.76	6,371.52	9.24	690.604		
8,600.00	7,342.35	3,679.00	3,580.18	34.21		-1.52	75.46	5,813.15	6,300.38	6,290.42	9.95	632.961		
8,700.00	7,342.52	3,679.00	3,580.18	36.37		-1.52	75.46	5,813.15	6,220.57	6,209.89	10.67	582.926		
8,800.00	7,342.68	3,679.00	3,580.18	38.58		-1.52	75.46	5,813.15	6,141.35	6,129.95	11.39	539.131		
8,900.00	7,342.85	3,679.00	3,580.18	40.82		-1.52	75.46	5,813.15	6,062.74	6,050.63	12.11	500.510		
9,000.00	7,343.01	3,679.00	3,580.18	43.09		-1.52	75.46	5,813.15	5,984.77	5,971.94	12.84	466.222		
9,100.00	7,343.18	3,679.00	3,580.18	45.39		-1.52	75.46	5,813.15	5,907.47	5,893.91	13.56	435.598		
9,200.00	7,343.35	3,679.00	3,580.18	47.71		-1.52	75.46	5,813.15	5,830.86	5,816.57	14.29	408.095		
9,300.00	7,343.51	3,679.00	3,580.18	50.06		-1.52	75.46	5,813.15	5,754.96	5,739.95	15.02	383.275		
9,400.00	7,343.68	3,679.00	3,580.18	52.42		-1.52	75.46	5,813.15	5,679.81	5,664.07	15.74	360.776		
9,500.00	7,343.84	3,679.00	3,580.18	54.79		-1.52	75.46	5,813.15	5,605.44	5,588.97	16.47	340.297		
9,600.00	7,344.01	3,679.00	3,580.18	57.18		-1.52	75.46	5,813.15	5,531.87	5,514.67	17.20	321.588		
9,700.00	7,344.17	3,679.00	3,580.18	59.58		-1.52	75.46	5,813.15	5,459.15	5,441.22	17.93	304.438		
9,800.00	7,344.34	3,679.00	3,580.18	61.99		-1.52	75.46	5,813.15	5,387.30	5,368.64	18.66	288.669		
9,900.00	7,344.51	3,679.00	3,580.18	64.41		-1.52	75.46	5,813.15	5,316.36	5,296.97	19.39	274.129		
10,000.00	7,344.67	3,679.00	3,580.18	66.84		-1.52	75.46	5,813.15	5,246.37	5,226.24	20.13	260.687		
10,100.00	7,344.84	3,679.00	3,580.18	69.27		-1.52	75.46	5,813.15	5,177.36	5,156.51	20.86	248.231		
10,200.00	7,345.00	3,679.00	3,580.18	71.71		-1.52	75.46	5,813.15	5,109.38	5,087.79	21.59	236.663		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #400A - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 302-MWD												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,300.00	7,345.17	3,679.00	3,580.18	74.16		-1.52	75.46	5,813.15	5,042.47	5,020.14	22.32	225.899	
10,400.00	7,345.34	3,679.00	3,580.18	76.61		-1.52	75.46	5,813.15	4,976.66	4,953.61	23.05	215.865	
10,500.00	7,345.50	3,679.00	3,580.18	79.06		-1.52	75.46	5,813.15	4,912.01	4,888.22	23.79	206.495	
10,600.00	7,345.67	3,679.00	3,580.18	81.53		-1.52	75.46	5,813.15	4,848.56	4,824.04	24.52	197.733	
10,700.00	7,345.83	3,679.00	3,580.18	83.99		-1.52	75.46	5,813.15	4,786.36	4,761.10	25.25	189.527	
10,800.00	7,346.00	3,679.00	3,580.18	86.46		-1.52	75.46	5,813.15	4,725.45	4,699.46	25.99	181.834	
10,900.00	7,346.16	3,679.00	3,580.18	88.93		-1.52	75.46	5,813.15	4,665.90	4,639.17	26.72	174.612	
11,000.00	7,346.33	3,679.00	3,580.18	91.40		-1.52	75.46	5,813.15	4,607.74	4,580.29	27.46	167.826	
11,100.00	7,346.50	3,679.00	3,580.18	93.88		-1.52	75.46	5,813.15	4,551.04	4,522.85	28.19	161.444	
11,200.00	7,346.66	3,679.00	3,580.18	96.36		-1.52	75.46	5,813.15	4,495.85	4,466.92	28.92	155.438	
11,300.00	7,346.83	3,679.00	3,580.18	98.85		-1.52	75.46	5,813.15	4,442.22	4,412.56	29.66	149.781	
11,400.00	7,346.99	3,679.00	3,580.18	101.33		-1.52	75.46	5,813.15	4,390.22	4,359.83	30.39	144.450	
11,500.00	7,347.16	3,679.00	3,580.18	103.82		-1.52	75.46	5,813.15	4,339.90	4,308.77	31.13	139.425	
11,600.00	7,347.32	3,679.00	3,580.18	106.31		-1.52	75.46	5,813.15	4,291.32	4,259.46	31.86	134.685	
11,700.00	7,347.49	3,679.00	3,580.18	108.80		-1.52	75.46	5,813.15	4,244.54	4,211.94	32.60	130.214	
11,800.00	7,347.66	3,679.00	3,580.18	111.29		-1.52	75.46	5,813.15	4,199.62	4,166.29	33.33	125.996	
11,900.00	7,347.82	3,679.00	3,580.18	113.78		-1.52	75.46	5,813.15	4,156.62	4,122.55	34.07	122.015	
12,000.00	7,347.99	3,679.00	3,580.18	116.28		-1.52	75.46	5,813.15	4,115.60	4,080.80	34.80	118.280	
12,100.00	7,348.15	3,679.00	3,580.18	118.77		-1.52	75.46	5,813.15	4,076.62	4,041.09	35.54	114.717	
12,200.00	7,348.32	3,679.00	3,580.18	121.27		-1.52	75.46	5,813.15	4,039.74	4,003.47	36.27	111.375	
12,300.00	7,348.49	3,679.00	3,580.18	123.77		-1.52	75.46	5,813.15	4,005.02	3,968.02	37.01	108.224	
12,400.00	7,348.65	3,679.00	3,580.18	126.27		-1.52	75.46	5,813.15	3,972.52	3,934.78	37.74	105.255	
12,500.00	7,348.82	3,679.00	3,580.18	128.77		-1.52	75.46	5,813.15	3,942.28	3,903.81	38.48	102.457	
12,600.00	7,348.98	3,679.00	3,580.18	131.28		-1.52	75.46	5,813.15	3,914.37	3,875.16	39.21	99.824	
12,700.00	7,349.15	3,679.00	3,580.18	133.78		-1.52	75.46	5,813.15	3,888.83	3,848.88	39.95	97.347	
12,800.00	7,349.31	3,679.00	3,580.18	136.28		-1.52	75.46	5,813.15	3,865.70	3,825.02	40.68	95.019	
12,900.00	7,349.48	3,679.00	3,580.18	138.79		-1.52	75.46	5,813.15	3,845.04	3,803.62	41.42	92.833	
13,000.00	7,349.65	3,679.00	3,580.18	141.29		-1.52	75.46	5,813.15	3,826.88	3,784.73	42.15	90.782	
13,100.00	7,349.81	3,679.00	3,580.18	143.80		-1.52	75.46	5,813.15	3,811.26	3,768.37	42.89	88.861	
13,200.00	7,349.98	3,679.00	3,580.18	146.31		-1.52	75.46	5,813.15	3,798.21	3,754.59	43.63	87.064	
13,300.00	7,350.14	3,679.00	3,580.18	148.82		-1.52	75.46	5,813.15	3,787.76	3,743.40	44.36	85.384	
13,400.00	7,350.31	3,679.00	3,580.18	151.33		-1.52	75.46	5,813.15	3,779.92	3,734.82	45.10	83.817	
13,500.00	7,350.47	3,679.00	3,580.18	153.83		-1.52	75.46	5,813.15	3,774.72	3,728.88	45.83	82.358	
13,600.00	7,350.64	3,679.00	3,580.18	156.34		-1.52	75.46	5,813.15	3,772.16	3,725.59	46.57	81.002	
13,646.56	7,350.72	3,679.00	3,580.18	157.51		-1.52	75.46	5,813.15	3,771.87	3,724.96	46.91	80.405 CC	
13,700.00	7,350.81	3,679.00	3,580.18	158.86		-1.52	75.46	5,813.15	3,772.25	3,724.94	47.30	79.744 ES	
13,800.00	7,350.97	3,679.00	3,580.18	161.37		-1.52	75.46	5,813.15	3,774.99	3,726.95	48.04	78.580	
13,900.00	7,351.14	3,679.00	3,580.18	163.88		-1.52	75.46	5,813.15	3,780.37	3,731.60	48.78	77.505	
14,000.00	7,351.30	3,679.00	3,580.18	166.39		-1.52	75.46	5,813.15	3,788.39	3,738.88	49.51	76.515	
14,100.00	7,351.47	3,679.00	3,580.18	168.90		-1.52	75.46	5,813.15	3,799.03	3,748.78	50.25	75.606	
14,200.00	7,351.63	3,679.00	3,580.18	171.42		-1.52	75.46	5,813.15	3,812.26	3,761.27	50.98	74.774	
14,300.00	7,351.80	3,679.00	3,580.18	173.93		-1.52	75.46	5,813.15	3,828.05	3,776.33	51.72	74.016	
14,400.00	7,351.97	3,679.00	3,580.18	176.44		-1.52	75.46	5,813.15	3,846.38	3,793.93	52.46	73.327	
14,500.00	7,352.13	3,679.00	3,580.18	178.96		-1.52	75.46	5,813.15	3,867.22	3,814.02	53.19	72.704	
14,600.00	7,352.30	3,679.00	3,580.18	181.47		-1.52	75.46	5,813.15	3,890.51	3,836.58	53.93	72.143	
14,700.00	7,352.46	3,679.00	3,580.18	183.99		-1.52	75.46	5,813.15	3,916.21	3,861.55	54.66	71.642	
14,800.00	7,352.63	3,679.00	3,580.18	186.50		-1.52	75.46	5,813.15	3,944.29	3,888.89	55.40	71.197	
14,900.00	7,352.80	3,679.00	3,580.18	189.02		-1.52	75.46	5,813.15	3,974.68	3,918.55	56.14	70.805	
15,000.00	7,352.96	3,679.00	3,580.18	191.53		-1.52	75.46	5,813.15	4,007.34	3,950.47	56.87	70.463	
15,100.00	7,353.13	3,679.00	3,580.18	194.05		-1.52	75.46	5,813.15	4,042.21	3,984.61	57.61	70.168	
15,200.00	7,353.29	3,679.00	3,580.18	196.57		-1.52	75.46	5,813.15	4,079.24	4,020.89	58.34	69.917	
15,300.00	7,353.46	3,679.00	3,580.18	199.08		-1.52	75.46	5,813.15	4,118.36	4,059.28	59.08	69.708	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company: B.P.
Project: San Juan County, NM NAD83
Reference Site: NEBU 602 Pad
Site Error: 0.00 usft
Reference Well: NEBU 602 #1H
Well Error: 0.00 usft
Reference Wellbore: Lateral
Reference Design: Plan #2

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Output errors are at
Database:
Offset TVD Reference:
Well NEBU 602 #1H
GL 6521' & RKB 15' @ 6536.00usft
GL 6521' & RKB 15' @ 6536.00usft
Grid
Minimum Curvature
2.00 sigma
Grand Junction District
Reference Datum

Offset Design NEBU 602 Pad - NEBU #400A - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 302-MWD													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
15,400.00	7,353.62	3,679.00	3,580.18	201.60		-1.52	75.46	5,813.15	4,159.51	4,099.70	59.82	69.538	
15,500.00	7,353.79	3,679.00	3,580.18	204.12		-1.52	75.46	5,813.15	4,202.65	4,142.10	60.55	69.405	
15,600.00	7,353.96	3,679.00	3,580.18	206.63		-1.52	75.46	5,813.15	4,247.70	4,186.41	61.29	69.307	
15,700.00	7,354.12	3,679.00	3,580.18	209.15		-1.52	75.46	5,813.15	4,294.60	4,232.58	62.02	69.240	
15,800.00	7,354.29	3,679.00	3,580.18	211.67		-1.52	75.46	5,813.15	4,343.31	4,280.55	62.76	69.204	
15,900.00	7,354.45	3,679.00	3,580.18	214.19		-1.52	75.46	5,813.15	4,393.75	4,330.25	63.50	69.196 SF	
16,000.00	7,354.62	3,679.00	3,580.18	216.71		-1.52	75.46	5,813.15	4,445.86	4,381.63	64.23	69.214	
16,100.00	7,354.78	3,679.00	3,580.18	219.23		-1.52	75.46	5,813.15	4,499.60	4,434.63	64.97	69.257	
16,200.00	7,354.95	3,679.00	3,580.18	221.74		-1.52	75.46	5,813.15	4,554.89	4,489.19	65.71	69.323	
16,300.00	7,355.12	3,679.00	3,580.18	224.26		-1.52	75.46	5,813.15	4,611.70	4,545.26	66.44	69.410	
16,400.00	7,355.28	3,679.00	3,580.18	226.78		-1.52	75.46	5,813.15	4,669.95	4,602.77	67.18	69.516	
16,500.00	7,355.45	3,679.00	3,580.18	229.30		-1.52	75.46	5,813.15	4,729.60	4,661.69	67.91	69.641	
16,600.00	7,355.61	3,679.00	3,580.18	231.82		-1.52	75.46	5,813.15	4,790.60	4,721.95	68.65	69.782	
16,700.00	7,355.78	3,679.00	3,580.18	234.34		-1.52	75.46	5,813.15	4,852.89	4,783.50	69.39	69.940	
16,800.00	7,355.95	3,679.00	3,580.18	236.86		-1.52	75.46	5,813.15	4,916.42	4,846.30	70.12	70.111	
16,833.02	7,356.00	3,679.00	3,580.18	237.69		-1.52	75.46	5,813.15	4,937.67	4,867.30	70.37	70.171	



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #460 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.00	0.00	0.00	152.38	0.00	0.00	90.46	-69.47	8,570.53	8,572.17					
100.00	100.00	0.00	152.38	0.10	0.00	90.46	-69.47	8,570.53	8,570.97	8,570.88	0.10	N/A		
170.00	170.00	17.62	170.00	0.25	0.35	90.46	-69.47	8,570.53	8,570.81	8,570.21	0.61	N/A		
200.00	200.00	47.62	200.00	0.32	0.95	90.46	-69.47	8,570.53	8,570.81	8,569.54	1.27	6,733.843		
300.00	300.00	147.62	300.00	0.55	3.90	90.46	-69.47	8,570.53	8,570.81	8,566.36	4.45	1,926.087		
400.00	400.00	247.62	400.00	0.77	7.90	90.46	-69.47	8,570.53	8,570.81	8,562.14	8.67	988.033		
500.00	500.00	347.62	500.00	0.99	11.90	90.46	-69.47	8,570.53	8,570.81	8,557.91	12.90	664.435		
600.00	599.92	447.54	599.92	1.21	15.90	-175.63	-69.47	8,570.53	8,574.29	8,557.21	17.08	501.911		
700.00	699.35	546.97	699.35	1.44	19.88	-175.60	-69.47	8,570.53	8,584.71	8,563.57	21.14	406.001		
800.00	797.81	645.43	797.81	1.73	23.82	-175.55	-69.47	8,570.53	8,602.02	8,577.01	25.01	343.878		
900.00	895.04	742.66	895.04	2.11	27.71	-175.53	-69.47	8,570.53	8,625.32	8,596.47	28.85	298.983		
1,000.00	992.06	839.68	992.06	2.54	31.59	-175.54	-69.47	8,570.53	8,649.47	8,616.62	32.85	263.284		
1,100.00	1,089.08	936.70	1,089.08	3.00	35.47	-175.55	-69.47	8,570.53	8,673.63	8,636.76	36.87	235.271		
1,200.00	1,186.10	1,033.72	1,186.10	3.47	39.35	-175.57	-69.47	8,570.53	8,697.79	8,656.90	40.89	212.718		
1,300.00	1,283.12	1,130.74	1,283.12	3.96	43.23	-175.58	-69.47	8,570.53	8,721.94	8,677.03	44.92	194.180		
1,400.00	1,380.14	1,227.76	1,380.14	4.45	47.11	-175.59	-69.47	8,570.53	8,746.10	8,697.15	48.95	178.676		
1,500.00	1,477.17	1,324.79	1,477.17	4.94	50.99	-175.60	-69.47	8,570.53	8,770.26	8,717.27	52.99	165.522		
1,600.00	1,574.19	1,421.81	1,574.19	5.44	54.87	-175.62	-69.47	8,570.53	8,794.42	8,737.39	57.02	154.223		
1,700.00	1,671.21	1,518.83	1,671.21	5.94	58.75	-175.63	-69.47	8,570.53	8,818.58	8,757.51	61.08	144.413		
1,800.00	1,768.23	1,615.85	1,768.23	6.44	62.63	-175.64	-69.47	8,570.53	8,842.74	8,777.63	65.11	135.818		
1,900.00	1,865.25	1,712.87	1,865.25	6.95	66.51	-175.65	-69.47	8,570.53	8,866.90	8,797.75	69.15	128.225		
2,000.00	1,962.27	1,809.89	1,962.27	7.45	70.40	-175.66	-69.47	8,570.53	8,891.06	8,817.86	73.20	121.469		
2,100.00	2,059.29	1,906.91	2,059.29	7.96	74.28	-175.68	-69.47	8,570.53	8,915.22	8,837.98	77.24	115.419		
2,200.00	2,156.31	2,003.93	2,156.31	8.47	78.16	-175.69	-69.47	8,570.53	8,939.38	8,858.09	81.29	109.970		
2,300.00	2,253.34	2,100.96	2,253.34	8.98	82.04	-175.70	-69.47	8,570.53	8,963.54	8,878.20	85.34	105.037		
2,400.00	2,350.36	2,197.98	2,350.36	9.49	85.92	-175.71	-69.47	8,570.53	8,987.70	8,898.32	89.38	100.551		
2,500.00	2,447.38	2,295.00	2,447.38	10.00	89.80	-175.72	-69.47	8,570.53	9,011.86	8,918.43	93.43	96.452		
2,600.00	2,544.40	2,392.02	2,544.40	10.51	93.68	-175.73	-69.47	8,570.53	9,036.03	8,938.54	97.48	92.694		
2,700.00	2,641.42	2,489.04	2,641.42	11.02	97.56	-175.74	-69.47	8,570.53	9,060.19	8,958.66	101.53	89.235		
2,800.00	2,738.44	2,586.06	2,738.44	11.53	101.44	-175.76	-69.47	8,570.53	9,084.35	8,978.77	105.58	86.041		
2,900.00	2,835.46	2,683.08	2,835.46	12.04	105.32	-175.77	-69.47	8,570.53	9,108.52	8,998.88	109.63	83.083		
3,000.00	2,932.48	2,780.10	2,932.48	12.55	109.20	-175.78	-69.47	8,570.53	9,132.68	9,019.00	113.68	80.336		
3,100.00	3,029.50	2,877.12	3,029.50	13.06	113.08	-175.79	-69.47	8,570.53	9,156.84	9,039.11	117.73	77.777		
3,200.00	3,126.53	2,974.15	3,126.53	13.57	116.97	-175.80	-69.47	8,570.53	9,181.01	9,059.23	121.78	75.388		
3,300.00	3,223.55	3,071.17	3,223.55	14.08	120.85	-175.81	-69.47	8,570.53	9,205.17	9,079.34	125.83	73.154		
3,400.00	3,320.57	3,168.19	3,320.57	14.56	124.73	-175.85	-69.47	8,570.53	9,228.59	9,097.79	130.80	70.556		
3,500.00	3,419.16	3,266.78	3,419.16	14.86	128.67	-175.91	-69.47	8,570.53	9,246.15	9,109.74	136.40	67.785		
3,600.00	3,518.57	3,326.00	3,478.38	15.08	131.04	-175.95	-69.47	8,570.53	9,256.90	9,117.06	139.84	66.195		
3,700.00	3,618.48	3,326.00	3,478.38	15.22	131.04	-175.96	-69.47	8,570.53	9,261.60	9,121.36	140.24	66.040		
3,800.00	3,718.48	3,326.00	3,478.38	15.32	131.04	90.14	-69.47	8,570.53	9,263.66	9,117.33	146.33	63.308		
3,900.00	3,818.48	3,326.00	3,478.38	15.44	131.04	90.14	-69.47	8,570.53	9,266.79	9,120.35	146.44	63.281		
4,000.00	3,918.48	3,326.00	3,478.38	15.55	131.04	90.14	-69.47	8,570.53	9,271.00	9,124.45	146.55	63.260		
4,100.00	4,018.48	3,326.00	3,478.38	15.67	131.04	90.14	-69.47	8,570.53	9,276.28	9,129.61	146.67	63.245		
4,200.00	4,118.48	3,326.00	3,478.38	15.79	131.04	90.14	-69.47	8,570.53	9,282.64	9,135.85	146.79	63.237		
4,300.00	4,218.48	3,326.00	3,478.38	15.91	131.04	90.14	-69.47	8,570.53	9,290.07	9,143.16	146.91	63.235		
4,400.00	4,318.48	3,326.00	3,478.38	16.03	131.04	90.14	-69.47	8,570.53	9,298.58	9,151.54	147.04	63.240		
4,500.00	4,418.48	3,326.00	3,478.38	16.16	131.04	90.14	-69.47	8,570.53	9,308.14	9,160.98	147.16	63.250		
4,600.00	4,518.48	3,326.00	3,478.38	16.29	131.04	90.14	-69.47	8,570.53	9,318.77	9,171.48	147.29	63.267		
4,700.00	4,618.48	3,326.00	3,478.38	16.42	131.04	90.14	-69.47	8,570.53	9,330.46	9,183.04	147.42	63.291		
4,800.00	4,718.48	3,326.00	3,478.38	16.55	131.04	90.14	-69.47	8,570.53	9,343.21	9,195.66	147.56	63.320		
4,900.00	4,818.48	3,326.00	3,478.38	16.68	131.04	90.14	-69.47	8,570.53	9,357.01	9,209.32	147.69	63.356		
5,000.00	4,918.48	3,326.00	3,478.38	16.82	131.04	90.14	-69.47	8,570.53	9,371.85	9,224.03	147.83	63.398		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company: B.P.
 Project: San Juan County, NM NAD83
 Reference Site: NEBU 602 Pad
 Error: 0.00 usft
 Reference Well: NEBU 602 #1H
 Error: 0.00 usft
 Reference Wellbore: Lateral
 Reference Design: Plan #2

Local Co-ordinate Reference: Well NEBU 602 #1H
 TVD Reference: GL 6521' & RKB 15' @ 6536.00usft
 MD Reference: GL 6521' & RKB 15' @ 6536.00usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: Grand Junction District
 Offset TVD Reference: Reference Datum

Offset Design NEBU 602 Pad - NEBU #460 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,100.00	5,018.48	3,326.00	3,478.38	16.96	131.04	90.14	-69.47	8,570.53	9,387.74	9,239.77	147.97	63.446		
5,200.00	5,118.48	3,326.00	3,478.38	17.10	131.04	90.14	-69.47	8,570.53	9,404.66	9,256.56	148.11	63.500		
5,300.00	5,218.48	3,326.00	3,478.38	17.24	131.04	90.14	-69.47	8,570.53	9,422.62	9,274.37	148.25	63.560		
5,400.00	5,318.48	3,326.00	3,478.38	17.38	131.04	90.14	-69.47	8,570.53	9,441.59	9,293.20	148.39	63.626		
5,500.00	5,418.48	3,326.00	3,478.38	17.53	131.04	90.14	-69.47	8,570.53	9,461.59	9,313.06	148.54	63.699		
5,600.00	5,518.48	3,326.00	3,478.38	17.68	131.04	90.14	-69.47	8,570.53	9,482.60	9,333.92	148.68	63.777		
5,700.00	5,618.48	3,326.00	3,478.38	17.82	131.04	90.14	-69.47	8,570.53	9,504.62	9,355.79	148.83	63.861		
5,800.00	5,718.48	3,326.00	3,478.38	17.97	131.04	90.14	-69.47	8,570.53	9,527.63	9,378.65	148.98	63.951		
5,900.00	5,818.48	3,326.00	3,478.38	18.13	131.04	90.14	-69.47	8,570.53	9,551.64	9,402.50	149.14	64.047		
6,000.00	5,918.48	3,326.00	3,478.38	18.28	131.04	90.14	-69.47	8,570.53	9,576.63	9,427.34	149.29	64.148		
6,100.00	6,018.48	3,326.00	3,478.38	18.43	131.04	90.14	-69.47	8,570.53	9,602.60	9,453.15	149.44	64.256		
6,200.00	6,118.48	3,326.00	3,478.38	18.59	131.04	90.14	-69.47	8,570.53	9,629.53	9,479.93	149.60	64.369		
6,300.00	6,218.48	3,326.00	3,478.38	18.75	131.04	90.14	-69.47	8,570.53	9,657.43	9,507.67	149.76	64.487		
6,400.00	6,318.48	3,326.00	3,478.38	18.91	131.04	90.14	-69.47	8,570.53	9,686.27	9,536.36	149.92	64.611		
6,500.00	6,418.48	3,326.00	3,478.38	19.07	131.04	90.14	-69.47	8,570.53	9,716.07	9,565.99	150.08	64.740		
6,600.00	6,518.48	3,326.00	3,478.38	19.23	131.04	90.14	-69.47	8,570.53	9,746.79	9,596.55	150.24	64.875		
6,700.00	6,618.48	3,326.00	3,478.38	19.39	131.04	90.14	-69.47	8,570.53	9,778.44	9,628.04	150.40	65.015		
6,800.00	6,718.48	3,326.00	3,478.38	19.54	131.04	0.33	-69.47	8,570.53	9,810.87	9,664.78	146.09	67.156		
6,900.00	6,817.87	3,326.00	3,478.38	19.47	131.04	0.32	-69.47	8,570.53	9,834.69	9,691.18	143.51	68.528		
7,000.00	6,914.47	3,326.00	3,478.38	19.28	131.04	0.32	-69.47	8,570.53	9,844.04	9,706.63	137.41	71.639		
7,100.00	7,005.89	3,326.00	3,478.38	19.01	131.04	0.32	-69.47	8,570.53	9,838.73	9,710.79	127.94	76.902		
7,200.00	7,089.89	3,326.00	3,478.38	18.71	131.04	0.33	-69.47	8,570.53	9,818.86	9,703.52	115.34	85.128		
7,300.00	7,164.40	3,326.00	3,478.38	18.44	131.04	0.35	-69.47	8,570.53	9,784.83	9,684.88	99.95	97.894		
7,400.00	7,227.58	3,326.00	3,478.38	18.29	131.04	0.38	-69.47	8,570.53	9,737.35	9,655.16	82.20	118.466		
7,500.00	7,277.87	3,326.00	3,478.38	18.34	131.04	0.43	-69.47	8,570.53	9,677.39	9,614.78	62.61	154.569		
7,600.00	7,314.05	3,326.00	3,478.38	18.68	131.04	0.50	-69.47	8,570.53	9,606.21	9,564.26	41.95	228.986		
7,700.00	7,335.21	3,326.00	3,478.38	19.34	131.04	0.62	-69.47	8,570.53	9,525.33	9,503.95	21.38	445.452		
7,800.00	7,341.02	3,326.00	3,478.38	20.28	131.04	0.80	-69.47	8,570.53	9,436.60	9,430.27	6.32	1,492.636		
7,900.00	7,341.19	3,326.00	3,478.38	21.48	131.04	0.80	-69.47	8,570.53	9,345.52	9,338.55	6.97	1,340.474		
8,000.00	7,341.36	3,326.00	3,478.38	22.90	131.04	0.80	-69.47	8,570.53	9,254.62	9,246.98	7.64	1,210.749		
8,100.00	7,341.52	3,326.00	3,478.38	24.50	131.04	0.80	-69.47	8,570.53	9,163.92	9,155.59	8.33	1,099.986		
8,200.00	7,341.69	3,326.00	3,478.38	26.24	131.04	0.80	-69.47	8,570.53	9,073.41	9,064.38	9.03	1,004.909		
8,300.00	7,341.85	3,326.00	3,478.38	28.11	131.04	0.80	-69.47	8,570.53	8,983.10	8,973.37	9.74	922.741		
8,400.00	7,342.02	3,326.00	3,478.38	30.07	131.04	0.80	-69.47	8,570.53	8,893.00	8,882.55	10.45	851.215		
8,500.00	7,342.19	3,326.00	3,478.38	32.11	131.04	0.80	-69.47	8,570.53	8,803.11	8,791.95	11.16	788.509		
8,600.00	7,342.35	3,326.00	3,478.38	34.21	131.04	0.80	-69.47	8,570.53	8,713.45	8,701.56	11.88	733.162		
8,700.00	7,342.52	3,326.00	3,478.38	36.37	131.04	0.80	-69.47	8,570.53	8,624.01	8,611.40	12.61	684.002		
8,800.00	7,342.68	3,326.00	3,478.38	38.58	131.04	0.80	-69.47	8,570.53	8,534.80	8,521.47	13.33	640.082		
8,900.00	7,342.85	3,326.00	3,478.38	40.82	131.04	0.80	-69.47	8,570.53	8,445.84	8,431.78	14.06	600.629		
9,000.00	7,343.01	3,326.00	3,478.38	43.09	131.04	0.80	-69.47	8,570.53	8,357.13	8,342.34	14.79	565.015		
9,100.00	7,343.18	3,326.00	3,478.38	45.39	131.04	0.80	-69.47	8,570.53	8,268.67	8,253.15	15.52	532.718		
9,200.00	7,343.35	3,326.00	3,478.38	47.71	131.04	0.80	-69.47	8,570.53	8,180.48	8,164.23	16.25	503.305		
9,300.00	7,343.51	3,326.00	3,478.38	50.06	131.04	0.80	-69.47	8,570.53	8,092.56	8,075.58	16.99	476.416		
9,400.00	7,343.68	3,326.00	3,478.38	52.42	131.04	0.80	-69.47	8,570.53	8,004.93	7,987.21	17.72	451.745		
9,500.00	7,343.84	3,326.00	3,478.38	54.79	131.04	0.80	-69.47	8,570.53	7,917.59	7,899.14	18.45	429.035		
9,600.00	7,344.01	3,326.00	3,478.38	57.18	131.04	0.80	-69.47	8,570.53	7,830.56	7,811.37	19.19	408.065		
9,700.00	7,344.17	3,326.00	3,478.38	59.58	131.04	0.80	-69.47	8,570.53	7,743.84	7,723.91	19.93	388.648		
9,800.00	7,344.34	3,326.00	3,478.38	61.99	131.04	0.80	-69.47	8,570.53	7,657.44	7,636.78	20.66	370.619		
9,900.00	7,344.51	3,326.00	3,478.38	64.41	131.04	0.80	-69.47	8,570.53	7,571.37	7,549.98	21.40	353.840		
10,000.00	7,344.67	3,326.00	3,478.38	66.84	131.04	0.80	-69.47	8,570.53	7,485.66	7,463.52	22.13	338.187		
10,100.00	7,344.84	3,326.00	3,478.38	69.27	131.04	0.80	-69.47	8,570.53	7,400.30	7,377.43	22.87	323.553		
10,200.00	7,345.00	3,326.00	3,478.38	71.71	131.04	0.80	-69.47	8,570.53	7,315.31	7,291.70	23.61	309.845		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #460 - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Hightide Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
10,300.00	7,345.17	3,326.00	3,478.38	74.16	131.04	0.80	-69.47	8,570.53	7,230.71	7,206.36	24.35	296.980	
10,400.00	7,345.34	3,326.00	3,478.38	76.61	131.04	0.80	-69.47	8,570.53	7,146.50	7,121.41	25.09	284.884	
10,500.00	7,345.50	3,326.00	3,478.38	79.06	131.04	0.80	-69.47	8,570.53	7,062.70	7,036.88	25.82	273.494	
10,600.00	7,345.67	3,326.00	3,478.38	81.53	131.04	0.80	-69.47	8,570.53	6,979.34	6,952.77	26.56	262.750	
10,700.00	7,345.83	3,326.00	3,478.38	83.99	131.04	0.80	-69.47	8,570.53	6,896.41	6,869.11	27.30	252.603	
10,800.00	7,346.00	3,326.00	3,478.38	86.46	131.04	0.80	-69.47	8,570.53	6,813.95	6,785.90	28.04	243.005	
10,900.00	7,346.16	3,326.00	3,478.38	88.93	131.04	0.80	-69.47	8,570.53	6,731.95	6,703.17	28.78	233.915	
11,000.00	7,346.33	3,326.00	3,478.38	91.40	131.04	0.80	-69.47	8,570.53	6,650.45	6,620.94	29.52	225.296	
11,100.00	7,346.50	3,326.00	3,478.38	93.88	131.04	0.80	-69.47	8,570.53	6,569.47	6,539.21	30.26	217.113	
11,200.00	7,346.66	3,326.00	3,478.38	96.36	131.04	0.80	-69.47	8,570.53	6,489.01	6,458.01	31.00	209.338	
11,300.00	7,346.83	3,326.00	3,478.38	98.85	131.04	0.80	-69.47	8,570.53	6,409.10	6,377.37	31.74	201.941	
11,400.00	7,346.99	3,326.00	3,478.38	101.33	131.04	0.80	-69.47	8,570.53	6,329.77	6,297.29	32.48	194.899	
11,500.00	7,347.16	3,326.00	3,478.38	103.82	131.04	0.80	-69.47	8,570.53	6,251.02	6,217.81	33.22	188.187	
11,600.00	7,347.32	3,326.00	3,478.38	106.31	131.04	0.80	-69.47	8,570.53	6,172.90	6,138.94	33.96	181.785	
11,700.00	7,347.49	3,326.00	3,478.38	108.80	131.04	0.80	-69.47	8,570.53	6,095.41	6,060.71	34.70	175.675	
11,800.00	7,347.66	3,326.00	3,478.38	111.29	131.04	0.80	-69.47	8,570.53	6,018.58	5,983.15	35.44	169.838	
11,900.00	7,347.82	3,326.00	3,478.38	113.78	131.04	0.80	-69.47	8,570.53	5,942.45	5,906.27	36.18	164.258	
12,000.00	7,347.99	3,326.00	3,478.38	116.28	131.04	0.80	-69.47	8,570.53	5,867.03	5,830.11	36.92	158.921	
12,100.00	7,348.15	3,326.00	3,478.38	118.77	131.04	0.80	-69.47	8,570.53	5,792.38	5,754.70	37.66	153.814	
12,200.00	7,348.32	3,326.00	3,478.38	121.27	131.04	0.80	-69.47	8,570.53	5,718.46	5,680.06	38.40	148.924	
12,300.00	7,348.49	3,326.00	3,478.38	123.77	131.04	0.80	-69.47	8,570.53	5,645.36	5,606.22	39.14	144.238	
12,400.00	7,348.65	3,326.00	3,478.38	126.27	131.04	0.80	-69.47	8,570.53	5,573.10	5,533.22	39.88	139.748	
12,500.00	7,348.82	3,326.00	3,478.38	128.77	131.04	0.80	-69.47	8,570.53	5,501.71	5,461.09	40.62	135.443	
12,600.00	7,348.98	3,326.00	3,478.38	131.28	131.04	0.80	-69.47	8,570.53	5,431.22	5,389.86	41.36	131.313	
12,700.00	7,349.15	3,326.00	3,478.38	133.78	131.04	0.80	-69.47	8,570.53	5,361.67	5,319.57	42.10	127.351	
12,800.00	7,349.31	3,326.00	3,478.38	136.28	131.04	0.80	-69.47	8,570.53	5,293.09	5,250.25	42.84	123.548	
12,900.00	7,349.48	3,326.00	3,478.38	138.79	131.04	0.80	-69.47	8,570.53	5,225.53	5,181.95	43.58	119.898	
13,000.00	7,349.65	3,326.00	3,478.38	141.29	131.04	0.80	-69.47	8,570.53	5,159.03	5,114.70	44.32	116.394	
13,100.00	7,349.81	3,326.00	3,478.38	143.80	131.04	0.80	-69.47	8,570.53	5,093.61	5,048.55	45.06	113.029	
13,200.00	7,349.98	3,326.00	3,478.38	146.31	131.04	0.80	-69.47	8,570.53	5,029.34	4,983.53	45.81	109.797	
13,300.00	7,350.14	3,326.00	3,478.38	148.82	131.04	0.80	-69.47	8,570.53	4,966.24	4,919.70	46.55	106.694	
13,400.00	7,350.31	3,326.00	3,478.38	151.33	131.04	0.80	-69.47	8,570.53	4,904.38	4,857.09	47.29	103.714	
13,500.00	7,350.47	3,326.00	3,478.38	153.83	131.04	0.80	-69.47	8,570.53	4,843.79	4,795.76	48.03	100.852	
13,600.00	7,350.64	3,326.00	3,478.38	156.34	131.04	0.80	-69.47	8,570.53	4,784.52	4,735.75	48.77	98.105	
13,700.00	7,350.81	3,326.00	3,478.38	158.86	131.04	0.80	-69.47	8,570.53	4,726.63	4,677.11	49.51	95.467	
13,800.00	7,350.97	3,326.00	3,478.38	161.37	131.04	0.80	-69.47	8,570.53	4,670.15	4,619.90	50.25	92.935	
13,900.00	7,351.14	3,326.00	3,478.38	163.88	131.04	0.80	-69.47	8,570.53	4,615.16	4,564.17	50.99	90.506	
14,000.00	7,351.30	3,326.00	3,478.38	166.39	131.04	0.80	-69.47	8,570.53	4,561.69	4,509.96	51.73	88.176	
14,100.00	7,351.47	3,326.00	3,478.38	168.90	131.04	0.80	-69.47	8,570.53	4,509.81	4,457.33	52.48	85.942	
14,200.00	7,351.63	3,326.00	3,478.38	171.42	131.04	0.80	-69.47	8,570.53	4,459.57	4,406.35	53.22	83.801	
14,300.00	7,351.80	3,326.00	3,478.38	173.93	131.04	0.80	-69.47	8,570.53	4,411.02	4,357.06	53.96	81.750	
14,400.00	7,351.97	3,326.00	3,478.38	176.44	131.04	0.80	-69.47	8,570.53	4,364.22	4,309.52	54.70	79.787	
14,500.00	7,352.13	3,326.00	3,478.38	178.96	131.04	0.80	-69.47	8,570.53	4,319.23	4,263.79	55.44	77.908	
14,600.00	7,352.30	3,326.00	3,478.38	181.47	131.04	0.80	-69.47	8,570.53	4,276.11	4,219.93	56.18	76.113	
14,700.00	7,352.46	3,326.00	3,478.38	183.99	131.04	0.80	-69.47	8,570.53	4,234.91	4,177.99	56.92	74.398	
14,800.00	7,352.63	3,326.00	3,478.38	186.50	131.04	0.80	-69.47	8,570.53	4,195.69	4,138.03	57.66	72.761	
14,900.00	7,352.80	3,326.00	3,478.38	189.02	131.04	0.80	-69.47	8,570.53	4,158.51	4,100.10	58.41	71.201	
15,000.00	7,352.96	3,326.00	3,478.38	191.53	131.04	0.80	-69.47	8,570.53	4,123.41	4,064.27	59.15	69.715	
15,100.00	7,353.13	3,326.00	3,478.38	194.05	131.04	0.80	-69.47	8,570.53	4,090.46	4,030.57	59.89	68.302	
15,200.00	7,353.29	3,326.00	3,478.38	196.57	131.04	0.80	-69.47	8,570.53	4,059.71	3,999.08	60.63	66.960	
15,300.00	7,353.46	3,326.00	3,478.38	199.08	131.04	0.80	-69.47	8,570.53	4,031.20	3,969.83	61.37	65.686	
15,400.00	7,353.62	3,326.00	3,478.38	201.60	131.04	0.80	-69.47	8,570.53	4,004.99	3,942.88	62.11	64.480	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #460 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N-S (usft)	Offset Wellbore Centre +E-W (usft)						
15,500.00	7,353.79	3,326.00	3,478.38	204.12	131.04	0.80	-69.47	8,570.53	3,981.12	3,918.26	62.85	63.340		
15,600.00	7,353.96	3,326.00	3,478.38	206.63	131.04	0.80	-69.47	8,570.53	3,959.62	3,896.03	63.59	62.263		
15,700.00	7,354.12	3,326.00	3,478.38	209.15	131.04	0.80	-69.47	8,570.53	3,940.56	3,876.22	64.34	61.250		
15,800.00	7,354.29	3,326.00	3,478.38	211.67	131.04	0.80	-69.47	8,570.53	3,923.94	3,858.87	65.08	60.296		
15,900.00	7,354.45	3,326.00	3,478.38	214.19	131.04	0.80	-69.47	8,570.53	3,909.82	3,844.00	65.82	59.403		
16,000.00	7,354.62	3,326.00	3,478.38	216.71	131.04	0.80	-69.47	8,570.53	3,898.21	3,831.65	66.56	58.566		
16,100.00	7,354.78	3,326.00	3,478.38	219.23	131.04	0.80	-69.47	8,570.53	3,889.14	3,821.83	67.30	57.786		
16,200.00	7,354.95	3,326.00	3,478.38	221.74	131.04	0.80	-69.47	8,570.53	3,882.62	3,814.58	68.04	57.061		
16,300.00	7,355.12	3,326.00	3,478.38	224.26	131.04	0.80	-69.47	8,570.53	3,878.67	3,809.88	68.78	56.388		
16,400.00	7,355.28	3,326.00	3,478.38	226.78	131.04	0.80	-69.47	8,570.53	3,877.30	3,807.77	69.53	55.767		
16,403.25	7,355.29	3,326.00	3,478.38	226.86	131.04	0.80	-69.47	8,570.53	3,877.29	3,807.74	69.56	55.742 CC, ES		
16,500.00	7,355.45	3,326.00	3,478.38	229.30	131.04	0.80	-69.47	8,570.53	3,878.50	3,808.23	70.27	55.196		
16,600.00	7,355.61	3,326.00	3,478.38	231.82	131.04	0.80	-69.47	8,570.53	3,882.28	3,811.27	71.01	54.673		
16,700.00	7,355.78	3,326.00	3,478.38	234.34	131.04	0.80	-69.47	8,570.53	3,888.63	3,816.88	71.75	54.196		
16,800.00	7,355.95	3,326.00	3,478.38	236.86	131.04	0.80	-69.47	8,570.53	3,897.54	3,825.05	72.49	53.765		
16,833.02	7,356.00	3,326.00	3,478.38	237.69	131.04	0.80	-69.47	8,570.53	3,901.04	3,828.30	72.74	53.632 SF		



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #60 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.00	0.00	0.00	15.00	0.00	0.00	92.30	-339.47	8,462.87	8,469.69					
100.00	100.00	85.00	100.00	0.10	0.00	92.30	-339.47	8,462.87	8,469.68	8,469.58	0.10	N/A		
200.00	200.00	185.00	200.00	0.32	0.92	92.30	-339.47	8,462.87	8,469.68	8,468.44	1.24	6,845.436		
300.00	300.00	285.00	300.00	0.55	4.48	92.30	-339.47	8,462.87	8,469.68	8,464.65	5.02	1,685.890		
400.00	400.00	385.00	400.00	0.77	8.48	92.30	-339.47	8,462.87	8,469.68	8,460.43	9.25	915.777		
500.00	500.00	485.00	500.00	0.98	12.48	92.30	-339.47	8,462.87	8,469.68	8,456.20	13.47	628.622		
600.00	599.92	584.92	599.92	1.21	16.48	-173.79	-339.47	8,462.87	8,473.14	8,455.49	17.66	479.899		
700.00	699.35	684.35	699.35	1.44	20.45	-173.75	-339.47	8,462.87	8,483.53	8,461.82	21.71	390.688		
800.00	797.81	782.81	797.81	1.73	24.39	-173.69	-339.47	8,462.87	8,500.79	8,475.21	25.58	332.315		
900.00	895.04	880.04	895.04	2.11	28.28	-173.65	-339.47	8,462.87	8,524.02	8,494.61	29.41	289.792		
1,000.00	992.06	977.06	992.06	2.54	32.16	-173.67	-339.47	8,462.87	8,548.11	8,514.68	33.42	255.771		
1,100.00	1,089.08	1,074.08	1,089.08	3.00	36.04	-173.69	-339.47	8,462.87	8,572.19	8,534.75	37.44	228.965		
1,200.00	1,186.10	1,171.10	1,186.10	3.47	39.92	-173.71	-339.47	8,462.87	8,596.28	8,554.82	41.46	207.316		
1,300.00	1,283.12	1,268.12	1,283.12	3.96	43.80	-173.73	-339.47	8,462.87	8,620.37	8,574.87	45.50	189.473		
1,400.00	1,380.14	1,365.14	1,380.14	4.45	47.68	-173.74	-339.47	8,462.87	8,644.46	8,594.93	49.53	174.520		
1,500.00	1,477.17	1,462.17	1,477.17	4.94	51.57	-173.76	-339.47	8,462.87	8,668.55	8,614.98	53.57	161.809		
1,600.00	1,574.19	1,559.19	1,574.19	5.44	55.45	-173.78	-339.47	8,462.87	8,692.64	8,635.03	57.62	150.874		
1,700.00	1,671.21	1,656.21	1,671.21	5.94	59.33	-173.79	-339.47	8,462.87	8,716.73	8,655.07	61.66	141.389		
1,800.00	1,768.23	1,753.23	1,768.23	6.44	63.21	-173.81	-339.47	8,462.87	8,740.82	8,675.12	65.71	133.030		
1,900.00	1,865.25	1,850.25	1,865.25	6.95	67.09	-173.83	-339.47	8,462.87	8,764.92	8,695.16	69.75	125.656		
2,000.00	1,962.27	1,947.27	1,962.27	7.45	70.97	-173.85	-339.47	8,462.87	8,789.01	8,715.21	73.80	119.089		
2,100.00	2,059.29	2,044.29	2,059.29	7.96	74.85	-173.86	-339.47	8,462.87	8,813.11	8,735.25	77.85	113.203		
2,200.00	2,156.31	2,141.31	2,156.31	8.47	78.73	-173.88	-339.47	8,462.87	8,837.20	8,755.30	81.90	107.899		
2,300.00	2,253.34	2,238.34	2,253.34	8.98	82.61	-173.90	-339.47	8,462.87	8,861.30	8,775.34	85.95	103.094		
2,400.00	2,350.36	2,335.36	2,350.36	9.49	86.49	-173.91	-339.47	8,462.87	8,885.39	8,795.39	90.01	98.721		
2,500.00	2,447.38	2,432.38	2,447.38	10.00	90.37	-173.93	-339.47	8,462.87	8,909.49	8,815.43	94.06	94.724		
2,600.00	2,544.40	2,529.40	2,544.40	10.51	94.25	-173.95	-339.47	8,462.87	8,933.59	8,835.48	98.11	91.057		
2,700.00	2,641.42	2,626.42	2,641.42	11.02	98.14	-173.96	-339.47	8,462.87	8,957.69	8,855.53	102.16	87.680		
2,800.00	2,738.44	2,723.44	2,738.44	11.53	102.02	-173.98	-339.47	8,462.87	8,981.79	8,875.57	106.22	84.561		
2,900.00	2,835.46	2,820.46	2,835.46	12.04	105.90	-173.99	-339.47	8,462.87	9,005.89	8,895.62	110.27	81.672		
3,000.00	2,932.48	2,917.48	2,932.48	12.55	109.78	-174.01	-339.47	8,462.87	9,029.99	8,915.67	114.32	78.987		
3,100.00	3,029.50	3,014.50	3,029.50	13.06	113.66	-174.03	-339.47	8,462.87	9,054.09	8,935.71	118.38	76.485		
3,200.00	3,126.53	3,111.53	3,126.53	13.57	117.54	-174.04	-339.47	8,462.87	9,078.19	8,955.76	122.43	74.149		
3,300.00	3,223.55	3,208.55	3,223.55	14.08	121.42	-174.06	-339.47	8,462.87	9,102.30	8,975.81	126.49	71.963		
3,400.00	3,320.57	3,305.57	3,320.57	14.56	125.31	-174.12	-339.47	8,462.87	9,126.41	8,994.20	131.45	69.423		
3,500.00	3,417.59	3,402.59	3,417.59	14.86	129.25	-174.20	-339.47	8,462.87	9,143.17	9,006.11	137.05	66.712		
3,600.00	3,514.61	3,499.61	3,514.61	15.08	133.22	-174.25	-339.47	8,462.87	9,153.81	9,011.72	142.09	64.421		
3,700.00	3,611.63	3,596.63	3,611.63	15.22	137.22	-174.27	-339.47	8,462.87	9,157.53	9,011.03	146.49	62.511		
3,800.00	3,708.65	3,693.65	3,708.65	15.32	141.22	91.83	-339.47	8,462.87	9,157.53	9,001.06	156.47	58.524		
3,900.00	3,805.67	3,790.67	3,805.67	15.44	145.22	91.83	-339.47	8,462.87	9,157.53	8,996.94	160.59	57.025		
4,000.00	3,902.69	3,887.69	3,902.69	15.55	149.22	91.83	-339.47	8,462.87	9,157.53	8,992.83	164.70	55.600		
4,100.00	4,000.00	3,985.00	4,000.00	15.67	153.22	91.83	-339.47	8,462.87	9,157.53	8,988.71	168.82	54.244		
4,200.00	4,097.02	4,082.02	4,097.02	15.79	157.22	91.83	-339.47	8,462.87	9,157.53	8,984.59	172.94	52.952		
4,300.00	4,194.04	4,179.04	4,194.04	15.91	161.22	91.83	-339.47	8,462.87	9,157.53	8,980.47	177.06	51.719		
4,400.00	4,291.06	4,276.06	4,291.06	16.03	165.22	91.83	-339.47	8,462.87	9,157.53	8,976.34	181.19	50.542		
4,500.00	4,388.08	4,373.08	4,388.08	16.16	169.22	91.83	-339.47	8,462.87	9,157.53	8,972.22	185.31	49.416		
4,600.00	4,485.10	4,470.10	4,485.10	16.29	173.22	91.83	-339.47	8,462.87	9,157.53	8,968.09	189.44	48.339		
4,700.00	4,582.12	4,567.12	4,582.12	16.42	177.22	91.83	-339.47	8,462.87	9,157.53	8,963.96	193.57	47.308		
4,800.00	4,679.14	4,664.14	4,679.14	16.55	181.22	91.83	-339.47	8,462.87	9,157.53	8,959.82	197.71	46.319		
4,900.00	4,776.16	4,761.16	4,776.16	16.68	185.22	91.83	-339.47	8,462.87	9,157.53	8,955.69	201.84	45.370		
5,000.00	4,873.18	4,858.18	4,873.18	16.82	189.22	91.83	-339.47	8,462.87	9,157.53	8,951.55	205.98	44.459		
5,100.00	5,018.48	5,003.48	5,018.48	16.96	193.22	91.83	-339.47	8,462.87	9,157.53	8,947.41	210.12	43.583		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company: B.P.
Project: San Juan County, NM NAD83
Reference Site: NEBU 602 Pad
Site Error: 0.00 usft
Reference Well: NEBU 602 #1H
Well Error: 0.00 usft
Reference Wellbore: Lateral
Reference Design: Plan #2

Local Co-ordinate Reference: Well NEBU 602 #1H
TVD Reference: GL 6521' & RKB 15' @ 6536.00usft
MD Reference: GL 6521' & RKB 15' @ 6536.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Grand Junction District
Offset TVD Reference: Reference Datum

Offset Design NEBU 602 Pad - NEBU #60 - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
5,200.00	5,118.48	5,103.48	5,118.48	17.10	197.22	91.83	-339.47	8,462.87	9,157.53	8,943.27	214.26	42.741	
5,300.00	5,218.48	5,203.48	5,218.48	17.24	201.22	91.83	-339.47	8,462.87	9,157.53	8,939.13	218.40	41.930	
5,400.00	5,318.48	5,303.48	5,318.48	17.38	205.22	91.83	-339.47	8,462.87	9,157.53	8,934.99	222.54	41.149	
5,500.00	5,418.48	5,403.48	5,418.48	17.53	209.22	91.83	-339.47	8,462.87	9,157.53	8,930.84	226.69	40.397	
5,600.00	5,518.48	5,503.48	5,518.48	17.68	213.22	91.83	-339.47	8,462.87	9,157.53	8,926.69	230.84	39.671	
5,700.00	5,618.48	5,603.48	5,618.48	17.82	217.22	91.83	-339.47	8,462.87	9,157.53	8,922.54	234.99	38.971	
5,800.00	5,718.48	5,703.48	5,718.48	17.97	221.22	91.83	-339.47	8,462.87	9,157.53	8,918.39	239.14	38.294	
5,900.00	5,818.48	5,803.48	5,818.48	18.13	225.22	91.83	-339.47	8,462.87	9,157.53	8,914.24	243.29	37.641	
5,913.46	5,831.94	5,816.94	5,831.94	18.15	225.76	91.83	-339.47	8,462.87	9,157.53	8,913.68	243.85	37.554	
6,000.00	5,918.48	5,842.00	5,857.00	18.28	226.76	91.83	-339.47	8,462.87	9,157.74	8,912.75	244.98	37.381	
6,100.00	6,018.48	5,842.00	5,857.00	18.43	226.76	91.83	-339.47	8,462.87	9,158.95	8,913.82	245.14	37.362	
6,200.00	6,118.48	5,842.00	5,857.00	18.59	226.76	91.83	-339.47	8,462.87	9,161.26	8,915.97	245.29	37.348	
6,300.00	6,218.48	5,842.00	5,857.00	18.75	226.76	91.83	-339.47	8,462.87	9,164.66	8,919.21	245.45	37.338	
6,400.00	6,318.48	5,842.00	5,857.00	18.91	226.76	91.83	-339.47	8,462.87	9,169.15	8,923.54	245.61	37.332	
6,500.00	6,418.48	5,842.00	5,857.00	19.07	226.76	91.83	-339.47	8,462.87	9,174.73	8,928.95	245.77	37.330	
6,600.00	6,518.48	5,842.00	5,857.00	19.23	226.76	91.83	-339.47	8,462.87	9,181.39	8,935.46	245.93	37.333	
6,700.00	6,618.48	5,842.00	5,857.00	19.39	226.76	91.83	-339.47	8,462.87	9,189.14	8,943.04	246.10	37.339	
6,800.00	6,718.48	5,842.00	5,857.00	19.54	226.76	2.02	-339.47	8,462.87	9,197.81	8,955.97	241.84	38.032	
6,900.00	6,817.87	5,842.00	5,857.00	19.47	226.76	2.02	-339.47	8,462.87	9,197.67	8,959.91	237.76	38.685	
7,000.00	6,914.47	5,842.00	5,857.00	19.28	226.76	2.07	-339.47	8,462.87	9,182.98	8,955.13	227.85	40.303	
7,100.00	7,005.89	5,842.00	5,857.00	19.01	226.76	2.17	-339.47	8,462.87	9,154.03	8,941.68	212.35	43.108	
7,200.00	7,089.89	5,842.00	5,857.00	18.71	226.76	2.34	-339.47	8,462.87	9,111.41	8,919.73	191.69	47.533	
7,300.00	7,164.40	5,842.00	5,857.00	18.44	226.76	2.60	-339.47	8,462.87	9,055.98	8,889.58	166.41	54.421	
7,400.00	7,227.58	5,842.00	5,857.00	18.29	226.76	3.00	-339.47	8,462.87	8,988.89	8,851.64	137.25	65.492	
7,500.00	7,277.87	5,842.00	5,857.00	18.34	226.76	3.64	-339.47	8,462.87	8,911.53	8,806.27	105.26	84.658	
7,600.00	7,314.05	5,842.00	5,857.00	18.68	226.76	4.75	-339.47	8,462.87	8,825.58	8,753.18	72.41	121.890	
7,700.00	7,335.21	5,842.00	5,857.00	19.34	226.76	7.05	-339.47	8,462.87	8,732.93	8,687.09	45.85	190.472	
7,800.00	7,341.02	5,842.00	5,857.00	20.28	226.76	12.21	-339.47	8,462.87	8,635.72	8,580.92	54.80	157.585	
7,900.00	7,341.19	5,842.00	5,857.00	21.48	226.76	12.21	-339.47	8,462.87	8,537.32	8,481.78	55.55	153.693	
8,000.00	7,341.36	5,842.00	5,857.00	22.90	226.76	12.21	-339.47	8,462.87	8,438.97	8,382.62	56.35	149.760	
8,100.00	7,341.52	5,842.00	5,857.00	24.50	226.76	12.21	-339.47	8,462.87	8,340.65	8,283.46	57.19	145.833	
8,200.00	7,341.69	5,842.00	5,857.00	26.24	226.76	12.21	-339.47	8,462.87	8,242.37	8,184.31	58.07	141.946	
8,300.00	7,341.85	5,842.00	5,857.00	28.11	226.76	12.21	-339.47	8,462.87	8,144.14	8,085.18	58.96	138.120	
8,400.00	7,342.02	5,842.00	5,857.00	30.07	226.76	12.21	-339.47	8,462.87	8,045.95	7,986.07	59.88	134.368	
8,500.00	7,342.19	5,842.00	5,857.00	32.11	226.76	12.21	-339.47	8,462.87	7,947.80	7,886.99	60.81	130.699	
8,600.00	7,342.35	5,842.00	5,857.00	34.21	226.76	12.21	-339.47	8,462.87	7,849.70	7,787.95	61.75	127.118	
8,700.00	7,342.52	5,842.00	5,857.00	36.37	226.76	12.21	-339.47	8,462.87	7,751.65	7,688.95	62.70	123.627	
8,800.00	7,342.68	5,842.00	5,857.00	38.58	226.76	12.21	-339.47	8,462.87	7,653.65	7,589.99	63.66	120.226	
8,900.00	7,342.85	5,842.00	5,857.00	40.82	226.76	12.21	-339.47	8,462.87	7,555.71	7,491.08	64.63	116.916	
9,000.00	7,343.01	5,842.00	5,857.00	43.09	226.76	12.21	-339.47	8,462.87	7,457.81	7,392.22	65.60	113.695	
9,100.00	7,343.18	5,842.00	5,857.00	45.39	226.76	12.21	-339.47	8,462.87	7,359.98	7,293.41	66.57	110.561	
9,200.00	7,343.35	5,842.00	5,857.00	47.71	226.76	12.21	-339.47	8,462.87	7,262.20	7,194.65	67.55	107.512	
9,300.00	7,343.51	5,842.00	5,857.00	50.06	226.76	12.21	-339.47	8,462.87	7,164.48	7,095.95	68.53	104.547	
9,400.00	7,343.68	5,842.00	5,857.00	52.42	226.76	12.21	-339.47	8,462.87	7,066.83	6,997.32	69.51	101.682	
9,500.00	7,343.84	5,842.00	5,857.00	54.79	226.76	12.21	-339.47	8,462.87	6,969.24	6,898.74	70.50	98.855	
9,600.00	7,344.01	5,842.00	5,857.00	57.18	226.76	12.21	-339.47	8,462.87	6,871.73	6,800.24	71.49	96.124	
9,700.00	7,344.17	5,842.00	5,857.00	59.58	226.76	12.21	-339.47	8,462.87	6,774.28	6,701.81	72.48	93.466	
9,800.00	7,344.34	5,842.00	5,857.00	61.99	226.76	12.21	-339.47	8,462.87	6,676.92	6,603.44	73.47	90.879	
9,900.00	7,344.51	5,842.00	5,857.00	64.41	226.76	12.21	-339.47	8,462.87	6,579.63	6,505.16	74.46	88.359	
10,000.00	7,344.67	5,842.00	5,857.00	66.84	226.76	12.21	-339.47	8,462.87	6,482.42	6,406.96	75.46	85.906	
10,100.00	7,344.84	5,842.00	5,857.00	69.27	226.76	12.21	-339.47	8,462.87	6,385.30	6,308.84	76.46	83.517	
10,200.00	7,345.00	5,842.00	5,857.00	71.71	226.76	12.21	-339.47	8,462.87	6,288.27	6,210.82	77.45	81.189	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Company: B.P.
Project: San Juan County, NM NAD83
Reference Site: NEBU 602 Pad
Site Error: 0.00 usft
Reference Well: NEBU 602 #1H
Well Error: 0.00 usft
Reference Wellbore: Lateral
Reference Design: Plan #2

Local Co-ordinate Reference: Well NEBU 602 #1H
TVD Reference: GL 6521' & RKB 15' @ 6536.00usft
MD Reference: GL 6521' & RKB 15' @ 6536.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Grand Junction District
Offset TVD Reference: Reference Datum

Offset Design NEBU 602 Pad - NEBU #60 - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,300.00	7,345.17	5,842.00	5,857.00	74.16	226.76	12.21	-339.47	8,462.87	6,191.33	6,112.88	78.45	78.920		
10,400.00	7,345.34	5,842.00	5,857.00	76.61	226.76	12.21	-339.47	8,462.87	6,094.50	6,015.05	79.45	76.709		
10,500.00	7,345.50	5,842.00	5,857.00	79.06	226.76	12.21	-339.47	8,462.87	5,997.76	5,917.31	80.45	74.554		
10,600.00	7,345.67	5,842.00	5,857.00	81.53	226.76	12.21	-339.47	8,462.87	5,901.14	5,819.69	81.45	72.452		
10,700.00	7,345.83	5,842.00	5,857.00	83.99	226.76	12.21	-339.47	8,462.87	5,804.63	5,722.18	82.45	70.402		
10,800.00	7,346.00	5,842.00	5,857.00	86.46	226.76	12.21	-339.47	8,462.87	5,708.24	5,624.79	83.45	68.402		
10,900.00	7,346.16	5,842.00	5,857.00	88.93	226.76	12.21	-339.47	8,462.87	5,611.98	5,527.52	84.45	66.450		
11,000.00	7,346.33	5,842.00	5,857.00	91.40	226.76	12.21	-339.47	8,462.87	5,515.85	5,430.39	85.46	64.546		
11,100.00	7,346.50	5,842.00	5,857.00	93.88	226.76	12.21	-339.47	8,462.87	5,419.86	5,333.40	86.46	62.687		
11,200.00	7,346.66	5,842.00	5,857.00	96.36	226.76	12.21	-339.47	8,462.87	5,324.01	5,236.55	87.46	60.872		
11,300.00	7,346.83	5,842.00	5,857.00	98.85	226.76	12.21	-339.47	8,462.87	5,228.33	5,139.86	88.47	59.099		
11,400.00	7,346.99	5,842.00	5,857.00	101.33	226.76	12.21	-339.47	8,462.87	5,132.80	5,043.33	89.47	57.368		
11,500.00	7,347.16	5,842.00	5,857.00	103.82	226.76	12.21	-339.47	8,462.87	5,037.46	4,946.98	90.48	55.677		
11,600.00	7,347.32	5,842.00	5,857.00	106.31	226.76	12.21	-339.47	8,462.87	4,942.29	4,850.81	91.48	54.026		
11,700.00	7,347.49	5,842.00	5,857.00	108.80	226.76	12.21	-339.47	8,462.87	4,847.32	4,754.83	92.49	52.411		
11,800.00	7,347.66	5,842.00	5,857.00	111.29	226.76	12.21	-339.47	8,462.87	4,752.56	4,659.07	93.49	50.834		
11,900.00	7,347.82	5,842.00	5,857.00	113.78	226.76	12.21	-339.47	8,462.87	4,658.01	4,563.51	94.50	49.293		
12,000.00	7,347.99	5,842.00	5,857.00	116.28	226.76	12.21	-339.47	8,462.87	4,563.70	4,468.20	95.50	47.786		
12,100.00	7,348.15	5,842.00	5,857.00	118.77	226.76	12.21	-339.47	8,462.87	4,469.83	4,373.13	96.51	46.313		
12,200.00	7,348.32	5,842.00	5,857.00	121.27	226.76	12.21	-339.47	8,462.87	4,375.83	4,278.32	97.52	44.873		
12,300.00	7,348.49	5,842.00	5,857.00	123.77	226.76	12.21	-339.47	8,462.87	4,282.31	4,183.79	98.52	43.466		
12,400.00	7,348.65	5,842.00	5,857.00	126.27	226.76	12.21	-339.47	8,462.87	4,189.09	4,089.56	99.53	42.089		
12,500.00	7,348.82	5,842.00	5,857.00	128.77	226.76	12.21	-339.47	8,462.87	4,096.19	3,995.65	100.54	40.744		
12,600.00	7,348.98	5,842.00	5,857.00	131.28	226.76	12.21	-339.47	8,462.87	4,003.63	3,902.08	101.54	39.428		
12,700.00	7,349.15	5,842.00	5,857.00	133.78	226.76	12.21	-339.47	8,462.87	3,911.43	3,808.88	102.55	38.142		
12,800.00	7,349.31	5,842.00	5,857.00	136.28	226.76	12.21	-339.47	8,462.87	3,819.63	3,716.07	103.56	36.884		
12,900.00	7,349.48	5,842.00	5,857.00	138.79	226.76	12.21	-339.47	8,462.87	3,728.25	3,623.69	104.56	35.655		
13,000.00	7,349.65	5,842.00	5,857.00	141.29	226.76	12.21	-339.47	8,462.87	3,637.33	3,531.75	105.57	34.453		
13,100.00	7,349.81	5,842.00	5,857.00	143.80	226.76	12.21	-339.47	8,462.87	3,546.89	3,440.31	106.58	33.279		
13,200.00	7,349.98	5,842.00	5,857.00	146.31	226.76	12.21	-339.47	8,462.87	3,456.98	3,349.39	107.59	32.132		
13,300.00	7,350.14	5,842.00	5,857.00	148.82	226.76	12.21	-339.47	8,462.87	3,367.64	3,259.04	108.60	31.011		
13,400.00	7,350.31	5,842.00	5,857.00	151.33	226.76	12.21	-339.47	8,462.87	3,278.91	3,169.31	109.60	29.916		
13,500.00	7,350.47	5,842.00	5,857.00	153.83	226.76	12.21	-339.47	8,462.87	3,190.85	3,080.24	110.61	28.847		
13,600.00	7,350.64	5,842.00	5,857.00	156.34	226.76	12.21	-339.47	8,462.87	3,103.52	2,991.90	111.62	27.804		
13,700.00	7,350.81	5,842.00	5,857.00	158.86	226.76	12.21	-339.47	8,462.87	3,016.97	2,904.34	112.63	26.787		
13,800.00	7,350.97	5,842.00	5,857.00	161.37	226.76	12.21	-339.47	8,462.87	2,931.28	2,817.64	113.64	25.795		
13,900.00	7,351.14	5,842.00	5,857.00	163.88	226.76	12.21	-339.47	8,462.87	2,846.52	2,731.87	114.65	24.829		
14,000.00	7,351.30	5,842.00	5,857.00	166.39	226.76	12.21	-339.47	8,462.87	2,762.78	2,647.12	115.65	23.888		
14,100.00	7,351.47	5,842.00	5,857.00	168.90	226.76	12.21	-339.47	8,462.87	2,680.15	2,563.49	116.66	22.973		
14,200.00	7,351.63	5,842.00	5,857.00	171.42	226.76	12.21	-339.47	8,462.87	2,598.75	2,481.08	117.67	22.085		
14,300.00	7,351.80	5,842.00	5,857.00	173.93	226.76	12.21	-339.47	8,462.87	2,518.69	2,400.00	118.68	21.222		
14,400.00	7,351.97	5,842.00	5,857.00	176.44	226.76	12.21	-339.47	8,462.87	2,440.09	2,320.40	119.69	20.387		
14,500.00	7,352.13	5,842.00	5,857.00	178.96	226.76	12.21	-339.47	8,462.87	2,363.12	2,242.42	120.70	19.579		
14,600.00	7,352.30	5,842.00	5,857.00	181.47	226.76	12.21	-339.47	8,462.87	2,287.93	2,166.22	121.71	18.798		
14,700.00	7,352.46	5,842.00	5,857.00	183.99	226.76	12.21	-339.47	8,462.87	2,214.70	2,091.98	122.72	18.047		
14,800.00	7,352.63	5,842.00	5,857.00	186.50	226.76	12.21	-339.47	8,462.87	2,143.64	2,019.91	123.73	17.326		
14,900.00	7,352.80	5,842.00	5,857.00	189.02	226.76	12.21	-339.47	8,462.87	2,074.96	1,950.22	124.74	16.635		
15,000.00	7,352.96	5,842.00	5,857.00	191.53	226.76	12.21	-339.47	8,462.87	2,008.91	1,883.17	125.75	15.976		
15,100.00	7,353.13	5,842.00	5,857.00	194.05	226.76	12.21	-339.47	8,462.87	1,945.77	1,819.01	126.75	15.351		
15,200.00	7,353.29	5,842.00	5,857.00	196.57	226.76	12.21	-339.47	8,462.87	1,885.81	1,758.05	127.76	14.760		
15,300.00	7,353.46	5,842.00	5,857.00	199.08	226.76	12.21	-339.47	8,462.87	1,829.36	1,700.59	128.77	14.206		
15,400.00	7,353.62	5,842.00	5,857.00	201.60	226.76	12.21	-339.47	8,462.87	1,776.75	1,646.97	129.78	13.690		

CC - Min to distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU #60 - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 100-UNKNOWN													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,500.00	7,353.79	5,842.00	5,857.00	204.12	226.76	12.21	-339.47	8,462.87	1,728.33	1,597.54	130.79	13.214	
15,600.00	7,353.96	5,842.00	5,857.00	206.63	226.76	12.21	-339.47	8,462.87	1,684.46	1,552.66	131.80	12.780	
15,700.00	7,354.12	5,842.00	5,857.00	209.15	226.76	12.21	-339.47	8,462.87	1,645.51	1,512.69	132.81	12.390	
15,800.00	7,354.29	5,842.00	5,857.00	211.67	226.76	12.21	-339.47	8,462.87	1,611.82	1,478.00	133.82	12.045	
15,900.00	7,354.45	5,842.00	5,857.00	214.19	226.76	12.21	-339.47	8,462.87	1,583.74	1,448.91	134.83	11.746	
16,000.00	7,354.62	5,842.00	5,857.00	216.71	226.76	12.21	-339.47	8,462.87	1,561.58	1,425.74	135.84	11.496	
16,100.00	7,354.78	5,842.00	5,857.00	219.23	226.76	12.21	-339.47	8,462.87	1,545.58	1,408.73	136.85	11.294	
16,200.00	7,354.95	5,842.00	5,857.00	221.74	226.76	12.21	-339.47	8,462.87	1,535.93	1,398.07	137.86	11.141	
16,298.60	7,355.11	5,842.00	5,857.00	224.23	226.76	12.21	-339.47	8,462.87	1,532.76	1,393.91	138.86	11.038 CC	
16,300.00	7,355.12	5,842.00	5,857.00	224.26	226.76	12.21	-339.47	8,462.87	1,532.76	1,393.89	138.87	11.037 ES	
16,400.00	7,355.28	5,842.00	5,857.00	226.78	226.76	12.21	-339.47	8,462.87	1,536.11	1,396.23	139.88	10.982	
16,500.00	7,355.45	5,842.00	5,857.00	229.30	226.76	12.21	-339.47	8,462.87	1,545.94	1,405.05	140.89	10.973 SF	
16,600.00	7,355.61	5,842.00	5,857.00	231.82	226.76	12.21	-339.47	8,462.87	1,562.11	1,420.22	141.90	11.009	
16,700.00	7,355.78	5,842.00	5,857.00	234.34	226.76	12.21	-339.47	8,462.87	1,584.45	1,441.54	142.91	11.087	
16,800.00	7,355.95	5,842.00	5,857.00	236.86	226.76	12.21	-339.47	8,462.87	1,612.69	1,468.77	143.92	11.205	
16,833.02	7,356.00	5,842.00	5,857.00	237.69	226.76	12.21	-339.47	8,462.87	1,623.26	1,479.00	144.25	11.253	



Anticollision Report



Company:	B.P.	Local Co-ordinate Reference:	Well NEBU 602 #1H
Project:	San Juan County, NM NAD83	TVD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Reference Site:	NEBU 602 Pad	MD Reference:	GL 6521' & RKB 15' @ 6536.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	NEBU 602 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Lateral	Database:	Grand Junction District
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design NEBU 602 Pad - NEBU 602 #1H - Pilot - Plan #1													Offset Site Error:	0.00 usft
Survey Program: O-SDI MWD													Offset Well Error:	0.00 usft
Reference	Offset		Semi Major Axis		Distance		Between Centres		Minimum Separation		Separation Factor		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
6,785.90	6,704.38	6,785.89	6,704.38	0.00	0.00	180.00	-47.05	-689.99	0.82					
6,800.00	6,718.48	6,800.00	6,718.48	0.02	0.03	180.00	-47.05	-689.99	0.16	0.10	0.06	2.793	CC, ES, SF	
6,900.00	6,817.87	6,899.39	6,817.87	0.03	0.23	180.00	-47.05	-689.99	10.20	9.94	0.26	39.689		
7,000.00	6,914.47	6,995.99	6,914.47	0.06	0.43	180.00	-47.05	-689.99	35.66	35.23	0.44	81.738		
7,100.00	7,005.89	7,087.41	7,005.89	0.13	0.62	180.00	-47.05	-689.99	75.93	75.34	0.59	128.757		
7,200.00	7,089.89	7,171.41	7,089.89	0.23	0.80	180.00	-47.05	-689.99	130.00	129.29	0.71	183.228		
7,300.00	7,164.40	7,245.92	7,164.40	0.35	0.95	180.00	-47.05	-689.99	196.54	195.74	0.80	244.270		
7,400.00	7,227.58	7,309.10	7,227.58	0.50	1.08	180.00	-47.05	-689.99	273.92	272.98	0.95	289.312		
7,500.00	7,277.87	7,359.39	7,277.87	0.67	1.19	180.00	-47.05	-689.99	360.23	359.06	1.17	306.927		
7,600.00	7,314.05	7,395.57	7,314.05	0.85	1.26	180.00	-47.05	-689.99	453.35	451.86	1.49	303.250		
7,700.00	7,335.21	7,416.73	7,335.21	1.03	1.31	180.00	-47.05	-689.99	550.98	549.08	1.90	289.646		
7,800.00	7,341.02	7,422.54	7,341.02	1.35	1.32	180.00	-47.05	-689.99	650.72	648.29	2.43	267.454		
7,900.00	7,341.19	7,422.71	7,341.19	2.18	1.32	180.00	-47.05	-689.99	750.72	747.65	3.07	244.227		
8,000.00	7,341.36	7,422.88	7,341.36	3.48	1.32	180.00	-47.05	-689.99	850.72	846.98	3.74	227.646		
8,100.00	7,341.52	7,423.04	7,341.52	5.05	1.32	180.00	-47.05	-689.99	950.72	946.30	4.42	215.309		
8,200.00	7,341.69	7,423.21	7,341.69	6.78	1.32	180.00	-47.05	-689.99	1,050.72	1,045.61	5.11	205.815		
8,300.00	7,341.85	7,423.37	7,341.85	8.83	1.32	180.00	-47.05	-689.99	1,150.72	1,144.92	5.80	198.304		
8,400.00	7,342.02	7,423.54	7,342.02	10.59	1.32	180.00	-47.05	-689.99	1,250.72	1,244.21	6.51	192.224		
8,500.00	7,342.19	7,423.70	7,342.19	12.64	1.32	180.00	-47.05	-689.99	1,350.72	1,343.50	7.22	187.209		
8,600.00	7,342.35	7,423.87	7,342.35	14.76	1.32	180.00	-47.05	-689.99	1,450.72	1,442.79	7.93	183.005		
8,700.00	7,342.52	7,424.04	7,342.52	16.92	1.32	180.00	-47.05	-689.99	1,550.72	1,542.08	8.64	179.431		
8,800.00	7,342.68	7,424.20	7,342.68	19.11	1.32	180.00	-47.05	-689.99	1,650.72	1,641.36	9.36	176.355		
8,900.00	7,342.85	7,424.37	7,342.85	21.35	1.32	180.00	-47.05	-689.99	1,750.72	1,740.64	10.08	173.651		
9,000.00	7,343.01	7,424.53	7,343.01	23.62	1.32	180.00	-47.05	-689.99	1,850.72	1,839.91	10.80	171.300		
9,100.00	7,343.18	7,424.70	7,343.18	25.91	1.32	180.00	-47.05	-689.99	1,950.72	1,939.19	11.53	169.234		
9,200.00	7,343.35	7,424.87	7,343.35	28.23	1.33	180.00	-47.05	-689.99	2,050.72	2,038.47	12.25	167.399		
9,300.00	7,343.51	7,425.03	7,343.51	30.57	1.33	180.00	-47.05	-689.99	2,150.72	2,137.74	12.98	165.758		
9,400.00	7,343.68	7,425.20	7,343.68	32.93	1.33	180.00	-47.05	-689.99	2,250.72	2,237.02	13.70	164.282		
9,500.00	7,343.84	7,425.36	7,343.84	35.30	1.33	180.00	-47.05	-689.99	2,350.72	2,336.29	14.43	162.945		
9,600.00	7,344.01	7,425.53	7,344.01	37.69	1.33	180.00	-47.05	-689.99	2,450.72	2,435.56	15.15	161.731		
9,700.00	7,344.17	7,425.69	7,344.17	40.09	1.33	180.00	-47.05	-689.99	2,550.72	2,534.84	15.88	160.622		
9,800.00	7,344.34	7,425.86	7,344.34	42.50	1.33	180.00	-47.05	-689.99	2,650.72	2,634.11	16.61	159.606		
9,900.00	7,344.51	7,426.03	7,344.51	44.92	1.33	180.00	-47.05	-689.99	2,750.72	2,733.38	17.34	158.671		
10,000.00	7,344.67	7,426.19	7,344.67	47.34	1.33	180.00	-47.05	-689.99	2,850.72	2,832.65	18.06	157.808		
10,100.00	7,344.84	7,426.36	7,344.84	49.78	1.33	180.00	-47.05	-689.99	2,950.72	2,931.92	18.79	157.009		
10,200.00	7,345.00	7,426.52	7,345.00	52.22	1.33	180.00	-47.05	-689.99	3,050.72	3,031.19	19.52	156.267		
10,300.00	7,345.17	7,426.69	7,345.17	54.66	1.33	180.00	-47.05	-689.99	3,150.72	3,130.46	20.25	155.576		
10,400.00	7,345.34	7,426.85	7,345.34	57.11	1.33	180.00	-47.05	-689.99	3,250.72	3,229.73	20.98	154.932		
10,500.00	7,345.50	7,427.02	7,345.50	59.57	1.33	180.00	-47.05	-689.99	3,350.72	3,329.00	21.71	154.329		
10,600.00	7,345.67	7,427.19	7,345.67	62.03	1.33	180.00	-47.05	-689.99	3,450.72	3,428.27	22.44	153.764		
10,700.00	7,345.83	7,427.35	7,345.83	64.50	1.33	180.00	-47.05	-689.99	3,550.72	3,527.54	23.17	153.234		
10,800.00	7,346.00	7,427.52	7,346.00	66.96	1.33	180.00	-47.05	-689.99	3,650.72	3,626.81	23.90	152.734		
10,900.00	7,346.16	7,427.68	7,346.16	69.44	1.33	180.00	-47.05	-689.99	3,750.72	3,726.08	24.63	152.263		
11,000.00	7,346.33	7,427.85	7,346.33	71.91	1.33	180.00	-47.05	-689.99	3,850.72	3,825.35	25.36	151.819		
11,100.00	7,346.50	7,428.02	7,346.50	74.39	1.33	180.00	-47.05	-689.99	3,950.72	3,924.62	26.09	151.398		
11,200.00	7,346.66	7,428.18	7,346.66	76.87	1.33	180.00	-47.05	-689.99	4,050.72	4,023.89	26.83	151.000		
11,300.00	7,346.83	7,428.35	7,346.83	79.35	1.33	180.00	-47.05	-689.99	4,150.72	4,123.16	27.56	150.622		
11,400.00	7,346.99	7,428.51	7,346.99	81.83	1.33	180.00	-47.05	-689.99	4,250.71	4,222.43	28.29	150.264		
11,500.00	7,347.16	7,428.68	7,347.16	84.32	1.33	180.00	-47.05	-689.99	4,350.71	4,321.69	29.02	149.922		
11,600.00	7,347.32	7,428.84	7,347.32	86.81	1.33	180.00	-47.05	-689.99	4,450.71	4,420.96	29.75	149.597		
11,700.00	7,347.49	7,429.01	7,347.49	89.30	1.33	180.00	-47.05	-689.99	4,550.71	4,520.23	30.48	149.288		
11,800.00	7,347.66	7,429.18	7,347.66	91.79	1.33	180.00	-47.05	-689.99	4,650.71	4,619.50	31.21	148.992		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company: B.P.
 Project: San Juan County, NM NAD83
 Reference Site: NEBU 602 Pad
 Site Error: 0.00 usft
 Reference Well: NEBU 602 #1H
 Well Error: 0.00 usft
 Reference Wellbore: Lateral
 Reference Design: Plan #2

Local Co-ordinate Reference:
 TVD Reference:
 MD Reference:
 North Reference:
 Survey Calculation Method:
 Output errors are at
 Database:
 Offset TVD Reference:

Well NEBU 602 #1H
 GL 6521' & RKB 15' @ 6536.00usft
 GL 6521' & RKB 15' @ 6536.00usft
 Grid
 Minimum Curvature
 2.00 sigma
 Grand Junction District
 Reference Datum

Offset Design NEBU 602 Pad - NEBU 602 #1H - Pilot - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-SDI MWD														Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
11,900.00	7,347.82	7,429.34	7,347.82	94.29	1.33	180.00		-47.05	-889.99	4,750.71	4,718.77	31.95	148.709		
12,000.00	7,347.99	7,429.51	7,347.99	96.78	1.33	180.00		-47.05	-889.99	4,850.71	4,818.04	32.68	148.439		
12,100.00	7,348.15	7,429.67	7,348.15	99.28	1.34	180.00		-47.05	-889.99	4,950.71	4,917.30	33.41	148.180		
12,200.00	7,348.32	7,429.84	7,348.32	101.78	1.34	180.00		-47.05	-889.99	5,050.71	5,016.57	34.14	147.933		
12,300.00	7,348.49	7,430.00	7,348.49	104.28	1.34	180.00		-47.05	-889.99	5,150.71	5,115.84	34.87	147.695		
12,400.00	7,348.65	7,430.17	7,348.65	106.78	1.34	180.00		-47.05	-889.99	5,250.71	5,215.11	35.61	147.467		
12,500.00	7,348.82	7,430.34	7,348.82	109.28	1.34	180.00		-47.05	-889.99	5,350.71	5,314.38	36.34	147.248		
12,600.00	7,348.98	7,430.50	7,348.98	111.78	1.34	180.00		-47.05	-889.99	5,450.71	5,413.64	37.07	147.037		
12,700.00	7,349.15	7,430.67	7,349.15	114.28	1.34	180.00		-47.05	-889.99	5,550.71	5,512.91	37.80	146.834		
12,800.00	7,349.31	7,430.83	7,349.31	116.79	1.34	180.00		-47.05	-889.99	5,650.71	5,612.18	38.53	146.639		
12,900.00	7,349.48	7,431.00	7,349.48	119.29	1.34	180.00		-47.05	-889.99	5,750.71	5,711.45	39.27	146.451		
13,000.00	7,349.65	7,431.17	7,349.65	121.80	1.34	180.00		-47.05	-889.99	5,850.71	5,810.71	40.00	146.269		
13,100.00	7,349.81	7,431.33	7,349.81	124.31	1.34	180.00		-47.05	-889.99	5,950.71	5,909.98	40.73	146.094		
13,200.00	7,349.98	7,431.50	7,349.98	126.81	1.34	180.00		-47.05	-889.99	6,050.71	6,009.25	41.46	145.925		
13,300.00	7,350.14	7,431.66	7,350.14	129.32	1.34	180.00		-47.05	-889.99	6,150.71	6,108.52	42.20	145.762		
13,400.00	7,350.31	7,431.83	7,350.31	131.83	1.34	180.00		-47.05	-889.99	6,250.71	6,207.78	42.93	145.604		
13,500.00	7,350.47	7,431.99	7,350.47	134.34	1.34	180.00		-47.05	-889.99	6,350.71	6,307.05	43.66	145.452		
13,600.00	7,350.64	7,432.16	7,350.64	136.85	1.34	180.00		-47.05	-889.99	6,450.71	6,406.32	44.39	145.304		
13,700.00	7,350.81	7,432.33	7,350.81	139.36	1.34	180.00		-47.05	-889.99	6,550.71	6,505.58	45.13	145.161		
13,800.00	7,350.97	7,432.49	7,350.97	141.87	1.34	180.00		-47.05	-889.99	6,650.71	6,604.85	45.86	145.023		
13,900.00	7,351.14	7,432.66	7,351.14	144.38	1.34	180.00		-47.05	-889.99	6,750.71	6,704.12	46.59	144.889		
14,000.00	7,351.30	7,432.82	7,351.30	146.89	1.34	180.00		-47.05	-889.99	6,850.71	6,803.39	47.33	144.759		
14,100.00	7,351.47	7,432.99	7,351.47	149.41	1.34	180.00		-47.05	-889.99	6,950.71	6,902.65	48.06	144.633		
14,200.00	7,351.63	7,433.15	7,351.63	151.92	1.34	180.00		-47.05	-889.99	7,050.71	7,001.92	48.79	144.510		
14,300.00	7,351.80	7,433.32	7,351.80	154.43	1.34	180.00		-47.05	-889.99	7,150.71	7,101.19	49.52	144.391		
14,400.00	7,351.97	7,433.49	7,351.97	156.95	1.34	180.00		-47.05	-889.99	7,250.71	7,200.45	50.26	144.276		
14,500.00	7,352.13	7,433.65	7,352.13	159.46	1.34	180.00		-47.05	-889.99	7,350.71	7,299.72	50.99	144.163		
14,600.00	7,352.30	7,433.82	7,352.30	161.98	1.34	180.00		-47.05	-889.99	7,450.71	7,398.99	51.72	144.054		
14,700.00	7,352.46	7,433.98	7,352.46	164.49	1.34	180.00		-47.05	-889.99	7,550.71	7,498.26	52.45	143.948		
14,800.00	7,352.63	7,434.15	7,352.63	167.01	1.34	180.00		-47.05	-889.99	7,650.71	7,597.52	53.19	143.845		
14,900.00	7,352.80	7,434.32	7,352.80	169.52	1.35	180.00		-47.05	-889.99	7,750.71	7,696.79	53.92	143.744		
15,000.00	7,352.96	7,434.48	7,352.96	172.04	1.35	180.00		-47.05	-889.99	7,850.71	7,796.06	54.65	143.647		
15,100.00	7,353.13	7,434.65	7,353.13	174.55	1.35	180.00		-47.05	-889.99	7,950.71	7,895.32	55.39	143.551		
15,200.00	7,353.29	7,434.81	7,353.29	177.07	1.35	180.00		-47.05	-889.99	8,050.71	7,994.59	56.12	143.458		
15,300.00	7,353.46	7,434.98	7,353.46	179.59	1.35	180.00		-47.05	-889.99	8,150.71	8,093.86	56.85	143.368		
15,400.00	7,353.62	7,435.14	7,353.62	182.10	1.35	180.00		-47.05	-889.99	8,250.71	8,193.12	57.58	143.280		
15,500.00	7,353.79	7,435.31	7,353.79	184.62	1.35	180.00		-47.05	-889.99	8,350.71	8,292.39	58.32	143.194		
15,600.00	7,353.96	7,435.48	7,353.96	187.14	1.35	180.00		-47.05	-889.99	8,450.71	8,391.66	59.05	143.110		
15,700.00	7,354.12	7,435.64	7,354.12	189.66	1.35	180.00		-47.05	-889.99	8,550.71	8,490.93	59.78	143.028		
15,800.00	7,354.29	7,435.81	7,354.29	192.17	1.35	180.00		-47.05	-889.99	8,650.71	8,590.19	60.52	142.948		
15,900.00	7,354.45	7,435.97	7,354.45	194.69	1.35	180.00		-47.05	-889.99	8,750.71	8,689.46	61.25	142.870		
16,000.00	7,354.62	7,436.14	7,354.62	197.21	1.35	180.00		-47.05	-889.99	8,850.71	8,788.73	61.98	142.794		
16,100.00	7,354.78	7,436.30	7,354.78	199.73	1.35	180.00		-47.05	-889.99	8,950.71	8,887.99	62.72	142.719		
16,200.00	7,354.95	7,436.47	7,354.95	202.25	1.35	180.00		-47.05	-889.99	9,050.71	8,987.26	63.45	142.646		
16,300.00	7,355.12	7,436.64	7,355.12	204.77	1.35	180.00		-47.05	-889.99	9,150.71	9,086.53	64.18	142.575		
16,400.00	7,355.28	7,436.80	7,355.28	207.29	1.35	180.00		-47.05	-889.99	9,250.71	9,185.79	64.91	142.506		
16,500.00	7,355.45	7,436.97	7,355.45	209.81	1.35	180.00		-47.05	-889.99	9,350.71	9,285.06	65.65	142.438		
16,600.00	7,355.61	7,437.13	7,355.61	212.33	1.35	180.00		-47.05	-889.99	9,450.71	9,384.33	66.38	142.371		
16,700.00	7,355.78	7,437.30	7,355.78	214.85	1.35	180.00		-47.05	-889.99	9,550.71	9,483.59	67.11	142.306		
16,800.00	7,355.95	7,437.46	7,355.95	217.37	1.35	180.00		-47.05	-889.99	9,650.71	9,582.86	67.85	142.242		
16,833.02	7,356.00	7,437.52	7,356.00	218.20	1.35	180.00		-47.05	-889.99	9,683.73	9,615.64	68.09	142.222		



Anticollision Report



Company: B.P.
Project: San Juan County, NM NAD83
Reference Site: NEBU 602 Pad
Site Error: 0.00 usft
Reference Well: NEBU 602 #1H
Well Error: 0.00 usft
Reference Wellbore: Lateral
Reference Design: Plan #2

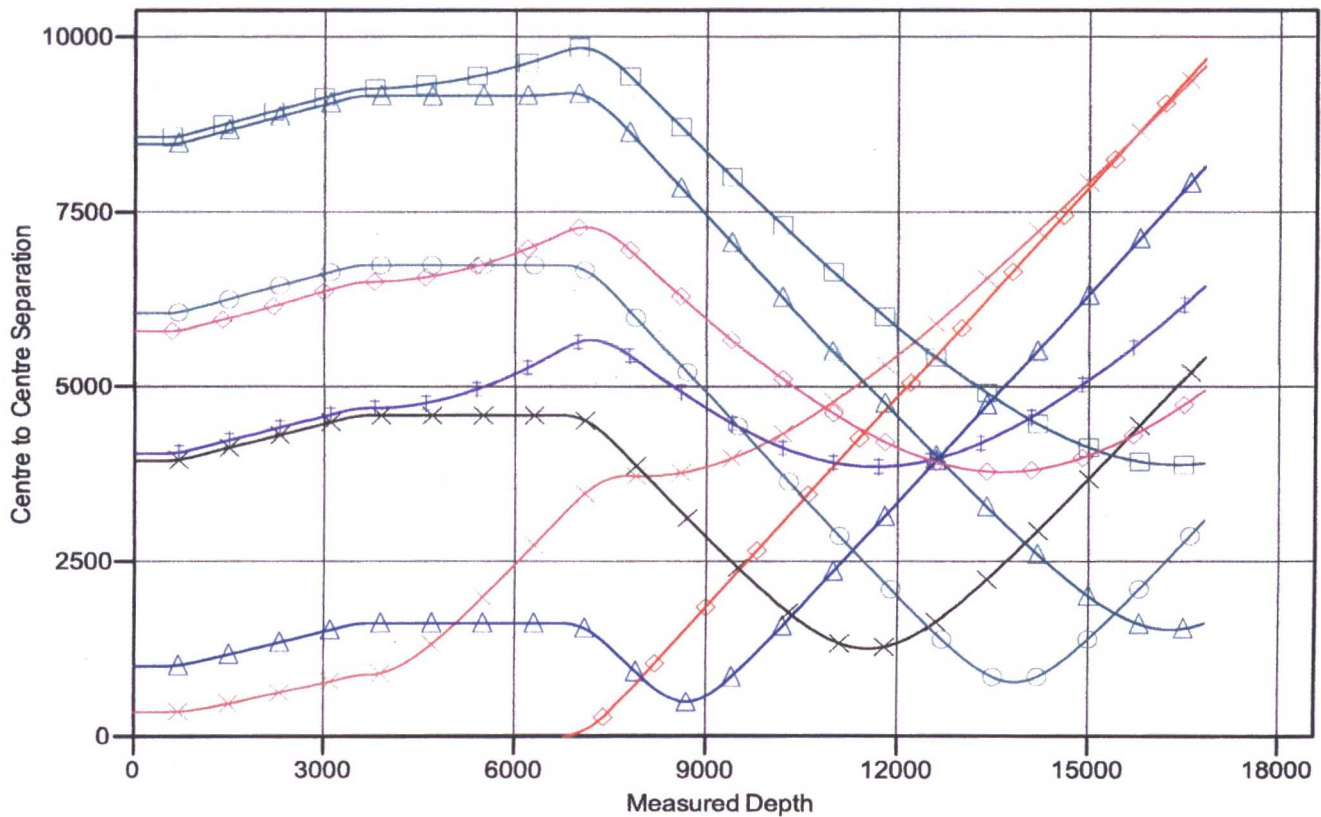
Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Output errors are at
Database:
Offset TVD Reference:

Well NEBU 602 #1H
GL 6521' & RKB 15' @ 6536.00usft
GL 6521' & RKB 15' @ 6536.00usft
Grid
Minimum Curvature
2.00 sigma
Grand Junction District
Reference Datum

Reference Depths are relative to GL 6521' & RKB 15' @ 6536.00usft
Offset Depths are relative to Offset Datum
Central Meridian is -107.833334

Coordinates are relative to: NEBU 602 #1H
Coordinate System is US State Plane 1983, New Mexico Western Zone
Grid Convergence at Surface is: 0.18°

Ladder Plot



LEGEND

- NEBU 602 #1H, Pilot, Plan #1 V0
- NEBU #213, OH, OH V0
- NEBU #033A, OH, OH V0
- NEBU #318, OH, OH V0
- NEBU #229, OH, OH V0
- NEBU #319M, OH, OH V0
- NEBU #60, OH, OH V0
- NEBU #460, OH, OH V0
- NEBU #400A, OH, OH V0



Anticollision Report



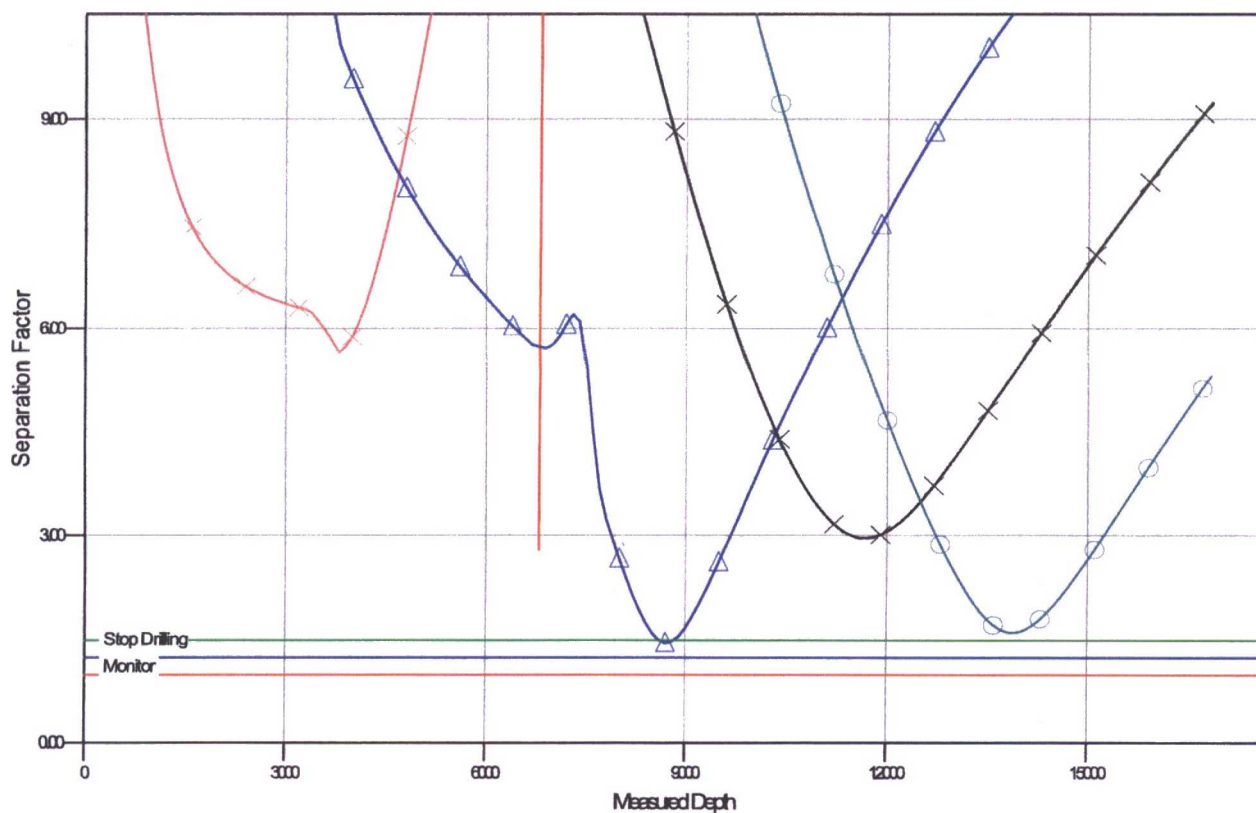
Company: B.P.
Project: San Juan County, NM NAD83
Reference Site: NEBU 602 Pad
Site Error: 0.00 usft
Reference Well: NEBU 602 #1H
Well Error: 0.00 usft
Reference Wellbore: Lateral
Reference Design: Plan #2

Local Co-ordinate Reference:
TVD Reference: GL 6521' & RKB 15' @ 6536.00usft
MD Reference: GL 6521' & RKB 15' @ 6536.00usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: Grand Junction District
Offset TVD Reference: Reference Datum

Reference Depths are relative to GL 6521' & RKB 15' @ 6536.00usft
Offset Depths are relative to Offset Datum
Central Meridian is -107.8333334

Coordinates are relative to: NEBU 602 #1H
Coordinate System is US State Plane 1983, New Mexico Western Zone
Grid Convergence at Surface is: 0.18°

Separation Factor Plot



LEGEND

- NEBU 602 #1H, Pilot, Plan #1 V0
- NEBU #213, OH, OH V0
- NEBU #033A, OH, OH V0
- NEBU #318, OH, OH V0
- NEBU #229, OH, OH V0
- NEBU #319M, OH, OH V0
- NEBU #60, OH, OH V0
- NEBU #460, OH, OH V0
- NEBU #400A, OH, OH V0