

District I

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

District II

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

District III

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

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

Form C-101
August 1, 2011

Permit 286889

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

1. Operator Name and Address BC OPERATING, INC. P.O. Box 50820 Midland, TX 79710		2. OGRID Number 160825
		3. API Number 30-015-47476
4. Property Code 329703	5. Property Name WINCHESTER 24 TB STATE	6. Well No. 303H

7. Surface Location

UL - Lot E	Section 24	Township 19S	Range 27E	Lot Idn E	Feet From 2471	N/S Line N	Feet From 561	E/W Line W	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot F	Section 19	Township 19S	Range 28E	Lot Idn F	Feet From 2410	N/S Line N	Feet From 2604	E/W Line W	County Eddy
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9. Pool Information

WINCHESTER; BONE SPRING, WEST	97569
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3468
16. Multiple N	17. Proposed Depth 16000	18. Formation 3rd Bone Spring Sand	19. Contractor	20. Spud Date 3/1/2021
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☐ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13.375	48	425	470	0
Int1	12.25	9.625	40	3025	780	0
Prod	8.75	5.5	20	16000	4040	2025

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Hydril	5000	5000	Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief.
I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.

Signature:

Printed Name: Electronically filed by Thomas A Wolfmueller

Title:

Email Address: twolfmueller@bcoperating.com

Date: 9/24/2020

Phone: 432-214-1985

OIL CONSERVATION DIVISION

Approved By: Kurt Simmons

Title: Petroleum Specialist - A

Approved Date: 2/3/2021

Expiration Date: 2/3/2023

Conditions of Approval Attached

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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		² Pool Code 97569		³ Pool Name WINCHESTER; BONE SPRING, WEST					
⁴ Property Code		⁵ Property Name WINCHESTER 24 TB STATE						⁶ Well Number 303H	
⁷ OGRID No. 160825		⁸ Operator Name B.C. OPERATING, INC.						⁹ Elevation 3468'	
¹⁰ Surface Location									
UL or lot no. E	Section 24	Township 19S	Range 27E	Lot Idn	Feet from the 2471	North/South line NORTH	Feet from the 561	East/West line WEST	County EDDY
¹¹ Bottom Hole Location If Different From Surface									
UL or lot no. F	Section 19	Township 19S	Range 28E	Lot Idn	Feet from the 2410	North/South line NORTH	Feet from the 2604	East/West line WEST	County EDDY
¹² Dedicated Acres 972.24		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.

INFILL WELL SECTION 12 SECTION 13 SECTION 14 SECTION 13 SECTION 13 SECTION 24 SECTION 24 SECTION 25 SECTION 26 SECTION 25 SECTION 25 SECTION 30 SECTION 31 SECTION 36		CORNER COORDINATES NAD 83, SPCS NM EAST A - X: 569768.51' / Y: 596098.34' B - X: 569825.32' / Y: 601363.58' C - X: 575079.59' / Y: 601266.35' D - X: 577731.23' / Y: 601324.25' E - X: 577710.96' / Y: 596054.35' F - X: 575053.27' / Y: 595988.40'		CORNER COORDINATES NAD 27, SPCS NM EAST A - X: 528588.65' / Y: 596036.60' B - X: 528645.54' / Y: 601301.71' C - X: 533899.81' / Y: 601204.45' D - X: 536551.45' / Y: 601262.33' E - X: 536531.09' / Y: 595992.55' F - X: 533873.41' / Y: 595926.62'		17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature: <i>Thomas Wolfmueller</i> Date: 9/29/2020 Printed Name: Thomas Wolfmueller E-mail Address: twolfmueller@bcoperating.com	
SURFACE HOLE LOCATION 2471' FNL 561' FWL, SECTION 24 NAD 83, SPCS NM EAST X: 570359.16' / Y: 598881.85' LAT: 32.64633876N / LON: 104.23904407W NAD 27, SPCS NM EAST X: 529179.34' / Y: 598820.04' LAT: 32.64622256N / LON: 104.23853395W		KICK OFF POINT 2410' FNL 25' FWL, SECTION 24 NAD 83, SPCS NM EAST X: 569824.10' / Y: 598953.19' LAT: 32.64653614N / LON: 104.24078222W NAD 27, SPCS NM EAST X: 528644.29' / Y: 598891.38' LAT: 32.64641996N / LON: 104.24027205W		FIRST TAKE POINT 2410' FNL 100' FWL, SECTION 24 NAD 83, SPCS NM EAST X: 569899.09' / Y: 598951.80' LAT: 32.64653215N / LON: 104.24053859W NAD 27, SPCS NM EAST X: 528719.28' / Y: 598889.99' LAT: 32.64641597N / LON: 104.24002843W		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. SEPTEMBER 21, 2020 Date of Survey Signature and Seal of Professional Surveyor: <i>DAVID W. MYERS</i> Certificate Number: DAVID W. MYERS 11403	
LAST TAKE POINT 2410' FNL 2554' FWL, SECTION 19 NAD 83, SPCS NM EAST X: 577621.95' / Y: 598911.29' LAT: 32.64639974N / LON: 104.21544773W NAD 27, SPCS NM EAST X: 536442.13' / Y: 598849.42' LAT: 32.64628329N / LON: 104.21493816W		BOTTOM HOLE LOCATION 2410' FNL 2604' FWL, SECTION 19 NAD 83, SPCS NM EAST X: 577671.95' / Y: 598912.38' LAT: 32.64640259N / LON: 104.21528526W NAD 27, SPCS NM EAST X: 536492.13' / Y: 598850.51' LAT: 32.64628614N / LON: 104.21477570W					

SHEET 1 OF 3
JOB No. R4035_003
REV 0 DEF 9/17/2020

Distances/areas relative to NAD 83 Combined Scale Factor: 0.99974809 Convergence Angle: 00°04'09.069996"

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GAS CAPTURE PLAN

Date: 2/3/2021

☒ Original

Operator & OGRID No.: [160825] BC OPERATING, INC.

☐ Amended - Reason for
Amendment:

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
WINCHESTER 24 TB STATE #303H	30-015-47476	E-24-19S-27E	2471N 0561W	10	Flared	

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to FRONTIER FIELD SERVICES, LLC and will be connected to FRONTIER FIELD SERVICES, LLC Low Pressure gathering system located in Eddy County, New Mexico. It will require 2000' of pipeline to connect the facility to Low Pressure gathering system. BC OPERATING, INC. provides (periodically) to FRONTIER FIELD SERVICES, LLC a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, BC OPERATING, INC. and FRONTIER FIELD SERVICES, LLC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at FRONTIER FIELD SERVICES, LLC Processing Plant located in Sec. 03, Twn. 18S, Rng. 27E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on FRONTIER FIELD SERVICES, LLC system at that time. Based on current information, it is BC OPERATING, INC.'s belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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1220 S. St Francis Dr.
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Form APD Comments

Permit 286889

PERMIT COMMENTS

Operator Name and Address: BC OPERATING, INC. [160825] P.O. Box 50820 Midland, TX 79710		API Number: 30-015-47476
		Well: WINCHESTER 24 TB STATE #303H

Created By	Comment	Comment Date
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Form APD Conditions

Permit 286889

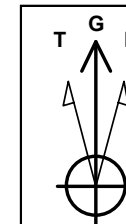
PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: BC OPERATING, INC. [160825] P.O. Box 50820 Midland, TX 79710	API Number: 30-015-47476
	Well: WINCHESTER 24 TB STATE #303H

OCD Reviewer	Condition
ksimmons	Will require a directional survey with the C-104
ksimmons	Cement is required to circulate on both surface and intermediate1 strings of casing
ksimmons	Operator shall notify in writing other operators in same quarter/quarter section(s) before commencing both drilling and completing operations.
kpickford	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud
kpickford	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud 2)- Drilling Sundries Form C-103 (Casing and Cement test are to be submitted within 10 days 3)- Completion Reports & Logs are to be submitted within 45 days 4)- Deviation / Directional Drill Survey are to be filed with or prior to C-104
kpickford	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
kpickford	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

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	6885.10	0.00	0.00	6885.10	0.00	0.00	0.00	0.00	0.00		KOP: 12°/100' @ 6885.10' MD
3	7426.77	65.00	272.59	7317.83	12.46	-275.40	12.00	272.59	-275.34		Build Turn: 12°/100' @ 7426.77' MD
4	8726.39	91.00	91.06	8226.18	62.81	-64.00	12.00	176.24	-63.73		LP, Hold: 91.00° Inc, 91.06° Azm
5	13500.34	91.00	91.06	8142.86	-25.49	4708.41	0.00	0.00	4708.26	PI - Winchester303H	Hold: 91.00° Inc, 91.06° Azm
6	13617.57	91.00	88.71	8140.82	-25.26	4825.62	2.00	-89.96	4825.47		Turn: 2°/100' @ 13617.57' MD
7	16105.75	91.00	88.71	8097.36	30.53	7312.79	0.00	0.00	7312.85	PBHL - Winchester303H	TD @ 16105.75' MD/8097.36' TVD



Azimuths to Grid North
True North: -0.05°
Magnetic North: 7.03°

Magnetic Field
Strength: 47838.5nT
Dip Angle: 60.35°
Date: 9/23/2020
Model: MVHD

PROJECT DETAILS: Eddy Co., NM (NAD 83 NME)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

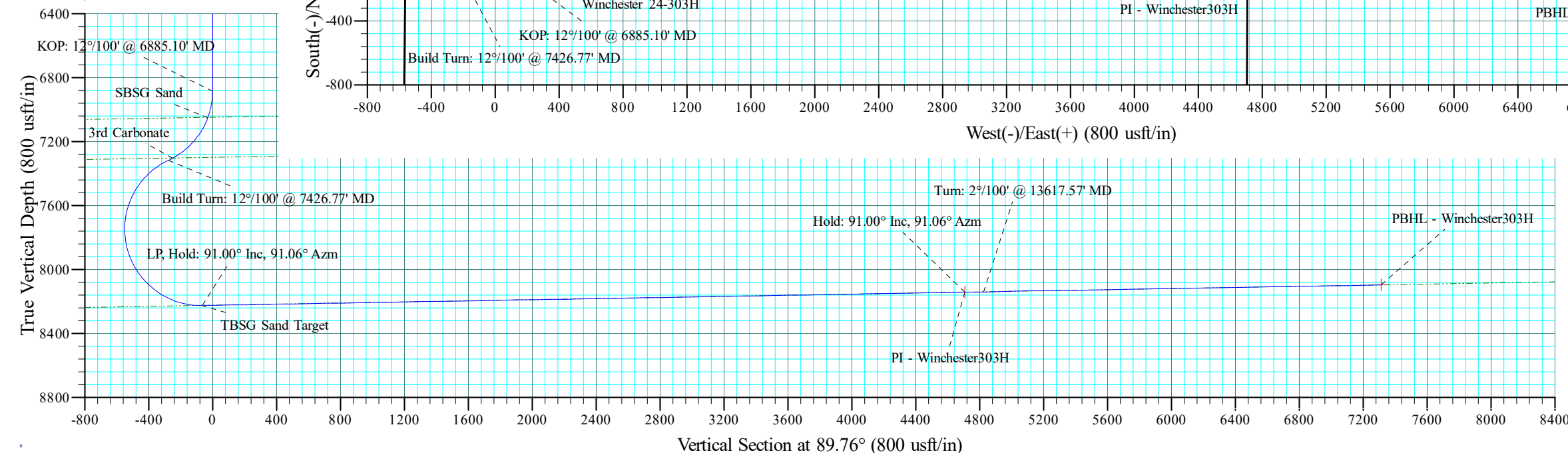
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP - Winchester303H	0.00	69.95	-460.07	598951.80	569899.09	32° 38' 47.516 N	104° 14' 25.939 W
KOP - Winchester303H	0.00	71.34	-535.06	598953.19	569824.10	32° 38' 47.530 N	104° 14' 26.816 W
LTP - Winchester303H	0.00	29.44	7262.79	598911.29	577621.95	32° 38' 47.039 N	104° 12' 55.612 W
PBHL - Winchester303H	8097.36	30.53	7312.79	598912.38	577671.95	32° 38' 47.049 N	104° 12' 55.027 W
PI - Winchester303H	8142.86	-25.68	4708.41	598856.17	575067.57	32° 38' 46.521 N	104° 13' 25.489 W

SITE DETAILS: Winchester 24 TB State 303H

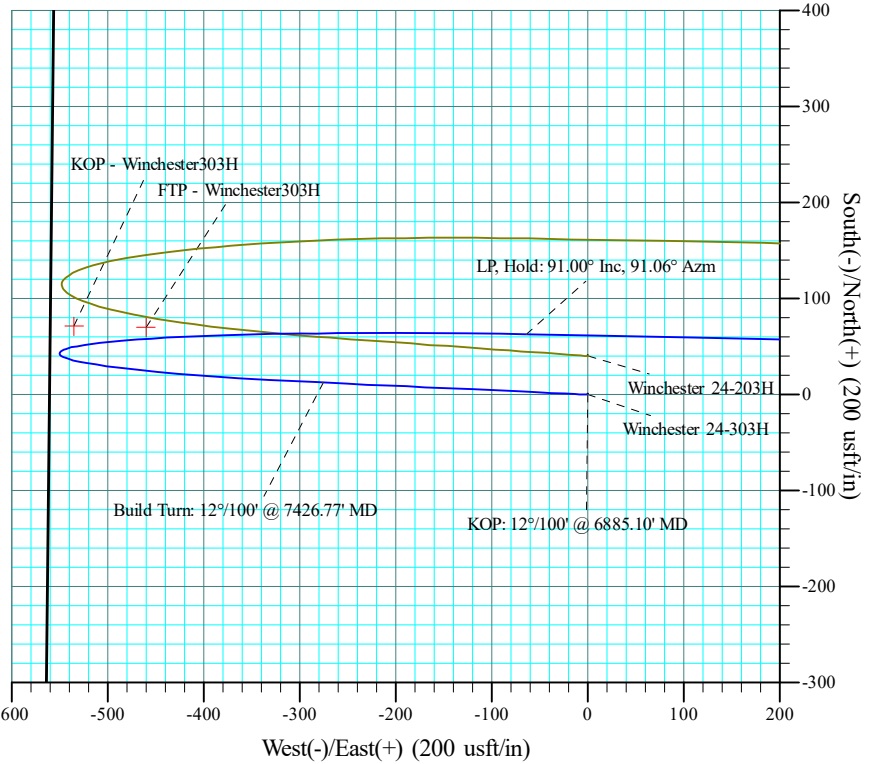
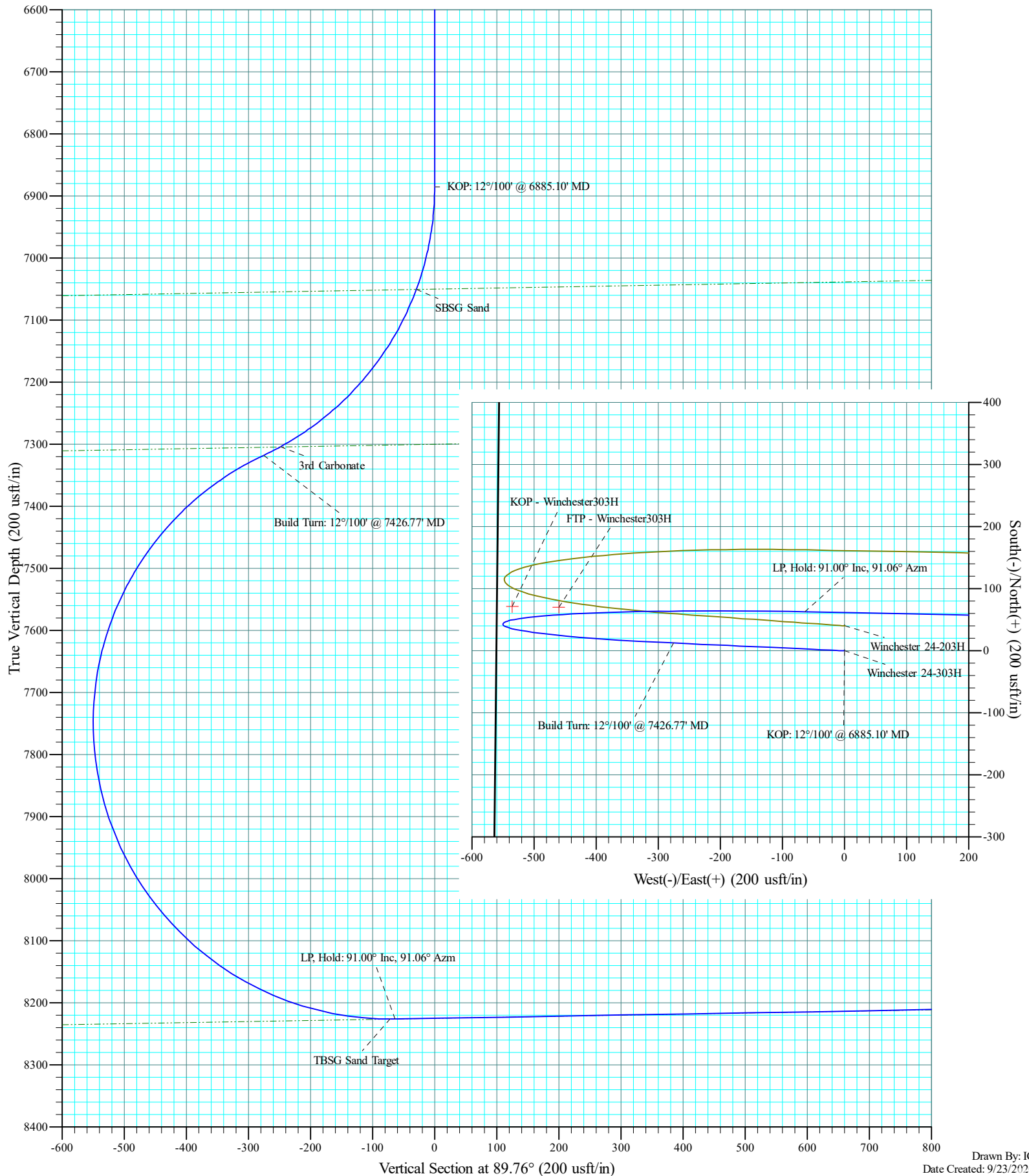
Site Centre Northing: 598881.85
Easting: 570359.16

Positional Uncertainty: 0.00
Convergence: 0.05
Local North: Grid





Winchester 24 TB State 303H
Eddy Co., NM (NAD 83 NME)
Lateral 1r0



Aim Directional Services, LLC

Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Winchester 24-303H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	3468'GL @ 3468.00usft
Site:	Winchester 24 TB State 303H	MD Reference:	3468'GL @ 3468.00usft
Well:	Winchester 24-303H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDM 5000.1 Aim Database

Project	Eddy Co., NM (NAD 83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Winchester 24 TB State 303H		
Site Position:		Northing:	598,881.85 usft
From:	Map	Easting:	570,359.16 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 38' 46.820 N
		Longitude:	104° 14' 20.559 W
		Grid Convergence:	0.05 °

Well	Winchester 24-303H		
Well Position	+N/-S	0.00 usft	Northing: 598,881.85 usft
	+E/-W	0.00 usft	Easting: 570,359.16 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 38' 46.820 N
		Longitude:	104° 14' 20.559 W
		Ground Level:	3,468.00 usft

Wellbore	Planning		
Magnetics	Model Name	Sample Date	Declination (°)
	MVHD	9/23/2020	7.08
			Dip Angle (°)
			60.35
			Field Strength (nT)
			47,838.47344469

Design	Lateral 1r0		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
			Direction (°)
			89.76

Survey Tool Program	Date	9/24/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	16,105.75	Lateral 1r0 (Planning)	MWD+HRGM	OWSG MWD + HRGM

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
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	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
Tansill									
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
725.00	0.00	0.00	725.00	0.00	0.00	0.00	0.00	0.00	0.00

Aim Directional Services, LLC

Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Winchester 24-303H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	3468'GL @ 3468.00usft
Site:	Winchester 24 TB State 303H	MD Reference:	3468'GL @ 3468.00usft
Well:	Winchester 24-303H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDM 5000.1 Aim Database

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)	
Yates										
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
Seven Rivers										
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
Queen										
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,950.00	0.00	0.00	1,950.00	0.00	0.00	0.00	0.00	0.00	0.00	
Grayburg										
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
San Andres										
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,250.00	0.00	0.00	3,250.00	0.00	0.00	0.00	0.00	0.00	0.00	
Bone Spring										
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00	

Aim Directional Services, LLC

Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Winchester 24-303H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	3468'GL @ 3468.00usft
Site:	Winchester 24 TB State 303H	MD Reference:	3468'GL @ 3468.00usft
Well:	Winchester 24-303H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDM 5000.1 Aim Database

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)
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,175.00	0.00	0.00	6,175.00	0.00	0.00	0.00	0.00	0.00	0.00
FBSG Sand									
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2nd Carbonate									
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,885.10	0.00	0.00	6,885.10	0.00	0.00	0.00	0.00	0.00	0.00
KOP: 12°/100' @ 6885.10' MD									
6,900.00	1.79	272.59	6,900.00	0.01	-0.23	-0.23	12.00	12.00	0.00
6,925.00	4.79	272.59	6,924.95	0.08	-1.66	-1.66	12.00	12.00	0.00
6,950.00	7.79	272.59	6,949.80	0.20	-4.40	-4.40	12.00	12.00	0.00
6,975.00	10.79	272.59	6,974.47	0.38	-8.43	-8.43	12.00	12.00	0.00
7,000.00	13.79	272.59	6,998.89	0.62	-13.74	-13.74	12.00	12.00	0.00
7,025.00	16.79	272.59	7,023.01	0.92	-20.33	-20.32	12.00	12.00	0.00
7,050.00	19.79	272.59	7,046.74	1.27	-28.16	-28.16	12.00	12.00	0.00
7,054.02	20.27	272.59	7,050.52	1.34	-29.54	-29.53	12.00	12.00	0.00
SBSG Sand									
7,075.00	22.79	272.59	7,070.03	1.68	-37.23	-37.22	12.00	12.00	0.00
7,100.00	25.79	272.59	7,092.82	2.15	-47.50	-47.49	12.00	12.00	0.00
7,125.00	28.79	272.59	7,115.03	2.67	-58.95	-58.94	12.00	12.00	0.00
7,150.00	31.79	272.59	7,136.62	3.24	-71.55	-71.53	12.00	12.00	0.00
7,175.00	34.79	272.59	7,157.51	3.86	-85.25	-85.23	12.00	12.00	0.00

Aim Directional Services, LLC

Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Winchester 24-303H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	3468'GL @ 3468.00usft
Site:	Winchester 24 TB State 303H	MD Reference:	3468'GL @ 3468.00usft
Well:	Winchester 24-303H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDM 5000.1 Aim Database

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)
7,200.00	37.79	272.59	7,177.66	4.52	-100.03	-100.01	12.00	12.00	0.00
7,225.00	40.79	272.59	7,197.01	5.24	-115.84	-115.82	12.00	12.00	0.00
7,250.00	43.79	272.59	7,215.50	6.00	-132.64	-132.62	12.00	12.00	0.00
7,275.00	46.79	272.59	7,233.09	6.80	-150.39	-150.36	12.00	12.00	0.00
7,300.00	49.79	272.59	7,249.72	7.65	-169.03	-169.00	12.00	12.00	0.00
7,325.00	52.79	272.59	7,265.35	8.53	-188.52	-188.48	12.00	12.00	0.00
7,350.00	55.79	272.59	7,279.95	9.44	-208.79	-208.75	12.00	12.00	0.00
7,375.00	58.79	272.59	7,293.45	10.40	-229.80	-229.76	12.00	12.00	0.00
7,396.84	61.41	272.59	7,304.34	11.25	-248.72	-248.67	12.00	12.00	0.00
3rd Carbonate									
7,400.00	61.79	272.59	7,305.84	11.38	-251.49	-251.44	12.00	12.00	0.00
7,426.77	65.00	272.59	7,317.83	12.46	-275.40	-275.34	12.00	12.00	0.00
Build Turn: 12°/100' @ 7426.77' MD									
7,450.00	62.22	272.80	7,328.16	13.43	-296.18	-296.13	12.00	-11.97	0.89
7,475.00	59.23	273.03	7,340.38	14.54	-317.96	-317.90	12.00	-11.97	0.94
7,500.00	56.23	273.28	7,353.73	15.71	-339.06	-339.00	12.00	-11.97	1.00
7,525.00	53.24	273.55	7,368.16	16.92	-359.44	-359.36	12.00	-11.97	1.07
7,550.00	50.25	273.84	7,383.64	18.18	-379.03	-378.95	12.00	-11.97	1.16
7,575.00	47.26	274.15	7,400.12	19.49	-397.78	-397.69	12.00	-11.96	1.26
7,600.00	44.27	274.50	7,417.56	20.84	-415.64	-415.54	12.00	-11.96	1.39
7,625.00	41.28	274.89	7,435.91	22.23	-432.55	-432.46	12.00	-11.95	1.55
7,650.00	38.29	275.32	7,455.11	23.65	-448.49	-448.38	12.00	-11.95	1.74
7,675.00	35.31	275.82	7,475.13	25.10	-463.39	-463.28	12.00	-11.94	1.99
7,700.00	32.33	276.39	7,495.90	26.58	-477.22	-477.11	12.00	-11.93	2.30
7,725.00	29.35	277.07	7,517.36	28.08	-489.95	-489.83	12.00	-11.92	2.72
7,750.00	26.37	277.89	7,539.46	29.59	-501.53	-501.40	12.00	-11.90	3.27
7,775.00	23.40	278.90	7,562.14	31.12	-511.94	-511.80	12.00	-11.88	4.04
7,800.00	20.44	280.19	7,585.33	32.66	-521.14	-521.00	12.00	-11.85	5.14
7,825.00	17.49	281.88	7,608.97	34.21	-529.11	-528.97	12.00	-11.80	6.79
7,850.00	14.56	284.24	7,633.00	35.76	-535.84	-535.68	12.00	-11.72	9.43
7,875.00	11.67	287.75	7,657.34	37.30	-541.29	-541.13	12.00	-11.58	14.02
7,900.00	8.84	293.48	7,681.94	38.84	-545.46	-545.29	12.00	-11.30	22.95
7,925.00	6.18	304.30	7,706.72	40.36	-548.34	-548.16	12.00	-10.63	43.28
7,950.00	4.03	328.52	7,731.63	41.87	-549.91	-549.73	12.00	-8.60	96.87
7,975.00	3.51	14.79	7,756.58	43.36	-550.17	-549.99	12.00	-2.11	185.10
8,000.00	5.13	49.47	7,781.51	44.82	-549.13	-548.94	12.00	6.49	138.69
8,025.00	7.63	64.65	7,806.36	46.26	-546.78	-546.58	12.00	10.02	60.72
8,050.00	10.40	72.09	7,831.05	47.67	-543.13	-542.93	12.00	11.08	29.78
8,075.00	13.27	76.39	7,855.51	49.04	-538.19	-537.98	12.00	11.48	17.20
8,100.00	16.19	79.18	7,879.69	50.37	-531.98	-531.76	12.00	11.66	11.13
8,125.00	19.13	81.13	7,903.51	51.65	-524.51	-524.29	12.00	11.77	7.80
8,150.00	22.09	82.57	7,926.90	52.89	-515.80	-515.57	12.00	11.83	5.78
8,175.00	25.05	83.69	7,949.82	54.08	-505.87	-505.64	12.00	11.87	4.47
8,200.00	28.03	84.58	7,972.18	55.22	-494.76	-494.53	12.00	11.89	3.58

Aim Directional Services, LLC

Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Winchester 24-303H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	3468'GL @ 3468.00usft
Site:	Winchester 24 TB State 303H	MD Reference:	3468'GL @ 3468.00usft
Well:	Winchester 24-303H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDM 5000.1 Aim Database

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)	
8,225.00	31.00	85.32	7,993.93	56.30	-482.49	-482.26	12.00	11.91	2.94	
8,250.00	33.99	85.94	8,015.02	57.32	-469.10	-468.86	12.00	11.93	2.47	
8,275.00	36.97	86.47	8,035.37	58.28	-454.63	-454.38	12.00	11.94	2.12	
8,300.00	39.96	86.93	8,054.95	59.17	-439.11	-438.85	12.00	11.95	1.84	
8,325.00	42.94	87.34	8,073.68	60.00	-422.58	-422.32	12.00	11.95	1.63	
8,350.00	45.93	87.70	8,091.53	60.75	-405.09	-404.84	12.00	11.96	1.45	
8,375.00	48.92	88.03	8,108.44	61.44	-386.70	-386.44	12.00	11.96	1.31	
8,400.00	51.91	88.33	8,124.37	62.05	-367.44	-367.18	12.00	11.96	1.20	
8,425.00	54.91	88.61	8,139.27	62.59	-347.38	-347.11	12.00	11.97	1.11	
8,450.00	57.90	88.86	8,153.10	63.04	-326.56	-326.30	12.00	11.97	1.03	
8,475.00	60.89	89.10	8,165.83	63.43	-305.05	-304.78	12.00	11.97	0.96	
8,500.00	63.88	89.33	8,177.41	63.73	-282.90	-282.63	12.00	11.97	0.91	
8,525.00	66.88	89.55	8,187.83	63.95	-260.18	-259.91	12.00	11.97	0.86	
8,550.00	69.87	89.75	8,197.04	64.09	-236.94	-236.67	12.00	11.98	0.82	
8,575.00	72.87	89.95	8,205.02	64.16	-213.25	-212.98	12.00	11.98	0.79	
8,600.00	75.86	90.14	8,211.76	64.14	-189.18	-188.91	12.00	11.98	0.77	
8,625.00	78.86	90.33	8,217.23	64.04	-164.79	-164.52	12.00	11.98	0.75	
8,650.00	81.85	90.51	8,221.42	63.85	-140.15	-139.88	12.00	11.98	0.73	
8,675.00	84.84	90.69	8,224.32	63.59	-115.32	-115.05	12.00	11.98	0.72	
8,700.00	87.84	90.87	8,225.91	63.25	-90.38	-90.11	12.00	11.98	0.72	
8,718.36	90.04	91.00	8,226.25	62.95	-72.03	-71.76	12.00	11.98	0.71	
TBSG Sand Target										
8,726.39	91.00	91.06	8,226.18	62.81	-64.00	-63.73	12.00	11.98	0.71	
LP, Hold: 91.00° Inc, 91.06° Azm										
8,800.00	91.00	91.06	8,224.90	61.45	9.59	9.85	0.00	0.00	0.00	
8,900.00	91.00	91.06	8,223.15	59.60	109.56	109.81	0.00	0.00	0.00	
9,000.00	91.00	91.06	8,221.40	57.75	209.53	209.77	0.00	0.00	0.00	
9,100.00	91.00	91.06	8,219.66	55.90	309.49	309.73	0.00	0.00	0.00	
9,200.00	91.00	91.06	8,217.91	54.05	409.46	409.68	0.00	0.00	0.00	
9,300.00	91.00	91.06	8,216.17	52.20	509.43	509.64	0.00	0.00	0.00	
9,400.00	91.00	91.06	8,214.42	50.35	609.40	609.60	0.00	0.00	0.00	
9,500.00	91.00	91.06	8,212.68	48.50	709.37	709.56	0.00	0.00	0.00	
9,600.00	91.00	91.06	8,210.93	46.65	809.33	809.52	0.00	0.00	0.00	
9,700.00	91.00	91.06	8,209.19	44.80	909.30	909.48	0.00	0.00	0.00	
9,800.00	91.00	91.06	8,207.44	42.95	1,009.27	1,009.44	0.00	0.00	0.00	
9,900.00	91.00	91.06	8,205.70	41.10	1,109.24	1,109.40	0.00	0.00	0.00	
10,000.00	91.00	91.06	8,203.95	39.25	1,209.20	1,209.36	0.00	0.00	0.00	
10,100.00	91.00	91.06	8,202.21	37.40	1,309.17	1,309.32	0.00	0.00	0.00	
10,200.00	91.00	91.06	8,200.46	35.55	1,409.14	1,409.28	0.00	0.00	0.00	
10,300.00	91.00	91.06	8,198.72	33.70	1,509.11	1,509.23	0.00	0.00	0.00	
10,400.00	91.00	91.06	8,196.97	31.85	1,609.07	1,609.19	0.00	0.00	0.00	
10,500.00	91.00	91.06	8,195.23	30.00	1,709.04	1,709.15	0.00	0.00	0.00	
10,600.00	91.00	91.06	8,193.48	28.15	1,809.01	1,809.11	0.00	0.00	0.00	

Aim Directional Services, LLC

Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Winchester 24-303H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	3468'GL @ 3468.00usft
Site:	Winchester 24 TB State 303H	MD Reference:	3468'GL @ 3468.00usft
Well:	Winchester 24-303H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDM 5000.1 Aim Database

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
10,700.00	91.00	91.06	8,191.74	26.30	1,908.98	1,909.07	0.00	0.00	0.00	
10,800.00	91.00	91.06	8,189.99	24.45	2,008.94	2,009.03	0.00	0.00	0.00	
10,900.00	91.00	91.06	8,188.25	22.60	2,108.91	2,108.99	0.00	0.00	0.00	
11,000.00	91.00	91.06	8,186.50	20.75	2,208.88	2,208.95	0.00	0.00	0.00	
11,100.00	91.00	91.06	8,184.75	18.90	2,308.85	2,308.91	0.00	0.00	0.00	
11,200.00	91.00	91.06	8,183.01	17.05	2,408.82	2,408.87	0.00	0.00	0.00	
11,300.00	91.00	91.06	8,181.26	15.20	2,508.78	2,508.82	0.00	0.00	0.00	
11,400.00	91.00	91.06	8,179.52	13.35	2,608.75	2,608.78	0.00	0.00	0.00	
11,500.00	91.00	91.06	8,177.77	11.50	2,708.72	2,708.74	0.00	0.00	0.00	
11,600.00	91.00	91.06	8,176.03	9.65	2,808.69	2,808.70	0.00	0.00	0.00	
11,700.00	91.00	91.06	8,174.28	7.81	2,908.65	2,908.66	0.00	0.00	0.00	
11,800.00	91.00	91.06	8,172.54	5.96	3,008.62	3,008.62	0.00	0.00	0.00	
11,900.00	91.00	91.06	8,170.79	4.11	3,108.59	3,108.58	0.00	0.00	0.00	
12,000.00	91.00	91.06	8,169.05	2.26	3,208.56	3,208.54	0.00	0.00	0.00	
12,100.00	91.00	91.06	8,167.30	0.41	3,308.52	3,308.50	0.00	0.00	0.00	
12,200.00	91.00	91.06	8,165.56	-1.44	3,408.49	3,408.46	0.00	0.00	0.00	
12,300.00	91.00	91.06	8,163.81	-3.29	3,508.46	3,508.42	0.00	0.00	0.00	
12,400.00	91.00	91.06	8,162.07	-5.14	3,608.43	3,608.37	0.00	0.00	0.00	
12,500.00	91.00	91.06	8,160.32	-6.99	3,708.40	3,708.33	0.00	0.00	0.00	
12,600.00	91.00	91.06	8,158.58	-8.84	3,808.36	3,808.29	0.00	0.00	0.00	
12,700.00	91.00	91.06	8,156.83	-10.69	3,908.33	3,908.25	0.00	0.00	0.00	
12,800.00	91.00	91.06	8,155.09	-12.54	4,008.30	4,008.21	0.00	0.00	0.00	
12,900.00	91.00	91.06	8,153.34	-14.39	4,108.27	4,108.17	0.00	0.00	0.00	
13,000.00	91.00	91.06	8,151.60	-16.24	4,208.23	4,208.13	0.00	0.00	0.00	
13,100.00	91.00	91.06	8,149.85	-18.09	4,308.20	4,308.09	0.00	0.00	0.00	
13,200.00	91.00	91.06	8,148.10	-19.94	4,408.17	4,408.05	0.00	0.00	0.00	
13,300.00	91.00	91.06	8,146.36	-21.79	4,508.14	4,508.01	0.00	0.00	0.00	
13,400.00	91.00	91.06	8,144.61	-23.64	4,608.10	4,607.97	0.00	0.00	0.00	
13,500.34	91.00	91.06	8,142.86	-25.49	4,708.41	4,708.26	0.00	0.00	0.00	
Hold: 91.00° Inc, 91.06° Azm										
13,600.00	91.00	89.07	8,141.12	-25.60	4,808.05	4,807.90	2.00	0.00	-2.00	
13,617.58	91.00	88.71	8,140.82	-25.26	4,825.62	4,825.47	2.00	0.00	-2.00	
Turn: 2°/100' @ 13617.57' MD										
13,700.00	91.00	88.71	8,139.38	-23.42	4,908.01	4,907.87	0.00	0.00	0.00	
13,800.00	91.00	88.71	8,137.63	-21.17	5,007.97	5,007.84	0.00	0.00	0.00	
13,900.00	91.00	88.71	8,135.88	-18.93	5,107.93	5,107.81	0.00	0.00	0.00	
14,000.00	91.00	88.71	8,134.14	-16.69	5,207.89	5,207.78	0.00	0.00	0.00	
14,100.00	91.00	88.71	8,132.39	-14.45	5,307.85	5,307.74	0.00	0.00	0.00	
14,200.00	91.00	88.71	8,130.64	-12.20	5,407.81	5,407.71	0.00	0.00	0.00	
14,300.00	91.00	88.71	8,128.90	-9.96	5,507.77	5,507.68	0.00	0.00	0.00	
14,400.00	91.00	88.71	8,127.15	-7.72	5,607.73	5,607.65	0.00	0.00	0.00	
14,500.00	91.00	88.71	8,125.40	-5.48	5,707.69	5,707.62	0.00	0.00	0.00	
14,600.00	91.00	88.71	8,123.66	-3.23	5,807.65	5,807.58	0.00	0.00	0.00	
14,700.00	91.00	88.71	8,121.91	-0.99	5,907.61	5,907.55	0.00	0.00	0.00	

Aim Directional Services, LLC

Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Winchester 24-303H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	3468'GL @ 3468.00usft
Site:	Winchester 24 TB State 303H	MD Reference:	3468'GL @ 3468.00usft
Well:	Winchester 24-303H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDM 5000.1 Aim Database

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)	
14,800.00	91.00	88.71	8,120.17	1.25	6,007.57	6,007.52	0.00	0.00	0.00	
14,900.00	91.00	88.71	8,118.42	3.49	6,107.53	6,107.49	0.00	0.00	0.00	
15,000.00	91.00	88.71	8,116.67	5.73	6,207.49	6,207.46	0.00	0.00	0.00	
15,100.00	91.00	88.71	8,114.93	7.98	6,307.45	6,307.42	0.00	0.00	0.00	
15,200.00	91.00	88.71	8,113.18	10.22	6,407.41	6,407.39	0.00	0.00	0.00	
15,300.00	91.00	88.71	8,111.43	12.46	6,507.37	6,507.36	0.00	0.00	0.00	
15,400.00	91.00	88.71	8,109.69	14.70	6,607.33	6,607.33	0.00	0.00	0.00	
15,500.00	91.00	88.71	8,107.94	16.95	6,707.28	6,707.30	0.00	0.00	0.00	
15,600.00	91.00	88.71	8,106.19	19.19	6,807.24	6,807.27	0.00	0.00	0.00	
15,700.00	91.00	88.71	8,104.45	21.43	6,907.20	6,907.23	0.00	0.00	0.00	
15,800.00	91.00	88.71	8,102.70	23.67	7,007.16	7,007.20	0.00	0.00	0.00	
15,900.00	91.00	88.71	8,100.95	25.92	7,107.12	7,107.17	0.00	0.00	0.00	
16,000.00	91.00	88.71	8,099.21	28.16	7,207.08	7,207.14	0.00	0.00	0.00	
16,105.75	91.00	88.71	8,097.36	30.53	7,312.79	7,312.85	0.00	0.00	0.00	
TD @ 16105.75' MD/8097.36' TVD										

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	
LTP - Winchester303H - plan misses target center by 7262.85usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	29.44	7,262.79	598,911.29	577,621.95	32° 38' 47.039 N	104° 12' 55.612 W	
KOP - Winchester303H - plan misses target center by 539.79usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.01	0.00	71.34	-535.06	598,953.19	569,824.10	32° 38' 47.530 N	104° 14' 26.816 W	
FTP - Winchester303H - plan misses target center by 465.36usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	69.95	-460.07	598,951.80	569,899.09	32° 38' 47.516 N	104° 14' 25.939 W	
PBHL - Winchester303H - plan hits target center - Point	0.00	0.00	8,097.36	30.53	7,312.79	598,912.38	577,671.95	32° 38' 47.049 N	104° 12' 55.027 W	
PI - Winchester303H - plan misses target center by 0.19usft at 13500.34usft MD (8142.86 TVD, -25.49 N, 4708.41 E) - Point	0.00	0.00	8,142.86	-25.68	4,708.41	598,856.17	575,067.57	32° 38' 46.521 N	104° 13' 25.489 W	

Aim Directional Services, LLC

Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Winchester 24-303H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	3468'GL @ 3468.00usft
Site:	Winchester 24 TB State 303H	MD Reference:	3468'GL @ 3468.00usft
Well:	Winchester 24-303H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDM 5000.1 Aim Database

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
600.00	600.00	Tansill		-1.00	89.76	
725.00	725.00	Yates		-1.00	89.76	
1,100.00	1,100.00	Seven Rivers		-1.00	89.76	
1,600.00	1,600.00	Queen		-1.00	89.76	
1,950.00	1,950.00	Grayburg		-1.00	89.76	
2,400.00	2,400.00	San Andres		-1.00	89.76	
3,250.00	3,250.00	Bone Spring		-1.00	89.76	
6,175.00	6,175.00	FBSG Sand		-1.00	89.76	
6,300.00	6,300.00	2nd Carbonate		-1.00	89.76	
7,054.02	7,050.52	SBSG Sand		-1.00	89.76	
7,396.84	7,304.34	3rd Carbonate		-1.00	89.76	
8,718.36	8,226.25	TBSG Sand Target		-1.00	89.76	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
6885	6885	0	0	KOP: 12°/100' @ 6885.10' MD	
7427	7318	12	-275	Build Turn: 12°/100' @ 7426.77' MD	
8726	8226	63	-64	LP, Hold: 91.00° Inc, 91.06° Azm	
13,500	8143	-25	4708	Hold: 91.00° Inc, 91.06° Azm	
13,618	8141	-25	4826	Turn: 2°/100' @ 13617.57' MD	
16,106	8097	31	7313	TD @ 16105.75' MD/8097.36' TVD	