

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

Form C-101

August 1, 2011

Permit 278849

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

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 30-015-46793
4. Property Code 327214	5. Property Name Fadeaway Ridge 32 TB State	6. Well No. 302H

7. Surface Location

UL - Lot H	Section 32	Township 19S	Range 28E	Lot Idn H	Feet From 1626	N/S Line N	Feet From 303	E/W Line E	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot E	Section 32	Township 19S	Range 28E	Lot Idn E	Feet From 2300	N/S Line N	Feet From 50	E/W Line W	County Eddy
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9. Pool Information

WINCHESTER;BONE SPRING	65010
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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 3365
16. Multiple N	17. Proposed Depth 14132	18. Formation 3rd Bone Spring Sand	19. Contractor	20. Spud Date 3/31/2020
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	700	750	0
Int1	12.25	9.625	40	4000	740	0
Prod	8.75	7	29	7844	370	0
Prod	8.75	5.5	17	14132	1460	3000

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	3000	3000	

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.	OIL CONSERVATION DIVISION	
Signature:		
Printed Name: Electronically filed by Thomas A Wolfmueller	Approved By: Raymond Podany	
Title:	Title: Geologist	
Email Address: twolfmueller@bcoperating.com	Approved Date: 3/9/2020	Expiration Date: 3/9/2022
Date: 2/26/2020	Phone: 432-214-1985	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 65010	³ Pool Name WINCHESTER; BONE SPRING
⁴ Property Code	⁵ Property Name FADEAWAY RIDGE 32 TB STATE	⁶ Well Number 302H
⁷ OGRID No. 249099	⁸ Operator Name B.C. OPERATING, INC.	⁹ Elevation 3365'

¹⁰ Surface Location

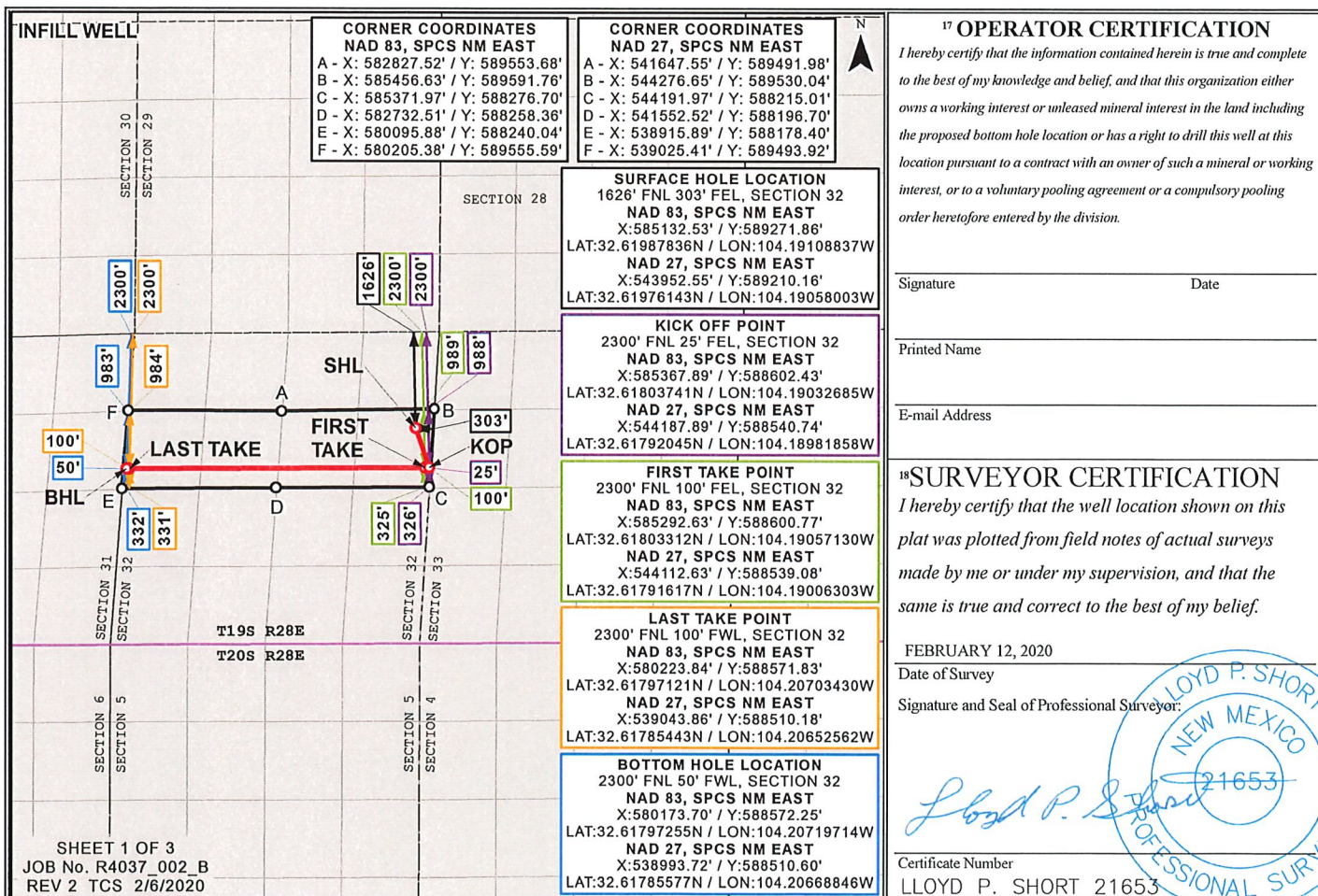
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	32	19S	28E		1626	NORTH	303	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

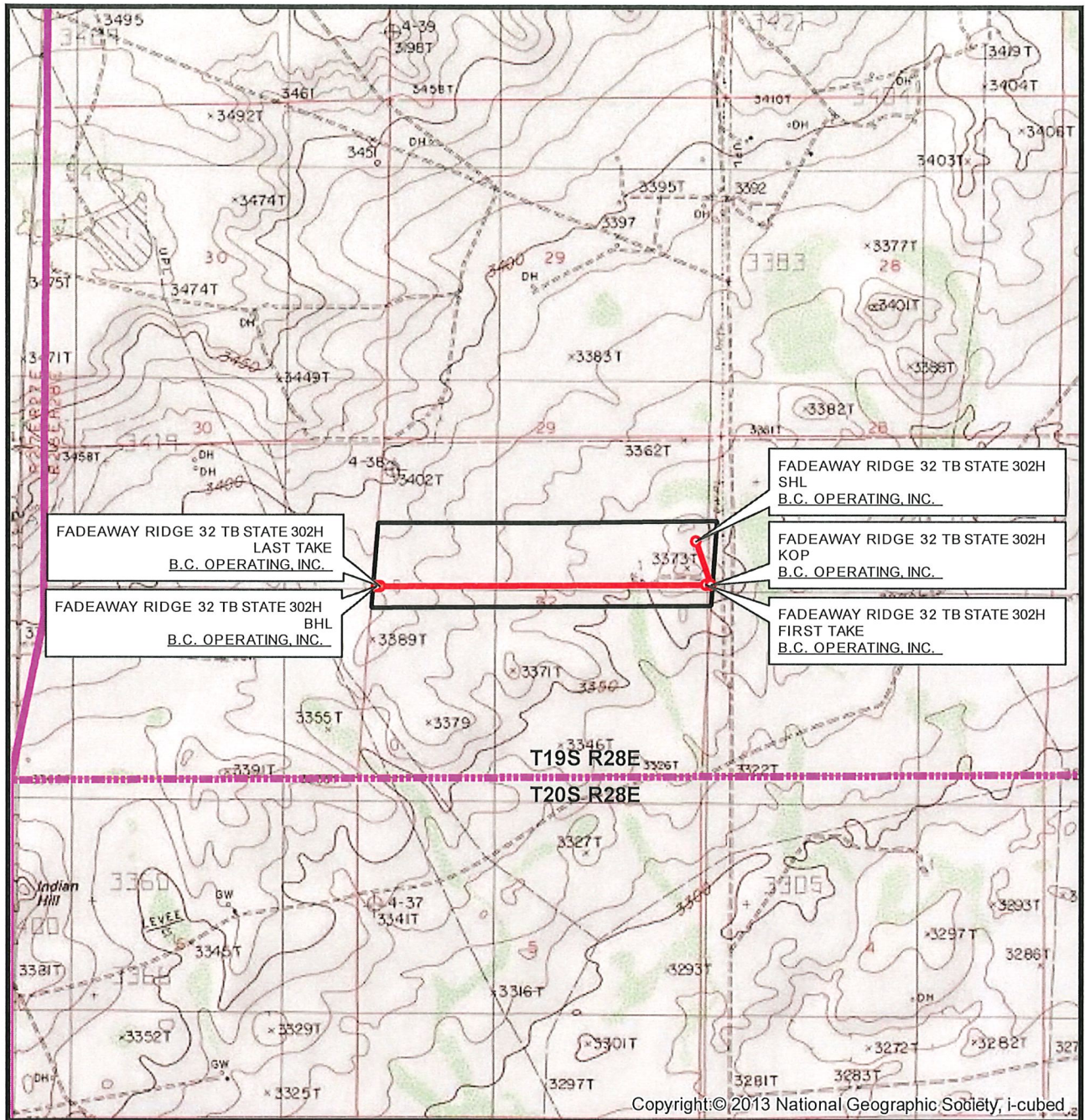
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	32	19S	28E		2300	NORTH	50	WEST	EDDY

¹² Dedicated Acres 160.0	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



LOCATION VERIFICATION MAP



SEC. 32 TWP. 19-S RGE. 28-E
SURVEY: N.M.P.M.
COUNTY: EDDY
OPERATOR: B.C. OPERATING, INC.
DESCRIPTION: 1626' FNL & 303' FEL
ELEVATION: 3365'
LEASE: FADEAWAY RIDGE 32 STATE
U.S.G.S. TOPOGRAPHIC MAP: ANGEL DRAW, NM.

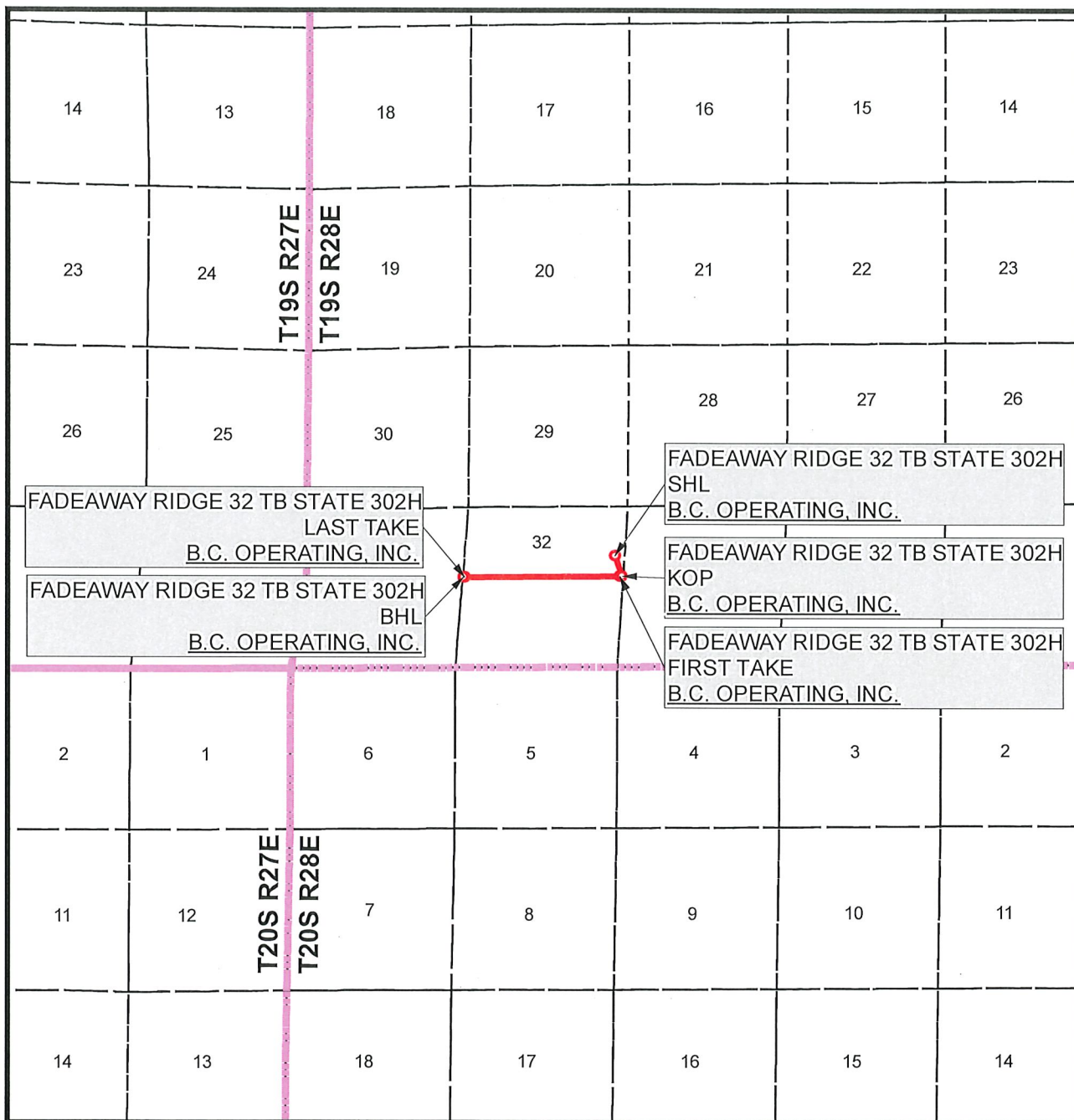
1" = 2,500'
CONTOUR INTERVAL = 10'



SHEET 2 OF 3

PREPARED BY:
R-SQUARED GLOBAL, LLC
1309 LOUISVILLE AVENUE, MONROE, LA 71201
318-323-6900 OFFICE
JOB No. R4037_002_B

VICINITY MAP



SEC. 32 TWP. 19-S RGE. 28-E

SURVEY: N.M.P.M.

COUNTY: EDDY

OPERATOR: B.C. OPERATING, INC.

DESCRIPTION: 1626' FNL & 303' FEL

ELEVATION: 3365'

LEASE: FADEAWAY RIDGE 32 STATE

U.S.G.S. TOPOGRAPHIC MAP: ANGEL DRAW, NM.

1" = 1 MILE



SHEET 3 OF 3

PREPARED BY:
R-SQUARED GLOBAL, LLC
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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

GAS CAPTURE PLAN

Date: 3/9/2020

☒ 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
Fadeaway Ridge 32 TB State #302H	30-015-46793	H-32-19S-28E	1626N 0303E	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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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Comments

Permit 278849

PERMIT COMMENTS

Operator Name and Address: BC OPERATING, INC. [160825] P.O. Box 50820 Midland, TX 79710		API Number: 30-015-46793
		Well: Fadeaway Ridge 32 TB State #302H

Created By	Comment	Comment Date
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Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Conditions

Permit 278849

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: BC OPERATING, INC. [160825] P.O. Box 50820 Midland, TX 79710		API Number: 30-015-46793
		Well: Fadeaway Ridge 32 TB State #302H

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 must notify operator(s) of other wells in same quarter-quarter section(s) before both drilling and completing.

CASING / CEMENT DESIGN SUMMARY

Estimate only, confirm volumes and cement blends prior to job, adjust as required for hole conditions and changes in well bore construction. Re-calculate all volumes prior to pump.

Surface Casing

Setting Depth										
	TVD	MD	Length	Size	Weight	Grade	Threads	ID	Drift	Conn OD
1	700.0 ft	700.0 ft	700.0 ft	13.375 in	48.0 #/ft	H40	STC	12.715 in	12.559 in	14.375 in
2	- ft	- ft	- ft	- in	- #/ft	-	-	- in	- in	- in
3	- ft	- ft	- ft	- in	- #/ft	-	-	- in	- in	- in

BURST			COLLAPSE			TENSILE			Optimum Torque	
Rated	Load	S.F.	Rated	Load	S.F.	Rated	Load	S.F.		
1	1,730 psi	466 psi	3.72	740 psi	284 psi	2.6	352,000 lbs	133,600 lbs	2.6	3,220 ft*lbs
2	- psi	- psi	0.00	- psi	- psi	-	- lbs	100,000 lbs	-	- ft*lbs
3	- psi	- psi	0.00	- psi	- psi	-	- lbs	100,000 lbs	-	- ft*lbs

Cement to Surf	0 - 700	Lead	0 sx	C+4% Gel+2% CaCl2+1/4 #/sx Cello Flake	Yield	1.75 ft3/sx
Excess	100% Lead				Density	13.5 ppg
	100% Tail	Tail	750 sx	C+2% CaCl2+1-GAL/100-SX CF-41L	Yield	1.34 ft3/sx
					Density	14.8 ppg

Intermediate Casing

Setting Depth										
	TVD	MD	Length	Size	Weight	Grade	Threads	ID	Drift	Conn OD
1	4,000.0 ft	4,000.0 ft	4,000.0 ft	9.625 in	36.0 #/ft	J55	STC	8.921 in	8.765 in	10.625 in
2	- ft	- ft	- ft	- in	- #/ft	-	-	- in	- in	- in
3	- ft	- ft	- ft	- in	- #/ft	-	-	- in	- in	- in

BURST			COLLAPSE			TENSILE			Optimum Torque	
Rated	Load	S.F.	Rated	Load	S.F.	Rated	Load	S.F.		
1	3,520 psi	1,412 psi	2.49	2,020 psi	1,412 psi	1.4	394,000 lbs	144,000 lbs	2.7	3,940 ft*lbs
2	- psi	1,872 psi	0.00	- psi	- psi	-	- lbs	- lbs	-	- ft*lbs
3	- psi	1,872 psi	0.00	- psi	- psi	-	- lbs	- lbs	-	- ft*lbs

Intermediate	0 - 4000	Lead	580 sx	C 50:50:10+6/10% SMS+1/4 #/sx CF	Yield	2.91 ft3/sx
3600 - 0	50% Lead			+5% SALT+1-GAL/100-SX CF-41L	Density	11.3 ppg
4000 - 3600	50% Tail	Tail	160 sx	C+1-GAL/100-SX CF-41L	Yield	1.33 ft3/sx
					Density	14.8 ppg

Production Liner

Production Data										
Setting Depth										
	TVD	MD	Length	Size	Weight	Grade	Threads	ID	Drift	Conn OD
1	7,844.0 ft	7,844.0 ft	7,844.0 ft	7.000 in	29.0 #/ft	HCP110	GBCD	6.276 in	6.151 in	7.656 in
2	8,750.0 ft	6,288.0 ft	6,288.0 ft	5.500 in	17.0 #/ft	HCP110	GBCD	4.892 in	4.767 in	6.050 in
3	- ft	- ft	- ft	- in	- #/ft	-	-	- in	- in	- in

BURST			COLLAPSE			TENSILE			Optimum	
Rated	Load	S.F.	Rated	Load	S.F.	Rated	Load	S.F.	Torque	
1	9,950 psi	4,604 psi	2.16	6,230 psi	3,585 psi	1.74	639,000 lbs	242,878 lbs	2.63	6,930 ft*lbs
2	10,640 psi	5,136 psi	2.07	8,580 psi	3,999 psi	2.15	445,000 lbs	15,402 lbs	28.89	6,470 ft*lbs
3	- psi	- psi	0.00	- psi	- psi	-	- lbs	- lbs	-	- ft*lbs

Production	3000 - 14132	Lead	370 sx			0	Yield	1.72 ft3/sx
6000 - 3000	40% Lead					0	Density	13.2 ppg
14132 - 6000	40% Tail	Tail	1460 sx	Solucem Cement+.25lb/sk D-Air 5000 + .7% HR-601			Yield	1.18 ft3/sx
Preflush	Mud Compatible Spacer					0	Density	15.6 ppg

Hydrogen Sulfide Drilling Operations Plan

BC Operating, Inc.

Fadeaway Ridge 32 TB State 302H

SHL: 1626' FNL & 303' FEL, Section 32

BHL: 2300' FNL & 50' FWL, Section 32

T19S-R28E

Eddy County, New Mexico

1. H2S Detection and Alarm Systems
 - A. H2S detectors and audio alarm system to be located at bell nipple, end of flow line (mud pit) and on derrick floor or doghouse.
2. Windsock and/or wind streamers
 - A. Windsock at mudpit area should be high enough to be visible.
 - B. Windsock at briefing area should be high enough to be visible.
3. Condition Flags and Signs
 - A. Warning sign on access road to location.
 - B. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H2S present in dangerous concentration. Only emergency personnel admitted to location.
4. Well control equipment
 - A. See "Pressure Control Equipment"
5. Communication
 - A. While working under masks chalkboards will be used for communication.
 - B. Hand signals will be used where chalk board is inappropriate.
 - C. Two-way radio will be used to communicate off location in case emergency help is required.
In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
6. Drillstem testing is not anticipated.
7. Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubular goods and other mechanical equipment.
8. If H2S is encountered, mud system will be altered if necessary, to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary.

BC Operating, Inc.
Fadeaway Ridge 32 TB State 302H
SHL: 1626' FNL & 303' FEL, Section 32
BHL: 2300' FNL & 50' FWL, Section 32
T19S-R28E
Eddy County, New Mexico

Emergency Contact list

BC Operating, Inc.	432-684-9696
Thomas Wolfmueller	432-214-1985
Jason Wacker	432-631-2142
Bruce Madden	432-894-0721

EMERGENCY RESPONSE NUMBERS

State Police	575-748-9718
State Police Lea Co.	575-392-5588
Eddy County Sheriff	575-746-2701
Lea County Sheriff	575-396-3611
Emergency Medical Services	911 or 575-746-2701
Artesia Fire and Ambulance	575-746-5050
Maljamar Fire and Ambulance	575-674-4100
Artesia General Hospital	575-748-3333
702 N. 13th St. Artesia	
Carlsbad Medical Center	575-887-4100
2430 West Pierce Street	
Lea County Emergency Response	575-396-8602
Lea County Ambulance Eunice	911 or 575-396-8602
Carlsbad Police Department	575-885-2111
Eddy County Emergency Management	575-887-9511
Carlsbad Fire Department	575-885-3125

Fadeaway Ridge 32 TB State 302H

Drilling Program



API No: <pending>

Permit: <pending>

SHL: 1626 FNL & 303 FEL, Sec 32, T19S R28E, NMPM

Eddy County

BHL: 2300 FNL & 50 FWL, Sec 32, T19S R28E, NMPM

Field: Winchester; Bone Spring

NM

AFE #: 318051-02H

Contractor: <pending>

Date: 9-Jan-20

WELLBORE SCHEMATIC		MD	TVD	Dev deg	SECTION COMMENTS	Survey x:y Coordinates
Hole Size	Formation				Pre-Drill Prognosis	
17 1/2	KB	3,392.0 feet			Daily Reports in by 06:30 Thomas Wolfmueller- 432-214-1985 twolfmueller@bcoperating.com	SHL x: 585132.53
	Ground	3,365.0 feet				y: 589271.86
	Csg Flng	3,363.8 feet				BHL x: 580173.70
						y: 588572.25
12 1/4	Base Ogallala	325			Pre-Set Surface Casing	Planned
					If no inc/azi tool: Gyro Surface Hole	5422' VS, 4747' lateral
	Alt Surf Csg	700		0.0	* CEMENT TO SURFACE *	Mud
	Surface Casing	700		700'	13.375in, 48.lb, H40, STC	Lead 0 sx, 13.5 ppg
		TOC	0			Tail 750 sx, 14.8 ppg
	Yates	790	790	0.0	Confirm 12 1/4" BHA with engineering	Drill out with 10# brine
	Seven Rivers	1,250	1,250			
	Queen	1,700	1,700			
	Grayburg	2,190	2,190			Add 10# brine for make up to
	San Andres	2,780	2,780	0.0	Run fluid caliper to calc cement vol to Surface	MW 10.0
8 3/4	Intermediate Casing	4,000		4,000'	9.625in, 36.lb, J55, STC	Lead 580 sx, 11.3 ppg
		TOC	0			Tail 160 sx, 14.8 ppg
	Bone Spring Lime	3,750	3,750	0.0	Drill out shoe with cut brine	Cut Brine
					Confirm 8 3/4" BHA w/ engineering	MW 8.9-9.1
	FBSG Sand	6,775	6,775	0.0	Drill down to KOP as per program	pH 10-10.5
	SBSG Sand	7,155	7,155	0.0	Reduce flow as needed for seepage	Losses in Canyon Sands
					Survey every stand	Maintain LCM sweeps
					At KOP increase MW with 10#, if necessary	
					P/U 8 3/4" Dir BHA. Confirm w/ engineering	
	KOP	7,844	7,844	0	Drill curve as per plan	
	TBSG	8,425	8,300	48	Confirm landing point.	
	55°	8,307	8,238	56		
	3rd BS	9,385	8,800	90.0		
	EOB	9,385	8,800	90.6	P/U 8 3/4" BHA, Confirm with Engineering	
					Drill curve/lateral section as prog	
					Drill to TD and condition lateral for csg	
					Confirm TD	
					Follow Clean up program at TD	
	Total Depth	14,132	8,750	90.5	Planned 5422' VS, 4747' lateral	
	Production Casing	14,132		7,844'	7.in, 29.lb, HCP110, GB CD	Lead 370 sx, 13.2 ppg
		TOC	3,000	6,288'	5.5in, 17.lb, HCP110, GB CD	Tail 1460 sx, 15.6 ppg
Wellhead Data		Multibowl		Primary Contacts		Phone
		Tubing Spool		Drilling		
		13-5/8"5M x 7-1/16" 10M		Drilling Fluids		
		Multi Bowl		Casing		
		13-5/8"5M x 13-5/8"5M		Directional		
		x 10 3/4"x 7 5/8"x 51/2"		Cement (Surf)		
		Casing Flange		Cement (Prod)		
		13-5/8"5Mx13-3/8 SOW		Rental - Centrifuges		
				Mud Logging		
				Wellhead		

Directions

From the intersection 285 and N Loop Rd (north of Carlsbad). Go East on N Loop Rd for 3.25 miles to 206(Illinois Camp Rd). Go north on 206 for 12 miles. Turn right and go 2.17 miles. Turn right to rig.

Lat: #

Lon: 104.2



BC Operating, Inc.

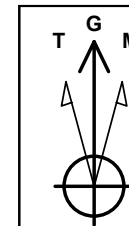
Fadeaway Ridge 32 SB State 302H
Eddy Co., NM (NAD 83 NME)
Job No. WT-20-***
Rig - N/A



Received by OCD: 3/9/2020 8:44:00 AM

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	0.000	0.00	0.00		
2	7844.60	0.00	0.00	7844.60	0.00	0.00	0.000	0.00	0.00		KOP: 12°/100' @ 7844.60' MD
3	8307.10	55.50	129.90	8238.09	-132.80	158.82	12.000	129.90	-138.72		Build: 12°/100' @ 8307.10' MD
4	9385.71	90.60	269.68	8800.00	-672.86	-212.85	12.000	123.28	304.76		Hold: 90.60° Inc, 269.68° Azm
5	14132.00	90.60	269.68	8750.00	-699.61	-4958.80	0.000	0.00	5007.91	PBHL - Fadeaway 302H	TD @ 14132.00' MD/8750.00' TVD



Azimuths to Grid North
True North: -0.08°
Magnetic North: 7.10°

Magnetic Field
Strength: 47909.7nT
Dip Angle: 60.32°
Date: 1/30/2020
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

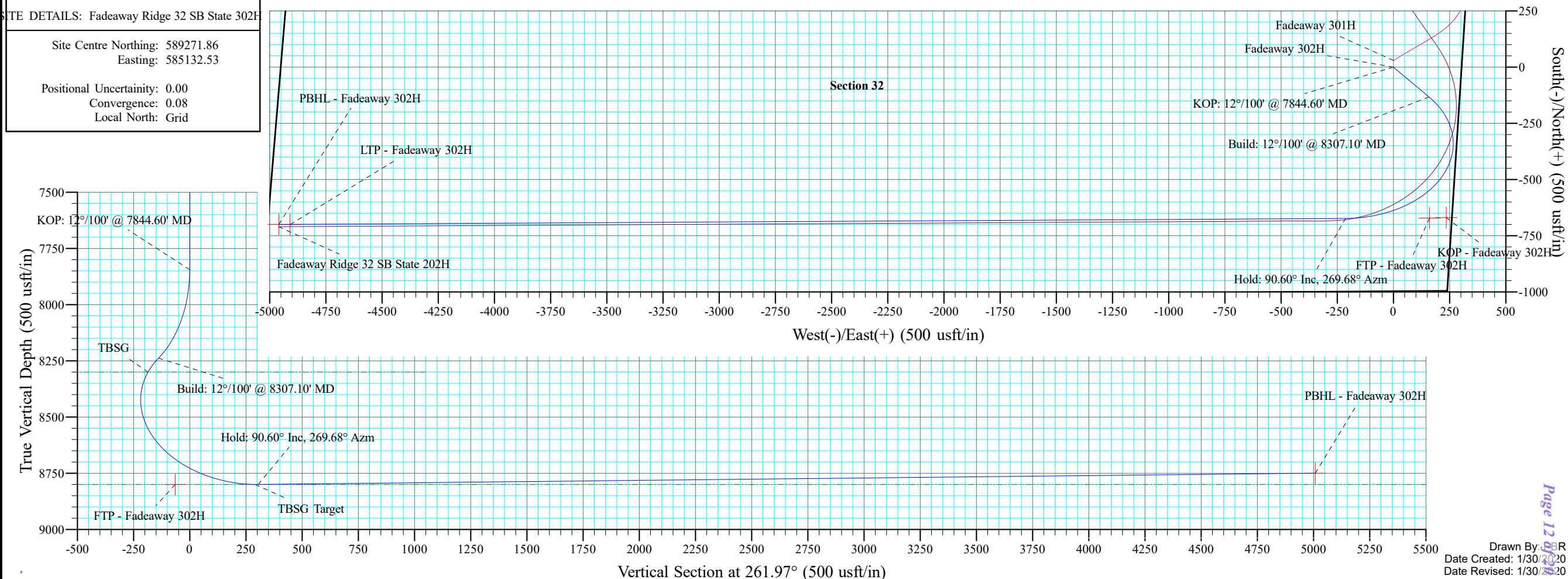
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
KOP - Fadeaway 302H	0.00	-669.43	235.36	588602.43	585367.89	32° 37' 4.935 N	104° 11' 25.177 W
LTP - Fadeaway 302H	0.00	-700.03	-4908.69	588571.83	580223.84	32° 37' 4.696 N	104° 12' 25.323 W
PBHL - Fadeaway 302H	8750.00	-699.61	-4958.80	588572.25	580173.73	32° 37' 4.701 N	104° 12' 25.909 W
FTP - Fadeaway 302H	8800.00	-671.09	160.10	588600.77	585292.63	32° 37' 4.919 N	104° 11' 26.057 W

SITE DETAILS: Fadeaway Ridge 32 SB State 302H

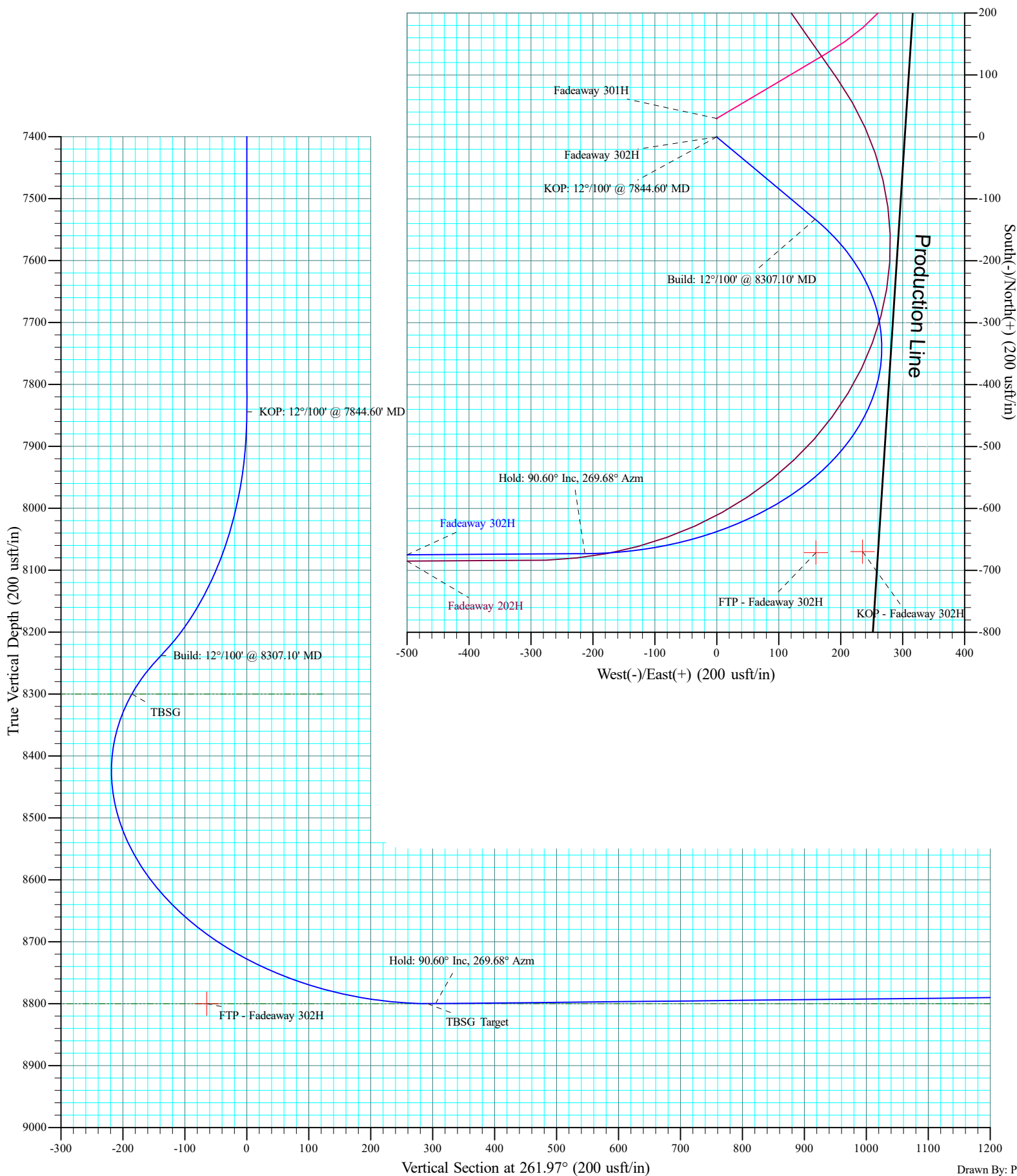
Site Centre Northing: 589271.86
Easting: 585132.53

Positional Uncertainty: 0.00
Convergence: 0.08
Local North: Grid



South(-)/North(+) (500 usft/in)

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Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Fadeaway 302H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	Well @ 3385.00usft (Est. 20'KB)
Site:	Fadeaway Ridge 32 SB State 302H	MD Reference:	Well @ 3385.00usft (Est. 20'KB)
Well:	Fadeaway 302H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

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	Fadeaway Ridge 32 SB State 302H		
Site Position:		Northing:	589,271.86 usft
From:	Map	Easting:	585,132.53 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 37' 11.562 N
		Longitude:	104° 11' 27.918 W
		Grid Convergence:	0.08 °

Well	Fadeaway 302H		
Well Position	+N/-S	0.00 usft	Northing: 589,271.86 usft
	+E/-W	0.00 usft	Easting: 585,132.53 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 37' 11.562 N
		Longitude:	104° 11' 27.918 W
		Ground Level:	3,365.00 usft

Wellbore	Planning		
Magnetics	Model Name	Sample Date	Declination (°)
	MVHD	1/30/2020	7.18
			Dip Angle (°) 60.32
			Field Strength (nT) 47,909.699

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 (°) 261.97

Survey Tool Program	Date	1/30/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	14,132.00	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 (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	0.000	0.000
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.000	0.000	0.000
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.000	0.000	0.000
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.000	0.000	0.000
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.000	0.000	0.000
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.000	0.000	0.000
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.000	0.000	0.000
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.000	0.000	0.000
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.000	0.000	0.000
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.000	0.000	0.000



Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Fadeaway 302H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	Well @ 3385.00usft (Est. 20'KB)
Site:	Fadeaway Ridge 32 SB State 302H	MD Reference:	Well @ 3385.00usft (Est. 20'KB)
Well:	Fadeaway 302H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.000	0.000	0.000
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.000	0.000	0.000
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.000	0.000	0.000
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.000	0.000	0.000
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.000	0.000	0.000
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.000	0.000	0.000
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.000	0.000	0.000
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.000	0.000	0.000
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.000	0.000	0.000
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.000	0.000	0.000
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.000	0.000	0.000
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.000	0.000	0.000
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.000	0.000	0.000
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.000	0.000	0.000
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.000	0.000	0.000
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.000	0.000	0.000
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.000	0.000	0.000
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.000	0.000	0.000
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.000	0.000	0.000
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.000	0.000	0.000
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.000	0.000	0.000
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.000	0.000	0.000
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.000	0.000	0.000
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.000	0.000	0.000
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.000	0.000	0.000
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.000	0.000	0.000
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.000	0.000	0.000
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.000	0.000	0.000
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.000	0.000	0.000
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.000	0.000	0.000
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.000	0.000	0.000
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.000	0.000	0.000
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.000	0.000	0.000
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.000	0.000	0.000
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.000	0.000	0.000
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.000	0.000	0.000
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.000	0.000	0.000
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.000	0.000	0.000
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.000	0.000	0.000
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.000	0.000	0.000
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.000	0.000	0.000
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.000	0.000	0.000
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.000	0.000	0.000
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.000	0.000	0.000



Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Fadeaway 302H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	Well @ 3385.00usft (Est. 20'KB)
Site:	Fadeaway Ridge 32 SB State 302H	MD Reference:	Well @ 3385.00usft (Est. 20'KB)
Well:	Fadeaway 302H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.000	0.000	0.000
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.000	0.000	0.000
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.000	0.000	0.000
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.000	0.000	0.000
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.000	0.000	0.000
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.000	0.000	0.000
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.000	0.000	0.000
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.000	0.000	0.000
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.000	0.000	0.000
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.000	0.000	0.000
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.000	0.000	0.000
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.000	0.000	0.000
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.000	0.000	0.000
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.000	0.000	0.000
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.000	0.000	0.000
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.000	0.000	0.000
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.000	0.000	0.000
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.000	0.000	0.000
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.000	0.000	0.000
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.000	0.000	0.000
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.000	0.000	0.000
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.000	0.000	0.000
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.000	0.000	0.000
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.000	0.000	0.000
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.000	0.000	0.000
7,844.60	0.00	0.00	7,844.60	0.00	0.00	0.00	0.000	0.000	0.000
KOP: 12°/100' @ 7844.60' MD									
7,850.00	0.65	129.90	7,850.00	-0.02	0.02	-0.02	12.000	12.000	0.000
7,875.00	3.65	129.90	7,874.98	-0.62	0.74	-0.65	12.000	12.000	0.000
7,900.00	6.65	129.90	7,899.88	-2.06	2.46	-2.15	12.000	12.000	0.000
7,925.00	9.65	129.90	7,924.62	-4.33	5.18	-4.52	12.000	12.000	0.000
7,950.00	12.65	129.90	7,949.15	-7.43	8.89	-7.76	12.000	12.000	0.000
7,975.00	15.65	129.90	7,973.39	-11.35	13.58	-11.86	12.000	12.000	0.000
8,000.00	18.65	129.90	7,997.27	-16.08	19.23	-16.80	12.000	12.000	0.000
8,025.00	21.65	129.90	8,020.74	-21.60	25.84	-22.56	12.000	12.000	0.000
8,050.00	24.65	129.90	8,043.72	-27.91	33.37	-29.15	12.000	12.000	0.000
8,075.00	27.65	129.90	8,066.16	-34.97	41.83	-36.53	12.000	12.000	0.000
8,100.00	30.65	129.90	8,087.99	-42.78	51.17	-44.69	12.000	12.000	0.000
8,125.00	33.65	129.90	8,109.16	-51.31	61.37	-53.60	12.000	12.000	0.000
8,150.00	36.65	129.90	8,129.60	-60.54	72.41	-63.24	12.000	12.000	0.000
8,175.00	39.65	129.90	8,149.26	-70.45	84.26	-73.59	12.000	12.000	0.000
8,200.00	42.65	129.90	8,168.08	-81.00	96.87	-84.61	12.000	12.000	0.000
8,225.00	45.65	129.90	8,186.02	-92.17	110.23	-96.28	12.000	12.000	0.000



Survey Report

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Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	Well @ 3385.00usft (Est. 20'KB)
Site:	Fadeaway Ridge 32 SB State 302H	MD Reference:	Well @ 3385.00usft (Est. 20'KB)
Well:	Fadeaway 302H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,250.00	48.65	129.90	8,203.02	-103.92	124.29	-108.55	12.000	12.000	0.000
8,275.00	51.65	129.90	8,219.03	-116.23	139.01	-121.41	12.000	12.000	0.000
8,300.00	54.65	129.90	8,234.03	-129.06	154.36	-134.81	12.000	12.000	0.000
8,307.10	55.50	129.90	8,238.09	-132.80	158.82	-138.72	12.000	12.000	0.000
Build: 12°/100' @ 8307.10' MD									
8,325.00	54.34	132.11	8,248.38	-142.41	169.88	-148.32	12.000	-6.473	12.348
8,350.00	52.79	135.30	8,263.23	-156.30	184.42	-160.78	12.000	-6.192	12.777
8,375.00	51.33	138.63	8,278.60	-170.70	197.87	-172.09	12.000	-5.835	13.297
8,400.00	49.97	142.09	8,294.45	-185.58	210.21	-182.22	12.000	-5.444	13.831
8,425.00	48.72	145.68	8,310.74	-200.89	221.39	-191.16	12.000	-5.016	14.371
8,450.00	47.58	149.41	8,327.43	-216.60	231.38	-198.86	12.000	-4.553	14.907
8,475.00	46.57	153.26	8,344.45	-232.65	240.17	-205.31	12.000	-4.053	15.427
8,500.00	45.69	157.24	8,361.78	-249.01	247.71	-210.50	12.000	-3.517	15.917
8,525.00	44.95	161.33	8,379.37	-265.63	254.00	-214.40	12.000	-2.949	16.361
8,550.00	44.36	165.52	8,397.15	-282.46	259.01	-217.02	12.000	-2.351	16.744
8,575.00	43.93	169.78	8,415.10	-299.46	262.74	-218.33	12.000	-1.727	17.051
8,600.00	43.66	174.10	8,433.15	-316.59	265.17	-218.34	12.000	-1.085	17.270
8,625.00	43.55	178.45	8,451.25	-333.78	266.29	-217.05	12.000	-0.430	17.390
8,650.00	43.61	182.80	8,469.37	-351.01	266.10	-214.46	12.000	0.231	17.406
8,675.00	43.83	187.13	8,487.44	-368.22	264.60	-210.57	12.000	0.888	17.317
8,700.00	44.22	191.41	8,505.42	-385.35	261.81	-205.41	12.000	1.535	17.127
8,725.00	44.76	195.62	8,523.26	-402.38	257.71	-198.98	12.000	2.165	16.846
8,750.00	45.45	199.74	8,540.91	-419.24	252.33	-191.29	12.000	2.771	16.484
8,775.00	46.29	203.76	8,558.32	-435.90	245.68	-182.38	12.000	3.349	16.057
8,800.00	47.26	207.65	8,575.44	-452.31	237.78	-172.26	12.000	3.895	15.579
8,825.00	48.36	211.42	8,592.23	-468.42	228.65	-160.97	12.000	4.406	15.066
8,850.00	49.58	215.05	8,608.65	-484.18	218.31	-148.53	12.000	4.880	14.534
8,875.00	50.91	218.55	8,624.64	-499.57	206.79	-134.98	12.000	5.319	13.993
8,900.00	52.34	221.91	8,640.16	-514.52	194.14	-120.36	12.000	5.721	13.457
8,925.00	53.87	225.15	8,655.17	-529.01	180.36	-104.70	12.000	6.088	12.932
8,950.00	55.47	228.25	8,669.63	-542.99	165.52	-88.05	12.000	6.422	12.427
8,975.00	57.15	231.24	8,683.50	-556.43	149.65	-70.45	12.000	6.725	11.946
9,000.00	58.90	234.11	8,696.74	-569.28	132.78	-51.96	12.000	6.998	11.493
9,025.00	60.71	236.88	8,709.31	-581.51	114.98	-32.62	12.000	7.243	11.070
9,050.00	62.58	239.55	8,721.19	-593.09	96.28	-12.48	12.000	7.463	10.679
9,075.00	64.49	242.13	8,732.33	-603.99	76.73	8.39	12.000	7.660	10.319
9,100.00	66.45	244.63	8,742.71	-614.18	56.40	29.95	12.000	7.835	9.992
9,125.00	68.45	247.05	8,752.29	-623.63	35.34	52.12	12.000	7.990	9.695
9,150.00	70.48	249.41	8,761.06	-632.30	13.60	74.86	12.000	8.126	9.430
9,175.00	72.54	251.71	8,768.99	-640.19	-8.76	98.10	12.000	8.245	9.194
9,200.00	74.63	253.95	8,776.06	-647.27	-31.67	121.77	12.000	8.348	8.987
9,225.00	76.74	256.16	8,782.24	-653.51	-55.07	145.82	12.000	8.437	8.808
9,250.00	78.87	258.32	8,787.52	-658.91	-78.90	170.17	12.000	8.511	8.656
9,275.00	81.01	260.45	8,791.89	-663.44	-103.09	194.76	12.000	8.572	8.530



Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Fadeaway 302H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	Well @ 3385.00usft (Est. 20'KB)
Site:	Fadeaway Ridge 32 SB State 302H	MD Reference:	Well @ 3385.00usft (Est. 20'KB)
Well:	Fadeaway 302H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,300.00	83.16	262.56	8,795.33	-667.10	-127.58	219.51	12.000	8.620	8.429
9,325.00	85.33	264.65	8,797.84	-669.87	-152.29	244.38	12.000	8.657	8.353
9,350.00	87.50	266.72	8,799.40	-671.74	-177.17	269.27	12.000	8.681	8.302
9,375.00	89.67	268.79	8,800.02	-672.72	-202.14	294.13	12.000	8.694	8.274
9,385.71	90.60	269.68	8,800.00	-672.86	-212.85	304.76	12.000	8.697	8.268
Hold: 90.60° Inc, 269.68° Azm									
9,400.00	90.60	269.68	8,799.85	-672.95	-227.14	318.92	0.000	0.000	0.000
9,500.00	90.60	269.68	8,798.79	-673.51	-327.13	418.01	0.000	0.000	0.000
9,600.00	90.60	269.68	8,797.74	-674.07	-427.13	517.10	0.000	0.000	0.000
9,700.00	90.60	269.68	8,796.69	-674.64	-527.12	616.19	0.000	0.000	0.000
9,800.00	90.60	269.68	8,795.63	-675.20	-627.11	715.28	0.000	0.000	0.000
9,900.00	90.60	269.68	8,794.58	-675.76	-727.10	814.37	0.000	0.000	0.000
10,000.00	90.60	269.68	8,793.53	-676.33	-827.10	913.46	0.000	0.000	0.000
10,100.00	90.60	269.68	8,792.47	-676.89	-927.09	1,012.56	0.000	0.000	0.000
10,200.00	90.60	269.68	8,791.42	-677.45	-1,027.08	1,111.65	0.000	0.000	0.000
10,300.00	90.60	269.68	8,790.37	-678.02	-1,127.08	1,210.74	0.000	0.000	0.000
10,400.00	90.60	269.68	8,789.31	-678.58	-1,227.07	1,309.83	0.000	0.000	0.000
10,500.00	90.60	269.68	8,788.26	-679.14	-1,327.06	1,408.92	0.000	0.000	0.000
10,600.00	90.60	269.68	8,787.21	-679.71	-1,427.05	1,508.01	0.000	0.000	0.000
10,700.00	90.60	269.68	8,786.15	-680.27	-1,527.05	1,607.10	0.000	0.000	0.000
10,800.00	90.60	269.68	8,785.10	-680.83	-1,627.04	1,706.19	0.000	0.000	0.000
10,900.00	90.60	269.68	8,784.04	-681.40	-1,727.03	1,805.28	0.000	0.000	0.000
11,000.00	90.60	269.68	8,782.99	-681.96	-1,827.03	1,904.38	0.000	0.000	0.000
11,100.00	90.60	269.68	8,781.94	-682.52	-1,927.02	2,003.47	0.000	0.000	0.000
11,200.00	90.60	269.68	8,780.88	-683.09	-2,027.01	2,102.56	0.000	0.000	0.000
11,300.00	90.60	269.68	8,779.83	-683.65	-2,127.00	2,201.65	0.000	0.000	0.000
11,400.00	90.60	269.68	8,778.78	-684.22	-2,227.00	2,300.74	0.000	0.000	0.000
11,500.00	90.60	269.68	8,777.72	-684.78	-2,326.99	2,399.83	0.000	0.000	0.000
11,600.00	90.60	269.68	8,776.67	-685.34	-2,426.98	2,498.92	0.000	0.000	0.000
11,700.00	90.60	269.68	8,775.62	-685.91	-2,526.98	2,598.01	0.000	0.000	0.000
11,800.00	90.60	269.68	8,774.56	-686.47	-2,626.97	2,697.11	0.000	0.000	0.000
11,900.00	90.60	269.68	8,773.51	-687.03	-2,726.96	2,796.20	0.000	0.000	0.000
12,000.00	90.60	269.68	8,772.46	-687.60	-2,826.96	2,895.29	0.000	0.000	0.000
12,100.00	90.60	269.68	8,771.40	-688.16	-2,926.95	2,994.38	0.000	0.000	0.000
12,200.00	90.60	269.68	8,770.35	-688.72	-3,026.94	3,093.47	0.000	0.000	0.000
12,300.00	90.60	269.68	8,769.30	-689.29	-3,126.93	3,192.56	0.000	0.000	0.000
12,400.00	90.60	269.68	8,768.24	-689.85	-3,226.93	3,291.65	0.000	0.000	0.000
12,500.00	90.60	269.68	8,767.19	-690.41	-3,326.92	3,390.74	0.000	0.000	0.000
12,600.00	90.60	269.68	8,766.14	-690.98	-3,426.91	3,489.83	0.000	0.000	0.000
12,700.00	90.60	269.68	8,765.08	-691.54	-3,526.91	3,588.93	0.000	0.000	0.000
12,800.00	90.60	269.68	8,764.03	-692.10	-3,626.90	3,688.02	0.000	0.000	0.000
12,900.00	90.60	269.68	8,762.98	-692.67	-3,726.89	3,787.11	0.000	0.000	0.000
13,000.00	90.60	269.68	8,761.92	-693.23	-3,826.88	3,886.20	0.000	0.000	0.000



Survey Report

Company:	BC Operating, Inc.	Local Co-ordinate Reference:	Well Fadeaway 302H
Project:	Eddy Co., NM (NAD 83 NME)	TVD Reference:	Well @ 3385.00usft (Est. 20'KB)
Site:	Fadeaway Ridge 32 SB State 302H	MD Reference:	Well @ 3385.00usft (Est. 20'KB)
Well:	Fadeaway 302H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
13,100.00	90.60	269.68	8,760.87	-693.79	-3,926.88	3,985.29	0.000	0.000	0.000
13,200.00	90.60	269.68	8,759.82	-694.36	-4,026.87	4,084.38	0.000	0.000	0.000
13,300.00	90.60	269.68	8,758.76	-694.92	-4,126.86	4,183.47	0.000	0.000	0.000
13,400.00	90.60	269.68	8,757.71	-695.49	-4,226.86	4,282.56	0.000	0.000	0.000
13,500.00	90.60	269.68	8,756.66	-696.05	-4,326.85	4,381.66	0.000	0.000	0.000
13,600.00	90.60	269.68	8,755.60	-696.61	-4,426.84	4,480.75	0.000	0.000	0.000
13,700.00	90.60	269.68	8,754.55	-697.18	-4,526.83	4,579.84	0.000	0.000	0.000
13,800.00	90.60	269.68	8,753.50	-697.74	-4,626.83	4,678.93	0.000	0.000	0.000
13,900.00	90.60	269.68	8,752.44	-698.30	-4,726.82	4,778.02	0.000	0.000	0.000
14,000.00	90.60	269.68	8,751.39	-698.87	-4,826.81	4,877.11	0.000	0.000	0.000
14,100.00	90.60	269.68	8,750.34	-699.43	-4,926.81	4,976.20	0.000	0.000	0.000
14,132.00	90.60	269.68	8,750.00	-699.61	-4,958.80	5,007.91	0.000	0.000	0.000
TD @ 14132.00' MD/8750.00' TVD									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LTP - Fadeaway 302H - hit/miss target - Shape - Point	0.00	0.00	0.00	-700.03	-4,908.69	588,571.83	580,223.84	32° 37' 4.696 N	104° 12' 25.323 W
- plan misses target center by 4958.35usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
KOP - Fadeaway 302H - plan misses target center by 709.60usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Point	0.00	0.00	0.00	-669.43	235.36	588,602.43	585,367.89	32° 37' 4.935 N	104° 11' 25.177 W
PBHL - Fadeaway 302H - plan hits target center - Point	0.00	0.00	8,750.00	-699.61	-4,958.80	588,572.25	580,173.73	32° 37' 4.701 N	104° 12' 25.909 W
FTP - Fadeaway 302H - plan misses target center by 126.37usft at 9069.24usft MD (8729.83 TVD, -601.55 N, 81.30 E) - Point	0.00	0.00	8,800.00	-671.09	160.10	588,600.77	585,292.63	32° 37' 4.919 N	104° 11' 26.057 W



Survey Report

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Site:	Fadeaway Ridge 32 SB State 302H	MD Reference:	Well @ 3385.00usft (Est. 20'KB)
Well:	Fadeaway 302H	North Reference:	Grid
Wellbore:	Planning	Survey Calculation Method:	Minimum Curvature
Design:	Lateral 1r0	Database:	EDMRESTORED

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
640.00	640.00	Tansill		0.00	
790.00	790.00	Yates		0.00	
1,250.00	1,250.00	Seven Rivers		0.00	
1,700.00	1,700.00	Queen		0.00	
2,190.00	2,190.00	Grayburg		0.00	
2,780.00	2,780.00	San Andres		0.00	
3,750.00	3,750.00	Bone Spring Lime		0.00	
6,775.00	6,775.00	FBSG Sand		0.00	
7,155.00	7,155.00	SBSG Sand		0.00	
8,408.59	8,300.00	TBSG		0.00	
9,372.26	8,800.00	TBSG Target		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7845	7845	0	0	KOP: 12°/100' @ 7844.60' MD
8307	8238	-133	159	Build: 12°/100' @ 8307.10' MD
9386	8800	-673	-213	Hold: 90.60° Inc, 269.68° Azm
14,132	8750	-700	-4959	TD @ 14132.00' MD/8750.00' TVD

Checked By: _____ Approved By: _____ Date: _____