Well Name: GOONCH FED COM 0409
Well Location: T22S / R28E / SEC 33 / SESE / 32.3432168 / -104.0848194
County or Parish/State: EDDY / NM

Well Number: 234H
Type of Well: CONVENTIONAL GAS WELL
Allottee or Tribe Name:

Lease Number: NMNM13233
Unit or CA Name:
Unit or CA Number:

US Well Number: 300154706300X1
Well Status: Drilling Well
Operator: NOVO OIL AND GAS NORTHERN DELA

Notice of Intent

Type of Submission: Notice of Intent
Type of Action Other

Date Sundry Submitted: 03/02/2021
Time Sundry Submitted: 01:38

Date proposed operation will begin: 03/15/2021

Procedure Description: Request to change as follows: Move Surface Hole Location From: 475’ FSL & 285’ FEL, Section 33, T-22-S, R-28-E, SESE To: 475’ FSL & 215’ FEL, Section 33, T-22-S, R-28-E, SESE Moved on the same pad site and there will be no new surface disturbance. Move Bottom Hole Location From: 130’ FSL & 330’ FEL, Section 9, T-23-S, R-28-E, SESE To: 130’ FSL & 330’ FEL, Section 9, T-23-S, R-28-E, SESE Production Formation From: Wolfcamp B To: Wolfcamp XY Casing Substitution Hole Size: 9-7/8”, Casing: 8-5/8”, 32 ppf, P-110, TLW to be set at 8,875’ TMD. Design Safety Factors: Burst 5.95, Collapse 1.49, Tension 3.38 (Casing Specification Sheet is attached) Hole Size: 7-7/8”, Casing: 5-1/2”, 20 ppf, P-110, DWC/C IS+ to be set at 20,975’ TMD. Design Safety Factors: Burst 1.25, Collapse 2.86, Tension 2.78 (Casing Specification Sheet is attached) Single Stage Cement Job for 8-5/8” Intermediate Casing String (TOC = Surface) Lead: 600 Sacks; 2,148 cu. ft.; 100% excess; 3.58 cu.ft./sx; 10 ppg; Class C + retarder + LCM + beads; 900 psi 24-hour compressive strength. Tail: 130 Sacks; 180.7 cu. ft; 50% excess; 1.39 cu.ft./sx; 13.8 ppg; Class C + retarder + LCM; 1,200 psi 24-hour compressive strength. Singe Stage Cement Job for 5-1/2” Production Casing String (TOC = Surface) Lead: 683 Sacks; 1,447.2 cu. ft.; 20% excess; 2.12 cu.ft./sx; 12 ppg; Class C + retarder; 1,200 psi 24-hour compressive strength. Tail: 2,065 Sacks; 3,282.6 cu. ft; 20% excess; 1.59 cu.ft./sx; 13.2 ppg; Class C + retarder; 1,200 psi 24-hour compressive strength.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

NOVO_Goonch_Fed_Com_0409__234H_Plan_0_20210302133824.xlsx

NOVO_Goonch_Fed_Com_0409__234H_AC_Report_Plan_0_20210302133817.pdf

NOVO_Goonch_Fed_Com_0409__234H_plot_Plan_0_20210302133808.pdf

NOVO_Goonch_Fed_Com_0409__234H_Plan_0_20210302133800.pdf

Well Name: GOONCH FED COM 0409 | **Well Location:** T22S / R28E / SEC 33 / SESE / 32.3432168 / -104.0848194 | **County or Parish/State:** EDDY / NM

Well Number: 234H | **Type of Well:** CONVENTIONAL GAS WELL | **Allottee or Tribe Name:**

Lease Number: NMNM13233 | **Unit or CA Name:** | **Unit or CA Number:**

US Well Number: 300154706300X1 | **Well Status:** Drilling Well | **Operator:** NOVO OIL AND GAS NORTHERN DELA

5.500_20_P110EC_DWC_C_IS_PLUS_20210302133748.pdf

8.625_32.00_P110HSCY_TLW_20210302133742.pdf

GOONCH_FED_COM_0409_234H_20210302133735.pdf

Drill_Plan_3S_10K_GOONCH_FED_COM_04_234H_030221_v2_20210302133722.pdf

Goonch_0409_234H_APD_Change_Request_20210302133710.pdf

Operator Certification

I certify that the foregoing is true and correct. 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. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: JUSTIN CARTER **Signed on:** MAR 02, 2021 01:38 PM

Name: NOVO OIL AND GAS NORTHERN DELA

Title: Landman

Street Address: 1001 West Wilshire Boulevard Suite 206

City: Oklahoma City **State:** OK

Phone: (405) 286-3375

Email address: JCARTER@NOVOOG.COM

Field Representative

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS **BLM POC Title:** Petroleum Engineer

BLM POC Phone: 5752342234 **BLM POC Email Address:** cwalls@blm.gov

Disposition: Approved **Disposition Date:** 03/08/2021

Signature: Chris Walls

GOONCH FED COM 0409 234H

CHANGE TO PLANS

Move Surface Hole Location

From: 475' FSL & 285' FEL, Section 33, T-22-S, R-28-E, SESE

To: 475' FSL & 215' FEL, Section 33, T-22-S, R-28-E, SESE

Moved on the same pad site and there will be no new surface disturbance.

Move Bottom Hole Location

From: 130' FSL & 330' FEL, Section 9, T-23-S, R-28-E, SESE

To: 130' FSL & 330' FEL, Section 9, T-23-S, R-28-E, SESE

Production Formation

From: Wolfcamp B

To: Wolfcamp XY

Casing Substitution

Hole Size: 9-7/8", Casing: 8-5/8", 32 ppf, P-110, TLW to be set at 8,875' TMD.
Design Safety Factors: Burst 5.95, Collapse 1.49, Tension 3.38 (Casing Specification Sheet is attached)

Hole Size: 7-7/8", Casing: 5-1/2", 20 ppf, P-110, DWC/C IS+ to be set at 20,975' TMD.
Design Safety Factors: Burst 1.25, Collapse 2.86, Tension 2.78 (Casing Specification Sheet is attached)

Single Stage Cement Job for 8-5/8" Intermediate Casing String (TOC = Surface)

Lead: 600 Sacks; 2,148 cu. ft.; 100% excess; 3.58 cu.ft./sx; 10 ppg; Class C + retarder + LCM + beads; 900 psi 24-hour compressive strength.

Tail: 130 Sacks; 180.7 cu. ft; 50% excess; 1.39 cu.ft./sx; 13.8 ppg; Class C + retarder + LCM; 1,200 psi 24-hour compressive strength.

Singe Stage Cement Job for 5-1/2" Production Casing String (TOC = Surface)

Lead: 683 Sacks; 1,447.2 cu. ft.; 20% excess; 2.12 cu.ft./sx; 12 ppg; Class C + retarder; 1,200 psi 24-hour compressive strength.

Tail: 2,065 Sacks; 3,282.6 cu. ft; 20% excess; 1.59 cu.ft./sx; 13.2 ppg; Class C + retarder; 1,200 psi 24-hour compressive strength.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-47063	98220	Purple Sage; Wolfcamp Gas Pool

[4] Property Code	[5] Property Name	[6] Well Number
	GOONCH FED COM 0409	234H

[7] OGRID No.	[8] Operator Name	[9] Elevation
372920	NOVO OIL & GAS NORTHERN DELAWARE, LLC	3038.5

[10] Surface Location

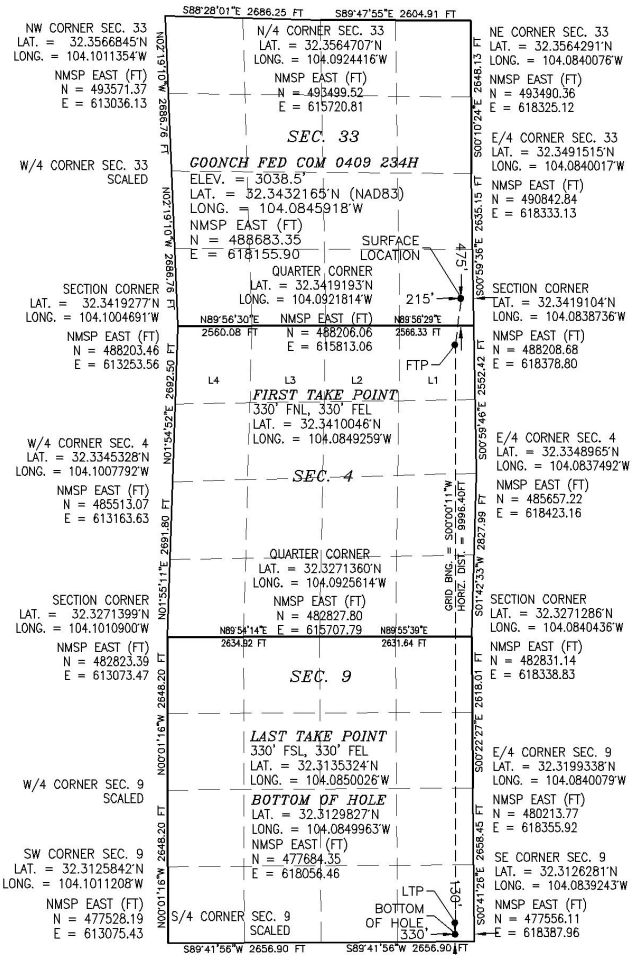
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	33	22 S	28 E		475	SOUTH	215	EAST	EDDY

[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
P	9	23 S	28 E		130	SOUTH	330	EAST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
640.45			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or 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.

Justin Carter 5/12/2021
Signature Date

Justin Carter
Printed Name

jcarter@novoog.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

FEBRUARY 22, 2021
Date of Survey

Signature and Seal of Professional Surveyor:
Certificate Number: E. LIMON F. JARAMILLO, LS 12797
SURVEY NO. 7264A

Intent ☐ As Drilled ☐

API #

Operator Name:	Property Name:	Well Number
NOVO OIL & GAS NORTHERN DELAWARE, LLC	GOONCH FED COM 0409	234H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County

Latitude	Longitude	NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	4	23S	28E	1	330	NORTH	330	EAST	EDDY

Latitude	Longitude	NAD
32.3410046	104.0849259	83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
P	9	23S	28E		330	SOUTH	330	EAST	EDDY

Latitude	Longitude	NAD
32.3135324	104.0850026	83

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

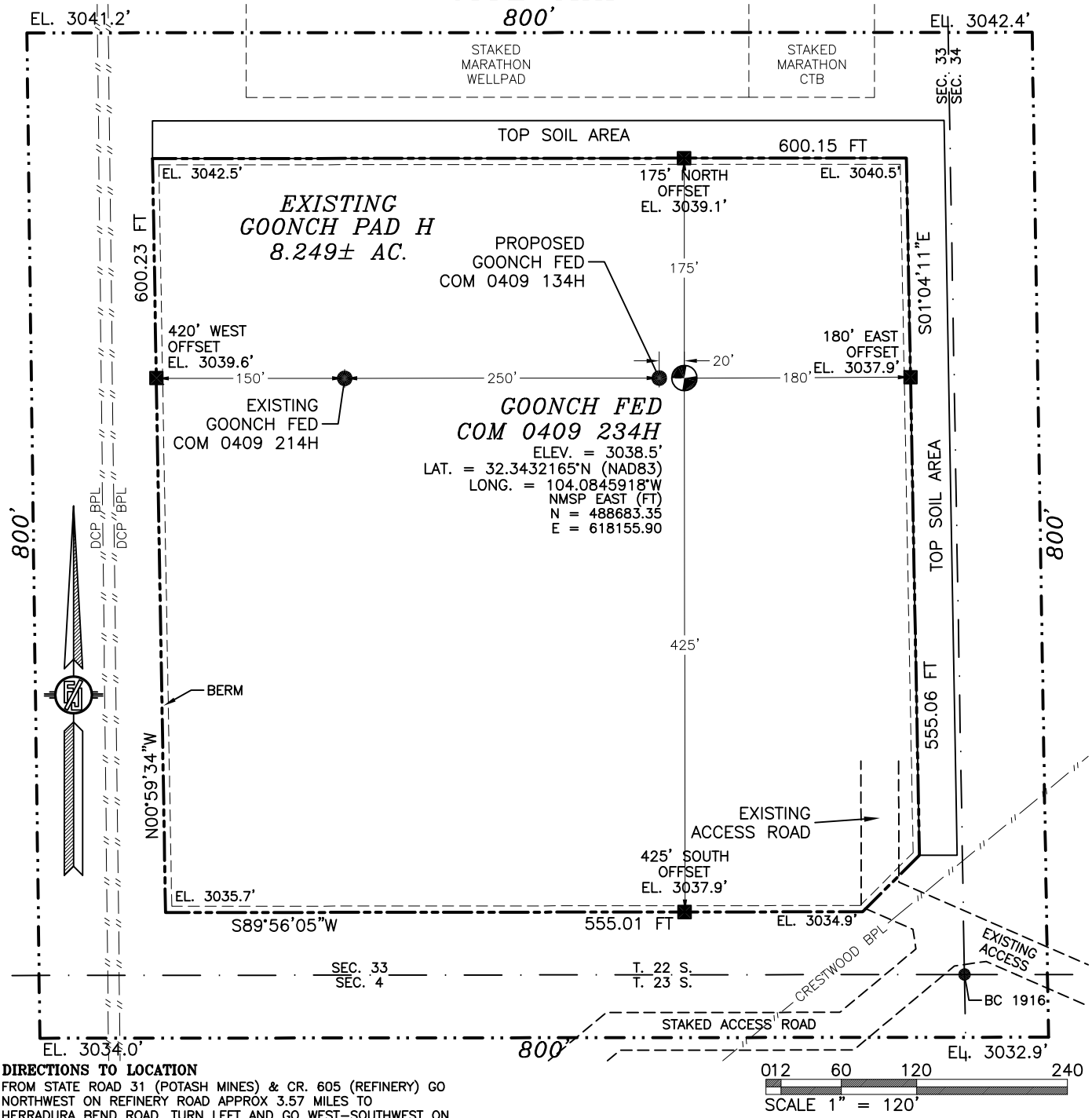
If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #

Operator Name:	Property Name:	Well Number

KZ 06/29/2018

SECTION 33, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SITE MAP



DIRECTIONS TO LOCATION

FROM STATE ROAD 31 (POTASH MINES) & CR. 605 (REFINERY) GO NORTHWEST ON REFINERY ROAD APPROX 3.57 MILES TO HERRADURA BEND ROAD, TURN LEFT AND GO WEST–SOUTHWEST ON HERRADURA BEND ROAD APPROX. 0.66 MILE, TURN RIGHT AND GO SOUTH–SOUTHEAST APPROX. 0.59 MILE TO A STAKED ACCESS ROAD ON RIGHT (WEST), FOLLOW STAKED ROAD SOUTH–SOUTHWEST 597', THEN WEST–NORTHWEST 330' TO THE SOUTHEAST PAD CORNER FOR CULEBRA BLUFF WELL PAD #1, FOLLOW PAD ACCESS ROAD WEST AND NORTH TO SOUTHEAST PAD CORNER FOR THIS LOCATION.

I, FILIMON F. JARAMILLO, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I PREPARED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

FILIMON F. JARAMILLO NO. 12797

NEW MEXICO FILIMON F. JARAMILLO 12797 REGISTERED PROFESSIONAL SURVEYOR

NOVO OIL & GAS NORTHERN DELAWARE, LLC

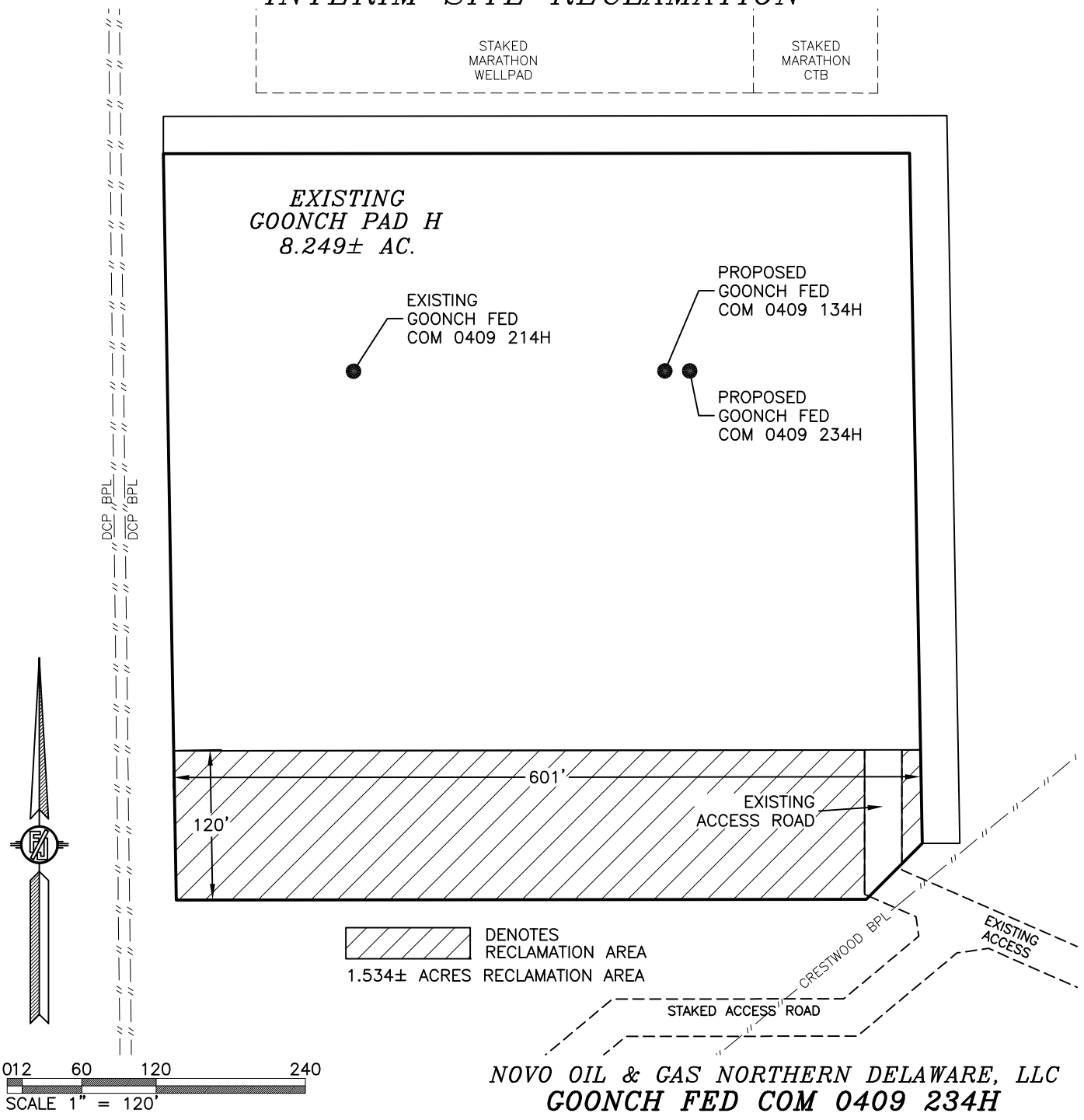
GOONCH FED COM 0409 234H

LOCATED 475 FT. FROM THE SOUTH LINE AND 215 FT. FROM THE EAST LINE OF SECTION 33, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO

FEBRUARY 22, 2021 *SURVEY NO. 7264A*

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 *CARLSBAD, NEW MEXICO*

SECTION 33, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
INTERIM SITE RECLAMATION



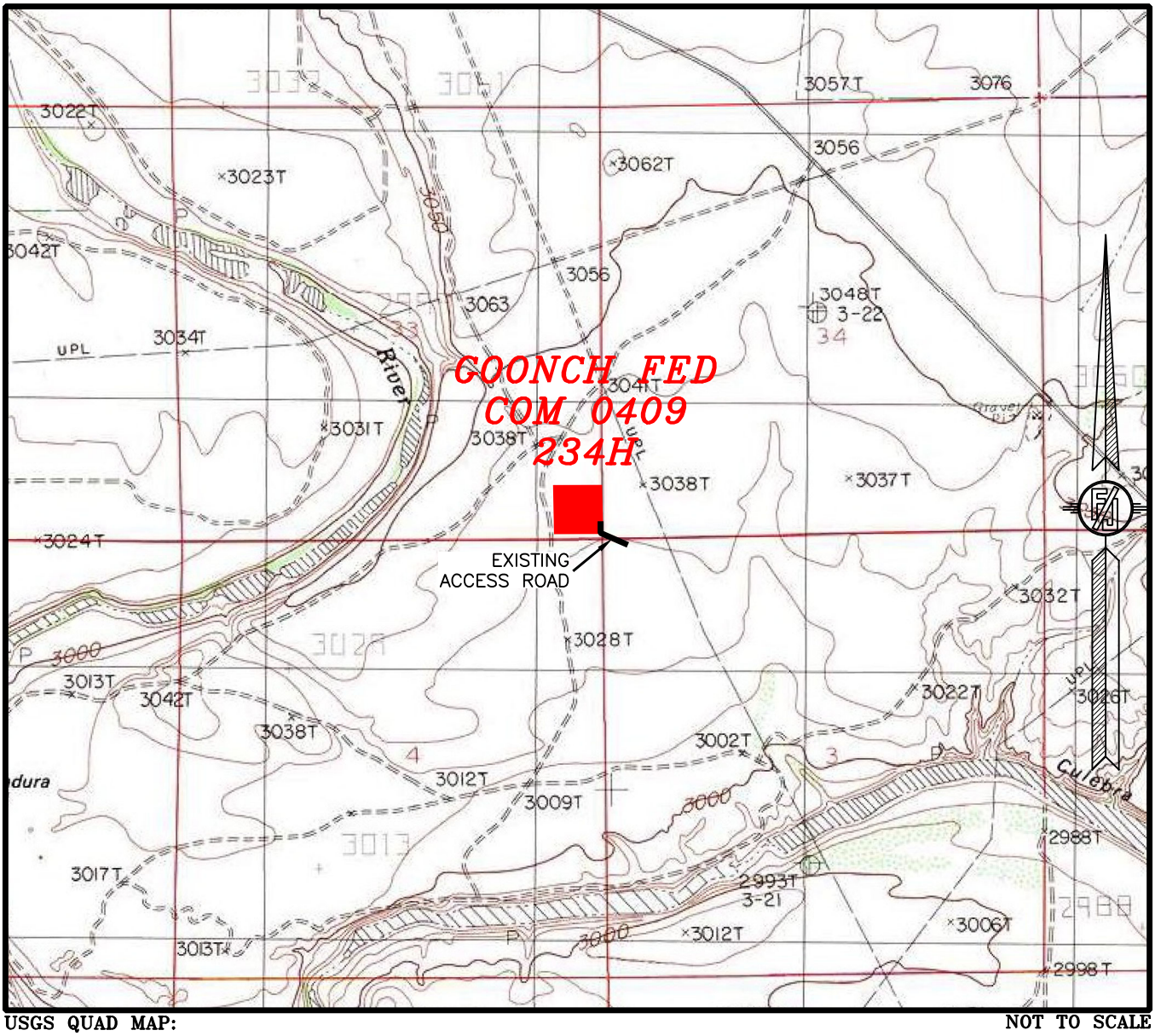
NOVO OIL & GAS NORTHERN DELAWARE, LLC
GOONCH FED COM 0409 234H
LOCATED 475 FT. FROM THE SOUTH LINE
AND 215 FT. FROM THE EAST LINE OF
SECTION 33, TOWNSHIP 22 SOUTH,
RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

FEBRUARY 22, 2021
SURVEY NO. 7264A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SECTION 33, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

LOCATION VERIFICATION MAP



USGS QUAD MAP:
LOVING

NOT TO SCALE

NOVO OIL & GAS NORTHERN DELAWARE, LLC
GOONCH FED COM 0409 234H
LOCATED 475 FT. FROM THE SOUTH LINE
AND 215 FT. FROM THE EAST LINE OF
SECTION 33, TOWNSHIP 22 SOUTH,
RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

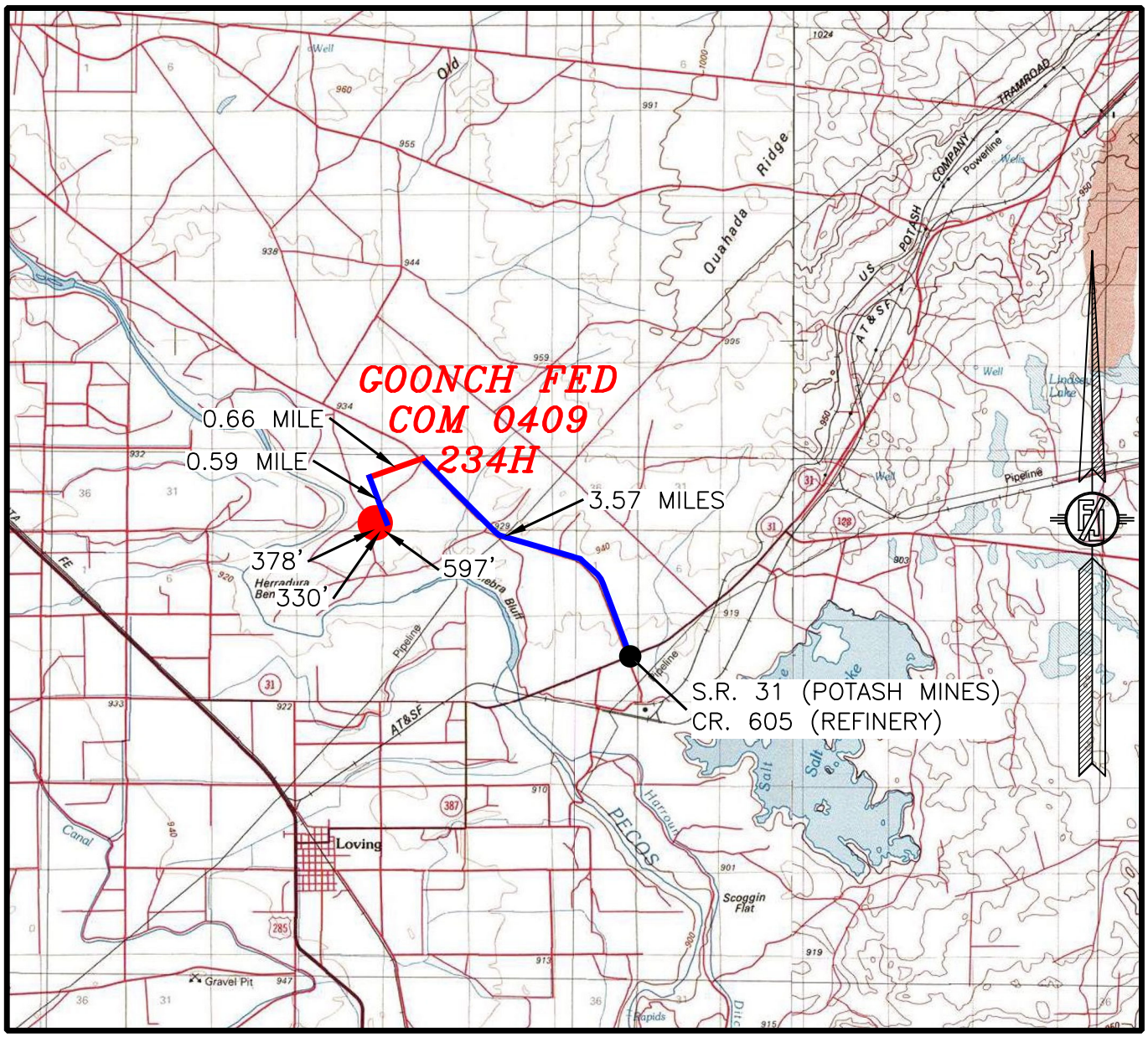
FEBRUARY 22, 2021

SURVEY NO. 7264A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SECTION 33, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

VICINITY MAP



DISTANCES IN MILES NOT TO SCALE

DIRECTIONS TO LOCATION
FROM STATE ROAD 31 (POTASH MINES) & CR. 605 (REFINERY) GO NORTHWEST ON REFINERY ROAD APPROX 3.57 MILES TO HERRADURA BEND ROAD, TURN LEFT AND GO WEST–SOUTHWEST ON HERRADURA BEND ROAD APPROX. 0.66 MILE, TURN RIGHT AND GO SOUTH–SOUTHEAST APPROX. 0.59 MILE TO A STAKED ACCESS ROAD ON RIGHT (WEST), FOLLOW STAKED ROAD SOUTH–SOUTHWEST 597', THEN WEST–NORTHWEST 330' TO THE SOUTHEAST PAD CORNER FOR CULEBRA BLUFF WELL PAD 1, FOLLOW PAD ACCESS ROAD WEST AND NORTH 378', TO THE SOUTHEAST PAD CORNER FOR THIS LOCATION.

NOVO OIL & GAS NORTHERN DELAWARE, LLC
GOONCH FED COM 0409 234H
LOCATED 475 FT. FROM THE SOUTH LINE
AND 215 FT. FROM THE EAST LINE OF
SECTION 33, TOWNSHIP 22 SOUTH,
RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

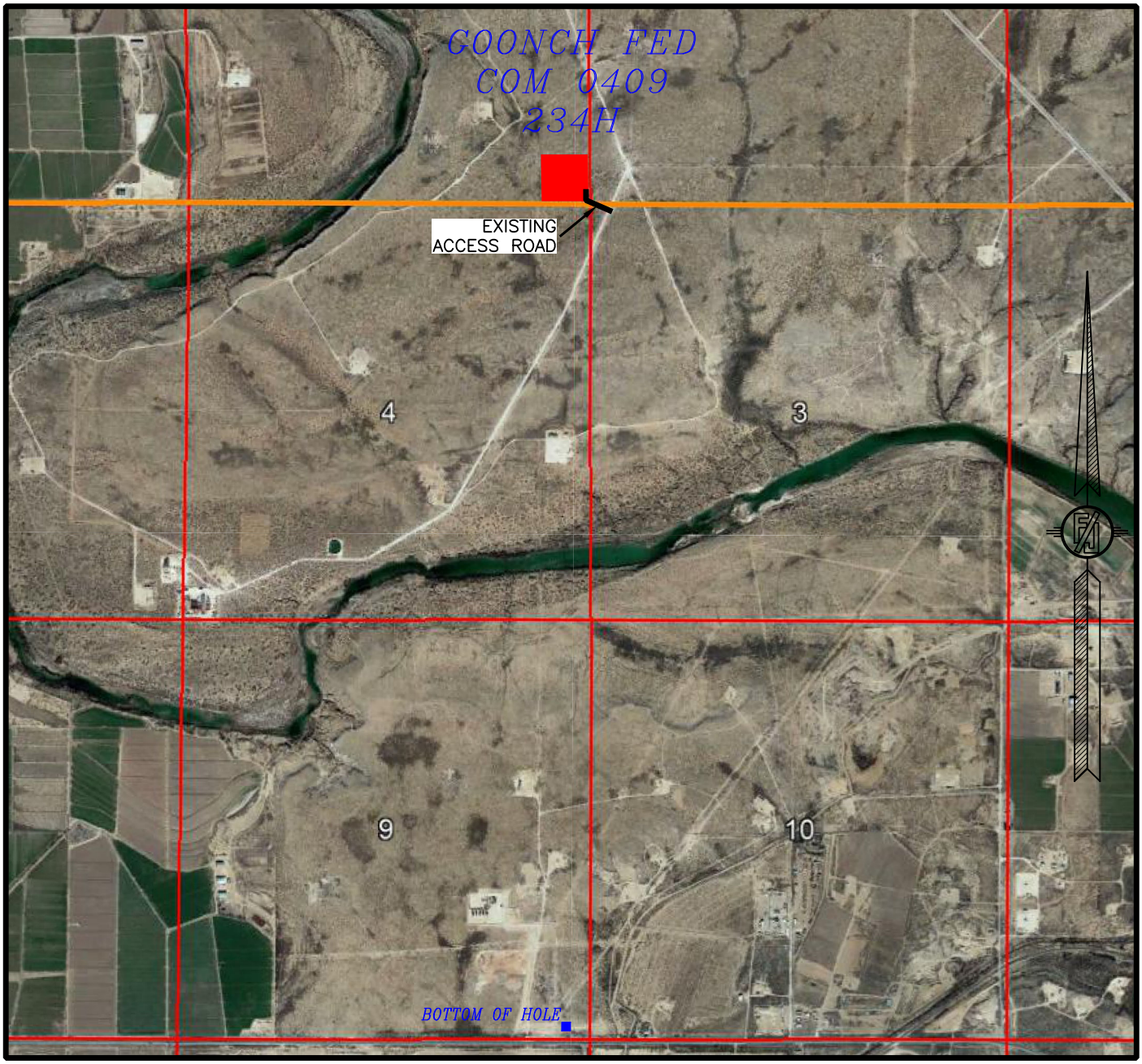
FEBRUARY 22, 2021

SURVEY NO. 7264A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234–3341 CARLSBAD, NEW MEXICO

SECTION 33, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
DEC. 2019

NOVO OIL & GAS NORTHERN DELAWARE, LLC

GOONCH FED COM 0409 234H

LOCATED 475 FT. FROM THE SOUTH LINE
AND 215 FT. FROM THE EAST LINE OF
SECTION 33, TOWNSHIP 22 SOUTH,
RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

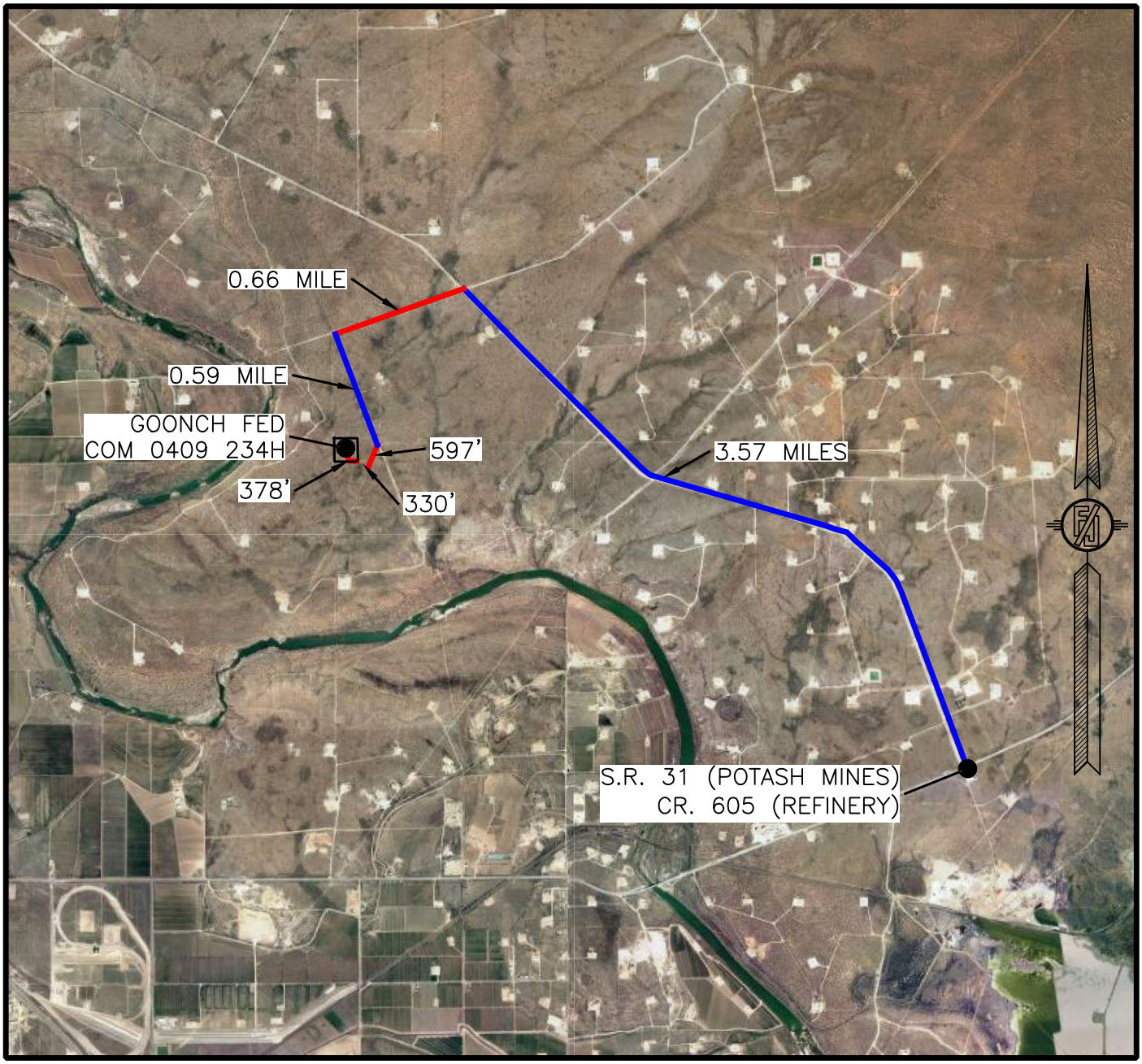
FEBRUARY 22, 2021

SURVEY NO. 7264A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

SECTION 33, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

AERIAL ACCESS ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
DEC. 2019

NOVO OIL & GAS NORTHERN DELAWARE, LLC

GOONCH FED COM 0409 234H

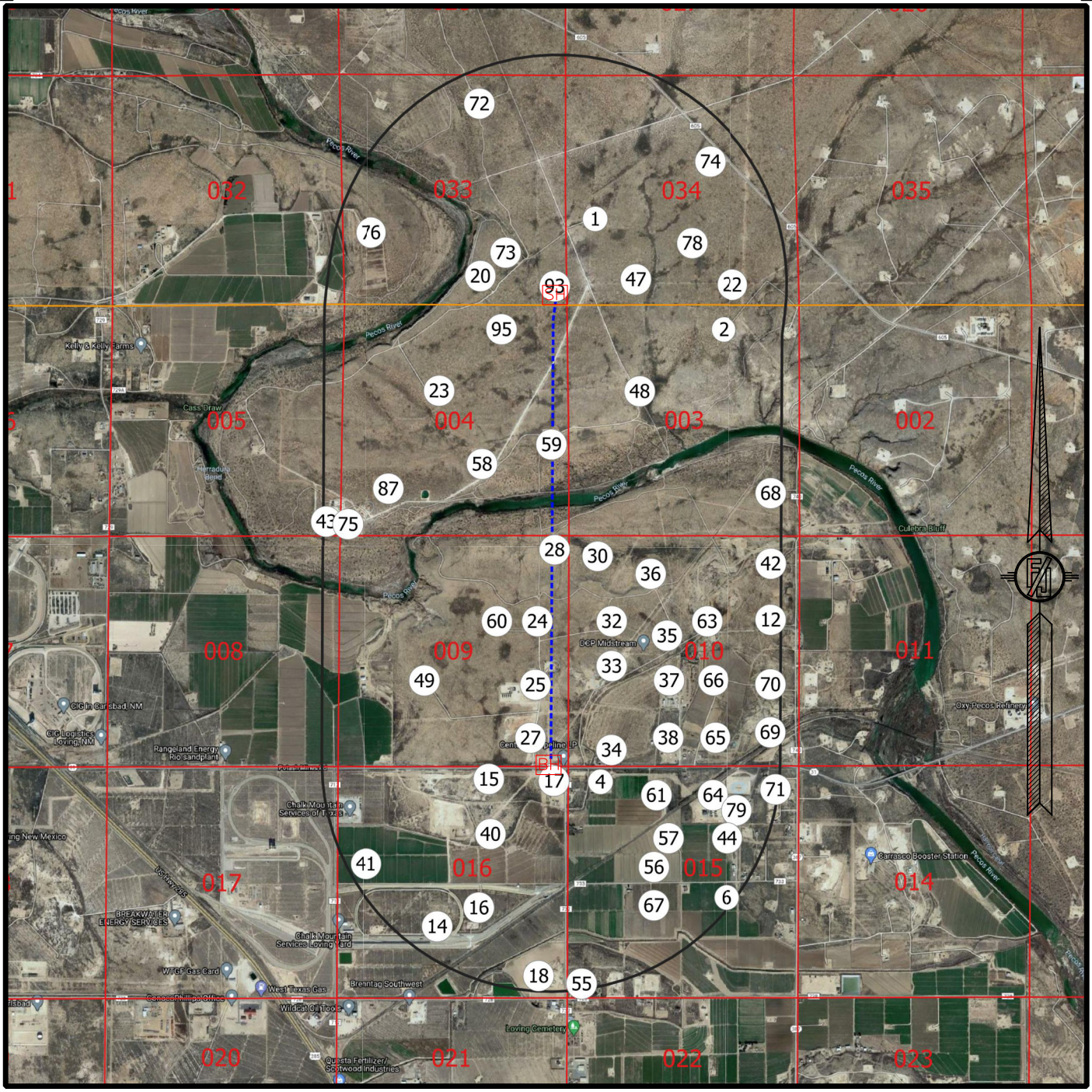
LOCATED 475 FT. FROM THE SOUTH LINE
AND 215 FT. FROM THE EAST LINE OF
SECTION 33, TOWNSHIP 22 SOUTH,
RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

FEBRUARY 22, 2021

SURVEY NO. 7264A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

1–MILE WELL MAP



WELL DATA FROM NMOCD GIS – 1/27/2021

SH SURFACE LOCATION

BH BOTTOM OF HOLE

XX WELLS WITHIN 1 MILE

WELL PATH

1–MILE BOUNDARY

NOVO OIL & GAS NORTHERN DELAWARE, LLC

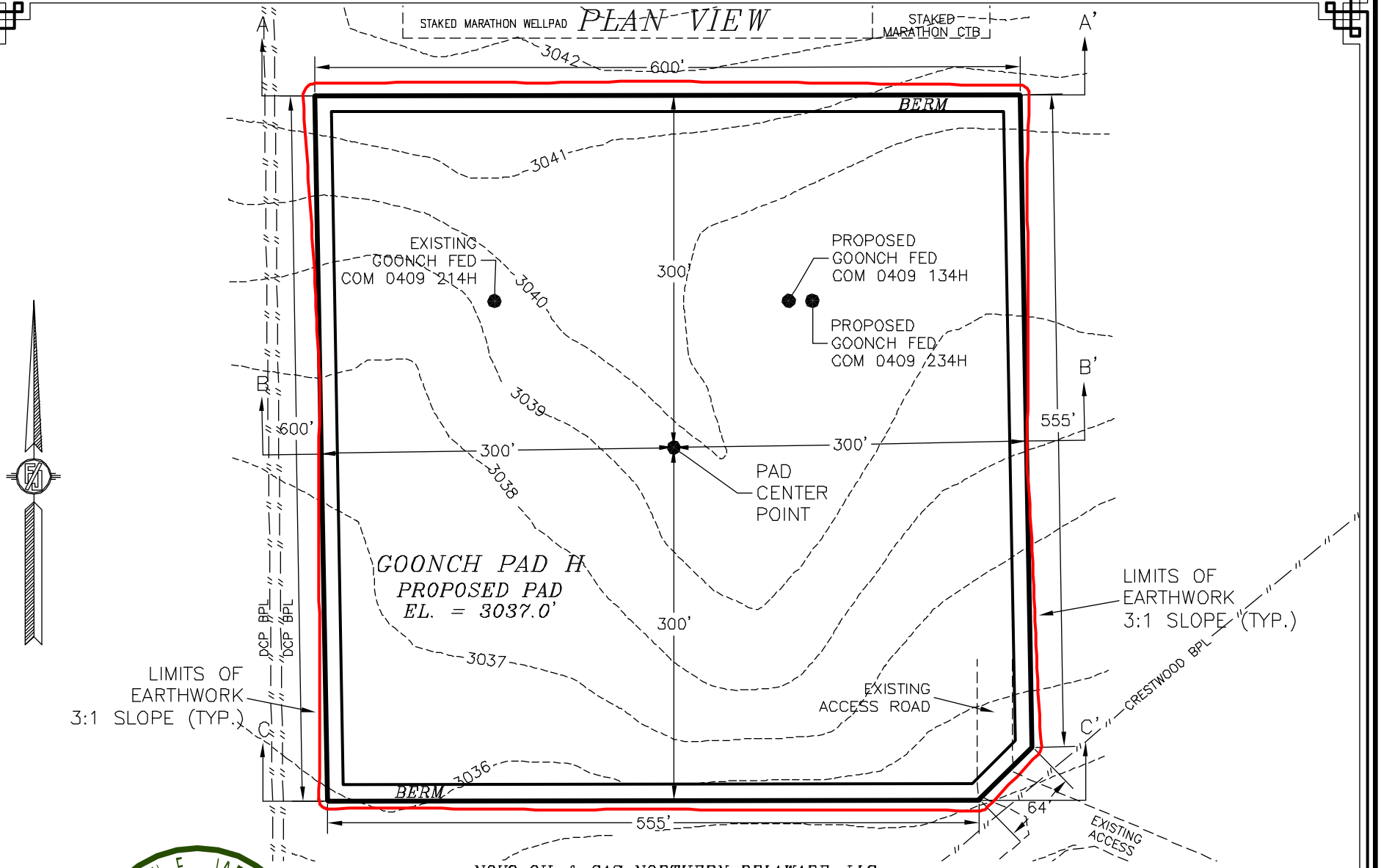
GOONCH FED COM 0409 234H

LOCATED 475 FT. FROM THE SOUTH LINE AND 215 FT. FROM THE EAST LINE OF SECTION 33, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M. EDDY COUNTY, STATE OF NEW MEXICO

FEBRUARY 22, 2021

SURVEY NO. 7264A

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234–3341 *CARLSBAD, NEW MEXICO*



NOVO OIL & GAS NORTHERN DELAWARE, LLC
PAD GRADING AND CROSS SECTIONS
FOR GOONCH FED COM 0409 234H
SECTION 33, TOWNSHIP 22 SOUTH,
RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

CUT	FILL	NET
13104 CU. YD	6620 CU. YD	6484 CU. YD (CUT)

EARTHWORK QUANTITIES ARE ESTIMATED

I, FILIMON F. JARAMILLO, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

FILIMON F. JARAMILLO, PLS 12797

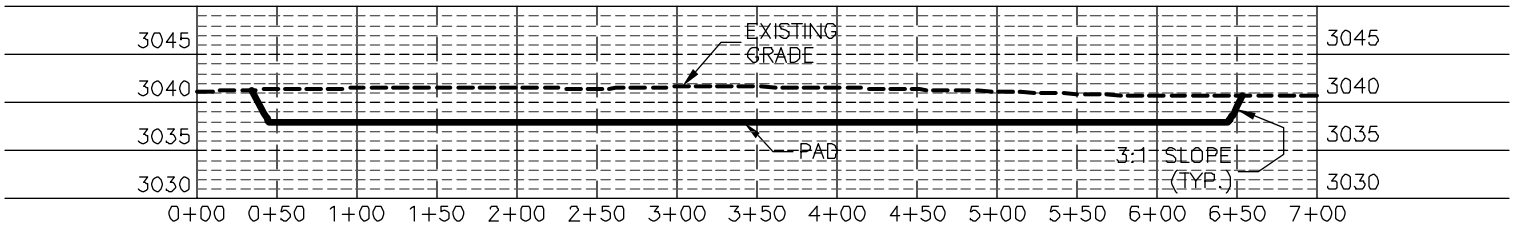
FEBRUARY 22, 2021

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

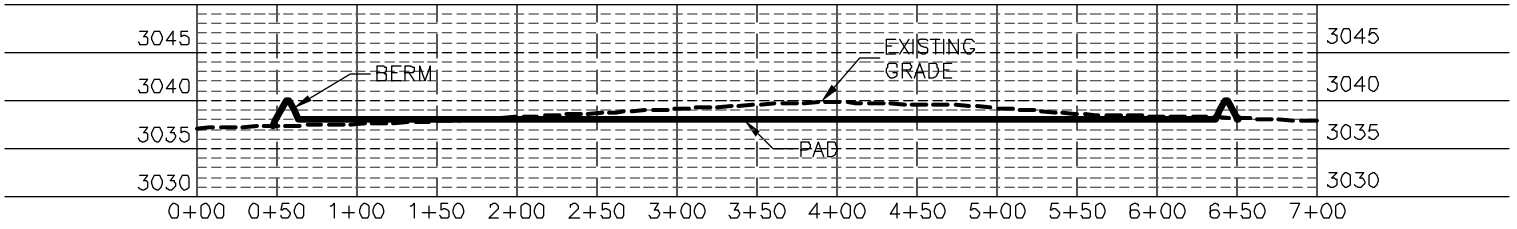
SHEET 1-2
SURVEY NO. 7264A

CROSS-SECTIONS

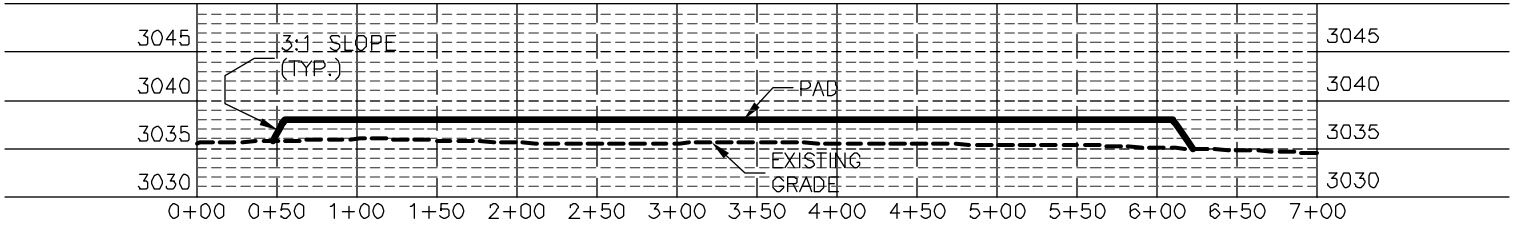
SECTION A-A'



SECTION B-B'



SECTION C-C'



I, FILIMON F. JARAMILLO, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

FILIMON F. JARAMILLO, PLS 12797

NOVO OIL & GAS NORTHERN DELAWARE, LLC
PAD GRADING AND CROSS SECTIONS
FOR GOONCH FED COM 0409 234H
SECTION 33, TOWNSHIP 22 SOUTH,
RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

FEBRUARY 22, 2021

012 60 120 240
SCALE 1" = 120'

CUT	FILL	NET
13104 CU. YD	6620 CU. YD	6484 CU. YD (CUT)

EARTHWORK QUANTITIES ARE ESTIMATED

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 *CARLSBAD, NEW MEXICO*

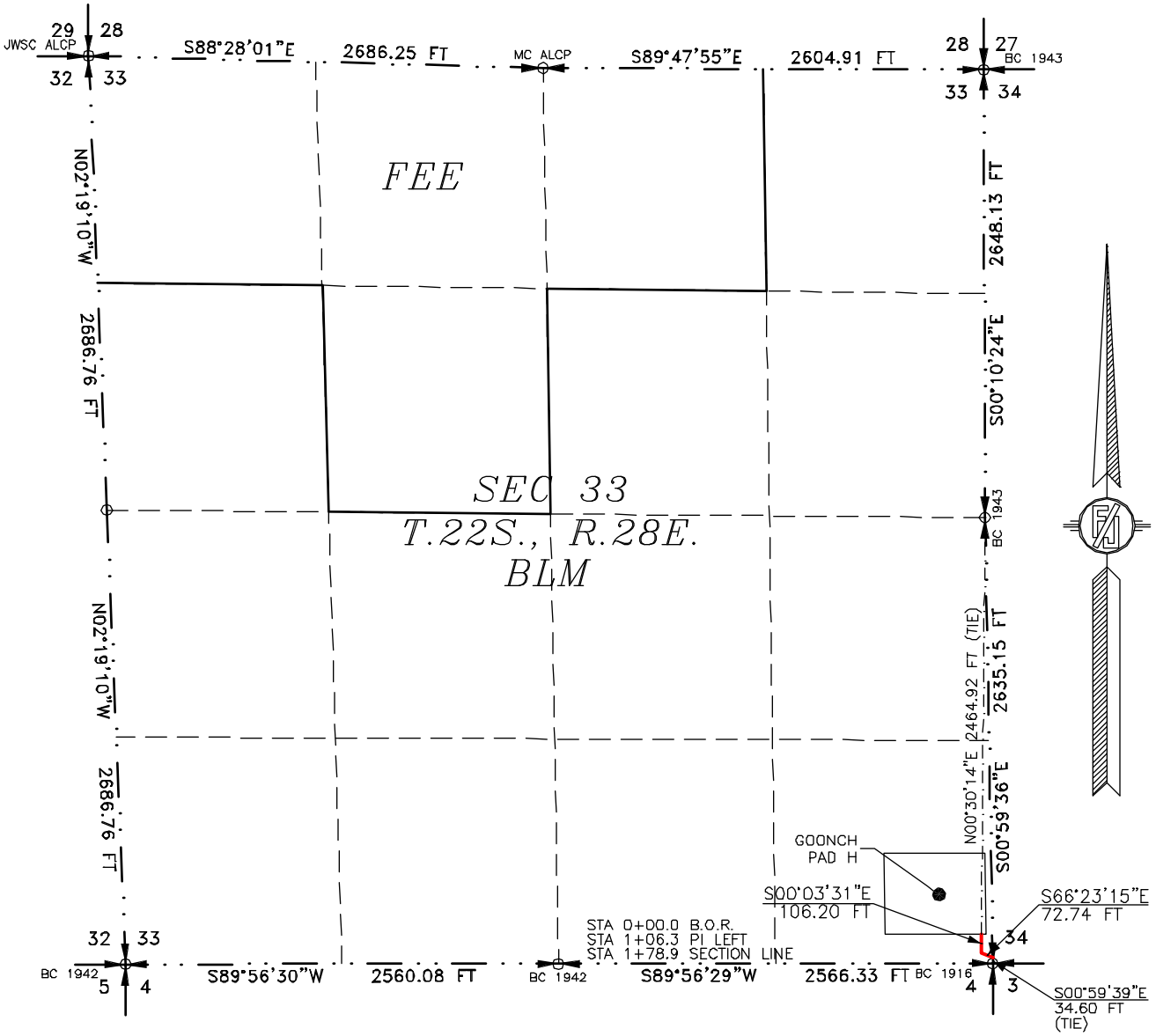
SHEET 2-2
SURVEY NO. 7264A

ACCESS ROAD PLAT

EXISTING ACCESS ROAD FOR ACCESS TO GOONCH PAD H

NOVO OIL & GAS NORTHERN DELAWARE, LLC

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 33, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
FEBRUARY 22, 2021



SEE NEXT SHEET (2-4) FOR DESCRIPTION

1000 0 1000
Scale: 1" = 1000'

GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS [illegible] DAY OF MARCH 2021.

FILIMON F. JARAMILLO PLS 12797
301 SOUTH CANAL
(575) 234-3341

MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

SHEET: 1-4

SURVEY NO. 7264A

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

EXISTING ACCESS ROAD FOR ACCESS TO COONCH PAD H

NOVO OIL & GAS NORTHERN DELAWARE, LLC

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 33, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
FEBRUARY 22, 2021

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 33, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE SE/4 SE/4 OF SAID SECTION 33, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M., WHENCE THE EAST QUARTER CORNER OF SAID SECTION 33, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS N00°30'14"E, A DISTANCE OF 2464.92 FEET;
THENCE S00°03'31"E A DISTANCE OF 106.20 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED;
THENCE S66°23'15"E A DISTANCE OF 72.74 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHEAST CORNER OF SAID SECTION 33, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS S00°59'39"E, A DISTANCE OF 34.60 FEET;

SAID STRIP OF LAND BEING 178.94 FEET OR 10.85 RODS IN LENGTH, CONTAINING 0.123 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SE/4 SE/4	178.94 L.F.	10.85 RODS	0.123 ACRES

GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS [illegible] DAY OF MARCH 2021.

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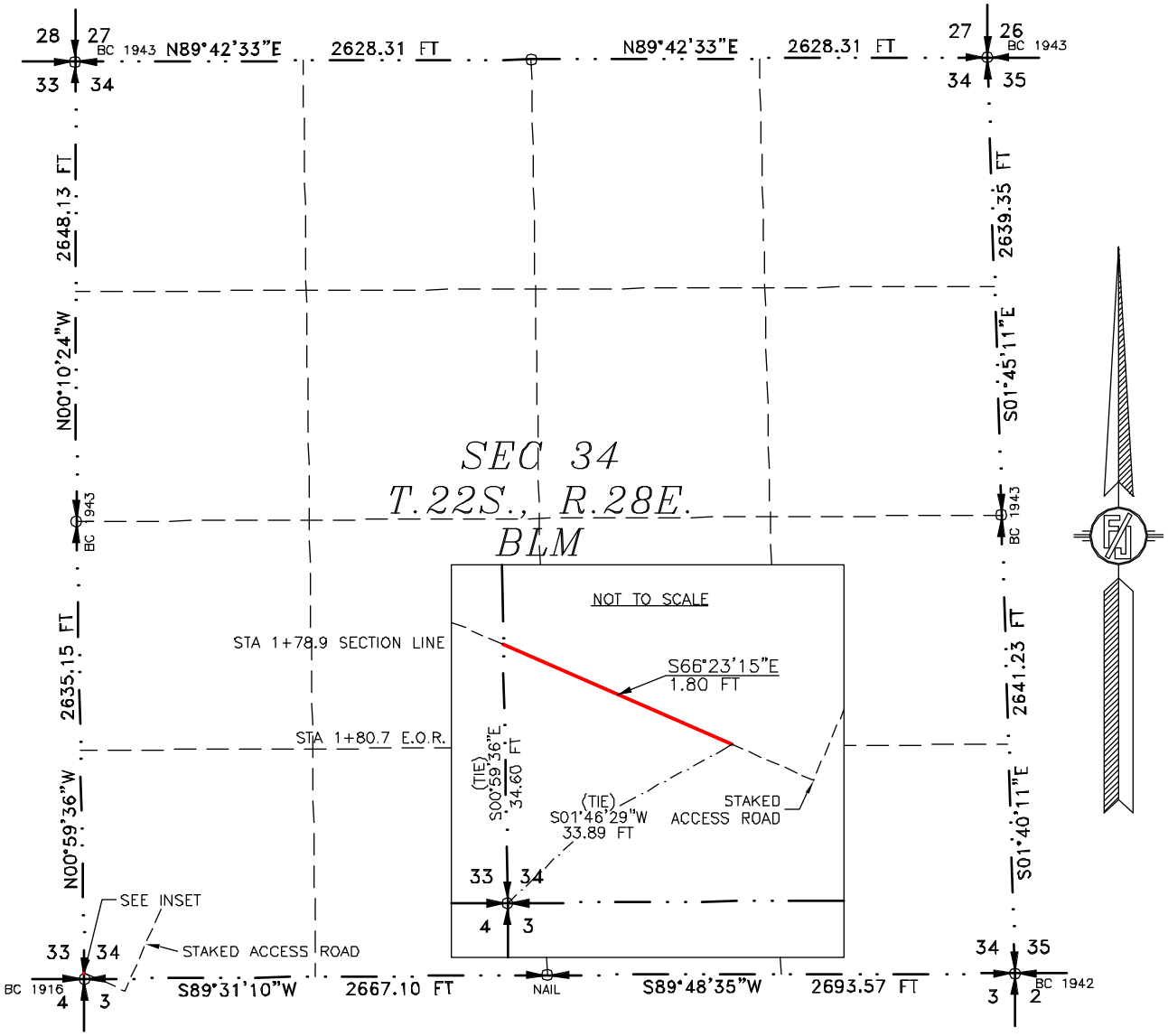
ACCESS ROAD PLAT

EXISTING ACCESS ROAD FOR ACCESS TO COONCH PAD H

NOVO OIL & GAS NORTHERN DELAWARE, LLC

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 34, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
FEBRUARY 22, 2021



SEE NEXT SHEET (4-4) FOR DESCRIPTION

1000 0 1000
Scale: 1" = 1000'

GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SURVEYOR CERTIFICATE

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IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 11 DAY OF MARCH 2021.

FILIMON F. JARAMILLO PLS 12797
301 SOUTH CANAL
(575) 234-3341

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301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

SHEET: 3-4

SURVEY NO. 7264A

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

EXISTING ACCESS ROAD FOR ACCESS TO COONCH PAD H

NOVO OIL & GAS NORTHERN DELAWARE, LLC

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 34, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
FEBRUARY 22, 2021

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING BUREAU OF LAND MANAGEMENT LAND IN SECTION 34, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M., EDDY COUNTY, STATE OF NEW MEXICO AND BEING 15 FEET EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE SURVEY:

BEGINNING AT A POINT WITHIN THE SW/4 SW/4 OF SAID SECTION 34, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M., WHENCE THE SOUTHWEST CORNER OF SAID SECTION 34, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS S00°59'36"E, A DISTANCE OF 34.60 FEET;
THENCE S66°23'15"E A DISTANCE OF 1.80 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE SOUTHWEST CORNER OF SAID SECTION 34, TOWNSHIP 22 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS S01°46'29"W, A DISTANCE OF 33.89 FEET;

SAID STRIP OF LAND BEING 1.80 FEET OR 0.11 RODS IN LENGTH, CONTAINING 0.001 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SW/4	1.80 L.F.	0.11 RODS	0.001 ACRES

GENERAL NOTES

1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.

2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SURVEYOR CERTIFICATE

I, FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

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301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

SHEET: 4-4

SURVEY NO. 7264A

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO

NOVO OIL & GAS NORTHERN DELAWARE, LLC

Goonch Fed Com 0409 234H

SHL: 475' FSL & 215' FEL Section 33-22S-28E
BHL: 130' FSL & 330' FEL Section 9-23S-28E
Eddy County, New Mexico

DRILLING OPERATIONS PLAN

Standard Wolfcamp 3-STRING CASING DESIGN (Not Secretary's Potash or R-111-P)

Estimated Drilling Conditions

Target Formation	Wolfcamp XY
Target Depth - TVD (ft)	9575
Planned MD (ft)	20975
Anticipated Bottom-Hole Pressure (psi)	6223.75
Anticipated Maximum Surface Pressure (psi)	4117.25
Abnormal Pressure (Yes/No)	No
Anticipated Bottom-Hole Temperature (deg F)	215 deg F
H2S Contingency Plan Required (Yes/No)	Yes

Geologic Formations

	GR	KB (25')	
Elevation	3,040	3,065	
Formation Tops	**TVDss**	**TVD - KB**	**Mineral Resources**
Rustler	2,639	426	Water
Bell Canyon (base of salt)	500	2,565	Water
Cherry Canyon	-575	3,640	Water
Brushy Canyon	-1,588	4,653	Oil, Gas, Water
Bone Spring Lime	-3,031	6,096	Oil, Gas, Water
Lower Avalon	-3,539	6,604	Oil, Gas, Water
1st Bone Spring Sand	-3,998	7,063	Oil, Gas, Water
2nd Bone Spring Carbonate	-4,211	7,276	Oil, Gas, Water
2nd Bone Spring Sand	-4,746	7,811	Oil, Gas, Water
3rd Bone Spring Carbonate	-5,043	8,108	Oil, Gas, Water
3rd Bone Spring Sand	-6,090	9,155	Oil, Gas, Water
Wolfcamp XY	-6,370	9,435	Oil, Gas, Water
Wolfcamp A	-6,575	9,640	Oil, Gas, Water
Wolfcamp B	-6,780	9,845	Oil, Gas, Water
Wolfcamp B Flow Unit	-7,115	10,180	Oil, Gas, Water
Wolfcamp C	-7,233	10,298	Oil, Gas, Water

Pressure Control Equipment and Pressure Testing Procedure

A 13-5/8" 5M Blowout Preventer system will be installed on a multi-bowl wellhead with a 13-5/8 flanged casing spool. The top flange of casing spool will be set in a cellar below ground level. The blowout preventor system will consist of a single pipe ram on bottom, mud cross, double pipe ram with blind rams on bottom and pipe rams on top and annular preventer. The blowout preventer will be installed on top of the 13-3/8" surface casing and will remain installed to total depth of the well. Wellhead, blowout preventer and choke manifold diagrams have been included. A co-flex line will be used between the BOP system and the choke manifold. A pressure test certification form for the co-flex hose will be available on the location at the time of the BOP testing.

The BOP system will be isolated with a test plug and tested by an independent tester to 250 psi low and 5,000 psi high for 10 minutes.

The Surface Casing will be pressure tested to 250 psi low and 1500 psi high. Intermediate Casing will be pressure tested to 250 psi low and (.22 psi x Shoe TVD, which is equivalent to 1952.5 psi) high for 30 minutes

Drilling Fluid Program

Depth Interval (ft)	Hole Size (in.)	Fluid Type	Mud Weight (ppg)	Funnel Viscosity (sec/qt)	API Fluid Loss (ml/30min)	Total Solids (%)
0 - 476	17-1/2	Water Based Spud Mud	8.3	30-60	N/C	2.0-8.0
476 - 8,875	9-7/8"	Brine Diesel Emulsion or Brine	8.8-9.6	35-45	N/C	1.0-4.0
8,875 - 20,975	7-7/8"	Oil Based Mud	12-13.5	35-65	4-6 cc's	1.0-8.0
Drilling Fluid System	A closed loop drilling system will be used.					

Casing Program

Depth Interval	Length (ft)	Hole Size	Casing Size	Weight (ppf)	Grade	Coupling	Notes
0' - 476'	476	17-1/2	13-3/8"	54.50	J-55	BTC	
0' - 8,875'	8,875	9-7/8"	8-5/8"	32.00	P-110	TLW	
0' - 20,975'	20,975	7-7/8"	5-1/2"	20.00	P-110	DWC/C IS+	

Casing Centralizers

Surface Casing: Centralizers will be run on the bottom 3 joints of casing and then 1 centralizer per joint to surface.

Casing Performance Properties and Design Criteria

Depth Interval	Collapse (psi)	Burst (psi)	Joint Strength (1000 lbs)	Actual Design Safety Factors			Notes
				Collapse	Burst	Tension	
0' - 476'	1,130	2,730	853	5.49	1.82	6.96	
0' - 8,875'	4,230	8,930	1144	1.49	5.95	3.38	Collapse: 1/3 fluid filled at all times
0' - 20,975'	12,090	14,360	729	2.86	1.25	2.78	
Design Safety Factors	Design safety factors will meet or exceed as shown.						

Surface Casing

Collapse: $DF_C = 1.125$

a. Full Internal Evacuation: Collapse force is equal to mud gradient (0.433 psi/ft) in which the casing will be run and internal evacuation of casing.

b. Cementing: Collapse force is equal net force of the planned cement slurry gradient (0.718 psi/ft) in which the casing will be run and internal force equivalent to fresh water displacement gradient (0.433 psi/ft).

Burst: $DF_B = 1.125$

a. Casing Pressure Test: According to BLM Onshore Order No. 2 with 0.22 psi/ft or 1500 psi, whichever is greater but not to exceed 70 percent of the minimum internal yield.

Tensile: $DF_T = 1.60$

a. Overpull: A tensile force of 100,000 lbs over string weight with a bouyancy factor of 0.8727 in water (8.33 ppg).

Intermediate Casing

Collapse: $DF_C = 1.125$

a. **Partial (2/3rd) Internal Evacuation: Casing will remain greater than 1/3 fluid filled at all times with a mud weight greather than 11 ppg**

b. Collapse force is equal to mud gradient (0.531 psi/ft) in which the casing will be run.

c. Cementing: Collapse force is equal net force of the planned cement slurry gradient (0.626 psi/ft) in which the casing will be run and internal force equivalent to the displacement fluid gradient.

Burst: $DF_B = 1.125$

a. Casing Pressure Test: According to BLM Onshore Order No. 2 with 0.22 psi/ft or 1500 psi, whichever is greater but not to exceed 70 percent of the minimum internal yield.

b. Gas Kick: Internal burst load of a 50 bbl gas kick at the casing with drillpipe in the hole. External force will be 10.2 ppg brine water gradient (0.531 psi/ft) and intrenal force will be with 10.0 ppg brine water gradient (0.521 psi/ft) with gas kick.

Tensile: $DF_T = 1.60$

a. Overpull: A tensile force of 100,000 lbs over string weight with a bouyancy factor of 0.8441 in brine water (10.2 ppg).

Production Casing

Collapse: $DF_C = 1.125$

a. Full Internal Evacuation: Collapse force is equal to mud gradient (0.531 psi/ft) in which the casing will be run and internal evacuation of casing.

b. Cementing: Collapse force is equal net force of the planned cement slurry gradient (0.688 psi/ft) in which the casing will be run and internal force equivalent to fresh water displacement gradient (0.433 psi/ft).

Burst: $DF_B = 1.125$

a. Pressure Test: Pressure test will be to 80% of Internal Yield Pressure of casing intended for fracture stimulation.

Tensile: $DF_T = 1.60$

a. Overpull: A tensile force of 100,000 lbs over string weight with a bouyancy factor of 0.8472 in oil-based mud (10.0 ppg).

Cementing Program

Surface Casing Cement: 0' - 476' Top of Cement: Surface

Cement	Amount (sacks)	Slurry Volume (cu. ft.)	Slurry Volume (bbls)	Weight (ppg)	Yield (cu. ft./sx)	Mix Water (gal/sx)	24hr 115deg Strength (psi)	Excess Cement (%)
Lead								
Tail	408	660.9	117.7	13.80	1.62	7.67	1,200	100.0%

Lead: N/A

Tail: Class C Cement with Gel, Accelerator, LCM

Intermediate Casing Cement: Surface Shoe Depth 476

Top of Lead 0 Top of Tail 7,875 Intermediate Shoe Depth 8,875

Cement	Amount (sacks)	Slurry Volume (cu. ft.)	Slurry Volume (bbls)	Weight (ppg)	Yield (cu. ft./sx)	Mix Water (gal/sx)	24hr 115deg Strength (psi)	Excess Cement (%)
Lead	600	2148.0	382.5	10.00	3.58	19.15	900	100.0%
Tail	130.0	180.7	32.2	13.80	1.39	6.57	1,200	50.0%

Lead: Class C or H Cement with Fluid Loss, Retarder, LCM, Possibly beaded for desired compressive strength

Tail: Class C or H Cement with Fluid Loss, Retarder, LCM

Top of Cement/Lead: 0'

Production Casing Cement: 0' - 20,975' Top of Tail: 6,875'

Cement	Amount (sacks)	Slurry Volume (cu. ft.)	Slurry Volume (bbls)	Weight (ppg)	Yield (cu. ft./sx)	Mix Water (gal/sx)	24hr 115deg Strength (psi)	Excess Cement (%)
Lead	683	1447.2	257.7	12.00	2.12	11.91	1,200	20.0%
Tail	2065	3282.6	584.6	13.20	1.59	7.98	1,200	20.0%

Lead: Class H Cement with Fluid Loss, Retarder, LCM

Tail: Class H Cement with Fluid Loss, Retarder, LCM

Logging, Testing & Coring Program

A gamma ray log will be acquired by directional drilling Measure While Drilling tools from the intermediate casing to Total Depth.

TEC-LOCK WEDGE

8.625" 32.00 LB/FT (.352" Wall)
BORUSAN MANNESMANNP110 HSCY

Pipe Body Data

Nominal OD:	8.625	in
Nominal Wall:	.352	in
Nominal Weight:	32.00	lb/ft
Plain End Weight:	31.13	lb/ft
Material Grade:	P110 HSCY	
Mill/Specification:	BORUSAN MANNESMANN	
Yield Strength:	125,000	psi
Tensile Strength:	125,000	psi
Nominal ID:	7.921	in
API Drift Diameter:	7.796	in
Special Drift Diameter:	7.875	in
RBW:	87.5 %	
Body Yield:	1,144,000	lbf
Burst:	8,930	psi
Collapse:	4,230	psi

Connection Data

Standard OD:	9.000	in
Pin Bored ID:	7.921	in
Critical Section Area:	8.61433	in²
Tensile Efficiency:	94.2 %	
Compressive Efficiency:	100.0 %	
Longitudinal Yield Strength:	1,077,000	lbf
Compressive Limit:	1,144,000	lbf
Internal Pressure Rating:	8,930	psi
External Pressure Rating:	4,230	psi
Maximum Bend:	62.6	°/100

Operational Data

Minimum Makeup Torque:	29,900	ft*lbf
Optimum Makeup Torque:	37,375	ft*lbf
Maximum Makeup Torque:	80,900	ft*lbf
Minimum Yield:	89,900	ft*lbf
Makeup Loss:	5.97	in

Notes

Operational Torque is equivalent to the Maximum Make-Up Torque.

HUNTING

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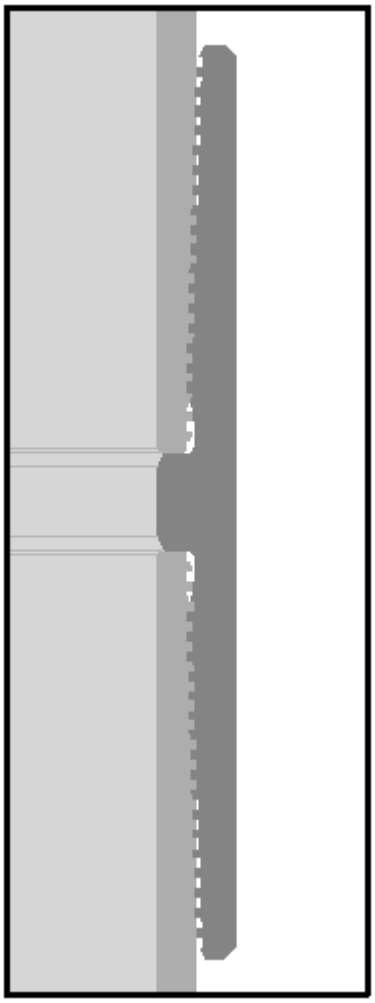
Please visit http://www.huntingplc.com for the latest technical information.

Technical Specifications

Connection Type:	Size(O.D.):	Weight (Wall):	Grade:
DWC/C-IS PLUS Casing STANDARD	5-1/2 in	20.00 lb/ft (0.361 in)	VST P110 EC

	Material
VST P110 EC	Grade
125,000	Minimum Yield Strength (psi.)
135,000	Minimum Ultimate Strength (psi.)
	Pipe Dimensions
5.500	Nominal Pipe Body O.D. (in.)
4.778	Nominal Pipe Body I.D. (in.)
0.361	Nominal Wall Thickness (in.)
20.00	Nominal Weight (lbs./ft.)
19.83	Plain End Weight (lbs./ft.)
5.828	Nominal Pipe Body Area (sq. in.)
	Pipe Body Performance Properties
729,000	Minimum Pipe Body Yield Strength (lbs.)
12,090	Minimum Collapse Pressure (psi.)
14,360	Minimum Internal Yield Pressure (psi.)
13,100	Hydrostatic Test Pressure (psi.)
	Connection Dimensions
6.300	Connection O.D. (in.)
4.778	Connection I.D. (in.)
4.653	Connection Drift Diameter (in.)
4.13	Make-up Loss (in.)
5.828	Critical Area (sq. in.)
100.0	Joint Efficiency (%)
	Connection Performance Properties
729,000	Joint Strength (lbs.)
26,040	Reference String Length (ft) 1.4 Design Factor
728,000	API Joint Strength (lbs.)
729,000	Compression Rating (lbs.)
12,090	API Collapse Pressure Rating (psi.)
14,360	API Internal Pressure Resistance (psi.)
104.2	Maximum Uniaxial Bend Rating [degrees/100 ft]
	Approximated Field End Torque Values
16,600	Minimum Final Torque (ft.-lbs.)
19,100	Maximum Final Torque (ft.-lbs.)
21,600	Connection Yield Torque (ft.-lbs.)

VAM USA
4424 W. Sam Houston Pkwy. Suite 150
Houston, TX 77041
Phone: 713-479-3200
Fax: 713-479-3234
E-mail: VAMUSAsales@vam-usa.com



For detailed information on performance properties, refer to DWC Connection Data Notes on following page(s).

no event shall VAM USA or its affiliates be responsible for any indirect, special, incidental, punitive, exemplary or consequential loss or damage (including without limitation, loss of use, loss of bargain, loss of revenue, profit or anticipated profit) however caused or arising, and whether such losses or damages were foreseeable or VAM USA or its affiliates was advised of the possibility of such damages.

11/29/2018 6:04 PM

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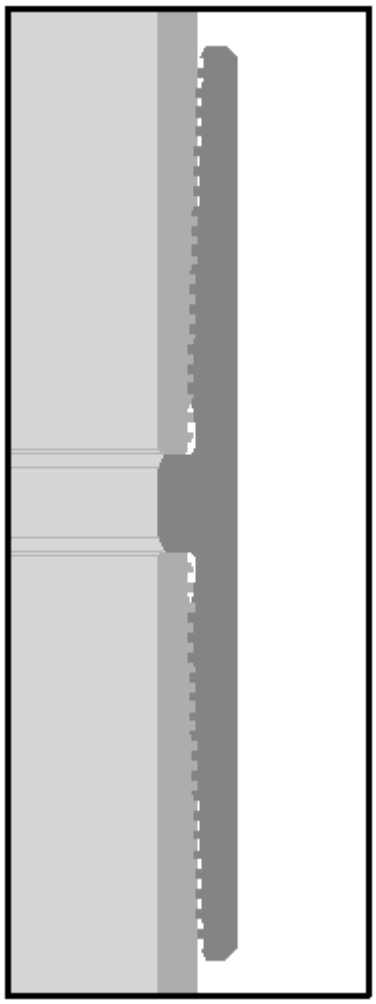
4424 W. Sam Houston Pkwy. Suite 150
Houston, TX 77041
Phone: 713-479-3200
Fax: 713-479-3234
E-mail: VAMUSAsales@vam-usa.com

DWC Connection Data Notes:

1. DWC connections are available with a seal ring (SR) option.
2. All standard DWC/C connections are interchangeable for a given pipe OD. DWC connections are interchangeable with DWC/C-SR connections of the same OD and wall.
3. Connection performance properties are based on nominal pipe body and connection dimensions.
4. DWC connection internal and external pressure resistance is calculated using the API rating for buttress connections. API Internal pressure resistance is calculated from formulas 31, 32, and 35 in the API Bulletin 5C3.
5. DWC joint strength is the minimum pipe body yield strength multiplied by the connection critical area.
6. API joint strength is for reference only. It is calculated from formulas 42 and 43 in the API Bulletin 5C3.
7. Bending efficiency is equal to the compression efficiency.
8. The torque values listed are recommended. The actual torque required may be affected by field conditions such as temperature, thread compound, speed of make-up, weather conditions, etc.
9. Connection yield torque is not to be exceeded.
10. Reference string length is calculated by dividing the joint strength by both the nominal weight in air and a design factor (DF) of 1.4. These values are offered for reference only and do not include load factors such as bending, buoyancy, temperature, load dynamics, etc.
11. DWC connections will accommodate API standard drift diameters.



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Goonch Fed Com 0409 234H

PRECISION RIG# 596

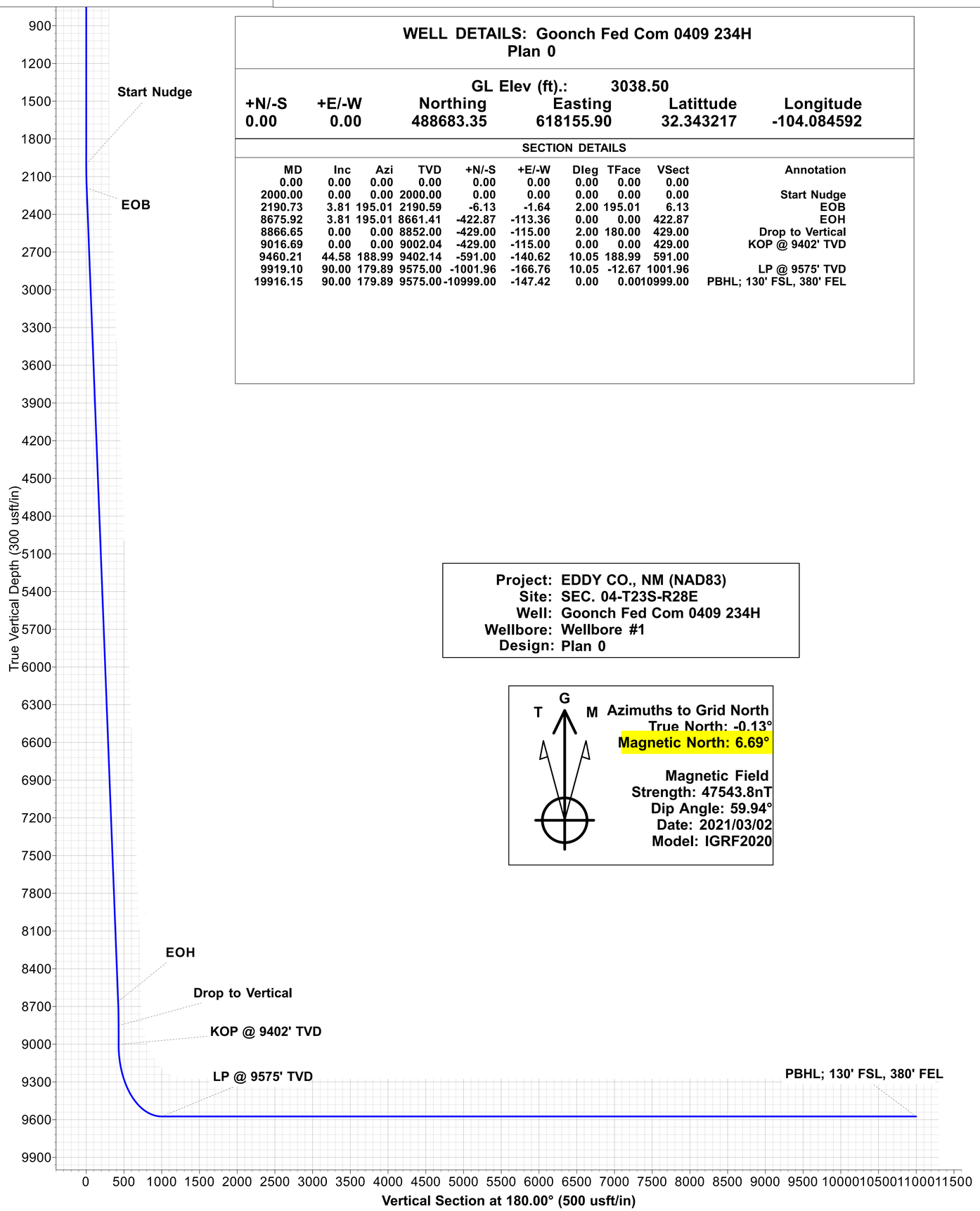
WELL DETAILS: Goonch Fed Com 0409 234H
Plan 0

GL Elev (ft).: 3038.50

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude
0.00	0.00	488683.35	618155.90	32.343217	-104.084592

SECTION DETAILS

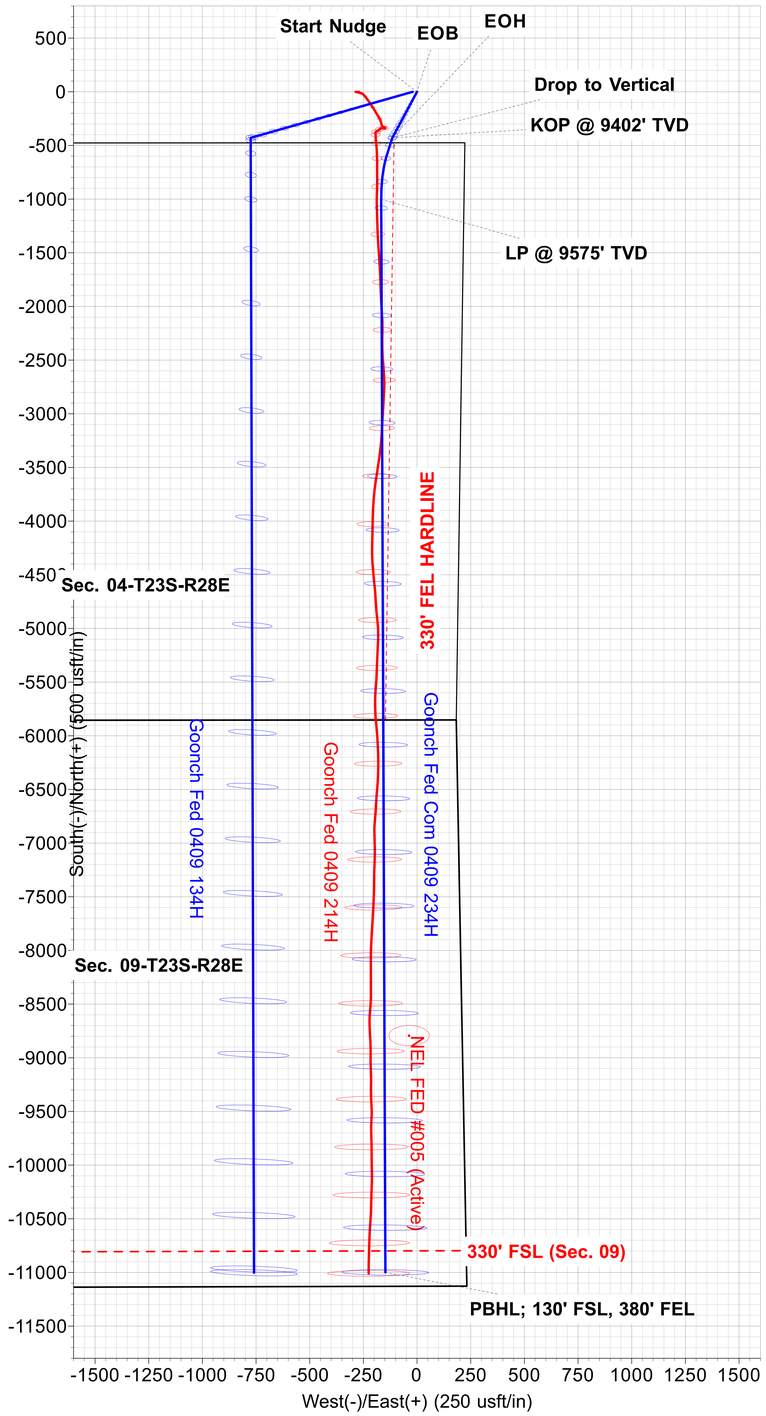
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	Start Nudge
2190.73	3.81	195.01	2190.59	-6.13	-1.64	2.00	195.01	6.13	EOB
8675.92	3.81	195.01	8661.41	-422.87	-113.36	0.00	0.00	422.87	EOH
8866.65	0.00	0.00	8852.00	-429.00	-115.00	2.00	180.00	429.00	Drop to Vertical
9016.69	0.00	0.00	9002.04	-429.00	-115.00	0.00	0.00	429.00	KOP @ 9402' TVD
9460.21	44.58	188.99	9402.14	-591.00	-140.62	10.05	188.99	591.00	
9919.10	90.00	179.89	9575.00	-1001.96	-166.76	10.05	-12.67	1001.96	LP @ 9575' TVD
19916.15	90.00	179.89	9575.00	-10999.00	-147.42	0.00	0.00	10999.00	PBHL; 130' FSL, 380' FEL



Project:	EDDY CO., NM (NAD83)
Site:	SEC. 04-T23S-R28E
Well:	Goonch Fed Com 0409 234H
Wellbore:	Wellbore #1
Design:	Plan 0

Azimuths to Grid North
True North: -0.13°
Magnetic North: 6.69°

Magnetic Field
Strength: 47543.8nT
Dip Angle: 59.94°
Date: 2021/03/02
Model: IGRF2020



NOVO Oil & Gas

EDDY CO., NM (NAD83)
SEC. 04-T23S-R28E
Goonch Fed Com 0409 234H

Wellbore #1
Plan 0

Anticollision Report

02 March, 2021

SB Directional

Anticollision Report

Company:	NOVO Oil & Gas	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Project:	EDDY CO., NM (NAD83)	**TVD Reference:**	RKB @ 3063.50usft
Reference Site:	SEC. 04-T23S-R28E	**MD Reference:**	RKB @ 3063.50usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.16 Single User Db
Reference Design:	Plan 0	**Offset TVD Reference:**	Offset Datum

Reference	Plan 0		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum centre distance of 1,500.00usft	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 2021/03/02

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	19,916.15	Plan 0 (Wellbore #1)	MWD	MWD - Standard

Summary

Site Name / Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SEC. 04-T23S-R28E						
Goonch Fed 0409 134H - Wellbore #1 - Plan 0	1,500.00	1,500.00	19.99	13.45	3.057	CC, ES
Goonch Fed 0409 134H - Wellbore #1 - Plan 0	19,916.15	20,131.42	637.81	248.14	1.637	Collision Risk Procedures Re
Goonch Fed 0409 214H - Wellbore #1 - Wellbore #1	7,414.33	7,424.07	59.21	25.82	1.773	Collision Risk Procedures Re
Goonch Fed 0409 214H - Wellbore #1 - Wellbore #1	7,500.00	7,509.45	59.57	25.86	1.767	Collision Risk Procedures Re
SEC. 09-T23S-R28E						
NEL FED #005 (Active) - Wellbore #1 - Wellbore #1						Out of range

Offset Design: SEC. 04-T23S-R28E - Goonch Fed 0409 134H - Wellbore #1 - Plan 0

Offset Site Error: 0.00 usft

Survey Program: 0-MWD

Offset Well Error: 0.50 usft

Rule Assigned:

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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	0.00	0.00	0.50	0.50	-90.06	-0.02	-19.99	19.99				
100.00	100.00	100.00	100.00	0.51	0.51	-90.06	-0.02	-19.99	19.99	18.98	1.01	19.712	
200.00	200.00	200.00	200.00	0.59	0.59	-90.06	-0.02	-19.99	19.99	18.81	1.18	17.004	
300.00	300.00	300.00	300.00	0.73	0.73	-90.06	-0.02	-19.99	19.99	18.53	1.46	13.665	
400.00	400.00	400.00	400.00	0.91	0.91	-90.06	-0.02	-19.99	19.99	18.17	1.82	11.001	
500.00	500.00	500.00	500.00	1.10	1.10	-90.06	-0.02	-19.99	19.99	17.78	2.21	9.060	
600.00	600.00	600.00	600.00	1.31	1.31	-90.06	-0.02	-19.99	19.99	17.38	2.61	7.644	
700.00	700.00	700.00	700.00	1.52	1.52	-90.06	-0.02	-19.99	19.99	16.95	3.04	6.586	
800.00	800.00	800.00	800.00	1.73	1.73	-90.06	-0.02	-19.99	19.99	16.53	3.46	5.773	
900.00	900.00	900.00	900.00	1.95	1.95	-90.06	-0.02	-19.99	19.99	16.09	3.90	5.132	
1,000.00	1,000.00	1,000.00	1,000.00	2.17	2.17	-90.06	-0.02	-19.99	19.99	15.66	4.33	4.615	
1,100.00	1,100.00	1,100.00	1,100.00	2.38	2.38	-90.06	-0.02	-19.99	19.99	15.22	4.77	4.191	
1,200.00	1,200.00	1,200.00	1,200.00	2.61	2.61	-90.06	-0.02	-19.99	19.99	14.78	5.21	3.837	
1,300.00	1,300.00	1,300.00	1,300.00	2.83	2.83	-90.06	-0.02	-19.99	19.99	14.34	5.65	3.537	
1,400.00	1,400.00	1,400.00	1,400.00	3.05	3.05	-90.06	-0.02	-19.99	19.99	13.89	6.10	3.280	
1,500.00	1,500.00	1,500.00	1,500.00	3.27	3.27	-90.06	-0.02	-19.99	19.99	13.45	6.54	3.057	CC, ES
1,600.00	1,600.00	1,599.36	1,599.34	3.49	3.47	-92.32	-0.87	-21.49	21.52	14.56	6.96	3.092	
1,700.00	1,700.00	1,698.48	1,698.32	3.71	3.66	-97.49	-3.42	-25.97	26.24	18.89	7.36	3.568	
1,800.00	1,800.00	1,797.12	1,796.59	3.94	3.85	-102.87	-7.63	-33.37	34.40	26.66	7.75	4.440	
1,900.00	1,900.00	1,895.86	1,894.65	4.16	4.06	-107.04	-13.28	-43.33	45.64	37.49	8.15	5.600	
2,000.00	2,000.00	1,995.13	1,993.22	4.38	4.29	-109.65	-19.17	-53.69	57.41	48.84	8.57	6.700	

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

SB Directional

Anticollision Report

Company:	NOVO Oil & Gas	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Project:	EDDY CO., NM (NAD83)	**TVD Reference:**	RKB @ 3063.50usft
Reference Site:	SEC. 04-T23S-R28E	**MD Reference:**	RKB @ 3063.50usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.16 Single User Db
Reference Design:	Plan 0	**Offset TVD Reference:**	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed 0409 134H - Wellbore #1 - Plan 0

Offset Site Error: 0.00 usft

Survey Program: 0-MWD

Offset Well Error: 0.50 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
2,100.00	2,099.98	2,094.54	2,091.90	4.58	4.52	54.64	-25.06	-64.05	68.24	59.28	8.96	7.615	
2,190.73	2,190.59	2,184.88	2,181.60	4.73	4.74	56.00	-30.41	-73.48	76.36	67.06	9.30	8.210	
2,200.00	2,199.84	2,194.12	2,190.76	4.75	4.77	56.23	-30.96	-74.44	77.11	67.77	9.34	8.260	
2,300.00	2,299.62	2,293.73	2,289.66	4.93	5.02	58.41	-36.86	-84.83	85.27	75.55	9.72	8.770	
2,400.00	2,399.40	2,393.35	2,388.56	5.11	5.28	60.21	-42.77	-95.22	93.54	83.42	10.12	9.240	
2,500.00	2,499.17	2,492.97	2,487.46	5.30	5.54	61.72	-48.67	-105.61	101.88	91.35	10.53	9.673	
2,600.00	2,598.95	2,592.59	2,586.36	5.49	5.81	62.99	-54.57	-116.00	110.29	99.33	10.95	10.071	
2,700.00	2,698.73	2,692.21	2,685.26	5.69	6.09	64.09	-60.48	-126.39	118.73	107.36	11.38	10.436	
2,800.00	2,798.51	2,791.83	2,784.16	5.90	6.37	65.04	-66.38	-136.77	127.22	115.41	11.81	10.771	
2,900.00	2,898.29	2,891.45	2,883.06	6.11	6.65	65.87	-72.28	-147.16	135.74	123.49	12.25	11.079	
3,000.00	2,998.07	2,991.06	2,981.96	6.32	6.93	66.61	-78.19	-157.55	144.28	131.58	12.70	11.362	
3,100.00	3,097.84	3,090.68	3,080.85	6.53	7.22	67.26	-84.09	-167.94	152.84	139.69	13.15	11.622	
3,200.00	3,197.62	3,190.30	3,179.75	6.75	7.51	67.84	-89.99	-178.33	161.42	147.82	13.61	11.863	
3,300.00	3,297.40	3,289.92	3,278.65	6.97	7.80	68.36	-95.90	-188.72	170.02	155.95	14.07	12.085	
3,400.00	3,397.18	3,389.54	3,377.55	7.20	8.10	68.84	-101.80	-199.11	178.63	164.09	14.53	12.290	
3,500.00	3,496.96	3,489.16	3,476.45	7.42	8.39	69.27	-107.70	-209.50	187.25	172.24	15.00	12.480	
3,600.00	3,596.74	3,588.77	3,575.35	7.65	8.69	69.66	-113.60	-219.89	195.88	180.40	15.48	12.657	
3,700.00	3,696.52	3,688.39	3,674.25	7.88	8.99	70.02	-119.51	-230.28	204.51	188.56	15.95	12.821	
3,800.00	3,796.29	3,788.01	3,773.15	8.11	9.29	70.35	-125.41	-240.67	213.16	196.73	16.43	12.974	
3,900.00	3,896.07	3,887.63	3,872.05	8.35	9.59	70.65	-131.31	-251.06	221.81	204.90	16.91	13.117	
4,000.00	3,995.85	3,987.25	3,970.95	8.58	9.89	70.93	-137.22	-261.45	230.47	213.07	17.39	13.250	
4,100.00	4,095.63	4,086.87	4,069.85	8.82	10.19	71.19	-143.12	-271.84	239.13	221.25	17.88	13.375	
4,200.00	4,195.41	4,186.49	4,168.75	9.05	10.49	71.43	-149.02	-282.22	247.79	229.43	18.37	13.492	
4,300.00	4,295.19	4,286.10	4,267.65	9.29	10.79	71.66	-154.93	-292.61	256.46	237.61	18.86	13.601	
4,400.00	4,394.96	4,385.72	4,366.54	9.53	11.10	71.87	-160.83	-303.00	265.14	245.79	19.35	13.705	
4,500.00	4,494.74	4,485.34	4,465.44	9.77	11.40	72.07	-166.73	-313.39	273.82	253.98	19.84	13.802	
4,600.00	4,594.52	4,584.96	4,564.34	10.01	11.71	72.26	-172.64	-323.78	282.50	262.16	20.33	13.893	
4,700.00	4,694.30	4,684.58	4,663.24	10.25	12.01	72.43	-178.54	-334.17	291.18	270.35	20.83	13.980	
4,800.00	4,794.08	4,784.20	4,762.14	10.49	12.32	72.59	-184.44	-344.56	299.87	278.54	21.33	14.062	
4,900.00	4,893.86	4,883.81	4,861.04	10.74	12.63	72.75	-190.35	-354.95	308.55	286.73	21.82	14.139	
5,000.00	4,993.64	4,983.43	4,959.94	10.98	12.93	72.90	-196.25	-365.34	317.24	294.92	22.32	14.212	
5,100.00	5,093.41	5,083.05	5,058.84	11.22	13.24	73.04	-202.15	-375.73	325.94	303.11	22.82	14.282	
5,200.00	5,193.19	5,182.67	5,157.74	11.47	13.55	73.17	-208.06	-386.12	334.63	311.31	23.32	14.348	
5,300.00	5,292.97	5,282.29	5,256.64	11.71	13.86	73.29	-213.96	-396.51	343.33	319.50	23.82	14.410	
5,400.00	5,392.75	5,381.91	5,355.54	11.96	14.17	73.41	-219.86	-406.90	352.02	327.70	24.33	14.470	
5,500.00	5,492.53	5,481.53	5,454.44	12.21	14.48	73.52	-225.77	-417.29	360.72	335.89	24.83	14.527	
5,600.00	5,592.31	5,581.14	5,553.34	12.45	14.78	73.63	-231.67	-427.67	369.42	344.09	25.34	14.581	
5,700.00	5,692.08	5,680.76	5,652.23	12.70	15.09	73.73	-237.57	-438.06	378.12	352.28	25.84	14.633	
5,800.00	5,791.86	5,780.38	5,751.13	12.95	15.40	73.83	-243.48	-448.45	386.82	360.48	26.35	14.682	
5,900.00	5,891.64	5,880.00	5,850.03	13.20	15.71	73.93	-249.38	-458.84	395.53	368.68	26.85	14.730	
6,000.00	5,991.42	5,979.62	5,948.93	13.45	16.02	74.02	-255.28	-469.23	404.23	376.87	27.36	14.775	
6,100.00	6,091.20	6,079.24	6,047.83	13.69	16.33	74.10	-261.19	-479.62	412.94	385.07	27.87	14.818	
6,200.00	6,190.98	6,178.86	6,146.73	13.94	16.64	74.19	-267.09	-490.01	421.64	393.27	28.37	14.860	
6,300.00	6,290.76	6,278.47	6,245.63	14.19	16.95	74.26	-272.99	-500.40	430.35	401.47	28.88	14.900	
6,400.00	6,390.53	6,378.09	6,344.53	14.44	17.27	74.34	-278.90	-510.79	439.06	409.67	29.39	14.938	
6,500.00	6,490.31	6,477.71	6,443.43	14.69	17.58	74.41	-284.80	-521.18	447.77	417.87	29.90	14.975	
6,600.00	6,590.09	6,577.33	6,542.33	14.94	17.89	74.48	-290.70	-531.57	456.48	426.07	30.41	15.010	
6,700.00	6,689.87	6,676.95	6,641.23	15.19	18.20	74.55	-296.61	-541.96	465.19	434.27	30.92	15.044	
6,800.00	6,789.65	6,776.57	6,740.13	15.44	18.51	74.62	-302.51	-552.35	473.90	442.46	31.43	15.076	
6,900.00	6,889.43	6,876.18	6,839.03	15.70	18.82	74.68	-308.41	-562.73	482.61	450.66	31.94	15.108	
7,000.00	6,989.20	6,975.80	6,937.92	15.95	19.13	74.74	-314.32	-573.12	491.32	458.87	32.46	15.138	
7,100.00	7,088.98	7,075.42	7,036.82	16.20	19.45	74.80	-320.22	-583.51	500.03	467.07	32.97	15.168	

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

SB Directional

Anticollision Report

Company:	NOVO Oil & Gas	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Project:	EDDY CO., NM (NAD83)	**TVD Reference:**	RKB @ 3063.50usft
Reference Site:	SEC. 04-T23S-R28E	**MD Reference:**	RKB @ 3063.50usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.16 Single User Db
Reference Design:	Plan 0	**Offset TVD Reference:**	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed 0409 134H - Wellbore #1 - Plan 0

Offset Site Error: 0.00 usft

Survey Program: 0-MWD

Offset Well Error: 0.50 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
7,200.00	7,188.76	7,175.04	7,135.72	16.45	19.76	74.85	-326.12	-593.90	508.75	475.27	33.48	15.196	
7,300.00	7,288.54	7,274.66	7,234.62	16.70	20.07	74.91	-332.03	-604.29	517.46	483.47	33.99	15.223	
7,400.00	7,388.32	7,374.28	7,333.52	16.95	20.38	74.96	-337.93	-614.68	526.17	491.67	34.50	15.249	
7,500.00	7,488.10	7,473.90	7,432.42	17.21	20.69	75.01	-343.83	-625.07	534.89	499.87	35.02	15.275	
7,600.00	7,587.88	7,573.51	7,531.32	17.46	21.01	75.06	-349.74	-635.46	543.60	508.07	35.53	15.299	
7,700.00	7,687.65	7,673.13	7,630.22	17.71	21.32	75.11	-355.64	-645.85	552.32	516.27	36.04	15.323	
7,800.00	7,787.43	7,772.75	7,729.12	17.96	21.63	75.16	-361.54	-656.24	561.03	524.47	36.56	15.346	
7,900.00	7,887.21	7,872.37	7,828.02	18.22	21.94	75.20	-367.45	-666.63	569.75	532.67	37.07	15.368	
8,000.00	7,986.99	7,971.99	7,926.92	18.47	22.26	75.25	-373.35	-677.02	578.46	540.88	37.59	15.390	
8,100.00	8,086.77	8,071.61	8,025.82	18.72	22.57	75.29	-379.25	-687.41	587.18	549.08	38.10	15.411	
8,200.00	8,186.55	8,171.23	8,124.72	18.97	22.88	75.33	-385.16	-697.80	595.90	557.28	38.62	15.431	
8,300.00	8,286.32	8,270.84	8,223.61	19.23	23.20	75.37	-391.06	-708.18	604.61	565.48	39.13	15.451	
8,400.00	8,386.10	8,370.46	8,322.51	19.48	23.51	75.41	-396.96	-718.57	613.33	573.68	39.65	15.470	
8,500.00	8,485.88	8,470.08	8,421.41	19.73	23.82	75.45	-402.87	-728.96	622.05	581.88	40.16	15.488	
8,600.00	8,585.66	8,569.70	8,520.31	19.99	24.14	75.48	-408.77	-739.35	630.77	590.09	40.68	15.506	
8,675.92	8,661.41	8,645.33	8,595.39	20.18	24.37	75.51	-413.25	-747.24	637.38	596.31	41.07	15.519	
8,700.00	8,685.44	8,669.32	8,619.21	20.24	24.45	75.55	-414.67	-749.74	639.51	598.32	41.19	15.527	
8,800.00	8,785.36	8,776.13	8,725.28	20.43	24.77	75.53	-420.88	-760.67	648.70	607.06	41.64	15.577	
8,866.65	8,852.00	8,858.81	8,807.61	20.56	24.95	-89.62	-424.67	-767.34	653.86	611.92	41.94	15.589	
8,900.00	8,885.35	8,900.31	8,848.99	20.62	25.04	-89.75	-426.13	-769.90	655.92	613.84	42.08	15.588	
9,000.00	8,985.35	9,025.11	8,973.68	20.79	25.25	-89.98	-428.73	-774.47	659.58	617.13	42.45	15.539	
9,016.69	9,002.04	9,045.98	8,994.54	20.82	25.29	-89.99	-428.90	-774.78	659.82	617.31	42.51	15.523	
9,050.00	9,035.33	9,087.60	9,036.16	20.89	25.35	81.11	-429.02	-774.99	659.84	617.19	42.64	15.474	
9,100.00	9,085.05	9,136.49	9,085.05	21.03	25.43	81.62	-429.02	-774.99	659.07	616.16	42.91	15.361	
9,150.00	9,134.14	9,185.58	9,134.14	21.20	25.50	82.55	-429.02	-774.99	657.74	614.51	43.23	15.214	
9,200.00	9,182.21	9,233.65	9,182.22	21.39	25.58	83.86	-429.02	-774.99	656.06	612.44	43.62	15.040	
9,250.00	9,228.89	9,284.42	9,232.92	21.62	25.67	85.45	-431.28	-774.99	654.14	610.06	44.08	14.841	
9,300.00	9,273.83	9,336.72	9,284.72	21.89	25.79	87.11	-438.30	-774.98	651.95	607.37	44.58	14.624	
9,350.00	9,316.68	9,390.64	9,337.24	22.18	25.95	88.83	-450.44	-774.96	649.51	604.37	45.14	14.390	
9,400.00	9,357.11	9,446.29	9,390.00	22.50	26.13	90.60	-468.09	-774.93	646.80	601.07	45.73	14.142	
9,450.00	9,394.81	9,503.77	9,442.42	22.86	26.35	92.41	-491.60	-774.90	643.83	597.46	46.37	13.885	
9,460.21	9,402.14	9,515.74	9,453.02	22.94	26.40	92.78	-497.15	-774.89	643.19	596.68	46.51	13.830	
9,500.00	9,429.51	9,563.20	9,493.86	23.25	26.61	95.01	-521.30	-774.85	640.88	593.85	47.03	13.626	
9,550.00	9,461.00	9,624.72	9,543.58	23.67	26.92	97.52	-557.49	-774.80	638.54	590.83	47.71	13.383	
9,600.00	9,489.03	9,688.35	9,590.62	24.12	27.28	99.72	-600.30	-774.74	636.78	588.37	48.41	13.155	
9,650.00	9,513.40	9,754.07	9,633.90	24.61	27.69	101.64	-649.70	-774.66	635.50	586.40	49.11	12.941	
9,700.00	9,533.91	9,821.76	9,672.27	25.12	28.17	103.25	-705.41	-774.58	634.64	584.81	49.83	12.736	
9,750.00	9,550.40	9,891.22	9,704.54	25.65	28.72	104.56	-766.88	-774.49	634.08	583.51	50.57	12.538	
9,800.00	9,562.75	9,962.17	9,729.58	26.21	29.33	105.54	-833.21	-774.39	633.75	582.40	51.36	12.340	
9,850.00	9,570.87	10,034.22	9,746.42	26.79	30.01	106.19	-903.21	-774.29	633.58	581.38	52.20	12.138	
9,900.00	9,574.68	10,106.93	9,754.38	27.39	30.73	106.49	-975.44	-774.18	633.50	580.39	53.11	11.928	
9,919.10	9,575.00	10,134.77	9,755.00	27.62	31.02	106.51	-1,003.27	-774.14	633.49	580.01	53.48	11.845	
9,922.89	9,575.00	10,140.30	9,754.96	27.67	31.08	106.50	-1,008.80	-774.13	633.48	579.92	53.56	11.828	
10,000.00	9,575.00	10,215.27	9,755.00	28.62	31.89	106.51	-1,083.77	-774.02	633.52	578.18	55.34	11.448	
10,100.00	9,575.00	10,315.27	9,755.00	29.91	33.03	106.51	-1,183.77	-773.87	633.57	575.82	57.75	10.972	
10,200.00	9,575.00	10,415.27	9,755.00	31.26	34.23	106.50	-1,283.77	-773.72	633.61	573.35	60.26	10.514	
10,300.00	9,575.00	10,515.27	9,755.00	32.65	35.48	106.50	-1,383.77	-773.57	633.65	570.78	62.88	10.078	
10,400.00	9,575.00	10,615.27	9,755.00	34.09	36.79	106.50	-1,483.77	-773.42	633.70	568.12	65.58	9.664	
10,500.00	9,575.00	10,715.27	9,755.00	35.56	38.13	106.50	-1,583.77	-773.28	633.74	565.39	68.35	9.272	
10,600.00	9,575.00	10,815.27	9,755.00	37.06	39.52	106.50	-1,683.77	-773.13	633.78	562.59	71.20	8.902	
10,700.00	9,575.00	10,915.27	9,755.00	38.59	40.94	106.50	-1,783.76	-772.98	633.83	559.73	74.10	8.554	
10,800.00	9,575.00	11,015.27	9,755.00	40.15	42.39	106.50	-1,883.76	-772.83	633.87	556.81	77.06	8.226	

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

SB Directional

Anticollision Report

Company:	NOVO Oil & Gas	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Project:	EDDY CO., NM (NAD83)	**TVD Reference:**	RKB @ 3063.50usft
Reference Site:	SEC. 04-T23S-R28E	**MD Reference:**	RKB @ 3063.50usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.16 Single User Db
Reference Design:	Plan 0	**Offset TVD Reference:**	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed 0409 134H - Wellbore #1 - Plan 0

Offset Site Error: 0.00 usft

Survey Program: 0-MWD

Rule Assigned:

Offset Well Error: 0.50 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
10,900.00	9,575.00	11,115.27	9,755.00	41.73	43.87	106.50	-1,983.76	-772.68	633.91	553.85	80.06	7.918	
11,000.00	9,575.00	11,215.27	9,755.00	43.33	45.37	106.49	-2,083.76	-772.53	633.96	550.85	83.11	7.628	
11,100.00	9,575.00	11,315.27	9,755.00	44.95	46.90	106.49	-2,183.76	-772.39	634.00	547.81	86.19	7.356	
11,200.00	9,575.00	11,415.27	9,755.00	46.58	48.45	106.49	-2,283.76	-772.24	634.04	544.74	89.31	7.100	
11,300.00	9,575.00	11,515.27	9,755.00	48.22	50.02	106.49	-2,383.76	-772.09	634.09	541.63	92.45	6.858	
11,400.00	9,575.00	11,615.27	9,755.00	49.88	51.60	106.49	-2,483.76	-771.94	634.13	538.50	95.63	6.631	
11,500.00	9,575.00	11,715.27	9,755.00	51.55	53.20	106.49	-2,583.76	-771.79	634.17	535.35	98.83	6.417	
11,600.00	9,575.00	11,815.27	9,755.00	53.24	54.82	106.49	-2,683.76	-771.64	634.22	532.17	102.05	6.215	
11,700.00	9,575.00	11,915.27	9,755.00	54.93	56.45	106.49	-2,783.76	-771.50	634.26	528.97	105.29	6.024	
11,800.00	9,575.00	12,015.27	9,755.00	56.63	58.09	106.49	-2,883.76	-771.35	634.30	525.75	108.55	5.844	
11,900.00	9,575.00	12,115.27	9,755.00	58.33	59.74	106.48	-2,983.76	-771.20	634.35	522.52	111.82	5.673	
12,000.00	9,575.00	12,215.27	9,755.00	60.05	61.40	106.48	-3,083.76	-771.05	634.39	519.27	115.12	5.511	
12,100.00	9,575.00	12,315.27	9,755.00	61.77	63.07	106.48	-3,183.76	-770.90	634.43	516.01	118.42	5.357	
12,200.00	9,575.00	12,415.27	9,755.00	63.50	64.75	106.48	-3,283.76	-770.75	634.47	512.73	121.74	5.212	
12,300.00	9,575.00	12,515.27	9,755.00	65.23	66.44	106.48	-3,383.76	-770.61	634.52	509.44	125.07	5.073	
12,400.00	9,575.00	12,615.27	9,755.00	66.97	68.13	106.48	-3,483.76	-770.46	634.56	506.15	128.42	4.941	
12,500.00	9,575.00	12,715.27	9,755.00	68.71	69.83	106.48	-3,583.76	-770.31	634.60	502.84	131.77	4.816	
12,600.00	9,575.00	12,815.27	9,755.00	70.46	71.54	106.48	-3,683.76	-770.16	634.65	499.52	135.13	4.697	
12,700.00	9,575.00	12,915.27	9,755.00	72.21	73.25	106.48	-3,783.76	-770.01	634.69	496.19	138.50	4.583	
12,800.00	9,575.00	13,015.27	9,755.00	73.97	74.97	106.47	-3,883.76	-769.86	634.73	492.86	141.88	4.474	
12,900.00	9,575.00	13,115.27	9,755.00	75.73	76.70	106.47	-3,983.76	-769.72	634.78	489.51	145.26	4.370	
13,000.00	9,575.00	13,215.27	9,755.00	77.49	78.43	106.47	-4,083.76	-769.57	634.82	486.16	148.66	4.270	
13,100.00	9,575.00	13,315.27	9,755.00	79.26	80.16	106.47	-4,183.76	-769.42	634.86	482.81	152.06	4.175	
13,200.00	9,575.00	13,415.27	9,755.00	81.02	81.90	106.47	-4,283.76	-769.27	634.91	479.44	155.46	4.084	
13,300.00	9,575.00	13,515.27	9,755.00	82.80	83.64	106.47	-4,383.76	-769.12	634.95	476.07	158.88	3.997	
13,400.00	9,575.00	13,615.27	9,755.00	84.57	85.39	106.47	-4,483.76	-768.97	634.99	472.70	162.29	3.913	
13,500.00	9,575.00	13,715.27	9,755.00	86.35	87.14	106.47	-4,583.76	-768.82	635.04	469.32	165.72	3.832	
13,600.00	9,575.00	13,815.27	9,755.00	88.12	88.89	106.46	-4,683.76	-768.68	635.08	465.94	169.14	3.755	
13,700.00	9,575.00	13,915.27	9,755.00	89.90	90.64	106.46	-4,783.76	-768.53	635.12	462.55	172.57	3.680	
13,800.00	9,575.00	14,015.27	9,755.00	91.69	92.40	106.46	-4,883.76	-768.38	635.17	459.16	176.01	3.609	
13,900.00	9,575.00	14,115.27	9,755.00	93.47	94.16	106.46	-4,983.76	-768.23	635.21	455.76	179.45	3.540	
14,000.00	9,575.00	14,215.27	9,755.00	95.26	95.93	106.46	-5,083.76	-768.08	635.25	452.36	182.89	3.473	
14,100.00	9,575.00	14,315.27	9,755.00	97.04	97.69	106.46	-5,183.76	-767.93	635.30	448.96	186.34	3.409	
14,200.00	9,575.00	14,415.27	9,755.00	98.83	99.46	106.46	-5,283.76	-767.79	635.34	445.55	189.79	3.348	
14,300.00	9,575.00	14,515.27	9,755.00	100.62	101.23	106.46	-5,383.76	-767.64	635.38	442.14	193.24	3.288	
14,400.00	9,575.00	14,615.27	9,755.00	102.42	103.00	106.46	-5,483.76	-767.49	635.43	438.73	196.70	3.230	
14,500.00	9,575.00	14,715.27	9,755.00	104.21	104.78	106.45	-5,583.76	-767.34	635.47	435.31	200.16	3.175	
14,600.00	9,575.00	14,815.27	9,755.00	106.01	106.56	106.45	-5,683.76	-767.19	635.51	431.89	203.62	3.121	
14,700.00	9,575.00	14,915.27	9,755.00	107.80	108.33	106.45	-5,783.76	-767.04	635.56	428.47	207.09	3.069	
14,800.00	9,575.00	15,015.27	9,755.00	109.60	110.11	106.45	-5,883.76	-766.90	635.60	425.05	210.55	3.019	
14,900.00	9,575.00	15,115.27	9,755.00	111.40	111.90	106.45	-5,983.76	-766.75	635.64	421.62	214.02	2.970	
15,000.00	9,575.00	15,215.27	9,755.00	113.20	113.68	106.45	-6,083.76	-766.60	635.69	418.19	217.49	2.923	
15,100.00	9,575.00	15,315.27	9,755.00	115.00	115.46	106.45	-6,183.76	-766.45	635.73	414.76	220.97	2.877	
15,200.00	9,575.00	15,415.27	9,755.00	116.80	117.25	106.45	-6,283.76	-766.30	635.77	411.33	224.44	2.833	
15,300.00	9,575.00	15,515.27	9,755.00	118.60	119.04	106.45	-6,383.76	-766.15	635.81	407.89	227.92	2.790	
15,400.00	9,575.00	15,615.27	9,755.00	120.40	120.83	106.44	-6,483.76	-766.01	635.86	404.46	231.40	2.748	
15,500.00	9,575.00	15,715.27	9,755.00	122.21	122.62	106.44	-6,583.76	-765.86	635.90	401.02	234.88	2.707	
15,600.00	9,575.00	15,815.27	9,755.00	124.01	124.41	106.44	-6,683.76	-765.71	635.94	397.58	238.37	2.668	
15,700.00	9,575.00	15,915.27	9,755.00	125.82	126.20	106.44	-6,783.76	-765.56	635.99	394.14	241.85	2.630	
15,800.00	9,575.00	16,015.27	9,755.00	127.62	127.99	106.44	-6,883.76	-765.41	636.03	390.69	245.34	2.592	
15,900.00	9,575.00	16,115.27	9,755.00	129.43	129.79	106.44	-6,983.76	-765.26	636.07	387.25	248.82	2.556	
16,000.00	9,575.00	16,215.27	9,755.00	131.24	131.58	106.44	-7,083.76	-765.12	636.12	383.80	252.31	2.521	

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

SB Directional

Anticollision Report

Company:	NOVO Oil & Gas	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Project:	EDDY CO., NM (NAD83)	**TVD Reference:**	RKB @ 3063.50usft
Reference Site:	SEC. 04-T23S-R28E	**MD Reference:**	RKB @ 3063.50usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.16 Single User Db
Reference Design:	Plan 0	**Offset TVD Reference:**	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed 0409 134H - Wellbore #1 - Plan 0

Offset Site Error: 0.00 usft

Survey Program: 0-MWD

Rule Assigned:

Offset Well Error: 0.50 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
16,100.00	9,575.00	16,315.27	9,755.00	133.04	133.38	106.44	-7,183.76	-764.97	636.16	380.36	255.80	2.487	
16,200.00	9,575.00	16,415.27	9,755.00	134.85	135.18	106.43	-7,283.76	-764.82	636.20	376.91	259.30	2.454	
16,300.00	9,575.00	16,515.27	9,755.00	136.66	136.98	106.43	-7,383.76	-764.67	636.25	373.46	262.79	2.421	
16,400.00	9,575.00	16,615.27	9,755.00	138.47	138.78	106.43	-7,483.76	-764.52	636.29	370.01	266.28	2.390	
16,500.00	9,575.00	16,715.27	9,755.00	140.28	140.58	106.43	-7,583.76	-764.37	636.33	366.55	269.78	2.359	
16,600.00	9,575.00	16,815.27	9,755.00	142.09	142.38	106.43	-7,683.76	-764.22	636.38	363.10	273.28	2.329	
16,700.00	9,575.00	16,915.27	9,755.00	143.91	144.18	106.43	-7,783.76	-764.08	636.42	359.65	276.77	2.299	
16,800.00	9,575.00	17,015.27	9,755.00	145.72	145.98	106.43	-7,883.76	-763.93	636.46	356.19	280.27	2.271	
16,900.00	9,575.00	17,115.27	9,755.00	147.53	147.78	106.43	-7,983.76	-763.78	636.51	352.73	283.77	2.243	
17,000.00	9,575.00	17,215.27	9,755.00	149.34	149.59	106.43	-8,083.76	-763.63	636.55	349.28	287.27	2.216	
17,100.00	9,575.00	17,315.27	9,755.00	151.16	151.39	106.42	-8,183.76	-763.48	636.59	345.82	290.77	2.189	
17,200.00	9,575.00	17,415.27	9,755.00	152.97	153.20	106.42	-8,283.76	-763.33	636.64	342.36	294.28	2.163	
17,300.00	9,575.00	17,515.27	9,755.00	154.78	155.00	106.42	-8,383.76	-763.19	636.68	338.90	297.78	2.138	
17,400.00	9,575.00	17,615.27	9,755.00	156.60	156.81	106.42	-8,483.76	-763.04	636.72	335.44	301.28	2.113	
17,500.00	9,575.00	17,715.27	9,755.00	158.41	158.61	106.42	-8,583.76	-762.89	636.77	331.98	304.79	2.089	
17,600.00	9,575.00	17,815.27	9,755.00	160.23	160.42	106.42	-8,683.76	-762.74	636.81	328.51	308.30	2.066	
17,700.00	9,575.00	17,915.27	9,755.00	162.04	162.23	106.42	-8,783.76	-762.59	636.85	325.05	311.80	2.042	
17,800.00	9,575.00	18,015.27	9,755.00	163.86	164.04	106.42	-8,883.76	-762.44	636.90	321.59	315.31	2.020	
17,900.00	9,575.00	18,115.27	9,755.00	165.68	165.84	106.42	-8,983.76	-762.30	636.94	318.12	318.82	1.998	Collision Risk Procedures Req.
18,000.00	9,575.00	18,215.27	9,755.00	167.49	167.65	106.41	-9,083.76	-762.15	636.98	314.65	322.33	1.976	Collision Risk Procedures Req.
18,100.00	9,575.00	18,315.27	9,755.00	169.31	169.46	106.41	-9,183.76	-762.00	637.03	311.19	325.84	1.955	Collision Risk Procedures Req.
18,200.00	9,575.00	18,415.27	9,755.00	171.13	171.27	106.41	-9,283.76	-761.85	637.07	307.72	329.35	1.934	Collision Risk Procedures Req.
18,300.00	9,575.00	18,515.27	9,755.00	172.94	173.08	106.41	-9,383.76	-761.70	637.11	304.25	332.86	1.914	Collision Risk Procedures Req.
18,400.00	9,575.00	18,615.27	9,755.00	174.76	174.89	106.41	-9,483.76	-761.55	637.15	300.79	336.37	1.894	Collision Risk Procedures Req.
18,500.00	9,575.00	18,715.27	9,755.00	176.58	176.71	106.41	-9,583.76	-761.41	637.20	297.32	339.88	1.875	Collision Risk Procedures Req.
18,600.00	9,575.00	18,815.27	9,755.00	178.40	178.52	106.41	-9,683.76	-761.26	637.24	293.85	343.39	1.856	Collision Risk Procedures Req.
18,700.00	9,575.00	18,915.27	9,755.00	180.22	180.33	106.41	-9,783.76	-761.11	637.28	290.38	346.91	1.837	Collision Risk Procedures Req.
18,800.00	9,575.00	19,015.27	9,755.00	182.03	182.14	106.41	-9,883.76	-760.96	637.33	286.91	350.42	1.819	Collision Risk Procedures Req.
18,900.00	9,575.00	19,115.27	9,755.00	183.85	183.95	106.40	-9,983.76	-760.81	637.37	283.44	353.93	1.801	Collision Risk Procedures Req.
19,000.00	9,575.00	19,215.27	9,755.00	185.67	185.77	106.40	-10,083.76	-760.66	637.41	279.96	357.45	1.783	Collision Risk Procedures Req.
19,100.00	9,575.00	19,315.27	9,755.00	187.49	187.58	106.40	-10,183.76	-760.51	637.46	276.49	360.97	1.766	Collision Risk Procedures Req.
19,200.00	9,575.00	19,415.27	9,755.00	189.31	189.40	106.40	-10,283.75	-760.37	637.50	273.02	364.48	1.749	Collision Risk Procedures Req.
19,300.00	9,575.00	19,515.27	9,755.00	191.13	191.21	106.40	-10,383.75	-760.22	637.54	269.55	368.00	1.732	Collision Risk Procedures Req.
19,400.00	9,575.00	19,615.27	9,755.00	192.95	193.02	106.40	-10,483.75	-760.07	637.59	266.07	371.51	1.716	Collision Risk Procedures Req.
19,500.00	9,575.00	19,715.27	9,755.00	194.77	194.84	106.40	-10,583.75	-759.92	637.63	262.60	375.03	1.700	Collision Risk Procedures Req.
19,600.00	9,575.00	19,815.27	9,755.00	196.59	196.65	106.40	-10,683.75	-759.77	637.67	259.12	378.55	1.685	Collision Risk Procedures Req.
19,700.00	9,575.00	19,915.27	9,755.00	198.41	198.47	106.39	-10,783.75	-759.62	637.72	255.65	382.07	1.669	Collision Risk Procedures Req.
19,800.00	9,575.00	20,015.27	9,755.00	200.23	200.28	106.39	-10,883.75	-759.48	637.76	252.17	385.59	1.654	Collision Risk Procedures Req.
19,900.00	9,575.00	20,115.27	9,755.00	202.05	202.10	106.39	-10,983.75	-759.33	637.80	248.70	389.10	1.639	Collision Risk Procedures Req.
19,916.15	9,575.00	20,131.42	9,755.00	202.35	202.39	106.39	-10,999.91	-759.30	637.81	248.14	389.67	1.637	Collision Risk Procedures Req., SF

SB Directional

Anticollision Report

Company:	NOVO Oil & Gas	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Project:	EDDY CO., NM (NAD83)	**TVD Reference:**	RKB @ 3063.50usft
Reference Site:	SEC. 04-T23S-R28E	**MD Reference:**	RKB @ 3063.50usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.16 Single User Db
Reference Design:	Plan 0	**Offset TVD Reference:**	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed 0409 214H - Wellbore #1 - Wellbore #1

Offset Site Error: 0.00 usft

Survey Program: 100-MWD

Offset Well Error: 0.50 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	2.58	2.58	0.50	0.50	-90.06	-0.26	-270.31	270.31				
100.00	100.00	105.50	105.49	0.51	0.51	-90.08	-0.38	-269.64	269.66	268.64	1.02	265.194	
168.94	168.94	171.44	171.44	0.55	0.55	-90.08	-0.40	-269.28	269.28	268.17	1.11	243.462	
200.00	200.00	201.16	201.15	0.59	0.58	-90.07	-0.34	-269.35	269.36	268.19	1.17	230.635	
300.00	300.00	303.67	303.66	0.73	0.71	-90.09	-0.43	-269.39	269.39	267.95	1.44	186.652	
345.45	345.45	347.96	347.95	0.81	0.78	-90.12	-0.55	-269.29	269.29	267.70	1.59	169.438	
400.00	400.00	401.11	401.11	0.91	0.87	-90.12	-0.57	-269.43	269.43	267.66	1.78	151.604	
500.00	500.00	498.80	498.79	1.10	1.04	-90.12	-0.57	-270.36	270.39	268.24	2.15	125.989	
600.00	600.00	599.70	599.68	1.31	1.23	-90.16	-0.76	-271.56	271.58	269.04	2.54	106.930	
700.00	700.00	699.62	699.60	1.52	1.43	-90.19	-0.91	-272.60	272.62	269.67	2.94	92.599	
800.00	800.00	799.28	799.25	1.73	1.63	-90.24	-1.15	-273.74	273.76	270.40	3.36	81.526	
900.00	900.00	898.90	898.86	1.95	1.83	-90.30	-1.44	-274.94	274.97	271.20	3.78	72.821	
1,000.00	1,000.00	997.81	997.76	2.17	2.04	-90.37	-1.78	-276.44	276.48	272.29	4.20	65.851	
1,100.00	1,100.00	1,097.84	1,097.77	2.38	2.24	-90.41	-1.97	-278.24	278.29	273.67	4.62	60.173	
1,200.00	1,200.00	1,197.51	1,197.43	2.61	2.45	-90.38	-1.84	-279.90	279.96	274.91	5.05	55.443	
1,300.00	1,300.00	1,298.82	1,298.73	2.83	2.66	-90.36	-1.79	-281.62	281.65	276.17	5.48	51.417	
1,400.00	1,400.00	1,399.18	1,399.07	3.05	2.86	-90.35	-1.73	-282.85	282.87	276.97	5.90	47.925	
1,500.00	1,500.00	1,499.18	1,499.07	3.27	3.07	-90.32	-1.56	-284.06	284.08	277.75	6.33	44.865	
1,600.00	1,600.00	1,599.65	1,599.53	3.49	3.28	-90.26	-1.29	-285.24	285.26	278.50	6.76	42.170	
1,700.00	1,700.00	1,702.37	1,702.25	3.71	3.49	-90.16	-0.78	-285.83	285.83	278.63	7.20	39.704	
1,800.00	1,800.00	1,806.45	1,806.33	3.94	3.70	-90.15	-0.74	-285.31	285.34	277.71	7.63	37.385	
1,900.00	1,900.00	1,910.69	1,910.54	4.16	3.92	-90.31	-1.55	-282.98	283.10	275.03	8.07	35.099	
2,000.00	2,000.00	2,011.35	2,011.13	4.38	4.12	-90.62	-3.04	-279.88	280.03	271.53	8.49	32.965	
2,100.00	2,099.98	2,113.03	2,112.75	4.58	4.33	74.53	-4.30	-276.49	276.24	267.34	8.90	31.045	
2,190.73	2,190.59	2,203.96	2,203.61	4.73	4.52	75.31	-5.44	-273.00	271.57	262.32	9.24	29.389	
2,200.00	2,199.84	2,213.20	2,212.84	4.75	4.54	75.40	-5.65	-272.65	271.05	261.77	9.28	29.221	
2,300.00	2,299.62	2,310.98	2,310.54	4.93	4.74	76.29	-7.81	-269.21	265.87	256.22	9.66	27.531	
2,400.00	2,399.40	2,408.23	2,407.74	5.11	4.94	77.33	-9.40	-266.69	261.70	251.66	10.05	26.050	
2,500.00	2,499.17	2,507.69	2,507.17	5.30	5.15	78.47	-10.81	-264.65	258.18	247.74	10.44	24.720	
2,600.00	2,598.95	2,607.70	2,607.14	5.49	5.36	79.66	-12.20	-262.49	254.67	243.82	10.85	23.476	
2,700.00	2,698.73	2,707.81	2,707.22	5.69	5.57	80.87	-13.59	-260.39	251.32	240.07	11.26	22.326	
2,800.00	2,798.51	2,807.53	2,806.91	5.90	5.78	82.15	-14.88	-258.04	247.85	236.18	11.67	21.237	
2,900.00	2,898.29	2,906.42	2,905.77	6.11	5.99	83.47	-16.00	-255.99	244.80	232.71	12.09	20.250	
3,000.00	2,998.07	3,008.19	3,007.50	6.32	6.21	84.71	-17.85	-253.89	241.78	229.27	12.51	19.322	
3,100.00	3,097.84	3,110.81	3,109.98	6.53	6.43	85.40	-22.34	-251.08	237.75	224.81	12.94	18.372	
3,200.00	3,197.62	3,213.32	3,212.16	6.75	6.65	85.46	-29.62	-247.58	232.58	219.21	13.37	17.392	
3,300.00	3,297.40	3,315.34	3,313.64	6.97	6.88	84.95	-39.29	-243.48	226.38	212.57	13.81	16.388	
3,400.00	3,397.18	3,415.96	3,413.49	7.20	7.12	83.92	-50.82	-238.92	219.39	205.13	14.26	15.383	
3,500.00	3,496.96	3,515.11	3,511.89	7.42	7.35	82.82	-62.23	-234.51	212.54	197.82	14.72	14.440	
3,600.00	3,596.74	3,614.43	3,610.48	7.65	7.59	81.72	-73.41	-230.28	205.99	190.80	15.18	13.568	
3,700.00	3,696.52	3,713.82	3,709.15	7.88	7.83	80.52	-84.63	-226.20	199.68	184.03	15.65	12.759	
3,800.00	3,796.29	3,812.96	3,807.60	8.11	8.08	79.30	-95.68	-222.35	193.68	177.56	16.12	12.012	
3,900.00	3,896.07	3,912.17	3,906.18	8.35	8.33	78.14	-106.24	-218.77	188.08	171.48	16.60	11.330	
4,000.00	3,995.85	4,012.23	4,005.60	8.58	8.58	76.87	-116.97	-215.21	182.62	165.54	17.08	10.691	
4,100.00	4,095.63	4,112.22	4,104.88	8.82	8.83	75.35	-128.25	-211.53	177.12	159.56	17.57	10.083	
4,200.00	4,195.41	4,212.17	4,204.07	9.05	9.09	73.59	-139.95	-207.71	171.63	153.57	18.06	9.503	
4,300.00	4,295.19	4,311.82	4,302.93	9.29	9.35	71.60	-151.94	-203.79	166.21	147.65	18.56	8.956	
4,400.00	4,394.96	4,411.21	4,401.51	9.53	9.62	69.46	-163.99	-200.02	161.16	142.09	19.06	8.455	
4,500.00	4,494.74	4,510.87	4,500.35	9.77	9.89	67.17	-176.14	-196.36	156.46	136.90	19.57	7.997	
4,600.00	4,594.52	4,610.62	4,599.29	10.01	10.16	64.70	-188.37	-192.64	152.00	131.93	20.07	7.573	
4,700.00	4,694.30	4,710.31	4,698.15	10.25	10.43	62.08	-200.61	-188.89	147.81	127.24	20.57	7.186	
4,800.00	4,794.08	4,810.00	4,797.02	10.49	10.70	59.36	-212.75	-185.16	143.94	122.88	21.07	6.833	

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

SB Directional

Anticollision Report

Company:	NOVO Oil & Gas	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Project:	EDDY CO., NM (NAD83)	**TVD Reference:**	RKB @ 3063.50usft
Reference Site:	SEC. 04-T23S-R28E	**MD Reference:**	RKB @ 3063.50usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.16 Single User Db
Reference Design:	Plan 0	**Offset TVD Reference:**	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed 0409 214H - Wellbore #1 - Wellbore #1

Offset Site Error: 0.00 usft

Survey Program: 100-MWD

Offset Well Error: 0.50 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.00	4,893.86	4,909.68	4,895.95	10.74	10.97	56.68	-224.46	-181.57	140.41	118.86	21.55	6.515	
5,000.00	4,993.64	5,009.38	4,994.97	10.98	11.23	54.14	-235.55	-178.21	137.19	115.15	22.04	6.226	
5,100.00	5,093.41	5,108.99	5,093.96	11.22	11.49	51.70	-246.24	-175.10	134.33	111.82	22.51	5.967	
5,200.00	5,193.19	5,208.24	5,192.63	11.47	11.76	49.32	-256.64	-172.35	131.92	108.93	22.99	5.739	
5,300.00	5,292.97	5,307.19	5,291.00	11.71	12.02	46.96	-267.09	-170.23	130.35	106.90	23.45	5.559	
5,400.00	5,392.75	5,406.81	5,390.05	11.96	12.29	44.64	-277.65	-168.64	129.50	105.59	23.91	5.416	
5,500.00	5,492.53	5,506.69	5,489.38	12.21	12.56	42.43	-287.99	-167.23	128.88	104.51	24.37	5.289	
5,600.00	5,592.31	5,606.46	5,588.62	12.45	12.82	40.34	-298.08	-166.02	128.49	103.67	24.82	5.177	
5,700.00	5,692.08	5,706.71	5,688.38	12.70	13.08	38.36	-308.02	-165.02	128.32	103.06	25.27	5.079	
5,800.00	5,791.86	5,809.43	5,790.72	12.95	13.34	36.72	-316.62	-163.42	126.91	101.19	25.72	4.935	
5,900.00	5,891.64	5,911.08	5,892.14	13.20	13.59	35.57	-322.98	-160.92	123.54	97.38	26.16	4.722	
6,000.00	5,991.42	6,011.30	5,992.17	13.45	13.82	34.59	-328.49	-158.31	119.63	93.03	26.60	4.497	
6,100.00	6,091.20	6,111.83	6,092.55	13.69	14.05	33.77	-333.44	-155.74	115.40	88.37	27.04	4.268	
6,200.00	6,190.98	6,212.50	6,193.12	13.94	14.28	33.38	-337.23	-153.27	110.52	83.03	27.48	4.021	
6,300.00	6,290.76	6,312.33	6,292.90	14.19	14.49	33.71	-339.71	-151.45	105.25	77.31	27.94	3.767	
6,400.00	6,390.53	6,412.05	6,392.61	14.44	14.69	35.20	-340.78	-151.05	100.15	71.73	28.42	3.524	
6,500.00	6,490.31	6,512.26	6,492.82	14.69	14.89	37.39	-341.09	-151.07	94.99	66.09	28.90	3.286	
6,600.00	6,590.09	6,612.47	6,593.03	14.94	15.08	39.89	-341.07	-150.79	89.55	60.16	29.39	3.047	
6,700.00	6,689.87	6,712.69	6,693.24	15.19	15.27	43.01	-340.39	-150.31	83.78	53.89	29.90	2.802	
6,800.00	6,789.65	6,812.45	6,792.99	15.44	15.45	46.93	-339.08	-149.72	77.89	47.48	30.41	2.561	
6,900.00	6,889.43	6,911.91	6,892.45	15.70	15.64	51.42	-337.89	-149.29	72.63	41.69	30.94	2.348	
7,000.00	6,989.20	7,011.49	6,992.02	15.95	15.83	56.48	-336.89	-149.06	68.13	36.67	31.46	2.166	
7,100.00	7,088.98	7,111.11	7,091.64	16.20	16.01	62.15	-335.98	-148.96	64.37	32.40	31.97	2.013	
7,200.00	7,188.76	7,210.61	7,191.13	16.45	16.20	68.31	-335.23	-149.07	61.56	29.10	32.46	1.897	Collision Risk Procedures Req.
7,300.00	7,288.54	7,310.15	7,290.68	16.70	16.39	74.73	-334.74	-149.52	59.87	26.95	32.92	1.819	Collision Risk Procedures Req.
7,400.00	7,388.32	7,409.79	7,390.31	16.95	16.59	81.33	-334.33	-150.23	59.22	25.89	33.33	1.777	Collision Risk Procedures Req.
7,414.33	7,402.62	7,424.07	7,404.59	16.99	16.61	82.28	-334.27	-150.35	59.21	25.82	33.39	1.773	Collision Risk Procedures Req., CC, ES
7,500.00	7,488.10	7,509.45	7,489.97	17.21	16.78	87.95	-333.91	-151.15	59.57	25.86	33.71	1.767	Collision Risk Procedures Req., SF
7,600.00	7,587.88	7,609.19	7,589.70	17.46	16.97	94.18	-333.70	-152.22	60.80	26.74	34.06	1.785	Collision Risk Procedures Req.
7,700.00	7,687.65	7,708.81	7,689.31	17.71	17.17	99.76	-333.78	-153.54	62.81	28.41	34.40	1.826	Collision Risk Procedures Req.
7,800.00	7,787.43	7,808.37	7,788.85	17.96	17.36	104.33	-334.30	-155.50	65.72	30.98	34.73	1.892	Collision Risk Procedures Req.
7,900.00	7,887.21	7,908.27	7,888.71	18.22	17.56	107.99	-335.24	-157.94	69.18	34.09	35.09	1.971	Collision Risk Procedures Req.
8,000.00	7,986.99	8,008.29	7,988.70	18.47	17.76	111.11	-336.52	-160.36	72.68	37.21	35.46	2.049	
8,100.00	8,086.77	8,108.36	8,088.73	18.72	17.96	113.89	-337.98	-162.62	76.13	40.29	35.84	2.124	
8,200.00	8,186.55	8,208.38	8,188.71	18.97	18.15	116.53	-339.51	-164.61	79.50	43.29	36.21	2.196	
8,300.00	8,286.32	8,308.20	8,288.50	19.23	18.35	118.88	-341.10	-166.63	83.00	46.42	36.59	2.269	
8,400.00	8,386.10	8,408.13	8,388.39	19.48	18.56	120.92	-342.80	-168.82	86.68	49.70	36.98	2.344	
8,500.00	8,485.88	8,508.22	8,488.44	19.73	18.76	122.67	-344.77	-171.05	90.27	52.90	37.38	2.415	
8,600.00	8,585.66	8,608.50	8,588.67	19.99	18.97	124.19	-347.05	-173.21	93.67	55.88	37.79	2.479	
8,675.92	8,661.41	8,684.72	8,664.85	20.18	19.13	125.27	-349.03	-174.65	95.97	57.87	38.10	2.519	
8,700.00	8,685.44	8,708.90	8,689.02	20.24	19.18	125.56	-349.71	-175.06	96.58	58.39	38.19	2.529	
8,800.00	8,785.36	8,809.28	8,789.35	20.43	19.38	125.70	-352.71	-176.63	97.63	59.04	38.59	2.530	
8,866.65	8,852.00	8,876.16	8,856.19	20.56	19.52	-40.17	-354.90	-177.54	96.98	58.09	38.89	2.494	
8,900.00	8,885.35	8,909.56	8,889.56	20.62	19.59	-40.79	-356.04	-177.97	96.39	57.34	39.05	2.468	
9,000.00	8,985.35	9,009.20	8,989.14	20.79	19.81	-42.73	-359.35	-179.34	94.82	55.32	39.51	2.400	
9,016.69	9,002.04	9,025.83	9,005.76	20.82	19.84	-43.06	-359.89	-179.59	94.60	55.02	39.59	2.390	
9,028.27	9,013.62	9,037.37	9,017.29	20.84	19.87	127.78	-360.25	-179.76	94.53	54.89	39.64	2.385	
9,050.00	9,035.33	9,059.04	9,038.95	20.89	19.91	127.74	-360.93	-180.11	94.79	55.06	39.73	2.386	
9,100.00	9,085.05	9,108.45	9,088.32	21.03	20.02	128.92	-362.41	-180.95	97.44	57.53	39.92	2.441	
9,150.00	9,134.14	9,157.07	9,136.92	21.20	20.12	131.61	-363.61	-181.97	103.35	63.30	40.05	2.580	
9,200.00	9,182.21	9,204.69	9,184.52	21.39	20.22	135.22	-364.52	-183.16	112.95	72.79	40.15	2.813	
9,250.00	9,228.89	9,250.89	9,230.69	21.62	20.31	139.12	-365.16	-184.50	126.65	86.41	40.24	3.147	

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

SB Directional

Anticollision Report

Company:	NOVO Oil & Gas	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Project:	EDDY CO., NM (NAD83)	**TVD Reference:**	RKB @ 3063.50usft
Reference Site:	SEC. 04-T23S-R28E	**MD Reference:**	RKB @ 3063.50usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.16 Single User Db
Reference Design:	Plan 0	**Offset TVD Reference:**	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed 0409 214H - Wellbore #1 - Wellbore #1

Offset Site Error: 0.00 usft

Survey Program: 100-MWD

Offset Well Error: 0.50 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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	Rule Assigned: Warning
9,300.00	9,273.83	9,296.70	9,276.48	21.89	20.41	142.98	-365.69	-185.86	144.51	104.18	40.34	3.583	
9,350.00	9,316.68	9,340.85	9,320.61	22.18	20.50	146.46	-366.37	-186.95	166.31	125.86	40.45	4.112	
9,400.00	9,357.11	9,382.78	9,362.52	22.50	20.58	149.38	-367.17	-187.78	192.00	151.43	40.57	4.733	
9,450.00	9,394.81	9,422.17	9,401.90	22.86	20.66	151.69	-368.06	-188.38	221.44	180.75	40.69	5.442	
9,460.21	9,402.14	9,429.87	9,409.60	22.94	20.68	152.08	-368.25	-188.48	227.89	187.17	40.73	5.596	
9,500.00	9,429.51	9,458.08	9,437.79	23.25	20.74	154.79	-368.96	-188.81	254.50	213.68	40.83	6.234	
9,550.00	9,461.00	9,490.40	9,470.10	23.67	20.81	157.43	-369.77	-189.19	291.09	250.14	40.95	7.108	
9,600.00	9,489.03	9,519.30	9,498.99	24.12	20.87	159.37	-370.47	-189.55	330.78	289.70	41.08	8.052	
9,650.00	9,513.40	9,544.57	9,524.26	24.61	20.92	160.71	-371.07	-189.86	373.15	331.95	41.19	9.059	
9,700.00	9,533.91	9,566.02	9,545.70	25.12	20.96	161.44	-371.57	-190.14	417.77	376.48	41.29	10.118	
9,750.00	9,550.40	9,583.49	9,563.16	25.65	21.00	161.47	-371.97	-190.37	464.26	422.88	41.37	11.221	
9,800.00	9,562.75	9,596.84	9,576.51	26.21	21.03	160.41	-372.28	-190.55	512.21	470.77	41.44	12.361	
9,850.00	9,570.87	9,605.99	9,585.66	26.79	21.05	156.84	-372.48	-190.67	561.21	519.73	41.48	13.529	
9,900.00	9,574.68	9,610.88	9,590.54	27.39	21.06	142.27	-372.59	-190.74	610.89	569.38	41.51	14.717	
9,919.10	9,575.00	9,611.62	9,591.28	27.62	21.06	121.18	-372.61	-190.75	629.96	588.44	41.51	15.175	
10,000.00	9,575.00	9,613.41	9,593.06	28.62	21.06	124.33	-372.65	-190.77	710.80	669.27	41.53	17.117	
10,100.00	9,575.00	11,040.12	10,343.18	29.91	30.54	178.62	-1,236.73	-184.75	767.79	737.76	30.03	25.567	
10,200.00	9,575.00	11,144.76	10,335.57	31.26	31.85	178.74	-1,341.08	-182.80	760.48	729.93	30.55	24.892	
10,300.00	9,575.00	11,249.96	10,327.16	32.65	33.26	178.94	-1,445.89	-179.78	752.43	721.29	31.13	24.170	
10,400.00	9,575.00	11,341.97	10,319.57	34.09	34.51	179.19	-1,537.52	-176.26	744.15	712.39	31.76	23.433	
10,500.00	9,575.00	11,426.23	10,314.64	35.56	35.65	179.35	-1,621.61	-173.98	738.21	705.76	32.45	22.752	
10,600.00	9,575.00	11,520.00	10,309.71	37.06	36.95	179.53	-1,715.21	-171.43	732.95	699.76	33.19	22.083	
10,700.00	9,575.00	11,597.57	10,307.44	38.59	38.04	179.63	-1,792.73	-169.96	730.02	696.02	34.01	21.466	
10,739.76	9,575.00	11,627.47	10,307.24	39.21	38.45	179.66	-1,822.63	-169.51	729.76	695.40	34.36	21.240	
10,800.00	9,575.00	11,674.20	10,307.73	40.15	39.10	179.71	-1,869.35	-168.84	730.36	695.47	34.89	20.932	
10,900.00	9,575.00	11,766.75	10,310.02	41.73	40.41	179.87	-1,961.84	-166.57	732.82	697.03	35.79	20.476	
11,000.00	9,575.00	11,870.37	10,312.62	43.33	41.93	-179.91	-2,065.39	-163.54	735.33	698.62	36.70	20.035	
11,100.00	9,575.00	11,975.84	10,315.10	44.95	43.49	-179.69	-2,170.77	-160.56	737.70	700.05	37.65	19.594	
11,200.00	9,575.00	12,086.86	10,315.82	46.58	45.16	-179.80	-2,281.79	-161.71	738.32	699.71	38.62	19.119	
11,300.00	9,575.00	12,191.33	10,315.65	48.22	46.78	-179.81	-2,386.26	-161.60	738.17	698.54	39.63	18.629	
11,400.00	9,575.00	12,295.31	10,314.86	49.88	48.42	-179.69	-2,490.22	-159.87	737.41	696.74	40.67	18.133	
11,500.00	9,575.00	12,389.71	10,314.25	51.55	49.92	-179.41	-2,584.53	-156.08	736.79	695.04	41.75	17.648	
11,600.00	9,575.00	12,503.26	10,313.06	53.24	51.69	-179.12	-2,698.00	-152.14	735.81	692.96	42.85	17.173	
11,700.00	9,575.00	12,611.96	10,310.05	54.93	53.37	-179.27	-2,806.64	-153.89	733.00	689.06	43.94	16.681	
11,800.00	9,575.00	12,711.49	10,306.82	56.63	54.94	-179.52	-2,906.06	-156.95	729.71	684.65	45.06	16.193	
11,900.00	9,575.00	12,812.26	10,303.70	58.33	56.54	-179.74	-3,006.75	-159.56	726.60	680.40	46.20	15.726	
12,000.00	9,575.00	12,912.83	10,300.27	60.05	58.13	-179.97	-3,107.23	-162.34	723.18	675.82	47.37	15.268	
12,100.00	9,575.00	12,994.37	10,298.25	61.77	59.40	179.83	-3,188.70	-164.67	720.78	672.21	48.57	14.841	
12,123.74	9,575.00	13,012.28	10,298.18	62.18	59.68	179.78	-3,206.60	-165.22	720.68	671.83	48.85	14.752	
12,200.00	9,575.00	13,089.27	10,298.41	63.50	60.88	179.53	-3,283.53	-168.21	720.93	671.15	49.78	14.484	
12,300.00	9,575.00	13,189.76	10,298.04	65.23	62.46	179.04	-3,383.85	-174.24	720.64	669.62	51.02	14.126	
12,400.00	9,575.00	13,301.99	10,296.97	66.97	64.24	178.37	-3,495.77	-182.36	719.87	667.57	52.31	13.763	
12,439.49	9,575.00	13,328.69	10,296.72	67.66	64.66	178.21	-3,522.39	-184.42	719.58	666.75	52.83	13.621	
12,500.00	9,575.00	13,372.52	10,297.13	68.71	65.36	177.95	-3,566.10	-187.57	720.28	666.66	53.63	13.431	
12,600.00	9,575.00	13,466.79	10,299.71	70.46	66.86	177.41	-3,660.09	-194.27	723.31	668.32	54.99	13.153	
12,700.00	9,575.00	13,562.97	10,302.69	72.21	68.40	176.94	-3,756.04	-200.18	726.72	670.35	56.38	12.890	
12,800.00	9,575.00	13,655.00	10,306.53	73.97	69.90	176.70	-3,847.94	-203.32	731.08	673.36	57.72	12.665	
12,900.00	9,575.00	13,745.60	10,311.44	75.73	71.37	176.52	-3,938.37	-205.69	736.64	677.59	59.06	12.473	
13,000.00	9,575.00	13,861.12	10,317.10	77.49	73.28	176.43	-4,053.74	-207.05	741.61	681.20	60.42	12.275	
13,100.00	9,575.00	13,961.81	10,320.43	79.26	74.95	176.33	-4,154.36	-208.29	745.01	683.25	61.76	12.063	
13,200.00	9,575.00	14,064.24	10,324.87	81.02	76.64	176.27	-4,256.69	-209.13	749.41	686.31	63.11	11.876	
13,300.00	9,575.00	14,208.28	10,326.06	82.80	79.06	176.42	-4,400.67	-207.07	750.24	685.86	64.38	11.653	

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

SB Directional

Anticollision Report

Company:	NOVO Oil & Gas	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Project:	EDDY CO., NM (NAD83)	**TVD Reference:**	RKB @ 3063.50usft
Reference Site:	SEC. 04-T23S-R28E	**MD Reference:**	RKB @ 3063.50usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.16 Single User Db
Reference Design:	Plan 0	**Offset TVD Reference:**	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed 0409 214H - Wellbore #1 - Wellbore #1

Offset Site Error: 0.00 usft

Survey Program: 100-MWD

Offset Well Error: 0.50 usft

Rule Assigned:

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
13,400.00	9,575.00	14,298.57	10,325.18	84.57	80.57	176.70	-4,490.88	-203.14	748.97	683.35	65.62	11.413	
13,500.00	9,575.00	14,392.97	10,324.64	86.35	82.15	177.02	-4,585.17	-198.73	748.15	681.30	66.85	11.191	
13,516.30	9,575.00	14,407.05	10,324.65	86.64	82.39	177.07	-4,599.24	-198.03	748.13	681.07	67.06	11.157	
13,600.00	9,575.00	14,487.10	10,325.37	88.12	83.73	177.37	-4,679.17	-193.99	748.66	680.58	68.09	10.996	
13,700.00	9,575.00	14,592.80	10,325.00	89.90	85.50	177.54	-4,784.84	-191.60	748.19	678.81	69.38	10.783	
13,715.14	9,575.00	14,606.03	10,325.00	90.17	85.73	177.57	-4,798.06	-191.16	748.17	678.59	69.58	10.753	
13,800.00	9,575.00	14,674.33	10,325.74	91.69	86.88	177.82	-4,866.27	-187.74	748.96	678.32	70.64	10.602	
13,900.00	9,575.00	14,761.09	10,329.18	93.47	88.35	178.17	-4,952.83	-183.10	752.66	680.77	71.89	10.470	
14,000.00	9,575.00	14,918.74	10,330.24	95.26	90.99	178.29	-5,110.38	-181.28	753.58	680.34	73.24	10.290	
14,100.00	9,575.00	15,012.07	10,327.18	97.04	92.55	178.10	-5,203.63	-183.56	750.38	675.74	74.64	10.053	
14,200.00	9,575.00	15,107.12	10,324.82	98.83	94.13	177.91	-5,298.63	-185.66	747.98	671.92	76.06	9.834	
14,300.00	9,575.00	15,204.26	10,322.88	100.62	95.76	177.73	-5,395.72	-187.79	746.08	668.60	77.48	9.630	
14,400.00	9,575.00	15,302.74	10,321.25	102.42	97.41	177.55	-5,494.16	-189.84	744.51	665.61	78.90	9.436	
14,500.00	9,575.00	15,399.41	10,319.70	104.21	99.03	177.25	-5,590.75	-193.53	743.10	662.72	80.38	9.244	
14,573.72	9,575.00	15,465.32	10,319.19	105.53	100.14	177.12	-5,656.65	-195.11	742.63	661.18	81.45	9.117	
14,600.00	9,575.00	15,487.18	10,319.24	106.01	100.52	177.10	-5,678.50	-195.32	742.71	660.89	81.82	9.077	
14,700.00	9,575.00	15,572.93	10,320.71	107.80	101.99	177.15	-5,764.23	-194.61	744.36	661.19	83.17	8.950	
14,800.00	9,575.00	15,662.43	10,323.73	109.60	103.54	177.36	-5,853.63	-191.76	747.60	663.15	84.45	8.853	
14,900.00	9,575.00	15,801.58	10,327.61	111.40	105.94	177.82	-5,992.56	-185.64	750.72	664.98	85.74	8.756	
15,000.00	9,575.00	15,906.80	10,325.91	113.20	107.72	178.03	-6,097.73	-182.59	749.00	661.93	87.06	8.603	
15,100.00	9,575.00	16,006.39	10,324.10	115.00	109.39	178.16	-6,197.28	-180.73	747.12	658.70	88.42	8.450	
15,200.00	9,575.00	16,115.45	10,321.53	116.80	111.23	178.14	-6,306.30	-180.63	744.79	654.98	89.80	8.294	
15,300.00	9,575.00	16,208.13	10,318.42	118.60	112.79	177.99	-6,398.91	-182.34	741.55	650.30	91.26	8.126	
15,388.88	9,575.00	16,281.05	10,317.63	120.20	114.00	177.78	-6,471.79	-184.89	740.68	648.11	92.57	8.001	
15,400.00	9,575.00	16,290.62	10,317.62	120.40	114.16	177.75	-6,481.34	-185.27	740.70	647.96	92.74	7.987	
15,500.00	9,575.00	16,375.94	10,318.48	122.21	115.59	177.47	-6,566.60	-188.72	741.88	647.66	94.22	7.874	
15,600.00	9,575.00	16,480.95	10,321.11	124.01	117.37	177.24	-6,671.53	-191.61	744.56	648.82	95.73	7.777	
15,700.00	9,575.00	16,594.92	10,321.20	125.82	119.30	176.89	-6,785.41	-196.00	744.80	647.48	97.32	7.653	
15,741.19	9,575.00	16,633.67	10,321.01	126.56	119.95	176.76	-6,824.12	-197.64	744.70	646.73	97.97	7.601	
15,800.00	9,575.00	16,686.83	10,321.15	127.62	120.86	176.68	-6,877.27	-198.51	744.93	646.09	98.84	7.537	
15,900.00	9,575.00	16,783.00	10,322.22	129.43	122.52	176.74	-6,973.43	-197.65	745.99	645.77	100.22	7.444	
16,000.00	9,575.00	16,886.01	10,323.35	131.24	124.29	176.80	-7,076.43	-196.66	747.04	645.44	101.61	7.352	
16,100.00	9,575.00	16,986.87	10,324.22	133.04	125.99	176.74	-7,177.28	-197.36	747.95	644.89	103.06	7.257	
16,200.00	9,575.00	17,086.96	10,324.56	134.85	127.69	176.56	-7,277.35	-199.54	748.43	643.84	104.59	7.156	
16,300.00	9,575.00	17,176.88	10,325.81	136.66	129.23	176.51	-7,367.26	-200.03	749.86	643.84	106.02	7.073	
16,400.00	9,575.00	17,272.33	10,328.24	138.47	130.85	176.45	-7,462.68	-200.79	752.45	644.99	107.47	7.002	
16,500.00	9,575.00	17,382.03	10,330.56	140.28	132.71	176.30	-7,572.32	-202.77	754.71	645.69	109.02	6.923	
16,600.00	9,575.00	17,480.39	10,331.59	142.09	134.38	176.07	-7,670.64	-205.64	755.96	645.36	110.60	6.835	
16,700.00	9,575.00	17,590.92	10,332.57	143.91	136.25	175.79	-7,781.11	-209.22	757.12	644.86	112.26	6.744	
16,800.00	9,575.00	17,684.29	10,333.12	145.72	137.84	175.62	-7,874.45	-211.38	757.88	644.06	113.82	6.658	
16,900.00	9,575.00	17,784.18	10,333.86	147.53	139.56	175.43	-7,974.31	-213.79	758.83	643.41	115.42	6.574	
17,000.00	9,575.00	17,868.45	10,335.51	149.34	141.00	175.32	-8,058.54	-215.13	760.93	644.03	116.90	6.509	
17,100.00	9,575.00	17,946.00	10,339.15	151.16	142.34	175.33	-8,136.01	-215.20	765.63	647.43	118.20	6.478	
17,200.00	9,575.00	18,035.00	10,345.43	152.97	143.86	175.38	-8,224.78	-214.89	772.63	653.13	119.50	6.466	
17,300.00	9,575.00	18,158.11	10,353.80	154.78	145.96	175.40	-8,347.60	-214.94	779.60	658.49	121.11	6.437	
17,400.00	9,575.00	18,291.83	10,355.74	156.60	148.24	175.36	-8,481.28	-215.52	780.81	658.08	122.73	6.362	
17,500.00	9,575.00	18,392.00	10,355.49	158.41	149.94	175.05	-8,581.38	-219.46	780.90	656.43	124.47	6.274	
17,600.00	9,575.00	18,482.00	10,356.35	160.23	151.48	174.90	-8,671.34	-221.42	782.03	655.98	126.05	6.204	
17,700.00	9,575.00	18,571.59	10,358.76	162.04	153.03	175.02	-8,760.89	-219.79	784.53	657.18	127.35	6.160	
17,800.00	9,575.00	18,678.81	10,362.00	163.86	154.88	175.27	-8,868.00	-216.40	787.31	658.73	128.59	6.123	
17,900.00	9,575.00	18,804.19	10,361.26	165.68	157.03	175.27	-8,993.36	-216.13	786.50	656.43	130.07	6.047	
18,000.00	9,575.00	18,905.78	10,359.96	167.49	158.77	175.27	-9,094.94	-215.86	785.23	653.70	131.53	5.970	

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

SB Directional

Anticollision Report

Company:	NOVO Oil & Gas	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Project:	EDDY CO., NM (NAD83)	**TVD Reference:**	RKB @ 3063.50usft
Reference Site:	SEC. 04-T23S-R28E	**MD Reference:**	RKB @ 3063.50usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.16 Single User Db
Reference Design:	Plan 0	**Offset TVD Reference:**	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed 0409 214H - Wellbore #1 - Wellbore #1

Offset Site Error: 0.00 usft

Survey Program: 100-MWD

Offset Well Error: 0.50 usft

Rule Assigned:

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
18,100.00	9,575.00	18,993.98	10,359.19	169.31	160.27	175.39	-9,183.11	-214.00	784.23	651.36	132.87	5.902	
18,100.86	9,575.00	18,994.70	10,359.19	169.32	160.28	175.39	-9,183.83	-213.99	784.23	651.34	132.89	5.902	
18,200.00	9,575.00	19,078.94	10,359.97	171.13	161.72	175.36	-9,268.06	-214.34	785.19	650.86	134.33	5.845	
18,300.00	9,575.00	19,178.10	10,362.20	172.94	163.41	175.37	-9,367.20	-214.08	787.42	651.65	135.77	5.800	
18,400.00	9,575.00	19,307.79	10,363.61	174.76	165.64	175.59	-9,496.83	-211.00	788.57	651.52	137.04	5.754	
18,500.00	9,575.00	19,429.76	10,356.75	176.58	167.74	175.38	-9,618.57	-213.12	782.60	643.99	138.61	5.646	
18,600.00	9,575.00	19,504.86	10,354.69	178.40	169.03	175.32	-9,693.63	-213.52	779.86	639.64	140.22	5.562	
18,700.00	9,575.00	19,596.08	10,354.43	180.22	170.62	175.42	-9,784.84	-211.99	779.42	637.83	141.58	5.505	
18,800.00	9,575.00	19,697.37	10,354.02	182.03	172.36	175.44	-9,886.12	-211.46	778.99	635.97	143.02	5.447	
18,900.00	9,575.00	19,800.58	10,353.51	183.85	174.12	175.45	-9,989.33	-211.11	778.49	634.02	144.47	5.389	
18,970.48	9,575.00	19,864.79	10,353.16	185.14	175.21	175.49	-10,053.53	-210.47	778.07	632.60	145.46	5.349	
19,000.00	9,575.00	19,890.04	10,353.23	185.67	175.64	175.50	-10,078.79	-210.26	778.14	632.27	145.88	5.334	
19,100.00	9,575.00	20,007.72	10,352.95	187.49	177.65	175.42	-10,196.45	-211.10	778.05	630.64	147.42	5.278	
19,200.00	9,575.00	20,099.38	10,351.84	189.31	179.24	175.28	-10,288.09	-212.80	776.99	627.95	149.04	5.213	
19,300.00	9,575.00	20,194.47	10,351.53	191.13	180.89	175.19	-10,383.17	-213.71	776.76	626.16	150.60	5.158	
19,400.00	9,575.00	20,301.41	10,350.80	192.95	182.73	174.99	-10,490.08	-216.20	776.30	624.00	152.30	5.097	
19,500.00	9,575.00	20,401.67	10,349.33	194.77	184.45	174.74	-10,590.28	-219.31	775.13	621.05	154.08	5.031	
19,577.71	9,575.00	20,472.12	10,348.76	196.19	185.66	174.58	-10,660.70	-221.22	774.72	619.30	155.42	4.985	
19,600.00	9,575.00	20,491.66	10,348.75	196.59	186.00	174.55	-10,680.24	-221.64	774.76	618.97	155.79	4.973	
19,700.00	9,575.00	20,586.41	10,349.49	198.41	187.64	174.44	-10,774.97	-223.04	775.68	618.28	157.40	4.928	
19,800.00	9,575.00	20,679.81	10,350.48	200.23	189.26	174.32	-10,868.35	-224.57	776.94	617.92	159.02	4.886	
19,900.00	9,575.00	20,788.32	10,352.18	202.05	191.12	174.27	-10,976.84	-225.21	778.60	618.01	160.59	4.848	
19,916.15	9,575.00	20,804.47	10,352.30	202.35	191.40	174.26	-10,992.99	-225.28	778.73	617.89	160.84	4.842	

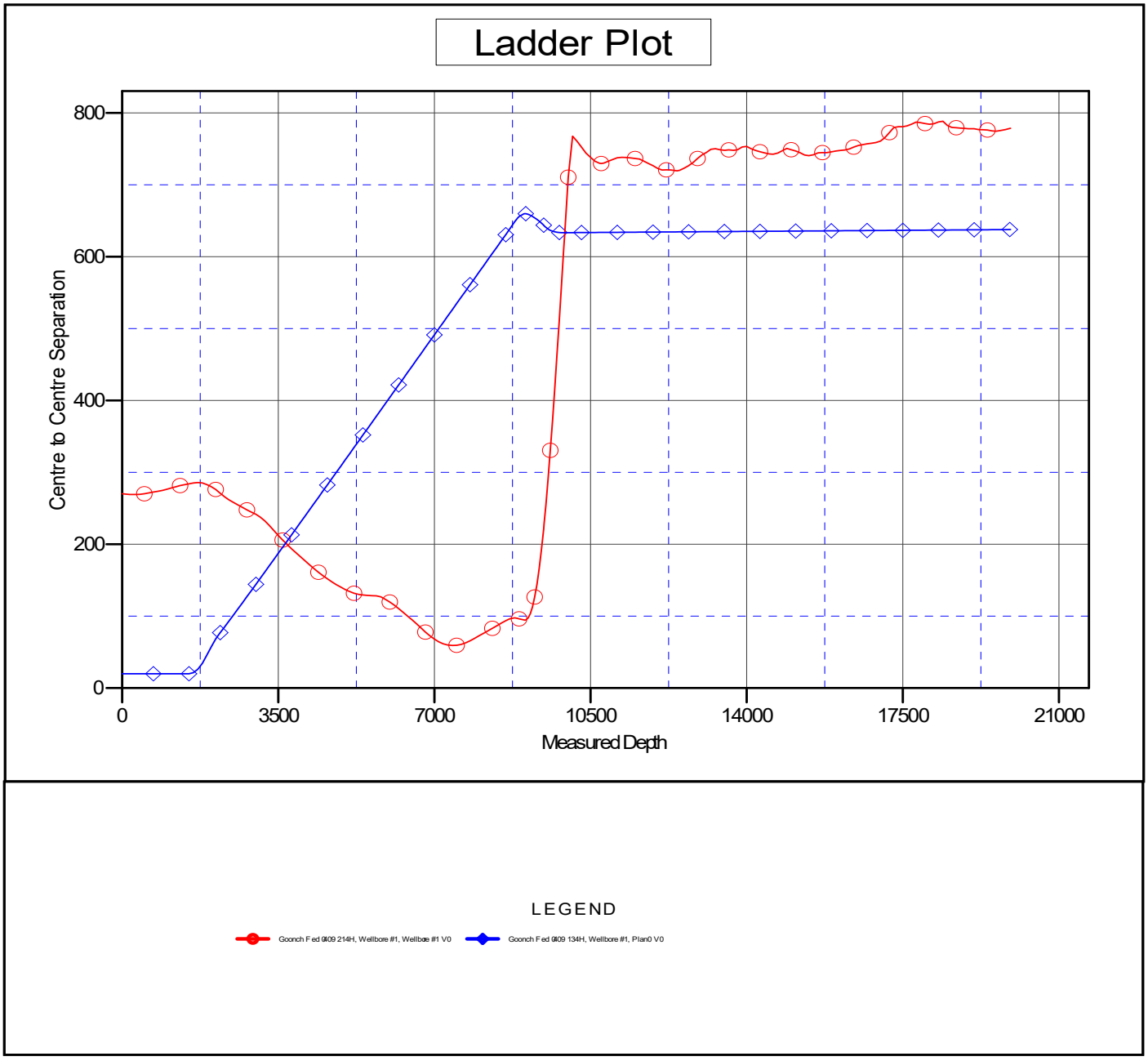
SB Directional

Anticollision Report

Company:	NOVO Oil & Gas	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Project:	EDDY CO., NM (NAD83)	**TVD Reference:**	RKB @ 3063.50usft
Reference Site:	SEC. 04-T23S-R28E	**MD Reference:**	RKB @ 3063.50usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.16 Single User Db
Reference Design:	Plan 0	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to RKB @ 3063.50usft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334

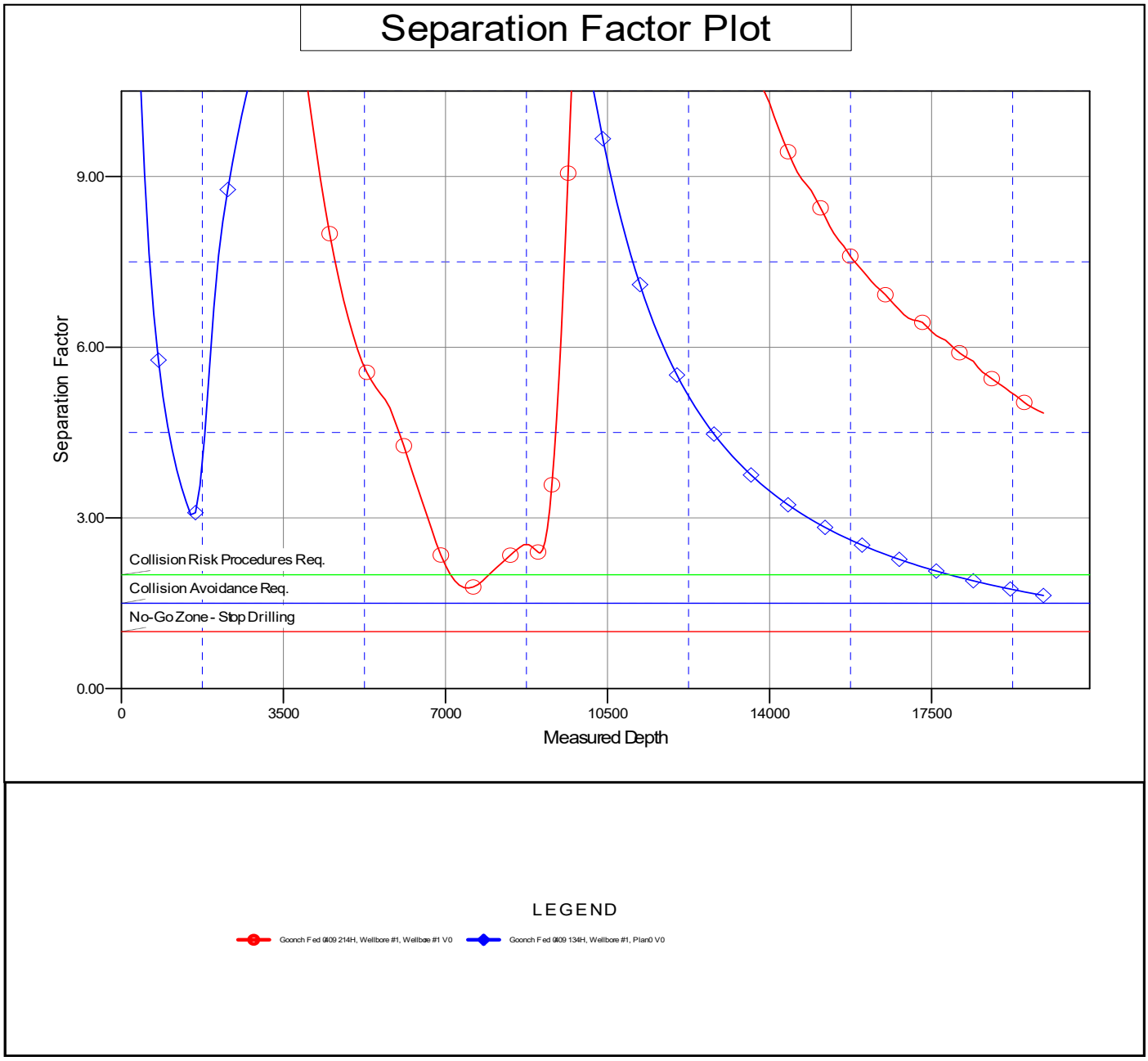
Coordinates are relative to: Goonch Fed Com 0409 234H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.13°



SB Directional
Anticollision Report

Company:	NOVO Oil & Gas	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Project:	EDDY CO., NM (NAD83)	**TVD Reference:**	RKB @ 3063.50usft
Reference Site:	SEC. 04-T23S-R28E	**MD Reference:**	RKB @ 3063.50usft
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM 5000.16 Single User Db
Reference Design:	Plan 0	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to RKB @ 3063.50usft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334
Coordinates are relative to: Goonch Fed Com 0409 234H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.13°



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

NOVO Oil & Gas

EDDY CO., NM (NAD83)
SEC. 04-T23S-R28E
Goonch Fed Com 0409 234H

Wellbore #1

Plan: Plan 0

Standard Planning Report

02 March, 2021

SB Directional

Planning Report

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Company:	NOVO Oil & Gas	**TVD Reference:**	RKB @ 3063.50usft
Project:	EDDY CO., NM (NAD83)	**MD Reference:**	RKB @ 3063.50usft
Site:	SEC. 04-T23S-R28E	**North Reference:**	Grid
Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 0		

Project EDDY CO., NM (NAD83)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site SEC. 04-T23S-R28E

Site Position:		**Northing:**	487,875.76 usft	**Latitude:**	32.341014
From:	Map	**Easting:**	615,421.32 usft	**Longitude:**	-104.093453
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "		

Well Goonch Fed Com 0409 234H

Well Position	**+N/-S**	0.00 usft	**Northing:**	488,683.35	usft	**Latitude:**	32.343217
	+E/-W	0.00 usft	**Easting:**	618,155.90	usft	**Longitude:**	-104.084592
Position Uncertainty		0.50 usft	**Wellhead Elevation:**		usft	**Ground Level:**	3,038.50 usft
Grid Convergence:		0.13 °					

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	2021/03/02	6.83	59.94	47,543.77585351

Design Plan 0

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	180.00

Plan Survey Tool Program **Date** 2021/03/02

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	19,916.15	Plan 0 (Wellbore #1)	MWD	
				MWD - Standard	

SB Directional
Planning Report

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Company:	NOVO Oil & Gas	**TVD Reference:**	RKB @ 3063.50usft
Project:	EDDY CO., NM (NAD83)	**MD Reference:**	RKB @ 3063.50usft
Site:	SEC. 04-T23S-R28E	**North Reference:**	Grid
Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 0		

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	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,190.73	3.81	195.01	2,190.59	-6.13	-1.64	2.00	2.00	0.00	195.01	
8,675.92	3.81	195.01	8,661.41	-422.87	-113.36	0.00	0.00	0.00	0.00	
8,866.65	0.00	0.00	8,852.00	-429.00	-115.00	2.00	-2.00	0.00	180.00	
9,016.69	0.00	0.00	9,002.04	-429.00	-115.00	0.00	0.00	0.00	0.00	
9,460.21	44.58	188.99	9,402.14	-591.00	-140.62	10.05	10.05	0.00	188.99	
9,919.10	90.00	179.89	9,575.00	-1,001.96	-166.76	10.05	9.90	-1.98	-12.67	
19,916.15	90.00	179.89	9,575.00	-10,999.00	-147.42	0.00	0.00	0.00	0.00	PBHL - Goonch Fed C

SB DIRECTIONAL

SB Directional

Planning Report

NOVO

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Company:	NOVO Oil & Gas	**TVD Reference:**	RKB @ 3063.50usft
Project:	EDDY CO., NM (NAD83)	**MD Reference:**	RKB @ 3063.50usft
Site:	SEC. 04-T23S-R28E	**North Reference:**	Grid
Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 0		

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
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
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
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Nudge									
2,100.00	2.00	195.01	2,099.98	-1.69	-0.45	1.69	2.00	2.00	0.00
2,190.73	3.81	195.01	2,190.59	-6.13	-1.64	6.13	2.00	2.00	0.00
EOB									
2,200.00	3.81	195.01	2,199.84	-6.73	-1.80	6.73	0.00	0.00	0.00
2,300.00	3.81	195.01	2,299.62	-13.15	-3.53	13.15	0.00	0.00	0.00
2,400.00	3.81	195.01	2,399.40	-19.58	-5.25	19.58	0.00	0.00	0.00
2,500.00	3.81	195.01	2,499.17	-26.00	-6.97	26.00	0.00	0.00	0.00
2,600.00	3.81	195.01	2,598.95	-32.43	-8.69	32.43	0.00	0.00	0.00
2,700.00	3.81	195.01	2,698.73	-38.86	-10.42	38.86	0.00	0.00	0.00
2,800.00	3.81	195.01	2,798.51	-45.28	-12.14	45.28	0.00	0.00	0.00
2,900.00	3.81	195.01	2,898.29	-51.71	-13.86	51.71	0.00	0.00	0.00
3,000.00	3.81	195.01	2,998.07	-58.13	-15.58	58.13	0.00	0.00	0.00
3,100.00	3.81	195.01	3,097.84	-64.56	-17.31	64.56	0.00	0.00	0.00
3,200.00	3.81	195.01	3,197.62	-70.99	-19.03	70.99	0.00	0.00	0.00
3,300.00	3.81	195.01	3,297.40	-77.41	-20.75	77.41	0.00	0.00	0.00
3,400.00	3.81	195.01	3,397.18	-83.84	-22.47	83.84	0.00	0.00	0.00
3,500.00	3.81	195.01	3,496.96	-90.26	-24.20	90.26	0.00	0.00	0.00
3,600.00	3.81	195.01	3,596.74	-96.69	-25.92	96.69	0.00	0.00	0.00
3,700.00	3.81	195.01	3,696.52	-103.12	-27.64	103.12	0.00	0.00	0.00
3,800.00	3.81	195.01	3,796.29	-109.54	-29.36	109.54	0.00	0.00	0.00
3,900.00	3.81	195.01	3,896.07	-115.97	-31.09	115.97	0.00	0.00	0.00
4,000.00	3.81	195.01	3,995.85	-122.39	-32.81	122.39	0.00	0.00	0.00
4,100.00	3.81	195.01	4,095.63	-128.82	-34.53	128.82	0.00	0.00	0.00
4,200.00	3.81	195.01	4,195.41	-135.25	-36.25	135.25	0.00	0.00	0.00
4,300.00	3.81	195.01	4,295.19	-141.67	-37.98	141.67	0.00	0.00	0.00
4,400.00	3.81	195.01	4,394.96	-148.10	-39.70	148.10	0.00	0.00	0.00
4,500.00	3.81	195.01	4,494.74	-154.52	-41.42	154.52	0.00	0.00	0.00
4,600.00	3.81	195.01	4,594.52	-160.95	-43.15	160.95	0.00	0.00	0.00
4,700.00	3.81	195.01	4,694.30	-167.38	-44.87	167.38	0.00	0.00	0.00
4,800.00	3.81	195.01	4,794.08	-173.80	-46.59	173.80	0.00	0.00	0.00
4,900.00	3.81	195.01	4,893.86	-180.23	-48.31	180.23	0.00	0.00	0.00
5,000.00	3.81	195.01	4,993.64	-186.65	-50.04	186.65	0.00	0.00	0.00

SB DIRECTIONAL

SB Directional

Planning Report

NOVO

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Company:	NOVO Oil & Gas	**TVD Reference:**	RKB @ 3063.50usft
Project:	EDDY CO., NM (NAD83)	**MD Reference:**	RKB @ 3063.50usft
Site:	SEC. 04-T23S-R28E	**North Reference:**	Grid
Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 0		

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)
5,100.00	3.81	195.01	5,093.41	-193.08	-51.76	193.08	0.00	0.00	0.00
5,200.00	3.81	195.01	5,193.19	-199.51	-53.48	199.51	0.00	0.00	0.00
5,300.00	3.81	195.01	5,292.97	-205.93	-55.20	205.93	0.00	0.00	0.00
5,400.00	3.81	195.01	5,392.75	-212.36	-56.93	212.36	0.00	0.00	0.00
5,500.00	3.81	195.01	5,492.53	-218.78	-58.65	218.78	0.00	0.00	0.00
5,600.00	3.81	195.01	5,592.31	-225.21	-60.37	225.21	0.00	0.00	0.00
5,700.00	3.81	195.01	5,692.08	-231.64	-62.09	231.64	0.00	0.00	0.00
5,800.00	3.81	195.01	5,791.86	-238.06	-63.82	238.06	0.00	0.00	0.00
5,900.00	3.81	195.01	5,891.64	-244.49	-65.54	244.49	0.00	0.00	0.00
6,000.00	3.81	195.01	5,991.42	-250.91	-67.26	250.91	0.00	0.00	0.00
6,100.00	3.81	195.01	6,091.20	-257.34	-68.98	257.34	0.00	0.00	0.00
6,200.00	3.81	195.01	6,190.98	-263.77	-70.71	263.77	0.00	0.00	0.00
6,300.00	3.81	195.01	6,290.76	-270.19	-72.43	270.19	0.00	0.00	0.00
6,400.00	3.81	195.01	6,390.53	-276.62	-74.15	276.62	0.00	0.00	0.00
6,500.00	3.81	195.01	6,490.31	-283.04	-75.87	283.04	0.00	0.00	0.00
6,600.00	3.81	195.01	6,590.09	-289.47	-77.60	289.47	0.00	0.00	0.00
6,700.00	3.81	195.01	6,689.87	-295.90	-79.32	295.90	0.00	0.00	0.00
6,800.00	3.81	195.01	6,789.65	-302.32	-81.04	302.32	0.00	0.00	0.00
6,900.00	3.81	195.01	6,889.43	-308.75	-82.76	308.75	0.00	0.00	0.00
7,000.00	3.81	195.01	6,989.20	-315.17	-84.49	315.17	0.00	0.00	0.00
7,100.00	3.81	195.01	7,088.98	-321.60	-86.21	321.60	0.00	0.00	0.00
7,200.00	3.81	195.01	7,188.76	-328.03	-87.93	328.03	0.00	0.00	0.00
7,300.00	3.81	195.01	7,288.54	-334.45	-89.66	334.45	0.00	0.00	0.00
7,400.00	3.81	195.01	7,388.32	-340.88	-91.38	340.88	0.00	0.00	0.00
7,500.00	3.81	195.01	7,488.10	-347.30	-93.10	347.30	0.00	0.00	0.00
7,600.00	3.81	195.01	7,587.88	-353.73	-94.82	353.73	0.00	0.00	0.00
7,700.00	3.81	195.01	7,687.65	-360.16	-96.55	360.16	0.00	0.00	0.00
7,800.00	3.81	195.01	7,787.43	-366.58	-98.27	366.58	0.00	0.00	0.00
7,900.00	3.81	195.01	7,887.21	-373.01	-99.99	373.01	0.00	0.00	0.00
8,000.00	3.81	195.01	7,986.99	-379.43	-101.71	379.43	0.00	0.00	0.00
8,100.00	3.81	195.01	8,086.77	-385.86	-103.44	385.86	0.00	0.00	0.00
8,200.00	3.81	195.01	8,186.55	-392.29	-105.16	392.29	0.00	0.00	0.00
8,300.00	3.81	195.01	8,286.32	-398.71	-106.88	398.71	0.00	0.00	0.00
8,400.00	3.81	195.01	8,386.10	-405.14	-108.60	405.14	0.00	0.00	0.00
8,500.00	3.81	195.01	8,485.88	-411.57	-110.33	411.57	0.00	0.00	0.00
8,600.00	3.81	195.01	8,585.66	-417.99	-112.05	417.99	0.00	0.00	0.00
8,675.92	3.81	195.01	8,661.41	-422.87	-113.36	422.87	0.00	0.00	0.00
EOH									
8,700.00	3.33	195.01	8,685.44	-424.32	-113.75	424.32	2.00	-2.00	0.00
8,800.00	1.33	195.01	8,785.36	-428.25	-114.80	428.25	2.00	-2.00	0.00
8,866.65	0.00	0.00	8,852.00	-429.00	-115.00	429.00	2.00	-2.00	0.00
Drop to Vertical									
8,900.00	0.00	0.00	8,885.35	-429.00	-115.00	429.00	0.00	0.00	0.00
9,000.00	0.00	0.00	8,985.35	-429.00	-115.00	429.00	0.00	0.00	0.00
9,016.69	0.00	0.00	9,002.04	-429.00	-115.00	429.00	0.00	0.00	0.00
KOP @ 9402' TVD									
9,100.00	8.37	188.99	9,085.05	-435.00	-115.95	435.00	10.05	10.05	0.00
9,200.00	18.43	188.99	9,182.21	-457.86	-119.56	457.86	10.05	10.05	0.00
9,300.00	28.48	188.99	9,273.83	-497.12	-125.77	497.12	10.05	10.05	0.00
9,400.00	38.53	188.99	9,357.11	-551.57	-134.38	551.57	10.05	10.05	0.00
9,460.21	44.58	188.99	9,402.14	-591.00	-140.62	591.00	10.05	10.05	0.00
9,500.00	48.49	187.82	9,429.51	-619.57	-144.83	619.57	10.05	9.82	-2.94
9,600.00	58.35	185.40	9,489.03	-699.25	-153.95	699.25	10.05	9.86	-2.42

SB Directional

Planning Report

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Company:	NOVO Oil & Gas	**TVD Reference:**	RKB @ 3063.50usft
Project:	EDDY CO., NM (NAD83)	**MD Reference:**	RKB @ 3063.50usft
Site:	SEC. 04-T23S-R28E	**North Reference:**	Grid
Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 0		

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)
9,700.00	68.25	183.45	9,533.91	-788.21	-160.77	788.21	10.05	9.90	-1.95
9,800.00	78.17	181.76	9,562.75	-883.73	-165.08	883.73	10.05	9.92	-1.69
9,900.00	88.10	180.18	9,574.68	-982.87	-166.75	982.87	10.05	9.93	-1.57
9,919.10	90.00	179.89	9,575.00	-1,001.96	-166.76	1,001.96	10.05	9.93	-1.55
LP @ 9575' TVD									
10,000.00	90.00	179.89	9,575.00	-1,082.86	-166.60	1,082.86	0.00	0.00	0.00
10,100.00	90.00	179.89	9,575.00	-1,182.86	-166.41	1,182.86	0.00	0.00	0.00
10,200.00	90.00	179.89	9,575.00	-1,282.86	-166.22	1,282.86	0.00	0.00	0.00
10,300.00	90.00	179.89	9,575.00	-1,382.86	-166.02	1,382.86	0.00	0.00	0.00
10,400.00	90.00	179.89	9,575.00	-1,482.86	-165.83	1,482.86	0.00	0.00	0.00
10,500.00	90.00	179.89	9,575.00	-1,582.86	-165.64	1,582.86	0.00	0.00	0.00
10,600.00	90.00	179.89	9,575.00	-1,682.86	-165.44	1,682.86	0.00	0.00	0.00
10,700.00	90.00	179.89	9,575.00	-1,782.86	-165.25	1,782.86	0.00	0.00	0.00
10,800.00	90.00	179.89	9,575.00	-1,882.86	-165.06	1,882.86	0.00	0.00	0.00
10,900.00	90.00	179.89	9,575.00	-1,982.86	-164.86	1,982.86	0.00	0.00	0.00
11,000.00	90.00	179.89	9,575.00	-2,082.86	-164.67	2,082.86	0.00	0.00	0.00
11,100.00	90.00	179.89	9,575.00	-2,182.86	-164.48	2,182.86	0.00	0.00	0.00
11,200.00	90.00	179.89	9,575.00	-2,282.86	-164.28	2,282.86	0.00	0.00	0.00
11,300.00	90.00	179.89	9,575.00	-2,382.86	-164.09	2,382.86	0.00	0.00	0.00
11,400.00	90.00	179.89	9,575.00	-2,482.86	-163.90	2,482.86	0.00	0.00	0.00
11,500.00	90.00	179.89	9,575.00	-2,582.86	-163.70	2,582.86	0.00	0.00	0.00
11,600.00	90.00	179.89	9,575.00	-2,682.86	-163.51	2,682.86	0.00	0.00	0.00
11,700.00	90.00	179.89	9,575.00	-2,782.86	-163.31	2,782.86	0.00	0.00	0.00
11,800.00	90.00	179.89	9,575.00	-2,882.86	-163.12	2,882.86	0.00	0.00	0.00
11,900.00	90.00	179.89	9,575.00	-2,982.86	-162.93	2,982.86	0.00	0.00	0.00
12,000.00	90.00	179.89	9,575.00	-3,082.86	-162.73	3,082.86	0.00	0.00	0.00
12,100.00	90.00	179.89	9,575.00	-3,182.86	-162.54	3,182.86	0.00	0.00	0.00
12,200.00	90.00	179.89	9,575.00	-3,282.86	-162.35	3,282.86	0.00	0.00	0.00
12,300.00	90.00	179.89	9,575.00	-3,382.86	-162.15	3,382.86	0.00	0.00	0.00
12,400.00	90.00	179.89	9,575.00	-3,482.86	-161.96	3,482.86	0.00	0.00	0.00
12,500.00	90.00	179.89	9,575.00	-3,582.86	-161.77	3,582.86	0.00	0.00	0.00
12,600.00	90.00	179.89	9,575.00	-3,682.86	-161.57	3,682.86	0.00	0.00	0.00
12,700.00	90.00	179.89	9,575.00	-3,782.86	-161.38	3,782.86	0.00	0.00	0.00
12,800.00	90.00	179.89	9,575.00	-3,882.86	-161.19	3,882.86	0.00	0.00	0.00
12,900.00	90.00	179.89	9,575.00	-3,982.86	-160.99	3,982.86	0.00	0.00	0.00
13,000.00	90.00	179.89	9,575.00	-4,082.86	-160.80	4,082.86	0.00	0.00	0.00
13,100.00	90.00	179.89	9,575.00	-4,182.86	-160.61	4,182.86	0.00	0.00	0.00
13,200.00	90.00	179.89	9,575.00	-4,282.86	-160.41	4,282.86	0.00	0.00	0.00
13,300.00	90.00	179.89	9,575.00	-4,382.86	-160.22	4,382.86	0.00	0.00	0.00
13,400.00	90.00	179.89	9,575.00	-4,482.86	-160.03	4,482.86	0.00	0.00	0.00
13,500.00	90.00	179.89	9,575.00	-4,582.86	-159.83	4,582.86	0.00	0.00	0.00
13,600.00	90.00	179.89	9,575.00	-4,682.86	-159.64	4,682.86	0.00	0.00	0.00
13,700.00	90.00	179.89	9,575.00	-4,782.86	-159.45	4,782.86	0.00	0.00	0.00
13,800.00	90.00	179.89	9,575.00	-4,882.86	-159.25	4,882.86	0.00	0.00	0.00
13,900.00	90.00	179.89	9,575.00	-4,982.86	-159.06	4,982.86	0.00	0.00	0.00
14,000.00	90.00	179.89	9,575.00	-5,082.86	-158.87	5,082.86	0.00	0.00	0.00
14,100.00	90.00	179.89	9,575.00	-5,182.86	-158.67	5,182.86	0.00	0.00	0.00
14,200.00	90.00	179.89	9,575.00	-5,282.86	-158.48	5,282.86	0.00	0.00	0.00
14,300.00	90.00	179.89	9,575.00	-5,382.86	-158.28	5,382.86	0.00	0.00	0.00
14,400.00	90.00	179.89	9,575.00	-5,482.86	-158.09	5,482.86	0.00	0.00	0.00
14,500.00	90.00	179.89	9,575.00	-5,582.86	-157.90	5,582.86	0.00	0.00	0.00
14,600.00	90.00	179.89	9,575.00	-5,682.86	-157.70	5,682.86	0.00	0.00	0.00
14,700.00	90.00	179.89	9,575.00	-5,782.86	-157.51	5,782.86	0.00	0.00	0.00
14,800.00	90.00	179.89	9,575.00	-5,882.86	-157.32	5,882.86	0.00	0.00	0.00

SB Directional

Planning Report

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Company:	NOVO Oil & Gas	**TVD Reference:**	RKB @ 3063.50usft
Project:	EDDY CO., NM (NAD83)	**MD Reference:**	RKB @ 3063.50usft
Site:	SEC. 04-T23S-R28E	**North Reference:**	Grid
Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 0		

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)
14,900.00	90.00	179.89	9,575.00	-5,982.86	-157.12	5,982.86	0.00	0.00	0.00
15,000.00	90.00	179.89	9,575.00	-6,082.86	-156.93	6,082.86	0.00	0.00	0.00
15,100.00	90.00	179.89	9,575.00	-6,182.86	-156.74	6,182.86	0.00	0.00	0.00
15,200.00	90.00	179.89	9,575.00	-6,282.85	-156.54	6,282.85	0.00	0.00	0.00
15,300.00	90.00	179.89	9,575.00	-6,382.85	-156.35	6,382.85	0.00	0.00	0.00
15,400.00	90.00	179.89	9,575.00	-6,482.85	-156.16	6,482.85	0.00	0.00	0.00
15,500.00	90.00	179.89	9,575.00	-6,582.85	-155.96	6,582.85	0.00	0.00	0.00
15,600.00	90.00	179.89	9,575.00	-6,682.85	-155.77	6,682.85	0.00	0.00	0.00
15,700.00	90.00	179.89	9,575.00	-6,782.85	-155.58	6,782.85	0.00	0.00	0.00
15,800.00	90.00	179.89	9,575.00	-6,882.85	-155.38	6,882.85	0.00	0.00	0.00
15,900.00	90.00	179.89	9,575.00	-6,982.85	-155.19	6,982.85	0.00	0.00	0.00
16,000.00	90.00	179.89	9,575.00	-7,082.85	-155.00	7,082.85	0.00	0.00	0.00
16,100.00	90.00	179.89	9,575.00	-7,182.85	-154.80	7,182.85	0.00	0.00	0.00
16,200.00	90.00	179.89	9,575.00	-7,282.85	-154.61	7,282.85	0.00	0.00	0.00
16,300.00	90.00	179.89	9,575.00	-7,382.85	-154.42	7,382.85	0.00	0.00	0.00
16,400.00	90.00	179.89	9,575.00	-7,482.85	-154.22	7,482.85	0.00	0.00	0.00
16,500.00	90.00	179.89	9,575.00	-7,582.85	-154.03	7,582.85	0.00	0.00	0.00
16,600.00	90.00	179.89	9,575.00	-7,682.85	-153.84	7,682.85	0.00	0.00	0.00
16,700.00	90.00	179.89	9,575.00	-7,782.85	-153.64	7,782.85	0.00	0.00	0.00
16,800.00	90.00	179.89	9,575.00	-7,882.85	-153.45	7,882.85	0.00	0.00	0.00
16,900.00	90.00	179.89	9,575.00	-7,982.85	-153.25	7,982.85	0.00	0.00	0.00
17,000.00	90.00	179.89	9,575.00	-8,082.85	-153.06	8,082.85	0.00	0.00	0.00
17,100.00	90.00	179.89	9,575.00	-8,182.85	-152.87	8,182.85	0.00	0.00	0.00
17,200.00	90.00	179.89	9,575.00	-8,282.85	-152.67	8,282.85	0.00	0.00	0.00
17,300.00	90.00	179.89	9,575.00	-8,382.85	-152.48	8,382.85	0.00	0.00	0.00
17,400.00	90.00	179.89	9,575.00	-8,482.85	-152.29	8,482.85	0.00	0.00	0.00
17,500.00	90.00	179.89	9,575.00	-8,582.85	-152.09	8,582.85	0.00	0.00	0.00
17,600.00	90.00	179.89	9,575.00	-8,682.85	-151.90	8,682.85	0.00	0.00	0.00
17,700.00	90.00	179.89	9,575.00	-8,782.85	-151.71	8,782.85	0.00	0.00	0.00
17,800.00	90.00	179.89	9,575.00	-8,882.85	-151.51	8,882.85	0.00	0.00	0.00
17,900.00	90.00	179.89	9,575.00	-8,982.85	-151.32	8,982.85	0.00	0.00	0.00
18,000.00	90.00	179.89	9,575.00	-9,082.85	-151.13	9,082.85	0.00	0.00	0.00
18,100.00	90.00	179.89	9,575.00	-9,182.85	-150.93	9,182.85	0.00	0.00	0.00
18,200.00	90.00	179.89	9,575.00	-9,282.85	-150.74	9,282.85	0.00	0.00	0.00
18,300.00	90.00	179.89	9,575.00	-9,382.85	-150.55	9,382.85	0.00	0.00	0.00
18,400.00	90.00	179.89	9,575.00	-9,482.85	-150.35	9,482.85	0.00	0.00	0.00
18,500.00	90.00	179.89	9,575.00	-9,582.85	-150.16	9,582.85	0.00	0.00	0.00
18,600.00	90.00	179.89	9,575.00	-9,682.85	-149.97	9,682.85	0.00	0.00	0.00
18,700.00	90.00	179.89	9,575.00	-9,782.85	-149.77	9,782.85	0.00	0.00	0.00
18,800.00	90.00	179.89	9,575.00	-9,882.85	-149.58	9,882.85	0.00	0.00	0.00
18,900.00	90.00	179.89	9,575.00	-9,982.85	-149.39	9,982.85	0.00	0.00	0.00
19,000.00	90.00	179.89	9,575.00	-10,082.85	-149.19	10,082.85	0.00	0.00	0.00
19,100.00	90.00	179.89	9,575.00	-10,182.85	-149.00	10,182.85	0.00	0.00	0.00
19,200.00	90.00	179.89	9,575.00	-10,282.85	-148.81	10,282.85	0.00	0.00	0.00
19,300.00	90.00	179.89	9,575.00	-10,382.85	-148.61	10,382.85	0.00	0.00	0.00
19,400.00	90.00	179.89	9,575.00	-10,482.85	-148.42	10,482.85	0.00	0.00	0.00
19,500.00	90.00	179.89	9,575.00	-10,582.85	-148.23	10,582.85	0.00	0.00	0.00
19,600.00	90.00	179.89	9,575.00	-10,682.85	-148.03	10,682.85	0.00	0.00	0.00
19,700.00	90.00	179.89	9,575.00	-10,782.85	-147.84	10,782.85	0.00	0.00	0.00
19,800.00	90.00	179.89	9,575.00	-10,882.85	-147.64	10,882.85	0.00	0.00	0.00
19,900.00	90.00	179.89	9,575.00	-10,982.85	-147.45	10,982.85	0.00	0.00	0.00
19,916.14	90.00	179.89	9,575.00	-10,998.99	-147.42	10,998.99	0.00	0.00	0.00
PBHL; 130' FSL, 380' FEL									

SB Directional
Planning Report

Database:	EDM 5000.16 Single User Db	**Local Co-ordinate Reference:**	Well Goonch Fed Com 0409 234H
Company:	NOVO Oil & Gas	**TVD Reference:**	RKB @ 3063.50usft
Project:	EDDY CO., NM (NAD83)	**MD Reference:**	RKB @ 3063.50usft
Site:	SEC. 04-T23S-R28E	**North Reference:**	Grid
Well:	Goonch Fed Com 0409 234H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 0		

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)
19,916.15	90.00	179.89	9,575.00	-10,999.00	-147.42	10,999.00	0.00	0.00	0.00

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
PBHL - Goonch Fed 040	0.00	0.00	0.00	-10,999.00	-147.42	477,684.35	618,008.48	32.312983	-104.085152
- plan misses target center by 9575.00usft at 19916.15usft MD (9575.00 TVD, -10999.00 N, -147.42 E)									
- Point									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
19,914.80	9,575.00	20" Casing	20	24

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,000.00	2,000.00	0.00	0.00	Start Nudge
2,190.73	2,190.59	-6.13	-1.64	EOB
8,675.92	8,661.41	-422.87	-113.36	EOH
8,866.65	8,852.00	-429.00	-115.00	Drop to Vertical
9,016.69	9,002.04	-429.00	-115.00	KOP @ 9402' TVD
9,919.10	9,575.00	-1,001.96	-166.76	LP @ 9575' TVD
19,916.14	9,575.00	-10,998.99	-147.42	PBHL; 130' FSL, 380' FEL

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

COMMENTS

Operator: NOVO OIL & GAS NORTHERN DELAWARE, LLC 1001 West Wilshire Blvd Oklahoma City, OK 73116	OGRID: 372920
	Action Number: 28474
	Action Type: [C-103] NOI Change of Plans (C-103A)

COMMENTS

Created By	Comment	Comment Date
kpickford	KP GEO Review 5/17/2021	5/17/2021

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CONDITIONS

Action 28474

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CONDITIONS

Created By	Condition	Condition Date
kpickford	Adhere to previous NMOCD Conditions of Approval	5/17/2021