

Well Name: GOONCH FED COM 04	Well Location: T23S / R28E / SEC 4 / LOT 2 / 32.3404146 / -104.0888039	County or Parish/State: EDDY / NM
Well Number: 235H	Type of Well: CONVENTIONAL GAS WELL	Allottee or Tribe Name:
Lease Number: NMNM18038	Unit or CA Name:	Unit or CA Number:
US Well Number: 300154728000X1	Well Status: Approved Application for Permit to Drill	Operator: NOVO OIL AND GAS NORTHERN DELA

Notice of Intent

Type of Submission: Notice of Intent	Type of Action Other
Date Sundry Submitted: 04/08/2021	Time Sundry Submitted: 09:31
Date proposed operation will begin: 04/14/2021	

Procedure Description: Novo Oil & Gas Northern Delaware, LLC respectfully requests the following APD changes: Change the BHL to 130' FSL & 1,1650' FEL, Sec. 9, T23S, R28E, from the previously approved location of 130' FSL & 2,178' FEL, Sec. 4, T23S, R28E. Change the intermediate casing size to 8-5/8" from the previously approved 9-5/8". See attachments for technical details.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

- NOVO_Goonch_Fed_Com_0409_235H_plot_Plan_1_20210408093126.pdf
- NOVO_Goonch_Fed_Com_0409_235H_Plan_1_20210408093120.xlsx
- NOVO_Goonch_Fed_Com_0409_235H_Plan_1_20210408093113.pdf
- NOVO_Goonch_Fed_Com_0409_235H_AC_Report_Plan_1_20210408093103.pdf
- 5.500_20_P110EC_DWC_C_IS_PLUS_20210408093054.pdf
- 8.625_32.00_P110HSCY_TLW_20210408093049.pdf
- GOONCH_FED_COM_04_235H_signed_20210408093040.pdf
- Drill_Plan_3S_10K_GOONCH_FED_COM_04_235H_031121_20210408093028.pdf
- Goonch_04_235H_Change_to_Sundry_Request_v.2_20210408093018.pdf

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US Well Number: 300154728000X1	Well Status: Approved Application for Permit to Drill	Operator: NOVO OIL AND GAS NORTHERN DELA

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: APR 08, 2021 09:31 AM
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: 04/26/2021
Signature: Chris Walls	

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 30-015-47280	² Pool Code 98220	³ Pool Name Purple Sage; Wolfcamp Gas Pool
⁴ Property Code	⁵ Property Name GOONCH FED COM 0409	⁶ Well Number 235H
⁷ OGRID No. 372920	⁸ Operator Name NOVO OIL & GAS NORTHERN DELAWARE, LLC	⁹ Elevation 3035.4

¹⁰ Surface Location

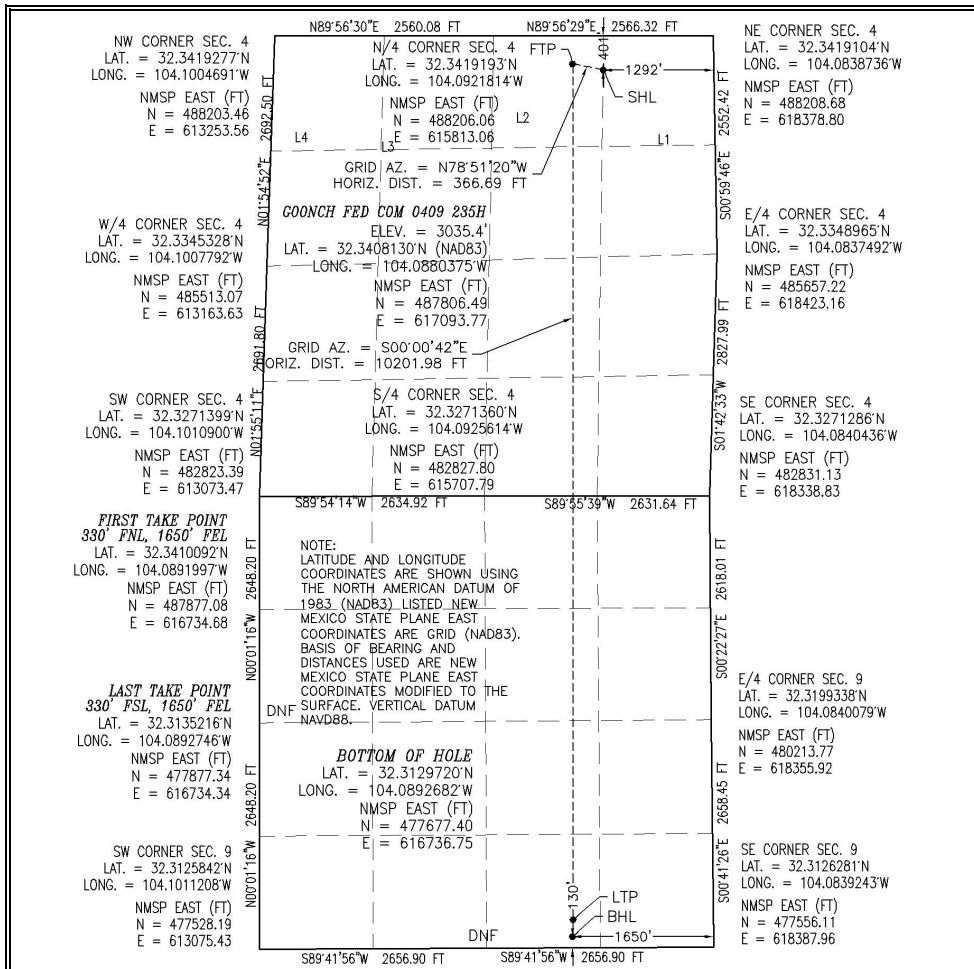
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	4	23 S	28 E		401	NORTH	1292	EAST	EDDY

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
O	9	23 S	28 E		130	SOUTH	1650	EAST	EDDY

¹² Dedicated Acres 640.45	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or 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 4/1/2021
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.

MARCH 1, 2021

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number: **EDMOND JARAMILLO, PLS 12797**
Survey No. 7266E

Intent ☐ As Drilled ☐

API #

Operator Name:	Property Name:	Well Number
NOVO OIL & GAS NORTHERN DELAWARE, LLC	GOONCH FED COM 0409	235H

Kick Off Point (KOP)

UL	Section 4	Township 23S	Range 28E	Lot 1	Feet 401	From N/S NORTH	Feet 1292	From E/W EAST	County EDDY
Latitude 32.3408130					Longitude 104.0880375			NAD 83	

First Take Point (FTP)

UL	Section 4	Township 23S	Range 28E	Lot 2	Feet 330	From N/S NORTH	Feet 1650	From E/W EAST	County EDDY
Latitude 32.3410092					Longitude 104.0891997			NAD 83	

Last Take Point (LTP)

UL O	Section 9	Township 23S	Range 28E	Lot	Feet 330	From N/S SOUTH	Feet 1650	From E/W EAST	County EDDY
Latitude 32.3135216					Longitude 104.0892746			NAD 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

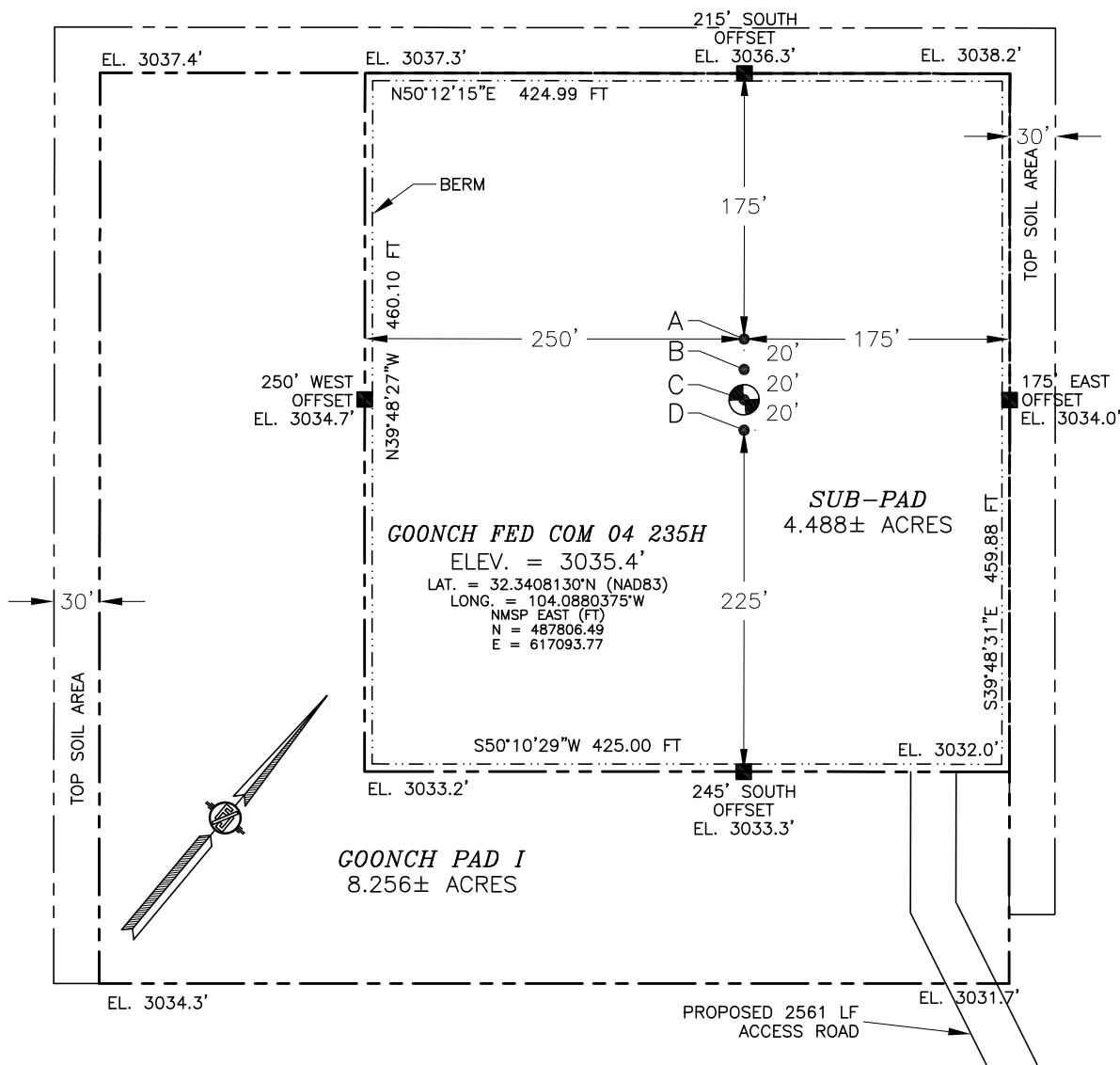
KZ 06/29/2018

SECTION 4, TOWNSHIP 23 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SITE MAP

A - GOONCH FED COM 0409 225H
B - GOONCH FED COM 0409 236H
C - GOONCH FED COM 04 235H
D - GOONCH FED COM 0409 136H

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83) LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83) BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE. VERTICAL DATUM NAVD88.

SEC. 33
SEC. 4



012 60 120 240

SCALE 1" = 120'

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 OF A MILE, TURN LEFT AND GO SOUTH-SOUTHEAST APPROX. 0.59 OF A MILE TO A PROPOSED ROAD, GO SOUTHWEST-NORTHWEST 2561' TO THE SOUTHEAST PAD CORNER FOR THIS LOCATION.

I, FILIMON F. JARAMILLO, NEW MEXICO LICENSED PROFESSIONAL SURVEYOR, CERTIFY THAT I AM RESPONSIBLE FOR THIS SURVEY, THAT THE SURVEY WAS CONDUCTED TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

FILIMON F. JARAMILLO, 12787

MADDOX SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3341

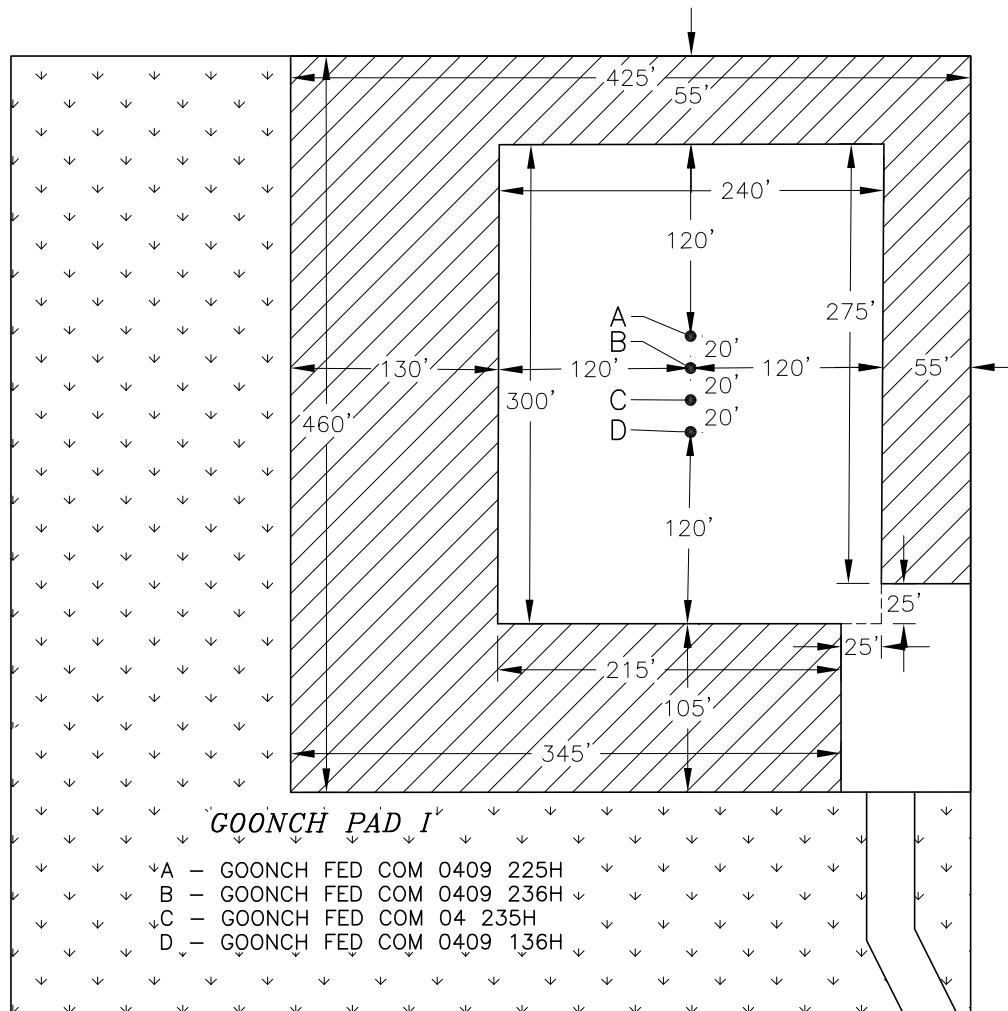
NOVO OIL & GAS NORTHERN DELAWARE, LLC
GOONCH FED COM 04 235H
LOCATED 401 FT. FROM THE NORTH LINE
AND 1292 FT. FROM THE EAST LINE OF
SECTION 4, TOWNSHIP 23 SOUTH,
RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

FEBRUARY 22, 2021

SURVEY NO. 7266E

CARLSBAD, NEW MEXICO

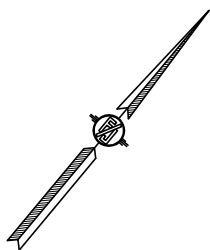
SECTION 4, TOWNSHIP 23 SOUTH, RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO
 INTERIM SITE BUILD PLAN



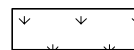
GOONCH PAD I

- A - GOONCH FED COM 0409 225H
- B - GOONCH FED COM 0409 236H
- C - GOONCH FED COM 04 235H
- D - GOONCH FED COM 0409 136H

PROPOSED 2561 LF
ACCESS ROAD



DENOTES INTERIM PAD
RECLAMATION AREA



DENOTES GRADING SITE
RECLAMATION AREA

012 60 120 240
 SCALE 1" = 120'

2.610± ACRES INTERIM PAD RECLAMATION AREA
 3.668± ACRES GRADING SITE RECLAMATION AREA
 1.978± ACRES NON-RECLAIMED AREA
 8.256± ACRES GOONCH PAD I

NOVO OIL & GAS NORTHERN DELAWARE, LLC
GOONCH FED COM 04 235H
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 RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

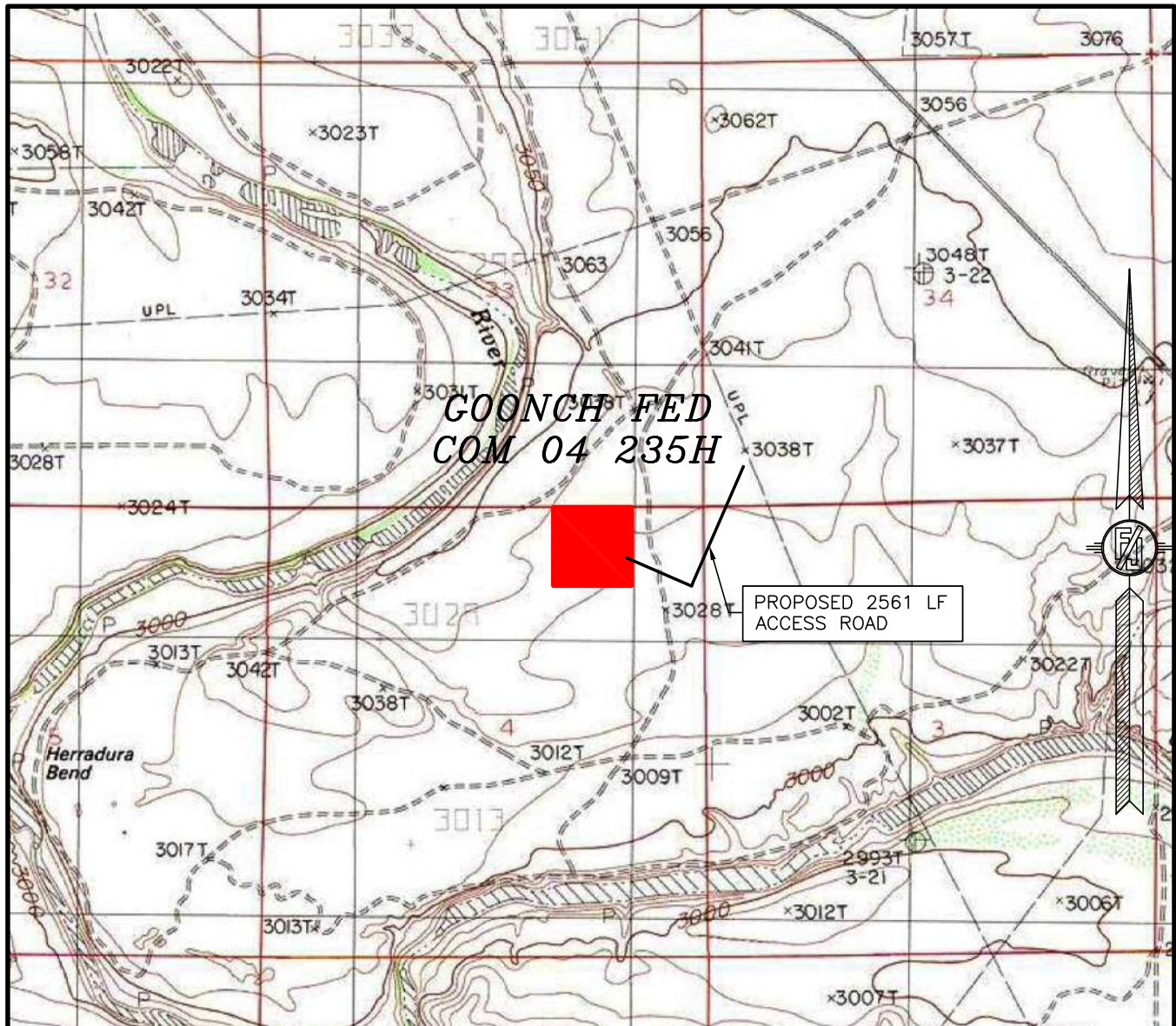
FEBRUARY 22, 2021

SURVEY NO. 7266E

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

CARLSBAD, NEW MEXICO

SECTION 4, TOWNSHIP 23 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 04 235H
 LOCATED 401 FT. FROM THE NORTH LINE
 AND 1292 FT. FROM THE EAST LINE OF
 SECTION 4, TOWNSHIP 23 SOUTH,
 RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

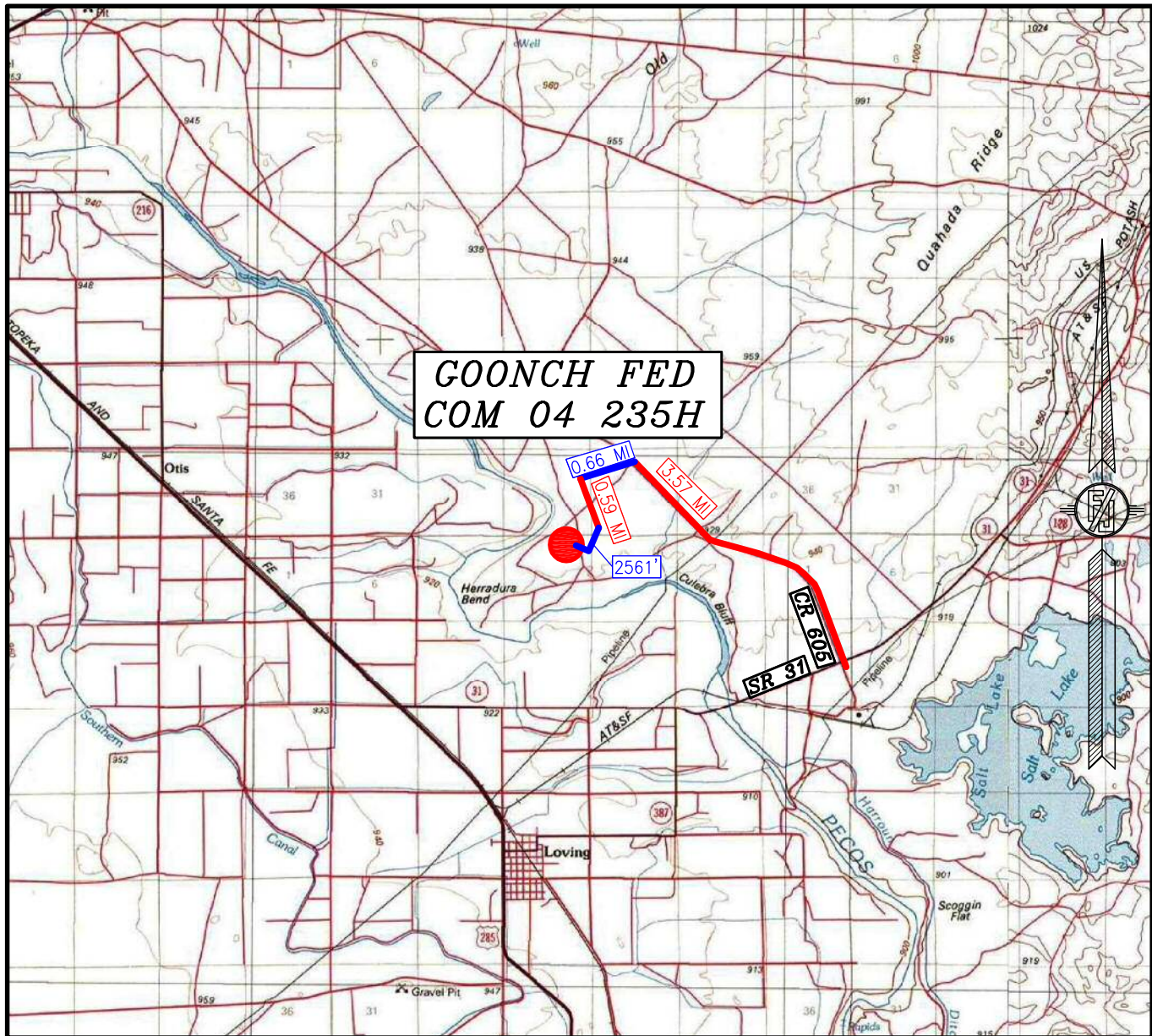
FEBRUARY 22, 2021

MADRON SURVEYING, INC.

301 SOUTH CANAL
 (575) 234-3341

SURVEY NO. 7266E
 CARLSBAD, NEW MEXICO

SECTION 4, TOWNSHIP 23 SOUTH, RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO
 VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

NOVO OIL & GAS NORTHERN DELAWARE, LLC
GOONCH FED COM 04 235H

LOCATED 401 FT. FROM THE NORTH LINE
 AND 1292 FT. FROM THE EAST LINE OF
 SECTION 4, TOWNSHIP 23 SOUTH,
 RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

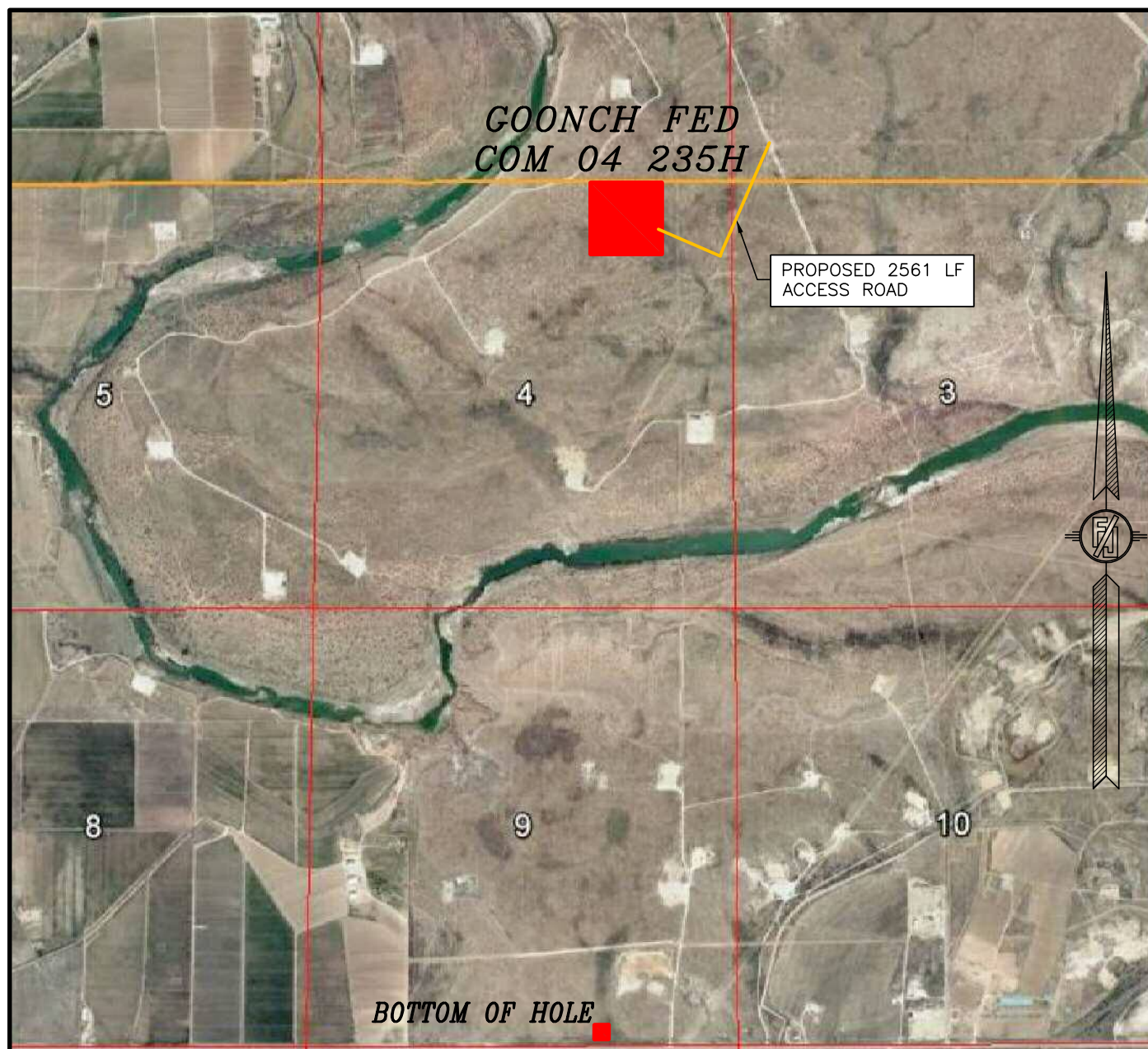
FEBRUARY 22, 2021

SURVEY NO. 7266E

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

CARLSBAD, NEW MEXICO

SECTION 4, TOWNSHIP 23 SOUTH, RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO
 AERIAL PHOTO



NOT TO SCALE
 AERIAL PHOTO:
 GOOGLE EARTH
 MARCH 2016

NOVO OIL & GAS NORTHERN DELAWARE, LLC
GOONCH FED COM 04 235H
 LOCATED 401 FT. FROM THE NORTH LINE
 AND 1292 FT. FROM THE EAST LINE OF
 SECTION 4, TOWNSHIP 23 SOUTH,
 RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

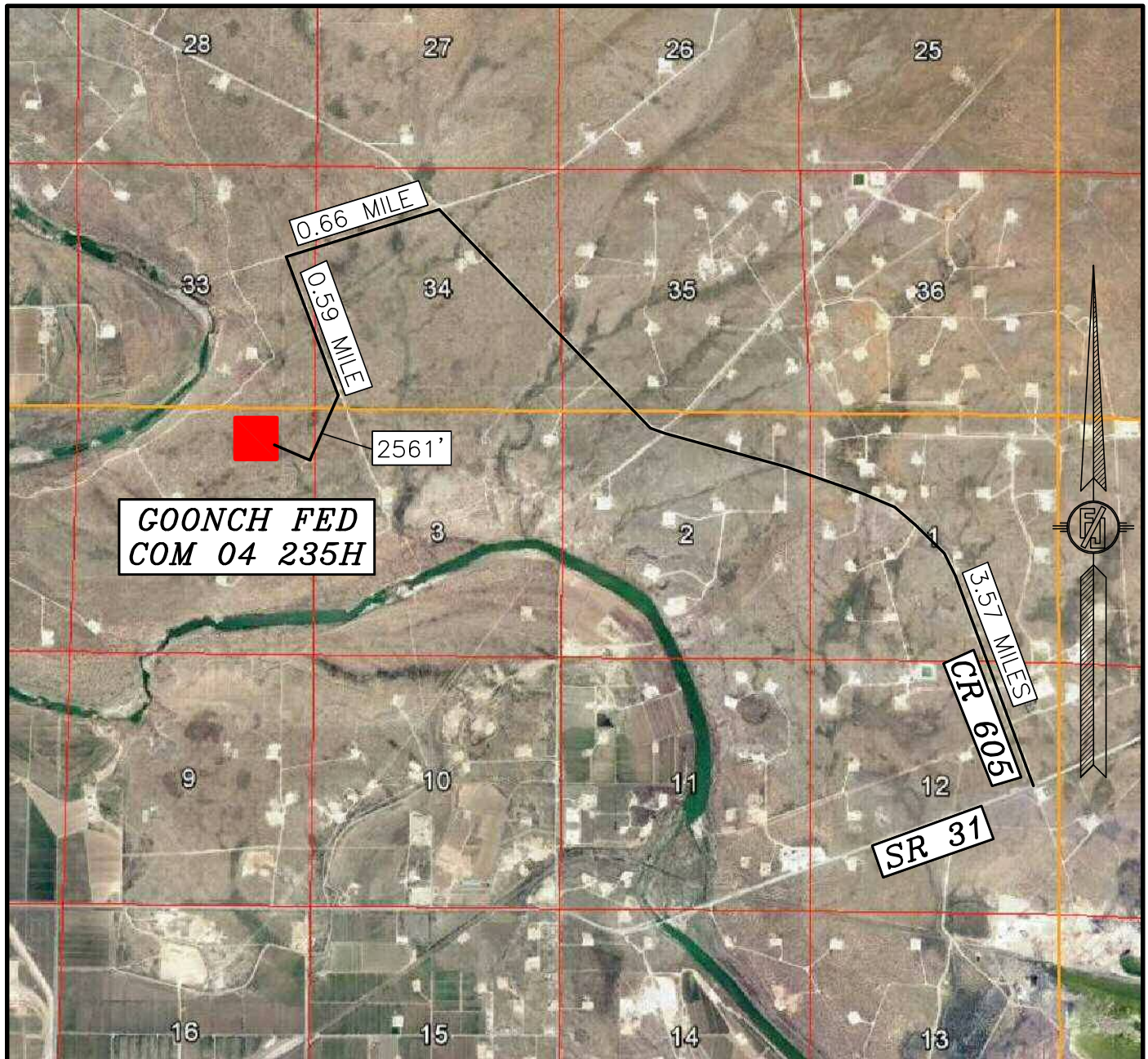
FEBRUARY 22, 2021

MADRON SURVEYING, INC.

301 SOUTH CANAL
 (575) 234-3341

SURVEY NO. 7266E
 CARLSBAD, NEW MEXICO

SECTION 4, TOWNSHIP 23 SOUTH, RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO
 ACCESS AERIAL ROUTE MAP



NOT TO SCALE
 AERIAL PHOTO:
 GOOGLE EARTH
 MARCH 2016

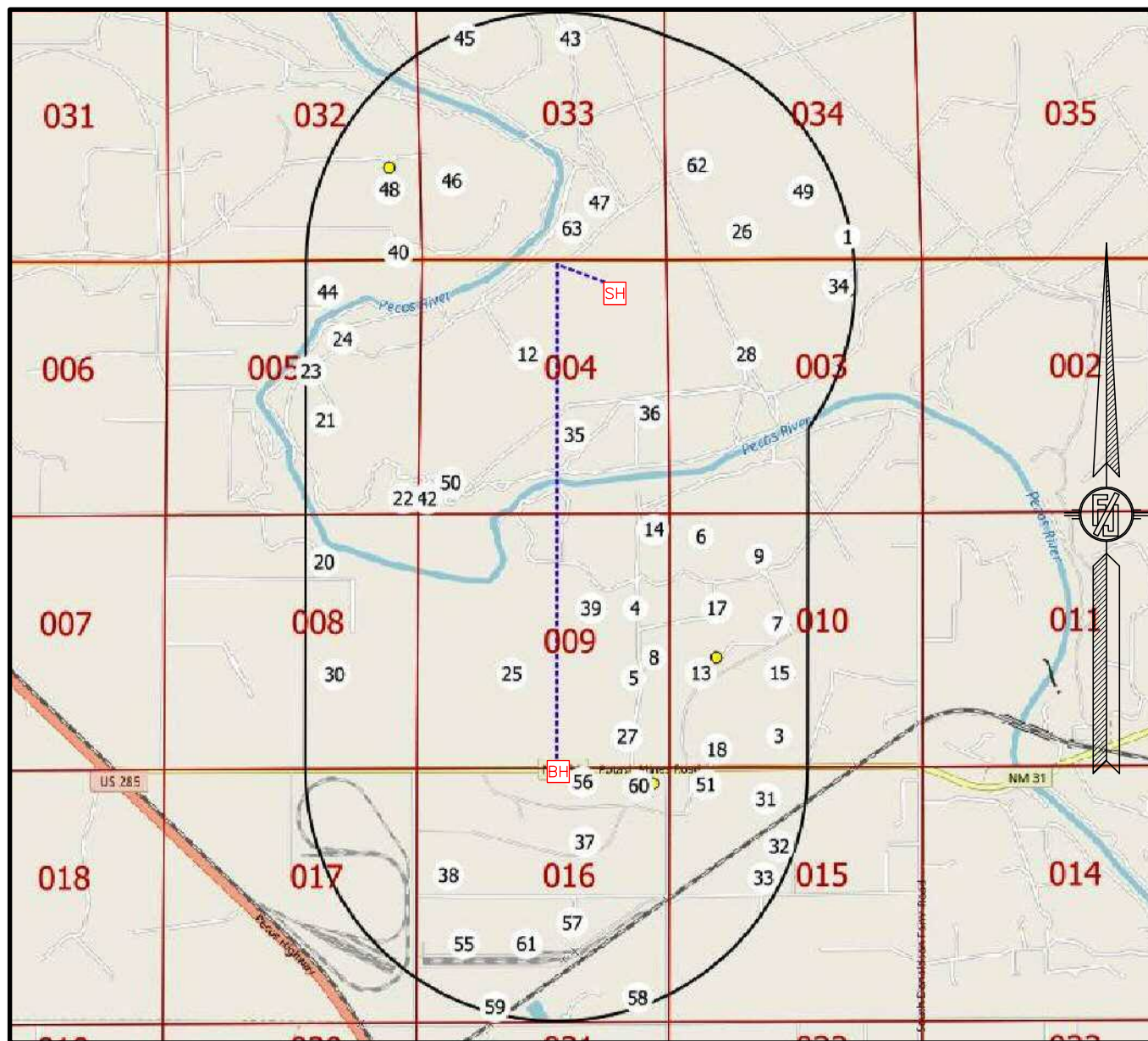
NOVO OIL & GAS NORTHERN DELAWARE, LLC
GOONCH FED COM 04 235H
 LOCATED 401 FT. FROM THE NORTH LINE
 AND 1292 FT. FROM THE EAST LINE OF
 SECTION 4, TOWNSHIP 23 SOUTH,
 RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

FEBRUARY 22, 2021

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

SURVEY NO. 7266E
 CARLSBAD, NEW MEXICO

1-MILE MAP



NOT TO SCALE

[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 04 235H
 LOCATED 401 FT. FROM THE NORTH LINE
 AND 1292 FT. FROM THE EAST LINE OF
 SECTION 4, TOWNSHIP 23 SOUTH,
 RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

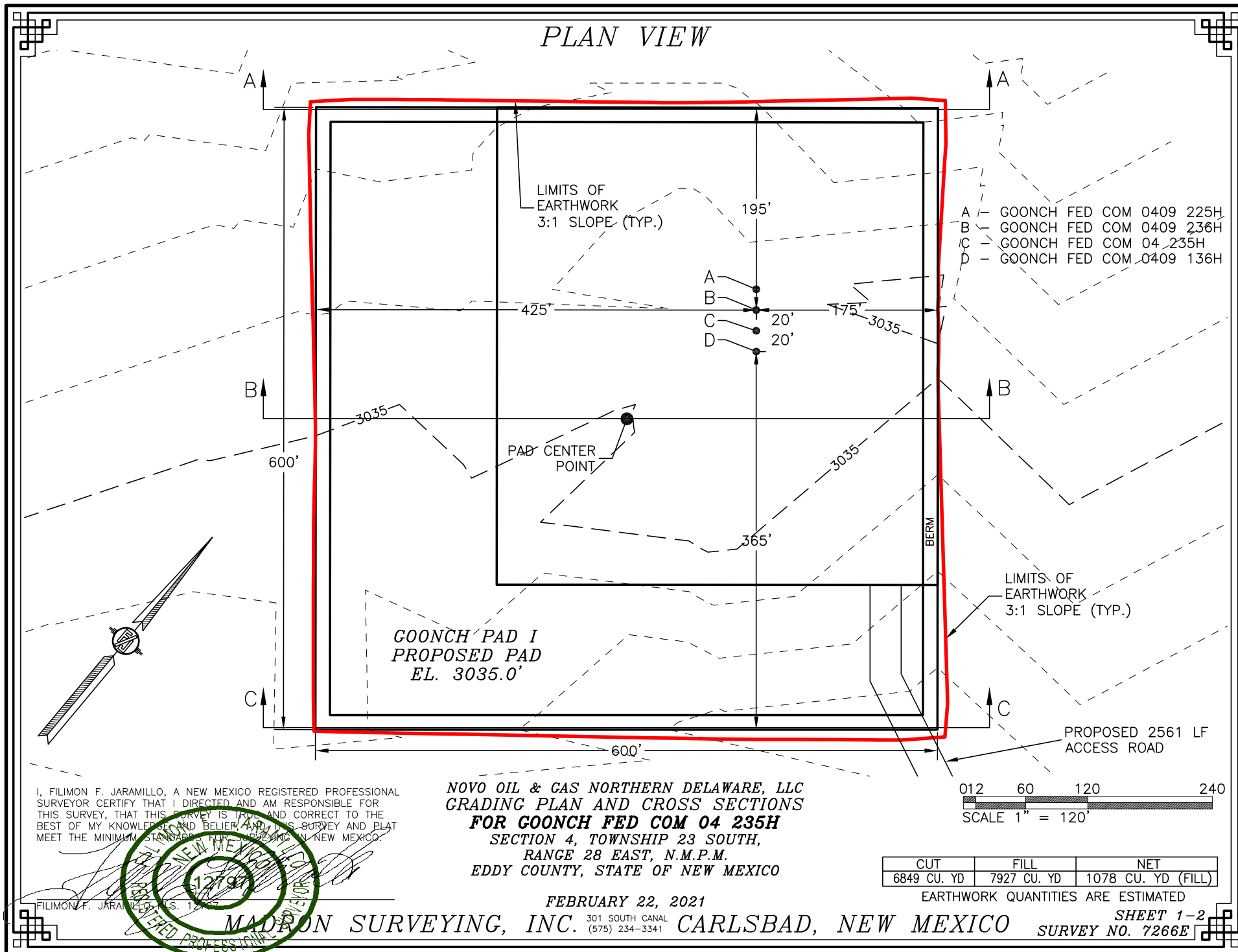
FEBRUARY 22, 2021

SURVEY NO. 7266E

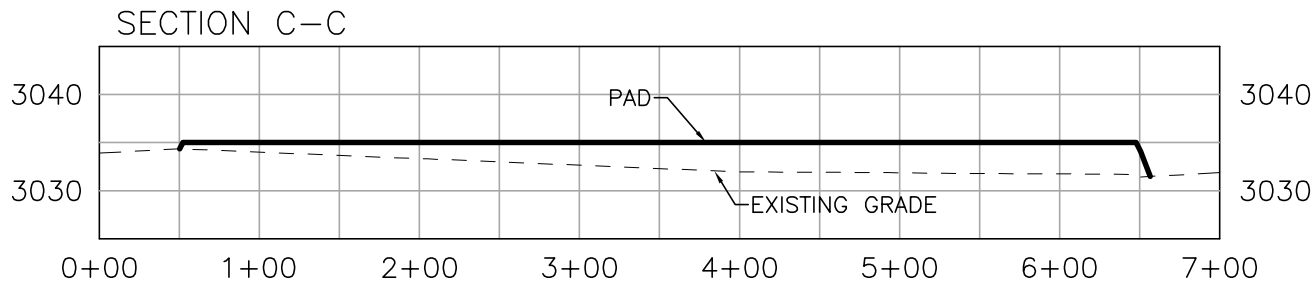
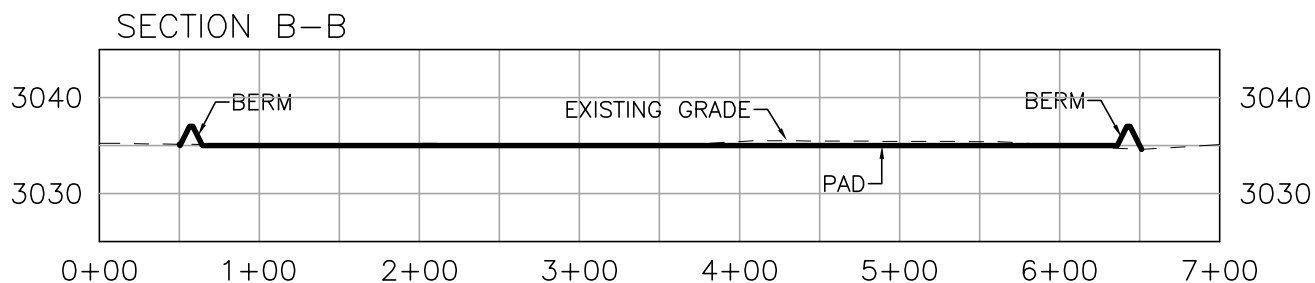
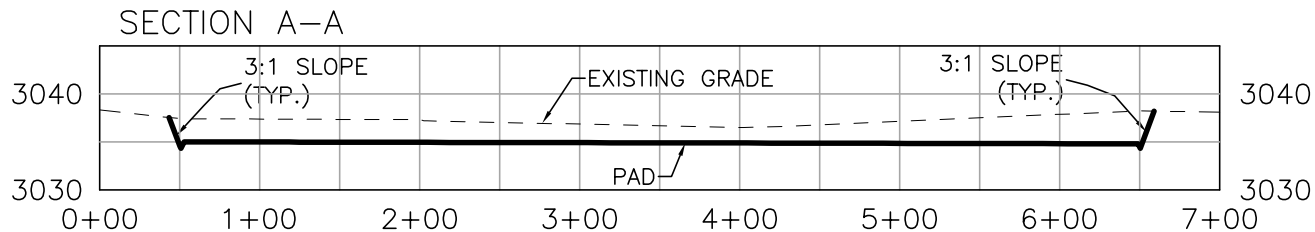
MADRON SURVEYING, INC. 301 SOUTH CANAL
(575) 234-3341

CARLSBAD, NEW MEXICO

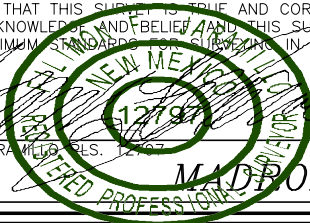
PLAN VIEW



CROSS SECTIONS



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 AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.



FILIMON F. JARAMILLO, PLS. 12797

NOVO OIL & GAS NORTHERN DELAWARE, LLC
GRADING PLAN AND CROSS SECTIONS
FOR GOONCH FED COM 04 235H
SECTION 4, TOWNSHIP 23 SOUTH,
RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

FEBRUARY 22, 2021

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

012 60 120 240
 SCALE 1" = 120' - 1" = 20' VER

CUT	FILL	NET
6849 CU. YD	7927 CU. YD	1078 CU. YD (FILL)

EARTHWORK QUANTITIES ARE ESTIMATED

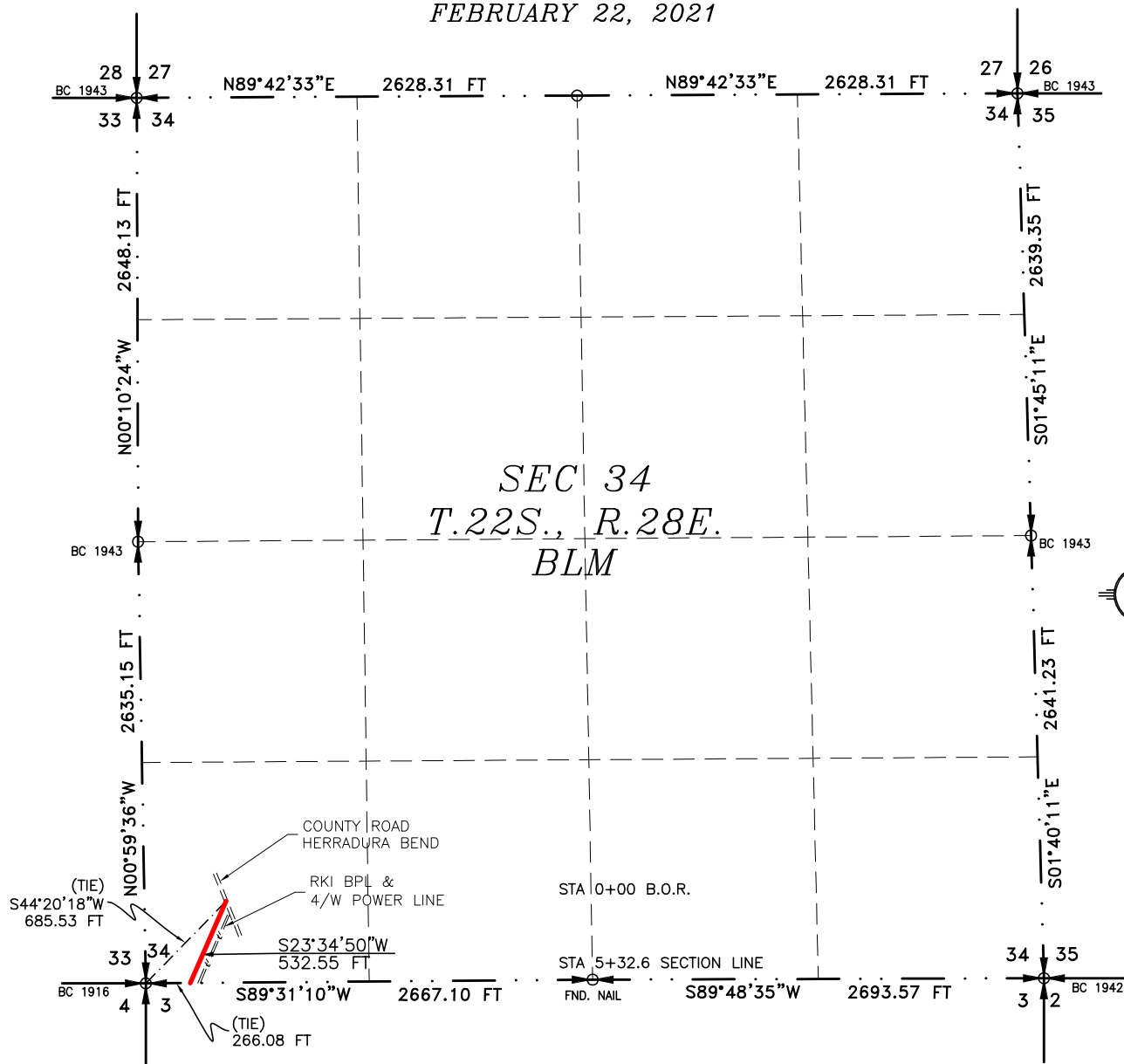
SHEET 2-2
 SURVEY NO. 7266E

ACCESS ROAD PLAT

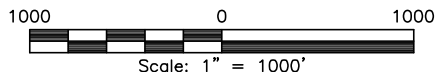
ACCESS ROAD TO THE GOONCH PAD I

(GOONCH FED COM 0409 236H, 136H, 225H AND GOONCH FED COM 04 235H)

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 (2-6) FOR DESCRIPTION

**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.

SHEET: 1-6

MADRON SURVEYING, INC.

SURVEYOR CERTIFICATE

I, FILMON 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 04 DAY OF MARCH 2021

FILMON F. JARAMILLO, PLS. 12797
 301 SOUTH CANAL
 CARLSBAD, NEW MEXICO 88220
 Phone (575) 234-3341

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

SURVEY NO. 7266E

CARLSBAD, NEW MEXICO

ACCESS ROAD PLAT

ACCESS ROAD TO THE GOONCH PAD I

(GOONCH FED COM 0409 236H, 136H, 225H AND GOONCH FED COM 04 235H)

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 S44°20'18"W, A DISTANCE OF 685.53 FEET;
 THENCE S23°34'50"W A DISTANCE OF 532.55 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 S89°31'10"W, A DISTANCE OF 266.08 FEET;

SAID STRIP OF LAND BEING 532.55 FEET OR 32.28 RODS IN LENGTH, CONTAINING 0.367 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

SW/4 SW/4 532.55 L.F. 32.28 RODS 0.367 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.

SHEET: 2-6

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

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,

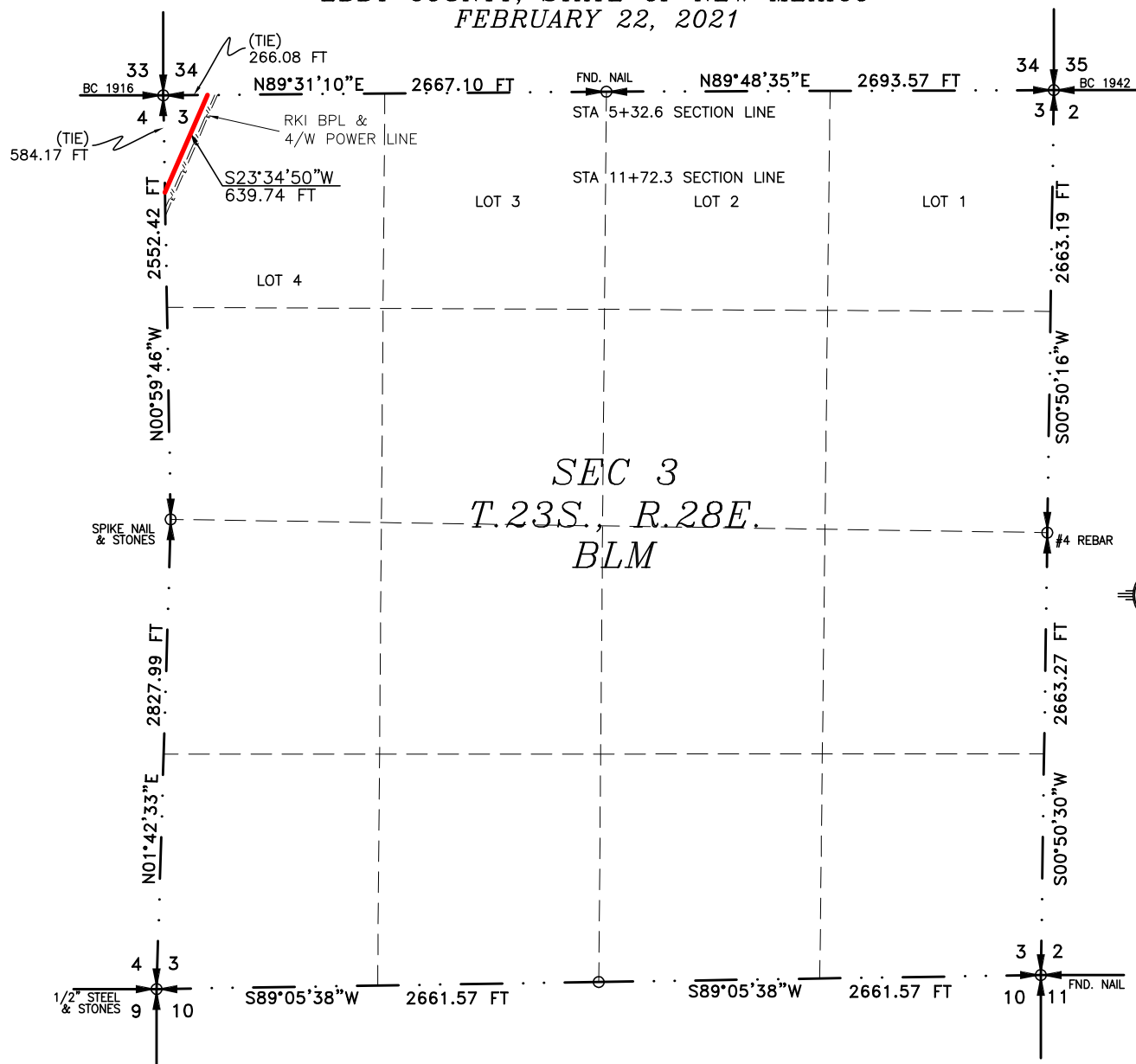
NEW MEXICO, THIS 04TH DAY OF MARCH 2021

[Signature]
 FILIMON F. JARAMILLO, PLS. 12797

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

SURVEY NO. 7266E

NOVO OIL & GAS NORTHERN DELAWARE, LLC
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 3, TOWNSHIP 23 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
FEBRUARY 22, 2021



1000 0 1000

Scale: 1" = 1000'

SHEET: 3-6

MADRON SURVEYING, INC. 301 SOUTH CARLSBAD, NEW MEXICO
(575) 254-1340

ALBUQUERQUE, NEW MEXICO 87104
12797
FILMO 12797

SURVEY NO. 7266E

ACCESS ROAD PLAT

ACCESS ROAD TO THE GOONCH PAD I

(GOONCH FED COM 0409 236H, 136H, 225H AND GOONCH FED COM 04 235H)

NOVO OIL & GAS NORTHERN DELAWARE, LLC
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 3, TOWNSHIP 23 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 3, TOWNSHIP 23 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 LOT 4 OF SAID SECTION 3, TOWNSHIP 23 SOUTH, RANGE 28 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 3, TOWNSHIP 23 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS S89°31'10"W, A DISTANCE OF 266.08 FEET; THENCE S23°34'50"W A DISTANCE OF 639.74 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHWEST CORNER OF SAID SECTION 3, TOWNSHIP 23 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS N00°59'46"W, A DISTANCE OF 584.17 FEET;

SAID STRIP OF LAND BEING 639.74 FEET OR 38.77 RODS IN LENGTH, CONTAINING 0.441 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

LOT 4 639.74 L.F. 38.77 RODS 0.441 ACRES

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 04TH DAY OF MARCH 2021

[Signature]
 FILIMON F. JARAMILLO, PLS. 12797
 NEW MEXICO PROFESSIONAL SURVEYOR

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

SURVEY NO. 7266E

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.

SHEET: 4-6

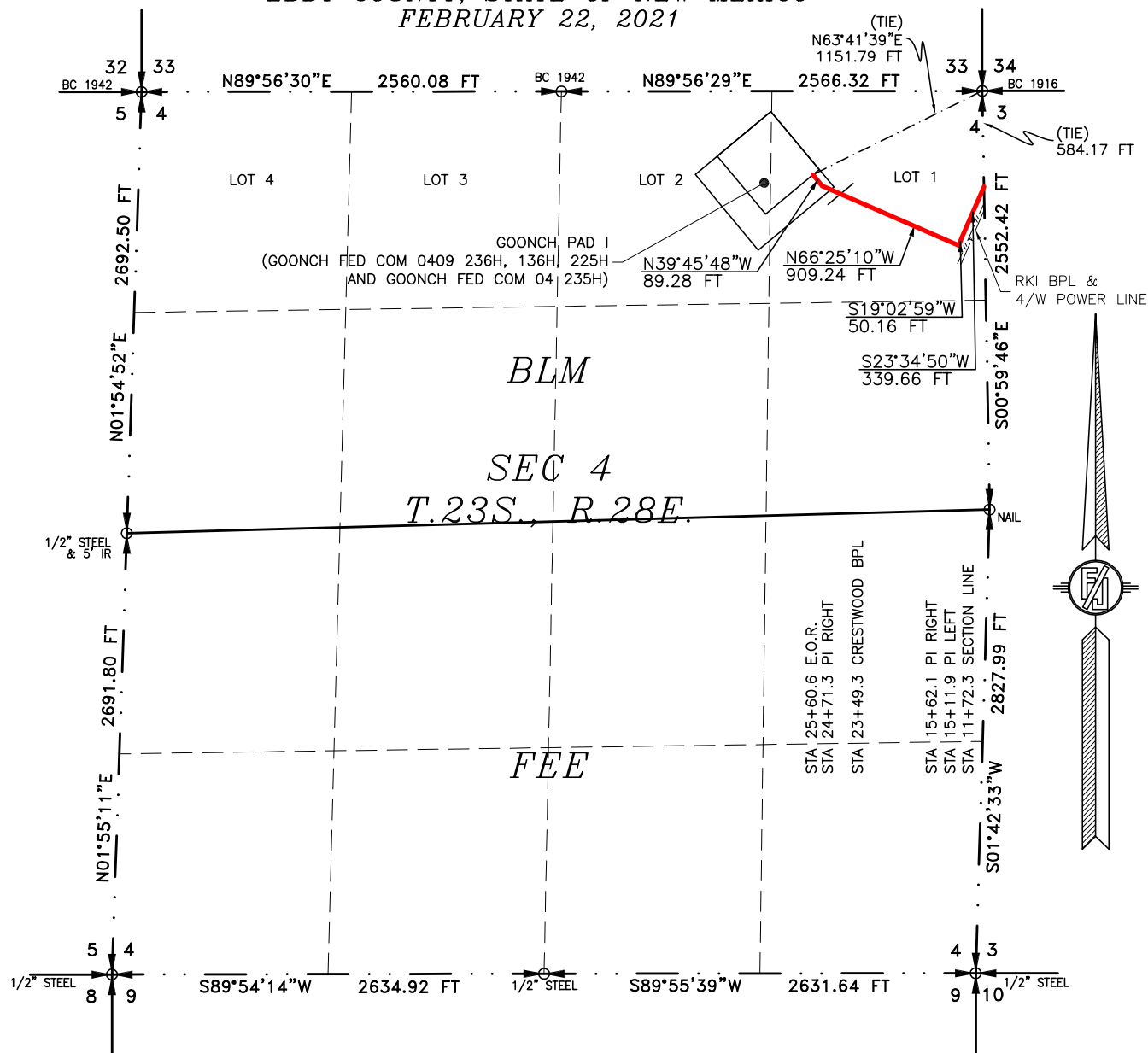
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO
 (575) 234-3341

ACCESS ROAD PLAT

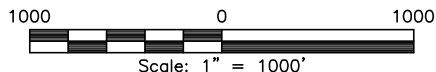
ACCESS ROAD TO THE GOONCH PAD I

(GOONCH FED COM 0409 236H, 136H, 225H AND GOONCH FED COM 04 235H)

NOVO OIL & GAS NORTHERN DELAWARE, LLC
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 4, TOWNSHIP 23 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
FEBRUARY 22, 2021



SEE NEXT SHEET (6-6) FOR DESCRIPTION

**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.

SHEET: 5-6

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

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 22nd DAY OF MARCH 2021

FILIMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HAS SIGNED AND SEALED THIS CERTIFICATE.

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

SURVEY NO. 7266E

ACCESS ROAD PLAT

ACCESS ROAD TO THE GOONCH PAD I

(GOONCH FED COM 0409 236H, 136H, 225H AND GOONCH FED COM 04 235H)

NOVO OIL & GAS NORTHERN DELAWARE, LLC
CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 4, TOWNSHIP 23 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 4, TOWNSHIP 23 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 LOT 1 OF SAID SECTION 4, TOWNSHIP 23 SOUTH, RANGE 28 EAST, N.M.P.M., WHENCE THE NORTHEAST CORNER OF SAID SECTION 4, TOWNSHIP 23 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS N00°59'46"W, A DISTANCE OF 584.17 FEET; THENCE S23°34'50"W A DISTANCE OF 339.66 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE S19°02'59"W A DISTANCE OF 50.16 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE N66°25'10"W A DISTANCE OF 909.24 FEET TO AN ANGLE POINT OF THE LINE HEREIN DESCRIBED; THENCE N39°45'48"W A DISTANCE OF 89.28 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHEAST CORNER OF SAID SECTION 4, TOWNSHIP 23 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS N63°41'39"E, A DISTANCE OF 1151.79 FEET;

SAID STRIP OF LAND BEING 1388.34 FEET OR 84.14 RODS IN LENGTH, CONTAINING 0.956 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

LOT 1 1388.34 L.F. 84.14 RODS 0.956 ACRES

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 04TH DAY OF MARCH 2021

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.

SHEET: 6-6

MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3341

CARLSBAD, NEW MEXICO

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

SURVEY NO. 7266E

Goonch Fed Com 04 235H

CHANGE TO PLANS

Move Bottom Hole Location

From: 130' FSL & 2,178' FEL, Section 4, T-23-S, R-28-E, SESW

To: 130' FSL & 1,650' FEL, Section 9, T-23-S, R-28-E, SWSE

Formation Change

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 8,856' 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 21,000' 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: 598 Sacks; 2,142.4 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; 13.80 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: 681 Sacks; 1,443.2 cu. ft.; 20% excess; 2.12 cu.ft./sx; 11.91 ppg; Class C + retarder; 1,200 psi 24-hour compressive strength.

Tail: 2,070 Sacks; 3,291.7 cu. ft; 20% excess; 1.59 cu.ft./sx; 13.20 ppg; Class C + retarder; 1,200 psi 24-hour compressive strength.



NOVO OIL & GAS NORTHERN DELAWARE, LLC

Goonch Fed Com 04 235H

SHL: 401' FNL & 1292' FEL Section 4-23S-28E

BHL: 130' FSL & 1,650' 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)	9556
Planned MD (ft)	21000
Anticipated Bottom-Hole Pressure (psi)	6211.4
Anticipated Maximum Surface Pressure (psi)	4109.08
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	3,036	3,061	
Formation Tops	TVDss	TVD - KB	Mineral Resources
Rustler	2,639	422	Water
Bell Canyon (base of salt)	500	2,561	Water
Cherry Canyon	-575	3,636	Water
Brushy Canyon	-1,588	4,649	Oil, Gas, Water
Bone Spring Lime	-3,031	6,092	Oil, Gas, Water
Lower Avalon	-3,539	6,600	Oil, Gas, Water
1st Bone Spring Sand	-3,998	7,059	Oil, Gas, Water
2nd Bone Spring Carbonate	-4,211	7,272	Oil, Gas, Water
2nd Bone Spring Sand	-4,746	7,807	Oil, Gas, Water
3rd Bone Spring Carbonate	-5,043	8,104	Oil, Gas, Water
3rd Bone Spring Sand	-6,090	9,151	Oil, Gas, Water
Wolfcamp XY	-6,370	9,431	Oil, Gas, Water
Wolfcamp A	-6,575	9,636	Oil, Gas, Water
Wolfcamp B	-6,780	9,841	Oil, Gas, Water
Wolfcamp B Flow Unit	-7,115	10,176	Oil, Gas, Water
Wolfcamp C	-7,233	10,294	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 1948.32 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 - 472	17-1/2	Water Based Spud Mud	8.3	30-60	N/C	2.0-8.0
472 - 8,856	9-7/8"	Brine Diesel Emulsion or Brine	8.8-9.6	35-45	N/C	1.0-4.0
8,856 - 21,000	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' - 472'	472	17-1/2	13-3/8"	54.50	J-55	BTC	
0' - 8,856'	8,856	9-7/8"	8-5/8"	32.00	P-110	TLW	
0' - 21,000'	21,000	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' - 472'	1,130	2,730	853	5.53	1.82	6.97	
0' - 8,856'	4,230	8,930	1144	1.49	5.95	3.38	Collapse: 1/3 fluid filled at all times
0' - 21,000'	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: $DF_C = 1.125$

- 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.
- 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: $DF_B = 1.125$

- 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: $DF_T = 1.60$

- 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: $DF_C = 1.125$

- 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**
- Collapse force is equal to mud gradient (0.531 psi/ft) in which the casing will be run.
- 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: $DF_B = 1.125$

- 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.
- 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: $DF_T = 1.60$

- 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 CasingCollapse: $DF_C = 1.125$

- 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.
- 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: $DF_B = 1.125$

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

Tensile: $DF_T = 1.60$

- 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' - 472'

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	404	655.1	116.7	13.80	1.62	7.67	1,200	100.0%

Lead: N/A

Tail: Class C Cement with Gel, Accelerator, LCM

Intermediate Casing Cement:

Top of Lead 0

Top of Tail 7,856

Surface Shoe Depth

472

Intermediate Shoe Depth

8,856

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	598	2142.4	381.6	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

Production Casing Cement:

0' - 21,000'

Top of Cement/Lead: 0'

Top of Tail: 6,856'

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	681	1443.2	257.0	12.00	2.12	11.91	1,200	20.0%
Tail	2070	3291.7	586.2	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 MANNESMANN P110 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	in ²
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*lb
Optimum Makeup Torque:	37,375	ft*lb
Maximum Makeup Torque:	80,900	ft*lb
Minimum Yield:	89,900	ft*lb
Makeup Loss:	5.97	in

Notes

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



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.)

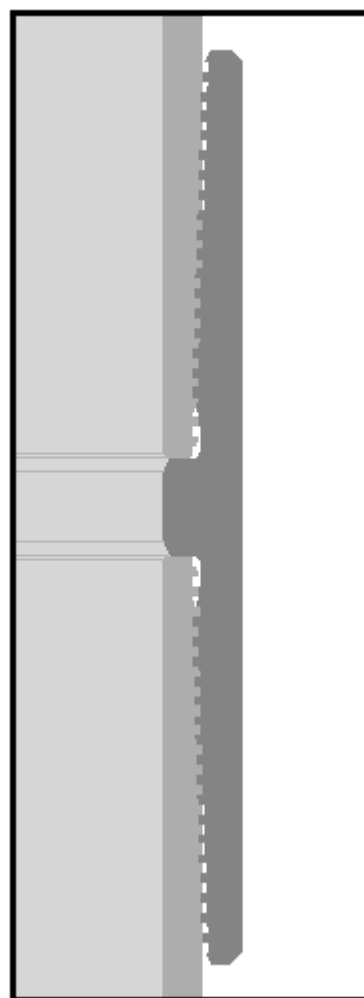
	Connection Dimensions
6.300	Connection O.D. (in.)
4.778	Connection I.D. (in.)
4.653	Connection Drift Diameter (in.)
4.13	Make-up Loss (in.)
5.828	Critical Area (sq. in.)
100.0	Joint Efficiency (%)

	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).

Connection specifications within the control of VAM USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

All information is provided by VAM USA or its affiliates at user's sole risk, without liability for loss, damage or injury resulting from the use thereof; and on an "AS IS" basis without warranty or representation of any kind, whether express or implied, including without limitation any warranty of merchantability, fitness for purpose or completeness. This document and its contents are subject to change without notice. In

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.

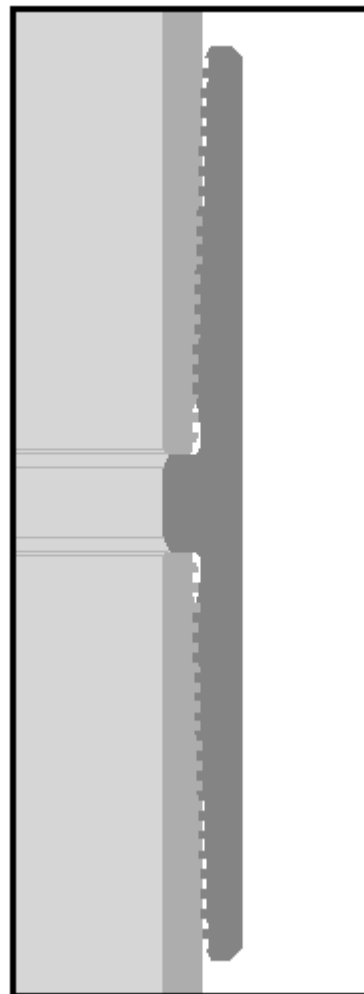
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VAM USA
4424 W. Sam Houston Pkwy. Suite 150
Houston, TX 77041
Phone: 713-479-3200
Fax: 713-479-3234
E-mail: VAMUSAsales@vam-usa.com

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.



Connection specifications within the control of VAM USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

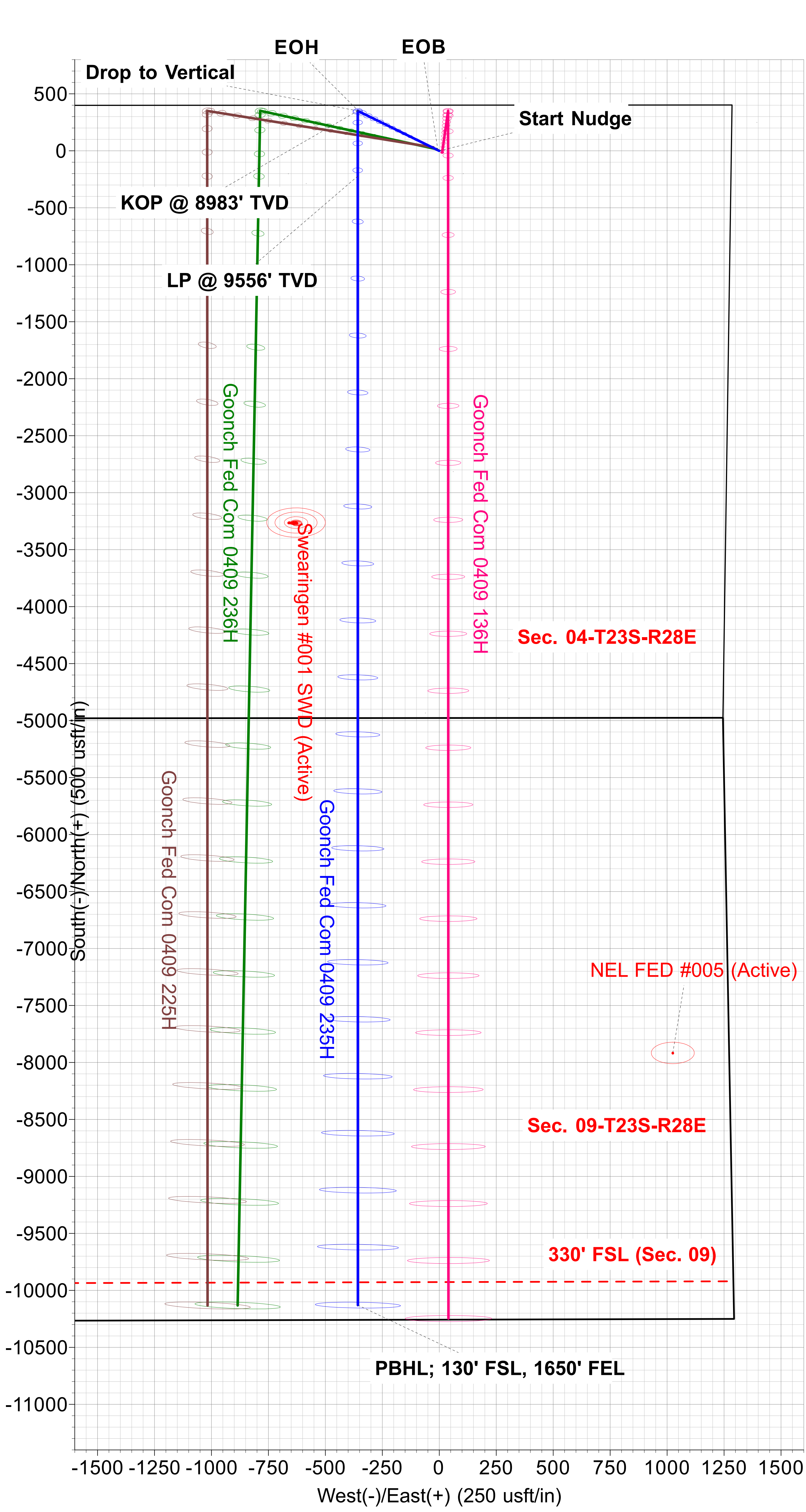
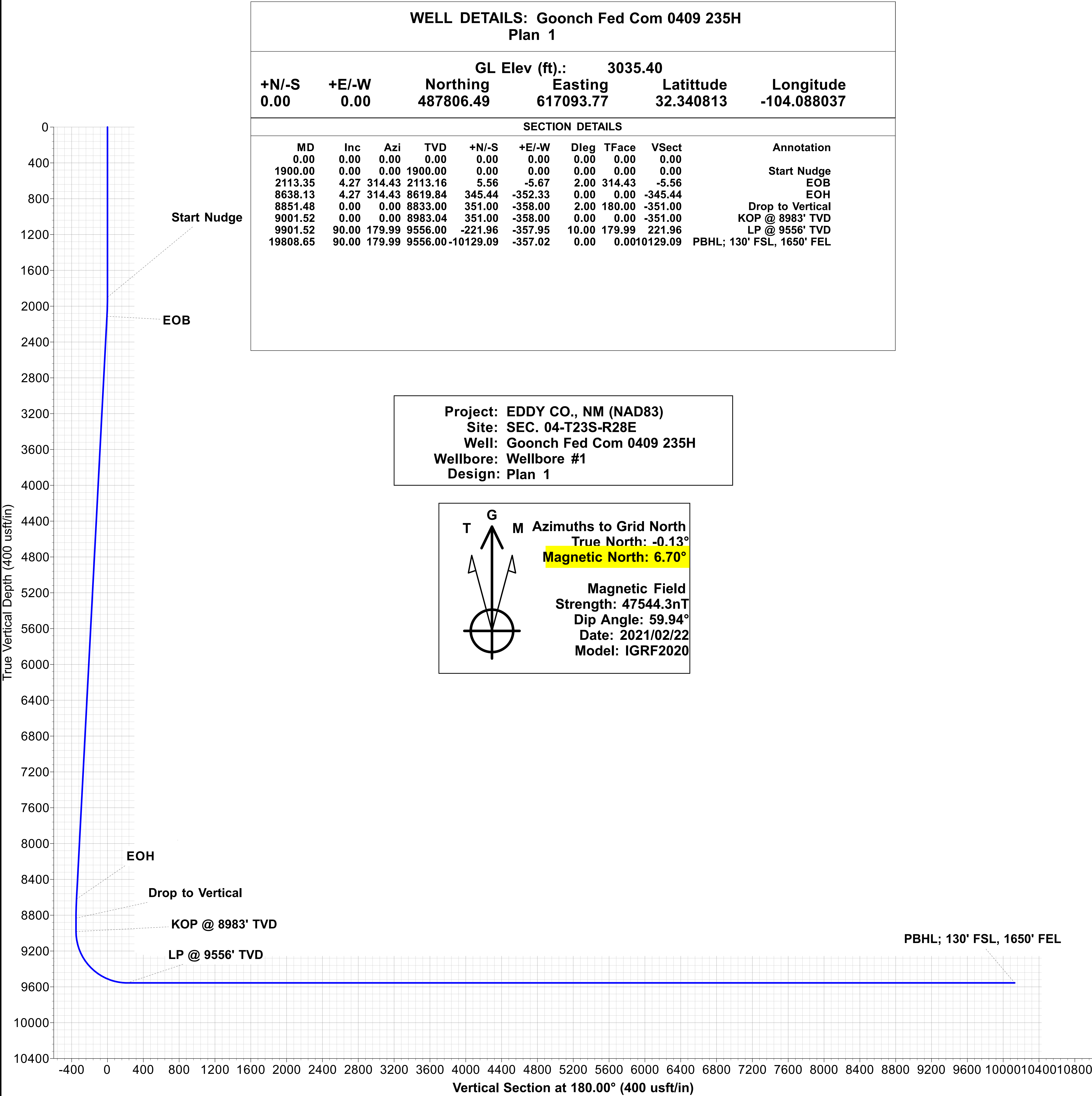
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11/29/2018 6:04 PM



Goonch Fed Com 0409 235H

PRECISION RIG #596





NOVO Oil & Gas

EDDY CO., NM (NAD83)

SEC. 04-T23S-R28E

Goonch Fed Com 0409 235H

Wellbore #1

Plan 1

Anticollision Report

11 March, 2021





SB Directional Anticollision Report



Company:	NOVO Oil & Gas	Local Co-ordinate Reference:	Well Goonch Fed Com 0409 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Reference	Plan 1		
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	2021/03/11	
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	19,808.65	Plan 1 (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
SEC. 04-T23S-R28E						
Apollo Fee 23-28 4 WA 005H - Wellbore #1 - Wellbore #1						Out of range
Goonch Fed Com 04 132H - Wellbore #1 - Plan 2	14,610.80	9,710.19	1,448.15	1,325.85	11.841	CC, ES
Goonch Fed Com 04 132H - Wellbore #1 - Plan 2	14,700.00	9,710.19	1,450.90	1,327.55	11.762	SF
Goonch Fed Com 04 211H - Wellbore #1 - Plan 1						Out of range
Goonch Fed Com 04 212H - Wellbore #1 - Plan 1	9,550.00	14,500.16	1,181.83	1,078.93	11.485	ES
Goonch Fed Com 04 212H - Wellbore #1 - Plan 1	9,586.29	14,469.86	1,181.60	1,079.20	11.539	CC
Goonch Fed Com 04 212H - Wellbore #1 - Plan 1	14,600.00	9,590.17	1,335.25	1,217.31	11.321	SF
Goonch Fed Com 04 221H - Wellbore #1 - Plan 1						Out of range
Goonch Fed Com 04 222H - Wellbore #1 - Plan 1						Out of range
Goonch Fed Com 04 231H - Wellbore #1 - Plan 1						Out of range
Goonch Fed Com 04 232H - Wellbore #1 - Plan 1						Out of range
Goonch Fed Com 0409 136H - Wellbore #1 - Plan 0	1,900.00	1,900.00	19.99	11.67	2.403	CC, ES, SF
Goonch Fed Com 0409 225H - Wellbore #1 - Plan 0	1,200.00	1,199.70	39.99	34.78	7.676	CC, ES
Goonch Fed Com 0409 225H - Wellbore #1 - Plan 0	19,808.65	20,023.28	679.05	313.33	1.857	Collision Risk Procedures R
Goonch Fed Com 0409 236H - Wellbore #1 - Plan 0	1,500.00	1,500.00	19.99	13.46	3.058	CC, ES, SF
Jack Sleeper State Com 9 201H - Wellbore #1 - Wellbore						Out of range
Jack Sleeper State Com 9 215H - Wellbore #1 - Wellbore						Out of range
Jack Sleeper State Com 9 221H - Wellbore #1 - Wellbore						Out of range
Loving Federal Com #001 (Active) - Wellbore #1 - Wellbo	11,261.14	9,541.51	1,289.78	1,067.15	5.793	CC
Loving Federal Com #001 (Active) - Wellbore #1 - Wellbo	11,300.00	9,541.51	1,290.37	1,067.04	5.778	ES
Loving Federal Com #001 (Active) - Wellbore #1 - Wellbo	11,400.00	9,541.51	1,297.24	1,072.19	5.764	SF
Swearingen #001 SWD (Active) - Wellbore #1 - Wellbore	12,941.50	9,625.32	270.93	145.65	2.163	CC, ES, SF
SEC. 09-T23S-R28E						
NEL FED #005 (Active) - Wellbore #1 - Wellbore #1						Out of range

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 04 132H - Wellbore #1 - Plan 2													Offset Site Error: 0.00 usft	
Survey Program: 0-MWD		Offset		Semi Major Axis		Offset Wellbore Centre			Rule Assigned:				Offset Well Error: 0.50 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
9,700.00	9,520.92	15,092.64	10,219.00	21.76	80.92	117.61	10.80	-1,672.70	1,499.14	1,405.46	93.68	16.002		
9,750.00	9,536.08	15,045.03	10,219.00	21.78	80.11	117.64	-36.79	-1,673.98	1,493.06	1,399.75	93.31	16.001		

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 04 132H - Wellbore #1 - Plan 2												Offset Site Error:	0.00 usft
Survey Program: 0-MWD												Offset Well Error:	0.50 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,800.00	9,547.03	14,996.27	10,219.00	21.85	79.28	117.60	-85.53	-1,675.29	1,489.09	1,396.22	92.87	16.034	
9,850.00	9,553.68	14,946.75	10,219.00	21.97	78.44	117.52	-135.03	-1,676.63	1,487.19	1,394.82	92.37	16.101	
9,871.77	9,555.23	14,925.05	10,219.00	22.04	78.07	117.48	-156.73	-1,677.21	1,487.00	1,394.86	92.14	16.139	
9,901.52	9,556.00	14,895.32	10,219.00	22.15	77.57	117.41	-186.44	-1,678.01	1,487.36	1,395.56	91.79	16.203	
10,000.00	9,556.00	14,796.88	10,219.00	22.63	75.90	117.36	-284.85	-1,680.66	1,489.72	1,399.01	90.71	16.423	
10,100.00	9,556.00	14,696.91	10,219.00	23.25	74.22	117.31	-384.78	-1,683.34	1,492.11	1,402.38	89.74	16.627	
10,200.00	9,556.00	14,596.95	10,219.00	24.00	72.54	117.26	-484.71	-1,686.03	1,494.51	1,405.63	88.89	16.814	
10,300.00	9,556.00	14,496.99	10,219.00	24.86	70.86	117.22	-584.63	-1,688.72	1,496.91	1,408.77	88.14	16.983	
10,400.00	9,556.00	14,397.02	10,219.00	25.82	69.19	117.17	-684.56	-1,691.41	1,499.31	1,411.81	87.50	17.135	
14,300.00	9,556.00	9,710.19	9,534.60	88.15	33.94	90.00	-4,931.37	-1,805.66	1,481.13	1,365.08	116.05	12.763	
14,400.00	9,556.00	9,710.19	9,534.60	89.92	33.94	90.00	-4,931.37	-1,805.66	1,463.42	1,344.95	118.47	12.353	
14,500.00	9,556.00	9,710.19	9,534.60	91.70	33.94	90.00	-4,931.37	-1,805.66	1,452.39	1,331.87	120.52	12.051	
14,600.00	9,556.00	9,710.19	9,534.60	93.48	33.94	90.00	-4,931.37	-1,805.66	1,448.19	1,326.04	122.15	11.856	
14,610.80	9,556.00	9,710.19	9,534.60	93.67	33.94	90.00	-4,931.37	-1,805.66	1,448.15	1,325.85	122.30	11.841 CC, ES	
14,700.00	9,556.00	9,710.19	9,534.60	95.26	33.94	90.00	-4,931.37	-1,805.66	1,450.90	1,327.55	123.35	11.762 SF	
14,800.00	9,556.00	9,710.19	9,534.60	97.04	33.94	90.00	-4,931.37	-1,805.66	1,460.46	1,336.35	124.11	11.767	
14,900.00	9,556.00	9,710.19	9,534.60	98.83	33.94	90.00	-4,931.37	-1,805.66	1,476.75	1,352.30	124.45	11.866	
15,000.00	9,556.00	9,710.19	9,534.60	100.61	33.94	90.00	-4,931.37	-1,805.66	1,499.54	1,375.14	124.40	12.054	

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 04 212H - Wellbore #1 - Plan 1													Offset Site Error:	0.00 usft		
Survey Program:		0-MWD		Reference			Offset		Semi Maior Axis		Offset Wellbore Centre		Rule Assigned:		Offset Well Error:	0.50 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning			
8,638.13	8,619.84	14,629.92	9,504.00	21.03	85.44	-50.72	269.36	-1,533.70	1,489.24	1,399.41	89.83	16.578				
8,700.00	8,681.59	14,629.92	9,504.00	21.17	85.44	-49.95	269.36	-1,533.70	1,450.47	1,359.24	91.23	15.900				
8,800.00	8,781.52	14,629.92	9,504.00	21.35	85.44	-48.88	269.36	-1,533.70	1,392.85	1,299.34	93.51	14.894				
8,851.48	8,833.00	14,629.92	9,504.00	21.43	85.44	-93.97	269.36	-1,533.70	1,365.86	1,271.16	94.70	14.423				
8,900.00	8,881.52	14,629.92	9,504.00	21.52	85.44	-93.97	269.36	-1,533.70	1,341.99	1,246.17	95.82	14.005				
9,001.52	8,983.04	14,629.92	9,504.00	21.72	85.44	-93.97	269.36	-1,533.70	1,296.50	1,198.42	98.08	13.218				
9,050.00	9,031.46	14,629.92	9,504.00	21.80	85.44	88.17	269.36	-1,533.70	1,276.95	1,177.84	99.11	12.884				
9,100.00	9,081.04	14,629.92	9,504.00	21.86	85.44	90.18	269.36	-1,533.70	1,258.30	1,158.16	100.14	12.566				
9,150.00	9,129.86	14,629.92	9,504.00	21.89	85.44	91.97	269.36	-1,533.70	1,241.39	1,140.26	101.13	12.275				
9,200.00	9,177.57	14,629.92	9,504.00	21.91	85.44	93.54	269.36	-1,533.70	1,226.43	1,124.36	102.07	12.016				
9,250.00	9,223.80	14,629.92	9,504.00	21.92	85.44	94.86	269.36	-1,533.70	1,213.61	1,110.67	102.94	11.789				
9,300.00	9,268.20	14,629.92	9,504.00	21.91	85.44	95.93	269.36	-1,533.70	1,203.10	1,099.37	103.73	11.598				
9,350.00	9,310.43	14,629.92	9,504.00	21.89	85.44	96.75	269.36	-1,533.70	1,195.03	1,090.60	104.43	11.444				
9,400.00	9,350.16	14,610.13	9,504.00	21.87	85.10	96.57	249.58	-1,534.23	1,189.35	1,084.88	104.47	11.384				
9,450.00	9,387.11	14,576.47	9,504.00	21.85	84.52	95.76	215.93	-1,535.14	1,185.44	1,081.37	104.07	11.391				
9,500.00	9,420.97	14,539.72	9,504.00	21.82	83.89	94.79	179.20	-1,536.13	1,183.01	1,079.48	103.54	11.426				
9,550.00	9,451.51	14,500.16	9,504.00	21.79	83.22	93.74	139.65	-1,537.19	1,181.83	1,078.93	102.90	11.485 ES				
9,586.29	9,471.45	14,469.86	9,504.00	21.77	82.70	92.96	109.36	-1,538.01	1,181.60	1,079.20	102.40	11.539 CC				
9,600.00	9,478.47	14,458.09	9,504.00	21.77	82.50	92.66	97.60	-1,538.32	1,181.63	1,079.43	102.20	11.562				
9,650.00	9,501.67	14,413.83	9,504.00	21.76	81.74	91.61	53.36	-1,539.51	1,182.17	1,080.72	101.45	11.653				
9,700.00	9,520.92	14,367.72	9,504.00	21.76	80.95	90.65	7.26	-1,540.75	1,183.22	1,082.54	100.68	11.752				
9,750.00	9,536.08	14,320.11	9,504.00	21.78	80.14	89.81	-40.34	-1,542.03	1,184.57	1,084.66	99.91	11.856				
9,800.00	9,547.03	14,271.36	9,504.00	21.85	79.31	89.15	-89.07	-1,543.34	1,186.05	1,086.89	99.16	11.961				
9,850.00	9,553.68	14,221.84	9,504.00	21.97	78.47	88.68	-138.57	-1,544.68	1,187.54	1,089.09	98.45	12.063				
9,901.52	9,556.00	14,170.40	9,504.00	22.15	77.59	88.43	-189.99	-1,546.06	1,188.99	1,091.23	97.76	12.163				
10,000.00	9,556.00	14,071.96	9,504.00	22.63	75.93	88.43	-288.40	-1,548.71	1,191.65	1,095.09	96.56	12.341				
10,100.00	9,556.00	13,972.00	9,504.00	23.25	74.24	88.44	-388.32	-1,551.40	1,194.35	1,098.86	95.48	12.509				
10,200.00	9,556.00	13,872.03	9,504.00	24.00	72.56	88.44	-488.25	-1,554.09	1,197.04	1,102.51	94.53	12.663				
10,300.00	9,556.00	13,772.07	9,504.00	24.86	70.88	88.44	-588.18	-1,556.77	1,199.74	1,106.04	93.71	12.803				
10,400.00	9,556.00	13,672.11	9,504.00	25.82	69.21	88.45	-688.11	-1,559.46	1,202.44	1,109.45	92.99	12.931				
10,500.00	9,556.00	13,572.14	9,504.00	26.87	67.55	88.45	-788.03	-1,562.15	1,205.14	1,112.78	92.36	13.048				
10,600.00	9,556.00	13,472.18	9,504.00	28.00	65.89	88.45	-887.96	-1,564.84	1,207.84	1,116.01	91.83	13.153				
10,700.00	9,556.00	13,372.21	9,504.00	29.20	64.25	88.46	-987.89	-1,567.53	1,210.54	1,119.17	91.37	13.249				
10,800.00	9,556.00	13,272.25	9,504.00	30.46	62.61	88.46	-1,087.81	-1,570.22	1,213.23	1,122.25	90.98	13.335				
10,900.00	9,556.00	13,172.29	9,504.00	31.77	60.99	88.46	-1,187.74	-1,572.91	1,215.93	1,125.27	90.66	13.412				
11,000.00	9,556.00	13,072.32	9,504.00	33.13	59.37	88.47	-1,287.67	-1,575.60	1,218.63	1,128.24	90.39	13.481				
11,100.00	9,556.00	12,972.36	9,504.00	34.54	57.76	88.47	-1,387.60	-1,578.29	1,221.33	1,131.15	90.18	13.543				
11,200.00	9,556.00	12,872.40	9,504.00	35.98	56.17	88.47	-1,487.52	-1,580.97	1,224.03	1,134.01	90.02	13.598				
11,300.00	9,556.00	12,772.43	9,504.00	37.46	54.59	88.48	-1,587.45	-1,583.66	1,226.72	1,136.83	89.90	13.646				
11,400.00	9,556.00	12,672.47	9,504.00	38.97	53.02	88.48	-1,687.38	-1,586.35	1,229.42	1,139.60	89.82	13.687				
11,500.00	9,556.00	12,572.51	9,504.00	40.50	51.47	88.48	-1,787.31	-1,589.04	1,232.12	1,142.33	89.79	13.723				
11,600.00	9,556.00	12,472.54	9,504.00	42.06	49.94	88.49	-1,887.23	-1,591.73	1,234.82	1,145.03	89.79	13.752				
11,700.00	9,556.00	12,372.58	9,504.00	43.64	48.42	88.49	-1,987.16	-1,594.42	1,237.52	1,147.68	89.84	13.775				
11,800.00	9,556.00	12,272.62	9,504.00	45.23	46.93	88.49	-2,087.09	-1,597.11	1,240.22	1,150.30	89.92	13.793				
11,900.00	9,556.00	12,172.65	9,504.00	46.85	45.45	88.50	-2,187.02	-1,599.80	1,242.91	1,152.87	90.04	13.804				
12,000.00	9,556.00	12,072.69	9,504.00	48.48	44.00	88.50	-2,286.94	-1,602.49	1,245.61	1,155.41	90.20	13.809				
12,100.00	9,556.00	11,972.73	9,504.00	50.12	42.58	88.50	-2,386.87	-1,605.17	1,248.31	1,157.91	90.40	13.808				
12,200.00	9,556.00	11,872.76	9,504.00	51.78	41.18	88.51	-2,486.80	-1,607.86	1,251.01	1,160.36	90.65	13.801				
12,300.00	9,556.00	11,772.80	9,504.00	53.44	39.82	88.51	-2,586.73	-1,610.55	1,253.71	1,162.77	90.94	13.786				
12,400.00	9,556.00	11,672.83	9,504.00	55.12	38.49	88.51	-2,686.65	-1,613.24	1,256.41	1,165.13	91.28	13.765				
12,500.00	9,556.00	11,572.87	9,504.00	56.81	37.20	88.52	-2,786.58	-1,615.93	1,259.10	1,167.44	91.67	13.735				
12,600.00	9,556.00	11,472.91	9,504.00	58.50	35.96	88.52	-2,886.51	-1,618.62	1,261.80	1,169.69	92.12	13.698				

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 04 212H - Wellbore #1 - Plan 1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.50 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
12,700.00	9,556.00	11,372.94	9,504.00	60.20	34.77	88.52	-2,986.44	-1,621.31	1,264.50	1,171.88	92.62	13.652	
12,800.00	9,556.00	11,272.98	9,504.00	61.92	33.64	88.53	-3,086.36	-1,624.00	1,267.20	1,174.00	93.20	13.597	
12,900.00	9,556.00	11,173.02	9,504.00	63.63	32.60	88.53	-3,186.29	-1,626.69	1,269.90	1,176.05	93.84	13.532	
13,000.00	9,556.00	11,073.05	9,504.00	65.36	31.65	88.53	-3,286.22	-1,629.37	1,272.60	1,178.03	94.57	13.457	
13,100.00	9,556.00	10,973.09	9,504.00	67.08	30.86	88.53	-3,386.15	-1,632.06	1,275.29	1,179.91	95.38	13.370	
13,200.00	9,556.00	10,873.13	9,504.00	68.82	30.27	88.54	-3,486.07	-1,634.75	1,277.99	1,181.70	96.29	13.272	
13,300.00	9,556.00	10,773.16	9,504.00	70.56	29.93	88.54	-3,586.00	-1,637.44	1,280.69	1,183.39	97.30	13.163	
13,400.00	9,556.00	10,673.20	9,504.00	72.30	29.83	88.54	-3,685.93	-1,640.13	1,283.39	1,184.97	98.42	13.040	
13,500.00	9,556.00	10,573.24	9,504.00	74.05	29.87	88.55	-3,785.85	-1,642.82	1,286.09	1,186.43	99.66	12.905	
13,600.00	9,556.00	10,473.27	9,504.00	75.80	30.02	88.55	-3,885.78	-1,645.51	1,288.79	1,187.77	101.02	12.758	
13,700.00	9,556.00	10,373.31	9,504.00	77.55	30.25	88.55	-3,985.71	-1,648.20	1,291.48	1,188.97	102.51	12.599	
13,800.00	9,556.00	10,273.34	9,504.00	79.31	30.53	88.56	-4,085.64	-1,650.88	1,294.18	1,190.05	104.13	12.428	
13,900.00	9,556.00	10,173.38	9,504.00	81.07	30.87	88.56	-4,185.56	-1,653.57	1,296.88	1,190.99	105.90	12.247	
14,000.00	9,556.00	10,073.42	9,504.00	82.84	31.26	88.56	-4,285.49	-1,656.26	1,299.58	1,191.79	107.79	12.056	
14,100.00	9,556.00	9,974.92	9,503.43	84.61	31.69	88.54	-4,383.95	-1,658.91	1,302.29	1,192.49	109.80	11.861	
14,200.00	9,556.00	9,882.03	9,491.83	86.38	32.13	88.03	-4,475.97	-1,661.39	1,305.37	1,193.55	111.82	11.674	
14,300.00	9,556.00	9,795.00	9,467.60	88.15	32.55	86.98	-4,559.44	-1,663.63	1,309.34	1,195.58	113.76	11.510	
14,400.00	9,556.00	9,716.81	9,435.27	89.92	32.93	85.57	-4,630.54	-1,665.55	1,315.02	1,199.53	115.49	11.387	
14,500.00	9,556.00	9,650.00	9,400.19	91.70	33.23	84.05	-4,687.34	-1,667.08	1,323.35	1,206.46	116.89	11.321	
14,600.00	9,556.00	9,590.17	9,363.35	93.48	33.49	82.47	-4,734.43	-1,668.34	1,335.25	1,217.31	117.95	11.321 SF	
14,700.00	9,556.00	9,540.52	9,329.19	95.26	33.69	81.02	-4,770.42	-1,669.31	1,351.44	1,232.85	118.58	11.396	
14,800.00	9,556.00	9,500.00	9,299.08	97.04	33.84	79.74	-4,797.52	-1,670.04	1,372.40	1,253.58	118.82	11.550	
14,900.00	9,556.00	9,462.60	9,269.65	98.83	33.96	78.51	-4,820.58	-1,670.66	1,398.43	1,279.73	118.70	11.781	
15,000.00	9,556.00	9,432.00	9,244.50	100.61	34.05	77.46	-4,837.99	-1,671.13	1,429.61	1,311.36	118.25	12.090	
15,100.00	9,556.00	9,400.00	9,217.23	102.40	34.14	76.34	-4,854.73	-1,671.58	1,465.92	1,348.38	117.55	12.471	

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 0409 136H - Wellbore #1 - Plan 0												Offset Site Error:	0.00 usft
Survey Program: 0-MWD												Offset Well Error:	0.50 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	0.00	0.00	0.50	0.50	140.19	-15.36	12.80	19.99				
100.00	100.00	100.00	100.00	0.51	0.51	140.19	-15.36	12.80	19.99	18.98	1.01	19.716	
200.00	200.00	200.00	200.00	0.59	0.59	140.19	-15.36	12.80	19.99	18.82	1.18	17.008	
300.00	300.00	300.00	300.00	0.73	0.73	140.19	-15.36	12.80	19.99	18.53	1.46	13.668	
400.00	400.00	400.00	400.00	0.91	0.91	140.19	-15.36	12.80	19.99	18.18	1.82	11.003	
500.00	500.00	500.00	500.00	1.10	1.10	140.19	-15.36	12.80	19.99	17.79	2.21	9.062	
524.37	524.37	524.37	524.37	1.15	1.15	140.19	-15.36	12.80	19.99	17.69	2.30	8.676	
600.00	600.00	600.00	600.00	1.31	1.31	140.19	-15.36	12.80	19.99	17.38	2.61	7.646	
633.33	633.33	633.33	633.33	1.38	1.38	140.19	-15.36	12.80	19.99	17.24	2.75	7.260	
700.00	700.00	700.00	700.00	1.52	1.52	140.19	-15.36	12.80	19.99	16.96	3.04	6.587	
800.00	800.00	800.00	800.00	1.73	1.73	140.19	-15.36	12.80	19.99	16.53	3.46	5.774	
900.00	900.00	900.00	900.00	1.95	1.95	140.19	-15.36	12.80	19.99	16.10	3.90	5.133	
1,000.00	1,000.00	1,000.00	1,000.00	2.17	2.17	140.19	-15.36	12.80	19.99	15.66	4.33	4.616	
1,100.00	1,100.00	1,100.00	1,100.00	2.38	2.38	140.19	-15.36	12.80	19.99	15.22	4.77	4.192	
1,200.00	1,200.00	1,200.00	1,200.00	2.61	2.61	140.19	-15.36	12.80	19.99	14.78	5.21	3.837	
1,300.00	1,300.00	1,300.00	1,300.00	2.83	2.83	140.19	-15.36	12.80	19.99	14.34	5.65	3.537	
1,400.00	1,400.00	1,400.00	1,400.00	3.05	3.05	140.19	-15.36	12.80	19.99	13.90	6.10	3.280	
1,500.00	1,500.00	1,500.00	1,500.00	3.27	3.27	140.19	-15.36	12.80	19.99	13.46	6.54	3.058	
1,600.00	1,600.00	1,600.00	1,600.00	3.49	3.49	140.19	-15.36	12.80	19.99	13.01	6.98	2.863	
1,700.00	1,700.00	1,700.00	1,700.00	3.71	3.71	140.19	-15.36	12.80	19.99	12.57	7.43	2.691	
1,800.00	1,800.00	1,800.00	1,800.00	3.94	3.94	140.19	-15.36	12.80	19.99	12.12	7.87	2.539	
1,900.00	1,900.00	1,900.00	1,900.00	4.16	4.16	140.19	-15.36	12.80	19.99	11.67	8.32	2.403 CC, ES, SF	
2,000.00	1,999.98	1,999.98	1,999.98	4.38	4.38	-174.70	-15.36	12.80	21.73	12.97	8.76	2.480	
2,100.00	2,099.84	2,099.84	2,099.84	4.60	4.61	-175.72	-15.36	12.80	26.95	17.74	9.20	2.928	
2,113.35	2,113.16	2,113.16	2,113.16	4.63	4.64	-175.87	-15.36	12.80	27.91	18.64	9.26	3.013	
2,200.00	2,199.56	2,199.56	2,199.56	4.82	4.83	-176.64	-15.36	12.80	34.34	24.70	9.64	3.561	
2,300.00	2,299.29	2,299.29	2,299.29	5.04	5.05	-177.24	-15.36	12.80	41.77	31.69	10.08	4.142	
2,400.00	2,399.01	2,399.01	2,399.01	5.27	5.28	-177.66	-15.36	12.80	49.20	38.68	10.53	4.675	
2,500.00	2,498.73	2,498.73	2,498.73	5.50	5.50	-177.96	-15.36	12.80	56.64	45.67	10.97	5.164	
2,600.00	2,598.45	2,598.45	2,598.45	5.74	5.72	-178.20	-15.36	12.80	64.08	52.66	11.41	5.615	
2,700.00	2,698.18	2,698.18	2,698.18	5.97	5.95	-178.39	-15.36	12.80	71.51	59.66	11.86	6.032	
2,800.00	2,797.90	2,797.90	2,797.90	6.21	6.17	-178.54	-15.36	12.80	78.95	66.65	12.30	6.419	
2,900.00	2,897.62	2,897.62	2,897.62	6.45	6.39	-178.67	-15.36	12.80	86.39	73.64	12.75	6.778	
3,000.00	2,997.35	2,997.35	2,997.35	6.69	6.62	-178.77	-15.36	12.80	93.83	80.64	13.19	7.112	
3,100.00	3,097.07	3,097.07	3,097.07	6.93	6.84	-178.86	-15.36	12.80	101.27	87.63	13.64	7.425	
3,200.00	3,196.79	3,196.79	3,196.79	7.18	7.06	-178.94	-15.36	12.80	108.71	94.62	14.09	7.717	
3,300.00	3,296.51	3,296.51	3,296.51	7.42	7.29	-179.01	-15.36	12.80	116.15	101.61	14.53	7.991	
3,400.00	3,396.24	3,396.24	3,396.24	7.67	7.51	-179.07	-15.36	12.80	123.58	108.60	14.98	8.249	
3,500.00	3,495.96	3,495.96	3,495.96	7.91	7.73	-179.12	-15.36	12.80	131.02	115.59	15.43	8.491	
3,600.00	3,595.68	3,598.79	3,598.77	8.16	7.96	-179.70	-13.66	12.92	137.38	121.50	15.89	8.648	
3,700.00	3,695.40	3,701.16	3,701.00	8.41	8.19	178.66	-8.40	13.29	141.52	125.18	16.34	8.663	
3,800.00	3,795.13	3,800.99	3,800.63	8.66	8.42	176.81	-2.16	13.74	145.09	128.30	16.78	8.645	
3,900.00	3,894.85	3,900.81	3,900.26	8.91	8.64	175.04	4.08	14.18	148.80	131.57	17.23	8.634	
4,000.00	3,994.57	4,000.64	3,999.89	9.16	8.87	173.37	10.32	14.62	152.65	134.96	17.69	8.631	
4,100.00	4,094.30	4,100.47	4,099.53	9.41	9.09	171.78	16.56	15.07	156.62	138.48	18.14	8.634	
4,200.00	4,194.02	4,200.30	4,199.16	9.66	9.32	170.27	22.80	15.51	160.70	142.11	18.60	8.642	
4,300.00	4,293.74	4,300.13	4,298.79	9.91	9.55	168.83	29.04	15.95	164.89	145.84	19.05	8.655	
4,400.00	4,393.46	4,399.96	4,398.42	10.17	9.78	167.47	35.29	16.40	169.18	149.67	19.51	8.671	
4,500.00	4,493.19	4,499.79	4,498.06	10.42	10.01	166.17	41.53	16.84	173.57	153.59	19.97	8.690	
4,600.00	4,592.91	4,599.62	4,597.69	10.67	10.24	164.94	47.77	17.28	178.03	157.60	20.43	8.712	
4,700.00	4,692.63	4,699.44	4,697.32	10.92	10.47	163.77	54.01	17.73	182.57	161.68	20.90	8.736	
4,800.00	4,792.36	4,799.27	4,796.95	11.18	10.70	162.66	60.25	18.17	187.19	165.83	21.36	8.762	

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 0409 136H - Wellbore #1 - Plan 0													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.50 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
4,900.00	4,892.08	4,899.10	4,896.59	11.43	10.94	161.60	66.49	18.61	191.87	170.04	21.83	8.789	
5,000.00	4,991.80	4,998.93	4,996.22	11.69	11.17	160.59	72.73	19.06	196.62	174.32	22.30	8.817	
5,100.00	5,091.52	5,098.76	5,095.85	11.94	11.40	159.63	78.97	19.50	201.42	178.65	22.77	8.846	
5,200.00	5,191.25	5,198.59	5,195.49	12.19	11.64	158.71	85.21	19.94	206.28	183.04	23.24	8.876	
5,300.00	5,290.97	5,298.42	5,295.12	12.45	11.88	157.84	91.45	20.39	211.19	187.48	23.71	8.906	
5,400.00	5,390.69	5,398.25	5,394.75	12.70	12.11	157.00	97.69	20.83	216.14	191.96	24.19	8.936	
5,500.00	5,490.42	5,498.08	5,494.38	12.96	12.35	156.21	103.93	21.27	221.14	196.48	24.66	8.967	
5,600.00	5,590.14	5,597.90	5,594.02	13.22	12.59	155.44	110.17	21.72	226.18	201.04	25.14	8.998	
5,700.00	5,689.86	5,697.73	5,693.65	13.47	12.82	154.72	116.41	22.16	231.26	205.65	25.61	9.029	
5,800.00	5,789.58	5,797.56	5,793.28	13.73	13.06	154.02	122.65	22.60	236.37	210.28	26.09	9.060	
5,900.00	5,889.31	5,897.39	5,892.91	13.98	13.30	153.35	128.89	23.05	241.52	214.95	26.57	9.090	
6,000.00	5,989.03	5,997.22	5,992.55	14.24	13.54	152.71	135.13	23.49	246.70	219.65	27.05	9.121	
6,100.00	6,088.75	6,097.05	6,092.18	14.50	13.78	152.10	141.38	23.93	251.90	224.38	27.53	9.151	
6,200.00	6,188.47	6,196.88	6,191.81	14.75	14.02	151.51	147.62	24.38	257.14	229.13	28.01	9.181	
6,300.00	6,288.20	6,296.71	6,291.44	15.01	14.26	150.95	153.86	24.82	262.40	233.91	28.49	9.210	
6,400.00	6,387.92	6,396.53	6,391.08	15.27	14.50	150.41	160.10	25.26	267.68	238.71	28.97	9.240	
6,500.00	6,487.64	6,496.36	6,490.71	15.52	14.74	149.89	166.34	25.71	272.99	243.54	29.45	9.269	
6,600.00	6,587.37	6,596.19	6,590.34	15.78	14.98	149.38	172.58	26.15	278.32	248.38	29.94	9.297	
6,700.00	6,687.09	6,696.02	6,689.97	16.04	15.22	148.90	178.82	26.59	283.67	253.25	30.42	9.325	
6,800.00	6,786.81	6,795.85	6,789.61	16.29	15.46	148.44	185.06	27.04	289.04	258.14	30.90	9.353	
6,900.00	6,886.53	6,895.68	6,889.24	16.55	15.70	147.99	191.30	27.48	294.43	263.04	31.39	9.380	
7,000.00	6,986.26	6,995.51	6,988.87	16.81	15.94	147.56	197.54	27.92	299.83	267.96	31.87	9.407	
7,100.00	7,085.98	7,095.34	7,088.50	17.07	16.18	147.14	203.78	28.37	305.25	272.90	32.36	9.433	
7,200.00	7,185.70	7,195.17	7,188.14	17.32	16.43	146.74	210.02	28.81	310.69	277.85	32.85	9.459	
7,300.00	7,285.43	7,294.99	7,287.77	17.58	16.67	146.35	216.26	29.25	316.14	282.81	33.33	9.485	
7,400.00	7,385.15	7,394.82	7,387.40	17.84	16.91	145.98	222.50	29.70	321.61	287.79	33.82	9.510	
7,500.00	7,484.87	7,494.65	7,487.03	18.10	17.15	145.62	228.74	30.14	327.09	292.78	34.31	9.535	
7,600.00	7,584.59	7,594.48	7,586.67	18.35	17.39	145.27	234.98	30.58	332.58	297.79	34.79	9.559	
7,700.00	7,684.32	7,694.31	7,686.30	18.61	17.64	144.93	241.22	31.03	338.08	302.80	35.28	9.583	
7,800.00	7,784.04	7,794.14	7,785.93	18.87	17.88	144.60	247.47	31.47	343.60	307.83	35.77	9.606	
7,900.00	7,883.76	7,893.97	7,885.57	19.13	18.12	144.28	253.71	31.91	349.12	312.87	36.26	9.629	
8,000.00	7,983.49	7,993.80	7,985.20	19.39	18.37	143.97	259.95	32.36	354.66	317.91	36.74	9.652	
8,100.00	8,083.21	8,093.62	8,084.83	19.64	18.61	143.68	266.19	32.80	360.20	322.97	37.23	9.674	
8,200.00	8,182.93	8,193.45	8,184.46	19.90	18.85	143.39	272.43	33.24	365.76	328.04	37.72	9.696	
8,300.00	8,282.65	8,293.28	8,284.10	20.16	19.10	143.11	278.67	33.69	371.32	333.11	38.21	9.718	
8,400.00	8,382.38	8,393.11	8,383.73	20.42	19.34	142.83	284.91	34.13	376.90	338.20	38.70	9.739	
8,500.00	8,482.10	8,492.94	8,483.36	20.68	19.58	142.57	291.15	34.57	382.48	343.29	39.19	9.759	
8,600.00	8,581.82	8,592.77	8,582.99	20.94	19.83	142.31	297.39	35.02	388.07	348.39	39.68	9.780	
8,638.13	8,619.84	8,630.83	8,620.98	21.03	19.92	142.22	299.77	35.19	390.20	350.33	39.87	9.787	
8,700.00	8,681.59	8,692.62	8,682.64	21.17	20.07	142.04	303.63	35.46	393.14	352.98	40.15	9.791	
8,800.00	8,781.52	8,792.49	8,782.33	21.35	20.32	141.48	309.88	35.90	395.68	355.09	40.59	9.748	
8,851.48	8,833.00	8,843.89	8,833.62	21.43	20.44	95.49	313.09	36.13	395.95	355.14	40.82	9.701	
8,900.00	8,881.52	8,892.31	8,881.95	21.52	20.56	95.06	316.12	36.35	395.89	354.85	41.04	9.647	
9,001.52	8,983.04	8,993.64	8,983.07	21.72	20.81	94.14	322.45	36.80	395.83	354.31	41.52	9.533	
9,050.00	9,031.46	9,041.83	9,031.18	21.80	20.93	-86.60	325.46	37.01	395.71	353.97	41.74	9.480	
9,100.00	9,081.04	9,090.91	9,080.16	21.86	21.05	-87.97	328.53	37.23	395.48	353.53	41.95	9.427	
9,131.17	9,111.59	9,121.02	9,110.20	21.88	21.12	-89.11	330.41	37.36	395.41	353.33	42.08	9.398	
9,150.00	9,129.86	9,138.97	9,128.12	21.89	21.16	-89.88	331.53	37.44	395.44	353.29	42.15	9.381	
9,200.00	9,177.57	9,185.66	9,174.72	21.91	21.28	-92.24	334.45	37.65	396.04	353.70	42.34	9.354	
9,250.00	9,223.80	9,230.61	9,219.58	21.92	21.39	-94.89	337.26	37.85	397.81	355.30	42.51	9.357	
9,300.00	9,268.20	9,273.48	9,262.37	21.91	21.49	-97.68	339.94	38.04	401.37	358.70	42.67	9.407	
9,350.00	9,310.43	9,313.96	9,302.76	21.89	21.59	-100.43	342.47	38.22	407.33	364.53	42.80	9.517	

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 0409 136H - Wellbore #1 - Plan 0													Offset Site Error:	0.00 usft
Survey Program:		0-MWD					Rule Assigned:				Offset Well Error:	0.50 usft		
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance				Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
9,400.00	9,350.16	9,351.72	9,340.45	21.87	21.68	-102.95	344.83	38.39	416.31	373.40	42.91	9.702		
9,450.00	9,387.11	9,388.75	9,377.42	21.85	21.76	-105.30	346.95	38.54	428.71	385.72	42.99	9.973		
9,500.00	9,420.97	9,423.48	9,412.12	21.82	21.83	-107.20	348.50	38.65	444.74	401.70	43.04	10.333		
9,550.00	9,451.51	9,455.47	9,444.09	21.79	21.89	-108.54	349.56	38.72	464.56	421.49	43.07	10.787		
9,600.00	9,478.47	9,484.42	9,473.04	21.77	21.94	-109.19	350.21	38.77	488.16	445.08	43.08	11.332		
9,650.00	9,501.67	9,510.03	9,498.64	21.76	21.98	-109.06	350.54	38.79	515.42	472.34	43.08	11.965		
9,700.00	9,520.92	9,531.97	9,520.58	21.76	22.02	-108.00	350.64	38.80	546.08	503.02	43.06	12.681		
9,750.00	9,536.08	9,547.47	9,536.08	21.78	22.05	-105.56	350.64	38.80	579.84	536.80	43.04	13.472		
9,800.00	9,547.03	9,558.42	9,547.03	21.85	22.07	-101.83	350.64	38.80	616.30	573.29	43.01	14.330		
9,850.00	9,553.68	9,565.07	9,553.68	21.97	22.08	-96.73	350.64	38.80	654.98	612.01	42.97	15.242		
9,901.52	9,556.00	9,567.39	9,556.00	22.15	22.08	-90.00	350.64	38.80	696.62	653.69	42.93	16.228		
10,000.00	9,556.00	9,567.39	9,556.00	22.63	22.08	-90.00	350.64	38.80	779.58	736.73	42.85	18.195		
10,100.00	9,556.00	10,782.49	10,246.00	23.25	24.09	-150.10	-420.38	38.91	795.98	760.79	35.19	22.619		
10,200.00	9,556.00	10,882.49	10,246.00	24.00	24.79	-150.10	-520.38	38.92	795.98	759.94	36.04	22.084		
10,300.00	9,556.00	10,982.49	10,246.00	24.86	25.59	-150.09	-620.38	38.94	795.98	758.97	37.01	21.506		
10,400.00	9,556.00	11,082.49	10,246.00	25.82	26.50	-150.09	-720.38	38.95	795.99	757.90	38.08	20.901		
10,500.00	9,556.00	11,182.49	10,246.00	26.87	27.51	-150.09	-820.38	38.97	795.99	756.73	39.25	20.278		
10,600.00	9,556.00	11,282.49	10,246.00	28.00	28.59	-150.09	-920.38	38.98	795.99	755.48	40.51	19.649		
10,700.00	9,556.00	11,382.49	10,246.00	29.20	29.75	-150.09	-1,020.38	39.00	795.99	754.14	41.85	19.021		
10,800.00	9,556.00	11,482.49	10,246.00	30.46	30.97	-150.09	-1,120.38	39.01	796.00	752.74	43.26	18.400		
10,900.00	9,556.00	11,582.49	10,246.00	31.77	32.25	-150.09	-1,220.38	39.03	796.00	751.26	44.74	17.793		
11,000.00	9,556.00	11,682.49	10,246.00	33.13	33.58	-150.09	-1,320.38	39.04	796.00	749.73	46.27	17.202		
11,100.00	9,556.00	11,782.49	10,246.00	34.54	34.96	-150.09	-1,420.38	39.05	796.00	748.14	47.86	16.631		
11,200.00	9,556.00	11,882.49	10,246.00	35.98	36.37	-150.09	-1,520.38	39.07	796.01	746.50	49.50	16.080		
11,300.00	9,556.00	11,982.49	10,246.00	37.46	37.83	-150.09	-1,620.38	39.08	796.01	744.82	51.19	15.552		
11,400.00	9,556.00	12,082.49	10,246.00	38.97	39.31	-150.09	-1,720.38	39.10	796.01	743.10	52.91	15.045		
11,500.00	9,556.00	12,182.49	10,246.00	40.50	40.82	-150.09	-1,820.38	39.11	796.01	741.35	54.67	14.561		
11,600.00	9,556.00	12,282.49	10,246.00	42.06	42.36	-150.09	-1,920.38	39.13	796.02	739.56	56.46	14.099		
11,700.00	9,556.00	12,382.49	10,246.00	43.64	43.92	-150.09	-2,020.38	39.14	796.02	737.74	58.28	13.658		
11,800.00	9,556.00	12,482.49	10,246.00	45.23	45.50	-150.09	-2,120.38	39.15	796.02	735.89	60.13	13.238		
11,900.00	9,556.00	12,582.49	10,246.00	46.85	47.09	-150.09	-2,220.38	39.17	796.02	734.02	62.00	12.838		
12,000.00	9,556.00	12,682.49	10,246.00	48.48	48.71	-150.09	-2,320.38	39.18	796.03	732.13	63.90	12.458		
12,100.00	9,556.00	12,782.49	10,246.00	50.12	50.34	-150.09	-2,420.38	39.20	796.03	730.21	65.82	12.095		
12,200.00	9,556.00	12,882.49	10,246.00	51.78	51.98	-150.09	-2,520.38	39.21	796.03	728.28	67.75	11.749		
12,300.00	9,556.00	12,982.49	10,246.00	53.44	53.63	-150.09	-2,620.38	39.23	796.03	726.33	69.70	11.420		
12,400.00	9,556.00	13,082.49	10,246.00	55.12	55.30	-150.09	-2,720.38	39.24	796.04	724.36	71.67	11.107		
12,500.00	9,556.00	13,182.49	10,246.00	56.81	56.97	-150.09	-2,820.38	39.25	796.04	722.38	73.65	10.808		
12,600.00	9,556.00	13,282.49	10,246.00	58.50	58.66	-150.09	-2,920.38	39.27	796.04	720.39	75.65	10.523		
12,700.00	9,556.00	13,382.49	10,246.00	60.20	60.35	-150.09	-3,020.38	39.28	796.04	718.38	77.66	10.251		
12,800.00	9,556.00	13,482.49	10,246.00	61.92	62.05	-150.09	-3,120.38	39.30	796.05	716.37	79.68	9.991		
12,900.00	9,556.00	13,582.49	10,246.00	63.63	63.76	-150.09	-3,220.38	39.31	796.05	714.34	81.71	9.742		
13,000.00	9,556.00	13,682.49	10,246.00	65.36	65.48	-150.09	-3,320.38	39.33	796.05	712.30	83.75	9.505		
13,100.00	9,556.00	13,782.49	10,246.00	67.08	67.20	-150.09	-3,420.38	39.34	796.05	710.25	85.80	9.278		
13,200.00	9,556.00	13,882.49	10,246.00	68.82	68.92	-150.09	-3,520.38	39.36	796.06	708.20	87.86	9.061		
13,300.00	9,556.00	13,982.49	10,246.00	70.56	70.66	-150.09	-3,620.38	39.37	796.06	706.13	89.92	8.853		
13,400.00	9,556.00	14,082.49	10,246.00	72.30	72.39	-150.09	-3,720.38	39.38	796.06	704.06	92.00	8.653		
13,500.00	9,556.00	14,182.49	10,246.00	74.05	74.13	-150.08	-3,820.38	39.40	796.06	701.98	94.08	8.462		
13,600.00	9,556.00	14,282.49	10,246.00	75.80	75.88	-150.08	-3,920.38	39.41	796.06	699.90	96.16	8.278		
13,700.00	9,556.00	14,382.49	10,246.00	77.55	77.63	-150.08	-4,020.38	39.43	796.07	697.81	98.26	8.102		
13,800.00	9,556.00	14,482.49	10,246.00	79.31	79.38	-150.08	-4,120.38	39.44	796.07	695.71	100.36	7.932		
13,900.00	9,556.00	14,582.49	10,246.00	81.07	81.14	-150.08	-4,220.38	39.46	796.07	693.61	102.46	7.770		
14,000.00	9,556.00	14,682.49	10,246.00	82.84	82.90	-150.08	-4,320.38	39.47	796.07	691.51	104.57	7.613		

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 0409 136H - Wellbore #1 - Plan 0													Offset Site Error:	0.00 usft	
Survey Program:		0-MWD		Offset			Semi Major Axis		Offset Wellbore Centre		Rule Assigned:			Offset Well Error:	0.50 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
14,100.00	9,556.00	14,782.49	10,246.00	84.61	84.66	-150.08	-4,420.38	39.48	796.08	689.40	106.68	7.462			
14,200.00	9,556.00	14,882.49	10,246.00	86.38	86.42	-150.08	-4,520.38	39.50	796.08	687.28	108.80	7.317			
14,300.00	9,556.00	14,982.49	10,246.00	88.15	88.19	-150.08	-4,620.38	39.51	796.08	685.16	110.92	7.177			
14,400.00	9,556.00	15,082.49	10,246.00	89.92	89.96	-150.08	-4,720.38	39.53	796.08	683.04	113.05	7.042			
14,500.00	9,556.00	15,182.49	10,246.00	91.70	91.74	-150.08	-4,820.38	39.54	796.09	680.91	115.18	6.912			
14,600.00	9,556.00	15,282.49	10,246.00	93.48	93.51	-150.08	-4,920.38	39.56	796.09	678.78	117.31	6.786			
14,700.00	9,556.00	15,382.49	10,246.00	95.26	95.29	-150.08	-5,020.38	39.57	796.09	676.64	119.45	6.665			
14,800.00	9,556.00	15,482.49	10,246.00	97.04	97.07	-150.08	-5,120.38	39.58	796.09	674.51	121.59	6.547			
14,900.00	9,556.00	15,582.49	10,246.00	98.83	98.85	-150.08	-5,220.38	39.60	796.10	672.37	123.73	6.434			
15,000.00	9,556.00	15,682.49	10,246.00	100.61	100.63	-150.08	-5,320.38	39.61	796.10	670.22	125.88	6.324			
15,100.00	9,556.00	15,782.49	10,246.00	102.40	102.41	-150.08	-5,420.38	39.63	796.10	668.08	128.03	6.218			
15,200.00	9,556.00	15,882.49	10,246.00	104.19	104.20	-150.08	-5,520.38	39.64	796.10	665.93	130.18	6.116			
15,300.00	9,556.00	15,982.49	10,246.00	105.98	105.99	-150.08	-5,620.38	39.66	796.11	663.78	132.33	6.016			
15,400.00	9,556.00	16,082.49	10,246.00	107.77	107.78	-150.08	-5,720.38	39.67	796.11	661.62	134.49	5.920			
15,500.00	9,556.00	16,182.49	10,246.00	109.57	109.57	-150.08	-5,820.38	39.69	796.11	659.47	136.64	5.826			
15,600.00	9,556.00	16,282.49	10,246.00	111.36	111.36	-150.08	-5,920.38	39.70	796.11	657.31	138.80	5.736			
15,700.00	9,556.00	16,382.49	10,246.00	113.16	113.15	-150.08	-6,020.38	39.71	796.12	655.15	140.97	5.648			
15,800.00	9,556.00	16,482.49	10,246.00	114.95	114.95	-150.08	-6,120.38	39.73	796.12	652.99	143.13	5.562			
15,900.00	9,556.00	16,582.49	10,246.00	116.75	116.74	-150.08	-6,220.38	39.74	796.12	650.83	145.30	5.479			
16,000.00	9,556.00	16,682.49	10,246.00	118.55	118.54	-150.08	-6,320.38	39.76	796.12	648.66	147.46	5.399			
16,100.00	9,556.00	16,782.49	10,246.00	120.35	120.33	-150.08	-6,420.38	39.77	796.13	646.49	149.63	5.321			
16,200.00	9,556.00	16,882.49	10,246.00	122.15	122.13	-150.08	-6,520.38	39.79	796.13	644.33	151.80	5.244			
16,300.00	9,556.00	16,982.49	10,246.00	123.95	123.93	-150.08	-6,620.38	39.80	796.13	642.16	153.98	5.170			
16,400.00	9,556.00	17,082.49	10,246.00	125.75	125.73	-150.08	-6,720.38	39.81	796.13	639.98	156.15	5.098			
16,500.00	9,556.00	17,182.49	10,246.00	127.55	127.53	-150.08	-6,820.38	39.83	796.14	637.81	158.33	5.028			
16,600.00	9,556.00	17,282.49	10,246.00	129.36	129.33	-150.08	-6,920.38	39.84	796.14	635.64	160.50	4.960			
16,700.00	9,556.00	17,382.49	10,246.00	131.16	131.14	-150.08	-7,020.38	39.86	796.14	633.46	162.68	4.894			
16,800.00	9,556.00	17,482.49	10,246.00	132.97	132.94	-150.07	-7,120.38	39.87	796.14	631.28	164.86	4.829			
16,900.00	9,556.00	17,582.49	10,246.00	134.77	134.74	-150.07	-7,220.38	39.89	796.15	629.11	167.04	4.766			
17,000.00	9,556.00	17,682.49	10,246.00	136.58	136.55	-150.07	-7,320.38	39.90	796.15	626.93	169.22	4.705			
17,100.00	9,556.00	17,782.49	10,246.00	138.39	138.35	-150.07	-7,420.38	39.91	796.15	624.75	171.41	4.645			
17,200.00	9,556.00	17,882.49	10,246.00	140.20	140.16	-150.07	-7,520.38	39.93	796.15	622.56	173.59	4.586			
17,300.00	9,556.00	17,982.49	10,246.00	142.00	141.97	-150.07	-7,620.38	39.94	796.16	620.38	175.78	4.529			
17,400.00	9,556.00	18,082.49	10,246.00	143.81	143.77	-150.07	-7,720.38	39.96	796.16	618.20	177.96	4.474			
17,500.00	9,556.00	18,182.49	10,246.00	145.62	145.58	-150.07	-7,820.38	39.97	796.16	616.01	180.15	4.419			
17,600.00	9,556.00	18,282.49	10,246.00	147.43	147.39	-150.07	-7,920.38	39.99	796.16	613.83	182.34	4.366			
17,700.00	9,556.00	18,382.49	10,246.00	149.24	149.20	-150.07	-8,020.38	40.00	796.17	611.64	184.53	4.315			
17,800.00	9,556.00	18,482.49	10,246.00	151.05	151.01	-150.07	-8,120.38	40.01	796.17	609.45	186.72	4.264			
17,900.00	9,556.00	18,582.49	10,246.00	152.86	152.82	-150.07	-8,220.38	40.03	796.17	607.27	188.91	4.215			
18,000.00	9,556.00	18,682.49	10,246.00	154.68	154.63	-150.07	-8,320.38	40.04	796.17	605.08	191.10	4.166			
18,100.00	9,556.00	18,782.49	10,246.00	156.49	156.44	-150.07	-8,420.38	40.06	796.18	602.89	193.29	4.119			
18,200.00	9,556.00	18,882.49	10,246.00	158.30	158.25	-150.07	-8,520.38	40.07	796.18	600.70	195.48	4.073			
18,300.00	9,556.00	18,982.49	10,246.00	160.11	160.06	-150.07	-8,620.38	40.09	796.18	598.50	197.68	4.028			
18,400.00	9,556.00	19,082.49	10,246.00	161.93	161.87	-150.07	-8,720.38	40.10	796.18	596.31	199.87	3.983			
18,500.00	9,556.00	19,182.49	10,246.00	163.74	163.69	-150.07	-8,820.38	40.12	796.19	594.12	202.07	3.940			
18,600.00	9,556.00	19,282.49	10,246.00	165.55	165.50	-150.07	-8,920.38	40.13	796.19	591.93	204.26	3.898			
18,700.00	9,556.00	19,382.49	10,246.00	167.37	167.31	-150.07	-9,020.38	40.14	796.19	589.73	206.46	3.856			
18,800.00	9,556.00	19,482.49	10,246.00	169.18	169.13	-150.07	-9,120.38	40.16	796.19	587.54	208.66	3.816			
18,900.00	9,556.00	19,582.49	10,246.00	171.00	170.94	-150.07	-9,220.38	40.17	796.20	585.34	210.85	3.776			
19,000.00	9,556.00	19,682.49	10,246.00	172.81	172.76	-150.07	-9,320.38	40.19	796.20	583.15	213.05	3.737			
19,100.00	9,556.00	19,782.49	10,246.00	174.63	174.57	-150.07	-9,420.38	40.20	796.20	580.95	215.25	3.699			
19,200.00	9,556.00	19,882.49	10,246.00	176.45	176.39	-150.07	-9,520.38	40.22	796.20	578.75	217.45	3.662			

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 0409 136H - Wellbore #1 - Plan 0														Offset Site Error:	0.00 usft
Survey Program: 0-MWD														Offset Well Error:	0.50 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
19,300.00	9,556.00	19,982.49	10,246.00	178.26	178.20	-150.07	-9,620.38	40.23	796.21	576.56	219.65	3.625			
19,400.00	9,556.00	20,082.49	10,246.00	180.08	180.02	-150.07	-9,720.38	40.24	796.21	574.36	221.85	3.589			
19,500.00	9,556.00	20,182.49	10,246.00	181.90	181.83	-150.07	-9,820.38	40.26	796.21	572.16	224.05	3.554			
19,600.00	9,556.00	20,282.49	10,246.00	183.71	183.65	-150.07	-9,920.38	40.27	796.21	569.96	226.25	3.519			
19,700.00	9,556.00	20,382.49	10,246.00	185.53	185.46	-150.07	-10,020.38	40.29	796.22	567.76	228.46	3.485			
19,808.65	9,556.00	20,491.15	10,246.00	187.51	187.44	-150.07	-10,129.03	40.30	796.22	565.37	230.85	3.449			



SB Directional Anticollision Report



Company:	NOVO Oil & Gas	Local Co-ordinate Reference:	Well Goonch Fed Com 0409 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 0409 225H - Wellbore #1 - Plan 0												Offset Site Error:	0.00 usft
Survey Program: 0-MWD												Offset Well Error:	0.50 usft
Measured Depth (usft)	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	-39.92	30.67	-25.66	39.99				
100.00	100.00	99.70	99.70	0.51	0.51	-39.92	30.67	-25.66	39.99	38.97	1.01	39.434	
200.00	200.00	199.70	199.70	0.59	0.59	-39.92	30.67	-25.66	39.99	38.81	1.18	34.025	
300.00	300.00	299.70	299.70	0.73	0.73	-39.92	30.67	-25.66	39.99	38.53	1.46	27.346	
400.00	400.00	399.70	399.70	0.91	0.91	-39.92	30.67	-25.66	39.99	38.17	1.82	22.014	
500.00	500.00	499.70	499.70	1.10	1.10	-39.92	30.67	-25.66	39.99	37.78	2.21	18.129	
600.00	600.00	599.70	599.70	1.31	1.31	-39.92	30.67	-25.66	39.99	37.37	2.61	15.296	
700.00	700.00	699.70	699.70	1.52	1.52	-39.92	30.67	-25.66	39.99	36.95	3.03	13.178	
800.00	800.00	799.70	799.70	1.73	1.73	-39.92	30.67	-25.66	39.99	36.53	3.46	11.550	
900.00	900.00	899.70	899.70	1.95	1.95	-39.92	30.67	-25.66	39.99	36.09	3.89	10.267	
1,000.00	1,000.00	999.70	999.70	2.17	2.17	-39.92	30.67	-25.66	39.99	35.66	4.33	9.234	
1,100.00	1,100.00	1,099.70	1,099.70	2.38	2.38	-39.92	30.67	-25.66	39.99	35.22	4.77	8.385	
1,200.00	1,200.00	1,199.70	1,199.70	2.61	2.60	-39.92	30.67	-25.66	39.99	34.78	5.21	7.676 CC, ES	
1,300.00	1,300.00	1,299.10	1,299.10	2.83	2.81	-40.56	30.93	-26.48	40.72	35.08	5.64	7.219	
1,400.00	1,400.00	1,398.45	1,398.41	3.05	3.02	-42.36	31.72	-28.93	42.95	36.89	6.06	7.083	
1,500.00	1,500.00	1,497.67	1,497.54	3.27	3.23	-44.98	33.04	-33.02	46.76	40.27	6.49	7.205	
1,600.00	1,600.00	1,596.72	1,596.40	3.49	3.44	-47.99	34.88	-38.73	52.22	45.31	6.92	7.550	
1,700.00	1,700.00	1,695.53	1,694.91	3.71	3.66	-51.03	37.24	-46.04	59.41	52.07	7.35	8.088	
1,800.00	1,800.00	1,794.04	1,792.98	3.94	3.89	-53.87	40.11	-54.94	68.36	60.58	7.77	8.795	
1,900.00	1,900.00	1,892.21	1,890.52	4.16	4.14	-56.39	43.48	-65.41	79.08	70.88	8.20	9.645	
2,000.00	1,999.98	1,990.15	1,987.65	4.38	4.39	-13.19	47.36	-77.44	89.88	81.26	8.62	10.430	
2,100.00	2,099.84	2,089.07	2,085.56	4.60	4.66	-15.73	51.69	-90.87	98.81	89.77	9.04	10.928	
2,113.35	2,113.16	2,102.38	2,098.72	4.63	4.70	-16.08	52.27	-92.70	99.78	90.68	9.10	10.967	
2,200.00	2,199.56	2,188.71	2,184.16	4.82	4.94	-18.27	56.09	-104.53	105.97	96.49	9.48	11.181	
2,300.00	2,299.29	2,288.35	2,282.76	5.04	5.23	-20.49	60.49	-118.18	113.28	103.36	9.92	11.421	
2,400.00	2,399.01	2,388.00	2,381.37	5.27	5.53	-22.44	64.89	-131.84	120.74	110.38	10.36	11.651	
2,500.00	2,498.73	2,487.64	2,479.97	5.50	5.83	-24.17	69.29	-145.49	128.33	117.51	10.81	11.869	
2,600.00	2,598.45	2,587.28	2,578.57	5.74	6.14	-25.70	73.69	-159.14	136.01	124.75	11.26	12.076	
2,700.00	2,698.18	2,686.92	2,677.18	5.97	6.45	-27.06	78.09	-172.80	143.79	132.07	11.72	12.272	
2,800.00	2,797.90	2,786.56	2,775.78	6.21	6.76	-28.29	82.49	-186.45	151.63	139.46	12.17	12.455	
2,900.00	2,897.62	2,886.20	2,874.39	6.45	7.07	-29.39	86.89	-200.11	159.54	146.91	12.63	12.627	
3,000.00	2,997.35	2,985.85	2,972.99	6.69	7.39	-30.39	91.29	-213.76	167.50	154.41	13.10	12.789	
3,100.00	3,097.07	3,085.49	3,071.59	6.93	7.71	-31.30	95.69	-227.41	175.51	161.95	13.56	12.940	
3,200.00	3,196.79	3,185.13	3,170.20	7.18	8.04	-32.13	100.09	-241.07	183.56	169.53	14.03	13.082	
3,300.00	3,296.51	3,284.77	3,268.80	7.42	8.36	-32.89	104.49	-254.72	191.64	177.14	14.50	13.216	
3,400.00	3,396.24	3,384.41	3,367.40	7.67	8.69	-33.59	108.89	-268.38	199.76	184.78	14.97	13.341	
3,500.00	3,495.96	3,484.06	3,466.01	7.91	9.01	-34.23	113.29	-282.03	207.90	192.45	15.45	13.458	
3,600.00	3,595.68	3,583.70	3,564.61	8.16	9.34	-34.82	117.69	-295.68	216.06	200.14	15.92	13.569	
3,700.00	3,695.40	3,683.34	3,663.22	8.41	9.67	-35.38	122.09	-309.34	224.25	207.85	16.40	13.673	
3,800.00	3,795.13	3,782.98	3,761.82	8.66	10.00	-35.89	126.49	-322.99	232.45	215.57	16.88	13.771	
3,900.00	3,894.85	3,882.62	3,860.42	8.91	10.33	-36.37	130.89	-336.64	240.68	223.32	17.36	13.863	
4,000.00	3,994.57	3,982.27	3,959.03	9.16	10.66	-36.81	135.29	-350.30	248.91	231.07	17.84	13.950	
4,100.00	4,094.30	4,081.91	4,057.63	9.41	11.00	-37.23	139.69	-363.95	257.17	238.84	18.33	14.033	
4,200.00	4,194.02	4,181.55	4,156.24	9.66	11.33	-37.62	144.09	-377.61	265.43	246.62	18.81	14.111	
4,300.00	4,293.74	4,281.19	4,254.84	9.91	11.66	-37.99	148.49	-391.26	273.71	254.41	19.30	14.185	
4,400.00	4,393.46	4,380.83	4,353.44	10.17	12.00	-38.33	152.89	-404.91	282.00	262.21	19.78	14.255	
4,500.00	4,493.19	4,480.48	4,452.05	10.42	12.33	-38.66	157.29	-418.57	290.29	270.02	20.27	14.321	
4,600.00	4,592.91	4,580.12	4,550.65	10.67	12.67	-38.97	161.69	-432.22	298.60	277.84	20.76	14.385	
4,700.00	4,692.63	4,679.76	4,649.26	10.92	13.00	-39.26	166.09	-445.88	306.91	285.66	21.25	14.445	
4,800.00	4,792.36	4,779.40	4,747.86	11.18	13.34	-39.54	170.49	-459.53	315.23	293.50	21.74	14.502	
4,900.00	4,892.08	4,879.04	4,846.46	11.43	13.68	-39.80	174.89	-473.18	323.56	301.33	22.23	14.556	
5,000.00	4,991.80	4,978.69	4,945.07	11.69	14.01	-40.05	179.29	-486.84	331.90	309.18	22.72	14.608	

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 0409 225H - Wellbore #1 - Plan 0													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.50 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,100.00	5,091.52	5,078.33	5,043.67	11.94	14.35	-40.29	183.69	-500.49	340.24	317.03	23.21	14.658	
5,200.00	5,191.25	5,177.97	5,142.28	12.19	14.69	-40.51	188.09	-514.15	348.58	324.88	23.70	14.705	
5,300.00	5,290.97	5,277.61	5,240.88	12.45	15.03	-40.73	192.49	-527.80	356.93	332.74	24.20	14.750	
5,400.00	5,390.69	5,377.25	5,339.48	12.70	15.36	-40.93	196.89	-541.45	365.29	340.60	24.69	14.794	
5,500.00	5,490.42	5,476.90	5,438.09	12.96	15.70	-41.13	201.29	-555.11	373.65	348.46	25.19	14.835	
5,600.00	5,590.14	5,576.54	5,536.69	13.22	16.04	-41.31	205.69	-568.76	382.01	356.33	25.68	14.875	
5,700.00	5,689.86	5,676.18	5,635.29	13.47	16.38	-41.49	210.09	-582.42	390.38	364.21	26.18	14.913	
5,800.00	5,789.58	5,775.82	5,733.90	13.73	16.72	-41.66	214.49	-596.07	398.76	372.08	26.67	14.950	
5,900.00	5,889.31	5,875.46	5,832.50	13.98	17.06	-41.83	218.89	-609.72	407.13	379.96	27.17	14.985	
6,000.00	5,989.03	5,975.11	5,931.11	14.24	17.40	-41.99	223.29	-623.38	415.51	387.84	27.67	15.019	
6,100.00	6,088.75	6,074.75	6,029.71	14.50	17.74	-42.14	227.69	-637.03	423.89	395.73	28.16	15.051	
6,200.00	6,188.47	6,174.39	6,128.31	14.75	18.08	-42.28	232.09	-650.69	432.27	403.61	28.66	15.083	
6,300.00	6,288.20	6,274.03	6,226.92	15.01	18.42	-42.42	236.49	-664.34	440.66	411.50	29.16	15.113	
6,400.00	6,387.92	6,373.67	6,325.52	15.27	18.76	-42.56	240.89	-677.99	449.05	419.40	29.66	15.142	
6,500.00	6,487.64	6,473.32	6,424.13	15.52	19.10	-42.69	245.29	-691.65	457.44	427.29	30.16	15.170	
6,600.00	6,587.37	6,572.96	6,522.73	15.78	19.44	-42.82	249.69	-705.30	465.84	435.18	30.65	15.197	
6,700.00	6,687.09	6,672.60	6,621.33	16.04	19.78	-42.94	254.09	-718.95	474.23	443.08	31.15	15.223	
6,800.00	6,786.81	6,772.24	6,719.94	16.29	20.12	-43.05	258.49	-732.61	482.63	450.98	31.65	15.248	
6,900.00	6,886.53	6,871.88	6,818.54	16.55	20.46	-43.17	262.89	-746.26	491.03	458.88	32.15	15.272	
7,000.00	6,986.26	6,971.53	6,917.15	16.81	20.80	-43.28	267.29	-759.92	499.44	466.78	32.65	15.296	
7,100.00	7,085.98	7,071.17	7,015.75	17.07	21.14	-43.38	271.69	-773.57	507.84	474.69	33.15	15.318	
7,200.00	7,185.70	7,170.81	7,114.35	17.32	21.48	-43.48	276.09	-787.22	516.24	482.59	33.65	15.341	
7,300.00	7,285.43	7,270.45	7,212.96	17.58	21.82	-43.58	280.49	-800.88	524.65	490.50	34.15	15.362	
7,400.00	7,385.15	7,370.09	7,311.56	17.84	22.17	-43.68	284.89	-814.53	533.06	498.41	34.65	15.382	
7,500.00	7,484.87	7,469.74	7,410.17	18.10	22.51	-43.77	289.29	-828.19	541.47	506.32	35.15	15.402	
7,600.00	7,584.59	7,569.38	7,508.77	18.35	22.85	-43.86	293.69	-841.84	549.88	514.23	35.66	15.422	
7,700.00	7,684.32	7,669.02	7,607.37	18.61	23.19	-43.95	298.09	-855.49	558.29	522.14	36.16	15.441	
7,800.00	7,784.04	7,768.66	7,705.98	18.87	23.53	-44.03	302.49	-869.15	566.71	530.05	36.66	15.459	
7,900.00	7,883.76	7,868.30	7,804.58	19.13	23.87	-44.11	306.89	-882.80	575.12	537.96	37.16	15.477	
8,000.00	7,983.49	7,967.95	7,903.18	19.39	24.21	-44.19	311.29	-896.46	583.54	545.88	37.66	15.494	
8,100.00	8,083.21	8,067.59	8,001.79	19.64	24.56	-44.27	315.69	-910.11	591.96	553.79	38.17	15.510	
8,200.00	8,182.93	8,167.23	8,100.39	19.90	24.90	-44.34	320.09	-923.76	600.38	561.71	38.67	15.527	
8,300.00	8,282.65	8,266.87	8,199.00	20.16	25.24	-44.42	324.49	-937.42	608.80	569.63	39.17	15.542	
8,400.00	8,382.38	8,366.51	8,297.60	20.42	25.58	-44.49	328.89	-951.07	617.22	577.54	39.67	15.558	
8,500.00	8,482.10	8,466.16	8,396.20	20.68	25.92	-44.56	333.29	-964.73	625.64	585.46	40.18	15.573	
8,600.00	8,581.82	8,565.80	8,494.81	20.94	26.26	-44.63	337.69	-978.38	634.06	593.38	40.68	15.587	
8,638.13	8,619.84	8,603.79	8,532.40	21.03	26.40	-44.65	339.37	-983.59	637.27	596.40	40.87	15.593	
8,700.00	8,681.59	8,668.91	8,596.85	21.17	26.61	-44.73	342.23	-992.46	642.92	601.75	41.17	15.615	
8,800.00	8,781.52	8,795.76	8,722.84	21.35	26.93	-44.72	346.75	-1,006.51	651.47	609.83	41.65	15.643	
8,851.48	8,833.00	8,861.31	8,788.15	21.43	27.06	-90.23	348.42	-1,011.68	655.20	613.35	41.85	15.656	
8,900.00	8,881.52	8,923.24	8,849.97	21.52	27.17	-90.12	349.57	-1,015.26	658.00	615.97	42.04	15.653	
9,001.52	8,983.04	9,053.19	8,979.86	21.72	27.38	-90.03	350.66	-1,018.63	660.64	618.23	42.41	15.579	
9,050.00	9,031.46	9,104.49	9,031.16	21.80	27.45	90.15	350.67	-1,018.66	660.66	618.11	42.55	15.525	
9,100.00	9,081.04	9,154.07	9,080.74	21.86	27.53	90.70	350.67	-1,018.66	660.71	618.06	42.65	15.491	
9,150.00	9,129.86	9,202.89	9,129.56	21.89	27.60	91.58	350.67	-1,018.66	660.93	618.23	42.70	15.480	
9,200.00	9,177.57	9,252.70	9,179.35	21.91	27.67	92.72	349.52	-1,018.66	661.47	618.77	42.69	15.493	
9,250.00	9,223.80	9,304.31	9,230.63	21.92	27.72	93.88	343.93	-1,018.66	662.30	619.64	42.66	15.525	
9,300.00	9,268.20	9,357.35	9,282.60	21.91	27.76	95.02	333.41	-1,018.66	663.40	620.80	42.61	15.569	
9,350.00	9,310.43	9,411.91	9,334.81	21.89	27.79	96.14	317.62	-1,018.65	664.75	622.21	42.55	15.625	
9,400.00	9,350.16	9,468.08	9,386.73	21.87	27.80	97.23	296.26	-1,018.65	666.31	623.84	42.47	15.688	
9,450.00	9,387.11	9,525.91	9,437.74	21.85	27.80	98.28	269.07	-1,018.65	668.03	625.63	42.40	15.755	
9,500.00	9,420.97	9,585.44	9,487.11	21.82	27.80	99.27	235.85	-1,018.64	669.85	627.52	42.33	15.824	

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 0409 225H - Wellbore #1 - Plan 0													Offset Site Error:	0.00 usft	
Survey Program:		0-MWD					Rule Assigned:							Offset Well Error:	0.50 usft
Reference	Offset	Reference	Offset	Semi Major Axis	Offset	Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Ellipses (usft)	Separation (usft)	Factor			
9,550.00	9,451.51	9,646.69	9,534.03	21.79	27.78	100.19	196.53	-1,018.63	671.70	629.43	42.27	15.891			
9,600.00	9,478.47	9,709.61	9,577.58	21.77	27.77	101.04	151.15	-1,018.63	673.51	631.29	42.22	15.951			
9,650.00	9,501.67	9,774.13	9,616.79	21.76	27.76	101.78	99.96	-1,018.62	675.22	633.01	42.21	15.997			
9,700.00	9,520.92	9,840.12	9,650.68	21.76	27.76	102.42	43.39	-1,018.61	676.74	634.51	42.23	16.025			
9,750.00	9,536.08	9,907.36	9,678.30	21.78	27.78	102.94	-17.88	-1,018.60	678.01	635.70	42.31	16.025			
9,800.00	9,547.03	9,975.63	9,698.80	21.85	27.83	103.32	-82.95	-1,018.59	678.97	636.52	42.45	15.993			
9,850.00	9,553.68	10,044.60	9,711.51	21.97	27.92	103.55	-150.71	-1,018.57	679.57	636.90	42.68	15.923			
9,901.52	9,556.00	10,116.07	9,716.00	22.15	28.07	103.64	-221.99	-1,018.56	679.79	636.79	43.00	15.809			
10,000.00	9,556.00	10,214.63	9,716.00	22.63	28.37	103.64	-320.55	-1,018.55	679.78	635.88	43.90	15.485			
10,100.00	9,556.00	10,314.63	9,716.00	23.25	28.80	103.64	-420.55	-1,018.53	679.77	634.71	45.06	15.084			
10,200.00	9,556.00	10,414.63	9,716.00	24.00	29.35	103.64	-520.55	-1,018.51	679.76	633.29	46.48	14.626			
10,300.00	9,556.00	10,514.63	9,716.00	24.86	30.00	103.64	-620.55	-1,018.50	679.76	631.64	48.11	14.128			
10,400.00	9,556.00	10,614.63	9,716.00	25.82	30.77	103.64	-720.55	-1,018.48	679.75	629.80	49.95	13.607			
10,500.00	9,556.00	10,714.63	9,716.00	26.87	31.63	103.64	-820.55	-1,018.46	679.74	627.77	51.98	13.078			
10,600.00	9,556.00	10,814.63	9,716.00	28.00	32.59	103.64	-920.55	-1,018.44	679.73	625.58	54.16	12.551			
10,700.00	9,556.00	10,914.63	9,716.00	29.20	33.62	103.64	-1,020.55	-1,018.43	679.73	623.25	56.48	12.035			
10,800.00	9,556.00	11,014.63	9,716.00	30.46	34.72	103.64	-1,120.55	-1,018.41	679.72	620.79	58.93	11.535			
10,900.00	9,556.00	11,114.63	9,716.00	31.77	35.89	103.64	-1,220.55	-1,018.39	679.71	618.22	61.49	11.054			
11,000.00	9,556.00	11,214.63	9,716.00	33.13	37.11	103.64	-1,320.55	-1,018.38	679.71	615.56	64.14	10.596			
11,100.00	9,556.00	11,314.63	9,716.00	34.54	38.39	103.64	-1,420.55	-1,018.36	679.70	612.81	66.89	10.162			
11,200.00	9,556.00	11,414.63	9,716.00	35.98	39.70	103.64	-1,520.55	-1,018.34	679.69	609.99	69.70	9.751			
11,300.00	9,556.00	11,514.63	9,716.00	37.46	41.06	103.64	-1,620.55	-1,018.33	679.68	607.09	72.59	9.364			
11,400.00	9,556.00	11,614.63	9,716.00	38.97	42.46	103.64	-1,720.55	-1,018.31	679.68	604.14	75.53	8.999			
11,500.00	9,556.00	11,714.63	9,716.00	40.50	43.89	103.64	-1,820.55	-1,018.29	679.67	601.14	78.53	8.655			
11,600.00	9,556.00	11,814.63	9,716.00	42.06	45.35	103.64	-1,920.55	-1,018.27	679.66	598.09	81.57	8.332			
11,700.00	9,556.00	11,914.63	9,716.00	43.64	46.83	103.64	-2,020.55	-1,018.26	679.65	595.00	84.65	8.029			
11,800.00	9,556.00	12,014.63	9,716.00	45.23	48.34	103.64	-2,120.55	-1,018.24	679.65	591.87	87.77	7.743			
11,900.00	9,556.00	12,114.63	9,716.00	46.85	49.87	103.64	-2,220.55	-1,018.22	679.64	588.71	90.93	7.474			
12,000.00	9,556.00	12,214.63	9,716.00	48.48	51.42	103.64	-2,320.55	-1,018.21	679.63	585.52	94.11	7.221			
12,100.00	9,556.00	12,314.63	9,716.00	50.12	52.99	103.64	-2,420.55	-1,018.19	679.62	582.30	97.32	6.983			
12,200.00	9,556.00	12,414.63	9,716.00	51.78	54.57	103.64	-2,520.55	-1,018.17	679.62	579.06	100.56	6.758			
12,300.00	9,556.00	12,514.63	9,716.00	53.44	56.17	103.64	-2,620.55	-1,018.16	679.61	575.79	103.82	6.546			
12,400.00	9,556.00	12,614.63	9,716.00	55.12	57.78	103.64	-2,720.55	-1,018.14	679.60	572.51	107.10	6.346			
12,500.00	9,556.00	12,714.63	9,716.00	56.81	59.41	103.64	-2,820.55	-1,018.12	679.59	569.20	110.39	6.156			
12,600.00	9,556.00	12,814.63	9,716.00	58.50	61.05	103.64	-2,920.55	-1,018.10	679.59	565.88	113.71	5.977			
12,700.00	9,556.00	12,914.63	9,716.00	60.20	62.69	103.64	-3,020.55	-1,018.09	679.58	562.54	117.03	5.807			
12,800.00	9,556.00	13,014.63	9,716.00	61.92	64.35	103.64	-3,120.55	-1,018.07	679.57	559.19	120.38	5.645			
12,900.00	9,556.00	13,114.63	9,716.00	63.63	66.02	103.64	-3,220.55	-1,018.05	679.56	555.83	123.73	5.492			
13,000.00	9,556.00	13,214.63	9,716.00	65.36	67.69	103.64	-3,320.55	-1,018.04	679.56	552.46	127.10	5.347			
13,100.00	9,556.00	13,314.63	9,716.00	67.08	69.38	103.64	-3,420.55	-1,018.02	679.55	549.07	130.48	5.208			
13,200.00	9,556.00	13,414.63	9,716.00	68.82	71.07	103.64	-3,520.55	-1,018.00	679.54	545.67	133.87	5.076			
13,300.00	9,556.00	13,514.63	9,716.00	70.56	72.77	103.64	-3,620.55	-1,017.99	679.53	542.27	137.27	4.950			
13,400.00	9,556.00	13,614.63	9,716.00	72.30	74.47	103.64	-3,720.55	-1,017.97	679.53	538.85	140.67	4.831			
13,500.00	9,556.00	13,714.63	9,716.00	74.05	76.18	103.64	-3,820.55	-1,017.95	679.52	535.43	144.09	4.716			
13,600.00	9,556.00	13,814.63	9,716.00	75.80	77.89	103.64	-3,920.55	-1,017.93	679.51	532.00	147.51	4.607			
13,700.00	9,556.00	13,914.63	9,716.00	77.55	79.61	103.65	-4,020.55	-1,017.92	679.51	528.56	150.94	4.502			
13,800.00	9,556.00	14,014.63	9,716.00	79.31	81.34	103.65	-4,120.55	-1,017.90	679.50	525.12	154.38	4.402			
13,900.00	9,556.00	14,114.63	9,716.00	81.07	83.07	103.65	-4,220.55	-1,017.88	679.49	521.67	157.82	4.306			
14,000.00	9,556.00	14,214.63	9,716.00	82.84	84.80	103.65	-4,320.55	-1,017.87	679.48	518.22	161.27	4.213			
14,100.00	9,556.00	14,314.63	9,716.00	84.61	86.54	103.65	-4,420.55	-1,017.85	679.48	514.76	164.72	4.125			
14,200.00	9,556.00	14,414.63	9,716.00	86.38	88.28	103.65	-4,520.55	-1,017.83	679.47	511.29	168.18	4.040			
14,300.00	9,556.00	14,514.63	9,716.00	88.15	90.02	103.65	-4,620.55	-1,017.82	679.46	507.82	171.64	3.959			

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 0409 225H - Wellbore #1 - Plan 0												Offset Site Error:	0.00 usft
Survey Program: 0-MWD												Offset Well Error:	0.50 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
14,400.00	9,556.00	14,614.63	9,716.00	89.92	91.77	103.65	-4,720.55	-1,017.80	679.45	504.34	175.11	3.880	
14,500.00	9,556.00	14,714.63	9,716.00	91.70	93.52	103.65	-4,820.55	-1,017.78	679.45	500.86	178.58	3.805	
14,600.00	9,556.00	14,814.63	9,716.00	93.48	95.28	103.65	-4,920.55	-1,017.76	679.44	497.38	182.06	3.732	
14,700.00	9,556.00	14,914.63	9,716.00	95.26	97.03	103.65	-5,020.55	-1,017.75	679.43	493.89	185.54	3.662	
14,800.00	9,556.00	15,014.63	9,716.00	97.04	98.79	103.65	-5,120.55	-1,017.73	679.42	490.40	189.02	3.594	
14,900.00	9,556.00	15,114.63	9,716.00	98.83	100.55	103.65	-5,220.55	-1,017.71	679.42	486.91	192.51	3.529	
15,000.00	9,556.00	15,214.63	9,716.00	100.61	102.32	103.65	-5,320.55	-1,017.70	679.41	483.41	196.00	3.466	
15,100.00	9,556.00	15,314.63	9,716.00	102.40	104.09	103.65	-5,420.55	-1,017.68	679.40	479.91	199.49	3.406	
15,200.00	9,556.00	15,414.63	9,716.00	104.19	105.85	103.65	-5,520.55	-1,017.66	679.39	476.41	202.98	3.347	
15,300.00	9,556.00	15,514.63	9,716.00	105.98	107.63	103.65	-5,620.55	-1,017.65	679.39	472.91	206.48	3.290	
15,400.00	9,556.00	15,614.63	9,716.00	107.77	109.40	103.65	-5,720.55	-1,017.63	679.38	469.40	209.98	3.235	
15,500.00	9,556.00	15,714.63	9,716.00	109.57	111.17	103.65	-5,820.55	-1,017.61	679.37	465.89	213.49	3.182	
15,600.00	9,556.00	15,814.63	9,716.00	111.36	112.95	103.65	-5,920.55	-1,017.60	679.36	462.37	216.99	3.131	
15,700.00	9,556.00	15,914.63	9,716.00	113.16	114.73	103.65	-6,020.55	-1,017.58	679.36	458.86	220.50	3.081	
15,800.00	9,556.00	16,014.63	9,716.00	114.95	116.51	103.65	-6,120.55	-1,017.56	679.35	455.34	224.01	3.033	
15,900.00	9,556.00	16,114.63	9,716.00	116.75	118.29	103.65	-6,220.55	-1,017.54	679.34	451.82	227.52	2.986	
16,000.00	9,556.00	16,214.63	9,716.00	118.55	120.07	103.65	-6,320.55	-1,017.53	679.33	448.30	231.03	2.940	
16,100.00	9,556.00	16,314.63	9,716.00	120.35	121.86	103.65	-6,420.55	-1,017.51	679.33	444.78	234.55	2.896	
16,200.00	9,556.00	16,414.63	9,716.00	122.15	123.64	103.65	-6,520.55	-1,017.49	679.32	441.25	238.07	2.854	
16,300.00	9,556.00	16,514.63	9,716.00	123.95	125.43	103.65	-6,620.55	-1,017.48	679.31	437.73	241.58	2.812	
16,400.00	9,556.00	16,614.63	9,716.00	125.75	127.22	103.65	-6,720.55	-1,017.46	679.31	434.20	245.10	2.771	
16,500.00	9,556.00	16,714.63	9,716.00	127.55	129.00	103.65	-6,820.55	-1,017.44	679.30	430.67	248.63	2.732	
16,600.00	9,556.00	16,814.63	9,716.00	129.36	130.80	103.65	-6,920.55	-1,017.43	679.29	427.14	252.15	2.694	
16,700.00	9,556.00	16,914.63	9,716.00	131.16	132.59	103.65	-7,020.55	-1,017.41	679.28	423.61	255.67	2.657	
16,800.00	9,556.00	17,014.63	9,716.00	132.97	134.38	103.65	-7,120.55	-1,017.39	679.28	420.07	259.20	2.621	
16,900.00	9,556.00	17,114.63	9,716.00	134.77	136.17	103.65	-7,220.55	-1,017.37	679.27	416.54	262.73	2.585	
17,000.00	9,556.00	17,214.63	9,716.00	136.58	137.97	103.65	-7,320.55	-1,017.36	679.26	413.00	266.26	2.551	
17,100.00	9,556.00	17,314.63	9,716.00	138.39	139.76	103.65	-7,420.55	-1,017.34	679.25	409.47	269.79	2.518	
17,200.00	9,556.00	17,414.63	9,716.00	140.20	141.56	103.65	-7,520.55	-1,017.32	679.25	405.93	273.32	2.485	
17,300.00	9,556.00	17,514.63	9,716.00	142.00	143.36	103.65	-7,620.55	-1,017.31	679.24	402.39	276.85	2.453	
17,400.00	9,556.00	17,614.63	9,716.00	143.81	145.15	103.65	-7,720.55	-1,017.29	679.23	398.85	280.38	2.423	
17,500.00	9,556.00	17,714.63	9,716.00	145.62	146.95	103.65	-7,820.55	-1,017.27	679.22	395.31	283.92	2.392	
17,600.00	9,556.00	17,814.63	9,716.00	147.43	148.75	103.65	-7,920.55	-1,017.26	679.22	391.76	287.45	2.363	
17,700.00	9,556.00	17,914.63	9,716.00	149.24	150.55	103.65	-8,020.55	-1,017.24	679.21	388.22	290.99	2.334	
17,800.00	9,556.00	18,014.63	9,716.00	151.05	152.35	103.65	-8,120.55	-1,017.22	679.20	384.68	294.53	2.306	
17,900.00	9,556.00	18,114.63	9,716.00	152.86	154.15	103.65	-8,220.55	-1,017.20	679.19	381.13	298.06	2.279	
18,000.00	9,556.00	18,214.63	9,716.00	154.68	155.96	103.65	-8,320.55	-1,017.19	679.19	377.58	301.60	2.252	
18,100.00	9,556.00	18,314.63	9,716.00	156.49	157.76	103.65	-8,420.55	-1,017.17	679.18	374.04	305.14	2.226	
18,200.00	9,556.00	18,414.63	9,716.00	158.30	159.56	103.65	-8,520.55	-1,017.15	679.17	370.49	308.68	2.200	
18,300.00	9,556.00	18,514.63	9,716.00	160.11	161.37	103.65	-8,620.55	-1,017.14	679.16	366.94	312.22	2.175	
18,400.00	9,556.00	18,614.63	9,716.00	161.93	163.17	103.65	-8,720.55	-1,017.12	679.16	363.39	315.76	2.151	
18,500.00	9,556.00	18,714.63	9,716.00	163.74	164.98	103.65	-8,820.55	-1,017.10	679.15	359.84	319.31	2.127	
18,600.00	9,556.00	18,814.63	9,716.00	165.55	166.78	103.65	-8,920.55	-1,017.09	679.14	356.29	322.85	2.104	
18,700.00	9,556.00	18,914.63	9,716.00	167.37	168.59	103.65	-9,020.55	-1,017.07	679.13	352.74	326.39	2.081	
18,800.00	9,556.00	19,014.63	9,716.00	169.18	170.40	103.65	-9,120.55	-1,017.05	679.13	349.19	329.94	2.058	
18,900.00	9,556.00	19,114.63	9,716.00	171.00	172.20	103.65	-9,220.55	-1,017.03	679.12	345.64	333.48	2.036	
19,000.00	9,556.00	19,214.63	9,716.00	172.81	174.01	103.65	-9,320.55	-1,017.02	679.11	342.08	337.03	2.015	
19,100.00	9,556.00	19,314.63	9,716.00	174.63	175.82	103.65	-9,420.55	-1,017.00	679.10	338.53	340.58	1.994 Collision Risk Procedures Req.	
19,200.00	9,556.00	19,414.63	9,716.00	176.45	177.63	103.65	-9,520.55	-1,016.98	679.10	334.97	344.12	1.973 Collision Risk Procedures Req.	
19,300.00	9,556.00	19,514.63	9,716.00	178.26	179.44	103.65	-9,620.55	-1,016.97	679.09	331.42	347.67	1.953 Collision Risk Procedures Req.	
19,400.00	9,556.00	19,614.63	9,716.00	180.08	181.25	103.65	-9,720.55	-1,016.95	679.08	327.86	351.22	1.934 Collision Risk Procedures Req.	
19,500.00	9,556.00	19,714.63	9,716.00	181.90	183.06	103.65	-9,820.55	-1,016.93	679.08	324.31	354.77	1.914 Collision Risk Procedures Req.	

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 0409 225H - Wellbore #1 - Plan 0													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.50 usft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Rule Assigned:			Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
19,600.00	9,556.00	19,814.63	9,716.00	183.71	184.87	103.65	-9,920.55	-1,016.92	679.07	320.75	358.32	1.895	Collision Risk Procedures Req.
19,700.00	9,556.00	19,914.63	9,716.00	185.53	186.68	103.65	-10,020.55	-1,016.90	679.06	317.19	361.87	1.877	Collision Risk Procedures Req.
19,808.65	9,556.00	20,023.28	9,716.00	187.51	188.65	103.65	-10,129.20	-1,016.88	679.05	313.33	365.72	1.857	Collision Risk Procedures Req., SF

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 0409 236H - Wellbore #1 - Plan 0												Offset Site Error:	0.00 usft
Survey Program: 0-MWD												Offset Well Error:	0.50 usft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Distance	Rule Assigned:							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.50	0.50	-39.81	15.36	-12.80	19.99				
100.00	100.00	100.00	100.00	0.51	0.51	-39.81	15.36	-12.80	19.99	18.98	1.01	19.716	
200.00	200.00	200.00	200.00	0.59	0.59	-39.81	15.36	-12.80	19.99	18.82	1.18	17.008	
300.00	300.00	300.00	300.00	0.73	0.73	-39.81	15.36	-12.80	19.99	18.53	1.46	13.668	
400.00	400.00	400.00	400.00	0.91	0.91	-39.81	15.36	-12.80	19.99	18.18	1.82	11.003	
500.00	500.00	500.00	500.00	1.10	1.10	-39.81	15.36	-12.80	19.99	17.79	2.21	9.062	
524.37	524.37	524.37	524.37	1.15	1.15	-39.81	15.36	-12.80	19.99	17.69	2.30	8.676	
600.00	600.00	600.00	600.00	1.31	1.31	-39.81	15.36	-12.80	19.99	17.38	2.61	7.646	
633.33	633.33	633.33	633.33	1.38	1.38	-39.81	15.36	-12.80	19.99	17.24	2.75	7.260	
700.00	700.00	700.00	700.00	1.52	1.52	-39.81	15.36	-12.80	19.99	16.96	3.04	6.587	
800.00	800.00	800.00	800.00	1.73	1.73	-39.81	15.36	-12.80	19.99	16.53	3.46	5.774	
900.00	900.00	900.00	900.00	1.95	1.95	-39.81	15.36	-12.80	19.99	16.10	3.90	5.133	
1,000.00	1,000.00	1,000.00	1,000.00	2.17	2.17	-39.81	15.36	-12.80	19.99	15.66	4.33	4.616	
1,100.00	1,100.00	1,100.00	1,100.00	2.38	2.38	-39.81	15.36	-12.80	19.99	15.22	4.77	4.192	
1,200.00	1,200.00	1,200.00	1,200.00	2.61	2.61	-39.81	15.36	-12.80	19.99	14.78	5.21	3.837	
1,300.00	1,300.00	1,300.00	1,300.00	2.83	2.83	-39.81	15.36	-12.80	19.99	14.34	5.65	3.537	
1,400.00	1,400.00	1,400.00	1,400.00	3.05	3.05	-39.81	15.36	-12.80	19.99	13.90	6.10	3.280	
1,500.00	1,500.00	1,500.00	1,500.00	3.27	3.27	-39.81	15.36	-12.80	19.99	13.46	6.54	3.058 CC, ES, SF	
1,600.00	1,600.00	1,599.34	1,599.32	3.49	3.48	-41.86	16.05	-14.38	21.56	14.59	6.97	3.092	
1,700.00	1,700.00	1,698.44	1,698.28	3.71	3.69	-46.54	18.10	-19.10	26.37	18.98	7.39	3.567	
1,800.00	1,800.00	1,797.07	1,796.54	3.94	3.91	-51.39	21.49	-26.91	34.62	26.81	7.81	4.434	
1,900.00	1,900.00	1,896.29	1,895.18	4.16	4.14	-54.97	25.79	-36.79	45.18	36.95	8.24	5.486	
2,000.00	1,999.98	1,995.86	1,994.14	4.38	4.37	-11.98	30.11	-46.74	54.20	45.54	8.67	6.256	
2,100.00	2,099.84	2,095.65	2,093.35	4.60	4.62	-14.61	34.45	-56.71	59.93	50.84	9.09	6.591	
2,113.35	2,113.16	2,108.99	2,106.61	4.63	4.65	-14.99	35.03	-58.04	60.45	51.30	9.15	6.607	
2,200.00	2,199.56	2,195.54	2,192.64	4.82	4.87	-17.37	38.78	-66.69	63.68	54.15	9.52	6.686	
2,300.00	2,299.29	2,295.42	2,291.93	5.04	5.12	-19.82	43.12	-76.67	67.53	57.57	9.96	6.780	
2,400.00	2,399.01	2,395.31	2,391.22	5.27	5.38	-22.01	47.46	-86.65	71.49	61.09	10.40	6.874	
2,500.00	2,498.73	2,495.20	2,490.51	5.50	5.65	-23.97	51.80	-96.63	75.55	64.71	10.84	6.967	
2,600.00	2,598.45	2,595.08	2,589.80	5.74	5.92	-25.72	56.14	-106.61	79.68	68.39	11.29	7.058	
2,700.00	2,698.18	2,694.97	2,689.10	5.97	6.19	-27.30	60.48	-116.59	83.89	72.15	11.74	7.145	
2,800.00	2,797.90	2,794.85	2,788.39	6.21	6.46	-28.73	64.81	-126.58	88.14	75.95	12.19	7.229	
2,900.00	2,897.62	2,894.74	2,887.68	6.45	6.73	-30.03	69.15	-136.56	92.45	79.80	12.65	7.306	
3,000.00	2,997.35	2,994.63	2,986.97	6.69	7.01	-31.21	73.49	-146.54	96.81	83.70	13.11	7.386	
3,100.00	3,097.07	3,094.51	3,086.26	6.93	7.29	-32.29	77.83	-156.52	101.20	87.63	13.57	7.458	
3,200.00	3,196.79	3,194.40	3,185.55	7.18	7.57	-33.28	82.17	-166.50	105.62	91.59	14.03	7.527	
3,300.00	3,296.51	3,294.29	3,284.85	7.42	7.85	-34.18	86.51	-176.48	110.07	95.57	14.50	7.592	
3,400.00	3,396.24	3,394.17	3,384.14	7.67	8.13	-35.02	90.85	-186.46	114.55	99.58	14.97	7.653	
3,500.00	3,495.96	3,494.06	3,483.43	7.91	8.41	-35.80	95.18	-196.44	119.04	103.61	15.44	7.712	
3,600.00	3,595.68	3,593.94	3,582.72	8.16	8.70	-36.52	99.52	-206.42	123.56	107.66	15.91	7.767	
3,700.00	3,695.40	3,693.83	3,682.01	8.41	8.98	-37.18	103.86	-216.40	128.10	111.72	16.38	7.819	
3,800.00	3,795.13	3,793.72	3,781.30	8.66	9.27	-37.80	108.20	-226.38	132.66	115.80	16.86	7.869	
3,900.00	3,894.85	3,893.60	3,880.59	8.91	9.56	-38.39	112.54	-236.37	137.22	119.89	17.34	7.916	
4,000.00	3,994.57	3,993.49	3,979.89	9.16	9.84	-38.93	116.88	-246.35	141.81	123.99	17.81	7.960	
4,100.00	4,094.30	4,093.38	4,079.18	9.41	10.13	-39.44	121.21	-256.33	146.40	128.10	18.29	8.002	
4,200.00	4,194.02	4,193.26	4,178.47	9.66	10.42	-39.92	125.55	-266.31	151.00	132.23	18.78	8.043	
4,300.00	4,293.74	4,293.15	4,277.76	9.91	10.71	-40.37	129.89	-276.29	155.62	136.36	19.26	8.081	
4,400.00	4,393.46	4,393.03	4,377.05	10.17	11.00	-40.79	134.23	-286.27	160.24	140.50	19.74	8.117	
4,500.00	4,493.19	4,492.92	4,476.34	10.42	11.29	-41.19	138.57	-296.25	164.87	144.65	20.22	8.152	
4,600.00	4,592.91	4,592.81	4,575.64	10.67	11.58	-41.57	142.91	-306.23	169.51	148.80	20.71	8.185	
4,700.00	4,692.63	4,692.69	4,674.93	10.92	11.87	-41.92	147.24	-316.21	174.16	152.96	21.20	8.216	
4,800.00	4,792.36	4,792.58	4,774.22	11.18	12.16	-42.26	151.58	-326.19	178.81	157.12	21.68	8.246	

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 0409 236H - Wellbore #1 - Plan 0												Offset Site Error:	0.00 usft
Survey Program: 0-MWD												Offset Well Error:	0.50 usft
Rule Assigned:												Warning	
Measured Depth (usft)	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
4,900.00	4,892.08	4,892.47	4,873.51	11.43	12.45	-42.59	155.92	-336.17	183.47	161.30	22.17	8.275	
5,000.00	4,991.80	4,992.35	4,972.80	11.69	12.74	-42.89	160.26	-346.15	188.13	165.47	22.66	8.303	
5,100.00	5,091.52	5,092.24	5,072.09	11.94	13.04	-43.18	164.60	-356.14	192.80	169.65	23.15	8.329	
5,200.00	5,191.25	5,192.12	5,171.39	12.19	13.33	-43.46	168.94	-366.12	197.47	173.83	23.64	8.354	
5,300.00	5,290.97	5,292.01	5,270.68	12.45	13.62	-43.73	173.27	-376.10	202.15	178.02	24.13	8.378	
5,400.00	5,390.69	5,391.90	5,369.97	12.70	13.91	-43.98	177.61	-386.08	206.83	182.21	24.62	8.401	
5,500.00	5,490.42	5,491.78	5,469.26	12.96	14.21	-44.22	181.95	-396.06	211.52	186.41	25.11	8.423	
5,600.00	5,590.14	5,591.67	5,568.55	13.22	14.50	-44.45	186.29	-406.04	216.21	190.60	25.60	8.445	
5,700.00	5,689.86	5,691.56	5,667.84	13.47	14.79	-44.67	190.63	-416.02	220.90	194.81	26.10	8.465	
5,800.00	5,789.58	5,791.44	5,767.14	13.73	15.09	-44.88	194.97	-426.00	225.60	199.01	26.59	8.485	
5,900.00	5,889.31	5,891.33	5,866.43	13.98	15.38	-45.09	199.30	-435.98	230.30	203.21	27.08	8.504	
6,000.00	5,989.03	5,991.22	5,965.72	14.24	15.67	-45.28	203.64	-445.96	235.00	207.42	27.58	8.522	
6,100.00	6,088.75	6,091.10	6,065.01	14.50	15.97	-45.47	207.98	-455.94	239.70	211.63	28.07	8.540	
6,200.00	6,188.47	6,190.99	6,164.30	14.75	16.26	-45.65	212.32	-465.93	244.41	215.84	28.56	8.557	
6,300.00	6,288.20	6,290.87	6,263.59	15.01	16.56	-45.83	216.66	-475.91	249.12	220.06	29.06	8.573	
6,400.00	6,387.92	6,390.76	6,362.89	15.27	16.85	-45.99	221.00	-485.89	253.83	224.27	29.55	8.589	
6,500.00	6,487.64	6,490.65	6,462.18	15.52	17.15	-46.15	225.34	-495.87	258.54	228.49	30.05	8.604	
6,600.00	6,587.37	6,590.53	6,561.47	15.78	17.44	-46.31	229.67	-505.85	263.26	232.71	30.55	8.619	
6,700.00	6,687.09	6,690.42	6,660.76	16.04	17.73	-46.46	234.01	-515.83	267.97	236.93	31.04	8.633	
6,800.00	6,786.81	6,790.31	6,760.05	16.29	18.03	-46.60	238.35	-525.81	272.69	241.16	31.54	8.647	
6,900.00	6,886.53	6,890.19	6,859.34	16.55	18.32	-46.74	242.69	-535.79	277.41	245.38	32.03	8.660	
7,000.00	6,986.26	6,990.08	6,958.64	16.81	18.62	-46.88	247.03	-545.77	282.14	249.60	32.53	8.673	
7,100.00	7,085.98	7,089.96	7,057.93	17.07	18.91	-47.01	251.37	-555.75	286.86	253.83	33.03	8.685	
7,200.00	7,185.70	7,189.85	7,157.22	17.32	19.21	-47.13	255.70	-565.73	291.59	258.06	33.53	8.697	
7,300.00	7,285.43	7,289.74	7,255.51	17.58	19.51	-47.26	260.04	-575.72	296.31	262.29	34.02	8.709	
7,400.00	7,385.15	7,389.62	7,355.80	17.84	19.80	-47.38	264.38	-585.70	301.04	266.52	34.52	8.720	
7,500.00	7,484.87	7,489.51	7,455.09	18.10	20.10	-47.49	268.72	-595.68	305.77	270.75	35.02	8.731	
7,600.00	7,584.59	7,589.40	7,554.39	18.35	20.39	-47.60	273.06	-605.66	310.50	274.98	35.52	8.742	
7,700.00	7,684.32	7,689.28	7,653.68	18.61	20.69	-47.71	277.40	-615.64	315.23	279.21	36.02	8.752	
7,800.00	7,784.04	7,789.17	7,752.97	18.87	20.98	-47.81	281.73	-625.62	319.96	283.45	36.52	8.762	
7,900.00	7,883.76	7,889.05	7,852.26	19.13	21.28	-47.92	286.07	-635.60	324.70	287.68	37.01	8.772	
8,000.00	7,983.49	7,988.94	7,951.55	19.39	21.57	-48.01	290.41	-645.58	329.43	291.92	37.51	8.782	
8,100.00	8,083.21	8,088.83	8,050.84	19.64	21.87	-48.11	294.75	-655.56	334.17	296.16	38.01	8.791	
8,200.00	8,182.93	8,188.71	8,150.13	19.90	22.17	-48.20	299.09	-665.54	338.90	300.39	38.51	8.800	
8,300.00	8,282.65	8,288.60	8,249.43	20.16	22.46	-48.29	303.43	-675.52	343.64	304.63	39.01	8.809	
8,400.00	8,382.38	8,388.49	8,348.72	20.42	22.76	-48.38	307.76	-685.51	348.38	308.87	39.51	8.817	
8,500.00	8,482.10	8,488.37	8,448.01	20.68	23.05	-48.47	312.10	-695.49	353.12	313.11	40.01	8.826	
8,600.00	8,581.82	8,588.26	8,547.30	20.94	23.35	-48.55	316.44	-705.47	357.86	317.35	40.51	8.834	
8,638.13	8,619.84	8,626.34	8,585.16	21.03	23.46	-48.58	318.10	-709.27	359.66	318.96	40.70	8.837	
8,700.00	8,681.59	8,688.12	8,646.57	21.17	23.65	-48.61	320.78	-715.45	363.04	322.05	40.98	8.858	
8,800.00	8,781.52	8,787.82	8,745.67	21.35	23.94	-48.34	325.11	-725.41	370.36	328.98	41.38	8.950	
8,851.48	8,833.00	8,839.04	8,796.59	21.43	24.09	-93.64	327.33	-730.53	375.05	333.48	41.57	9.023	
8,900.00	8,881.52	8,887.27	8,844.53	21.52	24.24	-93.27	329.43	-735.34	379.77	338.02	41.75	9.097	
9,001.52	8,983.04	8,988.18	8,944.85	21.72	24.54	-92.54	333.81	-745.43	389.69	347.54	42.15	9.246	
9,050.00	9,031.46	9,036.23	8,992.60	21.80	24.68	87.63	335.90	-750.23	394.37	352.07	42.30	9.324	
9,100.00	9,081.04	9,085.23	9,041.31	21.86	24.83	88.38	338.03	-755.13	399.13	356.76	42.37	9.420	
9,150.00	9,129.86	9,133.30	9,089.10	21.89	24.97	89.65	340.11	-759.93	404.08	361.69	42.39	9.533	
9,200.00	9,177.57	9,180.08	9,135.60	21.91	25.11	91.33	342.15	-764.60	409.54	367.19	42.35	9.670	
9,250.00	9,223.80	9,225.21	9,180.46	21.92	25.24	93.30	344.11	-769.11	415.96	373.67	42.29	9.836	
9,300.00	9,268.20	9,273.83	9,228.81	21.91	25.37	95.78	346.12	-773.74	423.62	381.38	42.24	10.029	
9,350.00	9,310.43	9,322.00	9,276.81	21.89	25.48	98.47	347.79	-777.60	432.56	390.36	42.20	10.249	
9,400.00	9,350.16	9,367.69	9,322.38	21.87	25.57	101.10	349.09	-780.57	443.34	401.14	42.20	10.506	

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 0409 236H - Wellbore #1 - Plan 0												Offset Site Error:	0.00 usft
Survey Program: 0-MWD												Offset Well Error:	0.50 usft
Rule Assigned:												Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,450.00	9,387.11	9,410.53	9,365.16	21.85	25.65	103.51	350.04	-782.76	456.50	414.25	42.26	10.803	
9,500.00	9,420.97	9,450.20	9,404.78	21.82	25.72	105.56	350.69	-784.26	472.50	430.11	42.39	11.147	
9,550.00	9,451.51	9,486.34	9,440.91	21.79	25.78	107.09	351.09	-785.18	491.68	449.08	42.60	11.541	
9,600.00	9,478.47	9,518.64	9,473.21	21.77	25.83	107.99	351.30	-785.66	514.23	471.34	42.89	11.989	
9,650.00	9,501.67	9,546.81	9,501.37	21.76	25.87	108.11	351.36	-785.80	540.19	496.95	43.24	12.494	
9,700.00	9,520.92	9,566.35	9,520.92	21.76	25.90	106.84	351.36	-785.80	569.53	525.90	43.63	13.053	
9,750.00	9,536.08	9,581.51	9,536.08	21.78	25.93	104.51	351.36	-785.80	602.04	557.99	44.04	13.669	
9,800.00	9,547.03	9,592.46	9,547.03	21.85	25.94	101.01	351.36	-785.80	637.29	592.85	44.45	14.338	
9,850.00	9,553.68	9,599.12	9,553.68	21.97	25.95	96.25	351.36	-785.80	674.83	630.00	44.83	15.052	
9,901.52	9,556.00	9,601.43	9,556.00	22.15	25.96	90.00	351.36	-785.80	715.37	670.17	45.20	15.827	
10,000.00	9,556.00	9,601.43	9,556.00	22.63	25.96	90.00	351.36	-785.80	796.48	750.66	45.82	17.383	
10,100.00	9,556.00	10,793.23	10,226.00	23.25	27.40	147.00	-416.32	-793.06	798.91	764.99	33.92	23.553	
10,200.00	9,556.00	10,893.23	10,226.00	24.00	28.00	146.94	-516.31	-794.00	799.43	764.71	34.72	23.025	
10,300.00	9,556.00	10,993.22	10,226.00	24.86	28.71	146.88	-616.31	-794.95	799.95	764.29	35.66	22.433	
10,400.00	9,556.00	11,093.22	10,226.00	25.82	29.52	146.83	-716.30	-795.89	800.47	763.74	36.73	21.794	
10,500.00	9,556.00	11,193.21	10,226.00	26.87	30.43	146.77	-816.29	-796.84	801.00	763.08	37.92	21.125	
10,600.00	9,556.00	11,293.21	10,226.00	28.00	31.43	146.71	-916.28	-797.78	801.52	762.30	39.21	20.440	
10,700.00	9,556.00	11,393.20	10,226.00	29.20	32.50	146.66	-1,016.27	-798.73	802.04	761.43	40.61	19.750	
10,800.00	9,556.00	11,493.20	10,226.00	30.46	33.64	146.60	-1,116.26	-799.68	802.57	760.47	42.10	19.065	
10,900.00	9,556.00	11,593.20	10,226.00	31.77	34.84	146.54	-1,216.25	-800.62	803.09	759.43	43.67	18.392	
11,000.00	9,556.00	11,693.19	10,226.00	33.13	36.09	146.48	-1,316.24	-801.57	803.62	758.31	45.31	17.737	
11,100.00	9,556.00	11,793.19	10,226.00	34.54	37.39	146.43	-1,416.23	-802.51	804.15	757.13	47.02	17.104	
11,200.00	9,556.00	11,893.18	10,226.00	35.98	38.73	146.37	-1,516.22	-803.46	804.68	755.89	48.79	16.494	
11,300.00	9,556.00	11,993.18	10,226.00	37.46	40.12	146.31	-1,616.22	-804.40	805.21	754.60	50.61	15.910	
11,400.00	9,556.00	12,093.17	10,226.00	38.97	41.53	146.26	-1,716.21	-805.35	805.74	753.25	52.48	15.352	
11,500.00	9,556.00	12,193.17	10,226.00	40.50	42.98	146.20	-1,816.20	-806.29	806.27	751.86	54.40	14.820	
11,600.00	9,556.00	12,293.16	10,226.00	42.06	44.45	146.15	-1,916.19	-807.24	806.80	750.44	56.36	14.314	
11,700.00	9,556.00	12,393.16	10,226.00	43.64	45.95	146.09	-2,016.18	-808.18	807.33	748.97	58.36	13.833	
11,800.00	9,556.00	12,493.15	10,226.00	45.23	47.48	146.03	-2,116.17	-809.13	807.86	747.47	60.39	13.377	
11,900.00	9,556.00	12,593.15	10,226.00	46.85	49.02	145.98	-2,216.16	-810.07	808.40	745.94	62.45	12.944	
12,000.00	9,556.00	12,693.15	10,226.00	48.48	50.59	145.92	-2,316.15	-811.02	808.93	744.39	64.55	12.533	
12,100.00	9,556.00	12,793.14	10,226.00	50.12	52.17	145.86	-2,416.14	-811.96	809.47	742.80	66.66	12.142	
12,200.00	9,556.00	12,893.14	10,226.00	51.78	53.76	145.81	-2,516.13	-812.91	810.00	741.20	68.81	11.772	
12,300.00	9,556.00	12,993.13	10,226.00	53.44	55.37	145.75	-2,616.12	-813.86	810.54	739.57	70.97	11.420	
12,400.00	9,556.00	13,093.13	10,226.00	55.12	57.00	145.70	-2,716.12	-814.80	811.08	737.92	73.16	11.086	
12,500.00	9,556.00	13,193.12	10,226.00	56.81	58.63	145.64	-2,816.11	-815.75	811.62	736.25	75.37	10.769	
12,600.00	9,556.00	13,293.12	10,226.00	58.50	60.28	145.59	-2,916.10	-816.69	812.16	734.56	77.59	10.467	
12,700.00	9,556.00	13,393.11	10,226.00	60.20	61.93	145.53	-3,016.09	-817.64	812.70	732.86	79.83	10.180	
12,800.00	9,556.00	13,493.11	10,226.00	61.92	63.60	145.48	-3,116.08	-818.58	813.24	731.15	82.09	9.906	
12,900.00	9,556.00	13,593.10	10,226.00	63.63	65.27	145.42	-3,216.07	-819.53	813.78	729.41	84.37	9.646	
13,000.00	9,556.00	13,693.10	10,226.00	65.36	66.96	145.36	-3,316.06	-820.47	814.32	727.67	86.65	9.397	
13,100.00	9,556.00	13,793.10	10,226.00	67.08	68.65	145.31	-3,416.05	-821.42	814.86	725.91	88.95	9.160	
13,200.00	9,556.00	13,893.09	10,226.00	68.82	70.34	145.25	-3,516.04	-822.36	815.41	724.14	91.27	8.934	
13,300.00	9,556.00	13,993.09	10,226.00	70.56	72.04	145.20	-3,616.03	-823.31	815.95	722.36	93.60	8.718	
13,400.00	9,556.00	14,093.08	10,226.00	72.30	73.75	145.14	-3,716.03	-824.25	816.50	720.56	95.93	8.511	
13,500.00	9,556.00	14,193.08	10,226.00	74.05	75.47	145.09	-3,816.02	-825.20	817.04	718.76	98.28	8.313	
13,600.00	9,556.00	14,293.07	10,226.00	75.80	77.19	145.03	-3,916.01	-826.14	817.59	716.95	100.64	8.124	
13,700.00	9,556.00	14,393.07	10,226.00	77.55	78.91	144.98	-4,016.00	-827.09	818.14	715.12	103.01	7.942	
13,800.00	9,556.00	14,493.06	10,226.00	79.31	80.64	144.92	-4,115.99	-828.04	818.69	713.29	105.39	7.768	
13,900.00	9,556.00	14,593.06	10,226.00	81.07	82.37	144.87	-4,215.98	-828.98	819.23	711.45	107.78	7.601	
14,000.00	9,556.00	14,693.05	10,226.00	82.84	84.11	144.82	-4,315.97	-829.93	819.78	709.60	110.18	7.440	
14,100.00	9,556.00	14,793.05	10,226.00	84.61	85.85	144.76	-4,415.96	-830.87	820.33	707.74	112.59	7.286	

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 0409 236H - Wellbore #1 - Plan 0													Offset Site Error:	0.00 usft	
Survey Program:		0-MWD		Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:				Offset Well Error:	0.50 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
14,200.00	9,556.00	14,893.05	10,226.00	86.38	87.60	144.71	-4,515.95	-831.82	820.89	705.88	115.01	7.138			
14,300.00	9,556.00	14,993.04	10,226.00	88.15	89.34	144.65	-4,615.94	-832.76	821.44	704.01	117.43	6.995			
14,400.00	9,556.00	15,093.04	10,226.00	89.92	91.09	144.60	-4,715.94	-833.71	821.99	702.13	119.86	6.858			
14,500.00	9,556.00	15,193.03	10,226.00	91.70	92.85	144.54	-4,815.93	-834.65	822.54	700.24	122.30	6.725			
14,600.00	9,556.00	15,293.03	10,226.00	93.48	94.60	144.49	-4,915.92	-835.60	823.10	698.35	124.75	6.598			
14,700.00	9,556.00	15,393.02	10,226.00	95.26	96.36	144.44	-5,015.91	-836.54	823.65	696.45	127.21	6.475			
14,800.00	9,556.00	15,493.02	10,226.00	97.04	98.13	144.38	-5,115.90	-837.49	824.21	694.54	129.67	6.356			
14,900.00	9,556.00	15,593.01	10,226.00	98.83	99.89	144.33	-5,215.89	-838.43	824.77	692.63	132.14	6.242			
15,000.00	9,556.00	15,693.01	10,226.00	100.61	101.66	144.27	-5,315.88	-839.38	825.32	690.71	134.61	6.131			
15,100.00	9,556.00	15,793.00	10,226.00	102.40	103.42	144.22	-5,415.87	-840.32	825.88	688.79	137.09	6.024			
15,200.00	9,556.00	15,893.00	10,226.00	104.19	105.19	144.17	-5,515.86	-841.27	826.44	686.86	139.58	5.921			
15,300.00	9,556.00	15,993.00	10,226.00	105.98	106.97	144.11	-5,615.85	-842.21	827.00	684.92	142.08	5.821			
15,400.00	9,556.00	16,092.99	10,226.00	107.77	108.74	144.06	-5,715.85	-843.16	827.56	682.98	144.58	5.724			
15,500.00	9,556.00	16,192.99	10,226.00	109.57	110.52	144.01	-5,815.84	-844.11	828.12	681.03	147.09	5.630			
15,600.00	9,556.00	16,292.98	10,226.00	111.36	112.29	143.95	-5,915.83	-845.05	828.68	679.08	149.60	5.539			
15,700.00	9,556.00	16,392.98	10,226.00	113.16	114.07	143.90	-6,015.82	-846.00	829.24	677.12	152.12	5.451			
15,800.00	9,556.00	16,492.97	10,226.00	114.95	115.85	143.85	-6,115.81	-846.94	829.81	675.16	154.64	5.366			
15,900.00	9,556.00	16,592.97	10,226.00	116.75	117.64	143.79	-6,215.80	-847.89	830.37	673.20	157.17	5.283			
16,000.00	9,556.00	16,692.96	10,226.00	118.55	119.42	143.74	-6,315.79	-848.83	830.93	671.22	159.71	5.203			
16,100.00	9,556.00	16,792.96	10,226.00	120.35	121.20	143.69	-6,415.78	-849.78	831.50	669.25	162.25	5.125			
16,200.00	9,556.00	16,892.95	10,226.00	122.15	122.99	143.63	-6,515.77	-850.72	832.06	667.27	164.80	5.049			
16,300.00	9,556.00	16,992.95	10,226.00	123.95	124.78	143.58	-6,615.76	-851.67	832.63	665.28	167.35	4.975			
16,400.00	9,556.00	17,092.95	10,226.00	125.75	126.56	143.53	-6,715.75	-852.61	833.20	663.29	169.91	4.904			
16,500.00	9,556.00	17,192.94	10,226.00	127.55	128.35	143.47	-6,815.75	-853.56	833.77	661.30	172.47	4.834			
16,600.00	9,556.00	17,292.94	10,226.00	129.36	130.14	143.42	-6,915.74	-854.50	834.33	659.30	175.04	4.767			
16,700.00	9,556.00	17,392.93	10,226.00	131.16	131.94	143.37	-7,015.73	-855.45	834.90	657.29	177.61	4.701			
16,800.00	9,556.00	17,492.93	10,226.00	132.97	133.73	143.32	-7,115.72	-856.39	835.47	655.29	180.19	4.637			
16,900.00	9,556.00	17,592.92	10,226.00	134.77	135.52	143.26	-7,215.71	-857.34	836.04	653.27	182.77	4.574			
17,000.00	9,556.00	17,692.92	10,226.00	136.58	137.32	143.21	-7,315.70	-858.29	836.62	651.26	185.36	4.514			
17,100.00	9,556.00	17,792.91	10,226.00	138.39	139.11	143.16	-7,415.69	-859.23	837.19	649.24	187.95	4.454			
17,200.00	9,556.00	17,892.91	10,226.00	140.20	140.91	143.11	-7,515.68	-860.18	837.76	647.21	190.55	4.397			
17,300.00	9,556.00	17,992.90	10,226.00	142.00	142.70	143.06	-7,615.67	-861.12	838.33	645.19	193.15	4.340			
17,400.00	9,556.00	18,092.90	10,226.00	143.81	144.50	143.00	-7,715.66	-862.07	838.91	643.15	195.76	4.285			
17,500.00	9,556.00	18,192.89	10,226.00	145.62	146.30	142.95	-7,815.66	-863.01	839.48	641.12	198.37	4.232			
17,600.00	9,556.00	18,292.89	10,226.00	147.43	148.10	142.90	-7,915.65	-863.96	840.06	639.08	200.98	4.180			
17,700.00	9,556.00	18,392.89	10,226.00	149.24	149.90	142.85	-8,015.64	-864.90	840.64	637.03	203.60	4.129			
17,800.00	9,556.00	18,492.88	10,226.00	151.05	151.70	142.80	-8,115.63	-865.85	841.21	634.99	206.23	4.079			
17,900.00	9,556.00	18,592.88	10,226.00	152.86	153.50	142.74	-8,215.62	-866.79	841.79	632.93	208.86	4.030			
18,000.00	9,556.00	18,692.87	10,226.00	154.68	155.30	142.69	-8,315.61	-867.74	842.37	630.88	211.49	3.983			
18,100.00	9,556.00	18,792.87	10,226.00	156.49	157.10	142.64	-8,415.60	-868.68	842.95	628.82	214.13	3.937			
18,200.00	9,556.00	18,892.86	10,226.00	158.30	158.91	142.59	-8,515.59	-869.63	843.53	626.76	216.77	3.891			
18,300.00	9,556.00	18,992.86	10,226.00	160.11	160.71	142.54	-8,615.58	-870.57	844.11	624.69	219.42	3.847			
18,400.00	9,556.00	19,092.85	10,226.00	161.93	162.51	142.49	-8,715.57	-871.52	844.69	622.62	222.07	3.804			
18,500.00	9,556.00	19,192.85	10,226.00	163.74	164.32	142.43	-8,815.57	-872.47	845.27	620.55	224.72	3.761			
18,600.00	9,556.00	19,292.84	10,226.00	165.55	166.12	142.38	-8,915.56	-873.41	845.85	618.47	227.38	3.720			
18,700.00	9,556.00	19,392.84	10,226.00	167.37	167.93	142.33	-9,015.55	-874.36	846.44	616.39	230.04	3.679			
18,800.00	9,556.00	19,492.84	10,226.00	169.18	169.73	142.28	-9,115.54	-875.30	847.02	614.31	232.71	3.640			
18,900.00	9,556.00	19,592.83	10,226.00	171.00	171.54	142.23	-9,215.53	-876.25	847.60	612.22	235.38	3.601			
19,000.00	9,556.00	19,692.83	10,226.00	172.81	173.35	142.18	-9,315.52	-877.19	848.19	610.13	238.06	3.563			
19,100.00	9,556.00	19,792.82	10,226.00	174.63	175.15	142.13	-9,415.51	-878.14	848.77	608.04	240.74	3.526			
19,200.00	9,556.00	19,892.82	10,226.00	176.45	176.96	142.08	-9,515.50	-879.08	849.36	605.94	243.42	3.489			
19,300.00	9,556.00	19,992.81	10,226.00	178.26	178.77	142.03	-9,615.49	-880.03	849.95	603.84	246.11	3.454			

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Goonch Fed Com 0409 236H - Wellbore #1 - Plan 0													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.50 usft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance				Rule Assigned:			Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
19,400.00	9,556.00	20,092.81	10,226.00	180.08	180.58	141.98	-9,715.48	-880.97	850.54	601.73	248.80	3.419	
19,500.00	9,556.00	20,192.80	10,226.00	181.90	182.39	141.93	-9,815.48	-881.92	851.12	599.63	251.50	3.384	
19,600.00	9,556.00	20,292.80	10,226.00	183.71	184.19	141.87	-9,915.47	-882.86	851.71	597.51	254.20	3.351	
19,700.00	9,556.00	20,392.79	10,226.00	185.53	186.00	141.82	-10,015.46	-883.81	852.30	595.40	256.90	3.318	
19,808.65	9,556.00	20,501.44	10,226.00	187.51	187.97	141.77	-10,124.10	-884.84	852.95	593.10	259.85	3.283	

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Loving Federal Com #001 (Active) - Wellbore #1 - Wellbore #1													Offset Site Error: 0.00 usft
Survey Program: 125-INC-ONLY													Offset Well Error: 0.50 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
10,500.00	9,556.00	9,541.51	9,540.60	26.87	186.11	90.00	-1,581.69	-1,647.60	1,497.62	1,287.61	210.01	7.131	
10,600.00	9,556.00	9,541.51	9,540.60	28.00	186.11	90.00	-1,581.69	-1,647.60	1,449.36	1,238.19	211.17	6.864	
10,700.00	9,556.00	9,541.51	9,540.60	29.20	186.11	90.00	-1,581.69	-1,647.60	1,406.56	1,194.02	212.54	6.618	
10,800.00	9,556.00	9,541.51	9,540.60	30.46	186.11	90.00	-1,581.69	-1,647.60	1,369.74	1,155.62	214.12	6.397	
10,900.00	9,556.00	9,541.51	9,540.60	31.77	186.11	90.00	-1,581.69	-1,647.60	1,339.39	1,123.53	215.85	6.205	
11,000.00	9,556.00	9,541.51	9,540.60	33.13	186.11	90.00	-1,581.69	-1,647.60	1,315.95	1,098.25	217.70	6.045	
11,100.00	9,556.00	9,541.51	9,540.60	34.54	186.11	90.00	-1,581.69	-1,647.60	1,299.81	1,080.21	219.60	5.919	
11,200.00	9,556.00	9,541.51	9,540.60	35.98	186.11	90.00	-1,581.69	-1,647.60	1,291.23	1,069.74	221.49	5.830	
11,261.14	9,556.00	9,541.51	9,540.60	36.89	186.11	90.00	-1,581.69	-1,647.60	1,289.78	1,067.15	222.63	5.793 CC	
11,300.00	9,556.00	9,541.51	9,540.60	37.46	186.11	90.00	-1,581.69	-1,647.60	1,290.37	1,067.04	223.32	5.778 ES	
11,400.00	9,556.00	9,541.51	9,540.60	38.97	186.11	90.00	-1,581.69	-1,647.60	1,297.24	1,072.19	225.04	5.764 SF	
11,500.00	9,556.00	9,541.51	9,540.60	40.50	186.11	90.00	-1,581.69	-1,647.60	1,311.71	1,085.11	226.60	5.789	
11,600.00	9,556.00	9,541.51	9,540.60	42.06	186.11	90.00	-1,581.69	-1,647.60	1,333.55	1,105.57	227.98	5.849	
11,700.00	9,556.00	9,541.51	9,540.60	43.64	186.11	90.00	-1,581.69	-1,647.60	1,362.40	1,133.24	229.16	5.945	
11,800.00	9,556.00	9,541.51	9,540.60	45.23	186.11	90.00	-1,581.69	-1,647.60	1,397.82	1,167.68	230.15	6.074	
11,900.00	9,556.00	9,541.51	9,540.60	46.85	186.11	90.00	-1,581.69	-1,647.60	1,439.34	1,208.39	230.95	6.232	
12,000.00	9,556.00	9,541.51	9,540.60	48.48	186.11	90.00	-1,581.69	-1,647.60	1,486.43	1,254.86	231.57	6.419	

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Offset Design: SEC. 04-T23S-R28E - Swearingen #001 SWD (Active) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 100-GYRO-NS, 6925-INC-ONLY												Offset Well Error:	0.50 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
11,500.00	9,556.00	9,625.32	9,624.60	40.50	61.16	90.00	-3,261.96	-628.59	1,466.74	1,384.24	82.50	17.779	
11,600.00	9,556.00	9,625.32	9,624.60	42.06	61.16	90.00	-3,261.96	-628.59	1,368.58	1,286.01	82.57	16.575	
11,700.00	9,556.00	9,625.32	9,624.60	43.64	61.16	90.00	-3,261.96	-628.59	1,270.72	1,188.02	82.69	15.367	
11,800.00	9,556.00	9,625.32	9,624.60	45.23	61.16	90.00	-3,261.96	-628.59	1,173.21	1,090.33	82.88	14.155	
11,900.00	9,556.00	9,625.32	9,624.60	46.85	61.16	90.00	-3,261.96	-628.59	1,076.16	992.98	83.18	12.938	
12,000.00	9,556.00	9,625.32	9,624.60	48.48	61.16	90.00	-3,261.96	-628.59	979.71	896.09	83.62	11.716	
12,100.00	9,556.00	9,625.32	9,624.60	50.12	61.16	90.00	-3,261.96	-628.59	884.04	799.75	84.29	10.489	
12,200.00	9,556.00	9,625.32	9,624.60	51.78	61.16	90.00	-3,261.96	-628.59	789.45	704.16	85.28	9.257	
12,300.00	9,556.00	9,625.32	9,624.60	53.44	61.16	90.00	-3,261.96	-628.59	696.36	609.57	86.79	8.024	
12,400.00	9,556.00	9,625.32	9,624.60	55.12	61.16	90.00	-3,261.96	-628.59	605.49	516.43	89.07	6.798	
12,500.00	9,556.00	9,625.32	9,624.60	56.81	61.16	90.00	-3,261.96	-628.59	518.00	425.50	92.50	5.600	
12,600.00	9,556.00	9,625.32	9,624.60	58.50	61.16	90.00	-3,261.96	-628.59	435.92	338.28	97.64	4.465	
12,700.00	9,556.00	9,625.32	9,624.60	60.20	61.16	90.00	-3,261.96	-628.59	362.94	257.91	105.03	3.456	
12,800.00	9,556.00	9,625.32	9,624.60	61.92	61.16	90.00	-3,261.96	-628.59	305.66	191.20	114.46	2.670	
12,900.00	9,556.00	9,625.32	9,624.60	63.63	61.16	90.00	-3,261.96	-628.59	274.09	150.94	123.15	2.226	
12,941.50	9,556.00	9,625.32	9,624.60	64.35	61.16	90.00	-3,261.96	-628.59	270.93	145.65	125.28	2.163	CC, ES, SF
13,000.00	9,556.00	9,625.32	9,624.60	65.36	61.16	90.00	-3,261.96	-628.59	277.17	151.12	126.05	2.199	
13,100.00	9,556.00	9,625.32	9,624.60	67.08	61.16	90.00	-3,261.96	-628.59	313.89	191.46	122.43	2.564	
13,200.00	9,556.00	9,625.32	9,624.60	68.82	61.16	90.00	-3,261.96	-628.59	374.47	258.07	116.40	3.217	
13,300.00	9,556.00	9,625.32	9,624.60	70.56	61.16	90.00	-3,261.96	-628.59	449.36	338.56	110.80	4.056	
13,400.00	9,556.00	9,625.32	9,624.60	72.30	61.16	90.00	-3,261.96	-628.59	532.57	426.22	106.35	5.008	
13,500.00	9,556.00	9,625.32	9,624.60	74.05	61.16	90.00	-3,261.96	-628.59	620.75	517.81	102.94	6.030	
13,600.00	9,556.00	9,625.32	9,624.60	75.80	61.16	90.00	-3,261.96	-628.59	712.06	611.72	100.33	7.097	
13,700.00	9,556.00	9,625.32	9,624.60	77.55	61.16	90.00	-3,261.96	-628.59	805.44	707.12	98.32	8.192	
13,800.00	9,556.00	9,625.32	9,624.60	79.31	61.16	90.00	-3,261.96	-628.59	900.24	803.50	96.73	9.306	
13,900.00	9,556.00	9,625.32	9,624.60	81.07	61.16	90.00	-3,261.96	-628.59	996.06	900.59	95.47	10.433	
14,000.00	9,556.00	9,625.32	9,624.60	82.84	61.16	90.00	-3,261.96	-628.59	1,092.62	998.18	94.44	11.569	
14,100.00	9,556.00	9,625.32	9,624.60	84.61	61.16	90.00	-3,261.96	-628.59	1,189.76	1,096.16	93.60	12.711	
14,200.00	9,556.00	9,625.32	9,624.60	86.38	61.16	90.00	-3,261.96	-628.59	1,287.33	1,194.43	92.90	13.857	
14,300.00	9,556.00	9,625.32	9,624.60	88.15	61.16	90.00	-3,261.96	-628.59	1,385.25	1,292.94	92.31	15.006	
14,400.00	9,556.00	9,625.32	9,624.60	89.92	61.16	90.00	-3,261.96	-628.59	1,483.45	1,391.64	91.82	16.157	

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB @ 3060.40usft

Offset Depths are relative to Offset Datum

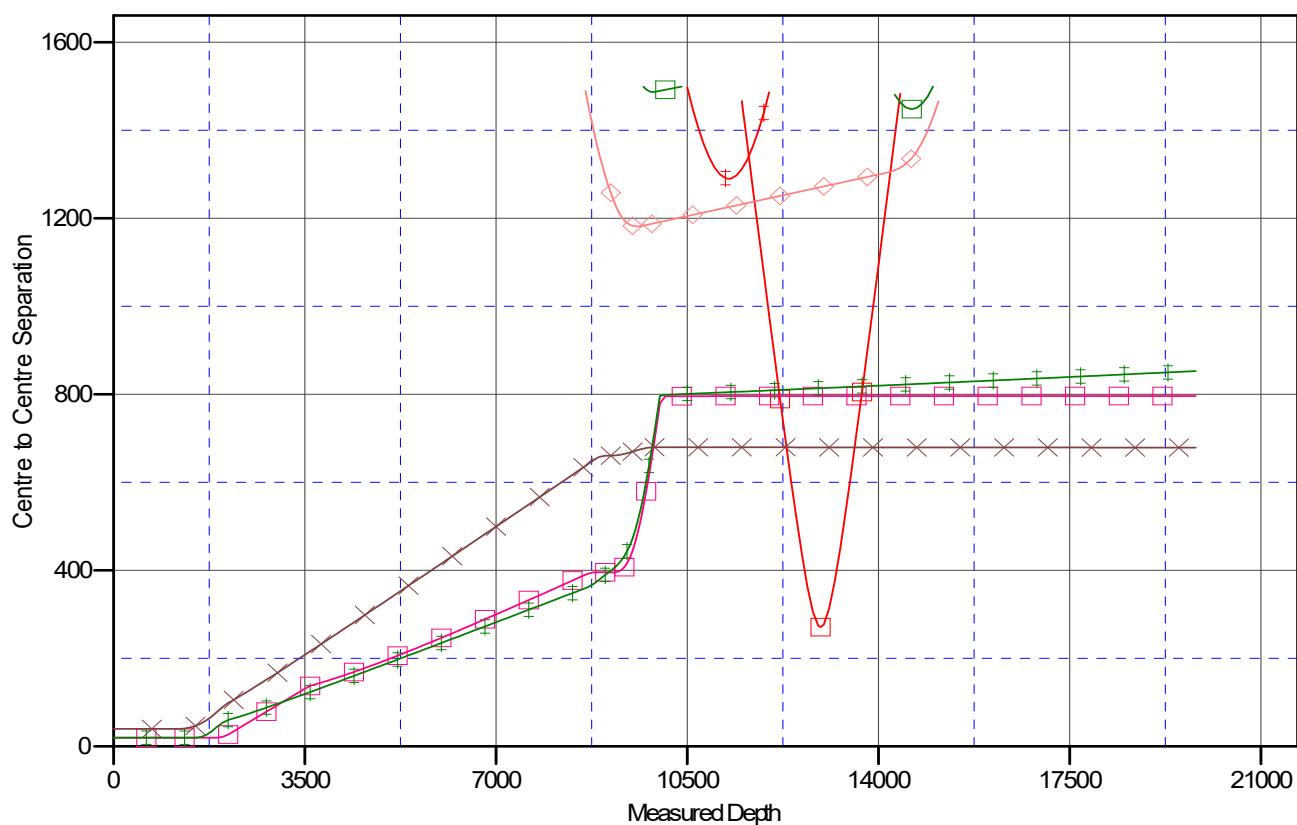
Central Meridian is -104.333334

Coordinates are relative to: Goonch Fed Com 0409 235H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Grid Convergence at Surface is: 0.13°

Ladder Plot



LEGEND

Loving Federal Com #001 (Active), Wellbore #1, Wellbore #1 V0	Goonch Fed Qm 0409 136H, Wellbore #1, Plan 0 V0	Goonch Fed Qm 0409 225H, Wellbore #1, Plan 0 V0
Swearingen #001 SWD (Active), Wellbore #1, Wellbore #1 V0	Goonch Fed Qm 0409 236H, Wellbore #1, Plan 0 V0	
Goonch Fed Qm 04 132H, Wellbore #1, Plan 2 V0	Goonch Fed Qm 04 212H, Wellbore #1, Plan 1 V0	

CC - Min centre to center distance or convergent 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 235H
Project:	EDDY CO., NM (NAD83)	TVD Reference:	RKB @ 3060.40usft
Reference Site:	SEC. 04-T23S-R28E	MD Reference:	RKB @ 3060.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Goonch Fed Com 0409 235H	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 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB @ 3060.40usft

Offset Depths are relative to Offset Datum

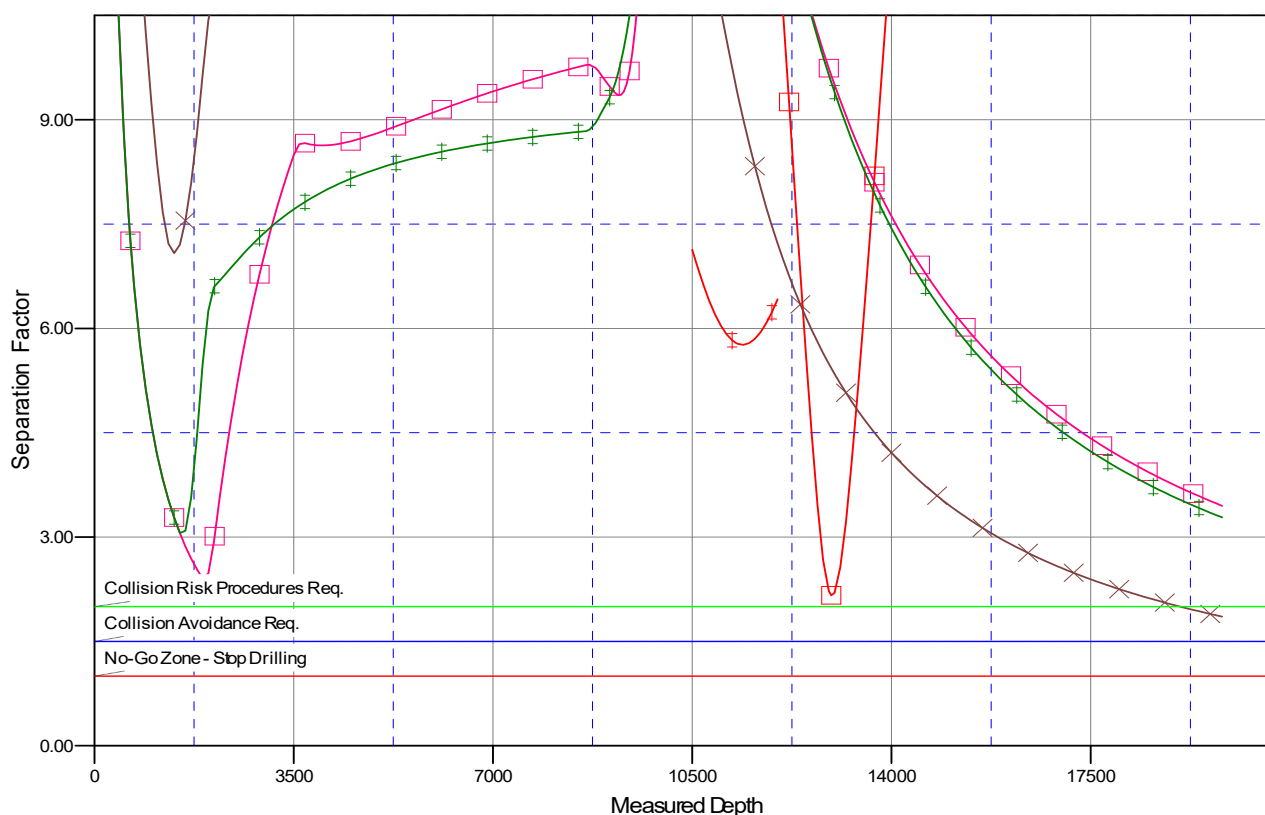
Central Meridian is -104.333334

Coordinates are relative to: Goonch Fed Com 0409 235H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Grid Convergence at Surface is: 0.13°

Separation Factor Plot



LEGEND

Loving Fedest Com #001 (Active), Wellbore#1, Wellbore #1 V0	Goonch Fed Com 0409 136H, Wellbore #1, Plan 0 V0	Goonch Fed Com 0409 225H, Wellbore #1, Plan 0 V0
Swearingen #001 SWD (Active), Wellbore #1, Wellbore #1 V0	Goonch Fed Com 0409 236H, Wellbore #1, Plan 0 V0	
Goonch Fed Com 04 132H, Wellbore #1, Plan 2 V0	Goonch Fed Com 04 212H, Wellbore #1, Plan 1 V0	

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



NOVO Oil & Gas

EDDY CO., NM (NAD83)

SEC. 04-T23S-R28E

Goonch Fed Com 0409 235H

Wellbore #1

Plan: Plan 1

Standard Planning Report - Geographic

11 March, 2021





SB Directional

Planning Report - Geographic



Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Goonch Fed Com 0409 235H
Company:	NOVO Oil & Gas	TVD Reference:	RKB @ 3060.40usft
Project:	EDDY CO., NM (NAD83)	MD Reference:	RKB @ 3060.40usft
Site:	SEC. 04-T23S-R28E	North Reference:	Grid
Well:	Goonch Fed Com 0409 235H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

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 235H					
Well Position	+N/-S	0.00 usft	Northing:	487,806.49 usft	Latitude:	32.340813
	+E/-W	0.00 usft	Easting:	617,093.77 usft	Longitude:	-104.088038
Position Uncertainty		0.50 usft	Wellhead Elevation:	usft	Ground Level:	3,035.40 usft
Grid Convergence:		0.13 °				

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	2021/02/22	6.83	59.94	47,544.28853691

Design	Plan 1				
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	2021/03/11			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	19,808.65 Plan 1 (Wellbore #1)	MWD	MWD - Standard	

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	
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,113.35	4.27	314.43	2,113.16	5.56	-5.67	2.00	2.00	0.00	314.43	
8,638.13	4.27	314.43	8,619.84	345.44	-352.33	0.00	0.00	0.00	0.00	
8,851.48	0.00	0.00	8,833.00	351.00	-358.00	2.00	-2.00	0.00	180.00	
9,001.52	0.00	0.00	8,983.04	351.00	-358.00	0.00	0.00	0.00	0.00	
9,901.52	90.00	179.99	9,556.00	-221.96	-357.95	10.00	10.00	0.00	179.99	PBHL - Goonch 04 23
19,808.65	90.00	179.99	9,556.00	-10,129.09	-357.02	0.00	0.00	0.00	0.00	PBHL - Goonch 04 23



SB Directional

Planning Report - Geographic



Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Goonch Fed Com 0409 235H
Company:	NOVO Oil & Gas	TVD Reference:	RKB @ 3060.40usft
Project:	EDDY CO., NM (NAD83)	MD Reference:	RKB @ 3060.40usft
Site:	SEC. 04-T23S-R28E	North Reference:	Grid
Well:	Goonch Fed Com 0409 235H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
100.00	0.00	0.00	100.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
200.00	0.00	0.00	200.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
300.00	0.00	0.00	300.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
400.00	0.00	0.00	400.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
500.00	0.00	0.00	500.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
600.00	0.00	0.00	600.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
700.00	0.00	0.00	700.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
800.00	0.00	0.00	800.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
900.00	0.00	0.00	900.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
1,000.00	0.00	0.00	1,000.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
1,100.00	0.00	0.00	1,100.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
1,200.00	0.00	0.00	1,200.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
1,300.00	0.00	0.00	1,300.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
1,400.00	0.00	0.00	1,400.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
1,500.00	0.00	0.00	1,500.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
1,600.00	0.00	0.00	1,600.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
1,700.00	0.00	0.00	1,700.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
1,800.00	0.00	0.00	1,800.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
1,900.00	0.00	0.00	1,900.00	0.00	0.00	487,806.49	617,093.77	32.340813	-104.088038
Start Nudge									
2,000.00	2.00	314.43	1,999.98	1.22	-1.25	487,807.71	617,092.53	32.340816	-104.088042
2,100.00	4.00	314.43	2,099.84	4.89	-4.98	487,811.38	617,088.79	32.340826	-104.088054
2,113.35	4.27	314.43	2,113.15	5.56	-5.67	487,812.05	617,088.10	32.340828	-104.088056
EOB									
2,200.00	4.27	314.43	2,199.56	10.07	-10.27	487,816.56	617,083.50	32.340841	-104.088071
2,300.00	4.27	314.43	2,299.29	15.28	-15.59	487,821.77	617,078.19	32.340855	-104.088088
2,400.00	4.27	314.43	2,399.01	20.49	-20.90	487,826.98	617,072.87	32.340869	-104.088105
2,500.00	4.27	314.43	2,498.73	25.70	-26.21	487,832.19	617,067.56	32.340884	-104.088122
2,600.00	4.27	314.43	2,598.45	30.91	-31.53	487,837.40	617,062.25	32.340898	-104.088140
2,700.00	4.27	314.43	2,698.18	36.12	-36.84	487,842.61	617,056.94	32.340913	-104.088157
2,800.00	4.27	314.43	2,797.90	41.33	-42.15	487,847.82	617,051.62	32.340927	-104.088174
2,900.00	4.27	314.43	2,897.62	46.54	-47.46	487,853.03	617,046.31	32.340941	-104.088191
3,000.00	4.27	314.43	2,997.35	51.75	-52.78	487,858.24	617,041.00	32.340956	-104.088208
3,100.00	4.27	314.43	3,097.07	56.95	-58.09	487,863.45	617,035.68	32.340970	-104.088225
3,200.00	4.27	314.43	3,196.79	62.16	-63.40	487,868.65	617,030.37	32.340984	-104.088243
3,300.00	4.27	314.43	3,296.51	67.37	-68.72	487,873.86	617,025.06	32.340999	-104.088260
3,400.00	4.27	314.43	3,396.24	72.58	-74.03	487,879.07	617,019.74	32.341013	-104.088277
3,500.00	4.27	314.43	3,495.96	77.79	-79.34	487,884.28	617,014.43	32.341027	-104.088294
3,600.00	4.27	314.43	3,595.68	83.00	-84.66	487,889.49	617,009.12	32.341042	-104.088311
3,700.00	4.27	314.43	3,695.40	88.21	-89.97	487,894.70	617,003.81	32.341056	-104.088328
3,800.00	4.27	314.43	3,795.13	93.42	-95.28	487,899.91	616,998.49	32.341070	-104.088346
3,900.00	4.27	314.43	3,894.85	98.63	-100.59	487,905.12	616,993.18	32.341085	-104.088363
4,000.00	4.27	314.43	3,994.57	103.84	-105.91	487,910.33	616,987.87	32.341099	-104.088380
4,100.00	4.27	314.43	4,094.30	109.05	-111.22	487,915.54	616,982.55	32.341113	-104.088397
4,200.00	4.27	314.43	4,194.02	114.25	-116.53	487,920.75	616,977.24	32.341128	-104.088414
4,300.00	4.27	314.43	4,293.74	119.46	-121.85	487,925.95	616,971.93	32.341142	-104.088431
4,400.00	4.27	314.43	4,393.46	124.67	-127.16	487,931.16	616,966.61	32.341157	-104.088449
4,500.00	4.27	314.43	4,493.19	129.88	-132.47	487,936.37	616,961.30	32.341171	-104.088466
4,600.00	4.27	314.43	4,592.91	135.09	-137.79	487,941.58	616,955.99	32.341185	-104.088483
4,700.00	4.27	314.43	4,692.63	140.30	-143.10	487,946.79	616,950.68	32.341200	-104.088500
4,800.00	4.27	314.43	4,792.36	145.51	-148.41	487,952.00	616,945.36	32.341214	-104.088517
4,900.00	4.27	314.43	4,892.08	150.72	-153.72	487,957.21	616,940.05	32.341228	-104.088534
5,000.00	4.27	314.43	4,991.80	155.93	-159.04	487,962.42	616,934.74	32.341243	-104.088552



SB Directional

Planning Report - Geographic



Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Goonch Fed Com 0409 235H
Company:	NOVO Oil & Gas	TVD Reference:	RKB @ 3060.40usft
Project:	EDDY CO., NM (NAD83)	MD Reference:	RKB @ 3060.40usft
Site:	SEC. 04-T23S-R28E	North Reference:	Grid
Well:	Goonch Fed Com 0409 235H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,100.00	4.27	314.43	5,091.52	161.14	-164.35	487,967.63	616,929.42	32.341257	-104.088569
5,200.00	4.27	314.43	5,191.25	166.35	-169.66	487,972.84	616,924.11	32.341271	-104.088586
5,300.00	4.27	314.43	5,290.97	171.55	-174.98	487,978.05	616,918.80	32.341286	-104.088603
5,400.00	4.27	314.43	5,390.69	176.76	-180.29	487,983.25	616,913.48	32.341300	-104.088620
5,500.00	4.27	314.43	5,490.42	181.97	-185.60	487,988.46	616,908.17	32.341314	-104.088637
5,600.00	4.27	314.43	5,590.14	187.18	-190.91	487,993.67	616,902.86	32.341329	-104.088655
5,700.00	4.27	314.43	5,689.86	192.39	-196.23	487,998.88	616,897.55	32.341343	-104.088672
5,800.00	4.27	314.43	5,789.58	197.60	-201.54	488,004.09	616,892.23	32.341357	-104.088689
5,900.00	4.27	314.43	5,889.31	202.81	-206.85	488,009.30	616,886.92	32.341372	-104.088706
6,000.00	4.27	314.43	5,989.03	208.02	-212.17	488,014.51	616,881.61	32.341386	-104.088723
6,100.00	4.27	314.43	6,088.75	213.23	-217.48	488,019.72	616,876.29	32.341401	-104.088740
6,200.00	4.27	314.43	6,188.47	218.44	-222.79	488,024.93	616,870.98	32.341415	-104.088758
6,300.00	4.27	314.43	6,288.20	223.65	-228.11	488,030.14	616,865.67	32.341429	-104.088775
6,400.00	4.27	314.43	6,387.92	228.85	-233.42	488,035.35	616,860.36	32.341444	-104.088792
6,500.00	4.27	314.43	6,487.64	234.06	-238.73	488,040.55	616,855.04	32.341458	-104.088809
6,600.00	4.27	314.43	6,587.37	239.27	-244.04	488,045.76	616,849.73	32.341472	-104.088826
6,700.00	4.27	314.43	6,687.09	244.48	-249.36	488,050.97	616,844.42	32.341487	-104.088843
6,800.00	4.27	314.43	6,786.81	249.69	-254.67	488,056.18	616,839.10	32.341501	-104.088861
6,900.00	4.27	314.43	6,886.53	254.90	-259.98	488,061.39	616,833.79	32.341515	-104.088878
7,000.00	4.27	314.43	6,986.26	260.11	-265.30	488,066.60	616,828.48	32.341530	-104.088895
7,100.00	4.27	314.43	7,085.98	265.32	-270.61	488,071.81	616,823.16	32.341544	-104.088912
7,200.00	4.27	314.43	7,185.70	270.53	-275.92	488,077.02	616,817.85	32.341558	-104.088929
7,300.00	4.27	314.43	7,285.43	275.74	-281.24	488,082.23	616,812.54	32.341573	-104.088946
7,400.00	4.27	314.43	7,385.15	280.95	-286.55	488,087.44	616,807.23	32.341587	-104.088964
7,500.00	4.27	314.43	7,484.87	286.15	-291.86	488,092.65	616,801.91	32.341601	-104.088981
7,600.00	4.27	314.43	7,584.59	291.36	-297.17	488,097.85	616,796.60	32.341616	-104.088998
7,700.00	4.27	314.43	7,684.32	296.57	-302.49	488,103.06	616,791.29	32.341630	-104.089015
7,800.00	4.27	314.43	7,784.04	301.78	-307.80	488,108.27	616,785.97	32.341645	-104.089032
7,900.00	4.27	314.43	7,883.76	306.99	-313.11	488,113.48	616,780.66	32.341659	-104.089049
8,000.00	4.27	314.43	7,983.49	312.20	-318.43	488,118.69	616,775.35	32.341673	-104.089066
8,100.00	4.27	314.43	8,083.21	317.41	-323.74	488,123.90	616,770.03	32.341688	-104.089084
8,200.00	4.27	314.43	8,182.93	322.62	-329.05	488,129.11	616,764.72	32.341702	-104.089101
8,300.00	4.27	314.43	8,282.65	327.83	-334.37	488,134.32	616,759.41	32.341716	-104.089118
8,400.00	4.27	314.43	8,382.38	333.04	-339.68	488,139.53	616,754.10	32.341731	-104.089135
8,500.00	4.27	314.43	8,482.10	338.25	-344.99	488,144.74	616,748.78	32.341745	-104.089152
8,600.00	4.27	314.43	8,581.82	343.45	-350.30	488,149.95	616,743.47	32.341759	-104.089169
8,638.13	4.27	314.43	8,619.85	345.44	-352.33	488,151.93	616,741.44	32.341765	-104.089176
EOH									
8,700.00	3.03	314.43	8,681.59	348.20	-355.14	488,154.69	616,738.63	32.341772	-104.089185
8,800.00	1.03	314.43	8,781.52	350.68	-357.67	488,157.17	616,736.10	32.341779	-104.089193
8,851.48	0.00	0.00	8,833.00	351.00	-358.00	488,157.49	616,735.77	32.341780	-104.089194
Drop to Vertical									
8,900.00	0.00	0.00	8,881.52	351.00	-358.00	488,157.49	616,735.77	32.341780	-104.089194
9,000.00	0.00	0.00	8,981.52	351.00	-358.00	488,157.49	616,735.77	32.341780	-104.089194
9,001.52	0.00	0.00	8,983.04	351.00	-358.00	488,157.49	616,735.77	32.341780	-104.089194
KOP @ 8983' TVD									
9,100.00	9.85	179.99	9,081.04	342.56	-358.00	488,149.05	616,735.77	32.341757	-104.089194
9,200.00	19.85	179.99	9,177.57	316.96	-358.00	488,123.46	616,735.78	32.341687	-104.089195
9,300.00	29.85	179.99	9,268.20	275.00	-357.99	488,081.49	616,735.78	32.341571	-104.089195
9,400.00	39.85	179.99	9,350.16	217.93	-357.99	488,024.42	616,735.79	32.341414	-104.089195
9,500.00	49.85	179.99	9,420.97	147.50	-357.98	487,953.99	616,735.79	32.341221	-104.089196
9,600.00	59.85	179.99	9,478.47	65.84	-357.97	487,872.33	616,735.80	32.340996	-104.089196
9,700.00	69.85	179.99	9,520.92	-24.57	-357.96	487,781.92	616,735.81	32.340748	-104.089197
9,800.00	79.85	179.99	9,547.03	-120.97	-357.96	487,685.52	616,735.82	32.340483	-104.089198



SB Directional

Planning Report - Geographic



Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Goonch Fed Com 0409 235H
Company:	NOVO Oil & Gas	TVD Reference:	RKB @ 3060.40usft
Project:	EDDY CO., NM (NAD83)	MD Reference:	RKB @ 3060.40usft
Site:	SEC. 04-T23S-R28E	North Reference:	Grid
Well:	Goonch Fed Com 0409 235H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,900.00	89.85	179.99	9,556.00	-220.44	-357.95	487,586.05	616,735.83	32.340209	-104.089198
9,901.52	90.00	179.99	9,556.00	-221.96	-357.95	487,584.53	616,735.83	32.340205	-104.089198
LP @ 9556' TVD									
10,000.00	90.00	179.99	9,556.00	-320.44	-357.94	487,486.05	616,735.84	32.339934	-104.089199
10,100.00	90.00	179.99	9,556.00	-420.44	-357.93	487,386.05	616,735.85	32.339660	-104.089200
10,200.00	90.00	179.99	9,556.00	-520.44	-357.92	487,286.05	616,735.86	32.339385	-104.089201
10,300.00	90.00	179.99	9,556.00	-620.44	-357.91	487,186.05	616,735.86	32.339110	-104.089201
10,400.00	90.00	179.99	9,556.00	-720.44	-357.90	487,086.05	616,735.87	32.338835	-104.089202
10,500.00	90.00	179.99	9,556.00	-820.44	-357.89	486,986.05	616,735.88	32.338560	-104.089203
10,600.00	90.00	179.99	9,556.00	-920.44	-357.88	486,886.05	616,735.89	32.338285	-104.089203
10,700.00	90.00	179.99	9,556.00	-1,020.44	-357.87	486,786.05	616,735.90	32.338010	-104.089204
10,800.00	90.00	179.99	9,556.00	-1,120.44	-357.86	486,686.05	616,735.91	32.337735	-104.089205
10,900.00	90.00	179.99	9,556.00	-1,220.44	-357.85	486,586.05	616,735.92	32.337460	-104.089205
11,000.00	90.00	179.99	9,556.00	-1,320.44	-357.84	486,486.05	616,735.93	32.337186	-104.089206
11,100.00	90.00	179.99	9,556.00	-1,420.44	-357.83	486,386.05	616,735.94	32.336911	-104.089207
11,200.00	90.00	179.99	9,556.00	-1,520.44	-357.83	486,286.05	616,735.95	32.336636	-104.089208
11,300.00	90.00	179.99	9,556.00	-1,620.44	-357.82	486,186.05	616,735.96	32.336361	-104.089208
11,400.00	90.00	179.99	9,556.00	-1,720.44	-357.81	486,086.05	616,735.97	32.336086	-104.089209
11,500.00	90.00	179.99	9,556.00	-1,820.44	-357.80	485,986.05	616,735.98	32.335811	-104.089210
11,600.00	90.00	179.99	9,556.00	-1,920.44	-357.79	485,886.05	616,735.99	32.335536	-104.089210
11,700.00	90.00	179.99	9,556.00	-2,020.44	-357.78	485,786.05	616,736.00	32.335261	-104.089211
11,800.00	90.00	179.99	9,556.00	-2,120.44	-357.77	485,686.05	616,736.00	32.334987	-104.089212
11,900.00	90.00	179.99	9,556.00	-2,220.44	-357.76	485,586.05	616,736.01	32.334712	-104.089213
12,000.00	90.00	179.99	9,556.00	-2,320.44	-357.75	485,486.05	616,736.02	32.334437	-104.089213
12,100.00	90.00	179.99	9,556.00	-2,420.44	-357.74	485,386.05	616,736.03	32.334162	-104.089214
12,200.00	90.00	179.99	9,556.00	-2,520.44	-357.73	485,286.05	616,736.04	32.333887	-104.089215
12,300.00	90.00	179.99	9,556.00	-2,620.44	-357.72	485,186.05	616,736.05	32.333612	-104.089215
12,400.00	90.00	179.99	9,556.00	-2,720.44	-357.71	485,086.05	616,736.06	32.333337	-104.089216
12,500.00	90.00	179.99	9,556.00	-2,820.44	-357.70	484,986.05	616,736.07	32.333062	-104.089217
12,600.00	90.00	179.99	9,556.00	-2,920.44	-357.69	484,886.05	616,736.08	32.332787	-104.089218
12,700.00	90.00	179.99	9,556.00	-3,020.44	-357.68	484,786.05	616,736.09	32.332513	-104.089218
12,800.00	90.00	179.99	9,556.00	-3,120.44	-357.68	484,686.05	616,736.10	32.332238	-104.089219
12,900.00	90.00	179.99	9,556.00	-3,220.44	-357.67	484,586.05	616,736.11	32.331963	-104.089220
13,000.00	90.00	179.99	9,556.00	-3,320.44	-357.66	484,486.05	616,736.12	32.331688	-104.089220
13,100.00	90.00	179.99	9,556.00	-3,420.44	-357.65	484,386.05	616,736.13	32.331413	-104.089221
13,200.00	90.00	179.99	9,556.00	-3,520.44	-357.64	484,286.05	616,736.14	32.331138	-104.089222
13,300.00	90.00	179.99	9,556.00	-3,620.44	-357.63	484,186.05	616,736.15	32.330863	-104.089222
13,400.00	90.00	179.99	9,556.00	-3,720.44	-357.62	484,086.05	616,736.15	32.330588	-104.089223
13,500.00	90.00	179.99	9,556.00	-3,820.44	-357.61	483,986.05	616,736.16	32.330314	-104.089224
13,600.00	90.00	179.99	9,556.00	-3,920.44	-357.60	483,886.05	616,736.17	32.330039	-104.089225
13,700.00	90.00	179.99	9,556.00	-4,020.44	-357.59	483,786.05	616,736.18	32.329764	-104.089225
13,800.00	90.00	179.99	9,556.00	-4,120.44	-357.58	483,686.05	616,736.19	32.329489	-104.089226
13,900.00	90.00	179.99	9,556.00	-4,220.44	-357.57	483,586.05	616,736.20	32.329214	-104.089227
14,000.00	90.00	179.99	9,556.00	-4,320.44	-357.56	483,486.05	616,736.21	32.328939	-104.089227
14,100.00	90.00	179.99	9,556.00	-4,420.44	-357.55	483,386.05	616,736.22	32.328664	-104.089228
14,200.00	90.00	179.99	9,556.00	-4,520.44	-357.54	483,286.05	616,736.23	32.328389	-104.089229
14,300.00	90.00	179.99	9,556.00	-4,620.44	-357.54	483,186.05	616,736.24	32.328114	-104.089230
14,400.00	90.00	179.99	9,556.00	-4,720.44	-357.53	483,086.05	616,736.25	32.327840	-104.089230
14,500.00	90.00	179.99	9,556.00	-4,820.44	-357.52	482,986.05	616,736.26	32.327565	-104.089231
14,600.00	90.00	179.99	9,556.00	-4,920.44	-357.51	482,886.05	616,736.27	32.327290	-104.089232
14,700.00	90.00	179.99	9,556.00	-5,020.44	-357.50	482,786.05	616,736.28	32.327015	-104.089232
14,800.00	90.00	179.99	9,556.00	-5,120.44	-357.49	482,686.05	616,736.29	32.326740	-104.089233
14,900.00	90.00	179.99	9,556.00	-5,220.44	-357.48	482,586.05	616,736.29	32.326465	-104.089234
15,000.00	90.00	179.99	9,556.00	-5,320.44	-357.47	482,486.05	616,736.30	32.326190	-104.089234



SB Directional

Planning Report - Geographic



Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Goonch Fed Com 0409 235H
Company:	NOVO Oil & Gas	TVD Reference:	RKB @ 3060.40usft
Project:	EDDY CO., NM (NAD83)	MD Reference:	RKB @ 3060.40usft
Site:	SEC. 04-T23S-R28E	North Reference:	Grid
Well:	Goonch Fed Com 0409 235H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
15,100.00	90.00	179.99	9,556.00	-5,420.44	-357.46	482,386.05	616,736.31	32.325915	-104.089235	
15,200.00	90.00	179.99	9,556.00	-5,520.44	-357.45	482,286.05	616,736.32	32.325641	-104.089236	
15,300.00	90.00	179.99	9,556.00	-5,620.44	-357.44	482,186.05	616,736.33	32.325366	-104.089237	
15,400.00	90.00	179.99	9,556.00	-5,720.44	-357.43	482,086.05	616,736.34	32.325091	-104.089237	
15,500.00	90.00	179.99	9,556.00	-5,820.44	-357.42	481,986.05	616,736.35	32.324816	-104.089238	
15,600.00	90.00	179.99	9,556.00	-5,920.44	-357.41	481,886.05	616,736.36	32.324541	-104.089239	
15,700.00	90.00	179.99	9,556.00	-6,020.44	-357.40	481,786.05	616,736.37	32.324266	-104.089239	
15,800.00	90.00	179.99	9,556.00	-6,120.44	-357.39	481,686.05	616,736.38	32.323991	-104.089240	
15,900.00	90.00	179.99	9,556.00	-6,220.44	-357.39	481,586.05	616,736.39	32.323716	-104.089241	
16,000.00	90.00	179.99	9,556.00	-6,320.44	-357.38	481,486.05	616,736.40	32.323441	-104.089242	
16,100.00	90.00	179.99	9,556.00	-6,420.44	-357.37	481,386.05	616,736.41	32.323167	-104.089242	
16,200.00	90.00	179.99	9,556.00	-6,520.44	-357.36	481,286.05	616,736.42	32.322892	-104.089243	
16,300.00	90.00	179.99	9,556.00	-6,620.44	-357.35	481,186.05	616,736.43	32.322617	-104.089244	
16,400.00	90.00	179.99	9,556.00	-6,720.44	-357.34	481,086.05	616,736.44	32.322342	-104.089244	
16,500.00	90.00	179.99	9,556.00	-6,820.44	-357.33	480,986.05	616,736.44	32.322067	-104.089245	
16,600.00	90.00	179.99	9,556.00	-6,920.44	-357.32	480,886.05	616,736.45	32.321792	-104.089246	
16,700.00	90.00	179.99	9,556.00	-7,020.44	-357.31	480,786.05	616,736.46	32.321517	-104.089247	
16,800.00	90.00	179.99	9,556.00	-7,120.44	-357.30	480,686.05	616,736.47	32.321242	-104.089247	
16,900.00	90.00	179.99	9,556.00	-7,220.44	-357.29	480,586.05	616,736.48	32.320967	-104.089248	
17,000.00	90.00	179.99	9,556.00	-7,320.44	-357.28	480,486.05	616,736.49	32.320693	-104.089249	
17,100.00	90.00	179.99	9,556.00	-7,420.44	-357.27	480,386.05	616,736.50	32.320418	-104.089249	
17,200.00	90.00	179.99	9,556.00	-7,520.44	-357.26	480,286.05	616,736.51	32.320143	-104.089250	
17,300.00	90.00	179.99	9,556.00	-7,620.44	-357.25	480,186.05	616,736.52	32.319868	-104.089251	
17,400.00	90.00	179.99	9,556.00	-7,720.44	-357.25	480,086.05	616,736.53	32.319593	-104.089251	
17,500.00	90.00	179.99	9,556.00	-7,820.44	-357.24	479,986.05	616,736.54	32.319318	-104.089252	
17,600.00	90.00	179.99	9,556.00	-7,920.44	-357.23	479,886.05	616,736.55	32.319043	-104.089253	
17,700.00	90.00	179.99	9,556.00	-8,020.44	-357.22	479,786.05	616,736.56	32.318768	-104.089254	
17,800.00	90.00	179.99	9,556.00	-8,120.44	-357.21	479,686.05	616,736.57	32.318494	-104.089254	
17,900.00	90.00	179.99	9,556.00	-8,220.44	-357.20	479,586.05	616,736.58	32.318219	-104.089255	
18,000.00	90.00	179.99	9,556.00	-8,320.44	-357.19	479,486.05	616,736.58	32.317944	-104.089256	
18,100.00	90.00	179.99	9,556.00	-8,420.44	-357.18	479,386.05	616,736.59	32.317669	-104.089256	
18,200.00	90.00	179.99	9,556.00	-8,520.44	-357.17	479,286.05	616,736.60	32.317394	-104.089257	
18,300.00	90.00	179.99	9,556.00	-8,620.44	-357.16	479,186.05	616,736.61	32.317119	-104.089258	
18,400.00	90.00	179.99	9,556.00	-8,720.44	-357.15	479,086.05	616,736.62	32.316844	-104.089259	
18,500.00	90.00	179.99	9,556.00	-8,820.44	-357.14	478,986.05	616,736.63	32.316569	-104.089259	
18,600.00	90.00	179.99	9,556.00	-8,920.44	-357.13	478,886.05	616,736.64	32.316294	-104.089260	
18,700.00	90.00	179.99	9,556.00	-9,020.44	-357.12	478,786.05	616,736.65	32.316020	-104.089261	
18,800.00	90.00	179.99	9,556.00	-9,120.44	-357.11	478,686.05	616,736.66	32.315745	-104.089261	
18,900.00	90.00	179.99	9,556.00	-9,220.44	-357.10	478,586.05	616,736.67	32.315470	-104.089262	
19,000.00	90.00	179.99	9,556.00	-9,320.44	-357.10	478,486.05	616,736.68	32.315195	-104.089263	
19,100.00	90.00	179.99	9,556.00	-9,420.44	-357.09	478,386.05	616,736.69	32.314920	-104.089263	
19,200.00	90.00	179.99	9,556.00	-9,520.44	-357.08	478,286.05	616,736.70	32.314645	-104.089264	
19,300.00	90.00	179.99	9,556.00	-9,620.44	-357.07	478,186.05	616,736.71	32.314370	-104.089265	
19,400.00	90.00	179.99	9,556.00	-9,720.44	-357.06	478,086.05	616,736.72	32.314095	-104.089266	
19,500.00	90.00	179.99	9,556.00	-9,820.44	-357.05	477,986.05	616,736.72	32.313820	-104.089266	
19,600.00	90.00	179.99	9,556.00	-9,920.44	-357.04	477,886.05	616,736.73	32.313546	-104.089267	
19,700.00	90.00	179.99	9,556.00	-10,020.44	-357.03	477,786.05	616,736.74	32.313271	-104.089268	
19,800.00	90.00	179.99	9,556.00	-10,120.44	-357.02	477,686.05	616,736.75	32.312996	-104.089268	
19,808.65	90.00	179.99	9,556.00	-10,129.09	-357.02	477,677.40	616,736.75	32.312972	-104.089268	
PBHL; 130' FSL, 1650' FEL										



SB Directional

Planning Report - Geographic



Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Goonch Fed Com 0409 235H
Company:	NOVO Oil & Gas	TVD Reference:	RKB @ 3060.40usft
Project:	EDDY CO., NM (NAD83)	MD Reference:	RKB @ 3060.40usft
Site:	SEC. 04-T23S-R28E	North Reference:	Grid
Well:	Goonch Fed Com 0409 235H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL - Goonch 04 235H - hit/miss target - Shape	0.00	0.00	0.00	-10,129.09	-357.02	477,677.40	616,736.75	32.312972	-104.089268
- plan misses target center by 9556.00usft at 19808.65usft MD (9556.00 TVD, -10129.09 N, -357.02 E)									
- Point									

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
14,527.23	9,556.00	20" Casing	20	24

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,900.00	1,900.00	0.00	0.00	Start Nudge
2,113.35	2,113.15	5.56	-5.67	EOB
8,638.13	8,619.85	345.44	-352.33	EOH
8,851.48	8,833.00	351.00	-358.00	Drop to Vertical
9,001.52	8,983.04	351.00	-358.00	KOP @ 8983' TVD
9,901.52	9,556.00	-221.96	-357.95	LP @ 9556' TVD
19,808.65	9,556.00	-10,129.09	-357.02	PBHL; 130' FSL, 1650' 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

Action 29373

COMMENTS

Operator: NOVO OIL & GAS NORTHERN DELAWARE, LLC 1001 West Wilshire Blvd Oklahoma City, OK 73116	OGRID: 372920
	Action Number: 29373
	Action Type: [C-103] NOI Change of Plans (C-103A)

COMMENTS

Created By	Comment	Comment Date
kpickford	KP GEO Review 5/27/2021	5/27/2021

District I
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CONDITIONS

Action 29373

CONDITIONS

Operator: NOVO OIL & GAS NORTHERN DELAWARE, LLC 1001 West Wilshire Blvd Oklahoma City, OK 73116	OGRID: 372920
	Action Number: 29373
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Adhere to previous NMOCD Conditions of Approval	5/27/2021