

Well Name: GOONCH FED COM 0409	Well Location: T23S / R28E / SEC 4 / LOT 2 / 32.3406399 / -104.0881831	County or Parish/State: EDDY / NM
Well Number: 136H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM13233	Unit or CA Name:	Unit or CA Number:
US Well Number: 300154788400X1	Well Status: Approved Application for Permit to Drill	Operator: NOVO OIL AND GAS NORTHERN DELAWARE LLC

Notice of Intent

Type of Submission: Notice of Intent	Type of Action Other
Date Sundry Submitted: 04/08/2021	Time Sundry Submitted: 09:06
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 & 1,254' FEL, Sec. 9, T23S, R28E, from the previously approved location of 10' FSL & 1,914' FWL, Sec. 4, T23S, R28E. Request to change the target formation to Wolfcamp B from Third Bone Spring. Change the intermediate casing size to 8-5/8" from the previously approved 9-5/8". See attachments for details.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

- NOVO_Goonch_Fed_Com_0409_136H_plot_Plan_1_20210408090619.pdf
- NOVO_Goonch_Fed_Com_0409_136H_Plan_1_20210408090614.xlsx
- NOVO_Goonch_Fed_Com_0409_136H_Plan_1_20210408090608.pdf
- NOVO_Goonch_Fed_Com_0409_136H_AC_Report_Plan_1_20210408090601.pdf
- 5.500_20_P110EC_DWC_C_IS_PLUS_20210408090550.pdf
- 8.625_32.00_P110HSCY_TLW_20210408090540.pdf
- GOONCH_FED_COM_0409_136H_signed_20210408090530.pdf
- Drill_Plan_3S_10K_GOONCH_FED_COM_0409_136H_031821_20210408090523.pdf
- Goonch_0409_136H_Change_to_Sundry_Request_v.2_20210408090502.pdf

Received by OCD: 5/25/2021 7:56:13 AM

Page 2 of 80

Well Name: GOONCH FED COM 0409	Well Location: T23S / R28E / SEC 4 / LOT 2 / 32.3406399 / -104.0881831	County or Parish/State: EDDY / NM
Well Number: 136H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM13233	Unit or CA Name:	Unit or CA Number:
US Well Number: 300154788400X1	Well Status: Approved Application for Permit to Drill	Operator: NOVO OIL AND GAS NORTHERN DELAWARE LLC

Conditions of Approval

Additional Reviews

Goonch_FED_COM_0409_136H_APD_CHANGE_SUNDRY_Drilling_COAs_20210418182123.pdf

Operator Certification

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: JUSTIN CARTER

Signed on: APR 08, 2021 09:06 AM

Name: NOVO OIL AND GAS NORTHERN DELAWARE LLC

Title: Landman

Street Address: 1001 West Wilshire Boulevard Suite 206

City: Oklahoma CityState: 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 30-015-47884	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 136H
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		416	NORTH	1280	EAST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	9	23 S	28 E		130	SOUTH	1254	EAST	EDDY

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

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

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 NAVD83. BOTTOM OF HOLE LAT. = 32.3129752°N LONG. = 104.0879867°W NMSP EAST (FT) N = 477679.48 E = 617132.66	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. <i>Justin Carter</i> 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. FEBRUARY 22, 2021 Date of Survey <i>FILMON F. JARAMILLO</i> Signature and Seal of Professional Surveyor Certificate Number: FILMON F. JARAMILLO, PLS 12797 SURVEY NO. 7273D
--	---

Intent ☐ As Drilled ☐

API #		
Operator Name: NOVO OIL & GAS NORTHERN DELAWARE, LLC	Property Name: GOONCH FED COM 0409	Well Number 136H

Kick Off Point (KOP)

UL	Section 4	Township 23S	Range 28E	Lot 1	Feet 416	From N/S NORTH	Feet 1280	From E/W EAST	County EDDY
Latitude 32.3407707					Longitude 104.0879962			NAD 83	

First Take Point (FTP)

UL	Section 4	Township 23S	Range 28E	Lot 1	Feet 330	From N/S NORTH	Feet 1254	From E/W EAST	County EDDY
Latitude 32.3410079					Longitude 104.0879176			NAD 83	

Last Take Point (LTP)

UL P	Section 9	Township 23S	Range 28E	Lot	Feet 330	From N/S SOUTH	Feet 1254	From E/W EAST	County EDDY
Latitude 32.3135248					Longitude 104.0879930			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

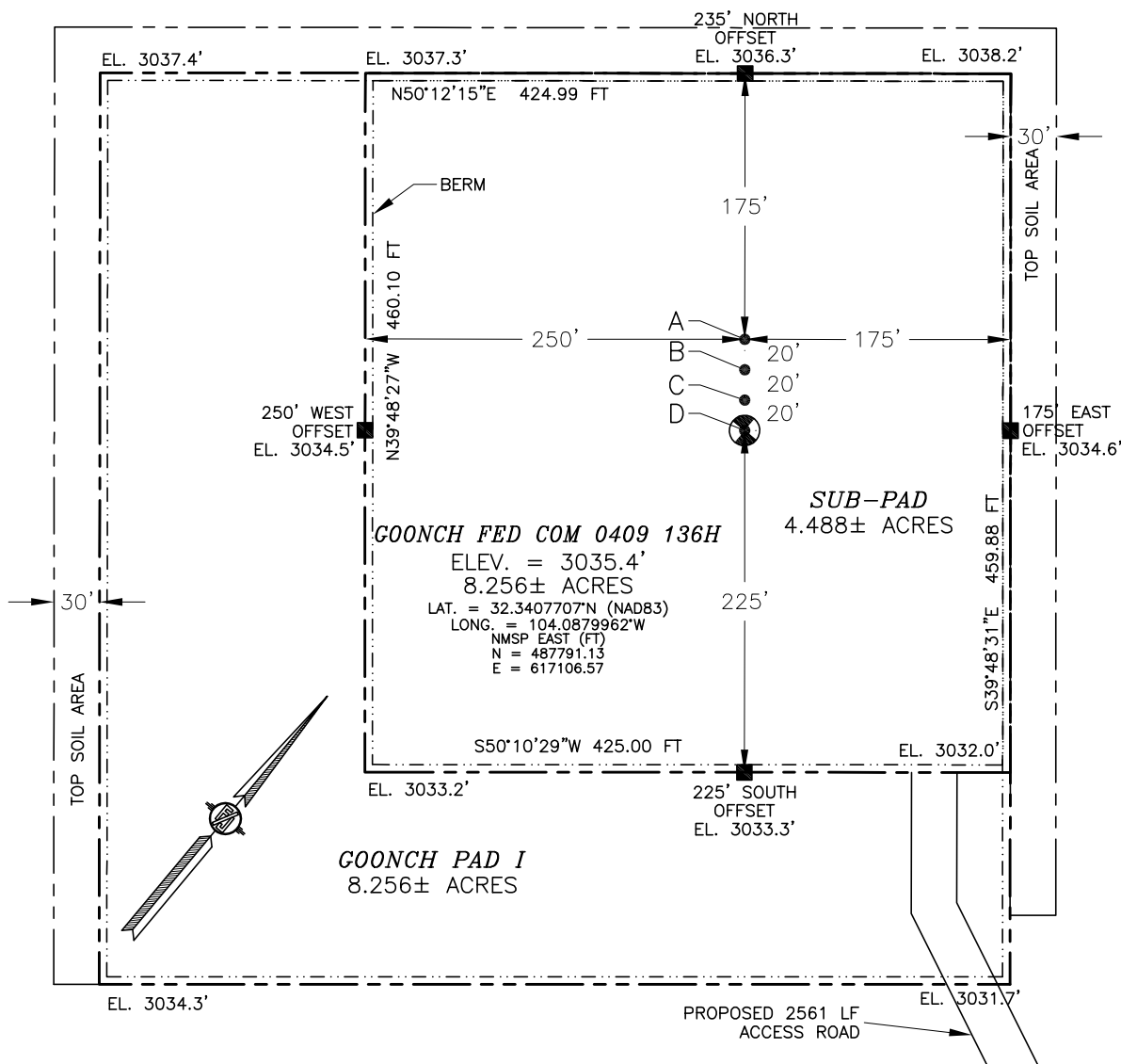
KZ 06/29/2018

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



0 12 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, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY WAS DONE TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT I AM A MEMBER OF THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

FILIMON F. JARAMILLO, LICENSE # 12797

MADDOX SURVEYING, INC.

301 SOUTH CANAL
 (575) 234-3341

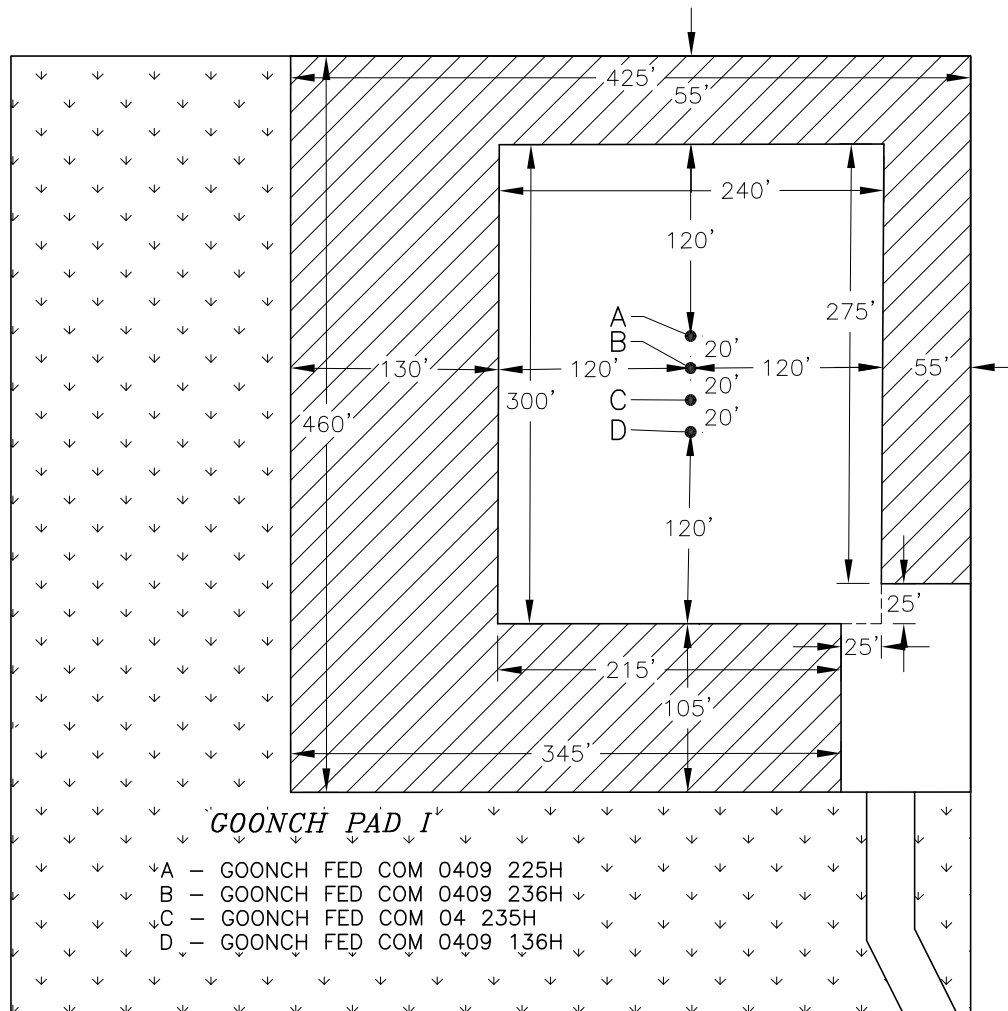
NOVO OIL & GAS NORTHERN DELAWARE, LLC
GOONCH FED COM 0409 136H
 LOCATED 416 FT. FROM THE NORTH LINE
 AND 1280 FT. FROM THE EAST LINE OF
 SECTION 4, TOWNSHIP 23 SOUTH,
 RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

FEBRUARY 22, 2021

SURVEY NO. 7273D

CARLSBAD, NEW MEXICO

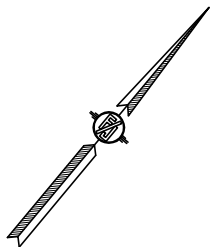
SECTION 4, TOWNSHIP 23 SOUTH, RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO
 INTERIM SITE BUILD PLAN



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



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 0409 136H
 LOCATED 416 FT. FROM THE NORTH LINE
 AND 1280 FT. FROM THE EAST LINE OF
 SECTION 4, TOWNSHIP 23 SOUTH,
 RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

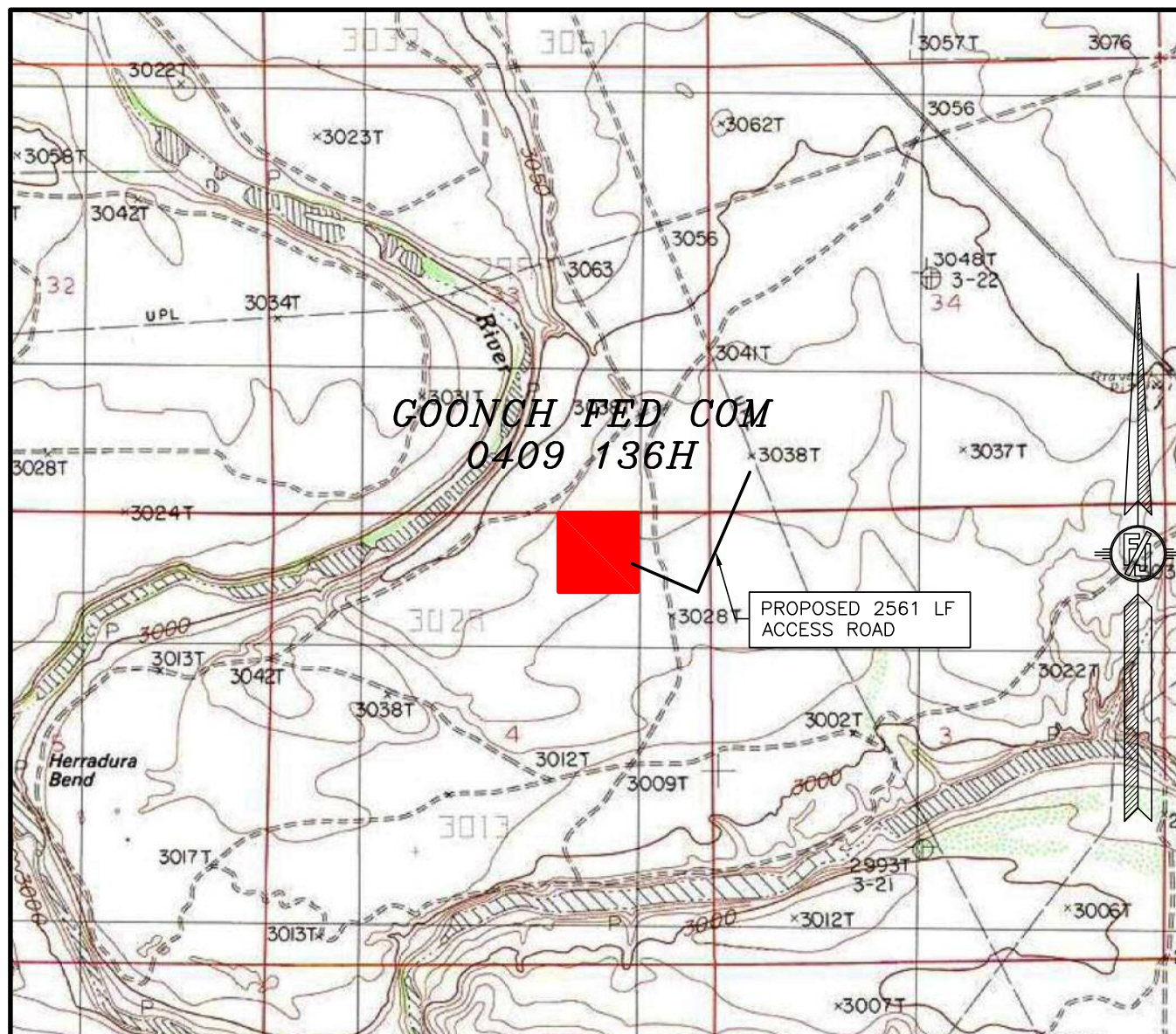
FEBRUARY 22, 2021

SURVEY NO. 7273D

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 0409 136H
 LOCATED 416 FT. FROM THE NORTH LINE
 AND 1280 FT. FROM THE EAST LINE OF
 SECTION 4, TOWNSHIP 23 SOUTH,
 RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

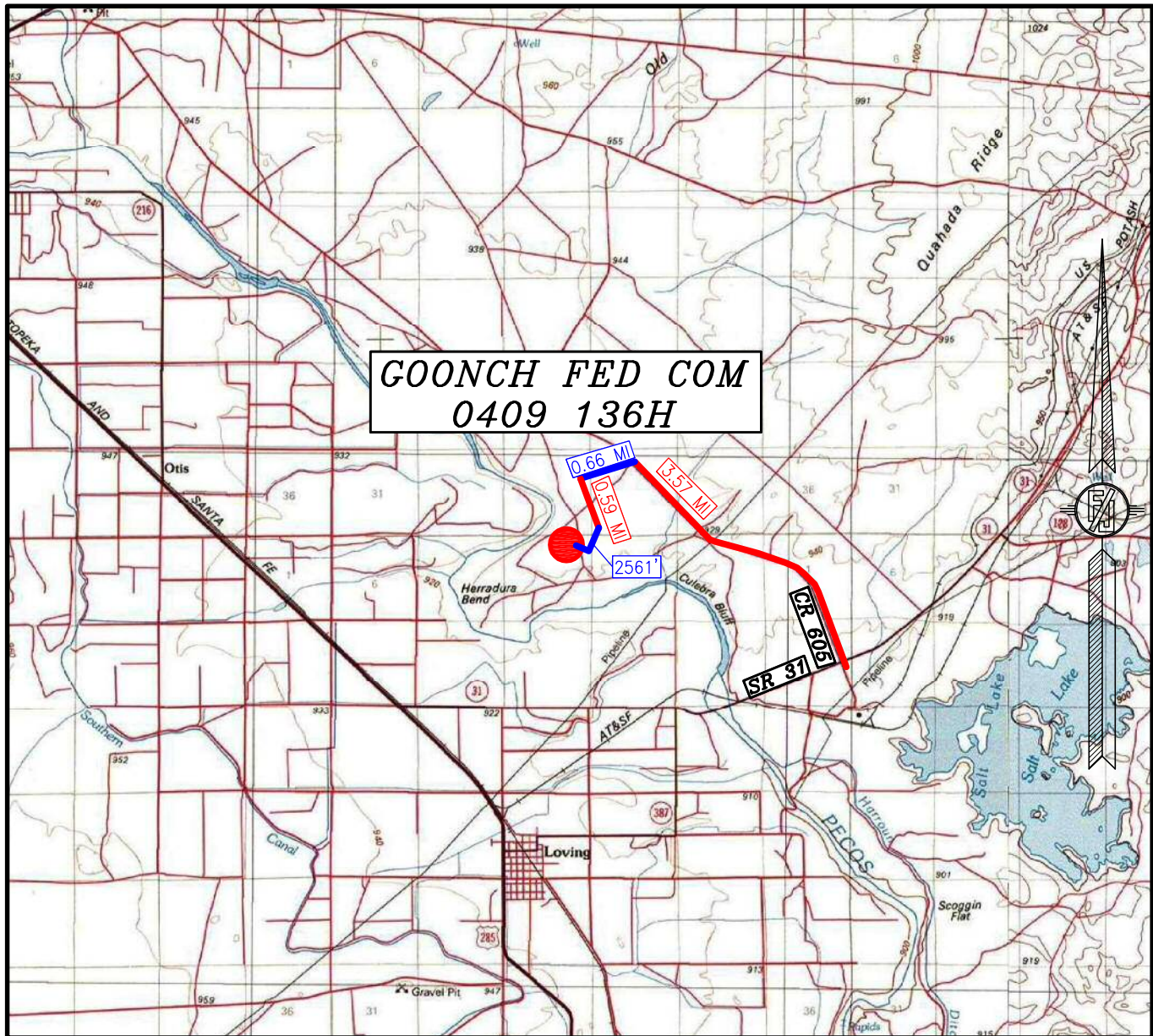
FEBRUARY 22, 2021

MADRON SURVEYING, INC.

301 SOUTH CANAL
 (575) 234-3341

SURVEY NO. 7273D
 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 0409 136H

LOCATED 416 FT. FROM THE NORTH LINE
 AND 1280 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

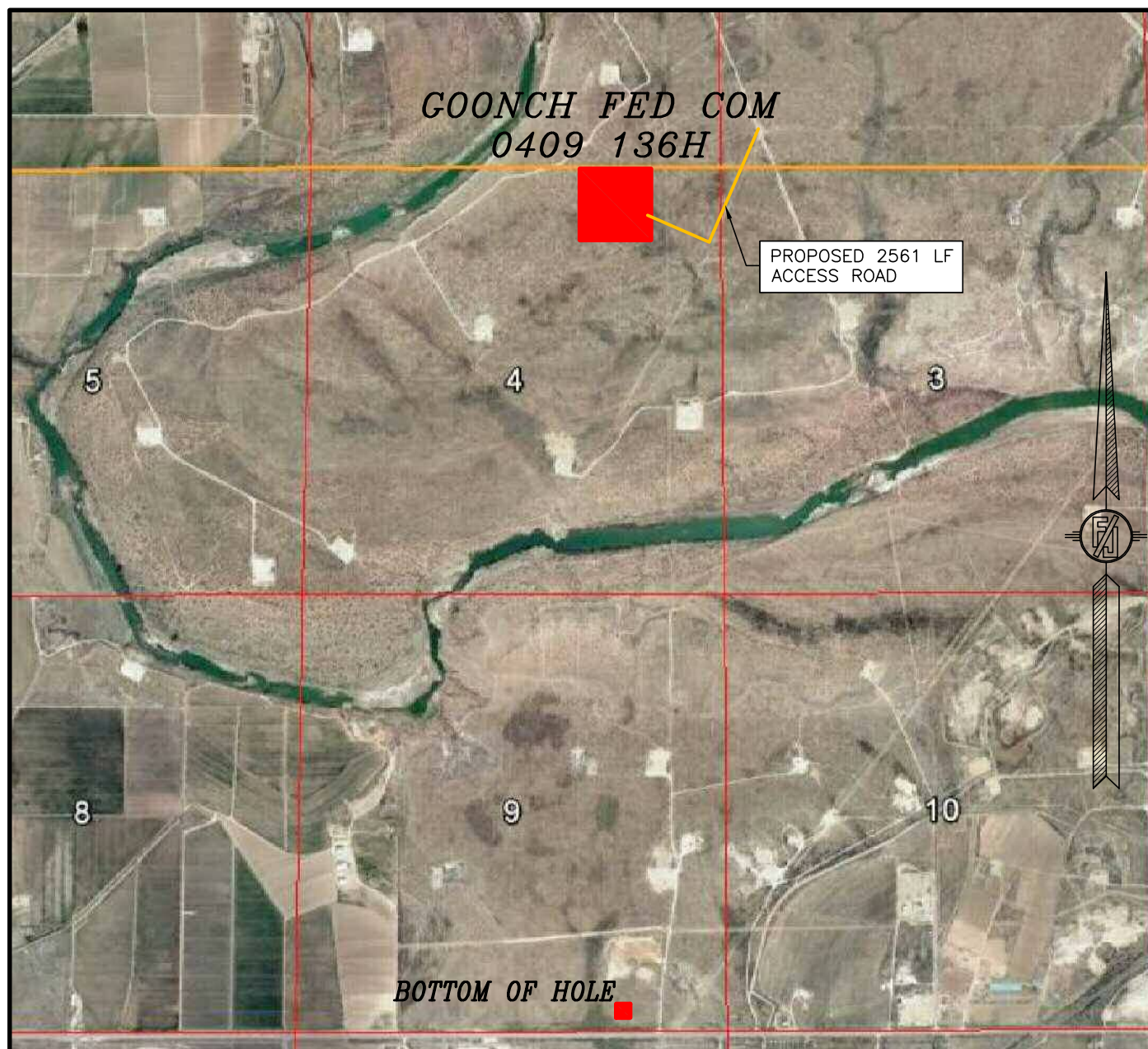
DIRECTIONS TO LOCATION

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.

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

SURVEY NO. 7273D
 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 0409 136H
 LOCATED 416 FT. FROM THE NORTH LINE
 AND 1280 FT. FROM THE EAST LINE OF
 SECTION 4, TOWNSHIP 23 SOUTH,
 RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

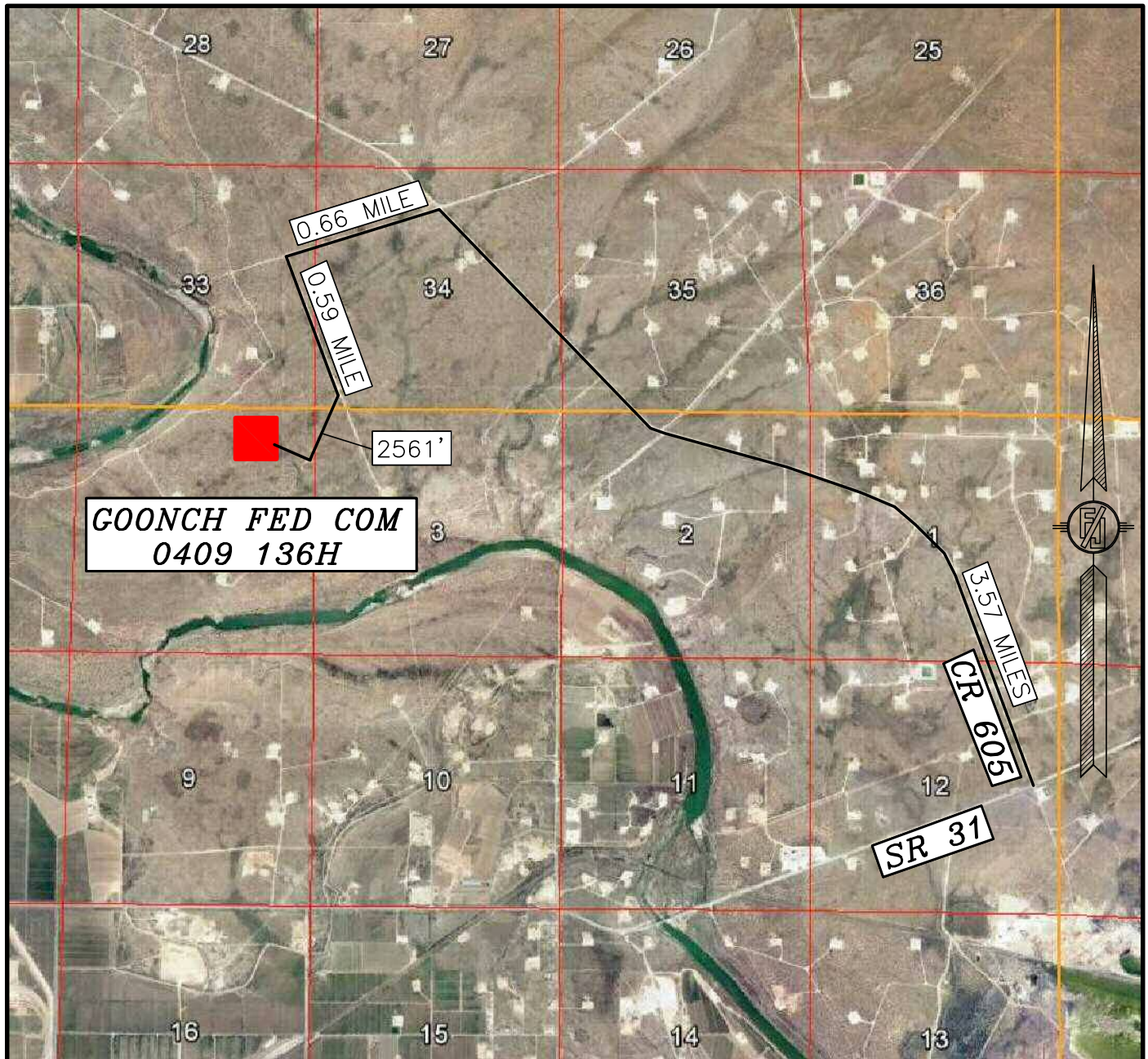
FEBRUARY 22, 2021

SURVEY NO. 7273D

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
 ACCESS AERIAL ROUTE MAP



NOT TO SCALE
 AERIAL PHOTO:
 GOOGLE EARTH
 MARCH 2016

NOVO OIL & GAS NORTHERN DELAWARE, LLC
GOONCH FED COM 0409 136H
 LOCATED 416 FT. FROM THE NORTH LINE
 AND 1280 FT. FROM THE EAST LINE OF
 SECTION 4, TOWNSHIP 23 SOUTH,
 RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

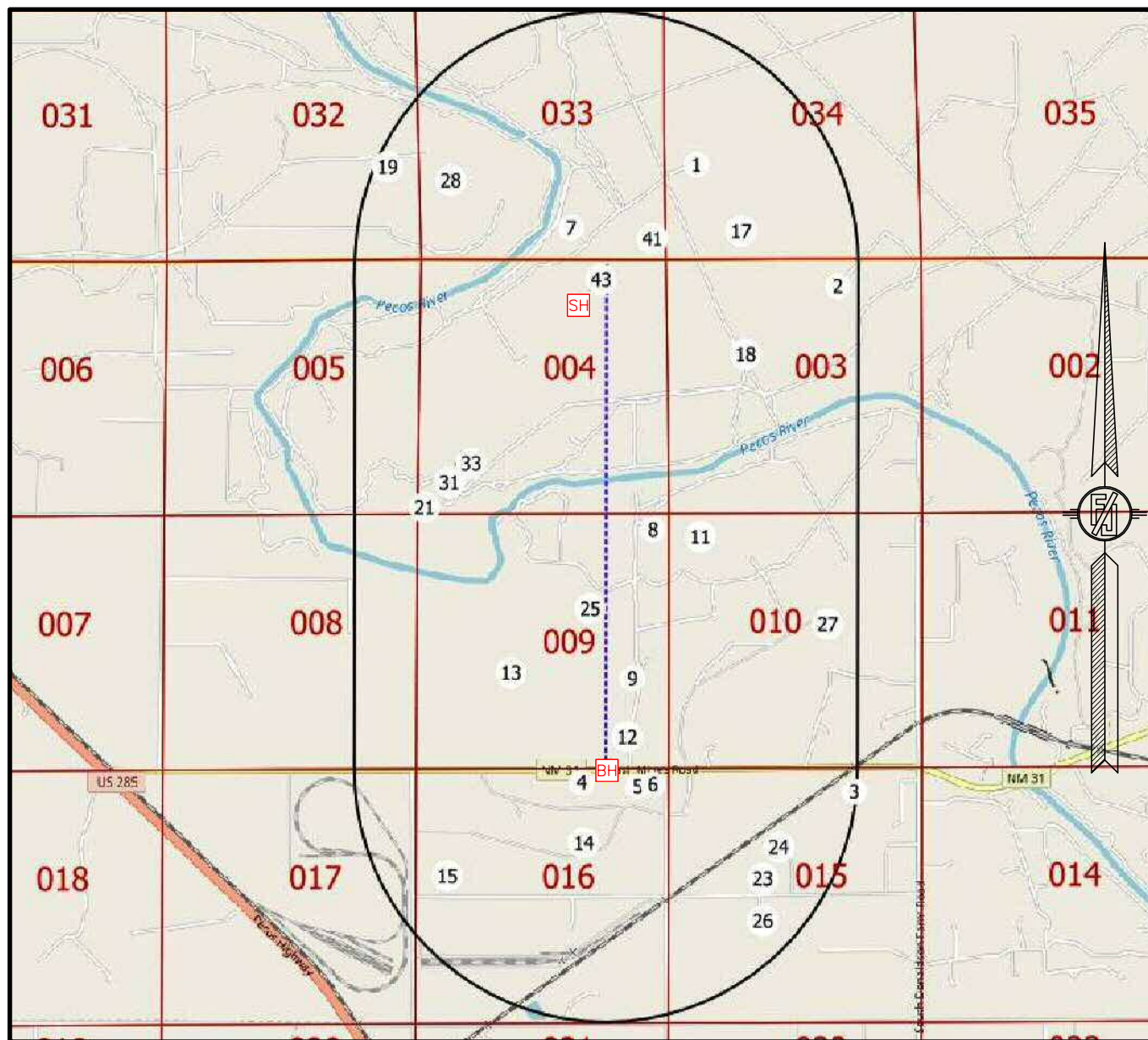
FEBRUARY 22, 2021

MADRON SURVEYING, INC.

301 SOUTH CANAL
 (575) 234-3341

SURVEY NO. 7273D
 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 0409 136H
 LOCATED 416 FT. FROM THE NORTH LINE
 AND 1280 FT. FROM THE EAST LINE OF
 SECTION 4, TOWNSHIP 23 SOUTH,
 RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

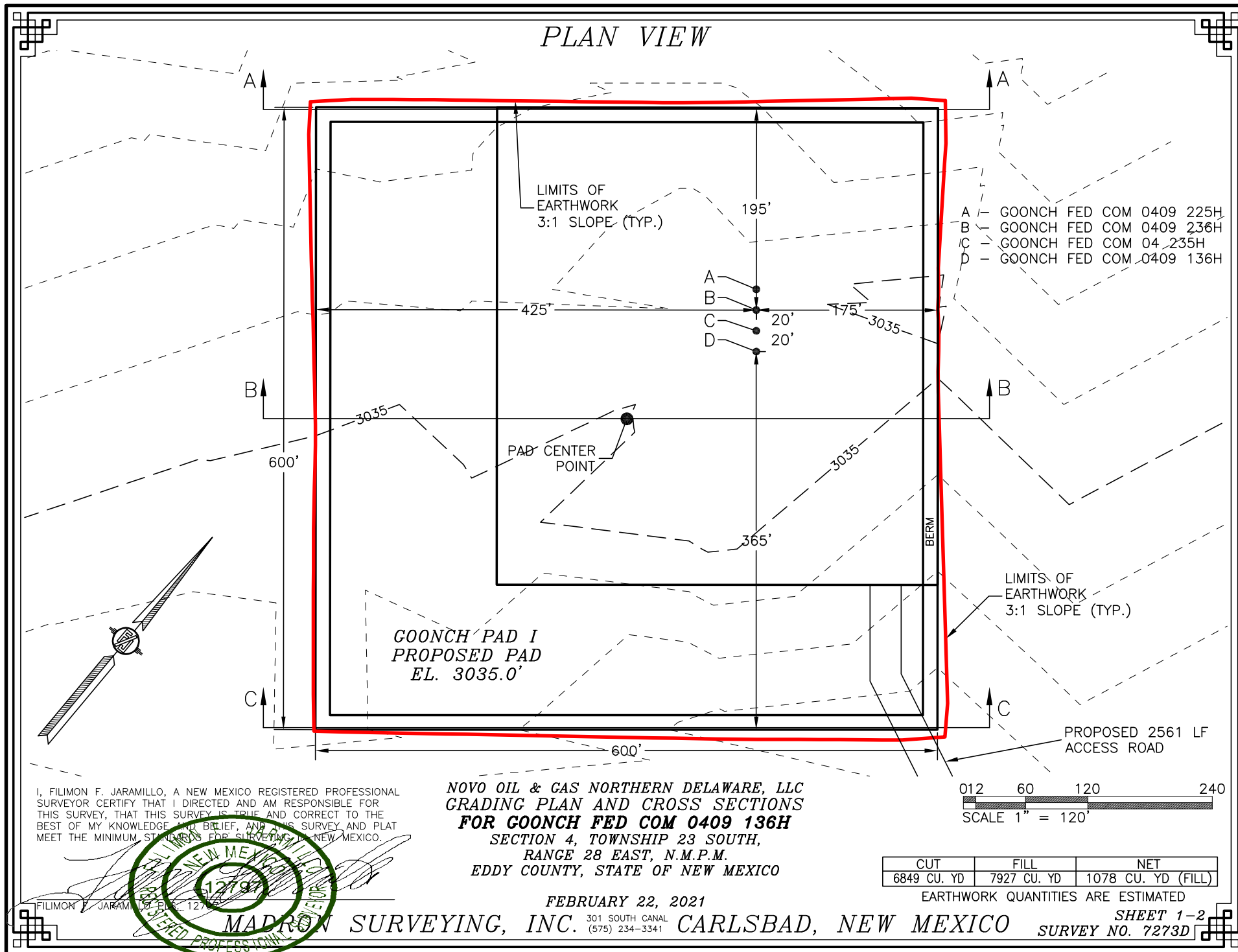
FEBRUARY 22, 2021

SURVEY NO. 7273D

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

CARLSBAD, NEW MEXICO

PLAN VIEW



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.

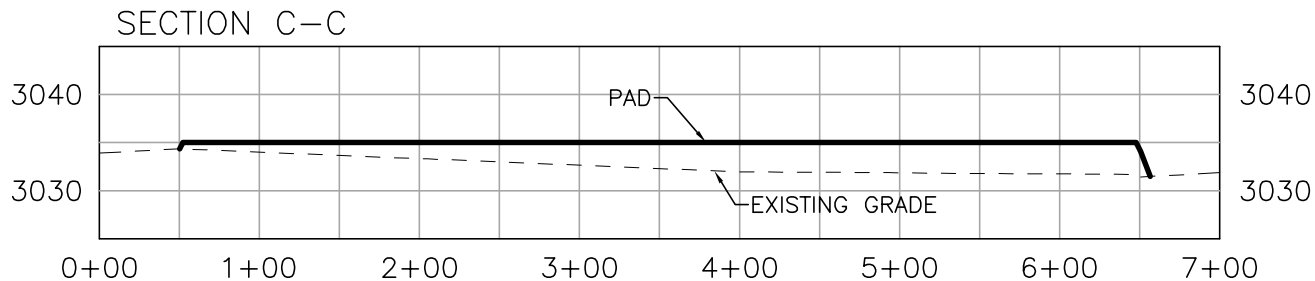
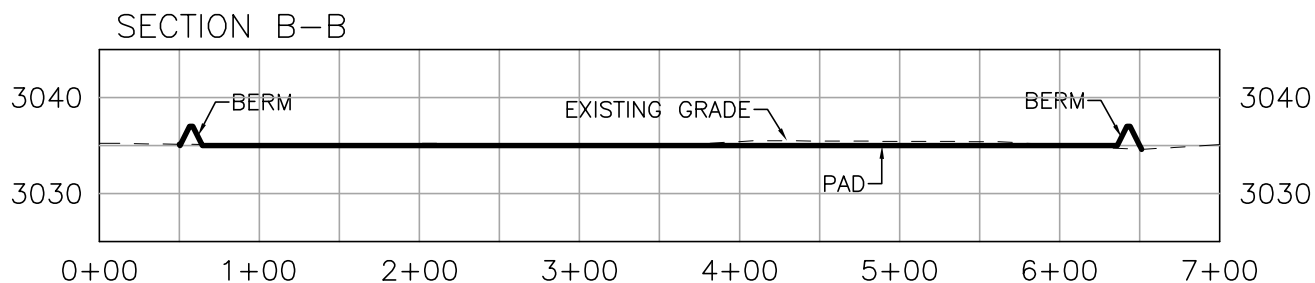
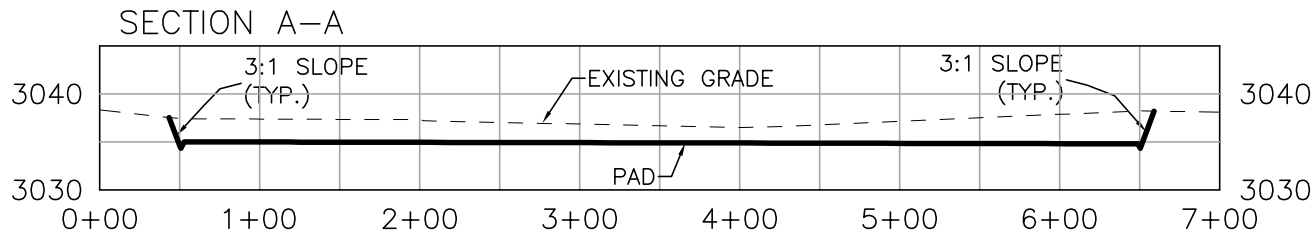
NOVO OIL & GAS NORTHERN DELAWARE, LLC
GRADING PLAN AND CROSS SECTIONS
FOR GOONCH FED COM 0409 136H
SECTION 4, TOWNSHIP 23 SOUTH,
RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

FEBRUARY 22, 2021

FILIMON F. JARAMILLO, 12773D

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

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

NOVO OIL & GAS NORTHERN DELAWARE, LLC
GRADING PLAN AND CROSS SECTIONS
FOR GOONCH FED COM 0409 136H
 SECTION 4, TOWNSHIP 23 SOUTH,
 RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF 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

FILIMON F. JARAMILLO, PLS. #2797



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

FEBRUARY 22, 2021

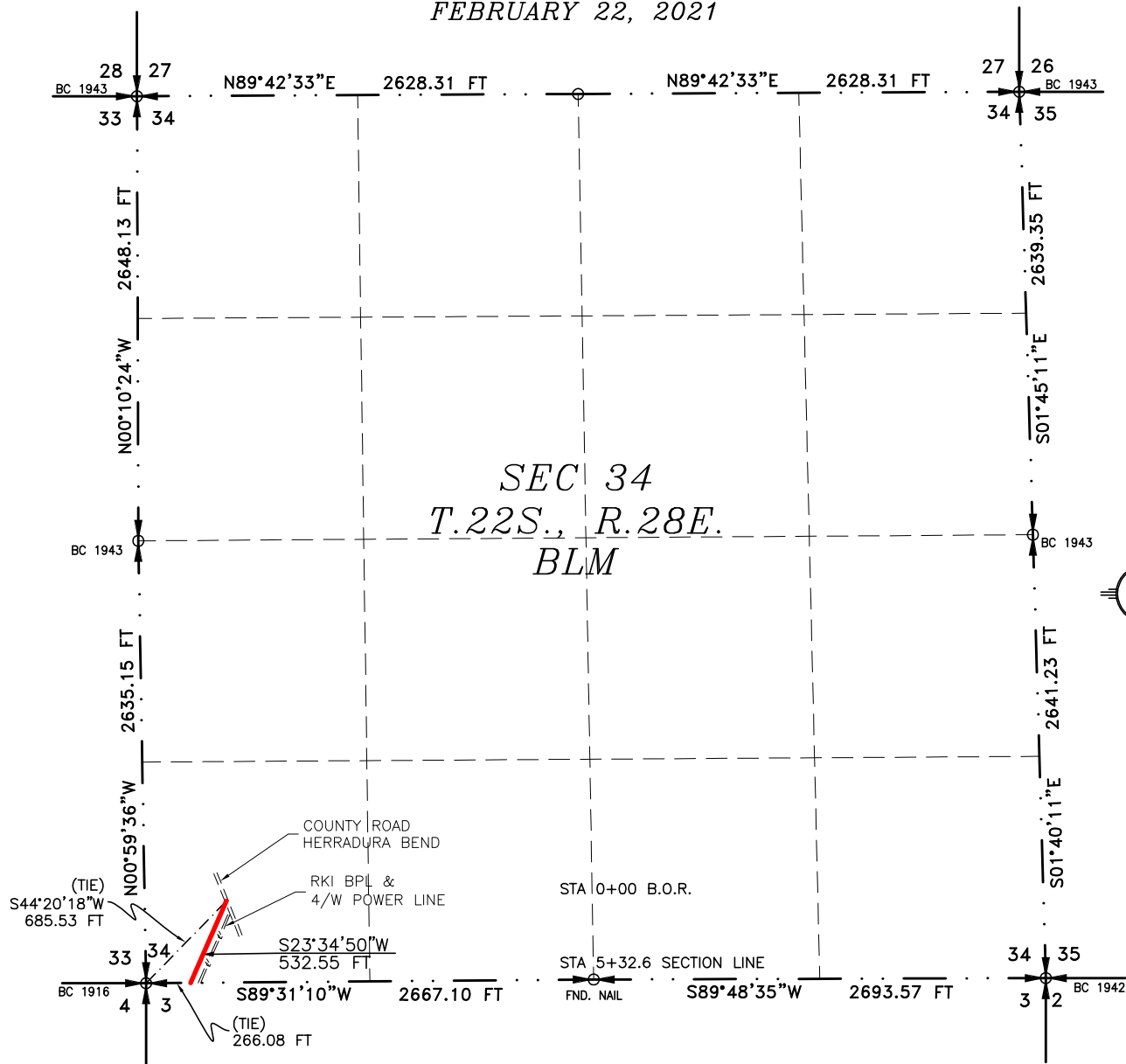
SHEET 2-2
 SURVEY NO. 7273D

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, 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 4 DAY OF MARCH 2021



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

SURVEY NO. 7273D

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 4 DAY OF MARCH 2021



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

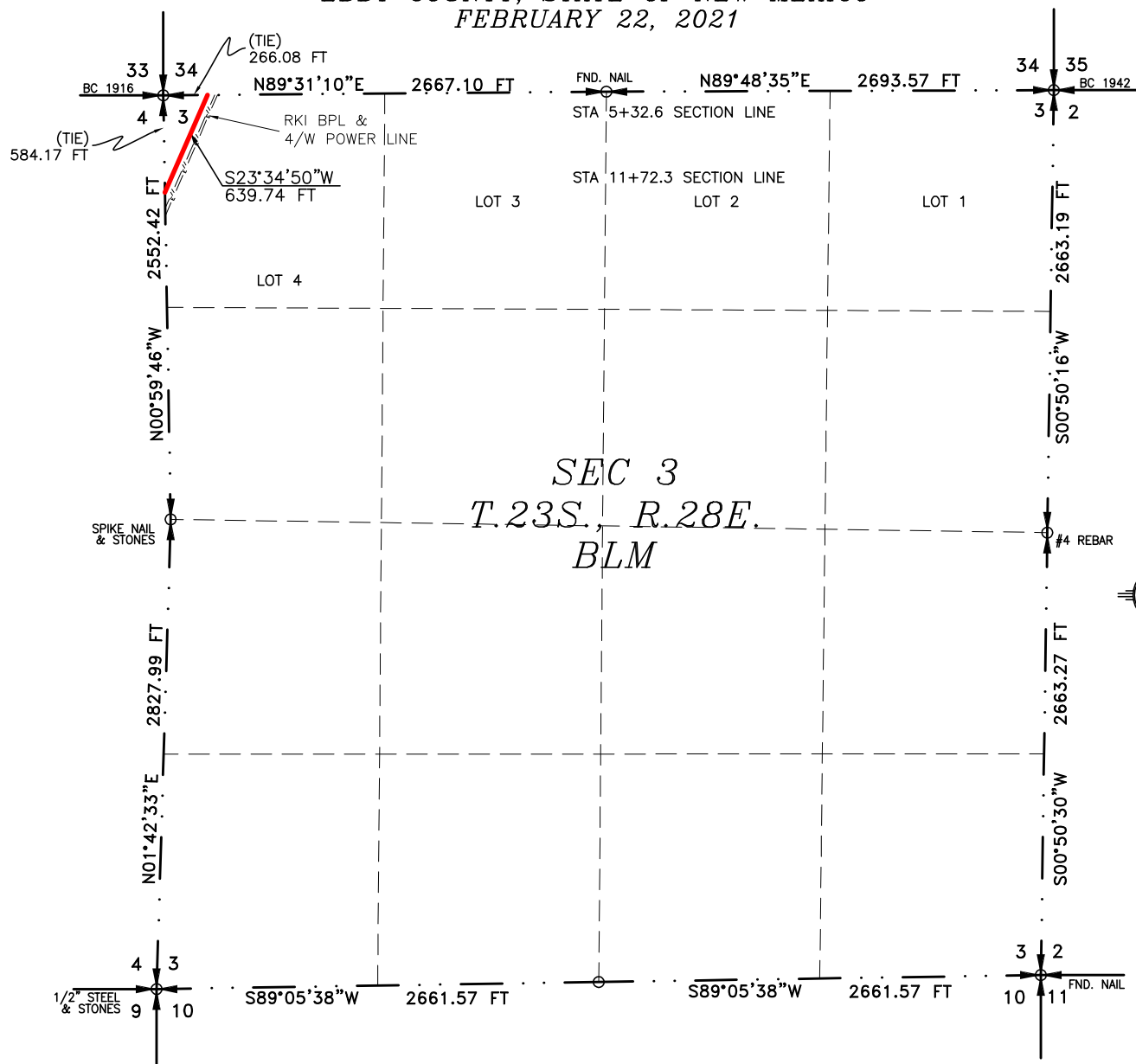
SURVEY NO. 7273D

ACCESS ROAD PLAT

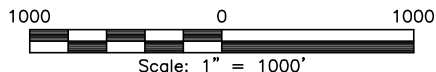
ACCESS ROAD TO THE GOONCH PAD I

(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



SEE NEXT SHEET (4-6) 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: 3-6

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 4 DAY OF MARCH 2021



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

SURVEY NO. 7273D

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 14 DAY OF MARCH 2021

FILIMON F. JARAMILLO
 FILIMON 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. 7273D

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

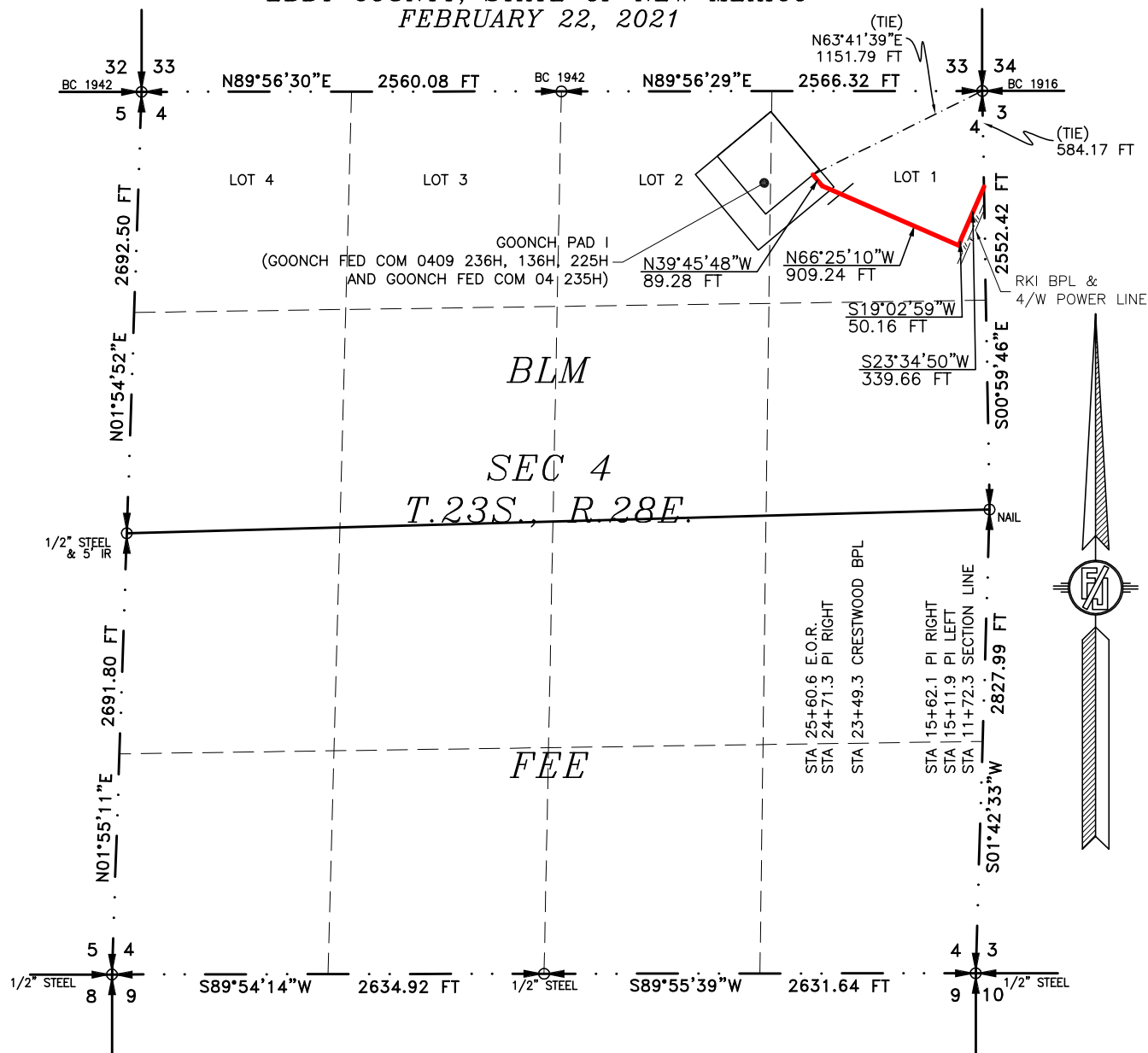
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO (575) 234-3341

ACCESS ROAD PLAT

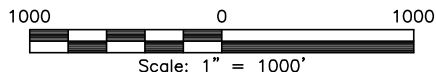
ACCESS ROAD TO THE GOONCH PAD I

(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.

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 14 DAY OF MARCH 2021

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. 7273D

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 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 4 DAY OF MARCH 2021

(Signature of Filimon F. Jaramillo)
 FILIMON 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. 7273D

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 CARLSBAD, NEW MEXICO
 (575) 234-3341

Goonch Fed Com 0409 136H

CHANGE TO PLANS

Move Bottom Hole Location

From: 10' FSL & 1,914' FEL, Section 4, T-23-S, R-28-E, SESW

To: 130' FSL & 1,254' FEL, Section 9, T-23-S, R-28-E, SWSE

Formation Change

From: Third Bone Spring

To: Wolfcamp B

Casing Substitution

Hole Size: 9-7/8", Casing: 8-5/8", 32 ppf, P-110, TLW to be set at 9,546' TMD.

Design Safety Factors: Burst 5.95, Collapse 1.38, Tension 3.21 (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 21,646' TMD.

Design Safety Factors: Burst 1.25, Collapse 2.77, Tension 2.66 (Casing Specification Sheet is attached)

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

Lead: 647 Sacks; 2,316.5 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: 749 Sacks; 1,588.5 cu. ft.; 20% excess; 2.12 cu.ft./sx; 11.91 ppg; Class C + retarder; 1,200 psi 24-hour compressive strength.

Tail: 2,065 Sacks; 3,282.6 cu. ft; 20% excess; 1.59 cu.ft./sx; 13.20 ppg; Class C + retarder; 1,200 psi 24-hour compressive strength.

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	NOVO OIL AND GAS
WELL NAME & NO.:	GOONCH FED COM 0409 136H
SURFACE HOLE FOOTAGE:	416'/N & 1280'/E
BOTTOM HOLE FOOTAGE:	130'/S & 1254'/E
LOCATION:	Section 04, T.23 S., R.28 E., NMPM
COUNTY:	EDDY County, New Mexico

COA

H2S	☒ Yes	☐ No	
Potash	☒ None	☐ Secretary	☐ R-111-P
Cave/Karst Potential	☐ Low	☒ Medium	☐ High
Cave/Karst Potential	☐ Critical		
Variance	☐ None	☒ Flex Hose	☐ Other
Wellhead	☐ Conventional	☒ Multibowl	☐ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☐ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☒ COM	☐ Unit

All Previous COAs still apply, except for the following:

A. CASING

1. The 13-3/8 inch surface casing shall be set at approximately **230 feet** (a minimum of **70 feet (Eddy County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **8-5/8** inch intermediate casing, which shall set at **5,900** ft, is:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**
 - ❖ In Medium Cave/Karst Areas if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.
3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

B. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

C. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New

Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.

- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

JJP04182021

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

☒ Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

☒ Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575)
393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.

- Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.

- c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
- a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
 - c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
 - d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
 - e. The results of the test shall be reported to the appropriate BLM office.

- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.



NOVO OIL & GAS NORTHERN DELAWARE, LLC

Goonch Fed Com 0409 136H

SHL: 416' FNL & 1280' FEL Section 4-23S-28E

BHL: 130' FSL & 1,254' 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 B
Target Depth - TVD (ft)	10246
Planned MD (ft)	21646
Anticipated Bottom-Hole Pressure (psi)	6659.9
Anticipated Maximum Surface Pressure (psi)	4405.78
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 2100.12 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 - 9,546	9-7/8"	Brine Diesel Emulsion or Brine	8.8-9.6	35-45	N/C	1.0-4.0
9,546 - 21,646	7-7/8"	Oil Based Mud	12-13.3	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' - 9,546'	9,546	9-7/8"	8-5/8"	32.00	P-110	TLW	
0' - 21,646'	21,646	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' - 9,546'	4,230	8,930	1144	1.38	5.95	3.21	Collapse: 1/3 fluid filled at all times
0' - 21,646'	12,090	14,360	729	2.77	1.25	2.66	
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 greater 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 internal 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 8,546

Surface Shoe Depth

472

Intermediate Shoe Depth

9,546

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	647	2316.5	412.6	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' - 21,646'

Top of Cement/Lead: 0'

Top of Tail: 7,546'

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	749	1588.5	282.9	12.00	2.12	11.91	1,200	20.0%
Tail	2065	3282.6	584.6	13.20	1.59	7.98	1,200	20.0%

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

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

Logging, Testing & Coring Program

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



TEC-LOCK WEDGE

8.625" 32.00 LB/FT (.352" Wall)
BORUSAN 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: DWC/C-IS PLUS Casing STANDARD	Size(O.D.): 5-1/2 in	Weight (Wall): 20.00 lb/ft (0.361 in)	Grade: 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.)

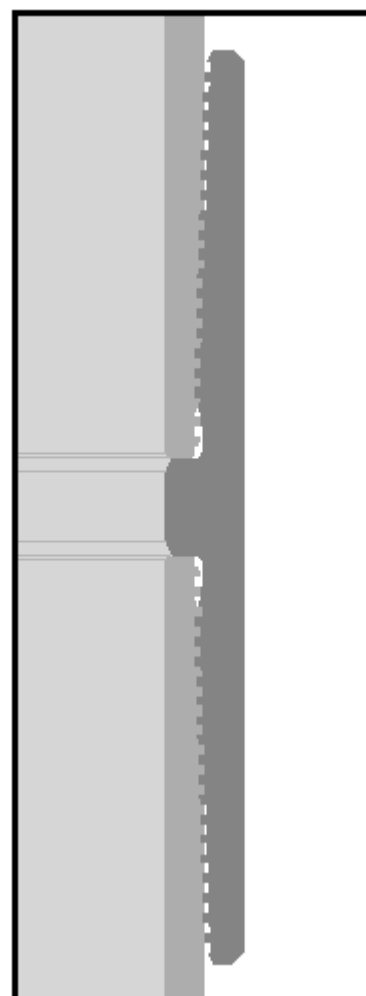
Connection Dimensions	
6.300	Connection O.D. (in.)
4.778	Connection I.D. (in.)
4.653	Connection Drift Diameter (in.)
4.13	Make-up Loss (in.)
5.828	Critical Area (sq. in.)
100.0	Joint Efficiency (%)

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.

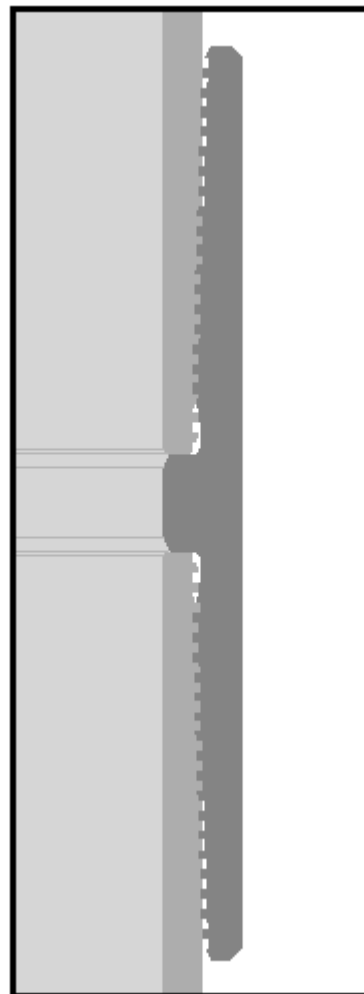
11/29/2018 6:04 PM



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:

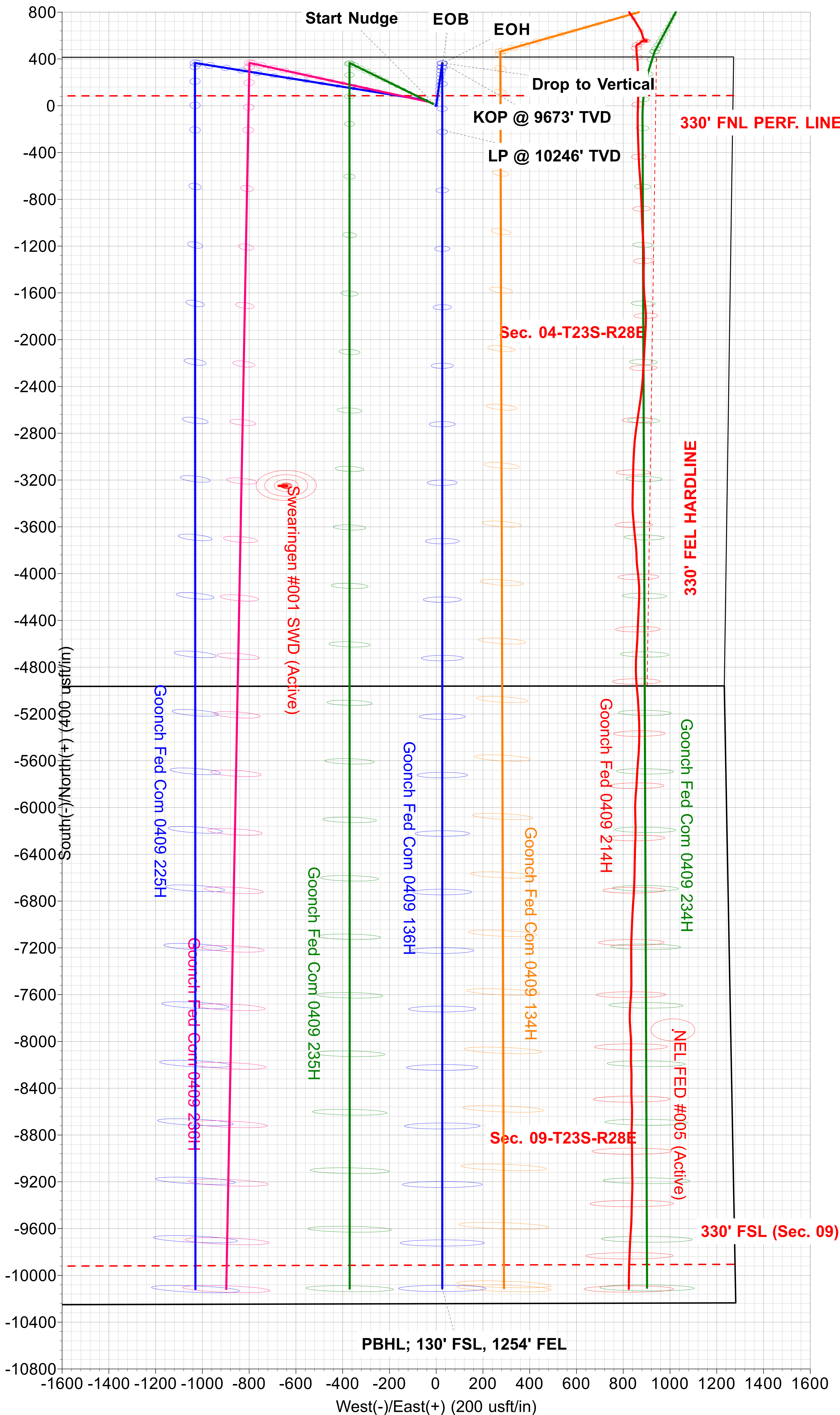
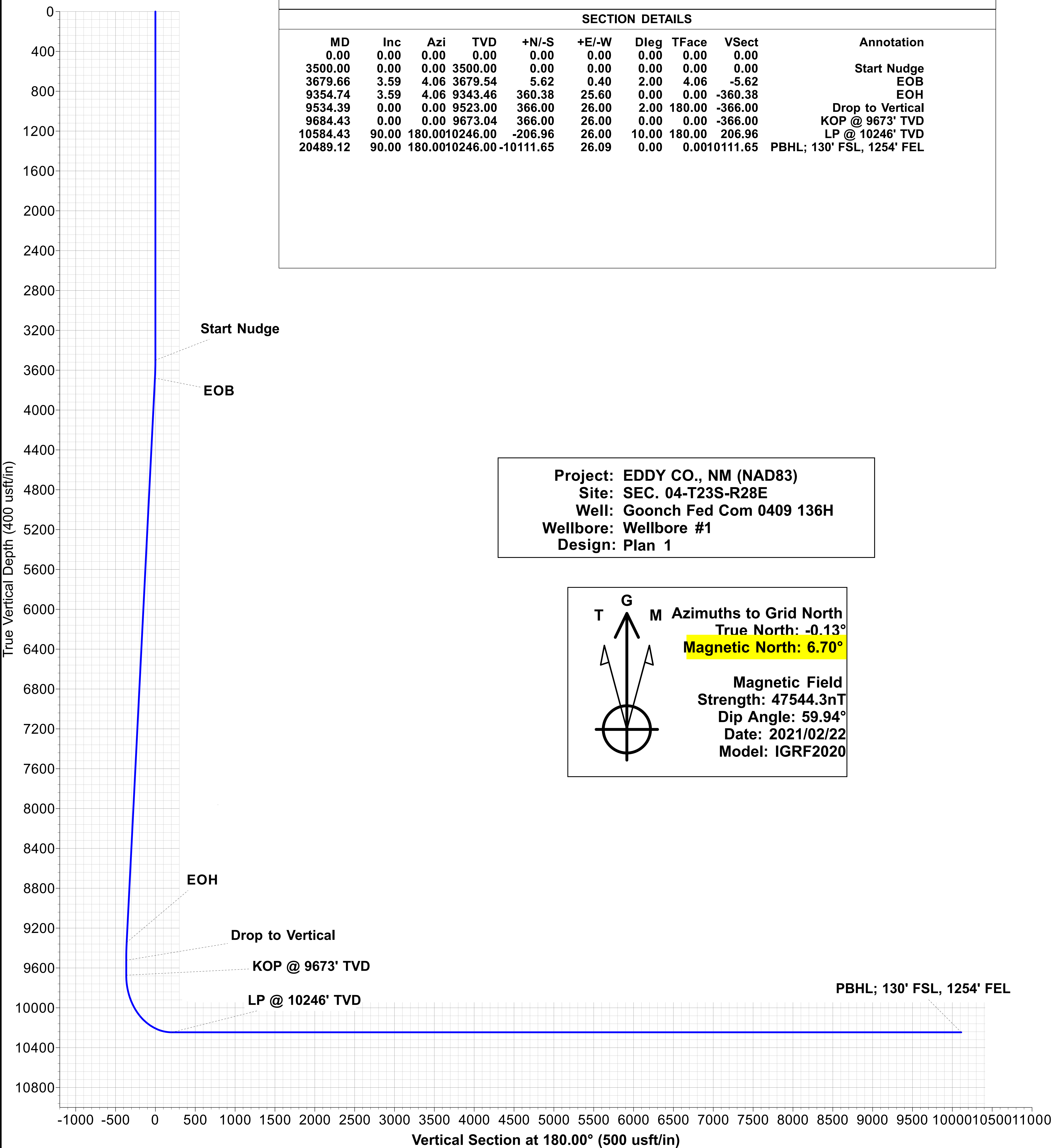
1. DWC connections are available with a seal ring (SR) option.
2. All standard DWC/C connections are interchangeable for a given pipe OD. DWC connections are interchangeable with DWC/C-SR connections of the same OD and wall.
3. Connection performance properties are based on nominal pipe body and connection 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.

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.

11/29/2018 6:04 PM





NOVO Oil & Gas

EDDY CO., NM (NAD83)

SEC. 04-T23S-R28E

Goonch Fed Com 0409 136H

Wellbore #1

Plan 1

Anticollision Report

19 March, 2021





SB Directional

Anticollision Report



Company:	NOVO Oil & Gas	Local Co-ordinate Reference:	Well Goonch Fed Com 0409 136H
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 136H	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	2021/03/19		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	20,489.12	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 0409 214H - Wellbore #1 - Wellbore #1	20,489.12	20,817.95	804.25	427.77	2.136	CC, ES, SF
Goonch Fed Com 04 132H - Wellbore #1 - Plan 2						Out of range
Goonch Fed Com 04 211H - Wellbore #1 - Plan 1						Out of range
Goonch Fed Com 04 212H - Wellbore #1 - Plan 1						Out of range
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 134H - Wellbore #1 - Plan 0	9,509.70	9,572.06	248.49	203.19	5.486	CC, ES
Goonch Fed Com 0409 134H - Wellbore #1 - Plan 0	20,489.12	20,133.98	560.18	332.19	2.457	SF
Goonch Fed Com 0409 225H - Wellbore #1 - Plan 0	1,200.00	1,199.70	59.98	54.77	11.514	CC, ES
Goonch Fed Com 0409 225H - Wellbore #1 - Plan 0	20,489.12	20,021.27	1,181.20	837.24	3.434	SF
Goonch Fed Com 0409 234H - Wellbore #1 - Plan 0	9,451.36	9,523.08	883.12	837.82	19.497	CC
Goonch Fed Com 0409 234H - Wellbore #1 - Plan 0	20,489.12	19,916.15	1,105.21	782.25	3.422	ES, SF
Goonch Fed Com 0409 235H - Wellbore #1 - Plan 1	1,900.00	1,900.00	19.99	11.67	2.403	CC, ES, SF
Goonch Fed Com 0409 236H - Wellbore #1 - Plan 0	1,500.00	1,500.00	39.99	33.45	6.115	CC, ES
Goonch Fed Com 0409 236H - Wellbore #1 - Plan 0	20,489.12	20,495.62	923.93	549.09	2.465	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						Out of range
Swearingen #001 SWD (Active) - Wellbore #1 - Wellbore	13,624.07	10,315.35	667.42	529.56	4.841	CC, ES
Swearingen #001 SWD (Active) - Wellbore #1 - Wellbore	13,700.00	10,315.35	671.73	532.97	4.841	SF
SEC. 09-T23S-R28E						
NEL FED #005 (Active) - Wellbore #1 - Wellbore #1						Out of range

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 136H
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 136H	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 0409 214H - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft
Survey Program: 100-MWD													Offset Well Error:	0.50 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance				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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	5.21	5.21	0.50	0.50	41.13	891.96	779.02	1,184.26					
100.00	100.00	100.00	100.00	0.51	0.51	41.16	891.85	779.62	1,184.59	1,183.57	1.01	1,167.887		
200.00	200.00	207.80	207.80	0.59	0.59	41.17	891.90	779.94	1,184.82	1,183.64	1.17	1,008.908		
300.00	300.00	305.82	305.81	0.73	0.71	41.17	891.78	779.95	1,184.74	1,183.29	1.45	819.175		
400.00	400.00	408.88	408.88	0.91	0.88	41.17	891.66	779.86	1,184.59	1,182.80	1.79	661.622		
500.00	500.00	517.78	517.77	1.10	1.08	41.13	891.60	778.71	1,183.85	1,181.67	2.18	542.856		
600.00	600.00	614.95	614.94	1.31	1.26	41.10	891.43	777.61	1,182.97	1,180.40	2.57	460.515		
700.00	700.00	715.85	715.83	1.52	1.46	41.06	891.28	776.56	1,182.17	1,179.19	2.98	397.180		
800.00	800.00	817.39	817.36	1.73	1.66	41.03	891.01	775.38	1,181.21	1,177.82	3.39	347.991		
900.00	900.00	919.51	919.47	1.95	1.87	40.99	890.71	774.11	1,180.17	1,176.35	3.82	309.081		
1,000.00	1,000.00	1,022.04	1,021.99	2.17	2.09	40.94	890.37	772.46	1,178.86	1,174.61	4.25	277.385		
1,100.00	1,100.00	1,117.29	1,117.22	2.38	2.28	40.88	890.26	770.76	1,177.62	1,172.95	4.67	252.404		
1,200.00	1,200.00	1,219.54	1,219.46	2.61	2.50	40.82	890.40	769.02	1,176.60	1,171.50	5.10	230.864		
1,300.00	1,300.00	1,315.17	1,315.07	2.83	2.69	40.76	890.43	767.50	1,175.60	1,170.08	5.51	213.223		
1,400.00	1,400.00	1,413.57	1,413.47	3.05	2.89	40.71	890.51	766.31	1,174.86	1,168.93	5.93	197.955		
1,500.00	1,500.00	1,513.10	1,512.98	3.27	3.10	40.66	890.68	765.10	1,174.20	1,167.84	6.36	184.483		
1,600.00	1,600.00	1,609.39	1,609.27	3.49	3.30	40.61	890.96	763.99	1,173.67	1,166.88	6.79	172.878		
1,641.33	1,641.33	1,647.05	1,646.93	3.58	3.38	40.60	891.14	763.69	1,173.61	1,166.65	6.96	168.640		
1,700.00	1,700.00	1,702.65	1,702.53	3.71	3.49	40.58	891.44	763.50	1,173.72	1,166.51	7.20	162.922		
1,800.00	1,800.00	1,799.23	1,799.11	3.94	3.69	40.59	891.51	763.92	1,174.06	1,166.43	7.62	154.022		
1,900.00	1,900.00	1,894.65	1,894.51	4.16	3.88	40.69	890.86	765.90	1,174.89	1,166.85	8.04	146.152		
2,000.00	2,000.00	1,995.88	1,995.68	4.38	4.09	40.85	889.43	768.97	1,175.80	1,167.33	8.47	138.849		
2,100.00	2,100.00	2,087.19	2,086.93	4.61	4.27	41.00	888.13	771.91	1,176.84	1,167.97	8.88	132.551		
2,200.00	2,200.00	2,193.51	2,193.17	4.83	4.49	41.18	887.00	775.92	1,178.55	1,169.22	9.32	126.410		
2,300.00	2,300.00	2,299.19	2,298.75	5.05	4.71	41.39	884.65	779.74	1,179.26	1,169.49	9.77	120.743		
2,400.00	2,400.00	2,401.02	2,400.53	5.28	4.93	41.55	882.92	782.48	1,179.77	1,169.57	10.20	115.618		
2,500.00	2,500.00	2,502.79	2,502.27	5.50	5.14	41.67	881.48	784.58	1,180.08	1,169.44	10.64	110.891		
2,600.00	2,600.00	2,601.44	2,600.88	5.73	5.35	41.79	880.10	786.71	1,180.47	1,169.40	11.07	106.611		
2,700.00	2,700.00	2,700.68	2,700.10	5.95	5.56	41.91	878.72	788.78	1,180.83	1,169.32	11.51	102.634		
2,800.00	2,800.00	2,798.96	2,798.34	6.17	5.76	42.04	877.44	791.09	1,181.43	1,169.49	11.94	98.978		
2,900.00	2,900.00	2,900.20	2,899.55	6.40	5.98	42.15	876.29	793.22	1,181.99	1,169.62	12.38	95.513		
3,000.00	3,000.00	3,014.64	3,013.95	6.62	6.22	42.31	874.17	795.60	1,182.04	1,169.20	12.84	92.049		
3,100.00	3,100.00	3,136.44	3,135.55	6.85	6.48	42.62	868.32	799.06	1,180.41	1,167.09	13.32	88.598		
3,200.00	3,200.00	3,255.05	3,253.70	7.07	6.74	43.09	858.92	803.35	1,177.04	1,163.24	13.80	85.273		
3,300.00	3,300.00	3,370.73	3,368.63	7.29	7.01	43.67	846.72	808.33	1,172.31	1,158.02	14.28	82.078		
3,400.00	3,400.00	3,468.86	3,465.99	7.52	7.24	44.22	835.27	812.78	1,167.02	1,152.29	14.74	79.186		
3,500.00	3,500.00	3,567.42	3,563.82	7.74	7.48	44.75	824.10	817.07	1,161.95	1,146.76	15.20	76.466		
3,600.00	3,599.98	3,668.35	3,664.01	7.97	7.72	41.38	812.73	821.28	1,155.60	1,139.94	15.66	73.785		
3,679.66	3,679.54	3,747.68	3,742.77	8.15	7.92	42.03	803.76	824.47	1,148.67	1,132.64	16.03	71.647		
3,700.00	3,699.84	3,767.35	3,762.30	8.19	7.96	42.18	801.56	825.24	1,146.71	1,130.59	16.13	71.106		
3,800.00	3,799.65	3,864.12	3,858.42	8.42	8.21	42.89	791.03	828.86	1,137.28	1,120.69	16.59	68.557		
3,900.00	3,899.45	3,963.83	3,957.52	8.64	8.45	43.62	780.51	832.38	1,128.11	1,111.05	17.06	66.129		
4,000.00	3,999.25	4,065.61	4,058.62	8.86	8.71	44.40	769.29	836.07	1,118.87	1,101.34	17.54	63.805		
4,100.00	4,099.06	4,165.79	4,158.05	9.09	8.97	45.20	757.74	839.83	1,109.61	1,091.59	18.02	61.586		
4,200.00	4,198.86	4,265.49	4,256.97	9.32	9.23	46.03	745.88	843.72	1,100.43	1,081.93	18.50	59.480		
4,300.00	4,298.66	4,365.64	4,356.31	9.55	9.50	46.89	733.76	847.60	1,091.34	1,072.35	18.99	57.459		
4,400.00	4,398.47	4,465.34	4,455.20	9.78	9.77	47.76	721.64	851.30	1,082.33	1,062.84	19.49	55.539		
4,500.00	4,498.27	4,563.58	4,552.63	10.01	10.04	48.62	709.63	854.93	1,073.52	1,053.54	19.98	53.722		
4,600.00	4,598.07	4,661.60	4,649.84	10.24	10.30	49.51	697.58	858.61	1,064.97	1,044.49	20.48	52.004		
4,700.00	4,697.88	4,759.38	4,746.81	10.47	10.56	50.40	685.62	862.28	1,056.71	1,035.74	20.97	50.384		
4,800.00	4,797.68	4,856.30	4,842.97	10.70	10.82	51.29	673.95	865.86	1,048.80	1,027.33	21.47	48.859		
4,900.00	4,897.48	4,952.84	4,938.81	10.94	11.08	52.15	662.88	869.24	1,041.30	1,019.35	21.96	47.425		

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 136H
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 136H	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 0409 214H - Wellbore #1 - Wellbore #1												Offset Site Error:	0.00 usft
Survey Program: 100-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
5,000.00	4,997.29	5,051.27	5,036.59	11.17	11.34	53.02	652.13	872.46	1,034.17	1,011.72	22.45	46.061	
5,100.00	5,097.09	5,150.38	5,135.10	11.41	11.60	53.87	641.63	875.43	1,027.23	1,004.28	22.95	44.759	
5,200.00	5,196.89	5,255.87	5,239.97	11.64	11.89	54.78	630.57	878.09	1,020.17	996.70	23.46	43.479	
5,300.00	5,296.70	5,359.69	5,343.19	11.88	12.17	55.67	619.53	879.97	1,012.66	988.69	23.97	42.242	
5,400.00	5,396.50	5,458.33	5,441.28	12.12	12.43	56.51	609.20	881.44	1,005.19	980.72	24.47	41.075	
5,500.00	5,496.30	5,557.58	5,540.00	12.35	12.69	57.35	599.07	882.75	997.93	972.95	24.97	39.961	
5,600.00	5,596.11	5,657.52	5,639.43	12.59	12.96	58.20	589.04	883.84	990.77	965.29	25.47	38.893	
5,700.00	5,695.91	5,746.24	5,727.74	12.83	13.18	58.93	580.61	884.81	984.08	958.13	25.95	37.926	
5,800.00	5,795.71	5,829.91	5,811.14	13.07	13.39	59.57	574.16	886.35	979.03	952.63	26.40	37.082	
5,900.00	5,895.52	5,921.19	5,902.24	13.31	13.61	60.21	568.67	888.67	975.50	948.64	26.86	36.315	
6,000.00	5,995.32	6,018.94	5,999.80	13.55	13.84	60.87	563.32	891.22	972.41	945.08	27.33	35.579	
6,100.00	6,095.12	6,115.28	6,095.99	13.79	14.06	61.49	558.63	893.68	969.67	941.88	27.79	34.891	
6,200.00	6,194.93	6,211.23	6,191.85	14.02	14.27	62.06	555.03	896.03	967.40	939.15	28.25	34.245	
6,300.00	6,294.73	6,317.04	6,297.61	14.27	14.50	62.59	552.43	897.93	965.15	936.44	28.71	33.614	
6,400.00	6,394.53	6,422.39	6,402.95	14.51	14.71	63.01	551.40	898.26	962.18	933.01	29.17	32.986	
6,500.00	6,494.34	6,518.53	6,499.09	14.75	14.90	63.34	551.12	898.27	959.25	929.65	29.60	32.412	
6,600.00	6,594.14	6,614.53	6,595.09	14.99	15.08	63.67	551.16	898.55	956.73	926.71	30.02	31.870	
6,700.00	6,693.95	6,710.30	6,690.85	15.23	15.26	63.97	551.81	899.01	954.66	924.22	30.44	31.362	
6,800.00	6,793.75	6,809.42	6,789.96	15.47	15.45	64.24	553.10	899.60	952.96	922.09	30.87	30.874	
6,900.00	6,893.55	6,912.08	6,892.62	15.71	15.64	64.53	554.33	900.04	951.08	919.78	31.30	30.388	
7,000.00	6,993.36	7,013.69	6,994.22	15.95	15.83	64.83	555.35	900.27	948.97	917.25	31.73	29.909	
7,100.00	7,093.16	7,114.94	7,095.47	16.20	16.02	65.13	556.27	900.38	946.74	914.58	32.16	29.438	
7,200.00	7,192.96	7,218.83	7,199.35	16.44	16.22	65.44	557.04	900.23	944.25	911.65	32.60	28.965	
7,300.00	7,292.77	7,322.11	7,302.63	16.68	16.42	65.76	557.53	899.73	941.37	908.33	33.04	28.493	
7,400.00	7,392.57	7,423.72	7,404.24	16.92	16.61	66.07	557.95	898.98	938.25	904.78	33.48	28.027	
7,500.00	7,492.37	7,525.56	7,506.08	17.17	16.81	66.39	558.36	898.02	934.97	901.06	33.92	27.568	
7,600.00	7,592.18	7,627.58	7,608.09	17.41	17.01	66.71	558.53	896.89	931.48	897.13	34.36	27.113	
7,700.00	7,691.98	7,734.11	7,714.61	17.65	17.22	67.07	558.35	895.36	927.61	892.80	34.80	26.653	
7,800.00	7,791.78	7,841.14	7,821.60	17.89	17.43	67.45	557.65	893.03	922.91	887.66	35.25	26.181	
7,900.00	7,891.59	7,941.38	7,921.82	18.14	17.63	67.83	556.59	890.58	917.86	882.17	35.69	25.716	
8,000.00	7,991.39	8,040.70	8,021.09	18.38	17.82	68.22	555.23	888.21	912.81	876.68	36.13	25.264	
8,100.00	8,091.19	8,138.16	8,118.53	18.63	18.01	68.63	553.79	886.09	907.99	871.42	36.57	24.830	
8,200.00	8,191.00	8,237.64	8,217.97	18.87	18.21	69.05	552.26	884.15	903.39	866.38	37.01	24.410	
8,300.00	8,290.80	8,339.11	8,319.41	19.11	18.42	69.49	550.61	882.03	898.70	861.25	37.46	23.993	
8,400.00	8,390.60	8,439.78	8,420.03	19.36	18.62	69.94	548.83	879.80	893.90	855.99	37.91	23.582	
8,500.00	8,490.41	8,540.12	8,520.33	19.60	18.83	70.41	546.77	877.57	889.07	850.71	38.36	23.178	
8,600.00	8,590.21	8,637.94	8,618.10	19.85	19.03	70.90	544.43	875.54	884.35	845.54	38.81	22.789	
8,700.00	8,690.01	8,735.71	8,715.82	20.09	19.23	71.41	541.74	873.83	879.91	840.66	39.25	22.416	
8,800.00	8,789.82	8,834.08	8,814.13	20.33	19.44	71.96	538.71	872.35	875.72	836.01	39.71	22.055	
8,900.00	8,889.62	8,933.27	8,913.25	20.58	19.64	72.54	535.38	871.06	871.73	831.57	40.16	21.706	
9,000.00	8,989.42	9,034.33	9,014.25	20.82	19.86	73.13	532.06	869.61	867.74	827.12	40.62	21.361	
9,100.00	9,089.23	9,137.44	9,117.30	21.07	20.08	73.71	529.06	867.80	863.59	822.50	41.08	21.021	
9,200.00	9,189.03	9,242.35	9,222.15	21.31	20.30	74.22	527.16	865.09	858.95	817.40	41.54	20.676	
9,300.00	9,288.83	9,336.55	9,316.31	21.56	20.49	74.64	525.92	862.48	854.28	812.29	41.99	20.345	
9,354.74	9,343.46	9,387.05	9,366.79	21.69	20.59	74.90	524.96	861.48	852.11	809.88	42.23	20.178	
9,400.00	9,388.66	9,428.82	9,408.55	21.79	20.68	75.07	524.00	860.86	850.61	808.20	42.42	20.054	
9,500.00	9,488.61	9,528.71	9,508.40	21.96	20.89	75.37	521.53	859.67	848.22	805.42	42.80	19.818	
9,534.39	9,523.00	9,563.35	9,543.03	22.02	20.96	75.48	520.71	859.23	847.59	804.66	42.93	19.743	
9,600.00	9,588.61	9,629.02	9,608.67	22.15	21.09	75.57	519.22	858.35	846.46	803.27	43.19	19.598	
9,684.43	9,673.04	9,711.55	9,691.18	22.33	21.27	75.67	517.53	857.32	845.11	801.56	43.55	19.407	
9,700.00	9,688.61	9,726.77	9,706.40	22.35	21.30	-100.35	517.25	857.14	844.92	801.31	43.61	19.376	
9,727.89	9,716.46	9,754.02	9,733.64	22.39	21.35	-100.42	516.75	856.85	844.79	801.09	43.70	19.331	

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 136H
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 136H	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 0409 214H - Wellbore #1 - Wellbore #1													Offset Site Error: 0.00 usft
Survey Program: 100-MWD													Offset Well Error: 0.50 usft
Rule Assigned:													
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
9,750.00	9,738.47	9,775.57	9,755.19	22.42	21.40	-100.53	516.38	856.62	844.87	801.10	43.77	19.301	
9,800.00	9,787.83	9,833.35	9,812.90	22.47	21.52	-100.93	514.04	856.09	845.53	801.59	43.94	19.243	
9,850.00	9,836.31	9,886.81	9,866.02	22.49	21.66	-101.30	508.11	855.82	846.58	802.48	44.10	19.198	
9,900.00	9,883.56	9,936.19	9,914.69	22.50	21.80	-101.65	499.80	856.15	848.54	804.30	44.25	19.178	
9,950.00	9,929.20	10,003.29	9,979.90	22.50	22.01	-102.21	484.06	856.81	850.97	806.54	44.43	19.153	
10,000.00	9,972.89	10,066.63	10,040.22	22.49	22.24	-102.79	464.79	857.10	853.35	808.74	44.61	19.129	
10,050.00	10,014.31	10,121.95	10,091.71	22.47	22.46	-103.29	444.60	857.41	856.16	811.37	44.79	19.116	
10,100.00	10,053.12	10,169.08	10,134.63	22.45	22.66	-103.68	425.14	858.24	860.08	815.13	44.96	19.131	
10,150.00	10,089.04	10,225.07	10,184.11	22.43	22.92	-104.18	399.03	859.95	865.12	819.95	45.16	19.156	
10,200.00	10,121.80	10,363.91	10,292.48	22.42	23.73	-105.46	313.50	862.41	868.22	822.61	45.61	19.035	
10,250.00	10,151.14	10,565.17	10,365.13	22.43	25.43	-102.48	129.62	863.52	863.31	816.36	46.94	18.391	
10,300.00	10,176.84	10,633.31	10,366.71	22.45	26.10	-100.81	61.52	863.89	857.93	810.15	47.78	17.955	
10,350.00	10,198.70	10,697.84	10,364.55	22.50	26.75	-99.33	-2.96	863.02	852.55	803.94	48.61	17.538	
10,400.00	10,216.57	10,739.10	10,362.64	22.57	27.17	-98.66	-44.16	862.32	848.23	799.00	49.23	17.231	
10,450.00	10,230.30	10,781.59	10,360.80	22.66	27.61	-98.07	-86.61	861.81	845.18	795.33	49.85	16.954	
10,500.00	10,239.79	10,823.70	10,358.59	22.79	28.07	-97.57	-128.66	861.65	843.30	792.80	50.50	16.699	
10,550.00	10,244.96	10,866.59	10,355.66	22.95	28.54	-97.16	-171.45	861.92	842.50	791.33	51.17	16.466	
10,570.19	10,245.82	10,885.35	10,354.26	23.02	28.75	-97.01	-190.16	862.13	842.43	790.97	51.47	16.369	
10,584.43	10,246.00	10,898.62	10,353.28	23.07	28.90	-96.93	-203.39	862.30	842.46	790.79	51.68	16.303	
10,600.00	10,246.00	10,913.15	10,352.22	23.13	29.07	-96.86	-217.88	862.50	842.54	790.63	51.91	16.231	
10,700.00	10,246.00	11,010.99	10,345.22	23.60	30.20	-96.37	-315.46	864.11	843.35	789.82	53.53	15.755	
10,800.00	10,246.00	11,108.26	10,338.30	24.19	31.38	-95.89	-412.46	865.77	844.29	788.96	55.33	15.258	
10,900.00	10,246.00	11,200.52	10,331.21	24.91	32.59	-95.40	-504.43	867.97	845.91	788.62	57.29	14.765	
11,000.00	10,246.00	11,291.52	10,323.67	25.74	33.82	-94.87	-595.06	871.09	848.59	789.21	59.38	14.290	
11,100.00	10,246.00	11,404.13	10,315.79	26.67	35.34	-94.32	-707.33	874.82	851.37	789.53	61.85	13.766	
11,200.00	10,246.00	11,498.75	10,310.73	27.68	36.66	-93.97	-801.77	877.34	853.64	789.44	64.20	13.297	
11,300.00	10,246.00	11,607.19	10,307.33	28.78	38.17	-93.74	-910.13	879.52	855.41	788.60	66.81	12.803	
11,400.00	10,246.00	11,700.61	10,308.27	29.95	39.47	-93.79	-1,003.53	880.97	857.05	787.77	69.28	12.371	
11,500.00	10,246.00	11,792.41	10,310.73	31.19	40.79	-93.94	-1,095.26	883.54	859.99	788.18	71.82	11.975	
11,600.00	10,246.00	11,891.06	10,313.12	32.48	42.24	-94.09	-1,193.84	886.43	863.09	788.55	74.54	11.579	
11,700.00	10,246.00	12,035.13	10,315.66	33.81	44.37	-94.25	-1,337.84	888.24	864.74	786.81	77.92	11.097	
11,792.19	10,246.00	12,112.00	10,315.84	35.09	45.53	-94.26	-1,414.71	887.54	863.92	783.53	80.39	10.746	
11,800.00	10,246.00	12,119.47	10,315.84	35.20	45.65	-94.26	-1,422.18	887.55	863.92	783.30	80.62	10.716	
11,900.00	10,246.00	12,213.07	10,315.54	36.62	47.12	-94.24	-1,515.77	887.85	864.23	780.72	83.52	10.348	
12,000.00	10,246.00	12,291.00	10,314.90	38.08	48.36	-94.19	-1,593.69	889.33	866.11	779.89	86.22	10.045	
12,100.00	10,246.00	12,378.95	10,314.28	39.57	49.75	-94.14	-1,681.57	892.72	869.94	780.84	89.09	9.765	
12,200.00	10,246.00	12,519.23	10,312.71	41.08	51.93	-94.01	-1,821.75	897.30	873.42	780.65	92.78	9.414	
12,300.00	10,246.00	12,649.28	10,308.84	42.63	53.95	-93.77	-1,951.69	894.27	870.62	774.38	96.24	9.046	
12,400.00	10,246.00	12,744.07	10,305.81	44.19	55.46	-93.58	-2,046.39	891.50	867.51	768.16	99.35	8.732	
12,500.00	10,246.00	12,846.06	10,302.56	45.77	57.08	-93.38	-2,148.30	888.86	864.72	762.17	102.56	8.432	
12,600.00	10,246.00	12,946.07	10,299.17	47.37	58.65	-93.17	-2,248.22	886.07	861.74	755.99	105.75	8.149	
12,700.00	10,246.00	13,054.18	10,298.37	48.99	60.33	-93.13	-2,356.26	882.70	858.61	749.61	109.00	7.877	
12,800.00	10,246.00	13,175.05	10,298.08	50.62	62.23	-93.13	-2,476.94	876.03	853.02	740.65	112.36	7.592	
12,900.00	10,246.00	13,288.32	10,297.22	52.27	64.02	-93.10	-2,589.92	868.06	845.96	730.30	115.66	7.314	
13,000.00	10,246.00	13,376.82	10,297.22	53.92	65.43	-93.13	-2,678.17	861.47	838.54	719.70	118.84	7.056	
13,100.00	10,246.00	13,476.00	10,299.97	55.59	67.00	-93.34	-2,777.06	854.35	831.52	709.46	122.06	6.812	
13,200.00	10,246.00	13,565.00	10,302.76	57.27	68.44	-93.56	-2,865.85	849.07	825.77	700.52	125.25	6.593	
13,300.00	10,246.00	13,643.43	10,305.98	58.95	69.71	-93.79	-2,944.17	846.34	822.40	694.07	128.33	6.409	
13,400.00	10,246.00	13,738.63	10,311.03	60.65	71.26	-94.16	-3,039.19	843.82	820.11	688.57	131.54	6.235	
13,500.00	10,246.00	13,823.95	10,315.53	62.35	72.66	-94.48	-3,124.38	842.48	818.95	684.31	134.64	6.083	
13,600.00	10,246.00	13,932.28	10,319.44	64.06	74.46	-94.76	-3,232.64	841.44	818.29	680.22	138.07	5.927	
13,700.00	10,246.00	14,024.57	10,323.25	65.78	75.98	-95.03	-3,324.84	840.48	817.59	676.32	141.27	5.787	

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 136H
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 136H	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 0409 214H - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft	
Survey Program:		100-MWD		Reference		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)	Distance Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
13,794.23	10,246.00	14,115.12	10,326.21	67.40	77.49	-95.24	-3,415.34	839.89	817.27	672.92	144.35	5.662			
13,800.00	10,246.00	14,119.21	10,326.28	67.50	77.56	-95.24	-3,419.43	839.90	817.29	672.77	144.52	5.655			
13,900.00	10,246.00	14,192.00	10,326.34	69.22	78.78	-95.24	-3,492.19	841.51	819.45	672.03	147.42	5.559			
14,000.00	10,246.00	14,285.79	10,325.29	70.96	80.36	-95.14	-3,585.88	845.60	823.69	672.99	150.70	5.466			
14,100.00	10,246.00	14,383.09	10,324.65	72.69	81.99	-95.07	-3,683.08	850.12	828.26	674.20	154.06	5.376			
14,200.00	10,246.00	14,489.29	10,325.38	74.44	83.77	-95.08	-3,789.14	855.43	833.33	675.74	157.60	5.288			
14,300.00	10,246.00	14,596.14	10,324.99	76.18	85.56	-95.04	-3,895.96	857.83	835.45	674.29	161.16	5.184			
14,400.00	10,246.00	14,675.15	10,325.76	77.93	86.90	-95.07	-3,974.87	861.63	840.23	676.13	164.10	5.120			
14,500.00	10,246.00	14,790.62	10,330.30	79.69	88.84	-95.34	-4,090.10	867.41	845.67	677.84	167.83	5.039			
14,600.00	10,246.00	14,946.39	10,329.25	81.44	91.45	-95.27	-4,245.78	867.37	845.23	673.09	172.14	4.910			
14,700.00	10,246.00	15,044.10	10,326.31	83.20	93.08	-95.09	-4,343.42	865.03	842.57	666.99	175.57	4.799			
14,800.00	10,246.00	15,143.20	10,324.06	84.97	94.74	-94.95	-4,442.47	862.89	840.21	661.20	179.02	4.693			
14,900.00	10,246.00	15,240.26	10,322.25	86.73	96.36	-94.84	-4,539.49	860.82	837.93	655.49	182.44	4.593			
15,000.00	10,246.00	15,364.88	10,320.19	88.50	98.45	-94.72	-4,664.03	857.08	834.89	648.80	186.09	4.486			
15,100.00	10,246.00	15,444.00	10,319.27	90.27	99.78	-94.67	-4,743.10	854.59	831.56	642.17	189.40	4.391			
15,178.30	10,246.00	15,501.72	10,319.36	91.66	100.77	-94.68	-4,800.82	853.96	830.69	638.83	191.86	4.330			
15,200.00	10,246.00	15,518.30	10,319.56	92.04	101.05	-94.69	-4,817.40	854.00	830.75	638.23	192.53	4.315			
15,300.00	10,246.00	15,598.91	10,321.44	93.82	102.44	-94.81	-4,897.97	855.34	832.59	636.98	195.61	4.256			
15,400.00	10,246.00	15,680.53	10,324.50	95.60	103.85	-95.01	-4,979.48	858.39	836.64	638.02	198.61	4.212			
15,500.00	10,246.00	15,803.13	10,327.59	97.38	105.96	-95.18	-5,101.89	863.73	841.38	638.79	202.59	4.153			
15,600.00	10,246.00	15,900.37	10,326.03	99.16	107.61	-95.06	-5,199.07	866.55	844.12	638.09	206.03	4.097			
15,700.00	10,246.00	16,018.63	10,323.86	100.94	109.60	-94.90	-5,317.29	868.71	845.77	635.90	209.86	4.030			
15,800.00	10,246.00	16,137.77	10,320.77	102.72	111.60	-94.69	-5,436.39	868.44	845.34	631.71	213.63	3.957			
15,900.00	10,246.00	16,255.75	10,317.74	104.51	113.58	-94.51	-5,554.28	865.41	842.56	625.28	217.28	3.878			
16,000.00	10,246.00	16,355.83	10,318.12	106.30	115.25	-94.55	-5,654.27	861.35	838.54	617.83	220.71	3.799			
16,100.00	10,246.00	16,443.14	10,320.33	108.09	116.73	-94.72	-5,741.52	858.77	835.76	611.71	224.05	3.730			
16,200.00	10,246.00	16,559.01	10,321.35	109.88	118.69	-94.81	-5,857.32	854.93	832.53	604.93	227.61	3.658			
16,300.00	10,246.00	16,645.14	10,321.00	111.67	120.15	-94.81	-5,943.37	851.36	828.48	597.48	231.00	3.587			
16,369.70	10,246.00	16,694.00	10,321.21	112.92	120.98	-94.82	-5,992.22	850.83	827.70	594.53	233.18	3.550			
16,400.00	10,246.00	16,718.00	10,321.44	113.46	121.40	-94.84	-6,016.22	850.95	827.87	593.74	234.13	3.536			
16,500.00	10,246.00	16,813.44	10,322.62	115.26	123.04	-94.91	-6,111.64	852.10	829.17	591.63	237.53	3.491			
16,600.00	10,246.00	16,928.19	10,323.73	117.05	125.00	-94.99	-6,226.39	852.61	829.70	588.46	241.24	3.439			
16,700.00	10,246.00	17,045.88	10,324.44	118.85	126.99	-95.05	-6,344.06	850.72	828.15	583.26	244.89	3.382			
16,800.00	10,246.00	17,126.74	10,324.95	120.65	128.38	-95.09	-6,424.91	849.38	826.59	578.43	248.16	3.331			
16,900.00	10,246.00	17,229.42	10,327.08	122.44	130.12	-95.24	-6,527.56	848.99	826.40	574.76	251.64	3.284			
17,000.00	10,246.00	17,338.52	10,329.85	124.24	131.97	-95.44	-6,636.61	847.52	825.30	570.15	255.15	3.235			
17,100.00	10,246.00	17,448.25	10,331.19	126.04	133.84	-95.55	-6,746.30	844.68	822.82	564.14	258.68	3.181			
17,200.00	10,246.00	17,550.65	10,332.44	127.85	135.57	-95.66	-6,848.64	841.44	819.80	557.66	262.13	3.127			
17,300.00	10,246.00	17,642.10	10,332.76	129.65	137.12	-95.70	-6,940.05	838.71	816.88	551.33	265.54	3.076			
17,400.00	10,246.00	17,745.65	10,333.62	131.45	138.89	-95.78	-7,043.57	836.63	814.98	545.94	269.04	3.029			
17,500.00	10,246.00	17,834.18	10,334.62	133.25	140.41	-95.86	-7,132.07	834.54	812.78	540.39	272.40	2.984			
17,561.92	10,246.00	17,886.58	10,336.14	134.37	141.32	-95.97	-7,184.44	834.10	812.44	538.05	274.40	2.961			
17,600.00	10,246.00	17,919.43	10,337.63	135.06	141.88	-96.08	-7,217.26	834.05	812.57	536.96	275.60	2.948			
17,700.00	10,246.00	18,015.85	10,343.95	136.86	143.54	-96.52	-7,313.47	834.40	813.64	534.80	278.84	2.918			
17,800.00	10,246.00	18,120.41	10,351.64	138.67	145.32	-97.06	-7,417.75	834.42	814.53	532.38	282.15	2.887			
17,900.00	10,246.00	18,220.24	10,355.42	140.47	147.02	-97.32	-7,517.49	834.69	815.27	529.78	285.50	2.856			
18,000.00	10,246.00	18,359.18	10,355.59	142.28	149.38	-97.36	-7,656.37	831.30	812.63	523.31	289.32	2.809			
18,100.00	10,246.00	18,440.37	10,355.66	144.09	150.77	-97.39	-7,737.50	828.29	809.08	516.38	292.70	2.764			
18,139.80	10,246.00	18,467.75	10,356.06	144.81	151.24	-97.42	-7,764.87	827.94	808.64	514.72	293.92	2.751			
18,200.00	10,246.00	18,512.35	10,357.08	145.90	152.01	-97.49	-7,809.46	828.13	809.08	513.36	295.71	2.736			
18,300.00	10,246.00	18,595.29	10,359.50	147.70	153.44	-97.64	-7,892.34	830.34	812.03	513.32	298.71	2.718			
18,400.00	10,246.00	18,721.15	10,362.39	149.51	155.61	-97.81	-8,018.11	833.54	815.05	512.34	302.71	2.692			

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 136H
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 136H	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 0409 214H - Wellbore #1 - Wellbore #1													Offset Site Error: 0.00 usft
Survey Program: 100-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)			
18,500.00	10,246.00	18,832.74	10,360.89	151.32	157.52	-97.71	-8,129.69	833.00	814.33	507.88	306.44	2.657	
18,533.49	10,246.00	18,859.07	10,360.57	151.93	157.97	-97.69	-8,156.01	832.90	814.15	506.63	307.53	2.647	
18,600.00	10,246.00	18,907.97	10,359.93	153.13	158.81	-97.64	-8,204.91	833.52	814.87	505.34	309.53	2.633	
18,700.00	10,246.00	19,033.65	10,359.36	154.94	160.95	-97.59	-8,330.56	835.22	816.33	502.82	313.51	2.604	
18,794.44	10,246.00	19,119.81	10,360.88	156.65	162.41	-97.70	-8,416.70	834.69	815.97	499.35	316.62	2.577	
18,800.00	10,246.00	19,123.95	10,360.97	156.75	162.48	-97.70	-8,420.85	834.68	815.97	499.19	316.78	2.576	
18,900.00	10,246.00	19,199.77	10,362.66	158.56	163.78	-97.81	-8,496.63	835.82	817.73	498.05	319.68	2.558	
19,000.00	10,246.00	19,340.63	10,362.52	160.38	166.20	-97.78	-8,637.43	838.27	819.87	495.92	323.95	2.531	
19,100.00	10,246.00	19,440.98	10,356.26	162.19	167.93	-97.36	-8,737.56	836.04	816.84	489.12	327.72	2.492	
19,165.13	10,246.00	19,491.10	10,354.90	163.37	168.79	-97.27	-8,787.65	835.75	816.23	486.34	329.89	2.474	
19,200.00	10,246.00	19,517.73	10,354.55	164.00	169.26	-97.24	-8,814.28	835.93	816.41	485.42	330.99	2.467	
19,300.00	10,246.00	19,619.40	10,354.37	165.81	171.02	-97.22	-8,915.93	837.60	818.03	483.47	334.56	2.445	
19,400.00	10,246.00	19,725.91	10,353.91	167.63	172.85	-97.18	-9,022.44	837.91	818.25	480.05	338.20	2.419	
19,500.00	10,246.00	19,821.00	10,353.34	169.44	174.46	-97.14	-9,117.53	838.42	818.70	477.07	341.63	2.396	
19,600.00	10,246.00	19,923.62	10,353.51	171.25	176.21	-97.14	-9,220.15	839.27	819.55	474.38	345.17	2.374	
19,700.00	10,246.00	20,043.36	10,352.43	173.07	178.27	-97.08	-9,339.86	837.48	817.82	468.87	348.95	2.344	
19,800.00	10,246.00	20,134.85	10,351.62	174.88	179.86	-97.04	-9,431.33	836.10	816.22	463.79	352.43	2.316	
19,900.00	10,246.00	20,246.32	10,351.32	176.70	181.79	-97.03	-9,542.80	834.74	815.03	458.98	356.05	2.289	
20,000.00	10,246.00	20,353.32	10,350.05	178.51	183.62	-96.97	-9,649.74	831.51	811.87	452.26	359.62	2.258	
20,100.00	10,246.00	20,447.00	10,348.88	180.33	185.23	-96.91	-9,743.37	828.74	808.79	445.65	363.14	2.227	
20,200.00	10,246.00	20,536.00	10,349.01	182.15	186.77	-96.93	-9,832.35	827.00	806.87	440.30	366.57	2.201	
20,300.00	10,246.00	20,639.09	10,349.92	183.96	188.55	-97.01	-9,935.43	825.34	805.38	435.30	370.08	2.176	
20,400.00	10,246.00	20,728.52	10,351.51	185.78	190.10	-97.13	-10,024.83	824.39	804.53	431.14	373.40	2.155	
20,489.12	10,246.00	20,817.95	10,352.40	187.40	191.63	-97.20	-10,114.25	824.00	804.25	427.77	376.48	2.136 CC, ES, 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 136H
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 136H	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 134H - 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	3.10	3.10	0.50	0.50	49.08	892.20	1,029.34	1,362.19				
100.00	100.00	103.10	103.10	0.51	0.51	49.08	892.20	1,029.34	1,362.19	1,361.17	1.02	1,341.644	
200.00	200.00	203.10	203.10	0.59	0.59	49.08	892.20	1,029.34	1,362.19	1,361.01	1.18	1,155.082	
300.00	300.00	303.10	303.10	0.73	0.74	49.08	892.20	1,029.34	1,362.19	1,360.72	1.47	927.970	
400.00	400.00	403.10	403.10	0.91	0.91	49.08	892.20	1,029.34	1,362.19	1,360.37	1.82	747.260	
500.00	500.00	503.10	503.10	1.10	1.11	49.08	892.20	1,029.34	1,362.19	1,359.98	2.21	615.665	
600.00	600.00	603.10	603.10	1.31	1.31	49.08	892.20	1,029.34	1,362.19	1,359.57	2.62	519.635	
700.00	700.00	703.10	703.10	1.52	1.52	49.08	892.20	1,029.34	1,362.19	1,359.15	3.04	447.822	
800.00	800.00	803.10	803.10	1.73	1.74	49.08	892.20	1,029.34	1,362.19	1,358.72	3.47	392.618	
900.00	900.00	903.10	903.10	1.95	1.95	49.08	892.20	1,029.34	1,362.19	1,358.29	3.90	349.091	
1,000.00	1,000.00	1,003.10	1,003.10	2.17	2.17	49.08	892.20	1,029.34	1,362.19	1,357.85	4.34	314.002	
1,100.00	1,100.00	1,103.10	1,103.10	2.38	2.39	49.08	892.20	1,029.34	1,362.19	1,357.41	4.78	285.173	
1,200.00	1,200.00	1,203.10	1,203.10	2.61	2.61	49.08	892.20	1,029.34	1,362.19	1,356.97	5.22	261.099	
1,300.00	1,300.00	1,303.10	1,303.10	2.83	2.83	49.08	892.20	1,029.34	1,362.19	1,356.53	5.66	240.713	
1,400.00	1,400.00	1,403.10	1,403.10	3.05	3.05	49.08	892.20	1,029.34	1,362.19	1,356.09	6.10	223.238	
1,500.00	1,500.00	1,505.81	1,505.81	3.27	3.28	49.08	892.20	1,029.33	1,362.19	1,355.64	6.55	207.948	
1,600.00	1,600.00	1,692.87	1,692.73	3.49	3.65	49.03	888.99	1,023.70	1,358.79	1,351.66	7.12	190.738	
1,700.00	1,700.00	1,862.68	1,861.72	3.71	3.99	48.89	880.90	1,009.46	1,349.13	1,341.48	7.65	176.455	
1,800.00	1,800.00	1,961.96	1,960.28	3.94	4.21	48.79	875.02	999.10	1,337.37	1,329.31	8.06	165.839	
1,900.00	1,900.00	2,061.24	2,058.85	4.16	4.44	48.68	869.14	988.75	1,325.62	1,317.14	8.49	156.202	
2,000.00	2,000.00	2,160.52	2,157.41	4.38	4.68	48.58	863.25	978.39	1,313.88	1,304.96	8.91	147.405	
2,100.00	2,100.00	2,259.80	2,255.97	4.61	4.93	48.47	857.37	968.04	1,302.13	1,292.79	9.34	139.372	
2,200.00	2,200.00	2,359.07	2,354.53	4.83	5.19	48.36	851.49	957.69	1,290.40	1,280.62	9.78	131.988	
2,300.00	2,300.00	2,458.35	2,453.09	5.05	5.45	48.25	845.60	947.33	1,278.66	1,268.45	10.21	125.198	
2,400.00	2,400.00	2,557.63	2,551.65	5.28	5.72	48.13	839.72	936.98	1,266.94	1,256.28	10.65	118.937	
2,500.00	2,500.00	2,656.91	2,650.21	5.50	5.99	48.02	833.84	926.63	1,255.21	1,244.12	11.09	113.150	
2,600.00	2,600.00	2,756.19	2,748.77	5.73	6.27	47.90	827.95	916.27	1,243.50	1,231.96	11.54	107.787	
2,700.00	2,700.00	2,855.46	2,847.34	5.95	6.55	47.78	822.07	905.92	1,231.78	1,219.80	11.98	102.806	
2,800.00	2,800.00	2,954.74	2,945.90	6.17	6.83	47.66	816.19	895.56	1,220.08	1,207.65	12.43	98.169	
2,900.00	2,900.00	3,054.02	3,044.46	6.40	7.12	47.53	810.30	885.21	1,208.38	1,195.50	12.88	93.843	
3,000.00	3,000.00	3,153.30	3,143.02	6.62	7.40	47.40	804.42	874.86	1,196.68	1,183.35	13.33	89.799	
3,100.00	3,100.00	3,252.58	3,241.58	6.85	7.69	47.27	798.54	864.50	1,184.99	1,171.21	13.78	86.012	
3,200.00	3,200.00	3,351.85	3,340.14	7.07	7.99	47.14	792.65	854.15	1,173.31	1,159.08	14.23	82.459	
3,300.00	3,300.00	3,451.13	3,438.70	7.29	8.28	47.00	786.77	843.80	1,161.63	1,146.95	14.68	79.118	
3,400.00	3,400.00	3,550.41	3,537.26	7.52	8.57	46.86	780.89	833.44	1,149.96	1,134.83	15.14	75.973	
3,500.00	3,500.00	3,649.69	3,635.82	7.74	8.87	46.72	775.01	823.09	1,138.30	1,122.71	15.59	73.008	
3,600.00	3,599.98	3,748.83	3,734.25	7.97	9.17	42.75	769.13	812.75	1,125.37	1,109.32	16.05	70.130	
3,679.66	3,679.54	3,827.55	3,812.41	8.15	9.40	42.94	764.47	804.54	1,113.25	1,096.84	16.41	67.844	
3,700.00	3,699.84	3,847.63	3,832.34	8.19	9.46	42.96	763.28	802.45	1,109.95	1,093.45	16.50	67.262	
3,800.00	3,799.65	3,946.29	3,930.29	8.42	9.76	43.03	757.43	792.16	1,093.74	1,076.79	16.95	64.514	
3,900.00	3,899.45	4,044.96	4,028.24	8.64	10.06	43.11	751.58	781.87	1,077.53	1,060.12	17.41	61.904	
4,000.00	3,999.25	4,143.63	4,126.20	8.86	10.36	43.19	745.73	771.58	1,061.32	1,043.45	17.86	59.422	
4,100.00	4,099.06	4,242.29	4,224.15	9.09	10.66	43.27	739.89	761.29	1,045.11	1,026.79	18.32	57.061	
4,200.00	4,198.86	4,340.96	4,322.10	9.32	10.96	43.36	734.04	751.00	1,028.90	1,010.13	18.77	54.812	
4,300.00	4,298.66	4,439.62	4,420.06	9.55	11.26	43.45	728.19	740.71	1,012.70	993.47	19.23	52.667	
4,400.00	4,398.47	4,538.29	4,518.01	9.78	11.56	43.54	722.35	730.42	996.50	976.81	19.69	50.619	
4,500.00	4,498.27	4,636.96	4,615.97	10.01	11.87	43.64	716.50	720.13	980.30	960.15	20.14	48.663	
4,600.00	4,598.07	4,735.62	4,713.92	10.24	12.17	43.73	710.65	709.84	964.10	943.50	20.60	46.793	
4,700.00	4,697.88	4,834.29	4,811.87	10.47	12.47	43.84	704.81	699.55	947.91	926.84	21.06	45.003	
4,800.00	4,797.68	4,932.96	4,909.83	10.70	12.78	43.94	698.96	689.26	931.72	910.19	21.52	43.288	
4,900.00	4,897.48	5,031.62	5,007.78	10.94	13.08	44.05	693.11	678.97	915.53	893.55	21.98	41.644	
5,000.00	4,997.29	5,130.29	5,105.73	11.17	13.39	44.16	687.27	668.68	899.35	876.90	22.45	40.067	

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 136H
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 136H	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 134H - Wellbore #1 - Plan 0													Offset Site Error:	0.00 usft	
Survey Program:		0-MWD		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		
5,100.00	5,097.09	5,228.95	5,203.69	11.41	13.69	44.28	681.42	658.39	883.17	860.26	22.91	38.553			
5,200.00	5,196.89	5,327.62	5,301.64	11.64	14.00	44.40	675.57	648.10	866.99	843.62	23.37	37.098			
5,300.00	5,296.70	5,426.29	5,399.59	11.88	14.30	44.52	669.73	637.81	850.82	826.98	23.83	35.699			
5,400.00	5,396.50	5,524.95	5,497.55	12.12	14.61	44.65	663.88	627.52	834.65	810.35	24.30	34.354			
5,500.00	5,496.30	5,623.62	5,595.50	12.35	14.92	44.79	658.03	617.23	818.48	793.72	24.76	33.058			
5,600.00	5,596.11	5,722.28	5,693.46	12.59	15.22	44.93	652.19	606.94	802.32	777.10	25.22	31.809			
5,700.00	5,695.91	5,820.95	5,791.41	12.83	15.53	45.08	646.34	596.65	786.17	760.48	25.69	30.606			
5,800.00	5,795.71	5,919.62	5,889.36	13.07	15.84	45.23	640.49	586.36	770.02	743.87	26.15	29.445			
5,900.00	5,895.52	6,018.28	5,987.32	13.31	16.14	45.39	634.64	576.07	753.88	727.26	26.62	28.325			
6,000.00	5,995.32	6,116.95	6,085.27	13.55	16.45	45.56	628.80	565.78	737.74	710.66	27.08	27.243			
6,100.00	6,095.12	6,215.61	6,183.22	13.79	16.76	45.73	622.95	555.49	721.61	694.06	27.55	26.197			
6,200.00	6,194.93	6,314.28	6,281.18	14.02	17.07	45.91	617.10	545.20	705.48	677.47	28.01	25.186			
6,300.00	6,294.73	6,412.95	6,379.13	14.27	17.37	46.10	611.26	534.91	689.36	660.89	28.48	24.209			
6,400.00	6,394.53	6,511.61	6,477.09	14.51	17.68	46.30	605.41	524.62	673.25	644.31	28.94	23.263			
6,500.00	6,494.34	6,610.28	6,575.04	14.75	17.99	46.51	599.56	514.33	657.15	627.75	29.41	22.347			
6,600.00	6,594.14	6,708.94	6,672.99	14.99	18.30	46.73	593.72	504.04	641.06	611.19	29.87	21.460			
6,700.00	6,693.95	6,807.61	6,770.95	15.23	18.61	46.96	587.87	493.75	624.98	594.64	30.34	20.600			
6,800.00	6,793.75	6,906.28	6,868.90	15.47	18.92	47.20	582.02	483.46	608.90	578.10	30.80	19.767			
6,900.00	6,893.55	7,004.94	6,966.85	15.71	19.23	47.46	576.18	473.17	592.84	561.57	31.27	18.958			
7,000.00	6,993.36	7,103.61	7,064.81	15.95	19.53	47.73	570.33	462.88	576.79	545.06	31.74	18.174			
7,100.00	7,093.16	7,202.27	7,162.76	16.20	19.84	48.02	564.48	452.59	560.76	528.55	32.20	17.413			
7,200.00	7,192.96	7,300.94	7,260.72	16.44	20.15	48.32	558.64	442.30	544.74	512.07	32.67	16.674			
7,300.00	7,292.77	7,399.61	7,358.67	16.68	20.46	48.64	552.79	432.01	528.73	495.59	33.14	15.956			
7,400.00	7,392.57	7,498.27	7,456.62	16.92	20.77	48.98	546.94	421.72	512.74	479.14	33.60	15.258			
7,500.00	7,492.37	7,596.94	7,554.58	17.17	21.08	49.35	541.09	411.43	496.77	462.70	34.07	14.580			
7,600.00	7,592.18	7,695.61	7,652.53	17.41	21.39	49.73	535.25	401.14	480.82	446.29	34.54	13.921			
7,700.00	7,691.98	7,794.27	7,750.48	17.65	21.70	50.15	529.40	390.85	464.90	429.89	35.01	13.280			
7,800.00	7,791.78	7,892.94	7,848.44	17.89	22.01	50.59	523.55	380.56	449.00	413.52	35.48	12.656			
7,900.00	7,891.59	7,991.60	7,946.39	18.14	22.32	51.07	517.71	370.27	433.13	397.18	35.95	12.050			
8,000.00	7,991.39	8,090.27	8,044.34	18.38	22.63	51.58	511.86	359.98	417.29	380.87	36.42	11.459			
8,100.00	8,091.19	8,188.94	8,142.30	18.63	22.94	52.13	506.01	349.69	401.48	364.59	36.89	10.884			
8,200.00	8,191.00	8,287.60	8,240.25	18.87	23.25	52.73	500.17	339.40	385.71	348.35	37.36	10.325			
8,300.00	8,290.80	8,386.27	8,338.21	19.11	23.56	53.37	494.32	329.11	369.99	332.16	37.83	9.780			
8,400.00	8,390.60	8,484.93	8,436.16	19.36	23.87	54.08	488.47	318.82	354.32	316.01	38.31	9.249			
8,500.00	8,490.41	8,583.60	8,534.11	19.60	24.18	54.85	482.63	308.53	338.70	299.92	38.79	8.733			
8,600.00	8,590.21	8,682.27	8,632.07	19.85	24.49	55.69	476.78	298.24	323.16	283.89	39.27	8.230			
8,700.00	8,690.01	8,776.86	8,726.01	20.09	24.77	56.58	471.30	288.59	307.96	268.20	39.76	7.746			
8,800.00	8,789.82	8,866.50	8,815.27	20.33	24.97	57.50	467.26	281.48	295.43	255.19	40.23	7.343			
8,900.00	8,889.62	8,956.76	8,905.36	20.58	25.14	58.48	464.58	276.77	286.11	245.43	40.67	7.034			
9,000.00	8,989.42	9,047.47	8,996.03	20.82	25.29	59.49	463.31	274.54	280.03	238.94	41.09	6.814			
9,100.00	9,089.23	9,143.77	9,092.33	21.07	25.44	60.57	463.20	274.34	276.65	235.12	41.53	6.661			
9,200.00	9,189.03	9,246.02	9,194.58	21.31	25.60	61.76	463.06	274.34	273.57	231.57	42.00	6.513			
9,300.00	9,288.83	9,365.87	9,313.26	21.56	25.87	66.17	447.97	274.36	265.97	223.31	42.67	6.234			
9,354.74	9,343.46	9,426.21	9,371.16	21.69	26.06	70.43	431.09	274.39	259.81	216.64	43.17	6.019			
9,400.00	9,388.66	9,472.60	9,414.28	21.79	26.23	74.55	414.02	274.41	254.84	211.14	43.70	5.832			
9,500.00	9,488.61	9,563.99	9,494.52	21.96	26.62	84.86	370.49	274.48	248.55	203.40	45.16	5.504			
9,509.70	9,498.31	9,572.06	9,501.26	21.98	26.66	85.90	366.04	274.48	248.49	203.19	45.30	5.486 CC, ES			
9,534.39	9,523.00	9,592.01	9,517.62	22.02	26.75	92.62	354.64	274.50	248.91	203.27	45.64	5.454			
9,600.00	9,588.61	9,640.57	9,555.74	22.15	27.01	99.47	324.56	274.55	254.53	208.24	46.29	5.499			
9,684.43	9,673.04	9,694.09	9,594.62	22.33	27.31	107.46	287.81	274.60	273.06	226.82	46.24	5.905			
9,700.00	9,688.61	9,700.00	9,598.70	22.35	27.35	-71.18	283.54	274.61	277.89	231.93	45.95	6.047			
9,750.00	9,738.47	9,731.75	9,619.84	22.42	27.55	-65.06	259.85	274.64	295.17	249.70	45.47	6.491			

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 136H
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 136H	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 134H - Wellbore #1 - Plan 0													Offset Site Error:	0.00 usft
Survey Program:		0-MWD						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	
9,800.00	9,787.83	9,760.08	9,637.57	22.47	27.73	-59.76	237.76	274.67	314.57	269.96	44.62	7.051		
9,850.00	9,836.31	9,788.14	9,654.04	22.49	27.93	-54.91	215.05	274.71	335.26	291.62	43.64	7.683		
9,900.00	9,883.56	9,815.97	9,669.25	22.50	28.13	-50.55	191.75	274.74	356.57	313.97	42.60	8.371		
9,950.00	9,929.20	9,850.00	9,686.29	22.50	28.39	-46.25	162.30	274.79	378.07	336.21	41.86	9.033		
10,000.00	9,972.89	9,871.06	9,695.95	22.49	28.55	-43.32	143.58	274.81	399.12	358.61	40.51	9.853		
10,050.00	10,014.31	9,900.00	9,708.08	22.47	28.79	-40.30	117.31	274.85	419.64	380.06	39.58	10.602		
10,100.00	10,053.12	9,925.57	9,717.69	22.45	29.01	-37.83	93.62	274.89	439.29	400.73	38.56	11.391		
10,150.00	10,089.04	9,950.00	9,725.87	22.43	29.22	-35.73	70.60	274.92	457.90	420.32	37.58	12.185		
10,200.00	10,121.80	9,979.65	9,734.47	22.42	29.49	-33.77	42.23	274.96	475.26	438.38	36.87	12.889		
10,250.00	10,151.14	10,000.00	9,739.52	22.43	29.68	-32.32	22.52	274.99	491.36	455.42	35.94	13.672		
10,300.00	10,176.84	10,033.42	9,746.28	22.45	30.00	-30.81	-10.21	275.04	505.84	470.33	35.51	14.244		
10,350.00	10,198.70	10,050.00	9,748.93	22.50	30.16	-29.83	-26.57	275.07	519.03	484.31	34.72	14.951		
10,400.00	10,216.57	10,086.96	9,753.11	22.57	30.53	-28.73	-63.29	275.12	530.24	495.70	34.53	15.354		
10,450.00	10,230.30	10,113.67	9,754.66	22.66	30.80	-27.96	-89.95	275.16	539.94	505.74	34.20	15.788		
10,500.00	10,239.79	10,146.18	9,755.00	22.79	31.14	-27.31	-122.46	275.21	547.85	513.78	34.07	16.080		
10,550.00	10,244.96	10,195.90	9,755.00	22.95	31.68	-26.86	-172.18	275.28	552.50	518.18	34.31	16.102		
10,584.43	10,246.00	10,230.31	9,755.00	23.07	32.06	-26.78	-206.59	275.33	553.44	518.90	34.54	16.023		
10,600.00	10,246.00	10,245.88	9,755.00	23.13	32.24	-26.78	-222.16	275.36	553.45	518.80	34.65	15.971		
10,700.00	10,246.00	10,345.88	9,755.00	23.60	33.39	-26.79	-322.16	275.51	553.52	518.08	35.44	15.619		
10,800.00	10,246.00	10,445.88	9,755.00	24.19	34.61	-26.81	-422.16	275.65	553.59	517.26	36.33	15.238		
10,900.00	10,246.00	10,545.88	9,755.00	24.91	35.88	-26.82	-522.16	275.80	553.65	516.34	37.32	14.836		
11,000.00	10,246.00	10,645.88	9,755.00	25.74	37.19	-26.83	-622.16	275.95	553.72	515.32	38.40	14.421		
11,100.00	10,246.00	10,745.88	9,755.00	26.67	38.55	-26.85	-722.16	276.10	553.79	514.23	39.56	13.999		
11,200.00	10,246.00	10,845.88	9,755.00	27.68	39.95	-26.86	-822.16	276.25	553.85	513.06	40.80	13.576		
11,300.00	10,246.00	10,945.88	9,755.00	28.78	41.38	-26.87	-922.16	276.40	553.92	511.81	42.11	13.155		
11,400.00	10,246.00	11,045.88	9,755.00	29.95	42.84	-26.89	-1,022.15	276.54	553.99	510.51	43.48	12.741		
11,500.00	10,246.00	11,145.88	9,755.00	31.19	44.32	-26.90	-1,122.15	276.69	554.05	509.14	44.91	12.336		
11,600.00	10,246.00	11,245.88	9,755.00	32.48	45.84	-26.91	-1,222.15	276.84	554.12	507.72	46.40	11.942		
11,700.00	10,246.00	11,345.88	9,755.00	33.81	47.37	-26.93	-1,322.15	276.99	554.19	506.25	47.94	11.561		
11,800.00	10,246.00	11,445.88	9,755.00	35.20	48.93	-26.94	-1,422.15	277.14	554.25	504.74	49.51	11.194		
11,900.00	10,246.00	11,545.88	9,755.00	36.62	50.50	-26.96	-1,522.15	277.29	554.32	503.19	51.13	10.841		
12,000.00	10,246.00	11,645.88	9,755.00	38.08	52.09	-26.97	-1,622.15	277.43	554.39	501.60	52.79	10.502		
12,100.00	10,246.00	11,745.88	9,755.00	39.57	53.70	-26.98	-1,722.15	277.58	554.45	499.97	54.48	10.177		
12,200.00	10,246.00	11,845.88	9,755.00	41.08	55.31	-27.00	-1,822.15	277.73	554.52	498.32	56.20	9.867		
12,300.00	10,246.00	11,945.88	9,755.00	42.63	56.95	-27.01	-1,922.15	277.88	554.59	496.64	57.95	9.570		
12,400.00	10,246.00	12,045.88	9,755.00	44.19	58.59	-27.02	-2,022.15	278.03	554.66	494.93	59.72	9.287		
12,500.00	10,246.00	12,145.88	9,755.00	45.77	60.24	-27.04	-2,122.15	278.18	554.72	493.20	61.52	9.017		
12,600.00	10,246.00	12,245.88	9,755.00	47.37	61.91	-27.05	-2,222.15	278.32	554.79	491.45	63.34	8.759		
12,700.00	10,246.00	12,345.88	9,755.00	48.99	63.58	-27.06	-2,322.15	278.47	554.86	489.68	65.18	8.513		
12,800.00	10,246.00	12,445.88	9,755.00	50.62	65.26	-27.08	-2,422.15	278.62	554.92	487.89	67.04	8.278		
12,900.00	10,246.00	12,545.88	9,755.00	52.27	66.95	-27.09	-2,522.15	278.77	554.99	486.08	68.91	8.054		
13,000.00	10,246.00	12,645.88	9,755.00	53.92	68.65	-27.10	-2,622.15	278.92	555.06	484.26	70.80	7.840		
13,100.00	10,246.00	12,745.88	9,755.00	55.59	70.35	-27.12	-2,722.15	279.07	555.13	482.42	72.71	7.635		
13,200.00	10,246.00	12,845.88	9,755.00	57.27	72.06	-27.13	-2,822.15	279.22	555.19	480.57	74.62	7.440		
13,300.00	10,246.00	12,945.88	9,755.00	58.95	73.78	-27.15	-2,922.15	279.36	555.26	478.71	76.55	7.253		
13,400.00	10,246.00	13,045.88	9,755.00	60.65	75.50	-27.16	-3,022.15	279.51	555.33	476.83	78.50	7.074		
13,500.00	10,246.00	13,145.88	9,755.00	62.35	77.23	-27.17	-3,122.15	279.66	555.39	474.94	80.45	6.904		
13,600.00	10,246.00	13,245.87	9,755.00	64.06	78.96	-27.19	-3,222.15	279.81	555.46	473.05	82.41	6.740		
13,700.00	10,246.00	13,345.87	9,755.00	65.78	80.69	-27.20	-3,322.15	279.96	555.53	471.14	84.39	6.583		
13,800.00	10,246.00	13,445.87	9,755.00	67.50	82.43	-27.21	-3,422.15	280.11	555.60	469.23	86.37	6.433		
13,900.00	10,246.00	13,545.87	9,755.00	69.22	84.18	-27.23	-3,522.15	280.25	555.66	467.30	88.36	6.289		
14,000.00	10,246.00	13,645.87	9,755.00	70.96	85.92	-27.24	-3,622.15	280.40	555.73	465.37	90.36	6.150		

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 136H
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 136H	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 134H - Wellbore #1 - Plan 0													Offset Site Error:	0.00 usft	
Survey Program:		0-MWD					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	10,246.00	13,745.87	9,755.00	72.69	87.67	-27.25	-3,722.15	280.55	555.80	463.43	92.37	6.017			
14,200.00	10,246.00	13,845.87	9,755.00	74.44	89.43	-27.27	-3,822.15	280.70	555.87	461.49	94.38	5.890			
14,300.00	10,246.00	13,945.87	9,755.00	76.18	91.18	-27.28	-3,922.15	280.85	555.93	459.53	96.40	5.767			
14,400.00	10,246.00	14,045.87	9,755.00	77.93	92.94	-27.29	-4,022.15	281.00	556.00	457.58	98.43	5.649			
14,500.00	10,246.00	14,145.87	9,755.00	79.69	94.70	-27.31	-4,122.15	281.14	556.07	455.61	100.46	5.535			
14,600.00	10,246.00	14,245.87	9,755.00	81.44	96.47	-27.32	-4,222.15	281.29	556.14	453.64	102.50	5.426			
14,700.00	10,246.00	14,345.87	9,755.00	83.20	98.23	-27.33	-4,322.15	281.44	556.21	451.66	104.54	5.320			
14,800.00	10,246.00	14,445.87	9,755.00	84.97	100.00	-27.35	-4,422.15	281.59	556.27	449.68	106.59	5.219			
14,900.00	10,246.00	14,545.87	9,755.00	86.73	101.77	-27.36	-4,522.15	281.74	556.34	447.69	108.65	5.121			
15,000.00	10,246.00	14,645.87	9,755.00	88.50	103.55	-27.37	-4,622.15	281.89	556.41	445.70	110.71	5.026			
15,100.00	10,246.00	14,745.87	9,755.00	90.27	105.32	-27.39	-4,722.15	282.03	556.48	443.71	112.77	4.935			
15,200.00	10,246.00	14,845.87	9,755.00	92.04	107.10	-27.40	-4,822.15	282.18	556.54	441.71	114.84	4.846			
15,300.00	10,246.00	14,945.87	9,755.00	93.82	108.88	-27.42	-4,922.15	282.33	556.61	439.70	116.91	4.761			
15,400.00	10,246.00	15,045.87	9,755.00	95.60	110.66	-27.43	-5,022.15	282.48	556.68	437.70	118.99	4.679			
15,500.00	10,246.00	15,145.87	9,755.00	97.38	112.44	-27.44	-5,122.15	282.63	556.75	435.68	121.07	4.599			
15,600.00	10,246.00	15,245.87	9,755.00	99.16	114.23	-27.46	-5,222.15	282.78	556.82	433.67	123.15	4.521			
15,700.00	10,246.00	15,345.87	9,755.00	100.94	116.01	-27.47	-5,322.15	282.92	556.88	431.65	125.24	4.447			
15,800.00	10,246.00	15,445.87	9,755.00	102.72	117.80	-27.48	-5,422.15	283.07	556.95	429.62	127.33	4.374			
15,900.00	10,246.00	15,545.87	9,755.00	104.51	119.59	-27.50	-5,522.15	283.22	557.02	427.60	129.42	4.304			
16,000.00	10,246.00	15,645.87	9,755.00	106.30	121.38	-27.51	-5,622.14	283.37	557.09	425.57	131.52	4.236			
16,100.00	10,246.00	15,745.87	9,755.00	108.09	123.17	-27.52	-5,722.14	283.52	557.16	423.54	133.62	4.170			
16,200.00	10,246.00	15,845.87	9,755.00	109.88	124.96	-27.54	-5,822.14	283.67	557.23	421.50	135.72	4.106			
16,300.00	10,246.00	15,945.87	9,755.00	111.67	126.75	-27.55	-5,922.14	283.82	557.29	419.46	137.83	4.043			
16,400.00	10,246.00	16,045.87	9,755.00	113.46	128.54	-27.56	-6,022.14	283.96	557.36	417.42	139.94	3.983			
16,500.00	10,246.00	16,145.87	9,755.00	115.26	130.34	-27.58	-6,122.14	284.11	557.43	415.38	142.05	3.924			
16,600.00	10,246.00	16,245.87	9,755.00	117.05	132.13	-27.59	-6,222.14	284.26	557.50	413.33	144.17	3.867			
16,700.00	10,246.00	16,345.87	9,755.00	118.85	133.93	-27.60	-6,322.14	284.41	557.57	411.28	146.29	3.811			
16,800.00	10,246.00	16,445.87	9,755.00	120.65	135.73	-27.62	-6,422.14	284.56	557.63	409.23	148.41	3.757			
16,900.00	10,246.00	16,545.87	9,755.00	122.44	137.53	-27.63	-6,522.14	284.71	557.70	407.17	150.53	3.705			
17,000.00	10,246.00	16,645.87	9,755.00	124.24	139.33	-27.64	-6,622.14	284.85	557.77	405.12	152.65	3.654			
17,100.00	10,246.00	16,745.87	9,755.00	126.04	141.13	-27.66	-6,722.14	285.00	557.84	403.06	154.78	3.604			
17,200.00	10,246.00	16,845.87	9,755.00	127.85	142.93	-27.67	-6,822.14	285.15	557.91	401.00	156.91	3.556			
17,300.00	10,246.00	16,945.87	9,755.00	129.65	144.73	-27.68	-6,922.14	285.30	557.98	398.93	159.04	3.508			
17,400.00	10,246.00	17,045.87	9,755.00	131.45	146.53	-27.70	-7,022.14	285.45	558.05	396.87	161.18	3.462			
17,500.00	10,246.00	17,145.87	9,755.00	133.25	148.33	-27.71	-7,122.14	285.60	558.11	394.80	163.32	3.417			
17,600.00	10,246.00	17,245.87	9,755.00	135.06	150.14	-27.72	-7,222.14	285.74	558.18	392.73	165.45	3.374			
17,700.00	10,246.00	17,345.87	9,755.00	136.86	151.94	-27.74	-7,322.14	285.89	558.25	390.66	167.59	3.331			
17,800.00	10,246.00	17,445.87	9,755.00	138.67	153.75	-27.75	-7,422.14	286.04	558.32	388.58	169.74	3.289			
17,900.00	10,246.00	17,545.87	9,755.00	140.47	155.55	-27.76	-7,522.14	286.19	558.39	386.51	171.88	3.249			
18,000.00	10,246.00	17,645.87	9,755.00	142.28	157.36	-27.78	-7,622.14	286.34	558.46	384.43	174.03	3.209			
18,100.00	10,246.00	17,745.87	9,755.00	144.09	159.17	-27.79	-7,722.14	286.49	558.53	382.35	176.18	3.170			
18,200.00	10,246.00	17,845.87	9,755.00	145.90	160.97	-27.80	-7,822.14	286.63	558.60	380.27	178.33	3.132			
18,300.00	10,246.00	17,945.87	9,755.00	147.70	162.78	-27.82	-7,922.14	286.78	558.66	378.18	180.48	3.095			
18,400.00	10,246.00	18,045.87	9,755.00	149.51	164.59	-27.83	-8,022.14	286.93	558.73	376.10	182.64	3.059			
18,500.00	10,246.00	18,145.87	9,755.00	151.32	166.40	-27.85	-8,122.14	287.08	558.80	374.01	184.79	3.024			
18,600.00	10,246.00	18,245.87	9,755.00	153.13	168.21	-27.86	-8,222.14	287.23	558.87	371.92	186.95	2.989			
18,700.00	10,246.00	18,345.87	9,755.00	154.94	170.02	-27.87	-8,322.14	287.38	558.94	369.83	189.11	2.956			
18,800.00	10,246.00	18,445.87	9,755.00	156.75	171.83	-27.89	-8,422.14	287.53	559.01	367.74	191.27	2.923			
18,900.00	10,246.00	18,545.87	9,755.00	158.56	173.64	-27.90	-8,522.14	287.67	559.08	365.64	193.43	2.890			
19,000.00	10,246.00	18,645.87	9,755.00	160.38	175.45	-27.91	-8,622.14	287.82	559.15	363.55	195.60	2.859			
19,100.00	10,246.00	18,745.87	9,755.00	162.19	177.26	-27.93	-8,722.14	287.97	559.22	361.45	197.77	2.828			
19,200.00	10,246.00	18,845.87	9,755.00	164.00	179.07	-27.94	-8,822.14	288.12	559.29	359.35	199.93	2.797			

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 136H
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 136H	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 134H - 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)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,300.00	10,246.00	18,945.87	9,755.00	165.81	180.88	-27.95	-8,922.14	288.27	559.35	357.25	202.10	2.768	
19,400.00	10,246.00	19,045.87	9,755.00	167.63	182.70	-27.97	-9,022.14	288.42	559.42	355.15	204.28	2.739	
19,500.00	10,246.00	19,145.87	9,755.00	169.44	184.51	-27.98	-9,122.14	288.56	559.49	353.04	206.45	2.710	
19,600.00	10,246.00	19,245.87	9,755.00	171.25	186.32	-27.99	-9,222.14	288.71	559.56	350.94	208.62	2.682	
19,700.00	10,246.00	19,345.87	9,755.00	173.07	188.14	-28.01	-9,322.14	288.86	559.63	348.83	210.80	2.655	
19,800.00	10,246.00	19,445.87	9,755.00	174.88	189.95	-28.02	-9,422.14	289.01	559.70	346.72	212.98	2.628	
19,900.00	10,246.00	19,545.87	9,755.00	176.70	191.76	-28.03	-9,522.14	289.16	559.77	344.61	215.16	2.602	
20,000.00	10,246.00	19,645.87	9,755.00	178.51	193.58	-28.05	-9,622.14	289.31	559.84	342.50	217.34	2.576	
20,100.00	10,246.00	19,745.87	9,755.00	180.33	195.39	-28.06	-9,722.14	289.45	559.91	340.39	219.52	2.551	
20,200.00	10,246.00	19,845.87	9,755.00	182.15	197.21	-28.07	-9,822.14	289.60	559.98	338.28	221.70	2.526	
20,300.00	10,246.00	19,945.87	9,755.00	183.96	199.02	-28.09	-9,922.14	289.75	560.05	336.16	223.89	2.501	
20,400.00	10,246.00	20,045.87	9,755.00	185.78	200.84	-28.10	-10,022.14	289.90	560.12	334.04	226.07	2.478	
20,489.12	10,246.00	20,133.98	9,755.00	187.40	202.44	-28.11	-10,110.25	290.03	560.18	332.19	227.99	2.457 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 136H
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 136H	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			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)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
0.00	0.00	0.00	0.00	0.50	0.50	-39.88	46.03	-38.46	59.98						
100.00	100.00	99.70	99.70	0.51	0.51	-39.88	46.03	-38.46	59.98	58.97	1.01	59.151			
200.00	200.00	199.70	199.70	0.59	0.59	-39.88	46.03	-38.46	59.98	58.81	1.18	51.038			
300.00	300.00	299.70	299.70	0.73	0.73	-39.88	46.03	-38.46	59.98	58.52	1.46	41.019			
400.00	400.00	399.70	399.70	0.91	0.91	-39.88	46.03	-38.46	59.98	58.17	1.82	33.021			
500.00	500.00	499.70	499.70	1.10	1.10	-39.88	46.03	-38.46	59.98	57.78	2.21	27.194			
600.00	600.00	599.70	599.70	1.31	1.31	-39.88	46.03	-38.46	59.98	57.37	2.61	22.943			
700.00	700.00	699.70	699.70	1.52	1.52	-39.88	46.03	-38.46	59.98	56.95	3.03	19.766			
800.00	800.00	799.70	799.70	1.73	1.73	-39.88	46.03	-38.46	59.98	56.52	3.46	17.325			
900.00	900.00	899.70	899.70	1.95	1.95	-39.88	46.03	-38.46	59.98	56.09	3.89	15.401			
1,000.00	1,000.00	999.70	999.70	2.17	2.17	-39.88	46.03	-38.46	59.98	55.65	4.33	13.851			
1,100.00	1,100.00	1,099.70	1,099.70	2.38	2.38	-39.88	46.03	-38.46	59.98	55.21	4.77	12.577			
1,200.00	1,200.00	1,199.70	1,199.70	2.61	2.60	-39.88	46.03	-38.46	59.98	54.77	5.21	11.514	CC, ES		
1,300.00	1,300.00	1,298.82	1,298.81	2.83	2.81	-40.31	46.29	-39.27	60.71	55.07	5.64	10.765			
1,400.00	1,400.00	1,397.87	1,397.83	3.05	3.02	-41.54	47.08	-41.71	62.93	56.86	6.06	10.378			
1,500.00	1,500.00	1,496.80	1,496.67	3.27	3.23	-43.41	48.39	-45.78	66.68	60.19	6.49	10.276			
1,600.00	1,600.00	1,595.56	1,595.25	3.49	3.44	-45.70	50.22	-51.45	72.03	65.12	6.92	10.416			
1,700.00	1,700.00	1,694.09	1,693.47	3.71	3.66	-48.17	52.56	-58.72	79.06	71.71	7.34	10.765			
1,800.00	1,800.00	1,792.32	1,791.26	3.94	3.89	-50.65	55.41	-67.57	87.80	80.02	7.77	11.297			
1,900.00	1,900.00	1,890.20	1,888.53	4.16	4.13	-53.00	58.77	-77.98	98.28	90.08	8.20	11.987			
2,000.00	2,000.00	1,987.68	1,985.20	4.38	4.38	-55.15	62.61	-89.91	110.52	101.89	8.62	12.814			
2,100.00	2,100.00	2,085.90	2,082.42	4.61	4.65	-57.05	66.91	-103.24	124.23	115.17	9.06	13.711			
2,200.00	2,200.00	2,184.86	2,180.35	4.83	4.93	-58.61	71.28	-116.80	138.19	128.69	9.51	14.537			
2,300.00	2,300.00	2,283.82	2,278.27	5.05	5.22	-59.87	75.65	-130.36	152.23	142.28	9.95	15.294			
2,400.00	2,400.00	2,382.78	2,376.20	5.28	5.51	-60.93	80.02	-143.92	166.34	155.93	10.40	15.990			
2,500.00	2,500.00	2,481.73	2,474.13	5.50	5.81	-61.82	84.39	-157.48	180.49	169.63	10.85	16.630			
2,600.00	2,600.00	2,580.69	2,572.06	5.73	6.12	-62.57	88.75	-171.04	194.67	183.37	11.31	17.220			
2,700.00	2,700.00	2,679.65	2,669.98	5.95	6.42	-63.23	93.12	-184.60	208.89	197.13	11.76	17.765			
2,800.00	2,800.00	2,778.61	2,767.91	6.17	6.73	-63.80	97.49	-198.16	223.12	210.91	12.21	18.271			
2,900.00	2,900.00	2,877.57	2,865.84	6.40	7.05	-64.31	101.86	-211.72	237.38	224.71	12.67	18.740			
3,000.00	3,000.00	2,976.52	2,963.76	6.62	7.36	-64.75	106.23	-225.28	251.65	238.53	13.12	19.176			
3,100.00	3,100.00	3,075.48	3,061.69	6.85	7.68	-65.15	110.60	-238.84	265.94	252.36	13.58	19.584			
3,200.00	3,200.00	3,174.44	3,159.62	7.07	8.00	-65.51	114.97	-252.40	280.24	266.20	14.04	19.964			
3,300.00	3,300.00	3,273.40	3,257.55	7.29	8.32	-65.83	119.34	-265.96	294.54	280.05	14.49	20.320			
3,400.00	3,400.00	3,372.36	3,355.47	7.52	8.65	-66.13	123.71	-279.52	308.86	293.91	14.95	20.655			
3,500.00	3,500.00	3,471.32	3,453.40	7.74	8.97	-66.39	128.08	-293.08	323.18	307.77	15.41	20.969			
3,600.00	3,599.98	3,570.31	3,551.37	7.97	9.30	-70.72	132.46	-306.65	336.94	321.07	15.87	21.232			
3,679.66	3,679.54	3,649.18	3,629.41	8.15	9.56	-71.31	135.94	-317.46	347.13	330.90	16.23	21.389			
3,700.00	3,699.84	3,669.31	3,649.34	8.19	9.62	-71.55	136.83	-320.21	349.65	333.33	16.32	21.423			
3,800.00	3,799.65	3,768.29	3,747.28	8.42	9.95	-72.66	141.20	-333.78	362.13	345.36	16.78	21.587			
3,900.00	3,899.45	3,867.27	3,845.23	8.64	10.28	-73.70	145.57	-347.34	374.74	357.51	17.23	21.746			
4,000.00	3,999.25	3,966.25	3,943.18	8.86	10.61	-74.67	149.94	-360.90	387.47	369.77	17.69	21.901			
4,100.00	4,099.06	4,065.23	4,041.13	9.09	10.94	-75.58	154.31	-374.47	400.29	382.14	18.15	22.051			
4,200.00	4,198.86	4,164.21	4,139.07	9.32	11.27	-76.44	158.68	-388.03	413.21	394.60	18.62	22.196			
4,300.00	4,298.66	4,263.19	4,237.02	9.55	11.60	-77.24	163.05	-401.59	426.22	407.14	19.08	22.335			
4,400.00	4,398.47	4,362.17	4,334.97	9.78	11.93	-77.99	167.42	-415.16	439.30	419.75	19.55	22.470			
4,500.00	4,498.27	4,461.14	4,432.92	10.01	12.27	-78.70	171.79	-428.72	452.45	432.43	20.02	22.600			
4,600.00	4,598.07	4,560.12	4,530.87	10.24	12.60	-79.37	176.16	-442.28	465.67	445.18	20.49	22.725			
4,700.00	4,697.88	4,659.10	4,628.81	10.47	12.93	-80.01	180.53	-455.85	478.95	457.98	20.97	22.845			
4,800.00	4,797.68	4,758.08	4,726.76	10.70	13.27	-80.61	184.91	-469.41	492.28	470.84	21.44	22.961			
4,900.00	4,897.48	4,857.06	4,824.71	10.94	13.60	-81.18	189.28	-482.97	505.66	483.75	21.92	23.073			
5,000.00	4,997.29	4,956.04	4,922.66	11.17	13.94	-81.72	193.65	-496.53	519.09	496.70	22.39	23.180			

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 136H
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 136H	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		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	5,097.09	5,055.02	5,020.60	11.41	14.27	-82.23	198.02	-510.10	532.57	509.69	23.283
5,200.00	5,196.89	5,154.00	5,118.55	11.64	14.61	-82.71	202.39	-523.66	546.08	522.72	23.383
5,300.00	5,296.70	5,252.98	5,216.50	11.88	14.94	-83.18	206.76	-537.22	559.63	535.79	23.479
5,400.00	5,396.50	5,351.95	5,314.45	12.12	15.28	-83.62	211.13	-550.79	573.21	548.89	23.571
5,500.00	5,496.30	5,450.93	5,412.39	12.35	15.62	-84.04	215.50	-564.35	586.82	562.02	23.660
5,600.00	5,596.11	5,549.91	5,510.34	12.59	15.95	-84.44	219.87	-577.91	600.47	575.18	23.746
5,700.00	5,695.91	5,648.89	5,608.29	12.83	16.29	-84.82	224.24	-591.48	614.14	588.37	23.829
5,800.00	5,795.71	5,747.87	5,706.24	13.07	16.62	-85.19	228.61	-605.04	627.84	601.58	23.909
5,900.00	5,895.52	5,846.85	5,804.19	13.31	16.96	-85.54	232.98	-618.60	641.56	614.81	23.986
6,000.00	5,995.32	5,945.83	5,902.13	13.55	17.30	-85.88	237.35	-632.17	655.30	628.07	24.061
6,100.00	6,095.12	6,044.81	6,000.08	13.79	17.64	-86.20	241.73	-645.73	669.07	641.34	24.133
6,200.00	6,194.93	6,143.79	6,098.03	14.02	17.97	-86.51	246.10	-659.29	682.86	654.64	24.202
6,300.00	6,294.73	6,242.76	6,195.98	14.27	18.31	-86.81	250.47	-672.85	696.66	667.96	24.269
6,400.00	6,394.53	6,341.74	6,293.92	14.51	18.65	-87.09	254.84	-686.42	710.48	681.29	24.334
6,500.00	6,494.34	6,440.72	6,391.87	14.75	18.99	-87.37	259.21	-699.98	724.32	694.63	24.397
6,600.00	6,594.14	6,539.70	6,489.82	14.99	19.33	-87.63	263.58	-713.54	738.18	708.00	24.458
6,700.00	6,693.95	6,638.68	6,587.77	15.23	19.66	-87.89	267.95	-727.11	752.05	721.37	24.517
6,800.00	6,793.75	6,737.66	6,685.72	15.47	20.00	-88.14	272.32	-740.67	765.93	734.76	24.574
6,900.00	6,893.55	6,836.64	6,783.66	15.71	20.34	-88.37	276.69	-754.23	779.83	748.17	24.629
7,000.00	6,993.36	6,935.62	6,881.61	15.95	20.68	-88.60	281.06	-767.80	793.74	761.58	24.683
7,100.00	7,093.16	7,034.60	6,979.56	16.20	21.02	-88.82	285.43	-781.36	807.66	775.01	24.735
7,200.00	7,192.96	7,133.57	7,077.51	16.44	21.36	-89.04	289.80	-794.92	821.60	788.45	24.785
7,300.00	7,292.77	7,232.55	7,175.45	16.68	21.69	-89.24	294.18	-808.49	835.54	801.90	24.834
7,400.00	7,392.57	7,331.53	7,273.40	16.92	22.03	-89.44	298.55	-822.05	849.49	815.35	24.882
7,500.00	7,492.37	7,430.51	7,371.35	17.17	22.37	-89.63	302.92	-835.61	863.46	828.82	24.928
7,600.00	7,592.18	7,529.49	7,469.30	17.41	22.71	-89.82	307.29	-849.17	877.43	842.30	24.973
7,700.00	7,691.98	7,628.47	7,567.24	17.65	23.05	-90.00	311.66	-862.74	891.42	855.78	25.016
7,800.00	7,791.78	7,727.45	7,665.19	17.89	23.39	-90.18	316.03	-876.30	905.41	869.27	25.059
7,900.00	7,891.59	7,826.43	7,763.14	18.14	23.73	-90.35	320.40	-889.86	919.41	882.78	25.100
8,000.00	7,991.39	7,925.41	7,861.09	18.38	24.07	-90.51	324.77	-903.43	933.41	896.28	25.140
8,100.00	8,091.19	8,024.38	7,959.04	18.63	24.41	-90.67	329.14	-916.99	947.43	909.80	25.179
8,200.00	8,191.00	8,123.36	8,056.98	18.87	24.75	-90.83	333.51	-930.55	961.45	923.32	25.216
8,300.00	8,290.80	8,222.34	8,154.93	19.11	25.09	-90.98	337.88	-944.12	975.48	936.85	25.253
8,400.00	8,390.60	8,321.32	8,252.88	19.36	25.43	-91.13	342.25	-957.68	989.51	950.38	25.289
8,500.00	8,490.41	8,420.30	8,350.83	19.60	25.77	-91.27	346.62	-971.24	1,003.55	963.92	25.324
8,600.00	8,590.21	8,519.28	8,448.77	19.85	26.11	-91.41	351.00	-984.81	1,017.60	977.47	25.358
8,700.00	8,690.01	8,618.26	8,546.72	20.09	26.44	-91.54	355.37	-998.37	1,031.65	991.02	25.391
8,800.00	8,789.82	8,752.26	8,679.56	20.33	26.83	-91.75	360.75	-1,015.09	1,044.62	1,003.38	25.330
8,900.00	8,889.62	8,905.96	8,832.71	20.58	27.15	-92.08	364.65	-1,027.19	1,052.80	1,010.98	25.174
9,000.00	8,989.42	9,060.33	8,987.00	20.82	27.39	-92.54	366.03	-1,031.45	1,055.85	1,013.54	24.956
9,100.00	9,089.23	9,162.26	9,088.93	21.07	27.54	-92.89	366.03	-1,031.46	1,056.15	1,013.39	24.699
9,200.00	9,189.03	9,263.23	9,189.84	21.31	27.68	-93.33	364.12	-1,031.46	1,056.46	1,013.25	24.450
9,300.00	9,288.83	9,361.09	9,286.23	21.56	27.76	-94.54	347.85	-1,031.46	1,056.86	1,013.22	24.222
9,354.74	9,343.46	9,410.73	9,333.70	21.69	27.79	-95.48	333.38	-1,031.45	1,057.44	1,013.58	24.110
9,400.00	9,388.66	9,450.00	9,370.25	21.79	27.80	-96.38	319.05	-1,031.45	1,058.29	1,014.26	24.036
9,500.00	9,488.61	9,527.29	9,438.92	21.96	27.80	-98.47	283.72	-1,031.45	1,061.76	1,017.43	23.951
9,534.39	9,523.00	9,550.00	9,458.13	22.02	27.80	-95.10	271.61	-1,031.44	1,063.61	1,019.19	23.946
9,600.00	9,588.61	9,600.00	9,498.64	22.15	27.80	-96.67	242.33	-1,031.44	1,068.42	1,023.83	23.961
9,684.43	9,673.04	9,650.00	9,536.44	22.33	27.78	-98.41	209.62	-1,031.43	1,077.59	1,032.82	24.072
9,700.00	9,688.61	9,650.00	9,536.44	22.35	27.78	-81.38	209.62	-1,031.43	1,079.64	1,034.88	24.121
9,750.00	9,738.47	9,679.23	9,557.17	22.42	27.77	79.67	189.02	-1,031.43	1,086.70	1,041.93	24.270
9,800.00	9,787.83	9,700.00	9,571.25	22.47	27.77	78.23	173.75	-1,031.43	1,094.33	1,049.62	24.476

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 136H
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 136H	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
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		
9,850.00	9,836.31	9,732.50	9,592.14	22.49	27.76	76.45	148.86	-1,031.42	1,102.28	1,057.63	44.64	24.691			
9,900.00	9,883.56	9,750.00	9,602.80	22.50	27.76	75.14	134.98	-1,031.42	1,110.52	1,066.04	44.48	24.969			
9,950.00	9,929.20	9,785.37	9,623.02	22.50	27.76	73.40	105.97	-1,031.42	1,118.72	1,074.36	44.36	25.221			
10,000.00	9,972.89	9,811.69	9,636.88	22.49	27.75	71.97	83.59	-1,031.41	1,126.90	1,082.72	44.18	25.508			
10,050.00	10,014.31	9,837.95	9,649.67	22.47	27.76	70.63	60.67	-1,031.41	1,134.88	1,090.89	43.99	25.796			
10,100.00	10,053.12	9,864.15	9,661.37	22.45	27.76	69.38	37.22	-1,031.40	1,142.54	1,098.73	43.81	26.082			
10,150.00	10,089.04	9,900.00	9,675.63	22.43	27.77	68.08	4.34	-1,031.40	1,149.84	1,106.15	43.69	26.317			
10,200.00	10,121.80	9,916.43	9,681.46	22.42	27.78	67.21	-11.02	-1,031.40	1,156.46	1,112.95	43.52	26.576			
10,250.00	10,151.14	9,950.00	9,692.01	22.43	27.81	66.20	-42.89	-1,031.39	1,162.59	1,119.15	43.44	26.765			
10,300.00	10,176.84	9,968.57	9,697.04	22.45	27.82	65.50	-60.76	-1,031.39	1,167.92	1,124.57	43.35	26.940			
10,350.00	10,198.70	10,000.00	9,704.22	22.50	27.86	64.78	-91.36	-1,031.38	1,172.56	1,129.20	43.37	27.039			
10,400.00	10,216.57	10,020.61	9,708.01	22.57	27.88	64.28	-111.62	-1,031.38	1,176.33	1,132.92	43.41	27.098			
10,450.00	10,230.30	10,050.00	9,712.16	22.66	27.93	63.85	-140.71	-1,031.37	1,179.28	1,135.73	43.54	27.082			
10,500.00	10,239.79	10,072.60	9,714.33	22.79	27.97	63.58	-163.20	-1,031.37	1,181.30	1,137.56	43.74	27.010			
10,550.00	10,244.96	10,100.00	9,715.76	22.95	28.03	63.42	-190.56	-1,031.37	1,182.41	1,138.40	44.01	26.869			
10,584.43	10,246.00	10,116.58	9,716.00	23.07	28.07	63.39	-207.14	-1,031.36	1,182.63	1,138.40	44.23	26.737			
10,600.00	10,246.00	10,132.15	9,716.00	23.13	28.11	63.39	-222.71	-1,031.36	1,182.63	1,138.26	44.37	26.655			
10,700.00	10,246.00	10,232.15	9,716.00	23.60	28.44	63.39	-322.71	-1,031.34	1,182.61	1,137.27	45.34	26.085			
10,800.00	10,246.00	10,332.15	9,716.00	24.19	28.89	63.39	-422.71	-1,031.33	1,182.60	1,136.08	46.52	25.421			
10,900.00	10,246.00	10,432.15	9,716.00	24.91	29.45	63.39	-522.71	-1,031.31	1,182.58	1,134.67	47.91	24.684			
11,000.00	10,246.00	10,532.15	9,716.00	25.74	30.13	63.39	-622.71	-1,031.29	1,182.57	1,133.09	49.48	23.899			
11,100.00	10,246.00	10,632.15	9,716.00	26.67	30.91	63.39	-722.71	-1,031.28	1,182.55	1,131.33	51.23	23.085			
11,200.00	10,246.00	10,732.15	9,716.00	27.68	31.79	63.39	-822.71	-1,031.26	1,182.54	1,129.42	53.12	22.261			
11,300.00	10,246.00	10,832.15	9,716.00	28.78	32.76	63.39	-922.71	-1,031.24	1,182.52	1,127.37	55.15	21.440			
11,400.00	10,246.00	10,932.15	9,716.00	29.95	33.81	63.39	-1,022.71	-1,031.22	1,182.51	1,125.20	57.31	20.633			
11,500.00	10,246.00	11,032.15	9,716.00	31.19	34.92	63.39	-1,122.71	-1,031.21	1,182.50	1,122.92	59.58	19.849			
11,600.00	10,246.00	11,132.15	9,716.00	32.48	36.10	63.39	-1,222.71	-1,031.19	1,182.48	1,120.54	61.94	19.091			
11,700.00	10,246.00	11,232.15	9,716.00	33.81	37.33	63.39	-1,322.71	-1,031.17	1,182.47	1,118.08	64.39	18.365			
11,800.00	10,246.00	11,332.15	9,716.00	35.20	38.61	63.39	-1,422.71	-1,031.16	1,182.45	1,115.54	66.91	17.672			
11,900.00	10,246.00	11,432.15	9,716.00	36.62	39.94	63.39	-1,522.71	-1,031.14	1,182.44	1,112.93	69.51	17.012			
12,000.00	10,246.00	11,532.15	9,716.00	38.08	41.31	63.39	-1,622.71	-1,031.12	1,182.42	1,110.26	72.16	16.386			
12,100.00	10,246.00	11,632.15	9,716.00	39.57	42.71	63.39	-1,722.71	-1,031.11	1,182.41	1,107.54	74.87	15.793			
12,200.00	10,246.00	11,732.15	9,716.00	41.08	44.14	63.39	-1,822.71	-1,031.09	1,182.39	1,104.76	77.63	15.231			
12,300.00	10,246.00	11,832.15	9,716.00	42.63	45.60	63.38	-1,922.71	-1,031.07	1,182.38	1,101.95	80.43	14.700			
12,400.00	10,246.00	11,932.15	9,716.00	44.19	47.09	63.38	-2,022.71	-1,031.05	1,182.37	1,099.09	83.28	14.198			
12,500.00	10,246.00	12,032.15	9,716.00	45.77	48.61	63.38	-2,122.71	-1,031.04	1,182.35	1,096.20	86.15	13.724			
12,600.00	10,246.00	12,132.15	9,716.00	47.37	50.14	63.38	-2,222.71	-1,031.02	1,182.34	1,093.27	89.06	13.275			
12,700.00	10,246.00	12,232.15	9,716.00	48.99	51.69	63.38	-2,322.71	-1,031.00	1,182.32	1,090.32	92.00	12.851			
12,800.00	10,246.00	12,332.15	9,716.00	50.62	53.26	63.38	-2,422.71	-1,030.99	1,182.31	1,087.34	94.97	12.450			
12,900.00	10,246.00	12,432.15	9,716.00	52.27	54.85	63.38	-2,522.71	-1,030.97	1,182.29	1,084.34	97.96	12.070			
13,000.00	10,246.00	12,532.15	9,716.00	53.92	56.45	63.38	-2,622.71	-1,030.95	1,182.28	1,081.31	100.97	11.709			
13,100.00	10,246.00	12,632.15	9,716.00	55.59	58.07	63.38	-2,722.71	-1,030.94	1,182.27	1,078.27	104.00	11.368			
13,200.00	10,246.00	12,732.15	9,716.00	57.27	59.70	63.38	-2,822.71	-1,030.92	1,182.25	1,075.20	107.05	11.044			
13,300.00	10,246.00	12,832.15	9,716.00	58.95	61.33	63.38	-2,922.71	-1,030.90	1,182.24	1,072.12	110.11	10.737			
13,400.00	10,246.00	12,932.15	9,716.00	60.65	62.98	63.38	-3,022.71	-1,030.88	1,182.22	1,069.03	113.19	10.444			
13,500.00	10,246.00	13,032.15	9,716.00	62.35	64.64	63.38	-3,122.71	-1,030.87	1,182.21	1,065.92	116.29	10.166			
13,600.00	10,246.00	13,132.15	9,716.00	64.06	66.31	63.38	-3,222.71	-1,030.85	1,182.19	1,062.80	119.40	9.901			
13,700.00	10,246.00	13,232.15	9,716.00	65.78	67.99	63.38	-3,322.71	-1,030.83	1,182.18	1,059.66	122.52	9.649			
13,800.00	10,246.00	13,332.15	9,716.00	67.50	69.67	63.38	-3,422.71	-1,030.82	1,182.16	1,056.51	125.65	9.408			
13,900.00	10,246.00	13,432.15	9,716.00	69.22	71.36	63.38	-3,522.71	-1,030.80	1,182.15	1,053.36	128.79	9.179			
14,000.00	10,246.00	13,532.15	9,716.00	70.96	73.06	63.38	-3,622.71	-1,030.78	1,182.14	1,050.19	131.94	8.959			
14,100.00	10,246.00	13,632.15	9,716.00	72.69	74.77	63.38	-3,722.71	-1,030.77	1,182.12	1,047.02	135.10	8.750			

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 136H
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 136H	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
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
14,200.00	10,246.00	13,732.15	9,716.00	74.44	76.48	63.38	-3,822.71	-1,030.75	1,182.11	1,043.84	138.27	8.549	
14,300.00	10,246.00	13,832.15	9,716.00	76.18	78.19	63.38	-3,922.71	-1,030.73	1,182.09	1,040.65	141.45	8.357	
14,400.00	10,246.00	13,932.15	9,716.00	77.93	79.91	63.38	-4,022.71	-1,030.71	1,182.08	1,037.45	144.63	8.173	
14,500.00	10,246.00	14,032.15	9,716.00	79.69	81.64	63.38	-4,122.71	-1,030.70	1,182.06	1,034.24	147.82	7.997	
14,600.00	10,246.00	14,132.15	9,716.00	81.44	83.37	63.38	-4,222.71	-1,030.68	1,182.05	1,031.03	151.02	7.827	
14,700.00	10,246.00	14,232.15	9,716.00	83.20	85.10	63.38	-4,322.71	-1,030.66	1,182.03	1,027.82	154.22	7.665	
14,800.00	10,246.00	14,332.15	9,716.00	84.97	86.84	63.38	-4,422.71	-1,030.65	1,182.02	1,024.59	157.43	7.508	
14,900.00	10,246.00	14,432.15	9,716.00	86.73	88.58	63.38	-4,522.71	-1,030.63	1,182.01	1,021.37	160.64	7.358	
15,000.00	10,246.00	14,532.15	9,716.00	88.50	90.33	63.38	-4,622.71	-1,030.61	1,181.99	1,018.13	163.86	7.213	
15,100.00	10,246.00	14,632.15	9,716.00	90.27	92.08	63.38	-4,722.71	-1,030.60	1,181.98	1,014.90	167.08	7.074	
15,200.00	10,246.00	14,732.15	9,716.00	92.04	93.83	63.37	-4,822.71	-1,030.58	1,181.96	1,011.65	170.31	6.940	
15,300.00	10,246.00	14,832.15	9,716.00	93.82	95.58	63.37	-4,922.71	-1,030.56	1,181.95	1,008.41	173.54	6.811	
15,400.00	10,246.00	14,932.15	9,716.00	95.60	97.34	63.37	-5,022.71	-1,030.55	1,181.93	1,005.16	176.77	6.686	
15,500.00	10,246.00	15,032.15	9,716.00	97.38	99.10	63.37	-5,122.71	-1,030.53	1,181.92	1,001.91	180.01	6.566	
15,600.00	10,246.00	15,132.15	9,716.00	99.16	100.86	63.37	-5,222.71	-1,030.51	1,181.90	998.65	183.26	6.449	
15,700.00	10,246.00	15,232.15	9,716.00	100.94	102.63	63.37	-5,322.71	-1,030.49	1,181.89	995.39	186.50	6.337	
15,800.00	10,246.00	15,332.15	9,716.00	102.72	104.40	63.37	-5,422.71	-1,030.48	1,181.88	992.13	189.75	6.229	
15,900.00	10,246.00	15,432.15	9,716.00	104.51	106.16	63.37	-5,522.71	-1,030.46	1,181.86	988.86	193.00	6.124	
16,000.00	10,246.00	15,532.15	9,716.00	106.30	107.94	63.37	-5,622.71	-1,030.44	1,181.85	985.59	196.26	6.022	
16,100.00	10,246.00	15,632.15	9,716.00	108.09	109.71	63.37	-5,722.71	-1,030.43	1,181.83	982.32	199.51	5.924	
16,200.00	10,246.00	15,732.15	9,716.00	109.88	111.48	63.37	-5,822.71	-1,030.41	1,181.82	979.04	202.77	5.828	
16,300.00	10,246.00	15,832.15	9,716.00	111.67	113.26	63.37	-5,922.71	-1,030.39	1,181.80	975.77	206.04	5.736	
16,400.00	10,246.00	15,932.15	9,716.00	113.46	115.04	63.37	-6,022.71	-1,030.38	1,181.79	972.49	209.30	5.646	
16,500.00	10,246.00	16,032.15	9,716.00	115.26	116.82	63.37	-6,122.71	-1,030.36	1,181.78	969.21	212.57	5.560	
16,600.00	10,246.00	16,132.15	9,716.00	117.05	118.60	63.37	-6,222.71	-1,030.34	1,181.76	965.92	215.84	5.475	
16,700.00	10,246.00	16,232.15	9,716.00	118.85	120.38	63.37	-6,322.71	-1,030.32	1,181.75	962.64	219.11	5.393	
16,800.00	10,246.00	16,332.15	9,716.00	120.65	122.17	63.37	-6,422.71	-1,030.31	1,181.73	959.35	222.38	5.314	
16,900.00	10,246.00	16,432.15	9,716.00	122.44	123.95	63.37	-6,522.71	-1,030.29	1,181.72	956.06	225.65	5.237	
17,000.00	10,246.00	16,532.15	9,716.00	124.24	125.74	63.37	-6,622.71	-1,030.27	1,181.70	952.77	228.93	5.162	
17,100.00	10,246.00	16,632.15	9,716.00	126.04	127.53	63.37	-6,722.71	-1,030.26	1,181.69	949.48	232.21	5.089	
17,200.00	10,246.00	16,732.15	9,716.00	127.85	129.32	63.37	-6,822.71	-1,030.24	1,181.67	946.19	235.49	5.018	
17,300.00	10,246.00	16,832.15	9,716.00	129.65	131.11	63.37	-6,922.71	-1,030.22	1,181.66	942.89	238.77	4.949	
17,400.00	10,246.00	16,932.15	9,716.00	131.45	132.90	63.37	-7,022.71	-1,030.21	1,181.65	939.59	242.05	4.882	
17,500.00	10,246.00	17,032.15	9,716.00	133.25	134.69	63.37	-7,122.71	-1,030.19	1,181.63	936.29	245.34	4.816	
17,600.00	10,246.00	17,132.15	9,716.00	135.06	136.49	63.37	-7,222.71	-1,030.17	1,181.62	932.99	248.62	4.753	
17,700.00	10,246.00	17,232.15	9,716.00	136.86	138.28	63.37	-7,322.71	-1,030.15	1,181.60	929.69	251.91	4.691	
17,800.00	10,246.00	17,332.15	9,716.00	138.67	140.08	63.37	-7,422.71	-1,030.14	1,181.59	926.39	255.20	4.630	
17,900.00	10,246.00	17,432.15	9,716.00	140.47	141.87	63.37	-7,522.71	-1,030.12	1,181.57	923.09	258.49	4.571	
18,000.00	10,246.00	17,532.15	9,716.00	142.28	143.67	63.36	-7,622.71	-1,030.10	1,181.56	919.78	261.78	4.514	
18,100.00	10,246.00	17,632.15	9,716.00	144.09	145.47	63.36	-7,722.71	-1,030.09	1,181.54	916.47	265.07	4.457	
18,200.00	10,246.00	17,732.15	9,716.00	145.90	147.27	63.36	-7,822.71	-1,030.07	1,181.53	913.17	268.36	4.403	
18,300.00	10,246.00	17,832.15	9,716.00	147.70	149.07	63.36	-7,922.71	-1,030.05	1,181.52	909.86	271.66	4.349	
18,400.00	10,246.00	17,932.15	9,716.00	149.51	150.87	63.36	-8,022.71	-1,030.04	1,181.50	906.55	274.95	4.297	
18,500.00	10,246.00	18,032.15	9,716.00	151.32	152.67	63.36	-8,122.71	-1,030.02	1,181.49	903.24	278.25	4.246	
18,600.00	10,246.00	18,132.15	9,716.00	153.13	154.47	63.36	-8,222.71	-1,030.00	1,181.47	899.93	281.54	4.196	
18,700.00	10,246.00	18,232.15	9,716.00	154.94	156.27	63.36	-8,322.71	-1,029.98	1,181.46	896.62	284.84	4.148	
18,800.00	10,246.00	18,332.15	9,716.00	156.75	158.08	63.36	-8,422.71	-1,029.97	1,181.44	893.30	288.14	4.100	
18,900.00	10,246.00	18,432.15	9,716.00	158.56	159.88	63.36	-8,522.71	-1,029.95	1,181.43	889.99	291.44	4.054	
19,000.00	10,246.00	18,532.15	9,716.00	160.38	161.68	63.36	-8,622.71	-1,029.93	1,181.41	886.68	294.74	4.008	
19,100.00	10,246.00	18,632.15	9,716.00	162.19	163.49	63.36	-8,722.71	-1,029.92	1,181.40	883.36	298.04	3.964	
19,200.00	10,246.00	18,732.15	9,716.00	164.00	165.29	63.36	-8,822.71	-1,029.90	1,181.39	880.04	301.34	3.920	
19,300.00	10,246.00	18,832.15	9,716.00	165.81	167.10	63.36	-8,922.71	-1,029.88	1,181.37	876.73	304.64	3.878	

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 136H
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 136H	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)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,400.00	10,246.00	18,932.15	9,716.00	167.63	168.91	63.36	-9,022.71	-1,029.87	1,181.36	873.41	307.95	3.836	
19,500.00	10,246.00	19,032.15	9,716.00	169.44	170.71	63.36	-9,122.71	-1,029.85	1,181.34	870.09	311.25	3.795	
19,600.00	10,246.00	19,132.15	9,716.00	171.25	172.52	63.36	-9,222.71	-1,029.83	1,181.33	866.77	314.56	3.756	
19,700.00	10,246.00	19,232.15	9,716.00	173.07	174.33	63.36	-9,322.71	-1,029.81	1,181.31	863.45	317.86	3.716	
19,800.00	10,246.00	19,332.15	9,716.00	174.88	176.14	63.36	-9,422.71	-1,029.80	1,181.30	860.13	321.17	3.678	
19,900.00	10,246.00	19,432.15	9,716.00	176.70	177.95	63.36	-9,522.71	-1,029.78	1,181.29	856.81	324.47	3.641	
20,000.00	10,246.00	19,532.15	9,716.00	178.51	179.75	63.36	-9,622.71	-1,029.76	1,181.27	853.49	327.78	3.604	
20,100.00	10,246.00	19,632.15	9,716.00	180.33	181.56	63.36	-9,722.71	-1,029.75	1,181.26	850.17	331.09	3.568	
20,200.00	10,246.00	19,732.15	9,716.00	182.15	183.37	63.36	-9,822.71	-1,029.73	1,181.24	846.85	334.39	3.532	
20,300.00	10,246.00	19,832.15	9,716.00	183.96	185.18	63.36	-9,922.71	-1,029.71	1,181.23	843.52	337.70	3.498	
20,400.00	10,246.00	19,932.15	9,716.00	185.78	187.00	63.36	-10,022.71	-1,029.70	1,181.21	840.20	341.01	3.464	
20,489.12	10,246.00	20,021.27	9,716.00	187.40	188.61	63.36	-10,111.83	-1,029.68	1,181.20	837.24	343.96	3.434 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 136H
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 136H	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 234H - 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	3.10	3.10	0.50	0.50	49.63	892.22	1,049.33	1,377.37				
100.00	100.00	103.10	103.10	0.51	0.51	49.63	892.22	1,049.33	1,377.37	1,376.36	1.02	1,356.596	
200.00	200.00	203.10	203.10	0.59	0.59	49.63	892.22	1,049.33	1,377.37	1,376.19	1.18	1,167.954	
300.00	300.00	303.10	303.10	0.73	0.74	49.63	892.22	1,049.33	1,377.37	1,375.90	1.47	938.312	
400.00	400.00	403.10	403.10	0.91	0.91	49.63	892.22	1,049.33	1,377.37	1,375.55	1.82	755.588	
500.00	500.00	503.10	503.10	1.10	1.11	49.63	892.22	1,049.33	1,377.37	1,375.16	2.21	622.526	
600.00	600.00	603.10	603.10	1.31	1.31	49.63	892.22	1,049.33	1,377.37	1,374.75	2.62	525.426	
700.00	700.00	703.10	703.10	1.52	1.52	49.63	892.22	1,049.33	1,377.37	1,374.33	3.04	452.813	
800.00	800.00	803.10	803.10	1.73	1.74	49.63	892.22	1,049.33	1,377.37	1,373.90	3.47	396.993	
900.00	900.00	903.10	903.10	1.95	1.95	49.63	892.22	1,049.33	1,377.37	1,373.47	3.90	352.981	
1,000.00	1,000.00	1,003.10	1,003.10	2.17	2.17	49.63	892.22	1,049.33	1,377.37	1,373.03	4.34	317.501	
1,100.00	1,100.00	1,103.10	1,103.10	2.38	2.39	49.63	892.22	1,049.33	1,377.37	1,372.59	4.78	288.351	
1,200.00	1,200.00	1,203.10	1,203.10	2.61	2.61	49.63	892.22	1,049.33	1,377.37	1,372.15	5.22	264.009	
1,300.00	1,300.00	1,303.10	1,303.10	2.83	2.83	49.63	892.22	1,049.33	1,377.37	1,371.71	5.66	243.395	
1,400.00	1,400.00	1,403.10	1,403.10	3.05	3.05	49.63	892.22	1,049.33	1,377.37	1,371.27	6.10	225.726	
1,500.00	1,500.00	1,503.10	1,503.10	3.27	3.28	49.63	892.22	1,049.33	1,377.37	1,370.82	6.55	210.420	
1,600.00	1,600.00	1,603.10	1,603.10	3.49	3.50	49.63	892.22	1,049.33	1,377.37	1,370.38	6.99	197.037	
1,700.00	1,700.00	1,703.10	1,703.10	3.71	3.72	49.63	892.22	1,049.33	1,377.37	1,369.94	7.44	185.240	
1,800.00	1,800.00	1,803.10	1,803.10	3.94	3.94	49.63	892.22	1,049.33	1,377.37	1,369.49	7.88	174.765	
1,900.00	1,900.00	1,903.10	1,903.10	4.16	4.17	49.63	892.22	1,049.33	1,377.37	1,369.04	8.33	165.403	
2,000.00	2,000.00	2,005.13	2,005.13	4.38	4.39	49.63	892.22	1,049.33	1,377.37	1,368.59	8.78	156.931	
2,100.00	2,100.00	2,170.40	2,170.30	4.61	4.70	49.75	887.33	1,048.02	1,374.85	1,365.55	9.30	147.896	
2,200.00	2,200.00	2,278.20	2,277.87	4.83	4.89	49.92	880.47	1,046.18	1,369.42	1,359.71	9.70	141.114	
2,300.00	2,300.00	2,377.98	2,377.42	5.05	5.07	50.08	874.06	1,044.46	1,363.96	1,353.86	10.11	134.960	
2,400.00	2,400.00	2,477.76	2,476.98	5.28	5.26	50.24	867.65	1,042.74	1,358.52	1,348.01	10.51	129.218	
2,500.00	2,500.00	2,577.54	2,576.54	5.50	5.45	50.40	861.23	1,041.02	1,353.09	1,342.16	10.92	123.854	
2,600.00	2,600.00	2,677.31	2,676.10	5.73	5.65	50.56	854.82	1,039.30	1,347.67	1,336.33	11.34	118.840	
2,700.00	2,700.00	2,777.09	2,775.65	5.95	5.85	50.73	848.41	1,037.59	1,342.25	1,330.50	11.76	114.144	
2,800.00	2,800.00	2,876.87	2,875.21	6.17	6.06	50.89	842.00	1,035.87	1,336.86	1,324.67	12.18	109.742	
2,900.00	2,900.00	2,976.65	2,974.77	6.40	6.27	51.06	835.59	1,034.15	1,331.47	1,318.86	12.61	105.611	
3,000.00	3,000.00	3,076.43	3,074.33	6.62	6.48	51.23	829.17	1,032.43	1,326.09	1,313.05	13.04	101.730	
3,100.00	3,100.00	3,176.21	3,173.88	6.85	6.70	51.40	822.76	1,030.71	1,320.72	1,307.26	13.47	98.078	
3,200.00	3,200.00	3,275.99	3,273.44	7.07	6.92	51.57	816.35	1,028.99	1,315.37	1,301.47	13.90	94.637	
3,300.00	3,300.00	3,375.76	3,373.00	7.29	7.14	51.75	809.94	1,027.27	1,310.03	1,295.70	14.33	91.392	
3,400.00	3,400.00	3,475.54	3,472.55	7.52	7.37	51.92	803.53	1,025.55	1,304.70	1,289.93	14.77	88.327	
3,500.00	3,500.00	3,575.32	3,572.11	7.74	7.60	52.10	797.12	1,023.84	1,299.38	1,284.17	15.21	85.429	
3,600.00	3,599.98	3,674.96	3,671.54	7.97	7.82	48.37	790.71	1,022.12	1,292.92	1,277.27	15.65	82.613	
3,679.66	3,679.54	3,754.09	3,750.49	8.15	8.01	48.74	785.63	1,020.76	1,286.14	1,270.14	16.00	80.374	
3,700.00	3,699.84	3,774.27	3,770.62	8.19	8.05	48.82	784.33	1,020.41	1,284.22	1,268.13	16.09	79.806	
3,800.00	3,799.65	3,873.44	3,869.57	8.42	8.28	49.21	777.96	1,018.70	1,274.86	1,258.32	16.53	77.107	
3,900.00	3,899.45	3,972.62	3,968.53	8.64	8.52	49.61	771.59	1,016.99	1,265.55	1,248.57	16.98	74.542	
4,000.00	3,999.25	4,071.79	4,067.48	8.86	8.75	50.02	765.21	1,015.28	1,256.31	1,238.88	17.42	72.102	
4,100.00	4,099.06	4,170.96	4,166.43	9.09	8.98	50.43	758.84	1,013.58	1,247.13	1,229.26	17.87	69.778	
4,200.00	4,198.86	4,270.13	4,265.39	9.32	9.22	50.84	752.47	1,011.87	1,238.01	1,219.69	18.32	67.564	
4,300.00	4,298.66	4,369.31	4,364.34	9.55	9.46	51.27	746.09	1,010.16	1,228.96	1,210.19	18.78	65.453	
4,400.00	4,398.47	4,468.48	4,463.29	9.78	9.69	51.69	739.72	1,008.45	1,219.98	1,200.75	19.23	63.438	
4,500.00	4,498.27	4,567.65	4,562.25	10.01	9.93	52.13	733.35	1,006.74	1,211.07	1,191.38	19.69	61.515	
4,600.00	4,498.07	4,666.83	4,661.20	10.24	10.17	52.57	726.98	1,005.03	1,202.23	1,182.09	20.15	59.676	
4,700.00	4,497.88	4,766.00	4,760.15	10.47	10.41	53.02	720.60	1,003.33	1,193.46	1,172.86	20.61	57.918	
4,800.00	4,497.68	4,865.17	4,859.11	10.70	10.65	53.47	714.23	1,001.62	1,184.77	1,163.70	21.07	56.236	
4,900.00	4,497.48	4,964.34	4,958.06	10.94	10.89	53.93	707.86	999.91	1,176.15	1,154.62	21.53	54.625	
5,000.00	4,997.29	5,063.52	5,057.01	11.17	11.14	54.40	701.48	998.20	1,167.61	1,145.62	22.00	53.082	

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 136H
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 136H	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 234H - 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		
5,100.00	5,097.09	5,162.69	5,155.97	11.41	11.38	54.88	695.11	996.49	1,159.15	1,136.69	22.46	51.602			
5,200.00	5,196.89	5,261.86	5,254.92	11.64	11.62	55.36	688.74	994.78	1,150.77	1,127.84	22.93	50.183			
5,300.00	5,296.70	5,361.04	5,353.87	11.88	11.87	55.85	682.37	993.08	1,142.47	1,119.07	23.40	48.821			
5,400.00	5,396.50	5,460.21	5,452.82	12.12	12.11	56.34	675.99	991.37	1,134.26	1,110.39	23.87	47.513			
5,500.00	5,496.30	5,559.38	5,551.78	12.35	12.35	56.85	669.62	989.66	1,126.13	1,101.79	24.35	46.256			
5,600.00	5,596.11	5,658.56	5,650.73	12.59	12.60	57.36	663.25	987.95	1,118.10	1,093.28	24.82	45.048			
5,700.00	5,695.91	5,757.73	5,749.68	12.83	12.84	57.87	656.87	986.24	1,110.15	1,084.85	25.30	43.887			
5,800.00	5,795.71	5,856.90	5,848.64	13.07	13.09	58.40	650.50	984.53	1,102.29	1,076.52	25.77	42.770			
5,900.00	5,895.52	5,956.07	5,947.59	13.31	13.34	58.93	644.13	982.83	1,094.53	1,068.28	26.25	41.694			
6,000.00	5,995.32	6,055.25	6,046.54	13.55	13.58	59.47	637.76	981.12	1,086.86	1,060.13	26.73	40.659			
6,100.00	6,095.12	6,154.42	6,145.50	13.79	13.83	60.02	631.38	979.41	1,079.30	1,052.08	27.21	39.662			
6,200.00	6,194.93	6,253.59	6,244.45	14.02	14.08	60.57	625.01	977.70	1,071.83	1,044.13	27.69	38.701			
6,300.00	6,294.73	6,352.77	6,343.40	14.27	14.33	61.13	618.64	975.99	1,064.46	1,036.28	28.18	37.775			
6,400.00	6,394.53	6,451.94	6,442.36	14.51	14.57	61.70	612.26	974.28	1,057.20	1,028.54	28.66	36.882			
6,500.00	6,494.34	6,551.11	6,541.31	14.75	14.82	62.28	605.89	972.58	1,050.05	1,020.90	29.15	36.021			
6,600.00	6,594.14	6,650.28	6,640.26	14.99	15.07	62.87	599.52	970.87	1,043.00	1,013.37	29.64	35.191			
6,700.00	6,693.95	6,749.46	6,739.22	15.23	15.32	63.46	593.15	969.16	1,036.07	1,005.94	30.13	34.389			
6,800.00	6,793.75	6,848.63	6,838.17	15.47	15.57	64.06	586.77	967.45	1,029.25	998.63	30.62	33.616			
6,900.00	6,893.55	6,947.80	6,937.12	15.71	15.82	64.67	580.40	965.74	1,022.54	991.43	31.11	32.869			
7,000.00	6,993.36	7,046.98	7,036.08	15.95	16.07	65.29	574.03	964.03	1,015.96	984.36	31.60	32.148			
7,100.00	7,093.16	7,146.15	7,135.03	16.20	16.31	65.91	567.65	962.33	1,009.49	977.39	32.10	31.452			
7,200.00	7,192.96	7,245.32	7,233.98	16.44	16.56	66.54	561.28	960.62	1,003.15	970.55	32.59	30.779			
7,300.00	7,292.77	7,344.50	7,332.94	16.68	16.81	67.18	554.91	958.91	996.93	963.84	33.09	30.129			
7,400.00	7,392.57	7,443.67	7,431.89	16.92	17.06	67.83	548.54	957.20	990.83	957.25	33.59	29.502			
7,500.00	7,492.37	7,542.84	7,530.84	17.17	17.31	68.49	542.16	955.49	984.87	950.79	34.08	28.895			
7,600.00	7,592.18	7,642.01	7,629.80	17.41	17.56	69.15	535.79	953.78	979.04	944.46	34.58	28.309			
7,700.00	7,691.98	7,741.19	7,728.75	17.65	17.81	69.82	529.42	952.07	973.35	938.26	35.08	27.743			
7,800.00	7,791.78	7,840.36	7,827.70	17.89	18.07	70.50	523.04	950.37	967.79	932.20	35.59	27.196			
7,900.00	7,891.59	7,939.53	7,926.66	18.14	18.32	71.19	516.67	948.66	962.36	926.28	36.09	26.667			
8,000.00	7,991.39	8,038.71	8,025.61	18.38	18.57	71.88	510.30	946.95	957.09	920.49	36.59	26.155			
8,100.00	8,091.19	8,137.88	8,124.56	18.63	18.82	72.59	503.92	945.24	951.95	914.85	37.10	25.661			
8,200.00	8,191.00	8,237.05	8,223.52	18.87	19.07	73.30	497.55	943.53	946.96	909.36	37.60	25.184			
8,300.00	8,290.80	8,336.23	8,322.47	19.11	19.32	74.01	491.18	941.82	942.12	904.01	38.11	24.722			
8,400.00	8,390.60	8,435.40	8,421.42	19.36	19.57	74.74	484.81	940.12	937.43	898.82	38.61	24.276			
8,500.00	8,490.41	8,534.57	8,520.38	19.60	19.82	75.47	478.43	938.41	932.89	893.77	39.12	23.846			
8,600.00	8,590.21	8,633.74	8,619.33	19.85	20.07	76.21	472.06	936.70	928.51	888.88	39.63	23.429			
8,700.00	8,690.01	8,726.26	8,711.67	20.09	20.29	76.88	466.54	935.22	924.49	884.39	40.10	23.053			
8,800.00	8,789.82	8,814.31	8,799.66	20.33	20.45	77.38	463.68	934.45	921.73	881.20	40.53	22.741			
8,900.00	8,889.62	8,907.37	8,892.72	20.58	20.63	77.76	463.22	934.33	920.16	879.20	40.96	22.464			
9,000.00	8,989.42	9,007.17	8,992.52	20.82	20.80	78.14	463.22	934.33	918.85	877.46	41.39	22.201			
9,100.00	9,089.23	9,177.95	9,161.16	21.07	21.31	80.15	440.84	930.79	914.03	871.93	42.10	21.713			
9,200.00	9,189.03	9,324.73	9,295.30	21.31	22.03	84.30	382.99	921.64	903.22	860.20	43.02	20.996			
9,300.00	9,288.83	9,433.55	9,382.73	21.56	22.74	88.74	319.25	911.56	891.64	847.56	44.08	20.229			
9,354.74	9,343.46	9,474.00	9,411.85	21.69	23.05	90.67	291.53	907.22	886.71	842.10	44.61	19.877			
9,400.00	9,388.66	9,500.00	9,429.51	21.79	23.25	91.91	272.65	904.50	884.15	839.17	44.98	19.658			
9,451.36	9,439.98	9,523.08	9,444.46	21.88	23.45	93.07	255.22	902.21	883.12	837.82	45.29	19.497 CC			
9,500.00	9,488.61	9,550.00	9,461.00	21.96	23.67	94.48	234.13	899.67	884.08	838.49	45.59	19.390			
9,534.39	9,523.00	9,559.43	9,466.56	22.02	23.76	95.08	226.56	898.82	885.89	840.20	45.68	19.392			
9,600.00	9,588.61	9,584.72	9,480.84	22.15	23.99	100.42	205.82	896.63	892.16	846.30	45.86	19.452			
9,684.43	9,673.04	9,612.94	9,495.70	22.33	24.25	101.97	181.93	894.36	905.81	859.90	45.92	19.728			
9,700.00	9,688.61	9,617.79	9,498.13	22.35	24.30	-77.45	177.75	893.99	908.98	863.08	45.90	19.804			
9,750.00	9,738.47	9,633.90	9,505.96	22.42	24.45	-75.50	163.73	892.80	919.92	874.14	45.79	20.092			

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 136H
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 136H	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 234H - Wellbore #1 - Plan 0													Offset Site Error:	0.00 usft
Survey Program:		0-MWD						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	
9,800.00	9,787.83	9,650.00	9,513.40	22.47	24.61	-73.50	149.49	891.67	931.87	886.27	45.60	20.434		
9,850.00	9,836.31	9,668.16	9,521.30	22.49	24.79	-71.39	133.19	890.47	944.57	899.16	45.40	20.804		
9,900.00	9,883.56	9,686.11	9,528.61	22.50	24.97	-69.31	116.82	889.36	957.77	912.61	45.15	21.212		
9,950.00	9,929.20	9,700.00	9,533.91	22.50	25.12	-67.44	104.01	888.56	971.26	926.45	44.81	21.675		
10,000.00	9,972.89	9,723.32	9,542.11	22.49	25.37	-65.27	82.22	887.32	984.76	940.17	44.59	22.084		
10,050.00	10,014.31	9,750.00	9,550.40	22.47	25.65	-63.12	56.89	886.08	998.20	953.79	44.41	22.476		
10,100.00	10,053.12	9,750.00	9,550.40	22.45	25.65	-61.92	56.89	886.08	1,011.33	967.47	43.86	23.058		
10,150.00	10,089.04	9,781.56	9,558.69	22.43	26.01	-59.91	26.47	884.85	1,023.70	979.93	43.78	23.384		
10,200.00	10,121.80	9,800.00	9,562.75	22.42	26.21	-58.41	8.49	884.25	1,035.57	992.04	43.53	23.788		
10,250.00	10,151.14	9,821.55	9,566.77	22.43	26.46	-56.99	-12.66	883.66	1,046.64	1,003.26	43.37	24.130		
10,300.00	10,176.84	9,850.00	9,570.87	22.45	26.79	-55.62	-40.81	883.08	1,056.86	1,013.51	43.35	24.382		
10,350.00	10,198.70	9,850.00	9,570.87	22.50	26.79	-54.85	-40.81	883.08	1,066.06	1,023.05	43.01	24.785		
10,400.00	10,216.57	9,882.66	9,573.85	22.57	27.18	-53.77	-73.33	882.68	1,073.89	1,030.74	43.15	24.887		
10,450.00	10,230.30	9,900.00	9,574.68	22.66	27.39	-53.04	-90.65	882.58	1,080.70	1,037.54	43.16	25.037		
10,500.00	10,239.79	9,930.53	9,575.00	22.79	27.76	-52.37	-121.17	882.59	1,086.20	1,042.79	43.40	25.027		
10,550.00	10,244.96	9,980.25	9,575.00	22.95	28.38	-51.90	-170.89	882.69	1,089.46	1,045.53	43.93	24.798		
10,584.43	10,246.00	10,014.66	9,575.00	23.07	28.81	-51.80	-205.30	882.75	1,090.15	1,045.80	44.36	24.577		
10,600.00	10,246.00	10,030.23	9,575.00	23.13	29.01	-51.81	-220.87	882.79	1,090.18	1,045.61	44.56	24.464		
10,700.00	10,246.00	10,130.22	9,575.00	23.60	30.32	-51.81	-320.87	882.98	1,090.33	1,044.36	45.96	23.722		
10,800.00	10,246.00	10,230.22	9,575.00	24.19	31.68	-51.82	-420.87	883.17	1,090.48	1,042.97	47.51	22.953		
10,900.00	10,246.00	10,330.22	9,575.00	24.91	33.09	-51.82	-520.87	883.37	1,090.63	1,041.44	49.19	22.171		
11,000.00	10,246.00	10,430.22	9,575.00	25.74	34.53	-51.83	-620.87	883.56	1,090.78	1,039.78	51.00	21.388		
11,100.00	10,246.00	10,530.22	9,575.00	26.67	36.01	-51.84	-720.87	883.75	1,090.93	1,038.01	52.92	20.616		
11,200.00	10,246.00	10,630.22	9,575.00	27.68	37.53	-51.84	-820.87	883.95	1,091.08	1,036.15	54.94	19.860		
11,300.00	10,246.00	10,730.22	9,575.00	28.78	39.06	-51.85	-920.87	884.14	1,091.24	1,034.19	57.05	19.128		
11,400.00	10,246.00	10,830.22	9,575.00	29.95	40.63	-51.86	-1,020.87	884.33	1,091.39	1,032.15	59.24	18.423		
11,500.00	10,246.00	10,930.22	9,575.00	31.19	42.21	-51.86	-1,120.87	884.53	1,091.54	1,030.03	61.51	17.747		
11,600.00	10,246.00	11,030.22	9,575.00	32.48	43.82	-51.87	-1,220.87	884.72	1,091.69	1,027.85	63.84	17.101		
11,700.00	10,246.00	11,130.22	9,575.00	33.81	45.44	-51.87	-1,320.87	884.91	1,091.84	1,025.62	66.23	16.487		
11,800.00	10,246.00	11,230.22	9,575.00	35.20	47.08	-51.88	-1,420.86	885.11	1,091.99	1,023.33	68.67	15.903		
11,900.00	10,246.00	11,330.22	9,575.00	36.62	48.73	-51.89	-1,520.86	885.30	1,092.14	1,020.99	71.16	15.349		
12,000.00	10,246.00	11,430.22	9,575.00	38.08	50.39	-51.89	-1,620.86	885.49	1,092.30	1,018.61	73.69	14.824		
12,100.00	10,246.00	11,530.22	9,575.00	39.57	52.06	-51.90	-1,720.86	885.69	1,092.45	1,016.19	76.25	14.327		
12,200.00	10,246.00	11,630.22	9,575.00	41.08	53.75	-51.90	-1,820.86	885.88	1,092.60	1,013.74	78.86	13.856		
12,300.00	10,246.00	11,730.22	9,575.00	42.63	55.44	-51.91	-1,920.86	886.07	1,092.75	1,011.26	81.49	13.410		
12,400.00	10,246.00	11,830.22	9,575.00	44.19	57.14	-51.92	-2,020.86	886.27	1,092.90	1,008.75	84.15	12.988		
12,500.00	10,246.00	11,930.22	9,575.00	45.77	58.85	-51.92	-2,120.86	886.46	1,093.05	1,006.22	86.83	12.588		
12,600.00	10,246.00	12,030.22	9,575.00	47.37	60.57	-51.93	-2,220.86	886.65	1,093.21	1,003.66	89.54	12.209		
12,700.00	10,246.00	12,130.22	9,575.00	48.99	62.29	-51.94	-2,320.86	886.85	1,093.36	1,001.09	92.27	11.849		
12,800.00	10,246.00	12,230.22	9,575.00	50.62	64.02	-51.94	-2,420.86	887.04	1,093.51	998.49	95.02	11.508		
12,900.00	10,246.00	12,330.22	9,575.00	52.27	65.76	-51.95	-2,520.86	887.23	1,093.66	995.87	97.79	11.184		
13,000.00	10,246.00	12,430.22	9,575.00	53.92	67.50	-51.95	-2,620.86	887.43	1,093.81	993.24	100.57	10.876		
13,100.00	10,246.00	12,530.22	9,575.00	55.59	69.24	-51.96	-2,720.86	887.62	1,093.96	990.60	103.36	10.584		
13,200.00	10,246.00	12,630.22	9,575.00	57.27	70.99	-51.97	-2,820.86	887.81	1,094.12	987.94	106.17	10.305		
13,300.00	10,246.00	12,730.22	9,575.00	58.95	72.74	-51.97	-2,920.86	888.01	1,094.27	985.27	109.00	10.039		
13,400.00	10,246.00	12,830.22	9,575.00	60.65	74.50	-51.98	-3,020.86	888.20	1,094.42	982.59	111.83	9.786		
13,500.00	10,246.00	12,930.22	9,575.00	62.35	76.26	-51.99	-3,120.86	888.40	1,094.57	979.90	114.68	9.545		
13,600.00	10,246.00	13,030.22	9,575.00	64.06	78.02	-51.99	-3,220.86	888.59	1,094.72	977.19	117.53	9.314		
13,700.00	10,246.00	13,130.22	9,575.00	65.78	79.79	-52.00	-3,320.86	888.78	1,094.87	974.48	120.39	9.094		
13,800.00	10,246.00	13,230.22	9,575.00	67.50	81.56	-52.00	-3,420.86	888.98	1,095.03	971.76	123.27	8.883		
13,900.00	10,246.00	13,330.22	9,575.00	69.22	83.33	-52.01	-3,520.86	889.17	1,095.18	969.03	126.15	8.682		
14,000.00	10,246.00	13,430.22	9,575.00	70.96	85.11	-52.02	-3,620.86	889.36	1,095.33	966.30	129.03	8.489		

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 136H
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 136H	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 234H - Wellbore #1 - Plan 0													Offset Site Error:	0.00 usft	
Survey Program:		0-MWD					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	10,246.00	13,530.22	9,575.00	72.69	86.88	-52.02	-3,720.86	889.56	1,095.48	963.55	131.93	8.304			
14,200.00	10,246.00	13,630.22	9,575.00	74.44	88.66	-52.03	-3,820.86	889.75	1,095.63	960.80	134.83	8.126			
14,300.00	10,246.00	13,730.22	9,575.00	76.18	90.44	-52.04	-3,920.86	889.94	1,095.78	958.05	137.74	7.956			
14,400.00	10,246.00	13,830.22	9,575.00	77.93	92.23	-52.04	-4,020.86	890.14	1,095.94	955.29	140.65	7.792			
14,500.00	10,246.00	13,930.22	9,575.00	79.69	94.01	-52.05	-4,120.85	890.33	1,096.09	952.52	143.57	7.635			
14,600.00	10,246.00	14,030.22	9,575.00	81.44	95.80	-52.05	-4,220.85	890.52	1,096.24	949.75	146.49	7.483			
14,700.00	10,246.00	14,130.22	9,575.00	83.20	97.59	-52.06	-4,320.85	890.72	1,096.39	946.97	149.42	7.338			
14,800.00	10,246.00	14,230.22	9,575.00	84.97	99.37	-52.07	-4,420.85	890.91	1,096.54	944.19	152.36	7.197			
14,900.00	10,246.00	14,330.22	9,575.00	86.73	101.17	-52.07	-4,520.85	891.10	1,096.70	941.40	155.29	7.062			
15,000.00	10,246.00	14,430.22	9,575.00	88.50	102.96	-52.08	-4,620.85	891.30	1,096.85	938.61	158.24	6.932			
15,100.00	10,246.00	14,530.22	9,575.00	90.27	104.75	-52.08	-4,720.85	891.49	1,097.00	935.82	161.18	6.806			
15,200.00	10,246.00	14,630.22	9,575.00	92.04	106.55	-52.09	-4,820.85	891.68	1,097.15	933.02	164.13	6.685			
15,300.00	10,246.00	14,730.22	9,575.00	93.82	108.34	-52.10	-4,920.85	891.88	1,097.30	930.22	167.08	6.567			
15,400.00	10,246.00	14,830.22	9,575.00	95.60	110.14	-52.10	-5,020.85	892.07	1,097.46	927.41	170.04	6.454			
15,500.00	10,246.00	14,930.22	9,575.00	97.38	111.94	-52.11	-5,120.85	892.26	1,097.61	924.61	173.00	6.345			
15,600.00	10,246.00	15,030.22	9,575.00	99.16	113.74	-52.12	-5,220.85	892.46	1,097.76	921.80	175.96	6.239			
15,700.00	10,246.00	15,130.22	9,575.00	100.94	115.54	-52.12	-5,320.85	892.65	1,097.91	918.98	178.93	6.136			
15,800.00	10,246.00	15,230.22	9,575.00	102.72	117.34	-52.13	-5,420.85	892.84	1,098.06	916.17	181.90	6.037			
15,900.00	10,246.00	15,330.22	9,575.00	104.51	119.14	-52.13	-5,520.85	893.04	1,098.22	913.35	184.87	5.940			
16,000.00	10,246.00	15,430.22	9,575.00	106.30	120.95	-52.14	-5,620.85	893.23	1,098.37	910.52	187.84	5.847			
16,100.00	10,246.00	15,530.21	9,575.00	108.09	122.75	-52.15	-5,720.85	893.43	1,098.52	907.70	190.82	5.757			
16,200.00	10,246.00	15,630.21	9,575.00	109.88	124.56	-52.15	-5,820.85	893.62	1,098.67	904.87	193.80	5.669			
16,300.00	10,246.00	15,730.21	9,575.00	111.67	126.36	-52.16	-5,920.85	893.81	1,098.82	902.04	196.78	5.584			
16,400.00	10,246.00	15,830.21	9,575.00	113.46	128.17	-52.17	-6,020.85	894.01	1,098.98	899.21	199.76	5.501			
16,500.00	10,246.00	15,930.21	9,575.00	115.26	129.98	-52.17	-6,120.85	894.20	1,099.13	896.38	202.75	5.421			
16,600.00	10,246.00	16,030.21	9,575.00	117.05	131.78	-52.18	-6,220.85	894.39	1,099.28	893.54	205.74	5.343			
16,700.00	10,246.00	16,130.21	9,575.00	118.85	133.59	-52.18	-6,320.85	894.59	1,099.43	890.71	208.73	5.267			
16,800.00	10,246.00	16,230.21	9,575.00	120.65	135.40	-52.19	-6,420.85	894.78	1,099.58	887.87	211.72	5.194			
16,900.00	10,246.00	16,330.21	9,575.00	122.44	137.21	-52.20	-6,520.85	894.97	1,099.74	885.03	214.71	5.122			
17,000.00	10,246.00	16,430.21	9,575.00	124.24	139.02	-52.20	-6,620.85	895.17	1,099.89	882.18	217.71	5.052			
17,100.00	10,246.00	16,530.21	9,575.00	126.04	140.83	-52.21	-6,720.85	895.36	1,100.04	879.34	220.70	4.984			
17,200.00	10,246.00	16,630.21	9,575.00	127.85	142.64	-52.21	-6,820.84	895.55	1,100.19	876.49	223.70	4.918			
17,300.00	10,246.00	16,730.21	9,575.00	129.65	144.45	-52.22	-6,920.84	895.75	1,100.35	873.65	226.70	4.854			
17,400.00	10,246.00	16,830.21	9,575.00	131.45	146.26	-52.23	-7,020.84	895.94	1,100.50	870.80	229.70	4.791			
17,500.00	10,246.00	16,930.21	9,575.00	133.25	148.08	-52.23	-7,120.84	896.13	1,100.65	867.95	232.71	4.730			
17,600.00	10,246.00	17,030.21	9,575.00	135.06	149.89	-52.24	-7,220.84	896.33	1,100.80	865.09	235.71	4.670			
17,700.00	10,246.00	17,130.21	9,575.00	136.86	151.70	-52.25	-7,320.84	896.52	1,100.95	862.24	238.72	4.612			
17,800.00	10,246.00	17,230.21	9,575.00	138.67	153.52	-52.25	-7,420.84	896.71	1,101.11	859.38	241.72	4.555			
17,900.00	10,246.00	17,330.21	9,575.00	140.47	155.33	-52.26	-7,520.84	896.91	1,101.26	856.53	244.73	4.500			
18,000.00	10,246.00	17,430.21	9,575.00	142.28	157.15	-52.26	-7,620.84	897.10	1,101.41	853.67	247.74	4.446			
18,100.00	10,246.00	17,530.21	9,575.00	144.09	158.96	-52.27	-7,720.84	897.29	1,101.56	850.81	250.75	4.393			
18,200.00	10,246.00	17,630.21	9,575.00	145.90	160.78	-52.28	-7,820.84	897.49	1,101.72	847.95	253.77	4.341			
18,300.00	10,246.00	17,730.21	9,575.00	147.70	162.59	-52.28	-7,920.84	897.68	1,101.87	845.09	256.78	4.291			
18,400.00	10,246.00	17,830.21	9,575.00	149.51	164.41	-52.29	-8,020.84	897.87	1,102.02	842.23	259.80	4.242			
18,500.00	10,246.00	17,930.21	9,575.00	151.32	166.22	-52.29	-8,120.84	898.07	1,102.17	839.36	262.81	4.194			
18,600.00	10,246.00	18,030.21	9,575.00	153.13	168.04	-52.30	-8,220.84	898.26	1,102.33	836.50	265.83	4.147			
18,700.00	10,246.00	18,130.21	9,575.00	154.94	169.86	-52.31	-8,320.84	898.45	1,102.48	833.63	268.85	4.101			
18,800.00	10,246.00	18,230.21	9,575.00	156.75	171.68	-52.31	-8,420.84	898.65	1,102.63	830.76	271.87	4.056			
18,900.00	10,246.00	18,330.21	9,575.00	158.56	173.49	-52.32	-8,520.84	898.84	1,102.78	827.90	274.89	4.012			
19,000.00	10,246.00	18,430.21	9,575.00	160.38	175.31	-52.32	-8,620.84	899.04	1,102.94	825.03	277.91	3.969			
19,100.00	10,246.00	18,530.21	9,575.00	162.19	177.13	-52.33	-8,720.84	899.23	1,103.09	822.16	280.93	3.927			
19,200.00	10,246.00	18,630.21	9,575.00	164.00	178.95	-52.34	-8,820.84	899.42	1,103.24	819.29	283.96	3.885			

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 136H
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 136H	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 234H - 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			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)	Minimum Separation (usft)			
19,300.00	10,246.00	18,730.21	9,575.00	165.81	180.77	-52.34	-8,920.84	899.62	1,103.39	816.41	286.98	3.845		
19,400.00	10,246.00	18,830.21	9,575.00	167.63	182.58	-52.35	-9,020.84	899.81	1,103.55	813.54	290.01	3.805		
19,500.00	10,246.00	18,930.21	9,575.00	169.44	184.40	-52.36	-9,120.84	900.00	1,103.70	810.67	293.03	3.766		
19,600.00	10,246.00	19,030.21	9,575.00	171.25	186.22	-52.36	-9,220.84	900.20	1,103.85	807.79	296.06	3.728		
19,700.00	10,246.00	19,130.21	9,575.00	173.07	188.04	-52.37	-9,320.84	900.39	1,104.00	804.91	299.09	3.691		
19,800.00	10,246.00	19,230.21	9,575.00	174.88	189.86	-52.37	-9,420.84	900.58	1,104.16	802.04	302.12	3.655		
19,900.00	10,246.00	19,330.21	9,575.00	176.70	191.68	-52.38	-9,520.83	900.78	1,104.31	799.16	305.15	3.619		
20,000.00	10,246.00	19,430.21	9,575.00	178.51	193.50	-52.39	-9,620.83	900.97	1,104.46	796.28	308.18	3.584		
20,100.00	10,246.00	19,530.21	9,575.00	180.33	195.32	-52.39	-9,720.83	901.16	1,104.61	793.40	311.21	3.549		
20,200.00	10,246.00	19,630.21	9,575.00	182.15	197.14	-52.40	-9,820.83	901.36	1,104.77	790.52	314.24	3.516		
20,300.00	10,246.00	19,730.21	9,575.00	183.96	198.96	-52.40	-9,920.83	901.55	1,104.92	787.64	317.28	3.483		
20,400.00	10,246.00	19,830.21	9,575.00	185.78	200.78	-52.41	-10,020.83	901.74	1,105.07	784.76	320.31	3.450		
20,489.12	10,246.00	19,916.15	9,575.00	187.40	202.35	-52.42	-10,106.78	901.91	1,105.21	782.25	322.96	3.422 ES, 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 136H
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 136H	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 235H - Wellbore #1 - Plan 1												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	
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	
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	
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	
1,600.00	1,600.00	1,600.00	1,600.00	3.49	3.49	-39.81	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	-39.81	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	-39.81	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	-39.81	15.36	-12.80	19.99	11.67	8.32	2.403 CC, ES, SF	
2,000.00	2,000.00	1,999.27	1,999.25	4.38	4.38	-40.26	16.56	-14.03	21.72	12.96	8.76	2.480	
2,100.00	2,100.00	2,098.30	2,098.15	4.61	4.59	-41.28	20.16	-17.70	26.89	17.71	9.18	2.929	
2,200.00	2,200.00	2,197.89	2,197.45	4.83	4.81	-42.20	25.32	-22.96	34.28	24.66	9.62	3.564	
2,300.00	2,300.00	2,297.61	2,296.90	5.05	5.04	-42.80	30.52	-28.26	41.71	31.65	10.06	4.147	
2,400.00	2,400.00	2,397.33	2,396.35	5.28	5.27	-43.22	35.71	-33.56	49.14	38.64	10.50	4.681	
2,500.00	2,500.00	2,497.05	2,495.79	5.50	5.50	-43.53	40.91	-38.86	56.58	45.63	10.94	5.171	
2,600.00	2,600.00	2,596.78	2,595.24	5.73	5.73	-43.76	46.10	-44.15	64.01	52.63	11.38	5.623	
2,700.00	2,700.00	2,696.50	2,694.69	5.95	5.96	-43.95	51.30	-49.45	71.45	59.62	11.83	6.040	
2,800.00	2,800.00	2,796.22	2,794.13	6.17	6.20	-44.10	56.49	-54.75	78.89	66.61	12.27	6.427	
2,900.00	2,900.00	2,895.95	2,893.58	6.40	6.44	-44.23	61.69	-60.05	86.33	73.61	12.72	6.787	
3,000.00	3,000.00	2,995.67	2,993.03	6.62	6.68	-44.34	66.88	-65.35	93.76	80.60	13.17	7.122	
3,100.00	3,100.00	3,095.39	3,092.47	6.85	6.92	-44.43	72.07	-70.65	101.20	87.59	13.61	7.434	
3,200.00	3,200.00	3,195.11	3,191.92	7.07	7.17	-44.50	77.27	-75.94	108.64	94.58	14.06	7.727	
3,300.00	3,300.00	3,294.84	3,291.36	7.29	7.41	-44.57	82.46	-81.24	116.08	101.57	14.51	8.001	
3,400.00	3,400.00	3,394.56	3,390.81	7.52	7.65	-44.63	87.66	-86.54	123.52	108.57	14.96	8.259	
3,500.00	3,500.00	3,494.28	3,490.26	7.74	7.90	-44.69	92.85	-91.84	130.96	115.56	15.40	8.501	
3,600.00	3,599.98	3,594.07	3,589.77	7.97	8.15	-49.25	98.05	-97.14	137.26	121.41	15.85	8.659	
3,679.66	3,679.54	3,673.59	3,669.07	8.15	8.34	-50.41	102.19	-101.37	140.69	124.48	16.21	8.680	
3,700.00	3,699.84	3,693.90	3,689.32	8.19	8.39	-50.80	103.25	-102.44	141.39	125.09	16.30	8.675	
3,800.00	3,799.65	3,793.73	3,788.88	8.42	8.64	-52.65	108.45	-107.75	144.96	128.21	16.75	8.656	
3,900.00	3,899.45	3,893.56	3,888.43	8.64	8.89	-54.42	113.65	-113.05	148.66	131.47	17.20	8.645	
4,000.00	3,999.25	3,993.39	3,987.98	8.86	9.14	-56.10	118.85	-118.36	152.50	134.86	17.65	8.641	
4,100.00	4,099.06	4,093.22	4,087.53	9.09	9.39	-57.69	124.05	-123.66	156.47	138.37	18.10	8.644	
4,200.00	4,198.86	4,193.05	4,187.09	9.32	9.64	-59.21	129.25	-128.96	160.55	142.00	18.56	8.652	
4,300.00	4,298.66	4,292.88	4,286.64	9.55	9.90	-60.64	134.45	-134.27	164.74	145.73	19.01	8.664	
4,400.00	4,398.47	4,392.70	4,386.19	9.78	10.15	-62.01	139.65	-139.57	169.03	149.55	19.47	8.680	
4,500.00	4,498.27	4,492.53	4,485.74	10.01	10.40	-63.31	144.85	-144.88	173.40	153.47	19.93	8.699	
4,600.00	4,498.07	4,492.36	4,485.29	10.24	10.65	-64.54	150.05	-150.18	177.87	157.47	20.40	8.720	
4,700.00	4,497.88	4,492.19	4,484.85	10.47	10.90	-65.72	155.25	-155.48	182.41	161.55	20.86	8.744	
4,800.00	4,497.68	4,492.02	4,484.40	10.70	11.16	-66.83	160.45	-160.79	187.02	165.69	21.33	8.769	
4,900.00	4,497.48	4,491.85	4,483.95	10.94	11.41	-67.89	165.65	-166.09	191.70	169.91	21.79	8.796	
5,000.00	4,997.29	4,991.68	4,983.50	11.17	11.66	-68.90	170.85	-171.39	196.45	174.18	22.26	8.824	

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 136H
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 136H	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 235H - Wellbore #1 - Plan 1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.50 usft
Rule Assigned:													
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	Warning
5,100.00	5,097.09	5,091.51	5,083.05	11.41	11.92	-69.87	176.05	-176.70	201.25	178.52	22.73	8.853	
5,200.00	5,196.89	5,191.34	5,182.61	11.64	12.17	-70.78	181.25	-182.00	206.10	182.90	23.20	8.882	
5,300.00	5,296.70	5,291.16	5,282.16	11.88	12.43	-71.66	186.45	-187.31	211.01	187.33	23.68	8.912	
5,400.00	5,396.50	5,390.99	5,381.71	12.12	12.68	-72.49	191.65	-192.61	215.96	191.81	24.15	8.943	
5,500.00	5,496.30	5,490.82	5,481.26	12.35	12.94	-73.29	196.85	-197.91	220.96	196.34	24.62	8.973	
5,600.00	5,596.11	5,590.65	5,580.81	12.59	13.19	-74.06	202.05	-203.22	226.00	200.90	25.10	9.004	
5,700.00	5,695.91	5,690.48	5,680.37	12.83	13.45	-74.78	207.26	-208.52	231.07	205.50	25.58	9.034	
5,800.00	5,795.71	5,790.31	5,779.92	13.07	13.70	-75.48	212.46	-213.83	236.19	210.13	26.05	9.065	
5,900.00	5,895.52	5,890.14	5,879.47	13.31	13.96	-76.15	217.66	-219.13	241.33	214.80	26.53	9.095	
6,000.00	5,995.32	5,989.97	5,979.02	13.55	14.21	-76.79	222.86	-224.43	246.51	219.49	27.01	9.126	
6,100.00	6,095.12	6,089.79	6,078.58	13.79	14.47	-77.40	228.06	-229.74	251.71	224.22	27.49	9.156	
6,200.00	6,194.93	6,189.62	6,178.13	14.02	14.73	-77.99	233.26	-235.04	256.95	228.97	27.97	9.185	
6,300.00	6,294.73	6,289.45	6,277.68	14.27	14.98	-78.56	238.46	-240.35	262.21	233.75	28.45	9.215	
6,400.00	6,394.53	6,389.28	6,377.23	14.51	15.24	-79.10	243.66	-245.65	267.49	238.55	28.94	9.244	
6,500.00	6,494.34	6,489.11	6,476.78	14.75	15.49	-79.62	248.86	-250.95	272.80	243.38	29.42	9.273	
6,600.00	6,594.14	6,588.94	6,576.34	14.99	15.75	-80.12	254.06	-256.26	278.13	248.22	29.90	9.301	
6,700.00	6,693.95	6,688.77	6,675.89	15.23	16.01	-80.61	259.26	-261.56	283.48	253.09	30.39	9.329	
6,800.00	6,793.75	6,788.60	6,775.44	15.47	16.26	-81.07	264.46	-266.86	288.85	257.97	30.87	9.357	
6,900.00	6,893.55	6,888.43	6,874.99	15.71	16.52	-81.52	269.66	-272.17	294.23	262.88	31.36	9.384	
7,000.00	6,993.36	6,988.25	6,974.54	15.95	16.78	-81.95	274.86	-277.47	299.64	267.80	31.84	9.410	
7,100.00	7,093.16	7,088.08	7,074.10	16.20	17.04	-82.37	280.06	-282.78	305.06	272.73	32.33	9.437	
7,200.00	7,192.96	7,187.91	7,173.65	16.44	17.29	-82.77	285.26	-288.08	310.49	277.68	32.81	9.463	
7,300.00	7,292.77	7,287.74	7,273.20	16.68	17.55	-83.16	290.46	-293.38	315.94	282.65	33.30	9.488	
7,400.00	7,392.57	7,387.57	7,372.75	16.92	17.81	-83.53	295.66	-298.69	321.41	287.62	33.79	9.513	
7,500.00	7,492.37	7,487.40	7,472.30	17.17	18.06	-83.90	300.86	-303.99	326.89	292.61	34.27	9.538	
7,600.00	7,592.18	7,587.23	7,571.86	17.41	18.32	-84.25	306.06	-309.30	332.38	297.62	34.76	9.562	
7,700.00	7,691.98	7,687.06	7,671.41	17.65	18.58	-84.59	311.26	-314.60	337.88	302.63	35.25	9.586	
7,800.00	7,791.78	7,786.88	7,770.96	17.89	18.84	-84.92	316.46	-319.90	343.40	307.66	35.74	9.609	
7,900.00	7,891.59	7,886.71	7,870.51	18.14	19.09	-85.23	321.66	-325.21	348.92	312.70	36.22	9.632	
8,000.00	7,991.39	7,986.54	7,970.07	18.38	19.35	-85.54	326.86	-330.51	354.46	317.74	36.71	9.655	
8,100.00	8,091.19	8,086.37	8,069.62	18.63	19.61	-85.84	332.06	-335.82	360.00	322.80	37.20	9.677	
8,200.00	8,191.00	8,186.20	8,169.17	18.87	19.87	-86.13	337.26	-341.12	365.56	327.87	37.69	9.699	
8,300.00	8,290.80	8,286.03	8,268.72	19.11	20.12	-86.41	342.46	-346.42	371.12	332.94	38.18	9.720	
8,400.00	8,390.60	8,385.86	8,368.27	19.36	20.38	-86.68	347.66	-351.73	376.69	338.02	38.67	9.741	
8,500.00	8,490.41	8,485.69	8,467.83	19.60	20.64	-86.95	352.86	-357.03	382.27	343.11	39.16	9.762	
8,600.00	8,590.21	8,585.52	8,567.38	19.85	20.90	-87.20	358.06	-362.33	387.86	348.21	39.65	9.782	
8,700.00	8,690.01	8,691.07	8,672.68	20.09	21.15	-87.51	363.22	-367.59	393.12	352.96	40.15	9.791	
8,800.00	8,789.82	8,803.07	8,784.59	20.33	21.36	-88.16	366.07	-370.51	395.74	355.12	40.62	9.743	
8,900.00	8,889.62	8,908.10	8,889.62	20.58	21.54	-89.08	366.36	-370.80	395.88	354.80	41.07	9.638	
9,000.00	8,989.42	9,008.23	8,989.75	20.82	21.74	-89.99	366.32	-370.80	395.83	354.28	41.55	9.526	
9,100.00	9,089.23	9,110.60	9,091.46	21.07	21.86	-92.41	356.01	-370.80	395.44	353.46	41.99	9.418	
9,121.03	9,110.22	9,131.19	9,111.60	21.12	21.88	-93.20	351.75	-370.80	395.41	353.33	42.08	9.398	
9,200.00	9,189.03	9,204.39	9,181.69	21.31	21.91	-96.86	330.82	-370.80	396.28	353.89	42.39	9.348	
9,300.00	9,288.83	9,286.38	9,256.31	21.56	21.91	-102.36	296.99	-370.79	401.98	359.32	42.67	9.421	
9,354.74	9,343.46	9,325.97	9,290.43	21.69	21.90	-105.47	276.92	-370.79	408.54	365.84	42.70	9.568	
9,400.00	9,388.66	9,356.16	9,315.46	21.79	21.89	-108.12	260.07	-370.79	416.16	373.54	42.62	9.764	
9,500.00	9,488.61	9,416.07	9,362.35	21.96	21.86	-113.69	222.82	-370.79	440.24	398.15	42.09	10.460	
9,534.39	9,523.00	9,434.74	9,376.14	22.02	21.85	-111.43	210.24	-370.79	450.85	409.05	41.80	10.786	
9,600.00	9,588.61	9,467.57	9,399.37	22.15	21.83	-114.28	187.04	-370.78	474.63	433.48	41.15	11.534	
9,684.43	9,673.04	9,500.00	9,420.97	22.33	21.82	-117.11	162.86	-370.78	512.09	472.01	40.09	12.775	
9,700.00	9,688.61	9,511.03	9,428.01	22.35	21.81	61.17	154.35	-370.78	519.67	479.70	39.97	13.002	
9,750.00	9,738.47	9,531.73	9,440.75	22.42	21.80	57.10	138.05	-370.78	544.37	505.06	39.31	13.848	

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 136H
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 136H	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 235H - Wellbore #1 - Plan 1												Offset Site Error:	0.00 usft		
Survey Program:		0-MWD				Rule Assigned:								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	9,787.83	9,550.00	9,451.51	22.47	21.79	53.48	123.28	-370.78	569.17	530.57	38.60	14.746			
9,850.00	9,836.31	9,574.04	9,464.93	22.49	21.78	49.84	103.34	-370.78	593.66	555.67	37.99	15.627			
9,900.00	9,883.56	9,600.00	9,478.47	22.50	21.77	46.51	81.20	-370.77	617.59	580.17	37.42	16.503			
9,950.00	9,929.20	9,617.28	9,486.93	22.50	21.76	43.93	66.13	-370.77	640.59	603.86	36.74	17.438			
10,000.00	9,972.89	9,650.00	9,501.67	22.49	21.76	41.10	36.92	-370.77	662.71	626.39	36.32	18.248			
10,050.00	10,014.31	9,650.00	9,501.67	22.47	21.76	39.63	36.92	-370.77	683.40	647.93	35.46	19.271			
10,100.00	10,053.12	9,683.36	9,514.96	22.45	21.75	37.44	6.33	-370.77	702.47	667.34	35.12	20.002			
10,150.00	10,089.04	9,700.00	9,520.92	22.43	21.76	35.93	-9.21	-370.76	720.20	685.58	34.62	20.804			
10,200.00	10,121.80	9,727.99	9,529.92	22.42	21.76	34.44	-35.71	-370.76	736.18	701.86	34.32	21.453			
10,250.00	10,151.14	9,750.00	9,536.08	22.43	21.78	33.28	-56.84	-370.76	750.43	716.45	33.98	22.082			
10,300.00	10,176.84	9,772.94	9,541.63	22.45	21.80	32.30	-79.09	-370.76	762.85	729.10	33.75	22.606			
10,350.00	10,198.70	9,800.00	9,547.03	22.50	21.85	31.47	-105.61	-370.76	773.39	739.78	33.60	23.016			
10,400.00	10,216.57	9,818.11	9,549.94	22.57	21.88	30.89	-123.48	-370.75	781.91	748.42	33.48	23.353			
10,450.00	10,230.30	9,850.00	9,553.68	22.66	21.97	30.37	-155.15	-370.75	788.57	755.07	33.51	23.534			
10,500.00	10,239.79	9,850.00	9,553.68	22.79	21.97	30.14	-155.15	-370.75	793.22	759.71	33.51	23.670			
10,550.00	10,244.96	9,886.08	9,555.79	22.95	22.09	29.93	-191.16	-370.75	795.44	761.73	33.70	23.600			
10,584.43	10,246.00	9,901.92	9,556.00	23.07	22.15	29.90	-206.99	-370.75	795.93	762.07	33.86	23.505			
10,600.00	10,246.00	9,917.49	9,556.00	23.13	22.22	29.90	-222.56	-370.74	795.93	761.98	33.95	23.444			
10,700.00	10,246.00	10,017.49	9,556.00	23.60	22.73	29.90	-322.56	-370.74	795.93	761.35	34.58	23.020			
10,800.00	10,246.00	10,117.49	9,556.00	24.19	23.38	29.90	-422.56	-370.73	795.93	760.60	35.33	22.529			
10,900.00	10,246.00	10,217.49	9,556.00	24.91	24.15	29.90	-522.56	-370.72	795.92	759.72	36.20	21.985			
11,000.00	10,246.00	10,317.49	9,556.00	25.74	25.03	29.90	-622.56	-370.71	795.92	758.73	37.19	21.402			
11,100.00	10,246.00	10,417.49	9,556.00	26.67	26.00	29.90	-722.56	-370.70	795.91	757.63	38.28	20.793			
11,200.00	10,246.00	10,517.49	9,556.00	27.68	27.07	29.90	-822.56	-370.69	795.91	756.45	39.46	20.168			
11,300.00	10,246.00	10,617.49	9,556.00	28.78	28.21	29.90	-922.56	-370.68	795.90	755.17	40.73	19.539			
11,400.00	10,246.00	10,717.49	9,556.00	29.95	29.42	29.89	-1,022.56	-370.67	795.90	753.81	42.09	18.912			
11,500.00	10,246.00	10,817.49	9,556.00	31.19	30.69	29.89	-1,122.56	-370.66	795.90	752.39	43.51	18.293			
11,600.00	10,246.00	10,917.49	9,556.00	32.48	32.01	29.89	-1,222.56	-370.65	795.89	750.90	44.99	17.689			
11,700.00	10,246.00	11,017.49	9,556.00	33.81	33.38	29.89	-1,322.56	-370.64	795.89	749.35	46.54	17.101			
11,800.00	10,246.00	11,117.49	9,556.00	35.20	34.79	29.89	-1,422.56	-370.63	795.88	747.75	48.14	16.534			
11,900.00	10,246.00	11,217.49	9,556.00	36.62	36.24	29.89	-1,522.56	-370.62	795.88	746.10	49.78	15.987			
12,000.00	10,246.00	11,317.49	9,556.00	38.08	37.72	29.89	-1,622.56	-370.61	795.87	744.40	51.47	15.462			
12,100.00	10,246.00	11,417.49	9,556.00	39.57	39.24	29.89	-1,722.56	-370.60	795.87	742.67	53.20	14.960			
12,200.00	10,246.00	11,517.49	9,556.00	41.08	40.77	29.89	-1,822.56	-370.60	795.87	740.90	54.97	14.479			
12,300.00	10,246.00	11,617.49	9,556.00	42.63	42.33	29.89	-1,922.56	-370.59	795.86	739.10	56.76	14.021			
12,400.00	10,246.00	11,717.49	9,556.00	44.19	43.92	29.89	-2,022.56	-370.58	795.86	737.27	58.59	13.584			
12,500.00	10,246.00	11,817.49	9,556.00	45.77	45.52	29.89	-2,122.56	-370.57	795.85	735.41	60.44	13.168			
12,600.00	10,246.00	11,917.49	9,556.00	47.37	47.13	29.89	-2,222.56	-370.56	795.85	733.53	62.31	12.771			
12,700.00	10,246.00	12,017.49	9,556.00	48.99	48.76	29.89	-2,322.56	-370.55	795.84	731.63	64.21	12.394			
12,800.00	10,246.00	12,117.49	9,556.00	50.62	50.41	29.89	-2,422.56	-370.54	795.84	729.71	66.13	12.034			
12,900.00	10,246.00	12,217.49	9,556.00	52.27	52.07	29.89	-2,522.56	-370.53	795.84	727.77	68.07	11.692			
13,000.00	10,246.00	12,317.49	9,556.00	53.92	53.74	29.89	-2,622.56	-370.52	795.83	725.81	70.02	11.366			
13,100.00	10,246.00	12,417.49	9,556.00	55.59	55.41	29.89	-2,722.56	-370.51	795.83	723.84	71.99	11.055			
13,200.00	10,246.00	12,517.49	9,556.00	57.27	57.10	29.89	-2,822.56	-370.50	795.82	721.85	73.97	10.758			
13,300.00	10,246.00	12,617.49	9,556.00	58.95	58.80	29.88	-2,922.56	-370.49	795.82	719.85	75.97	10.475			
13,400.00	10,246.00	12,717.49	9,556.00	60.65	60.50	29.88	-3,022.56	-370.48	795.82	717.84	77.98	10.206			
13,500.00	10,246.00	12,817.49	9,556.00	62.35	62.22	29.88	-3,122.56	-370.47	795.81	715.81	80.00	9.948			
13,600.00	10,246.00	12,917.49	9,556.00	64.06	63.93	29.88	-3,222.56	-370.46	795.81	713.78	82.03	9.702			
13,700.00	10,246.00	13,017.49	9,556.00	65.78	65.66	29.88	-3,322.56	-370.46	795.80	711.73	84.07	9.466			
13,800.00	10,246.00	13,117.49	9,556.00	67.50	67.39	29.88	-3,422.56	-370.45	795.80	709.68	86.12	9.241			
13,900.00	10,246.00	13,217.49	9,556.00	69.22	69.12	29.88	-3,522.56	-370.44	795.79	707.62	88.18	9.025			
14,000.00	10,246.00	13,317.49	9,556.00	70.96	70.86	29.88	-3,622.56	-370.43	795.79	705.55	90.24	8.819			

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 136H
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 136H	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 235H - Wellbore #1 - Plan 1												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)	Distance Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
14,100.00	10,246.00	13,417.49	9,556.00	72.69	72.61	29.88	-3,722.56	-370.42	795.79	703.47	92.31	8.621			
14,200.00	10,246.00	13,517.49	9,556.00	74.44	74.35	29.88	-3,822.56	-370.41	795.78	701.39	94.39	8.431			
14,300.00	10,246.00	13,617.49	9,556.00	76.18	76.11	29.88	-3,922.56	-370.40	795.78	699.30	96.48	8.248			
14,400.00	10,246.00	13,717.49	9,556.00	77.93	77.86	29.88	-4,022.56	-370.39	795.77	697.20	98.57	8.073			
14,500.00	10,246.00	13,817.49	9,556.00	79.69	79.62	29.88	-4,122.56	-370.38	795.77	695.10	100.66	7.905			
14,600.00	10,246.00	13,917.49	9,556.00	81.44	81.38	29.88	-4,222.56	-370.37	795.76	693.00	102.77	7.743			
14,700.00	10,246.00	14,017.49	9,556.00	83.20	83.15	29.88	-4,322.56	-370.36	795.76	690.89	104.87	7.588			
14,800.00	10,246.00	14,117.49	9,556.00	84.97	84.92	29.88	-4,422.56	-370.35	795.76	688.77	106.99	7.438			
14,900.00	10,246.00	14,217.49	9,556.00	86.73	86.69	29.88	-4,522.56	-370.34	795.75	686.65	109.10	7.294			
15,000.00	10,246.00	14,317.49	9,556.00	88.50	88.46	29.88	-4,622.56	-370.33	795.75	684.53	111.22	7.155			
15,100.00	10,246.00	14,417.49	9,556.00	90.27	90.23	29.88	-4,722.56	-370.32	795.74	682.40	113.34	7.021			
15,200.00	10,246.00	14,517.49	9,556.00	92.04	92.01	29.87	-4,822.56	-370.31	795.74	680.27	115.47	6.891			
15,300.00	10,246.00	14,617.49	9,556.00	93.82	93.79	29.87	-4,922.56	-370.31	795.73	678.13	117.60	6.766			
15,400.00	10,246.00	14,717.49	9,556.00	95.60	95.57	29.87	-5,022.56	-370.30	795.73	675.99	119.74	6.646			
15,500.00	10,246.00	14,817.49	9,556.00	97.38	97.35	29.87	-5,122.56	-370.29	795.73	673.85	121.87	6.529			
15,600.00	10,246.00	14,917.49	9,556.00	99.16	99.14	29.87	-5,222.56	-370.28	795.72	671.71	124.01	6.416			
15,700.00	10,246.00	15,017.49	9,556.00	100.94	100.93	29.87	-5,322.56	-370.27	795.72	669.56	126.16	6.307			
15,800.00	10,246.00	15,117.49	9,556.00	102.72	102.71	29.87	-5,422.56	-370.26	795.71	667.41	128.30	6.202			
15,900.00	10,246.00	15,217.49	9,556.00	104.51	104.50	29.87	-5,522.56	-370.25	795.71	665.26	130.45	6.100			
16,000.00	10,246.00	15,317.49	9,556.00	106.30	106.29	29.87	-5,622.56	-370.24	795.71	663.11	132.60	6.001			
16,100.00	10,246.00	15,417.49	9,556.00	108.09	108.09	29.87	-5,722.56	-370.23	795.70	660.95	134.75	5.905			
16,200.00	10,246.00	15,517.49	9,556.00	109.88	109.88	29.87	-5,822.56	-370.22	795.70	658.79	136.91	5.812			
16,300.00	10,246.00	15,617.49	9,556.00	111.67	111.67	29.87	-5,922.56	-370.21	795.69	656.63	139.06	5.722			
16,400.00	10,246.00	15,717.49	9,556.00	113.46	113.47	29.87	-6,022.56	-370.20	795.69	654.47	141.22	5.634			
16,500.00	10,246.00	15,817.49	9,556.00	115.26	115.27	29.87	-6,122.56	-370.19	795.68	652.30	143.38	5.549			
16,600.00	10,246.00	15,917.49	9,556.00	117.05	117.06	29.87	-6,222.56	-370.18	795.68	650.14	145.54	5.467			
16,700.00	10,246.00	16,017.49	9,556.00	118.85	118.86	29.87	-6,322.56	-370.17	795.68	647.97	147.71	5.387			
16,800.00	10,246.00	16,117.49	9,556.00	120.65	120.66	29.87	-6,422.56	-370.17	795.67	645.80	149.87	5.309			
16,900.00	10,246.00	16,217.49	9,556.00	122.44	122.46	29.87	-6,522.56	-370.16	795.67	643.63	152.04	5.233			
17,000.00	10,246.00	16,317.49	9,556.00	124.24	124.26	29.86	-6,622.56	-370.15	795.66	641.45	154.21	5.160			
17,100.00	10,246.00	16,417.49	9,556.00	126.04	126.07	29.86	-6,722.56	-370.14	795.66	639.28	156.38	5.088			
17,200.00	10,246.00	16,517.49	9,556.00	127.85	127.87	29.86	-6,822.56	-370.13	795.65	637.10	158.55	5.018			
17,300.00	10,246.00	16,617.49	9,556.00	129.65	129.67	29.86	-6,922.56	-370.12	795.65	634.93	160.72	4.950			
17,400.00	10,246.00	16,717.49	9,556.00	131.45	131.48	29.86	-7,022.56	-370.11	795.65	632.75	162.90	4.884			
17,500.00	10,246.00	16,817.49	9,556.00	133.25	133.28	29.86	-7,122.56	-370.10	795.64	630.57	165.07	4.820			
17,600.00	10,246.00	16,917.49	9,556.00	135.06	135.09	29.86	-7,222.56	-370.09	795.64	628.39	167.25	4.757			
17,700.00	10,246.00	17,017.49	9,556.00	136.86	136.90	29.86	-7,322.56	-370.08	795.63	626.21	169.43	4.696			
17,800.00	10,246.00	17,117.49	9,556.00	138.67	138.70	29.86	-7,422.56	-370.07	795.63	624.02	171.60	4.636			
17,900.00	10,246.00	17,217.49	9,556.00	140.47	140.51	29.86	-7,522.56	-370.06	795.62	621.84	173.78	4.578			
18,000.00	10,246.00	17,317.49	9,556.00	142.28	142.32	29.86	-7,622.56	-370.05	795.62	619.66	175.96	4.521			
18,100.00	10,246.00	17,417.49	9,556.00	144.09	144.13	29.86	-7,722.56	-370.04	795.62	617.47	178.15	4.466			
18,200.00	10,246.00	17,517.49	9,556.00	145.90	145.94	29.86	-7,822.56	-370.03	795.61	615.28	180.33	4.412			
18,300.00	10,246.00	17,617.49	9,556.00	147.70	147.75	29.86	-7,922.56	-370.02	795.61	613.10	182.51	4.359			
18,400.00	10,246.00	17,717.49	9,556.00	149.51	149.56	29.86	-8,022.56	-370.02	795.60	610.91	184.69	4.308			
18,500.00	10,246.00	17,817.49	9,556.00	151.32	151.37	29.86	-8,122.56	-370.01	795.60	608.72	186.88	4.257			
18,600.00	10,246.00	17,917.49	9,556.00	153.13	153.18	29.86	-8,222.56	-370.00	795.60	606.53	189.06	4.208			
18,700.00	10,246.00	18,017.49	9,556.00	154.94	154.99	29.86	-8,322.56	-369.99	795.59	604.34	191.25	4.160			
18,800.00	10,246.00	18,117.49	9,556.00	156.75	156.81	29.86	-8,422.56	-369.98	795.59	602.15	193.44	4.113			
18,900.00	10,246.00	18,217.49	9,556.00	158.56	158.62	29.85	-8,522.56	-369.97	795.58	599.96	195.63	4.067			
19,000.00	10,246.00	18,317.49	9,556.00	160.38	160.43	29.85	-8,622.56	-369.96	795.58	597.76	197.81	4.022			
19,100.00	10,246.00	18,417.49	9,556.00	162.19	162.24	29.85	-8,722.56	-369.95	795.57	595.57	200.00	3.978			
19,200.00	10,246.00	18,517.49	9,556.00	164.00	164.06	29.85	-8,822.56	-369.94	795.57	593.38	202.19	3.935			

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 136H
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 136H	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 235H - Wellbore #1 - Plan 1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD													Offset Well Error: 0.50 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,300.00	10,246.00	18,617.49	9,556.00	165.81	165.87	29.85	-8,922.56	-369.93	795.57	591.18	204.38	3.893	
19,400.00	10,246.00	18,717.49	9,556.00	167.63	167.69	29.85	-9,022.56	-369.92	795.56	588.99	206.57	3.851	
19,500.00	10,246.00	18,817.49	9,556.00	169.44	169.50	29.85	-9,122.56	-369.91	795.56	586.79	208.76	3.811	
19,600.00	10,246.00	18,917.49	9,556.00	171.25	171.32	29.85	-9,222.56	-369.90	795.55	584.60	210.96	3.771	
19,700.00	10,246.00	19,017.49	9,556.00	173.07	173.13	29.85	-9,322.56	-369.89	795.55	582.40	213.15	3.732	
19,800.00	10,246.00	19,117.49	9,556.00	174.88	174.95	29.85	-9,422.56	-369.88	795.54	580.20	215.34	3.694	
19,900.00	10,246.00	19,217.49	9,556.00	176.70	176.76	29.85	-9,522.56	-369.88	795.54	578.01	217.54	3.657	
20,000.00	10,246.00	19,317.49	9,556.00	178.51	178.58	29.85	-9,622.56	-369.87	795.54	575.81	219.73	3.621	
20,100.00	10,246.00	19,417.49	9,556.00	180.33	180.40	29.85	-9,722.56	-369.86	795.53	573.61	221.92	3.585	
20,200.00	10,246.00	19,517.49	9,556.00	182.15	182.21	29.85	-9,822.56	-369.85	795.53	571.41	224.12	3.550	
20,300.00	10,246.00	19,617.49	9,556.00	183.96	184.03	29.85	-9,922.56	-369.84	795.52	569.21	226.31	3.515	
20,400.00	10,246.00	19,717.49	9,556.00	185.78	185.85	29.85	-10,022.56	-369.83	795.52	567.01	228.51	3.481	
20,489.12	10,246.00	19,806.61	9,556.00	187.40	187.47	29.85	-10,111.69	-369.82	795.52	565.05	230.47	3.452	

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 136H
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 136H	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
0.00	0.00	0.00	0.00	0.50	0.50	-39.81	30.72	-25.60	39.99				
100.00	100.00	100.00	100.00	0.51	0.51	-39.81	30.72	-25.60	39.99	38.97	1.01	39.432	
200.00	200.00	200.00	200.00	0.59	0.59	-39.81	30.72	-25.60	39.99	38.81	1.18	34.015	
300.00	300.00	300.00	300.00	0.73	0.73	-39.81	30.72	-25.60	39.99	38.53	1.46	27.337	
400.00	400.00	400.00	400.00	0.91	0.91	-39.81	30.72	-25.60	39.99	38.17	1.82	22.007	
500.00	500.00	500.00	500.00	1.10	1.10	-39.81	30.72	-25.60	39.99	37.78	2.21	18.124	
600.00	600.00	600.00	600.00	1.31	1.31	-39.81	30.72	-25.60	39.99	37.37	2.61	15.292	
700.00	700.00	700.00	700.00	1.52	1.52	-39.81	30.72	-25.60	39.99	36.95	3.04	13.175	
800.00	800.00	800.00	800.00	1.73	1.73	-39.81	30.72	-25.60	39.99	36.53	3.46	11.548	
900.00	900.00	900.00	900.00	1.95	1.95	-39.81	30.72	-25.60	39.99	36.09	3.90	10.266	
1,000.00	1,000.00	1,000.00	1,000.00	2.17	2.17	-39.81	30.72	-25.60	39.99	35.66	4.33	9.232	
1,100.00	1,100.00	1,100.00	1,100.00	2.38	2.38	-39.81	30.72	-25.60	39.99	35.22	4.77	8.384	
1,200.00	1,200.00	1,200.00	1,200.00	2.61	2.61	-39.81	30.72	-25.60	39.99	34.78	5.21	7.675	
1,300.00	1,300.00	1,300.00	1,300.00	2.83	2.83	-39.81	30.72	-25.60	39.99	34.34	5.65	7.075	
1,400.00	1,400.00	1,400.00	1,400.00	3.05	3.05	-39.81	30.72	-25.60	39.99	33.89	6.10	6.561	
1,500.00	1,500.00	1,500.00	1,500.00	3.27	3.27	-39.81	30.72	-25.60	39.99	33.45	6.54	6.115 CC, ES	
1,600.00	1,600.00	1,598.73	1,598.71	3.49	3.48	-40.86	31.40	-27.16	41.54	34.56	6.97	5.959	
1,700.00	1,700.00	1,697.22	1,697.07	3.71	3.69	-43.59	33.43	-31.82	46.24	38.85	7.39	6.257	
1,800.00	1,800.00	1,795.26	1,794.73	3.94	3.90	-47.07	36.78	-39.54	54.26	46.45	7.81	6.951	
1,900.00	1,900.00	1,894.35	1,893.24	4.16	4.13	-50.26	41.06	-49.39	64.59	56.35	8.23	7.843	
2,000.00	2,000.00	1,993.75	1,992.05	4.38	4.37	-52.59	45.38	-59.33	75.11	66.44	8.67	8.663	
2,100.00	2,100.00	2,093.16	2,090.87	4.61	4.61	-54.34	49.70	-69.26	85.73	76.62	9.11	9.412	
2,200.00	2,200.00	2,192.56	2,189.68	4.83	4.86	-55.70	54.02	-79.19	96.41	86.86	9.55	10.097	
2,300.00	2,300.00	2,291.97	2,288.49	5.05	5.12	-56.80	58.33	-89.13	107.14	97.15	9.99	10.724	
2,400.00	2,400.00	2,391.37	2,387.31	5.28	5.37	-57.69	62.65	-99.06	117.89	107.46	10.43	11.298	
2,500.00	2,500.00	2,490.78	2,486.12	5.50	5.64	-58.43	66.97	-108.99	128.67	117.79	10.88	11.827	
2,600.00	2,600.00	2,590.18	2,584.93	5.73	5.90	-59.06	71.29	-118.92	139.47	128.14	11.33	12.315	
2,700.00	2,700.00	2,689.58	2,683.74	5.95	6.17	-59.60	75.60	-128.86	150.28	138.51	11.77	12.765	
2,800.00	2,800.00	2,788.99	2,782.56	6.17	6.44	-60.07	79.92	-138.79	161.10	148.88	12.22	13.183	
2,900.00	2,900.00	2,888.39	2,881.37	6.40	6.71	-60.47	84.24	-148.72	171.93	159.26	12.67	13.571	
3,000.00	3,000.00	2,987.80	2,980.18	6.62	6.99	-60.83	88.55	-158.65	182.77	169.65	13.12	13.932	
3,100.00	3,100.00	3,087.20	3,079.00	6.85	7.27	-61.15	92.87	-168.59	193.62	180.05	13.57	14.268	
3,200.00	3,200.00	3,186.61	3,177.81	7.07	7.54	-61.44	97.19	-178.52	204.47	190.45	14.02	14.583	
3,300.00	3,300.00	3,286.01	3,276.62	7.29	7.82	-61.69	101.51	-188.45	215.33	200.85	14.47	14.878	
3,400.00	3,400.00	3,385.42	3,375.43	7.52	8.10	-61.92	105.82	-198.39	226.18	211.26	14.92	15.155	
3,500.00	3,500.00	3,484.82	3,474.25	7.74	8.39	-62.13	110.14	-208.32	237.05	221.67	15.38	15.415	
3,600.00	3,599.98	3,584.27	3,573.10	7.97	8.67	-66.57	114.46	-218.26	247.22	231.39	15.83	15.619	
3,679.66	3,679.54	3,663.50	3,651.86	8.15	8.90	-67.38	117.90	-226.17	254.38	238.19	16.18	15.717	
3,700.00	3,699.84	3,683.73	3,671.97	8.19	8.95	-67.67	118.78	-228.19	256.11	239.84	16.28	15.736	
3,800.00	3,799.65	3,783.16	3,770.81	8.42	9.24	-69.03	123.10	-238.13	264.71	247.99	16.73	15.827	
3,900.00	3,899.45	3,882.60	3,869.65	8.64	9.52	-70.31	127.42	-248.07	273.46	256.28	17.18	15.920	
4,000.00	3,999.25	3,982.03	3,968.50	8.86	9.81	-71.51	131.74	-258.00	282.33	264.70	17.63	16.013	
4,100.00	4,099.06	4,081.47	4,067.34	9.09	10.10	-72.64	136.06	-267.94	291.32	273.23	18.09	16.105	
4,200.00	4,198.86	4,180.91	4,166.19	9.32	10.38	-73.70	140.38	-277.87	300.41	281.86	18.55	16.197	
4,300.00	4,298.66	4,280.34	4,265.03	9.55	10.67	-74.69	144.69	-287.81	309.60	290.59	19.01	16.288	
4,400.00	4,398.47	4,379.78	4,363.88	9.78	10.96	-75.63	149.01	-297.75	318.87	299.40	19.47	16.377	
4,500.00	4,498.27	4,479.22	4,462.72	10.01	11.25	-76.52	153.33	-307.68	328.23	308.29	19.94	16.465	
4,600.00	4,598.07	4,578.65	4,561.57	10.24	11.54	-77.35	157.65	-317.62	337.66	317.26	20.40	16.551	
4,700.00	4,697.88	4,678.09	4,660.41	10.47	11.83	-78.15	161.97	-327.55	347.16	326.29	20.87	16.634	
4,800.00	4,797.68	4,777.53	4,759.25	10.70	12.12	-78.89	166.29	-337.49	356.72	335.38	21.34	16.716	
4,900.00	4,897.48	4,876.96	4,858.10	10.94	12.41	-79.60	170.61	-347.42	366.33	344.52	21.81	16.796	
5,000.00	4,997.29	4,976.40	4,956.94	11.17	12.70	-80.28	174.93	-357.36	376.00	353.72	22.28	16.874	

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 136H
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 136H	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 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	5,097.09	5,075.84	5,055.79	11.41	12.99	-80.92	179.25	-367.30	385.72	362.97	22.76	16.950	
5,200.00	5,196.89	5,175.27	5,154.63	11.64	13.28	-81.53	183.56	-377.23	395.49	372.26	23.23	17.024	
5,300.00	5,296.70	5,274.71	5,253.48	11.88	13.57	-82.10	187.88	-387.17	405.29	381.59	23.71	17.095	
5,400.00	5,396.50	5,374.14	5,352.32	12.12	13.86	-82.66	192.20	-397.10	415.14	390.95	24.19	17.165	
5,500.00	5,496.30	5,473.58	5,451.17	12.35	14.15	-83.18	196.52	-407.04	425.02	400.36	24.66	17.233	
5,600.00	5,596.11	5,573.02	5,550.01	12.59	14.44	-83.68	200.84	-416.98	434.94	409.79	25.14	17.299	
5,700.00	5,695.91	5,672.45	5,648.86	12.83	14.74	-84.16	205.16	-426.91	444.88	419.26	25.62	17.363	
5,800.00	5,795.71	5,771.89	5,747.70	13.07	15.03	-84.62	209.48	-436.85	454.86	428.76	26.10	17.425	
5,900.00	5,895.52	5,871.33	5,846.54	13.31	15.32	-85.06	213.80	-446.78	464.87	438.28	26.59	17.485	
6,000.00	5,995.32	5,970.76	5,945.39	13.55	15.61	-85.48	218.12	-456.72	474.90	447.83	27.07	17.544	
6,100.00	6,095.12	6,070.20	6,044.23	13.79	15.91	-85.89	222.43	-466.66	484.95	457.40	27.55	17.601	
6,200.00	6,194.93	6,169.64	6,143.08	14.02	16.20	-86.27	226.75	-476.59	495.03	466.99	28.04	17.657	
6,300.00	6,294.73	6,269.07	6,241.92	14.27	16.49	-86.64	231.07	-486.53	505.13	476.61	28.52	17.711	
6,400.00	6,394.53	6,368.51	6,340.77	14.51	16.79	-87.00	235.39	-496.46	515.25	486.24	29.01	17.763	
6,500.00	6,494.34	6,467.94	6,439.61	14.75	17.08	-87.34	239.71	-506.40	525.39	495.89	29.49	17.814	
6,600.00	6,594.14	6,567.38	6,538.46	14.99	17.37	-87.67	244.03	-516.34	535.54	505.56	29.98	17.864	
6,700.00	6,693.95	6,666.82	6,637.30	15.23	17.67	-87.99	248.35	-526.27	545.72	515.25	30.47	17.912	
6,800.00	6,793.75	6,766.25	6,736.14	15.47	17.96	-88.30	252.67	-536.21	555.91	524.95	30.95	17.959	
6,900.00	6,893.55	6,865.69	6,834.99	15.71	18.25	-88.59	256.98	-546.14	566.11	534.67	31.44	18.005	
7,000.00	6,993.36	6,965.13	6,933.83	15.95	18.55	-88.88	261.30	-556.08	576.33	544.40	31.93	18.049	
7,100.00	7,093.16	7,064.56	7,032.68	16.20	18.84	-89.15	265.62	-566.02	586.56	554.14	32.42	18.093	
7,200.00	7,192.96	7,164.00	7,131.52	16.44	19.13	-89.42	269.94	-575.95	596.81	563.90	32.91	18.135	
7,300.00	7,292.77	7,263.44	7,230.37	16.68	19.43	-89.67	274.26	-585.89	607.06	573.66	33.40	18.176	
7,400.00	7,392.57	7,362.87	7,329.21	16.92	19.72	-89.92	278.58	-595.82	617.33	583.44	33.89	18.216	
7,500.00	7,492.37	7,462.31	7,428.06	17.17	20.02	-90.16	282.90	-605.76	627.61	593.23	34.38	18.255	
7,600.00	7,592.18	7,561.75	7,526.90	17.41	20.31	-90.39	287.22	-615.70	637.90	603.03	34.87	18.293	
7,700.00	7,691.98	7,661.18	7,625.74	17.65	20.60	-90.62	291.54	-625.63	648.21	612.84	35.36	18.330	
7,800.00	7,791.78	7,760.62	7,724.59	17.89	20.90	-90.83	295.85	-635.57	658.52	622.66	35.85	18.366	
7,900.00	7,891.59	7,860.05	7,823.43	18.14	21.19	-91.05	300.17	-645.50	668.84	632.49	36.35	18.402	
8,000.00	7,991.39	7,959.49	7,922.28	18.38	21.49	-91.25	304.49	-655.44	679.16	642.32	36.84	18.436	
8,100.00	8,091.19	8,058.93	8,021.12	18.63	21.78	-91.45	308.81	-665.37	689.50	652.17	37.33	18.470	
8,200.00	8,191.00	8,158.36	8,119.97	18.87	22.08	-91.64	313.13	-675.31	699.84	662.02	37.82	18.503	
8,300.00	8,290.80	8,257.80	8,218.81	19.11	22.37	-91.83	317.45	-685.25	710.20	671.88	38.32	18.535	
8,400.00	8,390.60	8,357.24	8,317.66	19.36	22.67	-92.01	321.77	-695.18	720.56	681.75	38.81	18.566	
8,500.00	8,490.41	8,456.67	8,416.50	19.60	22.96	-92.19	326.09	-705.12	730.92	691.62	39.30	18.597	
8,600.00	8,590.21	8,556.11	8,515.34	19.85	23.26	-92.36	330.41	-715.05	741.29	701.50	39.80	18.626	
8,700.00	8,690.01	8,655.55	8,614.19	20.09	23.55	-92.52	334.72	-724.99	751.67	711.38	40.29	18.656	
8,800.00	8,789.82	8,754.98	8,713.03	20.33	23.85	-92.69	339.04	-734.93	762.06	721.27	40.79	18.684	
8,900.00	8,889.62	8,854.42	8,811.88	20.58	24.14	-92.84	343.36	-744.86	772.45	731.17	41.28	18.712	
9,000.00	8,989.42	8,953.86	8,910.72	20.82	24.44	-93.00	347.68	-754.80	782.85	741.07	41.78	18.739	
9,100.00	9,089.23	9,053.29	9,009.57	21.07	24.73	-93.15	352.00	-764.73	793.25	750.98	42.27	18.766	
9,200.00	9,189.03	9,152.73	9,108.41	21.31	25.03	-93.29	356.32	-774.67	803.66	760.89	42.77	18.792	
9,300.00	9,288.83	9,252.00	9,213.06	21.56	25.33	-93.45	360.66	-784.51	814.01	770.73	43.28	18.808	
9,354.74	9,343.46	9,331.87	9,286.64	21.69	25.50	-93.59	363.46	-791.10	818.68	775.08	43.60	18.777	
9,400.00	9,388.66	9,393.13	9,347.78	21.79	25.62	-93.77	365.04	-794.74	821.54	777.71	43.83	18.745	
9,500.00	9,488.61	9,528.88	9,483.45	21.96	25.84	-94.00	366.69	-798.54	824.54	780.31	44.23	18.641	
9,534.39	9,523.00	9,568.43	9,523.00	22.02	25.91	-89.95	366.72	-798.60	824.60	780.25	44.35	18.591	
9,600.00	9,588.61	9,634.04	9,588.61	22.15	26.02	-89.95	366.72	-798.60	824.60	780.00	44.60	18.487	
9,605.60	9,594.21	9,639.64	9,594.21	22.16	26.03	-89.95	366.72	-798.60	824.60	779.97	44.63	18.477	
9,684.43	9,673.04	9,718.22	9,672.78	22.33	26.15	-89.97	366.38	-798.60	824.60	779.66	44.95	18.347	
9,700.00	9,688.61	9,733.57	9,688.12	22.35	26.18	89.99	365.65	-798.61	824.61	779.61	45.00	18.325	
9,750.00	9,738.47	9,782.79	9,737.05	22.42	26.23	89.87	360.53	-798.66	824.66	779.53	45.13	18.272	

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 136H
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 136H	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:													
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
9,800.00	9,787.83	9,831.87	9,785.24	22.47	26.27	89.75	351.26	-798.75	824.76	779.53	45.23	18.235	
9,850.00	9,836.31	9,880.82	9,832.33	22.49	26.30	89.64	337.95	-798.87	824.89	779.60	45.29	18.213	
9,900.00	9,883.56	9,929.66	9,878.00	22.50	26.32	89.52	320.71	-799.04	825.07	779.75	45.32	18.205	
9,950.00	9,929.20	9,978.38	9,921.95	22.50	26.33	89.41	299.70	-799.23	825.29	779.96	45.33	18.208	
10,000.00	9,972.89	10,027.00	9,963.86	22.49	26.33	89.31	275.09	-799.47	825.54	780.23	45.31	18.219	
10,050.00	10,014.31	10,075.53	10,003.47	22.47	26.32	89.21	247.07	-799.73	825.83	780.54	45.29	18.235	
10,100.00	10,053.12	10,123.99	10,040.50	22.45	26.31	89.11	215.85	-800.03	826.15	780.88	45.26	18.253	
10,150.00	10,089.04	10,172.37	10,074.72	22.43	26.30	89.02	181.67	-800.35	826.49	781.25	45.24	18.268	
10,200.00	10,121.80	10,220.69	10,105.90	22.42	26.29	88.94	144.77	-800.70	826.87	781.62	45.24	18.277	
10,250.00	10,151.14	10,268.97	10,133.84	22.43	26.28	88.87	105.41	-801.07	827.26	781.99	45.27	18.275	
10,300.00	10,176.84	10,317.22	10,158.34	22.45	26.28	88.81	63.87	-801.46	827.68	782.35	45.33	18.259	
10,350.00	10,198.70	10,365.44	10,179.26	22.50	26.29	88.75	20.44	-801.87	828.11	782.67	45.43	18.227	
10,400.00	10,216.57	10,413.65	10,196.45	22.57	26.31	88.70	-24.59	-802.30	828.55	782.96	45.59	18.176	
10,450.00	10,230.30	10,461.87	10,209.79	22.66	26.36	88.67	-70.91	-802.74	829.00	783.21	45.79	18.104	
10,500.00	10,239.79	10,510.10	10,219.20	22.79	26.42	88.64	-118.19	-803.18	829.46	783.40	46.05	18.011	
10,550.00	10,244.96	10,558.36	10,224.59	22.95	26.52	88.62	-166.13	-803.64	829.92	783.54	46.37	17.897	
10,584.43	10,246.00	10,591.61	10,225.96	23.07	26.60	88.62	-199.35	-803.95	830.23	783.61	46.62	17.807	
10,600.00	10,246.00	10,606.94	10,226.00	23.13	26.64	88.62	-214.68	-804.10	830.38	783.63	46.75	17.762	
10,700.00	10,246.00	10,706.93	10,226.00	23.60	26.99	88.62	-314.67	-805.04	831.33	783.63	47.70	17.428	
10,800.00	10,246.00	10,806.93	10,226.00	24.19	27.48	88.62	-414.66	-805.99	832.27	783.37	48.90	17.018	
10,900.00	10,246.00	10,906.93	10,226.00	24.91	28.09	88.62	-514.65	-806.93	833.22	782.87	50.35	16.550	
11,000.00	10,246.00	11,006.92	10,226.00	25.74	28.81	88.63	-614.64	-807.88	834.16	782.16	52.01	16.040	
11,100.00	10,246.00	11,106.92	10,226.00	26.67	29.64	88.63	-714.63	-808.82	835.11	781.25	53.86	15.504	
11,200.00	10,246.00	11,206.91	10,226.00	27.68	30.56	88.63	-814.63	-809.77	836.06	780.16	55.90	14.957	
11,300.00	10,246.00	11,306.91	10,226.00	28.78	31.57	88.63	-914.62	-810.71	837.00	778.91	58.09	14.408	
11,400.00	10,246.00	11,406.90	10,226.00	29.95	32.65	88.63	-1,014.61	-811.66	837.95	777.52	60.43	13.867	
11,500.00	10,246.00	11,506.90	10,226.00	31.19	33.80	88.63	-1,114.60	-812.60	838.89	776.00	62.89	13.339	
11,600.00	10,246.00	11,606.89	10,226.00	32.48	35.01	88.64	-1,214.59	-813.55	839.84	774.37	65.46	12.829	
11,700.00	10,246.00	11,706.89	10,226.00	33.81	36.27	88.64	-1,314.58	-814.50	840.79	772.65	68.14	12.339	
11,800.00	10,246.00	11,806.89	10,226.00	35.20	37.57	88.64	-1,414.57	-815.44	841.73	770.83	70.90	11.872	
11,900.00	10,246.00	11,906.88	10,226.00	36.62	38.92	88.64	-1,514.56	-816.39	842.68	768.94	73.74	11.428	
12,000.00	10,246.00	12,006.88	10,226.00	38.08	40.31	88.64	-1,614.55	-817.33	843.62	766.98	76.65	11.007	
12,100.00	10,246.00	12,106.87	10,226.00	39.57	41.73	88.64	-1,714.54	-818.28	844.57	764.95	79.62	10.608	
12,200.00	10,246.00	12,206.87	10,226.00	41.08	43.18	88.64	-1,814.54	-819.22	845.52	762.87	82.64	10.231	
12,300.00	10,246.00	12,306.86	10,226.00	42.63	44.66	88.65	-1,914.53	-820.17	846.46	760.75	85.71	9.875	
12,400.00	10,246.00	12,406.86	10,226.00	44.19	46.16	88.65	-2,014.52	-821.11	847.41	758.57	88.83	9.539	
12,500.00	10,246.00	12,506.85	10,226.00	45.77	47.69	88.65	-2,114.51	-822.06	848.35	756.36	91.99	9.222	
12,600.00	10,246.00	12,606.85	10,226.00	47.37	49.24	88.65	-2,214.50	-823.00	849.30	754.11	95.18	8.923	
12,700.00	10,246.00	12,706.85	10,226.00	48.99	50.80	88.65	-2,314.49	-823.95	850.24	751.83	98.41	8.640	
12,800.00	10,246.00	12,806.84	10,226.00	50.62	52.38	88.65	-2,414.48	-824.89	851.19	749.53	101.67	8.372	
12,900.00	10,246.00	12,906.84	10,226.00	52.27	53.98	88.66	-2,514.47	-825.84	852.14	747.19	104.95	8.120	
13,000.00	10,246.00	13,006.83	10,226.00	53.92	55.59	88.66	-2,614.46	-826.78	853.08	744.83	108.25	7.880	
13,100.00	10,246.00	13,106.83	10,226.00	55.59	57.22	88.66	-2,714.46	-827.73	854.03	742.45	111.58	7.654	
13,200.00	10,246.00	13,206.82	10,226.00	57.27	58.86	88.66	-2,814.45	-828.68	854.97	740.05	114.93	7.439	
13,300.00	10,246.00	13,306.82	10,226.00	58.95	60.50	88.66	-2,914.44	-829.62	855.92	737.63	118.29	7.236	
13,400.00	10,246.00	13,406.81	10,226.00	60.65	62.16	88.66	-3,014.43	-830.57	856.87	735.19	121.68	7.042	
13,500.00	10,246.00	13,506.81	10,226.00	62.35	63.83	88.66	-3,114.42	-831.51	857.81	732.74	125.07	6.858	
13,600.00	10,246.00	13,606.80	10,226.00	64.06	65.50	88.67	-3,214.41	-832.46	858.76	730.27	128.49	6.684	
13,700.00	10,246.00	13,706.80	10,226.00	65.78	67.19	88.67	-3,314.40	-833.40	859.70	727.79	131.91	6.517	
13,800.00	10,246.00	13,806.80	10,226.00	67.50	68.88	88.67	-3,414.39	-834.35	860.65	725.30	135.35	6.359	
13,900.00	10,246.00	13,906.79	10,226.00	69.22	70.57	88.67	-3,514.38	-835.29	861.60	722.80	138.80	6.208	
14,000.00	10,246.00	14,006.79	10,226.00	70.96	72.28	88.67	-3,614.37	-836.24	862.54	720.29	142.26	6.063	

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 136H
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 136H	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 Toolface (°)	Offset Wellbore Centre		Distance		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)		
14,100.00	10,246.00	14,106.78	10,226.00	72.69	73.99	88.67	-3,714.37	-837.18	863.49	717.76	145.73	5.925
14,200.00	10,246.00	14,206.78	10,226.00	74.44	75.70	88.67	-3,814.36	-838.13	864.43	715.23	149.20	5.794
14,300.00	10,246.00	14,306.77	10,226.00	76.18	77.42	88.68	-3,914.35	-839.07	865.38	712.69	152.69	5.668
14,400.00	10,246.00	14,406.77	10,226.00	77.93	79.15	88.68	-4,014.34	-840.02	866.33	710.14	156.18	5.547
14,500.00	10,246.00	14,506.76	10,226.00	79.69	80.88	88.68	-4,114.33	-840.96	867.27	707.59	159.69	5.431
14,600.00	10,246.00	14,606.76	10,226.00	81.44	82.61	88.68	-4,214.32	-841.91	868.22	705.03	163.19	5.320
14,700.00	10,246.00	14,706.76	10,226.00	83.20	84.35	88.68	-4,314.31	-842.86	869.16	702.46	166.71	5.214
14,800.00	10,246.00	14,806.75	10,226.00	84.97	86.09	88.68	-4,414.30	-843.80	870.11	699.88	170.23	5.111
14,900.00	10,246.00	14,906.75	10,226.00	86.73	87.84	88.68	-4,514.29	-844.75	871.06	697.30	173.75	5.013
15,000.00	10,246.00	15,006.74	10,226.00	88.50	89.58	88.69	-4,614.29	-845.69	872.00	694.72	177.29	4.919
15,100.00	10,246.00	15,106.74	10,226.00	90.27	91.33	88.69	-4,714.28	-846.64	872.95	692.13	180.82	4.828
15,200.00	10,246.00	15,206.73	10,226.00	92.04	93.09	88.69	-4,814.27	-847.58	873.89	689.53	184.36	4.740
15,300.00	10,246.00	15,306.73	10,226.00	93.82	94.85	88.69	-4,914.26	-848.53	874.84	686.93	187.91	4.656
15,400.00	10,246.00	15,406.72	10,226.00	95.60	96.60	88.69	-5,014.25	-849.47	875.79	684.33	191.46	4.574
15,500.00	10,246.00	15,506.72	10,226.00	97.38	98.37	88.69	-5,114.24	-850.42	876.73	681.72	195.01	4.496
15,600.00	10,246.00	15,606.72	10,226.00	99.16	100.13	88.69	-5,214.23	-851.36	877.68	679.11	198.57	4.420
15,700.00	10,246.00	15,706.71	10,226.00	100.94	101.90	88.70	-5,314.22	-852.31	878.62	676.49	202.13	4.347
15,800.00	10,246.00	15,806.71	10,226.00	102.72	103.67	88.70	-5,414.21	-853.25	879.57	673.88	205.69	4.276
15,900.00	10,246.00	15,906.70	10,226.00	104.51	105.44	88.70	-5,514.20	-854.20	880.52	671.25	209.26	4.208
16,000.00	10,246.00	16,006.70	10,226.00	106.30	107.21	88.70	-5,614.20	-855.14	881.46	668.63	212.83	4.142
16,100.00	10,246.00	16,106.69	10,226.00	108.09	108.98	88.70	-5,714.19	-856.09	882.41	666.00	216.41	4.078
16,200.00	10,246.00	16,206.69	10,226.00	109.88	110.76	88.70	-5,814.18	-857.04	883.35	663.37	219.98	4.016
16,300.00	10,246.00	16,306.68	10,226.00	111.67	112.54	88.70	-5,914.17	-857.98	884.30	660.74	223.56	3.956
16,400.00	10,246.00	16,406.68	10,226.00	113.46	114.32	88.71	-6,014.16	-858.93	885.25	658.10	227.14	3.897
16,500.00	10,246.00	16,506.68	10,226.00	115.26	116.10	88.71	-6,114.15	-859.87	886.19	655.47	230.73	3.841
16,600.00	10,246.00	16,606.67	10,226.00	117.05	117.88	88.71	-6,214.14	-860.82	887.14	652.83	234.31	3.786
16,700.00	10,246.00	16,706.67	10,226.00	118.85	119.66	88.71	-6,314.13	-861.76	888.08	650.19	237.90	3.733
16,800.00	10,246.00	16,806.66	10,226.00	120.65	121.45	88.71	-6,414.12	-862.71	889.03	647.54	241.49	3.681
16,900.00	10,246.00	16,906.66	10,226.00	122.44	123.23	88.71	-6,514.12	-863.65	889.98	644.89	245.08	3.631
17,000.00	10,246.00	17,006.65	10,226.00	124.24	125.02	88.71	-6,614.11	-864.60	890.92	642.25	248.68	3.583
17,100.00	10,246.00	17,106.65	10,226.00	126.04	126.81	88.71	-6,714.10	-865.54	891.87	639.60	252.27	3.535
17,200.00	10,246.00	17,206.64	10,226.00	127.85	128.60	88.72	-6,814.09	-866.49	892.81	636.95	255.87	3.489
17,300.00	10,246.00	17,306.64	10,226.00	129.65	130.39	88.72	-6,914.08	-867.43	893.76	634.29	259.47	3.445
17,400.00	10,246.00	17,406.63	10,226.00	131.45	132.18	88.72	-7,014.07	-868.38	894.71	631.64	263.07	3.401
17,500.00	10,246.00	17,506.63	10,226.00	133.25	133.97	88.72	-7,114.06	-869.32	895.65	628.98	266.67	3.359
17,600.00	10,246.00	17,606.63	10,226.00	135.06	135.77	88.72	-7,214.05	-870.27	896.60	626.32	270.27	3.317
17,700.00	10,246.00	17,706.62	10,226.00	136.86	137.56	88.72	-7,314.04	-871.22	897.54	623.66	273.88	3.277
17,800.00	10,246.00	17,806.62	10,226.00	138.67	139.36	88.72	-7,414.03	-872.16	898.49	621.00	277.49	3.238
17,900.00	10,246.00	17,906.61	10,226.00	140.47	141.15	88.73	-7,514.03	-873.11	899.44	618.34	281.09	3.200
18,000.00	10,246.00	18,006.61	10,226.00	142.28	142.95	88.73	-7,614.02	-874.05	900.38	615.68	284.70	3.163
18,100.00	10,246.00	18,106.60	10,226.00	144.09	144.75	88.73	-7,714.01	-875.00	901.33	613.01	288.31	3.126
18,200.00	10,246.00	18,206.60	10,226.00	145.90	146.55	88.73	-7,814.00	-875.94	902.27	610.35	291.92	3.091
18,300.00	10,246.00	18,306.59	10,226.00	147.70	148.34	88.73	-7,913.99	-876.89	903.22	607.68	295.54	3.056
18,400.00	10,246.00	18,406.59	10,226.00	149.51	150.14	88.73	-8,013.98	-877.83	904.17	605.02	299.15	3.022
18,500.00	10,246.00	18,506.59	10,226.00	151.32	151.94	88.73	-8,113.97	-878.78	905.11	602.35	302.77	2.989
18,600.00	10,246.00	18,606.58	10,226.00	153.13	153.75	88.74	-8,213.96	-879.72	906.06	599.68	306.38	2.957
18,700.00	10,246.00	18,706.58	10,226.00	154.94	155.55	88.74	-8,313.95	-880.67	907.00	597.01	310.00	2.926
18,800.00	10,246.00	18,806.57	10,226.00	156.75	157.35	88.74	-8,413.95	-881.61	907.95	594.33	313.62	2.895
18,900.00	10,246.00	18,906.57	10,226.00	158.56	159.15	88.74	-8,513.94	-882.56	908.90	591.66	317.23	2.865
19,000.00	10,246.00	19,006.56	10,226.00	160.38	160.96	88.74	-8,613.93	-883.50	909.84	588.99	320.85	2.836
19,100.00	10,246.00	19,106.56	10,226.00	162.19	162.76	88.74	-8,713.92	-884.45	910.79	586.31	324.47	2.807
19,200.00	10,246.00	19,206.55	10,226.00	164.00	164.56	88.74	-8,813.91	-885.40	911.73	583.64	328.09	2.779

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 136H
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 136H	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
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
19,300.00	10,246.00	19,306.55	10,226.00	165.81	166.37	88.74	-8,913.90	-886.34	912.68	580.96	331.72	2.751	
19,400.00	10,246.00	19,406.55	10,226.00	167.63	168.17	88.75	-9,013.89	-887.29	913.63	578.29	335.34	2.724	
19,500.00	10,246.00	19,506.54	10,226.00	169.44	169.98	88.75	-9,113.88	-888.23	914.57	575.61	338.96	2.698	
19,600.00	10,246.00	19,606.54	10,226.00	171.25	171.79	88.75	-9,213.87	-889.18	915.52	572.93	342.59	2.672	
19,700.00	10,246.00	19,706.53	10,226.00	173.07	173.59	88.75	-9,313.86	-890.12	916.46	570.25	346.21	2.647	
19,800.00	10,246.00	19,806.53	10,226.00	174.88	175.40	88.75	-9,413.86	-891.07	917.41	567.57	349.84	2.622	
19,900.00	10,246.00	19,906.52	10,226.00	176.70	177.21	88.75	-9,513.85	-892.01	918.36	564.89	353.46	2.598	
20,000.00	10,246.00	20,006.52	10,226.00	178.51	179.02	88.75	-9,613.84	-892.96	919.30	562.21	357.09	2.574	
20,100.00	10,246.00	20,106.51	10,226.00	180.33	180.82	88.75	-9,713.83	-893.90	920.25	559.53	360.72	2.551	
20,200.00	10,246.00	20,206.51	10,226.00	182.15	182.63	88.76	-9,813.82	-894.85	921.19	556.85	364.34	2.528	
20,300.00	10,246.00	20,306.51	10,226.00	183.96	184.44	88.76	-9,913.81	-895.79	922.14	554.17	367.97	2.506	
20,400.00	10,246.00	20,406.50	10,226.00	185.78	186.25	88.76	-10,013.80	-896.74	923.09	551.48	371.60	2.484	
20,489.12	10,246.00	20,495.62	10,226.00	187.40	187.86	88.76	-10,102.92	-897.58	923.93	549.09	374.84	2.465 SF	



SB Directional Anticollision Report



Company:	NOVO Oil & Gas	Local Co-ordinate Reference:	Well Goonch Fed Com 0409 136H
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 136H	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		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	
12,300.00	10,246.00	10,315.35	10,314.60	42.63	73.40	90.00	-3,246.60	-641.39	1,482.77	1,381.34	101.43	14.619	
12,400.00	10,246.00	10,315.35	10,314.60	44.19	73.40	90.00	-3,246.60	-641.39	1,394.20	1,291.59	102.61	13.587	
12,500.00	10,246.00	10,315.35	10,314.60	45.77	73.40	90.00	-3,246.60	-641.39	1,307.28	1,203.26	104.02	12.567	
12,600.00	10,246.00	10,315.35	10,314.60	47.37	73.40	90.00	-3,246.60	-641.39	1,222.36	1,116.66	105.70	11.564	
12,700.00	10,246.00	10,315.35	10,314.60	48.99	73.40	90.00	-3,246.60	-641.39	1,139.89	1,032.20	107.69	10.585	
12,800.00	10,246.00	10,315.35	10,314.60	50.62	73.40	90.00	-3,246.60	-641.39	1,060.44	950.40	110.04	9.637	
12,900.00	10,246.00	10,315.35	10,314.60	52.27	73.40	90.00	-3,246.60	-641.39	984.75	871.96	112.79	8.731	
13,000.00	10,246.00	10,315.35	10,314.60	53.92	73.40	90.00	-3,246.60	-641.39	913.74	797.78	115.96	7.880	
13,100.00	10,246.00	10,315.35	10,314.60	55.59	73.40	90.00	-3,246.60	-641.39	848.59	729.06	119.53	7.099	
13,200.00	10,246.00	10,315.35	10,314.60	57.27	73.40	90.00	-3,246.60	-641.39	790.75	667.32	123.44	6.406	
13,300.00	10,246.00	10,315.35	10,314.60	58.95	73.40	90.00	-3,246.60	-641.39	741.94	614.43	127.51	5.819	
13,400.00	10,246.00	10,315.35	10,314.60	60.65	73.40	90.00	-3,246.60	-641.39	704.03	572.57	131.46	5.355	
13,500.00	10,246.00	10,315.35	10,314.60	62.35	73.40	90.00	-3,246.60	-641.39	678.86	543.95	134.90	5.032	
13,600.00	10,246.00	10,315.35	10,314.60	64.06	73.40	90.00	-3,246.60	-641.39	667.86	530.43	137.43	4.860	
13,624.07	10,246.00	10,315.35	10,314.60	64.47	73.40	90.00	-3,246.60	-641.39	667.42	529.56	137.87	4.841 CC, ES	
13,700.00	10,246.00	10,315.35	10,314.60	65.78	73.40	90.00	-3,246.60	-641.39	671.73	532.97	138.76	4.841 SF	
13,800.00	10,246.00	10,315.35	10,314.60	67.50	73.40	90.00	-3,246.60	-641.39	690.22	551.39	138.83	4.972	
13,900.00	10,246.00	10,315.35	10,314.60	69.22	73.40	90.00	-3,246.60	-641.39	722.21	584.38	137.83	5.240	
14,000.00	10,246.00	10,315.35	10,314.60	70.96	73.40	90.00	-3,246.60	-641.39	766.02	629.95	136.07	5.630	
14,100.00	10,246.00	10,315.35	10,314.60	72.69	73.40	90.00	-3,246.60	-641.39	819.73	685.86	133.87	6.123	
14,200.00	10,246.00	10,315.35	10,314.60	74.44	73.40	90.00	-3,246.60	-641.39	881.56	750.06	131.50	6.704	
14,300.00	10,246.00	10,315.35	10,314.60	76.18	73.40	90.00	-3,246.60	-641.39	949.91	820.77	129.15	7.355	
14,400.00	10,246.00	10,315.35	10,314.60	77.93	73.40	90.00	-3,246.60	-641.39	1,023.49	896.58	126.90	8.065	
14,500.00	10,246.00	10,315.35	10,314.60	79.69	73.40	90.00	-3,246.60	-641.39	1,101.23	976.41	124.83	8.822	
14,600.00	10,246.00	10,315.35	10,314.60	81.44	73.40	90.00	-3,246.60	-641.39	1,182.33	1,059.39	122.93	9.618	
14,700.00	10,246.00	10,315.35	10,314.60	83.20	73.40	90.00	-3,246.60	-641.39	1,266.13	1,144.90	121.23	10.444	
14,800.00	10,246.00	10,315.35	10,314.60	84.97	73.40	90.00	-3,246.60	-641.39	1,352.14	1,232.44	119.70	11.296	
14,900.00	10,246.00	10,315.35	10,314.60	86.73	73.40	90.00	-3,246.60	-641.39	1,439.95	1,321.62	118.33	12.169	

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 136H
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 136H	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

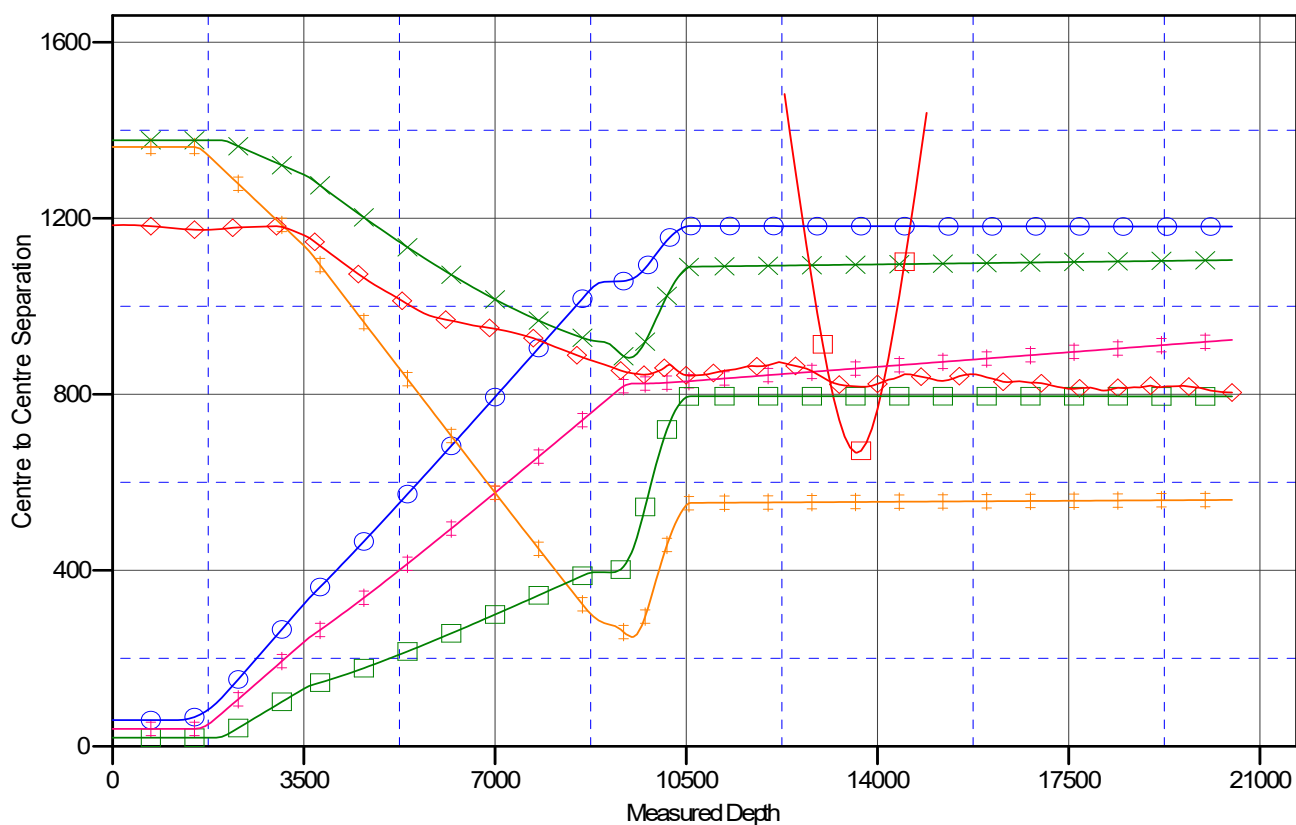
Central Meridian is -104.333334

Coordinates are relative to: Goonch Fed Com 0409 136H

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

Grid Convergence at Surface is: 0.13°

Ladder Plot



LEGEND

- Goonch Fed Com 0409 234H, Wellbore #1, Plan 0 V0
- Sweetening #001 SWD (Active), Wellbore #1 Wellbore #1 V0
- Goonch Fed Com 0409 134H, Wellbore #1, Plan 0 V0
- Goonch Fed Com 0409 225H, Wellbore #1, Plan 0 V0
- Goonch Fed Com 0409 236H, Wellbore #1, Plan 0 V0
- Goonch Fed Com 0409 234H, Wellbore #1, Wellbore #1 V0
- Goonch Fed Com 0409 235H, 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 136H
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 136H	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

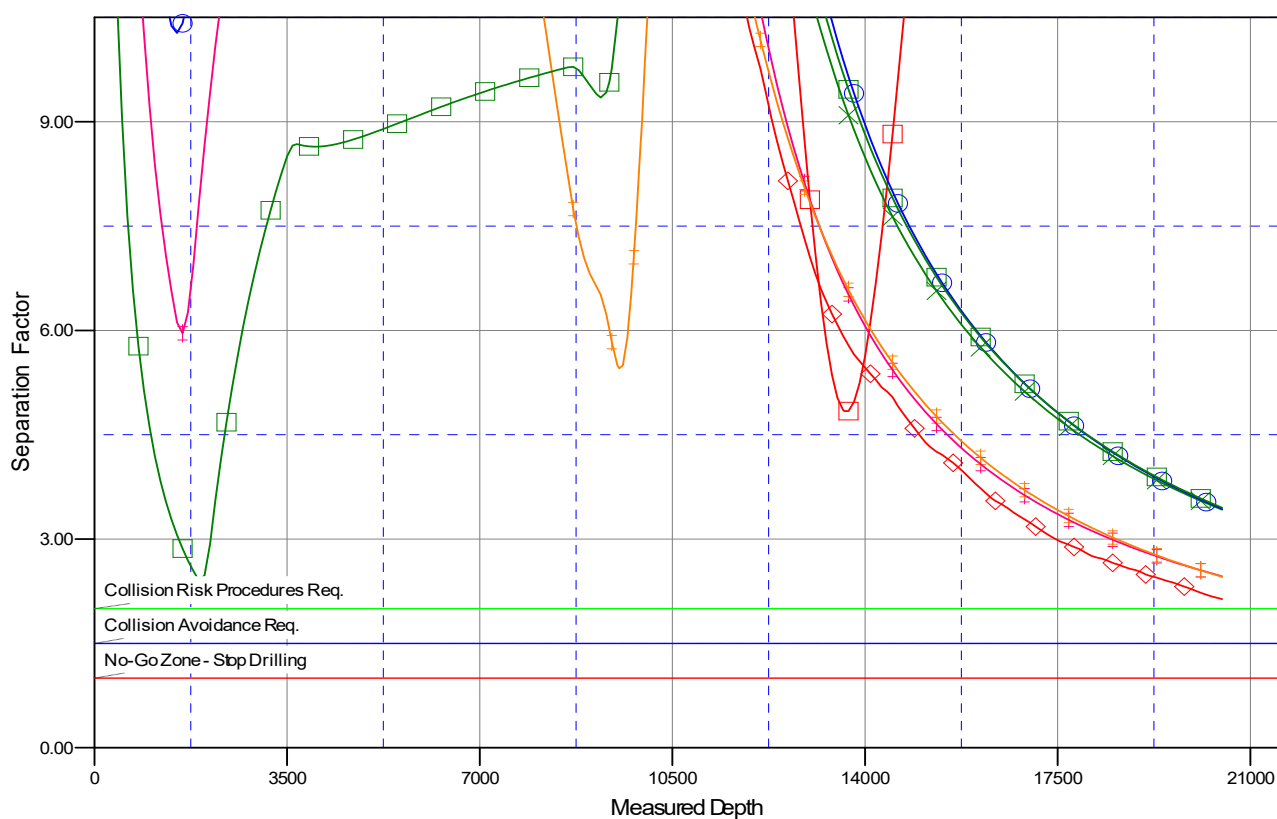
Central Meridian is -104.333334

Coordinates are relative to: Goonch Fed Com 0409 136H

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

Grid Convergence at Surface is: 0.13°

Separation Factor Plot



LEGEND

- Goonch Fed Com 0409 234H, Wellbore #1, Plan 0 V0
- Swearingin #001 SWD (Active), Wellbore #1 Wellbore #1 V0
- Goonch Fed Com 0409 225H, Wellbore #1, Plan 0 V0
- Goonch Fed Com 0409 236H, Wellbore #1, Plan 0 V0
- Goonch Fed Com 0409 134H, Wellbore #1, Plan 0 V0
- Goonch Fed Com 0409 235H, Wellbore #1, Plan 1 V0
- Goonch Fed Com 0409 214H, Wellbore #1, Wellbore #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 136H

Wellbore #1

Plan: Plan 1

Standard Planning Report - Geographic

19 March, 2021





SB Directional

Planning Report - Geographic



Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Goonch Fed Com 0409 136H
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 136H	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 136H					
Well Position	+N/-S	0.00 usft	Northing:	487,791.13 usft	Latitude:	32.340771
	+E/-W	0.00 usft	Easting:	617,106.57 usft	Longitude:	-104.087996
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	47,544.26787818

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	2021/03/19			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	20,489.12 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	
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,679.66	3.59	4.06	3,679.54	5.62	0.40	2.00	2.00	0.00	4.06	
9,354.74	3.59	4.06	9,343.46	360.38	25.60	0.00	0.00	0.00	0.00	
9,534.39	0.00	0.00	9,523.00	366.00	26.00	2.00	-2.00	0.00	180.00	
9,684.43	0.00	0.00	9,673.04	366.00	26.00	0.00	0.00	0.00	0.00	
10,584.43	90.00	180.00	10,246.00	-206.96	26.00	10.00	10.00	0.00	180.00	PBHL - Goonch 0409
20,489.12	90.00	180.00	10,246.00	-10,111.65	26.09	0.00	0.00	0.00	0.00	PBHL - Goonch 0409



SB Directional

Planning Report - Geographic



Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Goonch Fed Com 0409 136H
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 136H	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	487,791.13	617,106.57	32.340771	-104.087996
100.00	0.00	0.00	100.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
200.00	0.00	0.00	200.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
300.00	0.00	0.00	300.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
400.00	0.00	0.00	400.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
500.00	0.00	0.00	500.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
600.00	0.00	0.00	600.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
700.00	0.00	0.00	700.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
800.00	0.00	0.00	800.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
900.00	0.00	0.00	900.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
1,000.00	0.00	0.00	1,000.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
1,100.00	0.00	0.00	1,100.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
1,200.00	0.00	0.00	1,200.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
1,300.00	0.00	0.00	1,300.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
1,400.00	0.00	0.00	1,400.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
1,500.00	0.00	0.00	1,500.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
1,600.00	0.00	0.00	1,600.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
1,700.00	0.00	0.00	1,700.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
1,800.00	0.00	0.00	1,800.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
1,900.00	0.00	0.00	1,900.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
2,000.00	0.00	0.00	2,000.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
2,100.00	0.00	0.00	2,100.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
2,200.00	0.00	0.00	2,200.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
2,300.00	0.00	0.00	2,300.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
2,400.00	0.00	0.00	2,400.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
2,500.00	0.00	0.00	2,500.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
2,600.00	0.00	0.00	2,600.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
2,700.00	0.00	0.00	2,700.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
2,800.00	0.00	0.00	2,800.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
2,900.00	0.00	0.00	2,900.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
3,000.00	0.00	0.00	3,000.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
3,100.00	0.00	0.00	3,100.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
3,200.00	0.00	0.00	3,200.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
3,300.00	0.00	0.00	3,300.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
3,400.00	0.00	0.00	3,400.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
3,500.00	0.00	0.00	3,500.00	0.00	0.00	487,791.13	617,106.57	32.340771	-104.087996
Start Nudge									
3,600.00	2.00	4.06	3,599.98	1.74	0.12	487,792.87	617,106.70	32.340776	-104.087996
3,679.66	3.59	4.06	3,679.54	5.62	0.40	487,796.75	617,106.97	32.340786	-104.087995
EOB									
3,700.00	3.59	4.06	3,699.84	6.89	0.49	487,798.02	617,107.06	32.340790	-104.087995
3,800.00	3.59	4.06	3,799.65	13.14	0.93	487,804.27	617,107.51	32.340807	-104.087993
3,900.00	3.59	4.06	3,899.45	19.39	1.38	487,810.52	617,107.95	32.340824	-104.087992
4,000.00	3.59	4.06	3,999.25	25.64	1.82	487,816.77	617,108.40	32.340841	-104.087990
4,100.00	3.59	4.06	4,099.06	31.89	2.27	487,823.03	617,108.84	32.340858	-104.087989
4,200.00	3.59	4.06	4,198.86	38.15	2.71	487,829.28	617,109.28	32.340876	-104.087987
4,300.00	3.59	4.06	4,298.66	44.40	3.15	487,835.53	617,109.73	32.340893	-104.087986
4,400.00	3.59	4.06	4,398.47	50.65	3.60	487,841.78	617,110.17	32.340910	-104.087984
4,500.00	3.59	4.06	4,498.27	56.90	4.04	487,848.03	617,110.62	32.340927	-104.087983
4,600.00	3.59	4.06	4,598.07	63.15	4.49	487,854.28	617,111.06	32.340944	-104.087981
4,700.00	3.59	4.06	4,697.88	69.40	4.93	487,860.53	617,111.50	32.340961	-104.087980
4,800.00	3.59	4.06	4,797.68	75.65	5.37	487,866.78	617,111.95	32.340979	-104.087978
4,900.00	3.59	4.06	4,897.48	81.90	5.82	487,873.04	617,112.39	32.340996	-104.087977
5,000.00	3.59	4.06	4,997.29	88.16	6.26	487,879.29	617,112.84	32.341013	-104.087975



SB Directional

Planning Report - Geographic



Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Goonch Fed Com 0409 136H
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 136H	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	3.59	4.06	5,097.09	94.41	6.71	487,885.54	617,113.28	32.341030	-104.087974
5,200.00	3.59	4.06	5,196.89	100.66	7.15	487,891.79	617,113.72	32.341047	-104.087973
5,300.00	3.59	4.06	5,296.70	106.91	7.59	487,898.04	617,114.17	32.341065	-104.087971
5,400.00	3.59	4.06	5,396.50	113.16	8.04	487,904.29	617,114.61	32.341082	-104.087970
5,500.00	3.59	4.06	5,496.30	119.41	8.48	487,910.54	617,115.06	32.341099	-104.087968
5,600.00	3.59	4.06	5,596.11	125.66	8.93	487,916.79	617,115.50	32.341116	-104.087967
5,700.00	3.59	4.06	5,695.91	131.91	9.37	487,923.05	617,115.94	32.341133	-104.087965
5,800.00	3.59	4.06	5,795.71	138.17	9.82	487,929.30	617,116.39	32.341150	-104.087964
5,900.00	3.59	4.06	5,895.52	144.42	10.26	487,935.55	617,116.83	32.341168	-104.087962
6,000.00	3.59	4.06	5,995.32	150.67	10.70	487,941.80	617,117.28	32.341185	-104.087961
6,100.00	3.59	4.06	6,095.12	156.92	11.15	487,948.05	617,117.72	32.341202	-104.087959
6,200.00	3.59	4.06	6,194.93	163.17	11.59	487,954.30	617,118.17	32.341219	-104.087958
6,300.00	3.59	4.06	6,294.73	169.42	12.04	487,960.55	617,118.61	32.341236	-104.087956
6,400.00	3.59	4.06	6,394.53	175.67	12.48	487,966.80	617,119.05	32.341254	-104.087955
6,500.00	3.59	4.06	6,494.34	181.93	12.92	487,973.06	617,119.50	32.341271	-104.087953
6,600.00	3.59	4.06	6,594.14	188.18	13.37	487,979.31	617,119.94	32.341288	-104.087952
6,700.00	3.59	4.06	6,693.95	194.43	13.81	487,985.56	617,120.39	32.341305	-104.087950
6,800.00	3.59	4.06	6,793.75	200.68	14.26	487,991.81	617,120.83	32.341322	-104.087949
6,900.00	3.59	4.06	6,893.55	206.93	14.70	487,998.06	617,121.27	32.341339	-104.087947
7,000.00	3.59	4.06	6,993.36	213.18	15.14	488,004.31	617,121.72	32.341357	-104.087946
7,100.00	3.59	4.06	7,093.16	219.43	15.59	488,010.56	617,122.16	32.341374	-104.087944
7,200.00	3.59	4.06	7,192.96	225.68	16.03	488,016.81	617,122.61	32.341391	-104.087943
7,300.00	3.59	4.06	7,292.77	231.94	16.48	488,023.07	617,123.05	32.341408	-104.087941
7,400.00	3.59	4.06	7,392.57	238.19	16.92	488,029.32	617,123.49	32.341425	-104.087940
7,500.00	3.59	4.06	7,492.37	244.44	17.36	488,035.57	617,123.94	32.341443	-104.087938
7,600.00	3.59	4.06	7,592.18	250.69	17.81	488,041.82	617,124.38	32.341460	-104.087937
7,700.00	3.59	4.06	7,691.98	256.94	18.25	488,048.07	617,124.83	32.341477	-104.087935
7,800.00	3.59	4.06	7,791.78	263.19	18.70	488,054.32	617,125.27	32.341494	-104.087934
7,900.00	3.59	4.06	7,891.59	269.44	19.14	488,060.57	617,125.71	32.341511	-104.087932
8,000.00	3.59	4.06	7,991.39	275.69	19.58	488,066.83	617,126.16	32.341528	-104.087931
8,100.00	3.59	4.06	8,091.19	281.95	20.03	488,073.08	617,126.60	32.341546	-104.087929
8,200.00	3.59	4.06	8,191.00	288.20	20.47	488,079.33	617,127.05	32.341563	-104.087928
8,300.00	3.59	4.06	8,290.80	294.45	20.92	488,085.58	617,127.49	32.341580	-104.087927
8,400.00	3.59	4.06	8,390.60	300.70	21.36	488,091.83	617,127.93	32.341597	-104.087925
8,500.00	3.59	4.06	8,490.41	306.95	21.81	488,098.08	617,128.38	32.341614	-104.087924
8,600.00	3.59	4.06	8,590.21	313.20	22.25	488,104.33	617,128.82	32.341632	-104.087922
8,700.00	3.59	4.06	8,690.01	319.45	22.69	488,110.58	617,129.27	32.341649	-104.087921
8,800.00	3.59	4.06	8,789.82	325.70	23.14	488,116.84	617,129.71	32.341666	-104.087919
8,900.00	3.59	4.06	8,889.62	331.96	23.58	488,123.09	617,130.16	32.341683	-104.087918
9,000.00	3.59	4.06	8,989.42	338.21	24.03	488,129.34	617,130.60	32.341700	-104.087916
9,100.00	3.59	4.06	9,089.23	344.46	24.47	488,135.59	617,131.04	32.341717	-104.087915
9,200.00	3.59	4.06	9,189.03	350.71	24.91	488,141.84	617,131.49	32.341735	-104.087913
9,300.00	3.59	4.06	9,288.83	356.96	25.36	488,148.09	617,131.93	32.341752	-104.087912
9,354.74	3.59	4.06	9,343.47	360.38	25.60	488,151.51	617,132.17	32.341761	-104.087911
EOH									
9,400.00	2.69	4.06	9,388.66	362.86	25.78	488,153.99	617,132.35	32.341768	-104.087910
9,500.00	0.69	4.06	9,488.61	365.79	25.99	488,156.93	617,132.56	32.341776	-104.087910
9,534.39	0.00	0.00	9,523.00	366.00	26.00	488,157.13	617,132.57	32.341777	-104.087910
Drop to Vertical									
9,600.00	0.00	0.00	9,588.61	366.00	26.00	488,157.13	617,132.57	32.341777	-104.087910
9,684.43	0.00	0.00	9,673.04	366.00	26.00	488,157.13	617,132.57	32.341777	-104.087910
KOP @ 9673' TVD									
9,700.00	1.56	180.00	9,688.61	365.79	26.00	488,156.92	617,132.57	32.341776	-104.087910
9,800.00	11.56	180.00	9,787.83	354.38	26.00	488,145.51	617,132.57	32.341745	-104.087910



SB Directional

Planning Report - Geographic



Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Goonch Fed Com 0409 136H
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 136H	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	21.56	180.00	9,883.56	325.92	26.00	488,117.05	617,132.57	32.341666	-104.087910	
10,000.00	31.56	180.00	9,972.89	281.27	26.00	488,072.40	617,132.57	32.341544	-104.087910	
10,100.00	41.56	180.00	10,053.12	221.79	26.00	488,012.92	617,132.58	32.341380	-104.087911	
10,200.00	51.56	180.00	10,121.80	149.27	26.00	487,940.40	617,132.58	32.341181	-104.087911	
10,300.00	61.56	180.00	10,176.84	65.93	26.00	487,857.06	617,132.58	32.340952	-104.087912	
10,400.00	71.56	180.00	10,216.57	-25.70	26.00	487,765.44	617,132.58	32.340700	-104.087912	
10,500.00	81.56	180.00	10,239.79	-122.83	26.00	487,668.30	617,132.58	32.340433	-104.087913	
10,584.43	90.00	180.00	10,246.00	-206.96	26.00	487,584.17	617,132.58	32.340202	-104.087914	
LP @ 10246' TVD										
10,600.00	90.00	180.00	10,246.00	-222.53	26.01	487,568.60	617,132.58	32.340159	-104.087914	
10,700.00	90.00	180.00	10,246.00	-322.53	26.01	487,468.60	617,132.58	32.339884	-104.087915	
10,800.00	90.00	180.00	10,246.00	-422.53	26.01	487,368.60	617,132.58	32.339609	-104.087915	
10,900.00	90.00	180.00	10,246.00	-522.53	26.01	487,268.60	617,132.58	32.339334	-104.087916	
11,000.00	90.00	180.00	10,246.00	-622.53	26.01	487,168.60	617,132.58	32.339059	-104.087917	
11,100.00	90.00	180.00	10,246.00	-722.53	26.01	487,068.60	617,132.58	32.338784	-104.087918	
11,200.00	90.00	180.00	10,246.00	-822.53	26.01	486,968.60	617,132.58	32.338510	-104.087918	
11,300.00	90.00	180.00	10,246.00	-922.53	26.01	486,868.60	617,132.58	32.338235	-104.087919	
11,400.00	90.00	180.00	10,246.00	-1,022.53	26.01	486,768.60	617,132.59	32.337960	-104.087920	
11,500.00	90.00	180.00	10,246.00	-1,122.53	26.01	486,668.60	617,132.59	32.337685	-104.087921	
11,600.00	90.00	180.00	10,246.00	-1,222.53	26.01	486,568.60	617,132.59	32.337410	-104.087921	
11,700.00	90.00	180.00	10,246.00	-1,322.53	26.01	486,468.60	617,132.59	32.337135	-104.087922	
11,800.00	90.00	180.00	10,246.00	-1,422.53	26.02	486,368.60	617,132.59	32.336860	-104.087923	
11,900.00	90.00	180.00	10,246.00	-1,522.53	26.02	486,268.60	617,132.59	32.336585	-104.087923	
12,000.00	90.00	180.00	10,246.00	-1,622.53	26.02	486,168.60	617,132.59	32.336311	-104.087924	
12,100.00	90.00	180.00	10,246.00	-1,722.53	26.02	486,068.60	617,132.59	32.336036	-104.087925	
12,200.00	90.00	180.00	10,246.00	-1,822.53	26.02	485,968.60	617,132.59	32.335761	-104.087926	
12,300.00	90.00	180.00	10,246.00	-1,922.53	26.02	485,868.60	617,132.59	32.335486	-104.087926	
12,400.00	90.00	180.00	10,246.00	-2,022.53	26.02	485,768.60	617,132.59	32.335211	-104.087927	
12,500.00	90.00	180.00	10,246.00	-2,122.53	26.02	485,668.60	617,132.60	32.334936	-104.087928	
12,600.00	90.00	180.00	10,246.00	-2,222.53	26.02	485,568.60	617,132.60	32.334661	-104.087929	
12,700.00	90.00	180.00	10,246.00	-2,322.53	26.02	485,468.60	617,132.60	32.334386	-104.087929	
12,800.00	90.00	180.00	10,246.00	-2,422.53	26.02	485,368.60	617,132.60	32.334111	-104.087930	
12,900.00	90.00	180.00	10,246.00	-2,522.53	26.02	485,268.60	617,132.60	32.333837	-104.087931	
13,000.00	90.00	180.00	10,246.00	-2,622.53	26.03	485,168.60	617,132.60	32.333562	-104.087932	
13,100.00	90.00	180.00	10,246.00	-2,722.53	26.03	485,068.60	617,132.60	32.333287	-104.087932	
13,200.00	90.00	180.00	10,246.00	-2,822.53	26.03	484,968.60	617,132.60	32.333012	-104.087933	
13,300.00	90.00	180.00	10,246.00	-2,922.53	26.03	484,868.60	617,132.60	32.332737	-104.087934	
13,400.00	90.00	180.00	10,246.00	-3,022.53	26.03	484,768.60	617,132.60	32.332462	-104.087935	
13,500.00	90.00	180.00	10,246.00	-3,122.53	26.03	484,668.60	617,132.60	32.332187	-104.087935	
13,600.00	90.00	180.00	10,246.00	-3,222.53	26.03	484,568.60	617,132.60	32.331912	-104.087936	
13,700.00	90.00	180.00	10,246.00	-3,322.53	26.03	484,468.60	617,132.61	32.331637	-104.087937	
13,800.00	90.00	180.00	10,246.00	-3,422.53	26.03	484,368.60	617,132.61	32.331363	-104.087938	
13,900.00	90.00	180.00	10,246.00	-3,522.53	26.03	484,268.60	617,132.61	32.331088	-104.087938	
14,000.00	90.00	180.00	10,246.00	-3,622.53	26.03	484,168.60	617,132.61	32.330813	-104.087939	
14,100.00	90.00	180.00	10,246.00	-3,722.53	26.04	484,068.60	617,132.61	32.330538	-104.087940	
14,200.00	90.00	180.00	10,246.00	-3,822.53	26.04	483,968.60	617,132.61	32.330263	-104.087940	
14,300.00	90.00	180.00	10,246.00	-3,922.53	26.04	483,868.60	617,132.61	32.329988	-104.087941	
14,400.00	90.00	180.00	10,246.00	-4,022.53	26.04	483,768.60	617,132.61	32.329713	-104.087942	
14,500.00	90.00	180.00	10,246.00	-4,122.53	26.04	483,668.60	617,132.61	32.329438	-104.087943	
14,600.00	90.00	180.00	10,246.00	-4,222.53	26.04	483,568.60	617,132.61	32.329164	-104.087943	
14,700.00	90.00	180.00	10,246.00	-4,322.53	26.04	483,468.60	617,132.61	32.328889	-104.087944	
14,800.00	90.00	180.00	10,246.00	-4,422.53	26.04	483,368.60	617,132.61	32.328614	-104.087945	
14,900.00	90.00	180.00	10,246.00	-4,522.53	26.04	483,268.60	617,132.62	32.328339	-104.087946	
15,000.00	90.00	180.00	10,246.00	-4,622.53	26.04	483,168.60	617,132.62	32.328064	-104.087946	



SB Directional

Planning Report - Geographic



Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Goonch Fed Com 0409 136H
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 136H	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	180.00	10,246.00	-4,722.53	26.04	483,068.60	617,132.62	32.327789	-104.087947	
15,200.00	90.00	180.00	10,246.00	-4,822.53	26.04	482,968.60	617,132.62	32.327514	-104.087948	
15,300.00	90.00	180.00	10,246.00	-4,922.53	26.05	482,868.60	617,132.62	32.327239	-104.087949	
15,400.00	90.00	180.00	10,246.00	-5,022.53	26.05	482,768.60	617,132.62	32.326964	-104.087949	
15,500.00	90.00	180.00	10,246.00	-5,122.53	26.05	482,668.60	617,132.62	32.326690	-104.087950	
15,600.00	90.00	180.00	10,246.00	-5,222.53	26.05	482,568.60	617,132.62	32.326415	-104.087951	
15,700.00	90.00	180.00	10,246.00	-5,322.53	26.05	482,468.60	617,132.62	32.326140	-104.087952	
15,800.00	90.00	180.00	10,246.00	-5,422.53	26.05	482,368.60	617,132.62	32.325865	-104.087952	
15,900.00	90.00	180.00	10,246.00	-5,522.53	26.05	482,268.60	617,132.62	32.325590	-104.087953	
16,000.00	90.00	180.00	10,246.00	-5,622.53	26.05	482,168.60	617,132.63	32.325315	-104.087954	
16,100.00	90.00	180.00	10,246.00	-5,722.53	26.05	482,068.60	617,132.63	32.325040	-104.087955	
16,200.00	90.00	180.00	10,246.00	-5,822.53	26.05	481,968.60	617,132.63	32.324765	-104.087955	
16,300.00	90.00	180.00	10,246.00	-5,922.53	26.05	481,868.60	617,132.63	32.324491	-104.087956	
16,400.00	90.00	180.00	10,246.00	-6,022.53	26.05	481,768.60	617,132.63	32.324216	-104.087957	
16,500.00	90.00	180.00	10,246.00	-6,122.53	26.06	481,668.60	617,132.63	32.323941	-104.087957	
16,600.00	90.00	180.00	10,246.00	-6,222.53	26.06	481,568.60	617,132.63	32.323666	-104.087958	
16,700.00	90.00	180.00	10,246.00	-6,322.53	26.06	481,468.60	617,132.63	32.323391	-104.087959	
16,800.00	90.00	180.00	10,246.00	-6,422.53	26.06	481,368.60	617,132.63	32.323116	-104.087960	
16,900.00	90.00	180.00	10,246.00	-6,522.53	26.06	481,268.60	617,132.63	32.322841	-104.087960	
17,000.00	90.00	180.00	10,246.00	-6,622.53	26.06	481,168.60	617,132.63	32.322566	-104.087961	
17,100.00	90.00	180.00	10,246.00	-6,722.53	26.06	481,068.60	617,132.63	32.322291	-104.087962	
17,200.00	90.00	180.00	10,246.00	-6,822.53	26.06	480,968.60	617,132.64	32.322017	-104.087963	
17,300.00	90.00	180.00	10,246.00	-6,922.53	26.06	480,868.60	617,132.64	32.321742	-104.087963	
17,400.00	90.00	180.00	10,246.00	-7,022.53	26.06	480,768.60	617,132.64	32.321467	-104.087964	
17,500.00	90.00	180.00	10,246.00	-7,122.53	26.06	480,668.60	617,132.64	32.321192	-104.087965	
17,600.00	90.00	180.00	10,246.00	-7,222.53	26.07	480,568.60	617,132.64	32.320917	-104.087966	
17,700.00	90.00	180.00	10,246.00	-7,322.53	26.07	480,468.60	617,132.64	32.320642	-104.087966	
17,800.00	90.00	180.00	10,246.00	-7,422.53	26.07	480,368.60	617,132.64	32.320367	-104.087967	
17,900.00	90.00	180.00	10,246.00	-7,522.53	26.07	480,268.60	617,132.64	32.320092	-104.087968	
18,000.00	90.00	180.00	10,246.00	-7,622.53	26.07	480,168.60	617,132.64	32.319817	-104.087969	
18,100.00	90.00	180.00	10,246.00	-7,722.53	26.07	480,068.60	617,132.64	32.319543	-104.087969	
18,200.00	90.00	180.00	10,246.00	-7,822.53	26.07	479,968.60	617,132.64	32.319268	-104.087970	
18,300.00	90.00	180.00	10,246.00	-7,922.53	26.07	479,868.60	617,132.64	32.318993	-104.087971	
18,400.00	90.00	180.00	10,246.00	-8,022.53	26.07	479,768.60	617,132.65	32.318718	-104.087972	
18,500.00	90.00	180.00	10,246.00	-8,122.53	26.07	479,668.60	617,132.65	32.318443	-104.087972	
18,600.00	90.00	180.00	10,246.00	-8,222.53	26.07	479,568.60	617,132.65	32.318168	-104.087973	
18,700.00	90.00	180.00	10,246.00	-8,322.53	26.07	479,468.60	617,132.65	32.317893	-104.087974	
18,800.00	90.00	180.00	10,246.00	-8,422.53	26.08	479,368.60	617,132.65	32.317618	-104.087974	
18,900.00	90.00	180.00	10,246.00	-8,522.53	26.08	479,268.60	617,132.65	32.317344	-104.087975	
19,000.00	90.00	180.00	10,246.00	-8,622.53	26.08	479,168.60	617,132.65	32.317069	-104.087976	
19,100.00	90.00	180.00	10,246.00	-8,722.53	26.08	479,068.60	617,132.65	32.316794	-104.087977	
19,200.00	90.00	180.00	10,246.00	-8,822.53	26.08	478,968.60	617,132.65	32.316519	-104.087977	
19,300.00	90.00	180.00	10,246.00	-8,922.53	26.08	478,868.60	617,132.65	32.316244	-104.087978	
19,400.00	90.00	180.00	10,246.00	-9,022.53	26.08	478,768.60	617,132.65	32.315969	-104.087979	
19,500.00	90.00	180.00	10,246.00	-9,122.53	26.08	478,668.60	617,132.66	32.315694	-104.087980	
19,600.00	90.00	180.00	10,246.00	-9,222.53	26.08	478,568.60	617,132.66	32.315419	-104.087980	
19,700.00	90.00	180.00	10,246.00	-9,322.53	26.08	478,468.60	617,132.66	32.315144	-104.087981	
19,800.00	90.00	180.00	10,246.00	-9,422.53	26.08	478,368.60	617,132.66	32.314870	-104.087982	
19,900.00	90.00	180.00	10,246.00	-9,522.53	26.08	478,268.60	617,132.66	32.314595	-104.087983	
20,000.00	90.00	180.00	10,246.00	-9,622.53	26.09	478,168.60	617,132.66	32.314320	-104.087983	
20,100.00	90.00	180.00	10,246.00	-9,722.53	26.09	478,068.60	617,132.66	32.314045	-104.087984	
20,200.00	90.00	180.00	10,246.00	-9,822.53	26.09	477,968.60	617,132.66	32.313770	-104.087985	
20,300.00	90.00	180.00	10,246.00	-9,922.53	26.09	477,868.60	617,132.66	32.313495	-104.087986	
20,400.00	90.00	180.00	10,246.00	-10,022.53	26.09	477,768.60	617,132.66	32.313220	-104.087986	



SB Directional

Planning Report - Geographic



Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Goonch Fed Com 0409 136H
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 136H	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
20,489.12	90.00	180.00	10,246.00	-10,111.65	26.09	477,679.48	617,132.66	32.312975	-104.087987
PBHL; 130' FSL, 1254' FEL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL - Goonch 0409 13	0.00	0.00	0.00	-10,111.65	26.09	477,679.48	617,132.66	32.312975	-104.087987
- plan misses target center by 10111.68usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
20,489.12	10,246.00	20" Casing	20	24	

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
3,500.00	3,500.00	0.00	0.00	Start Nudge
3,679.66	3,679.54	5.62	0.40	EOB
9,354.74	9,343.47	360.38	25.60	EOH
9,534.39	9,523.00	366.00	26.00	Drop to Vertical
9,684.43	9,673.04	366.00	26.00	KOP @ 9673' TVD
10,584.43	10,246.00	-206.96	26.00	LP @ 10246' TVD
20,489.12	10,246.00	-10,111.65	26.09	PBHL; 130' FSL, 1254' 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 29369

COMMENTS

Operator: NOVO OIL & GAS NORTHERN DELAWARE, LLC 1001 West Wilshire Blvd Oklahoma City, OK 73116	OGRID: 372920
	Action Number: 29369
	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
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

CONDITIONS

Action 29369

CONDITIONS

Operator: NOVO OIL & GAS NORTHERN DELAWARE, LLC 1001 West Wilshire Blvd Oklahoma City, OK 73116	OGRID: 372920
	Action Number: 29369
	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