

Submit 1 Copy To Appropriate District Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

EMNRD-OCD ARTESIA Form C-103
REC'D: 7/25/2020 Revised July 18, 2013

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-015-45951
1. Type of Well: Oil Well ☐ Gas Well ☐ Other SWD ☐		5. Indicate Type of Lease STATE ☒ FEE ☐
2. Name of Operator V-F PETROLEUM, INC.		6. State Oil & Gas Lease No.
3. Address of Operator P.O.Box 1889, Midland, TX 79702		7. Lease Name or Unit Agreement Name CROCKETT 16 STATE COM
4. Well Location Unit Letter <u>A</u> : <u>940</u> feet from the <u>North</u> line and <u>225</u> feet from the <u>East</u> line Section <u>16</u> Township <u>19-S</u> Range <u>28-E</u> NMPM <u>Eddy</u> County		8. Well Number #221H
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3523' GL		9. OGRID Number 24010
		10. Pool name or Wildcat Palmillo; Bone Spring, SW (96413)

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☒	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
CLOSED-LOOP SYSTEM ☒			
OTHER: <u>Change Bottom Hole Location</u> ☒		OTHER: ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

V-F PETROLEUM, INC. would like to change the location of the bottom hole in this proposed horizontal oil well to 940' FNL & 2540' FEL, Sec. 17, T 19S R28E. The APD for this well was approved on 5/3/2019. Attached please find the new C-102 with its associated plats, the new Directional Diagram, the new Standard Planning Report for a deviated well, and the Anticollision Report.

Spud Date: _____ Drilling Rig Release Date: _____

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Mike Pippin TITLE Petroleum Engineer DATE 7/16/20

Type or print name Mike Pippin E-mail address: mike@pippinllc.com PHONE: 505-327-4573

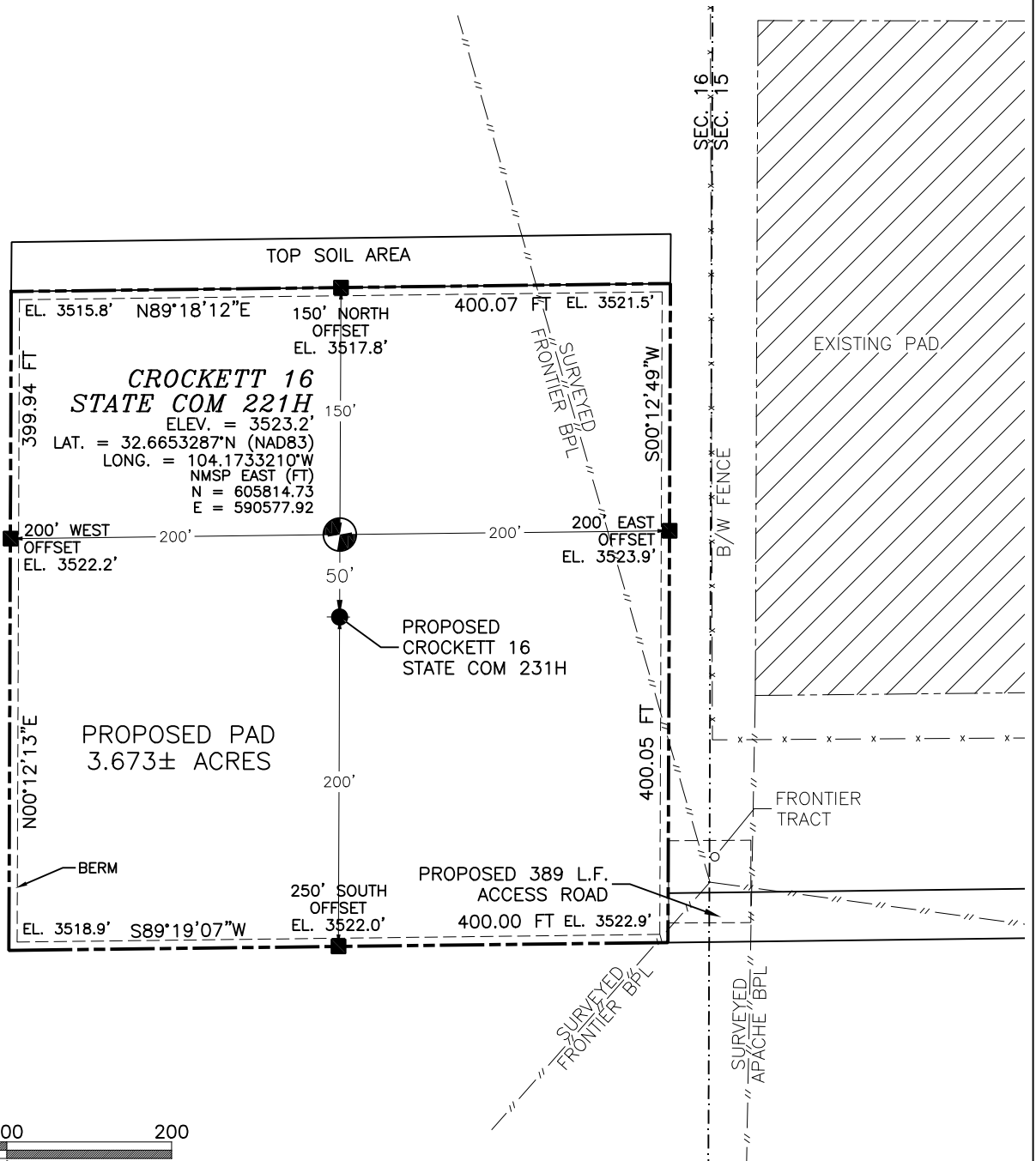
For State Use Only

APPROVED BY: John Garcia TITLE Petroleum Engineer DATE 8/21/2020

Conditions of Approval (if any):

HOLD C-104 for NSL - JAG

SECTION 16, TOWNSHIP 19 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SITE MAP



010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF CO. RD. 206 (ILLINOIS CAMP) & ANGEL RANCH ROAD, GO NORTH ON CO. RD. 206 APPROX. 5.0 MILES, TURN RIGHT AND GO EAST ON CALICHE LEASE ROAD APPROX. 2.0 MILES, TURN RIGHT AND GO SOUTH ON CALICHE LEASE ROAD APPROX. 0.4 OF A MILE, TURN LEFT AND GO EAST ON CALICHE LEASE ROAD APPROX. 1.3 MILES, TURN LEFT AND GO NORTH APPROX. 1.1 MILES TO BEGIN ROAD SURVEY, FOLLOW ROAD SURVEY WEST APPROX. 389' TO THE SOUTHEAST PAD CORNER FOR THIS LOCATION.

I, FILIMON F. JARMILL, A NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR, CERTIFY THAT I DIRECTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY WAS CONDUCTED IN ACCORDANCE WITH THE BEST OF MY KNOWLEDGE AND BELIEF AND THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

FILIMON F. JARMILL, LICENSE NO. 1279

MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3341

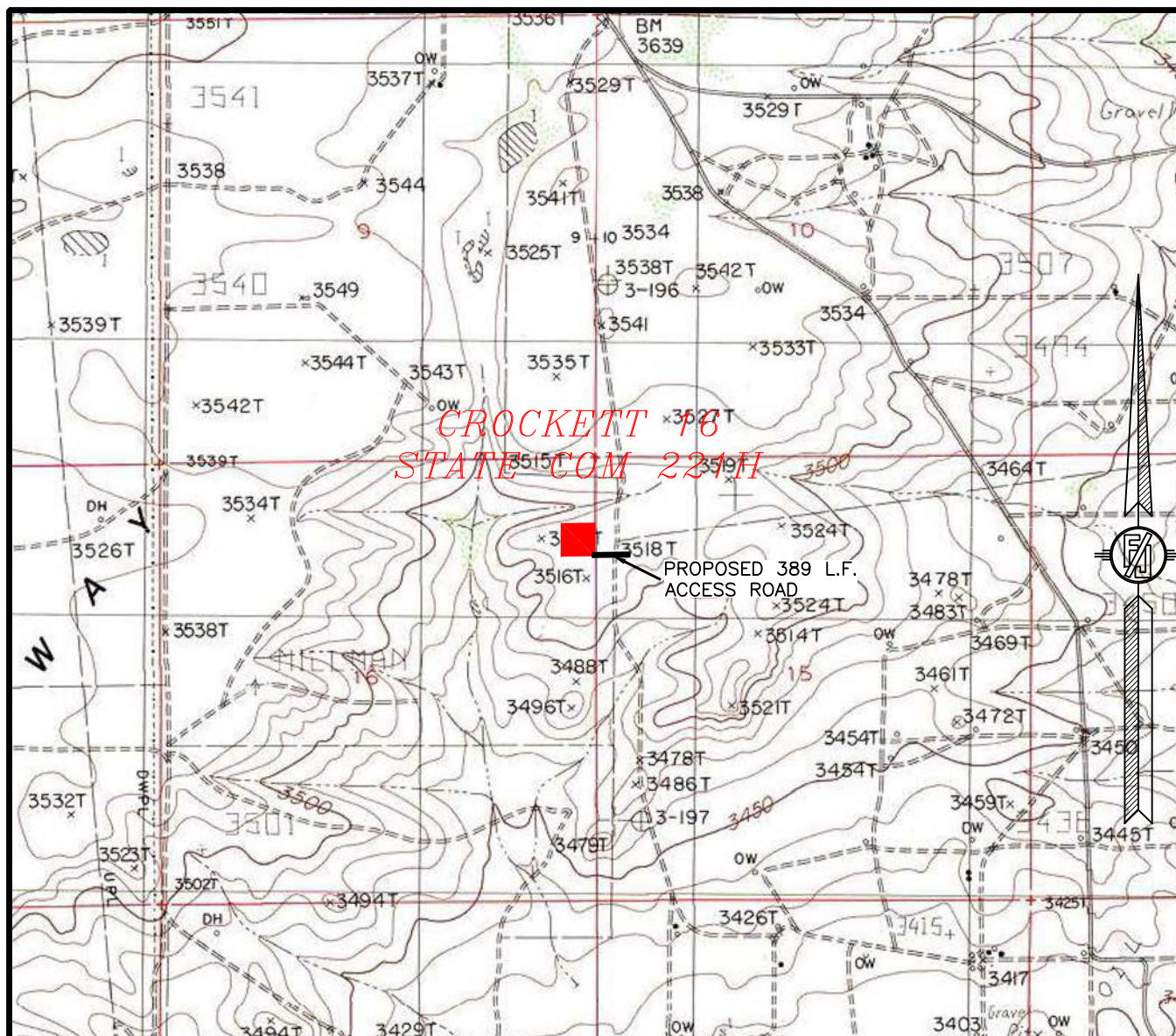
V-F PETROLEUM INC.
CROCKETT 16 STATE COM 221H
LOCATED 940 FT. FROM THE NORTH LINE
AND 225 FT. FROM THE EAST LINE OF
SECTION 16, TOWNSHIP 19 SOUTH,
RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

JANUARY 23, 2020

SURVEY NO. 7148A

CARLSBAD, NEW MEXICO

SECTION 16, TOWNSHIP 19 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



USGS QUAD MAP:
ILLINOIS CAMP

NOT TO SCALE

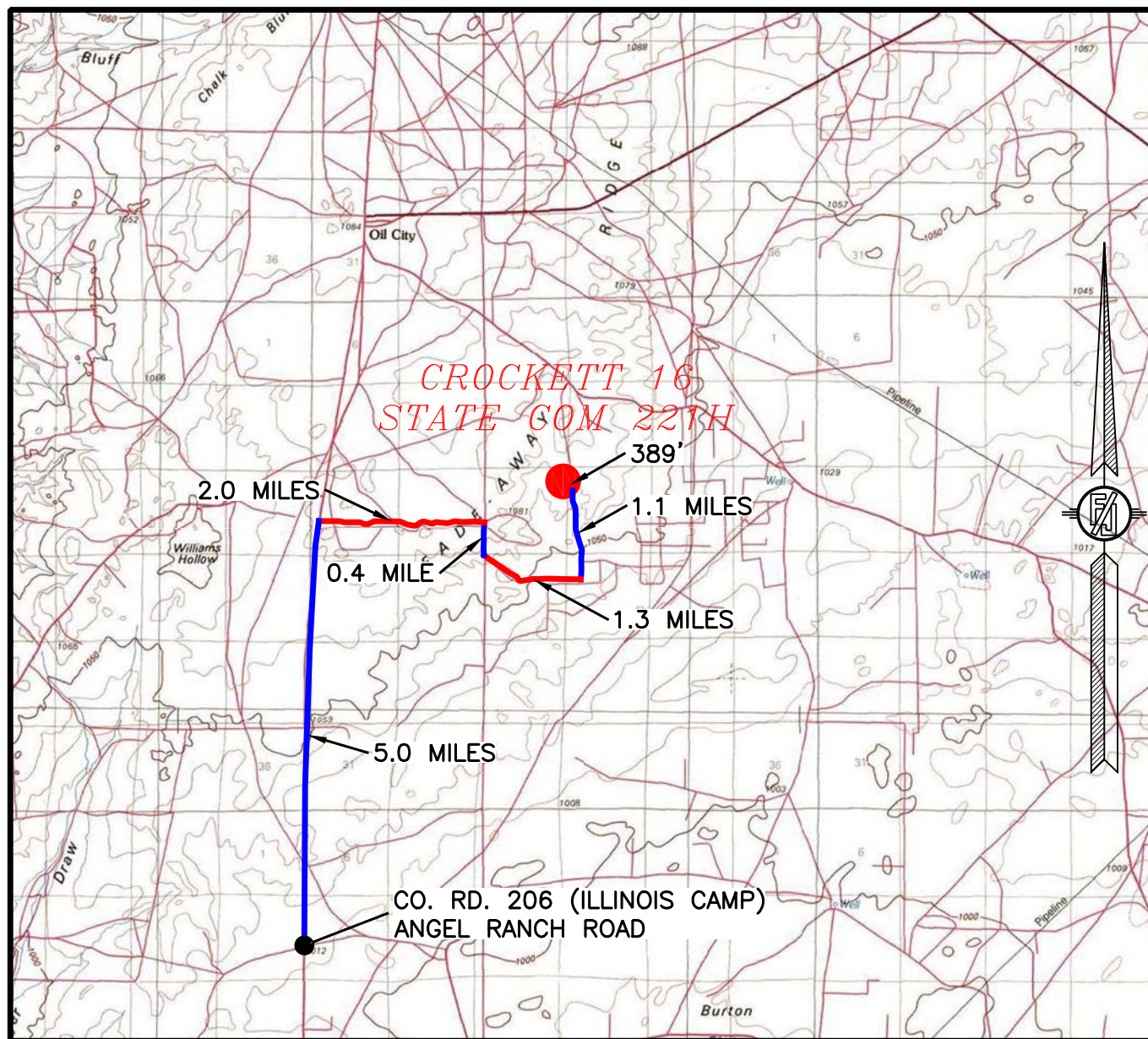
V-F PETROLEUM INC.
CROCKETT 16 STATE COM 221H
LOCATED 940 FT. FROM THE NORTH LINE
AND 225 FT. FROM THE EAST LINE OF
SECTION 16, TOWNSHIP 19 SOUTH,
RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

JANUARY 23, 2020

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

SURVEY NO. 7148A
CARLSBAD, NEW MEXICO

SECTION 16, TOWNSHIP 19 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF CO. RD. 206 (ILLINOIS CAMP) & ANGEL RANCH ROAD, GO NORTH ON CO. RD. 206 APPROX. 5.0 MILES, TURN RIGHT AND GO EAST ON CALICHE LEASE ROAD APPROX. 2.0 MILES, TURN RIGHT AND GO SOUTH ON CALICHE LEASE ROAD APPROX. 0.4 OF A MILE, TURN LEFT AND GO EAST ON CALICHE LEASE ROAD APPROX 1.3 MILES, TURN LEFT AND GO NORTH APPROX. 1.1 MILES TO BEGIN ROAD SURVEY, FOLLOW ROAD SURVEY WEST APPROX. 389' TO THE SOUTHEAST PAD CORNER FOR THIS LOCATION.

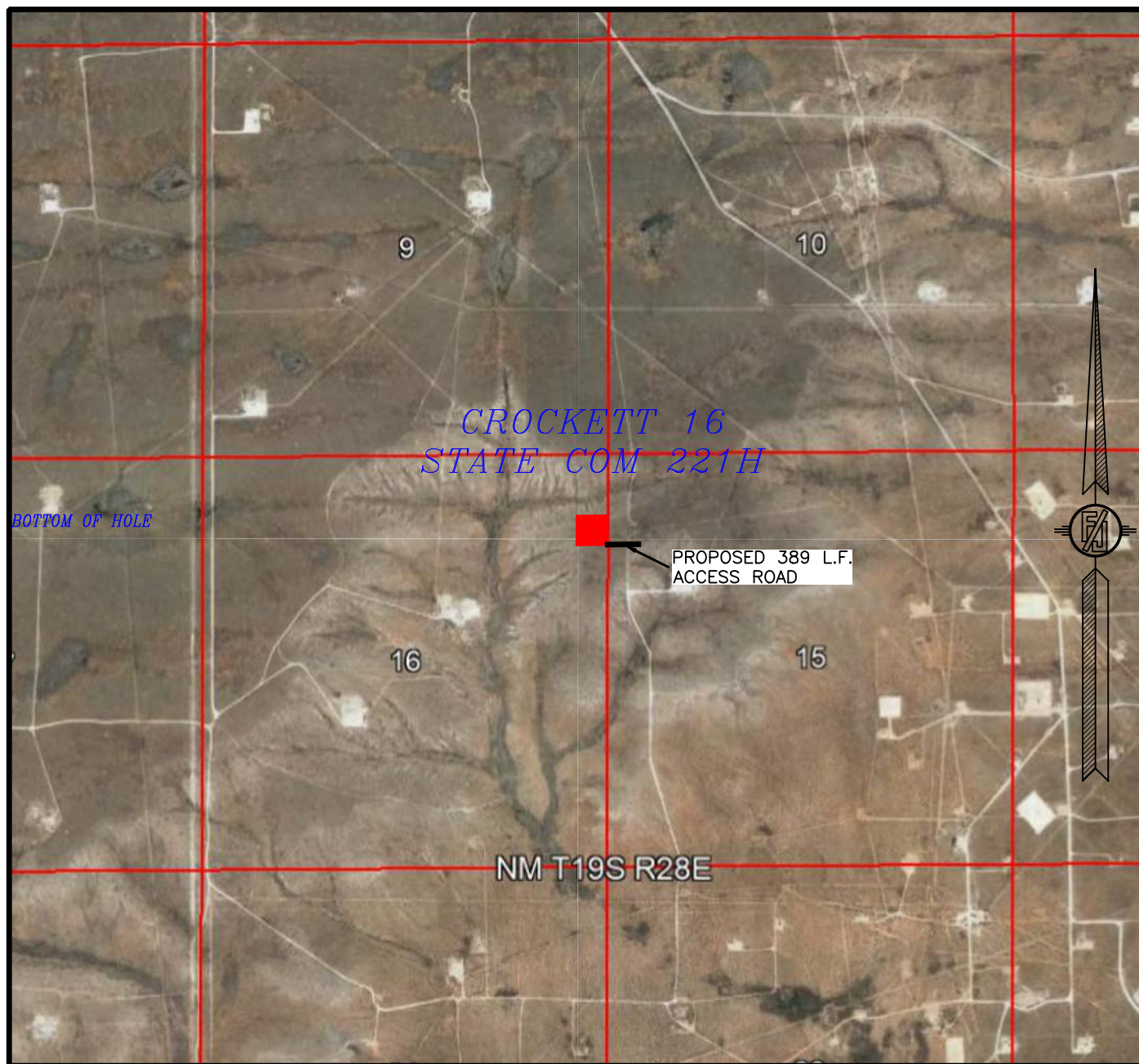
V-F PETROLEUM INC.
CROCKETT 16 STATE COM 221H
LOCATED 940 FT. FROM THE NORTH LINE
AND 225 FT. FROM THE EAST LINE OF
SECTION 16, TOWNSHIP 19 SOUTH,
RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

JANUARY 23, 2020

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

SURVEY NO. 7148A
CARLSBAD, NEW MEXICO

SECTION 16, TOWNSHIP 19 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
MAR. 2016

V-F PETROLEUM INC.
CROCKETT 16 STATE COM 221H
LOCATED 940 FT. FROM THE NORTH LINE
AND 225 FT. FROM THE EAST LINE OF
SECTION 16, TOWNSHIP 19 SOUTH,
RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

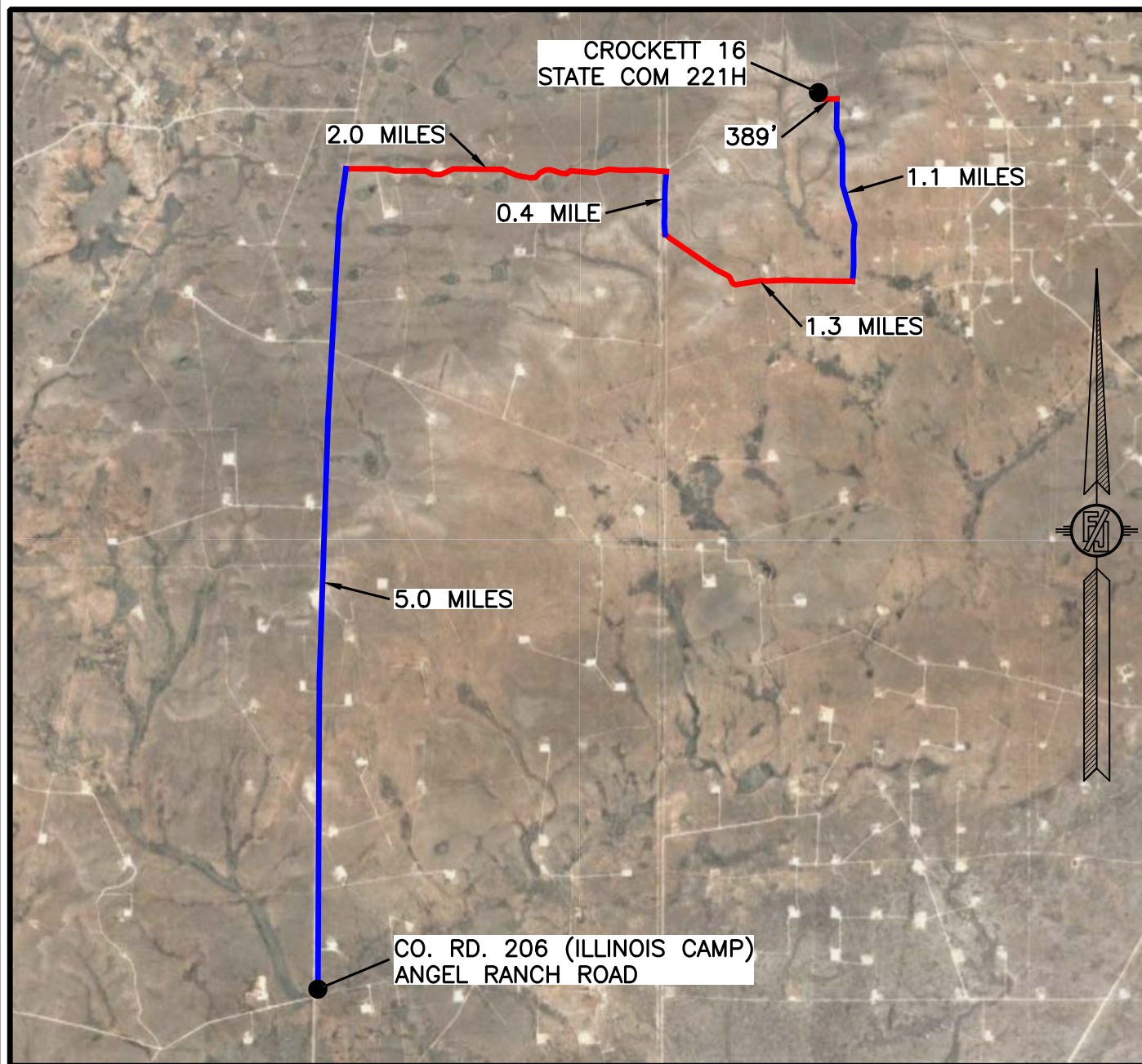
JANUARY 23, 2020

MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3341

SURVEY NO. 7148A
CARLSBAD, NEW MEXICO

SECTION 16, TOWNSHIP 19 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
AERIAL ACCESS ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
MAR. 2016

V-F PETROLEUM INC.
CROCKETT 16 STATE COM 221H
LOCATED 940 FT. FROM THE NORTH LINE
AND 225 FT. FROM THE EAST LINE OF
SECTION 16, TOWNSHIP 19 SOUTH,
RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

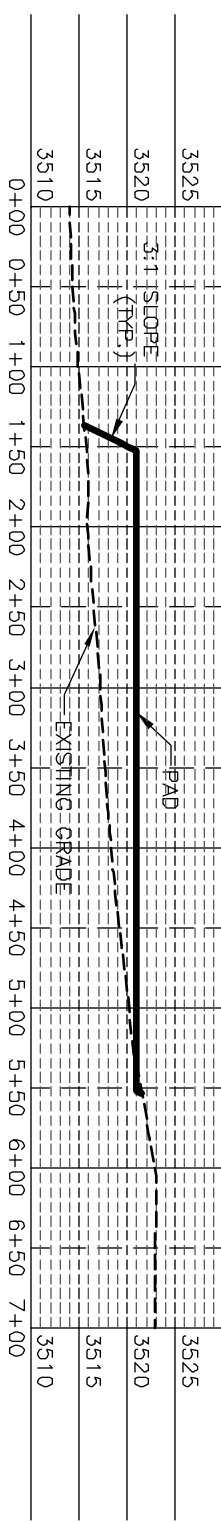
JANUARY 23, 2020

SURVEY NO. 7148A

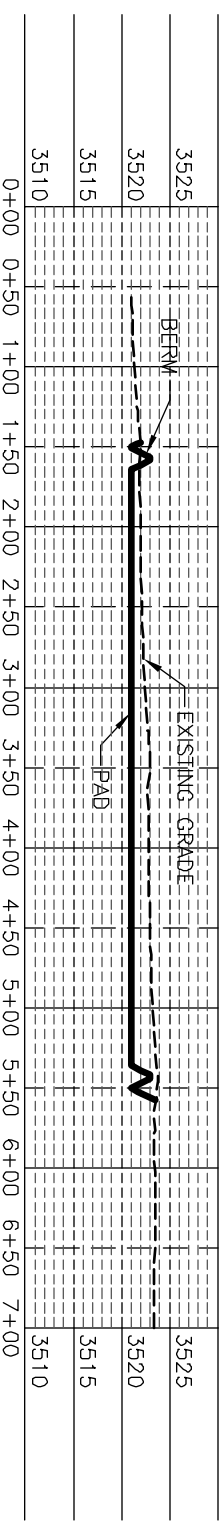
MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 CARLSBAD, NEW MEXICO

CROSS-SECTIONS

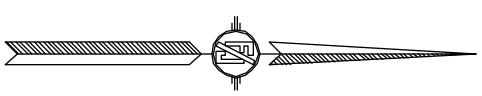
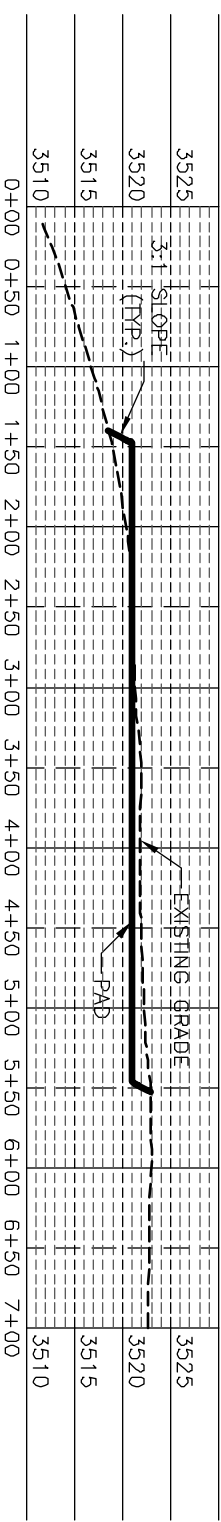
SECTION A-A'



SECTION B-B'

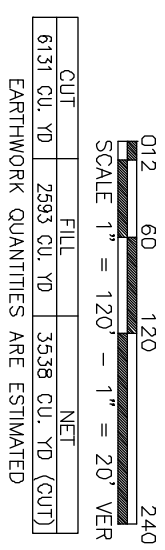


SECTION C-C'



I, FILMON F. JARAMILLO, NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR CERTIFICATE NO. 12787, AM RESPONSIBLE FOR THIS SURVEY, THAT THE SURVEY WAS MADE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THE SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

V-F PETROLEUM INC.
 PAD GRADING AND CROSS SECTIONS
 FOR CROCKETT 16 STATE COM 221H
 SECTION 16, TOWNSHIP 19 SOUTH,
 RANGE 28 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

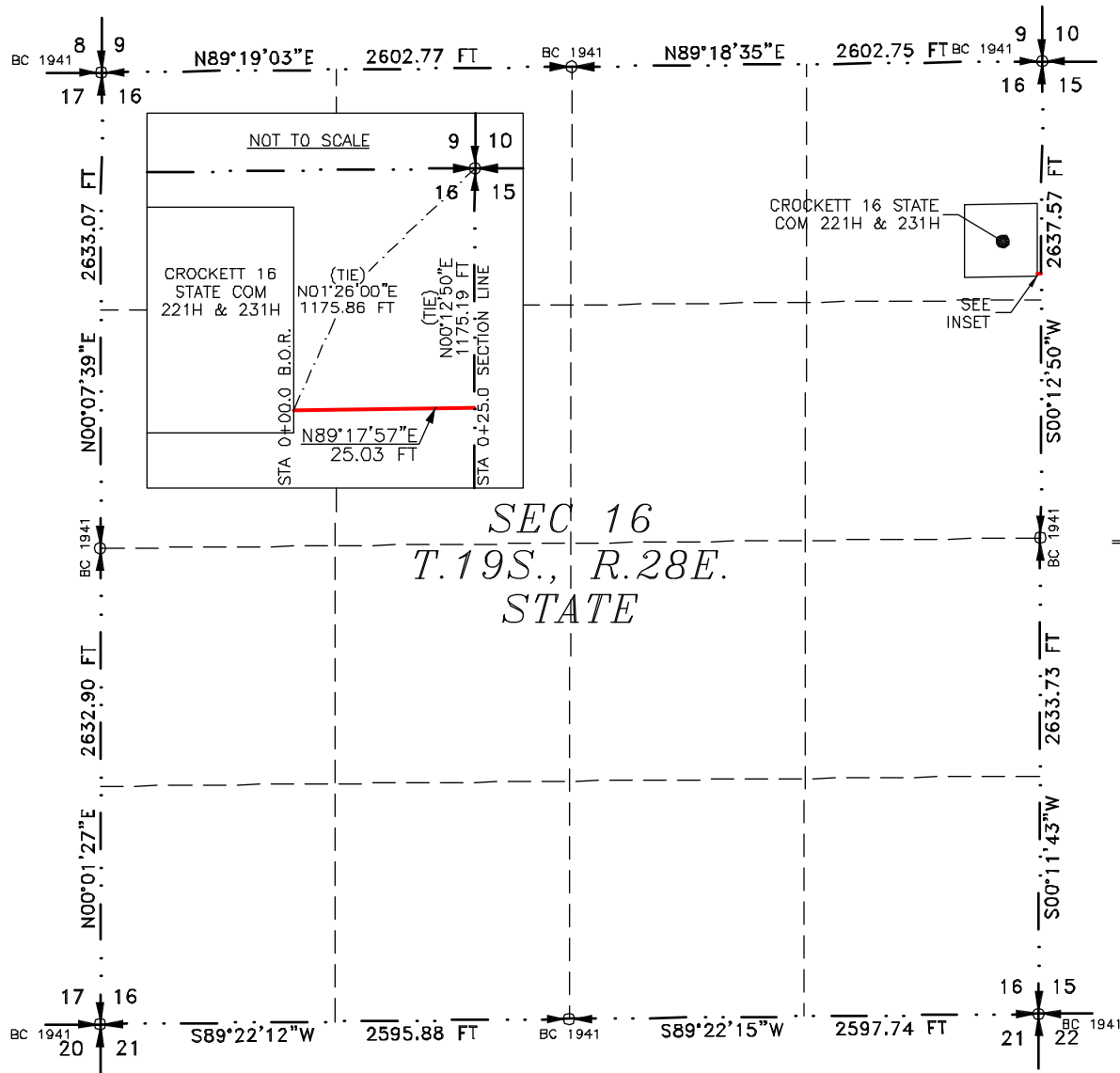


ACCESS ROAD PLAT

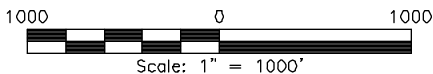
ACCESS ROAD FOR CROCKETT 16 STATE COM 221H & 231H

V-F PETROLEUM INC.

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 16, TOWNSHIP 19 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
JANUARY 23, 2020



SEE NEXT SHEET (2-4) 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: 1-4

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

SURVEYOR CERTIFICATE

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

IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 23rd DAY OF JANUARY 2020.

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

SURVEY NO. 7148A

ACCESS ROAD PLAT

ACCESS ROAD FOR CROCKETT 16 STATE COM 221H & 231H

V-F PETROLEUM INC.

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 16, TOWNSHIP 19 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
JANUARY 23, 2020

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 16, TOWNSHIP 19 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 NE/4 NE/4 OF SAID SECTION 16, TOWNSHIP 19 SOUTH, RANGE 28 EAST, N.M.P.M., WHENCE THE NORTHEAST CORNER OF SAID SECTION 16, TOWNSHIP 19 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS N01°26'00"E, A DISTANCE OF 1175.86 FEET;
THENCE N89°17'57"E A DISTANCE OF 25.03 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHEAST CORNER OF SAID SECTION 16, TOWNSHIP 19 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS N00°12'50"E, A DISTANCE OF 1175.19 FEET;

SAID STRIP OF LAND BEING 25.03 FEET OR 1.52 RODS IN LENGTH, CONTAINING 0.017 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NE/4 NE/4 25.03 L.F. 1.52 RODS 0.017 ACRES

GENERAL NOTES

- 1.) THE INTENT OF THIS ROUTE SURVEY IS TO ACQUIRE AN EASEMENT.
- 2.) BASIS OF BEARING AND DISTANCE IS NMSP EAST (NAD83) MODIFIED TO SURFACE COORDINATES. NAD 83 (FEET) AND NAVD 88 (FEET) COORDINATE SYSTEMS USED IN THE SURVEY.

SURVEYOR CERTIFICATE

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

IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 23rd DAY OF JANUARY 2020

FILIMON F. JARAMILLO
12797
MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

SURVEY NO. 7148A

SHEET: 2-4

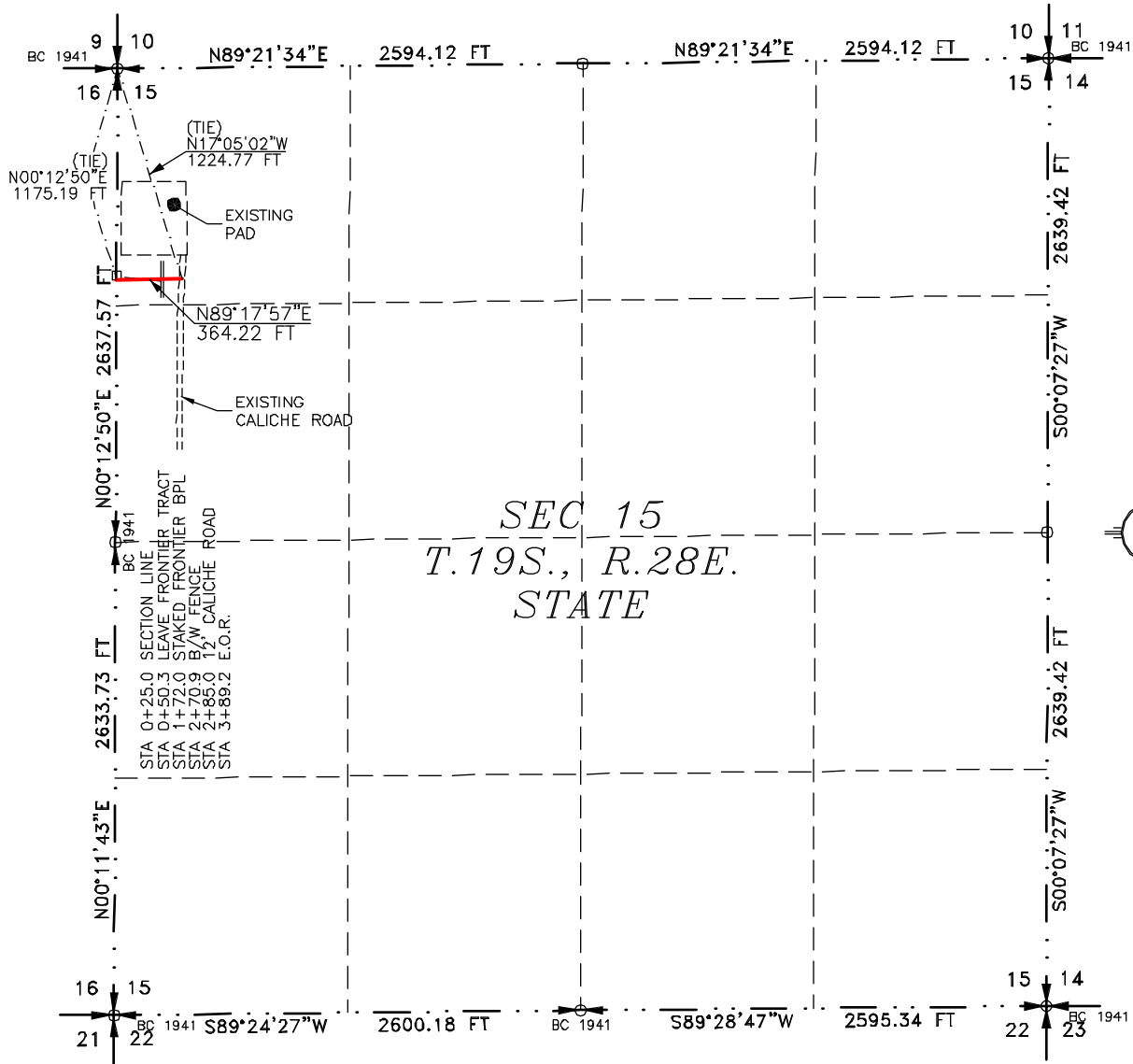
MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO (575) 234-3341

ACCESS ROAD PLAT

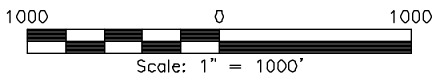
ACCESS ROAD FOR CROCKETT 16 STATE COM 221H & 231H

V-F PETROLEUM INC.

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 15, TOWNSHIP 19 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
JANUARY 23, 2020



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

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

SURVEYOR CERTIFICATE

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

IN WITNESS WHEREOF THIS CERTIFICATE IS EXECUTED AT CARLSBAD, NEW MEXICO, THIS 23rd DAY OF JANUARY 2020

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

SURVEY NO. 7148A

ACCESS ROAD PLAT

ACCESS ROAD FOR CROCKETT 16 STATE COM 221H & 231H

V-F PETROLEUM INC.

CENTERLINE SURVEY OF AN ACCESS ROAD CROSSING
SECTION 15, TOWNSHIP 19 SOUTH, RANGE 28 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
JANUARY 23, 2020

DESCRIPTION

A STRIP OF LAND 30 FEET WIDE CROSSING STATE OF NEW MEXICO LAND IN SECTION 15, TOWNSHIP 19 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 NW/4 NW/4 OF SAID SECTION 15, TOWNSHIP 19 SOUTH, RANGE 28 EAST, N.M.P.M., WHENCE THE NORTHWEST CORNER OF SAID SECTION 15, TOWNSHIP 19 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS N00°12'50"E, A DISTANCE OF 1175.19 FEET;
THENCE N89°17'57"E A DISTANCE OF 364.22 FEET THE TERMINUS OF THIS CENTERLINE SURVEY, WHENCE THE NORTHWEST CORNER OF SAID SECTION 15, TOWNSHIP 19 SOUTH, RANGE 28 EAST, N.M.P.M. BEARS N17°05'02"W, A DISTANCE OF 1224.77 FEET;

SAID STRIP OF LAND BEING 364.22 FEET OR 22.07 RODS IN LENGTH, CONTAINING 0.251 ACRES MORE OR LESS AND BEING ALLOCATED BY FORTIES AS FOLLOWS:

NW/4 NW/4 364.22 L.F. 22.07 RODS 0.251 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 23RD DAY OF JANUARY 2020

FILIMON F. JARAMILLO
12797
MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (575) 234-3341

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: 4-4

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

SURVEY NO. 7148A

NW CORNER SEC. 17
LAT. = 32.6676385°N
LONG. = 104.2063531°W
NMSP EAST (FT)
N = 606641.32
E = 580411.97

N/4 CORNER SEC. 17
LAT. = 32.6677030°N
LONG. = 104.1979181°W
NMSP EAST (FT)
N = 606667.99
E = 583007.58

SECTION CORNER
LAT. = 32.6677677°N
LONG. = 104.1894851°W
NMSP EAST (FT)
N = 606694.94
E = 585602.55

N/4 CORNER SEC. 16
LAT. = 32.6678429°N
LONG. = 104.1810294°W
NMSP EAST (FT)
N = 606725.94
E = 588204.50

NE CORNER SEC. 16
LAT. = 32.6679186°N
LONG. = 104.1725738°W
NMSP EAST (FT)
N = 606757.29
E = 590806.43

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.

Jason J. Lodge
Signature

Jason J. Lodge

7/14/20
Date

Printed Name
Jason@vfpetroleum.com

E-mail Address

SW CORNER SEC. 17
LAT. = 32.6531823°N
LONG. = 104.2064682°W
NMSP EAST (FT)
N = 601382.00
E = 580382.85

S/4 CORNER SEC. 17
LAT. = 32.6532392°N
LONG. = 104.1980003°W
NMSP EAST (FT)
N = 601405.93
E = 582988.98

SECTION CORNER
LAT. = 32.6532966°N
LONG. = 104.1895309°W
NMSP EAST (FT)
N = 601430.25
E = 585595.58

S/4 CORNER SEC. 16
LAT. = 32.6533651°N
LONG. = 104.1810989°W
NMSP EAST (FT)
N = 601458.79
E = 588190.67

SE CORNER SEC. 16
LAT. = 32.6534330°N
LONG. = 104.1726609°W
NMSP EAST (FT)
N = 601487.30
E = 590787.62

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.

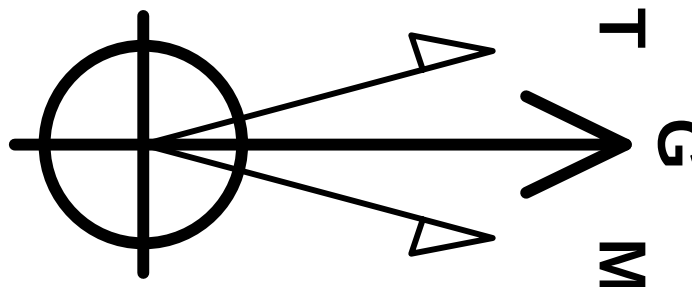
JANUARY 23, 2020
Date of Survey

William F. Jaramillo
Signature and Seal of Professional Surveyor

Certificate Number: PL12797
PL12797
SURVEY NO. 7148A

V-F Petroleum, Inc.

Company: V-F Petroleum Inc.
Field: Eddy County, NM
Location: Crockett 16 State Com
Well: 221H
OH
Plan: Plan 1
GL 3523.2 + 20' KB @ 3543.20usft



Azimuths to Grid North
True North: -0.09°
Magnetic North: 6.89°

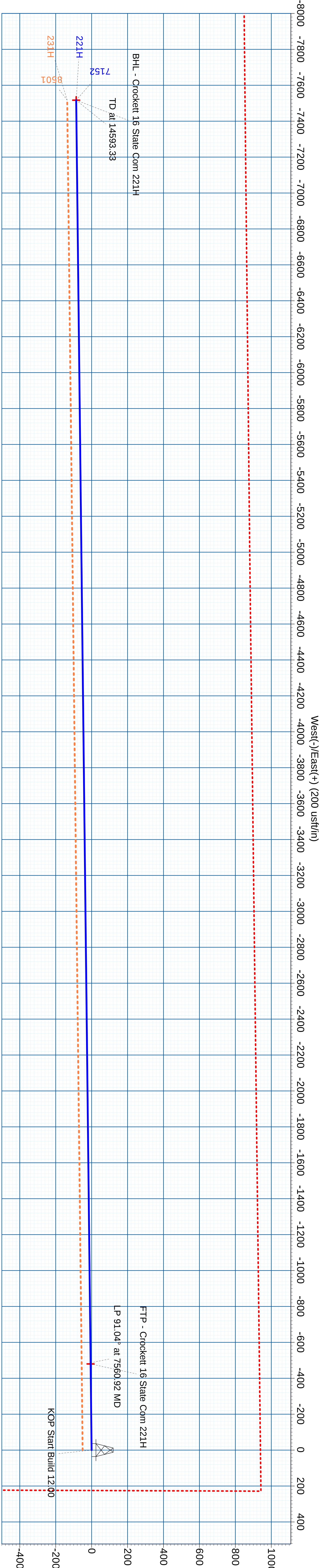
Magnetic Field
Strength: 47789.5nT
Dip Angle: 60.24°
Date: 7/14/2020
Model: WMM2020

To convert a Magnetic Direction to a Grid Direction, Add 6.89°



PROJECT DETAILS: Eddy County, NM

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level



WELL DETAILS: 221H

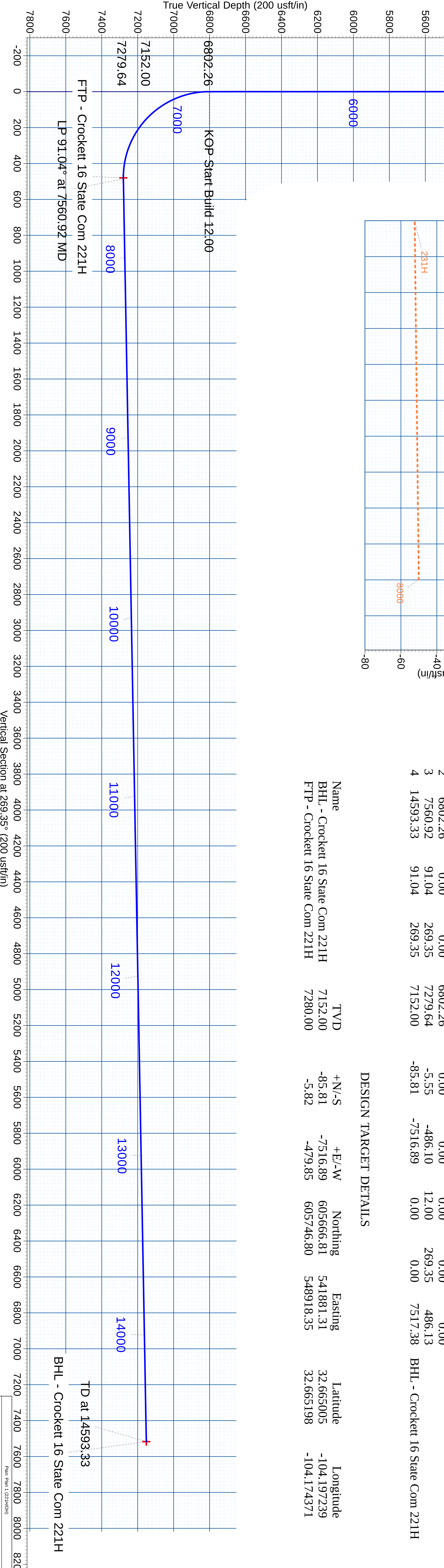
+N/-S		+E/-W		GL 3523.2 + 20' KB @ 3543.20usft		Slot	
0.00		0.00		Northing	605752.62	Latitude	32.665212
				Easting	549398.20	Longitude	-104.172812

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	6802.26	0.00	0.00	6802.26	0.00	0.00	0.00	0.00	0.00	
3	7560.92	91.04	269.35	7279.64	-5.55	-486.10	12.00	269.35	486.13	
4	14593.33	91.04	269.35	7152.00	-85.81	-7516.89	0.00	0.00	7517.38	BHL - Crockett 16 State Com 221H

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL - Crockett 16 State Com 221H	7152.00	-85.81	-7516.89	605666.81	541881.31	32.665005	-104.197239
FTP - Crockett 16 State Com 221H	7280.00	-5.82	-479.85	605746.80	548918.35	32.665198	-104.174371



Intent ☒ As Drilled ☐

API # 30-015-45951								
Operator Name: V-F PETROLEUM INC.			Property Name: CROCKETT 16 STATE COM			Well Number 221H		

Kick Off Point (KOP)

UL A	Section 16	Township 19S	Range 28E	Lot	Feet 940	From N/S NORTH	Feet 225	From E/W EAST	County EDDY
Latitude 32.6653287					Longitude 104.1733210				NAD 83

First Take Point (FTP)

UL A	Section 16	Township 19S	Range 28E	Lot	Feet 940	From N/S NORTH	Feet 705	From E/W EAST	County EDDY
Latitude 32.6653147					Longitude 104.1748804				NAD 83

Last Take Point (LTP)

UL B	Section 17	Township 19S	Range 28E	Lot	Feet 940	From N/S NORTH	Feet 2540	From E/W EAST	County EDDY
Latitude 32.6651211					Longitude 104.1977483				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

V-F Petroleum Inc.

**Eddy County, NM
Crockett 16 State Com
221H**

OH

Plan: Plan 1

Standard Planning Report

14 July, 2020

Legacy Directional

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well 221H
Company:	V-F Petroleum Inc.	TVD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Project:	Eddy County, NM	MD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Site:	Crockett 16 State Com	North Reference:	Grid
Well:	221H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Project	Eddy County, NM		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site		Crockett 16 State Com			
Site Position:		Northing:	605,752.62 usft	Latitude:	32.665212
From:	Map	Easting:	549,398.20 usft	Longitude:	-104.172812
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.09 °

Well	221H					
Well Position	+N/-S	0.00 usft	Northing:	605,752.62 usft	Latitude:	32.665212
	+E/-W	0.00 usft	Easting:	549,398.20 usft	Longitude:	-104.172812
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,523.20 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	WMM2020	7/14/2020	6.98	60.24	47,789.49282915

Design	Plan 1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	269.35

Plan Survey Tool Program	Date	7/14/2020		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	14,593.33	Plan 1 (OH)	

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	
6,802.26	0.00	0.00	6,802.26	0.00	0.00	0.00	0.00	0.00	0.00	
7,560.92	91.04	269.35	7,279.64	-5.55	-486.10	12.00	12.00	0.00	269.35	
14,593.33	91.04	269.35	7,152.00	-85.81	-7,516.89	0.00	0.00	0.00	0.00	BHL - Crockett 16 Sta

Legacy Directional

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well 221H
Company:	V-F Petroleum Inc.	TVD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Project:	Eddy County, NM	MD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Site:	Crockett 16 State Com	North Reference:	Grid
Well:	221H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,802.26	0.00	0.00	6,802.26	0.00	0.00	0.00	0.00	0.00	0.00
KOP Start Build 12.00									
6,900.00	11.73	269.35	6,899.32	-0.11	-9.97	9.97	12.00	12.00	0.00
7,000.00	23.73	269.35	6,994.40	-0.46	-40.36	40.37	12.00	12.00	0.00
7,100.00	35.73	269.35	7,081.07	-1.03	-89.86	89.87	12.00	12.00	0.00
7,200.00	47.73	269.35	7,155.57	-1.78	-156.30	156.31	12.00	12.00	0.00
7,300.00	59.73	269.35	7,214.62	-2.70	-236.77	236.78	12.00	12.00	0.00
7,400.00	71.73	269.35	7,255.65	-3.74	-327.76	327.78	12.00	12.00	0.00
7,500.00	83.73	269.35	7,276.86	-4.85	-425.29	425.31	12.00	12.00	0.00
7,554.70	90.29	269.35	7,279.71	-5.48	-479.88	479.91	12.00	12.00	0.00
FTP - Crockett 16 State Com 221H									
7,560.92	91.04	269.35	7,279.64	-5.55	-486.10	486.13	12.00	12.00	0.00
LP 91.04° at 7560.92 MD									
7,600.00	91.04	269.35	7,278.93	-5.99	-525.17	525.20	0.00	0.00	0.00
7,700.00	91.04	269.35	7,277.12	-7.14	-625.15	625.19	0.00	0.00	0.00
7,800.00	91.04	269.35	7,275.30	-8.28	-725.12	725.17	0.00	0.00	0.00
7,900.00	91.04	269.35	7,273.49	-9.42	-825.10	825.15	0.00	0.00	0.00
8,000.00	91.04	269.35	7,271.67	-10.56	-925.08	925.14	0.00	0.00	0.00
8,100.00	91.04	269.35	7,269.86	-11.70	-1,025.05	1,025.12	0.00	0.00	0.00
8,200.00	91.04	269.35	7,268.04	-12.84	-1,125.03	1,125.10	0.00	0.00	0.00
8,300.00	91.04	269.35	7,266.23	-13.98	-1,225.01	1,225.09	0.00	0.00	0.00
8,400.00	91.04	269.35	7,264.41	-15.13	-1,324.98	1,325.07	0.00	0.00	0.00
8,500.00	91.04	269.35	7,262.60	-16.27	-1,424.96	1,425.05	0.00	0.00	0.00
8,600.00	91.04	269.35	7,260.78	-17.41	-1,524.94	1,525.04	0.00	0.00	0.00
8,700.00	91.04	269.35	7,258.97	-18.55	-1,624.92	1,625.02	0.00	0.00	0.00
8,800.00	91.04	269.35	7,257.15	-19.69	-1,724.89	1,725.01	0.00	0.00	0.00
8,900.00	91.04	269.35	7,255.34	-20.83	-1,824.87	1,824.99	0.00	0.00	0.00
9,000.00	91.04	269.35	7,253.52	-21.97	-1,924.85	1,924.97	0.00	0.00	0.00
9,100.00	91.04	269.35	7,251.71	-23.11	-2,024.82	2,024.96	0.00	0.00	0.00
9,200.00	91.04	269.35	7,249.89	-24.26	-2,124.80	2,124.94	0.00	0.00	0.00
9,300.00	91.04	269.35	7,248.08	-25.40	-2,224.78	2,224.92	0.00	0.00	0.00
9,400.00	91.04	269.35	7,246.26	-26.54	-2,324.75	2,324.91	0.00	0.00	0.00
9,500.00	91.04	269.35	7,244.45	-27.68	-2,424.73	2,424.89	0.00	0.00	0.00
9,600.00	91.04	269.35	7,242.63	-28.82	-2,524.71	2,524.87	0.00	0.00	0.00
9,700.00	91.04	269.35	7,240.82	-29.96	-2,624.69	2,624.86	0.00	0.00	0.00
9,800.00	91.04	269.35	7,239.00	-31.10	-2,724.66	2,724.84	0.00	0.00	0.00
9,900.00	91.04	269.35	7,237.19	-32.24	-2,824.64	2,824.82	0.00	0.00	0.00
10,000.00	91.04	269.35	7,235.37	-33.39	-2,924.62	2,924.81	0.00	0.00	0.00
10,100.00	91.04	269.35	7,233.56	-34.53	-3,024.59	3,024.79	0.00	0.00	0.00
10,200.00	91.04	269.35	7,231.74	-35.67	-3,124.57	3,124.77	0.00	0.00	0.00
10,300.00	91.04	269.35	7,229.93	-36.81	-3,224.55	3,224.76	0.00	0.00	0.00
10,400.00	91.04	269.35	7,228.11	-37.95	-3,324.53	3,324.74	0.00	0.00	0.00
10,500.00	91.04	269.35	7,226.30	-39.09	-3,424.50	3,424.73	0.00	0.00	0.00
10,600.00	91.04	269.35	7,224.48	-40.23	-3,524.48	3,524.71	0.00	0.00	0.00
10,700.00	91.04	269.35	7,222.67	-41.37	-3,624.46	3,624.69	0.00	0.00	0.00
10,800.00	91.04	269.35	7,220.85	-42.52	-3,724.43	3,724.68	0.00	0.00	0.00
10,900.00	91.04	269.35	7,219.04	-43.66	-3,824.41	3,824.66	0.00	0.00	0.00
11,000.00	91.04	269.35	7,217.22	-44.80	-3,924.39	3,924.64	0.00	0.00	0.00
11,100.00	91.04	269.35	7,215.41	-45.94	-4,024.36	4,024.63	0.00	0.00	0.00
11,200.00	91.04	269.35	7,213.59	-47.08	-4,124.34	4,124.61	0.00	0.00	0.00
11,300.00	91.04	269.35	7,211.78	-48.22	-4,224.32	4,224.59	0.00	0.00	0.00
11,400.00	91.04	269.35	7,209.96	-49.36	-4,324.30	4,324.58	0.00	0.00	0.00

Legacy Directional

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well 221H
Company:	V-F Petroleum Inc.	TVD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Project:	Eddy County, NM	MD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Site:	Crockett 16 State Com	North Reference:	Grid
Well:	221H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
11,500.00	91.04	269.35	7,208.15	-50.50	-4,424.27	4,424.56	0.00	0.00	0.00	
11,600.00	91.04	269.35	7,206.33	-51.65	-4,524.25	4,524.54	0.00	0.00	0.00	
11,700.00	91.04	269.35	7,204.52	-52.79	-4,624.23	4,624.53	0.00	0.00	0.00	
11,800.00	91.04	269.35	7,202.70	-53.93	-4,724.20	4,724.51	0.00	0.00	0.00	
11,900.00	91.04	269.35	7,200.89	-55.07	-4,824.18	4,824.49	0.00	0.00	0.00	
12,000.00	91.04	269.35	7,199.07	-56.21	-4,924.16	4,924.48	0.00	0.00	0.00	
12,100.00	91.04	269.35	7,197.26	-57.35	-5,024.13	5,024.46	0.00	0.00	0.00	
12,200.00	91.04	269.35	7,195.44	-58.49	-5,124.11	5,124.45	0.00	0.00	0.00	
12,300.00	91.04	269.35	7,193.63	-59.63	-5,224.09	5,224.43	0.00	0.00	0.00	
12,400.00	91.04	269.35	7,191.81	-60.78	-5,324.07	5,324.41	0.00	0.00	0.00	
12,500.00	91.04	269.35	7,190.00	-61.92	-5,424.04	5,424.40	0.00	0.00	0.00	
12,600.00	91.04	269.35	7,188.18	-63.06	-5,524.02	5,524.38	0.00	0.00	0.00	
12,700.00	91.04	269.35	7,186.36	-64.20	-5,624.00	5,624.36	0.00	0.00	0.00	
12,800.00	91.04	269.35	7,184.55	-65.34	-5,723.97	5,724.35	0.00	0.00	0.00	
12,900.00	91.04	269.35	7,182.73	-66.48	-5,823.95	5,824.33	0.00	0.00	0.00	
13,000.00	91.04	269.35	7,180.92	-67.62	-5,923.93	5,924.31	0.00	0.00	0.00	
13,100.00	91.04	269.35	7,179.10	-68.76	-6,023.90	6,024.30	0.00	0.00	0.00	
13,200.00	91.04	269.35	7,177.29	-69.91	-6,123.88	6,124.28	0.00	0.00	0.00	
13,300.00	91.04	269.35	7,175.47	-71.05	-6,223.86	6,224.26	0.00	0.00	0.00	
13,400.00	91.04	269.35	7,173.66	-72.19	-6,323.84	6,324.25	0.00	0.00	0.00	
13,500.00	91.04	269.35	7,171.84	-73.33	-6,423.81	6,424.23	0.00	0.00	0.00	
13,600.00	91.04	269.35	7,170.03	-74.47	-6,523.79	6,524.21	0.00	0.00	0.00	
13,700.00	91.04	269.35	7,168.21	-75.61	-6,623.77	6,624.20	0.00	0.00	0.00	
13,800.00	91.04	269.35	7,166.40	-76.75	-6,723.74	6,724.18	0.00	0.00	0.00	
13,900.00	91.04	269.35	7,164.58	-77.89	-6,823.72	6,824.17	0.00	0.00	0.00	
14,000.00	91.04	269.35	7,162.77	-79.04	-6,923.70	6,924.15	0.00	0.00	0.00	
14,100.00	91.04	269.35	7,160.95	-80.18	-7,023.67	7,024.13	0.00	0.00	0.00	
14,200.00	91.04	269.35	7,159.14	-81.32	-7,123.65	7,124.12	0.00	0.00	0.00	
14,300.00	91.04	269.35	7,157.32	-82.46	-7,223.63	7,224.10	0.00	0.00	0.00	
14,400.00	91.04	269.35	7,155.51	-83.60	-7,323.61	7,324.08	0.00	0.00	0.00	
14,500.00	91.04	269.35	7,153.69	-84.74	-7,423.58	7,424.07	0.00	0.00	0.00	
14,593.33	91.04	269.35	7,152.00	-85.81	-7,516.89	7,517.38	0.00	0.00	0.00	
TD at 14593.33 - BHL - Crockett 16 State Com 221H										

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										
BHL - Crockett 16 State	0.00	0.01	7,152.00	-85.81	-7,516.89	605,666.82	541,881.31	32.665005		-104.197239
- plan hits target center										
- Point										
FTP - Crockett 16 State	0.00	0.00	7,280.00	-5.82	-479.85	605,746.81	548,918.35	32.665198		-104.174372
- plan misses target center by 0.44usft at 7554.69usft MD (7279.71 TVD, -5.48 N, -479.87 E)										
- Point										

Legacy Directional

Planning Report

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well 221H
Company:	V-F Petroleum Inc.	TVD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Project:	Eddy County, NM	MD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Site:	Crockett 16 State Com	North Reference:	Grid
Well:	221H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
6,802.26	6,802.26	0.00	0.00	KOP Start Build 12.00	
7,560.92	7,279.64	-5.55	-486.10	LP 91.04° at 7560.92 MD	
14,593.33	7,152.00	-85.81	-7,516.89	TD at 14593.33	

V-F Petroleum Inc.

**Eddy County, NM
Crockett 16 State Com
221H**

**OH
Plan 1**

Anticollision Report

14 July, 2020

Legacy Directional

Anticollision Report

Company:	V-F Petroleum Inc.	Local Co-ordinate Reference:	Well 221H
Project:	Eddy County, NM	TVD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Reference Site:	Crockett 16 State Com	MD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	221H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Reference	Plan 1		
Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
Interpolation Method:	MD Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 1,659.33usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	7/14/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	14,593.33	Plan 1 (OH)			

Summary							
Site Name	Reference	Offset	Distance		Separation	Warning	
	Measured	Measured	Between	Between			
	Depth	Depth	Centres	Ellipses			
Offset Well - Wellbore - Design	(usft)	(usft)	(usft)	(usft)	Factor		
Crockett 16 State Com							
231H - OH - Plan 1	6,826.73	6,826.51	50.03	1.53	1.031	Level 3, CC, ES, SF	

Offset Design: Crockett 16 State Com - 231H - OH - Plan 1													Offset Site Error:	0.00 usft	
Survey Program:		0-MWD+IGRF+FDIR		Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned:				Offset Well Error:	0.00 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		
0.00	0.00	0.00	0.00	0.00	0.00	-179.82	-50.04	-0.16	50.04						
100.00	100.00	99.80	99.80	0.14	0.14	-179.82	-50.04	-0.16	50.04	49.75	0.29	174.664			
200.00	200.00	199.80	199.80	0.50	0.50	-179.82	-50.04	-0.16	50.04	49.04	1.00	49.890			
300.00	300.00	299.80	299.80	0.86	0.86	-179.82	-50.04	-0.16	50.04	48.32	1.72	29.094			
400.00	400.00	399.80	399.80	1.22	1.22	-179.82	-50.04	-0.16	50.04	47.60	2.44	20.534			
500.00	500.00	499.80	499.80	1.58	1.58	-179.82	-50.04	-0.16	50.04	46.89	3.15	15.866			
600.00	600.00	599.80	599.80	1.94	1.94	-179.82	-50.04	-0.16	50.04	46.17	3.87	12.928			
700.00	700.00	699.80	699.80	2.29	2.29	-179.82	-50.04	-0.16	50.04	45.45	4.59	10.907			
800.00	800.00	799.80	799.80	2.65	2.65	-179.82	-50.04	-0.16	50.04	44.73	5.30	9.433			
900.00	900.00	899.80	899.80	3.01	3.01	-179.82	-50.04	-0.16	50.04	44.02	6.02	8.310			
1,000.00	1,000.00	999.80	999.80	3.37	3.37	-179.82	-50.04	-0.16	50.04	43.30	6.74	7.426			
1,100.00	1,100.00	1,099.80	1,099.80	3.73	3.73	-179.82	-50.04	-0.16	50.04	42.58	7.46	6.712			
1,200.00	1,200.00	1,199.80	1,199.80	4.09	4.09	-179.82	-50.04	-0.16	50.04	41.87	8.17	6.123			
1,300.00	1,300.00	1,299.80	1,299.80	4.45	4.44	-179.82	-50.04	-0.16	50.04	41.15	8.89	5.629			
1,400.00	1,400.00	1,399.80	1,399.80	4.80	4.80	-179.82	-50.04	-0.16	50.04	40.43	9.61	5.209			
1,500.00	1,500.00	1,499.80	1,499.80	5.16	5.16	-179.82	-50.04	-0.16	50.04	39.72	10.32	4.847			
1,600.00	1,600.00	1,599.80	1,599.80	5.52	5.52	-179.82	-50.04	-0.16	50.04	39.00	11.04	4.532			
1,700.00	1,700.00	1,699.80	1,699.80	5.88	5.88	-179.82	-50.04	-0.16	50.04	38.28	11.76	4.256			
1,800.00	1,800.00	1,799.80	1,799.80	6.24	6.24	-179.82	-50.04	-0.16	50.04	37.57	12.47	4.011			
1,900.00	1,900.00	1,899.80	1,899.80	6.60	6.60	-179.82	-50.04	-0.16	50.04	36.85	13.19	3.793			
2,000.00	2,000.00	1,999.80	1,999.80	6.95	6.95	-179.82	-50.04	-0.16	50.04	36.13	13.91	3.598			
2,100.00	2,100.00	2,099.80	2,099.80	7.31	7.31	-179.82	-50.04	-0.16	50.04	35.41	14.62	3.422			
2,200.00	2,200.00	2,199.80	2,199.80	7.67	7.67	-179.82	-50.04	-0.16	50.04	34.70	15.34	3.262			
2,300.00	2,300.00	2,299.80	2,299.80	8.03	8.03	-179.82	-50.04	-0.16	50.04	33.98	16.06	3.116			
2,400.00	2,400.00	2,399.80	2,399.80	8.39	8.39	-179.82	-50.04	-0.16	50.04	33.26	16.78	2.983			
2,500.00	2,500.00	2,499.80	2,499.80	8.75	8.75	-179.82	-50.04	-0.16	50.04	32.55	17.49	2.861			

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

Legacy Directional

Anticollision Report

Company:	V-F Petroleum Inc.	Local Co-ordinate Reference:	Well 221H
Project:	Eddy County, NM	TVD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Reference Site:	Crockett 16 State Com	MD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	221H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design: Crockett 16 State Com - 231H - OH - Plan 1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IGRF+FDIR												Offset Well Error:	0.00 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)			
2,600.00	2,600.00	2,599.80	2,599.80	9.11	9.10	-179.82	-50.04	-0.16	50.04	31.83	18.21	2.748	
2,700.00	2,700.00	2,699.80	2,699.80	9.46	9.46	-179.82	-50.04	-0.16	50.04	31.11	18.93	2.644	
2,800.00	2,800.00	2,799.80	2,799.80	9.82	9.82	-179.82	-50.04	-0.16	50.04	30.40	19.64	2.547	
2,900.00	2,900.00	2,899.80	2,899.80	10.18	10.18	-179.82	-50.04	-0.16	50.04	29.68	20.36	2.458	
3,000.00	3,000.00	2,999.80	2,999.80	10.54	10.54	-179.82	-50.04	-0.16	50.04	28.96	21.08	2.374	
3,100.00	3,100.00	3,099.80	3,099.80	10.90	10.90	-179.82	-50.04	-0.16	50.04	28.25	21.79	2.296	
3,200.00	3,200.00	3,199.80	3,199.80	11.26	11.26	-179.82	-50.04	-0.16	50.04	27.53	22.51	2.223	
3,300.00	3,300.00	3,299.80	3,299.80	11.61	11.61	-179.82	-50.04	-0.16	50.04	26.81	23.23	2.154	
3,400.00	3,400.00	3,399.80	3,399.80	11.97	11.97	-179.82	-50.04	-0.16	50.04	26.09	23.95	2.090	
3,500.00	3,500.00	3,499.80	3,499.80	12.33	12.33	-179.82	-50.04	-0.16	50.04	25.38	24.66	2.029	
3,600.00	3,600.00	3,599.80	3,599.80	12.69	12.69	-179.82	-50.04	-0.16	50.04	24.66	25.38	1.972	
3,700.00	3,700.00	3,699.80	3,699.80	13.05	13.05	-179.82	-50.04	-0.16	50.04	23.94	26.10	1.918	
3,800.00	3,800.00	3,799.80	3,799.80	13.41	13.41	-179.82	-50.04	-0.16	50.04	23.23	26.81	1.866	
3,900.00	3,900.00	3,899.80	3,899.80	13.77	13.76	-179.82	-50.04	-0.16	50.04	22.51	27.53	1.818	
4,000.00	4,000.00	3,999.80	3,999.80	14.12	14.12	-179.82	-50.04	-0.16	50.04	21.79	28.25	1.772	
4,100.00	4,100.00	4,099.80	4,099.80	14.48	14.48	-179.82	-50.04	-0.16	50.04	21.08	28.96	1.728	
4,200.00	4,200.00	4,199.80	4,199.80	14.84	14.84	-179.82	-50.04	-0.16	50.04	20.36	29.68	1.686	
4,300.00	4,300.00	4,299.80	4,299.80	15.20	15.20	-179.82	-50.04	-0.16	50.04	19.64	30.40	1.646	
4,400.00	4,400.00	4,399.80	4,399.80	15.56	15.56	-179.82	-50.04	-0.16	50.04	18.93	31.11	1.608	
4,500.00	4,500.00	4,499.80	4,499.80	15.92	15.92	-179.82	-50.04	-0.16	50.04	18.21	31.83	1.572	
4,600.00	4,600.00	4,599.80	4,599.80	16.27	16.27	-179.82	-50.04	-0.16	50.04	17.49	32.55	1.537	
4,700.00	4,700.00	4,699.80	4,699.80	16.63	16.63	-179.82	-50.04	-0.16	50.04	16.77	33.27	1.504	
4,800.00	4,800.00	4,799.80	4,799.80	16.99	16.99	-179.82	-50.04	-0.16	50.04	16.06	33.98	1.473 Level 3	
4,900.00	4,900.00	4,899.80	4,899.80	17.35	17.35	-179.82	-50.04	-0.16	50.04	15.34	34.70	1.442 Level 3	
5,000.00	5,000.00	4,999.80	4,999.80	17.71	17.71	-179.82	-50.04	-0.16	50.04	14.62	35.42	1.413 Level 3	
5,100.00	5,100.00	5,099.80	5,099.80	18.07	18.07	-179.82	-50.04	-0.16	50.04	13.91	36.13	1.385 Level 3	
5,200.00	5,200.00	5,199.80	5,199.80	18.43	18.42	-179.82	-50.04	-0.16	50.04	13.19	36.85	1.358 Level 3	
5,300.00	5,300.00	5,299.80	5,299.80	18.78	18.78	-179.82	-50.04	-0.16	50.04	12.47	37.57	1.332 Level 3	
5,400.00	5,400.00	5,399.80	5,399.80	19.14	19.14	-179.82	-50.04	-0.16	50.04	11.76	38.28	1.307 Level 3	
5,500.00	5,500.00	5,499.80	5,499.80	19.50	19.50	-179.82	-50.04	-0.16	50.04	11.04	39.00	1.283 Level 3	
5,600.00	5,600.00	5,599.80	5,599.80	19.86	19.86	-179.82	-50.04	-0.16	50.04	10.32	39.72	1.260 Level 3	
5,700.00	5,700.00	5,699.80	5,699.80	20.22	20.22	-179.82	-50.04	-0.16	50.04	9.60	40.43	1.238 Level 3	
5,800.00	5,800.00	5,799.80	5,799.80	20.58	20.58	-179.82	-50.04	-0.16	50.04	8.89	41.15	1.216 Level 3	
5,900.00	5,900.00	5,899.80	5,899.80	20.93	20.93	-179.82	-50.04	-0.16	50.04	8.17	41.87	1.195 Level 3	
6,000.00	6,000.00	5,999.80	5,999.80	21.29	21.29	-179.82	-50.04	-0.16	50.04	7.45	42.59	1.175 Level 3	
6,100.00	6,100.00	6,099.80	6,099.80	21.65	21.65	-179.82	-50.04	-0.16	50.04	6.74	43.30	1.156 Level 3	
6,200.00	6,200.00	6,199.80	6,199.80	22.01	22.01	-179.82	-50.04	-0.16	50.04	6.02	44.02	1.137 Level 3	
6,300.00	6,300.00	6,299.80	6,299.80	22.37	22.37	-179.82	-50.04	-0.16	50.04	5.30	44.74	1.119 Level 3	
6,400.00	6,400.00	6,399.80	6,399.80	22.73	22.73	-179.82	-50.04	-0.16	50.04	4.59	45.45	1.101 Level 3	
6,500.00	6,500.00	6,499.80	6,499.80	23.09	23.08	-179.82	-50.04	-0.16	50.04	3.87	46.17	1.084 Level 3	
6,600.00	6,600.00	6,599.80	6,599.80	23.44	23.44	-179.82	-50.04	-0.16	50.04	3.15	46.89	1.067 Level 3	
6,700.00	6,700.00	6,699.80	6,699.80	23.80	23.80	-179.82	-50.04	-0.16	50.04	2.44	47.60	1.051 Level 3	
6,800.00	6,800.00	6,799.80	6,799.80	24.16	24.16	-179.82	-50.04	-0.16	50.04	1.72	48.32	1.036 Level 3	
6,826.73	6,826.71	6,826.51	6,826.51	24.25	24.26	-90.00	-50.04	-0.16	50.03	1.53	48.51	1.031 Level 3, CC, ES, SF	
6,900.00	6,899.32	6,899.12	6,899.12	24.50	24.52	-100.25	-50.04	-0.16	50.88	1.86	49.02	1.038 Level 3	
7,000.00	6,994.40	6,994.20	6,994.20	24.85	24.86	-125.95	-50.04	-0.16	63.83	14.14	49.70	1.284 Level 3	
7,100.00	7,081.07	7,080.87	7,080.87	25.20	25.17	-145.34	-50.04	-0.16	102.22	51.92	50.30	2.032	
7,200.00	7,155.57	7,155.37	7,155.37	25.59	25.43	-154.45	-50.04	-0.16	163.42	112.63	50.79	3.218	
7,300.00	7,214.62	7,214.42	7,214.42	26.03	25.65	-157.19	-50.04	-0.16	241.30	190.13	51.16	4.716	
7,400.00	7,255.65	7,255.45	7,255.45	26.55	25.79	-153.99	-50.04	-0.16	330.85	279.45	51.41	6.436	
7,500.00	7,276.86	7,276.66	7,276.66	27.14	25.87	-132.83	-50.04	-0.16	427.52	376.00	51.52	8.298	
7,600.00	7,278.93	7,278.73	7,278.73	27.81	25.88	-79.23	-50.04	-0.16	526.85	475.31	51.54	10.222	

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

Legacy Directional Anticollision Report

Company:	V-F Petroleum Inc.	Local Co-ordinate Reference:	Well 221H
Project:	Eddy County, NM	TVD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Reference Site:	Crockett 16 State Com	MD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	221H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design: Crockett 16 State Com - 231H - OH - Plan 1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IGRF+FDIR												Offset Well Error:	0.00 usft
Reference												Rule Assigned:	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
				Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
7,700.00	7,277.12	7,276.92	7,276.92	28.60	25.87	-77.24	-50.04	-0.16	626.46	574.92	51.54	12.155	
7,800.00	7,275.30	7,275.10	7,275.10	29.51	25.86	-75.28	-50.04	-0.16	726.16	674.63	51.54	14.090	
7,900.00	7,273.49	7,273.29	7,273.29	30.52	25.86	-73.35	-50.04	-0.16	825.94	774.40	51.54	16.025	
8,000.00	7,271.67	7,271.47	7,271.47	31.62	25.85	-71.46	-50.04	-0.16	925.76	874.22	51.54	17.962	
8,100.00	7,269.86	7,269.66	7,269.66	32.80	25.84	-69.61	-50.04	-0.16	1,025.61	974.07	51.54	19.898	
8,200.00	7,268.04	7,267.84	7,267.84	34.06	25.84	-67.81	-50.04	-0.16	1,125.49	1,073.94	51.55	21.834	
8,300.00	7,266.23	7,266.03	7,266.03	35.39	25.83	-66.05	-50.04	-0.16	1,225.38	1,173.83	51.55	23.770	
8,400.00	7,264.41	9,738.70	8,588.29	36.78	40.49	-177.84	-65.39	-1,343.13	1,325.16	1,292.46	32.70	40.530	
8,500.00	7,262.60	9,838.70	8,586.88	38.22	41.82	-177.84	-66.53	-1,443.11	1,325.56	1,291.90	33.66	39.381	
8,600.00	7,260.78	9,938.70	8,585.47	39.71	43.20	-177.84	-67.67	-1,543.10	1,325.96	1,291.29	34.67	38.247	
8,700.00	7,258.97	10,038.70	8,584.05	41.24	44.63	-177.84	-68.82	-1,643.08	1,326.36	1,290.64	35.72	37.134	
8,800.00	7,257.15	10,138.70	8,582.64	42.81	46.10	-177.84	-69.96	-1,743.06	1,326.76	1,289.96	36.80	36.049	
8,900.00	7,255.34	10,238.69	8,581.22	44.42	47.61	-177.84	-71.10	-1,843.04	1,327.16	1,289.24	37.93	34.994	
9,000.00	7,253.52	10,338.69	8,579.81	46.05	49.15	-177.84	-72.24	-1,943.03	1,327.57	1,288.49	39.08	33.972	
9,100.00	7,251.71	10,438.69	8,578.40	47.71	50.72	-177.84	-73.39	-2,043.01	1,327.97	1,287.71	40.26	32.986	
9,200.00	7,249.89	10,538.69	8,576.98	49.40	52.33	-177.84	-74.53	-2,142.99	1,328.37	1,286.90	41.47	32.036	
9,300.00	7,248.08	10,638.69	8,575.57	51.11	53.95	-177.84	-75.67	-2,242.98	1,328.77	1,286.07	42.70	31.121	
9,400.00	7,246.26	10,738.69	8,574.16	52.84	55.61	-177.84	-76.82	-2,342.96	1,329.17	1,285.22	43.95	30.244	
9,500.00	7,244.45	10,838.69	8,572.74	54.58	57.28	-177.84	-77.96	-2,442.94	1,329.57	1,284.35	45.22	29.401	
9,600.00	7,242.63	10,938.69	8,571.33	56.35	58.98	-177.84	-79.10	-2,542.92	1,329.97	1,283.46	46.51	28.594	
9,700.00	7,240.82	11,038.69	8,569.92	58.12	60.69	-177.84	-80.24	-2,642.91	1,330.37	1,282.55	47.82	27.820	
9,800.00	7,239.00	11,138.69	8,568.50	59.91	62.42	-177.84	-81.39	-2,742.89	1,330.78	1,281.63	49.14	27.079	
9,900.00	7,237.19	11,238.69	8,567.09	61.72	64.16	-177.84	-82.53	-2,842.87	1,331.18	1,280.69	50.48	26.369	
10,000.00	7,235.37	11,338.69	8,565.67	63.53	65.92	-177.84	-83.67	-2,942.85	1,331.58	1,279.74	51.83	25.689	
10,100.00	7,233.56	11,438.68	8,564.26	65.36	67.69	-177.85	-84.81	-3,042.84	1,331.98	1,278.78	53.20	25.038	
10,200.00	7,231.74	11,538.68	8,562.85	67.19	69.48	-177.85	-85.96	-3,142.82	1,332.38	1,277.81	54.57	24.414	
10,300.00	7,229.93	11,638.68	8,561.43	69.04	71.27	-177.85	-87.10	-3,242.80	1,332.78	1,276.82	55.96	23.817	
10,400.00	7,228.11	11,738.68	8,560.02	70.89	73.08	-177.85	-88.24	-3,342.79	1,333.18	1,275.83	57.35	23.245	
10,500.00	7,226.30	11,838.68	8,558.61	72.75	74.89	-177.85	-89.38	-3,442.77	1,333.58	1,274.82	58.76	22.696	
10,600.00	7,224.48	11,938.68	8,557.19	74.61	76.71	-177.85	-90.53	-3,542.75	1,333.99	1,273.81	60.17	22.169	
10,700.00	7,222.67	12,038.68	8,555.78	76.49	78.55	-177.85	-91.67	-3,642.73	1,334.39	1,272.79	61.59	21.665	
10,800.00	7,220.85	12,138.68	8,554.36	78.37	80.38	-177.85	-92.81	-3,742.72	1,334.79	1,271.77	63.02	21.180	
10,900.00	7,219.04	12,238.68	8,552.95	80.25	82.23	-177.85	-93.96	-3,842.70	1,335.19	1,270.73	64.46	20.715	
11,000.00	7,217.22	12,338.68	8,551.54	82.14	84.08	-177.85	-95.10	-3,942.68	1,335.59	1,269.69	65.90	20.268	
11,100.00	7,215.41	12,438.68	8,550.12	84.03	85.94	-177.85	-96.24	-4,042.66	1,335.99	1,268.65	67.35	19.838	
11,200.00	7,213.59	12,538.68	8,548.71	85.93	87.81	-177.85	-97.38	-4,142.65	1,336.39	1,267.59	68.80	19.425	
11,300.00	7,211.78	12,638.68	8,547.30	87.84	89.68	-177.85	-98.53	-4,242.63	1,336.79	1,266.54	70.26	19.027	
11,400.00	7,209.96	12,738.67	8,545.88	89.74	91.56	-177.85	-99.67	-4,342.61	1,337.19	1,265.47	71.72	18.645	
11,500.00	7,208.15	12,838.67	8,544.47	91.65	93.44	-177.85	-100.81	-4,442.59	1,337.60	1,264.41	73.19	18.276	
11,600.00	7,206.33	12,938.67	8,543.06	93.57	95.32	-177.85	-101.95	-4,542.58	1,338.00	1,263.34	74.66	17.921	
11,700.00	7,204.52	13,038.67	8,541.64	95.48	97.21	-177.85	-103.10	-4,642.56	1,338.40	1,262.26	76.14	17.579	
11,800.00	7,202.70	13,138.67	8,540.23	97.40	99.11	-177.86	-104.24	-4,742.54	1,338.80	1,261.18	77.62	17.249	
11,900.00	7,200.89	13,238.67	8,538.81	99.33	101.00	-177.86	-105.38	-4,842.53	1,339.20	1,260.10	79.10	16.930	
12,000.00	7,199.07	13,338.67	8,537.40	101.25	102.91	-177.86	-106.53	-4,942.51	1,339.60	1,259.01	80.59	16.623	
12,100.00	7,197.26	13,438.67	8,535.99	103.18	104.81	-177.86	-107.67	-5,042.49	1,340.00	1,257.92	82.08	16.326	
12,200.00	7,195.44	13,538.67	8,534.57	105.11	106.72	-177.86	-108.81	-5,142.47	1,340.40	1,256.83	83.57	16.039	
12,300.00	7,193.63	13,638.67	8,533.16	107.04	108.63	-177.86	-109.95	-5,242.46	1,340.81	1,255.73	85.07	15.761	
12,400.00	7,191.81	13,738.67	8,531.75	108.98	110.54	-177.86	-111.10	-5,342.44	1,341.21	1,254.64	86.57	15.493	
12,500.00	7,190.00	13,838.67	8,530.33	110.92	112.46	-177.86	-112.24	-5,442.42	1,341.61	1,253.53	88.07	15.233	
12,600.00	7,188.18	13,938.66	8,528.92	112.86	114.38	-177.86	-113.38	-5,542.40	1,342.01	1,252.43	89.58	14.981	
12,700.00	7,186.36	14,038.66	8,527.51	114.80	116.30	-177.86	-114.52	-5,642.39	1,342.41	1,251.33	91.09	14.738	
12,800.00	7,184.55	14,138.66	8,526.09	116.74	118.23	-177.86	-115.67	-5,742.37	1,342.81	1,250.22	92.59	14.502	

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

Legacy Directional

Anticollision Report

Company:	V-F Petroleum Inc.	Local Co-ordinate Reference:	Well 221H
Project:	Eddy County, NM	TVD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Reference Site:	Crockett 16 State Com	MD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	221H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

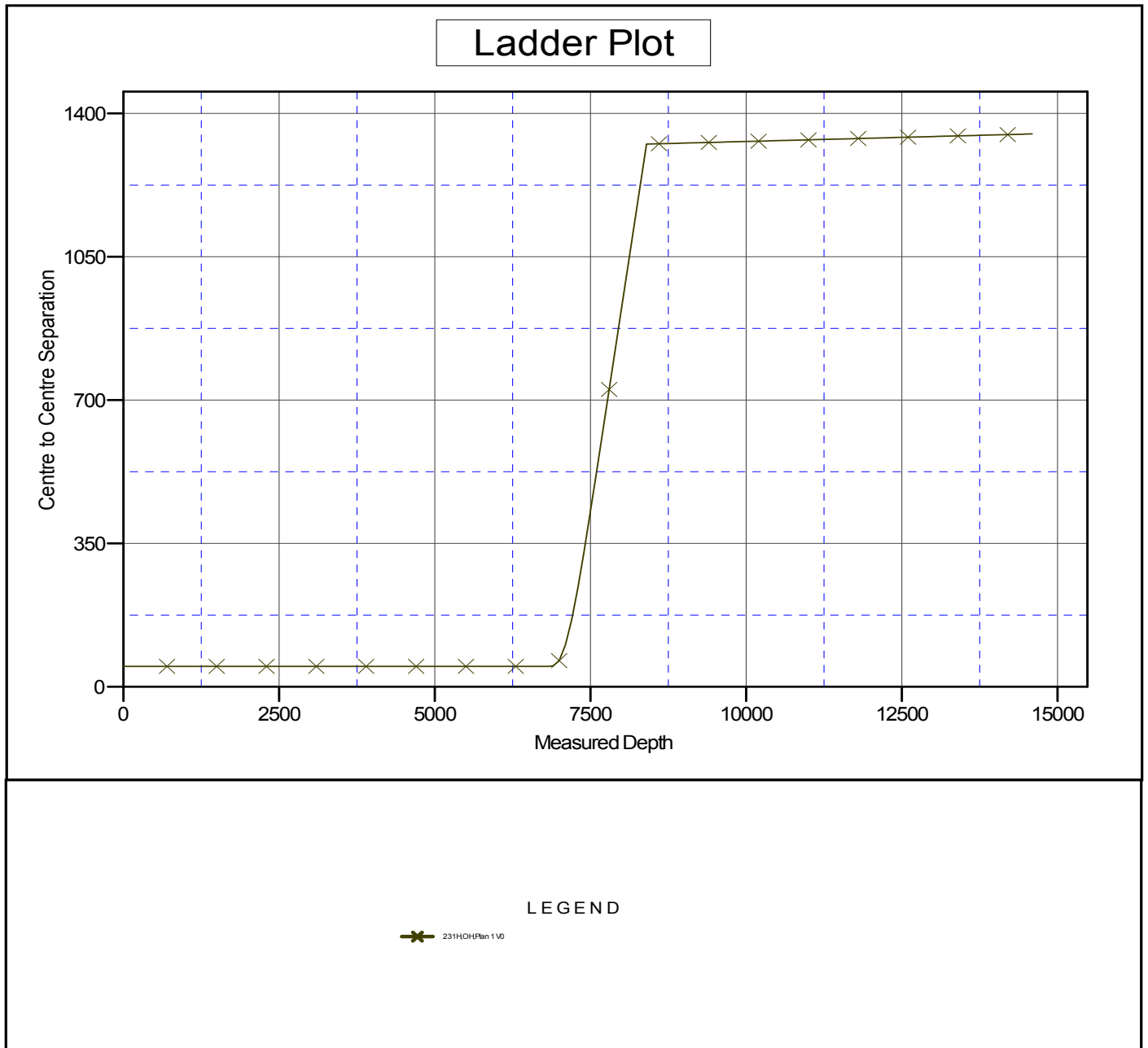
Offset Design: Crockett 16 State Com - 231H - OH - Plan 1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IGRF+FDIR												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance		Rule Assigned:		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,900.00	7,182.73	14,238.66	8,524.68	118.68	120.15	-177.86	-116.81	-5,842.35	1,343.21	1,249.11	94.11	14.273	
13,000.00	7,180.92	14,338.66	8,523.26	120.63	122.08	-177.86	-117.95	-5,942.33	1,343.61	1,247.99	95.62	14.052	
13,100.00	7,179.10	14,438.66	8,521.85	122.58	124.01	-177.86	-119.10	-6,042.32	1,344.01	1,246.88	97.14	13.836	
13,200.00	7,177.29	14,538.66	8,520.44	124.53	125.94	-177.86	-120.24	-6,142.30	1,344.42	1,245.76	98.65	13.628	
13,300.00	7,175.47	14,638.66	8,519.02	126.48	127.88	-177.86	-121.38	-6,242.28	1,344.82	1,244.64	100.17	13.425	
13,400.00	7,173.66	14,738.66	8,517.61	128.43	129.82	-177.86	-122.52	-6,342.27	1,345.22	1,243.52	101.69	13.228	
13,500.00	7,171.84	14,838.66	8,516.20	130.38	131.75	-177.87	-123.67	-6,442.25	1,345.62	1,242.40	103.22	13.037	
13,600.00	7,170.03	14,938.66	8,514.78	132.34	133.69	-177.87	-124.81	-6,542.23	1,346.02	1,241.28	104.74	12.851	
13,700.00	7,168.21	15,038.66	8,513.37	134.29	135.63	-177.87	-125.95	-6,642.21	1,346.42	1,240.15	106.27	12.670	
13,800.00	7,166.40	15,138.66	8,511.96	136.25	137.58	-177.87	-127.09	-6,742.20	1,346.82	1,239.03	107.80	12.494	
13,900.00	7,164.58	15,238.65	8,510.54	138.21	139.52	-177.87	-128.24	-6,842.18	1,347.22	1,237.90	109.32	12.323	
14,000.00	7,162.77	15,338.65	8,509.13	140.17	141.47	-177.87	-129.38	-6,942.16	1,347.63	1,236.77	110.85	12.157	
14,100.00	7,160.95	15,438.65	8,507.71	142.12	143.41	-177.87	-130.52	-7,042.14	1,348.03	1,235.64	112.39	11.995	
14,200.00	7,159.14	15,538.65	8,506.30	144.09	145.36	-177.87	-131.66	-7,142.13	1,348.43	1,234.51	113.92	11.837	
14,300.00	7,157.32	15,638.65	8,504.89	146.05	147.31	-177.87	-132.81	-7,242.11	1,348.83	1,233.38	115.45	11.683	
14,400.00	7,155.51	15,738.65	8,503.47	148.01	149.26	-177.87	-133.95	-7,342.09	1,349.23	1,232.24	116.99	11.533	
14,500.00	7,153.69	15,838.65	8,502.06	149.97	151.21	-177.87	-135.09	-7,442.07	1,349.63	1,231.11	118.52	11.387	
14,593.33	7,152.00	15,913.59	8,501.00	151.80	152.68	-177.87	-135.95	-7,517.00	1,350.13	1,230.34	119.79	11.271	

Legacy Directional Anticollision Report

Company:	V-F Petroleum Inc.	Local Co-ordinate Reference:	Well 221H
Project:	Eddy County, NM	TVD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Reference Site:	Crockett 16 State Com	MD Reference:	GL 3523.2 + 20' KB @ 3543.20usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	221H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GL 3523.2 + 20' KB @ 3543.20usft
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.333334

Coordinates are relative to: 221H
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 300
 Grid Convergence at Surface is: 0.09°



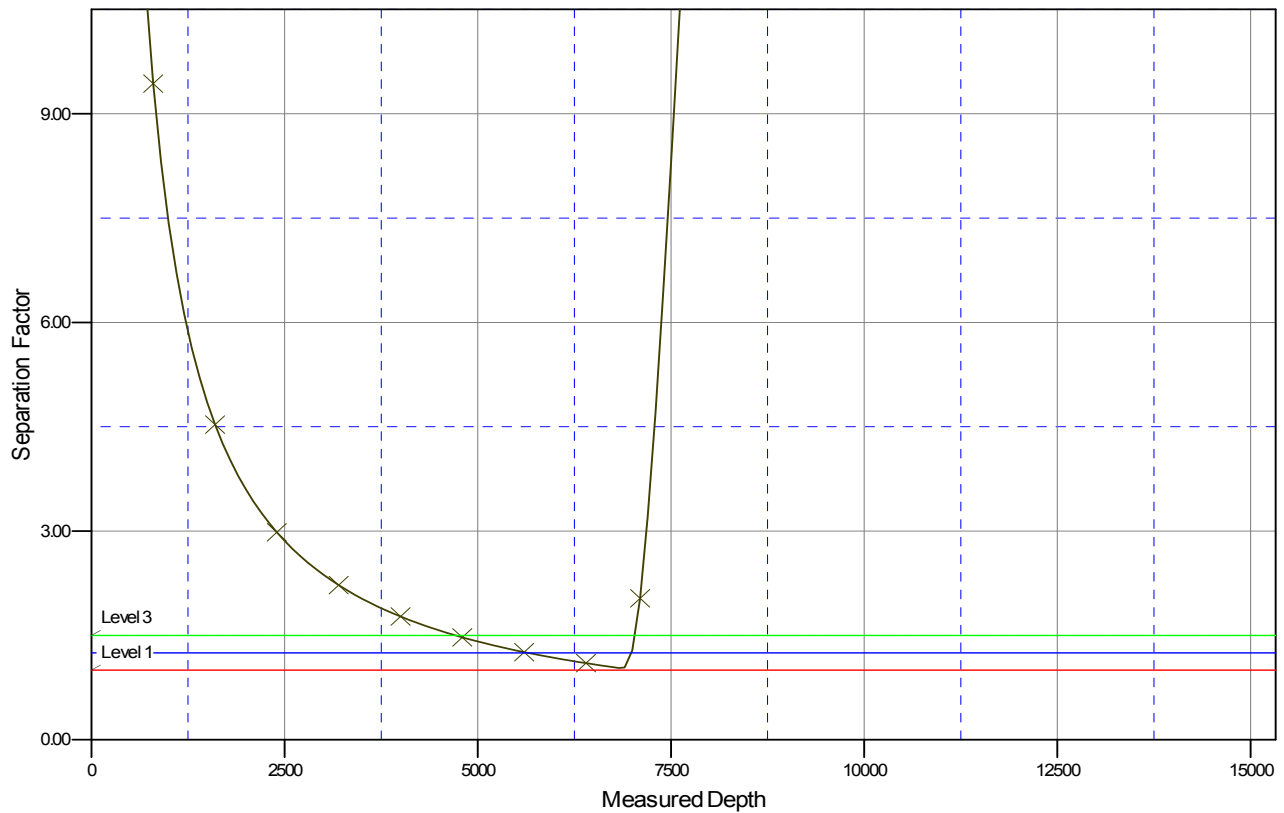
Legacy Directional Anticollision Report

Company:	V-F Petroleum Inc.	Local Co-ordinate Reference:	Well 221H
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Reference Well:	221H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.14 Single User Db
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to GL 3523.2 + 20' KB @ 3543.20usft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334

Coordinates are relative to: 221H
Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 300
Grid Convergence at Surface is: 0.09°

Separation Factor Plot



LEGEND

✕ 221H(OH)Plan 1V0