

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

NMOCD Rec'd: 10/14/2020

Form C-103
Revised July 18, 2013

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

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. 30-015-46008
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐		5. Indicate Type of Lease STATE ☐ FEE ☒
2. Name of Operator Redwood Operating LLC		6. State Oil & Gas Lease No.
3. Address of Operator P.O. Box 1370 Artesia, NM 88210		7. Lease Name or Unit Agreement Name Leavitt 13
4. Well Location Unit Letter <u>I</u> : <u>660</u> feet from the <u>North</u> line and <u>500</u> feet from the <u>West</u> line Section <u>18</u> Township <u>18S</u> Range <u>27E</u> NMPM County <u>Eddy, NM</u>		8. Well Number 1H
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3287.5' GR		9. OGRID Number 330211
		10. Pool name or Wildcat Red Lake; Glorieta Yeso

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: ☐	Change to APD ☒	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.

Redwood Operating request the following changes to the Leavitt 13 1H APD:

BHL- Unit D, Sec. 13 T18S R26E 990 FNL 1 FWL

Surface- Drill 12 1/4" hole to 1230'. Run 9 5/8", 36#, J-55, ST&C csg to 1230'. Cmt w/ 550sx Class C to surface
Production- Drill 8 3/4" hole to 8924'. Run 7", 26#, L-80, LT&C csg 0 to 2300', 7", 26#, L-80, BT&C csg
2300 to 3400', 5 1/2", 17#, L-80, BT&C 3400-8924'. Cmt w/ 200sx 35/65 Perlite, 1445sx PVL to surface.

Spud Date:

Rig Release Date:

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

SIGNATURE Deana Weaver TITLE Production Clerk DATE 10/13/2020

Type or print name Deana Weaver E-mail address: dweaver@mec.com PHONE: 575-748-1288

For State Use Only

APPROVED BY: John Garcia TITLE Petroleum Engineer DATE 11/3/2020

Conditions of Approval (if any):

KP 10/26/2020 GEO Review

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 30-015-46008	² Pool Code 51120	³ Pool Name Red Lake; Glorieta- Yeso
⁴ Property Code 316765	⁵ Property Name LEAVITT 13	⁶ Well Number 1H
⁷ OGRID No. 330211	⁸ Operator Name REDWOOD OPERATING LLC	⁹ Elevation 3287.5

¹⁰ Surface Location

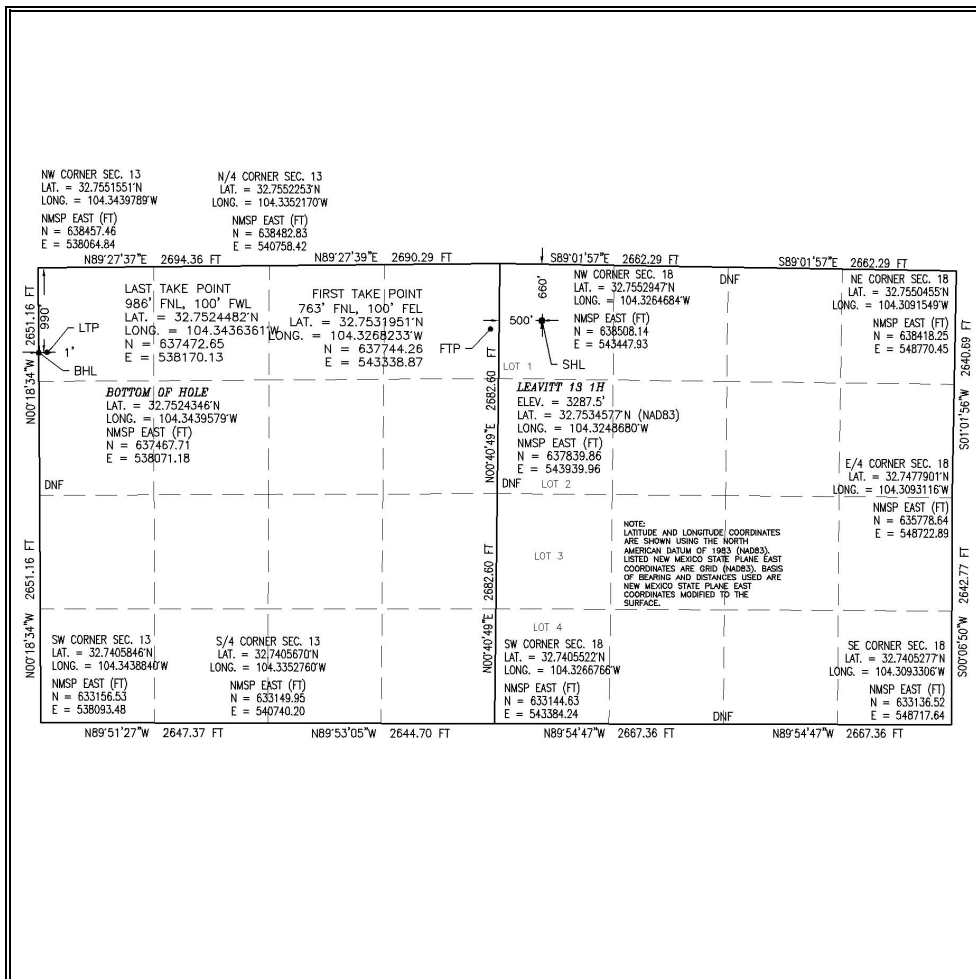
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	18	18 S	27 E		660	NORTH	500	WEST	EDDY

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
D	13	18 S	26 E		990	NORTH	1	WEST	EDDY

¹² Dedicated Acres 160	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Deana Weaver</i> 10/13/2020 Signature Date Deana Weaver Printed Name dweaver@mec.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. SEPTEMBER 10, 2020 Date of Survey Signature and Seal of Professional Surveyor: Certificate Number: 12797 Professional Surveyor No. 4816E
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Intent ☒ As Drilled ☐

API #

Operator Name:	Property Name:	Well Number
REDWOOD OPERATING LLC	LEAVITT 13	1H

Kick Off Point (KOP)

UL	Section 18	Township 18S	Range 27E	Lot 1	Feet 660	From N/S NORTH	Feet 500	From E/W WEST	County EDDY
Latitude 32.7534577					Longitude 104.3248680			NAD 83	

First Take Point (FTP)

UL A	Section 13	Township 18S	Range 26E	Lot	Feet 763	From N/S NORTH	Feet 100	From E/W EAST	County EDDY
Latitude 32.7531951					Longitude 104.3268233			NAD 83	

Last Take Point (LTP)

UL D	Section 13	Township 18S	Range 26E	Lot	Feet 986	From N/S NORTH	Feet 100	From E/W WEST	County EDDY
Latitude 32.7524482					Longitude 104.3436361			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.

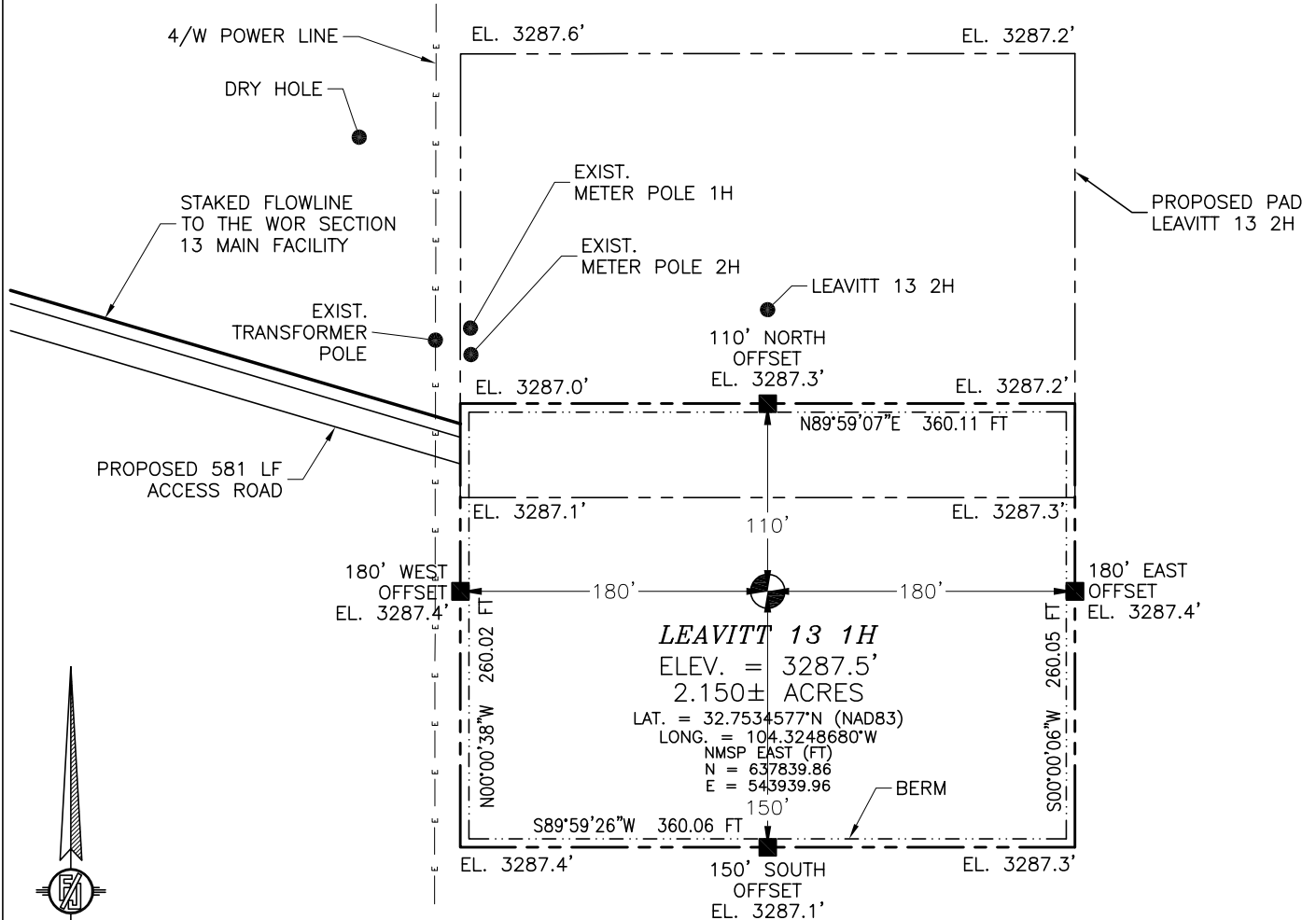
API #

Operator Name:	Property Name:	Well Number

KZ 06/29/2018

SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
SITE MAP

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



010 50 100 200

SCALE 1" = 100'

DIRECTIONS TO LOCATION

FROM CR 39 (FOUR DINKUS) AND CR 44 (FANNING) AND CALICHE LEASE ROAD GO EAST ON CALICHE LEASE ROAD 1.05 MILES, BEND LEFT AND GO NORTHEAST 917', TURN RIGHT AND GO SOUTH 477' TO EXISTING HIGGINS TRUST 13A 2 PAD, FROM THE SOUTHEAST PAD CORNER FOLLOW PROPOSED ROAD SURVEY FLAGS SOUTHEAST 581' TO THE NORTHWEST PAD CORNER FOR THIS LOCATION.

I, FILMON 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 TO THE SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO.

FILMON F. JARAMILLO, PLS 127287

MADEON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3341

CARLSBAD, NEW MEXICO

REDWOOD OPERATING LLC

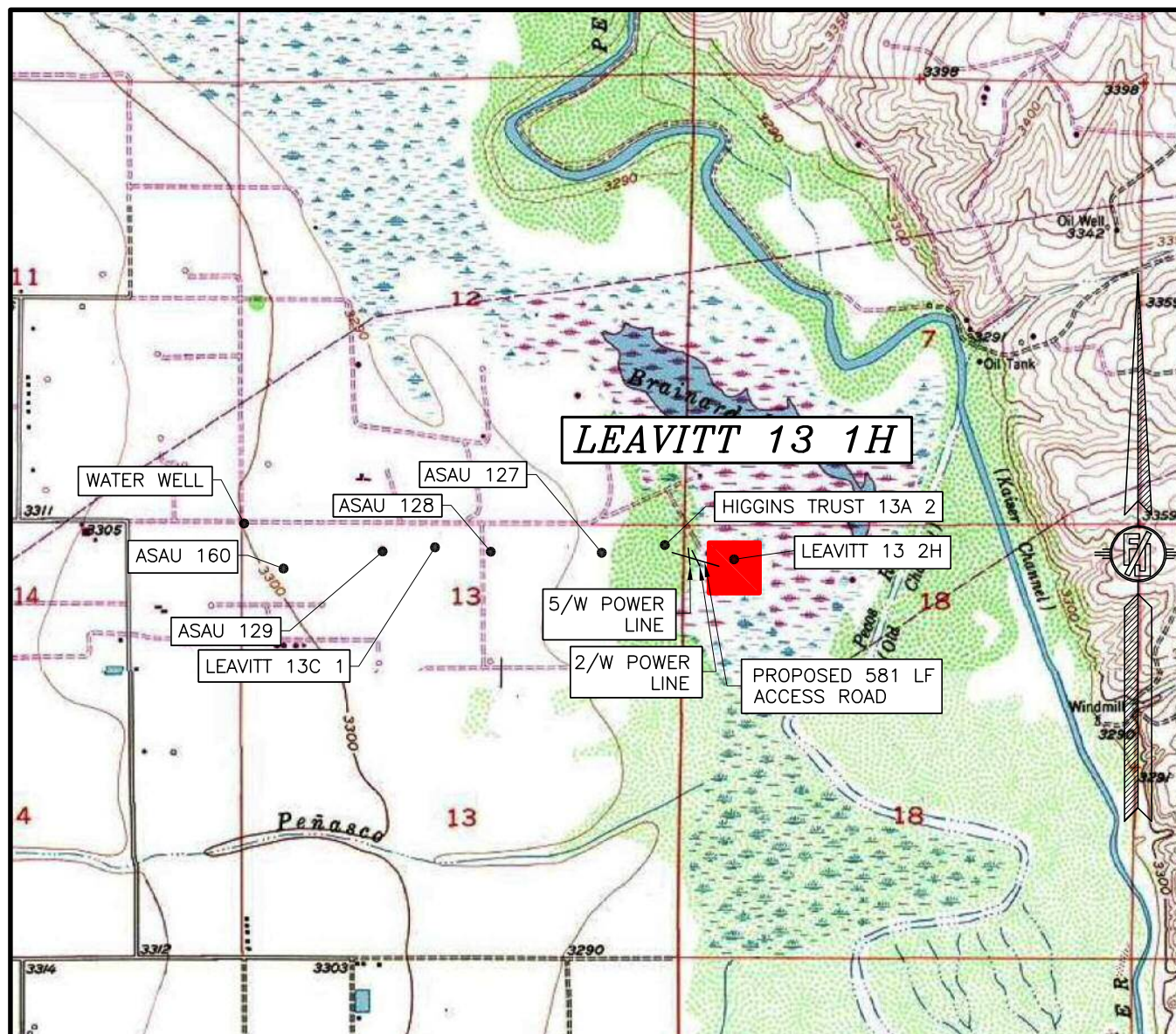
LEAVITT 13 1H

LOCATED 660 FT. FROM THE NORTH LINE
AND 500 FT. FROM THE WEST LINE OF
SECTION 18, TOWNSHIP 18 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

SEPTEMBER 10, 2020

SURVEY NO. 4816E

SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO
 LOCATION VERIFICATION MAP



USGS/4UAD MAP:
 SPRING LAKE

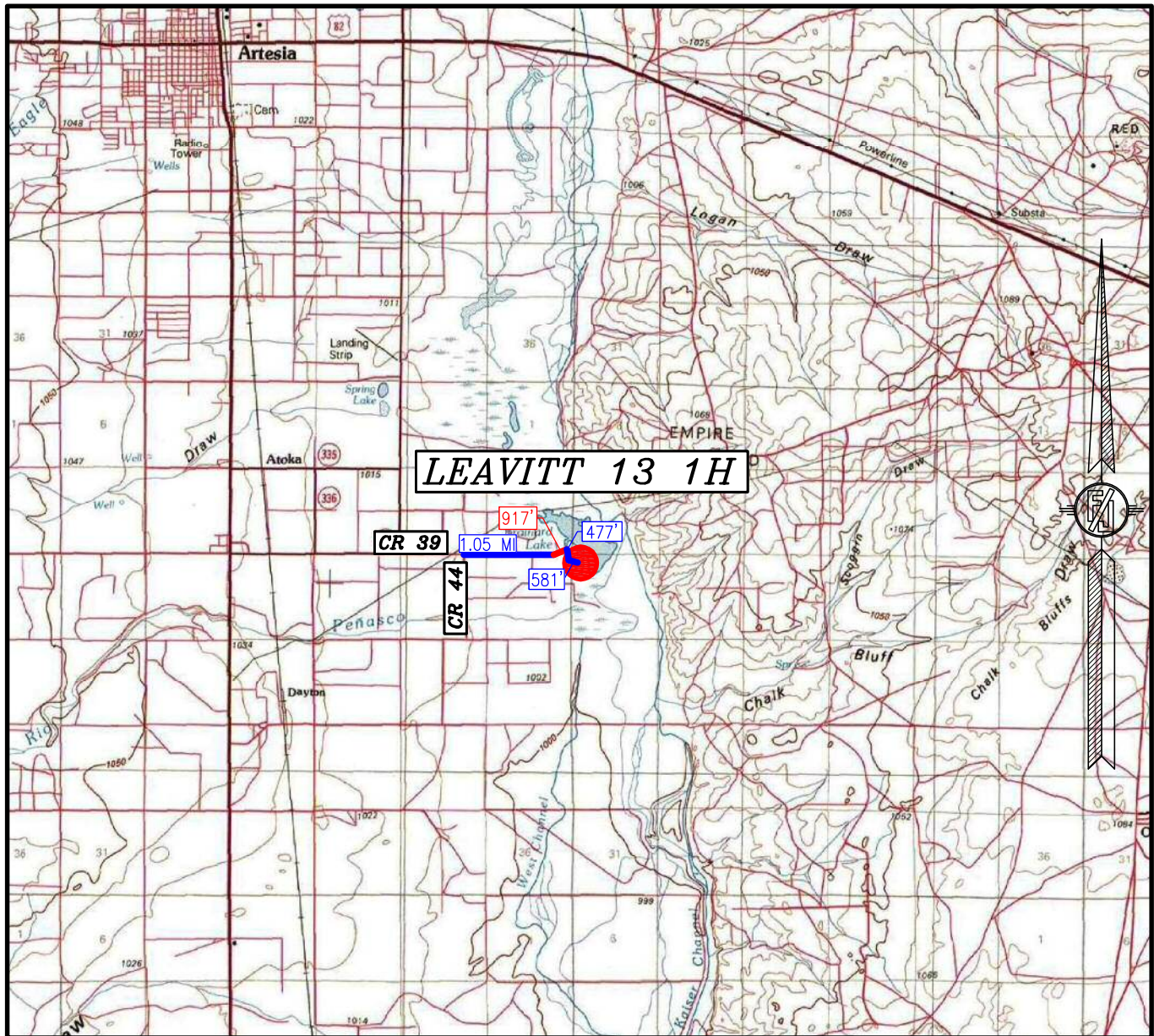
NOT TO SCALE

REDWOOD OPERATING LLC
LEAVITT 13 1H
 LOCATED 660 FT. FROM THE NORTH LINE
 AND 500 FT. FROM THE WEST LINE OF
 SECTION 18, TOWNSHIP 18 SOUTH,
 RANGE 27 EAST, N.M.P.M.
 EDDY COUNTY, STATE OF NEW MEXICO

SEPTEMBER 10, 2020

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 234-3341 SURVEY NO. 4816E CARLSBAD, NEW MEXICO

SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

REDWOOD OPERATING LLC
LEAVITT 13 1H

LOCATED 660 FT. FROM THE NORTH LINE
AND 500 FT. FROM THE WEST LINE OF
SECTION 18, TOWNSHIP 18 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

SEPTEMBER 10, 2020

DIRECTIONS TO LOCATION

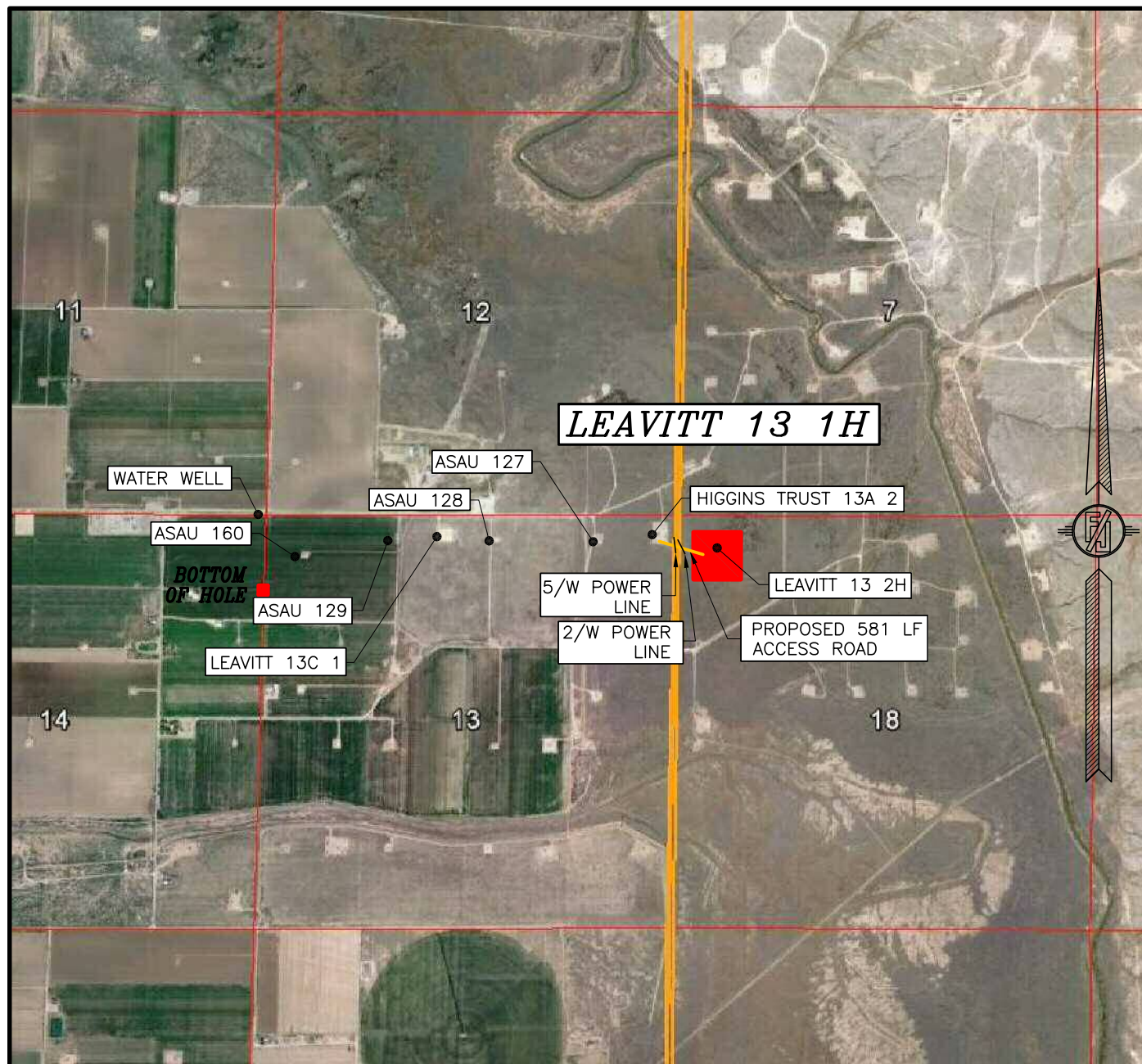
FROM CR 39 (FOUR DINKUS) AND CR 44 (FANNING) AND CALICHE LEASE ROAD GO EAST ON CALICHE LEASE ROAD 1.05 MILES, BEND LEFT AND GO NORTHEAST 917', TURN RIGHT AND GO SOUTH 477' TO EXISTING HIGGINS TRUST 13A 2 PAD, FROM THE SOUTHEAST PAD CORNER FOLLOW PROPOSED ROAD SURVEY FLAGS SOUTHEAST 581' TO THE NORTHWEST PAD CORNER FOR THIS LOCATION.

SURVEY NO. 4816E

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

CARLSBAD, NEW MEXICO

SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
MARCH 2016

REDWOOD OPERATING LLC
LEAVITT 13 1H
LOCATED 660 FT. FROM THE NORTH LINE
AND 500 FT. FROM THE WEST LINE OF
SECTION 18, TOWNSHIP 18 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

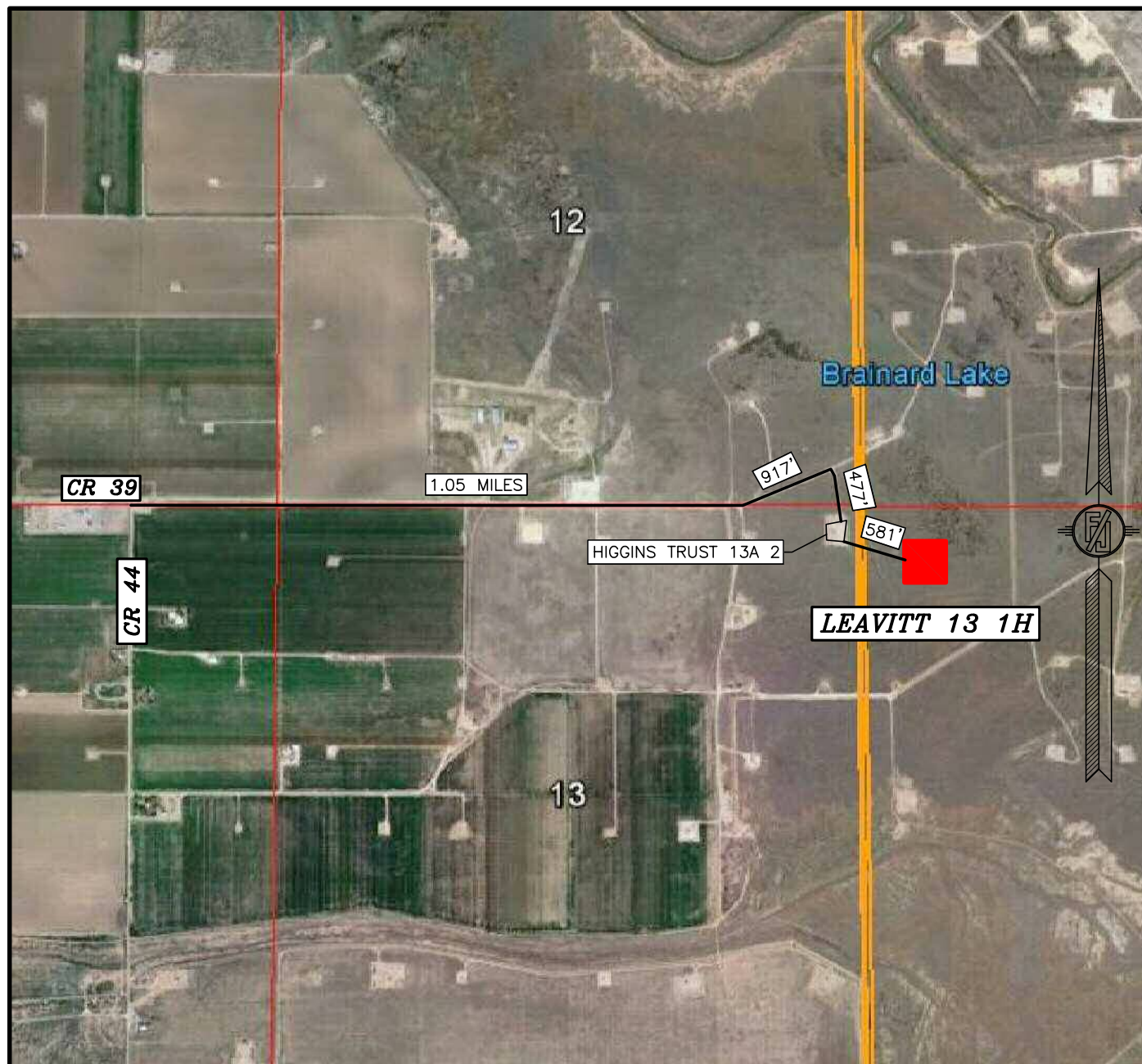
SEPTEMBER 10, 2020

MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3341

SURVEY NO. 4816E
CARLSBAD, NEW MEXICO

SECTION 18, TOWNSHIP 18 SOUTH, RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO
ACCESS AERIAL ROUTE MAP



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
MARCH 2016

REDWOOD OPERATING LLC
LEAVITT 13 1H
LOCATED 660 FT. FROM THE NORTH LINE
AND 500 FT. FROM THE WEST LINE OF
SECTION 18, TOWNSHIP 18 SOUTH,
RANGE 27 EAST, N.M.P.M.
EDDY COUNTY, STATE OF NEW MEXICO

SEPTEMBER 10, 2020

MADRON SURVEYING, INC.

301 SOUTH CANAL
(575) 234-3341

SURVEY NO. 4816E
CARLSBAD, NEW MEXICO



PANTHER

Redwood Operating LLC

Eddy County, NM

Sec 18-T18S-R27E

Leavitt 13 #1H

Wellbore #1

Plan: Plan #2

Standard Planning Report

04 September, 2020

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Leavitt 13 #1H
Company:	Redwood Operating LLC	TVD Reference:	3287.5+18 @ 3305.5usft
Project:	Eddy County, NM	MD Reference:	3287.5+18 @ 3305.5usft
Site:	Sec 18-T18S-R27E	North Reference:	Grid
Well:	Leavitt 13 #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Project	Eddy County, NM		
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 18-T18S-R27E			
Site Position:		Northing:	637,839.86 usft	Latitude:	32° 45' 12.448 N
From:	Map	Easting:	543,939.96 usft	Longitude:	104° 19' 29.525 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.00 °

Well	Leavitt 13 #1H					
Well Position	+N/-S	0.0 usft	Northing:	637,839.86 usft	Latitude:	32° 45' 12.448 N
	+E/-W	0.0 usft	Easting:	543,939.96 usft	Longitude:	104° 19' 29.525 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,287.5 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	09/02/20	7.00	60.39	47,840.52238118

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	268.00

Plan Survey Tool Program	Date	09/04/20		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	8,646.1	Plan #2 (Wellbore #1)	MWD
				OWSG 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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,410.9	0.00	0.00	2,410.9	0.0	0.0	0.00	0.00	0.00	0.00	
3,098.4	55.00	255.80	2,997.6	-74.9	-296.1	8.00	8.00	0.00	255.80	
3,348.4	55.00	255.80	3,141.0	-125.2	-494.6	0.00	0.00	0.00	0.00	
3,665.4	90.81	269.52	3,233.0	-159.6	-789.8	12.00	11.30	4.33	22.64	
8,646.9	90.81	269.52	3,163.0	-201.2	-5,770.7	0.00	0.00	0.00	0.00	BHL Leavitt 13 #1H



Database: EDM 5000.15 Single User Db
Company: Redwood Operating LLC
Project: Eddy County, NM
Site: Sec 18-T18S-R27E
Well: Leavitt 13 #1H
Wellbore: Wellbore #1
Design: Plan #2

Local Co-ordinate Reference: Well Leavitt 13 #1H
TVD Reference: 3287.5+18 @ 3305.5usft
MD Reference: 3287.5+18 @ 3305.5usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,410.9	0.00	0.00	2,410.9	0.0	0.0	0.0	0.00	0.00	0.00
KOP BLD 8°/100'									
2,450.0	3.13	255.80	2,450.0	-0.3	-1.0	1.0	8.00	8.00	0.00
2,500.0	7.13	255.80	2,499.8	-1.4	-5.4	5.4	8.00	8.00	0.00
2,550.0	11.13	255.80	2,549.1	-3.3	-13.1	13.2	8.00	8.00	0.00
2,600.0	15.13	255.80	2,597.8	-6.1	-24.1	24.3	8.00	8.00	0.00
2,650.0	19.13	255.80	2,645.6	-9.7	-38.3	38.6	8.00	8.00	0.00
2,700.0	23.13	255.80	2,692.2	-14.1	-55.8	56.3	8.00	8.00	0.00
2,750.0	27.13	255.80	2,737.5	-19.3	-76.4	77.0	8.00	8.00	0.00
2,800.0	31.13	255.80	2,781.1	-25.3	-100.0	100.8	8.00	8.00	0.00
2,850.0	35.13	255.80	2,823.0	-32.0	-126.5	127.5	8.00	8.00	0.00
2,900.0	39.13	255.80	2,862.9	-39.4	-155.7	157.0	8.00	8.00	0.00
2,950.0	43.13	255.80	2,900.5	-47.5	-187.6	189.1	8.00	8.00	0.00
3,000.0	47.13	255.80	2,935.8	-56.2	-221.9	223.8	8.00	8.00	0.00
3,050.0	51.13	255.80	2,968.5	-65.4	-258.6	260.7	8.00	8.00	0.00
3,098.4	55.00	255.80	2,997.6	-74.9	-296.1	298.5	8.00	8.00	0.00
EOB HLD 55° Inc. 250'									
3,100.0	55.00	255.80	2,998.5	-75.2	-297.3	299.8	0.00	0.00	0.00
3,200.0	55.00	255.80	3,055.8	-95.3	-376.8	379.8	0.00	0.00	0.00
3,300.0	55.00	255.80	3,113.2	-115.4	-456.2	459.9	0.00	0.00	0.00
3,348.4	55.00	255.80	3,141.0	-125.2	-494.6	498.7	0.00	0.00	0.00
CONT BLD 12°/100'									
3,350.0	55.18	255.89	3,141.9	-125.5	-495.9	499.9	12.00	11.08	5.63
3,375.0	57.95	257.25	3,155.7	-130.3	-516.2	520.4	12.00	11.11	5.44
3,400.0	60.75	258.53	3,168.4	-134.8	-537.2	541.6	12.00	11.16	5.11
3,425.0	63.55	259.74	3,180.1	-139.0	-558.9	563.4	12.00	11.21	4.84
3,450.0	66.36	260.89	3,190.7	-142.8	-581.2	585.8	12.00	11.25	4.61
3,475.0	69.18	262.00	3,200.1	-146.2	-604.1	608.8	12.00	11.28	4.42



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Leavitt 13 #1H
Company:	Redwood Operating LLC	TVD Reference:	3287.5+18 @ 3305.5usft
Project:	Eddy County, NM	MD Reference:	3287.5+18 @ 3305.5usft
Site:	Sec 18-T18S-R27E	North Reference:	Grid
Well:	Leavitt 13 #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

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)
3,500.0	72.01	263.06	3,208.4	-149.3	-627.5	632.3	12.00	11.31	4.25
3,525.0	74.84	264.09	3,215.6	-152.0	-651.3	656.2	12.00	11.33	4.12
3,550.0	77.68	265.09	3,221.5	-154.3	-675.5	680.4	12.00	11.35	4.01
3,575.0	80.52	266.07	3,226.2	-156.2	-699.9	705.0	12.00	11.36	3.92
3,600.0	83.36	267.04	3,229.7	-157.6	-724.6	729.7	12.00	11.38	3.86
3,625.0	86.21	267.99	3,232.0	-158.7	-749.5	754.6	12.00	11.38	3.82
3,650.0	89.06	268.94	3,233.0	-159.4	-774.5	779.6	12.00	11.39	3.79
3,665.4	90.81	269.52	3,233.0	-159.6	-789.8	794.9	12.00	11.39	3.78
EOB HLD 90.81° Inc.									
3,700.0	90.81	269.52	3,232.6	-159.9	-824.5	829.5	0.00	0.00	0.00
3,800.0	90.81	269.52	3,231.2	-160.7	-924.5	929.5	0.00	0.00	0.00
3,900.0	90.81	269.52	3,229.7	-161.6	-1,024.4	1,029.5	0.00	0.00	0.00
4,000.0	90.81	269.52	3,228.3	-162.4	-1,124.4	1,129.4	0.00	0.00	0.00
4,100.0	90.81	269.52	3,226.9	-163.2	-1,224.4	1,229.4	0.00	0.00	0.00
4,200.0	90.81	269.52	3,225.5	-164.1	-1,324.4	1,329.3	0.00	0.00	0.00
4,300.0	90.81	269.52	3,224.1	-164.9	-1,424.4	1,429.3	0.00	0.00	0.00
4,400.0	90.81	269.52	3,222.7	-165.7	-1,524.4	1,529.2	0.00	0.00	0.00
4,500.0	90.81	269.52	3,221.3	-166.6	-1,624.4	1,629.2	0.00	0.00	0.00
4,600.0	90.81	269.52	3,219.9	-167.4	-1,724.4	1,729.1	0.00	0.00	0.00
4,700.0	90.81	269.52	3,218.5	-168.2	-1,824.3	1,829.1	0.00	0.00	0.00
4,800.0	90.81	269.52	3,217.1	-169.1	-1,924.3	1,929.0	0.00	0.00	0.00
4,900.0	90.81	269.52	3,215.7	-169.9	-2,024.3	2,029.0	0.00	0.00	0.00
5,000.0	90.81	269.52	3,214.3	-170.8	-2,124.3	2,129.0	0.00	0.00	0.00
5,100.0	90.81	269.52	3,212.9	-171.6	-2,224.3	2,228.9	0.00	0.00	0.00
5,200.0	90.81	269.52	3,211.5	-172.4	-2,324.3	2,328.9	0.00	0.00	0.00
5,300.0	90.81	269.52	3,210.1	-173.3	-2,424.3	2,428.8	0.00	0.00	0.00
5,400.0	90.81	269.52	3,208.7	-174.1	-2,524.2	2,528.8	0.00	0.00	0.00
5,500.0	90.81	269.52	3,207.2	-174.9	-2,624.2	2,628.7	0.00	0.00	0.00
5,600.0	90.81	269.52	3,205.8	-175.8	-2,724.2	2,728.7	0.00	0.00	0.00
5,700.0	90.81	269.52	3,204.4	-176.6	-2,824.2	2,828.6	0.00	0.00	0.00
5,800.0	90.81	269.52	3,203.0	-177.4	-2,924.2	2,928.6	0.00	0.00	0.00
5,900.0	90.81	269.52	3,201.6	-178.3	-3,024.2	3,028.6	0.00	0.00	0.00
6,000.0	90.81	269.52	3,200.2	-179.1	-3,124.2	3,128.5	0.00	0.00	0.00
6,100.0	90.81	269.52	3,198.8	-180.0	-3,224.2	3,228.5	0.00	0.00	0.00
6,200.0	90.81	269.52	3,197.4	-180.8	-3,324.1	3,328.4	0.00	0.00	0.00
6,300.0	90.81	269.52	3,196.0	-181.6	-3,424.1	3,428.4	0.00	0.00	0.00
6,400.0	90.81	269.52	3,194.6	-182.5	-3,524.1	3,528.3	0.00	0.00	0.00
6,500.0	90.81	269.52	3,193.2	-183.3	-3,624.1	3,628.3	0.00	0.00	0.00
6,600.0	90.81	269.52	3,191.8	-184.1	-3,724.1	3,728.2	0.00	0.00	0.00
6,700.0	90.81	269.52	3,190.4	-185.0	-3,824.1	3,828.2	0.00	0.00	0.00
6,800.0	90.81	269.52	3,189.0	-185.8	-3,924.1	3,928.1	0.00	0.00	0.00
6,900.0	90.81	269.52	3,187.6	-186.6	-4,024.0	4,028.1	0.00	0.00	0.00
7,000.0	90.81	269.52	3,186.2	-187.5	-4,124.0	4,128.1	0.00	0.00	0.00
7,100.0	90.81	269.52	3,184.8	-188.3	-4,224.0	4,228.0	0.00	0.00	0.00
7,200.0	90.81	269.52	3,183.3	-189.2	-4,324.0	4,328.0	0.00	0.00	0.00
7,300.0	90.81	269.52	3,181.9	-190.0	-4,424.0	4,427.9	0.00	0.00	0.00
7,400.0	90.81	269.52	3,180.5	-190.8	-4,524.0	4,527.9	0.00	0.00	0.00
7,500.0	90.81	269.52	3,179.1	-191.7	-4,624.0	4,627.8	0.00	0.00	0.00
7,600.0	90.81	269.52	3,177.7	-192.5	-4,723.9	4,727.8	0.00	0.00	0.00
7,700.0	90.81	269.52	3,176.3	-193.3	-4,823.9	4,827.7	0.00	0.00	0.00
7,800.0	90.81	269.52	3,174.9	-194.2	-4,923.9	4,927.7	0.00	0.00	0.00
7,900.0	90.81	269.52	3,173.5	-195.0	-5,023.9	5,027.7	0.00	0.00	0.00
8,000.0	90.81	269.52	3,172.1	-195.8	-5,123.9	5,127.6	0.00	0.00	0.00
8,100.0	90.81	269.52	3,170.7	-196.7	-5,223.9	5,227.6	0.00	0.00	0.00

Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Leavitt 13 #1H
Company:	Redwood Operating LLC	TVD Reference:	3287.5+18 @ 3305.5usft
Project:	Eddy County, NM	MD Reference:	3287.5+18 @ 3305.5usft
Site:	Sec 18-T18S-R27E	North Reference:	Grid
Well:	Leavitt 13 #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

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)	
8,200.0	90.81	269.52	3,169.3	-197.5	-5,323.9	5,327.5	0.00	0.00	0.00	
8,300.0	90.81	269.52	3,167.9	-198.3	-5,423.9	5,427.5	0.00	0.00	0.00	
8,400.0	90.81	269.52	3,166.5	-199.2	-5,523.8	5,527.4	0.00	0.00	0.00	
8,500.0	90.81	269.52	3,165.1	-200.0	-5,623.8	5,627.4	0.00	0.00	0.00	
8,600.0	90.81	269.52	3,163.7	-200.9	-5,723.8	5,727.3	0.00	0.00	0.00	
8,646.9	90.81	269.52	3,163.0	-201.2	-5,770.7	5,774.2	0.00	0.00	0.00	
TD at 8646.9										

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
BHL Leavitt 13 #1H - plan hits target center - Point	0.00	360.00	3,163.0	-201.2	-5,770.7	637,638.61	538,169.25	32° 45' 10.456 N	104° 20' 37.100 W	
FTP Leavitt 13 #1H - plan misses target center by 32.1usft at 3484.5usft MD (3203.4 TVD, -147.4 N, -613.0 E) - Point	0.00	0.00	3,233.0	-152.7	-601.8	637,687.20	543,338.20	32° 45' 10.938 N	104° 19' 36.572 W	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
2,410.9	2,410.9	0.0	0.0	KOP BLD 8°/100'	
3,098.4	2,997.6	-74.9	-296.1	EOB HLD 55° Inc. 250'	
3,348.4	3,141.0	-125.2	-494.6	CONT BLD 12°/100'	
3,665.4	3,233.0	-159.6	-789.8	EOB HLD 90.81° Inc.	
8,646.9	3,163.0	-201.2	-5,770.7	TD at 8646.9	



PANTHER

Redwood Operating LLC

Eddy County, NM

Sec 18-T18S-R27E

Leavitt 13 #1H

Wellbore #1

Plan #2

Anticollision Report

04 September, 2020



Microsoft
Anticollision Report

Company:	Redwood Operating LLC	Local Co-ordinate Reference:	Well Leavitt 13 #1H
Project:	Eddy County, NM	TVD Reference:	3287.5+18 @ 3305.5usft
Reference Site:	Sec 18-T18S-R27E	MD Reference:	3287.5+18 @ 3305.5usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Leavitt 13 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum ellipse separation of 1,000.0 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	09/04/20		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	8,646.1	Plan #2 (Wellbore #1)	MWD	OWSG 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 18-T18S-R27E							
Higgins Trust 1 - Wellbore #1 - Wellbore #1	4,370.5	3,227.5	107.6	0.7	1.006	Level 2, CC, ES, SF	

Offset Design	Sec 18-T18S-R27E - Higgins Trust 1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program:	224-INC-ONLY												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor	Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-102.49	-331.0	-1,494.0	1,530.2					
100.0	100.0	100.6	100.6	0.3	1.2	-102.49	-330.9	-1,494.0	1,530.2	1,528.9	1.35	1,133.628		
200.0	200.0	201.3	201.3	1.0	2.3	-102.48	-330.6	-1,494.0	1,530.1	1,527.1	2.99	510.960		
300.0	300.0	302.1	302.1	1.5	4.6	-102.46	-330.1	-1,494.0	1,530.0	1,524.5	5.54	275.984		
400.0	400.0	403.0	403.0	1.9	7.1	-102.43	-329.3	-1,494.0	1,529.9	1,521.5	8.34	183.391		
500.0	500.0	503.9	503.9	2.3	9.7	-102.39	-328.2	-1,494.0	1,529.6	1,518.5	11.12	137.566		
600.0	600.0	604.7	604.7	2.7	12.4	-102.34	-326.9	-1,494.0	1,529.4	1,515.4	13.99	109.356		
700.0	700.0	705.4	705.4	3.1	15.1	-102.29	-325.3	-1,494.0	1,529.0	1,512.1	16.92	90.377		
800.0	800.0	806.1	806.1	3.5	17.8	-102.22	-323.6	-1,494.0	1,528.7	1,508.8	19.85	77.027		
900.0	900.0	906.8	906.7	3.9	20.5	-102.15	-321.6	-1,494.0	1,528.2	1,505.5	22.77	67.121		
1,000.0	1,000.0	1,006.0	1,005.9	4.2	22.8	-102.07	-319.5	-1,494.0	1,527.8	1,502.5	25.31	60.369		
1,100.0	1,100.0	1,104.2	1,104.1	4.6	24.7	-102.02	-318.0	-1,494.0	1,527.5	1,499.9	27.57	55.408		
1,200.0	1,200.0	1,202.9	1,202.8	5.0	26.6	-101.98	-317.0	-1,494.0	1,527.3	1,497.4	29.89	51.097		
1,300.0	1,300.0	1,303.2	1,303.1	5.3	28.8	-101.94	-316.0	-1,494.0	1,527.1	1,494.7	32.37	47.175		
1,400.0	1,400.0	1,403.5	1,403.4	5.7	31.1	-101.91	-315.0	-1,494.0	1,526.8	1,492.0	34.85	43.812		
1,500.0	1,500.0	1,503.8	1,503.7	6.1	33.3	-101.86	-313.8	-1,494.0	1,526.6	1,489.3	37.33	40.896		
1,600.0	1,600.0	1,604.1	1,604.0	6.4	35.5	-101.82	-312.6	-1,494.0	1,526.4	1,486.6	39.81	38.345		
1,700.0	1,700.0	1,704.5	1,704.3	6.8	37.6	-101.77	-311.3	-1,494.0	1,526.1	1,483.8	42.25	36.117		
1,800.0	1,800.0	1,804.9	1,804.8	7.2	39.7	-101.72	-309.8	-1,494.0	1,525.8	1,481.1	44.68	34.150		
1,900.0	1,900.0	1,905.4	1,905.2	7.5	41.8	-101.66	-308.2	-1,494.0	1,525.5	1,478.4	47.10	32.385		
2,000.0	2,000.0	2,005.7	2,005.6	7.9	44.0	-101.59	-306.4	-1,494.0	1,525.1	1,475.5	49.64	30.723		
2,100.0	2,100.0	2,106.0	2,105.8	8.2	46.3	-101.52	-304.6	-1,494.0	1,524.7	1,472.5	52.23	29.190		
2,200.0	2,200.0	2,206.3	2,206.1	8.6	48.5	-101.45	-302.6	-1,494.0	1,524.3	1,469.5	54.83	27.801		
2,300.0	2,300.0	2,306.6	2,306.4	9.0	50.8	-101.37	-300.5	-1,494.0	1,523.9	1,466.5	57.42	26.538		
2,400.0	2,400.0	2,407.1	2,406.8	9.3	53.2	-101.29	-298.3	-1,494.0	1,523.5	1,463.3	60.17	25.321		
2,500.0	2,499.8	2,507.4	2,507.2	9.8	55.8	3.03	-295.9	-1,494.0	1,517.5	1,454.3	63.26	23.990		

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



Microsoft
Anticollision Report

Company:	Redwood Operating LLC	Local Co-ordinate Reference:	Well Leavitt 13 #1H
Project:	Eddy County, NM	TVD Reference:	3287.5+18 @ 3305.5usft
Reference Site:	Sec 18-T18S-R27E	MD Reference:	3287.5+18 @ 3305.5usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Leavitt 13 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design													Sec 18-T18S-R27E - Higgins Trust 1 - Wellbore #1 - Wellbore #1		Offset Site Error:		0.0 usft
Survey Program: 224-INC-ONLY													Offset Well Error:		0.0 usft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
2,600.0	2,597.8	2,605.9	2,605.6	10.6	58.3	3.26	-293.3	-1,494.0	1,497.8	1,431.2	66.55	22.507					
2,700.0	2,692.2	2,700.6	2,700.3	11.3	60.7	3.61	-290.6	-1,494.0	1,464.6	1,394.9	69.65	21.029					
2,800.0	2,781.1	2,789.7	2,789.3	11.9	63.0	4.14	-288.0	-1,494.0	1,418.6	1,346.1	72.52	19.563					
2,900.0	2,862.9	2,871.4	2,870.9	12.4	65.1	4.90	-285.4	-1,494.0	1,360.7	1,285.6	75.13	18.112					
3,000.0	2,935.8	2,944.0	2,943.5	12.9	66.9	6.04	-282.9	-1,494.0	1,292.1	1,214.7	77.41	16.692					
3,100.0	2,998.5	3,006.2	3,005.7	13.2	68.5	7.80	-280.8	-1,494.0	1,214.2	1,134.8	79.36	15.300					
3,200.0	3,055.8	3,062.8	3,062.3	13.5	70.0	8.53	-278.8	-1,494.0	1,132.2	1,051.2	81.01	13.976					
3,300.0	3,113.2	3,119.4	3,118.8	14.6	71.5	9.36	-276.8	-1,494.0	1,050.3	967.6	82.67	12.705					
3,400.0	3,168.4	3,173.9	3,173.3	16.0	73.0	6.47	-274.9	-1,494.0	967.0	882.7	84.30	11.471					
3,500.0	3,208.4	3,213.4	3,212.8	17.6	74.1	-4.00	-273.5	-1,494.0	875.4	789.9	85.52	10.236					
3,600.0	3,229.7	3,234.4	3,233.7	19.5	74.6	-41.36	-272.8	-1,494.0	777.9	691.7	86.20	9.025					
3,700.0	3,232.6	3,237.2	3,236.5	21.4	74.7	-97.11	-272.7	-1,494.0	679.0	592.6	86.39	7.860					
3,800.0	3,231.2	3,235.7	3,235.1	23.4	74.7	-96.35	-272.8	-1,494.0	580.5	493.9	86.54	6.707					
3,900.0	3,229.7	3,234.3	3,233.6	25.5	74.6	-95.59	-272.8	-1,494.0	482.6	395.7	86.87	5.555					
4,000.0	3,228.3	3,232.9	3,232.2	27.7	74.6	-94.83	-272.9	-1,494.0	385.7	298.2	87.58	4.405					
4,100.0	3,226.9	3,231.4	3,230.8	29.9	74.6	-94.06	-272.9	-1,494.0	291.1	201.9	89.20	3.263					
4,200.0	3,225.5	3,230.0	3,229.3	32.1	74.5	-93.30	-273.0	-1,494.0	201.6	108.3	93.27	2.161					
4,300.0	3,224.1	3,228.6	3,227.9	34.4	74.5	-92.54	-273.0	-1,494.0	128.6	26.1	102.49	1.255 Level 3					
4,370.5	3,223.1	3,227.5	3,226.9	36.0	74.5	-92.00	-273.0	-1,494.0	107.6	0.7	106.94	1.006 Level 2, CC, ES, SF					
4,400.0	3,222.7	3,227.1	3,226.5	36.7	74.4	-91.77	-273.1	-1,494.0	111.6	6.2	105.43	1.058 Level 2					
4,500.0	3,221.3	3,225.7	3,225.0	39.0	74.4	-91.01	-273.1	-1,494.0	168.4	71.8	96.62	1.743					
4,600.0	3,219.9	3,224.3	3,223.6	41.4	74.4	-90.25	-273.2	-1,494.0	253.5	161.5	92.02	2.755					
4,700.0	3,218.5	3,222.8	3,222.2	43.7	74.3	-89.49	-273.2	-1,494.0	346.6	256.7	89.90	3.856					
4,800.0	3,217.1	3,221.4	3,220.7	46.1	74.3	-88.72	-273.3	-1,494.0	442.8	354.0	88.77	4.988					
4,900.0	3,215.7	3,219.9	3,219.3	48.4	74.2	-87.96	-273.3	-1,494.0	540.3	452.2	88.10	6.133					
5,000.0	3,214.3	3,218.5	3,217.9	50.8	74.2	-87.20	-273.4	-1,494.0	638.6	551.0	87.65	7.286					
5,100.0	3,212.9	3,217.1	3,216.4	53.2	74.2	-86.45	-273.4	-1,494.0	737.4	650.0	87.34	8.442					
5,200.0	3,211.5	3,215.6	3,215.0	55.6	74.1	-85.69	-273.5	-1,494.0	836.4	749.3	87.12	9.601					
5,300.0	3,210.1	3,214.2	3,213.6	58.0	74.1	-84.94	-273.5	-1,494.0	935.6	848.7	86.94	10.762					
5,400.0	3,208.7	3,212.8	3,212.1	60.4	74.1	-84.19	-273.6	-1,494.0	1,035.0	948.2	86.80	11.924					
5,500.0	3,207.2	3,211.3	3,210.7	62.8	74.0	-83.44	-273.6	-1,494.0	1,134.5	1,047.8	86.69	13.087					
5,600.0	3,205.8	3,209.9	3,209.3	65.2	74.0	-82.69	-273.7	-1,494.0	1,234.1	1,147.5	86.60	14.251					
5,700.0	3,204.4	3,208.5	3,207.8	67.6	73.9	-81.95	-273.7	-1,494.0	1,333.7	1,247.2	86.52	15.415					
5,800.0	3,203.0	3,207.0	3,206.4	70.0	73.9	-81.21	-273.8	-1,494.0	1,433.4	1,347.0	86.45	16.580					
5,900.0	3,201.6	3,205.6	3,205.0	72.4	73.9	-80.48	-273.8	-1,494.0	1,533.2	1,446.8	86.40	17.746					
6,000.0	3,200.2	3,204.2	3,203.5	74.8	73.8	-79.75	-273.9	-1,494.0	1,632.9	1,546.6	86.35	18.911					
6,100.0	3,198.8	3,202.7	3,202.1	77.2	73.8	-79.02	-273.9	-1,494.0	1,732.7	1,646.4	86.30	20.077					
6,200.0	3,197.4	3,201.3	3,200.7	79.7	73.7	-78.30	-274.0	-1,494.0	1,832.5	1,746.2	86.26	21.243					
6,300.0	3,196.0	3,199.9	3,199.2	82.1	73.7	-77.58	-274.0	-1,494.0	1,932.3	1,846.1	86.23	22.410					
6,400.0	3,194.6	3,198.4	3,197.8	84.5	73.7	-76.86	-274.1	-1,494.0	2,032.2	1,946.0	86.20	23.576					
6,500.0	3,193.2	3,197.0	3,196.4	86.9	73.6	-76.15	-274.1	-1,494.0	2,132.0	2,045.9	86.17	24.742					
6,600.0	3,191.8	3,195.6	3,194.9	89.4	73.6	-75.45	-274.2	-1,494.0	2,231.9	2,145.8	86.15	25.909					
6,700.0	3,190.4	3,194.1	3,193.5	91.8	73.6	-74.75	-274.2	-1,494.0	2,331.8	2,245.7	86.12	27.075					
6,800.0	3,189.0	3,192.7	3,192.1	94.2	73.5	-74.06	-274.3	-1,494.0	2,431.7	2,345.6	86.10	28.241					

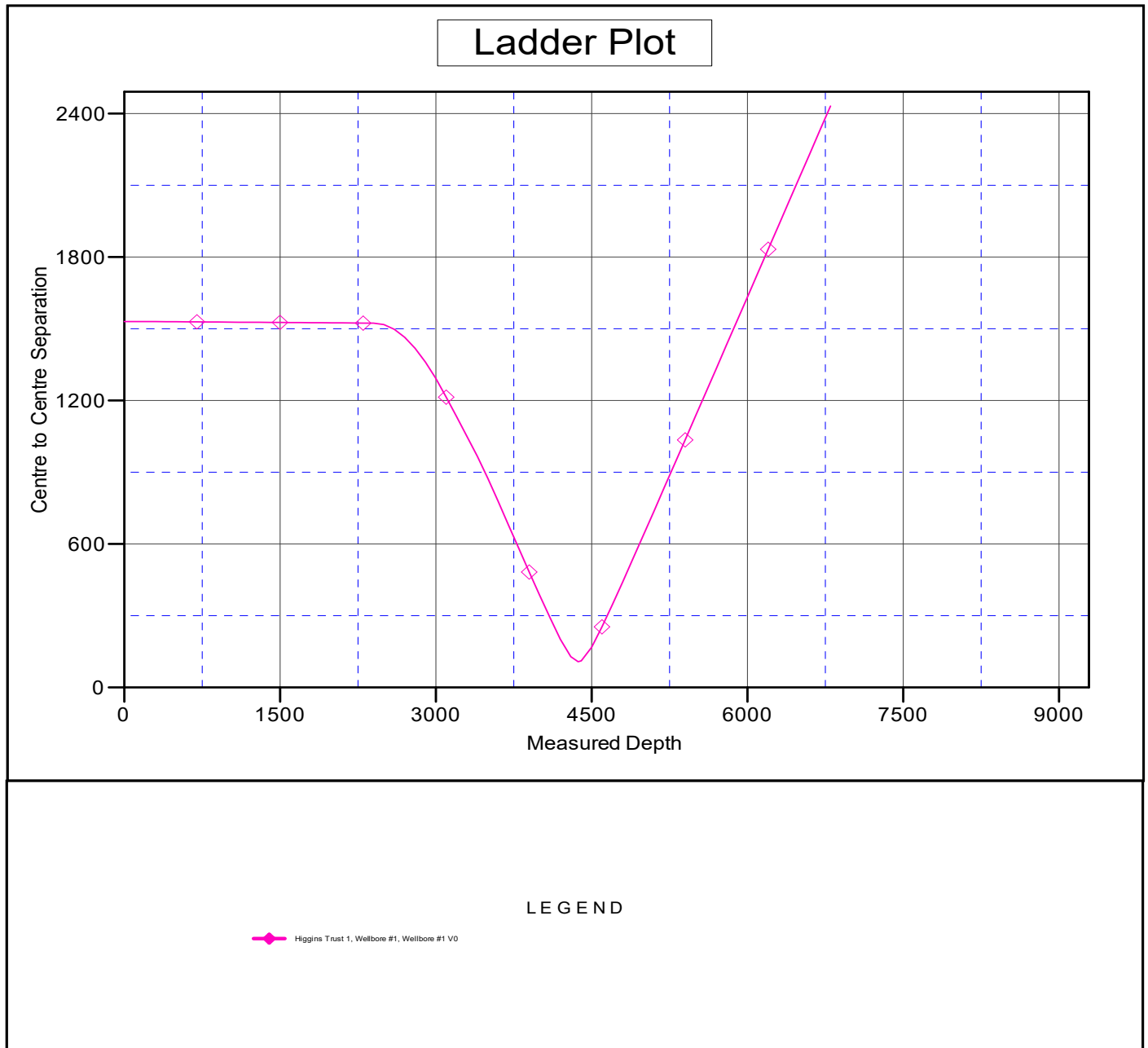
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Company:	Redwood Operating LLC	Local Co-ordinate Reference:	Well Leavitt 13 #1H
Project:	Eddy County, NM	TVD Reference:	3287.5+18 @ 3305.5usft
Reference Site:	Sec 18-T18S-R27E	MD Reference:	3287.5+18 @ 3305.5usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	Leavitt 13 #1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.15 Single User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 3287.5+18 @ 3305.5usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: Leavitt 13 #1H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.00°





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