

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address Redwood Operating LLC P.O. Box 1370 Artesia, NM 88211-1370		² OGRID Number 330211
		³ Reason for Filing Code/ Effective Date NW
⁴ API Number 30 - 0 15-46977	⁵ Pool Name Red Lake; Glorieta-Yeso	⁶ Pool Code 51120
⁷ Property Code 329470	⁸ Property Name Hawk 9 Federal Com	⁹ Well Number 2H

II. 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
A	8	18S	27E		387	North	373	East	Eddy

¹¹ Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	9	18S	27E		824	North	78	East	Eddy
¹² Lse Code F	¹³ Producing Method Code P	¹⁴ Gas Connection Date 7/26/2021	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date				

III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
278471	Holly Marketing & Refining Co LLC P.O Box 1600 Artesia, NM 88211-1600	O
036788	DCP Midstream 4001 Penbrook Odessa, TX 79762	G

IV. Well Completion Data

²¹ Spud Date 3/20/2021	²² Ready Date 7/17/2021	²³ TD 8687' TVD 3774'	²⁴ PBDT 8663' TVD 3774'	²⁵ Perforations TVD 3460-3762 3875-8599'	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
17 1/2"	13 3/8"	377'	420sx		
12 1/4"	9 5/8"	1225'	450sx		
8 3/4"	7 & 5 1/2"	8687'	1580sx		

V. Well Test Data

³¹ Date New Oil 7/30/2021	³² Gas Delivery Date 7/26/2021	³³ Test Date 7/30/2021	³⁴ Test Length 24 hr	³⁵ Tbg. Pressure	³⁶ Csg. Pressure
³⁷ Choke Size	³⁸ Oil 91	³⁹ Water 5664	⁴⁰ Gas 19		⁴¹ Test Method P
⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: Delilah Flores			OIL CONSERVATION DIVISION		
Printed name: Delilah Flores			Approved by: KURT SIMMONS		
Title: Regulatory Technician I			Title: NMOCD, SANTA FE		
E-mail Address: regulatory@redwoodoperating.com			Approval Date: 09/08/2021		
Date: 8/2/2021		Phone: 575-748-1288			

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 30-015-46977	² Pool Code 51120	³ Pool Name Red Lake; Glorieta-Yeso
⁴ Property Code 329470	⁵ Property Name HAWK 9 FEDERAL COM	
⁷ OGRID No. 13837	⁸ Operator Name MACK ENERGY CORPORATION	
		⁶ Well Number 2H
		⁹ Elevation 3477.1

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
A	8	18 S	27 E		387	NORTH	373	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
A	9	18 S	27 E		824	NORTH	78	EAST	EDDY

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
160			

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.

NW CORNER SEC. 8 LAT. = 32.7695498°N LONG. = 104.3091295°W NMSP EAST (FT) N = 643695.09 E = 548777.05		NE CORNER SEC. 8 LAT. = 32.7695301°N LONG. = 104.2919694°W NMSP EAST (FT) N = 643689.57 E = 554051.59		AS-DRILLED BOTTOM OF HOLE LAT. = 32.7672993°N LONG. = 104.2751260°W NMSP EAST (FT) N = 642880.40 E = 559229.20		NE CORNER SEC. 9 LAT. = 32.7695666°N LONG. = 104.2748572°W NMSP EAST (FT) N = 643705.32 E = 559311.36	
S89°56'24"E 2639.38 FT N/4 CORNER SEC. 8 LAT. = 32.7695402°N LONG. = 104.3005448°W NMSP EAST (FT) N = 643692.32 E = 551415.74		S89°56'25"E 2636.52 FT 373' SHL 387'		N89°49'37"E 2629.54 FT N/4 CORNER SEC. 9 LAT. = 32.7695488°N LONG. = 104.2834167°W NMSP EAST (FT) N = 643697.50 E = 556680.44		N89°49'47"E 2631.62 FT BHL 78' LTP	
W/4 CORNER SEC. 8 LAT. = 32.7622997°N LONG. = 104.3091424°W NMSP EAST (FT) N = 641057.42 E = 548773.70		E/4 CORNER SEC. 8 LAT. = 32.7623157°N LONG. = 104.2920134°W NMSP EAST (FT) N = 641064.87 E = 554039.09		AS-DRILLED FIRST TAKE POINT 821' FNL, 455' FWL LAT. = 32.7672750°N LONG. = 104.2905021°W NMSP EAST (FT) N = 642869.31 E = 554502.91		E/4 CORNER SEC. 9 LAT. = 32.7623345°N LONG. = 104.2749216°W NMSP EAST (FT) N = 641074.18 E = 559293.01	
S89°45'48"W 2628.29 FT SW CORNER SEC. 8 LAT. = 32.7550456°N LONG. = 104.3091543°W NMSP EAST (FT) N = 638418.28 E = 548770.65		S89°45'50"W 2627.73 FT SE CORNER SEC. 8 LAT. = 32.7551007°N LONG. = 104.2920617°W NMSP EAST (FT) N = 638439.96 E = 554025.27		S89°57'54"W 2625.98 FT S/4 CORNER SEC. 9 LAT. = 32.7551020°N LONG. = 104.2835219°W NMSP EAST (FT) N = 638441.56 E = 556650.57		S89°58'46"W 2625.24 FT SE CORNER SEC. 9 LAT. = 32.7551009°N LONG. = 104.2749845°W NMSP EAST (FT) N = 638442.50 E = 559275.13	
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.							
HAWK 9 FEDERAL COM 2H ELEV. = 3477.1' LAT. = 32.7684682°N (NAD83) LONG. = 104.2931893°W NMSP EAST (FT) N = 643303.07 E = 553676.77							

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.

Delilah Flores 8/2/2021
Signature Date

Delilah Flores
Printed Name

regulatory@redwoodoperating.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.

JULY 19, 2021
Date of Survey

William F. Jaramila
Signature and Seal of Professional Surveyor

Certificate Number: 12797
PLS 12797
SURVEY NO. 7035

Intent ☐ As Drilled ☒

API #		
Operator Name: MACK ENERGY CORPORATION	Property Name: HAWK 9 FEDERAL COM	Well Number 2H

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	8	18S	27E		387	NORTH	373	EAST	EDDY
Latitude 32.7684682					Longitude 104.2931893			NAD 83	

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
D	9	18S	27E		821	NORTH	455	WEST	EDDY
Latitude 32.7672750					Longitude 104.2905021			NAD 83	

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
A	9	18S	27E		824	NORTH	91	EAST	EDDY
Latitude 32.7672989					Longitude 104.2751681			NAD 83	

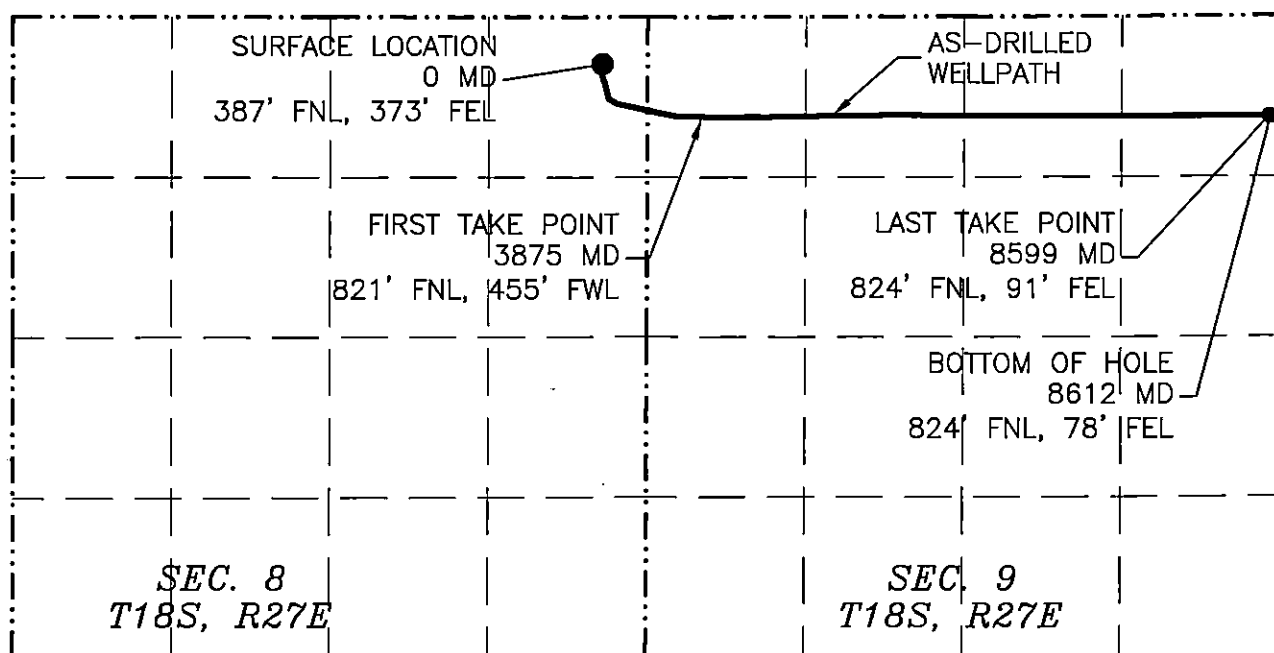
Is this well the defining well for the Horizontal Spacing Unit? ☐Is this well an infill well? ☐

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

PLAN VIEW



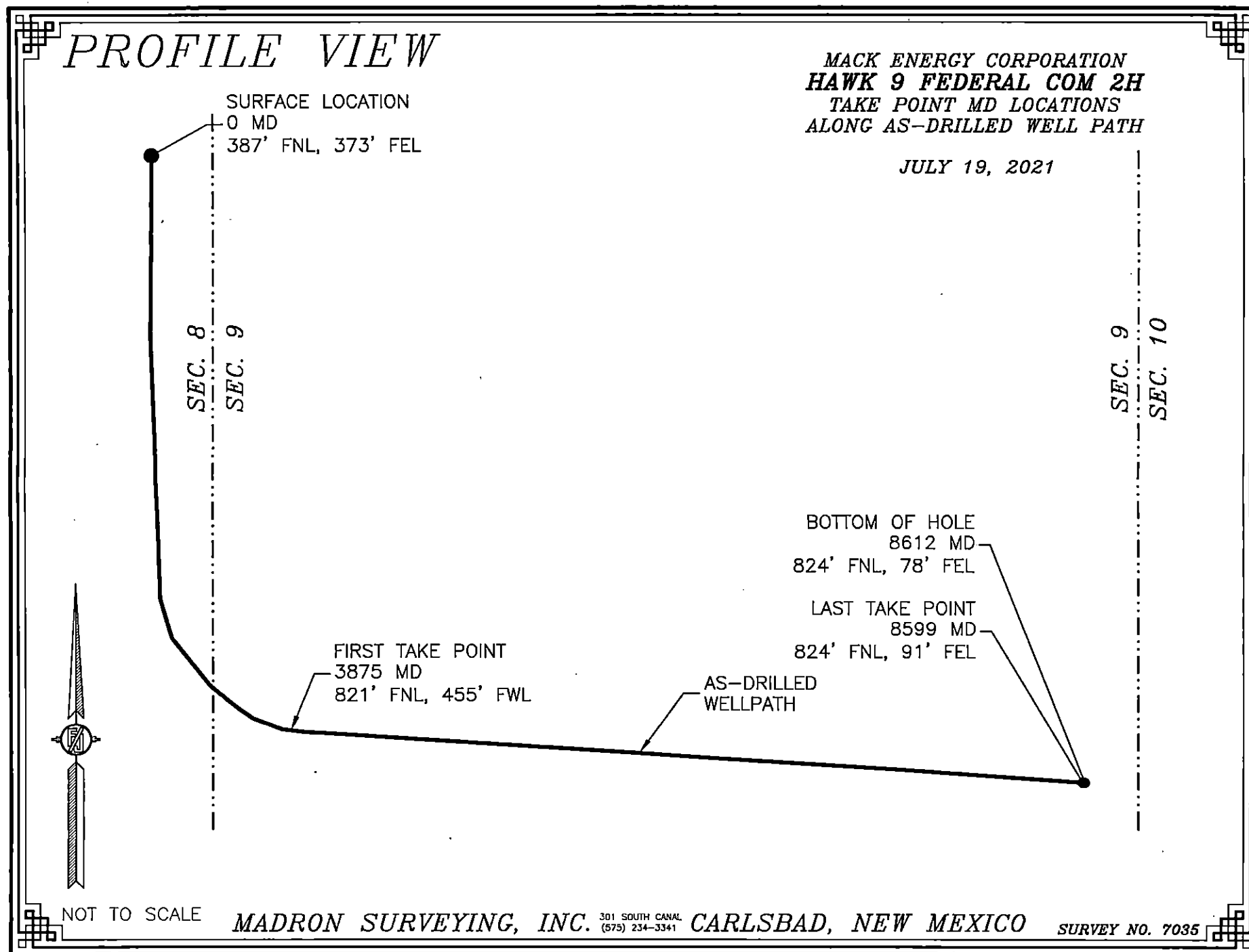
MACK ENERGY CORPORATION
HAWK 9 FEDERAL COM 2H
 TAKE POINT MD LOCATIONS
 ALONG AS-DRILLED WELL PATH

NOT TO SCALE

JULY 19, 2021

SURVEY NO. 7035

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





Redwood Operating LLC

Eddy County, NM

Sec 8-T18S-R27E

Hawk 9 Federal Com #2H

Wellbore #1

Survey: Survey #1

Standard Survey Report

31 March, 2021



Microsoft Survey Report

Company:	Redwood Operating LLC	Local Co-ordinate Reference:	Well Hawk 9 Federal Com #2H
Project:	Eddy County, NM	TVD Reference:	3477.1+18 @ 3495.1usft
Site:	Sec 8-T18S-R27E	MD Reference:	3477.1+18 @ 3495.1usft
Well:	Hawk 9 Federal Com #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.15 Single User Db

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 8-T18S-R27E		
Site Position:		Northing:	643,343.04 usft
From:	Map	Easting:	553,677.02 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 46' 6.881 N
		Longitude:	104° 17' 35.478 W
		Grid Convergence:	0.02 °

Well	Hawk 9 Federal Com #2H		
Well Position	+N/-S	0.0 usft	Northing: 643,303.07 usft
	+E/-W	0.0 usft	Easting: 553,676.77 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 46' 6.485 N
		Longitude:	104° 17' 35.481 W
		Ground Level:	3,477.1 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2015	03/16/21	6.93
			Dip Angle (°)
			60.40
			Field Strength (nT)
			47,796.40252867

Design	Wellbore #1		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.0	0.0	0.0
			Direction (°)
			94.24

Survey Program	Date	03/31/21		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
197.0	8,687.0	Survey #1 (Wellbore #1)	MWD	OWSG MWD - Standard

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
197.0	2.46	285.79	196.9	1.2	-4.1	-4.1	1.25	1.25	0.00
1st MWD Survey									
306.0	3.65	281.66	305.8	2.5	-9.7	-9.9	1.11	1.09	-3.79
483.0	3.91	235.07	482.4	0.2	-20.2	-20.1	1.69	0.15	-26.32
661.0	6.73	186.73	659.7	-13.7	-26.4	-25.3	2.84	1.58	-27.16
786.0	8.92	178.91	783.6	-30.6	-27.1	-24.7	1.94	1.75	-6.26
850.0	9.01	169.95	846.8	-40.5	-26.1	-23.0	2.18	0.14	-14.00
976.0	10.68	153.16	971.0	-60.7	-19.1	-14.6	2.62	1.33	-13.33
1,103.0	11.30	151.14	1,095.6	-82.1	-7.8	-1.7	0.57	0.49	-1.59
1,166.0	10.29	153.07	1,157.5	-92.5	-2.3	4.6	1.70	-1.60	3.06



Microsoft Survey Report

Company:	Redwood Operating LLC	Local Co-ordinate Reference:	Well Hawk 9 Federal Com #2H
Project:	Eddy County, NM	TVD Reference:	3477.1+18 @ 3495.1usft
Site:	Sec 8-T18S-R27E	MD Reference:	3477.1+18 @ 3495.1usft
Well:	Hawk 9 Federal Com #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.15 Single User Db

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)
1,251.0	10.15	157.29	1,241.2	-106.2	4.1	11.9	0.90	-0.16	4.96
1,379.0	9.05	158.61	1,367.4	-125.9	12.1	21.4	0.88	-0.86	1.03
1,487.0	8.09	164.06	1,474.2	-141.2	17.3	27.7	1.16	-0.89	5.05
1,613.0	5.71	173.46	1,599.2	-155.9	20.4	31.9	2.08	-1.89	7.46
1,739.0	5.05	176.54	1,724.7	-167.7	21.5	33.8	0.57	-0.52	2.44
1,866.0	6.07	180.14	1,851.1	-180.0	21.8	35.1	0.85	0.80	2.83
1,992.0	7.82	179.70	1,976.2	-195.2	21.8	36.2	1.39	1.39	-0.35
2,182.0	8.66	165.38	2,164.2	-222.0	25.5	41.9	1.16	0.44	-7.54
2,308.0	7.65	163.00	2,288.9	-239.2	30.4	48.0	0.85	-0.80	-1.89
2,435.0	7.25	153.69	2,414.9	-254.4	36.4	55.1	1.00	-0.31	-7.33
2,498.0	7.34	152.72	2,477.4	-261.6	40.0	59.2	0.24	0.14	-1.54
2,561.0	7.43	154.30	2,539.8	-268.8	43.6	63.4	0.35	0.14	2.51
2,625.0	7.43	155.62	2,603.3	-276.3	47.1	67.4	0.27	0.00	2.06
2,688.0	8.31	153.07	2,665.7	-284.1	50.8	71.7	1.50	1.40	-4.05
2,751.0	13.76	134.00	2,727.5	-293.4	58.3	79.9	10.30	8.65	-30.27
2,815.0	20.18	123.98	2,788.7	-304.8	73.0	95.3	10.99	10.03	-15.66
2,878.0	24.84	117.92	2,846.9	-317.1	93.7	116.9	8.25	7.40	-9.62
2,941.0	28.53	111.50	2,903.2	-328.8	119.4	143.4	7.43	5.86	-10.19
3,004.0	33.01	105.26	2,957.3	-338.9	150.0	174.6	8.72	7.11	-9.90
3,068.0	37.05	102.01	3,009.7	-347.5	185.7	210.9	6.95	6.31	-5.08
3,131.0	38.90	101.30	3,059.4	-355.3	223.6	249.3	3.02	2.94	-1.13
3,194.0	42.33	100.95	3,107.2	-363.2	263.9	290.0	5.46	5.44	-0.56
3,257.0	46.99	101.30	3,152.0	-371.8	307.3	334.0	7.41	7.40	0.56
3,272.0	48.09	101.30	3,162.2	-373.9	318.1	344.9	7.33	7.33	0.00
3,282.0	48.57	101.30	3,168.8	-375.4	325.5	352.4	4.80	4.80	0.00
3,292.0	48.92	101.48	3,175.4	-376.9	332.8	359.8	3.75	3.50	1.80
3,302.0	49.19	101.48	3,181.9	-378.4	340.2	367.3	2.70	2.70	0.00
3,312.0	49.36	101.48	3,188.5	-379.9	347.7	374.8	1.70	1.70	0.00
3,321.0	49.48	101.48	3,194.3	-381.3	354.4	381.6	1.33	1.33	0.00
3,331.0	49.93	101.57	3,200.8	-382.8	361.8	389.2	4.55	4.50	0.90
3,341.0	50.15	101.48	3,207.2	-384.3	369.3	396.8	2.31	2.20	-0.90
3,351.0	50.42	101.48	3,213.6	-385.8	376.9	404.4	2.70	2.70	0.00
3,361.0	50.64	101.39	3,220.0	-387.4	384.5	412.1	2.31	2.20	-0.90
3,371.0	50.81	101.39	3,226.3	-388.9	392.0	419.8	1.70	1.70	0.00
3,378.0	50.86	101.22	3,230.7	-390.0	397.4	425.1	2.01	0.71	-2.43
3,384.0	50.95	101.22	3,234.5	-390.9	401.9	429.8	1.50	1.50	0.00
3,394.0	51.16	101.30	3,240.8	-392.4	409.6	437.5	2.19	2.10	0.80
3,404.0	51.34	101.13	3,247.0	-393.9	417.2	445.2	2.24	1.80	-1.70
3,414.0	51.43	101.13	3,253.3	-395.4	424.9	453.0	0.90	0.90	0.00
3,424.0	51.52	101.04	3,259.5	-396.9	432.6	460.7	1.14	0.90	-0.90
3,434.0	51.69	101.04	3,265.7	-398.4	440.2	468.5	1.70	1.70	0.00
3,441.0	51.82	100.95	3,270.1	-399.5	445.6	474.0	2.11	1.86	-1.29
3,447.0	52.13	100.51	3,273.8	-400.3	450.3	478.7	7.75	5.17	-7.33



Microsoft Survey Report

Company: Redwood Operating LLC
Project: Eddy County, NM
Site: Sec 8-T18S-R27E
Well: Hawk 9 Federal Com #2H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Hawk 9 Federal Com #2H
TVD Reference: 3477.1+18 @ 3495.1ustf
MD Reference: 3477.1+18 @ 3495.1ustf
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.15 Single User Db

Survey

Measured Depth (ustf)	Inclination (°)	Azimuth (°)	Vertical Depth (ustf)	+N/-S (ustf)	+E/-W (ustf)	Vertical Section (ustf)	Dogleg Rate (°/100ustf)	Build Rate (°/100ustf)	Turn Rate (°/100ustf)
3,457.0	52.04	100.95	3,279.9	-401.8	458.0	486.5	3.59	-0.90	4.40
3,467.0	52.22	100.95	3,286.0	-403.3	465.8	494.4	1.80	1.80	0.00
3,477.0	52.40	100.78	3,292.1	-404.8	473.6	502.2	2.25	1.80	-1.70
3,487.0	52.44	100.78	3,298.2	-406.3	481.3	510.1	0.40	0.40	0.00
3,497.0	52.66	100.78	3,304.3	-407.8	489.1	518.0	2.20	2.20	0.00
3,505.0	52.88	100.60	3,309.2	-409.0	495.4	524.3	3.28	2.75	-2.25
3,511.0	52.97	100.60	3,312.8	-409.8	500.1	529.1	1.50	1.50	0.00
3,521.0	53.10	100.51	3,318.8	-411.3	508.0	537.0	1.49	1.30	-0.90
3,531.0	53.32	100.51	3,324.8	-412.8	515.8	545.0	2.20	2.20	0.00
3,541.0	53.49	100.51	3,330.7	-414.2	523.7	553.0	1.70	1.70	0.00
3,551.0	53.67	100.60	3,336.7	-415.7	531.6	561.0	1.94	1.80	0.90
3,561.0	53.85	100.51	3,342.6	-417.2	539.6	569.0	1.94	1.80	-0.90
3,568.0	53.93	100.43	3,346.7	-418.2	545.1	574.6	1.47	1.14	-1.14
3,574.0	54.11	100.34	3,350.2	-419.1	549.9	579.4	3.24	3.00	-1.50
3,584.0	54.59	99.99	3,356.1	-420.5	557.9	587.5	5.58	4.80	-3.50
3,637.0	58.59	95.15	3,385.3	-426.3	601.7	631.6	10.72	7.55	-9.13
3,700.0	66.29	92.08	3,414.4	-429.8	657.4	687.4	12.96	12.22	-4.87
3,764.0	74.15	91.29	3,436.0	-431.5	717.6	747.6	12.34	12.28	-1.23
3,827.0	78.68	91.11	3,450.8	-432.8	778.8	808.7	7.20	7.19	-0.29
3,890.0	83.12	91.29	3,460.8	-434.1	841.0	870.8	7.05	7.05	0.29
3,954.0	85.19	91.20	3,467.3	-435.5	904.6	934.4	3.24	3.23	-0.14
4,017.0	87.25	91.37	3,471.5	-436.9	967.5	997.1	3.28	3.27	0.27
4,118.0	87.43	89.62	3,476.2	-437.8	1,068.3	1,097.8	1.74	0.18	-1.73
4,245.0	86.59	90.32	3,482.8	-437.7	1,195.2	1,224.3	0.86	-0.66	0.55
4,371.0	85.45	89.35	3,491.5	-437.3	1,320.9	1,349.6	1.19	-0.90	-0.77
4,434.0	85.63	89.09	3,496.4	-436.5	1,383.7	1,412.2	0.50	0.29	-0.41
4,498.0	85.71	88.56	3,501.3	-435.2	1,447.5	1,475.7	0.84	0.13	-0.83
4,561.0	86.07	87.86	3,505.8	-433.2	1,510.3	1,538.2	1.25	0.57	-1.11
4,688.0	85.71	88.47	3,514.9	-429.2	1,636.9	1,664.2	0.56	-0.28	0.48
4,751.0	85.80	87.77	3,519.5	-427.1	1,699.7	1,726.6	1.12	0.14	-1.11
4,878.0	85.54	89.44	3,529.1	-424.0	1,826.3	1,852.6	1.33	-0.20	1.31
4,941.0	86.29	89.53	3,533.6	-423.4	1,889.1	1,915.3	1.20	1.19	0.14
5,004.0	86.29	88.91	3,537.7	-422.6	1,952.0	1,977.9	0.98	0.00	-0.98
5,131.0	87.16	89.00	3,544.9	-420.3	2,078.7	2,104.1	0.69	0.69	0.07
5,194.0	86.95	89.62	3,548.2	-419.5	2,141.6	2,166.8	1.04	-0.33	0.98
5,321.0	86.73	89.53	3,555.2	-418.6	2,268.5	2,293.2	0.19	-0.17	-0.07
5,448.0	87.21	89.97	3,561.9	-418.0	2,395.3	2,419.6	0.51	0.38	0.35
5,574.0	85.93	90.67	3,569.4	-418.7	2,521.0	2,545.1	1.16	-1.02	0.56
5,638.0	86.55	90.49	3,573.6	-419.4	2,584.9	2,608.8	1.01	0.97	-0.28
5,701.0	86.64	90.23	3,577.4	-419.8	2,647.8	2,671.6	0.44	0.14	-0.41
5,765.0	87.08	89.79	3,580.9	-419.8	2,711.7	2,735.3	0.97	0.69	-0.69
5,892.0	85.63	90.32	3,589.0	-419.9	2,838.4	2,861.7	1.22	-1.14	0.42
5,955.0	85.93	90.32	3,593.6	-420.3	2,901.3	2,924.4	0.48	0.48	0.00



Microsoft Survey Report

Company: Redwood Operating LLC
Project: Eddy County, NM
Site: Sec 8-T18S-R27E
Well: Hawk 9 Federal Com #2H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Hawk 9 Federal Com #2H
TVD Reference: 3477.1+18 @ 3495.1usft
MD Reference: 3477.1+18 @ 3495.1usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.15 Single User Db

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)
6,019.0	86.02	90.14	3,598.1	-420.5	2,965.1	2,988.1	0.31	0.14	-0.28
6,082.0	86.07	90.05	3,602.4	-420.6	3,027.9	3,050.8	0.16	0.08	-0.14
6,145.0	86.15	90.14	3,606.7	-420.7	3,090.8	3,113.5	0.19	0.13	0.14
6,272.0	86.15	90.23	3,615.2	-421.1	3,217.5	3,239.9	0.07	0.00	0.07
6,335.0	86.20	90.05	3,619.4	-421.3	3,280.4	3,302.6	0.30	0.08	-0.29
6,399.0	86.42	89.70	3,623.5	-421.1	3,344.2	3,366.2	0.64	0.34	-0.55
6,525.0	86.24	89.88	3,631.6	-420.7	3,470.0	3,491.6	0.20	-0.14	0.14
6,652.0	86.64	89.79	3,639.5	-420.3	3,596.7	3,618.0	0.32	0.31	-0.07
6,778.0	86.33	90.05	3,647.2	-420.1	3,722.5	3,743.4	0.32	-0.25	0.21
6,841.0	86.46	89.97	3,651.2	-420.2	3,785.4	3,806.1	0.24	0.21	-0.13
6,904.0	86.81	89.97	3,654.9	-420.1	3,848.3	3,868.8	0.56	0.56	0.00
7,030.0	86.29	89.88	3,662.5	-420.0	3,974.0	3,994.2	0.42	-0.41	-0.07
7,093.0	86.29	89.97	3,666.5	-419.9	4,036.9	4,056.9	0.14	0.00	0.14
7,157.0	86.11	89.97	3,670.8	-419.8	4,100.8	4,120.6	0.28	-0.28	0.00
7,220.0	86.20	89.97	3,675.0	-419.8	4,163.6	4,183.3	0.14	0.14	0.00
7,284.0	86.37	90.32	3,679.2	-420.0	4,227.5	4,247.0	0.61	0.27	0.55
7,347.0	86.51	90.41	3,683.1	-420.4	4,290.4	4,309.7	0.26	0.22	0.14
7,411.0	86.77	90.23	3,686.8	-420.7	4,354.3	4,373.5	0.49	0.41	-0.28
7,474.0	87.16	90.32	3,690.2	-421.0	4,417.2	4,436.2	0.64	0.62	0.14
7,600.0	85.63	90.14	3,698.1	-421.5	4,542.9	4,561.7	1.22	-1.21	-0.14
7,664.0	86.11	89.97	3,702.7	-421.6	4,606.7	4,625.3	0.80	0.75	-0.27
7,727.0	85.98	90.32	3,707.0	-421.8	4,669.6	4,688.0	0.59	-0.21	0.56
7,790.0	86.07	90.14	3,711.4	-422.0	4,732.4	4,750.7	0.32	0.14	-0.29
7,853.0	86.11	90.23	3,715.7	-422.2	4,795.3	4,813.4	0.16	0.06	0.14
7,917.0	86.29	90.23	3,719.9	-422.5	4,859.2	4,877.1	0.28	0.28	0.00
7,980.0	87.03	90.14	3,723.6	-422.7	4,922.0	4,939.8	1.18	1.17	-0.14
8,107.0	86.68	90.14	3,730.6	-423.0	5,048.9	5,066.3	0.28	-0.28	0.00
8,233.0	85.63	89.97	3,739.0	-423.1	5,174.6	5,191.7	0.84	-0.83	-0.13
8,296.0	85.76	89.97	3,743.8	-423.1	5,237.4	5,254.3	0.21	0.21	0.00
8,359.0	85.93	90.23	3,748.3	-423.2	5,300.2	5,317.0	0.49	0.27	0.41
8,422.0	86.20	90.49	3,752.6	-423.6	5,363.1	5,379.7	0.59	0.43	0.41
8,549.0	84.97	89.35	3,762.4	-423.4	5,489.7	5,506.0	1.32	-0.97	-0.90
8,612.0	84.79	89.26	3,768.0	-422.6	5,552.4	5,568.5	0.32	-0.29	-0.14
Last MWD Survey 8612 MD/3768.0 TVD -422.6 S 5552.8 E N: 642880.4 E: 559229.2									
8,687.0	84.79	89.26	3,774.8	-421.7	5,627.1	5,642.9	0.00	0.00	0.00
PTB 8687 MD/3774.8 TVD -421.7 S 5627.1 E N: 642881.4 E: 559303.8									

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
197.0	196.9	1.2	-4.1	1st MWD Survey
8,612.0	3,768.0	-422.6	5,552.4	Last MWD Survey 8612 MD/3768.0 TVD -422.6 S 5552.8 E N: 642880.4 E: 559
8,687.0	3,774.8	-421.7	5,627.1	PTB 8687 MD/3774.8 TVD -421.7 S 5627.1 E N: 642881.4 E: 559303.8



Microsoft
Survey Report

Company:	Redwood Operating LLC	Local Co-ordinate Reference:	Well Hawk 9 Federal Com #2H
Project:	Eddy County, NM	TVD Reference:	3477.1+18 @ 3495.1usft
Site:	Sec 8-T18S-R27E	MD Reference:	3477.1+18 @ 3495.1usft
Well:	Hawk 9 Federal Com #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.15 Single User Db

Checked By: _____ Approved By: _____ Date: _____

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

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. 30-015-46977
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 88211-1370		7. Lease Name or Unit Agreement Name Hawk 9 Federal Com
4. Well Location Unit Letter A : 387 feet from the North line and 373 feet from the East line Section 8 Township 18S Range 27E NMPM County Eddy		8. Well Number 2H
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3477.1' 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: ☐		OTHER: Completion ☒	

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.

6/17/21 - 7/17/21 Perforated 3875-8599' w/1008 holes. Frac w/ 949bbls 15% HCL, 226,935bbls SW, 3,786,990# 100 Mesh, 3,064,402# 40/70 WI, 577,737# 40/70 RC. RIH w/105 jts 2 7/8 tbg @3427'. Summit 513 SG 5500AR @3483'.

Spud Date:

3/20/2021

Rig Release Date:

3/31/2021

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

SIGNATURE Delilah Flores TITLE Regulatory Technician I DATE 8/2/2021

Type or print name Delilah Flores E-mail address: regulatory@redwoodoperating.com PHONE: 575-748-1288

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

Submit To Appropriate District Office Two Copies <u>District I</u> 1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> 811 S. First St., Artesia, NM 88210 <u>District III</u> 1000 Rio Brazos Rd., Aztec, NM 87410 <u>District IV</u> 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				Form C-105 Revised April 3, 2017				
WELL COMPLETION OR RECOMPLETION REPORT AND LOG										
4. Reason for filing: ☒ COMPLETION REPORT (Fill in boxes #1 through #31 for State and Fee wells only) ☐ C-144 CLOSURE ATTACHMENT (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17.13.K NMAC)								5. Lease Name or Unit Agreement Name Hawk 9 Federal Com		
7. Type of Completion: ☒ NEW WELL ☐ WORKOVER ☐ DEEPENING ☐ PLUGBACK ☐ DIFFERENT RESERVOIR ☐ OTHER _____								6. Well Number: 2H		
8. Name of Operator Redwood Operating LLC						9. OGRID 330211				
10. Address of Operator P.O. Box 1370 Artesia, NM 88211-1370						11. Pool name or Wildcat Red Lake; Glorieta- Yeso				
12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
Surface:	A	8	18S	27E		387	N	373	East	Eddy
BH:	A	9	18S	27E		824	N	78	East	Eddy
13. Date Spudded 3/20/2021	14. Date T.D. Reached 3/29/2021		15. Date Rig Released 3/31/2021			16. Date Completed (Ready to Produce)		17. Elevations (DF and RKB, RT, GR, etc.) 3477.1'		
18. Total Measured Depth of Well 8687' TVD 3774'			19. Plug Back Measured Depth 8663' TVD 3774'			20. Was Directional Survey Made? Yes		21. Type Electric and Other Logs Run Submitted		
22. Producing Interval(s), of this completion - Top, Bottom, Name 3875-8599' Red Lake; Glorieta-Yeso										
23. CASING RECORD (Report all strings set in well)										
CASING SIZE		WEIGHT LB./FT.		DEPTH SET		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED
13 3/8"		48#		377'		17 1/2"		420sx		
9 5/8"		36#		1225'		12 1/4"		450sx		
7 & 5 1/2"		26 # & 17#		8687'		8 3/4"		1580sx		
24. LINER RECORD						25. TUBING RECORD				
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET			
26. Perforation record (interval, size, and number) 3875-8599', 0.41, 1008 holes						27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.				
						DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED		
						3875-8599'		949bbls 15% HCL, 226,935bbls SW, 3,786,990# 100 Mesh		
								3,064,402# 40/70 WI, 577,737# 40/70 RC		
28. PRODUCTION										
Date First Production 7/30/2021		Production Method (Flowing, gas lift, pumping - Size and type pump) Pump Summit 513SG5500AR				Well Status (Prod. or Shut-in) Producing				
Date of Test 7/30/2021	Hours Tested 24 hrs.	Choke Size	Prod'n For Test Period	Oil - Bbl 91	Gas - MCF 19	Water - Bbl. 5664	Gas - Oil Ratio 1729			
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - (Corr.) 36.2				
29. Disposition of Gas (Sold, used for fuel, vented, etc.) Sold								30. Test Witnessed By Jerry Sherrell		
31. List Attachments										
32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit.								33. Rig Release Date: 3/31/2021		
34. If an on-site burial was used at the well, report the exact location of the on-site burial:										
Latitude _____ Longitude _____ NAD83										
I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief										
Signature <i>Delilah Flores</i>			Printed Name			Title			Date	
E-mail Address regulatory@redwoodoperating.com			Delilah Flores			Regulatory Technician I			8/2/2021	

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well and not later than 60 days after completion of closure. When submitted as a completion report, this shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 11, 12 and 26-31 shall be reported for each zone.

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy	T. Canyon	T. Ojo Alamo	T. Penn A"
T. Salt	T. Strawn	T. Kirtland	T. Penn. "B"
B. Salt	T. Atoka	T. Fruitland	T. Penn. "C"
T. Yates	T. Miss	T. Pictured Cliffs	T. Penn. "D"
T. 7 Rivers 126'	T. Devonian	T. Cliff House	T. Leadville
T. Queen 690'	T. Silurian	T. Menefee	T. Madison
T. Grayburg 1038'	T. Montoya	T. Point Lookout	T. Elbert
T. San Andres 1346'	T. Simpson	T. Mancos	T. McCracken
T. Glorieta 2725'	T. McKee	T. Gallup	T. Ignacio Otzte
T. Paddock 2815'	T. Ellenburger	Base Greenhorn	T. Granite
T. Blinebry 3257'	T. Gr. Wash	T. Dakota	
T. Tubb	T. Delaware Sand	T. Morrison	
T. Drinkard	T. Bone Springs	T. Todilto	
T. Abo	T.	T. Entrada	
T. Wolfcamp	T.	T. Wingate	
T. Penn	T.	T. Chinle	
T. Cisco (Bough C)	T.	T. Permian	

No. 1, from.....to.....
No. 2, from.....to.....
No. 3, from.....to.....
No. 4, from.....to.....

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....
 No. 2, from.....to.....feet.....
 No. 3, from.....to.....feet.....

From	To	Thickness In Feet	Lithology

From	To	Thickness In Feet	Lithology

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

ACKNOWLEDGMENTS

Action 39586

ACKNOWLEDGMENTS

Operator: Redwood Operating LLC PO Box 1370 Artesia, NM 88211370	OGRID: 330211
	Action Number: 39586
	Action Type: [C-104] Completion Packet (C-104C)

ACKNOWLEDGMENTS

☒	I hereby certify that the required Water Use Report has been, or will be, submitted for this wells completion.
☒	I hereby certify that the required FracFocus disclosure has been, or will be, submitted for this wells completion.

District I
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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 39586

CONDITIONS

Operator: Redwood Operating LLC PO Box 1370 Artesia, NM 88211370	OGRID: 330211
	Action Number: 39586
	Action Type: [C-104] Completion Packet (C-104C)

CONDITIONS

Created By	Condition	Condition Date
ksimmons	None	9/8/2021