

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

Form C-101

August 1, 2011

Permit 335195

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address HADAWAY CONSULTING AND ENGINEERING, LLC 711 W Birch St Canadian, TX 79014		2. OGRID Number 371985
		3. API Number 30-005-29227
4. Property Code 333841	5. Property Name STATE	6. Well No. 502H

7. Surface Location

UL - Lot N	Section 5	Township 08S	Range 33E	Lot Idn N	Feet From 700	N/S Line S	Feet From 2609	E/W Line W	County Chaves
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8. Proposed Bottom Hole Location

UL - Lot C	Section 5	Township 08S	Range 33E	Lot Idn 3	Feet From 100	N/S Line N	Feet From 1980	E/W Line W	County Chaves
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9. Pool Information

CHAVEROO;SAN ANDRES	12049
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 4444
16. Multiple N	17. Proposed Depth 8966	18. Formation San Andres	19. Contractor	20. Spud Date 6/1/2023
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	13.5	9.625	36	2300	1525	0
Prod	8.75	5.5	20	8966	2080	0

Casing/Cement Program: Additional Comments

Production Casing Grade is P110 HC

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	3000	3000	3M Shaffer

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.	OIL CONSERVATION DIVISION	
Signature:		
Printed Name: Electronically filed by Allen C Hadaway	Approved By: Paul F Kautz	
Title: Manager	Title: Geologist	
Email Address: hadaway@hadeng.com	Approved Date: 3/21/2023	Expiration Date: 3/21/2025
Date: 3/1/2023	Phone: 806-323-9811	Conditions of Approval Attached

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STATE of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 36-005-29227	Pool Code 12049	Pool Name CHAVEROO;SAN ANDRES
Property Code 333841	Property Name STATE	Well Number 502H
OGRID No. 371985	Operator Name HADAWAY CONSULTING & ENGINEERING, LLC	Elevation 4444'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	5	8 S	33 E		700	SOUTH	2609	WEST	CHAVES

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
C	5	8 S	33 E		100	NORTH	1980	WEST	CHAVES
Dedicated Acres 159.98	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	BOTTOM HOLE LOCATION Lat - N 33.656500° Long - W 103.590494° NMSPCE- N 967213.1 E 767375.5 (NAD-83)	N: 967348.1 E: 770708.9 (NAD 83)	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>Cory Walk</i> 02-28-2023 Signature Date Printed Name Cory Walk Email Address cory@permitswest.com	
	FIRST TAKE POINT 800' FSL & 1980' FWL Lat - N 33.644501° Long - W 103.590515° NMSPCE- N 962846.6 E 767400.5 (NAD-83)			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 2, 2022 Date Surveyed Signature & Seal of Professional Surveyor
	SURFACE LOCATION Lat - N 33.644226° Long - W 103.588448° NMSPCE- N 962751.3 E 768030.5 (NAD-83)			Certificate No. Gary L. Jones 7977 BASIN SURVEYS
	N: 962031.9 E: 765425.1 (NAD 83)	N: 962071.3 E: 770721.5 (NAD 83)	SCALE: 1" = 2000' WO Num.: 35571	

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form APD Conditions

Permit 335195

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: HADAWAY CONSULTING AND ENGINEERING, LLC [371985] 711 W Birch St Canadian, TX 79014	API Number: 30-005-29227
	Well: STATE #502H

OCD Reviewer	Condition
pkautz	Notify OCD 24 hours prior to casing & cement
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system
pkautz	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud
pkautz	Cement is required to circulate on both surface and production strings of casing

Hadaway Consulting & Eng. LLC

DrilTech, LLC

Hadaway Consulting & Eng. LLC
State 502H
Wellbore #1
Plan #2
Norton 2



SURFACE LOCATION

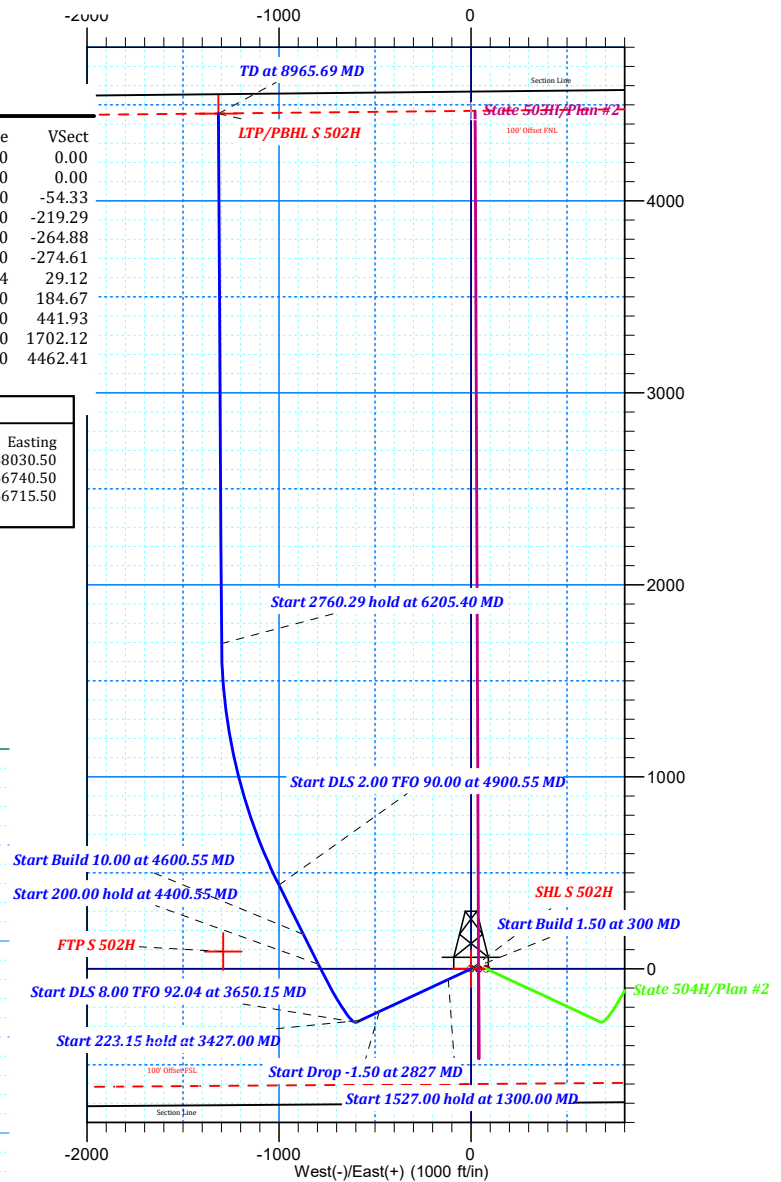
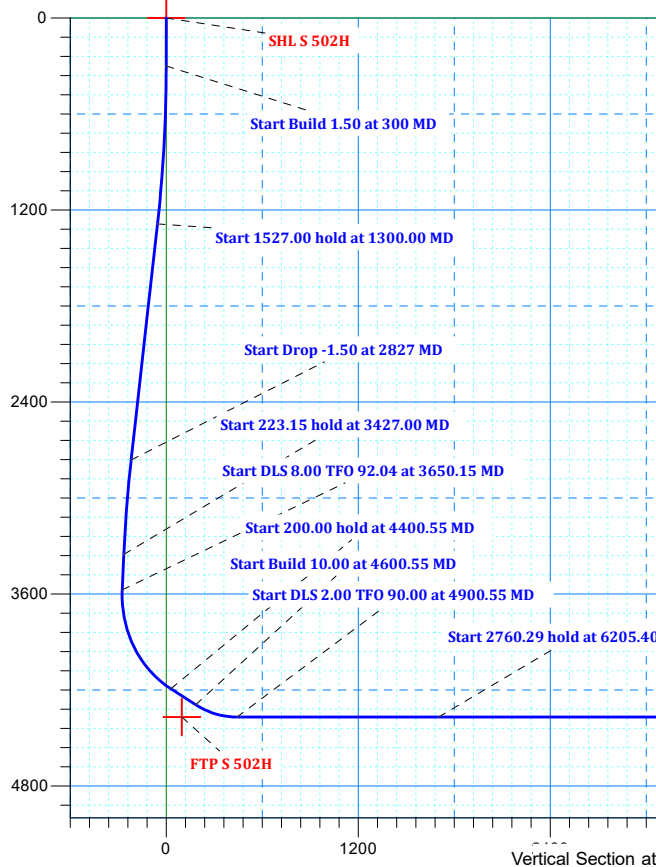
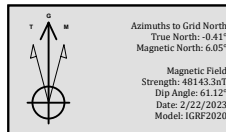
US State Plane 1983
New Mexico Eastern Zone
Elevation: GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Northing 962751.30 Easting 768030.50 Latitude 33° 38' 39.215 N Longitude 103° 35' 18.411 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
1300.00	15.00	245.00	1288.62	-55.01	-117.96	1.50	245.00	-54.33
2827.00	15.00	245.00	2763.58	-222.03	-476.15	0.00	0.00	-219.29
3427.00	6.00	245.00	3352.93	-268.19	-575.14	1.50	180.00	-264.88
3650.15	6.00	245.00	3574.86	-278.05	-596.28	0.00	0.00	-274.61
4400.55	60.00	333.57	4193.24	24.55	-794.97	8.00	92.04	29.12
4600.55	60.00	333.57	4293.24	179.65	-872.07	0.00	0.00	184.67
4900.55	90.00	333.57	4370.00	436.18	-999.58	10.00	0.00	441.93
6205.40	90.00	359.67	4370.00	1694.67	-1298.96	2.00	90.00	1702.12
8965.69	90.00	359.67	4370.00	4454.91	-1315.00	0.00	0.00	4462.41

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
SHL S 502H	0.00	0.00	0.00	962751.30	768030.50
FTP S 502H	4370.00	90.40	-1290.00	962841.70	766740.50
LTP/PBHL S 502H	4370.00	4454.91	-1315.00	967206.20	766715.50



Hadaway Consulting & Eng. LLC

Hadaway Chaves County, NM (NAD 83)

State 502H

State 502H

Wellbore #1

Plan: Plan #2

Standard Planning Report

25 February, 2023

Planning Report

Database:	edmdb	Local Co-ordinate Reference:	Well State 502H
Company:	Hadaway Consulting & Eng. LLC	TVD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Project:	Hadaway Chaves County, NM (NAD 83)	MD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Site:	State 502H	North Reference:	Grid
Well:	State 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Project	Hadaway Chaves County, NM (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		State 502H			
Site Position:		Northing:	962,751.30 usft	Latitude:	33° 38' 39.215 N
From:	Map	Easting:	768,030.50 usft	Longitude:	103° 35' 18.411 W
Position Uncertainty:		0.00 ft	Slot Radius:	13.200 in	

Well	State 502H					
Well Position	+N/-S	0.00 ft	Northing:	962,751.30 usft	Latitude:	33° 38' 39.215 N
	+E/-W	0.00 ft	Easting:	768,030.50 usft	Longitude:	103° 35' 18.411 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,444.00 ft
Grid Convergence:		0.41 °				

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	2/22/2023	6.47	61.12	48,143.28074732

Design	Plan #2				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	359.67	

Plan Survey Tool Program	Date	2/22/2023			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	8,965.69	Plan #2 (Wellbore #1)	MWD	
				MWD - Standard	

Planning Report

Database:	edmdb	Local Co-ordinate Reference:	Well State 502H
Company:	Hadaway Consulting & Eng. LLC	TVD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Project:	Hadaway Chaves County, NM (NAD 83)	MD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Site:	State 502H	North Reference:	Grid
Well:	State 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	15.00	245.00	1,288.62	-55.01	-117.96	1.50	1.50	0.00	245.00	
2,827.00	15.00	245.00	2,763.58	-222.03	-476.15	0.00	0.00	0.00	0.00	
3,427.00	6.00	245.00	3,352.93	-268.19	-575.14	1.50	-1.50	0.00	180.00	
3,650.15	6.00	245.00	3,574.86	-278.05	-596.28	0.00	0.00	0.00	0.00	
4,400.55	60.00	333.57	4,193.24	24.55	-794.97	8.00	7.20	11.80	92.04	
4,600.55	60.00	333.57	4,293.24	179.65	-872.07	0.00	0.00	0.00	0.00	
4,900.55	90.00	333.57	4,370.00	436.18	-999.58	10.00	10.00	0.00	0.00	
6,205.40	90.00	359.67	4,370.00	1,694.67	-1,298.96	2.00	0.00	2.00	90.00	
8,965.69	90.00	359.67	4,370.00	4,454.91	-1,315.00	0.00	0.00	0.00	0.00	LTP/PBHL S 502H

Planning Report

Database:	edmdb	Local Co-ordinate Reference:	Well State 502H
Company:	Hadaway Consulting & Eng. LLC	TVD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Project:	Hadaway Chaves County, NM (NAD 83)	MD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Site:	State 502H	North Reference:	Grid
Well:	State 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 1.50 at 300 MD									
400.00	1.50	245.00	399.99	-0.55	-1.19	-0.55	1.50	1.50	0.00
500.00	3.00	245.00	499.91	-2.21	-4.74	-2.18	1.50	1.50	0.00
600.00	4.50	245.00	599.69	-4.98	-10.67	-4.91	1.50	1.50	0.00
700.00	6.00	245.00	699.27	-8.84	-18.96	-8.73	1.50	1.50	0.00
800.00	7.50	245.00	798.57	-13.81	-29.62	-13.64	1.50	1.50	0.00
900.00	9.00	245.00	897.54	-19.87	-42.62	-19.63	1.50	1.50	0.00
1,000.00	10.50	245.00	996.09	-27.03	-57.97	-26.70	1.50	1.50	0.00
1,100.00	12.00	245.00	1,094.16	-35.28	-75.65	-34.84	1.50	1.50	0.00
1,200.00	13.50	245.00	1,191.70	-44.60	-95.65	-44.05	1.50	1.50	0.00
1,300.00	15.00	245.00	1,288.62	-55.01	-117.96	-54.33	1.50	1.50	0.00
Start 1527.00 hold at 1300.00 MD									
1,400.00	15.00	245.00	1,385.21	-65.94	-141.42	-65.13	0.00	0.00	0.00
1,500.00	15.00	245.00	1,481.80	-76.88	-164.87	-75.93	0.00	0.00	0.00
1,600.00	15.00	245.00	1,578.39	-87.82	-188.33	-86.73	0.00	0.00	0.00
1,700.00	15.00	245.00	1,674.99	-98.76	-211.79	-97.54	0.00	0.00	0.00
1,800.00	15.00	245.00	1,771.58	-109.70	-235.24	-108.34	0.00	0.00	0.00
1,900.00	15.00	245.00	1,868.17	-120.63	-258.70	-119.14	0.00	0.00	0.00
2,000.00	15.00	245.00	1,964.76	-131.57	-282.16	-129.95	0.00	0.00	0.00
2,100.00	15.00	245.00	2,061.36	-142.51	-305.62	-140.75	0.00	0.00	0.00
2,200.00	15.00	245.00	2,157.95	-153.45	-329.07	-151.55	0.00	0.00	0.00
2,300.00	15.00	245.00	2,254.54	-164.39	-352.53	-162.35	0.00	0.00	0.00
2,400.00	15.00	245.00	2,351.13	-175.33	-375.99	-173.16	0.00	0.00	0.00
2,500.00	15.00	245.00	2,447.73	-186.26	-399.44	-183.96	0.00	0.00	0.00
2,600.00	15.00	245.00	2,544.32	-197.20	-422.90	-194.76	0.00	0.00	0.00
2,700.00	15.00	245.00	2,640.91	-208.14	-446.36	-205.57	0.00	0.00	0.00
2,800.00	15.00	245.00	2,737.50	-219.08	-469.81	-216.37	0.00	0.00	0.00
2,827.00	15.00	245.00	2,763.58	-222.03	-476.15	-219.29	0.00	0.00	0.00
Start Drop -1.50 at 2827 MD									
2,900.00	13.91	245.00	2,834.27	-229.73	-492.66	-226.89	1.50	-1.50	0.00
3,000.00	12.41	245.00	2,931.65	-239.35	-513.28	-236.39	1.50	-1.50	0.00
3,100.00	10.91	245.00	3,029.58	-247.89	-531.59	-244.82	1.50	-1.50	0.00
3,200.00	9.41	245.00	3,128.01	-255.34	-547.57	-252.18	1.50	-1.50	0.00
3,300.00	7.91	245.00	3,226.87	-261.70	-561.21	-258.46	1.50	-1.50	0.00
3,400.00	6.41	245.00	3,326.09	-266.96	-572.50	-263.66	1.50	-1.50	0.00
3,427.00	6.00	245.00	3,352.93	-268.19	-575.14	-264.88	1.50	-1.50	0.00
Start 223.15 hold at 3427.00 MD									
3,500.00	6.00	245.00	3,425.53	-271.42	-582.06	-268.06	0.00	0.00	0.00
3,600.00	6.00	245.00	3,524.98	-275.84	-591.53	-272.42	0.00	0.00	0.00
3,650.15	6.00	245.00	3,574.86	-278.05	-596.28	-274.61	0.00	0.00	0.00
Start DLS 8.00 TFO 92.04 at 3650.15 MD									
3,700.00	7.08	279.32	3,624.40	-278.65	-601.68	-275.18	8.00	2.17	68.84
3,800.00	13.19	310.43	3,722.86	-270.24	-616.47	-266.69	8.00	6.11	31.11
3,900.00	20.63	320.84	3,818.49	-249.15	-636.31	-245.48	8.00	7.43	10.42
4,000.00	28.36	325.83	3,909.43	-215.78	-660.82	-211.97	8.00	7.74	4.98
4,100.00	36.21	328.80	3,993.91	-170.79	-689.51	-166.82	8.00	7.84	2.97
4,200.00	44.10	330.82	4,070.28	-115.06	-721.82	-110.90	8.00	7.89	2.03
4,300.00	52.02	332.34	4,137.07	-49.66	-757.14	-45.30	8.00	7.92	1.52
4,400.00	59.96	333.56	4,192.96	24.12	-794.76	28.70	8.00	7.94	1.22
4,400.55	60.00	333.57	4,193.24	24.55	-794.97	29.12	8.00	7.94	1.11

Planning Report

Database:	edmdb	Local Co-ordinate Reference:	Well State 502H
Company:	Hadaway Consulting & Eng. LLC	TVD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Project:	Hadaway Chaves County, NM (NAD 83)	MD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Site:	State 502H	North Reference:	Grid
Well:	State 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Start 200.00 hold at 4400.55 MD									
4,500.00	60.00	333.57	4,242.96	101.67	-833.31	106.47	0.00	0.00	0.00
4,600.00	60.00	333.57	4,292.96	179.22	-871.86	184.24	0.00	0.00	0.00
4,600.55	60.00	333.57	4,293.24	179.65	-872.07	184.67	0.00	0.00	0.00
Start Build 10.00 at 4600.55 MD									
4,700.00	69.95	333.57	4,335.26	260.24	-912.13	265.49	10.00	10.00	0.00
4,800.00	79.95	333.57	4,361.20	346.61	-955.06	352.10	10.00	10.00	0.00
4,900.00	89.95	333.57	4,370.00	435.69	-999.34	441.44	10.00	10.00	0.00
4,900.55	90.00	333.57	4,370.00	436.18	-999.58	441.93	10.00	10.00	0.00
Start DLS 2.00 TFO 90.00 at 4900.55 MD									
5,000.00	90.00	335.56	4,370.00	525.99	-1,042.29	531.98	2.00	0.00	2.00
5,100.00	90.00	337.56	4,370.00	617.73	-1,082.07	623.95	2.00	0.00	2.00
5,200.00	90.00	339.56	4,370.00	710.81	-1,118.62	717.24	2.00	0.00	2.00
5,300.00	90.00	341.56	4,370.00	805.10	-1,151.91	811.72	2.00	0.00	2.00
5,400.00	90.00	343.56	4,370.00	900.50	-1,181.88	907.29	2.00	0.00	2.00
5,500.00	90.00	345.56	4,370.00	996.88	-1,208.50	1,003.83	2.00	0.00	2.00
5,600.00	90.00	347.56	4,370.00	1,094.14	-1,231.74	1,101.22	2.00	0.00	2.00
5,700.00	90.00	349.56	4,370.00	1,192.15	-1,251.58	1,199.34	2.00	0.00	2.00
5,800.00	90.00	351.56	4,370.00	1,290.79	-1,267.98	1,298.07	2.00	0.00	2.00
5,900.00	90.00	353.56	4,370.00	1,389.94	-1,280.93	1,397.30	2.00	0.00	2.00
6,000.00	90.00	355.56	4,370.00	1,489.49	-1,290.41	1,496.89	2.00	0.00	2.00
6,100.00	90.00	357.56	4,370.00	1,589.30	-1,296.41	1,596.74	2.00	0.00	2.00
6,200.00	90.00	359.56	4,370.00	1,689.26	-1,298.93	1,696.72	2.00	0.00	2.00
6,205.40	90.00	359.67	4,370.00	1,694.67	-1,298.96	1,702.12	2.00	0.00	2.00
Start 2760.29 hold at 6205.40 MD									
6,300.00	90.00	359.67	4,370.00	1,789.26	-1,299.51	1,796.72	0.00	0.00	0.00
6,400.00	90.00	359.67	4,370.00	1,889.26	-1,300.09	1,896.72	0.00	0.00	0.00
6,500.00	90.00	359.67	4,370.00	1,989.26	-1,300.68	1,996.72	0.00	0.00	0.00
6,600.00	90.00	359.67	4,370.00	2,089.26	-1,301.26	2,096.72	0.00	0.00	0.00
6,700.00	90.00	359.67	4,370.00	2,189.26	-1,301.84	2,196.72	0.00	0.00	0.00
6,800.00	90.00	359.67	4,370.00	2,289.25	-1,302.42	2,296.72	0.00	0.00	0.00
6,900.00	90.00	359.67	4,370.00	2,389.25	-1,303.00	2,396.72	0.00	0.00	0.00
7,000.00	90.00	359.67	4,370.00	2,489.25	-1,303.58	2,496.72	0.00	0.00	0.00
7,100.00	90.00	359.67	4,370.00	2,589.25	-1,304.16	2,596.72	0.00	0.00	0.00
7,200.00	90.00	359.67	4,370.00	2,689.25	-1,304.74	2,696.72	0.00	0.00	0.00
7,300.00	90.00	359.67	4,370.00	2,789.25	-1,305.32	2,796.72	0.00	0.00	0.00
7,400.00	90.00	359.67	4,370.00	2,889.24	-1,305.90	2,896.72	0.00	0.00	0.00
7,500.00	90.00	359.67	4,370.00	2,989.24	-1,306.49	2,996.72	0.00	0.00	0.00
7,600.00	90.00	359.67	4,370.00	3,089.24	-1,307.07	3,096.72	0.00	0.00	0.00
7,700.00	90.00	359.67	4,370.00	3,189.24	-1,307.65	3,196.72	0.00	0.00	0.00
7,800.00	90.00	359.67	4,370.00	3,289.24	-1,308.23	3,296.72	0.00	0.00	0.00
7,900.00	90.00	359.67	4,370.00	3,389.24	-1,308.81	3,396.72	0.00	0.00	0.00
8,000.00	90.00	359.67	4,370.00	3,489.23	-1,309.39	3,496.72	0.00	0.00	0.00
8,100.00	90.00	359.67	4,370.00	3,589.23	-1,309.97	3,596.72	0.00	0.00	0.00
8,200.00	90.00	359.67	4,370.00	3,689.23	-1,310.55	3,696.72	0.00	0.00	0.00
8,300.00	90.00	359.67	4,370.00	3,789.23	-1,311.13	3,796.72	0.00	0.00	0.00
8,400.00	90.00	359.67	4,370.00	3,889.23	-1,311.72	3,896.72	0.00	0.00	0.00
8,500.00	90.00	359.67	4,370.00	3,989.23	-1,312.30	3,996.72	0.00	0.00	0.00
8,600.00	90.00	359.67	4,370.00	4,089.22	-1,312.88	4,096.72	0.00	0.00	0.00
8,700.00	90.00	359.67	4,370.00	4,189.22	-1,313.46	4,196.72	0.00	0.00	0.00
8,800.00	90.00	359.67	4,370.00	4,289.22	-1,314.04	4,296.72	0.00	0.00	0.00
8,900.00	90.00	359.67	4,370.00	4,389.22	-1,314.62	4,396.72	0.00	0.00	0.00
8,965.69	90.00	359.67	4,370.00	4,454.91	-1,315.00	4,462.41	0.00	0.00	0.00

Planning Report

Database:	edmdb	Local Co-ordinate Reference:	Well State 502H
Company:	Hadaway Consulting & Eng. LLC	TVD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Project:	Hadaway Chaves County, NM (NAD 83)	MD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Site:	State 502H	North Reference:	Grid
Well:	State 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
TD at 8965.69 MD									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL S 502H - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	962,751.30	768,030.50	33° 38' 39.215 N	103° 35' 18.411 W
LTP/PBHL S 502H - plan hits target center - Point	0.00	0.00	4,370.00	4,454.91	-1,315.00	967,206.20	766,715.50	33° 39' 23.380 N	103° 35' 33.587 W
FTP S 502H - plan misses target center by 414.91ft at 4724.61ft MD (4343.20 TVD, 281.10 N, -922.49 E) - Point	0.00	0.00	4,370.00	90.40	-1,290.00	962,841.70	766,740.50	33° 38' 40.201 N	103° 35' 33.662 W

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.00	300.00	0.00	0.00	Start Build 1.50 at 300 MD
1,300.00	1,288.62	-55.01	-117.96	Start 1527.00 hold at 1300.00 MD
2,827.00	2,763.58	-222.03	-476.15	Start Drop -1.50 at 2827 MD
3,427.00	3,352.93	-268.19	-575.14	Start 223.15 hold at 3427.00 MD
3,650.15	3,574.86	-278.05	-596.28	Start DLS 8.00 TFO 92.04 at 3650.15 MD
4,400.55	4,193.24	24.55	-794.97	Start 200.00 hold at 4400.55 MD
4,600.55	4,293.24	179.65	-872.07	Start Build 10.00 at 4600.55 MD
4,900.55	4,370.00	436.18	-999.58	Start DLS 2.00 TFO 90.00 at 4900.55 MD
6,205.40	4,370.00	1,694.67	-1,298.96	Start 2760.29 hold at 6205.40 MD
8,965.69	4,370.00	4,454.91	-1,315.00	TD at 8965.69 MD

Hadaway Consulting & Eng. LLC

Hadaway Chaves County, NM (NAD 83)

State 502H

State 502H

Wellbore #1

Plan: Plan #2

Standard Planning Report - Geographic

25 February, 2023

Planning Report - Geographic

Database:	edmdb	Local Co-ordinate Reference:	Well State 502H
Company:	Hadaway Consulting & Eng. LLC	TVD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Project:	Hadaway Chaves County, NM (NAD 83)	MD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Site:	State 502H	North Reference:	Grid
Well:	State 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Project	Hadaway Chaves County, NM (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		State 502H			
Site Position:		Northing:	962,751.30 usft	Latitude:	33° 38' 39.215 N
From:	Map	Easting:	768,030.50 usft	Longitude:	103° 35' 18.411 W
Position Uncertainty:		0.00 ft	Slot Radius:	13.200 in	

Well	State 502H					
Well Position	+N/-S	0.00 ft	Northing:	962,751.30 usft	Latitude:	33° 38' 39.215 N
	+E/-W	0.00 ft	Easting:	768,030.50 usft	Longitude:	103° 35' 18.411 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,444.00 ft
Grid Convergence:		0.41 °				

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	2/22/2023	6.47	61.12	48,143.28074732

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	359.67

Plan Survey Tool Program	Date	2/22/2023		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	8,965.69 Plan #2 (Wellbore #1)	MWD	
			MWD - Standard	

Planning Report - Geographic

Database:	edmdb	Local Co-ordinate Reference:	Well State 502H
Company:	Hadaway Consulting & Eng. LLC	TVD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Project:	Hadaway Chaves County, NM (NAD 83)	MD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Site:	State 502H	North Reference:	Grid
Well:	State 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	15.00	245.00	1,288.62	-55.01	-117.96	1.50	1.50	0.00	245.00	
2,827.00	15.00	245.00	2,763.58	-222.03	-476.15	0.00	0.00	0.00	0.00	
3,427.00	6.00	245.00	3,352.93	-268.19	-575.14	1.50	-1.50	0.00	180.00	
3,650.15	6.00	245.00	3,574.86	-278.05	-596.28	0.00	0.00	0.00	0.00	
4,400.55	60.00	333.57	4,193.24	24.55	-794.97	8.00	7.20	11.80	92.04	
4,600.55	60.00	333.57	4,293.24	179.65	-872.07	0.00	0.00	0.00	0.00	
4,900.55	90.00	333.57	4,370.00	436.18	-999.58	10.00	10.00	0.00	0.00	
6,205.40	90.00	359.67	4,370.00	1,694.67	-1,298.96	2.00	0.00	2.00	90.00	
8,965.69	90.00	359.67	4,370.00	4,454.91	-1,315.00	0.00	0.00	0.00	0.00	LTP/PBHL S 502H

Planning Report - Geographic

Database:	edmdb	Local Co-ordinate Reference:	Well State 502H
Company:	Hadaway Consulting & Eng. LLC	TVD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Project:	Hadaway Chaves County, NM (NAD 83)	MD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Site:	State 502H	North Reference:	Grid
Well:	State 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	962,751.30	768,030.50	33° 38' 39.215 N	103° 35' 18.411 W
100.00	0.00	0.00	100.00	0.00	0.00	962,751.30	768,030.50	33° 38' 39.215 N	103° 35' 18.411 W
200.00	0.00	0.00	200.00	0.00	0.00	962,751.30	768,030.50	33° 38' 39.215 N	103° 35' 18.411 W
300.00	0.00	0.00	300.00	0.00	0.00	962,751.30	768,030.50	33° 38' 39.215 N	103° 35' 18.411 W
Start Build 1.50 at 300 MD									
400.00	1.50	245.00	399.99	-0.55	-1.19	962,750.75	768,029.31	33° 38' 39.209 N	103° 35' 18.425 W
500.00	3.00	245.00	499.91	-2.21	-4.74	962,749.09	768,025.75	33° 38' 39.193 N	103° 35' 18.467 W
600.00	4.50	245.00	599.69	-4.98	-10.67	962,746.33	768,019.83	33° 38' 39.166 N	103° 35' 18.537 W
700.00	6.00	245.00	699.27	-8.84	-18.96	962,742.46	768,011.53	33° 38' 39.128 N	103° 35' 18.636 W
800.00	7.50	245.00	798.57	-13.81	-29.62	962,737.49	768,000.88	33° 38' 39.080 N	103° 35' 18.762 W
900.00	9.00	245.00	897.54	-19.87	-42.62	962,731.43	767,987.88	33° 38' 39.021 N	103° 35' 18.917 W
1,000.00	10.50	245.00	996.09	-27.03	-57.97	962,724.27	767,972.53	33° 38' 38.951 N	103° 35' 19.099 W
1,100.00	12.00	245.00	1,094.16	-35.28	-75.65	962,716.03	767,954.85	33° 38' 38.871 N	103° 35' 19.309 W
1,200.00	13.50	245.00	1,191.70	-44.60	-95.65	962,706.70	767,934.85	33° 38' 38.780 N	103° 35' 19.546 W
1,300.00	15.00	245.00	1,288.62	-55.01	-117.96	962,696.30	767,912.54	33° 38' 38.679 N	103° 35' 19.811 W
Start 1527.00 hold at 1300.00 MD									
1,400.00	15.00	245.00	1,385.21	-65.94	-141.42	962,685.36	767,889.08	33° 38' 38.572 N	103° 35' 20.089 W
1,500.00	15.00	245.00	1,481.80	-76.88	-164.87	962,674.42	767,865.62	33° 38' 38.466 N	103° 35' 20.367 W
1,600.00	15.00	245.00	1,578.39	-87.82	-188.33	962,663.48	767,842.17	33° 38' 38.359 N	103° 35' 20.646 W
1,700.00	15.00	245.00	1,674.99	-98.76	-211.79	962,652.54	767,818.71	33° 38' 38.253 N	103° 35' 20.924 W
1,800.00	15.00	245.00	1,771.58	-109.70	-235.24	962,641.61	767,795.25	33° 38' 38.146 N	103° 35' 21.203 W
1,900.00	15.00	245.00	1,868.17	-120.63	-258.70	962,630.67	767,771.80	33° 38' 38.040 N	103° 35' 21.481 W
2,000.00	15.00	245.00	1,964.76	-131.57	-282.16	962,619.73	767,748.34	33° 38' 37.933 N	103° 35' 21.759 W
2,100.00	15.00	245.00	2,061.36	-142.51	-305.62	962,608.79	767,724.88	33° 38' 37.826 N	103° 35' 22.038 W
2,200.00	15.00	245.00	2,157.95	-153.45	-329.07	962,597.85	767,701.43	33° 38' 37.720 N	103° 35' 22.316 W
2,300.00	15.00	245.00	2,254.54	-164.39	-352.53	962,586.91	767,677.97	33° 38' 37.613 N	103° 35' 22.595 W
2,400.00	15.00	245.00	2,351.13	-175.33	-375.99	962,575.98	767,654.51	33° 38' 37.507 N	103° 35' 22.873 W
2,500.00	15.00	245.00	2,447.73	-186.26	-399.44	962,565.04	767,631.05	33° 38' 37.400 N	103° 35' 23.151 W
2,600.00	15.00	245.00	2,544.32	-197.20	-422.90	962,554.10	767,607.60	33° 38' 37.294 N	103° 35' 23.430 W
2,700.00	15.00	245.00	2,640.91	-208.14	-446.36	962,543.16	767,584.14	33° 38' 37.187 N	103° 35' 23.708 W
2,800.00	15.00	245.00	2,737.50	-219.08	-469.81	962,532.22	767,560.68	33° 38' 37.081 N	103° 35' 23.986 W
2,827.00	15.00	245.00	2,763.58	-222.03	-476.15	962,529.27	767,554.35	33° 38' 37.052 N	103° 35' 24.062 W
Start Drop -1.50 at 2827 MD									
2,900.00	13.91	245.00	2,834.27	-229.73	-492.66	962,521.57	767,537.84	33° 38' 36.977 N	103° 35' 24.258 W
3,000.00	12.41	245.00	2,931.65	-239.35	-513.28	962,511.95	767,517.21	33° 38' 36.883 N	103° 35' 24.502 W
3,100.00	10.91	245.00	3,029.58	-247.89	-531.59	962,503.42	767,498.90	33° 38' 36.800 N	103° 35' 24.720 W
3,200.00	9.41	245.00	3,128.01	-255.34	-547.57	962,495.96	767,482.93	33° 38' 36.727 N	103° 35' 24.909 W
3,300.00	7.91	245.00	3,226.87	-261.70	-561.21	962,489.61	767,469.29	33° 38' 36.666 N	103° 35' 25.071 W
3,400.00	6.41	245.00	3,326.09	-266.96	-572.50	962,484.34	767,458.00	33° 38' 36.614 N	103° 35' 25.205 W
3,427.00	6.00	245.00	3,352.93	-268.19	-575.14	962,483.11	767,455.36	33° 38' 36.602 N	103° 35' 25.236 W
Start 223.15 hold at 3427.00 MD									
3,500.00	6.00	245.00	3,425.53	-271.42	-582.06	962,479.88	767,448.44	33° 38' 36.571 N	103° 35' 25.319 W
3,600.00	6.00	245.00	3,524.98	-275.84	-591.53	962,475.47	767,438.97	33° 38' 36.528 N	103° 35' 25.431 W
3,650.15	6.00	245.00	3,574.86	-278.05	-596.28	962,473.25	767,434.22	33° 38' 36.506 N	103° 35' 25.487 W
Start DLS 8.00 TFO 92.04 at 3650.15 MD									
3,700.00	7.08	279.32	3,624.40	-278.65	-601.68	962,472.65	767,428.82	33° 38' 36.501 N	103° 35' 25.551 W
3,800.00	13.19	310.43	3,722.86	-270.24	-616.47	962,481.06	767,414.03	33° 38' 36.585 N	103° 35' 25.725 W
3,900.00	20.63	320.84	3,818.49	-249.15	-636.31	962,502.15	767,394.18	33° 38' 36.795 N	103° 35' 25.958 W
4,000.00	28.36	325.83	3,909.43	-215.78	-660.82	962,535.52	767,369.68	33° 38' 37.127 N	103° 35' 26.245 W
4,100.00	36.21	328.80	3,993.91	-170.79	-689.51	962,580.51	767,340.99	33° 38' 37.574 N	103° 35' 26.581 W
4,200.00	44.10	330.82	4,070.28	-115.06	-721.82	962,636.24	767,308.67	33° 38' 38.128 N	103° 35' 26.958 W
4,300.00	52.02	332.34	4,137.07	-49.66	-757.14	962,701.64	767,273.36	33° 38' 38.777 N	103° 35' 27.371 W
4,400.00	59.96	333.56	4,192.96	24.12	-794.76	962,775.42	767,235.74	33° 38' 39.510 N	103° 35' 27.809 W

Planning Report - Geographic

Database:	edmdb	Local Co-ordinate Reference:	Well State 502H
Company:	Hadaway Consulting & Eng. LLC	TVD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Project:	Hadaway Chaves County, NM (NAD 83)	MD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Site:	State 502H	North Reference:	Grid
Well:	State 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Planned Survey										
Measured			Vertical			Map		Map		
Depth (ft)	Inclination (°)	Azimuth (°)	Depth (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
4,400.55	60.00	333.57	4,193.24	24.55	-794.97	962,775.85	767,235.53	33° 38' 39.514 N	103° 35' 27.812 W	
Start 200.00 hold at 4400.55 MD										
4,500.00	60.00	333.57	4,242.96	101.67	-833.31	962,852.97	767,197.19	33° 38' 40.280 N	103° 35' 28.259 W	
4,600.00	60.00	333.57	4,292.96	179.22	-871.86	962,930.52	767,158.64	33° 38' 41.050 N	103° 35' 28.708 W	
4,600.55	60.00	333.57	4,293.24	179.65	-872.07	962,930.95	767,158.43	33° 38' 41.054 N	103° 35' 28.711 W	
Start Build 10.00 at 4600.55 MD										
4,700.00	69.95	333.57	4,335.26	260.24	-912.13	963,011.54	767,118.37	33° 38' 41.854 N	103° 35' 29.178 W	
4,800.00	79.95	333.57	4,361.20	346.61	-955.06	963,097.91	767,075.44	33° 38' 42.711 N	103° 35' 29.678 W	
4,900.00	89.95	333.57	4,370.00	435.69	-999.34	963,186.99	767,031.16	33° 38' 43.596 N	103° 35' 30.194 W	
4,900.55	90.00	333.57	4,370.00	436.18	-999.58	963,187.48	767,030.92	33° 38' 43.601 N	103° 35' 30.197 W	
Start DLS 2.00 TFO 90.00 at 4900.55 MD										
5,000.00	90.00	335.56	4,370.00	525.99	-1,042.29	963,277.29	766,988.21	33° 38' 44.492 N	103° 35' 30.695 W	
5,100.00	90.00	337.56	4,370.00	617.73	-1,082.07	963,369.03	766,948.43	33° 38' 45.403 N	103° 35' 31.157 W	
5,200.00	90.00	339.56	4,370.00	710.81	-1,118.62	963,462.11	766,911.88	33° 38' 46.326 N	103° 35' 31.582 W	
5,300.00	90.00	341.56	4,370.00	805.10	-1,151.91	963,556.40	766,878.59	33° 38' 47.261 N	103° 35' 31.968 W	
5,400.00	90.00	343.56	4,370.00	900.50	-1,181.88	963,651.80	766,848.62	33° 38' 48.207 N	103° 35' 32.314 W	
5,500.00	90.00	345.56	4,370.00	996.88	-1,208.50	963,748.18	766,822.00	33° 38' 49.163 N	103° 35' 32.621 W	
5,600.00	90.00	347.56	4,370.00	1,094.14	-1,231.74	963,845.44	766,798.76	33° 38' 50.126 N	103° 35' 32.887 W	
5,700.00	90.00	349.56	4,370.00	1,192.15	-1,251.58	963,943.45	766,778.92	33° 38' 51.097 N	103° 35' 33.114 W	
5,800.00	90.00	351.56	4,370.00	1,290.79	-1,267.98	964,042.09	766,762.52	33° 38' 52.074 N	103° 35' 33.299 W	
5,900.00	90.00	353.56	4,370.00	1,389.94	-1,280.93	964,141.24	766,749.57	33° 38' 53.056 N	103° 35' 33.444 W	
6,000.00	90.00	355.56	4,370.00	1,489.49	-1,290.41	964,240.79	766,740.09	33° 38' 54.042 N	103° 35' 33.548 W	
6,100.00	90.00	357.56	4,370.00	1,589.30	-1,296.41	964,340.60	766,734.09	33° 38' 55.030 N	103° 35' 33.610 W	
6,200.00	90.00	359.56	4,370.00	1,689.26	-1,298.93	964,440.56	766,731.57	33° 38' 56.019 N	103° 35' 33.632 W	
6,205.40	90.00	359.67	4,370.00	1,694.67	-1,298.96	964,445.96	766,731.54	33° 38' 56.072 N	103° 35' 33.632 W	
Start 2760.29 hold at 6205.40 MD										
6,300.00	90.00	359.67	4,370.00	1,789.26	-1,299.51	964,540.56	766,730.99	33° 38' 57.008 N	103° 35' 33.630 W	
6,400.00	90.00	359.67	4,370.00	1,889.26	-1,300.09	964,640.56	766,730.41	33° 38' 57.997 N	103° 35' 33.629 W	
6,500.00	90.00	359.67	4,370.00	1,989.26	-1,300.68	964,740.56	766,729.82	33° 38' 58.987 N	103° 35' 33.627 W	
6,600.00	90.00	359.67	4,370.00	2,089.26	-1,301.26	964,840.56	766,729.24	33° 38' 59.976 N	103° 35' 33.625 W	
6,700.00	90.00	359.67	4,370.00	2,189.26	-1,301.84	964,940.55	766,728.66	33° 39' 0.965 N	103° 35' 33.624 W	
6,800.00	90.00	359.67	4,370.00	2,289.25	-1,302.42	965,040.55	766,728.08	33° 39' 1.955 N	103° 35' 33.622 W	
6,900.00	90.00	359.67	4,370.00	2,389.25	-1,303.00	965,140.55	766,727.50	33° 39' 2.944 N	103° 35' 33.621 W	
7,000.00	90.00	359.67	4,370.00	2,489.25	-1,303.58	965,240.55	766,726.92	33° 39' 3.933 N	103° 35' 33.619 W	
7,100.00	90.00	359.67	4,370.00	2,589.25	-1,304.16	965,340.55	766,726.34	33° 39' 4.923 N	103° 35' 33.617 W	
7,200.00	90.00	359.67	4,370.00	2,689.25	-1,304.74	965,440.54	766,725.76	33° 39' 5.912 N	103° 35' 33.616 W	
7,300.00	90.00	359.67	4,370.00	2,789.25	-1,305.32	965,540.54	766,725.18	33° 39' 6.901 N	103° 35' 33.614 W	
7,400.00	90.00	359.67	4,370.00	2,889.24	-1,305.90	965,640.54	766,724.59	33° 39' 7.890 N	103° 35' 33.613 W	
7,500.00	90.00	359.67	4,370.00	2,989.24	-1,306.49	965,740.54	766,724.01	33° 39' 8.880 N	103° 35' 33.611 W	
7,600.00	90.00	359.67	4,370.00	3,089.24	-1,307.07	965,840.54	766,723.43	33° 39' 9.869 N	103° 35' 33.609 W	
7,700.00	90.00	359.67	4,370.00	3,189.24	-1,307.65	965,940.53	766,722.85	33° 39' 10.858 N	103° 35' 33.608 W	
7,800.00	90.00	359.67	4,370.00	3,289.24	-1,308.23	966,040.53	766,722.27	33° 39' 11.848 N	103° 35' 33.606 W	
7,900.00	90.00	359.67	4,370.00	3,389.24	-1,308.81	966,140.53	766,721.69	33° 39' 12.837 N	103° 35' 33.605 W	
8,000.00	90.00	359.67	4,370.00	3,489.23	-1,309.39	966,240.53	766,721.11	33° 39' 13.826 N	103° 35' 33.603 W	
8,100.00	90.00	359.67	4,370.00	3,589.23	-1,309.97	966,340.53	766,720.53	33° 39' 14.816 N	103° 35' 33.601 W	
8,200.00	90.00	359.67	4,370.00	3,689.23	-1,310.55	966,440.52	766,719.95	33° 39' 15.805 N	103° 35' 33.600 W	
8,300.00	90.00	359.67	4,370.00	3,789.23	-1,311.13	966,540.52	766,719.37	33° 39' 16.794 N	103° 35' 33.598 W	
8,400.00	90.00	359.67	4,370.00	3,889.23	-1,311.72	966,640.52	766,718.78	33° 39' 17.784 N	103° 35' 33.597 W	
8,500.00	90.00	359.67	4,370.00	3,989.23	-1,312.30	966,740.52	766,718.20	33° 39' 18.773 N	103° 35' 33.595 W	
8,600.00	90.00	359.67	4,370.00	4,089.22	-1,312.88	966,840.52	766,717.62	33° 39' 19.762 N	103° 35' 33.593 W	
8,700.00	90.00	359.67	4,370.00	4,189.22	-1,313.46	966,940.52	766,717.04	33° 39' 20.752 N	103° 35' 33.592 W	
8,800.00	90.00	359.67	4,370.00	4,289.22	-1,314.04	967,040.51	766,716.46	33° 39' 21.741 N	103° 35' 33.590 W	
8,900.00	90.00	359.67	4,370.00	4,389.22	-1,314.62	967,140.51	766,715.88	33° 39' 22.730 N	103° 35' 33.589 W	

Planning Report - Geographic

Database:	edmdb	Local Co-ordinate Reference:	Well State 502H
Company:	Hadaway Consulting & Eng. LLC	TVD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Project:	Hadaway Chaves County, NM (NAD 83)	MD Reference:	GL 4444' + RKB 17' @ 4461.00ft (Norton 2)
Site:	State 502H	North Reference:	Grid
Well:	State 502H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
8,965.69	90.00	359.67	4,370.00	4,454.91	-1,315.00	967,206.20	766,715.50	33° 39' 23.380 N	103° 35' 33.587 W	
TD at 8965.69 MD										

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SHL S 502H - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	962,751.30	768,030.50	33° 38' 39.215 N	103° 35' 18.411 W	
LTP/PBHL S 502H - plan hits target center - Point	0.00	0.00	4,370.00	4,454.91	-1,315.00	967,206.20	766,715.50	33° 39' 23.380 N	103° 35' 33.587 W	
FTP S 502H - plan misses target center by 414.91ft at 4724.61ft MD (4343.20 TVD, 281.10 N, -922.49 E) - Point	0.00	0.00	4,370.00	90.40	-1,290.00	962,841.70	766,740.50	33° 38' 40.201 N	103° 35' 33.662 W	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
300.00	300.00	0.00	0.00	Start Build 1.50 at 300 MD	
1,300.00	1,288.62	-55.01	-117.96	Start 1527.00 hold at 1300.00 MD	
2,827.00	2,763.58	-222.03	-476.15	Start Drop -1.50 at 2827 MD	
3,427.00	3,352.93	-268.19	-575.14	Start 223.15 hold at 3427.00 MD	
3,650.15	3,574.86	-278.05	-596.28	Start DLS 8.00 TFO 92.04 at 3650.15 MD	
4,400.55	4,193.24	24.55	-794.97	Start 200.00 hold at 4400.55 MD	
4,600.55	4,293.24	179.65	-872.07	Start Build 10.00 at 4600.55 MD	
4,900.55	4,370.00	436.18	-999.58	Start DLS 2.00 TFO 90.00 at 4900.55 MD	
6,205.40	4,370.00	1,694.67	-1,298.96	Start 2760.29 hold at 6205.40 MD	
8,965.69	4,370.00	4,454.91	-1,315.00	TD at 8965.69 MD	

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description Effective May 25, 2021

I. Operator: HADAWAY CONSULTING & ENGINEERING, LLC **OGRID:** 371985 **Date:** 2/28/2023

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
STATE 502H	TBD	N-05-08S-33E	700' FSL & 2609' FWL	300 BBL/D	300 MCF/D	3000 BBL/D

IV. Central Delivery Point Name: _____ [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
STATE 502H	TBD	6/1/2023	6/16/2023	7/1/2023	7/6/2023	7/10/2023

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan
EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

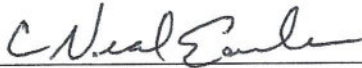
(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:



Printed Name: Neal Earle

Title: Engineer

E-mail Address: earle@hadeng.com

Date: 2/23/23

Phone: 806.323.9811

OIL CONSERVATION DIVISION**(Only applicable when submitted as a standalone form)**

Approved By:

Title:

Approval Date:

Conditions of Approval:

HADAWAY CONSULTING & ENGINEERING, LLC
OGRID #371985

HADAWAY CONSULTING & ENGINEERING, LLC does not expect the recompletion operation to produce more than 3 MCF/Day. Should that volume be exceeded in production operations, please see the below responses to the requirements of the Natural Gas Management Plan. Should the gas production not meet or exceed the expected 3 MCF/Day, gas will be utilized for power generation on lease.

Section 1

VI. Separation Equipment

HADAWAY CONSULTING & ENGINEERING, LLC will install a 4 x 8 horizontal 3 phase separator sufficient to optimize gas capture.

VII. Operational Practices

- A. HADAWAY CONSULTING & ENGINEERING, LLC will utilize produced gas as fuel for power generation on location. Should gas production increase, flare stacks will be installed to avoid venting excess gas.
- B. This is a recompletion operation, not a drilling operation and no gas is expected to be produced during recompletion.
- C. During initial flowback fluids will be produced into storage tankage. During separation flowback HADAWAY CONSULTING & ENGINEERING, LLC will use produced gas for power generation on location.
- D. HADAWAY CONSULTING & ENGINEERING, LLC will not flare or vent gas during production operations. Gas will be utilized for power generation.
- E. Tankage will be equipped with automatic metering devices to minimize waste. Should a flare stack become necessary it will be installed in accordance with all design standards.
- F. Metering will be conducted to accurately report all gas produced, used or flared. Should gas be produced at low enough volume to not require metering, GOR will be used and volumes reported on the form C-116.

VIII. Best Management Practices

Produced gas will be primarily used as fuel gas supply at the production facility. Flare stacks will be implemented during maintenance and emergency situations to avoid venting during any active or planned maintenance.

Section 3

Venting and Flaring Plan

If gas is produced in sufficient volumes, HADAWAY CONSULTING & ENGINEERING, LLC plans to utilize gas for power generation on lease.