

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

Form C-101
August 1, 2011

Permit 314710

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

1. Operator Name and Address Crockett Operating, LLC 1101 N. Little School Rd Arlington, TX 76017		2. OGRID Number 331255
		3. API Number 30-025-50078
4. Property Code 332795	5. Property Name ACKBAR 30 31 A FEE	6. Well No. 001H

7. Surface Location

UL - Lot L	Section 30	Township 13S	Range 38E	Lot Idn L	Feet From 2388	N/S Line S	Feet From 970	E/W Line W	County Lea
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8. Proposed Bottom Hole Location

UL - Lot M	Section 31	Township 13S	Range 38E	Lot Idn M	Feet From 50	N/S Line S	Feet From 1120	E/W Line W	County Lea
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9. Pool Information

BRONCO;SAN ANDRES, SOUTH	7500
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type Private	15. Ground Level Elevation 3851
16. Multiple N	17. Proposed Depth 12900	18. Formation San Andres	19. Contractor	20. Spud Date 5/20/2022
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	12.25	9.625	40	2450	930	0
Prod	8.75	5.5	20	12900	2450	0

Casing/Cement Program: Additional Comments

WOC FOR SURFACE CASING. PICK UP 8.75" BIT AND DRILL PILOT HOLE TO ~ 6300'. RUN LOGS. SET WHIPSTOCK ASSY AT KOP AND PLUG BACK PILOT HOLE WITH 525 SXs CEMENT. WOC. DRILL LATERAL AND SET PRODUCTION CASING.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	3000	1500	SCHAFER
Double Ram	3000	1500	SCHAFER

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 Gayle Foord	Approved By: Paul F Kautz
Title: Regulatory Manager	Title: Geologist
Email Address: gayle.foord@crockettops.com	Approved Date: 4/28/2022
Date: 4/22/2022	Expiration Date: 4/28/2024
Phone: 713-306-9706	Conditions of Approval Attached

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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 30-025-50078	² Pool Code 7500	³ Pool Name BRONCO; SAN ANDRES, SOUTH
⁴ Property Code 332795	⁵ Property Name ACKBAR 30 31 A FEE	⁶ Well Number 1H
⁷ OGRID No. 331255	⁸ Operator Name CROCKETT OPERATING LLC	⁹ Elevation 3851'

¹⁰Surface Location

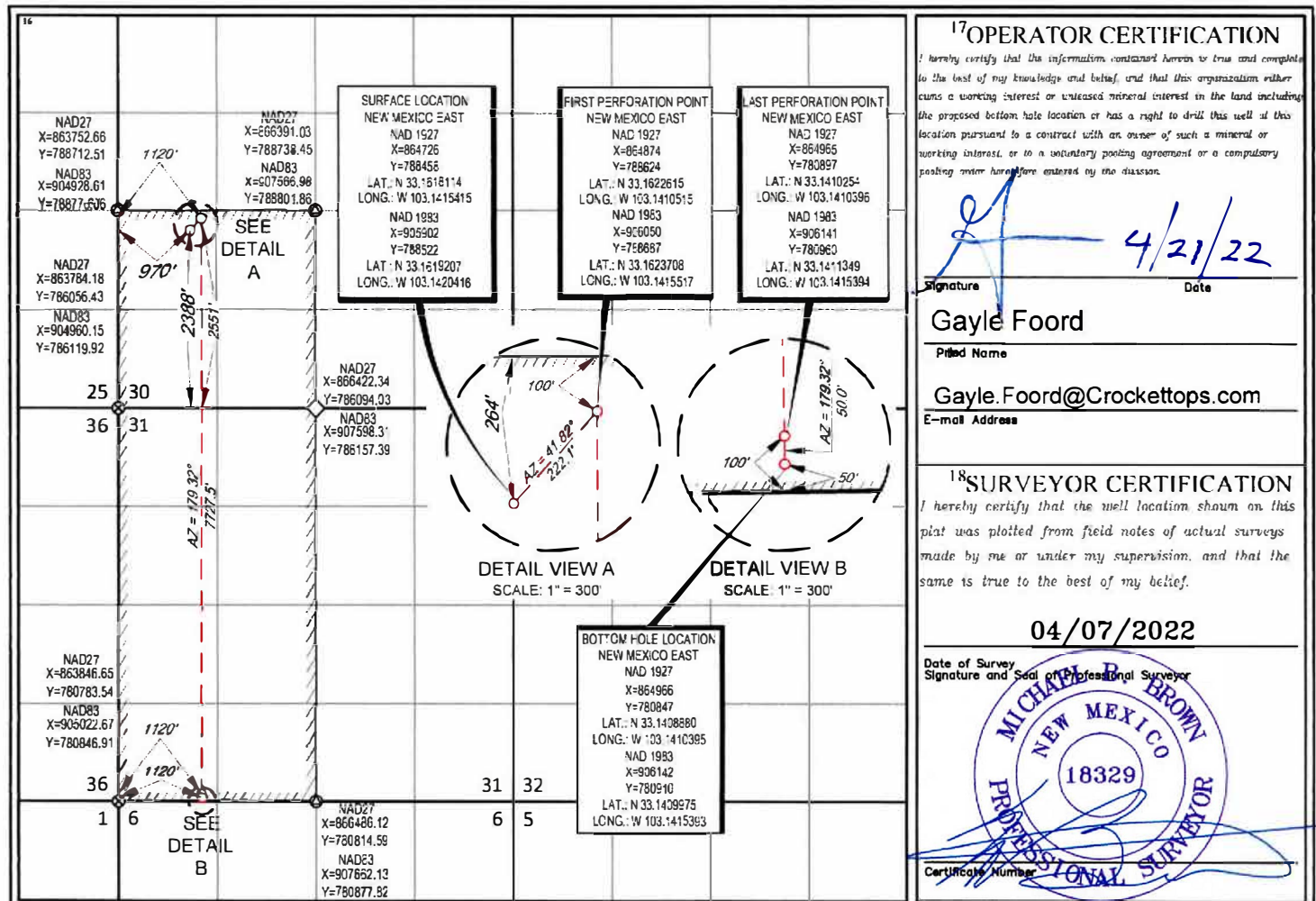
U/L or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	30	13-S	38-E	-	2388'	SOUTH	970'	WEST	LEA

¹¹Bottom Hole Location If Different From Surface

U/L or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	31	13-S	38-E	-	50'	SOUTH	1120'	WEST	LEA

¹² Dedicated Acres 480	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.



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

Form APD Conditions

Permit 314710

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: Crockett Operating, LLC [331255] 1101 N. Little School Rd Arlington, TX 76017	API Number: 30-025-50078
	Well: ACKBAR 30 31 A FEE #001H

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

Ackbar 30-31 A Fee 1H

WELL DETAILS: Ackbar 30-31 A Fee 1H					
			3851.00		
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	788458.00	864726.00	33.16181123	-103.14154053

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	
4624.00	0.00	0.00	4624.00	0.00	0.00	0.00	0.00	0.00	
4874.00	20.00	139.00	4868.95	-32.60	28.34	8.00	139.00	33.47	
5810.07	90.00	179.32	5384.28	-722.55	157.93	8.00	42.08	727.17	
12699.02	90.00	179.32	5384.00	-7611.00	240.00	0.00	0.00	7614.78	

DESIGN TARGET DETAILS							
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL Ackbar 1H (50' FSL 1120' FWL)	5384.00	-7611.00	240.00	780847.00	864966.00	33.14088880	-103.14103945
FPP Ackbar 1H (100' FNL 1120' FWL)	5384.00	166.00	148.00	788624.00	864874.00	33.16226277	-103.14105084
LPP Ackbar 1H (100' FSL 1120' FWL)	5384.00	-7561.00	239.00	780897.00	864965.00	33.14102623	-103.14104086

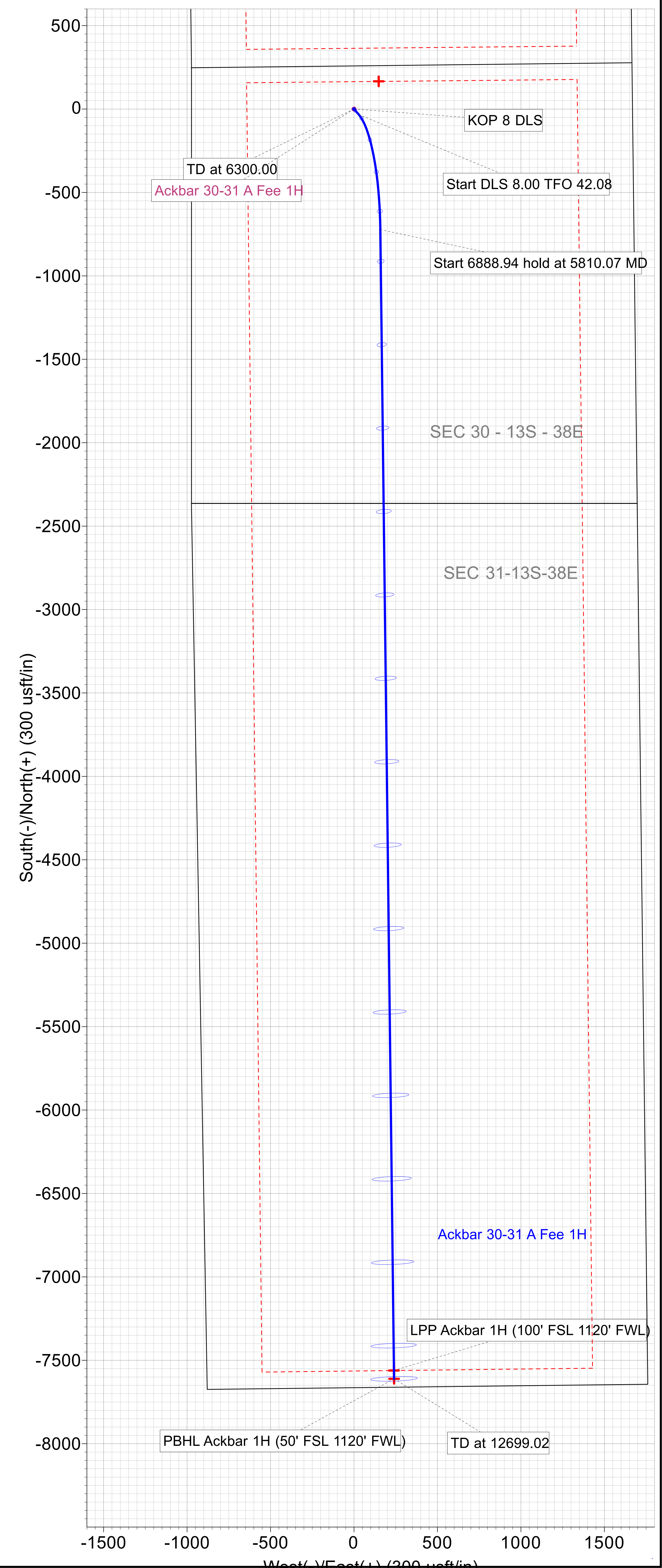
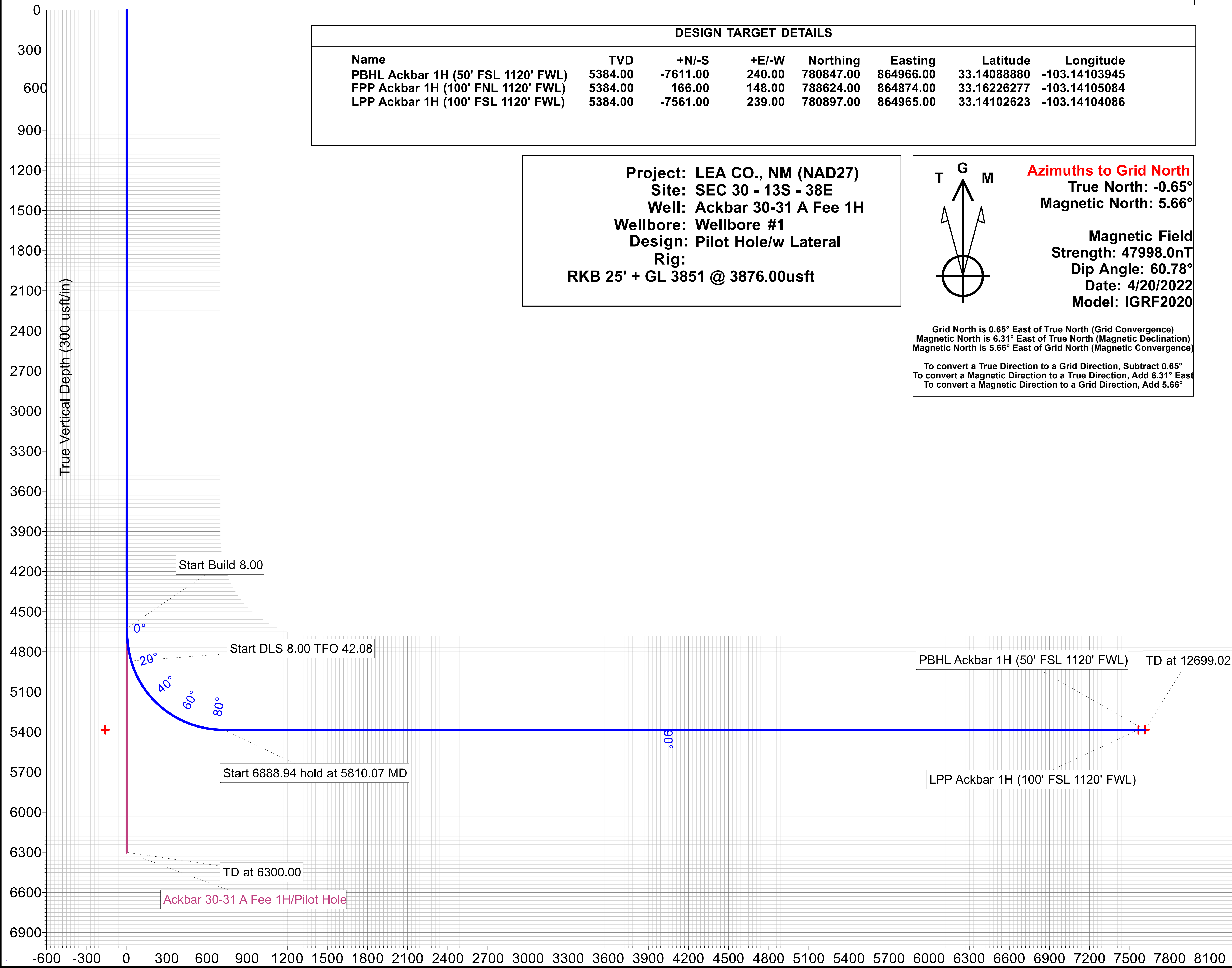
Project: LEA CO., NM (NAD27)
Site: SEC 30 - 13S - 38E
Well: Ackbar 30-31 A Fee 1H
Wellbore: Wellbore #1
Design: Pilot Hole/w Lateral
Rig:
RKB 25' + GL 3851 @ 3876.00usft

Azimuths to Grid North
True North: -0.65°
Magnetic North: 5.66°

Magnetic Field
Strength: 47998.0nT
Dip Angle: 60.78°
Date: 4/20/2022
Model: IGRF2020

Grid North is 0.65° East of True North (Grid Convergence)
Magnetic North is 6.31° East of True North (Magnetic Declination)
Magnetic North is 5.66° East of Grid North (Magnetic Convergence)

To convert a True Direction to a Grid Direction, Subtract 0.65°
To convert a Magnetic Direction to a True Direction, Add 6.31° East
To convert a Magnetic Direction to a Grid Direction, Add 5.66°





CROCKETT OPERATING

LEA CO., NM (NAD27)

SEC 30 - 13S - 38E

Ackbar 30-31 A Fee 1H

Wellbore #1

Plan: Pilot Hole

Standard Planning Report

21 April, 2022





SB Directional Planning Report



Database:	1 - EDM Production	Local Co-ordinate Reference:	Well Ackbar 30-31 A Fee 1H
Company:	CROCKETT OPERATING	TVD Reference:	RKB 25' + GL 3851 @ 3876.00usft
Project:	LEA CO., NM (NAD27)	MD Reference:	RKB 25' + GL 3851 @ 3876.00usft
Site:	SEC 30 - 13S - 38E	North Reference:	Grid
Well:	Ackbar 30-31 A Fee 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Pilot Hole		

Project	LEA CO., NM (NAD27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	SEC 30 - 13S - 38E		
Site Position:		Northing:	788,488.00 usft
From:	Map	Easting:	864,725.00 usft
Position Uncertainty:	2.00 usft	Slot Radius:	13-3/16 "
		Latitude:	33.16189370
		Longitude:	-103.14154268

Well	Ackbar 30-31 A Fee 1H		
Well Position	+N/-S	0.00 usft	Northing: 788,458.00 usft
	+E/-W	0.00 usft	Easting: 864,726.00 usft
Position Uncertainty	0.50 usft	Wellhead Elevation:	usft
Grid Convergence:	0.65 °	Ground Level:	3,851.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	4/20/2022	6.31	60.78	47,998.00325750

Design	Pilot Hole				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	0.00	

Plan Survey Tool Program	Date	4/21/2022			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	6,300.00	Pilot Hole (Wellbore #1)	MWD	
			MWD - Standard		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00	



SB Directional Planning Report



Database:	1 - EDM Production	Local Co-ordinate Reference:	Well Ackbar 30-31 A Fee 1H
Company:	CROCKETT OPERATING	TVD Reference:	RKB 25' + GL 3851 @ 3876.00usft
Project:	LEA CO., NM (NAD27)	MD Reference:	RKB 25' + GL 3851 @ 3876.00usft
Site:	SEC 30 - 13S - 38E	North Reference:	Grid
Well:	Ackbar 30-31 A Fee 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Pilot Hole		

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)
0.00	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
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00


SB Directional
 Planning Report


Database:	1 - EDM Production	Local Co-ordinate Reference:	Well Ackbar 30-31 A Fee 1H
Company:	CROCKETT OPERATING	TVD Reference:	RKB 25' + GL 3851 @ 3876.00usft
Project:	LEA CO., NM (NAD27)	MD Reference:	RKB 25' + GL 3851 @ 3876.00usft
Site:	SEC 30 - 13S - 38E	North Reference:	Grid
Well:	Ackbar 30-31 A Fee 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Pilot Hole		

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)	
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
PBHL Ackbar 1H (50' FS	0.00	0.00	5,384.00	-7,611.00	240.00	780,847.00	864,966.00	33.14088880	-103.14103945	
- plan misses target center by 7614.78usft at 5384.00usft MD (5384.00 TVD, 0.00 N, 0.00 E)										
- Point										
LPP Ackbar 1H (100' FS	0.00	0.00	5,384.00	-7,561.00	239.00	780,897.00	864,965.00	33.14102623	-103.14104085	
- plan misses target center by 7564.78usft at 5384.00usft MD (5384.00 TVD, 0.00 N, 0.00 E)										
- Point										
FPP Ackbar 1H (100' FN	0.00	0.00	5,384.00	166.00	148.00	788,624.00	864,874.00	33.16226277	-103.14105084	
- plan misses target center by 222.40usft at 5384.00usft MD (5384.00 TVD, 0.00 N, 0.00 E)										
- Point										



CROCKETT OPERATING

LEA CO., NM (NAD27)

SEC 30 - 13S - 38E

Ackbar 30-31 A Fee 1H

Wellbore #1

Plan: Pilot Hole/w Lateral

Standard Planning Report

21 April, 2022





SB Directional Planning Report



Database:	1 - EDM Production	Local Co-ordinate Reference:	Well Ackbar 30-31 A Fee 1H
Company:	CROCKETT OPERATING	TVD Reference:	RKB 25' + GL 3851 @ 3876.00usft
Project:	LEA CO., NM (NAD27)	MD Reference:	RKB 25' + GL 3851 @ 3876.00usft
Site:	SEC 30 - 13S - 38E	North Reference:	Grid
Well:	Ackbar 30-31 A Fee 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Pilot Hole/w Lateral		

Project	LEA CO., NM (NAD27)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	SEC 30 - 13S - 38E		
Site Position:		Northing:	788,488.00 usft
From:	Map	Easting:	864,725.00 usft
Position Uncertainty:	2.00 usft	Slot Radius:	13-3/16 "
		Latitude:	33.16189370
		Longitude:	-103.14154268

Well	Ackbar 30-31 A Fee 1H		
Well Position	+N/-S	0.00 usft	Northing: 788,458.00 usft
	+E/-W	0.00 usft	Easting: 864,726.00 usft
Position Uncertainty	0.50 usft	Wellhead Elevation:	usft
Grid Convergence:	0.65 °	Ground Level:	3,851.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	4/20/2022	6.31	60.78	47,998.00325750

Design	Pilot Hole/w Lateral				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	178.19	

Plan Survey Tool Program	Date	4/21/2022			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	12,699.02	Pilot Hole/w Lateral (Wellbore #1)	MWD	
			MWD - Standard		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,624.00	0.00	0.00	4,624.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,874.00	20.00	139.00	4,868.95	-32.60	28.34	8.00	8.00	0.00	139.00	
5,810.07	90.00	179.32	5,384.28	-722.55	157.93	8.00	7.48	4.31	42.08	
12,699.02	90.00	179.32	5,384.00	-7,611.00	240.00	0.00	0.00	0.00	0.00	PBHL Ackbar 1H (50'



SB Directional Planning Report



Database:	1 - EDM Production	Local Co-ordinate Reference:	Well Ackbar 30-31 A Fee 1H
Company:	CROCKETT OPERATING	TVD Reference:	RKB 25' + GL 3851 @ 3876.00usft
Project:	LEA CO., NM (NAD27)	MD Reference:	RKB 25' + GL 3851 @ 3876.00usft
Site:	SEC 30 - 13S - 38E	North Reference:	Grid
Well:	Ackbar 30-31 A Fee 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Pilot Hole/w Lateral		

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)
0.00	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
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,624.00	0.00	0.00	4,624.00	0.00	0.00	0.00	0.00	0.00	0.00
4,650.00	2.08	139.00	4,649.99	-0.36	0.31	0.37	8.00	8.00	0.00
4,700.00	6.08	139.00	4,699.86	-3.04	2.64	3.12	8.00	8.00	0.00
4,750.00	10.08	139.00	4,749.35	-8.34	7.25	8.57	8.00	8.00	0.00
4,800.00	14.08	139.00	4,798.23	-16.24	14.12	16.68	8.00	8.00	0.00
4,850.00	18.08	139.00	4,846.27	-26.69	23.20	27.41	8.00	8.00	0.00
4,874.00	20.00	139.00	4,868.95	-32.60	28.34	33.47	8.00	8.00	0.00



SB Directional Planning Report



Database:	1 - EDM Production	Local Co-ordinate Reference:	Well Ackbar 30-31 A Fee 1H
Company:	CROCKETT OPERATING	TVD Reference:	RKB 25' + GL 3851 @ 3876.00usft
Project:	LEA CO., NM (NAD27)	MD Reference:	RKB 25' + GL 3851 @ 3876.00usft
Site:	SEC 30 - 13S - 38E	North Reference:	Grid
Well:	Ackbar 30-31 A Fee 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Pilot Hole/w Lateral		

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)
4,900.00	21.59	142.79	4,893.26	-39.76	34.15	40.82	8.00	6.10	14.58
4,950.00	24.84	148.73	4,939.21	-56.07	45.16	57.47	8.00	6.50	11.88
5,000.00	28.27	153.34	4,983.94	-75.63	55.93	77.36	8.00	6.86	9.22
5,050.00	31.82	157.01	5,027.22	-98.36	66.39	100.40	8.00	7.11	7.34
5,100.00	35.46	160.01	5,068.84	-124.13	76.50	126.48	8.00	7.28	5.99
5,150.00	39.16	162.51	5,108.60	-152.83	86.21	155.47	8.00	7.40	5.00
5,200.00	42.91	164.64	5,146.31	-184.32	95.47	187.23	8.00	7.50	4.26
5,250.00	46.69	166.49	5,181.79	-218.43	104.23	221.61	8.00	7.56	3.70
5,300.00	50.50	168.12	5,214.85	-255.01	112.45	258.43	8.00	7.62	3.26
5,350.00	54.33	169.59	5,245.34	-293.88	120.10	297.52	8.00	7.66	2.92
5,400.00	58.17	170.91	5,273.11	-334.85	127.12	338.69	8.00	7.69	2.65
5,450.00	62.03	172.13	5,298.03	-377.71	133.50	381.73	8.00	7.72	2.44
5,500.00	65.90	173.27	5,319.97	-422.27	139.20	426.45	8.00	7.74	2.27
5,550.00	69.78	174.34	5,338.83	-468.29	144.19	472.61	8.00	7.75	2.14
5,600.00	73.66	175.36	5,354.52	-515.57	148.45	519.99	8.00	7.76	2.04
5,650.00	77.54	176.33	5,366.95	-563.86	151.95	568.37	8.00	7.77	1.96
5,700.00	81.43	177.28	5,376.07	-612.94	154.69	617.51	8.00	7.78	1.90
5,750.00	85.32	178.21	5,381.83	-662.55	156.64	667.16	8.00	7.78	1.86
5,800.00	89.22	179.13	5,384.21	-712.47	157.79	717.09	8.00	7.79	1.84
5,810.07	90.00	179.32	5,384.28	-722.55	157.93	727.17	8.00	7.79	1.83
5,900.00	90.00	179.32	5,384.28	-812.47	159.00	817.07	0.00	0.00	0.00
6,000.00	90.00	179.32	5,384.27	-912.46	160.19	917.05	0.00	0.00	0.00
6,100.00	90.00	179.32	5,384.27	-1,012.45	161.38	1,017.04	0.00	0.00	0.00
6,200.00	90.00	179.32	5,384.27	-1,112.45	162.57	1,117.02	0.00	0.00	0.00
6,300.00	90.00	179.32	5,384.26	-1,212.44	163.77	1,217.00	0.00	0.00	0.00
6,400.00	90.00	179.32	5,384.26	-1,312.43	164.96	1,316.98	0.00	0.00	0.00
6,500.00	90.00	179.32	5,384.25	-1,412.42	166.15	1,416.96	0.00	0.00	0.00
6,600.00	90.00	179.32	5,384.25	-1,512.42	167.34	1,516.94	0.00	0.00	0.00
6,700.00	90.00	179.32	5,384.25	-1,612.41	168.53	1,616.92	0.00	0.00	0.00
6,800.00	90.00	179.32	5,384.24	-1,712.40	169.72	1,716.90	0.00	0.00	0.00
6,900.00	90.00	179.32	5,384.24	-1,812.40	170.91	1,816.88	0.00	0.00	0.00
7,000.00	90.00	179.32	5,384.23	-1,912.39	172.10	1,916.86	0.00	0.00	0.00
7,100.00	90.00	179.32	5,384.23	-2,012.38	173.30	2,016.84	0.00	0.00	0.00
7,200.00	90.00	179.32	5,384.23	-2,112.37	174.49	2,116.82	0.00	0.00	0.00
7,300.00	90.00	179.32	5,384.22	-2,212.37	175.68	2,216.81	0.00	0.00	0.00
7,400.00	90.00	179.32	5,384.22	-2,312.36	176.87	2,316.79	0.00	0.00	0.00
7,500.00	90.00	179.32	5,384.21	-2,412.35	178.06	2,416.77	0.00	0.00	0.00
7,600.00	90.00	179.32	5,384.21	-2,512.35	179.25	2,516.75	0.00	0.00	0.00
7,700.00	90.00	179.32	5,384.21	-2,612.34	180.44	2,616.73	0.00	0.00	0.00
7,800.00	90.00	179.32	5,384.20	-2,712.33	181.64	2,716.71	0.00	0.00	0.00
7,900.00	90.00	179.32	5,384.20	-2,812.32	182.83	2,816.69	0.00	0.00	0.00
8,000.00	90.00	179.32	5,384.19	-2,912.32	184.02	2,916.67	0.00	0.00	0.00
8,100.00	90.00	179.32	5,384.19	-3,012.31	185.21	3,016.65	0.00	0.00	0.00
8,200.00	90.00	179.32	5,384.18	-3,112.30	186.40	3,116.63	0.00	0.00	0.00
8,300.00	90.00	179.32	5,384.18	-3,212.30	187.59	3,216.61	0.00	0.00	0.00
8,400.00	90.00	179.32	5,384.18	-3,312.29	188.78	3,316.59	0.00	0.00	0.00
8,500.00	90.00	179.32	5,384.17	-3,412.28	189.98	3,416.57	0.00	0.00	0.00
8,600.00	90.00	179.32	5,384.17	-3,512.27	191.17	3,516.56	0.00	0.00	0.00
8,700.00	90.00	179.32	5,384.16	-3,612.27	192.36	3,616.54	0.00	0.00	0.00
8,800.00	90.00	179.32	5,384.16	-3,712.26	193.55	3,716.52	0.00	0.00	0.00
8,900.00	90.00	179.32	5,384.16	-3,812.25	194.74	3,816.50	0.00	0.00	0.00
9,000.00	90.00	179.32	5,384.15	-3,912.25	195.93	3,916.48	0.00	0.00	0.00
9,100.00	90.00	179.32	5,384.15	-4,012.24	197.12	4,016.46	0.00	0.00	0.00
9,200.00	90.00	179.32	5,384.14	-4,112.23	198.31	4,116.44	0.00	0.00	0.00



SB Directional Planning Report



Database:	1 - EDM Production	Local Co-ordinate Reference:	Well Ackbar 30-31 A Fee 1H
Company:	CROCKETT OPERATING	TVD Reference:	RKB 25' + GL 3851 @ 3876.00usft
Project:	LEA CO., NM (NAD27)	MD Reference:	RKB 25' + GL 3851 @ 3876.00usft
Site:	SEC 30 - 13S - 38E	North Reference:	Grid
Well:	Ackbar 30-31 A Fee 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Pilot Hole/w Lateral		

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)	
9,300.00	90.00	179.32	5,384.14	-4,212.23	199.51	4,216.42	0.00	0.00	0.00	
9,400.00	90.00	179.32	5,384.14	-4,312.22	200.70	4,316.40	0.00	0.00	0.00	
9,500.00	90.00	179.32	5,384.13	-4,412.21	201.89	4,416.38	0.00	0.00	0.00	
9,600.00	90.00	179.32	5,384.13	-4,512.20	203.08	4,516.36	0.00	0.00	0.00	
9,700.00	90.00	179.32	5,384.12	-4,612.20	204.27	4,616.34	0.00	0.00	0.00	
9,800.00	90.00	179.32	5,384.12	-4,712.19	205.46	4,716.32	0.00	0.00	0.00	
9,900.00	90.00	179.32	5,384.11	-4,812.18	206.65	4,816.31	0.00	0.00	0.00	
10,000.00	90.00	179.32	5,384.11	-4,912.18	207.85	4,916.29	0.00	0.00	0.00	
10,100.00	90.00	179.32	5,384.11	-5,012.17	209.04	5,016.27	0.00	0.00	0.00	
10,200.00	90.00	179.32	5,384.10	-5,112.16	210.23	5,116.25	0.00	0.00	0.00	
10,300.00	90.00	179.32	5,384.10	-5,212.15	211.42	5,216.23	0.00	0.00	0.00	
10,400.00	90.00	179.32	5,384.09	-5,312.15	212.61	5,316.21	0.00	0.00	0.00	
10,500.00	90.00	179.32	5,384.09	-5,412.14	213.80	5,416.19	0.00	0.00	0.00	
10,600.00	90.00	179.32	5,384.09	-5,512.13	214.99	5,516.17	0.00	0.00	0.00	
10,700.00	90.00	179.32	5,384.08	-5,612.13	216.18	5,616.15	0.00	0.00	0.00	
10,800.00	90.00	179.32	5,384.08	-5,712.12	217.38	5,716.13	0.00	0.00	0.00	
10,900.00	90.00	179.32	5,384.07	-5,812.11	218.57	5,816.11	0.00	0.00	0.00	
11,000.00	90.00	179.32	5,384.07	-5,912.10	219.76	5,916.09	0.00	0.00	0.00	
11,100.00	90.00	179.32	5,384.07	-6,012.10	220.95	6,016.07	0.00	0.00	0.00	
11,200.00	90.00	179.32	5,384.06	-6,112.09	222.14	6,116.06	0.00	0.00	0.00	
11,300.00	90.00	179.32	5,384.06	-6,212.08	223.33	6,216.04	0.00	0.00	0.00	
11,400.00	90.00	179.32	5,384.05	-6,312.08	224.52	6,316.02	0.00	0.00	0.00	
11,500.00	90.00	179.32	5,384.05	-6,412.07	225.72	6,416.00	0.00	0.00	0.00	
11,600.00	90.00	179.32	5,384.05	-6,512.06	226.91	6,515.98	0.00	0.00	0.00	
11,700.00	90.00	179.32	5,384.04	-6,612.05	228.10	6,615.96	0.00	0.00	0.00	
11,800.00	90.00	179.32	5,384.04	-6,712.05	229.29	6,715.94	0.00	0.00	0.00	
11,900.00	90.00	179.32	5,384.03	-6,812.04	230.48	6,815.92	0.00	0.00	0.00	
12,000.00	90.00	179.32	5,384.03	-6,912.03	231.67	6,915.90	0.00	0.00	0.00	
12,100.00	90.00	179.32	5,384.02	-7,012.03	232.86	7,015.88	0.00	0.00	0.00	
12,200.00	90.00	179.32	5,384.02	-7,112.02	234.05	7,115.86	0.00	0.00	0.00	
12,300.00	90.00	179.32	5,384.02	-7,212.01	235.25	7,215.84	0.00	0.00	0.00	
12,400.00	90.00	179.32	5,384.01	-7,312.01	236.44	7,315.82	0.00	0.00	0.00	
12,500.00	90.00	179.32	5,384.01	-7,412.00	237.63	7,415.81	0.00	0.00	0.00	
12,600.00	90.00	179.32	5,384.00	-7,511.99	238.82	7,515.79	0.00	0.00	0.00	
12,699.02	90.00	179.32	5,384.00	-7,611.00	240.00	7,614.78	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
PBHL Ackbar 1H (50' FS) - hit/miss target - Shape - Point	0.00	0.00	5,384.00	-7,611.00	240.00	780,847.00	864,966.00	33.14088880	-103.14103945	
LPP Ackbar 1H (100' FS) - plan misses target center by 49.01usft at 12600.00usft MD (5384.00 TVD, -7511.99 N, 238.82 E) - Point	0.00	0.00	5,384.00	-7,561.00	239.00	780,897.00	864,965.00	33.14102623	-103.14104085	
FPP Ackbar 1H (100' FN) - plan misses target center by 425.01usft at 5168.38usft MD (5122.72 TVD, -164.09 N, 89.67 E) - Point	0.00	0.00	5,384.00	166.00	148.00	788,624.00	864,874.00	33.16226277	-103.14105084	

**SB Directional**
Planning Report

Database:	1 - EDM Production	Local Co-ordinate Reference:	Well Ackbar 30-31 A Fee 1H
Company:	CROCKETT OPERATING	TVD Reference:	RKB 25' + GL 3851 @ 3876.00usft
Project:	LEA CO., NM (NAD27)	MD Reference:	RKB 25' + GL 3851 @ 3876.00usft
Site:	SEC 30 - 13S - 38E	North Reference:	Grid
Well:	Ackbar 30-31 A Fee 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Pilot Hole/w Lateral		

Ackbar 30-31 A Fee 1H**Pilot Hole Drilling Program**

1. Drill and set 40' of 16", 65 #/ft, H40 Conductor and cement to surface. Drill and set mouse hole.
2. Move in and rig up Latshaw Rig #5 and closed loop mud system. Pick up motor and 12.25" bit and spud well and drill with fresh water to a depth of +/- 2,450'. Circulate hole clean and TOOH.
3. Rig up casing crew. MU float shoe, 2 joints of 9 5/8", 40#/ft, J55, BTC, ERW casing, float collar and remaining 9 5/8" casing to surface. M/U LJ with 9-5/8" x 11" wellhead assy and run thru rotary table. Land on conductor and dress out with valves.
4. R/U cmt head and circulate 1.5X csg cap. Rig down casing crew.
5. Rig up cementing company and pump 20 bbl fresh water spacer, 660 sx (100% excess) of 12.8 ppg class C lead followed by 270 sx (120% excess) of 14.8 ppg class C tail, bump plug and circulate excess cement back to surface. Rig down cementers.
6. N/U 5M BOP. Test BOPE.
7. Pick up 8 3/4" bit, motor, drill pipe and trip in hole to top of FE. Test csg to 1500 psi for 30 min.
8. Drill out FE. Continue to drill pilot hole TD @ ~6300'. Circulate and condition hole. TOOH.
9. Rig up wireline and run required logging runs from below the surface casing shoe to current total depth of 6300'. Rig down wireline.
10. M/U ~1700' 2-7/8" tail pipe, Whipstock Assy and drill pipe required to place top of whip at KOP. R/U wireline. Orient whip with gyro. R/D wireline and rig up cementers. Pump 1.5X csg capacity. Be sure to keep pump pressure below 1000 psi. Pump 20 bbl FW spacer and 525 sx (10% excess) of 14.8 ppg class H tail cement and displace same. Drop ball and inflate packer on whip. Confirm whipstock set per Whipstock rep procedures. Pull out of whip. WOC. Mill off whipstock to establish rathole.
11. POOH with whipstock running assembly.

Ackbar 30-31 A Fee 1H**Horizontal Well Drilling Program**

12. Pick up 8 3/4" curve assembly and TIH to top of whip.
13. Drill curve and land wellbore at 90 degrees based on landing point from Geology group based on evaluation from logging suite
14. Continue to drill horizontal to TD. Pump sweep and circulate bottoms up and trip out of hole racking back.
15. Rig up casing crew. M/U shoe trac and run of 5 1/2", 20 #/ft, L80, Geoconn Connection, ERW casing to surface. Rig down casing crew.
16. Rig up cement head. Circulate and condition hole. Swap to cementers and pump 50 bbl weighted spacer, 525 sx of 11.5 ppg class C lead (20% excess) followed by 1,925 sx of 14.5 class H tail (20% excess) 14.0 ppg tail, bump plug and circulate excess cement back to surface. Rig down cementing company.
17. Nipple down BOP, set casing in tension in slips and cutoff casing. Install 11" 5000 psi x 7 1/16", 10,000 psi Tubing Head. Test to 4,500 psi. Release from well.
18. Well is TA'd awaiting frac completion.

Crockett Operating, LLC

1101 N. Little School Rd

Arlington, TX 76017

H2S Contingency Plan

Lea County, NM

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crew should then block entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are NO homes or buildings in or near the ROE.

Assumed 100 ppm ROE = 3000'
100 ppm H2S concentration shall trigger activation of this plan

Emergency Procedures

In the event of a release of gas containing H2S, the first responder(s) must:

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H2S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response.
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the:
 - Detection of H2S,
 - Measures for protection against H2S,
 - Equipment used for protection and emergency response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

Characteristics of H2S and SO2,

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H2S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO2	2.21 Air=1	2 ppm	N/A	1000 ppm

Contacting Authorities

Crockett Operating, LLC personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Crockett Operating, LLC response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMERP).

Hydrogen Sulfide Drilling Operations Plan

1. All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:
 - a. Characteristics of H₂S
 - b. Physical effects and hazards
 - c. Principal and operation of H₂S detectors, warning system and briefing areas.
 - d. Evacuation procedure, routes and first aid.
 - e. Proper use of safety equipment & life support systems
 - f. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30-minute pressure demand air packs.
2. H₂S Detection and Alarm Systems:
 - a. H₂S sensors/detectors to be located on the drilling rig floor, in the base of the substructure/cellar area, on the mud pits in the shale shaker area. Additional H₂S detectors may be placed in other areas as deemed necessary.
 - b. An audio alarm system will be installed on the rig floor, mud pits, and living quarters/company man trailer vicinity. Additional H₂S audio alarms may be placed in other areas deemed necessary.
3. Windsock and/or wind streamers:
 - a. Windsock at mud pit area should be high enough to be visible.
 - b. Windsock on the rig floor and/ or top doghouse should be high enough to be visible.
4. Condition Flags and Signs
 - a. Warning sign on access road to location.
 - b. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H₂S present in dangerous concentration). Only H₂S trained and certified personnel admitted to location.
5. Well control equipment:
 - a) Flare Line 150' from wellhead with igniter.
 - b) Choke manifold with a remotely operated choke.
6. Communication:
 - a. While working under masks dry erase boards will be used for communication.
 - b. Hand signals will be used where chalk board is inappropriate.
 - c. Two-way radio will be used to communicate off location in case of emergency help is required. In most cases, cellular telephones will be available at most drilling foreman's trailer or living quarters.
7. Drill stem Testing:

No DSTs are planned at this time.
8. Drilling contractor supervisor will be required to be familiar with the effects H₂S has on tubular goods and other mechanical equipment.
9. If H₂S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H₂S scavengers if necessary.

Emergency Assistance Telephone List**Crockett Operating, LLC**

Reggie Hart	Cell:	(713) 302-8196
Gayle Foord	Cell:	(713) 306-9706
Jamie Hart	Cell:	(405) 230-0992
Shu Rau	Cell:	(713) 443-4616

Public Safety:**911 or**

Lea County Sheriff's Department	Number:	(575) 396-3611
Lea County Emergency Management-Lorenzo Velasquez	Number:	(575) 391-2983
Lea County Fire Marshal Lorenzo Velasquez, Director	Number:	(575) 391-2983
Fire Departments:		
Knowles Fire Department	Number:	(505) 392-7469
City of Hobbs Fire Department	Number:	(505) 397-9308
Jal Volunteer Fire Department	Number:	(505) 395-2221
Lovington Fire Department	Number:	(575) 396-2359
Maljamar Fire Department	Number:	(505) 676-4100
Tatum Volunteer Fire Department	Number:	(575) 398-4444
Eunice Fire Department	Number:	(575) 394-3258
Hospital: Lea Regional Medical Center	Number:	(575) 492-5000
Dept. of Public Safety	Number:	(505) 827-9000
New Mexico OCD-Dist. 1-Hobbs- Office	Number:	(575) 241-7063
Emergency	Number:	(575) 626-0830
Lea County Road Department	Number:	(575) 391-2940
NMDOT	Number:	(575) 840-3035
Poison Control Center	Number:	(800) 222-1222

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

Submit Electronically
Via E-permitting

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: CROCKETT OPERATING, LLC **OGRID:** 331255 **Date:** 04 / 22 / 2022

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
Ackbar 30-31 A Fee 1H		L 30, 13S, 38E	2388' FSL	350	450	1500
			970' FWL			

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
Ackbar 30-31 A Fee 1H		5/20/2022	6/7/2022	Not yet scheduled	Not yet scheduled	Not yet scheduled

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:	<i>Gayle Foord</i>
Printed Name:	Gayle Foord
Title:	Regulatory
E-mail Address:	Gayle.Foord@Crockettops.com
Date:	4/22/2022
Phone:	713-306-9706
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)	
Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

Natural Gas Management Plan Items VI-VIII**VI. Separation Equipment: Attach a complete description of how Operator will size separation equipment to optimize gas capture.**

- Separation equipment will be sized to provide adequate separation for anticipated rates.
- Adequate separation relates to retention time for Liquid – Liquid separation and velocity for Gas-Liquid separation.
- Collection systems are appropriately sized to handle facility production rates on all (3) phases.
- Ancillary equipment and metering is selected to be serviced without flow interruptions or the need to release gas from the well.

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

- All flare stacks will be properly sized. The flare stacks will be located at a minimum 150' from the nearest surface hole location on the pad.
- All natural gas produced during drilling operations will be flared, unless there is an equipment malfunction and/or to avoid risk of an immediate and substantial adverse impact on safety and the environment, at which point the gas will be vented.

Completions/Recompletions Operations

- New wells will not be flowed back until they are connected to a properly sized gathering system.
- The facility will be built/sized for maximum anticipated flowrates and pressures to minimize waste.
- For flowback operations, multiple stages of separation will be used as well as excess VRU and blowers to make sure waste is minimized off the storage tanks and facility.
- During initial flowback, the well stream will be routed to separation equipment.
- At an existing facility, when necessary, post separation natural gas will be flared until it meets pipeline specifications, at which point it will be turned into a collection system.
- At a new facility, post separation natural gas will be vented until storage tanks can safely function, at which point it will be flared until it meets pipeline spec.

Production Operations

- Weekly AVOs will be performed on all facilities.
- All flares will be equipped with auto-ignition systems and continuous pilot operations.
- After a well is stabilized from liquid unloading, the well will be turned back into the collection system.
- All plunger lift systems will be optimized to limit the amount of waste.
- All tanks will have automatic gauging equipment installed.
- Leaking thief hatches found during AVOs will be cleaned and properly re-sealed.

Performance Standards

- Production equipment will be designed to handle maximum anticipated rates and pressure.
- All flared gas will be combusted in a flare stack that is properly sized and designed to ensure proper combustion.
- Weekly AVOs will be performed on all wells and facilities that produce more than 60 Mcfd.

Measurement & Estimation

- All volume that is flared and vented that is not measured will be estimated.
- All measurement equipment for flared volumes will conform to API 14.10.
- No meter bypasses will be installed.
- When metering is not practical due to low pressure/low rate, the vented or flared volume will be estimated.

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

- During downhole well maintenance, Operator will use best management practices to vent as minimally as possible.
- Prior to the commencement of any maintenance, the tank or vessel will be isolated from the rest of the facilities.
- All valves upstream of the equipment will be closed and isolated.
- After equipment has been isolated, the equipment will be blown down to as low a pressure as possible into the collection system.
- If the equipment being maintained cannot be relieved into the collection system, it shall be released to a tank where the vapor can either be captured or combusted if possible.
- After downhole well maintenance, natural gas will be flared until it reaches pipeline specification