

Santa Fe Main Office
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State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised July 18, 2013

Online Phone Directory Visit:
<https://www.emnrd.nm.gov/ocd/contact-us/>

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

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.) 1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐		WELL API NO. 30-015-55713
2. Name of Operator Permian Resources Operating LLC		5. Indicate Type of Lease STATE ☒ FEE ☐
3. Address of Operator 300 N Marienfield St, Ste 1000, Midland, TX 79701		6. State Oil & Gas Lease No.
4. Well Location Unit Letter <u>E</u> : <u>1711</u> feet from the <u>North</u> line and <u>442</u> feet from the <u>West</u> line Section <u>33</u> Township <u>21S</u> Range <u>27E</u> NMPM County <u>Eddy</u>		7. Lease Name or Unit Agreement Name Fred State Com
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3117'		8. Well Number 421H
		9. OGRID Number 372165
		10. Pool name or Wildcat (74160) Carlsbad; Wolfcamp, East (GAS)

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

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

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

Permian Resources Operating, LLC requests permission to make the following changes to the original APD: SHL, FTP, Total Depth (MD).
API# 30-015-55713

Change SHL:

From: Lot E, Sec 33, T21S, R27E, 2266' FNL, 1172' FWL

To: Lot E, Sec 33, T21S, R27E, 1711' FNL, 442' FWL

Change FTP:

From Lot A, Sec 32, T21S, R27E, 990' FNL, 330' FEL

TO: Lot A, Sec 32, T21S, R27E, 985' FNL, 100' FEL

Change TD/MD

From: 9300'TVD, 24,837'MD

To: 9300'TVD, 24,683'MD

Updated Drilling Program reflecting casing / cement / mud circulation depth changes attached with the inclusion of a bradenhead squeeze variance request on the 2nd Intermediate string. Attachments: C102, Drilling plan, Directional Plan, Anti-collision, Pad Layout

Spud Date:

Rig Release Date:

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

SIGNATURE Cassie Evans TITLE Regulatory Supervisor DATE 4/3/25

Type or print name Cassie Evans E-mail address: Cassie.Evans@permianres.com PHONE: 432-313-1732

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

C-102 Submit Electronically Via OCD Permitting	State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION	Revised July 9, 2024	
		Submittal Type:	☒ Initial Submittal
			☐ Amended Report
			☐ As Drilled

WELL LOCATION INFORMATION

API Number 30-015-55713	Pool Code 74160	Pool Name Carlsbad; Wolfcamp, East (GAS)
Property Code 335408	Property Name FRED STATE COM	Well Number 421H
OGRID No. 372165	Operator Name PERMIAN RESOURCES OPERATING, LLC	Ground Level Elevation 3,117'
Surface Owner: ☒ State ☐ Fee ☐ Tribal ☐ Federal		Mineral Owner: ☒ State ☐ Fee ☐ Tribal ☐ Federal

Surface Location

UL E	Section 33	Township 21S	Range 27E	Lot	Ft. from N/S 1,711' FNL	Ft. from E/W 442' FWL	Latitude 32.438895°	Longitude -104.202068°	County EDDY
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Bottom Hole Location

UL D	Section 36	Township 21S	Range 26E	Lot	Ft. from N/S 990' FNL	Ft. from E/W 100' FWL	Latitude 32.440942°	Longitude -104.254170°	County EDDY
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Dedicated Acres 1908.20	Infill or Defining Well Infill	Defining Well API 30-015-55714	Overlapping Spacing Unit (Y/N) N	Consolidation Code C, NSL
Order Numbers. TBD, TBD			Well setbacks are under Common Ownership: ☒ Yes ☐ No	

Kick Off Point (KOP)

UL E	Section 33	Township 21S	Range 27E	Lot	Ft. from N/S 1,711' FNL	Ft. from E/W 442' FWL	Latitude 32.438895°	Longitude -104.202068°	County EDDY
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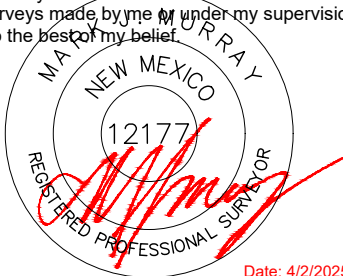
First Take Point (FTP)

UL A	Section 32	Township 21S	Range 27E	Lot	Ft. from N/S 985' FNL	Ft. from E/W 100' FEL	Latitude 32.440876°	Longitude -104.203834°	County EDDY
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Last Take Point (LTP)

UL D	Section 36	Township 21S	Range 26E	Lot	Ft. from N/S 990' FNL	Ft. from E/W 100' FWL	Latitude 32.440942°	Longitude -104.254170°	County EDDY
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Unitized Area or Area of Uniform Interest	Spacing Unit Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation:
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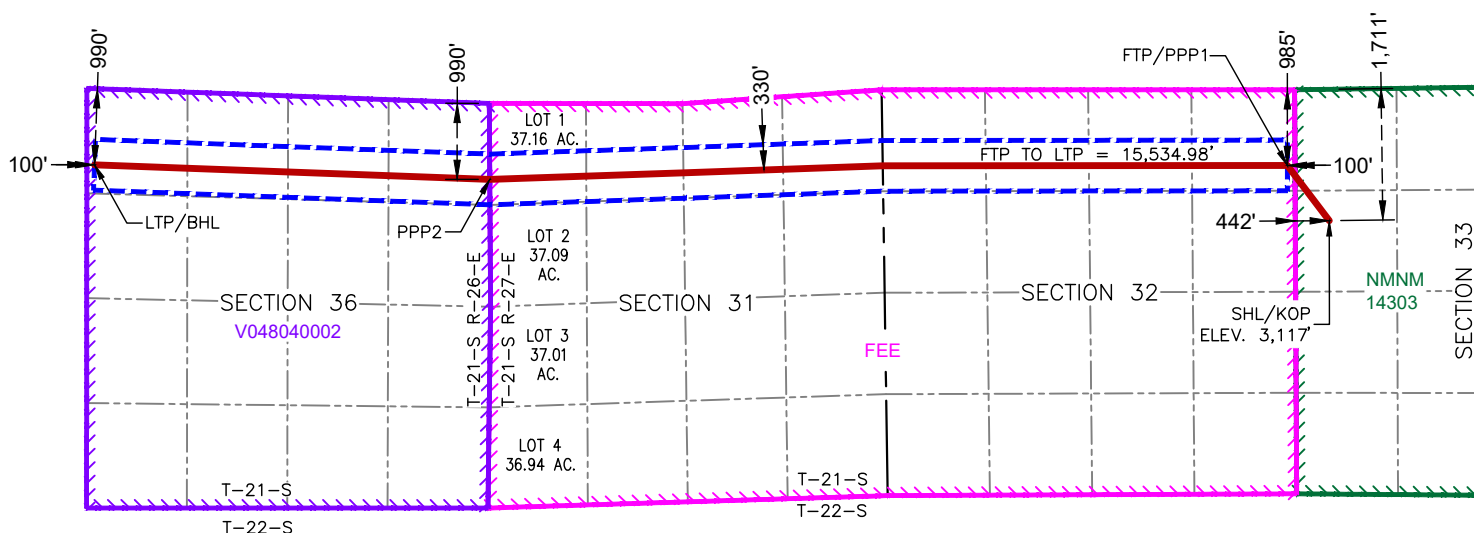
OPERATOR CERTIFICATIONS I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and, if the well is a vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of a working interest or unleased mineral interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. If this well is a horizontal well, I further certify that this organization has received the consent of at least one lessee or owner of a working interest or unleased mineral interest in each tract (in the target pool or formation) in which any part of the well's completed interval will be located or obtained a compulsory pooling order from the division.		SURVEYOR CERTIFICATIONS 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.  Date: 4/2/2025	
Signature 	Date 4/3/25	Signature and Seal of Professional Surveyor	
Printed Name Cassie Evans	Email Address Cassie.Evans@permianres.com	Certificate Number 12177	Date of Survey 4/2/2025

Note: 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.

ACREAGE DEDICATION PLATS

This grid represents a standard section. You may superimpose a non-standard section, or larger area, over this grid. Operators must outline the dedicated acreage in a red box, clearly show the well surface location and bottom hole location, if it is directionally drilled, with the dimensions from the section lines in the cardinal directions. If this is a horizontal wellbore show on this plat the location of the First Take Point and Last Take Point, and the point within the Completed interval (other than the First Take Point or Last Take Point) that is closest to any outer boundary of the tract.

Surveyors shall use the latest United States government survey or dependent resurvey. Well locations will be in reference to the New Mexico Principal Meridian. If the land is not surveyed, contact the OCD Engineering Bureau. Independent subdivision surveys will not be acceptable.

**FRED STATE COM 421H**

**SURFACE HOLE LOCATION
& KICK-OFF POINT
1,711' FNL & 442' FWL
ELEV. = 3,117'**

NAD 83 X = 581,833.09'
NAD 83 Y = 523,426.07'
NAD 83 LAT = 32.438895°
NAD 83 LONG = -104.202068°
NAD 27 X = 540,651.96'
NAD 27 Y = 523,365.97'
NAD 27 LAT = 32.438777°
NAD 27 LONG = -104.201564°

**FIRST TAKE POINT &
PENETRATION POINT 1
985' FNL & 100' FEL**

NAD 83 X = 581,287.56'
NAD 83 Y = 524,146.05'
NAD 83 LAT = 32.440876°
NAD 83 LONG = -104.203834°
NAD 27 X = 540,106.46'
NAD 27 Y = 524,085.94'
NAD 27 LAT = 32.440758°
NAD 27 LONG = -104.203330°

**PENETRATION POINT 2
990' FNL & 0' FWL**

NAD 83 X = 570,904.81'
NAD 83 Y = 523,964.08'
NAD 83 LAT = 32.440406°
NAD 83 LONG = -104.237490°
NAD 27 X = 529,723.79'
NAD 27 Y = 523,904.07'
NAD 27 LAT = 32.440288°
NAD 27 LONG = -104.236985°

**LAST TAKE POINT &
BOTTOM HOLE LOCATION
990' FNL & 100' FWL**

NAD 83 X = 565,759.16'
NAD 83 Y = 524,154.77'
NAD 83 LAT = 32.440942°
NAD 83 LONG = -104.254170°
NAD 27 X = 524,578.21'
NAD 27 Y = 524,094.82'
NAD 27 LAT = 32.440824°
NAD 27 LONG = -104.253664°

Permian Resources - Fred State Com 421H

1. Geologic Formations

Formation	Lithology	Elevation	TVD	Target
Rustler	Sandstone	2917	230	No
Top of Salt	Salt	2667	480	No
Tansill	Sandstone	2517	630	No
Yates	Anhydrite/Shale	2248	899	No
Seven Rivers	Limestone	1997	1150	No
Capitan	Sandstone	1917	1230	No
Delaware Sands	Sandstone	527	2620	No
Brushy Canyon	Sandstone	-1713	4860	No
Bone Spring Lime	Limestone/Shale	-1933	5080	No
1st Bone Spring Sand	Sandstone/Limestone/Shale	-3146	6293	No
2nd Bone Spring Sand	Sandstone/Limestone/Shale	-5913	9060	No
3rd Bone Spring Sand	Sandstone/Limestone/Shale	-5258	8405	No
Wolfcamp	Shale	-5588	8735	Yes

2. Blowout Prevention

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	x	Tested to:
12.25	13-5/8"	5M	Annular	x	2500 psi
			Blind Ram	x	5000 psi
			Pipe Ram	x	
			Double Ram		
			Other*		
9.875	13-5/8"	5M	Annular	x	2500 psi
			Blind Ram	x	5000 psi
			Pipe Ram	x	
			Double Ram		
			Other*		
7.875	13-5/8"	5M	Annular	x	2500 psi
			Blind Ram	x	5000 psi
			Pipe Ram	x	
			Double Ram		
			Other*		

Equipment: BOPE will meet all requirements for above listed system per 43 CFR 3172. BOPE with working pressure ratings in excess of anticipated maximum surface pressure will be utilized for well control from drill out of surface casing to TMD. The system may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all of the components installed will be functional, tested, and will meet all requirements per 43 CFR 3172. The wellhead will be a multibowl speed head allowing for hangoff of intermediate casing of the surface x intermediate annulus without breaking the connection between the BOP & wellhead. A variance is requested to utilize a flexible choke line (flexhose) from the BOP to choke manifold.

Requesting Variance? YES

Variance request: Multibowl Wellhead, Flexhose, Breaktesting, Offline Cementing Variances. Attachments in Section 8.

Testing Procedure: Operator requests to ONLY test broken pressure seals per API Standard 53 and the attachments in Section 8. The BOP test shall be performed before drilling out of the surface casing shoe and will occur at a minimum: a. when initially installed, b. whenever any seal subject to test pressure is broken, c. following related repairs, d. at 21-day intervals. Testing of the ram type preventer(s) and annual type preventer(s) shall be tested per 43 CFR 3172. The BOPE configuration, choke manifold layout, and accumulator system will be in compliance with 43 CFR 3172. Bleed lines will discharge 100' from wellhead in non-H2S scenarios and 150' from wellhead in H2S scenarios.

Choke Diagram Attachment: 5M Choke Manifold
BOP Diagram Attachment: BOP Schematics

3. Casing

String	Hole Size	Casing Size	Top	Bottom	Top TVD	Bottom TVD	Length	Grade	Weight	Connection	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
Surface	17.5	13.375	0	300	0	300	300	J55	54.5	BTC	7.62	8.26	Dry	7.81	Dry	7.33
Intermediate 1	12.25	10.75	0	790	0	790	790	J55	45.5	BTC	12.14	3.36	Dry	7.82	Dry	5.26
Intermediate 2	9.875	8.625	0	2620	0	2620	2620	P110 HS	32	MO-FXL	5.51	2.47	Dry	4.29	Dry	6.22
Production	7.875	5.5	0	9465	0	9300	9465	P110RY	20	GeoConn	1.55	1.62	Dry	1.91	Dry	1.91
Production	7.875	5.5	9465	24683	9300	9300	15218	P110RY	20	GeoConn	1.55	1.62	Dry	1.91	Dry	1.91
BLM Min Safety Factor											1.125	1		1.6		1.6

Non API casing spec sheets and casing design assumptions attached.

4. Cement

String	Lead/Tail	Top MD	Bottom MD	Quantity (sx)	Yield	Density	Cu Ft	Excess %	Cement Type	Additives
Surface	Tail	0	300	240	1.34	14.8	320	50%	Class C	Accelerator
Intermediate 1	Lead	0	630	100	1.88	12.9	170	50%	Class C	EconoCem-HLC + 5% Salt + 5% Kol-Seal
Intermediate 1	Tail	630	790	40	1.34	14.8	50	50%	Class C	Retarder
Intermediate 2	Lead	0	2090	130	2.96	11	360	50%	Class C	EconoCem-HLC + 5% Salt + 5% Kol-Seal
Intermediate 2	Tail	2090	2620	70	1.33	14.8	90	25%	Class C	Salt
Production	Lead	2120	8877	670	2.41	11.5	1610	40%	Class H	POZ, Extender, Fluid Loss, Dispersant, Retarder
Production	Tail	8877	24683	1990	1.73	12.5	3430	25%	Class H	POZ, Extender, Fluid Loss, Dispersant, Retarder

Permian Resources requests to pump a two-stage cement job on the 8-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Cherry Canyon and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If cement is not visually confirmed to circulate to surface, the final cement top after the second stage job will be verified by Echo-meter. If necessary, a top out consisting of 1,500 sack of Class C cement + 3% Salt + Bentonite Gel (2.30 yld, 12.9 ppg) will be executed as a contingency. If cement is still unable to circulate to surface, another Echo-meter run will be performed for cement top verification.

Permian Resources will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

Permian Resources will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

Permian Resources requests to pump an Optional Lead if well conditions dictate in an attempt to bring cement inside the surface casing. If cement reaches the desired height, the BLM will be notified and the second stage bradenhead squeeze and subsequent TOC verification will be negated.

Permian Resources requests the option to conduct the bradenhead squeeze and TOC verification offline as per standard approval from BLM when unplanned remediation is needed and batch drilling is approved. In the event the bradenhead is conducted, we will ensure the first stage cement job is cemented properly and the well is static with floats holding and no pressure on the csg annulus as with all other casing strings where batch drilling operations occur before moving off the rig. The TA cap will also be installed per Cactus procedure and pressure inside the casing will be monitored via the valve on the TA cap as per standard batch drilling ops.

5. Circulating Medium

Mud System Type: Closed

Will an air or gas system be used: No

Describe what will be on location to control well or mitigate oter conditions : Sufficient quantities of mud materials will be on the well site at all times for the purpose of assuring well control and maintaining wellbore integrity. Surface interval will employ fresh water mud. The intermediate hole will utilize a saturated brine fluid to inhibit salt washout. The production hole will employ brine based and oil base fluid to inhibit formation reactivity and of the appropriate density to maintain well control.

Describe the mud monitoring system utilized: Centrifuge separation system. Open tank monitoring with EDR will be used for drilling fluids and return volumes. Open tank monitoring will be used for cement and cuttings return volumes. Mud properties will be monitored at least every 24 hours using industry accepted mud check practices.

Cuttings Volume: 9340 Cu Ft

Circulating Medium Table				
Top Depth	Bottom Depth	Mud Type	Min Weight	Max Weight
0	300	Spud Mud	8.6	9.5
300	790	Salt Saturated	10	10
790	2620	Fresh Water	8.6	9.5
2620	9465	Oil Based Mud	9	10

6. Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

Will utilize MWD/LWD from intermediate hole to TD of the well.

List of open and cased hole logs run in the well:

DIRECTIONAL SURVEY

Coring operation description for the well:

N/A

7. Pressure

Anticipated Bottom Hole Pressure	4840	psi
Anticipated Surface Pressure	2790	psi
Anticipated Bottom Hole Temperature	149	°F
Anticipated Abnormal pressure, temp, or geo hazards	No	

PERMIAN

R E S O U R C E S

NEW MEXICO

(SP) EDDY

FRED PROJECT

FRED STATE COM 421H

OWB

Plan: PWP0

Standard Planning Report - Geographic

03 April, 2025

PERMIAN

RESOURCES

Planning Report - Geographic

Database:	Compass_17	Local Co-ordinate Reference:	Well FRED STATE COM 421H
Company:	NEW MEXICO	TVD Reference:	KB @ 3147.0usft
Project:	(SP) EDDY	MD Reference:	KB @ 3147.0usft
Site:	FRED PROJECT	North Reference:	Grid
Well:	FRED STATE COM 421H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Project	(SP) EDDY		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		FRED PROJECT			
Site Position:		Northing:	523,162.55 usft	Latitude:	32° 26' 17.407 N
From:	Map	Easting:	582,566.25 usft	Longitude:	104° 11' 58.894 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "		

Well		FRED STATE COM 421H				
Well Position	+N/-S	0.0 usft	Northing:	523,426.07 usft	Latitude:	32° 26' 20.023 N
	+E/-W	0.0 usft	Easting:	581,833.09 usft	Longitude:	104° 12' 7.446 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,117.0 usft
Grid Convergence:		0.07 °				

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	8.05	60.33	48,853.95563722

Design	PWP0				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	272.60	

Plan Survey Tool Program	Date	4/3/2025			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	24,682.6 PWP0 (OWB)	MWD		
			OWSG_Rev2_ MWD - Standai		

PERMIAN

RESOURCES

Planning Report - Geographic

Database:	Compass_17	Local Co-ordinate Reference:	Well FRED STATE COM 421H
Company:	NEW MEXICO	TVD Reference:	KB @ 3147.0usft
Project:	(SP) EDDY	MD Reference:	KB @ 3147.0usft
Site:	FRED PROJECT	North Reference:	Grid
Well:	FRED STATE COM 421H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,347.4	6.95	322.85	1,346.6	16.8	-12.7	2.00	2.00	0.00	322.85	
8,466.6	6.95	322.85	8,413.4	703.2	-532.8	0.00	0.00	0.00	0.00	
8,814.0	0.00	0.00	8,760.0	720.0	-545.5	2.00	-2.00	0.00	180.00	
8,876.5	0.00	0.00	8,822.5	720.0	-545.5	0.00	0.00	0.00	0.00	
9,626.5	90.00	269.00	9,300.0	711.6	-1,022.9	12.00	12.00	-12.13	269.00	
19,533.4	90.00	269.00	9,300.0	538.0	-10,928.3	0.00	0.00	0.00	0.00	PP2-FSC 421H
19,692.1	90.00	272.17	9,300.0	539.6	-11,087.0	2.00	0.00	2.00	90.00	
24,682.6	90.00	272.17	9,300.0	728.7	-16,073.9	0.00	0.00	0.00	0.00	LTP/BHL-FSC 421H

PERMIAN

RESOURCES

Planning Report - Geographic

Database:	Compass_17	Local Co-ordinate Reference:	Well FRED STATE COM 421H
Company:	NEW MEXICO	TVD Reference:	KB @ 3147.0usft
Project:	(SP) EDDY	MD Reference:	KB @ 3147.0usft
Site:	FRED PROJECT	North Reference:	Grid
Well:	FRED STATE COM 421H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	523,426.07	581,833.09	32° 26' 20.023 N	104° 12' 7.446 W
100.0	0.00	0.00	100.0	0.0	0.0	523,426.07	581,833.09	32° 26' 20.023 N	104° 12' 7.446 W
200.0	0.00	0.00	200.0	0.0	0.0	523,426.07	581,833.09	32° 26' 20.023 N	104° 12' 7.446 W
300.0	0.00	0.00	300.0	0.0	0.0	523,426.07	581,833.09	32° 26' 20.023 N	104° 12' 7.446 W
400.0	0.00	0.00	400.0	0.0	0.0	523,426.07	581,833.09	32° 26' 20.023 N	104° 12' 7.446 W
500.0	0.00	0.00	500.0	0.0	0.0	523,426.07	581,833.09	32° 26' 20.023 N	104° 12' 7.446 W
600.0	0.00	0.00	600.0	0.0	0.0	523,426.07	581,833.09	32° 26' 20.023 N	104° 12' 7.446 W
700.0	0.00	0.00	700.0	0.0	0.0	523,426.07	581,833.09	32° 26' 20.023 N	104° 12' 7.446 W
800.0	0.00	0.00	800.0	0.0	0.0	523,426.07	581,833.09	32° 26' 20.023 N	104° 12' 7.446 W
900.0	0.00	0.00	900.0	0.0	0.0	523,426.07	581,833.09	32° 26' 20.023 N	104° 12' 7.446 W
1,000.0	0.00	0.00	1,000.0	0.0	0.0	523,426.07	581,833.09	32° 26' 20.023 N	104° 12' 7.446 W
Start Build 2.00									
1,100.0	2.00	322.85	1,100.0	1.4	-1.1	523,427.46	581,832.04	32° 26' 20.037 N	104° 12' 7.458 W
1,200.0	4.00	322.85	1,199.8	5.6	-4.2	523,431.63	581,828.88	32° 26' 20.078 N	104° 12' 7.495 W
1,300.0	6.00	322.85	1,299.5	12.5	-9.5	523,438.58	581,823.62	32° 26' 20.147 N	104° 12' 7.556 W
1,347.4	6.95	322.85	1,346.6	16.8	-12.7	523,442.84	581,820.39	32° 26' 20.189 N	104° 12' 7.594 W
Start 7119.2 hold at 1347.4 MD									
1,400.0	6.95	322.85	1,398.8	21.8	-16.5	523,447.91	581,816.54	32° 26' 20.240 N	104° 12' 7.639 W
1,500.0	6.95	322.85	1,498.0	31.5	-23.9	523,457.55	581,809.24	32° 26' 20.335 N	104° 12' 7.724 W
1,600.0	6.95	322.85	1,597.3	41.1	-31.2	523,467.20	581,801.93	32° 26' 20.431 N	104° 12' 7.809 W
1,700.0	6.95	322.85	1,696.6	50.8	-38.5	523,476.84	581,794.63	32° 26' 20.526 N	104° 12' 7.894 W
1,800.0	6.95	322.85	1,795.8	60.4	-45.8	523,486.48	581,787.32	32° 26' 20.622 N	104° 12' 7.979 W
1,900.0	6.95	322.85	1,895.1	70.1	-53.1	523,496.12	581,780.02	32° 26' 20.717 N	104° 12' 8.064 W
2,000.0	6.95	322.85	1,994.4	79.7	-60.4	523,505.76	581,772.71	32° 26' 20.813 N	104° 12' 8.149 W
2,100.0	6.95	322.85	2,093.6	89.3	-67.7	523,515.41	581,765.40	32° 26' 20.908 N	104° 12' 8.234 W
2,200.0	6.95	322.85	2,192.9	99.0	-75.0	523,525.05	581,758.10	32° 26' 21.004 N	104° 12' 8.320 W
2,300.0	6.95	322.85	2,292.2	108.6	-82.3	523,534.69	581,750.79	32° 26' 21.099 N	104° 12' 8.405 W
2,400.0	6.95	322.85	2,391.4	118.3	-89.6	523,544.33	581,743.49	32° 26' 21.195 N	104° 12' 8.490 W
2,500.0	6.95	322.85	2,490.7	127.9	-96.9	523,553.98	581,736.18	32° 26' 21.290 N	104° 12' 8.575 W
2,600.0	6.95	322.85	2,589.9	137.5	-104.2	523,563.62	581,728.87	32° 26' 21.386 N	104° 12' 8.660 W
2,700.0	6.95	322.85	2,689.2	147.2	-111.5	523,573.26	581,721.57	32° 26' 21.481 N	104° 12' 8.745 W
2,800.0	6.95	322.85	2,788.5	156.8	-118.8	523,582.90	581,714.26	32° 26' 21.577 N	104° 12' 8.830 W
2,900.0	6.95	322.85	2,887.7	166.5	-126.1	523,592.54	581,706.96	32° 26' 21.672 N	104° 12' 8.915 W
3,000.0	6.95	322.85	2,987.0	176.1	-133.4	523,602.19	581,699.65	32° 26' 21.768 N	104° 12' 9.000 W
3,100.0	6.95	322.85	3,086.3	185.8	-140.7	523,611.83	581,692.34	32° 26' 21.863 N	104° 12' 9.086 W
3,200.0	6.95	322.85	3,185.5	195.4	-148.1	523,621.47	581,685.04	32° 26' 21.959 N	104° 12' 9.171 W
3,300.0	6.95	322.85	3,284.8	205.0	-155.4	523,631.11	581,677.73	32° 26' 22.054 N	104° 12' 9.256 W
3,400.0	6.95	322.85	3,384.1	214.7	-162.7	523,640.75	581,670.43	32° 26' 22.150 N	104° 12' 9.341 W
3,500.0	6.95	322.85	3,483.3	224.3	-170.0	523,650.40	581,663.12	32° 26' 22.245 N	104° 12' 9.426 W
3,600.0	6.95	322.85	3,582.6	234.0	-177.3	523,660.04	581,655.82	32° 26' 22.341 N	104° 12' 9.511 W
3,700.0	6.95	322.85	3,681.9	243.6	-184.6	523,669.68	581,648.51	32° 26' 22.436 N	104° 12' 9.596 W
3,800.0	6.95	322.85	3,781.1	253.3	-191.9	523,679.32	581,641.20	32° 26' 22.532 N	104° 12' 9.681 W
3,900.0	6.95	322.85	3,880.4	262.9	-199.2	523,688.97	581,633.90	32° 26' 22.627 N	104° 12' 9.767 W
4,000.0	6.95	322.85	3,979.7	272.5	-206.5	523,698.61	581,626.59	32° 26' 22.723 N	104° 12' 9.852 W
4,100.0	6.95	322.85	4,078.9	282.2	-213.8	523,708.25	581,619.29	32° 26' 22.818 N	104° 12' 9.937 W
4,200.0	6.95	322.85	4,178.2	291.8	-221.1	523,717.89	581,611.98	32° 26' 22.914 N	104° 12' 10.022 W
4,300.0	6.95	322.85	4,277.5	301.5	-228.4	523,727.53	581,604.67	32° 26' 23.009 N	104° 12' 10.107 W
4,400.0	6.95	322.85	4,376.7	311.1	-235.7	523,737.18	581,597.37	32° 26' 23.105 N	104° 12' 10.192 W
4,500.0	6.95	322.85	4,476.0	320.7	-243.0	523,746.82	581,590.06	32° 26' 23.200 N	104° 12' 10.277 W
4,600.0	6.95	322.85	4,575.3	330.4	-250.3	523,756.46	581,582.76	32° 26' 23.296 N	104° 12' 10.362 W
4,700.0	6.95	322.85	4,674.5	340.0	-257.6	523,766.10	581,575.45	32° 26' 23.391 N	104° 12' 10.447 W
4,800.0	6.95	322.85	4,773.8	349.7	-264.9	523,775.75	581,568.14	32° 26' 23.487 N	104° 12' 10.533 W
4,900.0	6.95	322.85	4,873.1	359.3	-272.3	523,785.39	581,560.84	32° 26' 23.582 N	104° 12' 10.618 W
5,000.0	6.95	322.85	4,972.3	369.0	-279.6	523,795.03	581,553.53	32° 26' 23.678 N	104° 12' 10.703 W

PERMIAN

RESOURCES

Planning Report - Geographic

Database:	Compass_17	Local Co-ordinate Reference:	Well FRED STATE COM 421H
Company:	NEW MEXICO	TVD Reference:	KB @ 3147.0usft
Project:	(SP) EDDY	MD Reference:	KB @ 3147.0usft
Site:	FRED PROJECT	North Reference:	Grid
Well:	FRED STATE COM 421H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
5,100.0	6.95	322.85	5,071.6	378.6	-286.9	523,804.67	581,546.23	32° 26' 23.773 N	104° 12' 10.788 W	
5,200.0	6.95	322.85	5,170.9	388.2	-294.2	523,814.31	581,538.92	32° 26' 23.869 N	104° 12' 10.873 W	
5,300.0	6.95	322.85	5,270.1	397.9	-301.5	523,823.96	581,531.62	32° 26' 23.964 N	104° 12' 10.958 W	
5,400.0	6.95	322.85	5,369.4	407.5	-308.8	523,833.60	581,524.31	32° 26' 24.060 N	104° 12' 11.043 W	
5,500.0	6.95	322.85	5,468.7	417.2	-316.1	523,843.24	581,517.00	32° 26' 24.155 N	104° 12' 11.128 W	
5,600.0	6.95	322.85	5,567.9	426.8	-323.4	523,852.88	581,509.70	32° 26' 24.251 N	104° 12' 11.214 W	
5,700.0	6.95	322.85	5,667.2	436.5	-330.7	523,862.52	581,502.39	32° 26' 24.346 N	104° 12' 11.299 W	
5,800.0	6.95	322.85	5,766.4	446.1	-338.0	523,872.17	581,495.09	32° 26' 24.442 N	104° 12' 11.384 W	
5,900.0	6.95	322.85	5,865.7	455.7	-345.3	523,881.81	581,487.78	32° 26' 24.537 N	104° 12' 11.469 W	
6,000.0	6.95	322.85	5,965.0	465.4	-352.6	523,891.45	581,480.47	32° 26' 24.633 N	104° 12' 11.554 W	
6,100.0	6.95	322.85	6,064.2	475.0	-359.9	523,901.09	581,473.17	32° 26' 24.728 N	104° 12' 11.639 W	
6,200.0	6.95	322.85	6,163.5	484.7	-367.2	523,910.74	581,465.86	32° 26' 24.824 N	104° 12' 11.724 W	
6,300.0	6.95	322.85	6,262.8	494.3	-374.5	523,920.38	581,458.56	32° 26' 24.919 N	104° 12' 11.809 W	
6,400.0	6.95	322.85	6,362.0	503.9	-381.8	523,930.02	581,451.25	32° 26' 25.015 N	104° 12' 11.894 W	
6,500.0	6.95	322.85	6,461.3	513.6	-389.1	523,939.66	581,443.94	32° 26' 25.110 N	104° 12' 11.980 W	
6,600.0	6.95	322.85	6,560.6	523.2	-396.5	523,949.30	581,436.64	32° 26' 25.206 N	104° 12' 12.065 W	
6,700.0	6.95	322.85	6,659.8	532.9	-403.8	523,958.95	581,429.33	32° 26' 25.301 N	104° 12' 12.150 W	
6,800.0	6.95	322.85	6,759.1	542.5	-411.1	523,968.59	581,422.03	32° 26' 25.397 N	104° 12' 12.235 W	
6,900.0	6.95	322.85	6,858.4	552.2	-418.4	523,978.23	581,414.72	32° 26' 25.492 N	104° 12' 12.320 W	
7,000.0	6.95	322.85	6,957.6	561.8	-425.7	523,987.87	581,407.42	32° 26' 25.588 N	104° 12' 12.405 W	
7,100.0	6.95	322.85	7,056.9	571.4	-433.0	523,997.51	581,400.11	32° 26' 25.683 N	104° 12' 12.490 W	
7,200.0	6.95	322.85	7,156.2	581.1	-440.3	524,007.16	581,392.80	32° 26' 25.779 N	104° 12' 12.575 W	
7,300.0	6.95	322.85	7,255.4	590.7	-447.6	524,016.80	581,385.50	32° 26' 25.874 N	104° 12' 12.661 W	
7,400.0	6.95	322.85	7,354.7	600.4	-454.9	524,026.44	581,378.19	32° 26' 25.970 N	104° 12' 12.746 W	
7,500.0	6.95	322.85	7,454.0	610.0	-462.2	524,036.08	581,370.89	32° 26' 26.065 N	104° 12' 12.831 W	
7,600.0	6.95	322.85	7,553.2	619.7	-469.5	524,045.73	581,363.58	32° 26' 26.161 N	104° 12' 12.916 W	
7,700.0	6.95	322.85	7,652.5	629.3	-476.8	524,055.37	581,356.27	32° 26' 26.256 N	104° 12' 13.001 W	
7,800.0	6.95	322.85	7,751.8	638.9	-484.1	524,065.01	581,348.97	32° 26' 26.352 N	104° 12' 13.086 W	
7,900.0	6.95	322.85	7,851.0	648.6	-491.4	524,074.65	581,341.66	32° 26' 26.447 N	104° 12' 13.171 W	
8,000.0	6.95	322.85	7,950.3	658.2	-498.7	524,084.29	581,334.36	32° 26' 26.543 N	104° 12' 13.256 W	
8,100.0	6.95	322.85	8,049.6	667.9	-506.0	524,093.94	581,327.05	32° 26' 26.638 N	104° 12' 13.342 W	
8,200.0	6.95	322.85	8,148.8	677.5	-513.3	524,103.58	581,319.74	32° 26' 26.734 N	104° 12' 13.427 W	
8,300.0	6.95	322.85	8,248.1	687.1	-520.7	524,113.22	581,312.44	32° 26' 26.829 N	104° 12' 13.512 W	
8,400.0	6.95	322.85	8,347.4	696.8	-528.0	524,122.86	581,305.13	32° 26' 26.925 N	104° 12' 13.597 W	
8,466.6	6.95	322.85	8,413.4	703.2	-532.8	524,129.28	581,300.27	32° 26' 26.988 N	104° 12' 13.654 W	
Start Drop -2.00										
8,500.0	6.28	322.85	8,446.6	706.3	-535.1	524,132.35	581,297.94	32° 26' 27.019 N	104° 12' 13.681 W	
8,600.0	4.28	322.85	8,546.2	713.6	-540.7	524,139.68	581,292.39	32° 26' 27.091 N	104° 12' 13.745 W	
8,700.0	2.28	322.85	8,646.0	718.2	-544.2	524,144.24	581,288.93	32° 26' 27.137 N	104° 12' 13.786 W	
8,800.0	0.28	322.85	8,746.0	720.0	-545.5	524,146.02	581,287.58	32° 26' 27.154 N	104° 12' 13.801 W	
8,814.0	0.00	0.00	8,760.0	720.0	-545.5	524,146.05	581,287.56	32° 26' 27.155 N	104° 12' 13.802 W	
Start 62.5 hold at 8814.0 MD										
8,876.5	0.00	0.00	8,822.5	720.0	-545.5	524,146.05	581,287.56	32° 26' 27.155 N	104° 12' 13.802 W	
Start DLS 12.00 TFO 269.00										
8,900.0	2.82	269.00	8,846.0	720.0	-546.1	524,146.04	581,286.98	32° 26' 27.154 N	104° 12' 13.808 W	
8,925.0	5.82	269.00	8,870.9	719.9	-548.0	524,146.01	581,285.10	32° 26' 27.154 N	104° 12' 13.830 W	
8,950.0	8.82	269.00	8,895.7	719.9	-551.2	524,145.95	581,281.92	32° 26' 27.154 N	104° 12' 13.867 W	
8,975.0	11.82	269.00	8,920.3	719.8	-555.7	524,145.87	581,277.44	32° 26' 27.153 N	104° 12' 13.920 W	
9,000.0	14.82	269.00	8,944.6	719.7	-561.4	524,145.77	581,271.68	32° 26' 27.152 N	104° 12' 13.987 W	
9,025.0	17.82	269.00	8,968.6	719.6	-568.4	524,145.65	581,264.66	32° 26' 27.151 N	104° 12' 14.069 W	
9,050.0	20.82	269.00	8,992.2	719.4	-576.7	524,145.51	581,256.39	32° 26' 27.150 N	104° 12' 14.165 W	
9,075.0	23.82	269.00	9,015.3	719.3	-586.2	524,145.34	581,246.89	32° 26' 27.148 N	104° 12' 14.276 W	
9,100.0	26.82	269.00	9,037.9	719.1	-596.9	524,145.15	581,236.20	32° 26' 27.146 N	104° 12' 14.401 W	
9,125.0	29.82	269.00	9,059.9	718.9	-608.7	524,144.94	581,224.35	32° 26' 27.144 N	104° 12' 14.539 W	

PERMIAN

RESOURCES

Planning Report - Geographic

Database:	Compass_17	Local Co-ordinate Reference:	Well FRED STATE COM 421H
Company:	NEW MEXICO	TVD Reference:	KB @ 3147.0usft
Project:	(SP) EDDY	MD Reference:	KB @ 3147.0usft
Site:	FRED PROJECT	North Reference:	Grid
Well:	FRED STATE COM 421H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,150.0	32.82	269.00	9,081.3	718.6	-621.7	524,144.72	581,211.35	32° 26' 27.142 N	104° 12' 14.691 W
9,175.0	35.82	269.00	9,101.9	718.4	-635.8	524,144.47	581,197.26	32° 26' 27.140 N	104° 12' 14.855 W
9,200.0	38.82	269.00	9,121.8	718.1	-651.0	524,144.20	581,182.11	32° 26' 27.138 N	104° 12' 15.032 W
9,225.0	41.82	269.00	9,140.9	717.8	-667.2	524,143.92	581,165.94	32° 26' 27.135 N	104° 12' 15.221 W
9,250.0	44.82	269.00	9,159.1	717.5	-684.3	524,143.62	581,148.79	32° 26' 27.132 N	104° 12' 15.421 W
FTP-FSC 421H									
9,275.0	47.82	269.00	9,176.3	717.2	-702.4	524,143.30	581,130.71	32° 26' 27.129 N	104° 12' 15.632 W
9,300.0	50.82	269.00	9,192.6	716.9	-721.3	524,142.97	581,111.76	32° 26' 27.126 N	104° 12' 15.853 W
9,325.0	53.82	269.00	9,207.9	716.6	-741.1	524,142.62	581,091.98	32° 26' 27.123 N	104° 12' 16.084 W
9,350.0	56.82	269.00	9,222.1	716.2	-761.7	524,142.26	581,071.42	32° 26' 27.120 N	104° 12' 16.324 W
9,375.0	59.82	269.00	9,235.3	715.8	-782.9	524,141.89	581,050.15	32° 26' 27.116 N	104° 12' 16.572 W
9,400.0	62.82	269.00	9,247.2	715.4	-804.9	524,141.51	581,028.23	32° 26' 27.113 N	104° 12' 16.828 W
9,425.0	65.82	269.00	9,258.1	715.0	-827.4	524,141.11	581,005.70	32° 26' 27.109 N	104° 12' 17.091 W
9,450.0	68.82	269.00	9,267.7	714.6	-850.5	524,140.71	580,982.64	32° 26' 27.105 N	104° 12' 17.360 W
9,475.0	71.82	269.00	9,276.1	714.2	-874.0	524,140.30	580,959.11	32° 26' 27.102 N	104° 12' 17.635 W
9,500.0	74.82	269.00	9,283.3	713.8	-897.9	524,139.88	580,935.17	32° 26' 27.098 N	104° 12' 17.914 W
9,525.0	77.82	269.00	9,289.2	713.4	-922.2	524,139.45	580,910.88	32° 26' 27.094 N	104° 12' 18.197 W
9,550.0	80.82	269.00	9,293.9	712.9	-946.8	524,139.02	580,886.32	32° 26' 27.090 N	104° 12' 18.484 W
9,575.0	83.82	269.00	9,297.2	712.5	-971.5	524,138.59	580,861.55	32° 26' 27.086 N	104° 12' 18.773 W
9,600.0	86.82	269.00	9,299.2	712.1	-996.5	524,138.15	580,836.64	32° 26' 27.082 N	104° 12' 19.064 W
9,626.5	90.00	269.00	9,300.0	711.6	-1,022.9	524,137.68	580,810.17	32° 26' 27.077 N	104° 12' 19.373 W
Start 9906.9 hold at 9626.5 MD									
9,700.0	90.00	269.00	9,300.0	710.3	-1,096.4	524,136.40	580,736.67	32° 26' 27.066 N	104° 12' 20.230 W
9,800.0	90.00	269.00	9,300.0	708.6	-1,196.4	524,134.64	580,636.69	32° 26' 27.049 N	104° 12' 21.397 W
9,900.0	90.00	269.00	9,300.0	706.8	-1,296.4	524,132.89	580,536.70	32° 26' 27.033 N	104° 12' 22.564 W
10,000.0	90.00	269.00	9,300.0	705.1	-1,396.4	524,131.14	580,436.72	32° 26' 27.017 N	104° 12' 23.731 W
10,100.0	90.00	269.00	9,300.0	703.3	-1,496.4	524,129.39	580,336.73	32° 26' 27.001 N	104° 12' 24.898 W
10,200.0	90.00	269.00	9,300.0	701.6	-1,596.3	524,127.63	580,236.75	32° 26' 26.985 N	104° 12' 26.064 W
10,300.0	90.00	269.00	9,300.0	699.8	-1,696.3	524,125.88	580,136.76	32° 26' 26.969 N	104° 12' 27.231 W
10,400.0	90.00	269.00	9,300.0	698.1	-1,796.3	524,124.13	580,036.78	32° 26' 26.952 N	104° 12' 28.398 W
10,500.0	90.00	269.00	9,300.0	696.3	-1,896.3	524,122.38	579,936.79	32° 26' 26.936 N	104° 12' 29.565 W
10,600.0	90.00	269.00	9,300.0	694.6	-1,996.3	524,120.63	579,836.81	32° 26' 26.920 N	104° 12' 30.732 W
10,700.0	90.00	269.00	9,300.0	692.8	-2,096.3	524,118.87	579,736.82	32° 26' 26.904 N	104° 12' 31.898 W
10,800.0	90.00	269.00	9,300.0	691.0	-2,196.3	524,117.12	579,636.84	32° 26' 26.888 N	104° 12' 33.065 W
10,900.0	90.00	269.00	9,300.0	689.3	-2,296.2	524,115.37	579,536.85	32° 26' 26.871 N	104° 12' 34.232 W
11,000.0	90.00	269.00	9,300.0	687.5	-2,396.2	524,113.62	579,436.87	32° 26' 26.855 N	104° 12' 35.399 W
11,100.0	90.00	269.00	9,300.0	685.8	-2,496.2	524,111.86	579,336.89	32° 26' 26.839 N	104° 12' 36.565 W
11,200.0	90.00	269.00	9,300.0	684.0	-2,596.2	524,110.11	579,236.90	32° 26' 26.823 N	104° 12' 37.732 W
11,300.0	90.00	269.00	9,300.0	682.3	-2,696.2	524,108.36	579,136.92	32° 26' 26.807 N	104° 12' 38.899 W
11,400.0	90.00	269.00	9,300.0	680.5	-2,796.2	524,106.61	579,036.93	32° 26' 26.790 N	104° 12' 40.066 W
11,500.0	90.00	269.00	9,300.0	678.8	-2,896.1	524,104.85	578,936.95	32° 26' 26.774 N	104° 12' 41.233 W
11,600.0	90.00	269.00	9,300.0	677.0	-2,996.1	524,103.10	578,836.96	32° 26' 26.758 N	104° 12' 42.399 W
11,700.0	90.00	269.00	9,300.0	675.3	-3,096.1	524,101.35	578,736.98	32° 26' 26.742 N	104° 12' 43.566 W
11,800.0	90.00	269.00	9,300.0	673.5	-3,196.1	524,099.60	578,636.99	32° 26' 26.726 N	104° 12' 44.733 W
11,900.0	90.00	269.00	9,300.0	671.8	-3,296.1	524,097.84	578,537.01	32° 26' 26.709 N	104° 12' 45.900 W
12,000.0	90.00	269.00	9,300.0	670.0	-3,396.1	524,096.09	578,437.02	32° 26' 26.693 N	104° 12' 47.067 W
12,100.0	90.00	269.00	9,300.0	668.3	-3,496.1	524,094.34	578,337.04	32° 26' 26.677 N	104° 12' 48.233 W
12,200.0	90.00	269.00	9,300.0	666.5	-3,596.0	524,092.59	578,237.05	32° 26' 26.661 N	104° 12' 49.400 W
12,300.0	90.00	269.00	9,300.0	664.8	-3,696.0	524,090.84	578,137.07	32° 26' 26.644 N	104° 12' 50.567 W
12,400.0	90.00	269.00	9,300.0	663.0	-3,796.0	524,089.08	578,037.08	32° 26' 26.628 N	104° 12' 51.734 W
12,500.0	90.00	269.00	9,300.0	661.3	-3,896.0	524,087.33	577,937.10	32° 26' 26.612 N	104° 12' 52.901 W
12,600.0	90.00	269.00	9,300.0	659.5	-3,996.0	524,085.58	577,837.12	32° 26' 26.596 N	104° 12' 54.067 W
12,700.0	90.00	269.00	9,300.0	657.8	-4,096.0	524,083.83	577,737.13	32° 26' 26.579 N	104° 12' 55.234 W
12,800.0	90.00	269.00	9,300.0	656.0	-4,195.9	524,082.07	577,637.15	32° 26' 26.563 N	104° 12' 56.401 W

PERMIAN

RESOURCES

Planning Report - Geographic

Database:	Compass_17	Local Co-ordinate Reference:	Well FRED STATE COM 421H
Company:	NEW MEXICO	TVD Reference:	KB @ 3147.0usft
Project:	(SP) EDDY	MD Reference:	KB @ 3147.0usft
Site:	FRED PROJECT	North Reference:	Grid
Well:	FRED STATE COM 421H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
12,900.0	90.00	269.00	9,300.0	654.2	-4,295.9	524,080.32	577,537.16	32° 26' 26.547 N	104° 12' 57.568 W	
13,000.0	90.00	269.00	9,300.0	652.5	-4,395.9	524,078.57	577,437.18	32° 26' 26.531 N	104° 12' 58.735 W	
13,100.0	90.00	269.00	9,300.0	650.7	-4,495.9	524,076.82	577,337.19	32° 26' 26.514 N	104° 12' 59.901 W	
13,200.0	90.00	269.00	9,300.0	649.0	-4,595.9	524,075.06	577,237.21	32° 26' 26.498 N	104° 13' 1.068 W	
13,300.0	90.00	269.00	9,300.0	647.2	-4,695.9	524,073.31	577,137.22	32° 26' 26.482 N	104° 13' 2.235 W	
13,400.0	90.00	269.00	9,300.0	645.5	-4,795.9	524,071.56	577,037.24	32° 26' 26.466 N	104° 13' 3.402 W	
13,500.0	90.00	269.00	9,300.0	643.7	-4,895.8	524,069.81	576,937.25	32° 26' 26.449 N	104° 13' 4.569 W	
13,600.0	90.00	269.00	9,300.0	642.0	-4,995.8	524,068.06	576,837.27	32° 26' 26.433 N	104° 13' 5.735 W	
13,700.0	90.00	269.00	9,300.0	640.2	-5,095.8	524,066.30	576,737.28	32° 26' 26.417 N	104° 13' 6.902 W	
13,800.0	90.00	269.00	9,300.0	638.5	-5,195.8	524,064.55	576,637.30	32° 26' 26.401 N	104° 13' 8.069 W	
13,900.0	90.00	269.00	9,300.0	636.7	-5,295.8	524,062.80	576,537.31	32° 26' 26.384 N	104° 13' 9.236 W	
14,000.0	90.00	269.00	9,300.0	635.0	-5,395.8	524,061.05	576,437.33	32° 26' 26.368 N	104° 13' 10.402 W	
14,100.0	90.00	269.00	9,300.0	633.2	-5,495.7	524,059.29	576,337.35	32° 26' 26.352 N	104° 13' 11.569 W	
14,200.0	90.00	269.00	9,300.0	631.5	-5,595.7	524,057.54	576,237.36	32° 26' 26.335 N	104° 13' 12.736 W	
14,300.0	90.00	269.00	9,300.0	629.7	-5,695.7	524,055.79	576,137.38	32° 26' 26.319 N	104° 13' 13.903 W	
14,400.0	90.00	269.00	9,300.0	628.0	-5,795.7	524,054.04	576,037.39	32° 26' 26.303 N	104° 13' 15.070 W	
14,500.0	90.00	269.00	9,300.0	626.2	-5,895.7	524,052.28	575,937.41	32° 26' 26.287 N	104° 13' 16.236 W	
14,600.0	90.00	269.00	9,300.0	624.5	-5,995.7	524,050.53	575,837.42	32° 26' 26.270 N	104° 13' 17.403 W	
14,700.0	90.00	269.00	9,300.0	622.7	-6,095.7	524,048.78	575,737.44	32° 26' 26.254 N	104° 13' 18.570 W	
14,800.0	90.00	269.00	9,300.0	621.0	-6,195.6	524,047.03	575,637.45	32° 26' 26.238 N	104° 13' 19.737 W	
14,900.0	90.00	269.00	9,300.0	619.2	-6,295.6	524,045.27	575,537.47	32° 26' 26.221 N	104° 13' 20.904 W	
15,000.0	90.00	269.00	9,300.0	617.5	-6,395.6	524,043.52	575,437.48	32° 26' 26.205 N	104° 13' 22.070 W	
15,100.0	90.00	269.00	9,300.0	615.7	-6,495.6	524,041.77	575,337.50	32° 26' 26.189 N	104° 13' 23.237 W	
15,200.0	90.00	269.00	9,300.0	613.9	-6,595.6	524,040.02	575,237.51	32° 26' 26.172 N	104° 13' 24.404 W	
15,300.0	90.00	269.00	9,300.0	612.2	-6,695.6	524,038.27	575,137.53	32° 26' 26.156 N	104° 13' 25.571 W	
15,400.0	90.00	269.00	9,300.0	610.4	-6,795.5	524,036.51	575,037.55	32° 26' 26.140 N	104° 13' 26.738 W	
15,500.0	90.00	269.00	9,300.0	608.7	-6,895.5	524,034.76	574,937.56	32° 26' 26.123 N	104° 13' 27.904 W	
15,600.0	90.00	269.00	9,300.0	606.9	-6,995.5	524,033.01	574,837.58	32° 26' 26.107 N	104° 13' 29.071 W	
15,700.0	90.00	269.00	9,300.0	605.2	-7,095.5	524,031.26	574,737.59	32° 26' 26.091 N	104° 13' 30.238 W	
15,800.0	90.00	269.00	9,300.0	603.4	-7,195.5	524,029.50	574,637.61	32° 26' 26.074 N	104° 13' 31.405 W	
15,900.0	90.00	269.00	9,300.0	601.7	-7,295.5	524,027.75	574,537.62	32° 26' 26.058 N	104° 13' 32.571 W	
16,000.0	90.00	269.00	9,300.0	599.9	-7,395.5	524,026.00	574,437.64	32° 26' 26.042 N	104° 13' 33.738 W	
16,100.0	90.00	269.00	9,300.0	598.2	-7,495.4	524,024.25	574,337.65	32° 26' 26.025 N	104° 13' 34.905 W	
16,200.0	90.00	269.00	9,300.0	596.4	-7,595.4	524,022.49	574,237.67	32° 26' 26.009 N	104° 13' 36.072 W	
16,300.0	90.00	269.00	9,300.0	594.7	-7,695.4	524,020.74	574,137.68	32° 26' 25.993 N	104° 13' 37.239 W	
16,400.0	90.00	269.00	9,300.0	592.9	-7,795.4	524,018.99	574,037.70	32° 26' 25.976 N	104° 13' 38.405 W	
16,500.0	90.00	269.00	9,300.0	591.2	-7,895.4	524,017.24	573,937.71	32° 26' 25.960 N	104° 13' 39.572 W	
16,600.0	90.00	269.00	9,300.0	589.4	-7,995.4	524,015.48	573,837.73	32° 26' 25.944 N	104° 13' 40.739 W	
16,700.0	90.00	269.00	9,300.0	587.7	-8,095.3	524,013.73	573,737.74	32° 26' 25.927 N	104° 13' 41.906 W	
16,800.0	90.00	269.00	9,300.0	585.9	-8,195.3	524,011.98	573,637.76	32° 26' 25.911 N	104° 13' 43.073 W	
16,900.0	90.00	269.00	9,300.0	584.2	-8,295.3	524,010.23	573,537.78	32° 26' 25.894 N	104° 13' 44.239 W	
17,000.0	90.00	269.00	9,300.0	582.4	-8,395.3	524,008.48	573,437.79	32° 26' 25.878 N	104° 13' 45.406 W	
17,100.0	90.00	269.00	9,300.0	580.7	-8,495.3	524,006.72	573,337.81	32° 26' 25.862 N	104° 13' 46.573 W	
17,200.0	90.00	269.00	9,300.0	578.9	-8,595.3	524,004.97	573,237.82	32° 26' 25.845 N	104° 13' 47.740 W	
17,300.0	90.00	269.00	9,300.0	577.1	-8,695.3	524,003.22	573,137.84	32° 26' 25.829 N	104° 13' 48.906 W	
17,400.0	90.00	269.00	9,300.0	575.4	-8,795.2	524,001.47	573,037.85	32° 26' 25.813 N	104° 13' 50.073 W	
17,500.0	90.00	269.00	9,300.0	573.6	-8,895.2	523,999.71	572,937.87	32° 26' 25.796 N	104° 13' 51.240 W	
17,600.0	90.00	269.00	9,300.0	571.9	-8,995.2	523,997.96	572,837.88	32° 26' 25.780 N	104° 13' 52.407 W	
17,700.0	90.00	269.00	9,300.0	570.1	-9,095.2	523,996.21	572,737.90	32° 26' 25.763 N	104° 13' 53.574 W	
17,800.0	90.00	269.00	9,300.0	568.4	-9,195.2	523,994.46	572,637.91	32° 26' 25.747 N	104° 13' 54.740 W	
17,900.0	90.00	269.00	9,300.0	566.6	-9,295.2	523,992.70	572,537.93	32° 26' 25.731 N	104° 13' 55.907 W	
18,000.0	90.00	269.00	9,300.0	564.9	-9,395.1	523,990.95	572,437.94	32° 26' 25.714 N	104° 13' 57.074 W	
18,100.0	90.00	269.00	9,300.0	563.1	-9,495.1	523,989.20	572,337.96	32° 26' 25.698 N	104° 13' 58.241 W	
18,200.0	90.00	269.00	9,300.0	561.4	-9,595.1	523,987.45	572,237.98	32° 26' 25.681 N	104° 13' 59.408 W	
18,300.0	90.00	269.00	9,300.0	559.6	-9,695.1	523,985.69	572,137.99	32° 26' 25.665 N	104° 14' 0.574 W	

PERMIAN

RESOURCES

Planning Report - Geographic

Database:	Compass_17	Local Co-ordinate Reference:	Well FRED STATE COM 421H
Company:	NEW MEXICO	TVD Reference:	KB @ 3147.0usft
Project:	(SP) EDDY	MD Reference:	KB @ 3147.0usft
Site:	FRED PROJECT	North Reference:	Grid
Well:	FRED STATE COM 421H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured			Vertical			Map		Map		
Depth (usft)	Inclination (°)	Azimuth (°)	Depth (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
18,400.0	90.00	269.00	9,300.0	557.9	-9,795.1	523,983.94	572,038.01	32° 26' 25.648 N	104° 14' 1.741 W	
18,500.0	90.00	269.00	9,300.0	556.1	-9,895.1	523,982.19	571,938.02	32° 26' 25.632 N	104° 14' 2.908 W	
18,600.0	90.00	269.00	9,300.0	554.4	-9,995.1	523,980.44	571,838.04	32° 26' 25.616 N	104° 14' 4.075 W	
18,700.0	90.00	269.00	9,300.0	552.6	-10,095.0	523,978.69	571,738.05	32° 26' 25.599 N	104° 14' 5.242 W	
18,800.0	90.00	269.00	9,300.0	550.9	-10,195.0	523,976.93	571,638.07	32° 26' 25.583 N	104° 14' 6.408 W	
18,900.0	90.00	269.00	9,300.0	549.1	-10,295.0	523,975.18	571,538.08	32° 26' 25.566 N	104° 14' 7.575 W	
19,000.0	90.00	269.00	9,300.0	547.4	-10,395.0	523,973.43	571,438.10	32° 26' 25.550 N	104° 14' 8.742 W	
19,100.0	90.00	269.00	9,300.0	545.6	-10,495.0	523,971.68	571,338.11	32° 26' 25.533 N	104° 14' 9.909 W	
19,200.0	90.00	269.00	9,300.0	543.9	-10,595.0	523,969.92	571,238.13	32° 26' 25.517 N	104° 14' 11.075 W	
19,300.0	90.00	269.00	9,300.0	542.1	-10,694.9	523,968.17	571,138.14	32° 26' 25.501 N	104° 14' 12.242 W	
19,400.0	90.00	269.00	9,300.0	540.3	-10,794.9	523,966.42	571,038.16	32° 26' 25.484 N	104° 14' 13.409 W	
19,500.0	90.00	269.00	9,300.0	538.6	-10,894.9	523,964.67	570,938.17	32° 26' 25.468 N	104° 14' 14.576 W	
19,533.4	90.00	269.00	9,300.0	538.0	-10,928.3	523,964.08	570,904.81	32° 26' 25.462 N	104° 14' 14.965 W	
Start DLS 2.00 TFO 90.00 - PP2-FSC 421H										
19,600.0	90.00	270.33	9,300.0	537.6	-10,994.9	523,963.69	570,838.18	32° 26' 25.459 N	104° 14' 15.743 W	
19,692.1	90.00	272.17	9,300.0	539.6	-11,087.0	523,965.70	570,746.07	32° 26' 25.480 N	104° 14' 16.817 W	
Start 4990.5 hold at 19692.1 MD										
19,700.0	90.00	272.17	9,300.0	539.9	-11,094.9	523,966.00	570,738.21	32° 26' 25.483 N	104° 14' 16.909 W	
19,800.0	90.00	272.17	9,300.0	543.7	-11,194.8	523,969.79	570,638.29	32° 26' 25.521 N	104° 14' 18.075 W	
19,900.0	90.00	272.17	9,300.0	547.5	-11,294.7	523,973.57	570,538.36	32° 26' 25.559 N	104° 14' 19.241 W	
20,000.0	90.00	272.17	9,300.0	551.3	-11,394.7	523,977.36	570,438.43	32° 26' 25.598 N	104° 14' 20.407 W	
20,100.0	90.00	272.17	9,300.0	555.1	-11,494.6	523,981.15	570,338.50	32° 26' 25.636 N	104° 14' 21.573 W	
20,200.0	90.00	272.17	9,300.0	558.9	-11,594.5	523,984.94	570,238.57	32° 26' 25.674 N	104° 14' 22.740 W	
20,300.0	90.00	272.17	9,300.0	562.7	-11,694.4	523,988.73	570,138.64	32° 26' 25.713 N	104° 14' 23.906 W	
20,400.0	90.00	272.17	9,300.0	566.4	-11,794.4	523,992.52	570,038.72	32° 26' 25.751 N	104° 14' 25.072 W	
20,500.0	90.00	272.17	9,300.0	570.2	-11,894.3	523,996.31	569,938.79	32° 26' 25.790 N	104° 14' 26.238 W	
20,600.0	90.00	272.17	9,300.0	574.0	-11,994.2	524,000.09	569,838.86	32° 26' 25.828 N	104° 14' 27.404 W	
20,700.0	90.00	272.17	9,300.0	577.8	-12,094.2	524,003.88	569,738.93	32° 26' 25.866 N	104° 14' 28.570 W	
20,800.0	90.00	272.17	9,300.0	581.6	-12,194.1	524,007.67	569,639.00	32° 26' 25.905 N	104° 14' 29.736 W	
20,900.0	90.00	272.17	9,300.0	585.4	-12,294.0	524,011.46	569,539.08	32° 26' 25.943 N	104° 14' 30.902 W	
21,000.0	90.00	272.17	9,300.0	589.2	-12,393.9	524,015.25	569,439.15	32° 26' 25.981 N	104° 14' 32.068 W	
21,100.0	90.00	272.17	9,300.0	593.0	-12,493.9	524,019.04	569,339.22	32° 26' 26.020 N	104° 14' 33.234 W	
21,200.0	90.00	272.17	9,300.0	596.8	-12,593.8	524,022.83	569,239.29	32° 26' 26.058 N	104° 14' 34.400 W	
21,300.0	90.00	272.17	9,300.0	600.5	-12,693.7	524,026.62	569,139.36	32° 26' 26.096 N	104° 14' 35.566 W	
21,400.0	90.00	272.17	9,300.0	604.3	-12,793.7	524,030.40	569,039.43	32° 26' 26.135 N	104° 14' 36.732 W	
21,500.0	90.00	272.17	9,300.0	608.1	-12,893.6	524,034.19	568,939.51	32° 26' 26.173 N	104° 14' 37.898 W	
21,600.0	90.00	272.17	9,300.0	611.9	-12,993.5	524,037.98	568,839.58	32° 26' 26.211 N	104° 14' 39.065 W	
21,700.0	90.00	272.17	9,300.0	615.7	-13,093.4	524,041.77	568,739.65	32° 26' 26.250 N	104° 14' 40.231 W	
21,800.0	90.00	272.17	9,300.0	619.5	-13,193.4	524,045.56	568,639.72	32° 26' 26.288 N	104° 14' 41.397 W	
21,900.0	90.00	272.17	9,300.0	623.3	-13,293.3	524,049.35	568,539.79	32° 26' 26.326 N	104° 14' 42.563 W	
22,000.0	90.00	272.17	9,300.0	627.1	-13,393.2	524,053.14	568,439.87	32° 26' 26.364 N	104° 14' 43.729 W	
22,100.0	90.00	272.17	9,300.0	630.9	-13,493.2	524,056.92	568,339.94	32° 26' 26.403 N	104° 14' 44.895 W	
22,200.0	90.00	272.17	9,300.0	634.6	-13,593.1	524,060.71	568,240.01	32° 26' 26.441 N	104° 14' 46.061 W	
22,300.0	90.00	272.17	9,300.0	638.4	-13,693.0	524,064.50	568,140.08	32° 26' 26.479 N	104° 14' 47.227 W	
22,400.0	90.00	272.17	9,300.0	642.2	-13,792.9	524,068.29	568,040.15	32° 26' 26.518 N	104° 14' 48.393 W	
22,500.0	90.00	272.17	9,300.0	646.0	-13,892.9	524,072.08	567,940.22	32° 26' 26.556 N	104° 14' 49.559 W	
22,600.0	90.00	272.17	9,300.0	649.8	-13,992.8	524,075.87	567,840.30	32° 26' 26.594 N	104° 14' 50.725 W	
22,700.0	90.00	272.17	9,300.0	653.6	-14,092.7	524,079.66	567,740.37	32° 26' 26.633 N	104° 14' 51.891 W	
22,800.0	90.00	272.17	9,300.0	657.4	-14,192.7	524,083.45	567,640.44	32° 26' 26.671 N	104° 14' 53.057 W	
22,900.0	90.00	272.17	9,300.0	661.2	-14,292.6	524,087.23	567,540.51	32° 26' 26.709 N	104° 14' 54.224 W	
23,000.0	90.00	272.17	9,300.0	665.0	-14,392.5	524,091.02	567,440.58	32° 26' 26.747 N	104° 14' 55.390 W	
23,100.0	90.00	272.17	9,300.0	668.7	-14,492.4	524,094.81	567,340.65	32° 26' 26.786 N	104° 14' 56.556 W	
23,200.0	90.00	272.17	9,300.0	672.5	-14,592.4	524,098.60	567,240.73	32° 26' 26.824 N	104° 14' 57.722 W	
23,300.0	90.00	272.17	9,300.0	676.3	-14,692.3	524,102.39	567,140.80	32° 26' 26.862 N	104° 14' 58.888 W	

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RESOURCES

Planning Report - Geographic

Database:	Compass_17	Local Co-ordinate Reference:	Well FRED STATE COM 421H
Company:	NEW MEXICO	TVD Reference:	KB @ 3147.0usft
Project:	(SP) EDDY	MD Reference:	KB @ 3147.0usft
Site:	FRED PROJECT	North Reference:	Grid
Well:	FRED STATE COM 421H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PWP0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
23,400.0	90.00	272.17	9,300.0	680.1	-14,792.2	524,106.18	567,040.87	32° 26' 26.900 N	104° 15' 0.054 W	
23,500.0	90.00	272.17	9,300.0	683.9	-14,892.2	524,109.97	566,940.94	32° 26' 26.939 N	104° 15' 1.220 W	
23,600.0	90.00	272.17	9,300.0	687.7	-14,992.1	524,113.75	566,841.01	32° 26' 26.977 N	104° 15' 2.386 W	
23,700.0	90.00	272.17	9,300.0	691.5	-15,092.0	524,117.54	566,741.09	32° 26' 27.015 N	104° 15' 3.552 W	
23,800.0	90.00	272.17	9,300.0	695.3	-15,191.9	524,121.33	566,641.16	32° 26' 27.053 N	104° 15' 4.718 W	
23,900.0	90.00	272.17	9,300.0	699.0	-15,291.9	524,125.12	566,541.23	32° 26' 27.092 N	104° 15' 5.884 W	
24,000.0	90.00	272.17	9,300.0	702.8	-15,391.8	524,128.91	566,441.30	32° 26' 27.130 N	104° 15' 7.050 W	
24,100.0	90.00	272.17	9,300.0	706.6	-15,491.7	524,132.70	566,341.37	32° 26' 27.168 N	104° 15' 8.217 W	
24,200.0	90.00	272.17	9,300.0	710.4	-15,591.6	524,136.49	566,241.44	32° 26' 27.206 N	104° 15' 9.383 W	
24,300.0	90.00	272.17	9,300.0	714.2	-15,691.6	524,140.28	566,141.52	32° 26' 27.245 N	104° 15' 10.549 W	
24,400.0	90.00	272.17	9,300.0	718.0	-15,791.5	524,144.06	566,041.59	32° 26' 27.283 N	104° 15' 11.715 W	
24,500.0	90.00	272.17	9,300.0	721.8	-15,891.4	524,147.85	565,941.66	32° 26' 27.321 N	104° 15' 12.881 W	
24,600.0	90.00	272.17	9,300.0	725.6	-15,991.4	524,151.64	565,841.73	32° 26' 27.359 N	104° 15' 14.047 W	
24,682.6	90.00	272.17	9,300.0	728.7	-16,073.9	524,154.77	565,759.16	32° 26' 27.391 N	104° 15' 15.010 W	
TD at 24682.6 - LTP/BHL-FSC 421H										

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										
PP2-FSC 421H	0.00	0.00	9,300.0	538.0	-10,928.3	523,964.08	570,904.81	32° 26' 25.462 N	104° 14' 14.965 W	
- plan hits target center										
- Point										
FTP-FSC 421H	0.00	0.00	9,300.0	720.0	-545.5	524,146.05	581,287.56	32° 26' 27.155 N	104° 12' 13.802 W	
- plan misses target center by 197.8usft at 9250.0usft MD (9159.1 TVD, 717.5 N, -684.3 E)										
- Point										
LTP/BHL-FSC 421H	0.00	0.00	9,300.0	728.7	-16,073.9	524,154.77	565,759.16	32° 26' 27.391 N	104° 15' 15.010 W	
- plan hits target center										
- Point										

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,000.0	1,000.0	0.0	0.0	Start Build 2.00	
1,347.4	1,346.6	16.8	-12.7	Start 7119.2 hold at 1347.4 MD	
8,466.6	8,413.4	703.2	-532.8	Start Drop -2.00	
8,814.0	8,760.0	720.0	-545.5	Start 62.5 hold at 8814.0 MD	
8,876.5	8,822.5	720.0	-545.5	Start DLS 12.00 TFO 269.00	
9,626.5	9,300.0	711.6	-1,022.9	Start 9906.9 hold at 9626.5 MD	
19,533.4	9,300.0	538.0	-10,928.3	Start DLS 2.00 TFO 90.00	
19,692.1	9,300.0	539.6	-11,087.0	Start 4990.5 hold at 19692.1 MD	
24,682.6	9,300.0	728.7	-16,073.9	TD at 24682.6	

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R E S O U R C E S

NEW MEXICO

(SP) EDDY

FRED PROJECT

FRED STATE COM 421H

OWB

PWP0

Anticollision Report

03 April, 2025

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RESOURCES

Anticollision Report

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well FRED STATE COM 421H
Project:	(SP) EDDY	TVD Reference:	KB @ 3147.0usft
Reference Site:	FRED PROJECT	MD Reference:	KB @ 3147.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	FRED STATE COM 421H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Compass_17
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Reference	PWP0		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 1,000.0usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	4/3/2025		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	24,682.6	PWP0 (OWB)	MWD	OWSG_Rev2_ MWD - Standard	

Summary						
Site Name Offset Well - Wellbore - Design	Reference	Offset	Distance		Separation Factor	Warning
	Measured	Measured	Between	Between		
	Depth	Depth	Centres	Ellipses		
(usft) (usft) (usft) (usft)						
FRED PROJECT						
FRED STATE COM 422H - OWB - PWP0	1,082.0	1,082.6	29.9	22.4	3.977	CC
FRED STATE COM 422H - OWB - PWP0	1,100.0	1,100.7	30.0	22.3	3.914	ES
FRED STATE COM 422H - OWB - PWP0	1,200.0	1,200.9	31.2	22.9	3.745	SF
FRED STATE COM 423H - OWB - PWP0	1,000.0	1,000.0	60.0	53.0	8.628	CC
FRED STATE COM 423H - OWB - PWP0	1,100.0	1,100.5	60.6	53.0	7.920	ES
FRED STATE COM 423H - OWB - PWP0	1,200.0	1,200.5	63.3	55.0	7.597	SF
FRED STATE COM 424H - OWB - PWP0	1,000.0	1,000.0	90.0	83.0	12.942	CC, ES
FRED STATE COM 424H - OWB - PWP0	1,300.0	1,299.0	100.5	91.5	11.136	SF

Offset Design:		FRED PROJECT - FRED STATE COM 422H - OWB - PWP0											Offset Site Error:		0.0 usft		
Survey Program:		0-MWD						Rule Assigned:						Offset Well Error:		0.0 usft	
Measured	Reference	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning				
Depth (usft)	Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)							
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	30.0	30.0								
100.0	100.0	100.0	100.0	0.3	0.3	90.00	0.0	30.0	30.0	29.5	0.50	59.778					
200.0	200.0	200.0	200.0	0.6	0.6	90.00	0.0	30.0	30.0	28.8	1.22	24.614					
300.0	300.0	300.0	300.0	1.0	1.0	90.00	0.0	30.0	30.0	28.1	1.94	15.498					
400.0	400.0	400.0	400.0	1.3	1.3	90.00	0.0	30.0	30.0	27.3	2.65	11.309					
500.0	500.0	500.0	500.0	1.7	1.7	90.00	0.0	30.0	30.0	26.6	3.37	8.903					
600.0	600.0	600.0	600.0	2.0	2.0	90.00	0.0	30.0	30.0	25.9	4.09	7.341					
700.0	700.0	700.0	700.0	2.4	2.4	90.00	0.0	30.0	30.0	25.2	4.80	6.245					
800.0	800.0	800.0	800.0	2.8	2.8	90.00	0.0	30.0	30.0	24.5	5.52	5.434					
900.0	900.0	900.0	900.0	3.1	3.1	90.00	0.0	30.0	30.0	23.8	6.24	4.810					
1,000.0	1,000.0	1,000.0	1,000.0	3.5	3.5	90.00	0.0	30.0	30.0	23.0	6.95	4.314					
1,082.0	1,082.0	1,082.6	1,082.6	3.8	3.8	130.60	-0.9	29.2	29.9	22.4	7.53	3.977	CC				
1,100.0	1,100.0	1,100.7	1,100.6	3.8	3.8	132.28	-1.3	28.8	30.0	22.3	7.65	3.914	ES				
1,200.0	1,199.8	1,200.9	1,200.7	4.2	4.2	147.10	-5.1	25.1	31.2	22.9	8.34	3.745	SF				
1,300.0	1,299.5	1,300.3	1,299.7	4.6	4.5	166.93	-11.4	19.1	37.3	28.2	9.04	4.122					
1,347.4	1,346.6	1,347.0	1,346.1	4.7	4.7	175.67	-15.2	15.5	42.6	33.2	9.38	4.545					
1,400.0	1,398.8	1,398.6	1,397.4	4.9	4.8	-176.44	-19.8	11.1	50.0	40.2	9.75	5.128					
1,500.0	1,498.0	1,496.9	1,494.9	5.3	5.2	-166.62	-28.5	2.8	65.7	55.2	10.45	6.287					
1,600.0	1,597.3	1,595.2	1,592.5	5.7	5.6	-160.67	-37.2	-5.6	82.6	71.4	11.16	7.400					
1,700.0	1,696.6	1,693.5	1,690.0	6.0	5.9	-156.75	-46.0	-13.9	100.0	88.1	11.87	8.424					

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

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Anticollision Report

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well FRED STATE COM 421H
Project:	(SP) EDDY	TVD Reference:	KB @ 3147.0usft
Reference Site:	FRED PROJECT	MD Reference:	KB @ 3147.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	FRED STATE COM 421H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Compass_17
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design: FRED PROJECT - FRED STATE COM 422H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,800.0	1,795.8	1,791.7	1,787.5	6.4	6.3	-154.01	-54.7	-22.3	117.8	105.2	12.59	9.353	
1,900.0	1,895.1	1,890.0	1,885.1	6.8	6.7	-151.98	-63.4	-30.6	135.7	122.4	13.32	10.192	
2,000.0	1,994.4	1,988.3	1,982.6	7.2	7.0	-150.43	-72.2	-39.0	153.8	139.8	14.05	10.951	
2,100.0	2,093.6	2,086.6	2,080.1	7.6	7.4	-149.21	-80.9	-47.3	172.0	157.2	14.78	11.639	
2,200.0	2,192.9	2,184.9	2,177.7	8.0	7.8	-148.22	-89.6	-55.7	190.2	174.7	15.51	12.263	
2,300.0	2,292.2	2,283.1	2,275.2	8.4	8.2	-147.40	-98.4	-64.0	208.5	192.2	16.25	12.832	
2,400.0	2,391.4	2,381.4	2,372.7	8.8	8.6	-146.72	-107.1	-72.4	226.8	209.8	16.99	13.352	
2,500.0	2,490.7	2,479.7	2,470.2	9.2	9.0	-146.14	-115.8	-80.7	245.1	227.4	17.73	13.829	
2,600.0	2,589.9	2,578.0	2,567.8	9.5	9.4	-145.63	-124.6	-89.0	263.5	245.0	18.47	14.268	
2,700.0	2,689.2	2,676.2	2,665.3	9.9	9.7	-145.20	-133.3	-97.4	281.9	262.7	19.21	14.672	
2,800.0	2,788.5	2,774.5	2,762.8	10.3	10.1	-144.82	-142.0	-105.7	300.3	280.3	19.96	15.046	
2,900.0	2,887.7	2,872.8	2,860.4	10.7	10.5	-144.48	-150.8	-114.1	318.7	298.0	20.70	15.393	
3,000.0	2,987.0	2,971.1	2,957.9	11.1	10.9	-144.18	-159.5	-122.4	337.1	315.6	21.45	15.716	
3,100.0	3,086.3	3,069.3	3,055.4	11.5	11.3	-143.90	-168.2	-130.8	355.5	333.3	22.19	16.017	
3,200.0	3,185.5	3,167.6	3,153.0	11.9	11.7	-143.66	-177.0	-139.1	373.9	351.0	22.94	16.297	
3,300.0	3,284.8	3,265.9	3,250.5	12.3	12.1	-143.44	-185.7	-147.5	392.3	368.6	23.69	16.560	
3,400.0	3,384.1	3,364.2	3,348.0	12.7	12.5	-143.24	-194.4	-155.8	410.8	386.3	24.44	16.807	
3,500.0	3,483.3	3,462.4	3,445.6	13.1	12.9	-143.06	-203.2	-164.2	429.2	404.0	25.19	17.038	
3,600.0	3,582.6	3,560.7	3,543.1	13.5	13.3	-142.89	-211.9	-172.5	447.7	421.7	25.94	17.256	
3,700.0	3,681.9	3,659.0	3,640.6	13.9	13.7	-142.73	-220.7	-180.9	466.1	439.4	26.69	17.462	
3,800.0	3,781.1	3,757.3	3,738.1	14.3	14.1	-142.59	-229.4	-189.2	484.6	457.1	27.44	17.656	
3,900.0	3,880.4	3,855.5	3,835.7	14.7	14.5	-142.45	-238.1	-197.6	503.0	474.8	28.20	17.839	
4,000.0	3,979.7	3,953.8	3,933.2	15.1	14.9	-142.33	-246.9	-205.9	521.5	492.5	28.95	18.013	
4,100.0	4,078.9	4,052.1	4,030.7	15.5	15.3	-142.22	-255.6	-214.2	539.9	510.2	29.70	18.178	
4,200.0	4,178.2	4,150.4	4,128.3	15.9	15.7	-142.11	-264.3	-222.6	558.4	527.9	30.45	18.335	
4,300.0	4,277.5	4,248.7	4,225.8	16.3	16.1	-142.01	-273.1	-230.9	576.8	545.6	31.21	18.484	
4,400.0	4,376.7	4,346.9	4,323.3	16.7	16.5	-141.91	-281.8	-239.3	595.3	563.3	31.96	18.626	
4,500.0	4,476.0	4,445.2	4,420.9	17.1	16.9	-141.82	-290.5	-247.6	613.8	581.1	32.72	18.761	
4,600.0	4,575.3	4,543.5	4,518.4	17.5	17.3	-141.74	-299.3	-256.0	632.2	598.8	33.47	18.890	
4,700.0	4,674.5	4,641.8	4,615.9	17.9	17.7	-141.66	-308.0	-264.3	650.7	616.5	34.22	19.013	
4,800.0	4,773.8	4,740.0	4,713.5	18.3	18.1	-141.59	-316.7	-272.7	669.2	634.2	34.98	19.130	
4,900.0	4,873.1	4,838.3	4,811.0	18.7	18.5	-141.52	-325.5	-281.0	687.6	651.9	35.73	19.243	
5,000.0	4,972.3	4,936.6	4,908.5	19.1	18.9	-141.45	-334.2	-289.4	706.1	669.6	36.49	19.351	
5,100.0	5,071.6	5,034.9	5,006.0	19.5	19.3	-141.39	-342.9	-297.7	724.6	687.3	37.25	19.454	
5,200.0	5,170.9	5,133.1	5,103.6	19.9	19.7	-141.33	-351.7	-306.1	743.1	705.1	38.00	19.554	
5,300.0	5,270.1	5,231.4	5,201.1	20.3	20.1	-141.27	-360.4	-314.4	761.5	722.8	38.76	19.649	
5,400.0	5,369.4	5,329.7	5,298.6	20.7	20.5	-141.22	-369.1	-322.8	780.0	740.5	39.51	19.741	
5,500.0	5,468.7	5,428.0	5,396.2	21.1	20.9	-141.16	-377.9	-331.1	798.5	758.2	40.27	19.829	
5,600.0	5,567.9	5,526.2	5,493.7	21.5	21.3	-141.11	-386.6	-339.4	817.0	775.9	41.02	19.914	
5,700.0	5,667.2	5,624.5	5,591.2	21.9	21.7	-141.07	-395.3	-347.8	835.4	793.6	41.78	19.995	
5,800.0	5,766.4	5,722.8	5,688.8	22.4	22.1	-141.02	-404.1	-356.1	853.9	811.4	42.54	20.074	
5,900.0	5,865.7	5,821.1	5,786.3	22.8	22.5	-140.98	-412.8	-364.5	872.4	829.1	43.29	20.150	
6,000.0	5,965.0	5,919.3	5,883.8	23.2	22.9	-140.94	-421.5	-372.8	890.9	846.8	44.05	20.223	
6,100.0	6,064.2	6,017.6	5,981.4	23.6	23.3	-140.90	-430.3	-381.2	909.3	864.5	44.81	20.294	
6,200.0	6,163.5	6,115.9	6,078.9	24.0	23.7	-140.86	-439.0	-389.5	927.8	882.2	45.57	20.362	
6,300.0	6,262.8	6,214.2	6,176.4	24.4	24.1	-140.82	-447.7	-397.9	946.3	900.0	46.32	20.428	
6,400.0	6,362.0	6,312.5	6,273.9	24.8	24.5	-140.79	-456.5	-406.2	964.8	917.7	47.08	20.492	
6,500.0	6,461.3	6,410.7	6,371.5	25.2	24.9	-140.75	-465.2	-414.6	983.2	935.4	47.84	20.554	

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

PERMIAN**RESOURCES****Anticollision Report**

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well FRED STATE COM 421H
Project:	(SP) EDDY	TVD Reference:	KB @ 3147.0usft
Reference Site:	FRED PROJECT	MD Reference:	KB @ 3147.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	FRED STATE COM 421H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Compass_17
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design: FRED PROJECT - FRED STATE COM 423H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	60.0	60.0				
100.0	100.0	100.0	100.0	0.3	0.3	90.00	0.0	60.0	60.0	59.5	0.50	119.555	
200.0	200.0	200.0	200.0	0.6	0.6	90.00	0.0	60.0	60.0	58.8	1.22	49.229	
300.0	300.0	300.0	300.0	1.0	1.0	90.00	0.0	60.0	60.0	58.1	1.94	30.996	
400.0	400.0	400.0	400.0	1.3	1.3	90.00	0.0	60.0	60.0	57.3	2.65	22.619	
500.0	500.0	500.0	500.0	1.7	1.7	90.00	0.0	60.0	60.0	56.6	3.37	17.806	
600.0	600.0	600.0	600.0	2.0	2.0	90.00	0.0	60.0	60.0	55.9	4.09	14.682	
700.0	700.0	700.0	700.0	2.4	2.4	90.00	0.0	60.0	60.0	55.2	4.80	12.491	
800.0	800.0	800.0	800.0	2.8	2.8	90.00	0.0	60.0	60.0	54.5	5.52	10.869	
900.0	900.0	900.0	900.0	3.1	3.1	90.00	0.0	60.0	60.0	53.8	6.24	9.619	
1,000.0	1,000.0	1,000.0	1,000.0	3.5	3.5	90.00	0.0	60.0	60.0	53.0	6.95	8.628 CC	
1,100.0	1,100.0	1,100.5	1,100.5	3.8	3.8	130.06	-1.7	59.5	60.6	53.0	7.65	7.920 ES	
1,200.0	1,199.8	1,200.5	1,200.3	4.2	4.1	138.26	-6.7	57.9	63.3	55.0	8.34	7.597 SF	
1,300.0	1,299.5	1,299.3	1,298.7	4.6	4.5	149.91	-14.9	55.4	70.4	61.4	9.03	7.800	
1,347.4	1,346.6	1,345.6	1,344.7	4.7	4.6	155.77	-19.9	53.8	76.0	66.6	9.36	8.120	
1,400.0	1,398.8	1,396.5	1,395.2	4.9	4.8	161.99	-26.2	51.9	83.7	73.9	9.72	8.609	
1,500.0	1,498.0	1,492.2	1,489.8	5.3	5.2	172.19	-40.3	47.5	101.5	91.1	10.39	9.767	
1,600.0	1,597.3	1,586.4	1,582.3	5.7	5.5	-179.61	-57.1	42.3	123.6	112.5	11.06	11.175	
1,700.0	1,696.6	1,678.9	1,672.6	6.0	5.9	-173.08	-76.5	36.2	149.5	137.8	11.70	12.775	
1,800.0	1,795.8	1,769.5	1,760.3	6.4	6.3	-167.87	-98.1	29.5	179.0	166.7	12.33	14.523	
1,900.0	1,895.1	1,861.6	1,848.8	6.8	6.7	-163.64	-122.2	22.0	211.5	198.5	12.99	16.287	
2,000.0	1,994.4	1,955.0	1,938.7	7.2	7.1	-160.44	-146.8	14.4	244.9	231.3	13.68	17.907	
2,100.0	2,093.6	2,048.5	2,028.5	7.6	7.6	-158.01	-171.4	6.7	278.9	264.5	14.38	19.396	
2,200.0	2,192.9	2,142.0	2,118.3	8.0	8.0	-156.10	-196.1	-0.9	313.2	298.1	15.09	20.760	
2,300.0	2,292.2	2,235.4	2,208.2	8.4	8.5	-154.56	-220.7	-8.6	347.7	331.9	15.80	22.011	
2,400.0	2,391.4	2,328.9	2,298.0	8.8	9.0	-153.31	-245.3	-16.2	382.5	365.9	16.52	23.157	
2,500.0	2,490.7	2,422.4	2,387.9	9.2	9.5	-152.26	-269.9	-23.9	417.3	400.1	17.24	24.211	
2,600.0	2,589.9	2,515.9	2,477.7	9.5	9.9	-151.37	-294.5	-31.5	452.3	434.3	17.96	25.181	
2,700.0	2,689.2	2,609.3	2,567.6	9.9	10.4	-150.61	-319.2	-39.2	487.3	468.7	18.69	26.076	
2,800.0	2,788.5	2,702.8	2,657.4	10.3	10.9	-149.95	-343.8	-46.8	522.5	503.0	19.42	26.904	
2,900.0	2,887.7	2,796.3	2,747.3	10.7	11.4	-149.37	-368.4	-54.5	557.6	537.5	20.15	27.672	
3,000.0	2,987.0	2,889.8	2,837.1	11.1	11.9	-148.87	-393.0	-62.1	592.8	572.0	20.89	28.384	
3,100.0	3,086.3	2,983.2	2,927.0	11.5	12.4	-148.42	-417.6	-69.8	628.1	606.5	21.62	29.048	
3,200.0	3,185.5	3,076.7	3,016.8	11.9	12.9	-148.01	-442.3	-77.4	663.4	641.0	22.36	29.668	
3,300.0	3,284.8	3,170.2	3,106.7	12.3	13.5	-147.65	-466.9	-85.1	698.7	675.6	23.10	30.247	
3,400.0	3,384.1	3,263.6	3,196.5	12.7	14.0	-147.32	-491.5	-92.7	734.0	710.2	23.84	30.789	
3,500.0	3,483.3	3,357.1	3,286.4	13.1	14.5	-147.02	-516.1	-100.4	769.4	744.8	24.58	31.298	
3,600.0	3,582.6	3,450.6	3,376.2	13.5	15.0	-146.75	-540.7	-108.0	804.7	779.4	25.32	31.776	
3,700.0	3,681.9	3,544.1	3,466.1	13.9	15.5	-146.50	-565.4	-115.7	840.1	814.0	26.07	32.227	
3,800.0	3,781.1	3,637.5	3,555.9	14.3	16.0	-146.28	-590.0	-123.3	875.5	848.7	26.81	32.652	
3,900.0	3,880.4	3,731.0	3,645.7	14.7	16.5	-146.07	-614.6	-131.0	910.9	883.3	27.56	33.053	
4,000.0	3,979.7	3,824.5	3,735.6	15.1	17.1	-145.87	-639.2	-138.6	946.3	918.0	28.31	33.432	
4,100.0	4,078.9	3,918.0	3,825.4	15.5	17.6	-145.69	-663.9	-146.3	981.7	952.7	29.05	33.792	

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

PERMIAN

RESOURCES

Anticollision Report

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well FRED STATE COM 421H
Project:	(SP) EDDY	TVD Reference:	KB @ 3147.0usft
Reference Site:	FRED PROJECT	MD Reference:	KB @ 3147.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	FRED STATE COM 421H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Compass_17
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Offset Design: FRED PROJECT - FRED STATE COM 424H - OWB - PWP0												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Semi Major Axis Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	90.0	90.0				
100.0	100.0	100.0	100.0	0.3	0.3	90.00	0.0	90.0	90.0	89.5	0.50	179.333	
200.0	200.0	200.0	200.0	0.6	0.6	90.00	0.0	90.0	90.0	88.8	1.22	73.843	
300.0	300.0	300.0	300.0	1.0	1.0	90.00	0.0	90.0	90.0	88.1	1.94	46.494	
400.0	400.0	400.0	400.0	1.3	1.3	90.00	0.0	90.0	90.0	87.3	2.65	33.928	
500.0	500.0	500.0	500.0	1.7	1.7	90.00	0.0	90.0	90.0	86.6	3.37	26.709	
600.0	600.0	600.0	600.0	2.0	2.0	90.00	0.0	90.0	90.0	85.9	4.09	22.023	
700.0	700.0	700.0	700.0	2.4	2.4	90.00	0.0	90.0	90.0	85.2	4.80	18.736	
800.0	800.0	800.0	800.0	2.8	2.8	90.00	0.0	90.0	90.0	84.5	5.52	16.303	
900.0	900.0	900.0	900.0	3.1	3.1	90.00	0.0	90.0	90.0	83.8	6.24	14.429	
1,000.0	1,000.0	1,000.0	1,000.0	3.5	3.5	90.00	0.0	90.0	90.0	83.0	6.95	12.942	CC, ES
1,100.0	1,100.0	1,100.5	1,100.5	3.8	3.8	129.11	-1.7	89.7	90.8	83.1	7.65	11.862	
1,200.0	1,199.8	1,200.4	1,200.2	4.2	4.1	134.72	-6.9	88.7	93.7	85.4	8.34	11.245	
1,300.0	1,299.5	1,299.0	1,298.5	4.6	4.5	143.04	-15.3	87.1	100.5	91.5	9.02	11.136	SF
1,347.4	1,346.6	1,345.2	1,344.4	4.7	4.6	147.50	-20.4	86.1	105.6	96.2	9.35	11.289	
1,400.0	1,398.8	1,396.0	1,394.8	4.9	4.8	152.50	-26.8	84.9	112.6	102.9	9.72	11.588	
1,500.0	1,498.0	1,491.5	1,489.1	5.3	5.2	161.35	-41.3	82.1	128.9	118.5	10.40	12.396	
1,600.0	1,597.3	1,585.3	1,581.3	5.7	5.5	169.11	-58.5	78.8	149.3	138.2	11.07	13.492	
1,700.0	1,696.6	1,677.4	1,671.1	6.0	5.9	175.71	-78.3	75.1	173.8	162.1	11.72	14.833	
1,800.0	1,795.8	1,767.6	1,758.5	6.4	6.3	-178.76	-100.4	70.8	202.1	189.8	12.35	16.373	
1,900.0	1,895.1	1,855.8	1,843.1	6.8	6.7	-174.15	-124.6	66.2	234.2	221.2	12.96	18.074	
2,000.0	1,994.4	1,941.8	1,924.9	7.2	7.1	-170.30	-150.7	61.2	269.6	256.1	13.55	19.904	
2,100.0	2,093.6	2,025.7	2,003.9	7.6	7.5	-167.07	-178.4	56.0	308.3	294.2	14.12	21.840	
2,200.0	2,192.9	2,107.3	2,079.9	8.0	7.9	-164.35	-207.6	50.4	350.0	335.3	14.67	23.861	
2,300.0	2,292.2	2,186.6	2,152.9	8.4	8.4	-162.03	-238.0	44.6	394.5	379.3	15.20	25.951	
2,400.0	2,391.4	2,263.6	2,223.0	8.8	8.9	-160.04	-269.3	38.6	441.6	425.9	15.72	28.100	
2,500.0	2,490.7	2,338.3	2,290.2	9.2	9.4	-158.33	-301.5	32.5	491.3	475.1	16.21	30.302	
2,600.0	2,589.9	2,418.9	2,361.8	9.5	9.9	-156.70	-337.7	25.6	542.9	526.1	16.82	32.282	
2,700.0	2,689.2	2,503.4	2,437.0	9.9	10.5	-155.27	-375.7	18.3	594.9	577.4	17.49	34.012	
2,800.0	2,788.5	2,587.9	2,512.1	10.3	11.1	-154.07	-413.8	11.1	647.2	629.0	18.17	35.609	
2,900.0	2,887.7	2,672.5	2,587.2	10.7	11.7	-153.05	-451.8	3.8	699.6	680.8	18.86	37.087	
3,000.0	2,987.0	2,757.0	2,662.3	11.1	12.3	-152.17	-489.9	-3.5	752.2	732.7	19.56	38.456	
3,100.0	3,086.3	2,841.5	2,737.5	11.5	12.9	-151.40	-527.9	-10.7	804.9	784.7	20.26	39.727	
3,200.0	3,185.5	2,926.0	2,812.6	11.9	13.6	-150.73	-565.9	-18.0	857.7	836.7	20.97	40.910	
3,300.0	3,284.8	3,010.5	2,887.7	12.3	14.2	-150.13	-604.0	-25.2	910.6	888.9	21.67	42.011	
3,400.0	3,384.1	3,095.1	2,962.8	12.7	14.9	-149.60	-642.0	-32.5	963.5	941.1	22.39	43.038	

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

PERMIAN

RESOURCES

Anticollision Report

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well FRED STATE COM 421H
Project:	(SP) EDDY	TVD Reference:	KB @ 3147.0usft
Reference Site:	FRED PROJECT	MD Reference:	KB @ 3147.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	FRED STATE COM 421H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Compass_17
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 3147.0usft

Offset Depths are relative to Offset Datum

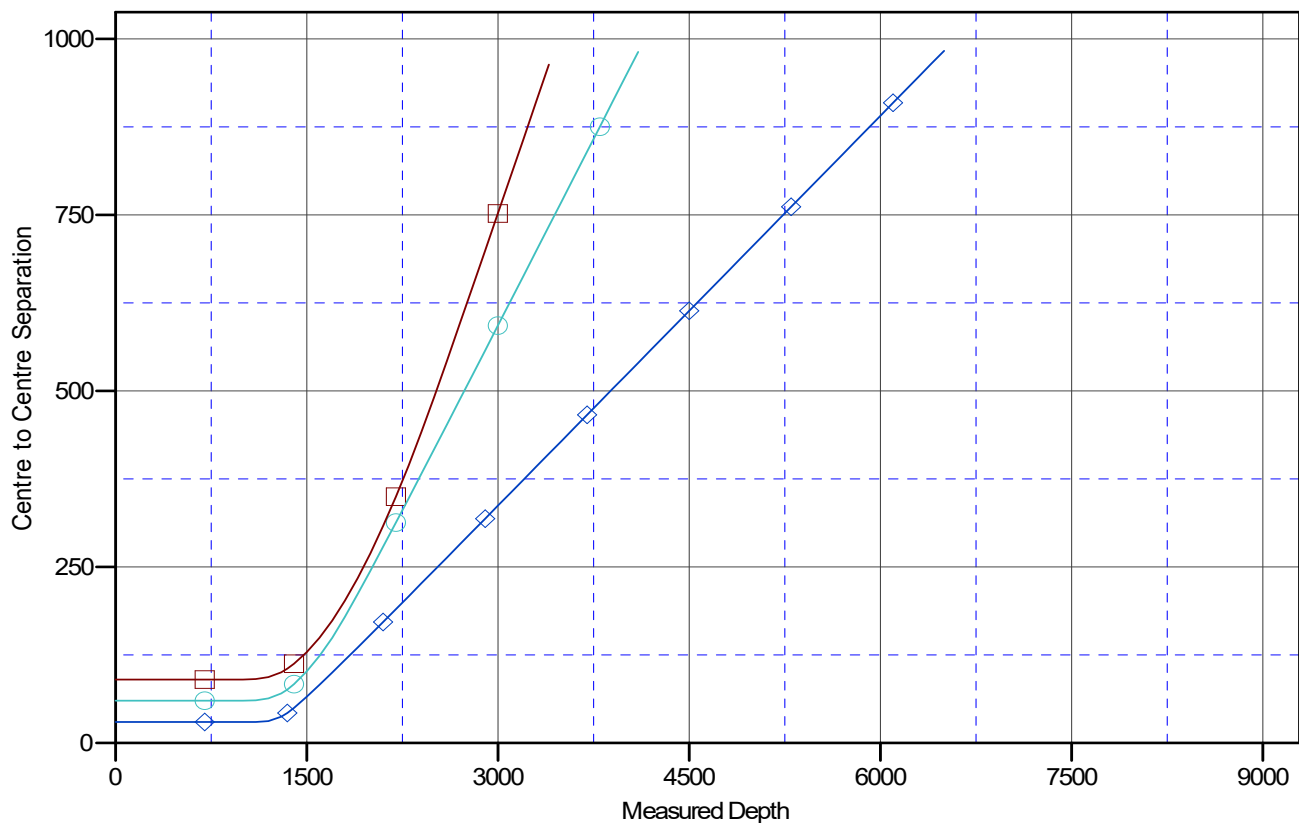
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: FRED STATE COM 421H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Grid Convergence at Surface is: 0.07°

Ladder Plot



LEGEND

—◆— FRED STATECOM422H.OWB/PWP0V0
 —○— FRED STATECOM423H.OWB/PWP0V0
 —□— FRED STATECOM424H.OWB/PWP0V0

PERMIAN**RESOURCES**

Anticollision Report

Company:	NEW MEXICO	Local Co-ordinate Reference:	Well FRED STATE COM 421H
Project:	(SP) EDDY	TVD Reference:	KB @ 3147.0usft
Reference Site:	FRED PROJECT	MD Reference:	KB @ 3147.0usft
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	FRED STATE COM 421H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	Compass_17
Reference Design:	PWP0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 3147.0usft

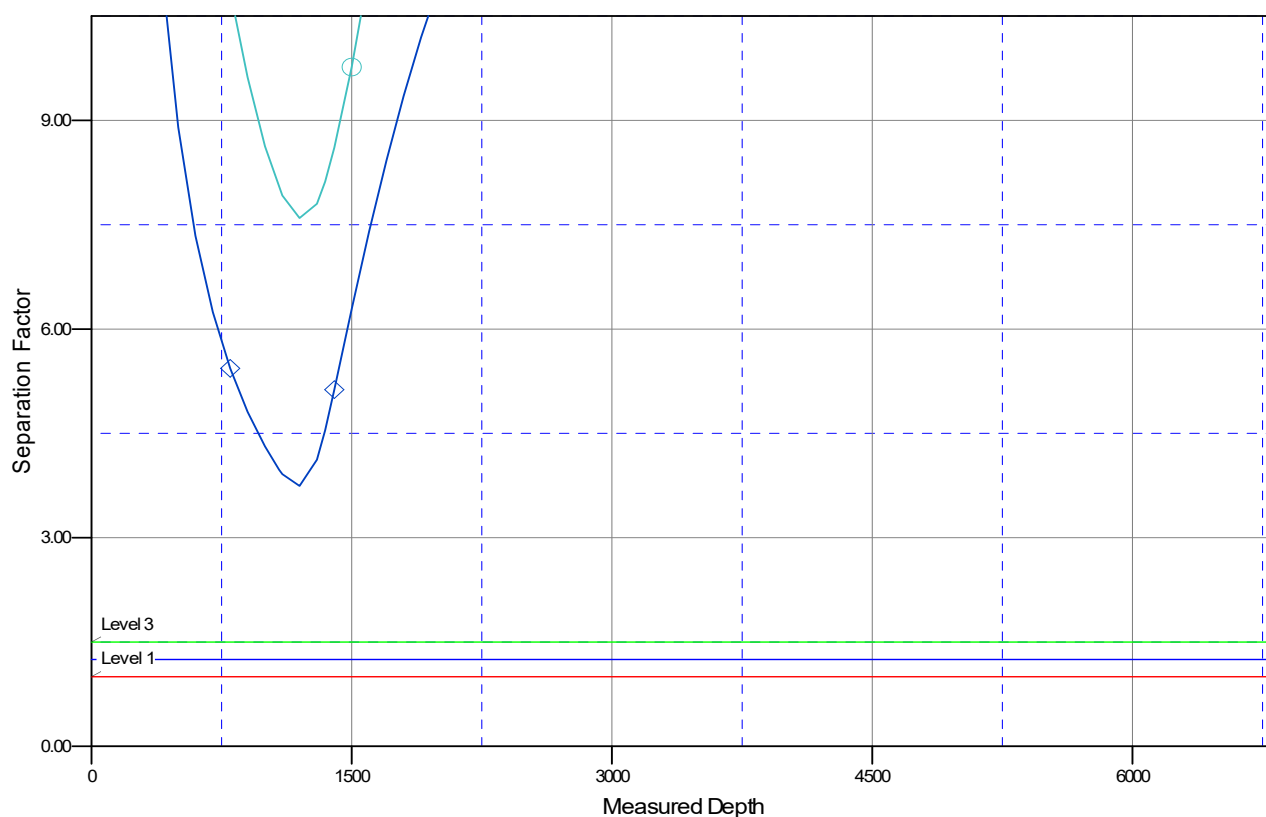
Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: FRED STATE COM 421H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Grid Convergence at Surface is: 0.07°

Separation Factor Plot**LEGEND**

—◆— FRED STATECOM422H.OWB/PWP0V0
 —●— FRED STATECOM423H.OWB/PWP0V0
 —■— FRED STATECOM424H.OWB/PWP0V0

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/oed/contact-us>

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

CONDITIONS

Action 448579

CONDITIONS

Operator: Permian Resources Operating, LLC 300 N. Marienfeld St Ste 1000 Midland, TX 79701	OGRID: 372165
	Action Number: 448579
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	This well is within the Capitan Reef. The first intermediate casing string shall be set and cemented back to surface immediately above the Capitan Reef. The second intermediate string shall be set and cemented back to surface immediately below the base of the Capitan Reef.	4/23/2025
ward.rikala	Any previous COA's not addressed within the updated COA's still apply.	4/23/2025