Received by OCP: 10/25/2024 still 8:13	<i>PM</i> State of New Mex	xico	Form E-103 of			
Office District I – (575) 393-6161	Energy, Minerals and Natur	ral Resources	Revised July 18, 2013			
1625 N. French Dr., Hobbs, NM 88240			WELL API NO.			
<u>District II</u> – (575) 748-1283 811 S. First St., Artesia, NM 88210 <u>District III</u> – (505) 334-6178 1000 Rio Brazos Rd., Aztec, NM 87410 <u>District IV</u> – (505) 476-3460 1220 S. St. Francis Dr., Santa Fe, NM	OIL CONSERVATION 1220 South St. Fran Santa Fe, NM 87	cis Dr.	30-025-53623 5. Indicate Type of Lease STATE X FEE 6. State Oil & Gas Lease No.			
87505						
	ES AND REPORTS ON WELLS		7. Lease Name or Unit Agreement Name			
(DO NOT USE THIS FORM FOR PROPOSA DIFFERENT RESERVOIR. USE "APPLICA"			Lea Unit			
PROPOSALS.) 1. Type of Well: Oil Well X G	8. Well Number 202H					
2. Name of Operator			9. OGRID Number 330396			
Avant Operating, LLC			330390			
3. Address of Operator			10. Pool name or Wildcat			
1515 Wynkoop Street, Suite	700. Denver, CO 80202		[37570] LEA; BONE SPRING			
4. Well Location						
Unit Letter I ::	2483 feet from the S	line and	20feet from theline			
Section 14	Township 20S Rat	nge 34E	NMPM County Lea			
	11. Elevation (Show whether DR,	RKB, RT, GR, etc.)				
	3652 GL					
12. Check Ap	propriate Box to Indicate Na	ature of Notice, F	Report or Other Data			
NOTICE OF INT	ENTION TO:	SUBS	EQUENT REPORT OF:			
PERFORM REMEDIAL WORK 🗌	PLUG AND ABANDON	REMEDIAL WORK	ALTERING CASING			
TEMPORARILY ABANDON	CHANGE PLANS	COMMENCE DRIL	LING OPNS. P AND A			
		CASING/CEMENT	IOB 🗌			

2. BHL change from 100' FNL & 1650' FEL to 100' FNL & 1540' FEL, please see attached revised C102 plat and directional plans to reflect this change.

1. Name change from the "Lea Unit 14 11 202H" to " Lea Unit 202H" to comply with unit naming

OTHER:

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

Avant Operating, LLC requests the following changes to the Lea Unit 14 11 202H well.

3. Perform offline cement procedure on surface & intermediate sections & run possible DV Tool in intermediate casing, see attached BLM approval.

Spud Date:	Rig Release Date:	
I hereby certify that the information above is true and c	omplete to the best of my knowledge and belief.	
SIGNATURE	TITLE Contract Regulatory Analyst	DATE10/25/2024
Type or print name <u>Meghan Twele</u> For State Use Only	E-mail address:	_ PHONE: <u>720-339-6880</u> _
APPROVED BY: Conditions of Approval (if any):	_TITLE	_DATE

proposed completion or recompletion.

convention, see attached updated plat.

DOWNHOLE COMMINGLE CLOSED-LOOP SYSTEM

OTHER:

of 32

<u>C-102</u> Energy, Minerals & Natural Resources Departm OIL CONSERVATION DIVISION								esources Department			Rev	rised July 9, 202
Sub	omit Electr OCD Perm	onically				011 001	10mil anioi	IN DIVIDIOIN			🛛 Init	ial Submittal
VIA	OUD Pern	litting								Submittal Type:	🗌 Am	ended Report
										-22	🗌 As	Drilled
						WE	LL LOCATION	INFORMATION				
API N	lumber			Pool Code Pool Name								
30)-025-5.	3623			3^	7570		LEA; BON	VE SP	RING		
-	erty Code			Proper	rty Ne	ame	1	A ! IN !!			Well N	
	336288											202H
OGRID) №. <u>330396</u>	5		Operat	tor Ne							i Level Elevation 3652.3
Surfa	ce Owner:	State	Fee	Tribal 🛛	Fede	ral		Mineral Owner: 🛄 State 🛄 F	'ee 🗌 Tri	bal 🔀 Federa	d	
							Surface L	Location				
UL	Section	Townshi		Lot	Ft	. from N/S	Ft. from E/W	W Latitude Longitude				County
I	14	20 S	5 34 E	,	24	83 FSL	1320 FEL	32.5727038° N	103.	5266103	°W	LEA
							Bottom Hole	e Location				
ու	Section	Townshi	-	Lot						Longitude		County
В		20 S	5 34 E		100 FNL 1540 FEL 32.5946107° N 103.5273293° W					° ₩	LEA	
n-dior	ated Acres			- 41 Ima W				<u></u>	• /27\	Consolidat	time Cad	
			Infill or De		en	Defining Well		Overlapping Spacing Unit (Y	/N)	Consondat	non cou	e
2	240		Infil	1		30-025	5-02428	No				
Order	Numbers.							Well setbacks are under Con	nmon Ow	mership:	Yes [X	No
							Kick Off Po					
UL	Section	Townshi		Lot		. from N/S	Ft. from E/W	Latitude		Longitude		County
G	14	20 S	5 34 E		25	90 FNL	1540 FEL	32.5732565° N	103.5	5273247	° W	LEA
							First Take F	Point (FTP)				
UL	Section	Townshi		Lot		. from N/S	Ft. from E/W	Latitude		Longitude		County
G	4	20 S	5 34 E		25	40 FNL	1540 FEL	32.5733939° N	103.5	5273247	° W	LEA
							Last Take P					
ու	Section	Townshi		Lot		. from N/S	Ft. from E/W	Latitude		Longitude		County
В		20 S	5 34 E			00 FNL	1540 FEL	32.5946107° N	103.5	5273293)° W	LEA
			f Uniform		 חי	Spacing Ur	nit Type 🔀 Horiz	contal 🔲 Vertical		Ground F	loor Ele	vation:
NIVII)/b//r	NMNM0	/09/0	<u>ы</u> В							
		*****		*****								
PE	RATOR	CERT	FIFICATI	ONS				SURVEYOR CERTIFI	CATTO	NS		

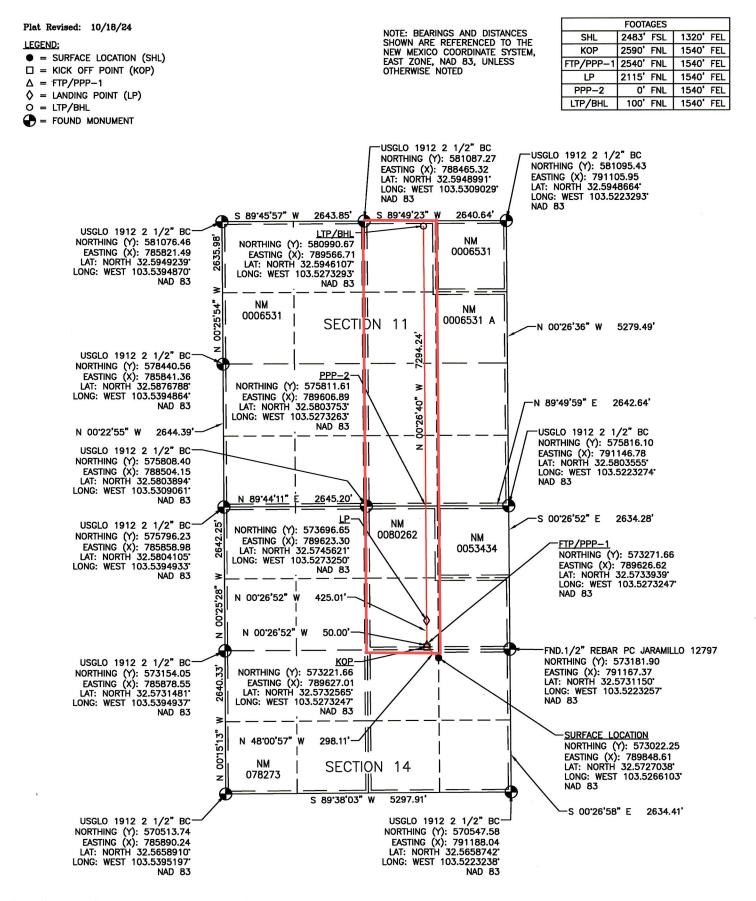
I hereby certify that the information contained herein is true and complete to the my knowledge and belief, and, if the well is vertical or directional well, that this organization either owns a working interest or unleased mineral interest in the it including the proposed bottom hole location or has a right to drill this well at it location pursuant to a contract with an owner of a working interest or unleased interest, or to a voluntary pooling agreement or a compulsory pooling order herein entered by the division. If this well is a horizontal well, I further certify that this organization has rece- consent of at least one lessee or owner of a working interest or unleased minera in each tract (in the target pool or formation) in which any part of the well's of interval will be located or obtained a compulsory pooling order from the division 10/25/2022	is was plotted from field notes of actual surveys made by me or under my supervision, and that the same D true and correct to the best of my belief. We the interest completed
Signature Date	Signature and Seal of Professional Surveyor
Meghan Twele	Chit A. Muhrt
Printed Name	Certificate Number Date of Survey
mtwele@outlook.com E-meil Address	1483/ 11/9/23 10/25/2024

L Note: No allowable will be assigned to this completion until all interests have be lard unit has been approved by the division. Released to Imaging: 10/28/2024 11:00:20 AM

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 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.

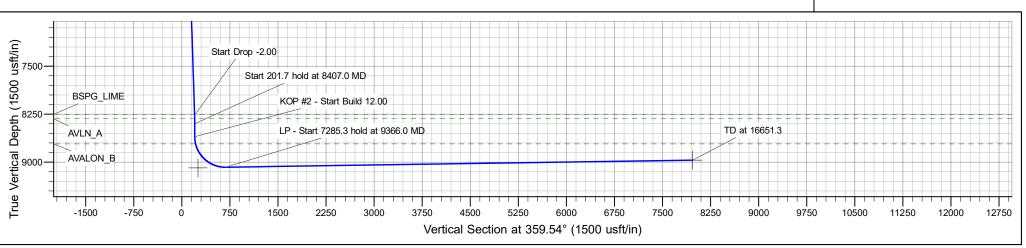


Released to Imaging: 10/28/2024 11:00:20 AM



		Lea Unit 14 11 202H	
ceived by OCD: 10/25/2024 2:08:13 PM		Lea Unit 14 11 201H	Page 4 d
NATURAL RESOURCES	7500	Lea Unit 14 11 751H	
WELL DETAILS: Lea Unit 14 11 202H	(ii	Lea Unit 14 11 204H	
Ground Elev: 3652.0 KB: 3678.5	(ui/Jtsn C	ß	
+N/-S +E/-W Northing Easting Latittude Longitude 0.0 0.0 573022.25 789848.60 32.572704 -103.526610	000 E 4500	Lea Unit 006	
	(+)UNOLL(+) 3000 500 500	Lea Federal Unit TR 20	
PROJECT DETAILS: Lea Co., NM (NAD 83)	N 3000	Lea Unit 14	
Geodetic System: US State Plane 1983 Datum: North American Datum 1983 Ellipsoid: GRS 1980	0 1500	W Lea Unit 54H V Lea Unit 54H Lea Unit 56H Lea Unit 56H	
Zone: New Mexico Eastern Zone System Datum: Mean Sea Level		4 Lea Unit 55H Lea Unit 501H 5000 -4500 -3000 -1500 0 1500 3000 4500	6000
	-01	000 -4500 -3000 -1500 0 1500 3000 4500 West(-)/East(+) (3000 usft/in)	6000
SECTION DETAILS			

						-					
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation	G
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		T M Azimuths to Grid North
2	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	KOP - Start Build 2.00	True North: -0.43°
3	2135.9	2.72	312.27	2135.8	2.2	-2.4	2.00	312.27	2.2	Start 6135.3 hold at 2135.9 MD	Λ Λ Magnetic North: 8.13°
4	8271.1	2.72	312.27	8264.2	197.8	-217.6	0.00	0.00	199.6	Start Drop -2.00	
5	8407.0	0.00	0.00	8400.0	200.0	-220.0	2.00	180.00	201.8	Start 201.7 hold at 8407.0 MD	Magnetic Field
6	8608.7	0.00	0.00	8601.7	200.0	-220.0	0.00	0.00	201.8	KOP #2 - Start Build 12.00	Strength: 49639.3nT
7	9366.0	90.87	359.54	9079.1	684.7	-223.9	12.00	359.54	686.5	LP - Start 7285.3 hold at 9366.0 MD	Dip Angle: 60.78°
8	16651.3	90.87	359.54	8968.5	7968.9	-281.9	0.00	0.00	7970.9	TD at 16651.3	Date: 12/31/2004 Model: IGRF2000



Avant Operating, LLC

Lea Co., NM (NAD 83) Lea Unit 14 11 Lea Unit 14 11 202H

ОН

Plan: Plan 0.1

Standard Planning Report

16 October, 2024

Database: Company: Project: Site: Well: Wellbore: Design:	Avar Lea Lea	1 5000.16 Single ht Operating, LL Co., NM (NAD & Unit 14 11 Unit 14 11 202H	C 33)		TVD Refer MD Refere North Ref	ence:		Well Lea Unit 1 WELL @ 3678. WELL @ 3678. Grid Minimum Curva	5usft (3678.5) 5usft (3678.5)	
Project	Lea C	Co., NM (NAD 83	3)							
Map System: Geo Datum: Map Zone:	North A	ate Plane 1983 American Datum exico Eastern Z			System Dat	tum:	M	ean Sea Level		
Site	Leal	Jnit 14 11								
Site Position: From: Position Uncert		at/Long 0.0	Northi Eastin usft Slot R	g:	789,	022.18 usft 828.61 usft 3-3/16 "	Latitude: Longitude:			32.572704 -103.526675
Well	Lea U	nit 14 11 202H								
Well Position Position Uncert Grid Converger	•	I (0.0 usft Ea	rthing: sting: Illhead Elevat	ion:	573,022.26 789,848.60	usft Lor	itude: ngitude: ound Level:		32.572704 -103.526611 3,652.0 usft
Wellbore	OH									
Magnetics	Ν	lodel Name	Sample	e Date	Declina (°)	tion		Angle °)		trength T)
		IGRF2000) 1	2/31/2004		8.57		60.78	49,63	39.30786632
Design	Plan	0.1								
Audit Notes:										
Version:			Phase		ROTOTYPE		On Depth:		0.0	
Vertical Section	:		Depth From (TV (usft) 0.0	'D)	+N/-S (usft) 0.0	(u	E/-W Isft)).0		rection (°) 59.54	
Plan Survey To Depth Fro (usft) 1	om Dej (u	oth To	10/16/2024 / (Wellbore) .1 (OH)		Tool Name B001Mb_MWI OWSG MWD		Remarks			
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 2,000.0 2,135.9 8,271.1 8,407.0	0.00 0.00 2.72 2.72 0.00	0.00 312.27 312.27 0.00	0.0 2,000.0 2,135.8 8,264.2 8,400.0	0.0 0.0 2.2 197.8 200.0	0.0 0.0 -2.4 -217.6 -220.0	0.00 0.00 2.00 0.00 2.00	0.00 0.00 2.00 0.00 -2.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 312.27 0.00 180.00	
8,608.7 9,366.0 16,651.3	0.00 90.87 90.87	359.54	8,601.7 9,079.1 8,968.5	200.0 684.7 7,968.9	-220.0 -223.9 -281.9	0.00 12.00 0.00	0.00 12.00 0.00	0.00 0.00 0.00	0.00 359.54 0.00 L	_ea Unit 14 11 202H I

10/16/2024 11:46:27AM

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Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Lea Unit 14 11 202H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3678.5usft (3678.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3678.5usft (3678.5)
Site:	Lea Unit 14 11	North Reference:	Grid
Well:	Lea Unit 14 11 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ОН		
Design:	Plan 0.1		

Planned Survey

	ination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,501.0	0.00	0.00	1,501.0	0.0	0.0	0.0	0.00	0.00	0.00
RUSTLER	0.00	0.00	4 000 0		~ ~		0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 2									
2,100.0	2.00	312.27	2,100.0	1.2	-1.3	1.2	2.00	2.00	0.00
2,135.9	2.72	312.27	2,135.8	2.2	-2.4	2.2	2.00	2.00	0.00
Start 6135.3 hold a									
2,200.0	2.72	312.27	2,199.9	4.2	-4.6	4.2	0.00	0.00	0.00
2,300.0	2.72	312.27	2,299.8	7.4	-8.1	7.5	0.00	0.00	0.00
2,400.0	2.72	312.27	2,399.7	10.6	-11.6	10.7	0.00	0.00	0.00
2,500.0	2.72	312.27	2,499.5	13.8	-15.2	13.9	0.00	0.00	0.00
2,600.0	2.72	312.27	2,599.4	17.0	-18.7	17.1	0.00	0.00	0.00
2,700.0	2.72	312.27	2,699.3	20.2	-22.2	20.3	0.00	0.00	0.00
2,800.0	2.72	312.27	2,799.2	23.3	-25.7	23.6	0.00	0.00	0.00
2,900.0	2.72	312.27	2,899.1	26.5	-29.2	26.8	0.00	0.00	0.00
3,000.0	2.72	312.27	2,999.0	29.7	-32.7	30.0	0.00	0.00	0.00
3,100.0	2.72	312.27	3,098.9	32.9	-36.2	33.2	0.00	0.00	0.00
3,200.0	2.72	312.27	3,198.8	36.1	-39.7	36.4	0.00	0.00	0.00
3,300.0	2.72	312.27	3,298.6	39.3	-43.2	39.6	0.00	0.00	0.00
3,400.0	2.72	312.27	3,398.5	42.5	-46.7	42.9	0.00	0.00	0.00
3,500.0	2.72	312.27	3,498.4	45.7	-50.2	46.1	0.00	0.00	0.00
3,535.6	2.72	312.27	3,534.0	46.8	-51.5	47.2	0.00	0.00	0.00
YATES			-,		0.10		0.00	0.00	
3,600.0	2.72	312.27	3,598.3	48.9	-53.7	49.3	0.00	0.00	0.00
3.700.0	2.72	312.27	3,698.2	52.1	-57.3	52.5	0.00	0.00	0.00
3,800.0	2.72	312.27	3,798.1	55.2	-60.8	55.7	0.00	0.00	0.00
3,900.0	2.72	312.27	3,898.0	58.4	-64.3	58.9	0.00	0.00	0.00
4,000.0	2.72	312.27	3,997.9	61.6	-67.8	62.2	0.00	0.00	0.00
4,100.0	2.72	312.27	4,097.7	64.8	-71.3	65.4	0.00	0.00	0.00
4,200.0	2.72	312.27	4,197.6	68.0 71.2	-74.8	68.6	0.00	0.00	0.00
4,300.0	2.72	312.27	4,297.5	71.2	-78.3	71.8	0.00	0.00	0.00
4,400.0 4,500.0	2.72 2.72	312.27	4,397.4 4,497.3	74.4 77.6	-81.8 -85.3	75.0 78.2	0.00 0.00	0.00 0.00	0.00 0.00
4,000.0	2.12	312.27	4,491.J	11.0	-00.0	10.2	0.00	0.00	0.00

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Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Lea Unit 14 11 202H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3678.5usft (3678.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3678.5usft (3678.5)
Site:	Lea Unit 14 11	North Reference:	Grid
Well:	Lea Unit 14 11 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ОН	-	
Design:	Plan 0.1		

Planned Survey

4,700.0 4,800.0 4,900.0 5,000.0 5,100.0 5,200.0 5,300.0 5,400.0 5,500.0 5,700.0 5,778.1 CHERRY_CNYN 5,800.0 5,900.0 6,000.0 6,100.0 6,200.0 6,200.0 6,300.0 6,400.0 6,600.0 6,663.1 BRUSHY_CANYON 6,600.0 6,663.1 BRUSHY_CANYON 6,700.0 6,800.0 6,800.0 6,800.0 6,800.0 7,000.0 7,100.0 7,200.0 7,300.0 7,300.0 7,400.0 7,500.0 7,900.0 8,000.0 8,000.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72 2.72 2.72 2.72 2.72 2.72 2.72 2.72	(°) 312.27 312.27 312.27 312.27 312.27 312.27 312.27 312.27 312.27 312.27 312.27 312.27 312.27 312.27 312.27 312.27 312.27	4,597.2 4,697.1 4,797.0 4,896.8 4,996.7 5,096.6 5,196.5 5,296.4 5,396.3 5,496.2 5,596.1 5,695.9	80.8 83.9 87.1 90.3 93.5 96.7 99.9 103.1 106.3 109.5	-88.8 -92.3 -95.8 -99.4 -102.9 -106.4 -109.9 -113.4	81.5 84.7 87.9 91.1 94.3 97.6 100.8	0.00 0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00
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5,000.0 5,100.0 5,200.0 5,300.0 5,400.0 5,500.0 5,700.0 5,778.1 CHERRY_CNYN 5,800.0 5,900.0 6,000.0 6,100.0 6,200.0 6,200.0 6,300.0 6,400.0 6,600.0 6,663.1 BRUSHY_CANYON 6,600.0 6,663.1 BRUSHY_CANYON 6,600.0 6,663.1 BRUSHY_CANYON 7,700.0 7,000.0 7,100.0 7,100.0 7,200.0 7,300.0 7,200.0 7,300.0 7,400.0 7,500.0 7,900.0 8,000.0 8,000.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72 2.72 2.72 2.72 2.72 2.72 2.72 2.72	312.27 312.27 312.27 312.27 312.27 312.27 312.27 312.27 312.27 312.27	4,996.7 5,096.6 5,196.5 5,296.4 5,396.3 5,496.2 5,596.1	93.5 96.7 99.9 103.1 106.3	-102.9 -106.4 -109.9 -113.4	94.3 97.6 100.8	0.00 0.00	0.00 0.00	0.00
5,100.0 5,200.0 5,300.0 5,300.0 5,500.0 5,700.0 5,778.1 CHERRY_CNYN 5,800.0 6,000.0 6,100.0 6,200.0 6,200.0 6,200.0 6,300.0 6,400.0 6,600.0 6,600.0 6,663.1 BRUSHY_CANYON 6,700.0 6,600.0 7,000.0 7,000.0 7,100.0 7,100.0 7,100.0 7,100.0 7,300.0 7,300.0 7,300.0 7,400.0 7,500.0 7,	2.72 2.72 2.72 2.72 2.72 2.72 2.72 2.72	312.27 312.27 312.27 312.27 312.27 312.27 312.27 312.27	5,096.6 5,196.5 5,296.4 5,396.3 5,496.2 5,596.1	96.7 99.9 103.1 106.3	-106.4 -109.9 -113.4	97.6 100.8	0.00	0.00	
5,300.0 5,400.0 5,500.0 5,700.0 5,778.1 CHERRY_CNYN 5,800.0 5,900.0 6,000.0 6,100.0 6,200.0 6,200.0 6,300.0 6,400.0 6,600.0 6,663.1 BRUSHY_CANYON 6,600.0 6,663.1 BRUSHY_CANYON 6,700.0 7,000.0 7,000.0 7,100.0 7,200.0 7,200.0 7,200.0 7,300.0 7,200.0 7,300.0 7,400.0 7,500.0 8,200.0 8,200.0 8,200.0 8,2259.9	2.72 2.72 2.72 2.72 2.72 2.72 2.72 2.72	312.27 312.27 312.27 312.27 312.27 312.27	5,296.4 5,396.3 5,496.2 5,596.1	103.1 106.3	-113.4		0.00		0.00
5,300.0 5,400.0 5,500.0 5,700.0 5,778.1 CHERRY_CNYN 5,800.0 5,900.0 6,000.0 6,100.0 6,200.0 6,200.0 6,300.0 6,400.0 6,600.0 6,663.1 BRUSHY_CANYON 6,600.0 6,663.1 BRUSHY_CANYON 6,700.0 7,000.0 7,000.0 7,100.0 7,200.0 7,200.0 7,200.0 7,300.0 7,200.0 7,300.0 7,400.0 7,500.0 8,200.0 8,200.0 8,200.0 8,2259.9	2.72 2.72 2.72 2.72 2.72 2.72 2.72 2.72	312.27 312.27 312.27 312.27 312.27 312.27	5,396.3 5,496.2 5,596.1	106.3			0.00	0.00	0.00
5,400.0 5,500.0 5,700.0 5,778.1 CHERRY_CNYN 5,800.0 6,000.0 6,100.0 6,200.0 6,200.0 6,200.0 6,300.0 6,400.0 6,600.0 6,663.1 BRUSHY_CANYON 6,700.0 6,600.0 6,663.1 BRUSHY_CANYON 6,700.0 6,800.0 6,900.0 7,000.0 7,100.0 7,100.0 7,200.0 7,300.0 7,400.0 7,500.0 8,200.0 8,200.0 8,200.0 8,225.9	2.72 2.72 2.72 2.72 2.72 2.72 2.72 2.72	312.27 312.27 312.27 312.27	5,396.3 5,496.2 5,596.1	106.3		104.0	0.00	0.00	0.00
5,500.0 5,700.0 5,778.1 CHERRY_CNYN 5,800.0 6,000.0 6,000.0 6,100.0 6,200.0 7,200.0 8,200.0 8,207.1 8,271.1	2.72 2.72 2.72 2.72 2.72 2.72 2.72	312.27 312.27 312.27	5,496.2 5,596.1		-116.9	107.2	0.00	0.00	0.00
5,600.0 5,778.1 CHERRY_CNYN 5,800.0 5,900.0 6,000.0 6,100.0 6,200.0 6,200.0 6,200.0 6,200.0 6,200.0 6,200.0 6,200.0 6,200.0 6,200.0 6,200.0 6,200.0 7,000.0 7,000.0 7,100.0 7,200.0 7,200.0 7,300.0 7,300.0 7,200.0 7,300.0 7,200.0	2.72 2.72 2.72 2.72 2.72 2.72	312.27 312.27	5,596.1	100.0	-120.4	110.4	0.00	0.00	0.00
5,778.1 CHERRY_CNYN 5,800.0 5,900.0 6,000.0 6,100.0 6,200.0 6,200.0 6,300.0 6,200.0 6,600.0 6,600.0 6,663.1 BRUSHY_CANYON 6,700.0 6,700.0 7,700.0 7,100.0 7,200.0 7,200.0 7,200.0 7,300.0 7,200.0 7,300.0 7,500.0 8,200.0 8,200.0 8,271.1 5,200.0 7,500.0 7,	2.72 2.72 2.72		5 605 0	112.6	-123.9	113.6	0.00	0.00	0.00
5,778.1 CHERRY_CNYN 5,800.0 5,900.0 6,000.0 6,100.0 6,200.0 6,200.0 6,300.0 6,200.0 6,600.0 6,600.0 6,663.1 BRUSHY_CANYON 6,700.0 6,700.0 7,700.0 7,100.0 7,200.0 7,200.0 7,200.0 7,300.0 7,200.0 7,300.0 7,500.0 8,200.0 8,200.0 8,271.1 5,200.0 7,500.0 7,	2.72 2.72 2.72		5.695.9	115.8	-127.4	116.9	0.00	0.00	0.00
5,800.0 5,900.0 6,000.0 6,100.0 6,200.0 6,200.0 6,300.0 6,200.0 6,600.0 6,600.0 6,663.1 BRUSHY_CANYON 6,700.0 6,800.0 6,900.0 7,000.0 7,100.0 7,200.0 7,200.0 7,300.0 7,300.0 7,300.0 7,500.0 8,200.0 8,200.0 8,200.0 8,200.0 8,225.9	2.72		5,774.0	118.3	-130.2	119.4	0.00	0.00	0.00
5,900.0 6,000.0 6,200.0 6,200.0 6,300.0 6,400.0 6,500.0 6,663.1 BRUSHY_CANYON 6,700.0 6,800.0 6,900.0 7,000.0 7,000.0 7,100.0 7,200.0 7,200.0 7,300.0 7,200.0 7,300.0 7,500.0 7,500.0 7,500.0 7,600.0 7,500.0 7,600.0 7,900.0 8,000.0 8,000.0 8,000.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72								
6,000.0 6,100.0 6,200.0 6,200.0 6,300.0 6,600.0 6,600.0 6,663.1 BRUSHY_CANYON 6,700.0 6,800.0 6,900.0 7,000.0 7,000.0 7,000.0 7,000.0 7,200.0 7,300.0 7,300.0 7,300.0 7,500.0 7,500.0 7,500.0 7,500.0 7,500.0 7,500.0 7,500.0 7,500.0 7,500.0 7,500.0 7,500.0 7,500.0 7,500.0 7,500.0 7,500.0 7,900.0 8,000.0 8,000.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00		312.27	5,795.8	119.0	-130.9	120.1	0.00	0.00	0.00
6,100.0 6,200.0 6,300.0 6,400.0 6,500.0 6,663.1 BRUSHY_CANYON 6,700.0 6,800.0 6,900.0 7,000.0 7,000.0 7,100.0 7,200.0 7,200.0 7,200.0 7,300.0 7,200.0 7,300.0 7,500.0 8,200.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	5,895.7	122.2	-134.4	123.3	0.00	0.00	0.00
6,200.0 6,300.0 6,400.0 6,500.0 6,600.0 6,663.1 BRUSHY_CANYON 6,700.0 6,800.0 6,900.0 7,000.0 7,000.0 7,000.0 7,200.0 7,200.0 7,200.0 7,300.0 7,200.0 7,500.0 7,500.0 7,500.0 7,600.0 7,500.0 7,600.0 7,500.0 7,500.0 7,500.0 7,600.0 8,000.0 8,000.0 8,000.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00		312.27	5,995.6	125.4	-137.9	126.5	0.00	0.00	0.00
6,200.0 6,300.0 6,400.0 6,500.0 6,600.0 6,663.1 BRUSHY_CANYON 6,700.0 6,800.0 6,900.0 7,000.0 7,000.0 7,000.0 7,200.0 7,200.0 7,200.0 7,300.0 7,200.0 7,500.0 7,500.0 7,500.0 7,600.0 7,500.0 7,600.0 7,500.0 7,500.0 7,500.0 7,600.0 8,000.0 8,000.0 8,000.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	6,095.5	128.6	-141.5	129.7	0.00	0.00	0.00
6,300.0 6,400.0 6,500.0 6,600.0 6,663.1 BRUSHY_CANYON 6,700.0 6,800.0 6,900.0 7,000.0 7,000.0 7,100.0 7,200.0 7,200.0 7,300.0 7,200.0 7,300.0 7,500.0 7,500.0 7,500.0 7,500.0 7,500.0 7,600.0 7,500.0 8,000.0 8,000.0 8,000.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	6,195.4	131.8	-145.0	132.9	0.00	0.00	0.00
6,500.0 6,600.0 6,663.1 BRUSHY_CANYON 6,700.0 6,800.0 6,900.0 7,000.0 7,100.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 8,200.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	6,295.3	135.0	-148.5	136.2	0.00	0.00	0.00
6,500.0 6,600.0 6,663.1 BRUSHY_CANYON 6,700.0 6,800.0 6,900.0 7,000.0 7,100.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 7,200.0 8,200.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	6,395.2	138.2	-152.0	139.4	0.00	0.00	0.00
6,663.1 BRUSHY_CANYON 6,700.0 6,800.0 6,900.0 7,000.0 7,100.0 7,200.0 7,300.0 7,300.0 7,500.0 7,500.0 7,600.0 7,500.0 7,600.0 7,900.0 8,000.0 8,000.0 8,000.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	6,495.0	141.3	-155.5	142.6	0.00	0.00	0.00
6,663.1 BRUSHY_CANYON 6,700.0 6,800.0 6,900.0 7,000.0 7,100.0 7,200.0 7,300.0 7,300.0 7,500.0 7,500.0 7,600.0 7,500.0 7,600.0 7,900.0 8,000.0 8,000.0 8,000.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	6,594.9	144.5	-159.0	145.8	0.00	0.00	0.00
6,700.0 6,800.0 6,900.0 7,000.0 7,100.0 7,200.0 7,300.0 7,300.0 7,500.0 7,500.0 7,600.0 7,600.0 7,600.0 7,700.0 7,800.0 8,000.0 8,000.0 8,000.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	6,658.0	146.6	-161.2	147.8	0.00	0.00	0.00
6,800.0 6,900.0 7,000.0 7,100.0 7,200.0 7,200.0 7,300.0 7,500.0 7,500.0 7,500.0 7,600.0 7,500.0 7,600.0 7,500.0 7,900.0 8,000.0 8,000.0 8,100.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00									
6,900.0 7,000.0 7,100.0 7,200.0 7,300.0 7,400.0 7,500.0 7,500.0 7,600.0 7,600.0 7,600.0 7,700.0 7,800.0 8,000.0 8,000.0 8,100.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	6,694.8	147.7	-162.5	149.0	0.00	0.00	0.00
7,000.0 7,100.0 7,200.0 7,300.0 7,400.0 7,500.0 7,500.0 7,600.0 7,700.0 7,800.0 7,900.0 8,000.0 8,000.0 8,100.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	6,794.7	150.9	-166.0	152.2	0.00	0.00	0.00
7,100.0 7,200.0 7,300.0 7,400.0 7,500.0 7,600.0 7,700.0 7,800.0 7,900.0 8,000.0 8,000.0 8,100.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	6,894.6	154.1	-169.5	155.5	0.00	0.00	0.00
7,200.0 7,300.0 7,400.0 7,500.0 7,600.0 7,700.0 7,800.0 7,900.0 8,000.0 8,100.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	6,994.5	157.3	-173.0	158.7	0.00	0.00	0.00
7,300.0 7,400.0 7,500.0 7,600.0 7,700.0 7,800.0 7,900.0 8,000.0 8,100.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	7,094.4	160.5	-176.5	161.9	0.00	0.00	0.00
7,400.0 7,500.0 7,600.0 7,700.0 7,800.0 7,900.0 8,000.0 8,100.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	7,194.3	163.7	-180.0	165.1	0.00	0.00	0.00
7,500.0 7,600.0 7,700.0 7,800.0 7,900.0 8,000.0 8,100.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	7,294.1	166.9	-183.5	168.3	0.00	0.00	0.00
7,600.0 7,700.0 7,800.0 7,900.0 8,000.0 8,100.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	7,394.0	170.1	-187.1	171.5	0.00	0.00	0.00
7,700.0 7,800.0 7,900.0 8,000.0 8,100.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	7,493.9	173.2	-190.6	174.8	0.00	0.00	0.00
7,700.0 7,800.0 7,900.0 8,000.0 8,100.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	7,593.8	176.4	-194.1	178.0	0.00	0.00	0.00
7,800.0 7,900.0 8,000.0 8,100.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	7,693.7	179.6	-197.6	181.2	0.00	0.00	0.00
7,900.0 8,000.0 8,100.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	7,793.6	182.8	-201.1	184.4	0.00	0.00	0.00
8,100.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	7,893.5	186.0	-204.6	187.6	0.00	0.00	0.00
8,100.0 8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	7,993.4	189.2	-208.1	190.9	0.00	0.00	0.00
8,200.0 8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	8,093.2	192.4	-211.6	194.1	0.00	0.00	0.00
8,259.9 BSPG_LIME 8,271.1 Start Drop -2.00	2.72	312.27	8,193.1	195.6	-215.1	197.3	0.00	0.00	0.00
8,271.1 Start Drop -2.00	2.72	312.27	8,253.0	197.5	-217.2	199.2	0.00	0.00	0.00
Start Drop -2.00									
-	2.72	312.27	8,264.2	197.8	-217.6	199.6	0.00	0.00	0.00
8,300.0									
	2 14	312.27	8,293.0	198.7	-218.5	200.4	2.00	-2.00	0.00
8,329.0	2.14	312.27	8,322.0	199.3	-219.2	201.0	2.00	-2.00	0.00
AVLN_A	2.14 1.56								
8,407.0		0.00	8,400.0	200.0	-220.0	201.8	2.00	-2.00	0.00
Start 201.7 hold at 840									
,	1.56 0.00 07.0 MD	0.00	8,493.0	200.0	-220.0	201.8	0.00	0.00	0.00
8,608.7	1.56 0.00	0.00	8,601.7	200.0	-220.0	201.8	0.00	0.00	0.00

10/16/2024 11:46:27AM

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Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Lea Unit 14 11 202H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3678.5usft (3678.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3678.5usft (3678.5)
Site:	Lea Unit 14 11	North Reference:	Grid
Well:	Lea Unit 14 11 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ОН		
Design:	Plan 0.1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,625.0	1.95	359.54	8,618.0	200.3	-220.0	202.0	12.00	12.00	0.00
8,650.0	4.95	359.54	8,642.9	201.8	-220.0	203.5	12.00	12.00	0.00
8,675.0	7.95	359.54	8,667.8	204.6	-220.0	206.4	12.00	12.00	0.00
8,700.0	10.95	359.54	8,692.4	208.7	-220.1	210.5	12.00	12.00	0.00
8,722.1	13.60	359.54	8,714.0	213.4	-220.1	215.2	12.00	12.00	0.00
AVALON_B									
8,725.0	13.95	359.54	8,716.9	214.1	-220.1	215.9	12.00	12.00	0.00
8,750.0	16.95	359.54	8,740.9	220.8	-220.2	222.5	12.00	12.00	0.00
8,775.0	19.95	359.54	8,764.7	228.7	-220.2	230.4	12.00	12.00	0.00
8,800.0	22.95	359.54	8,787.9	237.8	-220.3	239.6	12.00	12.00	0.00
8,825.0	25.95	359.54	8,810.7	248.2	-220.4	249.9	12.00	12.00	0.00
8,850.0	28.95	359.54	8,832.9	259.7	-220.5	261.4	12.00	12.00	0.00
8,875.0	31.95	359.54	8,854.4	272.4	-220.6	274.1	12.00	12.00	0.00
8,900.0	34.95	359.54	8,875.3	286.1	-220.7	287.9	12.00	12.00	0.00
8,925.0	37.95	359.54	8,895.4	301.0	-220.8	302.7	12.00	12.00	0.00
8,950.0	40.95	359.54	8,914.7	316.9	-220.9	318.6	12.00	12.00	0.00
8,975.0	43.95	359.54	8,933.1	333.7	-221.1	335.5	12.00	12.00	0.00
9,000.0	46.95	359.54	8,950.6	351.6	-221.2	353.3	12.00	12.00	0.00
9,016.4	48.92	359.54	8,961.6	363.7	-221.2	365.5	12.00	12.00	0.00
	11 202H FTP		.,						
9,025.0	49.95	359.54	8,967.2	370.3	-221.4	372.0	12.00	12.00	0.00
9,050.0	52.95	359.54	8,982.8	389.8	-221.5	391.6	12.00	12.00	0.00
9,075.0	55.95	359.54	8,997.3	410.2	-221.7	411.9	12.00	12.00	0.00
9,100.0	58.95	359.54	9,010.8	431.2	-221.8	433.0	12.00	12.00	0.00
9,125.0	61.95	359.54	9,023.1	453.0	-222.0	454.7	12.00	12.00	0.00
9,150.0	64.95	359.54	9,034.3	475.3	-222.2	477.1	12.00	12.00	0.00
9,175.0	67.95	359.54	9,044.3	498.2	-222.4	500.0	12.00	12.00	0.00
9,200.0	70.95	359.54	9,053.0	521.7	-222.6	523.4	12.00	12.00	0.00
9,225.0	73.95	359.54	9,060.6	545.5	-222.8	547.3	12.00	12.00	0.00
9,250.0	76.95	359.54	9,066.9	569.7	-222.9	571.5	12.00	12.00	0.00
9,275.0	79.95	359.54	9,071.9	594.2	-223.1	595.9	12.00	12.00	0.00
9,300.0	82.95	359.54	9,075.6	618.9	-223.3	620.7	12.00	12.00	0.00
9,325.0	85.95	359.54	9,078.0	643.8	-223.5	645.5	12.00	12.00	0.00
9,350.0	88.95	359.54	9,079.1	668.7	-223.7	670.5	12.00	12.00	0.00
9,366.0	90.87	359.54	9,079.1	684.7	-223.9	686.5	12.00	12.00	0.00
	85.3 hold at 936								
9,400.0 9,500.0	90.87 90.87	359.54 359.54	9,078.6 9,077.1	718.7 818.7	-224.1 -224.9	720.5 820.5	0.00 0.00	0.00 0.00	0.00 0.00
,									
9,600.0	90.87	359.54	9,075.6	918.7	-225.7	920.5	0.00	0.00	0.00
9,700.0	90.87	359.54	9,074.0	1,018.7	-226.5	1,020.5	0.00	0.00	0.00
9,800.0	90.87	359.54	9,072.5	1,118.7	-227.3	1,120.5	0.00	0.00	0.00
9,900.0	90.87	359.54 359.54	9,071.0 9,069.5	1,218.7	-228.1	1,220.5	0.00	0.00 0.00	0.00
10,000.0	90.87		,	1,318.6	-228.9	1,320.4	0.00		0.00
10,100.0	90.87	359.54	9,068.0	1,418.6	-229.7	1,420.4	0.00	0.00	0.00
10,200.0	90.87	359.54	9,066.5	1,518.6	-230.5	1,520.4	0.00	0.00	0.00
10,300.0	90.87	359.54	9,064.9	1,618.6	-231.3	1,620.4	0.00	0.00	0.00
10,400.0	90.87	359.54	9,063.4	1,718.6	-232.1	1,720.4	0.00	0.00	0.00
10,500.0	90.87	359.54	9,061.9	1,818.6	-232.9	1,820.4	0.00	0.00	0.00
10,600.0	90.87	359.54	9,060.4	1,918.6	-233.7	1,920.4	0.00	0.00	0.00
10,700.0	90.87	359.54	9,058.9	2,018.5	-234.5	2,020.4	0.00	0.00	0.00
10,800.0	90.87	359.54	9,057.3	2,118.5	-235.3	2,120.3	0.00	0.00	0.00
10,900.0	90.87	359.54	9,055.8	2,218.5	-236.1	2,220.3	0.00	0.00	0.00
11,000.0	90.87	359.54	9,054.3	2,318.5	-236.9	2,320.3	0.00	0.00	0.00

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Detabases	EDM 5000 16 Single Llear Dh	Level On and in sta Defenses	Well Lea Unit 14 11 202H
Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3678.5usft (3678.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3678.5usft (3678.5)
Site:	Lea Unit 14 11	North Reference:	Grid
Well:	Lea Unit 14 11 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.1		

Planned Survey

Measure Depth (usft)	d Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,10		359.54	9,052.8	2,418.5	-237.7	2,420.3	0.00	0.00	0.00
11,20			9,051.3	2,518.5	-238.5	2,520.3	0.00	0.00	0.00
11,30			9,049.8	2,618.5	-239.3	2,620.3	0.00	0.00	0.00
11,40			9,048.2	2,718.4	-240.1	2,720.3	0.00	0.00	0.00
11,50			9,046.7	2,818.4	-240.9	2,820.3	0.00	0.00	0.00
11,60			9,045.2	2,918.4	-241.7	2,920.3	0.00	0.00	0.00
11,70			9,043.7	3,018.4	-242.5	3,020.2	0.00	0.00	0.00
11,80			9,042.2	3,118.4	-243.3	3,120.2	0.00	0.00	0.00
11,90			9,040.6	3,218.4	-244.0	3,220.2	0.00	0.00	0.00
12,00	0.0 90.87	359.54	9,039.1	3,318.4	-244.8	3,320.2	0.00	0.00	0.00
12,10			9,037.6	3,418.3	-245.6	3,420.2	0.00	0.00	0.00
12,20			9,036.1	3,518.3	-246.4	3,520.2	0.00	0.00	0.00
12,30			9,034.6	3,618.3	-247.2	3,620.2	0.00	0.00	0.00
12,40			9,033.1	3,718.3	-248.0	3,720.2	0.00	0.00	0.00
12,50			9,031.5	3,818.3	-248.8	3,820.2	0.00	0.00	0.00
12,60			9,030.0	3,918.3	-249.6	3,920.1	0.00	0.00	0.00
12,70			9,028.5	4,018.2	-250.4	4,020.1	0.00	0.00	0.00
12,80			9,027.0	4,118.2	-251.2	4,120.1	0.00	0.00	0.00
12,90			9,025.5	4,218.2	-252.0	4,220.1	0.00	0.00	0.00
13,00	0.0 90.87	359.54	9,023.9	4,318.2	-252.8	4,320.1	0.00	0.00	0.00
13,10	0.0 90.87	359.54	9,022.4	4,418.2	-253.6	4,420.1	0.00	0.00	0.00
13,20			9,020.9	4,518.2	-254.4	4,520.1	0.00	0.00	0.00
13,30			9,019.4	4,618.2	-255.2	4,620.1	0.00	0.00	0.00
13,40			9,017.9	4,718.1	-256.0	4,720.0	0.00	0.00	0.00
13,50			9,016.3	4,818.1	-256.8	4,820.0	0.00	0.00	0.00
			0.014.0						
13,60			9,014.8	4,918.1 5,018.1	-257.6 -258.4	4,920.0 5,020.0	0.00 0.00	0.00 0.00	0.00 0.00
13,70 13,80			9,013.3 9,011.8	5,118.1	-259.2	5,020.0	0.00	0.00	0.00
13,90			9,010.3	5,218.1	-260.0	5,220.0	0.00	0.00	0.00
14,00			9,010.3	5,318.1	-260.8	5,320.0	0.00	0.00	0.00
14,10			9,007.2	5,418.0	-261.6	5,420.0	0.00	0.00	0.00
14,20			9,005.7	5,518.0	-262.4	5,520.0	0.00	0.00	0.00
14,30			9,004.2	5,618.0	-263.2	5,619.9	0.00	0.00	0.00
14,40			9,002.7	5,718.0	-264.0	5,719.9	0.00	0.00	0.00
14,50	0.0 90.87	359.54	9,001.2	5,818.0	-264.8	5,819.9	0.00	0.00	0.00
14,60			8,999.6	5,918.0	-265.6	5,919.9	0.00	0.00	0.00
14,70			8,998.1	6,018.0	-266.4	6,019.9	0.00	0.00	0.00
14,80			8,996.6	6,117.9	-267.1	6,119.9	0.00	0.00	0.00
14,90			8,995.1	6,217.9	-267.9	6,219.9	0.00	0.00	0.00
15,00	0.0 90.87	359.54	8,993.6	6,317.9	-268.7	6,319.9	0.00	0.00	0.00
15,10	0.0 90.87	359.54	8,992.1	6,417.9	-269.5	6,419.9	0.00	0.00	0.00
15,20			8,990.5	6,517.9	-270.3	6,519.8	0.00	0.00	0.00
15,30			8,989.0	6,617.9	-271.1	6,619.8	0.00	0.00	0.00
15,40			8,987.5	6,717.9	-271.9	6,719.8	0.00	0.00	0.00
15,50			8,986.0	6,817.8	-272.7	6,819.8	0.00	0.00	0.00
15,60	0.0 90.87	359.54	8,984.5	6,917.8	-273.5	6,919.8	0.00	0.00	0.00
15,70			8,982.9	7,017.8	-274.3	7,019.8	0.00	0.00	0.00
15,80			8,981.4	7,117.8	-275.1	7,119.8	0.00	0.00	0.00
15,90			8,979.9	7,217.8	-275.9	7,219.8	0.00	0.00	0.00
16,00			8,978.4	7,317.8	-276.7	7,319.7	0.00	0.00	0.00
16,10	0.0 90.87	359.54	8,976.9	7,417.7	-277.5	7,419.7	0.00	0.00	0.00
16,20			8,975.4	7,517.7	-278.3	7,519.7	0.00	0.00	0.00
16,30			8,973.8	7,617.7	-279.1	7,619.7	0.00	0.00	0.00
16,40			8,972.3	7,717.7	-279.9	7,719.7	0.00	0.00	0.00
	23.01		.,	,	,	,			

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well Lea Unit 14 11 202H
Company:	Avant Operating, LLC	TVD Reference:	WELL @ 3678.5usft (3678.5)
Project:	Lea Co., NM (NAD 83)	MD Reference:	WELL @ 3678.5usft (3678.5)
Site:	Lea Unit 14 11	North Reference:	Grid
Well:	Lea Unit 14 11 202H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan 0.1		

Planned Survey

Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
16,500.0	90.87	359.54	8,970.8	7,817.7	-280.7	7,819.7	0.00	0.00	0.00
16,600.0	90.87	359.54	8,969.3	7,917.7	-281.5	7,919.7	0.00	0.00	0.00
16,651.3	90.87	359.54	8,968.5	7,968.9	-281.9	7,970.9	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Lea Unit 14 11 202H LTF - plan hits target cent - Point	0.00 er	0.00	8,968.5	7,968.9	-281.9	580,991.19	789,566.70	32.594612	-103.527330
Lea Unit 14 11 202H FTI - plan misses target o - Point	0.00 center by 204	0.00 6usft at 901.	9,090.0 6.4usft MD (8	249.1 8961.6 TVD, 3	-332.0 363.7 N, -221.3	573,271.34 3 E)	789,516.61	32.573395	-103.527682

eacing ronne	Casing Points
--------------	---------------

eaching r child								
N	leasured	Vertical			Casing	Hole	•	
	Depth	Depth			Diameter	Diame	ter	
	(usft)	(usft)		Name	(")	(")		
		9,000.0	LP		5-1	/2	6	
	. ,		LP		5-1	/2	6	

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,501.0	1.501.0	RUSTLER			
3,535.6	3,534.0				
5,778.1	,	CHERRY CNYN			
6,663.1		 BRUSHY_CANYON			
8,259.9		BSPG LIME			
8,329.0		AVLN A			
8,722.1		AVALON B			

Plan Annotations					
Measured	Vertical	Local Coordinates			
Depth	Depth	+N/-S	+E/-W		
(usft)	(usft)	(usft)	(usft)	Comment	
2,000.0	2,000.0	0.0	0.0	KOP - Start Build 2.00	
2,135.9	2,135.8	2.2	-2.4	Start 6135.3 hold at 2135.9 MD	
8,271.1	8,264.2	197.8	-217.6	Start Drop -2.00	
8,407.0	8,400.0	200.0	-220.0	Start 201.7 hold at 8407.0 MD	
8,608.7	8,601.7	200.0	-220.0	KOP #2 - Start Build 12.00	
9,366.0	9,079.1	684.7	-223.9	LP - Start 7285.3 hold at 9366.0 MD	
16,651.3	8,968.5	7,968.9	-281.9	TD at 16651.3	

10/16/2024 11:46:27AM

Received by UCD: S0/25/2024 2:08:13 PM

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT

Well Name	Well Number	US Well Number	Lease Number	Case Number	Operator
LEA UNIT 14 11	204H		NMNM080262	NMNM70976B	AVANT
LEA UNIT 14 11	752H		NMNM080262	NMNM70976X	AVANT
LEA UNIT 14 11	201H		NMNM080262	NMNM70976B	AVANT
LEA UNIT 14 11	203H		NMNM080262	NMNM70976B	AVANT
LEA UNIT 14 11	751H		NMNM080262	NMNM70976B	AVANT
LEA UNIT 14 11	202H		NMNM080262	NMNM70976B	AVANT

Notice of Intent

Sundry ID: 2811466

Type of Submission: Notice of Intent

Date Sundry Submitted: 09/11/2024

Date proposed operation will begin: 12/27/2024

Type of Action: APD Change Time Sundry Submitted: 03:56

Sundry Print Repor

Procedure Description: Avant Operating, LLC would like to request to offline cement surface and intermediate casing, as well as run possible DV tool in intermediate casing for the Lea Unit 14 11 wells. Please see attached offline cementing procedures, as well as verbal approval for this work via email from Long Vo on 9/11/2024.COAs provided by Long attached for reference. The drilling rig was provided copies and will have on location.

NOI Attachments

Procedure Description

Lea_Unit_14_11_DV_Tool___Offline_Cement_Verbal_Approval_Email_9_11_24_20240911155401.pdf

Offline_Cementing_COA_Variance_20240911155244.pdf

Avant_Surface_Casing_Cement_Variance_20240911155235.pdf

Avant___Offline_Cementing_Procedure_20240911155224.pdf

Operator

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: MEGHAN TWELE

Signed on: SEP 11, 2024 03:56 PM

Name: AVANT OPERATING LLC Title: Contract Regulatory Analyst Street Address: 1515 WYNKOOP ST SUITE 700 City: DENVER State: CO Phone: (720) 339-6880 Email address: MTWELE@OUTLOOK.COM

State:

Field

Representative Name: Street Address:

City:

Phone:

Email address:

Zip:

BLM Point of Contact

BLM POC Name: LONG VO BLM POC Phone: 5759885402 Disposition: Accepted Signature: Long Vo

BLM POC Title: Petroleum Engineer BLM POC Email Address: LVO@BLM.GOV Disposition Date: 09/11/2024

Received by OCD: 10/25/2024 2:08:13 PM

eceivea by OCD: 10/25/20	24 2:08:13 PM		Page 14 of			
	UNITED STAT DEPARTMENT OF THE UREAU OF LAND MAI	0	FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2021 5. Lease Serial No.			
Do not use th		PORTS ON WELLS to drill or to re-enter an APD) for such proposals.	6. If Indian, Allottee o	r Tribe Name		
SUBMI	IN TRIPLICATE - Other inst	tructions on page 2	7. If Unit of CA/Agree	ement, Name and/or No.		
1. Type of Well	Gas Well Other	8. Well Name and No.				
2. Name of Operator		9. API Well No.				
3a. Address		3b. Phone No. <i>(include area code)</i>	10. Field and Pool or I	10. Field and Pool or Exploratory Area		
4. Location of Well (Footage, Sec.	, T.,R.,M., or Survey Descriptio	n)	11. Country or Parish,	State		
12.	CHECK THE APPROPRIATE	BOX(ES) TO INDICATE NATURE C	OF NOTICE, REPORT OR OTH	IER DATA		
TYPE OF SUBMISSION		TYPE	E OF ACTION			
Notice of Intent	Acidize	Deepen [Hydraulic Fracturing]	Production (Start/Resume) Reclamation	Water Shut-Off Well Integrity		
Subsequent Report	Casing Repair	New Construction [Recomplete Temporarily Abandon	Other		
Final Abandonment Notice	Convert to Injection	n Plug Back	Water Disposal			
the proposal is to deepen direct the Bond under which the wor completion of the involved op	tionally or recomplete horizonta k will be perfonned or provide t erations. If the operation results	ally, give subsurface locations and mea the Bond No. on file with BLM/BIA. F in a multiple completion or recomplet	asured and true vertical depths of Required subsequent reports mu tion in a new interval, a Form 3	rk and approximate duration thereof. If of all pertinent markers and zones. Attach st be filed within 30 days following 160-4 must be filed once testing has been he operator has detennined that the site		

14. I hereby certify that the foregoing is true and correct. Name (<i>Printed/Typed</i>)			
Т	ïtle		
Signatura	Date		
Signature D			
THE SPACE FOR FEDER	AL OR STATE OF	FICE USE	
Approved by			
	Title	Date	
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.			
Title 18 U.S.C Section 1001 and Title 43 U.S.C Section 1212, make it a crime for any pany false, fictitious or fraudulent statements or representations as to any matter within it		Ifully to make to any department or agency of the Uni	ited States

This form is designed for submitting proposals to perform certain well operations and reports of such operations when completed as indicated on Federal and Indian lands pursuant to applicable Federal law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local area or regional procedures and practices, are either shown below, will be issued by or may be obtained from the local Federal office.

SPECIFIC INSTRUCTIONS

Item 4 - Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult the local Federal office for specific instructions.

Item 13: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by the local Federal office. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones or other zones with present significant fluid contents not sealed off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to the top of any tubing left in the hole; method of closing top of well and date well site conditioned for final inspection looking for approval of the abandonment. If the proposal will involve **hydraulic fracturing operations**, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The privacy Act of 1974 and the regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 351 et seq., 25 U.S.C. 396; 43 CFR 3160.

PRINCIPAL PURPOSE: The information is used to: (1) Evaluate, when appropriate, approve applications, and report completion of subsequent well operations, on a Federal or Indian lease; and (2) document for administrative use, information for the management, disposal and use of National Resource lands and resources, such as: (a) evaluating the equipment and procedures to be used during a proposed subsequent well operation and reviewing the completed well operations for compliance with the approved plan; (b) requesting and granting approval to perform those actions covered by 43 CFR 3162.3-2, 3162.3-3, and 3162.3-4; (c) reporting the beginning or resumption of production, as required by 43 CFR 3162.4-1(c)and (d) analyzing future applications to drill or modify operations in light of data obtained and methods used.

ROUTINE USES: Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions in connection with congressional inquiries or to consumer reporting agencies to facilitate collection of debts owed the Government.

EFFECT OF NOT PROVIDING THE INFORMATION: Filing of this notice and report and disclosure of the information is mandatory for those subsequent well operations specified in 43 CFR 3162.3-2, 3162.3-3, 3162.3-4.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to evaluate proposed and/or completed subsequent well operations on Federal or Indian oil and gas leases.

Response to this request is mandatory.

The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C St., N.W., Mail Stop 401 LS, Washington, D.C. 20240

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(Form 3160-5, page 2)

Additional Information

Batch Well Data

LEA UNIT 14 11 201H, US Well Number: null, Case Number: NMNM70976B, Lease Number: NMNM080262, Operator:AVANT OPERATING LLC

LEA UNIT 14 11 202H, US Well Number: null, Case Number: NMNM70976B, Lease Number: NMNM080262, Operator:AVANT OPERATING LLC

LEA UNIT 14 11 203H, US Well Number: null, Case Number: NMNM70976B, Lease Number: NMNM080262, Operator:AVANT OPERATING LLC

LEA UNIT 14 11 204H, US Well Number: null, Case Number: NMNM70976B, Lease Number: NMNM080262, Operator:AVANT OPERATING LLC

LEA UNIT 14 11 751H, US Well Number: null, Case Number: NMNM70976B, Lease Number: NMNM080262, Operator:AVANT OPERATING LLC

LEA UNIT 14 11 752H, US Well Number: null, Case Number: NMNM70976X, Lease Number: NMNM080262, Operator:AVANT OPERATING LLC

mtwele@outlook.com

From:	Vo, Long T <lvo@blm.gov></lvo@blm.gov>
Sent:	Wednesday, September 11, 2024 9:22 AM
То:	Meghan Twele
Cc:	Ryan Harris
Subject:	Re: [EXTERNAL] Lea Unit 14 11 Offline Cement & DV Tool Approval

Please have copy of the verbal approval on the rig site.

43 CFR 3171.17(b)

Regards,

Long Vo, EIT, M.Sc. (Smart Oilfield Technologies)

Petroleum Engineer SME Carlsbad Field Office Land and Minerals Bureau of Land Management Department of Interior 575-988-5402 Cell

From: Vo, Long T <lvo@blm.gov>
Sent: Wednesday, September 11, 2024 9:53 AM
To: Meghan Twele <mtwele@outlook.com>
Cc: Ryan Harris <ryan@avantnr.com>
Subject: Re: [EXTERNAL] Lea Unit 14 11 Offline Cement & DV Tool Approval

Yes, please see attached. Please follow up with a formal sundry within 5 business days.

Depth of DV tool may be adjusted as long as the cement is changed proportionally. The DV tool(s) may be cancelled if cement circulates to surface on the first stage.

DV tool(s) shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall contact the BLM if DV tool(s) depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

- a. First stage to DV tool(s): Cement to circulate. If cement does not circulate off the DV tool(s), contact the appropriate BLM office before proceeding with second stage cement job.
- b. Second stage above DV tool(s):
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office.

Regards,

Long Vo, EIT, M.Sc. (Smart Oilfield Technologies)

Petroleum Engineer SME Carlsbad Field Office Land and Minerals Bureau of Land Management Department of Interior 575-988-5402 Cell

From: Meghan Twele <mtwele@outlook.com>
Sent: Tuesday, September 10, 2024 1:38 PM
To: Vo, Long T <lvo@blm.gov>
Cc: Ryan Harris <ryan@avantnr.com>
Subject: [EXTERNAL] Lea Unit 14 11 Offline Cement & DV Tool Approval

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Hi Long,

Some of the below wells had offline cement submitted with the approved APDs but are missing surface offline cement. Since we ran DV tools in our recently drilled Lea Unit 501 & 701 in the area we would also like to request the option to run a DV tool on intermediate casing if cement does not circulate. Can you give verbal approval for all and I will submit formal sundries?

Lea Unit 14 11 201H Lea Unit 14 11 202H Lea Unit 14 11 203H Lea Unit 14 11 204H Lea Unit 14 11 751H-- offline cement approval with APD, need surface Lea Unit 14 11 752H-- offline cement approval with APD, need surface





Meghan Twele Contract Regulatory Analyst 1515 Wynkoop Street, Suite 700 | Denver, CO | 80202 www.avantnr.com Owner—DNVR Regulatory Services, LLC Email: mtwele@outlook.com Phone:720-339-6880 Received by OCD: 10/25/2024 2:08:13 PM

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PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

All Previous COAs Still Apply. Variance request procedure is approved as written, please see below general conditions for variance.

Offline Cementing

Operator has been (**Approved**) to pump the proposed cement program offline in the **Surface and intermediate(s) intervals**.

Offline cementing should commence within 24 hours of landing the casing for the interval.

Notify the BLM 4hrs prior to cementing offline at Lea County: 575-689-5981.

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

\boxtimes Eddy County

EMAIL or call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,

BLM_NM_CFO_DrillingNotifications@BLM.GOV (575) 361-2822

Lea County Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 689-5981

- 1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
 - b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per **43** CFR part **3170** Subpart **3172** as soon as 2nd Rig is rigged up on well.
- 2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
- 3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a

digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

- 1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
- <u>Wait on cement (WOC) for Potash Areas:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least <u>24 hours</u>. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 3. <u>Wait on cement (WOC) for Water Basin:</u> After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least <u>8 hours</u>. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.
- 4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
- 5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
- 6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
- 7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

- 8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.
- B. PRESSURE CONTROL
- All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in 43 CFR part 3170 Subpart 3172 and API STD 53 Sec. 5.3.
- 2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
- 3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
- 4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after

installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

- b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)
- c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer and can be initiated immediately with the casing valve open. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to 43 CFR part 3170
 Subpart 3172 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
- d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per **43 CFR**

part 3170 Subpart 3172.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

Offline Cementing Summary – Surface Casing



No changes to the cement program will take place for offline cementing.

1. Run casing as per normal operations. While running casing, conduct negative pressure test and test back pressure valves.

a. Float equipment is equipped with two back pressure valves rated to a minimum of 5,000 psi.

- 2. Land casing on mandrel hanger.
 - **a.** If casing is unable to be landed with a mandrel hanger, then the casing will be cemented online.

b. Shoe assembly shown in Figure 1.

- 3. Break circulation and confirm no restrictions.
 - a. Ensure no blockage of float equipment and appropriate annular returns.
 - **b.** Perform flow check to confirm well is static.
- 5. With the well secured and BLM notified, nipple down diverter and secure with 5k cement adaptor and cement head.

a. Note: If the well does not remain static, the diverter will not be nippled down until after the cement job has concluded and both lead and tail slurry have reached 500 psi.

- 6. Skid/Walk rig off current well.
- 7. Confirm well is static before beginning cement job.
 - a. Cementing operations will not proceed until well is under control. (If well is not static, notify BLM and proceed to kill)
 - **b.** Casing outlet valves will provide access to the annulus, cement head will provide access to the casing. Rig or third party pump truck will establish circulation while monitoring returns prior to cementing.
 - c. If need be, rig can be moved back over well and diverter nippled back up for any further remediation.
- 8. Rig up return lines to take returns from wellhead to pits
- 9. Rig up cementing lines.
 - a. Pressure test cement lines against cement head to 80% of casing burst for 10 min.
- 10. Break circulation on well to confirm no restrictions while monitoring returns.
- a. Max anticipated time before circulating with cement truck is 6 hrs.
- 11. Pump cement job as per plan.
 - a. At plug bump, test casing to 0.22 psi/ft or 1500 psi, whichever is greater.

b. If plug does not bump on calculated, shut down and wait 8 hrs or 500 psi compressive strength, whichever is greater before testing casing.

- c. If cement is not circulated to surface, a CBL will be run to confirm top of cement.
- 1. If remediation is required, rig will be skid back over the well to take corrective action.
- 12. Confirm well is static and floats are holding after cement job.
 - a. With floats holding and backside static:
 - i. Remove cement head.
 - b. If floats are leaking:

i. Shut-in well and WOC (Wait on Cement) until tail slurry reaches 500 psi compressive strength and the casing is static prior to removing cement head.

c. If there is flow on the backside:

i. Shut in well and WOC until tail slurry reaches 500 psi compressive strength. Ensure that the casing is static prior to removing cement head.

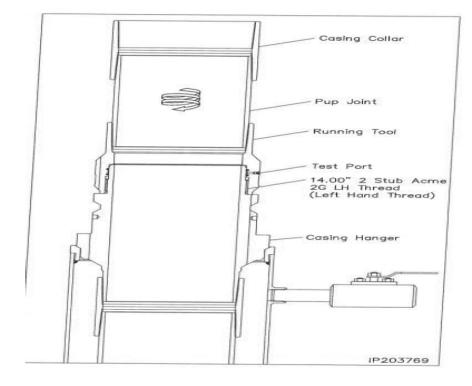
- 13. Remove offline cement tool.
- 14. Install night cap with pressure gauge for monitoring.

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Appendix

I. Cementing Instrumentation Diagram



II. Well Control Procedure (Remediation – Bradenhead squeeze)

- 1. Rig up cement pump to annulus valve
- 2. Close choke and cement head
- 3. Pump planned cement volume down annulus
- 4. Shut-in the well and record pressures and pit levels
- 5. Record time, SICP.
- 6. Shut in annulus valves and bleed off surface line.

Offline Cementing Summary – Intermediate Casing



No changes to the cement program will take place for offline cementing.

Note: Offline cementing will only be preformed within the Bone Springs and shallower with a MASP less than 5000 psi.

- 1. Run casing as per normal operations. While running casing, conduct negative pressure test and test back pressure valves.
 - a. Float equipment is equipped with two back pressure valves rated to a minimum of 5,000 psi.
- 2. Land production casing on mandrel hanger through BOP.
 - **a.** If casing is unable to be landed with a mandrel hanger, then the casing will be cemented online.
 - b. Shoe assembly shown in Figure 1.
- 3. Break circulation and confirm no restrictions.
 - **a.** Ensure no blockage of float equipment and appropriate annular returns.
 - **b.** Perform flow check to confirm well is static.
- 4. Set pack-off
 - **a.** If utilizing a fluted/ported mandrel hanger, ensure well is static on the annulus and inside the casing by filling the pipe with kill weight fluid, remove landing joint, and set annular packoff through BOP. Pressure test to 5,000 psi for 10 min.
 - **b.** If utilizing a solid mandrel hanger, ensure well is static on the annulus and inside the casing by filling the pipe with kill weight fluid. Pressure test seals to 5,000 psi for 10 min. Remove landing joint through BOP.
- 5. After confirmation of both annular barriers and the two casing barriers, install TA plug and pressure test to 5,000 psi for 10 min. Notify the BLM with intent to proceed with nipple down and offline cementing.
 - a. Minimum 4 hrs notice.
- 6. With the well secured and BLM notified, nipple down BOP and secure with 10k cement tool and cement head.
 - a. Note: If any of the mechanical barriers fail to pressure test or well does not remain static, the BOP stack will not be nippled down until after the cement job has concluded and both lead and tail slurry have reached 500 psi.
- 7. Skid/Walk rig off current well.
- 8. Rig up return lines to take returns from wellhead to pits and rig choke.
 - a. Test all connections and lines from wellhead to choke manifold to 5,000 psi high for 10 min.
 - b. If either test fails, perform corrections and retest before proceeding.
- 9. Rig up cementing lines.
 - a. Pressure test cement lines against cement head to 80% of casing burst for 10 min.
- 10. Break circulation on well to confirm no restrictions.
 - **a.** If gas is present on circulation, well will be shut in and returns rerouted through gas buster.
 - **b.** Max anticipated time before circulating with cement truck is 6 hrs.
- 11. Pump cement job as per plan.
 - a. At plug bump, test casing to 0.22 psi/ft or 1500 psi, whichever is greater.
 - **b.** If plug does not bump on calculated, shut down and wait 8 hrs or 500 psi compressive strength, whichever is greater before testing casing.
 - c. If an influx is taken while cementing, Well Control Procedure from Appendix III will be followed.
- 12. Confirm well is static and floats are holding after cement job.
 - **a.** With floats holding and backside static:
 - i. Remove cement head.
 - **b.** If floats are leaking:
 - i. Shut-in well and WOC (Wait on Cement) until tail slurry reaches 500 psi compressive strength and the casing is static prior to removing cement head.
 - **c.** If there is flow on the backside:
 - i. Shut in well and WOC until tail slurry reaches 500 psi compressive strength. Ensure that the casing is static prior to removing cement head.
 - d. If bradenhead cement remediation is required, Well Control Procedure from Appendix IV will be followed.
- **13**. Remove offline cement tool.
- 14. Install night cap with pressure gauge for monitoring.
- 15. Test night cap to 5,000 psi for 10 min.

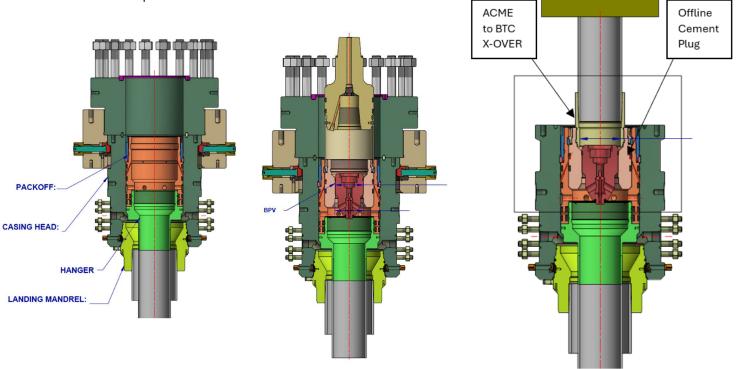
CEMENT HEAD

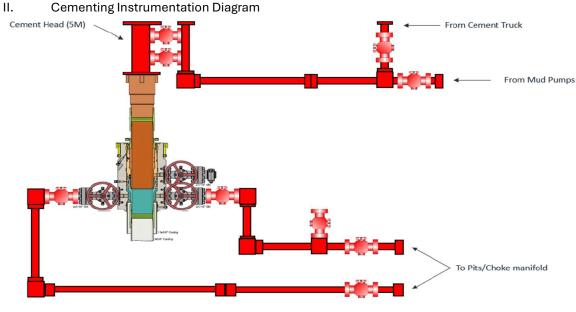
Appendix

I. Offline cementing equipment ratings – 5M requirement

Component RWP

- 1. Pack-off 10M
- 2. Cement head 10M
- 3. Casing Wellhead Valves 10M
- 4. Annular Wellhead Valves 5M
- 5. TA Plug 10M
- 6. Float Valves 5M
- 7. 2" 1502 Lo-Torque Valves 15M

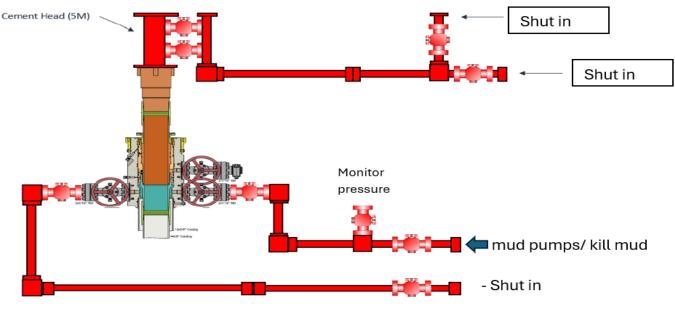




*** All Lines 10M rated working pressure

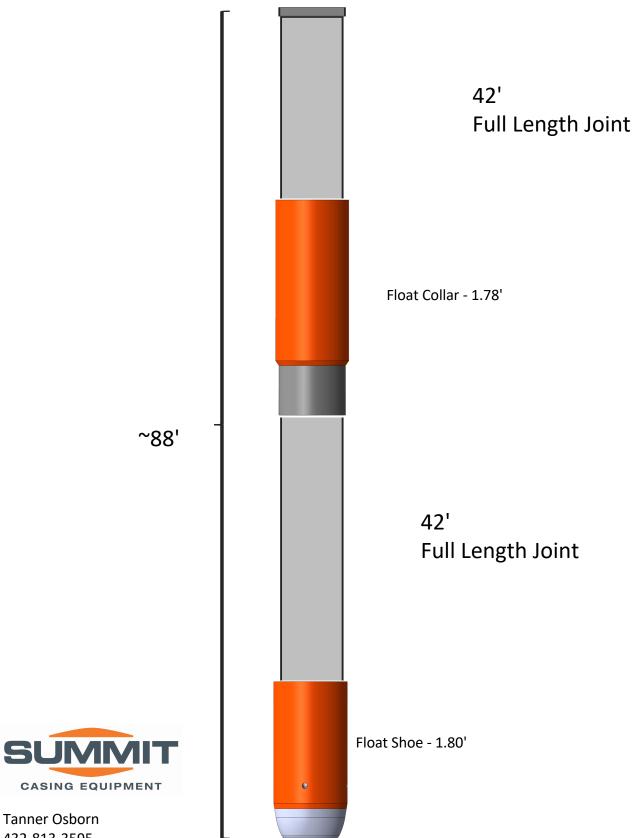
- III. Well Control Procedure (Influx occurs while cementing)
 - 8. Alert location and shut down pumps.
 - 9. Shut-in the well and record pressures and pit levels
 - 10. Open choke and resume pumping to take returns through choke manifold to mud/gas separator.
 - 11. Bump plug, close choke and cement head.
 - 12. Record time, SICP, annulus pressure, pit gain.
 - 13. Shut in annulus valves on wellhead and bleed of return line through the choke.
- IV. Well Control Procedure (Remediation Bradenhead squeeze)
 - a. If well is static:
 - 1. Rig up cement pump to annulus wellhead valve
 - 2. Close choke and cement head
 - 3. Pump planned cement volume down annulus
 - 4. Shut-in the well and record pressures and pit levels
 - 5. Record time, SICP, annulus pressure.
 - 6. Shut in annulus valves on wellhead and bleed of return line through the choke.
 - b. If well is not static:
 - 1. Rig up mud pump to annulus wellhead valve as shown in Figure 2.
 - 2. Close choke and cement head
 - 3. Bullhead kill fluid down annulus while monitoring casing pressure.
 - 4. Shut-in the well and record pressures and pit levels.
 - 5. Once well kill is confirmed, continue with cement remediation.

FIGURE 2: Well Control



*** All Lines 10M rated working pressure

Figure 1: Shoe Assembly - Intermediate



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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

CONDITIONS

Operator:	OGRID:
Avant Operating, LLC	330396
1515 Wynkoop Street	Action Number:
Denver, CO 80202	396008
	Action Type:
	[C-103] NOI Change of Plans (C-103A)
CONDITIONS	

CONDITIONS

Created By	Condition	Condition Date
pkautz	ALL PREVIOUS COA'S APPLY.	10/28/2024

Action 396008

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