

Form 3160-5 (June 2019)	UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT	FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2021
SUNDRY NOTICES AND REPORTS ON WELLS <i>Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.</i>		5. Lease Serial No.
		6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2		7. If Unit of CA/Agreement, Name and/or No.
1. Type of Well ☐ Oil Well ☐ Gas Well ☐ Other		8. Well Name and No.
2. Name of Operator		9. API Well No.
3a. Address	3b. Phone No. (include area code)	10. Field and Pool or Exploratory Area
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)		11. Country or Parish, State

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA				
TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be perfonned or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)		
	Title	
Signature	Date	

THE SPACE FOR FEDERAL OR STATE OFFICE 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.	Office	

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.

(Instructions on page 2)

CONDITIONS OF APPROVAL FOR APD EXTENSION

The Approved Application for Permit to Drill (AAPD) expires if only conductor or surface casing has been set, and the well is not being diligently drilled at the expiration date of the extension.

The APD extension is granted for a 2-year period, not exceed 4 years from the approval of the APD.

Additional Information

Batch Well Data

JUNIOR MINT FED 111H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 112H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 121H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 122H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 131H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 132H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 135H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 137H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 151H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 152H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 211H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 212H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 215H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 217H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,

Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 221H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 222H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 113H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 133H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 213H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 117H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 118H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 123H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 124H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 134H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 138H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 156H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 158H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 214H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 216H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 218H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 223H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

JUNIOR MINT FED 224H, US Well Number: null, Case Number: NMNM101609, Lease Number: NMNM101609,
Operator:CIVITAS PERMIAN OPERATING LLC

Form 3160-5
(June 2019)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED OMB
No. 1004-0137 Expires:
December 31, 2024**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an
abandoned well. Use Form 3160-3 (APD) for such proposals.**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator CIVITAS PERMIAN OPERATING, LLC (OGRID: 332195)

3a. Address 555 17th Street, Suite 3700, Denver, CO 80202

3b. Phone No. (include area code)
(303) 293-9100

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Multiple - See Attached

5. Lease Serial No. NMNM101609

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No.

8. Well Name and No.

Multiple - See Attached

9. API Well No.

10. Field and Pool or Exploratory Area
WC-02 H-08 S2535340/BONE SPRING

11. Country or Parish, State

LEA COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

SUCCESSOR OPERATOR

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has detennined that the site is ready for final inspection.)

This is notification that CIVITAS PERMIAN OPERATING, LLC is taking over operations of the wells referenced in Appendix A (Lea County, NM).

CIVITAS PERMIAN OPERATING, LLC, as new operator, accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portions thereof as described below:

Bond Coverage: BLM Bond Number: NMB106332702

Change of Operator Effective: 01/30/2025

Former Operator: Tap Rock Operating, LLC (OGRID: 372043)

See Conditions of Approval


Connor Wood, EVP
Tap Rock Operating, LLC

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Nathan S. Bennett

Director, Permitting & Compliance

Title

Signature

Date

02/26/2025

THE SPACE FOR FEDERAL OR STATE OFFICE USEApproved by JENNIFER
SANCHEZDigitally signed by JENNIFER
SANCHEZ
Date: 2025.03.03 05:39:54 -07'00'

Title Petroleum Engineer

Date 03/03/2025

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.

Office RFO

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.

(Instructions on page 2)

APPENDIX A						
Lease Number	Legal Description	API Number	Well Name	Producing Reservoir	County	State
NMNM101609	T25S R35 SEC 15: NENW	Not Issued	JUNIOR MINT FED 111H	AAPD	LEA	NM
NMNM101609	T25S R35 SEC 15: NENW	Not Issued	JUNIOR MINT FED 112H	AAPD	LEA	NM
NMNM101609	T25S R35E SEC 10: SWSE	Not Issued	JUNIOR MINT FED 113H	AAPD	LEA	NM
NMNM101609	T25S R35E SEC 10: SWSE	Not Issued	JUNIOR MINT FED 117H	AAPD	LEA	NM
NMNM101609	T25S R35E SEC 10: SWSE	Not Issued	JUNIOR MINT FED 118H	AAPD	LEA	NM
NMNM101609	T25S R35 SEC 15: NENW	Not Issued	JUNIOR MINT FED 121H	AAPD	LEA	NM
NMNM101609	T25S R35 SEC 15: NENW	Not Issued	JUNIOR MINT FED 122H	AAPD	LEA	NM
NMNM101609	T25S R35E SEC 10: SWSE	Not Issued	JUNIOR MINT FED 123H	AAPD	LEA	NM
NMNM101609	T25S R35E SEC 10: SWSE	Not Issued	JUNIOR MINT FED 124H	AAPD	LEA	NM
NMNM101609	T25S R35 SEC 15: NENW	Not Issued	JUNIOR MINT FED 131H	AAPD	LEA	NM
NMNM101609	T25S R35 SEC 15: NENW	Not Issued	JUNIOR MINT FED 132H	AAPD	LEA	NM
NMNM101609	T25S R35E SEC 10: SWSE	Not Issued	JUNIOR MINT FED 133H	AAPD	LEA	NM
NMNM101609	T25S R35E SEC 10: SWSE	Not Issued	JUNIOR MINT FED 134H	AAPD	LEA	NM
NMNM101609	T25S R35 SEC 15: NENW	Not Issued	JUNIOR MINT FED 135H	AAPD	LEA	NM
NMNM101609	T25S R35 SEC 15: NENW	Not Issued	JUNIOR MINT FED 137H	AAPD	LEA	NM
NMNM101609	T25S R35E SEC 10: SWSE	Not Issued	JUNIOR MINT FED 138H	AAPD	LEA	NM
NMNM101609	T25S R35 SEC 15: NENW	Not Issued	JUNIOR MINT FED 151H	AAPD	LEA	NM
NMNM101609	T25S R35 SEC 15: NENW	Not Issued	JUNIOR MINT FED 152H	AAPD	LEA	NM
NMNM101609	T25S R35E SEC 10: SWSE	Not Issued	JUNIOR MINT FED 156H	AAPD	LEA	NM
NMNM101609	T25S R35E SEC 10: SWSE	Not Issued	JUNIOR MINT FED 158H	AAPD	LEA	NM
NMNM101609	T25S R35 SEC 15: NENW	Not Issued	JUNIOR MINT FED 211H	AAPD	LEA	NM
NMNM101609	T25S R35 SEC 15: NENW	Not Issued	JUNIOR MINT FED 212H	AAPD	LEA	NM
NMNM101609	T25S R35E SEC 10: SWSE	Not Issued	JUNIOR MINT FED 213H	AAPD	LEA	NM
NMNM101609	T25S R35E SEC 10: SWSE	Not Issued	JUNIOR MINT FED 214H	AAPD	LEA	NM
NMNM101609	T25S R35 SEC 15: NENW	Not Issued	JUNIOR MINT FED 215H	AAPD	LEA	NM
NMNM101609	T25S R35E SEC 10: SWSE	Not Issued	JUNIOR MINT FED 216H	AAPD	LEA	NM
NMNM101609	T25S R35 SEC 15: NENW	Not Issued	JUNIOR MINT FED 217H	AAPD	LEA	NM
NMNM101609	T25S R35E SEC 10: SWSE	Not Issued	JUNIOR MINT FED 218H	AAPD	LEA	NM
NMNM101609	T25S R35 SEC 15: NENW	Not Issued	JUNIOR MINT FED 221H	AAPD	LEA	NM
NMNM101609	T25S R35 SEC 15: NENW	Not Issued	JUNIOR MINT FED 222H	AAPD	LEA	NM
NMNM101609	T25S R35E SEC 10: SWSE	Not Issued	JUNIOR MINT FED 223H	AAPD	LEA	NM
NMNM101609	T25S R35E SEC 10: SWSE	Not Issued	JUNIOR MINT FED 224H	AAPD	LEA	NM

Change of Operator Conditions of Approval

1. Tank battery must be bermed/diked (must be able to contain 1 1/2 times the volume of the largest tank) within 90 days.
2. Submit for approval of water disposal method within 60 days, if changes have been made from previously approved disposal method.
3. Review facility diagram on file, and submit updated facility diagrams, as per Onshore Order #3 within 60 day.
4. This agency shall be notified of any spill or discharge as required by NTL-3A.
5. All outstanding environmental issue must be addressed within 90 days. Contact Jim Amos for inspection and to resolve environmental issues. 575-234-5909
6. Install legible well sign on location with operator name, well name and number, lease number, unit number, 1/4 1/4, section, township, and range. NMOCD requires the API number on well signs.
7. Subject to like approval by NMOCD.
8. All Reporting to ONRR (OGOR Reports) must be brought current within 30 days of this approval including any past history.
9. If this well is incapable of producing in paying quantities submit NOI to plug and abandon this well or obtain approval to do otherwise within 90 days.
10. Submit plan for approval of well operations for all TA/SI wells within 30 days of this approval to change operator.
11. If not in place acquire operating rights on this lease within 30 days with BLM office in Santa Fe, NM.

JAM

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER 1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other 1c. Type of Completion: ☐ Hydraulic Fracturing ☒ Single Zone ☐ Multiple Zone		5. Lease Serial No. NMNM101609 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No. JUNIOR MINT FED 158H
2. Name of Operator TAP ROCK OPERATING LLC		9. API Well No. 30-025-55614
3a. Address 602 PARK POINT DRIVE SUITE 200, GOLDEN, CO 8040	3b. Phone No. (include area code) (720) 460-3316	10. Field and Pool, or Exploratory WC-025 H-08 S2535340/BONE SPRING
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWSE / 350 FSL / 1638 FEL / LAT 32.1385845 / LONG -103.3521548 At proposed prod. zone SESE / 5 FSL / 495 FEL / LAT 32.1086021 / LONG -103.3484632		11. Sec., T. R. M. or Blk. and Survey or Area SEC 10/T25S/R35E/NMP
14. Distance in miles and direction from nearest town or post office* 9 miles		12. County or Parish LEA
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 350 feet		16. No of acres in lease 17. Spacing Unit dedicated to this well 1280.0
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 25 feet		19. Proposed Depth 11621 feet / 21923 feet
20. BLM/BIA Bond No. in file FED:		21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3222 feet
22. Approximate date work will start* 10/01/2022		23. Estimated duration 90 days
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

- | | |
|---|---|
| 1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM. |
|---|---|

25. Signature (Electronic Submission) Title Permitting Agent	Name (Printed/Typed) BRIAN WOOD / Ph: (720) 460-3316	Date 07/06/2022
Approved by (Signature) (Electronic Submission) Title Assistant Field Manager Lands & Minerals	Name (Printed/Typed) CODY LAYTON / Ph: (575) 234-5959	Date 02/08/2023
Office Carlsbad Field Office		

Application approval 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.
 Conditions of approval, if any, are attached.

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.

(Continued on page 2)

*(Instructions on page 2)



Approval Date: 02/08/2023

Well Name: JUNIOR MINT FED	Well Location: T25S / R35E / SEC 10 / SWSE / 32.1385845 / -103.3521548	County or Parish/State: LEA / NM
Well Number: 158H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM101609	Unit or CA Name:	Unit or CA Number:
US Well Number:	Operator: CIVITAS PERMIAN OPERATING LLC	

Notice of Intent

Sundry ID: 2874485

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 09/19/2025	Time Sundry Submitted: 11:23
Date proposed operation will begin: 10/15/2025	

Procedure Description: Civitas Permian Operating, LLC would like to request the following changes to the previously approved surface hole location (SHL) and drill plan. Change SHL from 350' FSL & 1638' FEL, SWSE, Sec. 10, T.25S, R.35E to 328' FSL & 1488' FEL, SWSE, Sec. 10, T.25S, R.35E. Changes to the drill plan and other variance requests are detailed in the attached revised drill plan. Also please see the attached revised C102 plat, directional plan, anticollision report, production casing spec sheets, offline cementing procedure and wellhead diagram for additional information. APD ID No. 10400086508.

NOI Attachments

Procedure Description

JM_158H_Sundry_Attachment_091825_20250919112240.pdf

Well Name: JUNIOR MINT FED	Well Location: T25S / R35E / SEC 10 / SWSE / 32.1385845 / -103.3521548	County or Parish/State: LEA / NM
Well Number: 158H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM101609	Unit or CA Name:	Unit or CA Number:
US Well Number:	Operator: CIVITAS PERMIAN OPERATING LLC	

Conditions of Approval

Additional

Sec_10_25S_35E_NMP_Sundry_2874485_Junior_Mint_Fed_158H_COAs_20251114090258.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: CORY WALK	Signed on: OCT 27, 2025 01:36 PM
Name: CIVITAS PERMIAN OPERATING LLC	
Title: Permitting Agent	
Street Address: 5 CALIENTE ROAD SUITE 3A	
City: SANTA FE	State: NM
Phone: (505) 466-8120	
Email address: AFMSS@PERMITSWEST.COM	

Field

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5752342234	BLM POC Email Address: CWALLS@BLM.GOV
Disposition: Approved	Disposition Date: 11/14/2025
Signature: Chris Walls	

Form 3160-5
(October 2024)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS
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FORM APPROVED
OMB No. 1004-0220
Expires: October 31, 2027

5. Lease Serial No.
NMNM101609

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

7. If Unit of CA/Agreement, Name and/or No.

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
JUNIOR MINT FED/158H

2. Name of Operator
CIVITAS PERMIAN OPERATING LLC

9. API Well No.

3a. Address 555 17TH STREET SUITE 3700, DENVER, CO 80202

3b. Phone No. (include area code)
(303) 293-1000

10. Field and Pool or Exploratory Area
WC-025 H-08 S2535340/BONE SPRING

4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description)
SEC 10/T25S/R35E/NMP

11. Country or Parish, State
LEA/NM

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TYPE OF SUBMISSION	TYPE OF ACTION				
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off	
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity	
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other	
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14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)
CORY WALK / Ph: (505) 466-8120

Permitting Agent

(Electronic Submission)
Signature

Date
10/27/2025

THE SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by
CHRISTOPHER WALLS / Ph: (575) 234-2234 / Approved

Petroleum Engineer

Date
11/14/2025

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.

Office CARLSBAD

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.

GENERAL INSTRUCTIONS

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

Additional Information

Location of Well

0. SHL: SWSE / 350 FSL / 1638 FEL / TWSP: 25S / RANGE: 35E / SECTION: 10 / LAT: 32.1385845 / LONG: -103.3521548 (TVD: 0 feet, MD: 0 feet)

PPP: NENE / 105 FNL / 490 FEL / TWSP: 25S / RANGE: 35E / SECTION: 15 / LAT: 32.1373386 / LONG: -103.3484476 (TVD: 11265 feet, MD: 11368 feet)

BHL: SESE / 5 FSL / 495 FEL / TWSP: 25S / RANGE: 35E / SECTION: 22 / LAT: 32.1086021 / LONG: -103.3484632 (TVD: 11621 feet, MD: 21923 feet)

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Civitas Permian Operating LLC
WELL NAME & NO.:	Junior Mint Fed 158H
LOCATION:	Sec 10-25S-35E-NMP
COUNTY:	Lea County, New Mexico

*Changes approved through engineering via **Sundry 2874485** on 10/29/2025. Any previous COAs not addressed within the updated COAs still apply.*

Create COAs

H₂S Not Reported	Cave / Karst Low	Waste Prevention Rule APD Submitted Prior to 06/10/24
Potash None	R-111-Q Design 	
Wellhead Multibowl ☒ Flex Hose ☒ Break Testing	Casing 3-String Well ☐ Liner ☒ Fluid Filled ☒ Casing Clearance	
	Cementing ☐ DV Tool ☒ Offline Cement ☐ Bradenhead ☐ Open Annulus ☐ Echometer ☐ Pilot Hole	
Special Requirements		
☐ Capitan Reef	☐ Water Disposal	☐ COM ☐ Unit

THIS WELL HAS INTERVALS WITH A MASP OVER 5000 PSI. BREAK TESTING IS ONLY ALLOWED ON THOSE INTERVALS WHOSE MASP IS EXPECTED TO BE UNDER 5M PSI.

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H₂S) monitors shall be installed prior to drilling out the surface shoe. If H₂S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet 43 CFR 3176 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **11-3/4** inch surface casing shall be set between **990' to 1050'** feet (a minimum of **70'** into the Rustler Anhydrite, above the salt, and below usable fresh water) and cemented to the surface. **Set depth adjusted per BLM geologist.**
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic-type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or **500 pounds compressive strength**, whichever is greater (including lead cement.)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **8-5/8** inch intermediate casing is **cement to surface**. If cement does not circulate, see B.1.a, c-d above.
3. The minimum required fill of cement behind the **5-1/2** inch production casing is at least **300 feet** into previous casing string. Operator shall provide method of verification.
 - If cement does not circulate to surface on the previous casing, this string must come to surface.
 - String does not meet clearance requirement per 43 CFR 4172. Tieback increased by 100' and additional cement may be needed.

C. PRESSURE CONTROL

1. Operator has proposed a multi-bowl wellhead assembly. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M) psi**.
Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **10,000 (10M) psi**.
Variance is approved to use a 5000 (5M) annular which shall be tested to 5000 (5M) psi.
 - 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. 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.
 - e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 must be followed.
- 2. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
- 3. Break testing has been approved for this well ONLY on those intervals utilizing a 5M BOPE or less. **(Annular preventer must be tested to a minimum of 70% of BOPE working pressure and shall be higher than the MASP.)** If in the event break testing is not utilized, then a full BOPE test would be conducted.
 - a. Variance only pertains to the intermediate hole-sections and no deeper than the Bone Springs formation. **BOPE Break Testing is NOT permitted to drill the production hole section.**
 - b. While in transfer between wells, BOPE shall be secured by the hydraulic carrier or cradle.
 - c. A full BOPE test is required prior to drilling the first deep intermediate hole section. If any subsequent hole interval is deeper than the first, a full BOPE test will be required. (200' TVD tolerance between intermediate shoes is allowable).
 - d. As a minimum, a full BOPE test shall be performed at 21-day intervals.
 - e. In the event any repairs or replacement of the BOPE is required, the BOPE shall test as per **43 CFR 3172**. Any well control event while drilling require notification to the BLM Petroleum Engineer (**575-706-2779**) prior to the commencement of any BOPE Break Testing operations.

D. SPECIAL REQUIREMENT(S)

Offline Cementing

Offline cementing has been approved for **all hole sections, excluding production**. Contact the BLM prior to the commencement of any offline cementing procedure.

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)

Contact Lea County Petroleum Engineering Inspection Staff:

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
 - i. Notify the BLM when moving in and removing the Spudder Rig.
 - ii. 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.
 - iii. BOP/BOPE test to be conducted per **43 CFR 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. For intervals in which cement to surface is required, cement to surface should be verified with a visual check and density or pH check to differentiate cement from spacer and drilling mud. The results should be documented in the driller's log and daily reports.

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.

2. Wait on cement (WOC) for Potash Areas: 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 of both lead and tail cement, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: 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 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity 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-Q potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR 3172**.
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:
 - i. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - ii. 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.
 - iii. Manufacturer representative shall install the test plug for the initial BOP test.
 - iv. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172.6(b)(9) must be followed.
 - v. 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.
 - i. 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).
 - ii. 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.)
 - iii. 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 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 8 hours or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

- iv. 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.
- v. The results of the test shall be reported to the appropriate BLM office.
- vi. 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.
- vii. 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.
- viii. 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 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.

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 AND ACREAGE DEDICATION PLAT

API Number 30-025-55614	Pool Code 98185	Pool Name WC-025 G-09 S253502B; LWR BONE SPRING
Property Code 337333	Property Name JUNIOR MINT FED	Well Number 158H
OGRID No. 332195	Operator Name CIVITAS PERMIAN OPERATING, LLC	Ground Level Elevation 3220'
Surface Owner: ☐ State ☒ Fee ☐ Tribal ☐ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
O	10	25-S	35-E	-	328' S	1488' E	N 32.1385256	W 103.3516712	LEA

Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
P	22	25-S	35-E	-	5' S	495' E	N 32.1086021	W 103.3484632	LEA

Dedicated Acres 1280.00	Infill or Defining Well Infill	Defining Well API 30-025-54739 (131H)	Overlapping Spacing Unit (Y/N) N	Consolidated Code N/A
Order Numbers pending (NSP)			Well Setbacks are under Common Ownership: ☒ Yes ☐ No	

Kick Off Point (KOP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
A	15	25-S	35-E	-	100' N	495' E	N 32.1373428	W 103.3484588	LEA

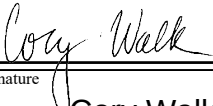
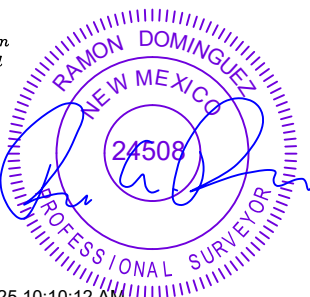
First Take Point (FTP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
A	15	25-S	35-E	-	100' N	495' E	N 32.1373428	W 103.3484588	LEA

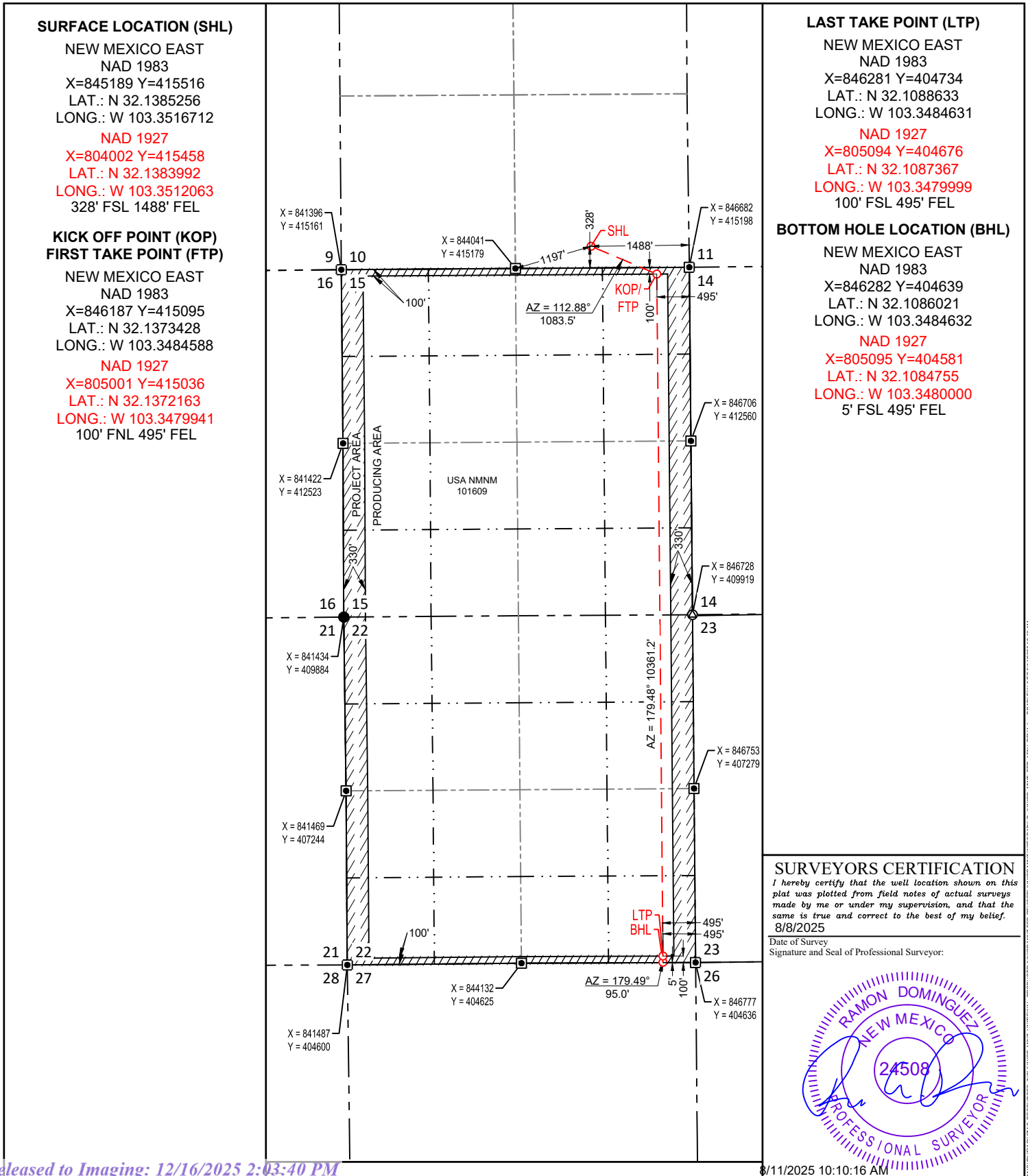
Last Take Point (LTP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
P	22	25-S	35-E	-	100' S	495' E	N 32.1088633	W 103.3484631	LEA

Unitized Area or Area of Uniform Interest N/A	Spacing Unity Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation 3220'
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OPERATOR CERTIFICATION <i>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.</i> <i>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.</i>  9-16-25		SURVEYORS CERTIFICATION <i>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.</i>  8/11/2025 10:10:12 AM	
Signature Cory Walk		Signature and Seal of Professional Surveyor	
Date 9-16-25		Date	
Print Name cory@permitswest.com		Certificate Number	Date of Survey 8/8/2025
E-mail Address			

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		
Property Name and Well Number JUNIOR MINT FED 158H				



DRILLING AND OPERATIONS PLAN

Civitas Permian Operating LLC

Section 1:**Well Information**

Well Name and Number: Junior Mint Fed 158

Proposed TD (ft MD): 21945

Proposed TD (ft TVD): 11621

Section 2:**Casing Design**

String Type	Hole Size	Casing Size	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Weight (lbs/ft)	Grade	Joint Type	Pressure Test (psi)	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
Surface	14.75	11.75	surface	1,080	surface	1,075	42	J55	BTC		1.13	1.15	BUOY	1.80	BUOY	1.80
Intermediate	10.625	8.625	surface	5,310	surface	5,210	32	HCL80	BTC		1.13	1.15	BUOY	1.80	BUOY	1.80
Production	7.875	5.5	surface	21,945	surface	11,621	20	P110RY	GBCD		1.13	1.15	BUOY	1.80	BUOY	1.80
Safety Factors will Meet or Exceed																

Centralization Plan:

Surface casing: centralizers run on bottom 3 joints. On subsequent strings of casing centralizers will be run as needed to ensure effective cement placement and zonal isolation.

NMOCD Casing Information:

Is casing new? If used, attach certification as required in 43 CFR 3172.	
Does casing meet API specifications? If no, attach casing specification sheet.	
Is premium or uncommon casing planned? If yes attach casing specification sheet.	
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	
Will intermediate pipe be kept at least 1/3 fluid filled until cement tops are verified? (collapse safety requirement)	
Capitan Reef:	
Is well located within Capitan Reef?	
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is proposed well within the designated four string boundary?	
R-111-Q and SOPA	
Is well located in R-111-Q and SOPA?	
Is the second string set 100' to 600' below the base of salt?	
SOPA but not R-111-Q	
Is well located in SOPA but not in R-111-Q?	
If yes, are the first 2 strings cemented to surface and third string cement tied back 500' into previous casing?	
High Cave / Karst	
Is well located in high Cave/Karst?	
If yes, are there two strings cemented to surface?	
If yes, is there a contingency casing if lost circulation occurs?	
Critical Cave / Karst	
Is well located in critical Cave/Karst?	
If yes, are there three strings cemented to surface?	

Section 3:**Cement Program**

String Type	Lead/Tail	Top MD	Density (ppg)	Quantity (sks)	Yield (ft³/sks)	Excess (%)	Cement Type	Additives
Surface	Lead	0	13.5	393	1.72	100	Class C	Additives + LCM
Surface	Tail	780	14.8	196	1.33	100	Class C	Additives + LCM
Intermediate	Lead	0	10.5	310	3.98	25	Class C	Additives + LCM
Intermediate	Tail	4310	13.2	226	1.61	25	Class C	Additives + LCM
Production	Lead	na	10.5	na	3.93	na	Class H	Additives + LCM
Production	Tail	10610	13.2	1637	1.44	20	Class H	Fluid Loss + Dispersant + Retarder + LCM

Cementing Procedure

Spacers will be used ahead of cement to ensure mud removal. Sturries will be designed to provide adequate compressive strength, fluid loss control, and bonding. Offline cementing may be performed on surface and intermediate casing strings when set above the Wolfcamp formation (variance request). BOPE will be installed and tested prior to drilling out the shoe, and cement job quality will be verified before resuming operations. This variance improves operational efficiency while maintaining full compliance with 43 CFR 3172 and BLM conditions of approval. If required to achieve top of cement on the intermediate casing, a second-stage cement job may be performed by bradenhead squeeze (variance request). This method will only be used as necessary to ensure zonal isolation and full compliance with 43 CFR 3172 and BLM conditions of approval. All WOC times will be 8 hours on surface and intermediate casing or until cement has reached 500 psi compressive strength, prior to resuming drilling or completion operations on the well.

Section 4:**Mud Program**

Mud System Type: Closed Loop

Will an air or gas system be used? No

Describe what will be on location to control well or mitigate other conditions:

The necessary mud products for additional weight and fluid loss control will be on location at all times.

Describe the mud monitoring system utilized:

Losses or gains in the mud system will be monitored visually/manually as well as with an electronic PVT.

Circulating Medium Table:

Top Depth	Bottom Depth	Mud Type	Min. Weight	Max Weight
0	1080	Water Based Mud	8.4	8.8
1080	5310	Brine or Oil Based Mud	9.2	10.0
5310	21945	Brine or Oil Based Mud	9.5	11.0

Section 5:**BOPE & Wellhead**

Hole Section	Hole Size	Casing Size	Stack Size	MAASP (psi)	Min. Required WP	BOPE Type & Components	Test Pressures (psi)	Notes / Variance Reference
Int 1	10 5/8	8 5/8	13-5/8", 10M	482	5M	Annular, Blind Ram, Double Pipe Ram	250 / 5,000	Variance – 10M stack tested to 5M for this section; Variance – 5M Annular tested to 70% WP (3,500 psi)
Production	7 7/8	5 1/2	13-5/8", 10M	2644	10M	Annular, Blind Ram, Double Pipe Ram	250 / 10,000	Variance – 5M Annular tested to 70% WP (3,500 psi)

Testing Procedure:

The BOPE will be installed and tested on the surface casing and prior to drilling out each casing shoe. Tests will include a 250 psi low-pressure test and a high-pressure test to the required working pressure for each hole section. Due to MASP values lower than 5M, a variance is requested to test the installed 10M BOPE stack to 250 psi low and 5,000 psi high. For the production section the installed 10M BOP stack will be tested to 250 psi low and 10,000 psi high. A variance is also requested to utilize a 5M annular preventer and test to 70% of rated working pressure for both 5M and 10M sections which is consistent with guidance from the API (variance request). A variance is requested for break testing of BOPE on the intermediate section only. A variance is requested to utilize a colexchoke line in place of a steel line. A variance is requested to utilize a multibowl wellhead system. The accumulator system will be sized to close the largest ram and annular preventers with 200 psi remaining. BOPE will be re-tested every 21 days as required by 43 CFR 3172. The remote kill line and 3rd choke (with remote control) will be installed as required.

Wellhead Information:

Manufacturer / Type	Multibowl
Pressure Rating	10M
Installation / Testing	Wellhead will be installed and tested by manufacturer's representative. Manufacturer representative shall install the test plug for the initial BOP test. For contingency top out cementing, wellhead has slot that will allow 1" string access to surface annulus.

Section 8:**Geological Prognosis**

Estimated Tops of Important Geological Markers:

Formation	TVD (ft)	Lithologies	Mineral Resources	Producing Formation?
Rustler	660	Salt	Salt	No
Top Salt	1100	Salt	Salt	No
Base Salt	4920	Salt	Salt	No
DMG	5160	Sandstone	None	No
Lamar	5165	Sandstone	Hydrocarbon	No
Bell Canyon	5185	Sandstone	Hydrocarbon	No
Ramsey Sand	5205	Sandstone	Hydrocarbon	Yes
Cherry Canyon	6150	Limestone	Hydrocarbon	Yes
Brushy Canyon	7620	Sandstone	Hydrocarbon	Yes
Bone Spring Lime	8930	Carbonate	Hydrocarbon	Yes
Upper Avalon	8955	Carbonate	Hydrocarbon	Yes
Middle Avalon	9185	Carbonate	Hydrocarbon	Yes
1st BS Sand	10165	Sandstone	Hydrocarbon	Yes
2nd BS Carb	10330	Carbonate	Hydrocarbon	Yes
2nd BS Sand	10715	Sandstone	Hydrocarbon	Yes
3rd BS Carb	11265	Carbonate	Hydrocarbon	Yes
3rd BS Sand	11895	Sandstone	Hydrocarbon	Yes
Wolfcamp A	12210	Sandstone	Hydrocarbon	Yes
Wolfcamp B	12635	Sandstone	Hydrocarbon	Yes

Anticipated Bottom Hole Pressure:

6647 PSI

Anticipated Static Bottom Hole Temperature:

186 °F

Anticipated Abnormal Pressure?

No

Potential Hazards:

None

Section 9:**H2S**

Anticipated concentration :
Depth of first occurrence

0	ppm
na	ft TVD

Additional Comments:

H2S detection equipment will be in operation after drilling out the surface casing shoe until the production casing has been cemented. If Hydrogen Sulfide is encountered, measured amounts and formations will be reported to the BLM. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. See attached H2S Contingency Plan.

Section 10:**Drilling Operations**

Batch drilling may be conducted on this pad to improve operational efficiency. Surface and/or intermediate hole sections may be drilled and cased on multiple wells prior to proceeding with deeper drilling operations. Each casing string will be cemented and BOPE installed and tested on each well before drilling ahead. All wells will maintain full compliance with 43 CFR 3172 and applicable COAs. Surface and intermediate casing will be cemented to surface, with offline cementing utilized on approved strings set above the Wolfcamp formation (variance). If required to achieve TOC, a second-stage cement job on the intermediate string may be performed by braidenhead squeeze through the casing (variance). Mud programs will be adjusted per hole section to maintain well control and borehole stability.

Section 11:**Testing, Logging, Coring**

All casing strings will be tested in accordance with 43 CFR 3172.
Casing strings will be pressure tested after cementing per 43 CFR 3172 and NMOCD requirements.
FIT/LOT will be performed at the surface and intermediate casing shoes to confirm integrity prior to drilling ahead.
GR will be run from surface to TD.
No cores or additional testing / logging planned.

Section 12:**Variance Requests**

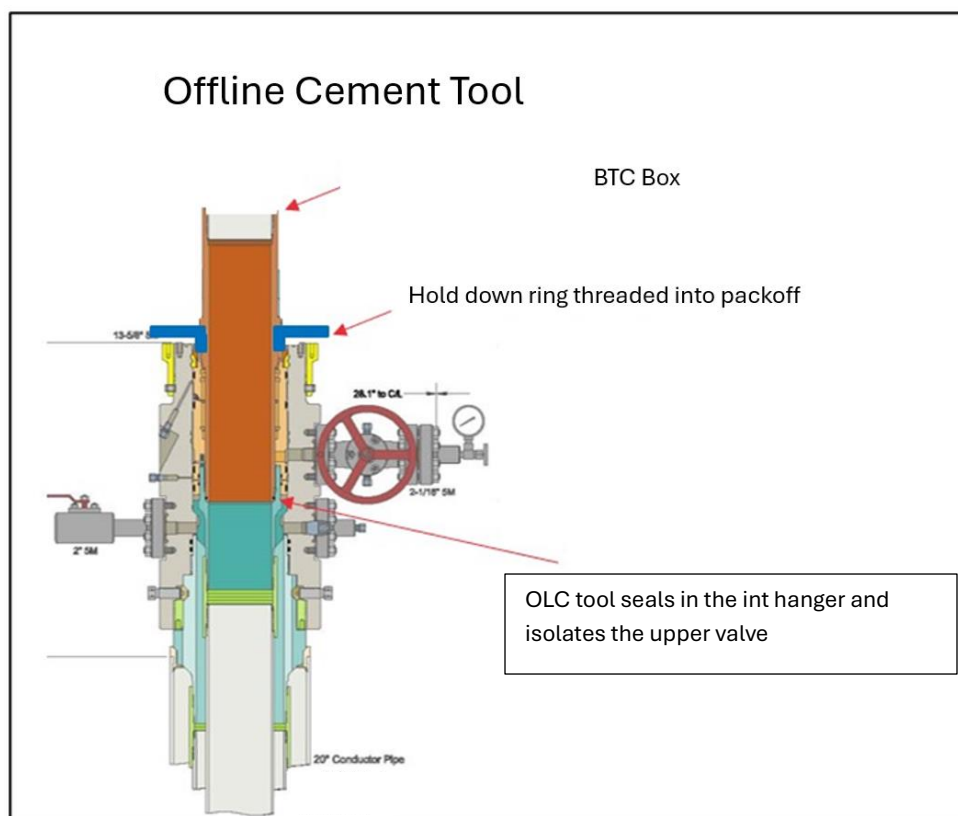
Var #	Type	Description of Request
1	Offline Cementing	Request to perform offline cementing of surface and intermediate casing when strings are set above the Wolfcamp formation. This allows rig operations to continue while cement sets. (see attached plan).
2	Intermediate Second-Stage Bullheading	Request to perform a second-stage cement job on intermediate casing by bullheading through the casing rather than circulating through drill pipe, if needed to achieve planned TOC.
3	Coflex Choke Line	Request to use a flexible choke line from the BOP to the choke manifold in place of rigid steel line, per manufacturer specifications.
4	Break Testing	Request to perform break testing of BOPE components on the intermediate hole section only, rather than full pressure tests, to verify integrity without over-testing.
5	5M Test on 10M BOPE	Request to test a 10,000 psi BOPE system to 5,000 psi for the intermediate hole section (MASP ~500 psi) rather than to full rating. Production section will be tested to 10,000 psi.
6	Annular Test Pressure	Request to test annular preventer to 70% of rated working pressure instead of full working pressure, consistent with API guidance.
7	Multibowl Wellhead	Request to utilize a multibowl wellhead system in lieu of a conventional wellhead.
8		
9		
10		

Section 13:**List of Attachments**

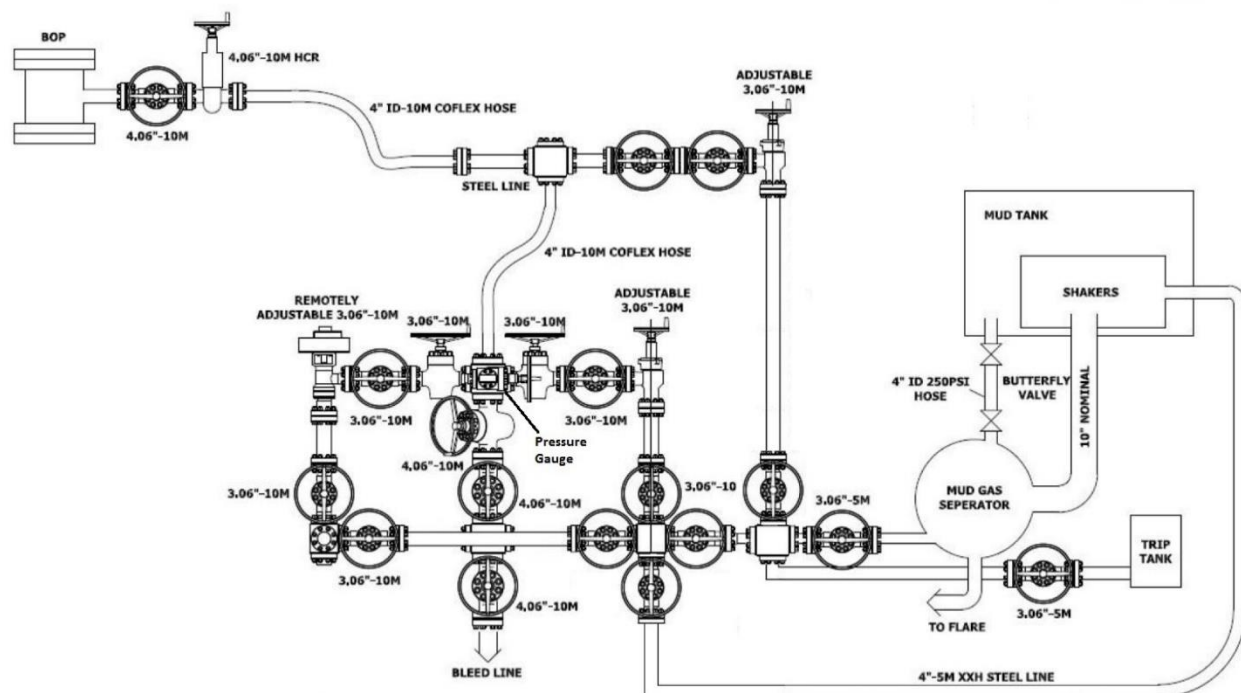
1	Directional Plan
2	Offline Cementing and Well control attachment
3	H2S Contingency Plan

Offline Cementing: Civitas requests a variance for the option to offline cement surface and intermediate casing strings set higher than Wolfcamp formations. To execute offline cement jobs safely, the following precautions and equipment are detailed below:

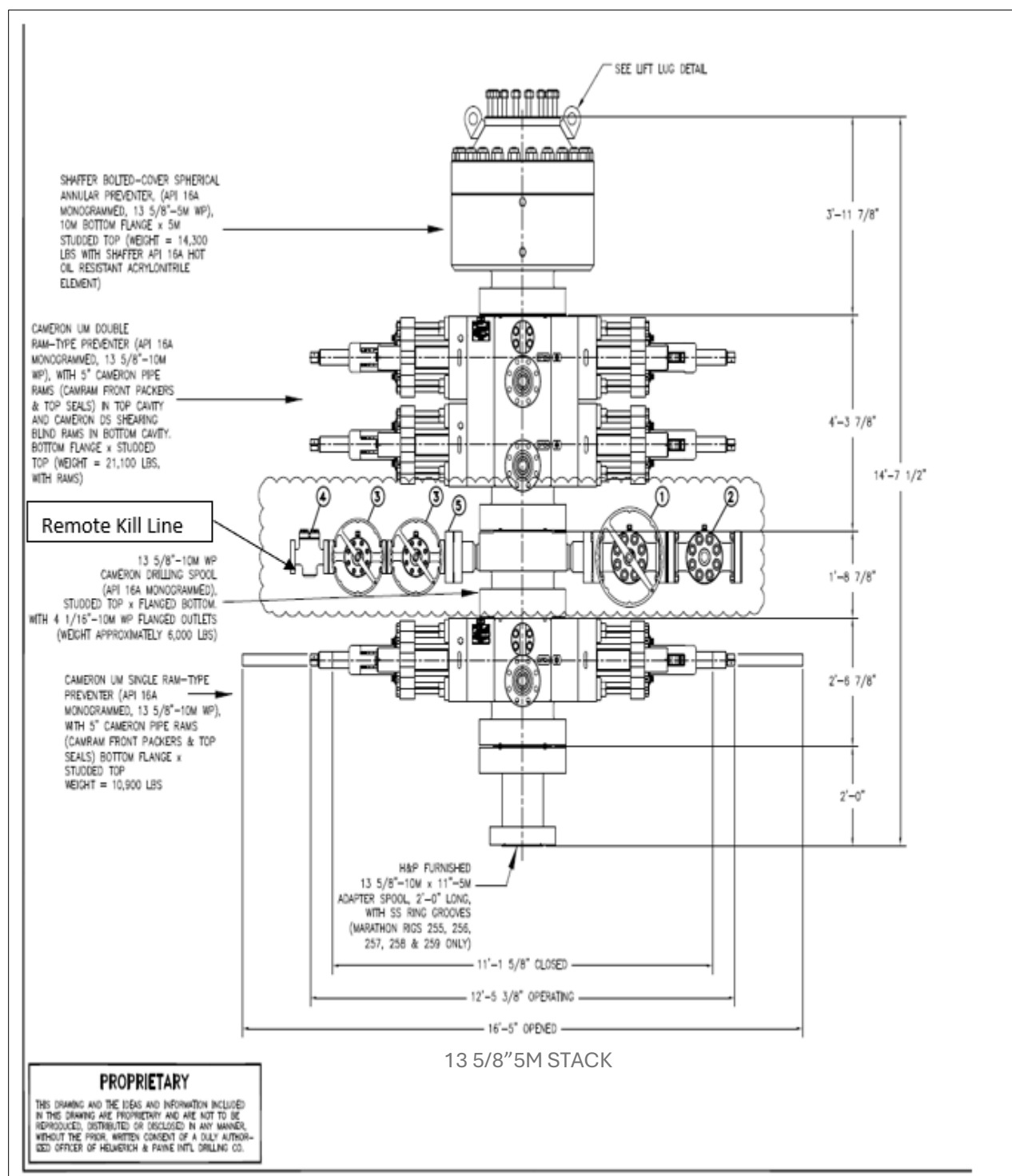
- For surface casing, no change to cement procedures to offline cement surface casing is anticipated.
- For intermediate casing, during the drilling of the intermediate hole section (all intermediate strings will be TD'd above the WCA top), hole conditions will be monitored and addressed to ensure for a successful casing run. In the event hole conditions change after running casing and/or the well is not in a static state, Civitas Resources can elect to pump the cement job online.
- Equipment for the offline cement job will include a tested/charted 5M working pressure dual manifold cement head system will be used with a standard offline cement tool that is packed off and tested through a port between the upper valve and packoff assembly (diagram below). Returns from the manifold will be taken to an auxiliary mud-gas separator during cement job. The operational scope is described in the following steps: the casing will be landed on the mandrel, pull tested, packoff installed and tested to 80% of collapse of casing on the top and bottom seals, nipple down BOP and install offline cement tool/screw into the top of the packoff assembly. The offline cement tool screws into the top of the packoff assembly. During the cement job, all returns will be taken through the A-Section valve (flanged). An example diagram of the tool is shown below:



10M Choke Layout



10M BOP Stack



**Gas Separator Rigs
Flex III Rigs**

Gas Separator Gas Outlet is Connected to Flare Line (arrow on the left 150' min flare line length)

Note: Closed Loop System placed here. It does not appear on the schematics to show the flare line.

SHOWER SCD

CHUCK WAREHOUSE

DRILL FLOOR

TOOL BOX

PARTS HOUSE

DRILLERS CABIN

BOOMER TRANSPORT SCD

HPL/Accumulator SCD

DRILLS SCD

DRILL LINE STORAGE SPool

END OF DECK ROCKET CRACK

LAST IN HARDWARE POSITION

VARIABLE FREQUENCY DRIVE HOUSE

GENERATOR HOUSE

DIESEL TANK

PUMP PAINTS HOUSE

LUBRICATOR

WATER TANK

VALVE MAN

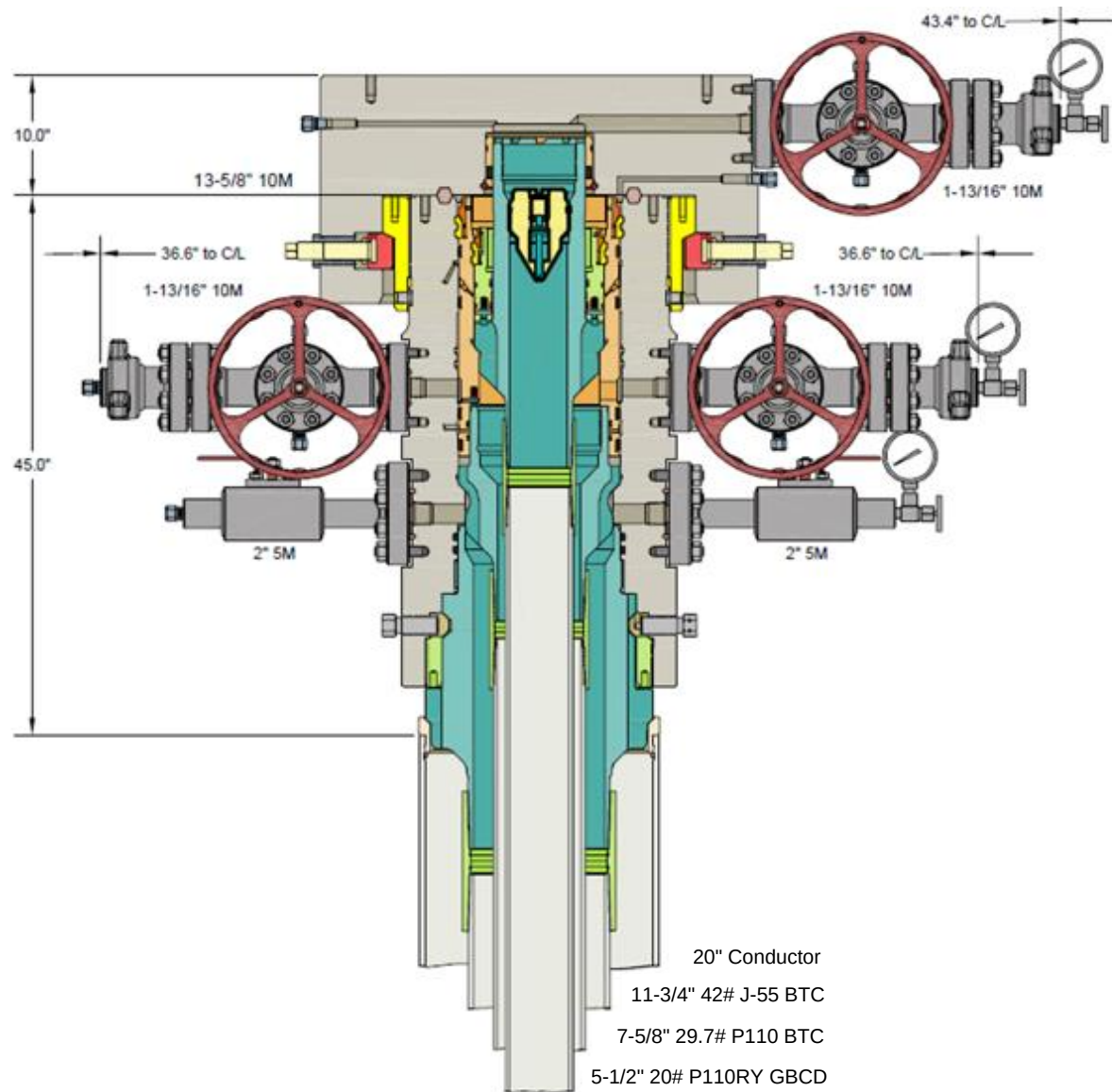
FLUID PUMP

HOIST

48'-0"x10'-0"
NO OFFICE TRAILER

48'-0"x10'-0"
MEETING/CHANGE HOUSE

Multi-bowl Wellhead Design





GB Connection Performance Properties Sheet

Rev. 0 (04/29/2025)

ENGINEERING THE RIGHT CONNECTIONS™

Casing: 5.5 OD, 20 ppf
Casing Grade: Benteler P110 RY (95% RBW)

Connection: GB CD Butt 6.300
Coupling Grade: API P-110

PIPE BODY GEOMETRY					
Nominal OD (in.)	5 1/2	Wall Thickness (in.)	0.361	Drift Diameter (in.)	4.653
Nominal Weight (ppf)	20.00	Nominal ID (in.)	4.778	API Alternate Drift Dia. (in.)	N/A
Plain End Weight (ppf)	19.83	Plain End Area (in. ²)	5.828		

PIPE BODY PERFORMANCE**					
Material Specification	Benteler P110 RY (95% RBW)	Min. Yield Str. (psi)	110,000	Min. Ultimate Str. (psi)	125,000
Collapse		Tension		Pressure	
API (psi)	11,106	Pl. End Yield Str. (kips)	641	Min. Int. Yield Press. (psi)	13,720
High Collapse (psi)	-	Torque		Bending	
		Yield Torque (ft-lbs)	74,420	Build Rate to Yield (°/100 ft)	91.7

GB CD Butt 6.300 COUPLING GEOMETRY			
Coupling OD (in.)	6.300	Makeup Loss (in.)	4.2500
Coupling Length (in.)	8.500	Critical Cross-Sect. (in. ²)	8.527

GB CD Butt 6.300 CONNECTION PERFORMANCE RATINGS/EFFICIENCIES					
Material Specification	API P-110	Min. Yield Str. (psi)	110,000	Min. Ultimate Str. (psi)	125,000
Tension		Efficiency		Bending	
Thread Str. (kips)	667	Internal Pressure (%)	100%	Build Rate to Yield (°/100 ft)	80.0
Min. Tension Yield (kips)	891	External Pressure (%)	100%	Yield Torque	
Min. Tension Ult. (kips)	1,013	Tension (%)	100%	Yield Torque (ft-lbs)	31,180
Joint Str. (kips)	667	Compression (%)	100%		
		Ratio of Areas (Cplg/Pipe)	1.46		

MAKEUP TORQUE					
Min. MU Tq. (ft-lbs)	10,000	Max. MU Tq. (ft-lbs)	20,000	Running Tq. (ft-lbs)	See GBC RP
				Max. Operating Tq. (ft-lbs)*	29,620

Units: US Customary (lbm, in., °F, lbf)

1 kip = 1,000 lbs

* See Running Procedure for description and limitations.

See attached: Notes for GB Connection Performance Properties.

GBC Running Procedure (GBC RP): www.gbconnections.com/resources/running-procedures/Blanking Dimensions: www.gbconnections.com/resources/documentation/#blanking-dimensions

Connection yield torque rating based on physical testing or extrapolation therefrom

** Casing properties applicable to Benteler P110 RY (95% RBW) grade with min. yield 110 ksi.

Project: Lea County, NM (NAD 83)
Site: Junior Mint Fed Pad
Well: Junior Mint Fed 158H
Wellbore: OH
Design: Plan #2
Rig: 26' KB



Azimuths to Grid North
True North: -0.52°
Magnetic North: 5.53°

Magnetic Field
Strength: 47061.9nT
Dip Angle: 59.57°
Date: 8/18/2025
Model: HDGM2025

Total Magnetic Correction: 5.53°

PROJECT DETAILS: Lea County, NM (NAD 83)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

Reference Datum: GE 3220 + 26 @ 3246.00usft (26' KB)

SHL

RKB Elevation: GE 3220 + 26 @ 3246.00usft (26' KB)

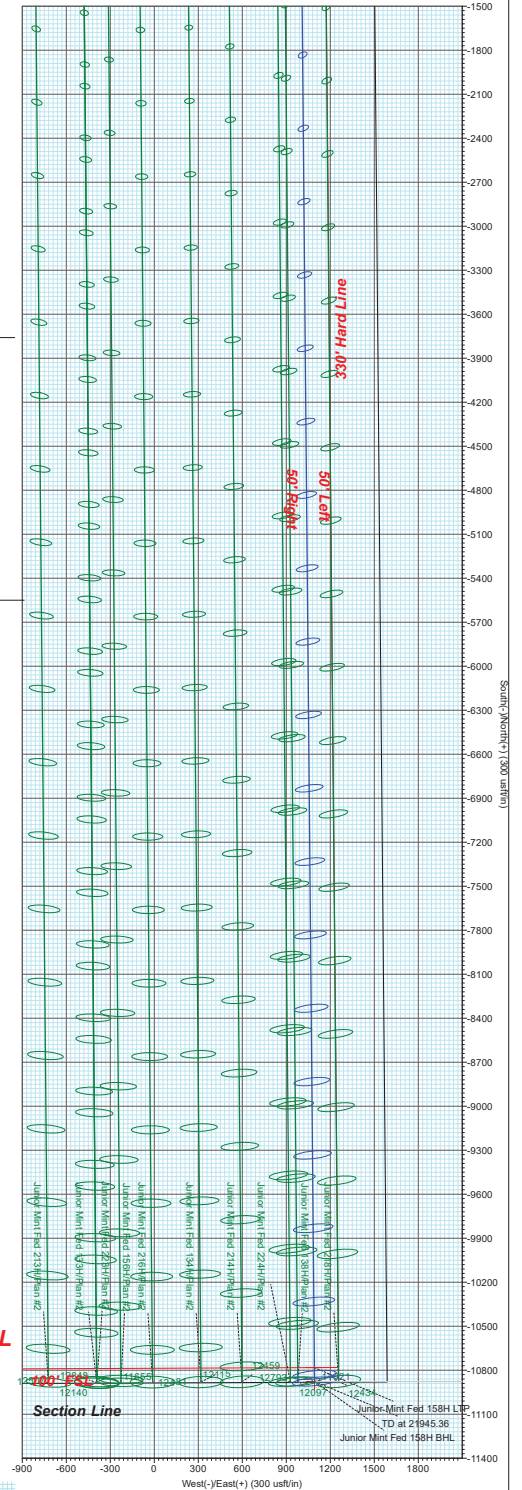
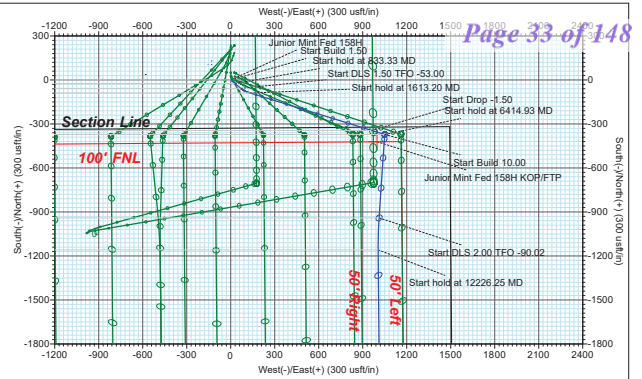
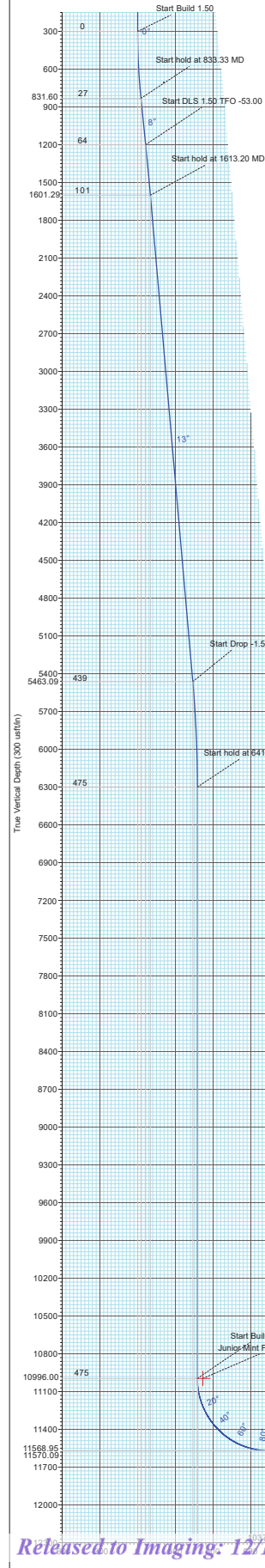
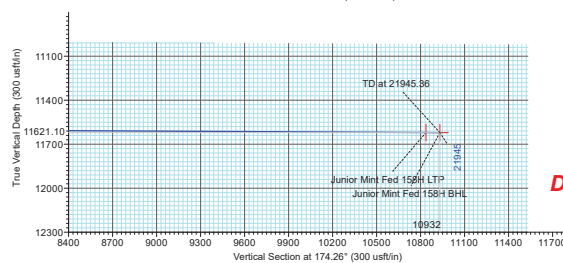
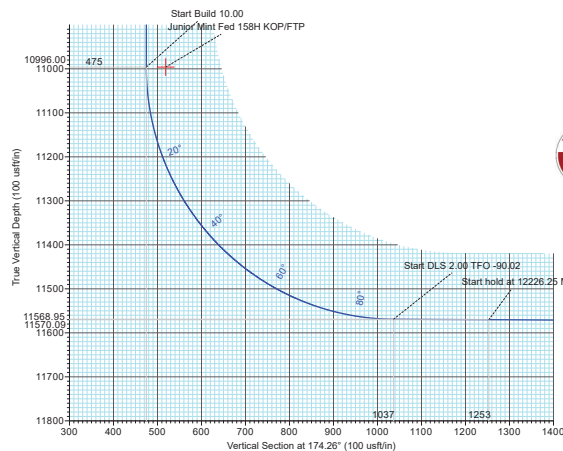
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	415516.00	845189.00	32.1385254	-103.3516717	

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSeet	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
833.33	8.00	130.00	831.60	-23.89	28.48	1.50	130.00	26.62	
1205.35	8.00	130.00	1200.00	-57.17	68.14	0.00	0.00	63.70	
1613.20	12.66	107.14	1601.29	-88.62	132.64	1.50	-53.00	101.44	
5571.17	12.66	107.14	5463.09	-344.21	961.31	0.00	0.00	438.63	
6414.93	0.00	0.00	6300.00	-371.57	1050.00	1.50	180.00	474.72	
11110.93	0.00	0.00	10996.00	-371.57	1050.00	0.00	0.00	474.72	
12007.93	89.70	183.85	11568.95	-940.24	1011.73	10.00	183.85	1036.71	
12226.25	89.70	179.48	11570.09	-1158.42	1005.38	2.00	-90.02	1253.16	
21945.36	89.70	179.48	11621.10	-10877.00	1093.00	0.00	0.00	10931.78	

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Junior Mint Fed 158H KOP/FTP	10996.00	-421.00	998.00	415095.00	846187.00	32.1373433	-103.3484603
Junior Mint Fed 158H LTP	11620.60	-10782.00	1092.00	404734.00	846281.00	32.1088632	-103.3484626
Junior Mint Fed 158H BHL	11621.10	-10877.00	1093.00	404639.00	846282.00	32.1086021	-103.3484621



Do Not Cross SL

Civitas Resources

Lea County, NM (NAD 83)
Junior Mint Fed Pad
Junior Mint Fed 158H

OH

Plan: Plan #2



Standard Plan Report

18 August, 2025

Total Report Version 1.80

COMPASS 5000.16 Build 97

ATTENTION

All annotation callouts related to distances are uncertified and are approximated footages using available software and measurement tools. They should not be mistaken as an official record, which can only be obtained via a certified land surveyor.

Total Directional Planned Survey Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Well:	Junior Mint Fed 158H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	.Total Directional Production DB

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

Site	Junior Mint Fed Pad				
Site Position:		Northing:	414,635.00 usft	Latitude:	32.1361627
From:	Map	Easting:	842,835.00 usft	Longitude:	-103.3593016
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "		

Well	Junior Mint Fed 158H					
Well Position	+N/-S	0.00 usft	Northing:	415,516.00 usft	Latitude:	32.1385255
	+E/-W	0.00 usft	Easting:	845,189.00 usft	Longitude:	-103.3516717
Position Uncertainty		0.50 usft	Wellhead Elevation:	usft	Ground Level:	3,220.00 usft
Grid Convergence:		0.52 °				

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2025	8/18/2025	6.05	59.57	47,061.90000000

Design	Plan #2				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	174.26	

Survey Tool Program	Date	8/18/2025			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	21,945.32	Plan #2 (OH)	MWD+HRGM+SAG+FDIF OWSG	MWD + HRGM + SAG + FDIR Correction	

Total Directional Planned Survey Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Well:	Junior Mint Fed 158H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	.Total Directional Production DB

Plan Summary

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
833.33	8.00	130.00	831.60	-23.89	28.48	1.50	1.50	0.00	130.00	
1,205.35	8.00	130.00	1,200.00	-57.17	68.14	0.00	0.00	0.00	0.00	
1,613.20	12.66	107.14	1,601.29	-88.62	132.64	1.50	1.14	-5.60	-53.00	
5,571.17	12.66	107.14	5,463.09	-344.21	961.31	0.00	0.00	0.00	0.00	
6,414.93	0.00	0.00	6,300.00	-371.57	1,050.00	1.50	-1.50	0.00	180.00	
11,110.93	0.00	0.00	10,996.00	-371.57	1,050.00	0.00	0.00	0.00	0.00	
12,007.93	89.70	183.85	11,568.95	-940.24	1,011.73	10.00	10.00	0.00	183.85	
12,226.25	89.70	179.48	11,570.10	-1,158.42	1,005.38	2.00	0.00	-2.00	-90.02	
21,945.36	89.70	179.48	11,621.10	-10,877.00	1,093.00	0.00	0.00	0.00	0.00	

Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates		Map Coordinates		Geo Coordinates		Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
				+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude (°)	Longitude (°)				
0.00	0.00	0.00	0.00	0.00	0.00	415,516.00	845,189.00	32.1385255	-103.3516717	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	415,516.00	845,189.00	32.1385255	-103.3516717	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	415,516.00	845,189.00	32.1385255	-103.3516717	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	415,516.00	845,189.00	32.1385255	-103.3516717	0.00	0.00	0.00	0.00
400.00	1.50	130.00	399.99	-0.84	1.00	415,515.16	845,190.00	32.1385231	-103.3516685	0.94	1.50	1.50	0.00
500.00	3.00	130.00	499.91	-3.36	4.01	415,512.64	845,193.01	32.1385161	-103.3516588	3.75	1.50	1.50	0.00
600.00	4.50	130.00	599.69	-7.57	9.02	415,508.43	845,198.02	32.1385044	-103.3516428	8.43	1.50	1.50	0.00
700.00	6.00	130.00	699.27	-13.45	16.03	415,502.55	845,205.03	32.1384881	-103.3516203	14.99	1.50	1.50	0.00
800.00	7.50	130.00	798.57	-21.01	25.03	415,494.99	845,214.03	32.1384671	-103.3515914	23.40	1.50	1.50	0.00
833.33	8.00	130.00	831.60	-23.89	28.48	415,492.11	845,217.48	32.1384591	-103.3515804	26.62	1.50	1.50	0.00
900.00	8.00	130.00	897.62	-29.86	35.58	415,486.14	845,224.58	32.1384425	-103.3515576	33.27	0.00	0.00	0.00
1,000.00	8.00	130.00	996.65	-38.80	46.25	415,477.20	845,235.25	32.1384177	-103.3515234	43.23	0.00	0.00	0.00
1,100.00	8.00	130.00	1,095.67	-47.75	56.91	415,468.25	845,245.91	32.1383928	-103.3514892	53.20	0.00	0.00	0.00
1,205.35	8.00	130.00	1,200.00	-57.17	68.14	415,458.83	845,257.14	32.1383666	-103.3514532	63.70	0.00	0.00	0.00
1,300.00	8.93	122.67	1,293.62	-65.37	79.37	415,450.63	845,268.37	32.1383438	-103.3514172	72.98	1.50	0.98	-7.74
1,400.00	10.03	116.49	1,392.26	-73.45	93.69	415,442.55	845,282.69	32.1383212	-103.3513712	82.45	1.50	1.10	-6.18
1,500.00	11.23	111.57	1,490.54	-80.91	110.54	415,435.09	845,299.54	32.1383003	-103.3513170	91.56	1.50	1.20	-4.92
1,600.00	12.49	107.61	1,588.41	-87.76	129.89	415,428.24	845,318.89	32.1382810	-103.3512547	100.31	1.50	1.26	-3.96
1,613.20	12.66	107.14	1,601.29	-88.62	132.64	415,427.38	845,321.64	32.1382786	-103.3512458	101.44	1.50	1.29	-3.52
1,700.00	12.66	107.14	1,685.98	-94.22	150.81	415,421.78	845,339.81	32.1382627	-103.3511873	108.83	0.00	0.00	0.00
1,800.00	12.66	107.14	1,783.55	-100.68	171.75	415,415.32	845,360.75	32.1382444	-103.3511198	117.35	0.00	0.00	0.00
1,900.00	12.66	107.14	1,881.12	-107.14	192.68	415,408.86	845,381.68	32.1382262	-103.3510524	125.87	0.00	0.00	0.00
2,000.00	12.66	107.14	1,978.69	-113.60	213.62	415,402.40	845,402.62	32.1382079	-103.3509850	134.39	0.00	0.00	0.00

Total Directional Planned Survey Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Well:	Junior Mint Fed 158H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	.Total Directional Production DB

Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,100.00	12.66	107.14	2,076.26	-120.05	234.56	415,395.95	845,423.56	32.1381896	-103.3509175	142.91	0.00	0.00	0.00
2,200.00	12.66	107.14	2,173.83	-126.51	255.49	415,389.49	845,444.49	32.1381713	-103.3508501	151.43	0.00	0.00	0.00
2,300.00	12.66	107.14	2,271.40	-132.97	276.43	415,383.03	845,465.43	32.1381531	-103.3507826	159.95	0.00	0.00	0.00
2,400.00	12.66	107.14	2,368.97	-139.43	297.37	415,376.57	845,486.37	32.1381348	-103.3507152	168.47	0.00	0.00	0.00
2,500.00	12.66	107.14	2,466.54	-145.88	318.30	415,370.12	845,507.30	32.1381165	-103.3506477	176.99	0.00	0.00	0.00
2,600.00	12.66	107.14	2,564.11	-152.34	339.24	415,363.66	845,528.24	32.1380982	-103.3505803	185.51	0.00	0.00	0.00
2,700.00	12.66	107.14	2,661.68	-158.80	360.18	415,357.20	845,549.18	32.1380800	-103.3505129	194.03	0.00	0.00	0.00
2,800.00	12.66	107.14	2,759.25	-165.26	381.11	415,350.74	845,570.11	32.1380617	-103.3504454	202.55	0.00	0.00	0.00
2,900.00	12.66	107.14	2,856.82	-171.72	402.05	415,344.28	845,591.05	32.1380434	-103.3503780	211.07	0.00	0.00	0.00
3,000.00	12.66	107.14	2,954.39	-178.17	422.99	415,337.83	845,611.99	32.1380251	-103.3503105	219.58	0.00	0.00	0.00
3,100.00	12.66	107.14	3,051.96	-184.63	443.93	415,331.37	845,632.93	32.1380069	-103.3502431	228.10	0.00	0.00	0.00
3,200.00	12.66	107.14	3,149.53	-191.09	464.86	415,324.91	845,653.86	32.1379886	-103.3501756	236.62	0.00	0.00	0.00
3,300.00	12.66	107.14	3,247.10	-197.55	485.80	415,318.45	845,674.80	32.1379703	-103.3501082	245.14	0.00	0.00	0.00
3,400.00	12.66	107.14	3,344.67	-204.00	506.74	415,312.00	845,695.74	32.1379520	-103.3500408	253.66	0.00	0.00	0.00
3,500.00	12.66	107.14	3,442.24	-210.46	527.67	415,305.54	845,716.67	32.1379338	-103.3499733	262.18	0.00	0.00	0.00
3,600.00	12.66	107.14	3,539.81	-216.92	548.61	415,299.08	845,737.61	32.1379155	-103.3499059	270.70	0.00	0.00	0.00
3,700.00	12.66	107.14	3,637.39	-223.38	569.55	415,292.62	845,758.55	32.1378972	-103.3498384	279.22	0.00	0.00	0.00
3,800.00	12.66	107.14	3,734.96	-229.84	590.48	415,286.16	845,779.48	32.1378789	-103.3497710	287.74	0.00	0.00	0.00
3,900.00	12.66	107.14	3,832.53	-236.29	611.42	415,279.71	845,800.42	32.1378607	-103.3497036	296.26	0.00	0.00	0.00
4,000.00	12.66	107.14	3,930.10	-242.75	632.36	415,273.25	845,821.36	32.1378424	-103.3496361	304.78	0.00	0.00	0.00
4,100.00	12.66	107.14	4,027.67	-249.21	653.29	415,266.79	845,842.29	32.1378241	-103.3495687	313.30	0.00	0.00	0.00
4,200.00	12.66	107.14	4,125.24	-255.67	674.23	415,260.33	845,863.23	32.1378058	-103.3495012	321.82	0.00	0.00	0.00
4,300.00	12.66	107.14	4,222.81	-262.12	695.17	415,253.88	845,884.17	32.1377876	-103.3494338	330.34	0.00	0.00	0.00
4,400.00	12.66	107.14	4,320.38	-268.58	716.10	415,247.42	845,905.10	32.1377693	-103.3493663	338.86	0.00	0.00	0.00
4,500.00	12.66	107.14	4,417.95	-275.04	737.04	415,240.96	845,926.04	32.1377510	-103.3492989	347.38	0.00	0.00	0.00
4,600.00	12.66	107.14	4,515.52	-281.50	757.98	415,234.50	845,946.98	32.1377327	-103.3492315	355.90	0.00	0.00	0.00
4,700.00	12.66	107.14	4,613.09	-287.96	778.92	415,228.04	845,967.91	32.1377145	-103.3491640	364.41	0.00	0.00	0.00
4,800.00	12.66	107.14	4,710.66	-294.41	799.85	415,221.59	845,988.85	32.1376962	-103.3490966	372.93	0.00	0.00	0.00
4,900.00	12.66	107.14	4,808.23	-300.87	820.79	415,215.13	846,009.79	32.1376779	-103.3490291	381.45	0.00	0.00	0.00
5,000.00	12.66	107.14	4,905.80	-307.33	841.73	415,208.67	846,030.73	32.1376596	-103.3489617	389.97	0.00	0.00	0.00
5,100.00	12.66	107.14	5,003.37	-313.79	862.66	415,202.21	846,051.66	32.1376414	-103.3488943	398.49	0.00	0.00	0.00
5,200.00	12.66	107.14	5,100.94	-320.25	883.60	415,195.75	846,072.60	32.1376231	-103.3488268	407.01	0.00	0.00	0.00
5,300.00	12.66	107.14	5,198.51	-326.70	904.54	415,189.30	846,093.54	32.1376048	-103.3487594	415.53	0.00	0.00	0.00
5,400.00	12.66	107.14	5,296.08	-333.16	925.47	415,182.84	846,114.47	32.1375865	-103.3486919	424.05	0.00	0.00	0.00
5,500.00	12.66	107.14	5,393.65	-339.62	946.41	415,176.38	846,135.41	32.1375683	-103.3486245	432.57	0.00	0.00	0.00
5,571.17	12.66	107.14	5,463.09	-344.21	961.31	415,171.79	846,150.31	32.1375553	-103.3485765	438.63	0.00	0.00	0.00
5,600.00	12.22	107.14	5,491.24	-346.05	967.25	415,169.96	846,156.25	32.1375501	-103.3485574	441.05	1.50	-1.50	0.00

Total Directional Planned Survey Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Well:	Junior Mint Fed 158H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	.Total Directional Production DB

Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,700.00	10.72	107.14	5,589.24	-351.91	986.25	415,164.09	846,175.25	32.1375335	-103.3484961	448.78	1.50	-1.50	0.00
5,800.00	9.22	107.14	5,687.73	-357.01	1,002.80	415,158.99	846,191.80	32.1375190	-103.3484428	455.52	1.50	-1.50	0.00
5,900.00	7.72	107.14	5,786.63	-361.36	1,016.88	415,154.64	846,205.88	32.1375067	-103.3483975	461.25	1.50	-1.50	0.00
6,000.00	6.22	107.14	5,885.89	-364.93	1,028.49	415,151.07	846,217.49	32.1374966	-103.3483601	465.97	1.50	-1.50	0.00
6,100.00	4.72	107.14	5,985.43	-367.75	1,037.60	415,148.25	846,226.60	32.1374887	-103.3483307	469.68	1.50	-1.50	0.00
6,200.00	3.22	107.14	6,085.19	-369.79	1,044.22	415,146.21	846,233.22	32.1374829	-103.3483094	472.37	1.50	-1.50	0.00
6,300.00	1.72	107.14	6,185.09	-371.06	1,048.35	415,144.94	846,237.35	32.1374793	-103.3482961	474.05	1.50	-1.50	0.00
6,400.00	0.22	107.14	6,285.07	-371.56	1,049.97	415,144.44	846,238.97	32.1374779	-103.3482909	474.71	1.50	-1.50	0.00
6,414.93	0.00	0.00	6,300.00	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	1.50	-1.50	0.00
6,500.00	0.00	0.00	6,385.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
6,600.00	0.00	0.00	6,485.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
6,700.00	0.00	0.00	6,585.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
6,800.00	0.00	0.00	6,685.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
6,900.00	0.00	0.00	6,785.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
7,000.00	0.00	0.00	6,885.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
7,100.00	0.00	0.00	6,985.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
7,200.00	0.00	0.00	7,085.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
7,300.00	0.00	0.00	7,185.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
7,400.00	0.00	0.00	7,285.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
7,500.00	0.00	0.00	7,385.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
7,600.00	0.00	0.00	7,485.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
7,700.00	0.00	0.00	7,585.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
7,800.00	0.00	0.00	7,685.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
7,900.00	0.00	0.00	7,785.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
8,000.00	0.00	0.00	7,885.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
8,100.00	0.00	0.00	7,985.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
8,200.00	0.00	0.00	8,085.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
8,300.00	0.00	0.00	8,185.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
8,400.00	0.00	0.00	8,285.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
8,500.00	0.00	0.00	8,385.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
8,600.00	0.00	0.00	8,485.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
8,700.00	0.00	0.00	8,585.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
8,800.00	0.00	0.00	8,685.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
8,900.00	0.00	0.00	8,785.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
9,000.00	0.00	0.00	8,885.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
9,100.00	0.00	0.00	8,985.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
9,200.00	0.00	0.00	9,085.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
9,300.00	0.00	0.00	9,185.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00

Total Directional Planned Survey Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Well:	Junior Mint Fed 158H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	.Total Directional Production DB

Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,400.00	0.00	0.00	9,285.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
9,500.00	0.00	0.00	9,385.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
9,600.00	0.00	0.00	9,485.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
9,700.00	0.00	0.00	9,585.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
9,800.00	0.00	0.00	9,685.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
9,900.00	0.00	0.00	9,785.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
10,000.00	0.00	0.00	9,885.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
10,100.00	0.00	0.00	9,985.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
10,200.00	0.00	0.00	10,085.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
10,300.00	0.00	0.00	10,185.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
10,400.00	0.00	0.00	10,285.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
10,500.00	0.00	0.00	10,385.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
10,600.00	0.00	0.00	10,485.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
10,700.00	0.00	0.00	10,585.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
10,800.00	0.00	0.00	10,685.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
10,900.00	0.00	0.00	10,785.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
11,000.00	0.00	0.00	10,885.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
11,100.00	0.00	0.00	10,985.07	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
11,110.93	0.00	0.00	10,996.00	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	0.00	0.00	0.00
11,112.73	0.18	183.85	10,997.80	-371.57	1,050.00	415,144.43	846,239.00	32.1374778	-103.3482908	474.72	10.00	10.00	0.00
Junior Mint Fed 158H KOP/FTP													
11,150.00	3.91	183.85	11,035.04	-372.90	1,049.91	415,143.10	846,238.91	32.1374742	-103.3482911	476.04	10.00	10.00	0.00
11,200.00	8.91	183.85	11,084.72	-378.46	1,049.54	415,137.54	846,238.54	32.1374589	-103.3482925	481.54	10.00	10.00	0.00
11,250.00	13.91	183.85	11,133.71	-388.33	1,048.87	415,127.67	846,237.87	32.1374318	-103.3482949	491.28	10.00	10.00	0.00
11,300.00	18.91	183.85	11,181.66	-402.42	1,047.92	415,113.58	846,236.92	32.1373931	-103.3482984	505.20	10.00	10.00	0.00
11,350.00	23.91	183.85	11,228.20	-420.62	1,046.70	415,095.38	846,235.70	32.1373431	-103.3483029	523.19	10.00	10.00	0.00
11,400.00	28.91	183.85	11,272.97	-442.80	1,045.21	415,073.20	846,234.21	32.1372822	-103.3483084	545.11	10.00	10.00	0.00
11,450.00	33.91	183.85	11,315.63	-468.79	1,043.46	415,047.21	846,232.46	32.1372108	-103.3483148	570.80	10.00	10.00	0.00
11,500.00	38.91	183.85	11,355.85	-498.39	1,041.47	415,017.61	846,230.47	32.1371295	-103.3483221	600.05	10.00	10.00	0.00
11,550.00	43.91	183.85	11,393.34	-531.37	1,039.25	414,984.63	846,228.25	32.1370389	-103.3483303	632.65	10.00	10.00	0.00
11,600.00	48.91	183.85	11,427.81	-567.49	1,036.82	414,948.51	846,225.82	32.1369397	-103.3483392	668.34	10.00	10.00	0.00
11,650.00	53.91	183.85	11,458.99	-606.47	1,034.19	414,909.53	846,223.19	32.1368326	-103.3483488	706.87	10.00	10.00	0.00
11,700.00	58.91	183.85	11,486.64	-648.01	1,031.40	414,867.99	846,220.40	32.1367185	-103.3483591	747.92	10.00	10.00	0.00
11,750.00	63.91	183.85	11,510.56	-691.80	1,028.45	414,824.20	846,217.45	32.1365982	-103.3483699	791.19	10.00	10.00	0.00
11,800.00	68.91	183.85	11,530.57	-737.51	1,025.37	414,778.49	846,214.37	32.1364727	-103.3483812	836.36	10.00	10.00	0.00
11,850.00	73.91	183.85	11,546.51	-784.78	1,022.19	414,731.22	846,211.19	32.1363428	-103.3483928	883.07	10.00	10.00	0.00
11,900.00	78.91	183.85	11,558.25	-833.25	1,018.93	414,682.75	846,207.93	32.1362097	-103.3484048	930.98	10.00	10.00	0.00
11,950.00	83.91	183.85	11,565.72	-882.56	1,015.61	414,633.44	846,204.61	32.1360742	-103.3484170	979.71	10.00	10.00	0.00

Total Directional Planned Survey Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Well:	Junior Mint Fed 158H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	.Total Directional Production DB

Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,000.00	88.91	183.85	11,568.85	-932.33	1,012.26	414,583.67	846,201.26	32.1359375	-103.3484293	1,028.90	10.00	10.00	0.00
12,007.93	89.70	183.85	11,568.95	-940.24	1,011.73	414,575.76	846,200.73	32.1359158	-103.3484312	1,036.71	10.00	10.00	0.00
12,100.00	89.70	182.01	11,569.43	-1,032.19	1,007.03	414,483.81	846,196.03	32.1356632	-103.3484491	1,127.73	2.00	0.00	-2.00
12,200.00	89.70	180.01	11,569.96	-1,132.17	1,005.27	414,383.83	846,194.27	32.1353884	-103.3484578	1,227.03	2.00	0.00	-2.00
12,226.25	89.70	179.48	11,570.10	-1,158.42	1,005.38	414,357.58	846,194.38	32.1353163	-103.3484582	1,253.16	2.00	0.00	-2.00
12,300.00	89.70	179.48	11,570.48	-1,232.16	1,006.05	414,283.84	846,195.05	32.1351136	-103.3484582	1,326.60	0.00	0.00	0.00
12,400.00	89.70	179.48	11,571.01	-1,332.16	1,006.95	414,183.84	846,195.95	32.1348387	-103.3484583	1,426.19	0.00	0.00	0.00
12,500.00	89.70	179.48	11,571.53	-1,432.15	1,007.85	414,083.85	846,196.85	32.1345638	-103.3484583	1,525.77	0.00	0.00	0.00
12,600.00	89.70	179.48	11,572.06	-1,532.15	1,008.75	413,983.85	846,197.75	32.1342890	-103.3484583	1,625.35	0.00	0.00	0.00
12,700.00	89.70	179.48	11,572.58	-1,632.14	1,009.65	413,883.86	846,198.65	32.1340141	-103.3484584	1,724.94	0.00	0.00	0.00
12,800.00	89.70	179.48	11,573.11	-1,732.14	1,010.55	413,783.86	846,199.55	32.1337393	-103.3484584	1,824.52	0.00	0.00	0.00
12,900.00	89.70	179.48	11,573.63	-1,832.13	1,011.46	413,683.87	846,200.46	32.1334644	-103.3484585	1,924.10	0.00	0.00	0.00
13,000.00	89.70	179.48	11,574.16	-1,932.13	1,012.36	413,583.87	846,201.36	32.1331895	-103.3484585	2,023.69	0.00	0.00	0.00
13,100.00	89.70	179.48	11,574.68	-2,032.12	1,013.26	413,483.88	846,202.26	32.1329147	-103.3484585	2,123.27	0.00	0.00	0.00
13,200.00	89.70	179.48	11,575.21	-2,132.11	1,014.16	413,383.89	846,203.16	32.1326398	-103.3484586	2,222.85	0.00	0.00	0.00
13,300.00	89.70	179.48	11,575.73	-2,232.11	1,015.06	413,283.89	846,204.06	32.1323650	-103.3484586	2,322.44	0.00	0.00	0.00
13,400.00	89.70	179.48	11,576.25	-2,332.10	1,015.96	413,183.90	846,204.96	32.1320901	-103.3484587	2,422.02	0.00	0.00	0.00
13,500.00	89.70	179.48	11,576.78	-2,432.10	1,016.86	413,083.90	846,205.86	32.1318152	-103.3484587	2,521.61	0.00	0.00	0.00
13,600.00	89.70	179.48	11,577.30	-2,532.09	1,017.77	412,983.91	846,206.77	32.1315404	-103.3484588	2,621.19	0.00	0.00	0.00
13,700.00	89.70	179.48	11,577.83	-2,632.09	1,018.67	412,883.91	846,207.67	32.1312655	-103.3484588	2,720.77	0.00	0.00	0.00
13,800.00	89.70	179.48	11,578.35	-2,732.08	1,019.57	412,783.92	846,208.57	32.1309906	-103.3484588	2,820.36	0.00	0.00	0.00
13,900.00	89.70	179.48	11,578.88	-2,832.08	1,020.47	412,683.92	846,209.47	32.1307158	-103.3484589	2,919.94	0.00	0.00	0.00
14,000.00	89.70	179.48	11,579.40	-2,932.07	1,021.37	412,583.93	846,210.37	32.1304409	-103.3484589	3,019.52	0.00	0.00	0.00
14,100.00	89.70	179.48	11,579.93	-3,032.07	1,022.27	412,483.93	846,211.27	32.1301661	-103.3484590	3,119.11	0.00	0.00	0.00
14,200.00	89.70	179.48	11,580.45	-3,132.06	1,023.18	412,383.94	846,212.18	32.1298912	-103.3484590	3,218.69	0.00	0.00	0.00
14,300.00	89.70	179.48	11,580.98	-3,232.05	1,024.08	412,283.95	846,213.08	32.1296163	-103.3484590	3,318.27	0.00	0.00	0.00
14,400.00	89.70	179.48	11,581.50	-3,332.05	1,024.98	412,183.95	846,213.98	32.1293415	-103.3484591	3,417.86	0.00	0.00	0.00
14,500.00	89.70	179.48	11,582.03	-3,432.04	1,025.88	412,083.96	846,214.88	32.1290666	-103.3484591	3,517.44	0.00	0.00	0.00
14,600.00	89.70	179.48	11,582.55	-3,532.04	1,026.78	411,983.96	846,215.78	32.1287918	-103.3484592	3,617.02	0.00	0.00	0.00
14,700.00	89.70	179.48	11,583.08	-3,632.03	1,027.68	411,883.97	846,216.68	32.1285169	-103.3484592	3,716.61	0.00	0.00	0.00
14,800.00	89.70	179.48	11,583.60	-3,732.03	1,028.58	411,783.97	846,217.58	32.1282420	-103.3484592	3,816.19	0.00	0.00	0.00
14,900.00	89.70	179.48	11,584.13	-3,832.02	1,029.49	411,683.98	846,218.49	32.1279672	-103.3484593	3,915.77	0.00	0.00	0.00
15,000.00	89.70	179.48	11,584.65	-3,932.02	1,030.39	411,583.98	846,219.39	32.1276923	-103.3484593	4,015.36	0.00	0.00	0.00
15,100.00	89.70	179.48	11,585.18	-4,032.01	1,031.29	411,483.99	846,220.29	32.1274174	-103.3484594	4,114.94	0.00	0.00	0.00
15,200.00	89.70	179.48	11,585.70	-4,132.01	1,032.19	411,383.99	846,221.19	32.1271426	-103.3484594	4,214.52	0.00	0.00	0.00
15,300.00	89.70	179.48	11,586.23	-4,232.00	1,033.09	411,284.00	846,222.09	32.1268677	-103.3484594	4,314.11	0.00	0.00	0.00
15,400.00	89.70	179.48	11,586.75	-4,332.00	1,033.99	411,184.00	846,222.99	32.1265929	-103.3484595	4,413.69	0.00	0.00	0.00

Total Directional Planned Survey Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Well:	Junior Mint Fed 158H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	.Total Directional Production DB

Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,500.00	89.70	179.48	11,587.28	-4,431.99	1,034.89	411,084.01	846,223.89	32.1263180	-103.3484595	4,513.27	0.00	0.00	0.00
15,600.00	89.70	179.48	11,587.80	-4,531.98	1,035.80	410,984.02	846,224.80	32.1260431	-103.3484596	4,612.86	0.00	0.00	0.00
15,700.00	89.70	179.48	11,588.33	-4,631.98	1,036.70	410,884.02	846,225.70	32.1257683	-103.3484596	4,712.44	0.00	0.00	0.00
15,800.00	89.70	179.48	11,588.85	-4,731.97	1,037.60	410,784.03	846,226.60	32.1254934	-103.3484597	4,812.02	0.00	0.00	0.00
15,900.00	89.70	179.48	11,589.37	-4,831.97	1,038.50	410,684.03	846,227.50	32.1252186	-103.3484597	4,911.61	0.00	0.00	0.00
16,000.00	89.70	179.48	11,589.90	-4,931.96	1,039.40	410,584.04	846,228.40	32.1249437	-103.3484597	5,011.19	0.00	0.00	0.00
16,100.00	89.70	179.48	11,590.42	-5,031.96	1,040.30	410,484.04	846,229.30	32.1246688	-103.3484598	5,110.77	0.00	0.00	0.00
16,200.00	89.70	179.48	11,590.95	-5,131.95	1,041.21	410,384.05	846,230.21	32.1243940	-103.3484598	5,210.36	0.00	0.00	0.00
16,300.00	89.70	179.48	11,591.47	-5,231.95	1,042.11	410,284.05	846,231.11	32.1241191	-103.3484599	5,309.94	0.00	0.00	0.00
16,400.00	89.70	179.48	11,592.00	-5,331.94	1,043.01	410,184.06	846,232.01	32.1238442	-103.3484599	5,409.52	0.00	0.00	0.00
16,500.00	89.70	179.48	11,592.52	-5,431.94	1,043.91	410,084.06	846,232.91	32.1235694	-103.3484599	5,509.11	0.00	0.00	0.00
16,600.00	89.70	179.48	11,593.05	-5,531.93	1,044.81	409,984.07	846,233.81	32.1232945	-103.3484600	5,608.69	0.00	0.00	0.00
16,700.00	89.70	179.48	11,593.57	-5,631.92	1,045.71	409,884.08	846,234.71	32.1230197	-103.3484600	5,708.27	0.00	0.00	0.00
16,800.00	89.70	179.48	11,594.10	-5,731.92	1,046.61	409,784.08	846,235.61	32.1227448	-103.3484601	5,807.86	0.00	0.00	0.00
16,900.00	89.70	179.48	11,594.62	-5,831.91	1,047.52	409,684.09	846,236.52	32.1224699	-103.3484601	5,907.44	0.00	0.00	0.00
17,000.00	89.70	179.48	11,595.15	-5,931.91	1,048.42	409,584.09	846,237.42	32.1221951	-103.3484601	6,007.02	0.00	0.00	0.00
17,100.00	89.70	179.48	11,595.67	-6,031.90	1,049.32	409,484.10	846,238.32	32.1219202	-103.3484602	6,106.61	0.00	0.00	0.00
17,200.00	89.70	179.48	11,596.20	-6,131.90	1,050.22	409,384.10	846,239.22	32.1216453	-103.3484602	6,206.19	0.00	0.00	0.00
17,300.00	89.70	179.48	11,596.72	-6,231.89	1,051.12	409,284.11	846,240.12	32.1213705	-103.3484603	6,305.77	0.00	0.00	0.00
17,400.00	89.70	179.48	11,597.25	-6,331.89	1,052.02	409,184.11	846,241.02	32.1210956	-103.3484603	6,405.36	0.00	0.00	0.00
17,500.00	89.70	179.48	11,597.77	-6,431.88	1,052.92	409,084.12	846,241.92	32.1208208	-103.3484603	6,504.94	0.00	0.00	0.00
17,600.00	89.70	179.48	11,598.30	-6,531.88	1,053.83	408,984.12	846,242.83	32.1205459	-103.3484604	6,604.52	0.00	0.00	0.00
17,700.00	89.70	179.48	11,598.82	-6,631.87	1,054.73	408,884.13	846,243.73	32.1202710	-103.3484604	6,704.11	0.00	0.00	0.00
17,800.00	89.70	179.48	11,599.35	-6,731.86	1,055.63	408,784.14	846,244.63	32.1199962	-103.3484605	6,803.69	0.00	0.00	0.00
17,900.00	89.70	179.48	11,599.87	-6,831.86	1,056.53	408,684.14	846,245.53	32.1197213	-103.3484605	6,903.27	0.00	0.00	0.00
18,000.00	89.70	179.48	11,600.40	-6,931.85	1,057.43	408,584.15	846,246.43	32.1194464	-103.3484605	7,002.86	0.00	0.00	0.00
18,100.00	89.70	179.48	11,600.92	-7,031.85	1,058.33	408,484.15	846,247.33	32.1191716	-103.3484606	7,102.44	0.00	0.00	0.00
18,200.00	89.70	179.48	11,601.44	-7,131.84	1,059.24	408,384.16	846,248.24	32.1188967	-103.3484606	7,202.02	0.00	0.00	0.00
18,300.00	89.70	179.48	11,601.97	-7,231.84	1,060.14	408,284.16	846,249.14	32.1186219	-103.3484607	7,301.61	0.00	0.00	0.00
18,400.00	89.70	179.48	11,602.49	-7,331.83	1,061.04	408,184.17	846,250.04	32.1183470	-103.3484607	7,401.19	0.00	0.00	0.00
18,500.00	89.70	179.48	11,603.02	-7,431.83	1,061.94	408,084.17	846,250.94	32.1180721	-103.3484607	7,500.77	0.00	0.00	0.00
18,600.00	89.70	179.48	11,603.54	-7,531.82	1,062.84	407,984.18	846,251.84	32.1177973	-103.3484608	7,600.36	0.00	0.00	0.00
18,700.00	89.70	179.48	11,604.07	-7,631.82	1,063.74	407,884.18	846,252.74	32.1175224	-103.3484608	7,699.94	0.00	0.00	0.00
18,800.00	89.70	179.48	11,604.59	-7,731.81	1,064.64	407,784.19	846,253.64	32.1172475	-103.3484609	7,799.52	0.00	0.00	0.00
18,900.00	89.70	179.48	11,605.12	-7,831.80	1,065.55	407,684.20	846,254.55	32.1169727	-103.3484609	7,899.11	0.00	0.00	0.00
19,000.00	89.70	179.48	11,605.64	-7,931.80	1,066.45	407,584.20	846,255.45	32.1166978	-103.3484609	7,998.69	0.00	0.00	0.00
19,100.00	89.70	179.48	11,606.17	-8,031.79	1,067.35	407,484.21	846,256.35	32.1164230	-103.3484610	8,098.27	0.00	0.00	0.00
19,200.00	89.70	179.48	11,606.69	-8,131.79	1,068.25	407,384.21	846,257.25	32.1161481	-103.3484610	8,197.86	0.00	0.00	0.00

Total Directional Planned Survey Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Well:	Junior Mint Fed 158H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	.Total Directional Production DB

Planned Survey

Measured Depth (usft)	INC (°)	AZI (°)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Map Coordinates Northing (usft)	Easting (usft)	Geo Coordinates Latitude (°)	Longitude (°)	Vertical Dogleg Section Rate (usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
19,300.00	89.70	179.48	11,607.22	-8,231.78	1,069.15	407,284.22	846,258.15	32.1158732	-103.3484611	8,297.44	0.00	0.00
19,400.00	89.70	179.48	11,607.74	-8,331.78	1,070.05	407,184.22	846,259.05	32.1155984	-103.3484611	8,397.02	0.00	0.00
19,500.00	89.70	179.48	11,608.27	-8,431.77	1,070.96	407,084.23	846,259.95	32.1153235	-103.3484611	8,496.61	0.00	0.00
19,600.00	89.70	179.48	11,608.79	-8,531.77	1,071.86	406,984.23	846,260.86	32.1150487	-103.3484612	8,596.19	0.00	0.00
19,700.00	89.70	179.48	11,609.32	-8,631.76	1,072.76	406,884.24	846,261.76	32.1147738	-103.3484612	8,695.77	0.00	0.00
19,800.00	89.70	179.48	11,609.84	-8,731.76	1,073.66	406,784.24	846,262.66	32.1144989	-103.3484613	8,795.36	0.00	0.00
19,900.00	89.70	179.48	11,610.37	-8,831.75	1,074.56	406,684.25	846,263.56	32.1142241	-103.3484613	8,894.94	0.00	0.00
20,000.00	89.70	179.48	11,610.89	-8,931.74	1,075.46	406,584.26	846,264.46	32.1139492	-103.3484613	8,994.52	0.00	0.00
20,100.00	89.70	179.48	11,611.42	-9,031.74	1,076.36	406,484.26	846,265.36	32.1136743	-103.3484614	9,094.11	0.00	0.00
20,200.00	89.70	179.48	11,611.94	-9,131.73	1,077.27	406,384.27	846,266.27	32.1133995	-103.3484614	9,193.69	0.00	0.00
20,300.00	89.70	179.48	11,612.47	-9,231.73	1,078.17	406,284.27	846,267.17	32.1131246	-103.3484615	9,293.27	0.00	0.00
20,400.00	89.70	179.48	11,612.99	-9,331.72	1,079.07	406,184.28	846,268.07	32.1128498	-103.3484615	9,392.86	0.00	0.00
20,500.00	89.70	179.48	11,613.52	-9,431.72	1,079.97	406,084.28	846,268.97	32.1125749	-103.3484615	9,492.44	0.00	0.00
20,600.00	89.70	179.48	11,614.04	-9,531.71	1,080.87	405,984.29	846,269.87	32.1123000	-103.3484616	9,592.02	0.00	0.00
20,700.00	89.70	179.48	11,614.56	-9,631.71	1,081.77	405,884.29	846,270.77	32.1120252	-103.3484616	9,691.61	0.00	0.00
20,800.00	89.70	179.48	11,615.09	-9,731.70	1,082.67	405,784.30	846,271.67	32.1117503	-103.3484617	9,791.19	0.00	0.00
20,900.00	89.70	179.48	11,615.61	-9,831.70	1,083.58	405,684.30	846,272.58	32.1114754	-103.3484617	9,890.77	0.00	0.00
21,000.00	89.70	179.48	11,616.14	-9,931.69	1,084.48	405,584.31	846,273.48	32.1112006	-103.3484617	9,990.36	0.00	0.00
21,100.00	89.70	179.48	11,616.66	-10,031.69	1,085.38	405,484.32	846,274.38	32.1109257	-103.3484618	10,089.94	0.00	0.00
21,200.00	89.70	179.48	11,617.19	-10,131.68	1,086.28	405,384.32	846,275.28	32.1106509	-103.3484618	10,189.52	0.00	0.00
21,300.00	89.70	179.48	11,617.71	-10,231.67	1,087.18	405,284.33	846,276.18	32.1103760	-103.3484619	10,289.11	0.00	0.00
21,400.00	89.70	179.48	11,618.24	-10,331.67	1,088.08	405,184.33	846,277.08	32.1101011	-103.3484619	10,388.69	0.00	0.00
21,500.00	89.70	179.48	11,618.76	-10,431.66	1,088.99	405,084.34	846,277.99	32.1098263	-103.3484619	10,488.27	0.00	0.00
21,600.00	89.70	179.48	11,619.29	-10,531.66	1,089.89	404,984.34	846,278.89	32.1095514	-103.3484620	10,587.86	0.00	0.00
21,700.00	89.70	179.48	11,619.81	-10,631.65	1,090.79	404,884.35	846,279.79	32.1092765	-103.3484620	10,687.44	0.00	0.00
21,800.00	89.70	179.48	11,620.34	-10,731.65	1,091.69	404,784.35	846,280.69	32.1090017	-103.3484621	10,787.02	0.00	0.00
21,850.36	89.70	179.48	11,620.60	-10,782.00	1,092.14	404,734.00	846,281.14	32.1088633	-103.3484621	10,837.17	0.00	0.00
Junior Mint Fed 158H LTP												
21,900.00	89.70	179.48	11,620.86	-10,831.64	1,092.59	404,684.36	846,281.59	32.1087268	-103.3484621	10,886.61	0.00	0.00
21,945.36	89.70	179.48	11,621.10	-10,877.00	1,093.00	404,639.00	846,282.00	32.1086021	-103.3484621	10,931.78	0.00	0.00
Junior Mint Fed 158H BHL												

Total Directional Planned Survey Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Well:	Junior Mint Fed 158H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #2	Database:	.Total Directional Production DB

Design Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- Shape									
Junior Mint Fed 158H	0.00	0.00	10,996.00	-421.00	998.00	415,095.00	846,187.00	32.1373433	-103.3484602
- plan misses target center by 71.74usft at 11111.01usft MD (10996.08 TVD, -371.57 N, 1050.00 E)									
- Point									
Junior Mint Fed 158H	0.00	0.00	11,620.60	-10,782.00	1,092.00	404,734.00	846,281.00	32.1088633	-103.3484625
- plan misses target center by 0.14usft at 21850.35usft MD (11620.60 TVD, -10782.00 N, 1092.14 E)									
- Point									
Junior Mint Fed 158H	0.00	0.00	11,621.10	-10,877.00	1,093.00	404,639.00	846,282.00	32.1086021	-103.3484621
- plan hits target center									
- Point									

Checked By: _____ Approved By: _____ Date: _____

Civitas Resources

Lea County, NM (NAD 83)

Junior Mint Fed Pad

Junior Mint Fed 158H

OH

Plan #2



Anticollision Report

Minimum Magnetic Interference Warning level is 20' center to center

18 August, 2025

Total Report Version 1.70

COMPASS 5000.16 Build 97

[Click here for our anticollision policy](#)

ATTENTION

All offset data provided was gathered using available software and resources . Total Directional Services cannot guarantee the accuracy of all offset data , which should be verified for accuracy by the Operator.

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Reference	Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 2,433.18usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Well	Junior Mint Fed 158H					
Well Position	+N/-S	0.00 usft	Northing:	415,516.00 usft	Latitude:	32.1385255
	+E/-W	0.00 usft	Easting:	845,189.00 usft	Longitude:	-103.3516717
Position Uncertainty		0.50 usft	Wellhead Elevation:	usft	Ground Level:	3,220.00 usft
Grid Convergence:		0.52 °				

Survey Tool Program	Date	8/18/2025			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	21,945.32	Plan #2 (OH)	MWD+HRGM+SAG+FDIR (n	OWSG MWD + HRGM + SAG + FDIR Correction	

Experimental: Summary Highlights: Junior Mint Fed 158H

- At 5,200.00 MD, Junior Mint Fed 218H - OH - Plan #2 is 42.30 usft away with a 1.36 SF.
- At 5,300.00 MD, Junior Mint Fed 218H - OH - Plan #2 is 42.78 usft away with a 1.36 SF.
- At 11,762.90 MD, (O) Montera Fed Com 702H - OH - Plan #1 is 53.25 usft away with a 1.24 SF.

Offset Listing								
Offset Customer - Project - Site Name			Map Coordinates		Geographical Coordinates		Surface Uncertainty	
Offset Well	Ground Level	KB Height	Northing	Easting	Latitude	Longitude	Site	Well
- - Junior Mint Fed Pad								
(O) Montera Fed Com 603H -	3,220.00	3,250.00	414,471.55	844,206.13	32.1356793	-103.3548773	0.00	0.00
(O) Montera Fed Com 702H -	3,220.00	3,250.00	414,481.65	844,222.03	32.1357067	-103.3548256	0.00	0.00
Junior Mint Fed 113H -	3,223.00	3,249.00	415,646.00	845,059.00	32.1388860	-103.3520878	0.00	0.00
Junior Mint Fed 118H -	3,222.00	3,248.00	415,621.00	845,059.00	32.1388173	-103.3520885	0.00	0.00
Junior Mint Fed 124H -	3,222.00	3,248.00	415,621.00	845,034.00	32.1388179	-103.3521693	0.00	0.00
Junior Mint Fed 133H -	3,221.00	3,247.00	415,726.00	845,189.00	32.1391027	-103.3516655	0.00	0.50
Junior Mint Fed 134H -	3,220.00	3,247.00	415,566.00	845,189.00	32.1386629	-103.3516702	0.00	0.50
Junior Mint Fed 137H -	3,220.00	3,246.00	414,845.00	842,835.00	32.1367399	-103.3592955	0.00	0.50
Junior Mint Fed 138H -	3,220.00	3,246.00	415,541.00	845,189.00	32.1385942	-103.3516709	0.00	0.50
Junior Mint Fed 156H -	3,221.00	3,247.00	415,701.00	845,189.00	32.1390339	-103.3516662	0.00	0.50
Junior Mint Fed 213H -	3,221.00	3,247.00	415,701.00	845,214.00	32.1390333	-103.3515855	0.00	0.50
Junior Mint Fed 214H -	3,220.00	3,246.00	415,541.00	845,214.00	32.1385936	-103.3515902	0.00	0.50
Junior Mint Fed 216H -	3,222.00	3,248.00	415,751.00	845,189.00	32.1391714	-103.3516647	0.00	0.50
Junior Mint Fed 218H -	3,220.00	3,246.00	415,516.00	845,214.00	32.1385248	-103.3515909	0.00	0.50
Junior Mint Fed 223H -	3,222.00	3,248.00	415,751.00	845,214.00	32.1391707	-103.3515840	0.00	0.50
Junior Mint Fed 224H -	3,222.00	3,248.00	415,566.00	845,214.00	32.1386623	-103.3515894	0.00	0.50

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Summary

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Junior Mint Fed Pad						
(O) Montera Fed Com 603H - OH - Plan #1	11,825.42	11,679.07	849.25	810.31	21.81	CC, ES
(O) Montera Fed Com 603H - OH - Plan #1	11,900.00	11,698.14	852.30	813.14	21.77	SF
(O) Montera Fed Com 702H - OH - Plan #1	11,762.90	11,765.99	53.25	10.27	1.24	Collision Avoidance Req., CC
Junior Mint Fed 133H - OH - Plan #2	300.00	301.00	210.00	206.03	52.95	CC, ES
Junior Mint Fed 133H - OH - Plan #2	21,945.36	22,387.52	1,573.16	1,285.19	5.46	SF
Junior Mint Fed 134H - OH - Plan #2	300.00	301.00	50.00	46.04	12.63	CC, ES
Junior Mint Fed 134H - OH - Plan #2	21,945.36	22,335.19	918.38	656.89	3.51	SF
Junior Mint Fed 137H - OH - Plan 2	11,559.88	11,532.82	2,247.28	2,209.25	59.09	CC
Junior Mint Fed 137H - OH - Plan 2	21,945.36	22,512.84	2,284.17	1,999.71	8.03	ES, SF
Junior Mint Fed 138H - OH - Plan #2	300.00	300.00	25.00	21.04	6.31	CC, ES
Junior Mint Fed 138H - OH - Plan #2	5,300.00	5,310.64	97.96	70.00	3.50	SF
Junior Mint Fed 156H - OH - Plan #2	682.93	697.32	181.06	174.68	28.35	CC
Junior Mint Fed 156H - OH - Plan #2	700.00	714.27	181.10	174.63	27.97	ES
Junior Mint Fed 156H - OH - Plan #2	21,945.36	21,918.86	1,320.45	1,018.90	4.38	SF
Junior Mint Fed 213H - OH - Plan #2	300.00	301.00	186.68	182.72	47.07	CC
Junior Mint Fed 213H - OH - Plan #2	400.00	400.99	187.38	182.70	40.04	ES
Junior Mint Fed 213H - OH - Plan #2	21,945.36	22,830.04	2,019.76	1,743.92	7.32	SF
Junior Mint Fed 214H - OH - Plan #2	300.00	300.00	35.36	31.39	8.92	CC
Junior Mint Fed 214H - OH - Plan #2	400.00	399.61	35.79	31.13	7.68	ES
Junior Mint Fed 214H - OH - Plan #2	21,945.36	22,703.35	973.28	790.06	5.31	SF
Junior Mint Fed 216H - OH - Plan #2	300.00	302.00	235.00	231.03	59.21	CC, ES
Junior Mint Fed 216H - OH - Plan #2	21,945.36	22,719.79	1,399.44	1,149.66	5.60	SF
Junior Mint Fed 218H - OH - Plan #2	300.00	300.00	25.00	21.04	6.31	CC
Junior Mint Fed 218H - OH - Plan #2	5,200.00	5,196.70	42.30	11.20	1.36	Collision Avoidance Req., ES
Junior Mint Fed 218H - OH - Plan #2	5,300.00	5,296.68	42.78	11.22	1.36	Collision Avoidance Req., SF
Junior Mint Fed 223H - OH - Plan #2	300.00	302.00	236.33	232.36	59.54	CC, ES
Junior Mint Fed 223H - OH - Plan #2	21,945.36	23,139.21	1,926.40	1,681.72	7.87	SF
Junior Mint Fed 224H - OH - Plan #2	300.00	302.00	55.90	51.93	14.08	CC
Junior Mint Fed 224H - OH - Plan #2	400.00	401.99	56.22	51.56	12.06	ES
Junior Mint Fed 224H - OH - Plan #2	11,200.00	11,190.62	217.06	182.18	6.22	SF

Offset Design: Junior Mint Fed Pad - (O) Montera Fed Com 603H - OH - Plan #1

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)													Offset Site Error:	0.00 usft
Reference Offset				Semi Major Axis		Offset Wellbore Centre			Rule Assigned:				Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.00	0.00	4.00	0.00	0.50	0.03	-136.74	-1,044.45	-982.87	1,434.19					
100.00	100.00	104.00	100.00	0.98	0.82	-136.74	-1,044.45	-982.87	1,434.19	1,432.39	1.80	797.005		
200.00	200.00	204.00	200.00	1.56	1.47	-136.74	-1,044.45	-982.87	1,434.19	1,431.16	3.03	473.557		
300.00	300.00	304.00	300.00	1.98	1.91	-136.74	-1,044.45	-982.87	1,434.19	1,430.30	3.89	368.684		
400.00	399.99	403.99	399.99	2.41	2.27	93.31	-1,044.45	-982.87	1,434.27	1,429.67	4.59	312.432		
500.00	499.91	503.91	499.91	2.77	2.58	93.46	-1,044.45	-982.87	1,434.50	1,429.30	5.20	276.049		
600.00	599.69	603.69	599.69	3.10	2.86	93.72	-1,044.45	-982.87	1,434.91	1,429.16	5.75	249.734		
700.00	699.27	703.27	699.27	3.41	3.12	94.07	-1,044.45	-982.87	1,435.53	1,429.28	6.26	229.463		
800.00	798.57	802.57	798.57	3.70	3.36	94.52	-1,044.45	-982.87	1,436.42	1,429.68	6.74	213.118		
900.00	897.62	901.62	897.62	3.83	3.58	95.06	-1,044.45	-982.87	1,437.58	1,430.48	7.10	202.515		
1,000.00	996.65	1,001.30	997.30	4.06	3.79	95.61	-1,044.45	-982.87	1,438.89	1,431.33	7.56	190.376		
1,100.00	1,095.67	1,200.09	1,195.92	4.28	4.42	96.71	-1,039.51	-977.93	1,436.84	1,428.43	8.41	170.763		
1,200.00	1,194.70	1,367.36	1,362.42	4.51	4.69	97.59	-1,029.46	-965.53	1,428.88	1,419.97	8.91	160.435		
1,300.00	1,293.62	1,524.36	1,517.76	4.72	5.08	105.57	-1,019.61	-945.18	1,417.91	1,408.41	9.50	149.263		

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - (O) Montero Fed Com 603H - OH - Plan #1

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:		Offset Site Error:	0.00 usft
												Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,400.00	1,392.26	1,681.12	1,671.50	4.94	5.47	112.27	-1,009.65	-916.38	1,405.24	1,395.15	10.09	139.278	
1,500.00	1,490.54	1,800.20	1,787.28	5.17	5.64	117.52	-1,002.03	-889.60	1,391.68	1,381.20	10.49	132.725	
1,600.00	1,588.41	1,899.25	1,883.49	5.40	5.82	121.79	-995.69	-866.89	1,380.21	1,369.28	10.94	126.199	
1,700.00	1,685.98	1,998.40	1,979.79	5.58	6.00	122.60	-989.34	-844.16	1,370.23	1,358.87	11.36	120.627	
1,800.00	1,783.55	2,097.56	2,076.09	5.80	6.20	122.96	-983.00	-821.44	1,360.32	1,348.49	11.83	115.018	
1,900.00	1,881.12	2,196.71	2,172.40	6.04	6.41	123.31	-976.65	-798.71	1,350.46	1,338.16	12.30	109.799	
2,000.00	1,978.69	2,295.86	2,268.70	6.31	6.63	123.68	-970.30	-775.98	1,340.66	1,327.88	12.78	104.939	
2,100.00	2,076.26	2,395.01	2,365.00	6.58	6.86	124.04	-963.96	-753.25	1,330.91	1,317.65	13.26	100.407	
2,200.00	2,173.83	2,494.17	2,461.31	6.87	7.12	124.42	-957.61	-730.52	1,321.21	1,307.47	13.74	96.178	
2,300.00	2,271.40	2,593.32	2,557.61	7.15	7.38	124.80	-951.26	-707.80	1,311.57	1,297.35	14.22	92.225	
2,400.00	2,368.97	2,692.47	2,653.92	7.44	7.65	125.18	-944.92	-685.07	1,301.99	1,287.28	14.71	88.528	
2,500.00	2,466.54	2,791.62	2,750.22	7.73	7.92	125.57	-938.57	-662.34	1,292.47	1,277.28	15.19	85.063	
2,600.00	2,564.11	2,890.78	2,846.52	8.02	8.20	125.97	-932.22	-639.61	1,283.01	1,267.33	15.68	81.806	
2,700.00	2,661.68	2,989.93	2,942.83	8.31	8.49	126.37	-925.88	-616.88	1,273.61	1,257.44	16.17	78.755	
2,800.00	2,759.25	3,089.08	3,039.13	8.60	8.78	126.78	-919.53	-594.15	1,264.28	1,247.62	16.66	75.883	
2,900.00	2,856.82	3,188.23	3,135.43	8.89	9.07	127.19	-913.18	-571.43	1,255.01	1,237.86	17.15	73.178	
3,000.00	2,954.39	3,287.39	3,231.74	9.18	9.36	127.61	-906.84	-548.70	1,245.81	1,228.17	17.64	70.627	
3,100.00	3,051.96	3,386.54	3,328.04	9.48	9.66	128.04	-900.49	-525.97	1,236.68	1,218.55	18.13	68.220	
3,200.00	3,149.53	3,485.69	3,424.34	9.77	9.95	128.47	-894.14	-503.24	1,227.61	1,209.00	18.62	65.944	
3,300.00	3,247.10	3,584.84	3,520.65	10.07	10.25	128.91	-887.80	-480.51	1,218.62	1,199.52	19.10	63.791	
3,400.00	3,344.67	3,684.00	3,616.95	10.37	10.55	129.36	-881.45	-457.79	1,209.70	1,190.11	19.59	61.752	
3,500.00	3,442.24	3,783.15	3,713.26	10.67	10.85	129.81	-875.10	-435.06	1,200.85	1,180.78	20.08	59.818	
3,600.00	3,539.81	3,882.30	3,809.56	10.96	11.16	130.27	-868.76	-412.33	1,192.08	1,171.52	20.56	57.982	
3,700.00	3,637.39	3,981.46	3,905.86	11.26	11.46	130.73	-862.41	-389.60	1,183.39	1,162.35	21.04	56.239	
3,800.00	3,734.96	4,080.61	4,002.17	11.56	11.76	131.21	-856.06	-366.87	1,174.77	1,153.25	21.52	54.580	
3,900.00	3,832.53	4,179.76	4,098.47	11.86	12.07	131.69	-849.72	-344.14	1,166.24	1,144.24	22.00	53.002	
4,000.00	3,930.10	4,278.91	4,194.77	12.16	12.38	132.17	-843.37	-321.42	1,157.79	1,135.31	22.48	51.499	
4,100.00	4,027.67	4,378.07	4,291.08	12.46	12.68	132.66	-837.02	-298.69	1,149.43	1,126.47	22.96	50.066	
4,200.00	4,125.24	4,477.22	4,387.38	12.76	12.99	133.16	-830.68	-275.96	1,141.15	1,117.71	23.43	48.698	
4,300.00	4,222.81	4,576.37	4,483.68	13.06	13.30	133.67	-824.33	-253.23	1,132.96	1,109.05	23.91	47.392	
4,400.00	4,320.38	4,675.52	4,579.99	13.36	13.61	134.19	-817.98	-230.50	1,124.86	1,100.48	24.38	46.144	
4,500.00	4,417.95	4,774.68	4,676.29	13.66	13.92	134.71	-811.64	-207.78	1,116.85	1,092.01	24.85	44.951	
4,600.00	4,515.52	4,873.83	4,772.60	13.96	14.23	135.24	-805.29	-185.05	1,108.94	1,083.63	25.31	43.810	
4,700.00	4,613.09	4,972.98	4,868.90	14.27	14.54	135.77	-798.94	-162.32	1,101.12	1,075.34	25.78	42.717	
4,800.00	4,710.66	5,072.13	4,965.20	14.57	14.86	136.32	-792.60	-139.59	1,093.40	1,067.16	26.24	41.670	
4,900.00	4,808.23	5,171.29	5,061.51	14.87	15.17	136.87	-786.25	-116.86	1,085.79	1,059.09	26.70	40.666	
5,000.00	4,905.80	5,270.44	5,157.81	15.17	15.48	137.43	-779.90	-94.13	1,078.27	1,051.11	27.16	39.703	
5,100.00	5,003.37	5,369.59	5,254.11	15.47	15.79	138.00	-773.56	-71.41	1,070.86	1,043.25	27.61	38.779	
5,200.00	5,100.94	5,468.74	5,350.42	15.78	16.11	138.57	-767.21	-48.68	1,063.56	1,035.49	28.07	37.892	
5,300.00	5,198.51	5,567.90	5,446.72	16.08	16.42	139.15	-760.86	-25.95	1,056.37	1,027.85	28.52	37.040	
5,400.00	5,296.08	5,667.05	5,543.02	16.38	16.74	139.75	-754.52	-3.22	1,049.28	1,020.32	28.97	36.221	
5,500.00	5,393.65	5,765.11	5,638.27	16.69	17.03	140.34	-748.24	19.25	1,042.32	1,012.92	29.40	35.455	
5,600.00	5,491.24	5,849.19	5,720.10	16.97	17.28	140.84	-743.04	37.87	1,036.21	1,006.42	29.79	34.780	
5,700.00	5,589.24	5,933.42	5,802.35	17.25	17.53	141.25	-738.16	55.35	1,030.14	999.93	30.21	34.095	
5,800.00	5,687.73	6,017.80	5,885.01	17.50	17.76	141.60	-733.60	71.70	1,023.57	992.96	30.61	33.434	
5,900.00	5,786.63	6,100.00	5,965.75	17.73	17.98	141.87	-729.47	86.49	1,016.48	985.49	30.99	32.798	
6,000.00	5,885.89	6,186.97	6,051.42	17.92	18.19	142.09	-725.44	100.92	1,008.83	977.47	31.36	32.172	
6,100.00	5,985.43	6,271.74	6,135.13	18.09	18.38	142.23	-721.84	113.79	1,000.61	968.91	31.70	31.567	
6,200.00	6,085.19	6,356.61	6,219.13	18.23	18.56	142.29	-718.58	125.47	991.82	959.80	32.02	30.978	
6,300.00	6,185.09	6,441.57	6,303.39	18.33	18.73	142.28	-715.65	135.97	982.43	950.12	32.31	30.403	
6,400.00	6,285.07	6,526.62	6,387.89	18.42	18.88	142.19	-713.05	145.26	972.46	939.88	32.58	29.848	
6,500.00	6,385.07	6,611.81	6,472.66	18.44	19.02	-110.72	-710.79	153.37	962.65	929.90	32.75	29.394	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - (O) Montero Fed Com 603H - OH - Plan #1

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:				Offset Site Error:
														Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
6,600.00	6,485.07	6,700.00	6,560.54	18.48	19.15	-110.76	-708.81	160.47	954.30	921.37	32.93	28.981		
6,700.00	6,585.07	6,782.84	6,643.18	18.52	19.26	-110.79	-707.27	165.96	947.42	914.34	33.08	28.643		
6,800.00	6,685.07	6,868.61	6,728.82	18.56	19.36	-110.82	-706.03	170.43	942.03	908.80	33.22	28.354		
6,900.00	6,785.07	6,954.50	6,814.64	18.60	19.44	-110.84	-705.12	173.67	938.13	904.77	33.36	28.122		
7,000.00	6,885.07	7,040.47	6,900.59	18.64	19.51	-110.85	-704.56	175.67	935.72	902.24	33.48	27.948		
7,100.00	6,985.07	7,126.48	6,986.60	18.68	19.57	-110.85	-704.35	176.43	934.81	901.24	33.57	27.847		
7,137.42	7,022.50	7,162.38	7,022.50	18.70	19.58	-110.85	-704.35	176.43	934.80	901.21	33.59	27.826		
7,200.00	7,085.07	7,224.96	7,085.07	18.72	19.60	-110.85	-704.35	176.43	934.80	901.16	33.65	27.783		
7,300.00	7,185.07	7,324.96	7,185.07	18.76	19.66	-110.85	-704.35	176.43	934.80	901.06	33.74	27.705		
7,400.00	7,285.07	7,424.96	7,285.07	18.80	19.71	-110.85	-704.35	176.43	934.80	900.97	33.84	27.626		
7,500.00	7,385.07	7,524.96	7,385.07	18.85	19.76	-110.85	-704.35	176.43	934.80	900.87	33.93	27.548		
7,600.00	7,485.07	7,624.96	7,485.07	18.89	19.82	-110.85	-704.35	176.43	934.80	900.77	34.03	27.469		
7,700.00	7,585.07	7,724.96	7,585.07	18.93	19.87	-110.85	-704.35	176.43	934.80	900.68	34.13	27.391		
7,800.00	7,685.07	7,824.96	7,685.07	18.97	19.92	-110.85	-704.35	176.43	934.80	900.58	34.23	27.312		
7,900.00	7,785.07	7,924.96	7,785.07	19.01	19.98	-110.85	-704.35	176.43	934.80	900.48	34.32	27.234		
8,000.00	7,885.07	8,024.96	7,885.07	19.06	20.03	-110.85	-704.35	176.43	934.80	900.38	34.42	27.156		
8,100.00	7,985.07	8,124.96	7,985.07	19.10	20.09	-110.85	-704.35	176.43	934.80	900.28	34.52	27.078		
8,200.00	8,085.07	8,224.96	8,085.07	19.14	20.14	-110.85	-704.35	176.43	934.80	900.18	34.62	26.999		
8,300.00	8,185.07	8,324.96	8,185.07	19.19	20.19	-110.85	-704.35	176.43	934.80	900.08	34.72	26.921		
8,400.00	8,285.07	8,424.96	8,285.07	19.23	20.25	-110.85	-704.35	176.43	934.80	899.98	34.82	26.843		
8,500.00	8,385.07	8,524.96	8,385.07	19.27	20.30	-110.85	-704.35	176.43	934.80	899.88	34.93	26.766		
8,600.00	8,485.07	8,624.96	8,485.07	19.32	20.36	-110.85	-704.35	176.43	934.80	899.78	35.03	26.688		
8,700.00	8,585.07	8,724.96	8,585.07	19.36	20.42	-110.85	-704.35	176.43	934.80	899.68	35.13	26.610		
8,800.00	8,685.07	8,824.96	8,685.07	19.41	20.47	-110.85	-704.35	176.43	934.80	899.57	35.23	26.533		
8,900.00	8,785.07	8,924.96	8,785.07	19.45	20.53	-110.85	-704.35	176.43	934.80	899.47	35.34	26.455		
9,000.00	8,885.07	9,024.96	8,885.07	19.50	20.58	-110.85	-704.35	176.43	934.80	899.37	35.44	26.378		
9,100.00	8,985.07	9,124.96	8,985.07	19.54	20.64	-110.85	-704.35	176.43	934.80	899.26	35.54	26.301		
9,200.00	9,085.07	9,224.96	9,085.07	19.59	20.69	-110.85	-704.35	176.43	934.80	899.16	35.65	26.224		
9,300.00	9,185.07	9,324.96	9,185.07	19.63	20.75	-110.85	-704.35	176.43	934.80	899.05	35.75	26.147		
9,400.00	9,285.07	9,424.96	9,285.07	19.68	20.81	-110.85	-704.35	176.43	934.80	898.95	35.86	26.070		
9,500.00	9,385.07	9,524.96	9,385.07	19.73	20.86	-110.85	-704.35	176.43	934.80	898.84	35.96	25.994		
9,600.00	9,485.07	9,624.96	9,485.07	19.77	20.92	-110.85	-704.35	176.43	934.80	898.74	36.07	25.917		
9,700.00	9,585.07	9,724.96	9,585.07	19.82	20.98	-110.85	-704.35	176.43	934.80	898.63	36.18	25.841		
9,800.00	9,685.07	9,824.96	9,685.07	19.87	21.04	-110.85	-704.35	176.43	934.80	898.52	36.28	25.765		
9,900.00	9,785.07	9,924.96	9,785.07	19.91	21.09	-110.85	-704.35	176.43	934.80	898.42	36.39	25.689		
10,000.00	9,885.07	10,024.96	9,885.07	19.96	21.15	-110.85	-704.35	176.43	934.80	898.31	36.50	25.613		
10,100.00	9,985.07	10,124.96	9,985.07	20.01	21.21	-110.85	-704.35	176.43	934.80	898.20	36.61	25.537		
10,200.00	10,085.07	10,224.96	10,085.07	20.06	21.27	-110.85	-704.35	176.43	934.80	898.09	36.71	25.462		
10,300.00	10,185.07	10,324.96	10,185.07	20.10	21.32	-110.85	-704.35	176.43	934.80	897.98	36.82	25.386		
10,400.00	10,285.07	10,424.96	10,285.07	20.15	21.38	-110.85	-704.35	176.43	934.80	897.87	36.93	25.311		
10,500.00	10,385.07	10,524.96	10,385.07	20.20	21.44	-110.85	-704.35	176.43	934.80	897.76	37.04	25.236		
10,600.00	10,485.07	10,624.96	10,485.07	20.25	21.50	-110.85	-704.35	176.43	934.80	897.65	37.15	25.161		
10,700.00	10,585.07	10,724.96	10,585.07	20.30	21.56	-110.85	-704.35	176.43	934.80	897.54	37.26	25.087		
10,800.00	10,685.07	10,824.96	10,685.07	20.35	21.62	-110.85	-704.35	176.43	934.80	897.43	37.37	25.012		
10,900.00	10,785.07	10,924.96	10,785.07	20.40	21.68	-110.85	-704.35	176.43	934.80	897.32	37.48	24.938		
11,000.00	10,885.07	11,024.96	10,885.07	20.45	21.73	-110.85	-704.35	176.43	934.80	897.21	37.60	24.864		
11,100.00	10,985.07	11,124.96	10,985.07	20.50	21.79	-110.85	-704.35	176.43	934.80	897.10	37.71	24.790		
11,200.00	11,084.72	11,224.60	11,084.72	20.59	21.85	65.94	-704.35	176.43	931.94	894.15	37.78	24.665		
11,300.00	11,181.66	11,321.54	11,181.66	20.75	21.91	68.16	-704.35	176.43	922.31	884.44	37.87	24.353		
11,400.00	11,272.97	11,412.85	11,272.97	20.95	21.96	71.78	-704.35	176.43	907.29	869.30	37.99	23.884		
11,500.00	11,355.85	11,495.74	11,355.85	21.20	22.01	76.42	-704.35	176.43	889.21	851.08	38.13	23.318		
11,600.00	11,427.81	11,567.69	11,427.81	21.52	22.06	81.45	-704.35	176.43	871.20	832.87	38.32	22.732		

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - (O) Montero Fed Com 603H - OH - Plan #1

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Reference		Offset		Semi Major Axis		Highside Toolface (")	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
11,700.00	11,486.64	11,626.52	11,486.64	21.92	22.09	86.05	-704.35	176.43	856.82	818.25	38.56	22.218	
11,800.00	11,530.57	11,670.45	11,530.57	22.42	22.12	89.42	-704.35	176.43	849.59	810.74	38.85	21.868	
11,825.42	11,539.19	11,679.07	11,539.19	22.56	22.12	90.00	-704.35	176.43	849.25	810.31	38.94	21.810	CC, ES
11,900.00	11,558.25	11,698.14	11,558.25	23.01	22.14	90.94	-704.35	176.43	852.30	813.14	39.16	21.765	SF
12,000.00	11,568.85	11,708.74	11,568.85	23.68	22.14	90.22	-704.35	176.43	866.36	826.92	39.45	21.962	
12,100.00	11,569.43	11,709.31	11,569.43	24.45	22.14	90.11	-704.35	176.43	892.95	853.24	39.71	22.485	
12,200.00	11,569.96	11,709.84	11,569.96	25.29	22.14	90.16	-704.35	176.43	932.73	892.80	39.93	23.359	
12,300.00	11,570.48	11,710.36	11,570.48	26.19	22.14	90.20	-704.35	176.43	983.28	943.22	40.07	24.541	
12,400.00	11,571.01	11,710.89	11,571.01	27.12	22.14	90.23	-704.35	176.43	1,041.10	1,000.94	40.16	25.923	
12,500.00	11,571.53	11,711.41	11,571.53	28.09	22.14	90.27	-704.35	176.43	1,104.97	1,064.75	40.22	27.473	
12,600.00	11,572.06	11,711.94	11,572.06	29.09	22.14	90.30	-704.35	176.43	1,173.88	1,133.63	40.25	29.162	
12,700.00	11,572.58	11,712.46	11,572.58	30.12	22.14	90.34	-704.35	176.43	1,247.02	1,206.75	40.27	30.966	
12,800.00	11,573.11	11,712.99	11,573.11	31.17	22.14	90.38	-704.35	176.43	1,323.67	1,283.39	40.28	32.864	
12,900.00	11,573.63	11,713.51	11,573.63	32.24	22.14	90.41	-704.35	176.43	1,403.26	1,362.99	40.28	34.839	
13,000.00	11,574.16	11,714.04	11,574.16	33.33	22.15	90.45	-704.35	176.43	1,485.33	1,445.05	40.28	36.877	
13,100.00	11,574.68	11,714.56	11,574.68	34.44	22.15	90.49	-704.35	176.43	1,569.47	1,529.20	40.28	38.965	
13,200.00	11,575.21	11,715.09	11,575.21	35.57	22.15	90.52	-704.35	176.43	1,655.38	1,615.10	40.28	41.095	
13,300.00	11,575.73	11,715.61	11,575.73	36.71	22.15	90.56	-704.35	176.43	1,742.80	1,702.51	40.29	43.258	
13,400.00	11,576.25	11,716.14	11,576.25	37.87	22.15	90.60	-704.35	176.43	1,831.50	1,791.20	40.30	45.448	
13,500.00	11,576.78	11,716.66	11,576.78	39.04	22.15	90.63	-704.35	176.43	1,921.31	1,881.00	40.31	47.658	
13,600.00	11,577.30	11,717.19	11,577.30	40.22	22.15	90.67	-704.35	176.43	2,012.08	1,971.75	40.33	49.885	
13,700.00	11,577.83	11,717.71	11,577.83	41.41	22.15	90.71	-704.35	176.43	2,103.69	2,063.34	40.36	52.125	
13,800.00	11,578.35	11,718.24	11,578.35	42.61	22.15	90.74	-704.35	176.43	2,196.04	2,155.65	40.39	54.373	
13,900.00	11,578.88	11,718.76	11,578.88	43.82	22.15	90.78	-704.35	176.43	2,289.02	2,248.60	40.42	56.628	
14,000.00	11,579.40	11,719.28	11,579.40	45.04	22.15	90.81	-704.35	176.43	2,382.57	2,342.11	40.46	58.886	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - (O) Montero Fed Com 702H - OH - Plan #1

Survey Program: Reference		0-MWD+HRGM+SAG+FDIR (rev.5)								Rule Assigned:		Offset Well Error:		0.00 usft
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Semi Major Axis Offset	Highside Toolface	Offset Wellbore Centre		Distance	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)		(usft)	(usft)	(usft)		
0.00	0.00	4.00	0.00	0.50	0.03	-136.93	-1,034.35	-966.97		1,415.95				
100.00	100.00	104.00	100.00	0.98	0.82	-136.93	-1,034.35	-966.97		1,415.95	1,414.15	1.80	786.866	
200.00	200.00	204.00	200.00	1.56	1.47	-136.93	-1,034.35	-966.97		1,415.95	1,412.92	3.03	467.533	
300.00	300.00	304.00	300.00	1.98	1.91	-136.93	-1,034.35	-966.97		1,415.95	1,412.06	3.89	363.994	
400.00	399.99	403.99	399.99	2.41	2.27	93.12	-1,034.35	-966.97		1,416.02	1,411.43	4.59	308.459	
500.00	499.91	503.91	499.91	2.77	2.58	93.28	-1,034.35	-966.97		1,416.24	1,411.04	5.20	272.538	
600.00	599.69	603.69	599.69	3.10	2.86	93.54	-1,034.35	-966.97		1,416.63	1,410.88	5.75	246.556	
700.00	699.27	703.27	699.27	3.41	3.12	93.89	-1,034.35	-966.97		1,417.22	1,410.96	6.26	226.540	
800.00	798.57	802.57	798.57	3.70	3.36	94.35	-1,034.35	-966.97		1,418.07	1,411.33	6.74	210.401	
900.00	897.62	901.62	897.62	3.83	3.58	94.90	-1,034.35	-966.97		1,419.19	1,412.09	7.10	199.930	
1,000.00	996.65	1,001.09	997.09	4.06	3.79	95.45	-1,034.35	-966.97		1,420.46	1,412.90	7.56	187.957	
1,100.00	1,095.67	1,168.94	1,164.84	4.28	4.32	96.28	-1,033.50	-962.06		1,419.43	1,411.18	8.25	171.986	
1,200.00	1,194.70	1,337.41	1,332.63	4.51	4.80	96.89	-1,030.98	-947.41		1,413.66	1,404.74	8.92	158.567	
1,300.00	1,293.62	1,505.50	1,498.88	4.72	5.25	104.64	-1,026.80	-923.13		1,404.09	1,394.55	9.53	147.283	
1,400.00	1,392.26	1,672.70	1,662.53	4.94	5.68	111.13	-1,021.00	-889.49		1,391.96	1,381.82	10.14	137.278	
1,500.00	1,490.54	1,802.22	1,787.91	5.17	5.86	116.24	-1,015.49	-857.48		1,378.01	1,367.46	10.56	130.555	
1,600.00	1,588.41	1,901.39	1,883.72	5.40	6.03	120.38	-1,011.14	-832.25		1,365.85	1,354.84	11.02	123.985	
1,700.00	1,685.98	2,000.70	1,979.66	5.58	6.20	121.05	-1,006.78	-806.98		1,355.13	1,343.68	11.45	118.338	
1,800.00	1,783.55	2,100.00	2,075.60	5.80	6.38	121.26	-1,002.43	-781.71		1,344.44	1,332.51	11.93	112.661	
1,900.00	1,881.12	2,199.31	2,171.54	6.04	6.56	121.47	-998.08	-756.44		1,333.77	1,321.35	12.42	107.371	
2,000.00	1,978.69	2,298.62	2,267.48	6.31	6.75	121.69	-993.72	-731.17		1,323.12	1,310.21	12.92	102.441	
2,100.00	2,076.26	2,397.92	2,363.41	6.58	6.96	121.91	-989.37	-705.90		1,312.49	1,299.08	13.41	97.842	
2,200.00	2,173.83	2,497.23	2,459.35	6.87	7.23	122.13	-985.02	-680.63		1,301.88	1,287.96	13.92	93.546	
2,300.00	2,271.40	2,596.53	2,555.29	7.15	7.52	122.36	-980.66	-655.36		1,291.29	1,276.86	14.42	89.531	
2,400.00	2,368.97	2,695.84	2,651.23	7.44	7.83	122.59	-976.31	-630.10		1,280.71	1,265.78	14.93	85.770	
2,500.00	2,466.54	2,795.15	2,747.17	7.73	8.13	122.82	-971.96	-604.83		1,270.16	1,254.72	15.44	82.248	
2,600.00	2,564.11	2,894.45	2,843.11	8.02	8.44	123.06	-967.60	-579.56		1,259.63	1,243.68	15.96	78.944	
2,700.00	2,661.68	2,993.76	2,939.05	8.31	8.76	123.30	-963.25	-554.29		1,249.13	1,232.66	16.47	75.838	
2,800.00	2,759.25	3,093.06	3,034.98	8.60	9.08	123.55	-958.90	-529.02		1,238.64	1,221.65	16.99	72.917	
2,900.00	2,856.82	3,192.37	3,130.92	8.89	9.40	123.80	-954.54	-503.75		1,228.18	1,210.68	17.50	70.165	
3,000.00	2,954.39	3,291.68	3,226.86	9.18	9.72	124.05	-950.19	-478.48		1,217.74	1,199.72	18.02	67.569	
3,100.00	3,051.96	3,390.98	3,322.80	9.48	10.04	124.31	-945.83	-453.21		1,207.33	1,188.79	18.54	65.118	
3,200.00	3,149.53	3,490.29	3,418.74	9.77	10.37	124.58	-941.48	-427.94		1,196.94	1,177.88	19.06	62.801	
3,300.00	3,247.10	3,589.59	3,514.68	10.07	10.69	124.84	-937.13	-402.68		1,186.58	1,167.00	19.58	60.608	
3,400.00	3,344.67	3,688.90	3,610.62	10.37	11.02	125.12	-932.77	-377.41		1,176.24	1,156.14	20.10	58.529	
3,500.00	3,442.24	3,788.21	3,706.55	10.67	11.35	125.40	-928.42	-352.14		1,165.93	1,145.31	20.61	56.558	
3,600.00	3,539.81	3,887.51	3,802.49	10.96	11.68	125.68	-924.07	-326.87		1,155.65	1,134.51	21.13	54.685	
3,700.00	3,637.39	3,986.82	3,898.43	11.26	12.02	125.97	-919.71	-301.60		1,145.39	1,123.74	21.65	52.905	
3,800.00	3,734.96	4,086.12	3,994.37	11.56	12.35	126.26	-915.36	-276.33		1,135.17	1,113.00	22.17	51.212	
3,900.00	3,832.53	4,185.43	4,090.31	11.86	12.69	126.56	-911.01	-251.06		1,124.97	1,102.29	22.68	49.598	
4,000.00	3,930.10	4,284.74	4,186.25	12.16	13.02	126.86	-906.65	-225.79		1,114.81	1,091.61	23.20	48.060	
4,100.00	4,027.67	4,384.04	4,282.19	12.46	13.36	127.17	-902.30	-200.52		1,104.68	1,080.97	23.71	46.592	
4,200.00	4,125.24	4,483.35	4,378.12	12.76	13.69	127.49	-897.95	-175.26		1,094.58	1,070.36	24.22	45.191	
4,300.00	4,222.81	4,582.65	4,474.06	13.06	14.03	127.81	-893.59	-149.99		1,084.51	1,059.78	24.73	43.851	
4,400.00	4,320.38	4,681.96	4,570.00	13.36	14.37	128.13	-889.24	-124.72		1,074.48	1,049.24	25.24	42.569	
4,500.00	4,417.95	4,781.27	4,665.94	13.66	14.71	128.47	-884.88	-99.45		1,064.48	1,038.74	25.75	41.343	
4,600.00	4,515.52	4,880.57	4,761.88	13.96	15.05	128.81	-880.53	-74.18		1,054.52	1,028.27	26.25	40.167	
4,700.00	4,613.09	4,979.88	4,857.82	14.27	15.39	129.15	-876.18	-48.91		1,044.60	1,017.85	26.76	39.040	
4,800.00	4,710.66	5,079.18	4,953.76	14.57	15.73	129.50	-871.82	-23.64		1,034.72	1,007.46	27.26	37.959	
4,900.00	4,808.23	5,178.49	5,049.69	14.87	16.07	129.86	-867.47	1.63		1,024.87	997.12	27.76	36.922	
5,000.00	4,905.80	5,277.80	5,145.63	15.17	16.41	130.23	-863.12	26.90		1,015.07	986.82	28.26	35.925	
5,100.00	5,003.37	5,377.10	5,241.57	15.47	16.75	130.60	-858.76	52.16		1,005.31	976.56	28.75	34.966	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - (O) Montero Fed Com 702H - OH - Plan #1

Survey Program: Reference		0-MWD+HRGM+SAG+FDIR (rev.5)		Semi Major Axis		Offset Wellbore Centre			Rule Assigned: Distance				Offset Well Error:		0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
5,200.00	5,100.94	5,476.41	5,337.51	15.78	17.10	130.98	-854.41	77.43	995.59	966.35	29.24	34.045			
5,300.00	5,198.51	5,575.72	5,433.45	16.08	17.44	131.37	-850.06	102.70	985.92	956.18	29.73	33.158			
5,400.00	5,296.08	5,675.02	5,529.39	16.38	17.78	131.77	-845.70	127.97	976.29	946.07	30.22	32.305			
5,500.00	5,393.65	5,774.33	5,625.33	16.69	18.13	132.17	-841.35	153.24	966.71	936.00	30.71	31.482			
5,600.00	5,491.24	5,873.63	5,721.26	16.97	18.47	132.54	-837.00	178.51	957.10	925.94	31.17	30.709			
5,700.00	5,589.24	5,972.89	5,817.15	17.25	18.81	132.75	-832.64	203.76	946.22	914.58	31.65	29.900			
5,800.00	5,687.73	6,072.02	5,912.93	17.50	19.16	132.83	-828.30	228.99	933.60	901.49	32.12	29.070			
5,900.00	5,786.63	6,170.96	6,008.51	17.73	19.50	132.77	-823.96	254.17	919.22	886.65	32.58	28.218			
6,000.00	5,885.89	6,269.65	6,103.85	17.92	19.84	132.58	-819.63	279.28	903.09	870.06	33.03	27.344			
6,100.00	5,985.43	6,368.01	6,198.88	18.09	20.19	132.23	-815.32	304.31	885.22	851.75	33.47	26.448			
6,200.00	6,085.19	6,465.98	6,293.53	18.23	20.53	131.73	-811.03	329.23	865.63	831.72	33.91	25.531			
6,300.00	6,185.09	6,563.49	6,387.73	18.33	20.87	131.06	-806.75	354.05	844.36	810.03	34.33	24.593			
6,400.00	6,285.07	6,660.48	6,481.43	18.42	21.20	130.20	-802.50	378.72	821.48	786.73	34.75	23.638			
6,500.00	6,385.07	6,757.09	6,574.77	18.44	21.54	-123.42	-798.27	403.31	797.66	762.55	35.11	22.719			
6,600.00	6,485.07	6,853.70	6,668.10	18.48	21.88	-124.18	-794.03	427.89	773.94	738.46	35.48	21.812			
6,700.00	6,585.07	6,950.31	6,761.43	18.52	22.21	-124.99	-789.79	452.47	750.37	714.50	35.87	20.921			
6,800.00	6,685.07	7,046.92	6,854.77	18.56	22.55	-125.85	-785.56	477.06	726.94	690.68	36.26	20.048			
6,900.00	6,785.07	7,143.53	6,948.10	18.60	22.89	-126.77	-781.32	501.64	703.69	667.02	36.66	19.192			
7,000.00	6,885.07	7,240.14	7,041.43	18.64	23.22	-127.75	-777.09	526.22	680.61	643.53	37.08	18.354			
7,100.00	6,985.07	7,336.75	7,134.77	18.68	23.56	-128.79	-772.85	550.80	657.75	620.23	37.51	17.533			
7,200.00	7,085.07	7,433.36	7,228.10	18.72	23.90	-129.91	-768.62	575.39	635.11	597.15	37.96	16.731			
7,300.00	7,185.07	7,529.96	7,321.43	18.76	24.24	-131.12	-764.38	599.97	612.72	574.29	38.42	15.947			
7,400.00	7,285.07	7,626.57	7,414.76	18.80	24.57	-132.41	-760.15	624.55	590.61	551.70	38.90	15.182			
7,500.00	7,385.07	7,723.18	7,508.10	18.85	24.91	-133.79	-755.91	649.13	568.81	529.41	39.40	14.436			
7,600.00	7,485.07	7,819.79	7,601.43	18.89	25.25	-135.29	-751.68	673.72	547.36	507.44	39.92	13.711			
7,700.00	7,585.07	7,916.40	7,694.76	18.93	25.59	-136.90	-747.44	698.30	526.31	485.85	40.46	13.007			
7,800.00	7,685.07	8,013.01	7,788.10	18.97	25.93	-138.65	-743.21	722.88	505.70	464.67	41.03	12.325			
7,900.00	7,785.07	8,109.62	7,881.43	19.01	26.27	-140.53	-738.97	747.47	485.59	443.97	41.62	11.667			
8,000.00	7,885.07	8,206.23	7,974.76	19.06	26.60	-142.57	-734.74	772.05	466.04	423.80	42.23	11.034			
8,100.00	7,985.07	8,300.00	8,065.41	19.10	26.91	-144.69	-730.66	795.70	447.29	404.44	42.85	10.438			
8,200.00	8,085.07	8,392.06	8,154.74	19.14	27.22	-146.82	-726.88	817.64	430.22	386.74	43.48	9.895			
8,300.00	8,185.07	8,484.83	8,245.10	19.19	27.51	-148.96	-723.32	838.32	414.89	370.80	44.09	9.410			
8,400.00	8,285.07	8,578.28	8,336.46	19.23	27.78	-151.10	-719.98	857.70	401.26	356.58	44.68	8.982			
8,500.00	8,385.07	8,672.37	8,428.75	19.27	28.04	-153.22	-716.87	875.71	389.25	344.02	45.23	8.606			
8,600.00	8,485.07	8,767.04	8,521.91	19.32	28.27	-155.28	-714.01	892.34	378.79	333.03	45.75	8.279			
8,700.00	8,585.07	8,862.26	8,615.87	19.36	28.50	-157.25	-711.39	907.52	369.77	323.53	46.24	7.997			
8,800.00	8,685.07	8,957.97	8,710.57	19.41	28.70	-159.11	-709.03	921.23	362.10	315.42	46.68	7.758			
8,900.00	8,785.07	9,054.13	8,805.92	19.45	28.89	-160.83	-706.93	933.43	355.65	308.58	47.07	7.556			
9,000.00	8,885.07	9,150.68	8,901.86	19.50	29.05	-162.38	-705.09	944.09	350.34	302.91	47.42	7.387			
9,100.00	8,985.07	9,247.57	8,998.31	19.54	29.20	-163.74	-703.53	953.19	346.04	298.31	47.73	7.250			
9,200.00	9,085.07	9,344.74	9,095.18	19.59	29.33	-164.89	-702.23	960.70	342.66	294.66	48.00	7.139			
9,300.00	9,185.07	9,442.15	9,192.41	19.63	29.44	-165.80	-701.22	966.60	340.11	291.89	48.22	7.053			
9,400.00	9,285.07	9,539.73	9,289.89	19.68	29.53	-166.47	-700.48	970.88	338.33	289.92	48.41	6.989			
9,500.00	9,385.07	9,637.44	9,387.56	19.73	29.61	-166.89	-700.02	973.52	337.25	288.69	48.56	6.946			
9,600.00	9,485.07	9,735.20	9,485.32	19.77	29.66	-167.05	-699.85	974.52	336.85	288.18	48.66	6.922			
9,637.42	9,522.50	9,772.38	9,522.50	19.79	29.66	-167.05	-699.85	974.53	336.84	288.15	48.69	6.918			
9,700.00	9,585.07	9,834.96	9,585.07	19.82	29.68	-167.05	-699.85	974.53	336.84	288.10	48.74	6.911			
9,800.00	9,685.07	9,934.96	9,685.07	19.87	29.72	-167.05	-699.85	974.53	336.84	288.02	48.83	6.899			
9,900.00	9,785.07	10,034.96	9,785.07	19.91	29.76	-167.05	-699.85	974.53	336.84	287.93	48.91	6.887			
10,000.00	9,885.07	10,134.96	9,885.07	19.96	29.80	-167.05	-699.85	974.53	336.84	287.84	49.00	6.875			
10,100.00	9,985.07	10,234.96	9,985.07	20.01	29.83	-167.05	-699.85	974.53	336.84	287.76	49.08	6.863			
10,200.00	10,085.07	10,334.96	10,085.07	20.06	29.87	-167.05	-699.85	974.53	336.84	287.67	49.17	6.850			

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

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Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - (O) Monteria Fed Com 702H - OH - Plan #1

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)							Rule Assigned:					Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre			Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
10,300.00	10,185.07	10,434.96	10,185.07	20.10	29.91	-167.05	-699.85	974.53	336.84	287.58	49.26	6.838		
10,400.00	10,285.07	10,534.96	10,285.07	20.15	29.95	-167.05	-699.85	974.53	336.84	287.50	49.35	6.826		
10,500.00	10,385.07	10,634.96	10,385.07	20.20	29.99	-167.05	-699.85	974.53	336.84	287.41	49.43	6.814		
10,600.00	10,485.07	10,734.96	10,485.07	20.25	30.02	-167.05	-699.85	974.53	336.84	287.32	49.52	6.802		
10,700.00	10,585.07	10,834.96	10,585.07	20.30	30.06	-167.05	-699.85	974.53	336.84	287.23	49.61	6.789		
10,800.00	10,685.07	10,934.96	10,685.07	20.35	30.10	-167.05	-699.85	974.53	336.84	287.14	49.70	6.777		
10,900.00	10,785.07	11,034.96	10,785.07	20.40	30.14	-167.05	-699.85	974.53	336.84	287.05	49.79	6.765		
11,000.00	10,885.07	11,134.96	10,885.07	20.45	30.18	-167.05	-699.85	974.53	336.84	286.96	49.88	6.753		
11,100.00	10,985.07	11,234.96	10,985.07	20.50	30.22	-167.05	-699.85	974.53	336.84	286.87	49.97	6.741		
11,200.00	11,084.72	11,334.60	11,084.72	20.59	30.26	9.40	-699.85	974.53	330.02	279.93	50.09	6.588		
11,300.00	11,181.66	11,431.55	11,181.66	20.75	30.30	10.57	-699.85	974.53	306.35	256.11	50.24	6.098		
11,400.00	11,272.97	11,522.85	11,272.97	20.95	30.33	13.11	-699.85	974.53	266.59	216.23	50.36	5.294		
11,500.00	11,355.85	11,605.74	11,355.85	21.20	30.37	18.42	-699.85	974.53	212.29	161.89	50.40	4.212		
11,600.00	11,427.81	11,677.69	11,427.81	21.52	30.40	30.74	-699.85	974.53	146.28	96.16	50.11	2.919		
11,700.00	11,486.64	11,736.53	11,486.64	21.92	30.42	61.70	-699.85	974.53	76.94	29.27	47.67	1.614	Collision Risk Procedures Req.	
11,762.90	11,516.11	11,765.99	11,516.11	22.22	30.43	90.00	-699.85	974.53	53.25	10.27	42.98	1.239	Collision Avoidance Req., CC, ES, SF	
11,800.00	11,530.57	11,780.46	11,530.57	22.42	30.44	103.00	-699.85	974.53	63.27	18.27	44.99	1.406	Collision Avoidance Req.	
11,900.00	11,558.25	11,808.14	11,558.25	23.01	30.45	115.18	-699.85	974.53	140.59	91.07	49.53	2.839		
12,000.00	11,568.85	11,818.74	11,568.85	23.68	30.45	94.70	-699.85	974.53	235.53	185.13	50.40	4.673		
12,100.00	11,569.43	11,819.32	11,569.43	24.45	30.45	92.25	-699.85	974.53	333.93	283.26	50.67	6.591		
12,200.00	11,569.96	11,819.84	11,569.96	25.29	30.45	94.21	-699.85	974.53	433.41	382.63	50.78	8.535		
12,300.00	11,570.48	11,820.37	11,570.48	26.19	30.45	95.97	-699.85	974.53	533.25	482.41	50.84	10.489		
12,400.00	11,571.01	11,820.89	11,571.01	27.12	30.45	97.08	-699.85	974.53	633.14	582.25	50.89	12.441		
12,500.00	11,571.53	11,821.42	11,571.53	28.09	30.45	98.19	-699.85	974.53	733.06	682.12	50.94	14.391		
12,600.00	11,572.06	11,821.94	11,572.06	29.09	30.45	99.29	-699.85	974.53	833.00	782.02	50.99	16.338		
12,700.00	11,572.58	11,822.47	11,572.58	30.12	30.45	100.38	-699.85	974.53	932.95	881.92	51.03	18.282		
12,800.00	11,573.11	11,822.99	11,573.11	31.17	30.45	101.47	-699.85	974.53	1,032.92	981.84	51.08	20.223		
12,900.00	11,573.63	11,823.52	11,573.63	32.24	30.45	102.54	-699.85	974.53	1,132.88	1,081.76	51.12	22.161		
13,000.00	11,574.16	11,824.04	11,574.16	33.33	30.45	103.61	-699.85	974.53	1,232.86	1,181.69	51.17	24.094		
13,100.00	11,574.68	11,824.57	11,574.68	34.44	30.46	104.67	-699.85	974.53	1,332.83	1,281.62	51.22	26.023		
13,200.00	11,575.21	11,825.09	11,575.21	35.57	30.46	105.72	-699.85	974.53	1,432.81	1,381.55	51.27	27.948		
13,300.00	11,575.73	11,825.62	11,575.73	36.71	30.46	106.76	-699.85	974.53	1,532.80	1,481.48	51.32	29.869		
13,400.00	11,576.25	11,826.14	11,576.25	37.87	30.46	107.78	-699.85	974.53	1,632.78	1,581.41	51.37	31.784		
13,500.00	11,576.78	11,826.67	11,576.78	39.04	30.46	108.80	-699.85	974.53	1,732.77	1,681.34	51.43	33.695		
13,600.00	11,577.30	11,827.19	11,577.30	40.22	30.46	109.80	-699.85	974.53	1,832.75	1,781.27	51.48	35.600		
13,700.00	11,577.83	11,827.71	11,577.83	41.41	30.46	110.79	-699.85	974.53	1,932.74	1,881.20	51.54	37.500		
13,800.00	11,578.35	11,828.24	11,578.35	42.61	30.46	111.77	-699.85	974.53	2,032.73	1,981.13	51.60	39.395		
13,900.00	11,578.88	11,828.76	11,578.88	43.82	30.46	112.73	-699.85	974.53	2,132.72	2,081.06	51.66	41.283		
14,000.00	11,579.40	11,829.29	11,579.40	45.04	30.46	113.68	-699.85	974.53	2,232.71	2,180.99	51.72	43.166		
14,100.00	11,579.93	11,829.81	11,579.93	46.27	30.46	114.62	-699.85	974.53	2,332.71	2,280.92	51.79	45.043		
14,200.00	11,580.45	11,830.34	11,580.45	47.51	30.46	115.54	-699.85	974.53	2,432.70	2,380.84	51.86	46.913		

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 133H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:		Offset Site Error:	0.00 usft
Reference										Offset Well Error:		0.50 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		Distance		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	1.00	0.00	0.50	0.50	0.00	210.00	0.00	210.00				
100.00	100.00	101.00	100.00	0.98	0.99	0.00	210.00	0.00	210.00	208.03	1.97	106.726	
200.00	200.00	201.00	200.00	1.56	1.57	0.00	210.00	0.00	210.00	206.87	3.13	67.170	
300.00	300.00	301.00	300.00	1.98	1.98	0.00	210.00	0.00	210.00	206.03	3.97	52.953	CC, ES
400.00	399.99	400.99	399.99	2.41	2.33	-130.26	210.00	0.00	210.84	206.15	4.69	44.950	
500.00	499.91	500.91	499.91	2.77	2.64	-131.04	210.00	0.00	213.40	208.08	5.32	40.107	
600.00	599.69	600.69	599.69	3.10	2.91	-132.29	210.00	0.00	217.76	211.86	5.90	36.931	
700.00	699.27	700.28	699.28	3.41	3.16	-133.95	210.00	0.00	224.02	217.59	6.44	34.811	
800.00	798.57	804.38	803.37	3.70	3.46	-136.28	208.82	-0.80	231.32	224.34	6.98	33.129	
900.00	897.62	908.14	907.04	3.83	3.72	-139.29	205.31	-3.19	238.53	231.17	7.36	32.399	
1,000.00	996.65	1,011.65	1,010.31	4.06	3.96	-142.63	199.49	-7.14	244.59	236.78	7.81	31.318	
1,100.00	1,095.67	1,111.38	1,109.66	4.28	4.07	-146.00	192.35	-12.00	250.19	242.03	8.15	30.682	
1,200.00	1,194.70	1,210.15	1,208.05	4.51	4.25	-149.20	185.24	-16.84	256.58	248.00	8.58	29.918	
1,300.00	1,293.62	1,310.46	1,307.94	4.72	4.36	-145.28	177.67	-22.06	263.75	254.85	8.90	29.650	
1,400.00	1,392.26	1,410.92	1,407.73	4.94	4.60	-143.31	168.33	-28.93	271.53	262.20	9.33	29.113	
1,500.00	1,490.54	1,509.83	1,505.64	5.17	4.82	-143.26	157.24	-37.42	280.78	271.04	9.75	28.813	
1,600.00	1,588.41	1,606.12	1,600.65	5.40	4.94	-144.52	144.94	-47.10	292.62	282.53	10.09	29.010	
1,700.00	1,685.98	1,701.06	1,694.29	5.58	5.12	-149.16	132.64	-56.79	307.62	297.16	10.47	29.392	
1,800.00	1,783.55	1,795.99	1,787.92	5.80	5.31	-153.81	120.34	-66.49	325.00	314.12	10.88	29.871	
1,900.00	1,881.12	1,890.92	1,881.55	6.04	5.49	-157.99	108.03	-76.18	344.37	333.07	11.29	30.492	
2,000.00	1,978.69	1,985.85	1,975.18	6.31	5.68	-161.74	95.73	-85.88	365.42	353.71	11.71	31.211	
2,100.00	2,076.26	2,080.79	2,068.81	6.58	5.87	-165.08	83.43	-95.57	387.88	375.75	12.12	31.994	
2,200.00	2,173.83	2,175.72	2,162.44	6.87	6.05	-168.07	71.13	-105.27	411.51	398.97	12.54	32.815	
2,300.00	2,271.40	2,270.65	2,256.07	7.15	6.24	-170.74	58.83	-114.97	436.13	423.17	12.96	33.655	
2,400.00	2,368.97	2,365.58	2,349.70	7.44	6.43	-173.14	46.52	-124.66	461.58	448.20	13.38	34.500	
2,500.00	2,466.54	2,460.51	2,443.33	7.73	6.62	-175.28	34.22	-134.36	487.73	473.93	13.80	35.339	
2,600.00	2,564.11	2,555.44	2,536.96	8.02	6.80	-177.21	21.92	-144.05	514.47	500.24	14.23	36.165	
2,700.00	2,661.68	2,650.37	2,630.59	8.31	6.99	-178.96	9.62	-153.75	541.71	527.06	14.65	36.969	
2,800.00	2,759.25	2,745.31	2,724.22	8.60	7.20	-179.46	-2.68	-163.44	569.39	554.31	15.08	37.764	
2,900.00	2,856.82	2,840.24	2,817.85	8.89	7.42	-178.02	-14.99	-173.14	597.43	581.93	15.51	38.526	
3,000.00	2,954.39	2,935.17	2,911.48	9.18	7.64	-176.71	-27.29	-182.84	625.80	609.87	15.94	39.265	
3,100.00	3,051.96	3,030.10	3,005.11	9.48	7.86	-175.52	-39.59	-192.53	654.45	638.08	16.37	39.979	
3,200.00	3,149.53	3,125.03	3,098.74	9.77	8.08	-174.42	-51.89	-202.23	683.35	666.54	16.80	40.667	
3,300.00	3,247.10	3,219.96	3,192.37	10.07	8.30	-173.41	-64.19	-211.92	712.46	695.22	17.24	41.331	
3,400.00	3,344.67	3,314.89	3,286.00	10.37	8.52	-172.48	-76.50	-221.62	741.75	724.08	17.67	41.969	
3,500.00	3,442.24	3,409.82	3,379.64	10.67	8.74	-171.61	-88.80	-231.31	771.22	753.11	18.11	42.584	
3,600.00	3,539.81	3,504.76	3,473.27	10.96	8.96	-170.82	-101.10	-241.01	800.84	782.29	18.55	43.176	
3,700.00	3,637.39	3,599.69	3,566.90	11.26	9.18	-170.07	-113.40	-250.71	830.59	811.60	18.99	43.745	
3,800.00	3,734.96	3,694.62	3,660.53	11.56	9.41	-169.38	-125.71	-260.40	860.46	841.03	19.43	44.292	
3,900.00	3,832.53	3,789.55	3,754.16	11.86	9.63	-168.74	-138.01	-270.10	890.43	870.57	19.87	44.819	
4,000.00	3,930.10	3,884.48	3,847.79	12.16	9.85	-168.13	-150.31	-279.79	920.51	900.20	20.31	45.326	
4,100.00	4,027.67	3,979.41	3,941.42	12.46	10.08	-167.57	-162.61	-289.49	950.67	929.92	20.75	45.814	
4,200.00	4,125.24	4,074.34	4,035.05	12.76	10.30	-167.04	-174.91	-299.18	980.91	959.72	21.19	46.283	
4,300.00	4,222.81	4,169.28	4,128.68	13.06	10.52	-166.54	-187.22	-308.88	1,011.23	989.59	21.64	46.736	
4,400.00	4,320.38	4,264.21	4,222.31	13.36	10.75	-166.06	-199.52	-318.57	1,041.61	1,019.53	22.08	47.172	
4,500.00	4,417.95	4,359.14	4,315.94	13.66	10.97	-165.62	-211.82	-328.27	1,072.05	1,049.52	22.53	47.592	
4,600.00	4,515.52	4,454.07	4,409.57	13.96	11.20	-165.20	-224.12	-337.97	1,102.55	1,079.58	22.97	47.997	
4,700.00	4,613.09	4,549.00	4,503.20	14.27	11.42	-164.80	-236.42	-347.66	1,133.10	1,109.68	23.42	48.388	
4,800.00	4,710.66	4,643.93	4,596.83	14.57	11.65	-164.43	-248.73	-357.36	1,163.69	1,139.83	23.86	48.765	
4,900.00	4,808.23	4,738.86	4,690.46	14.87	11.87	-164.07	-261.03	-367.05	1,194.33	1,170.02	24.31	49.128	
5,000.00	4,905.80	4,833.80	4,784.09	15.17	12.10	-163.73	-273.33	-376.75	1,225.01	1,200.25	24.76	49.480	
5,100.00	5,003.37	4,928.73	4,877.72	15.47	12.32	-163.41	-285.63	-386.44	1,255.73	1,230.52	25.21	49.819	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 133H - OH - Plan #2

Survey Program:		0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:			Offset Well Error:		0.50 usft			
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	+N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning			
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)					
5,200.00	5,100.94	5,023.66	4,971.35	15.78	12.55	163.10	-297.93	-396.14	1,286.48	1,260.82	25.65	50.148				
5,300.00	5,198.51	5,118.59	5,064.98	16.08	12.77	162.81	-310.24	-405.84	1,317.26	1,291.16	26.10	50.465				
5,400.00	5,296.08	5,213.52	5,158.61	16.38	13.00	162.52	-322.54	-415.53	1,348.07	1,321.52	26.55	50.772				
5,500.00	5,393.65	5,308.45	5,252.24	16.69	13.22	162.26	-334.84	-425.23	1,378.92	1,351.92	27.00	51.073				
5,600.00	5,491.24	5,417.74	5,360.11	16.97	13.45	162.02	-348.61	-436.08	1,409.44	1,381.99	27.46	51.336				
5,700.00	5,589.24	5,543.17	5,484.42	17.25	13.71	161.93	-361.68	-446.38	1,436.50	1,408.48	28.01	51.282				
5,800.00	5,687.73	5,670.94	5,611.55	17.50	13.93	161.91	-371.69	-454.27	1,459.14	1,430.61	28.53	51.149				
5,900.00	5,786.63	5,800.59	5,740.91	17.73	14.12	161.97	-378.43	-459.58	1,477.27	1,448.28	29.00	50.947				
6,000.00	5,885.89	5,931.65	5,871.90	17.92	14.25	162.10	-381.73	-462.19	1,490.83	1,461.44	29.39	50.724				
6,100.00	5,985.43	6,045.19	5,985.43	18.09	14.30	162.25	-382.07	-462.45	1,500.12	1,470.47	29.65	50.599				
6,200.00	6,085.19	6,144.94	6,085.19	18.23	14.33	162.36	-382.07	-462.45	1,506.72	1,476.86	29.86	50.458				
6,300.00	6,185.09	6,244.85	6,185.09	18.33	14.37	162.43	-382.07	-462.45	1,510.84	1,480.78	30.06	50.261				
6,400.00	6,285.07	6,344.83	6,285.07	18.42	14.40	162.46	-382.07	-462.45	1,512.46	1,482.22	30.23	50.024				
6,500.00	6,385.07	6,444.83	6,385.07	18.44	14.44	-90.40	-382.07	-462.45	1,512.49	1,482.19	30.30	49.921				
6,600.00	6,485.07	6,544.83	6,485.07	18.48	14.47	-90.40	-382.07	-462.45	1,512.49	1,482.12	30.37	49.803				
6,700.00	6,585.07	6,644.83	6,585.07	18.52	14.51	-90.40	-382.07	-462.45	1,512.49	1,482.04	30.44	49.684				
6,800.00	6,685.07	6,744.83	6,685.07	18.56	14.54	-90.40	-382.07	-462.45	1,512.49	1,481.97	30.52	49.564				
6,900.00	6,785.07	6,844.83	6,785.07	18.60	14.58	-90.40	-382.07	-462.45	1,512.49	1,481.90	30.59	49.444				
7,000.00	6,885.07	6,944.83	6,885.07	18.64	14.62	-90.40	-382.07	-462.45	1,512.49	1,481.82	30.66	49.324				
7,100.00	6,985.07	7,044.83	6,985.07	18.68	14.65	-90.40	-382.07	-462.45	1,512.49	1,481.75	30.74	49.202				
7,200.00	7,085.07	7,144.83	7,085.07	18.72	14.69	-90.40	-382.07	-462.45	1,512.49	1,481.67	30.82	49.081				
7,300.00	7,185.07	7,244.83	7,185.07	18.76	14.73	-90.40	-382.07	-462.45	1,512.49	1,481.59	30.89	48.959				
7,400.00	7,285.07	7,344.83	7,285.07	18.80	14.77	-90.40	-382.07	-462.45	1,512.49	1,481.52	30.97	48.836				
7,500.00	7,385.07	7,444.83	7,385.07	18.85	14.81	-90.40	-382.07	-462.45	1,512.49	1,481.44	31.05	48.713				
7,600.00	7,485.07	7,544.83	7,485.07	18.89	14.85	-90.40	-382.07	-462.45	1,512.49	1,481.36	31.13	48.590				
7,700.00	7,585.07	7,644.83	7,585.07	18.93	14.89	-90.40	-382.07	-462.45	1,512.49	1,481.28	31.21	48.466				
7,800.00	7,685.07	7,744.83	7,685.07	18.97	14.93	-90.40	-382.07	-462.45	1,512.49	1,481.20	31.29	48.342				
7,900.00	7,785.07	7,844.83	7,785.07	19.01	14.97	-90.40	-382.07	-462.45	1,512.49	1,481.12	31.37	48.217				
8,000.00	7,885.07	7,944.83	7,885.07	19.06	15.01	-90.40	-382.07	-462.45	1,512.49	1,481.04	31.45	48.092				
8,100.00	7,985.07	8,044.83	7,985.07	19.10	15.05	-90.40	-382.07	-462.45	1,512.49	1,480.95	31.53	47.967				
8,200.00	8,085.07	8,144.83	8,085.07	19.14	15.09	-90.40	-382.07	-462.45	1,512.49	1,480.87	31.61	47.842				
8,300.00	8,185.07	8,244.83	8,185.07	19.19	15.13	-90.40	-382.07	-462.45	1,512.49	1,480.79	31.70	47.716				
8,400.00	8,285.07	8,344.83	8,285.07	19.23	15.17	-90.40	-382.07	-462.45	1,512.49	1,480.70	31.78	47.590				
8,500.00	8,385.07	8,444.83	8,385.07	19.27	15.22	-90.40	-382.07	-462.45	1,512.49	1,480.62	31.87	47.463				
8,600.00	8,485.07	8,544.83	8,485.07	19.32	15.26	-90.40	-382.07	-462.45	1,512.49	1,480.53	31.95	47.337				
8,700.00	8,585.07	8,644.83	8,585.07	19.36	15.30	-90.40	-382.07	-462.45	1,512.49	1,480.45	32.04	47.210				
8,800.00	8,685.07	8,744.83	8,685.07	19.41	15.34	-90.40	-382.07	-462.45	1,512.49	1,480.36	32.12	47.083				
8,900.00	8,785.07	8,844.83	8,785.07	19.45	15.39	-90.40	-382.07	-462.45	1,512.49	1,480.28	32.21	46.956				
9,000.00	8,885.07	8,944.83	8,885.07	19.50	15.43	-90.40	-382.07	-462.45	1,512.49	1,480.19	32.30	46.829				
9,100.00	8,985.07	9,044.83	8,985.07	19.54	15.48	-90.40	-382.07	-462.45	1,512.49	1,480.10	32.39	46.701				
9,200.00	9,085.07	9,144.83	9,085.07	19.59	15.52	-90.40	-382.07	-462.45	1,512.49	1,480.01	32.48	46.573				
9,300.00	9,185.07	9,244.83	9,185.07	19.63	15.57	-90.40	-382.07	-462.45	1,512.49	1,479.92	32.56	46.446				
9,400.00	9,285.07	9,344.83	9,285.07	19.68	15.61	-90.40	-382.07	-462.45	1,512.49	1,479.83	32.65	46.318				
9,500.00	9,385.07	9,444.83	9,385.07	19.73	15.66	-90.40	-382.07	-462.45	1,512.49	1,479.74	32.75	46.190				
9,600.00	9,485.07	9,544.83	9,485.07	19.77	15.70	-90.40	-382.07	-462.45	1,512.49	1,479.65	32.84	46.062				
9,700.00	9,585.07	9,644.83	9,585.07	19.82	15.75	-90.40	-382.07	-462.45	1,512.49	1,479.56	32.93	45.933				
9,800.00	9,685.07	9,744.83	9,685.07	19.87	15.80	-90.40	-382.07	-462.45	1,512.49	1,479.47	33.02	45.805				
9,900.00	9,785.07	9,844.83	9,785.07	19.91	15.84	-90.40	-382.07	-462.45	1,512.49	1,479.37	33.11	45.677				
10,000.00	9,885.07	9,944.83	9,885.07	19.96	15.89	-90.40	-382.07	-462.45	1,512.49	1,479.28	33.21	45.549				
10,100.00	9,985.07	10,044.83	9,985.07	20.01	15.94	-90.40	-382.07	-462.45	1,512.49	1,479.19	33.30	45.420				
10,200.00	10,085.07	10,144.83	10,085.07	20.06	15.99	-90.40	-382.07	-462.45	1,512.49	1,479.09	33.39	45.292				
10,300.00	10,185.07	10,244.83	10,185.07	20.10	16.03	-90.40	-382.07	-462.45	1,512.49	1,479.00	33.49	45.164				

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

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Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 133H - OH - Plan #2

Survey Program:		0-MWD+HRGM+SAG+FDIR (rev.5)				Rule Assigned:				Offset Well Error:		0.50 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
10,400.00	10,285.07	10,344.83	10,285.07	20.15	16.08	-90.40	-382.07	-462.45	1,512.49	1,478.90	33.58	45.035	
10,500.00	10,385.07	10,444.83	10,385.07	20.20	16.13	-90.40	-382.07	-462.45	1,512.49	1,478.81	33.68	44.907	
10,600.00	10,485.07	10,544.83	10,485.07	20.25	16.18	-90.40	-382.07	-462.45	1,512.49	1,478.71	33.78	44.779	
10,700.00	10,585.07	10,644.83	10,585.07	20.30	16.23	-90.40	-382.07	-462.45	1,512.49	1,478.61	33.87	44.651	
10,800.00	10,685.07	10,744.83	10,685.07	20.35	16.28	-90.40	-382.07	-462.45	1,512.49	1,478.52	33.97	44.523	
10,900.00	10,785.07	10,844.83	10,785.07	20.40	16.33	-90.40	-382.07	-462.45	1,512.49	1,478.42	34.07	44.395	
11,000.00	10,885.07	10,944.83	10,885.07	20.45	16.38	-90.40	-382.07	-462.45	1,512.49	1,478.32	34.17	44.267	
11,100.00	10,985.07	11,044.83	10,985.07	20.50	16.43	-90.40	-382.07	-462.45	1,512.49	1,478.22	34.27	44.139	
11,200.00	11,084.72	11,144.47	11,084.72	20.59	16.48	86.06	-382.07	-462.45	1,511.99	1,477.65	34.34	44.034	
11,300.00	11,181.66	11,241.42	11,181.66	20.75	16.53	87.09	-382.07	-462.45	1,510.51	1,476.07	34.44	43.856	
11,400.00	11,272.97	11,332.72	11,272.97	20.95	16.58	88.65	-382.07	-462.45	1,508.88	1,474.29	34.59	43.620	
11,475.33	11,336.33	11,396.08	11,336.33	21.14	16.61	90.00	-382.07	-462.45	1,508.33	1,473.59	34.74	43.418	
11,500.00	11,355.85	11,415.61	11,355.85	21.20	16.62	90.45	-382.07	-462.45	1,508.41	1,473.62	34.78	43.366	
11,600.00	11,427.81	11,487.56	11,427.81	21.52	16.66	92.10	-382.07	-462.45	1,510.69	1,475.67	35.01	43.145	
11,700.00	11,486.64	11,546.40	11,486.64	21.92	16.68	93.23	-382.07	-462.45	1,517.33	1,482.07	35.26	43.028	
11,800.00	11,530.57	11,628.32	11,568.38	22.42	16.76	94.75	-386.41	-462.58	1,529.29	1,493.69	35.60	42.957	
11,900.00	11,558.25	11,755.90	11,692.22	23.01	17.04	97.28	-415.98	-463.49	1,545.84	1,509.52	36.32	42.563	
12,000.00	11,568.85	11,982.64	11,884.67	23.68	17.91	102.07	-532.82	-467.06	1,564.52	1,526.10	38.43	40.713	
12,100.00	11,569.43	12,521.36	12,071.42	24.45	22.37	108.64	-1,018.35	-481.09	1,570.56	1,525.36	45.21	34.742	
12,200.00	11,569.96	12,645.15	12,072.28	25.29	23.67	108.68	-1,142.13	-480.34	1,568.26	1,521.02	47.24	33.198	
12,291.26	11,570.44	12,736.40	12,072.92	26.11	24.66	108.69	-1,233.38	-479.51	1,567.88	1,518.98	48.90	32.066	
12,300.00	11,570.48	12,745.15	12,072.98	26.19	24.75	108.69	-1,242.13	-479.43	1,568.20	1,519.14	49.06	31.968	
12,400.00	11,571.01	12,845.15	12,073.68	27.12	25.87	108.70	-1,342.12	-478.52	1,568.25	1,517.30	50.95	30.782	
12,500.00	11,571.53	12,945.15	12,074.38	28.09	27.00	108.70	-1,442.11	-477.62	1,568.30	1,515.40	52.90	29.647	
12,600.00	11,572.06	13,045.15	12,075.07	29.09	28.16	108.71	-1,542.11	-476.71	1,568.35	1,513.44	54.91	28.565	
12,700.00	11,572.58	13,145.15	12,075.77	30.12	29.33	108.71	-1,642.10	-475.80	1,568.40	1,511.44	56.96	27.535	
12,800.00	11,573.11	13,245.15	12,076.47	31.17	30.52	108.72	-1,742.09	-474.90	1,568.45	1,509.39	59.06	26.557	
12,900.00	11,573.63	13,345.15	12,077.17	32.24	31.72	108.73	-1,842.09	-473.99	1,568.50	1,507.30	61.20	25.630	
13,000.00	11,574.16	13,445.15	12,077.87	33.33	32.94	108.73	-1,942.08	-473.08	1,568.55	1,505.18	63.37	24.752	
13,100.00	11,574.68	13,545.15	12,078.56	34.44	34.16	108.74	-2,042.07	-472.18	1,568.60	1,503.03	65.58	23.920	
13,200.00	11,575.21	13,645.15	12,079.26	35.57	35.40	108.74	-2,142.07	-471.27	1,568.65	1,500.84	67.81	23.133	
13,300.00	11,575.73	13,745.15	12,079.96	36.71	36.64	108.75	-2,242.06	-470.36	1,568.70	1,498.63	70.07	22.388	
13,400.00	11,576.25	13,845.15	12,080.66	37.87	37.90	108.76	-2,342.05	-469.46	1,568.75	1,496.40	72.35	21.682	
13,500.00	11,576.78	13,945.15	12,081.36	39.04	39.16	108.76	-2,442.05	-468.55	1,568.81	1,494.15	74.66	21.014	
13,600.00	11,577.30	14,045.15	12,082.06	40.22	40.43	108.77	-2,542.04	-467.64	1,568.86	1,491.88	76.98	20.380	
13,700.00	11,577.83	14,145.14	12,082.75	41.41	41.70	108.77	-2,642.03	-466.73	1,568.91	1,489.59	79.32	19.779	
13,800.00	11,578.35	14,245.14	12,083.45	42.61	42.98	108.78	-2,742.03	-465.83	1,568.96	1,487.28	81.68	19.209	
13,900.00	11,578.88	14,345.14	12,084.15	43.82	44.27	108.79	-2,842.02	-464.92	1,569.01	1,484.96	84.05	18.668	
14,000.00	11,579.40	14,445.14	12,084.85	45.04	45.56	108.79	-2,942.01	-464.01	1,569.06	1,482.62	86.43	18.153	
14,100.00	11,579.93	14,545.14	12,085.55	46.27	46.85	108.80	-3,042.01	-463.11	1,569.11	1,480.28	88.83	17.664	
14,200.00	11,580.45	14,645.14	12,086.25	47.51	48.15	108.80	-3,142.00	-462.20	1,569.16	1,477.92	91.24	17.198	
14,300.00	11,580.98	14,745.14	12,086.94	48.75	49.45	108.81	-3,241.99	-461.29	1,569.21	1,475.55	93.66	16.754	
14,400.00	11,581.50	14,845.14	12,087.64	49.99	50.76	108.82	-3,341.99	-460.39	1,569.26	1,473.17	96.09	16.331	
14,500.00	11,582.03	14,945.14	12,088.34	51.25	52.06	108.82	-3,441.98	-459.48	1,569.31	1,470.79	98.53	15.928	
14,600.00	11,582.55	15,045.14	12,089.04	52.51	53.37	108.83	-3,541.97	-458.57	1,569.36	1,468.39	100.97	15.542	
14,700.00	11,583.08	15,145.14	12,089.74	53.77	54.69	108.83	-3,641.97	-457.67	1,569.42	1,465.99	103.43	15.174	
14,800.00	11,583.60	15,245.14	12,090.43	55.04	56.01	108.84	-3,741.96	-456.76	1,569.47	1,463.58	105.89	14.822	
14,900.00	11,584.13	15,345.14	12,091.13	56.31	57.32	108.85	-3,841.95	-455.85	1,569.52	1,461.16	108.36	14.485	
15,000.00	11,584.65	15,445.14	12,091.83	57.59	58.65	108.85	-3,941.95	-454.95	1,569.57	1,458.74	110.83	14.162	
15,100.00	11,585.18	15,545.14	12,092.53	58.87	59.97	108.86	-4,041.94	-454.04	1,569.62	1,456.31	113.31	13.852	
15,200.00	11,585.70	15,645.14	12,093.23	60.16	61.30	108.87	-4,141.93	-453.13	1,569.67	1,453.87	115.80	13.555	
15,300.00	11,586.23	15,745.14	12,093.93	61.45	62.62	108.87	-4,241.93	-452.23	1,569.72	1,451.43	118.29	13.270	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 133H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:				Offset Site Error:
														Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
15,400.00	11,586.75	15,845.14	12,094.62	62.74	63.95	108.88	-4,341.92	-451.32	1,569.77	1,448.99	120.78	12.997		
15,500.00	11,587.28	15,945.14	12,095.32	64.03	65.28	108.88	-4,441.91	-450.41	1,569.82	1,446.54	123.28	12.734		
15,600.00	11,587.80	16,045.14	12,096.02	65.33	66.61	108.89	-4,541.91	-449.51	1,569.88	1,444.09	125.79	12.481		
15,700.00	11,588.33	16,145.14	12,096.72	66.63	67.95	108.90	-4,641.90	-448.60	1,569.93	1,441.63	128.29	12.237		
15,800.00	11,588.85	16,245.14	12,097.42	67.93	69.28	108.90	-4,741.89	-447.69	1,569.98	1,439.17	130.80	12.003		
15,900.00	11,589.37	16,345.14	12,098.12	69.24	70.62	108.91	-4,841.89	-446.78	1,570.03	1,436.71	133.32	11.777		
16,000.00	11,589.90	16,445.14	12,098.81	70.55	71.96	108.91	-4,941.88	-445.88	1,570.08	1,434.24	135.84	11.559		
16,100.00	11,590.42	16,545.14	12,099.51	71.86	73.30	108.92	-5,041.87	-444.97	1,570.13	1,431.77	138.36	11.348		
16,200.00	11,590.95	16,645.14	12,100.21	73.17	74.64	108.93	-5,141.86	-444.06	1,570.18	1,429.30	140.88	11.145		
16,300.00	11,591.47	16,745.14	12,100.91	74.48	75.98	108.93	-5,241.86	-443.16	1,570.23	1,426.83	143.41	10.949		
16,400.00	11,592.00	16,845.14	12,101.61	75.80	77.32	108.94	-5,341.85	-442.25	1,570.28	1,424.35	145.94	10.760		
16,500.00	11,592.52	16,945.14	12,102.31	77.12	78.66	108.94	-5,441.84	-441.34	1,570.34	1,421.87	148.47	10.577		
16,600.00	11,593.05	17,045.14	12,103.00	78.44	80.00	108.95	-5,541.84	-440.44	1,570.39	1,419.39	151.00	10.400		
16,700.00	11,593.57	17,145.14	12,103.70	79.76	81.35	108.96	-5,641.83	-439.53	1,570.44	1,416.90	153.54	10.228		
16,800.00	11,594.10	17,245.14	12,104.40	81.08	82.69	108.96	-5,741.82	-438.62	1,570.49	1,414.41	156.08	10.062		
16,900.00	11,594.62	17,345.14	12,105.10	82.41	84.04	108.97	-5,841.82	-437.72	1,570.54	1,411.93	158.62	9.902		
17,000.00	11,595.15	17,445.14	12,105.80	83.73	85.39	108.97	-5,941.81	-436.81	1,570.59	1,409.43	161.16	9.746		
17,100.00	11,595.67	17,545.14	12,106.49	85.06	86.73	108.98	-6,041.80	-435.90	1,570.64	1,406.94	163.70	9.595		
17,200.00	11,596.20	17,645.14	12,107.19	86.39	88.08	108.99	-6,141.80	-435.00	1,570.70	1,404.45	166.25	9.448		
17,300.00	11,596.72	17,745.14	12,107.89	87.72	89.43	108.99	-6,241.79	-434.09	1,570.75	1,401.95	168.79	9.306		
17,400.00	11,597.25	17,845.14	12,108.59	89.05	90.78	109.00	-6,341.78	-433.18	1,570.80	1,399.46	171.34	9.168		
17,500.00	11,597.77	17,945.14	12,109.29	90.38	92.13	109.00	-6,441.78	-432.28	1,570.85	1,396.96	173.89	9.033		
17,600.00	11,598.30	18,045.14	12,109.99	91.71	93.48	109.01	-6,541.77	-431.37	1,570.90	1,394.46	176.44	8.903		
17,700.00	11,598.82	18,145.14	12,110.68	93.05	94.83	109.02	-6,641.76	-430.46	1,570.95	1,391.96	179.00	8.776		
17,800.00	11,599.35	18,245.14	12,111.38	94.38	96.18	109.02	-6,741.76	-429.56	1,571.00	1,389.45	181.55	8.653		
17,900.00	11,599.87	18,345.14	12,112.08	95.72	97.54	109.03	-6,841.75	-428.65	1,571.06	1,386.95	184.10	8.534		
18,000.00	11,600.40	18,445.14	12,112.78	97.05	98.89	109.03	-6,941.74	-427.74	1,571.11	1,384.45	186.66	8.417		
18,100.00	11,600.92	18,545.14	12,113.48	98.39	100.24	109.04	-7,041.74	-426.84	1,571.16	1,381.94	189.22	8.303		
18,200.00	11,601.44	18,645.14	12,114.18	99.73	101.59	109.05	-7,141.73	-425.93	1,571.21	1,379.44	191.78	8.193		
18,300.00	11,601.97	18,745.14	12,114.87	101.07	102.95	109.05	-7,241.72	-425.02	1,571.26	1,376.93	194.33	8.085		
18,400.00	11,602.49	18,845.14	12,115.57	102.41	104.30	109.06	-7,341.72	-424.11	1,571.31	1,374.42	196.89	7.980		
18,500.00	11,603.02	18,945.14	12,116.27	103.75	105.66	109.06	-7,441.71	-423.21	1,571.37	1,371.91	199.46	7.878		
18,600.00	11,603.54	19,045.14	12,116.97	105.09	107.01	109.07	-7,541.70	-422.30	1,571.42	1,369.40	202.02	7.779		
18,700.00	11,604.07	19,145.14	12,117.67	106.44	108.37	109.08	-7,641.70	-421.39	1,571.47	1,366.89	204.58	7.681		
18,800.00	11,604.59	19,245.14	12,118.36	107.78	109.72	109.08	-7,741.69	-420.49	1,571.52	1,364.38	207.14	7.587		
18,900.00	11,605.12	19,345.14	12,119.06	109.12	111.08	109.09	-7,841.68	-419.58	1,571.57	1,361.86	209.71	7.494		
19,000.00	11,605.64	19,445.14	12,119.76	110.47	112.44	109.09	-7,941.68	-418.67	1,571.62	1,359.35	212.27	7.404		
19,100.00	11,606.17	19,545.14	12,120.46	111.81	113.79	109.10	-8,041.67	-417.77	1,571.68	1,356.84	214.84	7.316		
19,200.00	11,606.69	19,645.14	12,121.16	113.16	115.15	109.11	-8,141.66	-416.86	1,571.73	1,354.32	217.40	7.230		
19,300.00	11,607.22	19,745.14	12,121.86	114.50	116.51	109.11	-8,241.66	-415.95	1,571.78	1,351.81	219.97	7.145		
19,400.00	11,607.74	19,845.14	12,122.55	115.85	117.86	109.12	-8,341.65	-415.05	1,571.83	1,349.29	222.54	7.063		
19,500.00	11,608.27	19,945.14	12,123.25	117.20	119.22	109.13	-8,441.64	-414.14	1,571.88	1,346.78	225.11	6.983		
19,600.00	11,608.79	20,045.14	12,123.95	118.54	120.58	109.13	-8,541.64	-413.23	1,571.93	1,344.26	227.67	6.904		
19,700.00	11,609.32	20,145.14	12,124.65	119.89	121.94	109.14	-8,641.63	-412.33	1,571.99	1,341.74	230.24	6.828		
19,800.00	11,609.84	20,245.14	12,125.35	121.24	123.30	109.14	-8,741.62	-411.42	1,572.04	1,339.23	232.81	6.752		
19,900.00	11,610.37	20,345.14	12,126.05	122.59	124.66	109.15	-8,841.62	-410.51	1,572.09	1,336.71	235.38	6.679		
20,000.00	11,610.89	20,445.14	12,126.74	123.94	126.02	109.16	-8,941.61	-409.61	1,572.14	1,334.19	237.95	6.607		
20,100.00	11,611.42	20,545.14	12,127.44	125.29	127.37	109.16	-9,041.60	-408.70	1,572.19	1,331.67	240.52	6.537		
20,200.00	11,611.94	20,645.14	12,128.14	126.64	128.73	109.17	-9,141.60	-407.79	1,572.25	1,329.15	243.09	6.468		
20,300.00	11,612.47	20,745.14	12,128.84	127.99	130.09	109.17	-9,241.59	-406.89	1,572.30	1,326.63	245.67	6.400		
20,400.00	11,612.99	20,845.13	12,129.54	129.34	131.45	109.18	-9,341.58	-405.98	1,572.35	1,324.11	248.24	6.334		
20,500.00	11,613.52	20,945.13	12,130.23	130.69	132.81	109.19	-9,441.58	-405.07	1,572.40	1,321.59	250.81	6.269		

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 133H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:		Offset Site Error:	0.00 usft
												Offset Well Error:	0.50 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
20,600.00	11,614.04	21,045.13	12,130.93	132.04	134.17	109.19	-9,541.57	-404.17	1,572.45	1,319.07	253.38	6.206	
20,700.00	11,614.56	21,145.13	12,131.63	133.40	135.54	109.20	-9,641.56	-403.26	1,572.51	1,316.55	255.96	6.144	
20,800.00	11,615.09	21,245.13	12,132.33	134.75	136.90	109.20	-9,741.56	-402.35	1,572.56	1,314.03	258.53	6.083	
20,900.00	11,615.61	21,345.13	12,133.03	136.10	138.26	109.21	-9,841.55	-401.44	1,572.61	1,311.51	261.10	6.023	
21,000.00	11,616.14	21,445.13	12,133.73	137.45	139.62	109.22	-9,941.54	-400.54	1,572.66	1,308.99	263.68	5.964	
21,100.00	11,616.66	21,545.13	12,134.42	138.81	140.98	109.22	-10,041.54	-399.63	1,572.71	1,306.46	266.25	5.907	
21,200.00	11,617.19	21,645.13	12,135.12	140.16	142.34	109.23	-10,141.53	-398.72	1,572.77	1,303.94	268.82	5.851	
21,300.00	11,617.71	21,745.13	12,135.82	141.52	143.70	109.23	-10,241.52	-397.82	1,572.82	1,301.42	271.40	5.795	
21,400.00	11,618.24	21,845.13	12,136.52	142.87	145.06	109.24	-10,341.52	-396.91	1,572.87	1,298.90	273.97	5.741	
21,500.00	11,618.76	21,945.13	12,137.22	144.23	146.43	109.25	-10,441.51	-396.00	1,572.92	1,296.37	276.55	5.688	
21,600.00	11,619.29	22,045.13	12,137.92	145.58	147.79	109.25	-10,541.50	-395.10	1,572.97	1,293.85	279.12	5.635	
21,700.00	11,619.81	22,145.13	12,138.61	146.94	149.15	109.26	-10,641.50	-394.19	1,573.03	1,291.33	281.70	5.584	
21,800.00	11,620.34	22,245.13	12,139.31	148.29	150.51	109.26	-10,741.49	-393.28	1,573.08	1,288.80	284.28	5.534	
21,900.00	11,620.86	22,345.13	12,140.01	149.65	151.87	109.27	-10,841.48	-392.38	1,573.13	1,286.28	286.85	5.484	
21,945.36	11,621.10	22,387.52	12,140.31	150.26	152.46	109.27	-10,883.87	-391.99	1,573.16	1,285.19	287.97	5.463	SF

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 134H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)

Offset Site Error: 0.00 usft

Offset Well Error: 0.50 usft

Reference		Offset		Semi Major Axis		Highside Toolface (")	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	1.00	0.00	0.50	0.50	0.00	50.00	0.00	50.00				
100.00	100.00	101.00	100.00	0.98	0.98	0.00	50.00	0.00	50.00	48.04	1.96	25.557	
200.00	200.00	201.00	200.00	1.56	1.56	0.00	50.00	0.00	50.00	46.88	3.12	16.029	
300.00	300.00	301.00	300.00	1.98	1.98	0.00	50.00	0.00	50.00	46.04	3.96	12.626	CC, ES
400.00	399.99	400.99	399.99	2.41	2.33	-131.12	50.00	0.00	50.85	46.16	4.69	10.849	
500.00	499.91	500.91	499.91	2.77	2.63	-134.26	50.00	0.00	53.52	48.19	5.33	10.049	
600.00	599.69	600.69	599.69	3.10	2.91	-138.82	50.00	0.00	58.27	52.35	5.92	9.848	
700.00	699.27	700.27	699.27	3.41	3.16	-144.03	50.00	0.00	65.44	58.97	6.48	10.102	
800.00	798.57	799.57	798.57	3.70	3.40	-149.20	50.00	0.00	75.29	68.27	7.01	10.733	
900.00	897.62	898.62	897.62	3.83	3.62	-153.80	50.00	0.00	87.43	80.04	7.39	11.833	
1,000.00	996.65	997.65	996.65	4.06	3.83	-157.31	50.00	0.00	100.12	92.28	7.84	12.770	
1,100.00	1,095.67	1,096.67	1,095.67	4.28	4.03	-160.03	50.00	0.00	113.11	104.83	8.27	13.670	
1,200.00	1,194.70	1,195.70	1,194.70	4.51	4.22	-162.18	50.00	0.00	126.29	117.58	8.71	14.504	
1,300.00	1,293.62	1,294.62	1,293.62	4.72	4.41	-156.95	50.00	0.00	140.03	130.93	9.11	15.373	
1,400.00	1,392.26	1,394.70	1,393.70	4.94	4.49	-153.44	49.74	0.00	154.77	145.35	9.42	16.422	
1,500.00	1,490.54	1,496.49	1,495.46	5.17	4.68	-152.06	47.19	0.00	169.27	159.45	9.82	17.229	
1,600.00	1,588.41	1,598.01	1,596.84	5.40	4.86	-152.35	41.95	0.00	183.76	173.54	10.22	17.978	
1,700.00	1,685.98	1,699.49	1,698.01	5.58	4.98	-156.55	34.04	0.03	198.32	187.82	10.50	18.886	
1,800.00	1,783.55	1,802.92	1,800.96	5.80	5.14	-160.73	24.31	1.72	211.74	200.88	10.86	19.489	
1,900.00	1,881.12	1,907.23	1,904.60	6.04	5.29	-164.29	13.39	6.03	223.42	212.20	11.22	19.915	
2,000.00	1,978.69	2,008.36	2,004.89	6.31	5.37	-167.31	1.94	12.26	233.62	222.12	11.51	20.304	
2,100.00	2,076.26	2,107.16	2,102.85	6.58	5.52	-170.00	-9.33	18.54	244.19	232.32	11.87	20.567	
2,200.00	2,173.83	2,205.97	2,200.80	6.87	5.68	-172.47	-20.59	24.82	255.25	243.01	12.24	20.848	
2,300.00	2,271.40	2,304.77	2,298.76	7.15	5.83	-174.73	-31.86	31.10	266.75	254.14	12.62	21.143	
2,400.00	2,368.97	2,403.57	2,396.72	7.44	5.99	-176.81	-43.13	37.38	278.63	265.64	12.99	21.444	
2,500.00	2,466.54	2,502.37	2,494.67	7.73	6.15	-178.71	-54.39	43.66	290.84	277.47	13.37	21.747	
2,600.00	2,564.11	2,601.18	2,592.63	8.02	6.31	179.54	-65.66	49.94	303.35	289.59	13.76	22.049	
2,700.00	2,661.68	2,699.98	2,690.59	8.31	6.48	177.92	-76.93	56.22	316.11	301.97	14.15	22.348	
2,800.00	2,759.25	2,798.78	2,788.54	8.60	6.64	176.44	-88.19	62.50	329.10	314.57	14.54	22.641	
2,900.00	2,856.82	2,897.58	2,886.50	8.89	6.81	175.07	-99.46	68.78	342.30	327.37	14.93	22.927	
3,000.00	2,954.39	2,996.38	2,984.46	9.18	6.98	173.79	-110.73	75.06	355.67	340.35	15.33	23.206	
3,100.00	3,051.96	3,095.19	3,082.41	9.48	7.15	172.62	-122.00	81.34	369.21	353.48	15.73	23.476	
3,200.00	3,149.53	3,193.99	3,180.37	9.77	7.32	171.52	-133.26	87.62	382.89	366.76	16.13	23.737	
3,300.00	3,247.10	3,292.79	3,278.33	10.07	7.49	170.50	-144.53	93.90	396.70	380.16	16.54	23.990	
3,400.00	3,344.67	3,391.59	3,376.28	10.37	7.66	169.55	-155.80	100.18	410.62	393.68	16.94	24.234	
3,500.00	3,442.24	3,490.40	3,474.24	10.67	7.83	168.66	-167.06	106.46	424.65	407.29	17.35	24.469	
3,600.00	3,539.81	3,589.20	3,572.20	10.96	8.00	167.83	-178.33	112.74	438.77	421.00	17.77	24.696	
3,700.00	3,637.39	3,688.00	3,670.15	11.26	8.18	167.05	-189.60	119.02	452.97	434.79	18.18	24.914	
3,800.00	3,734.96	3,786.80	3,768.11	11.56	8.35	166.31	-200.86	125.30	467.26	448.66	18.60	25.124	
3,900.00	3,832.53	3,885.61	3,866.07	11.86	8.53	165.62	-212.13	131.58	481.61	462.60	19.02	25.326	
4,000.00	3,930.10	3,984.41	3,964.02	12.16	8.70	164.97	-223.40	137.86	496.03	476.60	19.44	25.520	
4,100.00	4,027.67	4,083.21	4,061.98	12.46	8.88	164.36	-234.67	144.14	510.51	490.65	19.86	25.707	
4,200.00	4,125.24	4,182.01	4,159.94	12.76	9.06	163.78	-245.93	150.42	525.05	504.76	20.28	25.888	
4,300.00	4,222.81	4,280.81	4,257.89	13.06	9.24	163.23	-257.20	156.70	539.63	518.92	20.71	26.061	
4,400.00	4,320.38	4,379.62	4,355.85	13.36	9.41	162.71	-268.47	162.98	554.26	533.13	21.13	26.228	
4,500.00	4,417.95	4,478.42	4,453.81	13.66	9.59	162.22	-279.73	169.26	568.93	547.37	21.56	26.389	
4,600.00	4,515.52	4,577.22	4,551.76	13.96	9.77	161.75	-291.00	175.54	583.64	561.65	21.99	26.543	
4,700.00	4,613.09	4,676.02	4,649.72	14.27	9.95	161.31	-302.27	181.82	598.39	575.97	22.42	26.693	
4,800.00	4,710.66	4,774.83	4,747.68	14.57	10.13	160.89	-313.53	188.10	613.17	590.32	22.85	26.837	
4,900.00	4,808.23	4,873.63	4,845.63	14.87	10.31	160.48	-324.80	194.38	627.98	604.70	23.28	26.975	
5,000.00	4,905.80	4,972.43	4,943.59	15.17	10.49	160.10	-336.07	200.66	642.82	619.11	23.71	27.109	
5,100.00	5,003.37	5,071.23	5,041.55	15.47	10.66	159.73	-347.33	206.94	657.69	633.55	24.13	27.252	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 134H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:		Offset Site Error:	0.00 usft
												Offset Well Error:	0.50 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,100.94	5,163.71	5,133.34	15.78	10.82	159.47	-357.12	212.40	672.99	648.47	24.52	27.442	
5,300.00	5,198.51	5,255.19	5,224.38	16.08	10.99	159.38	-364.91	216.74	689.34	664.44	24.90	27.680	
5,400.00	5,296.08	5,346.34	5,315.28	16.38	11.15	159.47	-370.77	220.01	706.73	681.47	25.26	27.978	
5,500.00	5,393.65	5,437.06	5,405.89	16.69	11.31	159.70	-374.72	222.21	725.16	699.56	25.59	28.335	
5,600.00	5,491.24	5,527.27	5,496.07	16.97	11.44	160.10	-376.78	223.36	744.54	718.67	25.87	28.785	
5,700.00	5,589.24	5,620.45	5,589.24	17.25	11.50	160.65	-377.13	223.55	763.12	737.00	26.12	29.220	
5,800.00	5,687.73	5,718.93	5,687.73	17.50	11.55	161.15	-377.13	223.55	779.51	753.14	26.38	29.554	
5,900.00	5,786.63	5,817.84	5,786.63	17.73	11.60	161.56	-377.13	223.55	793.49	766.86	26.63	29.797	
6,000.00	5,885.89	5,917.10	5,885.89	17.92	11.65	161.89	-377.13	223.55	805.03	778.15	26.88	29.954	
6,100.00	5,985.43	6,016.64	5,985.43	18.09	11.70	162.14	-377.13	223.55	814.11	786.99	27.11	30.026	
6,200.00	6,085.19	6,116.39	6,085.19	18.23	11.76	162.32	-377.13	223.55	820.71	793.37	27.34	30.018	
6,300.00	6,185.09	6,216.30	6,185.09	18.33	11.81	162.43	-377.13	223.55	824.82	797.27	27.55	29.935	
6,400.00	6,285.07	6,316.28	6,285.07	18.42	11.86	162.47	-377.13	223.55	826.44	798.70	27.74	29.788	
6,500.00	6,385.07	6,416.28	6,385.07	18.44	11.92	-90.39	-377.13	223.55	826.47	798.65	27.82	29.704	
6,600.00	6,485.07	6,516.28	6,485.07	18.48	11.97	-90.39	-377.13	223.55	826.47	798.56	27.91	29.610	
6,700.00	6,585.07	6,616.28	6,585.07	18.52	12.03	-90.39	-377.13	223.55	826.47	798.47	28.00	29.516	
6,800.00	6,685.07	6,716.28	6,685.07	18.56	12.08	-90.39	-377.13	223.55	826.47	798.38	28.09	29.421	
6,900.00	6,785.07	6,816.28	6,785.07	18.60	12.14	-90.39	-377.13	223.55	826.47	798.29	28.18	29.327	
7,000.00	6,885.07	6,916.28	6,885.07	18.64	12.19	-90.39	-377.13	223.55	826.47	798.20	28.27	29.233	
7,100.00	6,985.07	7,016.28	6,985.07	18.68	12.25	-90.39	-377.13	223.55	826.47	798.10	28.36	29.138	
7,200.00	7,085.07	7,116.28	7,085.07	18.72	12.30	-90.39	-377.13	223.55	826.47	798.01	28.46	29.043	
7,300.00	7,185.07	7,216.28	7,185.07	18.76	12.36	-90.39	-377.13	223.55	826.47	797.92	28.55	28.949	
7,400.00	7,285.07	7,316.28	7,285.07	18.80	12.42	-90.39	-377.13	223.55	826.47	797.83	28.64	28.854	
7,500.00	7,385.07	7,416.28	7,385.07	18.85	12.47	-90.39	-377.13	223.55	826.47	797.73	28.74	28.760	
7,600.00	7,485.07	7,516.28	7,485.07	18.89	12.53	-90.39	-377.13	223.55	826.47	797.64	28.83	28.665	
7,700.00	7,585.07	7,616.28	7,585.07	18.93	12.59	-90.39	-377.13	223.55	826.47	797.54	28.93	28.571	
7,800.00	7,685.07	7,716.28	7,685.07	18.97	12.64	-90.39	-377.13	223.55	826.47	797.45	29.02	28.476	
7,900.00	7,785.07	7,816.28	7,785.07	19.01	12.70	-90.39	-377.13	223.55	826.47	797.35	29.12	28.382	
8,000.00	7,885.07	7,916.28	7,885.07	19.06	12.76	-90.39	-377.13	223.55	826.47	797.25	29.22	28.287	
8,100.00	7,985.07	8,016.28	7,985.07	19.10	12.82	-90.39	-377.13	223.55	826.47	797.15	29.31	28.193	
8,200.00	8,085.07	8,116.28	8,085.07	19.14	12.88	-90.39	-377.13	223.55	826.47	797.06	29.41	28.098	
8,300.00	8,185.07	8,216.28	8,185.07	19.19	12.94	-90.39	-377.13	223.55	826.47	796.96	29.51	28.004	
8,400.00	8,285.07	8,316.28	8,285.07	19.23	13.00	-90.39	-377.13	223.55	826.47	796.86	29.61	27.910	
8,500.00	8,385.07	8,416.28	8,385.07	19.27	13.06	-90.39	-377.13	223.55	826.47	796.76	29.71	27.816	
8,600.00	8,485.07	8,516.28	8,485.07	19.32	13.12	-90.39	-377.13	223.55	826.47	796.66	29.81	27.722	
8,700.00	8,585.07	8,616.28	8,585.07	19.36	13.18	-90.39	-377.13	223.55	826.47	796.56	29.91	27.629	
8,800.00	8,685.07	8,716.28	8,685.07	19.41	13.24	-90.39	-377.13	223.55	826.47	796.45	30.02	27.535	
8,900.00	8,785.07	8,816.28	8,785.07	19.45	13.30	-90.39	-377.13	223.55	826.47	796.35	30.12	27.442	
9,000.00	8,885.07	8,916.28	8,885.07	19.50	13.36	-90.39	-377.13	223.55	826.47	796.25	30.22	27.348	
9,100.00	8,985.07	9,016.28	8,985.07	19.54	13.42	-90.39	-377.13	223.55	826.47	796.15	30.32	27.255	
9,200.00	9,085.07	9,116.28	9,085.07	19.59	13.48	-90.39	-377.13	223.55	826.47	796.04	30.43	27.162	
9,300.00	9,185.07	9,216.28	9,185.07	19.63	13.54	-90.39	-377.13	223.55	826.47	795.94	30.53	27.069	
9,400.00	9,285.07	9,316.28	9,285.07	19.68	13.60	-90.39	-377.13	223.55	826.47	795.83	30.64	26.977	
9,500.00	9,385.07	9,416.28	9,385.07	19.73	13.66	-90.39	-377.13	223.55	826.47	795.73	30.74	26.884	
9,600.00	9,485.07	9,516.28	9,485.07	19.77	13.73	-90.39	-377.13	223.55	826.47	795.62	30.85	26.792	
9,700.00	9,585.07	9,616.28	9,585.07	19.82	13.79	-90.39	-377.13	223.55	826.47	795.52	30.95	26.700	
9,800.00	9,685.07	9,716.28	9,685.07	19.87	13.85	-90.39	-377.13	223.55	826.47	795.41	31.06	26.609	
9,900.00	9,785.07	9,816.28	9,785.07	19.91	13.91	-90.39	-377.13	223.55	826.47	795.30	31.17	26.517	
10,000.00	9,885.07	9,916.28	9,885.07	19.96	13.98	-90.39	-377.13	223.55	826.47	795.19	31.28	26.426	
10,100.00	9,985.07	10,016.28	9,985.07	20.01	14.04	-90.39	-377.13	223.55	826.47	795.09	31.38	26.335	
10,200.00	10,085.07	10,116.28	10,085.07	20.06	14.10	-90.39	-377.13	223.55	826.47	794.98	31.49	26.244	
10,300.00	10,185.07	10,216.28	10,185.07	20.10	14.17	-90.39	-377.13	223.55	826.47	794.87	31.60	26.153	

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

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Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 134H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:		Offset Site Error:	0.00 usft
												Offset Well Error:	0.50 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	10,285.07	10,316.28	10,285.07	20.15	14.23	-90.39	-377.13	223.55	826.47	794.76	31.71	26.063	
10,500.00	10,385.07	10,416.28	10,385.07	20.20	14.29	-90.39	-377.13	223.55	826.47	794.65	31.82	25.973	
10,600.00	10,485.07	10,516.28	10,485.07	20.25	14.36	-90.39	-377.13	223.55	826.47	794.54	31.93	25.883	
10,700.00	10,585.07	10,616.28	10,585.07	20.30	14.42	-90.39	-377.13	223.55	826.47	794.43	32.04	25.793	
10,800.00	10,685.07	10,716.28	10,685.07	20.35	14.49	-90.39	-377.13	223.55	826.47	794.32	32.15	25.704	
10,900.00	10,785.07	10,816.28	10,785.07	20.40	14.55	-90.39	-377.13	223.55	826.47	794.20	32.27	25.615	
11,000.00	10,885.07	10,916.28	10,885.07	20.45	14.61	-90.39	-377.13	223.55	826.47	794.09	32.38	25.526	
11,100.00	10,985.07	11,016.28	10,985.07	20.50	14.68	-90.39	-377.13	223.55	826.47	793.98	32.49	25.438	
11,200.00	11,084.72	11,115.92	11,084.72	20.59	14.74	86.29	-377.13	223.55	825.99	793.42	32.56	25.365	
11,300.00	11,181.66	11,212.87	11,181.66	20.75	14.81	88.02	-377.13	223.55	824.76	792.11	32.65	25.259	
11,377.80	11,253.33	11,284.54	11,253.33	20.90	14.85	90.00	-377.13	223.55	824.21	791.47	32.74	25.174	
11,400.00	11,272.97	11,304.17	11,272.97	20.95	14.87	90.63	-377.13	223.55	824.28	791.52	32.76	25.161	
11,500.00	11,355.85	11,387.06	11,355.85	21.20	14.92	93.57	-377.13	223.55	826.86	793.97	32.88	25.145	
11,600.00	11,427.81	11,459.02	11,427.81	21.52	14.97	96.16	-377.13	223.55	835.25	802.23	33.02	25.296	
11,700.00	11,486.64	11,530.71	11,486.64	21.92	15.04	98.44	-377.74	223.56	851.95	818.78	33.17	25.687	
11,800.00	11,530.57	11,638.34	11,605.82	22.42	15.27	101.97	-393.14	223.70	875.75	842.19	33.56	26.093	
11,900.00	11,558.25	11,882.91	11,824.73	23.01	15.84	111.17	-497.79	224.65	902.46	866.35	36.11	24.992	
12,000.00	11,568.85	12,341.05	12,042.48	23.68	18.57	121.08	-887.04	228.18	917.14	873.61	43.54	21.066	
12,100.00	11,569.43	12,490.07	12,046.57	24.45	20.02	121.55	-1,035.92	229.54	912.23	866.60	45.63	19.992	
12,200.00	11,569.96	12,590.03	12,047.27	25.29	21.05	121.63	-1,135.87	230.45	910.05	862.96	47.09	19.326	
12,287.81	11,570.42	12,677.84	12,047.89	26.08	21.98	121.66	-1,232.68	231.24	909.74	861.33	48.40	18.795	
12,300.00	11,570.48	12,690.03	12,047.97	26.19	22.11	121.65	-1,235.87	231.35	910.03	861.44	48.59	18.730	
12,400.00	11,571.01	12,790.03	12,048.67	27.12	23.21	121.66	-1,335.86	232.26	910.12	859.96	50.16	18.145	
12,500.00	11,571.53	12,890.03	12,049.37	28.09	24.34	121.67	-1,435.85	233.17	910.20	858.41	51.79	17.575	
12,600.00	11,572.06	12,990.03	12,050.07	29.09	25.48	121.68	-1,535.85	234.08	910.29	856.81	53.48	17.022	
12,700.00	11,572.58	13,090.03	12,050.77	30.12	26.65	121.69	-1,635.84	234.99	910.37	855.16	55.22	16.487	
12,800.00	11,573.11	13,190.03	12,051.47	31.17	27.84	121.70	-1,735.83	235.90	910.46	853.46	57.00	15.973	
12,900.00	11,573.63	13,290.03	12,052.17	32.24	29.04	121.71	-1,835.83	236.81	910.54	851.72	58.83	15.478	
13,000.00	11,574.16	13,390.03	12,052.86	33.33	30.26	121.72	-1,935.82	237.72	910.63	849.94	60.69	15.004	
13,100.00	11,574.68	13,490.03	12,053.56	34.44	31.49	121.73	-2,035.81	238.62	910.71	848.13	62.59	14.551	
13,200.00	11,575.21	13,590.03	12,054.26	35.57	32.73	121.73	-2,135.81	239.53	910.80	846.28	64.52	14.117	
13,300.00	11,575.73	13,690.03	12,054.96	36.71	33.98	121.74	-2,235.80	240.44	910.89	844.41	66.48	13.703	
13,400.00	11,576.25	13,790.03	12,055.66	37.87	35.24	121.75	-2,335.79	241.35	910.97	842.51	68.46	13.307	
13,500.00	11,576.78	13,890.03	12,056.36	39.04	36.51	121.76	-2,435.78	242.26	911.06	840.59	70.47	12.929	
13,600.00	11,577.30	13,990.03	12,057.06	40.22	37.78	121.77	-2,535.78	243.17	911.14	838.65	72.50	12.568	
13,700.00	11,577.83	14,090.03	12,057.76	41.41	39.06	121.78	-2,635.77	244.08	911.23	836.68	74.55	12.224	
13,800.00	11,578.35	14,190.02	12,058.46	42.61	40.35	121.79	-2,735.76	244.99	911.31	834.70	76.61	11.895	
13,900.00	11,578.88	14,290.02	12,059.16	43.82	41.64	121.80	-2,835.76	245.89	911.40	832.70	78.70	11.581	
14,000.00	11,579.40	14,390.02	12,059.86	45.04	42.94	121.81	-2,935.75	246.80	911.49	830.69	80.80	11.281	
14,100.00	11,579.93	14,490.02	12,060.55	46.27	44.24	121.82	-3,035.74	247.71	911.57	828.66	82.91	10.994	
14,200.00	11,580.45	14,590.02	12,061.25	47.51	45.54	121.83	-3,135.74	248.62	911.66	826.62	85.04	10.720	
14,300.00	11,580.98	14,690.02	12,061.95	48.75	46.85	121.84	-3,235.73	249.53	911.74	824.56	87.18	10.458	
14,400.00	11,581.50	14,790.02	12,062.65	49.99	48.17	121.85	-3,335.72	250.44	911.83	822.50	89.33	10.207	
14,500.00	11,582.03	14,890.02	12,063.35	51.25	49.48	121.86	-3,435.72	251.35	911.91	820.42	91.49	9.967	
14,600.00	11,582.55	14,990.02	12,064.05	52.51	50.80	121.87	-3,535.71	252.26	912.00	818.34	93.66	9.737	
14,700.00	11,583.08	15,090.02	12,064.75	53.77	52.12	121.88	-3,635.70	253.16	912.09	816.24	95.84	9.516	
14,800.00	11,583.60	15,190.02	12,065.45	55.04	53.44	121.89	-3,735.70	254.07	912.17	814.14	98.03	9.305	
14,900.00	11,584.13	15,290.02	12,066.15	56.31	54.77	121.90	-3,835.69	254.98	912.26	812.03	100.23	9.102	
15,000.00	11,584.65	15,390.02	12,066.85	57.59	56.09	121.91	-3,935.68	255.89	912.34	809.91	102.43	8.907	
15,100.00	11,585.18	15,490.02	12,067.55	58.87	57.42	121.92	-4,035.68	256.80	912.43	807.79	104.64	8.720	
15,200.00	11,585.70	15,590.02	12,068.25	60.16	58.75	121.93	-4,135.67	257.71	912.52	805.66	106.86	8.539	
15,300.00	11,586.23	15,690.02	12,068.94	61.45	60.09	121.94	-4,235.66	258.62	912.60	803.52	109.08	8.366	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 134H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:		Offset Site Error:	0.00 usft
												Offset Well Error:	0.50 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
				(usft)	(usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
15,400.00	11,586.75	15,790.02	12,069.64	62.74	61.42	121.94	-4,335.66	259.53	912.69	801.38	111.31	8.200	
15,500.00	11,587.28	15,890.02	12,070.34	64.03	62.76	121.95	-4,435.65	260.43	912.77	799.23	113.54	8.039	
15,600.00	11,587.80	15,990.02	12,071.04	65.33	64.10	121.96	-4,535.64	261.34	912.86	797.08	115.78	7.884	
15,700.00	11,588.33	16,090.02	12,071.74	66.63	65.43	121.97	-4,635.64	262.25	912.95	794.92	118.02	7.735	
15,800.00	11,588.85	16,190.02	12,072.44	67.93	66.77	121.98	-4,735.63	263.16	913.03	792.76	120.27	7.591	
15,900.00	11,589.37	16,290.02	12,073.14	69.24	68.12	121.99	-4,835.62	264.07	913.12	790.60	122.52	7.453	
16,000.00	11,589.90	16,390.02	12,073.84	70.55	69.46	122.00	-4,935.62	264.98	913.21	788.43	124.78	7.319	
16,100.00	11,590.42	16,490.02	12,074.54	71.86	70.80	122.01	-5,035.61	265.89	913.29	786.26	127.03	7.189	
16,200.00	11,590.95	16,590.02	12,075.24	73.17	72.14	122.02	-5,135.60	266.79	913.38	784.08	129.30	7.064	
16,300.00	11,591.47	16,690.02	12,075.94	74.48	73.49	122.03	-5,235.60	267.70	913.46	781.90	131.56	6.943	
16,400.00	11,592.00	16,790.02	12,076.63	75.80	74.84	122.04	-5,335.59	268.61	913.55	779.72	133.83	6.826	
16,500.00	11,592.52	16,890.02	12,077.33	77.12	76.18	122.05	-5,435.58	269.52	913.64	777.54	136.10	6.713	
16,600.00	11,593.05	16,990.02	12,078.03	78.44	77.53	122.06	-5,535.58	270.43	913.72	775.35	138.37	6.603	
16,700.00	11,593.57	17,090.02	12,078.73	79.76	78.88	122.07	-5,635.57	271.34	913.81	773.16	140.65	6.497	
16,800.00	11,594.10	17,190.02	12,079.43	81.08	80.23	122.08	-5,735.56	272.25	913.90	770.97	142.93	6.394	
16,900.00	11,594.62	17,290.02	12,080.13	82.41	81.58	122.09	-5,835.56	273.16	913.98	768.78	145.21	6.294	
17,000.00	11,595.15	17,390.02	12,080.83	83.73	82.93	122.10	-5,935.55	274.06	914.07	766.58	147.49	6.198	
17,100.00	11,595.67	17,490.02	12,081.53	85.06	84.28	122.11	-6,035.54	274.97	914.16	764.38	149.77	6.104	
17,200.00	11,596.20	17,590.02	12,082.23	86.39	85.63	122.12	-6,135.54	275.88	914.24	762.18	152.06	6.012	
17,300.00	11,596.72	17,690.02	12,082.93	87.72	86.98	122.13	-6,235.53	276.79	914.33	759.98	154.35	5.924	
17,400.00	11,597.25	17,790.02	12,083.63	89.05	88.34	122.13	-6,335.52	277.70	914.42	757.78	156.64	5.838	
17,500.00	11,597.77	17,890.02	12,084.33	90.38	89.69	122.14	-6,435.52	278.61	914.50	755.57	158.93	5.754	
17,600.00	11,598.30	17,990.02	12,085.02	91.71	91.04	122.15	-6,535.51	279.52	914.59	753.37	161.22	5.673	
17,700.00	11,598.82	18,090.02	12,085.72	93.05	92.40	122.16	-6,635.50	280.43	914.68	751.16	163.52	5.594	
17,800.00	11,599.35	18,190.02	12,086.42	94.38	93.75	122.17	-6,735.50	281.33	914.76	748.95	165.81	5.517	
17,900.00	11,599.87	18,290.02	12,087.12	95.72	95.11	122.18	-6,835.49	282.24	914.85	746.74	168.11	5.442	
18,000.00	11,600.40	18,390.02	12,087.82	97.05	96.46	122.19	-6,935.48	283.15	914.94	744.53	170.41	5.369	
18,100.00	11,600.92	18,490.02	12,088.52	98.39	97.82	122.20	-7,035.48	284.06	915.02	742.32	172.70	5.298	
18,200.00	11,601.44	18,590.02	12,089.22	99.73	99.18	122.21	-7,135.47	284.97	915.11	740.10	175.00	5.229	
18,300.00	11,601.97	18,690.02	12,089.92	101.07	100.53	122.22	-7,235.46	285.88	915.20	737.89	177.31	5.162	
18,400.00	11,602.49	18,790.02	12,090.62	102.41	101.89	122.23	-7,335.46	286.79	915.28	735.67	179.61	5.096	
18,500.00	11,603.02	18,890.02	12,091.32	103.75	103.25	122.24	-7,435.45	287.70	915.37	733.46	181.91	5.032	
18,600.00	11,603.54	18,990.02	12,092.02	105.09	104.60	122.25	-7,535.44	288.60	915.46	731.24	184.21	4.970	
18,700.00	11,604.07	19,090.02	12,092.71	106.44	105.96	122.26	-7,635.44	289.51	915.54	729.02	186.52	4.909	
18,800.00	11,604.59	19,190.02	12,093.41	107.78	107.32	122.27	-7,735.43	290.42	915.63	726.81	188.82	4.849	
18,900.00	11,605.12	19,290.02	12,094.11	109.12	108.68	122.28	-7,835.42	291.33	915.72	724.59	191.13	4.791	
19,000.00	11,605.64	19,390.02	12,094.81	110.47	110.04	122.29	-7,935.42	292.24	915.80	722.37	193.44	4.734	
19,100.00	11,606.17	19,490.02	12,095.51	111.81	111.40	122.30	-8,035.41	293.15	915.89	720.15	195.74	4.679	
19,200.00	11,606.69	19,590.02	12,096.21	113.16	112.76	122.31	-8,135.40	294.06	915.98	717.93	198.05	4.625	
19,300.00	11,607.22	19,690.02	12,096.91	114.50	114.12	122.31	-8,235.40	294.97	916.07	715.70	200.36	4.572	
19,400.00	11,607.74	19,790.02	12,097.61	115.85	115.48	122.32	-8,335.39	295.87	916.15	713.48	202.67	4.520	
19,500.00	11,608.27	19,890.02	12,098.31	117.20	116.84	122.33	-8,435.38	296.78	916.24	711.26	204.98	4.470	
19,600.00	11,608.79	19,990.02	12,099.01	118.54	118.20	122.34	-8,535.37	297.69	916.33	709.04	207.29	4.420	
19,700.00	11,609.32	20,090.02	12,099.71	119.89	119.56	122.35	-8,635.37	298.60	916.41	706.81	209.60	4.372	
19,800.00	11,609.84	20,190.02	12,100.41	121.24	120.92	122.36	-8,735.36	299.51	916.50	704.59	211.91	4.325	
19,900.00	11,610.37	20,290.02	12,101.10	122.59	122.28	122.37	-8,835.35	300.42	916.59	702.37	214.22	4.279	
20,000.00	11,610.89	20,390.02	12,101.80	123.94	123.64	122.38	-8,935.35	301.33	916.68	700.14	216.53	4.233	
20,100.00	11,611.42	20,490.02	12,102.50	125.29	125.00	122.39	-9,035.34	302.24	916.76	697.92	218.85	4.189	
20,200.00	11,611.94	20,590.02	12,103.20	126.64	126.36	122.40	-9,135.33	303.14	916.85	695.69	221.16	4.146	
20,300.00	11,612.47	20,690.02	12,103.90	127.99	127.72	122.41	-9,235.33	304.05	916.94	693.47	223.47	4.103	
20,400.00	11,612.99	20,790.02	12,104.60	129.34	129.09	122.42	-9,335.32	304.96	917.02	691.24	225.78	4.062	
20,500.00	11,613.52	20,890.01	12,105.30	130.69	130.45	122.43	-9,435.31	305.87	917.11	689.01	228.10	4.021	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 134H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:		Offset Site Error:	0.00 usft
												Offset Well Error:	0.50 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
20,600.00	11,614.04	20,990.01	12,106.00	132.04	131.81	122.44	-9,535.31	306.78	917.20	686.79	230.41	3.981	
20,700.00	11,614.56	21,090.01	12,106.70	133.40	133.17	122.45	-9,635.30	307.69	917.29	684.56	232.72	3.942	
20,800.00	11,615.09	21,190.01	12,107.40	134.75	134.53	122.46	-9,735.29	308.60	917.37	682.34	235.04	3.903	
20,900.00	11,615.61	21,290.01	12,108.10	136.10	135.90	122.47	-9,835.29	309.51	917.46	680.11	237.35	3.865	
21,000.00	11,616.14	21,390.01	12,108.79	137.45	137.26	122.48	-9,935.28	310.41	917.55	677.88	239.67	3.828	
21,100.00	11,616.66	21,490.01	12,109.49	138.81	138.62	122.48	-10,035.27	311.32	917.64	675.66	241.98	3.792	
21,200.00	11,617.19	21,590.01	12,110.19	140.16	139.99	122.49	-10,135.27	312.23	917.72	673.43	244.29	3.757	
21,300.00	11,617.71	21,690.01	12,110.89	141.52	141.35	122.50	-10,235.26	313.14	917.81	671.20	246.61	3.722	
21,400.00	11,618.24	21,790.01	12,111.59	142.87	142.71	122.51	-10,335.25	314.05	917.90	668.98	248.92	3.687	
21,500.00	11,618.76	21,890.01	12,112.29	144.23	144.08	122.52	-10,435.25	314.96	917.99	666.75	251.24	3.654	
21,600.00	11,619.29	21,990.01	12,112.99	145.58	145.44	122.53	-10,535.24	315.87	918.07	664.52	253.55	3.621	
21,700.00	11,619.81	22,090.01	12,113.69	146.94	146.80	122.54	-10,635.23	316.78	918.16	662.30	255.87	3.588	
21,800.00	11,620.34	22,190.01	12,114.39	148.29	148.17	122.55	-10,735.23	317.68	918.25	660.07	258.18	3.557	
21,900.00	11,620.86	22,290.01	12,115.09	149.65	149.53	122.56	-10,835.22	318.59	918.34	657.84	260.50	3.525	
21,945.36	11,621.10	22,335.19	12,115.40	150.26	150.09	122.56	-10,880.40	319.00	918.38	656.89	261.49	3.512	SF

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 137H - OH - Plan 2

Survey Program: 204-MWD+HRGM+SAG+FDIR (rev.5), 1003-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:		Offset Site Error:	0.00 usft
												Offset Well Error:	0.50 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	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
700.00	699.27	911.20	909.76	3.41	4.05	124.73	-662.47	-2,315.95	2,429.75	2,422.48	7.27	334.318	
800.00	798.57	1,007.33	1,005.53	3.70	4.22	124.95	-661.23	-2,307.83	2,427.96	2,420.26	7.69	315.526	
900.00	897.62	1,107.37	1,105.20	3.83	4.44	125.19	-660.03	-2,299.32	2,427.34	2,419.29	8.05	301.551	
1,000.00	996.65	1,210.68	1,208.12	4.06	4.58	125.47	-657.98	-2,290.57	2,426.69	2,418.25	8.44	287.586	
1,100.00	1,095.67	1,310.05	1,307.11	4.28	4.80	125.73	-655.88	-2,282.17	2,426.07	2,417.17	8.90	272.722	
1,200.00	1,194.70	1,409.41	1,406.09	4.51	5.01	125.99	-653.79	-2,273.77	2,425.50	2,416.14	9.36	259.130	
1,221.41	1,215.90	1,430.68	1,427.29	4.56	5.06	127.74	-653.34	-2,271.97	2,425.44	2,415.99	9.45	256.531	
1,300.00	1,293.62	1,508.77	1,505.07	4.72	5.23	133.51	-651.70	-2,265.36	2,426.16	2,416.36	9.80	247.528	
1,400.00	1,392.26	1,608.07	1,604.00	4.94	5.44	139.87	-649.61	-2,256.97	2,429.48	2,419.23	10.25	236.964	
3,200.00	3,149.53	3,825.74	3,775.96	9.77	10.45	154.96	-549.52	-1,854.87	2,429.41	2,410.14	19.27	126.071	
3,300.00	3,247.10	3,924.84	3,871.68	10.07	10.75	155.24	-543.33	-1,829.97	2,423.32	2,403.59	19.73	122.811	
3,400.00	3,344.67	4,023.94	3,967.41	10.37	11.06	155.52	-537.13	-1,805.08	2,417.29	2,397.09	20.19	119.703	
3,500.00	3,442.24	4,123.04	4,063.13	10.67	11.37	155.81	-530.94	-1,780.19	2,411.31	2,390.66	20.66	116.734	
3,600.00	3,539.81	4,222.14	4,158.85	10.96	11.69	156.09	-524.74	-1,755.30	2,405.40	2,384.28	21.12	113.902	
3,700.00	3,637.39	4,321.24	4,254.57	11.26	12.01	156.38	-518.54	-1,730.41	2,399.55	2,377.97	21.58	111.194	
3,800.00	3,734.96	4,420.34	4,350.30	11.56	12.33	156.66	-512.35	-1,705.51	2,393.76	2,371.71	22.04	108.603	
3,900.00	3,832.53	4,519.44	4,446.02	11.86	12.65	156.95	-506.15	-1,680.62	2,388.02	2,365.52	22.50	106.121	
4,000.00	3,930.10	4,618.54	4,541.74	12.16	12.97	157.24	-499.96	-1,655.73	2,382.35	2,359.39	22.96	103.742	
4,100.00	4,027.67	4,717.64	4,637.47	12.46	13.30	157.53	-493.76	-1,630.84	2,376.75	2,353.32	23.43	101.461	
4,200.00	4,125.24	4,816.74	4,733.19	12.76	13.62	157.82	-487.57	-1,605.95	2,371.20	2,347.31	23.89	99.270	
4,300.00	4,222.81	4,915.84	4,828.91	13.06	13.95	158.12	-481.37	-1,581.05	2,365.72	2,341.37	24.35	97.166	
4,400.00	4,320.38	5,014.94	4,924.63	13.36	14.28	158.41	-475.17	-1,556.16	2,360.30	2,335.49	24.81	95.143	
4,500.00	4,417.95	5,114.04	5,020.36	13.66	14.61	158.71	-468.98	-1,531.27	2,354.94	2,329.67	25.27	93.196	
4,600.00	4,515.52	5,213.14	5,116.08	13.96	14.94	159.01	-462.78	-1,506.38	2,349.65	2,323.92	25.73	91.322	
4,700.00	4,613.09	5,312.24	5,211.80	14.27	15.27	159.31	-456.59	-1,481.49	2,344.42	2,318.23	26.19	89.516	
4,800.00	4,710.66	5,411.34	5,307.52	14.57	15.60	159.61	-450.39	-1,456.59	2,339.26	2,312.61	26.65	87.776	
4,900.00	4,808.23	5,510.44	5,403.25	14.87	15.94	159.91	-444.20	-1,431.70	2,334.16	2,307.05	27.11	86.097	
5,000.00	4,905.80	5,609.54	5,498.97	15.17	16.27	160.21	-438.00	-1,406.81	2,329.13	2,301.56	27.57	84.477	
5,100.00	5,003.37	5,708.64	5,594.69	15.47	16.61	160.51	-431.81	-1,381.92	2,324.16	2,296.13	28.03	82.912	
5,200.00	5,100.94	5,807.74	5,690.42	15.78	16.94	160.82	-425.61	-1,357.03	2,319.27	2,290.77	28.49	81.400	
5,300.00	5,198.51	5,906.84	5,786.14	16.08	17.28	161.13	-419.41	-1,332.13	2,314.43	2,285.48	28.95	79.946	
5,400.00	5,296.08	5,972.59	5,849.75	16.38	17.48	161.33	-415.40	-1,316.01	2,310.32	2,280.97	29.35	78.720	
5,500.00	5,393.65	6,034.93	5,910.32	16.69	17.68	161.51	-411.84	-1,301.69	2,307.84	2,278.10	29.74	77.592	
5,600.00	5,491.24	6,100.00	5,973.79	16.97	17.88	161.70	-408.37	-1,287.77	2,306.91	2,276.80	30.12	76.598	
5,700.00	5,589.24	6,159.87	6,032.39	17.25	18.04	161.86	-405.42	-1,275.90	2,305.77	2,275.27	30.50	75.599	
5,800.00	5,687.73	6,222.50	6,093.89	17.50	18.21	162.00	-402.56	-1,264.43	2,303.77	2,272.90	30.87	74.625	
5,900.00	5,786.63	6,300.00	6,170.26	17.73	18.40	162.15	-399.37	-1,251.59	2,301.00	2,269.74	31.26	73.610	
6,000.00	5,885.89	6,348.03	6,217.71	17.92	18.50	162.21	-397.58	-1,244.39	2,297.20	2,265.64	31.56	72.793	
6,100.00	5,985.43	6,400.00	6,269.16	18.09	18.62	162.27	-395.80	-1,237.25	2,292.65	2,260.81	31.85	71.994	
6,200.00	6,085.19	6,473.90	6,342.48	18.23	18.76	162.34	-393.56	-1,228.28	2,287.14	2,254.98	32.16	71.110	
6,300.00	6,185.09	6,536.95	6,405.16	18.33	18.87	162.37	-391.93	-1,221.71	2,280.79	2,248.36	32.43	70.330	
6,400.00	6,285.07	6,600.00	6,467.95	18.42	18.97	162.38	-390.54	-1,216.14	2,273.56	2,240.90	32.66	69.606	
6,500.00	6,385.07	6,663.25	6,531.03	18.44	19.05	-90.45	-389.41	-1,211.57	2,266.34	2,233.57	32.77	69.155	
6,600.00	6,485.07	6,726.59	6,594.26	18.48	19.13	-90.43	-388.52	-1,208.01	2,260.71	2,227.83	32.88	68.757	
6,700.00	6,585.07	6,800.00	6,667.60	18.52	19.21	-90.41	-387.81	-1,205.15	2,256.72	2,223.71	33.01	68.369	
6,800.00	6,685.07	6,853.55	6,721.14	18.56	19.25	-90.41	-387.50	-1,203.93	2,254.28	2,221.22	33.06	68.188	
6,900.00	6,785.07	6,917.49	6,785.07	18.60	19.29	-90.40	-387.38	-1,203.43	2,253.49	2,220.37	33.12	68.042	
7,000.00	6,885.07	7,017.49	6,885.07	18.64	19.33	-90.40	-387.38	-1,203.43	2,253.49	2,220.29	33.20	67.879	
7,100.00	6,985.07	7,117.49	6,985.07	18.68	19.38	-90.40	-387.38	-1,203.43	2,253.49	2,220.20	33.29	67.698	
7,200.00	7,085.07	7,217.49	7,085.07	18.72	19.43	-90.40	-387.38	-1,203.43	2,253.49	2,220.11	33.38	67.518	
7,300.00	7,185.07	7,317.49	7,185.07	18.76	19.48	-90.40	-387.38	-1,203.43	2,253.49	2,220.02	33.47	67.337	
7,400.00	7,285.07	7,417.49	7,285.07	18.80	19.53	-90.40	-387.38	-1,203.43	2,253.49	2,219.93	33.56	67.156	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 137H - OH - Plan 2

Survey Program: 204-MWD+HRGM+SAG+FDIR (rev.5), 1003-MWD+HRGM+SAG+FDIR (rev.5)							Rule Assigned:			Offset Well Error:		0.50 usft		
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
7,500.00	7,385.07	7,517.49	7,385.07	18.85	19.58	-90.40	-387.38	-1,203.43	2,253.49	2,219.84	33.65	66.975		
7,600.00	7,485.07	7,617.49	7,485.07	18.89	19.63	-90.40	-387.38	-1,203.43	2,253.49	2,219.75	33.74	66.793		
7,700.00	7,585.07	7,717.49	7,585.07	18.93	19.68	-90.40	-387.38	-1,203.43	2,253.49	2,219.66	33.83	66.612		
7,800.00	7,685.07	7,817.49	7,685.07	18.97	19.73	-90.40	-387.38	-1,203.43	2,253.49	2,219.56	33.92	66.431		
7,900.00	7,785.07	7,917.49	7,785.07	19.01	19.79	-90.40	-387.38	-1,203.43	2,253.49	2,219.47	34.02	66.249		
8,000.00	7,885.07	8,017.49	7,885.07	19.06	19.84	-90.40	-387.38	-1,203.43	2,253.49	2,219.38	34.11	66.068		
8,100.00	7,985.07	8,117.49	7,985.07	19.10	19.89	-90.40	-387.38	-1,203.43	2,253.49	2,219.28	34.20	65.887		
8,200.00	8,085.07	8,217.49	8,085.07	19.14	19.94	-90.40	-387.38	-1,203.43	2,253.49	2,219.19	34.30	65.705		
8,300.00	8,185.07	8,317.49	8,185.07	19.19	19.99	-90.40	-387.38	-1,203.43	2,253.49	2,219.09	34.39	65.524		
8,400.00	8,285.07	8,417.49	8,285.07	19.23	20.04	-90.40	-387.38	-1,203.43	2,253.49	2,219.00	34.49	65.342		
8,500.00	8,385.07	8,517.49	8,385.07	19.27	20.10	-90.40	-387.38	-1,203.43	2,253.49	2,218.90	34.58	65.161		
8,600.00	8,485.07	8,617.49	8,485.07	19.32	20.15	-90.40	-387.38	-1,203.43	2,253.49	2,218.81	34.68	64.980		
8,700.00	8,585.07	8,717.49	8,585.07	19.36	20.20	-90.40	-387.38	-1,203.43	2,253.49	2,218.71	34.78	64.799		
8,800.00	8,685.07	8,817.49	8,685.07	19.41	20.26	-90.40	-387.38	-1,203.43	2,253.49	2,218.61	34.87	64.617		
8,900.00	8,785.07	8,917.49	8,785.07	19.45	20.31	-90.40	-387.38	-1,203.43	2,253.49	2,218.51	34.97	64.437		
9,000.00	8,885.07	9,017.49	8,885.07	19.50	20.36	-90.40	-387.38	-1,203.43	2,253.49	2,218.41	35.07	64.256		
9,100.00	8,985.07	9,117.49	8,985.07	19.54	20.42	-90.40	-387.38	-1,203.43	2,253.49	2,218.32	35.17	64.075		
9,200.00	9,085.07	9,217.49	9,085.07	19.59	20.47	-90.40	-387.38	-1,203.43	2,253.49	2,218.22	35.27	63.894		
9,300.00	9,185.07	9,317.49	9,185.07	19.63	20.52	-90.40	-387.38	-1,203.43	2,253.49	2,218.12	35.37	63.714		
9,400.00	9,285.07	9,417.49	9,285.07	19.68	20.58	-90.40	-387.38	-1,203.43	2,253.49	2,218.02	35.47	63.534		
9,500.00	9,385.07	9,517.49	9,385.07	19.73	20.63	-90.40	-387.38	-1,203.43	2,253.49	2,217.92	35.57	63.354		
9,600.00	9,485.07	9,617.49	9,485.07	19.77	20.69	-90.40	-387.38	-1,203.43	2,253.49	2,217.81	35.67	63.174		
9,700.00	9,585.07	9,717.49	9,585.07	19.82	20.74	-90.40	-387.38	-1,203.43	2,253.49	2,217.71	35.77	62.994		
9,800.00	9,685.07	9,817.49	9,685.07	19.87	20.79	-90.40	-387.38	-1,203.43	2,253.49	2,217.61	35.88	62.815		
9,900.00	9,785.07	9,917.49	9,785.07	19.91	20.85	-90.40	-387.38	-1,203.43	2,253.49	2,217.51	35.98	62.636		
10,000.00	9,885.07	10,017.49	9,885.07	19.96	20.90	-90.40	-387.38	-1,203.43	2,253.49	2,217.40	36.08	62.457		
10,100.00	9,985.07	10,117.49	9,985.07	20.01	20.96	-90.40	-387.38	-1,203.43	2,253.49	2,217.30	36.18	62.278		
10,200.00	10,085.07	10,217.49	10,085.07	20.06	21.02	-90.40	-387.38	-1,203.43	2,253.49	2,217.20	36.29	62.100		
10,300.00	10,185.07	10,317.49	10,185.07	20.10	21.07	-90.40	-387.38	-1,203.43	2,253.49	2,217.09	36.39	61.922		
10,400.00	10,285.07	10,417.49	10,285.07	20.15	21.13	-90.40	-387.38	-1,203.43	2,253.49	2,216.99	36.50	61.744		
10,500.00	10,385.07	10,517.49	10,385.07	20.20	21.18	-90.40	-387.38	-1,203.43	2,253.49	2,216.88	36.60	61.566		
10,600.00	10,485.07	10,617.49	10,485.07	20.25	21.24	-90.40	-387.38	-1,203.43	2,253.49	2,216.78	36.71	61.389		
10,700.00	10,585.07	10,717.49	10,585.07	20.30	21.30	-90.40	-387.38	-1,203.43	2,253.49	2,216.67	36.81	61.212		
10,800.00	10,685.07	10,817.49	10,685.07	20.35	21.35	-90.40	-387.38	-1,203.43	2,253.49	2,216.56	36.92	61.036		
10,900.00	10,785.07	10,917.49	10,785.07	20.40	21.41	-90.40	-387.38	-1,203.43	2,253.49	2,216.46	37.03	60.859		
11,000.00	10,885.07	11,017.49	10,885.07	20.45	21.47	-90.40	-387.38	-1,203.43	2,253.49	2,216.35	37.14	60.683		
11,100.00	10,985.07	11,117.49	10,985.07	20.50	21.52	-90.40	-387.38	-1,203.43	2,253.49	2,216.24	37.24	60.508		
11,200.00	11,084.72	11,217.13	11,084.72	20.59	21.58	85.97	-387.38	-1,203.43	2,252.98	2,215.66	37.32	60.363		
11,300.00	11,181.66	11,314.08	11,181.66	20.75	21.64	86.72	-387.38	-1,203.43	2,251.40	2,213.96	37.45	60.124		
11,400.00	11,272.97	11,405.38	11,272.97	20.95	21.69	87.87	-387.38	-1,203.43	2,249.32	2,211.70	37.62	59.790		
11,500.00	11,355.85	11,488.27	11,355.85	21.20	21.74	89.21	-387.38	-1,203.43	2,247.64	2,209.79	37.85	59.380		
11,559.88	11,400.40	11,532.82	11,400.40	21.39	21.76	90.00	-387.38	-1,203.43	2,247.28	2,209.25	38.03	59.091	CC	
11,600.00	11,427.81	11,560.22	11,427.81	21.52	21.78	90.49	-387.38	-1,203.43	2,247.47	2,209.33	38.14	58.922		
11,700.00	11,486.64	11,619.06	11,486.64	21.92	21.81	91.45	-387.38	-1,203.43	2,249.97	2,211.48	38.49	58.454		
11,800.00	11,530.57	11,662.98	11,530.57	22.42	21.83	91.83	-387.38	-1,203.43	2,256.14	2,217.25	38.89	58.018		
11,900.00	11,558.25	11,708.98	11,576.56	23.01	21.85	91.91	-387.82	-1,203.43	2,266.63	2,227.30	39.33	57.638		
12,000.00	11,568.85	12,300.00	12,056.85	23.68	22.26	102.42	-685.69	-1,200.86	2,279.67	2,239.00	40.67	56.059		
12,100.00	11,569.43	12,672.42	12,127.73	24.45	23.46	104.21	-1,046.31	-1,197.75	2,274.41	2,230.99	43.42	52.383		
12,200.00	11,569.96	12,772.38	12,128.60	25.29	23.95	104.23	-1,146.27	-1,196.89	2,271.96	2,227.22	44.74	50.780		
12,285.91	11,570.41	12,858.28	12,129.35	26.06	24.42	104.24	-1,232.17	-1,196.15	2,271.63	2,225.68	45.95	49.440		
12,300.00	11,570.48	12,872.38	12,129.47	26.19	24.50	104.24	-1,246.26	-1,196.03	2,271.96	2,225.82	46.15	49.232		
12,400.00	11,571.01	12,972.38	12,130.34	27.12	25.09	104.25	-1,346.25	-1,195.17	2,272.09	2,224.42	47.67	47.663		

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 137H - OH - Plan 2

Survey Program: 204-MWD+HRGM+SAG+FDIR (rev.5), 1003-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:		Offset Site Error:	0.00 usft
												Offset Well Error:	0.50 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
12,500.00	11,571.53	13,072.38	12,131.22	28.09	25.74	104.26	-1,446.24	-1,194.31	2,272.21	2,222.93	49.29	46.101	
12,600.00	11,572.06	13,172.38	12,132.09	29.09	26.43	104.27	-1,546.23	-1,193.45	2,272.34	2,221.34	50.99	44.561	
12,700.00	11,572.58	13,272.38	12,132.96	30.12	27.16	104.28	-1,646.23	-1,192.59	2,272.46	2,219.68	52.78	43.056	
12,800.00	11,573.11	13,372.38	12,133.83	31.17	27.93	104.28	-1,746.22	-1,191.73	2,272.59	2,217.95	54.64	41.595	
12,900.00	11,573.63	13,472.37	12,134.70	32.24	28.74	104.29	-1,846.21	-1,190.86	2,272.71	2,216.15	56.56	40.183	
13,000.00	11,574.16	13,572.37	12,135.57	33.33	29.58	104.30	-1,946.20	-1,190.00	2,272.84	2,214.29	58.54	38.825	
13,100.00	11,574.68	13,672.37	12,136.45	34.44	30.46	104.31	-2,046.19	-1,189.14	2,272.96	2,212.38	60.58	37.523	
13,200.00	11,575.21	13,772.37	12,137.32	35.57	31.37	104.32	-2,146.19	-1,188.28	2,273.08	2,210.43	62.66	36.278	
13,300.00	11,575.73	13,872.37	12,138.19	36.71	32.31	104.33	-2,246.18	-1,187.42	2,273.21	2,208.43	64.78	35.090	
13,400.00	11,576.25	13,972.37	12,139.06	37.87	33.27	104.33	-2,346.17	-1,186.56	2,273.33	2,206.39	66.95	33.957	
13,500.00	11,576.78	14,072.37	12,139.93	39.04	34.26	104.34	-2,446.16	-1,185.70	2,273.46	2,204.31	69.15	32.878	
13,600.00	11,577.30	14,172.37	12,140.80	40.22	35.28	104.35	-2,546.15	-1,184.84	2,273.58	2,202.20	71.38	31.852	
13,700.00	11,577.83	14,272.37	12,141.67	41.41	36.31	104.36	-2,646.15	-1,183.97	2,273.71	2,200.07	73.64	30.876	
13,800.00	11,578.35	14,372.37	12,142.55	42.61	37.37	104.37	-2,746.14	-1,183.11	2,273.83	2,197.91	75.93	29.947	
13,900.00	11,578.88	14,472.37	12,143.42	43.82	38.45	104.38	-2,846.13	-1,182.25	2,273.96	2,195.72	78.24	29.064	
14,000.00	11,579.40	14,572.37	12,144.29	45.04	39.54	104.38	-2,946.12	-1,181.39	2,274.08	2,193.51	80.57	28.224	
14,100.00	11,579.93	14,672.37	12,145.16	46.27	40.65	104.39	-3,046.11	-1,180.53	2,274.21	2,191.28	82.93	27.424	
14,200.00	11,580.45	14,772.37	12,146.03	47.51	41.77	104.40	-3,146.10	-1,179.67	2,274.33	2,189.03	85.30	26.663	
14,300.00	11,580.98	14,872.37	12,146.90	48.75	42.91	104.41	-3,246.10	-1,178.81	2,274.46	2,186.77	87.69	25.938	
14,400.00	11,581.50	14,972.37	12,147.78	49.99	44.06	104.42	-3,346.09	-1,177.95	2,274.58	2,184.49	90.09	25.247	
14,500.00	11,582.03	15,072.36	12,148.65	51.25	45.22	104.42	-3,446.08	-1,177.08	2,274.71	2,182.20	92.51	24.589	
14,600.00	11,582.55	15,172.36	12,149.52	52.51	46.39	104.43	-3,546.07	-1,176.22	2,274.84	2,179.89	94.94	23.960	
14,700.00	11,583.08	15,272.36	12,150.39	53.77	47.57	104.44	-3,646.06	-1,175.36	2,274.96	2,177.57	97.39	23.360	
14,800.00	11,583.60	15,372.36	12,151.26	55.04	48.77	104.45	-3,746.06	-1,174.50	2,275.09	2,175.25	99.84	22.787	
14,900.00	11,584.13	15,472.36	12,152.13	56.31	49.97	104.46	-3,846.05	-1,173.64	2,275.21	2,172.91	102.31	22.239	
15,000.00	11,584.65	15,572.36	12,153.01	57.59	51.18	104.47	-3,946.04	-1,172.78	2,275.34	2,170.56	104.78	21.715	
15,100.00	11,585.18	15,672.36	12,153.88	58.87	52.39	104.47	-4,046.03	-1,171.92	2,275.46	2,168.20	107.26	21.214	
15,200.00	11,585.70	15,772.36	12,154.75	60.16	53.62	104.48	-4,146.02	-1,171.05	2,275.59	2,165.83	109.76	20.733	
15,300.00	11,586.23	15,872.36	12,155.62	61.45	54.85	104.49	-4,246.02	-1,170.19	2,275.71	2,163.46	112.25	20.273	
15,400.00	11,586.75	15,972.36	12,156.49	62.74	56.09	104.50	-4,346.01	-1,169.33	2,275.84	2,161.08	114.76	19.831	
15,500.00	11,587.28	16,072.36	12,157.36	64.03	57.33	104.51	-4,446.00	-1,168.47	2,275.97	2,158.69	117.27	19.407	
15,600.00	11,587.80	16,172.36	12,158.24	65.33	58.58	104.51	-4,545.99	-1,167.61	2,276.09	2,156.30	119.79	19.000	
15,700.00	11,588.33	16,272.36	12,159.11	66.63	59.83	104.52	-4,645.98	-1,166.75	2,276.22	2,153.90	122.32	18.609	
15,800.00	11,588.85	16,372.36	12,159.98	67.93	61.09	104.53	-4,745.97	-1,165.89	2,276.34	2,151.49	124.85	18.233	
15,900.00	11,589.37	16,472.36	12,160.85	69.24	62.36	104.54	-4,845.97	-1,165.03	2,276.47	2,149.08	127.39	17.871	
16,000.00	11,589.90	16,572.36	12,161.72	70.55	63.63	104.55	-4,945.96	-1,164.16	2,276.59	2,146.67	129.93	17.522	
16,100.00	11,590.42	16,672.36	12,162.59	71.86	64.90	104.56	-5,045.95	-1,163.30	2,276.72	2,144.25	132.47	17.186	
16,200.00	11,590.95	16,772.35	12,163.47	73.17	66.18	104.56	-5,145.94	-1,162.44	2,276.85	2,141.82	135.02	16.863	
16,300.00	11,591.47	16,872.35	12,164.34	74.48	67.46	104.57	-5,245.93	-1,161.58	2,276.97	2,139.40	137.58	16.551	
16,400.00	11,592.00	16,972.35	12,165.21	75.80	68.74	104.58	-5,345.93	-1,160.72	2,277.10	2,136.97	140.13	16.249	
16,500.00	11,592.52	17,072.35	12,166.08	77.12	70.03	104.59	-5,445.92	-1,159.86	2,277.23	2,134.53	142.69	15.959	
16,600.00	11,593.05	17,172.35	12,166.95	78.44	71.31	104.60	-5,545.91	-1,159.00	2,277.35	2,132.09	145.26	15.678	
16,700.00	11,593.57	17,272.35	12,167.82	79.76	72.61	104.60	-5,645.90	-1,158.14	2,277.48	2,129.65	147.83	15.406	
16,800.00	11,594.10	17,372.35	12,168.69	81.08	73.90	104.61	-5,745.89	-1,157.27	2,277.60	2,127.21	150.40	15.144	
16,900.00	11,594.62	17,472.35	12,169.57	82.41	75.20	104.62	-5,845.89	-1,156.41	2,277.73	2,124.76	152.97	14.890	
17,000.00	11,595.15	17,572.35	12,170.44	83.73	76.50	104.63	-5,945.88	-1,155.55	2,277.86	2,122.31	155.55	14.644	
17,100.00	11,595.67	17,672.35	12,171.31	85.06	77.80	104.64	-6,045.87	-1,154.69	2,277.98	2,119.86	158.12	14.406	
17,200.00	11,596.20	17,772.35	12,172.18	86.39	79.11	104.65	-6,145.86	-1,153.83	2,278.11	2,117.41	160.71	14.176	
17,300.00	11,596.72	17,872.35	12,173.05	87.72	80.42	104.65	-6,245.85	-1,152.97	2,278.24	2,114.95	163.29	13.952	
17,400.00	11,597.25	17,972.35	12,173.92	89.05	81.73	104.66	-6,345.84	-1,152.11	2,278.36	2,112.49	165.87	13.736	
17,500.00	11,597.77	18,072.35	12,174.80	90.38	83.04	104.67	-6,445.84	-1,151.25	2,278.49	2,110.03	168.46	13.525	
17,600.00	11,598.30	18,172.35	12,175.67	91.71	84.35	104.68	-6,545.83	-1,150.38	2,278.62	2,107.57	171.05	13.321	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 137H - OH - Plan 2

Survey Program: 204-MWD+HRGM+SAG+FDIR (rev.5), 1003-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:		Offset Site Error:	0.00 usft
												Offset Well Error:	0.50 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
17,700.00	11,598.82	18,272.35	12,176.54	93.05	85.67	104.69	-6,645.82	-1,149.52	2,278.74	2,105.10	173.64	13.123	
17,800.00	11,599.35	18,372.34	12,177.41	94.38	86.98	104.69	-6,745.81	-1,148.66	2,278.87	2,102.64	176.24	12.931	
17,900.00	11,599.87	18,472.34	12,178.28	95.72	88.30	104.70	-6,845.80	-1,147.80	2,279.00	2,100.17	178.83	12.744	
18,000.00	11,600.40	18,572.34	12,179.15	97.05	89.62	104.71	-6,945.80	-1,146.94	2,279.12	2,097.70	181.43	12.562	
18,100.00	11,600.92	18,672.34	12,180.03	98.39	90.94	104.72	-7,045.79	-1,146.08	2,279.25	2,095.23	184.02	12.386	
18,200.00	11,601.44	18,772.34	12,180.90	99.73	92.26	104.73	-7,145.78	-1,145.22	2,279.38	2,092.76	186.62	12.214	
18,300.00	11,601.97	18,872.34	12,181.77	101.07	93.59	104.74	-7,245.77	-1,144.36	2,279.51	2,090.28	189.22	12.047	
18,400.00	11,602.49	18,972.34	12,182.64	102.41	94.91	104.74	-7,345.76	-1,143.49	2,279.63	2,087.81	191.83	11.884	
18,500.00	11,603.02	19,072.34	12,183.51	103.75	96.24	104.75	-7,445.76	-1,142.63	2,279.76	2,085.33	194.43	11.725	
18,600.00	11,603.54	19,172.34	12,184.38	105.09	97.57	104.76	-7,545.75	-1,141.77	2,279.89	2,082.85	197.03	11.571	
18,700.00	11,604.07	19,272.34	12,185.26	106.44	98.90	104.77	-7,645.74	-1,140.91	2,280.01	2,080.38	199.64	11.421	
18,800.00	11,604.59	19,372.34	12,186.13	107.78	100.23	104.78	-7,745.73	-1,140.05	2,280.14	2,077.90	202.25	11.274	
18,900.00	11,605.12	19,472.34	12,187.00	109.12	101.56	104.78	-7,845.72	-1,139.19	2,280.27	2,075.42	204.85	11.131	
19,000.00	11,605.64	19,572.34	12,187.87	110.47	102.89	104.79	-7,945.72	-1,138.33	2,280.40	2,072.93	207.46	10.992	
19,100.00	11,606.17	19,672.34	12,188.74	111.81	104.22	104.80	-8,045.71	-1,137.46	2,280.52	2,070.45	210.07	10.856	
19,200.00	11,606.69	19,772.34	12,189.61	113.16	105.56	104.81	-8,145.70	-1,136.60	2,280.65	2,067.97	212.68	10.723	
19,300.00	11,607.22	19,872.34	12,190.49	114.50	106.89	104.82	-8,245.69	-1,135.74	2,280.78	2,065.49	215.29	10.594	
19,400.00	11,607.74	19,972.34	12,191.36	115.85	108.23	104.83	-8,345.68	-1,134.88	2,280.91	2,063.00	217.91	10.467	
19,500.00	11,608.27	20,072.33	12,192.23	117.20	109.56	104.83	-8,445.67	-1,134.02	2,281.03	2,060.52	220.52	10.344	
19,600.00	11,608.79	20,172.33	12,193.10	118.54	110.90	104.84	-8,545.67	-1,133.16	2,281.16	2,058.03	223.13	10.223	
19,700.00	11,609.32	20,272.33	12,193.97	119.89	112.24	104.85	-8,645.66	-1,132.30	2,281.29	2,055.54	225.75	10.105	
19,800.00	11,609.84	20,372.33	12,194.84	121.24	113.58	104.86	-8,745.65	-1,131.44	2,281.42	2,053.05	228.36	9.990	
19,900.00	11,610.37	20,472.33	12,195.71	122.59	114.92	104.87	-8,845.64	-1,130.57	2,281.55	2,050.57	230.98	9.878	
20,000.00	11,610.89	20,572.33	12,196.59	123.94	116.26	104.87	-8,945.63	-1,129.71	2,281.67	2,048.08	233.60	9.768	
20,100.00	11,611.42	20,672.33	12,197.46	125.29	117.60	104.88	-9,045.63	-1,128.85	2,281.80	2,045.59	236.21	9.660	
20,200.00	11,611.94	20,772.33	12,198.33	126.64	118.94	104.89	-9,145.62	-1,127.99	2,281.93	2,043.10	238.83	9.555	
20,300.00	11,612.47	20,872.33	12,199.20	127.99	120.28	104.90	-9,245.61	-1,127.13	2,282.06	2,040.61	241.45	9.452	
20,400.00	11,612.99	20,972.33	12,200.07	129.34	121.63	104.91	-9,345.60	-1,126.27	2,282.19	2,038.12	244.07	9.351	
20,500.00	11,613.52	21,072.33	12,200.94	130.69	122.97	104.92	-9,445.59	-1,125.41	2,282.31	2,035.63	246.69	9.252	
20,600.00	11,614.04	21,172.33	12,201.82	132.04	124.32	104.92	-9,545.59	-1,124.55	2,282.44	2,033.13	249.31	9.155	
20,700.00	11,614.56	21,272.33	12,202.69	133.40	125.66	104.93	-9,645.58	-1,123.68	2,282.57	2,030.64	251.93	9.060	
20,800.00	11,615.09	21,372.33	12,203.56	134.75	127.01	104.94	-9,745.57	-1,122.82	2,282.70	2,028.15	254.55	8.968	
20,900.00	11,615.61	21,472.33	12,204.43	136.10	128.35	104.95	-9,845.56	-1,121.96	2,282.83	2,025.66	257.17	8.877	
21,000.00	11,616.14	21,572.33	12,205.30	137.45	129.70	104.96	-9,945.55	-1,121.10	2,282.95	2,023.16	259.79	8.788	
21,100.00	11,616.66	21,672.32	12,206.17	138.81	131.04	104.96	-10,045.54	-1,120.24	2,283.08	2,020.67	262.41	8.700	
21,200.00	11,617.19	21,772.32	12,207.05	140.16	132.39	104.97	-10,145.54	-1,119.38	2,283.21	2,018.18	265.04	8.615	
21,300.00	11,617.71	21,872.32	12,207.92	141.52	133.74	104.98	-10,245.53	-1,118.52	2,283.34	2,015.68	267.66	8.531	
21,400.00	11,618.24	21,972.32	12,208.79	142.87	135.09	104.99	-10,345.52	-1,117.66	2,283.47	2,013.19	270.28	8.448	
21,500.00	11,618.76	22,072.32	12,209.66	144.23	136.44	105.00	-10,445.51	-1,116.79	2,283.60	2,010.69	272.90	8.368	
21,600.00	11,619.29	22,172.32	12,210.53	145.58	137.78	105.01	-10,545.50	-1,115.93	2,283.73	2,008.20	275.53	8.289	
21,700.00	11,619.81	22,272.32	12,211.40	146.94	139.13	105.01	-10,645.50	-1,115.07	2,283.85	2,005.70	278.15	8.211	
21,800.00	11,620.34	22,372.32	12,212.28	148.29	140.48	105.02	-10,745.49	-1,114.21	2,283.98	2,003.21	280.78	8.135	
21,900.00	11,620.86	22,472.32	12,213.15	149.65	141.83	105.03	-10,845.48	-1,113.35	2,284.11	2,000.71	283.40	8.060	
21,945.36	11,621.10	22,512.84	12,213.50	150.26	142.38	105.03	-10,886.00	-1,113.00	2,284.17	1,999.71	284.47	8.030	ES, SF

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 138H - OH - Plan #2

Survey Program:		0-MWD+HRGM+SAG+FDIR (rev.5)		Rule Assigned:		Offset Site Error:		0.00 usft		Offset Well Error:		0.50 usft			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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		
0.00	0.00	0.00	0.00	0.50	0.50	0.00	25.00	0.00	25.00						
100.00	100.00	100.00	100.00	0.98	0.98	0.00	25.00	0.00	25.00	23.04	1.96	12.741			
200.00	200.00	200.00	200.00	1.56	1.56	0.00	25.00	0.00	25.00	21.88	3.12	8.007			
300.00	300.00	300.00	300.00	1.98	1.98	0.00	25.00	0.00	25.00	21.04	3.96	6.309	CC, ES		
400.00	399.99	399.99	399.99	2.41	2.33	-132.21	25.00	0.00	25.86	21.17	4.69	5.513			
500.00	499.91	499.91	499.91	2.77	2.63	-138.01	25.00	0.00	28.65	23.31	5.34	5.368			
600.00	599.69	599.69	599.69	3.10	2.91	-145.40	25.00	0.00	33.79	27.85	5.94	5.687			
700.00	699.27	699.75	699.75	3.41	3.02	-152.33	24.79	0.25	41.37	35.00	6.37	6.493			
800.00	798.57	800.42	800.38	3.70	3.31	-157.23	23.10	2.27	49.66	42.71	6.95	7.143			
900.00	897.62	901.38	901.20	3.83	3.59	-160.55	19.69	6.33	57.64	50.28	7.36	7.830			
1,000.00	996.65	1,002.41	1,001.92	4.06	3.76	-162.40	14.59	12.41	63.43	55.67	7.76	8.171			
1,100.00	1,095.67	1,102.28	1,101.40	4.28	3.97	-163.73	8.99	19.08	68.44	60.24	8.20	8.344			
1,200.00	1,194.70	1,202.14	1,200.88	4.51	4.17	-164.87	3.40	25.74	73.48	64.83	8.65	8.498			
1,300.00	1,293.62	1,301.95	1,300.32	4.72	4.37	-159.33	-2.19	32.41	79.00	69.94	9.07	8.714			
1,400.00	1,392.26	1,401.62	1,399.61	4.94	4.57	-156.27	-7.78	39.06	85.74	76.23	9.50	9.020			
1,500.00	1,490.54	1,503.14	1,500.62	5.17	4.80	-155.02	-13.76	47.14	92.90	82.94	9.96	9.327			
1,600.00	1,588.41	1,604.91	1,601.61	5.40	5.03	-154.69	-20.35	57.87	99.53	89.11	10.42	9.549			
1,700.00	1,685.98	1,707.00	1,702.56	5.58	5.27	-157.46	-27.56	71.26	105.10	94.27	10.83	9.703			
1,800.00	1,783.55	1,809.44	1,803.42	5.80	5.50	-159.77	-35.38	87.34	108.55	97.27	11.27	9.629			
1,900.00	1,881.12	1,912.07	1,903.96	6.04	5.73	-161.39	-43.81	106.10	109.68	97.98	11.70	9.374			
2,000.00	1,978.69	2,013.27	2,002.63	6.31	5.87	-162.51	-52.61	126.79	108.77	96.71	12.06	9.022			
2,100.00	2,076.26	2,113.24	2,100.04	6.58	6.07	-163.58	-61.36	147.50	107.65	95.16	12.49	8.622			
2,200.00	2,173.83	2,213.21	2,197.46	6.87	6.27	-164.67	-70.11	168.22	106.56	93.65	12.92	8.251			
2,300.00	2,271.40	2,313.19	2,294.87	7.15	6.47	-165.79	-78.87	188.93	105.52	92.17	13.35	7.907			
2,400.00	2,368.97	2,413.16	2,392.28	7.44	6.68	-166.92	-87.62	209.64	104.52	90.74	13.77	7.588			
2,500.00	2,466.54	2,513.13	2,489.69	7.73	6.93	-168.08	-96.37	230.35	103.55	89.34	14.21	7.288			
2,600.00	2,564.11	2,613.11	2,587.10	8.02	7.21	-169.26	-105.12	251.06	102.63	87.99	14.64	7.010			
2,700.00	2,661.68	2,713.08	2,684.52	8.31	7.48	-170.45	-113.87	271.77	101.76	86.69	15.07	6.751			
2,800.00	2,759.25	2,813.05	2,781.93	8.60	7.76	-171.67	-122.63	292.48	100.93	85.42	15.51	6.508			
2,900.00	2,856.82	2,913.03	2,879.34	8.89	8.05	-172.91	-131.38	313.20	100.15	84.20	15.94	6.281			
3,000.00	2,954.39	3,013.00	2,976.75	9.18	8.33	-174.17	-140.13	333.91	99.41	83.03	16.38	6.069			
3,100.00	3,051.96	3,112.97	3,074.16	9.48	8.62	-175.45	-148.88	354.62	98.72	81.90	16.82	5.869			
3,200.00	3,149.53	3,212.95	3,171.58	9.77	8.91	-176.74	-157.63	375.33	98.09	80.82	17.26	5.682			
3,300.00	3,247.10	3,312.92	3,268.99	10.07	9.20	-178.05	-166.39	396.04	97.50	79.79	17.71	5.506			
3,400.00	3,344.67	3,412.89	3,366.40	10.37	9.49	-179.37	-175.14	416.75	96.96	78.81	18.16	5.340			
3,500.00	3,442.24	3,512.87	3,463.81	10.67	9.79	-179.29	-183.89	437.46	96.48	77.87	18.61	5.184			
3,600.00	3,539.81	3,612.84	3,561.22	10.96	10.08	-177.94	-192.64	458.18	96.05	76.98	19.07	5.037			
3,700.00	3,637.39	3,712.81	3,658.64	11.26	10.38	-176.58	-201.39	478.89	95.68	76.14	19.53	4.899			
3,800.00	3,734.96	3,812.79	3,756.05	11.56	10.68	-175.20	-210.15	499.60	95.36	75.35	20.00	4.768			
3,900.00	3,832.53	3,912.76	3,853.46	11.86	10.98	-173.82	-218.90	520.31	95.09	74.61	20.48	4.644			
4,000.00	3,930.10	4,012.73	3,950.87	12.16	11.28	-172.44	-227.65	541.02	94.88	73.92	20.96	4.527			
4,100.00	4,027.67	4,112.71	4,048.28	12.46	11.58	-171.04	-236.40	561.73	94.72	73.28	21.45	4.416			
4,200.00	4,125.24	4,212.68	4,145.70	12.76	11.88	-169.65	-245.15	582.44	94.62	72.68	21.95	4.312			
4,300.00	4,222.81	4,312.65	4,243.11	13.06	12.18	-168.25	-253.91	603.16	94.58	72.13	22.45	4.213			
4,324.79	4,246.99	4,337.44	4,267.26	13.13	12.26	-167.90	-256.07	608.29	94.58	72.00	22.58	4.189			
4,400.00	4,320.38	4,412.63	4,340.52	13.36	12.48	-166.85	-262.66	623.87	94.60	71.63	22.97	4.119			
4,500.00	4,417.95	4,512.60	4,437.93	13.66	12.79	-165.45	-271.41	644.58	94.67	71.18	23.49	4.030			
4,600.00	4,515.52	4,612.57	4,535.34	13.96	13.09	-164.06	-280.16	665.29	94.79	70.77	24.02	3.946			
4,700.00	4,613.09	4,712.55	4,632.76	14.27	13.40	-162.66	-288.91	686.00	94.98	70.42	24.56	3.867			
4,800.00	4,710.66	4,812.52	4,730.17	14.57	13.70	-161.28	-297.66	706.71	95.22	70.10	25.11	3.792			
4,900.00	4,808.23	4,912.49	4,827.58	14.87	14.01	-159.90	-306.42	727.42	95.51	69.84	25.67	3.721			
5,000.00	4,905.80	5,012.47	4,924.99	15.17	14.31	-158.54	-315.17	748.14	95.86	69.62	26.24	3.653			

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 138H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:						Offset Well Error:		0.50 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,100.00	5,003.37	5,112.44	5,022.40	15.47	14.62	157.18	-323.92	768.85	96.26	69.45	26.82	3.590	SF	
5,200.00	5,100.94	5,212.41	5,119.82	15.78	14.92	155.83	-332.67	789.56	96.72	69.32	27.40	3.530		
5,300.00	5,198.51	5,310.64	5,215.71	16.08	15.19	154.78	-340.96	809.16	97.96	70.00	27.95	3.505		
5,400.00	5,296.08	5,408.40	5,311.64	16.38	15.46	154.49	-348.26	826.45	101.37	72.91	28.46	3.562		
5,500.00	5,393.65	5,505.96	5,407.83	16.69	15.70	154.91	-354.60	841.44	106.97	78.09	28.88	3.704		
5,600.00	5,491.24	5,603.20	5,504.10	16.97	15.91	155.92	-359.96	854.13	114.69	85.47	29.22	3.926		
5,700.00	5,589.24	5,700.00	5,600.23	17.25	16.10	157.04	-364.35	864.52	122.86	93.32	29.54	4.159		
5,800.00	5,687.73	5,797.02	5,696.85	17.50	16.25	158.11	-367.79	872.67	130.90	101.06	29.84	4.387		
5,900.00	5,786.63	5,893.64	5,793.25	17.73	16.38	159.13	-370.27	878.54	138.79	108.69	30.10	4.611		
6,000.00	5,885.89	5,990.08	5,889.61	17.92	16.49	160.12	-371.80	882.16	146.54	116.21	30.33	4.832		
6,100.00	5,985.43	6,086.33	5,985.84	18.09	16.56	161.08	-372.38	883.54	154.14	123.66	30.48	5.058		
6,200.00	6,085.19	6,185.67	6,085.19	18.23	16.61	161.90	-372.39	883.55	160.69	130.06	30.64	5.245		
6,300.00	6,185.09	6,285.58	6,185.09	18.33	16.65	162.39	-372.39	883.55	164.80	133.99	30.81	5.349		
6,400.00	6,285.07	6,385.56	6,285.07	18.42	16.69	162.57	-372.39	883.55	166.42	135.44	30.98	5.372		
6,500.00	6,385.07	6,485.56	6,385.07	18.44	16.74	-90.28	-372.39	883.55	166.45	135.40	31.05	5.360		
6,600.00	6,485.07	6,585.56	6,485.07	18.48	16.78	-90.28	-372.39	883.55	166.45	135.32	31.13	5.346		
6,700.00	6,585.07	6,685.56	6,585.07	18.52	16.82	-90.28	-372.39	883.55	166.45	135.24	31.21	5.332		
6,800.00	6,685.07	6,785.56	6,685.07	18.56	16.87	-90.28	-372.39	883.55	166.45	135.16	31.30	5.319		
6,900.00	6,785.07	6,885.56	6,785.07	18.60	16.91	-90.28	-372.39	883.55	166.45	135.07	31.38	5.305		
7,000.00	6,885.07	6,985.56	6,885.07	18.64	16.96	-90.28	-372.39	883.55	166.45	134.99	31.46	5.291		
7,100.00	6,985.07	7,085.56	6,985.07	18.68	17.00	-90.28	-372.39	883.55	166.45	134.91	31.55	5.277		
7,200.00	7,085.07	7,185.56	7,085.07	18.72	17.05	-90.28	-372.39	883.55	166.45	134.82	31.63	5.263		
7,300.00	7,185.07	7,285.56	7,185.07	18.76	17.09	-90.28	-372.39	883.55	166.45	134.74	31.71	5.249		
7,400.00	7,285.07	7,385.56	7,285.07	18.80	17.14	-90.28	-372.39	883.55	166.45	134.65	31.80	5.234		
7,500.00	7,385.07	7,485.56	7,385.07	18.85	17.18	-90.28	-372.39	883.55	166.45	134.57	31.89	5.220		
7,600.00	7,485.07	7,585.56	7,485.07	18.89	17.23	-90.28	-372.39	883.55	166.45	134.48	31.97	5.206		
7,700.00	7,585.07	7,685.56	7,585.07	18.93	17.28	-90.28	-372.39	883.55	166.45	134.39	32.06	5.192		
7,800.00	7,685.07	7,785.56	7,685.07	18.97	17.32	-90.28	-372.39	883.55	166.45	134.31	32.15	5.178		
7,900.00	7,785.07	7,885.56	7,785.07	19.01	17.37	-90.28	-372.39	883.55	166.45	134.22	32.23	5.164		
8,000.00	7,885.07	7,985.56	7,885.07	19.06	17.42	-90.28	-372.39	883.55	166.45	134.13	32.32	5.150		
8,100.00	7,985.07	8,085.56	7,985.07	19.10	17.47	-90.28	-372.39	883.55	166.45	134.04	32.41	5.135		
8,200.00	8,085.07	8,185.56	8,085.07	19.14	17.51	-90.28	-372.39	883.55	166.45	133.95	32.50	5.121		
8,300.00	8,185.07	8,285.56	8,185.07	19.19	17.56	-90.28	-372.39	883.55	166.45	133.86	32.59	5.107		
8,400.00	8,285.07	8,385.56	8,285.07	19.23	17.61	-90.28	-372.39	883.55	166.45	133.77	32.69	5.093		
8,500.00	8,385.07	8,485.56	8,385.07	19.27	17.66	-90.28	-372.39	883.55	166.45	133.68	32.78	5.078		
8,600.00	8,485.07	8,585.56	8,485.07	19.32	17.71	-90.28	-372.39	883.55	166.45	133.58	32.87	5.064		
8,700.00	8,585.07	8,685.56	8,585.07	19.36	17.76	-90.28	-372.39	883.55	166.45	133.49	32.96	5.050		
8,800.00	8,685.07	8,785.56	8,685.07	19.41	17.81	-90.28	-372.39	883.55	166.45	133.40	33.06	5.036		
8,900.00	8,785.07	8,885.56	8,785.07	19.45	17.85	-90.28	-372.39	883.55	166.45	133.30	33.15	5.021		
9,000.00	8,885.07	8,985.56	8,885.07	19.50	17.90	-90.28	-372.39	883.55	166.45	133.21	33.24	5.007		
9,100.00	8,985.07	9,085.56	8,985.07	19.54	17.95	-90.28	-372.39	883.55	166.45	133.11	33.34	4.993		
9,200.00	9,085.07	9,185.56	9,085.07	19.59	18.00	-90.28	-372.39	883.55	166.45	133.02	33.43	4.979		
9,300.00	9,185.07	9,285.56	9,185.07	19.63	18.05	-90.28	-372.39	883.55	166.45	132.92	33.53	4.964		
9,400.00	9,285.07	9,385.56	9,285.07	19.68	18.11	-90.28	-372.39	883.55	166.45	132.83	33.63	4.950		
9,500.00	9,385.07	9,485.56	9,385.07	19.73	18.16	-90.28	-372.39	883.55	166.45	132.73	33.72	4.936		
9,600.00	9,485.07	9,585.56	9,485.07	19.77	18.21	-90.28	-372.39	883.55	166.45	132.63	33.82	4.922		
9,700.00	9,585.07	9,685.56	9,585.07	19.82	18.26	-90.28	-372.39	883.55	166.45	132.53	33.92	4.907		
9,800.00	9,685.07	9,785.56	9,685.07	19.87	18.31	-90.28	-372.39	883.55	166.45	132.43	34.02	4.893		
9,900.00	9,785.07	9,885.56	9,785.07	19.91	18.36	-90.28	-372.39	883.55	166.45	132.34	34.12	4.879		
10,000.00	9,885.07	9,985.56	9,885.07	19.96	18.41	-90.28	-372.39	883.55	166.45	132.24	34.22	4.865		
10,100.00	9,985.07	10,085.56	9,985.07	20.01	18.47	-90.28	-372.39	883.55	166.45	132.14	34.32	4.850		
10,200.00	10,085.07	10,185.56	10,085.07	20.06	18.52	-90.28	-372.39	883.55	166.45	132.03	34.42	4.836		

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

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Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 138H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:				Offset Well Error:		0.50 usft
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance			Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Major Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor
10,300.00	10,185.07	10,285.56	10,185.07	20.10	18.57	-90.28	-372.39	883.55	166.45	131.93	34.52	4.822
10,400.00	10,285.07	10,385.56	10,285.07	20.15	18.62	-90.28	-372.39	883.55	166.45	131.83	34.62	4.808
10,500.00	10,385.07	10,485.56	10,385.07	20.20	18.68	-90.28	-372.39	883.55	166.45	131.73	34.72	4.794
10,600.00	10,485.07	10,585.56	10,485.07	20.25	18.73	-90.28	-372.39	883.55	166.45	131.63	34.82	4.780
10,700.00	10,585.07	10,685.56	10,585.07	20.30	18.78	-90.28	-372.39	883.55	166.45	131.53	34.93	4.766
10,800.00	10,685.07	10,785.56	10,685.07	20.35	18.84	-90.28	-372.39	883.55	166.45	131.42	35.03	4.752
10,900.00	10,785.07	10,885.56	10,785.07	20.40	18.89	-90.28	-372.39	883.55	166.45	131.32	35.13	4.738
11,000.00	10,885.07	10,985.56	10,885.07	20.45	18.95	-90.28	-372.39	883.55	166.45	131.21	35.24	4.724
11,100.00	10,985.07	11,085.56	10,985.07	20.50	19.00	-90.28	-372.39	883.55	166.45	131.11	35.34	4.710
11,200.00	11,084.72	11,185.20	11,084.72	20.59	19.05	88.27	-372.39	883.55	166.10	130.81	35.28	4.708
11,228.36	11,112.62	11,213.10	11,112.62	20.63	19.07	90.00	-372.39	883.55	166.02	130.80	35.22	4.713
11,300.00	11,181.66	11,282.15	11,181.66	20.75	19.11	96.15	-372.39	883.55	167.09	132.08	35.02	4.772
11,400.00	11,272.97	11,373.45	11,272.97	20.95	19.16	107.39	-372.39	883.55	176.32	141.41	34.92	5.050
11,500.00	11,355.85	11,456.34	11,355.85	21.20	19.20	118.35	-372.39	883.55	202.02	166.65	35.37	5.711
11,600.00	11,427.81	11,528.29	11,427.81	21.52	19.24	126.13	-372.39	883.55	248.10	211.90	36.20	6.853
11,700.00	11,486.64	11,617.42	11,516.81	21.92	19.32	134.16	-375.84	883.58	311.19	274.05	37.13	8.381
11,800.00	11,530.57	11,757.87	11,653.14	22.42	19.56	144.53	-408.11	883.87	378.88	339.98	38.89	9.742
11,900.00	11,558.25	11,986.82	11,846.46	23.01	20.22	155.59	-527.91	884.96	440.74	397.47	43.26	10.188
12,000.00	11,568.85	12,395.50	12,023.92	23.68	22.55	164.45	-886.44	888.22	473.90	423.09	50.81	9.327
12,100.00	11,569.43	12,539.18	12,027.57	24.45	23.70	165.61	-1,030.01	889.53	472.97	421.32	51.66	9.156
12,200.00	11,569.96	12,639.14	12,028.28	25.29	24.58	165.93	-1,129.96	890.43	472.50	420.50	51.99	9.088
12,220.64	11,570.07	12,659.77	12,028.43	25.48	24.77	165.96	-1,150.60	890.62	472.49	420.43	52.06	9.076
12,300.00	11,570.48	12,739.13	12,028.99	26.19	25.50	165.96	-1,229.95	891.34	472.64	420.31	52.33	9.031
12,400.00	11,571.01	12,839.13	12,029.70	27.12	26.46	165.96	-1,329.95	892.25	472.82	420.12	52.70	8.972
12,500.00	11,571.53	12,939.13	12,030.41	28.09	27.45	165.97	-1,429.94	893.16	473.00	419.91	53.09	8.910
12,600.00	11,572.06	13,039.13	12,031.12	29.09	28.47	165.98	-1,529.93	894.07	473.17	419.68	53.49	8.845
12,700.00	11,572.58	13,139.13	12,031.83	30.12	29.52	165.98	-1,629.93	894.98	473.35	419.43	53.92	8.779
12,800.00	11,573.11	13,239.13	12,032.54	31.17	30.59	165.99	-1,729.92	895.89	473.53	419.17	54.36	8.710
12,900.00	11,573.63	13,339.13	12,033.25	32.24	31.68	166.00	-1,829.91	896.79	473.71	418.88	54.83	8.640
13,000.00	11,574.16	13,439.13	12,033.95	33.33	32.80	166.00	-1,929.91	897.70	473.88	418.58	55.31	8.568
13,100.00	11,574.68	13,539.13	12,034.66	34.44	33.93	166.01	-2,029.90	898.61	474.06	418.25	55.81	8.495
13,200.00	11,575.21	13,639.13	12,035.37	35.57	35.08	166.01	-2,129.89	899.52	474.24	417.92	56.32	8.420
13,300.00	11,575.73	13,739.13	12,036.08	36.71	36.24	166.02	-2,229.89	900.43	474.41	417.56	56.85	8.345
13,400.00	11,576.25	13,839.13	12,036.79	37.87	37.41	166.03	-2,329.88	901.34	474.59	417.19	57.40	8.268
13,500.00	11,576.78	13,939.13	12,037.50	39.04	38.60	166.03	-2,429.87	902.25	474.77	416.80	57.96	8.191
13,600.00	11,577.30	14,039.13	12,038.21	40.22	39.80	166.04	-2,529.87	903.15	474.95	416.40	58.54	8.113
13,700.00	11,577.83	14,139.13	12,038.92	41.41	41.01	166.04	-2,629.86	904.06	475.12	415.99	59.14	8.035
13,800.00	11,578.35	14,239.13	12,039.63	42.61	42.23	166.05	-2,729.85	904.97	475.30	415.56	59.74	7.956
13,900.00	11,578.88	14,339.13	12,040.34	43.82	43.45	166.06	-2,829.85	905.88	475.48	415.11	60.36	7.877
14,000.00	11,579.40	14,439.13	12,041.05	45.04	44.69	166.06	-2,929.84	906.79	475.65	414.66	61.00	7.798
14,100.00	11,579.93	14,539.13	12,041.75	46.27	45.93	166.07	-3,029.83	907.70	475.83	414.19	61.64	7.719
14,200.00	11,580.45	14,639.13	12,042.46	47.51	47.18	166.08	-3,129.83	908.61	476.01	413.71	62.30	7.640
14,300.00	11,580.98	14,739.13	12,043.17	48.75	48.43	166.08	-3,229.82	909.51	476.19	413.21	62.97	7.562
14,400.00	11,581.50	14,839.13	12,043.88	49.99	49.69	166.09	-3,329.81	910.42	476.36	412.71	63.66	7.483
14,500.00	11,582.03	14,939.13	12,044.59	51.25	50.96	166.09	-3,429.80	911.33	476.54	412.19	64.35	7.405
14,600.00	11,582.55	15,039.13	12,045.30	52.51	52.23	166.10	-3,529.80	912.24	476.72	411.66	65.06	7.328
14,700.00	11,583.08	15,139.13	12,046.01	53.77	53.50	166.11	-3,629.79	913.15	476.89	411.12	65.77	7.251
14,800.00	11,583.60	15,239.13	12,046.72	55.04	54.78	166.11	-3,729.78	914.06	477.07	410.58	66.50	7.174
14,900.00	11,584.13	15,339.13	12,047.43	56.31	56.07	166.12	-3,829.78	914.97	477.25	410.02	67.23	7.099
15,000.00	11,584.65	15,439.13	12,048.14	57.59	57.35	166.13	-3,929.77	915.87	477.43	409.45	67.98	7.023
15,100.00	11,585.18	15,539.13	12,048.84	58.87	58.64	166.13	-4,029.76	916.78	477.60	408.87	68.73	6.949
15,200.00	11,585.70	15,639.13	12,049.55	60.16	59.94	166.14	-4,129.76	917.69	477.78	408.29	69.49	6.875

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 138H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:							Offset Well Error: 0.50 usft	
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Major Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
15,300.00	11,586.23	15,739.13	12,050.26	61.45	61.24	166.14	-4,229.75	918.60	477.96	407.69	70.26	6.802		
15,400.00	11,586.75	15,839.13	12,050.97	62.74	62.54	166.15	-4,329.74	919.51	478.14	407.09	71.04	6.730		
15,500.00	11,587.28	15,939.13	12,051.68	64.03	63.84	166.16	-4,429.74	920.42	478.31	406.48	71.83	6.659		
15,600.00	11,587.80	16,039.13	12,052.39	65.33	65.15	166.16	-4,529.73	921.33	478.49	405.86	72.63	6.588		
15,700.00	11,588.33	16,139.13	12,053.10	66.63	66.46	166.17	-4,629.72	922.23	478.67	405.24	73.43	6.519		
15,800.00	11,588.85	16,239.13	12,053.81	67.93	67.77	166.17	-4,729.72	923.14	478.84	404.61	74.24	6.450		
15,900.00	11,589.37	16,339.13	12,054.52	69.24	69.08	166.18	-4,829.71	924.05	479.02	403.97	75.06	6.382		
16,000.00	11,589.90	16,439.13	12,055.23	70.55	70.39	166.19	-4,929.70	924.96	479.20	403.32	75.88	6.315		
16,100.00	11,590.42	16,539.13	12,055.94	71.86	71.71	166.19	-5,029.70	925.87	479.38	402.67	76.71	6.249		
16,200.00	11,590.95	16,639.13	12,056.64	73.17	73.03	166.20	-5,129.69	926.78	479.55	402.01	77.54	6.184		
16,300.00	11,591.47	16,739.13	12,057.35	74.48	74.35	166.20	-5,229.68	927.69	479.73	401.34	78.39	6.120		
16,400.00	11,592.00	16,839.13	12,058.06	75.80	75.67	166.21	-5,329.68	928.59	479.91	400.67	79.24	6.057		
16,500.00	11,592.52	16,939.13	12,058.77	77.12	77.00	166.22	-5,429.67	929.50	480.09	400.00	80.09	5.994		
16,600.00	11,593.05	17,039.13	12,059.48	78.44	78.32	166.22	-5,529.66	930.41	480.26	399.31	80.95	5.933		
16,700.00	11,593.57	17,139.13	12,060.19	79.76	79.65	166.23	-5,629.65	931.32	480.44	398.63	81.81	5.872		
16,800.00	11,594.10	17,239.13	12,060.90	81.08	80.98	166.23	-5,729.65	932.23	480.62	397.94	82.68	5.813		
16,900.00	11,594.62	17,339.13	12,061.61	82.41	82.31	166.24	-5,829.64	933.14	480.79	397.24	83.56	5.754		
17,000.00	11,595.15	17,439.13	12,062.32	83.73	83.64	166.25	-5,929.63	934.05	480.97	396.54	84.43	5.696		
17,100.00	11,595.67	17,539.13	12,063.03	85.06	84.97	166.25	-6,029.63	934.95	481.15	395.83	85.32	5.639		
17,200.00	11,596.20	17,639.13	12,063.74	86.39	86.31	166.26	-6,129.62	935.86	481.33	395.12	86.21	5.583		
17,300.00	11,596.72	17,739.13	12,064.44	87.72	87.64	166.26	-6,229.61	936.77	481.50	394.40	87.10	5.528		
17,400.00	11,597.25	17,839.13	12,065.15	89.05	88.98	166.27	-6,329.61	937.68	481.68	393.69	88.00	5.474		
17,500.00	11,597.77	17,939.13	12,065.86	90.38	90.31	166.28	-6,429.60	938.59	481.86	392.96	88.90	5.420		
17,600.00	11,598.30	18,039.13	12,066.57	91.71	91.65	166.28	-6,529.59	939.50	482.04	392.24	89.80	5.368		
17,700.00	11,598.82	18,139.13	12,067.28	93.05	92.99	166.29	-6,629.59	940.41	482.21	391.50	90.71	5.316		
17,800.00	11,599.35	18,239.13	12,067.99	94.38	94.33	166.29	-6,729.58	941.31	482.39	390.77	91.62	5.265		
17,900.00	11,599.87	18,339.13	12,068.70	95.72	95.67	166.30	-6,829.57	942.22	482.57	390.03	92.54	5.215		
18,000.00	11,600.40	18,439.13	12,069.41	97.05	97.01	166.31	-6,929.57	943.13	482.75	389.29	93.45	5.166		
18,100.00	11,600.92	18,539.13	12,070.12	98.39	98.35	166.31	-7,029.56	944.04	482.92	388.55	94.38	5.117		
18,200.00	11,601.44	18,639.12	12,070.83	99.73	99.69	166.32	-7,129.55	944.95	483.10	387.80	95.30	5.069		
18,300.00	11,601.97	18,739.12	12,071.54	101.07	101.03	166.32	-7,229.55	945.86	483.28	387.05	96.23	5.022		
18,400.00	11,602.49	18,839.12	12,072.24	102.41	102.38	166.33	-7,329.54	946.77	483.45	386.29	97.16	4.976		
18,500.00	11,603.02	18,939.12	12,072.95	103.75	103.72	166.34	-7,429.53	947.67	483.63	385.54	98.10	4.930		
18,600.00	11,603.54	19,039.12	12,073.66	105.09	105.07	166.34	-7,529.53	948.58	483.81	384.78	99.03	4.885		
18,700.00	11,604.07	19,139.12	12,074.37	106.44	106.41	166.35	-7,629.52	949.49	483.99	384.01	99.97	4.841		
18,800.00	11,604.59	19,239.12	12,075.08	107.78	107.76	166.35	-7,729.51	950.40	484.16	383.25	100.92	4.798		
18,900.00	11,605.12	19,339.12	12,075.79	109.12	109.11	166.36	-7,829.51	951.31	484.34	382.48	101.86	4.755		
19,000.00	11,605.64	19,439.12	12,076.50	110.47	110.45	166.37	-7,929.50	952.22	484.52	381.71	102.81	4.713		
19,100.00	11,606.17	19,539.12	12,077.21	111.81	111.80	166.37	-8,029.49	953.13	484.70	380.94	103.76	4.671		
19,200.00	11,606.69	19,639.12	12,077.92	113.16	113.15	166.38	-8,129.48	954.03	484.87	380.16	104.71	4.631		
19,300.00	11,607.22	19,739.12	12,078.63	114.50	114.50	166.38	-8,229.48	954.94	485.05	379.39	105.66	4.590		
19,400.00	11,607.74	19,839.12	12,079.34	115.85	115.85	166.39	-8,329.47	955.85	485.23	378.61	106.62	4.551		
19,500.00	11,608.27	19,939.12	12,080.04	117.20	117.20	166.40	-8,429.46	956.76	485.41	377.83	107.58	4.512		
19,600.00	11,608.79	20,039.12	12,080.75	118.54	118.55	166.40	-8,529.46	957.67	485.58	377.04	108.54	4.474		
19,700.00	11,609.32	20,139.12	12,081.46	119.89	119.90	166.41	-8,629.45	958.58	485.76	376.26	109.50	4.436		
19,800.00	11,609.84	20,239.12	12,082.17	121.24	121.25	166.41	-8,729.44	959.49	485.94	375.47	110.47	4.399		
19,900.00	11,610.37	20,339.12	12,082.88	122.59	122.60	166.42	-8,829.44	960.39	486.12	374.68	111.44	4.362		
20,000.00	11,610.89	20,439.12	12,083.59	123.94	123.95	166.43	-8,929.43	961.30	486.29	373.89	112.40	4.326		
20,100.00	11,611.42	20,539.12	12,084.30	125.29	125.31	166.43	-9,029.42	962.21	486.47	373.10	113.37	4.291		
20,200.00	11,611.94	20,639.12	12,085.01	126.64	126.66	166.44	-9,129.42	963.12	486.65	372.30	114.35	4.256		
20,300.00	11,612.47	20,739.12	12,085.72	127.99	128.01	166.44	-9,229.41	964.03	486.83	371.51	115.32	4.222		
20,400.00	11,612.99	20,839.12	12,086.43	129.34	129.37	166.45	-9,329.40	964.94	487.00	370.71	116.29	4.188		

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 138H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:						Offset Well Error:		0.50 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
20,500.00	11,613.52	20,939.12	12,087.13	130.69	130.72	166.46	-9,429.40	965.85	487.18	369.91	117.27	4.154		
20,600.00	11,614.04	21,039.12	12,087.84	132.04	132.07	166.46	-9,529.39	966.75	487.36	369.11	118.25	4.121		
20,700.00	11,614.56	21,139.12	12,088.55	133.40	133.43	166.47	-9,629.38	967.66	487.54	368.31	119.23	4.089		
20,800.00	11,615.09	21,239.12	12,089.26	134.75	134.78	166.47	-9,729.38	968.57	487.71	367.50	120.21	4.057		
20,900.00	11,615.61	21,339.12	12,089.97	136.10	136.14	166.48	-9,829.37	969.48	487.89	366.70	121.19	4.026		
21,000.00	11,616.14	21,439.12	12,090.68	137.45	137.49	166.48	-9,929.36	970.39	488.07	365.89	122.18	3.995		
21,100.00	11,616.66	21,539.12	12,091.39	138.81	138.85	166.49	-10,029.36	971.30	488.25	365.08	123.16	3.964		
21,200.00	11,617.19	21,639.12	12,092.10	140.16	140.20	166.50	-10,129.35	972.21	488.42	364.27	124.15	3.934		
21,300.00	11,617.71	21,739.12	12,092.81	141.52	141.56	166.50	-10,229.34	973.12	488.60	363.46	125.14	3.905		
21,400.00	11,618.24	21,839.12	12,093.52	142.87	142.92	166.51	-10,329.33	974.02	488.78	362.65	126.13	3.875		
21,500.00	11,618.76	21,939.12	12,094.23	144.23	144.27	166.51	-10,429.33	974.93	488.96	361.84	127.12	3.847		
21,600.00	11,619.29	22,039.12	12,094.93	145.58	145.63	166.52	-10,529.32	975.84	489.13	361.03	128.11	3.818		
21,700.00	11,619.81	22,139.12	12,095.64	146.94	146.99	166.53	-10,629.31	976.75	489.31	360.21	129.10	3.790		
21,800.00	11,620.34	22,239.12	12,096.35	148.29	148.34	166.53	-10,729.31	977.66	489.49	359.40	130.09	3.763		
21,900.00	11,620.86	22,339.12	12,097.06	149.65	149.70	166.54	-10,829.30	978.57	489.67	358.58	131.09	3.735		
21,945.36	11,621.10	22,384.48	12,097.38	150.26	150.32	166.54	-10,874.66	978.98	489.75	358.21	131.54	3.723		

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 156H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)

Offset Site Error: 0.00 usft

Offset Well Error: 0.50 usft

Reference		Offset		Semi Major Axis		Highside Toolface (")	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	1.00	0.00	0.50	0.50	0.00	185.00	0.00	185.00	185.00			
100.00	100.00	101.00	100.00	0.98	0.99	0.00	185.00	0.00	185.00	183.03	1.97	94.021	
200.00	200.00	201.00	200.00	1.56	1.57	0.00	185.00	0.00	185.00	181.87	3.13	59.173	
300.00	300.00	301.05	300.05	1.98	1.99	0.00	185.00	0.00	185.00	181.03	3.97	46.640	
400.00	399.99	405.61	404.60	2.41	2.43	-130.52	183.68	-0.61	184.58	179.81	4.77	38.708	
500.00	499.91	510.01	508.90	2.77	2.80	-132.08	179.76	-2.43	183.46	178.01	5.45	33.659	
600.00	599.69	614.07	612.71	3.10	3.11	-134.71	173.29	-5.43	181.90	175.86	6.04	30.120	
682.93	682.29	697.32	695.65	3.36	3.22	-137.51	166.75	-8.46	181.06	174.68	6.39	28.349	CC
700.00	699.27	714.27	712.54	3.41	3.26	-138.13	165.41	-9.08	181.10	174.63	6.48	27.968	ES
800.00	798.57	813.47	811.36	3.70	3.50	-142.02	157.57	-12.72	182.97	175.97	7.00	26.150	
900.00	897.62	912.45	909.97	3.83	3.73	-146.16	149.74	-16.34	187.36	180.00	7.37	25.427	
1,000.00	996.65	1,011.42	1,008.56	4.06	3.96	-150.13	141.92	-19.97	192.84	185.01	7.83	24.624	
1,100.00	1,095.67	1,110.38	1,107.15	4.28	4.18	-153.86	134.09	-23.60	199.20	190.92	8.28	24.058	
1,200.00	1,194.70	1,209.35	1,205.74	4.51	4.39	-157.36	126.27	-27.23	206.36	197.63	8.72	23.663	
1,300.00	1,293.62	1,309.48	1,305.45	4.72	4.52	-153.69	118.00	-31.13	214.42	205.37	9.05	23.680	
1,400.00	1,392.26	1,409.73	1,405.03	4.94	4.79	-152.07	107.77	-36.38	223.43	213.93	9.50	23.521	
1,500.00	1,490.54	1,508.61	1,502.93	5.17	5.04	-152.42	95.57	-43.00	234.25	224.31	9.94	23.568	
1,600.00	1,588.41	1,605.80	1,598.77	5.40	5.29	-154.18	81.55	-50.91	247.91	237.53	10.38	23.883	
1,700.00	1,685.98	1,701.32	1,692.54	5.58	5.53	-159.59	65.81	-60.01	264.76	253.99	10.78	24.571	
1,800.00	1,783.55	1,795.78	1,784.96	5.80	5.68	-165.05	48.92	-69.93	284.23	273.07	11.16	25.465	
1,900.00	1,881.12	1,890.17	1,877.28	6.04	5.88	-169.83	31.99	-79.87	306.03	294.42	11.61	26.366	
2,000.00	1,978.69	1,984.56	1,969.61	6.31	6.08	-173.98	15.07	-89.81	329.70	317.64	12.06	27.339	
2,100.00	2,076.26	2,078.96	2,061.94	6.58	6.28	-177.59	-1.86	-99.75	354.87	342.36	12.52	28.352	
2,200.00	2,173.83	2,173.35	2,154.26	6.87	6.48	179.27	-18.78	-109.69	381.24	368.26	12.98	29.377	
2,300.00	2,271.40	2,267.74	2,246.59	7.15	6.69	176.52	-35.71	-119.63	408.58	395.14	13.44	30.396	
2,400.00	2,368.97	2,362.13	2,338.92	7.44	6.89	174.12	-52.64	-129.57	436.70	422.80	13.91	31.399	
2,500.00	2,466.54	2,456.52	2,431.25	7.73	7.14	172.00	-69.56	-139.51	465.47	451.09	14.38	32.377	
2,600.00	2,564.11	2,550.91	2,523.57	8.02	7.41	170.12	-86.49	-149.45	494.77	479.92	14.85	33.322	
2,700.00	2,661.68	2,645.30	2,615.90	8.31	7.67	168.45	-103.41	-159.39	524.51	509.19	15.32	34.234	
2,800.00	2,759.25	2,739.69	2,708.23	8.60	7.94	166.95	-120.34	-169.33	554.63	538.83	15.80	35.112	
2,900.00	2,856.82	2,834.08	2,800.55	8.89	8.20	165.61	-137.26	-179.27	585.05	568.78	16.27	35.954	
3,000.00	2,954.39	2,928.47	2,892.88	9.18	8.47	164.40	-154.19	-189.21	615.75	599.00	16.75	36.762	
3,100.00	3,051.96	3,022.86	2,985.21	9.48	8.74	163.30	-171.11	-199.15	646.67	629.44	17.23	37.535	
3,200.00	3,149.53	3,117.25	3,077.53	9.77	9.00	162.30	-188.04	-209.09	677.79	660.09	17.71	38.276	
3,300.00	3,247.10	3,211.64	3,169.86	10.07	9.27	161.39	-204.96	-219.03	709.09	690.90	18.19	38.985	
3,400.00	3,344.67	3,306.03	3,262.19	10.37	9.54	160.56	-221.89	-228.97	740.53	721.86	18.67	39.663	
3,500.00	3,442.24	3,400.42	3,354.52	10.67	9.81	159.79	-238.81	-238.91	772.11	752.95	19.15	40.312	
3,600.00	3,539.81	3,494.81	3,446.84	10.96	10.09	159.08	-255.74	-248.85	803.80	784.16	19.64	40.934	
3,700.00	3,637.39	3,589.20	3,539.17	11.26	10.36	158.43	-272.67	-258.79	835.59	815.47	20.12	41.529	
3,800.00	3,734.96	3,683.59	3,631.50	11.56	10.63	157.82	-289.59	-268.73	867.48	846.88	20.61	42.100	
3,900.00	3,832.53	3,777.98	3,723.82	11.86	10.90	157.26	-306.52	-278.67	899.45	878.36	21.08	42.659	
4,000.00	3,930.10	3,885.79	3,829.50	12.16	11.19	156.72	-324.88	-289.45	930.91	909.28	21.63	43.032	
4,100.00	4,027.67	3,997.39	3,939.48	12.46	11.47	156.36	-341.19	-299.04	960.82	938.63	22.18	43.314	
4,200.00	4,125.24	4,110.38	4,051.35	12.76	11.72	156.19	-354.88	-307.07	989.07	966.37	22.71	43.560	
4,300.00	4,222.81	4,224.59	4,164.85	13.06	11.94	156.18	-365.81	-313.49	1,015.63	992.43	23.20	43.774	
4,400.00	4,320.38	4,339.82	4,279.69	13.36	12.13	156.33	-373.87	-318.23	1,040.47	1,016.80	23.67	43.963	
4,500.00	4,417.95	4,455.87	4,395.59	13.66	12.29	156.64	-378.96	-321.22	1,063.58	1,039.48	24.10	44.135	
4,600.00	4,515.52	4,572.55	4,512.24	13.96	12.39	157.08	-381.02	-322.42	1,084.98	1,060.52	24.46	44.355	
4,700.00	4,613.09	4,673.40	4,613.09	14.27	12.43	157.53	-381.06	-322.45	1,105.29	1,080.56	24.73	44.688	
4,800.00	4,710.66	4,770.97	4,710.66	14.57	12.47	157.96	-381.06	-322.45	1,125.64	1,100.64	25.00	45.027	
4,900.00	4,808.23	4,868.54	4,808.23	14.87	12.51	158.37	-381.06	-322.45	1,146.05	1,120.78	25.26	45.361	
5,000.00	4,905.80	4,966.11	4,905.80	15.17	12.55	158.76	-381.06	-322.45	1,166.51	1,140.98	25.53	45.691	

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

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Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 156H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:				Offset Well Error:		0.50 usft	
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,003.37	5,063.68	5,003.37	15.47	12.59	159.14	-381.06	-322.45	1,187.02	1,161.22	25.80	46.016	
5,200.00	5,100.94	5,161.25	5,100.94	15.78	12.62	159.51	-381.06	-322.45	1,207.58	1,181.52	26.06	46.336	
5,300.00	5,198.51	5,258.82	5,198.51	16.08	12.66	159.87	-381.06	-322.45	1,228.19	1,201.86	26.33	46.652	
5,400.00	5,296.08	5,356.39	5,296.08	16.38	12.70	160.22	-381.06	-322.45	1,248.84	1,222.25	26.59	46.963	
5,500.00	5,393.65	5,453.96	5,393.65	16.69	12.74	160.55	-381.06	-322.45	1,269.54	1,242.68	26.86	47.269	
5,600.00	5,491.24	5,551.55	5,491.24	16.97	12.78	160.90	-381.06	-322.45	1,290.17	1,263.07	27.10	47.608	
5,700.00	5,589.24	5,649.55	5,589.24	17.25	12.83	161.28	-381.06	-322.45	1,309.03	1,281.66	27.37	47.825	
5,800.00	5,687.73	5,748.04	5,687.73	17.50	12.87	161.60	-381.06	-322.45	1,325.47	1,297.84	27.63	47.965	
5,900.00	5,786.63	5,846.94	5,786.63	17.73	12.91	161.86	-381.06	-322.45	1,339.48	1,311.59	27.89	48.029	
6,000.00	5,885.89	5,946.20	5,885.89	17.92	12.95	162.08	-381.06	-322.45	1,351.03	1,322.90	28.14	48.019	
6,100.00	5,985.43	6,045.74	5,985.43	18.09	13.00	162.24	-381.06	-322.45	1,360.12	1,331.75	28.37	47.940	
6,200.00	6,085.19	6,145.50	6,085.19	18.23	13.04	162.36	-381.06	-322.45	1,366.72	1,338.12	28.60	47.795	
6,300.00	6,185.09	6,245.40	6,185.09	18.33	13.08	162.43	-381.06	-322.45	1,370.83	1,342.03	28.80	47.590	
6,400.00	6,285.07	6,345.38	6,285.07	18.42	13.13	162.46	-381.06	-322.45	1,372.46	1,343.47	28.99	47.342	
6,500.00	6,385.07	6,445.38	6,385.07	18.44	13.17	-90.40	-381.06	-322.45	1,372.48	1,343.42	29.06	47.224	
6,600.00	6,485.07	6,545.38	6,485.07	18.48	13.22	-90.40	-381.06	-322.45	1,372.48	1,343.34	29.15	47.090	
6,700.00	6,585.07	6,645.38	6,585.07	18.52	13.26	-90.40	-381.06	-322.45	1,372.48	1,343.25	29.23	46.956	
6,800.00	6,685.07	6,745.38	6,685.07	18.56	13.31	-90.40	-381.06	-322.45	1,372.48	1,343.17	29.31	46.822	
6,900.00	6,785.07	6,845.38	6,785.07	18.60	13.36	-90.40	-381.06	-322.45	1,372.48	1,343.09	29.40	46.687	
7,000.00	6,885.07	6,945.38	6,885.07	18.64	13.40	-90.40	-381.06	-322.45	1,372.48	1,343.00	29.48	46.552	
7,100.00	6,985.07	7,045.38	6,985.07	18.68	13.45	-90.40	-381.06	-322.45	1,372.48	1,342.91	29.57	46.417	
7,200.00	7,085.07	7,145.38	7,085.07	18.72	13.50	-90.40	-381.06	-322.45	1,372.48	1,342.83	29.65	46.282	
7,300.00	7,185.07	7,245.38	7,185.07	18.76	13.55	-90.40	-381.06	-322.45	1,372.48	1,342.74	29.74	46.146	
7,400.00	7,285.07	7,345.38	7,285.07	18.80	13.59	-90.40	-381.06	-322.45	1,372.48	1,342.65	29.83	46.010	
7,500.00	7,385.07	7,445.38	7,385.07	18.85	13.64	-90.40	-381.06	-322.45	1,372.48	1,342.56	29.92	45.874	
7,600.00	7,485.07	7,545.38	7,485.07	18.89	13.69	-90.40	-381.06	-322.45	1,372.48	1,342.48	30.01	45.738	
7,700.00	7,585.07	7,645.38	7,585.07	18.93	13.74	-90.40	-381.06	-322.45	1,372.48	1,342.39	30.10	45.602	
7,800.00	7,685.07	7,745.38	7,685.07	18.97	13.79	-90.40	-381.06	-322.45	1,372.48	1,342.30	30.19	45.466	
7,900.00	7,785.07	7,845.38	7,785.07	19.01	13.84	-90.40	-381.06	-322.45	1,372.48	1,342.20	30.28	45.329	
8,000.00	7,885.07	7,945.38	7,885.07	19.06	13.89	-90.40	-381.06	-322.45	1,372.48	1,342.11	30.37	45.193	
8,100.00	7,985.07	8,045.38	7,985.07	19.10	13.94	-90.40	-381.06	-322.45	1,372.48	1,342.02	30.46	45.056	
8,200.00	8,085.07	8,145.38	8,085.07	19.14	13.99	-90.40	-381.06	-322.45	1,372.48	1,341.93	30.55	44.919	
8,300.00	8,185.07	8,245.38	8,185.07	19.19	14.04	-90.40	-381.06	-322.45	1,372.48	1,341.84	30.65	44.783	
8,400.00	8,285.07	8,345.38	8,285.07	19.23	14.09	-90.40	-381.06	-322.45	1,372.48	1,341.74	30.74	44.646	
8,500.00	8,385.07	8,445.38	8,385.07	19.27	14.14	-90.40	-381.06	-322.45	1,372.48	1,341.65	30.84	44.509	
8,600.00	8,485.07	8,545.38	8,485.07	19.32	14.20	-90.40	-381.06	-322.45	1,372.48	1,341.55	30.93	44.373	
8,700.00	8,585.07	8,645.38	8,585.07	19.36	14.25	-90.40	-381.06	-322.45	1,372.48	1,341.46	31.03	44.236	
8,800.00	8,685.07	8,745.38	8,685.07	19.41	14.30	-90.40	-381.06	-322.45	1,372.48	1,341.36	31.12	44.099	
8,900.00	8,785.07	8,845.38	8,785.07	19.45	14.35	-90.40	-381.06	-322.45	1,372.48	1,341.26	31.22	43.963	
9,000.00	8,885.07	8,945.38	8,885.07	19.50	14.41	-90.40	-381.06	-322.45	1,372.48	1,341.17	31.32	43.826	
9,100.00	8,985.07	9,045.38	8,985.07	19.54	14.46	-90.40	-381.06	-322.45	1,372.48	1,341.07	31.41	43.690	
9,200.00	9,085.07	9,145.38	9,085.07	19.59	14.51	-90.40	-381.06	-322.45	1,372.48	1,340.97	31.51	43.554	
9,300.00	9,185.07	9,245.38	9,185.07	19.63	14.57	-90.40	-381.06	-322.45	1,372.48	1,340.87	31.61	43.417	
9,400.00	9,285.07	9,345.38	9,285.07	19.68	14.62	-90.40	-381.06	-322.45	1,372.48	1,340.77	31.71	43.281	
9,500.00	9,385.07	9,445.38	9,385.07	19.73	14.68	-90.40	-381.06	-322.45	1,372.48	1,340.67	31.81	43.145	
9,600.00	9,485.07	9,545.38	9,485.07	19.77	14.73	-90.40	-381.06	-322.45	1,372.48	1,340.57	31.91	43.010	
9,700.00	9,585.07	9,645.38	9,585.07	19.82	14.79	-90.40	-381.06	-322.45	1,372.48	1,340.47	32.01	42.874	
9,800.00	9,685.07	9,745.38	9,685.07	19.87	14.84	-90.40	-381.06	-322.45	1,372.48	1,340.37	32.11	42.739	
9,900.00	9,785.07	9,845.38	9,785.07	19.91	14.90	-90.40	-381.06	-322.45	1,372.48	1,340.27	32.22	42.603	
10,000.00	9,885.07	9,945.38	9,885.07	19.96	14.95	-90.40	-381.06	-322.45	1,372.48	1,340.17	32.32	42.468	
10,100.00	9,985.07	10,045.38	9,985.07	20.01	15.01	-90.40	-381.06	-322.45	1,372.48	1,340.06	32.42	42.334	
10,200.00	10,085.07	10,145.38	10,085.07	20.06	15.07	-90.40	-381.06	-322.45	1,372.48	1,339.96	32.52	42.199	

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

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Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 156H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:						Offset Well Error:		0.50 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
10,300.00	10,185.07	10,245.38	10,185.07	20.10	15.12	-90.40	-381.06	-322.45	1,372.48	1,339.85	32.63	42.064		
10,400.00	10,285.07	10,345.38	10,285.07	20.15	15.18	-90.40	-381.06	-322.45	1,372.48	1,339.75	32.73	41.930		
10,500.00	10,385.07	10,445.38	10,385.07	20.20	15.24	-90.40	-381.06	-322.45	1,372.48	1,339.65	32.84	41.796		
10,600.00	10,485.07	10,545.38	10,485.07	20.25	15.29	-90.40	-381.06	-322.45	1,372.48	1,339.54	32.94	41.663		
10,700.00	10,585.07	10,645.38	10,585.07	20.30	15.35	-90.40	-381.06	-322.45	1,372.48	1,339.43	33.05	41.529		
10,800.00	10,685.07	10,745.38	10,685.07	20.35	15.41	-90.40	-381.06	-322.45	1,372.48	1,339.33	33.15	41.396		
10,900.00	10,785.07	10,845.38	10,785.07	20.40	15.47	-90.40	-381.06	-322.45	1,372.48	1,339.22	33.26	41.263		
11,000.00	10,885.07	10,945.38	10,885.07	20.45	15.53	-90.40	-381.06	-322.45	1,372.48	1,339.11	33.37	41.131		
11,100.00	10,985.07	11,045.38	10,985.07	20.50	15.58	-90.40	-381.06	-322.45	1,372.48	1,339.01	33.47	41.002		
11,200.00	11,084.72	11,145.81	11,085.41	20.59	15.66	85.98	-383.75	-322.43	1,371.97	1,338.43	33.54	40.904		
11,300.00	11,181.66	11,247.42	11,185.15	20.75	15.85	86.40	-402.47	-322.26	1,370.18	1,336.44	33.75	40.604		
11,400.00	11,272.97	11,350.02	11,280.91	20.95	16.14	86.93	-438.92	-321.92	1,367.16	1,333.02	34.14	40.042		
11,500.00	11,355.85	11,453.53	11,369.38	21.20	16.51	87.56	-492.38	-321.44	1,362.98	1,328.22	34.77	39.204		
11,600.00	11,427.81	11,557.84	11,447.35	21.52	17.01	88.26	-561.45	-320.81	1,357.78	1,322.14	35.64	38.096		
11,700.00	11,486.64	11,662.82	11,511.89	21.92	17.67	89.01	-644.06	-320.06	1,351.70	1,314.91	36.78	36.747		
11,800.00	11,530.57	11,768.31	11,560.49	22.42	18.48	89.80	-737.52	-319.21	1,344.92	1,306.73	38.19	35.215		
11,900.00	11,558.25	11,874.14	11,591.22	23.01	19.43	90.60	-838.63	-318.29	1,337.64	1,297.81	39.83	33.582		
12,000.00	11,568.85	11,980.13	11,602.87	23.68	20.47	91.39	-943.82	-317.33	1,330.08	1,288.44	41.65	31.937		
12,100.00	11,569.43	12,080.36	11,603.44	24.45	21.51	91.46	-1,044.04	-316.42	1,323.94	1,280.40	43.54	30.410		
12,200.00	11,569.96	12,180.32	11,603.96	25.29	22.59	91.47	-1,144.00	-315.52	1,321.27	1,275.75	45.52	29.027		
12,296.37	11,570.46	12,276.69	11,604.47	26.15	23.66	91.48	-1,240.36	-314.64	1,320.81	1,273.33	47.47	27.821		
12,300.00	11,570.48	12,280.32	11,604.49	26.19	23.70	91.47	-1,243.99	-314.61	1,321.14	1,273.59	47.55	27.785		
12,400.00	11,571.01	12,380.32	11,605.01	27.12	24.83	91.47	-1,343.98	-313.70	1,321.14	1,271.48	49.65	26.607		
12,500.00	11,571.53	12,480.32	11,605.54	28.09	25.99	91.48	-1,443.98	-312.79	1,321.13	1,269.31	51.82	25.496		
12,600.00	11,572.06	12,580.32	11,606.06	29.09	27.16	91.48	-1,543.97	-311.88	1,321.12	1,267.09	54.03	24.451		
12,700.00	11,572.58	12,680.32	11,606.59	30.12	28.36	91.48	-1,643.97	-310.97	1,321.11	1,264.82	56.29	23.469		
12,800.00	11,573.11	12,780.32	11,607.11	31.17	29.56	91.48	-1,743.96	-310.06	1,321.11	1,262.51	58.59	22.547		
12,900.00	11,573.63	12,880.32	11,607.64	32.24	30.78	91.48	-1,843.96	-309.15	1,321.10	1,260.17	60.93	21.682		
13,000.00	11,574.16	12,980.32	11,608.16	33.33	32.02	91.48	-1,943.95	-308.24	1,321.09	1,257.79	63.30	20.870		
13,100.00	11,574.68	13,080.32	11,608.69	34.44	33.26	91.48	-2,043.95	-307.33	1,321.08	1,255.39	65.70	20.108		
13,200.00	11,575.21	13,180.32	11,609.21	35.57	34.51	91.48	-2,143.94	-306.43	1,321.08	1,252.95	68.12	19.393		
13,300.00	11,575.73	13,280.32	11,609.74	36.71	35.78	91.48	-2,243.93	-305.52	1,321.07	1,250.50	70.57	18.720		
13,400.00	11,576.25	13,380.32	11,610.26	37.87	37.04	91.48	-2,343.93	-304.61	1,321.06	1,248.03	73.04	18.088		
13,500.00	11,576.78	13,480.32	11,610.79	39.04	38.32	91.48	-2,443.92	-303.70	1,321.05	1,245.53	75.52	17.492		
13,600.00	11,577.30	13,580.32	11,611.32	40.22	39.60	91.48	-2,543.92	-302.79	1,321.05	1,243.02	78.02	16.931		
13,700.00	11,577.83	13,680.32	11,611.84	41.41	40.89	91.48	-2,643.91	-301.88	1,321.04	1,240.50	80.54	16.402		
13,800.00	11,578.35	13,780.32	11,612.37	42.61	42.18	91.48	-2,743.91	-300.97	1,321.03	1,237.96	83.07	15.902		
13,900.00	11,578.88	13,880.32	11,612.89	43.82	43.48	91.48	-2,843.90	-300.06	1,321.03	1,235.41	85.62	15.429		
14,000.00	11,579.40	13,980.32	11,613.42	45.04	44.78	91.48	-2,943.90	-299.15	1,321.02	1,232.84	88.18	14.982		
14,100.00	11,579.93	14,080.32	11,613.94	46.27	46.09	91.48	-3,043.89	-298.25	1,321.01	1,230.27	90.74	14.558		
14,200.00	11,580.45	14,180.32	11,614.47	47.51	47.39	91.48	-3,143.88	-297.34	1,321.00	1,227.68	93.32	14.156		
14,300.00	11,580.98	14,280.32	11,614.99	48.75	48.71	91.48	-3,243.88	-296.43	1,321.00	1,225.09	95.91	13.774		
14,400.00	11,581.50	14,380.32	11,615.52	49.99	50.02	91.48	-3,343.87	-295.52	1,320.99	1,222.49	98.50	13.411		
14,500.00	11,582.03	14,480.32	11,616.04	51.25	51.34	91.48	-3,443.87	-294.61	1,320.98	1,219.88	101.10	13.066		
14,600.00	11,582.55	14,580.32	11,616.57	52.51	52.66	91.48	-3,543.86	-293.70	1,320.97	1,217.26	103.71	12.737		
14,700.00	11,583.08	14,680.32	11,617.09	53.77	53.98	91.48	-3,643.86	-292.79	1,320.97	1,214.64	106.32	12.424		
14,800.00	11,583.60	14,780.32	11,617.62	55.04	55.31	91.48	-3,743.85	-291.88	1,320.96	1,212.01	108.95	12.125		
14,900.00	11,584.13	14,880.32	11,618.14	56.31	56.64	91.48	-3,843.85	-290.97	1,320.95	1,209.38	111.57	11.839		
15,000.00	11,584.65	14,980.32	11,618.67	57.59	57.96	91.48	-3,943.84	-290.07	1,320.94	1,206.74	114.20	11.566		
15,100.00	11,585.18	15,080.32	11,619.19	58.87	59.30	91.48	-4,043.84	-289.16	1,320.94	1,204.09	116.84	11.305		
15,200.00	11,585.70	15,180.32	11,619.72	60.16	60.63	91.48	-4,143.83	-288.25	1,320.93	1,201.45	119.48	11.055		
15,300.00	11,586.23	15,280.32	11,620.24	61.45	61.96	91.48	-4,243.82	-287.34	1,320.92	1,198.79	122.13	10.816		

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 156H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:						Offset Well Error:		0.50 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
15,400.00	11,586.75	15,380.32	11,620.77	62.74	63.30	91.48	-4,343.82	-286.43	1,320.91	1,196.14	124.78	10.586		
15,500.00	11,587.28	15,480.32	11,621.29	64.03	64.64	91.48	-4,443.81	-285.52	1,320.91	1,193.47	127.43	10.366		
15,600.00	11,587.80	15,580.32	11,621.82	65.33	65.97	91.48	-4,543.81	-284.61	1,320.90	1,190.81	130.09	10.154		
15,700.00	11,588.33	15,680.32	11,622.34	66.63	67.31	91.48	-4,643.80	-283.70	1,320.89	1,188.14	132.75	9.950		
15,800.00	11,588.85	15,780.32	11,622.87	67.93	68.65	91.48	-4,743.80	-282.79	1,320.88	1,185.47	135.41	9.754		
15,900.00	11,589.37	15,880.32	11,623.39	69.24	70.00	91.48	-4,843.79	-281.89	1,320.88	1,182.80	138.08	9.566		
16,000.00	11,589.90	15,980.32	11,623.92	70.55	71.34	91.48	-4,943.79	-280.98	1,320.87	1,180.12	140.75	9.385		
16,100.00	11,590.42	16,080.32	11,624.44	71.86	72.68	91.48	-5,043.78	-280.07	1,320.86	1,177.44	143.42	9.210		
16,200.00	11,590.95	16,180.32	11,624.97	73.17	74.03	91.48	-5,143.77	-279.16	1,320.86	1,174.76	146.10	9.041		
16,300.00	11,591.47	16,280.32	11,625.49	74.48	75.37	91.48	-5,243.77	-278.25	1,320.85	1,172.07	148.77	8.878		
16,400.00	11,592.00	16,380.32	11,626.02	75.80	76.72	91.48	-5,343.76	-277.34	1,320.84	1,169.39	151.45	8.721		
16,500.00	11,592.52	16,480.32	11,626.54	77.12	78.07	91.48	-5,443.76	-276.43	1,320.83	1,166.70	154.13	8.569		
16,600.00	11,593.05	16,580.32	11,627.07	78.44	79.42	91.48	-5,543.75	-275.52	1,320.83	1,164.01	156.82	8.423		
16,700.00	11,593.57	16,680.32	11,627.59	79.76	80.76	91.48	-5,643.75	-274.61	1,320.82	1,161.32	159.50	8.281		
16,800.00	11,594.10	16,780.32	11,628.12	81.08	82.11	91.48	-5,743.74	-273.71	1,320.81	1,158.62	162.19	8.144		
16,900.00	11,594.62	16,880.32	11,628.64	82.41	83.46	91.48	-5,843.74	-272.80	1,320.80	1,155.93	164.88	8.011		
17,000.00	11,595.15	16,980.32	11,629.17	83.73	84.81	91.48	-5,943.73	-271.89	1,320.80	1,153.23	167.57	7.882		
17,100.00	11,595.67	17,080.32	11,629.69	85.06	86.17	91.48	-6,043.73	-270.98	1,320.79	1,150.53	170.26	7.758		
17,200.00	11,596.20	17,180.32	11,630.22	86.39	87.52	91.48	-6,143.72	-270.07	1,320.78	1,147.83	172.95	7.637		
17,300.00	11,596.72	17,280.32	11,630.74	87.72	88.87	91.48	-6,243.71	-269.16	1,320.77	1,145.13	175.64	7.520		
17,400.00	11,597.25	17,380.32	11,631.27	89.05	90.22	91.48	-6,343.71	-268.25	1,320.77	1,142.43	178.34	7.406		
17,500.00	11,597.77	17,480.32	11,631.79	90.38	91.58	91.48	-6,443.70	-267.34	1,320.76	1,139.72	181.04	7.295		
17,600.00	11,598.30	17,580.32	11,632.32	91.71	92.93	91.48	-6,543.70	-266.43	1,320.75	1,137.02	183.74	7.188		
17,700.00	11,598.82	17,680.32	11,632.84	93.05	94.29	91.48	-6,643.69	-265.52	1,320.74	1,134.31	186.44	7.084		
17,800.00	11,599.35	17,780.32	11,633.37	94.38	95.64	91.48	-6,743.69	-264.62	1,320.74	1,131.60	189.14	6.983		
17,900.00	11,599.87	17,880.32	11,633.89	95.72	97.00	91.48	-6,843.68	-263.71	1,320.73	1,128.89	191.84	6.885		
18,000.00	11,600.40	17,980.32	11,634.42	97.05	98.35	91.48	-6,943.68	-262.80	1,320.72	1,126.18	194.54	6.789		
18,100.00	11,600.92	18,080.32	11,634.94	98.39	99.71	91.48	-7,043.67	-261.89	1,320.71	1,123.47	197.24	6.696		
18,200.00	11,601.44	18,180.32	11,635.47	99.73	101.06	91.48	-7,143.66	-260.98	1,320.71	1,120.76	199.95	6.605		
18,300.00	11,601.97	18,280.32	11,635.99	101.07	102.42	91.48	-7,243.66	-260.07	1,320.70	1,118.05	202.65	6.517		
18,400.00	11,602.49	18,380.32	11,636.52	102.41	103.78	91.48	-7,343.65	-259.16	1,320.69	1,115.33	205.36	6.431		
18,500.00	11,603.02	18,480.32	11,637.04	103.75	105.13	91.48	-7,443.65	-258.25	1,320.68	1,112.62	208.07	6.347		
18,600.00	11,603.54	18,580.32	11,637.57	105.09	106.49	91.48	-7,543.64	-257.34	1,320.68	1,109.90	210.78	6.266		
18,700.00	11,604.07	18,680.32	11,638.09	106.44	107.85	91.48	-7,643.64	-256.44	1,320.67	1,107.19	213.48	6.186		
18,800.00	11,604.59	18,780.32	11,638.62	107.78	109.21	91.48	-7,743.63	-255.53	1,320.66	1,104.47	216.19	6.109		
18,900.00	11,605.12	18,880.32	11,639.15	109.12	110.57	91.48	-7,843.63	-254.62	1,320.66	1,101.75	218.90	6.033		
19,000.00	11,605.64	18,980.32	11,639.67	110.47	111.93	91.48	-7,943.62	-253.71	1,320.65	1,099.03	221.62	5.959		
19,100.00	11,606.17	19,080.32	11,640.20	111.81	113.28	91.48	-8,043.61	-252.80	1,320.64	1,096.31	224.33	5.887		
19,200.00	11,606.69	19,180.32	11,640.72	113.16	114.64	91.48	-8,143.61	-251.89	1,320.63	1,093.59	227.04	5.817		
19,300.00	11,607.22	19,280.32	11,641.25	114.50	116.00	91.48	-8,243.60	-250.98	1,320.63	1,090.87	229.75	5.748		
19,400.00	11,607.74	19,380.32	11,641.77	115.85	117.36	91.48	-8,343.60	-250.07	1,320.62	1,088.15	232.47	5.681		
19,500.00	11,608.27	19,480.32	11,642.30	117.20	118.72	91.48	-8,443.59	-249.16	1,320.61	1,085.43	235.18	5.615		
19,600.00	11,608.79	19,580.32	11,642.82	118.54	120.08	91.48	-8,543.59	-248.26	1,320.60	1,082.71	237.89	5.551		
19,700.00	11,609.32	19,680.32	11,643.35	119.89	121.44	91.48	-8,643.58	-247.35	1,320.60	1,079.99	240.61	5.489		
19,800.00	11,609.84	19,780.32	11,643.87	121.24	122.80	91.48	-8,743.58	-246.44	1,320.59	1,077.26	243.33	5.427		
19,900.00	11,610.37	19,880.32	11,644.40	122.59	124.17	91.48	-8,843.57	-245.53	1,320.58	1,074.54	246.04	5.367		
20,000.00	11,610.89	19,980.32	11,644.92	123.94	125.53	91.48	-8,943.57	-244.62	1,320.57	1,071.82	248.76	5.309		
20,100.00	11,611.42	20,080.32	11,645.45	125.29	126.89	91.48	-9,043.56	-243.71	1,320.57	1,069.09	251.48	5.251		
20,200.00	11,611.94	20,180.32	11,645.97	126.64	128.25	91.48	-9,143.55	-242.80	1,320.56	1,066.37	254.19	5.195		
20,300.00	11,612.47	20,280.32	11,646.50	127.99	129.61	91.48	-9,243.55	-241.89	1,320.55	1,063.64	256.91	5.140		
20,400.00	11,612.99	20,380.32	11,647.02	129.34	130.97	91.48	-9,343.54	-240.98	1,320.54	1,060.91	259.63	5.086		
20,500.00	11,613.52	20,480.32	11,647.55	130.69	132.33	91.48	-9,443.54	-240.08	1,320.54	1,058.19	262.35	5.034		

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 156H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:						Offset Well Error:		0.50 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			Minimum Separation (usft)	
20,600.00	11,614.04	20,580.32	11,648.07	132.04	133.70	91.48	-9,543.53	-239.17	1,320.53	1,055.46	265.07	4.982		
20,700.00	11,614.56	20,680.32	11,648.60	133.40	135.06	91.48	-9,643.53	-238.26	1,320.52	1,052.73	267.79	4.931		
20,800.00	11,615.09	20,780.32	11,649.12	134.75	136.42	91.48	-9,743.52	-237.35	1,320.51	1,050.01	270.51	4.882		
20,900.00	11,615.61	20,880.32	11,649.65	136.10	137.78	91.48	-9,843.52	-236.44	1,320.51	1,047.28	273.23	4.833		
21,000.00	11,616.14	20,980.32	11,650.17	137.45	139.15	91.48	-9,943.51	-235.53	1,320.50	1,044.55	275.95	4.785		
21,100.00	11,616.66	21,080.32	11,650.70	138.81	140.51	91.48	-10,043.50	-234.62	1,320.49	1,041.82	278.67	4.739		
21,200.00	11,617.19	21,180.32	11,651.22	140.16	141.87	91.48	-10,143.50	-233.71	1,320.48	1,039.09	281.39	4.693		
21,300.00	11,617.71	21,280.32	11,651.75	141.52	143.23	91.48	-10,243.49	-232.80	1,320.48	1,036.36	284.11	4.648		
21,400.00	11,618.24	21,380.32	11,652.27	142.87	144.60	91.48	-10,343.49	-231.89	1,320.47	1,033.63	286.84	4.604		
21,500.00	11,618.76	21,480.32	11,652.80	144.23	145.96	91.48	-10,443.48	-230.99	1,320.46	1,030.90	289.56	4.560		
21,600.00	11,619.29	21,580.32	11,653.32	145.58	147.32	91.48	-10,543.48	-230.08	1,320.46	1,028.17	292.28	4.518		
21,700.00	11,619.81	21,680.32	11,653.85	146.94	148.69	91.48	-10,643.47	-229.17	1,320.45	1,025.44	295.00	4.476		
21,800.00	11,620.34	21,780.32	11,654.37	148.29	150.05	91.48	-10,743.47	-228.26	1,320.44	1,022.71	297.73	4.435		
21,900.00	11,620.86	21,880.32	11,654.90	149.65	151.41	91.48	-10,843.46	-227.35	1,320.43	1,019.98	300.45	4.395		
21,938.41	11,621.06	21,918.73	11,655.10	150.17	151.94	91.48	-10,881.87	-227.00	1,320.43	1,018.93	301.50	4.380		
21,945.36	11,621.10	21,918.86	11,655.10	150.26	151.94	91.48	-10,882.00	-227.00	1,320.45	1,018.90	301.55	4.379	SF	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 213H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)

Offset Site Error: 0.00 usft

Offset Well Error: 0.50 usft

Reference		Offset		Semi Major Axis		Highside Toolface (")	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	1.00	0.00	0.50	0.50	7.70	185.00	25.00	186.68				
100.00	100.00	101.00	100.00	0.98	0.99	7.70	185.00	25.00	186.68	184.71	1.97	94.875	
200.00	200.00	201.00	200.00	1.56	1.57	7.70	185.00	25.00	186.68	183.56	3.13	59.711	
300.00	300.00	301.00	300.00	1.98	1.98	7.70	185.00	25.00	186.68	182.72	3.97	47.073	CC
400.00	399.99	400.99	399.99	2.41	2.33	-122.63	185.00	25.00	187.38	182.70	4.68	40.042	ES
500.00	499.91	500.95	499.95	2.77	2.64	-123.61	185.00	25.00	189.53	184.23	5.30	35.748	
600.00	599.69	605.83	604.82	3.10	2.98	-125.39	183.62	24.50	191.89	185.95	5.94	32.321	
700.00	699.27	710.51	709.41	3.41	3.29	-128.02	179.55	23.02	193.39	186.88	6.52	29.680	
800.00	798.57	814.85	813.49	3.70	3.55	-131.51	172.81	20.56	194.44	187.40	7.04	27.626	
900.00	897.62	914.81	913.07	3.83	3.68	-135.45	164.67	17.60	195.97	188.65	7.31	26.799	
1,000.00	996.65	1,013.87	1,011.76	4.06	3.89	-139.31	156.56	14.65	198.47	190.70	7.77	25.542	
1,100.00	1,095.67	1,112.94	1,110.45	4.28	4.10	-143.06	148.44	11.69	201.88	193.66	8.22	24.570	
1,200.00	1,194.70	1,212.00	1,209.14	4.51	4.29	-146.68	140.33	8.74	206.13	197.47	8.65	23.821	
1,300.00	1,293.62	1,310.63	1,307.37	4.72	4.41	-143.23	132.13	5.37	211.36	202.37	8.99	23.519	
1,400.00	1,392.26	1,407.93	1,404.11	4.94	4.62	-141.89	123.44	-0.16	218.43	209.01	9.42	23.193	
1,500.00	1,490.54	1,503.55	1,498.98	5.17	4.83	-142.54	114.25	-7.91	228.45	218.61	9.84	23.226	
1,600.00	1,588.41	1,597.17	1,591.58	5.40	5.04	-144.55	104.66	-17.72	242.54	232.29	10.25	23.672	
1,700.00	1,685.98	1,688.81	1,681.92	5.58	5.24	-150.10	94.69	-29.45	261.15	250.54	10.60	24.633	
1,800.00	1,783.55	1,778.86	1,770.34	5.80	5.44	-155.63	84.34	-43.01	283.78	272.79	10.99	25.829	
1,900.00	1,881.12	1,867.28	1,856.76	6.04	5.64	-160.61	73.66	-58.29	310.28	298.91	11.37	27.289	
2,000.00	1,978.69	1,954.01	1,941.13	6.31	5.84	-165.03	62.69	-75.16	340.41	328.66	11.75	28.965	
2,100.00	2,076.26	2,040.33	2,024.64	6.58	6.00	-168.98	51.29	-93.74	373.90	361.79	12.11	30.874	
2,200.00	2,173.83	2,130.79	2,112.03	6.87	6.18	-172.55	39.20	-113.79	409.45	396.94	12.51	32.719	
2,300.00	2,271.40	2,221.26	2,199.41	7.15	6.40	-175.56	27.11	-133.84	446.24	433.31	12.93	34.502	
2,400.00	2,368.97	2,311.73	2,286.80	7.44	6.64	-178.13	15.01	-153.90	483.98	470.62	13.37	36.209	
2,500.00	2,466.54	2,402.20	2,374.18	7.73	6.90	-179.66	2.92	-173.95	522.48	508.68	13.80	37.860	
2,600.00	2,564.11	2,492.66	2,461.56	8.02	7.17	-177.74	-9.18	-194.00	561.57	547.33	14.24	39.446	
2,700.00	2,661.68	2,583.13	2,548.95	8.31	7.45	-176.07	-21.27	-214.05	601.13	586.46	14.68	40.962	
2,800.00	2,759.25	2,673.60	2,636.33	8.60	7.73	-174.60	-33.37	-234.10	641.09	625.97	15.12	42.411	
2,900.00	2,856.82	2,764.07	2,723.72	8.89	8.02	-173.29	-45.46	-254.16	681.37	665.81	15.56	43.793	
3,000.00	2,954.39	2,854.53	2,811.10	9.18	8.31	-172.14	-57.56	-274.21	721.92	705.91	16.00	45.110	
3,100.00	3,051.96	2,945.00	2,898.49	9.48	8.60	-171.10	-69.65	-294.26	762.69	746.24	16.45	46.365	
3,200.00	3,149.53	3,035.47	2,985.87	9.77	8.89	-170.17	-81.75	-314.31	803.65	786.75	16.90	47.562	
3,300.00	3,247.10	3,125.94	3,073.25	10.07	9.19	-169.32	-93.84	-334.36	844.78	827.43	17.35	48.702	
3,400.00	3,344.67	3,216.40	3,160.64	10.37	9.49	-168.55	-105.94	-354.42	886.04	868.25	17.80	49.789	
3,500.00	3,442.24	3,306.87	3,248.02	10.67	9.79	-167.85	-118.03	-374.47	927.43	909.18	18.25	50.826	
3,600.00	3,539.81	3,397.34	3,335.41	10.96	10.09	-167.21	-130.13	-394.52	968.92	950.22	18.70	51.816	
3,700.00	3,637.39	3,487.81	3,422.79	11.26	10.40	-166.63	-142.22	-414.57	1,010.51	991.36	19.15	52.761	
3,800.00	3,734.96	3,578.27	3,510.17	11.56	10.70	-166.08	-154.32	-434.63	1,052.18	1,032.57	19.61	53.663	
3,900.00	3,832.53	3,668.74	3,597.56	11.86	11.01	-165.58	-166.41	-454.68	1,093.92	1,073.86	20.06	54.526	
4,000.00	3,930.10	3,759.21	3,684.94	12.16	11.32	-165.12	-178.51	-474.73	1,135.72	1,115.21	20.52	55.352	
4,100.00	4,027.67	3,849.68	3,772.33	12.46	11.63	-164.69	-190.60	-494.78	1,177.59	1,156.61	20.98	56.142	
4,200.00	4,125.24	3,940.14	3,859.71	12.76	11.94	-164.29	-202.70	-514.83	1,219.50	1,198.07	21.43	56.899	
4,300.00	4,222.81	4,030.61	3,947.10	13.06	12.25	-163.91	-214.79	-534.89	1,261.46	1,239.57	21.89	57.624	
4,400.00	4,320.38	4,121.08	4,034.48	13.36	12.56	-163.56	-226.89	-554.94	1,303.47	1,281.12	22.35	58.320	
4,500.00	4,417.95	4,211.55	4,121.86	13.66	12.87	-163.23	-238.98	-574.99	1,345.51	1,322.70	22.81	58.988	
4,600.00	4,515.52	4,302.01	4,209.25	13.96	13.19	-162.92	-251.08	-595.04	1,387.58	1,364.31	23.27	59.629	
4,700.00	4,613.09	4,392.48	4,296.63	14.27	13.50	-162.63	-263.17	-615.09	1,429.69	1,405.96	23.73	60.244	
4,800.00	4,710.66	4,482.95	4,384.02	14.57	13.82	-162.35	-275.27	-635.15	1,471.83	1,447.64	24.19	60.836	
4,900.00	4,808.23	4,573.42	4,471.40	14.87	14.13	-162.09	-287.36	-655.20	1,513.99	1,489.34	24.66	61.405	
5,000.00	4,905.80	4,663.88	4,558.78	15.17	14.45	-161.85	-299.46	-675.25	1,556.18	1,531.06	25.12	61.953	
5,100.00	5,003.37	4,754.35	4,646.17	15.47	14.77	-161.61	-311.55	-695.30	1,598.39	1,572.81	25.58	62.483	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 213H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:				Offset Site Error:
														Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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	
5,200.00	5,100.94	4,872.53	4,760.50	15.78	15.17	161.34	-326.99	-720.89	1,640.23	1,614.03	26.19	62.623		
5,300.00	5,198.51	5,019.89	4,904.21	16.08	15.63	161.11	-343.82	-748.80	1,679.41	1,652.49	26.93	62.367		
5,400.00	5,296.08	5,171.55	5,053.30	16.38	16.03	161.00	-358.14	-772.54	1,715.47	1,687.84	27.63	62.097		
5,500.00	5,393.65	5,327.20	5,207.33	16.69	16.38	161.00	-369.65	-791.62	1,748.25	1,719.96	28.29	61.807		
5,600.00	5,491.24	5,486.51	5,365.80	16.97	16.66	161.15	-378.06	-805.57	1,777.53	1,748.66	28.87	61.561		
5,700.00	5,589.24	5,649.75	5,528.73	17.25	16.87	161.45	-383.13	-813.98	1,801.52	1,772.09	29.43	61.214		
5,800.00	5,687.73	5,808.78	5,687.73	17.50	17.00	161.77	-384.62	-816.44	1,819.45	1,789.61	29.84	60.977		
5,900.00	5,786.63	5,907.69	5,786.63	17.73	17.03	161.98	-384.62	-816.44	1,833.47	1,803.38	30.09	60.925		
6,000.00	5,885.89	6,006.95	5,885.89	17.92	17.07	162.15	-384.62	-816.44	1,845.03	1,814.69	30.34	60.814		
6,100.00	5,985.43	6,106.49	5,985.43	18.09	17.10	162.28	-384.62	-816.44	1,854.12	1,823.55	30.57	60.646		
6,200.00	6,085.19	6,206.24	6,085.19	18.23	17.14	162.38	-384.62	-816.44	1,860.72	1,829.93	30.79	60.426		
6,300.00	6,185.09	6,306.15	6,185.09	18.33	17.18	162.43	-384.62	-816.44	1,864.84	1,833.84	31.00	60.160		
6,400.00	6,285.07	6,406.13	6,285.07	18.42	17.21	162.46	-384.62	-816.44	1,866.46	1,835.28	31.18	59.867		
6,500.00	6,385.07	6,506.13	6,385.07	18.44	17.25	-90.40	-384.62	-816.44	1,866.49	1,835.24	31.24	59.740		
6,600.00	6,485.07	6,606.13	6,485.07	18.48	17.29	-90.40	-384.62	-816.44	1,866.49	1,835.17	31.32	59.596		
6,700.00	6,585.07	6,706.13	6,585.07	18.52	17.32	-90.40	-384.62	-816.44	1,866.49	1,835.09	31.40	59.451		
6,800.00	6,685.07	6,806.13	6,685.07	18.56	17.36	-90.40	-384.62	-816.44	1,866.49	1,835.01	31.47	59.306		
6,900.00	6,785.07	6,906.13	6,785.07	18.60	17.40	-90.40	-384.62	-816.44	1,866.49	1,834.94	31.55	59.160		
7,000.00	6,885.07	7,006.13	6,885.07	18.64	17.44	-90.40	-384.62	-816.44	1,866.49	1,834.86	31.63	59.014		
7,100.00	6,985.07	7,106.13	6,985.07	18.68	17.48	-90.40	-384.62	-816.44	1,866.49	1,834.78	31.71	58.867		
7,200.00	7,085.07	7,206.13	7,085.07	18.72	17.52	-90.40	-384.62	-816.44	1,866.49	1,834.70	31.79	58.720		
7,300.00	7,185.07	7,306.13	7,185.07	18.76	17.56	-90.40	-384.62	-816.44	1,866.49	1,834.62	31.87	58.573		
7,400.00	7,285.07	7,406.13	7,285.07	18.80	17.60	-90.40	-384.62	-816.44	1,866.49	1,834.54	31.95	58.425		
7,500.00	7,385.07	7,506.13	7,385.07	18.85	17.64	-90.40	-384.62	-816.44	1,866.49	1,834.46	32.03	58.276		
7,600.00	7,485.07	7,606.13	7,485.07	18.89	17.68	-90.40	-384.62	-816.44	1,866.49	1,834.38	32.11	58.127		
7,700.00	7,585.07	7,706.13	7,585.07	18.93	17.72	-90.40	-384.62	-816.44	1,866.49	1,834.29	32.19	57.978		
7,800.00	7,685.07	7,806.13	7,685.07	18.97	17.76	-90.40	-384.62	-816.44	1,866.49	1,834.21	32.28	57.829		
7,900.00	7,785.07	7,906.13	7,785.07	19.01	17.80	-90.40	-384.62	-816.44	1,866.49	1,834.13	32.36	57.679		
8,000.00	7,885.07	8,006.13	7,885.07	19.06	17.84	-90.40	-384.62	-816.44	1,866.49	1,834.04	32.44	57.529		
8,100.00	7,985.07	8,106.13	7,985.07	19.10	17.89	-90.40	-384.62	-816.44	1,866.49	1,833.96	32.53	57.378		
8,200.00	8,085.07	8,206.13	8,085.07	19.14	17.93	-90.40	-384.62	-816.44	1,866.49	1,833.87	32.62	57.227		
8,300.00	8,185.07	8,306.13	8,185.07	19.19	17.97	-90.40	-384.62	-816.44	1,866.49	1,833.78	32.70	57.077		
8,400.00	8,285.07	8,406.13	8,285.07	19.23	18.01	-90.40	-384.62	-816.44	1,866.49	1,833.70	32.79	56.925		
8,500.00	8,385.07	8,506.13	8,385.07	19.27	18.06	-90.40	-384.62	-816.44	1,866.49	1,833.61	32.88	56.774		
8,600.00	8,485.07	8,606.13	8,485.07	19.32	18.10	-90.40	-384.62	-816.44	1,866.49	1,833.52	32.96	56.623		
8,700.00	8,585.07	8,706.13	8,585.07	19.36	18.14	-90.40	-384.62	-816.44	1,866.49	1,833.43	33.05	56.471		
8,800.00	8,685.07	8,806.13	8,685.07	19.41	18.19	-90.40	-384.62	-816.44	1,866.49	1,833.34	33.14	56.319		
8,900.00	8,785.07	8,906.13	8,785.07	19.45	18.23	-90.40	-384.62	-816.44	1,866.49	1,833.25	33.23	56.167		
9,000.00	8,885.07	9,006.13	8,885.07	19.50	18.27	-90.40	-384.62	-816.44	1,866.49	1,833.16	33.32	56.015		
9,100.00	8,985.07	9,106.13	8,985.07	19.54	18.32	-90.40	-384.62	-816.44	1,866.49	1,833.07	33.41	55.863		
9,200.00	9,085.07	9,206.13	9,085.07	19.59	18.36	-90.40	-384.62	-816.44	1,866.49	1,832.98	33.50	55.710		
9,300.00	9,185.07	9,306.13	9,185.07	19.63	18.41	-90.40	-384.62	-816.44	1,866.49	1,832.89	33.60	55.558		
9,400.00	9,285.07	9,406.13	9,285.07	19.68	18.45	-90.40	-384.62	-816.44	1,866.49	1,832.80	33.69	55.406		
9,500.00	9,385.07	9,506.13	9,385.07	19.73	18.50	-90.40	-384.62	-816.44	1,866.49	1,832.71	33.78	55.253		
9,600.00	9,485.07	9,606.13	9,485.07	19.77	18.55	-90.40	-384.62	-816.44	1,866.49	1,832.61	33.87	55.101		
9,700.00	9,585.07	9,706.13	9,585.07	19.82	18.59	-90.40	-384.62	-816.44	1,866.49	1,832.52	33.97	54.948		
9,800.00	9,685.07	9,806.13	9,685.07	19.87	18.64	-90.40	-384.62	-816.44	1,866.49	1,832.42	34.06	54.796		
9,900.00	9,785.07	9,906.13	9,785.07	19.91	18.69	-90.40	-384.62	-816.44	1,866.49	1,832.33	34.16	54.643		
10,000.00	9,885.07	10,006.13	9,885.07	19.96	18.73	-90.40	-384.62	-816.44	1,866.49	1,832.23	34.25	54.491		
10,100.00	9,985.07	10,106.13	9,985.07	20.01	18.78	-90.40	-384.62	-816.44	1,866.49	1,832.14	34.35	54.338		
10,200.00	10,085.07	10,206.13	10,085.07	20.06	18.83	-90.40	-384.62	-816.44	1,866.49	1,832.04	34.45	54.186		
10,300.00	10,185.07	10,306.13	10,185.07	20.10	18.87	-90.40	-384.62	-816.44	1,866.49	1,831.94	34.54	54.034		

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

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Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 213H - OH - Plan #2

Survey Program:		0-MWD+HRGM+SAG+FDIR (rev.5)				Rule Assigned:				Offset Well Error:		0.50 usft		
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,400.00	10,285.07	10,406.13	10,285.07	20.15	18.92	-90.40	-384.62	-816.44	1,866.49	1,831.85	34.64	53.881		
10,500.00	10,385.07	10,506.13	10,385.07	20.20	18.97	-90.40	-384.62	-816.44	1,866.49	1,831.75	34.74	53.729		
10,600.00	10,485.07	10,606.13	10,485.07	20.25	19.02	-90.40	-384.62	-816.44	1,866.49	1,831.65	34.84	53.577		
10,700.00	10,585.07	10,706.13	10,585.07	20.30	19.07	-90.40	-384.62	-816.44	1,866.49	1,831.55	34.94	53.425		
10,800.00	10,685.07	10,806.13	10,685.07	20.35	19.12	-90.40	-384.62	-816.44	1,866.49	1,831.45	35.04	53.274		
10,900.00	10,785.07	10,906.13	10,785.07	20.40	19.17	-90.40	-384.62	-816.44	1,866.49	1,831.35	35.14	53.122		
11,000.00	10,885.07	11,006.13	10,885.07	20.45	19.21	-90.40	-384.62	-816.44	1,866.49	1,831.25	35.24	52.970		
11,100.00	10,985.07	11,106.13	10,985.07	20.50	19.26	-90.40	-384.62	-816.44	1,866.49	1,831.15	35.34	52.819		
11,200.00	11,084.72	11,205.77	11,084.72	20.59	19.31	86.01	-384.62	-816.44	1,865.99	1,830.57	35.42	52.685		
11,300.00	11,181.66	11,302.72	11,181.66	20.75	19.36	86.87	-384.62	-816.44	1,864.45	1,828.89	35.55	52.439		
11,400.00	11,272.97	11,394.02	11,272.97	20.95	19.41	88.20	-384.62	-816.44	1,862.56	1,826.80	35.76	52.089		
11,500.00	11,355.85	11,476.91	11,355.85	21.20	19.45	89.73	-384.62	-816.44	1,861.39	1,825.36	36.03	51.667		
11,517.56	11,369.35	11,490.40	11,369.35	21.25	19.46	90.00	-384.62	-816.44	1,861.35	1,825.26	36.09	51.578		
11,600.00	11,427.81	11,548.86	11,427.81	21.52	19.49	91.17	-384.62	-816.44	1,862.26	1,825.89	36.36	51.216		
11,700.00	11,486.64	11,607.70	11,486.64	21.92	19.52	92.20	-384.62	-816.44	1,866.51	1,829.76	36.75	50.787		
11,800.00	11,530.57	11,651.63	11,530.57	22.42	19.54	92.53	-384.62	-816.44	1,875.32	1,838.13	37.18	50.435		
11,900.00	11,558.25	11,679.31	11,558.25	23.01	19.55	91.92	-384.62	-816.44	1,889.41	1,851.78	37.63	50.209		
12,000.00	11,568.85	11,689.91	11,568.85	23.68	19.56	90.25	-384.62	-816.44	1,908.96	1,870.90	38.07	50.147		
12,100.00	11,569.43	11,690.49	11,569.43	24.45	19.56	90.09	-384.62	-816.44	1,935.04	1,896.54	38.50	50.259		
12,200.00	11,569.96	11,691.01	11,569.96	25.29	19.56	90.12	-384.62	-816.44	1,969.12	1,930.21	38.92	50.599		
12,300.00	11,570.48	11,691.54	11,570.48	26.19	19.56	90.14	-384.62	-816.44	2,009.92	1,970.65	39.27	51.180		
12,400.00	11,571.01	13,289.34	12,457.00	27.12	27.57	116.02	-1,343.82	-807.81	2,019.52	1,967.72	51.80	38.986		
12,500.00	11,571.53	13,389.34	12,457.52	28.09	28.62	116.02	-1,443.81	-806.91	2,019.53	1,966.00	53.53	37.729		
12,600.00	11,572.06	13,489.34	12,458.05	29.09	29.69	116.02	-1,543.81	-806.01	2,019.53	1,964.22	55.31	36.512		
12,700.00	11,572.58	13,589.34	12,458.58	30.12	30.78	116.02	-1,643.80	-805.11	2,019.53	1,962.38	57.15	35.338		
12,800.00	11,573.11	13,689.34	12,459.10	31.17	31.89	116.02	-1,743.80	-804.21	2,019.53	1,960.50	59.03	34.209		
12,900.00	11,573.63	13,789.34	12,459.63	32.24	33.02	116.02	-1,843.79	-803.32	2,019.54	1,958.57	60.96	33.126		
13,000.00	11,574.16	13,889.34	12,460.16	33.33	34.17	116.02	-1,943.79	-802.42	2,019.54	1,956.60	62.93	32.090		
13,100.00	11,574.68	13,989.34	12,460.68	34.44	35.34	116.02	-2,043.78	-801.52	2,019.54	1,954.60	64.94	31.099		
13,200.00	11,575.21	14,089.34	12,461.21	35.57	36.52	116.02	-2,143.78	-800.62	2,019.54	1,952.57	66.98	30.153		
13,300.00	11,575.73	14,189.34	12,461.73	36.71	37.71	116.02	-2,243.77	-799.72	2,019.55	1,950.50	69.05	29.249		
13,400.00	11,576.25	14,289.34	12,462.26	37.87	38.91	116.02	-2,343.77	-798.82	2,019.55	1,948.41	71.14	28.388		
13,500.00	11,576.78	14,389.34	12,462.79	39.04	40.12	116.02	-2,443.76	-797.92	2,019.55	1,946.29	73.26	27.566		
13,600.00	11,577.30	14,489.34	12,463.31	40.22	41.34	116.02	-2,543.75	-797.02	2,019.55	1,944.15	75.40	26.783		
13,700.00	11,577.83	14,589.34	12,463.84	41.41	42.57	116.02	-2,643.75	-796.12	2,019.55	1,941.99	77.57	26.036		
13,800.00	11,578.35	14,689.34	12,464.37	42.61	43.81	116.02	-2,743.74	-795.22	2,019.56	1,939.80	79.75	25.323		
13,900.00	11,578.88	14,789.34	12,464.89	43.82	45.06	116.02	-2,843.74	-794.32	2,019.56	1,937.61	81.95	24.643		
14,000.00	11,579.40	14,889.34	12,465.42	45.04	46.31	116.02	-2,943.73	-793.42	2,019.56	1,935.39	84.17	23.993		
14,100.00	11,579.93	14,989.34	12,465.94	46.27	47.57	116.02	-3,043.73	-792.52	2,019.56	1,933.16	86.40	23.373		
14,200.00	11,580.45	15,089.34	12,466.47	47.51	48.83	116.02	-3,143.72	-791.62	2,019.57	1,930.92	88.65	22.781		
14,300.00	11,580.98	15,189.34	12,467.00	48.75	50.10	116.02	-3,243.72	-790.72	2,019.57	1,928.66	90.91	22.215		
14,400.00	11,581.50	15,289.34	12,467.52	49.99	51.38	116.02	-3,343.71	-789.82	2,019.57	1,926.39	93.18	21.673		
14,500.00	11,582.03	15,389.34	12,468.05	51.25	52.66	116.02	-3,443.71	-788.92	2,019.57	1,924.11	95.47	21.155		
14,600.00	11,582.55	15,489.34	12,468.57	52.51	53.94	116.02	-3,543.70	-788.02	2,019.58	1,921.82	97.76	20.659		
14,700.00	11,583.08	15,589.34	12,469.10	53.77	55.23	116.02	-3,643.69	-787.13	2,019.58	1,919.52	100.06	20.183		
14,800.00	11,583.60	15,689.34	12,469.63	55.04	56.52	116.02	-3,743.69	-786.23	2,019.58	1,917.21	102.37	19.728		
14,900.00	11,584.13	15,789.34	12,470.15	56.31	57.81	116.02	-3,843.68	-785.33	2,019.58	1,914.89	104.69	19.291		
15,000.00	11,584.65	15,889.34	12,470.68	57.59	59.11	116.02	-3,943.68	-784.43	2,019.59	1,912.57	107.02	18.871		
15,100.00	11,585.18	15,989.34	12,471.21	58.87	60.41	116.02	-4,043.67	-783.53	2,019.59	1,910.23	109.36	18.468		
15,200.00	11,585.70	16,089.34	12,471.73	60.16	61.71	116.02	-4,143.67	-782.63	2,019.59	1,907.89	111.70	18.081		
15,300.00	11,586.23	16,189.34	12,472.26	61.45	63.02	116.02	-4,243.66	-781.73	2,019.59	1,905.55	114.05	17.708		
15,400.00	11,586.75	16,289.34	12,472.78	62.74	64.33	116.02	-4,343.66	-780.83	2,019.60	1,903.20	116.40	17.350		

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 213H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:							Offset Well Error:	0.50 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance			Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Major Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)			
15,500.00	11,587.28	16,389.34	12,473.31	64.03	65.64	116.02	-4,443.65	-779.93	2,019.60	1,900.84	118.76	17.005		
15,600.00	11,587.80	16,489.34	12,473.84	65.33	66.96	116.02	-4,543.65	-779.03	2,019.60	1,898.47	121.13	16.673		
15,700.00	11,588.33	16,589.34	12,474.36	66.63	68.27	116.02	-4,643.64	-778.13	2,019.60	1,896.11	123.50	16.353		
15,800.00	11,588.85	16,689.34	12,474.89	67.93	69.59	116.02	-4,743.64	-777.23	2,019.61	1,893.73	125.87	16.045		
15,900.00	11,589.37	16,789.34	12,475.42	69.24	70.91	116.02	-4,843.63	-776.33	2,019.61	1,891.36	128.25	15.747		
16,000.00	11,589.90	16,889.34	12,475.94	70.55	72.23	116.02	-4,943.62	-775.43	2,019.61	1,888.97	130.64	15.460		
16,100.00	11,590.42	16,989.34	12,476.47	71.86	73.55	116.02	-5,043.62	-774.53	2,019.61	1,886.59	133.03	15.182		
16,200.00	11,590.95	17,089.34	12,476.99	73.17	74.88	116.02	-5,143.61	-773.63	2,019.62	1,884.20	135.42	14.914		
16,300.00	11,591.47	17,189.34	12,477.52	74.48	76.20	116.02	-5,243.61	-772.73	2,019.62	1,881.80	137.81	14.655		
16,400.00	11,592.00	17,289.34	12,478.05	75.80	77.53	116.02	-5,343.60	-771.83	2,019.62	1,879.41	140.21	14.404		
16,500.00	11,592.52	17,389.34	12,478.57	77.12	78.86	116.02	-5,443.60	-770.94	2,019.62	1,877.01	142.62	14.161		
16,600.00	11,593.05	17,489.34	12,479.10	78.44	80.19	116.02	-5,543.59	-770.04	2,019.63	1,874.60	145.02	13.926		
16,700.00	11,593.57	17,589.34	12,479.62	79.76	81.52	116.02	-5,643.59	-769.14	2,019.63	1,872.20	147.43	13.699		
16,800.00	11,594.10	17,689.34	12,480.15	81.08	82.86	116.02	-5,743.58	-768.24	2,019.63	1,869.79	149.84	13.478		
16,900.00	11,594.62	17,789.34	12,480.68	82.41	84.19	116.02	-5,843.58	-767.34	2,019.63	1,867.38	152.26	13.265		
17,000.00	11,595.15	17,889.34	12,481.20	83.73	85.52	116.02	-5,943.57	-766.44	2,019.64	1,864.96	154.67	13.057		
17,100.00	11,595.67	17,989.34	12,481.73	85.06	86.86	116.02	-6,043.56	-765.54	2,019.64	1,862.55	157.09	12.856		
17,200.00	11,596.20	18,089.34	12,482.26	86.39	88.20	116.02	-6,143.56	-764.64	2,019.64	1,860.13	159.51	12.661		
17,300.00	11,596.72	18,189.34	12,482.78	87.72	89.54	116.02	-6,243.55	-763.74	2,019.64	1,857.71	161.94	12.472		
17,400.00	11,597.25	18,289.34	12,483.31	89.05	90.88	116.02	-6,343.55	-762.84	2,019.65	1,855.28	164.36	12.288		
17,500.00	11,597.77	18,389.34	12,483.83	90.38	92.22	116.02	-6,443.54	-761.94	2,019.65	1,852.86	166.79	12.109		
17,600.00	11,598.30	18,489.34	12,484.36	91.71	93.56	116.02	-6,543.54	-761.04	2,019.65	1,850.43	169.22	11.935		
17,700.00	11,598.82	18,589.34	12,484.89	93.05	94.90	116.02	-6,643.53	-760.14	2,019.65	1,848.00	171.65	11.766		
17,800.00	11,599.35	18,689.34	12,485.41	94.38	96.24	116.02	-6,743.53	-759.24	2,019.66	1,845.57	174.08	11.602		
17,900.00	11,599.87	18,789.34	12,485.94	95.72	97.58	116.02	-6,843.52	-758.34	2,019.66	1,843.14	176.52	11.442		
18,000.00	11,600.40	18,889.34	12,486.46	97.05	98.93	116.02	-6,943.52	-757.44	2,019.66	1,840.71	178.96	11.286		
18,100.00	11,600.92	18,989.34	12,486.99	98.39	100.27	116.02	-7,043.51	-756.54	2,019.66	1,838.27	181.39	11.134		
18,200.00	11,601.44	19,089.34	12,487.52	99.73	101.62	116.02	-7,143.50	-755.65	2,019.67	1,835.83	183.83	10.986		
18,300.00	11,601.97	19,189.34	12,488.04	101.07	102.96	116.02	-7,243.50	-754.75	2,019.67	1,833.39	186.27	10.842		
18,400.00	11,602.49	19,289.34	12,488.57	102.41	104.31	116.02	-7,343.49	-753.85	2,019.67	1,830.95	188.72	10.702		
18,500.00	11,603.02	19,389.34	12,489.10	103.75	105.66	116.02	-7,443.49	-752.95	2,019.67	1,828.51	191.16	10.565		
18,600.00	11,603.54	19,489.34	12,489.62	105.09	107.00	116.02	-7,543.48	-752.05	2,019.68	1,826.07	193.61	10.432		
18,700.00	11,604.07	19,589.34	12,490.15	106.44	108.35	116.02	-7,643.48	-751.15	2,019.68	1,823.63	196.05	10.302		
18,800.00	11,604.59	19,689.34	12,490.67	107.78	109.70	116.02	-7,743.47	-750.25	2,019.68	1,821.18	198.50	10.175		
18,900.00	11,605.12	19,789.34	12,491.20	109.12	111.05	116.02	-7,843.47	-749.35	2,019.68	1,818.73	200.95	10.051		
19,000.00	11,605.64	19,889.34	12,491.73	110.47	112.40	116.02	-7,943.46	-748.45	2,019.69	1,816.29	203.40	9.930		
19,100.00	11,606.17	19,989.34	12,492.25	111.81	113.75	116.02	-8,043.46	-747.55	2,019.69	1,813.84	205.85	9.811		
19,200.00	11,606.69	20,089.34	12,492.78	113.16	115.10	116.02	-8,143.45	-746.65	2,019.69	1,811.39	208.30	9.696		
19,300.00	11,607.22	20,189.34	12,493.31	114.50	116.45	116.02	-8,243.45	-745.75	2,019.69	1,808.94	210.75	9.583		
19,400.00	11,607.74	20,289.34	12,493.83	115.85	117.80	116.02	-8,343.44	-744.85	2,019.70	1,806.49	213.21	9.473		
19,500.00	11,608.27	20,389.34	12,494.36	117.20	119.15	116.02	-8,443.43	-743.95	2,019.70	1,804.04	215.66	9.365		
19,600.00	11,608.79	20,489.34	12,494.88	118.54	120.50	116.02	-8,543.43	-743.05	2,019.70	1,801.58	218.12	9.260		
19,700.00	11,609.32	20,589.34	12,495.41	119.89	121.86	116.02	-8,643.42	-742.15	2,019.70	1,799.13	220.58	9.157		
19,800.00	11,609.84	20,689.34	12,495.94	121.24	123.21	116.02	-8,743.42	-741.25	2,019.71	1,796.67	223.03	9.056		
19,900.00	11,610.37	20,789.34	12,496.46	122.59	124.56	116.02	-8,843.41	-740.35	2,019.71	1,794.22	225.49	8.957		
20,000.00	11,610.89	20,889.34	12,496.99	123.94	125.92	116.02	-8,943.41	-739.46	2,019.71	1,791.76	227.95	8.860		
20,100.00	11,611.42	20,989.34	12,497.51	125.29	127.27	116.02	-9,043.40	-738.56	2,019.71	1,789.30	230.41	8.766		
20,200.00	11,611.94	21,089.34	12,498.04	126.64	128.62	116.02	-9,143.40	-737.66	2,019.72	1,786.85	232.87	8.673		
20,300.00	11,612.47	21,189.34	12,498.57	127.99	129.98	116.02	-9,243.39	-736.76	2,019.72	1,784.39	235.33	8.582		
20,400.00	11,612.99	21,289.34	12,499.09	129.34	131.33	116.02	-9,343.39	-735.86	2,019.72	1,781.93	237.79	8.494		
20,500.00	11,613.52	21,389.34	12,499.62	130.69	132.69	116.02	-9,443.38	-734.96	2,019.72	1,779.47	240.26	8.407		
20,600.00	11,614.04	21,489.34	12,500.15	132.04	134.04	116.02	-9,543.37	-734.06	2,019.73	1,777.01	242.72	8.321		

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 213H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)								Rule Assigned:		Offset Well Error:		0.50 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
20,700.00	11,614.56	21,589.34	12,500.67	133.40	135.40	116.02	-9,643.37	-733.16	2,019.73	1,774.55	245.18	8.238	
20,800.00	11,615.09	21,689.34	12,501.20	134.75	136.76	116.02	-9,743.36	-732.26	2,019.73	1,772.08	247.65	8.156	
20,900.00	11,615.61	21,789.34	12,501.72	136.10	138.11	116.02	-9,843.36	-731.36	2,019.73	1,769.62	250.11	8.075	
21,000.00	11,616.14	21,889.34	12,502.25	137.45	139.47	116.02	-9,943.35	-730.46	2,019.74	1,767.16	252.58	7.996	
21,100.00	11,616.66	21,989.34	12,502.78	138.81	140.83	116.02	-10,043.35	-729.56	2,019.74	1,764.69	255.04	7.919	
21,200.00	11,617.19	22,089.34	12,503.30	140.16	142.18	116.02	-10,143.34	-728.66	2,019.74	1,762.23	257.51	7.843	
21,300.00	11,617.71	22,189.34	12,503.83	141.52	143.54	116.02	-10,243.34	-727.76	2,019.74	1,759.76	259.98	7.769	
21,400.00	11,618.24	22,289.34	12,504.36	142.87	144.90	116.02	-10,343.33	-726.86	2,019.75	1,757.30	262.45	7.696	
21,500.00	11,618.76	22,389.34	12,504.88	144.23	146.25	116.02	-10,443.33	-725.96	2,019.75	1,754.83	264.91	7.624	
21,600.00	11,619.29	22,489.34	12,505.41	145.58	147.61	116.02	-10,543.32	-725.06	2,019.75	1,752.37	267.38	7.554	
21,700.00	11,619.81	22,589.34	12,505.93	146.94	148.97	116.02	-10,643.31	-724.16	2,019.75	1,749.90	269.85	7.485	
21,800.00	11,620.34	22,689.34	12,506.46	148.29	150.33	116.02	-10,743.31	-723.27	2,019.76	1,747.43	272.32	7.417	
21,900.00	11,620.86	22,789.34	12,506.99	149.65	151.69	116.02	-10,843.30	-722.37	2,019.76	1,744.97	274.79	7.350	
21,903.04	11,620.88	22,792.38	12,507.00	149.69	151.73	116.02	-10,846.35	-722.34	2,019.76	1,744.89	274.87	7.348	
21,945.36	11,621.10	22,830.04	12,507.20	150.26	152.24	116.02	-10,884.00	-722.00	2,019.76	1,743.92	275.84	7.322	SF

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 214H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)

Offset Site Error: 0.00 usft

Offset Well Error: 0.50 usft

Reference		Offset		Semi Major Axis		Highside Toolface (")	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	0.00	0.00	0.50	0.50	45.00	25.00	25.00	35.36				
100.00	100.00	100.00	100.00	0.98	0.98	45.00	25.00	25.00	35.36	33.39	1.96	18.018	
200.00	200.00	200.00	200.00	1.56	1.56	45.00	25.00	25.00	35.36	32.23	3.12	11.324	
300.00	300.00	300.00	300.00	1.98	1.98	45.00	25.00	25.00	35.36	31.39	3.96	8.923	CC
400.00	399.99	399.61	399.60	2.41	2.41	-85.19	24.56	26.22	35.79	31.13	4.66	7.681	ES
500.00	499.91	499.20	499.11	2.77	2.77	-85.73	23.22	29.88	37.11	31.85	5.26	7.056	
600.00	599.69	599.17	598.94	3.10	3.04	-88.29	21.43	34.80	38.81	33.02	5.79	6.701	
700.00	699.27	699.06	698.70	3.41	3.29	-94.31	19.65	39.71	40.70	34.41	6.29	6.474	
800.00	798.57	798.81	798.31	3.70	3.52	-103.11	17.86	44.61	43.52	36.75	6.77	6.425	
900.00	897.62	898.39	897.76	3.83	3.75	-112.95	16.08	49.51	48.00	40.84	7.16	6.704	
1,000.00	996.65	997.97	997.20	4.06	3.98	-121.08	14.30	54.41	53.73	46.07	7.65	7.020	
1,100.00	1,095.67	1,097.55	1,096.64	4.28	4.19	-127.55	12.51	59.31	60.32	52.19	8.13	7.418	
1,200.00	1,194.70	1,197.12	1,196.07	4.51	4.40	-132.70	10.73	64.20	67.53	58.92	8.61	7.845	
1,300.00	1,293.62	1,296.64	1,295.46	4.72	4.61	-130.36	8.95	69.10	75.05	65.99	9.06	8.286	
1,400.00	1,392.26	1,395.99	1,394.67	4.94	4.81	-130.02	7.17	73.98	83.03	73.51	9.52	8.721	
1,500.00	1,490.54	1,495.10	1,493.65	5.17	5.02	-131.46	5.40	78.86	91.99	82.00	9.99	9.208	
1,600.00	1,588.41	1,596.41	1,594.75	5.40	5.24	-134.14	2.62	84.52	101.33	90.85	10.48	9.670	
1,700.00	1,685.98	1,698.22	1,696.18	5.58	5.46	-139.94	-2.36	91.78	109.67	98.73	10.93	10.031	
1,800.00	1,783.55	1,800.48	1,797.79	5.80	5.69	-145.35	-9.59	100.64	116.44	105.02	11.42	10.200	
1,900.00	1,881.12	1,901.60	1,897.99	6.04	5.83	-150.22	-18.71	110.80	121.70	109.90	11.79	10.321	
2,000.00	1,978.69	2,000.98	1,996.40	6.31	6.03	-154.61	-28.01	121.02	127.33	115.10	12.23	10.409	
2,100.00	2,076.26	2,100.36	2,094.82	6.58	6.22	-158.62	-37.32	131.25	133.65	120.98	12.67	10.551	
2,200.00	2,173.83	2,199.74	2,193.23	6.87	6.42	-162.25	-46.62	141.48	140.57	127.47	13.09	10.735	
2,300.00	2,271.40	2,299.12	2,291.65	7.15	6.62	-165.53	-55.92	151.70	148.00	134.48	13.52	10.948	
2,400.00	2,368.97	2,398.50	2,390.06	7.44	6.81	-168.50	-65.23	161.93	155.86	141.92	13.94	11.181	
2,500.00	2,466.54	2,497.88	2,488.48	7.73	7.01	-171.17	-74.53	172.16	164.11	149.75	14.36	11.428	
2,600.00	2,564.11	2,597.26	2,586.89	8.02	7.21	-173.58	-83.84	182.38	172.67	157.89	14.78	11.684	
2,700.00	2,661.68	2,696.64	2,685.30	8.31	7.40	-175.76	-93.14	192.61	181.52	166.32	15.20	11.942	
2,800.00	2,759.25	2,796.03	2,783.72	8.60	7.60	-177.74	-102.44	202.84	190.60	174.98	15.62	12.202	
2,900.00	2,856.82	2,895.41	2,882.13	8.89	7.80	-179.54	-111.75	213.06	199.88	183.84	16.04	12.460	
3,000.00	2,954.39	2,994.79	2,980.55	9.18	8.00	178.82	-121.05	223.29	209.35	192.88	16.47	12.714	
3,100.00	3,051.96	3,094.17	3,078.96	9.48	8.19	177.33	-130.36	233.52	218.97	202.08	16.89	12.964	
3,200.00	3,149.53	3,193.55	3,177.37	9.77	8.39	175.96	-139.66	243.74	228.72	211.41	17.32	13.208	
3,300.00	3,247.10	3,292.93	3,275.79	10.07	8.59	174.71	-148.97	253.97	238.60	220.85	17.74	13.446	
3,400.00	3,344.67	3,392.31	3,374.20	10.37	8.79	173.55	-158.27	264.19	248.58	230.40	18.17	13.678	
3,500.00	3,442.24	3,491.69	3,472.62	10.67	8.98	172.48	-167.57	274.42	258.65	240.04	18.60	13.902	
3,600.00	3,539.81	3,591.07	3,571.03	10.96	9.18	171.50	-176.88	284.65	268.80	249.76	19.04	14.120	
3,700.00	3,637.39	3,690.45	3,669.44	11.26	9.38	170.58	-186.18	294.87	279.03	259.56	19.47	14.331	
3,800.00	3,734.96	3,789.83	3,767.86	11.56	9.58	169.73	-195.49	305.10	289.32	269.41	19.91	14.535	
3,900.00	3,832.53	3,889.21	3,866.27	11.86	9.78	168.94	-204.79	315.33	299.67	279.33	20.34	14.732	
4,000.00	3,930.10	3,988.59	3,964.69	12.16	9.97	168.20	-214.10	325.55	310.07	289.30	20.78	14.923	
4,100.00	4,027.67	4,087.97	4,063.10	12.46	10.17	167.51	-223.40	335.78	320.53	299.31	21.22	15.108	
4,200.00	4,125.24	4,187.35	4,161.51	12.76	10.37	166.87	-232.70	346.01	331.02	309.37	21.66	15.286	
4,300.00	4,222.81	4,286.73	4,259.93	13.06	10.57	166.26	-242.01	356.23	341.55	319.46	22.10	15.458	
4,400.00	4,320.38	4,386.11	4,358.34	13.36	10.77	165.69	-251.31	366.46	352.12	329.59	22.54	15.625	
4,500.00	4,417.95	4,485.49	4,456.76	13.66	10.97	165.15	-260.62	376.69	362.73	339.75	22.98	15.786	
4,600.00	4,515.52	4,584.87	4,555.17	13.96	11.17	164.64	-269.92	386.91	373.36	349.94	23.42	15.941	
4,700.00	4,613.09	4,684.25	4,653.58	14.27	11.37	164.17	-279.22	397.14	384.02	360.15	23.86	16.092	
4,800.00	4,710.66	4,783.63	4,752.00	14.57	11.57	163.71	-288.53	407.37	394.70	370.39	24.31	16.238	
4,900.00	4,808.23	4,883.01	4,850.41	14.87	11.77	163.28	-297.83	417.59	405.41	380.66	24.75	16.379	
5,000.00	4,905.80	4,982.39	4,948.83	15.17	11.96	162.88	-307.14	427.82	416.14	390.94	25.20	16.515	
5,100.00	5,003.37	5,081.78	5,047.24	15.47	12.16	162.49	-316.44	438.04	426.89	401.24	25.64	16.647	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 214H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)												Offset Site Error:	0.00 usft
Rule Assigned:												Offset Well Error:	0.50 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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
5,200.00	5,100.94	5,181.16	5,145.65	15.78	12.36	162.12	-325.75	448.27	437.65	411.56	26.09	16.775	
5,300.00	5,198.51	5,280.54	5,244.07	16.08	12.56	161.77	-335.05	458.50	448.44	421.90	26.54	16.899	
5,400.00	5,296.08	5,379.92	5,342.48	16.38	12.77	161.44	-344.35	468.72	459.24	432.25	26.98	17.019	
5,500.00	5,393.65	5,476.22	5,437.87	16.69	12.93	161.14	-353.27	478.52	470.17	442.78	27.39	17.164	
5,600.00	5,491.24	5,567.27	5,528.28	16.97	13.11	161.04	-360.52	486.49	482.40	454.63	27.77	17.374	
5,700.00	5,589.24	5,658.16	5,618.76	17.25	13.28	161.09	-366.30	492.85	494.49	466.34	28.15	17.565	
5,800.00	5,687.73	5,748.93	5,709.30	17.50	13.45	161.21	-370.64	497.61	505.83	477.33	28.51	17.744	
5,900.00	5,786.63	5,839.59	5,799.86	17.73	13.60	161.41	-373.52	500.78	516.42	487.59	28.83	17.913	
6,000.00	5,885.89	5,930.12	5,890.36	17.92	13.72	161.68	-374.95	502.36	526.24	497.14	29.10	18.085	
6,100.00	5,985.43	6,025.19	5,985.43	18.09	13.76	162.01	-375.13	502.55	535.10	505.80	29.30	18.262	
6,200.00	6,085.19	6,124.95	6,085.19	18.23	13.79	162.27	-375.13	502.55	541.70	512.19	29.51	18.354	
6,300.00	6,185.09	6,224.86	6,185.09	18.33	13.83	162.42	-375.13	502.55	545.81	516.10	29.71	18.369	
6,400.00	6,285.07	6,324.84	6,285.07	18.42	13.87	162.48	-375.13	502.55	547.43	517.54	29.89	18.313	
6,500.00	6,385.07	6,424.84	6,385.07	18.44	13.91	-90.37	-375.13	502.55	547.46	517.50	29.96	18.273	
6,600.00	6,485.07	6,524.84	6,485.07	18.48	13.95	-90.37	-375.13	502.55	547.46	517.43	30.04	18.227	
6,700.00	6,585.07	6,624.84	6,585.07	18.52	13.99	-90.37	-375.13	502.55	547.46	517.35	30.11	18.180	
6,800.00	6,685.07	6,724.84	6,685.07	18.56	14.03	-90.37	-375.13	502.55	547.46	517.27	30.19	18.133	
6,900.00	6,785.07	6,824.84	6,785.07	18.60	14.07	-90.37	-375.13	502.55	547.46	517.19	30.27	18.086	
7,000.00	6,885.07	6,924.84	6,885.07	18.64	14.11	-90.37	-375.13	502.55	547.46	517.11	30.35	18.038	
7,100.00	6,985.07	7,024.84	6,985.07	18.68	14.15	-90.37	-375.13	502.55	547.46	517.03	30.43	17.991	
7,200.00	7,085.07	7,124.84	7,085.07	18.72	14.19	-90.37	-375.13	502.55	547.46	516.95	30.51	17.943	
7,300.00	7,185.07	7,224.84	7,185.07	18.76	14.23	-90.37	-375.13	502.55	547.46	516.87	30.59	17.896	
7,400.00	7,285.07	7,324.84	7,285.07	18.80	14.27	-90.37	-375.13	502.55	547.46	516.79	30.67	17.848	
7,500.00	7,385.07	7,424.84	7,385.07	18.85	14.31	-90.37	-375.13	502.55	547.46	516.70	30.76	17.800	
7,600.00	7,485.07	7,524.84	7,485.07	18.89	14.36	-90.37	-375.13	502.55	547.46	516.62	30.84	17.752	
7,700.00	7,585.07	7,624.84	7,585.07	18.93	14.40	-90.37	-375.13	502.55	547.46	516.54	30.92	17.703	
7,800.00	7,685.07	7,724.84	7,685.07	18.97	14.44	-90.37	-375.13	502.55	547.46	516.45	31.01	17.655	
7,900.00	7,785.07	7,824.84	7,785.07	19.01	14.49	-90.37	-375.13	502.55	547.46	516.37	31.09	17.607	
8,000.00	7,885.07	7,924.84	7,885.07	19.06	14.53	-90.37	-375.13	502.55	547.46	516.28	31.18	17.558	
8,100.00	7,985.07	8,024.84	7,985.07	19.10	14.58	-90.37	-375.13	502.55	547.46	516.20	31.27	17.510	
8,200.00	8,085.07	8,124.84	8,085.07	19.14	14.62	-90.37	-375.13	502.55	547.46	516.11	31.35	17.461	
8,300.00	8,185.07	8,224.84	8,185.07	19.19	14.67	-90.37	-375.13	502.55	547.46	516.02	31.44	17.412	
8,400.00	8,285.07	8,324.84	8,285.07	19.23	14.71	-90.37	-375.13	502.55	547.46	515.93	31.53	17.364	
8,500.00	8,385.07	8,424.84	8,385.07	19.27	14.76	-90.37	-375.13	502.55	547.46	515.84	31.62	17.315	
8,600.00	8,485.07	8,524.84	8,485.07	19.32	14.80	-90.37	-375.13	502.55	547.46	515.75	31.71	17.266	
8,700.00	8,585.07	8,624.84	8,585.07	19.36	14.85	-90.37	-375.13	502.55	547.46	515.66	31.80	17.217	
8,800.00	8,685.07	8,724.84	8,685.07	19.41	14.90	-90.37	-375.13	502.55	547.46	515.57	31.89	17.168	
8,900.00	8,785.07	8,824.84	8,785.07	19.45	14.94	-90.37	-375.13	502.55	547.46	515.48	31.98	17.119	
9,000.00	8,885.07	8,924.84	8,885.07	19.50	14.99	-90.37	-375.13	502.55	547.46	515.39	32.07	17.070	
9,100.00	8,985.07	9,024.84	8,985.07	19.54	15.04	-90.37	-375.13	502.55	547.46	515.30	32.16	17.021	
9,200.00	9,085.07	9,124.84	9,085.07	19.59	15.09	-90.37	-375.13	502.55	547.46	515.21	32.26	16.972	
9,300.00	9,185.07	9,224.84	9,185.07	19.63	15.13	-90.37	-375.13	502.55	547.46	515.11	32.35	16.923	
9,400.00	9,285.07	9,324.84	9,285.07	19.68	15.18	-90.37	-375.13	502.55	547.46	515.02	32.44	16.874	
9,500.00	9,385.07	9,424.84	9,385.07	19.73	15.23	-90.37	-375.13	502.55	547.46	514.92	32.54	16.825	
9,600.00	9,485.07	9,524.84	9,485.07	19.77	15.28	-90.37	-375.13	502.55	547.46	514.83	32.63	16.776	
9,700.00	9,585.07	9,624.84	9,585.07	19.82	15.33	-90.37	-375.13	502.55	547.46	514.73	32.73	16.727	
9,800.00	9,685.07	9,724.84	9,685.07	19.87	15.38	-90.37	-375.13	502.55	547.46	514.64	32.83	16.678	
9,900.00	9,785.07	9,824.84	9,785.07	19.91	15.43	-90.37	-375.13	502.55	547.46	514.54	32.92	16.629	
10,000.00	9,885.07	9,924.84	9,885.07	19.96	15.48	-90.37	-375.13	502.55	547.46	514.44	33.02	16.580	
10,100.00	9,985.07	10,024.84	9,985.07	20.01	15.53	-90.37	-375.13	502.55	547.46	514.34	33.12	16.531	
10,200.00	10,085.07	10,124.84	10,085.07	20.06	15.58	-90.37	-375.13	502.55	547.46	514.25	33.22	16.482	
10,300.00	10,185.07	10,224.84	10,185.07	20.10	15.63	-90.37	-375.13	502.55	547.46	514.15	33.31	16.433	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 214H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)							Rule Assigned:				Offset Well Error:		0.50 usft		
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
10,400.00	10,285.07	10,324.84	10,285.07	20.15	15.68	-90.37	-375.13	502.55	547.46	514.05	33.41	16.385			
10,500.00	10,385.07	10,424.84	10,385.07	20.20	15.73	-90.37	-375.13	502.55	547.46	513.95	33.51	16.336			
10,600.00	10,485.07	10,524.84	10,485.07	20.25	15.79	-90.37	-375.13	502.55	547.46	513.85	33.61	16.287			
10,700.00	10,585.07	10,624.84	10,585.07	20.30	15.84	-90.37	-375.13	502.55	547.46	513.75	33.71	16.238			
10,800.00	10,685.07	10,724.84	10,685.07	20.35	15.89	-90.37	-375.13	502.55	547.46	513.65	33.82	16.190			
10,900.00	10,785.07	10,824.84	10,785.07	20.40	15.94	-90.37	-375.13	502.55	547.46	513.54	33.92	16.141			
11,000.00	10,885.07	10,924.84	10,885.07	20.45	16.00	-90.37	-375.13	502.55	547.46	513.44	34.02	16.093			
11,100.00	10,985.07	11,024.84	10,985.07	20.50	16.05	-90.37	-375.13	502.55	547.46	513.34	34.12	16.044			
11,200.00	11,084.72	11,124.48	11,084.72	20.59	16.10	86.54	-375.13	502.55	547.00	512.81	34.18	16.003			
11,300.00	11,181.66	11,221.43	11,181.66	20.75	16.15	89.07	-375.13	502.55	546.06	511.82	34.24	15.948			
11,327.13	11,207.11	11,246.87	11,207.11	20.80	16.17	90.00	-375.13	502.55	545.98	511.71	34.26	15.935			
11,400.00	11,272.97	11,312.73	11,272.97	20.95	16.20	92.85	-375.13	502.55	546.86	512.56	34.30	15.941			
11,500.00	11,355.85	11,395.62	11,355.85	21.20	16.25	97.05	-375.13	502.55	552.83	518.46	34.37	16.083			
11,600.00	11,427.81	11,467.57	11,427.81	21.52	16.29	100.64	-375.13	502.55	567.84	533.40	34.44	16.488			
11,700.00	11,486.64	11,526.41	11,486.64	21.92	16.32	102.62	-375.13	502.55	595.10	560.60	34.50	17.252			
11,800.00	11,530.57	11,570.33	11,530.57	22.42	16.34	102.14	-375.13	502.55	636.13	601.60	34.53	18.424			
11,900.00	11,558.25	11,598.02	11,558.25	23.01	16.36	98.47	-375.13	502.55	690.31	655.78	34.52	19.995			
12,000.00	11,568.85	11,608.62	11,568.85	23.68	16.36	91.04	-375.13	502.55	755.17	720.69	34.48	21.902			
12,100.00	11,569.43	11,609.20	11,569.43	24.45	16.36	90.36	-375.13	502.55	828.39	793.96	34.43	24.060			
12,200.00	11,569.96	11,609.72	11,569.96	25.29	16.36	90.45	-375.13	502.55	908.75	874.36	34.39	26.422			
12,300.00	11,570.48	13,057.98	12,408.46	26.19	23.38	149.39	-1,232.27	510.34	973.62	920.99	52.63	18.499			
12,400.00	11,571.01	13,157.98	12,408.98	27.12	24.42	149.40	-1,332.26	511.25	973.61	920.26	53.35	18.250			
12,500.00	11,571.53	13,257.98	12,409.51	28.09	25.49	149.40	-1,432.26	512.16	973.61	919.51	54.10	17.995			
12,600.00	11,572.06	13,357.98	12,410.03	29.09	26.58	149.40	-1,532.25	513.06	973.61	918.71	54.90	17.735			
12,700.00	11,572.58	13,457.98	12,410.56	30.12	27.70	149.40	-1,632.25	513.97	973.60	917.88	55.72	17.472			
12,800.00	11,573.11	13,557.98	12,411.08	31.17	28.84	149.40	-1,732.24	514.88	973.60	917.02	56.58	17.207			
12,900.00	11,573.63	13,657.98	12,411.61	32.24	29.99	149.40	-1,832.24	515.79	973.60	916.12	57.47	16.940			
13,000.00	11,574.16	13,757.98	12,412.13	33.33	31.17	149.40	-1,932.23	516.70	973.59	915.20	58.39	16.673			
13,100.00	11,574.68	13,857.98	12,412.66	34.44	32.35	149.40	-2,032.23	517.61	973.59	914.24	59.34	16.406			
13,200.00	11,575.21	13,957.98	12,413.18	35.57	33.55	149.40	-2,132.22	518.52	973.59	913.26	60.32	16.140			
13,300.00	11,575.73	14,057.98	12,413.71	36.71	34.77	149.40	-2,232.21	519.43	973.58	912.26	61.33	15.876			
13,400.00	11,576.25	14,157.98	12,414.23	37.87	35.99	149.40	-2,332.21	520.33	973.58	911.22	62.35	15.614			
13,500.00	11,576.78	14,257.98	12,414.76	39.04	37.22	149.40	-2,432.20	521.24	973.57	910.17	63.41	15.355			
13,600.00	11,577.30	14,357.98	12,415.28	40.22	38.46	149.40	-2,532.20	522.15	973.57	909.09	64.48	15.099			
13,700.00	11,577.83	14,457.98	12,415.81	41.41	39.71	149.40	-2,632.19	523.06	973.57	907.99	65.58	14.846			
13,800.00	11,578.35	14,557.98	12,416.33	42.61	40.97	149.40	-2,732.19	523.97	973.56	906.87	66.69	14.598			
13,900.00	11,578.88	14,657.98	12,416.86	43.82	42.23	149.40	-2,832.18	524.88	973.56	905.73	67.83	14.353			
14,000.00	11,579.40	14,757.98	12,417.38	45.04	43.50	149.40	-2,932.18	525.79	973.56	904.58	68.98	14.113			
14,100.00	11,579.93	14,857.98	12,417.91	46.27	44.78	149.40	-3,032.17	526.69	973.55	903.40	70.15	13.878			
14,200.00	11,580.45	14,957.98	12,418.43	47.51	46.06	149.40	-3,132.16	527.60	973.55	902.21	71.34	13.646			
14,300.00	11,580.98	15,057.98	12,418.96	48.75	47.35	149.40	-3,232.16	528.51	973.55	901.00	72.54	13.420			
14,400.00	11,581.50	15,157.98	12,419.48	49.99	48.63	149.40	-3,332.15	529.42	973.54	899.78	73.76	13.198			
14,500.00	11,582.03	15,257.98	12,420.01	51.25	49.93	149.40	-3,432.15	530.33	973.54	898.54	75.00	12.981			
14,600.00	11,582.55	15,357.98	12,420.53	52.51	51.23	149.40	-3,532.14	531.24	973.54	897.29	76.24	12.769			
14,700.00	11,583.08	15,457.98	12,421.06	53.77	52.53	149.40	-3,632.14	532.15	973.53	896.03	77.50	12.561			
14,800.00	11,583.60	15,557.98	12,421.58	55.04	53.83	149.40	-3,732.13	533.06	973.53	894.75	78.77	12.358			
14,900.00	11,584.13	15,657.98	12,422.11	56.31	55.14	149.40	-3,832.13	533.96	973.53	893.47	80.06	12.160			
15,000.00	11,584.65	15,757.98	12,422.63	57.59	56.45	149.40	-3,932.12	534.87	973.52	892.17	81.35	11.967			
15,100.00	11,585.18	15,857.98	12,423.16	58.87	57.76	149.40	-4,032.12	535.78	973.52	890.86	82.66	11.778			
15,200.00	11,585.70	15,957.98	12,423.68	60.16	59.08	149.41	-4,132.11	536.69	973.51	889.54	83.97	11.593			
15,300.00	11,586.23	16,057.98	12,424.21	61.45	60.40	149.41	-4,232.10	537.60	973.51	888.21	85.30	11.413			
15,400.00	11,586.75	16,157.98	12,424.73	62.74	61.72	149.41	-4,332.10	538.51	973.51	886.87	86.63	11.237			

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 214H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:					Offset Well Error:		0.50 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
15,500.00	11,587.28	16,257.98	12,425.26	64.03	63.04	149.41	-4,432.09	539.42	973.50	885.53	87.98	11.065	
15,600.00	11,587.80	16,357.98	12,425.78	65.33	64.36	149.41	-4,532.09	540.32	973.50	884.17	89.33	10.898	
15,700.00	11,588.33	16,457.98	12,426.31	66.63	65.69	149.41	-4,632.08	541.23	973.50	882.81	90.69	10.735	
15,800.00	11,588.85	16,557.98	12,426.83	67.93	67.02	149.41	-4,732.08	542.14	973.49	881.44	92.06	10.575	
15,900.00	11,589.37	16,657.98	12,427.36	69.24	68.35	149.41	-4,832.07	543.05	973.49	880.06	93.43	10.419	
16,000.00	11,589.90	16,757.98	12,427.88	70.55	69.68	149.41	-4,932.07	543.96	973.49	878.67	94.81	10.268	
16,100.00	11,590.42	16,857.98	12,428.41	71.86	71.01	149.41	-5,032.06	544.87	973.48	877.28	96.20	10.119	
16,200.00	11,590.95	16,957.98	12,428.93	73.17	72.34	149.41	-5,132.05	545.78	973.48	875.88	97.60	9.975	
16,300.00	11,591.47	17,057.98	12,429.46	74.48	73.68	149.41	-5,232.05	546.69	973.48	874.48	99.00	9.833	
16,400.00	11,592.00	17,157.98	12,429.98	75.80	75.01	149.41	-5,332.04	547.59	973.47	873.07	100.40	9.696	
16,500.00	11,592.52	17,257.98	12,430.51	77.12	76.35	149.41	-5,432.04	548.50	973.47	871.65	101.82	9.561	
16,600.00	11,593.05	17,357.98	12,431.03	78.44	77.69	149.41	-5,532.03	549.41	973.47	870.23	103.23	9.430	
16,700.00	11,593.57	17,457.98	12,431.56	79.76	79.03	149.41	-5,632.03	550.32	973.46	868.81	104.66	9.301	
16,800.00	11,594.10	17,557.98	12,432.08	81.08	80.37	149.41	-5,732.02	551.23	973.46	867.37	106.09	9.176	
16,900.00	11,594.62	17,657.98	12,432.61	82.41	81.71	149.41	-5,832.02	552.14	973.45	865.94	107.52	9.054	
17,000.00	11,595.15	17,757.98	12,433.13	83.73	83.05	149.41	-5,932.01	553.05	973.45	864.50	108.96	8.934	
17,100.00	11,595.67	17,857.98	12,433.66	85.06	84.40	149.41	-6,032.00	553.95	973.45	863.05	110.40	8.818	
17,200.00	11,596.20	17,957.98	12,434.18	86.39	85.74	149.41	-6,132.00	554.86	973.44	861.60	111.84	8.704	
17,300.00	11,596.72	18,057.98	12,434.70	87.72	87.08	149.41	-6,231.99	555.77	973.44	860.15	113.29	8.592	
17,400.00	11,597.25	18,157.98	12,435.23	89.05	88.43	149.41	-6,331.99	556.68	973.44	858.69	114.75	8.483	
17,500.00	11,597.77	18,257.98	12,435.75	90.38	89.78	149.41	-6,431.98	557.59	973.43	857.23	116.21	8.377	
17,600.00	11,598.30	18,357.98	12,436.28	91.71	91.12	149.41	-6,531.98	558.50	973.43	855.76	117.67	8.273	
17,700.00	11,598.82	18,457.98	12,436.80	93.05	92.47	149.41	-6,631.97	559.41	973.43	854.29	119.13	8.171	
17,800.00	11,599.35	18,557.98	12,437.33	94.38	93.82	149.41	-6,731.97	560.32	973.42	852.82	120.60	8.071	
17,900.00	11,599.87	18,657.98	12,437.85	95.72	95.17	149.42	-6,831.96	561.22	973.42	851.35	122.07	7.974	
18,000.00	11,600.40	18,757.98	12,438.38	97.05	96.52	149.42	-6,931.96	562.13	973.42	849.87	123.55	7.879	
18,100.00	11,600.92	18,857.98	12,438.90	98.39	97.87	149.42	-7,031.95	563.04	973.41	848.39	125.03	7.786	
18,200.00	11,601.44	18,957.98	12,439.43	99.73	99.22	149.42	-7,131.94	563.95	973.41	846.90	126.51	7.694	
18,300.00	11,601.97	19,057.98	12,439.95	101.07	100.57	149.42	-7,231.94	564.86	973.41	845.41	127.99	7.605	
18,400.00	11,602.49	19,157.98	12,440.48	102.41	101.92	149.42	-7,331.93	565.77	973.40	843.92	129.48	7.518	
18,500.00	11,603.02	19,257.98	12,441.00	103.75	103.27	149.42	-7,431.93	566.68	973.40	842.43	130.97	7.432	
18,600.00	11,603.54	19,357.98	12,441.53	105.09	104.62	149.42	-7,531.92	567.58	973.40	840.94	132.46	7.349	
18,700.00	11,604.07	19,457.98	12,442.05	106.44	105.98	149.42	-7,631.92	568.49	973.39	839.44	133.95	7.267	
18,800.00	11,604.59	19,557.98	12,442.58	107.78	107.33	149.42	-7,731.91	569.40	973.39	837.94	135.45	7.186	
18,900.00	11,605.12	19,657.98	12,443.10	109.12	108.68	149.42	-7,831.91	570.31	973.38	836.44	136.95	7.108	
19,000.00	11,605.64	19,757.98	12,443.63	110.47	110.04	149.42	-7,931.90	571.22	973.38	834.93	138.45	7.031	
19,100.00	11,606.17	19,857.98	12,444.15	111.81	111.39	149.42	-8,031.89	572.13	973.38	833.43	139.95	6.955	
19,200.00	11,606.69	19,957.98	12,444.68	113.16	112.75	149.42	-8,131.89	573.04	973.37	831.92	141.46	6.881	
19,300.00	11,607.22	20,057.98	12,445.20	114.50	114.10	149.42	-8,231.88	573.95	973.37	830.41	142.96	6.809	
19,400.00	11,607.74	20,157.98	12,445.73	115.85	115.46	149.42	-8,331.88	574.85	973.37	828.89	144.47	6.737	
19,500.00	11,608.27	20,257.98	12,446.25	117.20	116.81	149.42	-8,431.87	575.76	973.36	827.38	145.98	6.668	
19,600.00	11,608.79	20,357.98	12,446.78	118.54	118.17	149.42	-8,531.87	576.67	973.36	825.86	147.50	6.599	
19,700.00	11,609.32	20,457.98	12,447.30	119.89	119.52	149.42	-8,631.86	577.58	973.36	824.35	149.01	6.532	
19,800.00	11,609.84	20,557.98	12,447.83	121.24	120.88	149.42	-8,731.86	578.49	973.35	822.83	150.53	6.466	
19,900.00	11,610.37	20,657.98	12,448.35	122.59	122.24	149.42	-8,831.85	579.40	973.35	821.31	152.04	6.402	
20,000.00	11,610.89	20,757.98	12,448.88	123.94	123.59	149.42	-8,931.85	580.31	973.35	819.78	153.56	6.338	
20,100.00	11,611.42	20,857.98	12,449.40	125.29	124.95	149.42	-9,031.84	581.21	973.34	818.26	155.09	6.276	
20,200.00	11,611.94	20,957.98	12,449.93	126.64	126.31	149.42	-9,131.83	582.12	973.34	816.73	156.61	6.215	
20,300.00	11,612.47	21,057.98	12,450.45	127.99	127.67	149.42	-9,231.83	583.03	973.34	815.20	158.13	6.155	
20,400.00	11,612.99	21,157.98	12,450.98	129.34	129.03	149.42	-9,331.82	583.94	973.33	813.67	159.66	6.096	
20,500.00	11,613.52	21,257.98	12,451.50	130.69	130.38	149.42	-9,431.82	584.85	973.33	812.14	161.18	6.039	
20,600.00	11,614.04	21,357.98	12,452.03	132.04	131.74	149.43	-9,531.81	585.76	973.32	810.61	162.71	5.982	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 214H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)

Offset Site Error: 0.00 usft

Offset Well Error: 0.50 usft

Reference		Offset		Semi Major Axis		Highside Toolface (")	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
20,700.00	11,614.56	21,457.98	12,452.55	133.40	133.10	149.43	-9,631.81	586.67	973.32	809.08	164.24	5.926	
20,800.00	11,615.09	21,557.98	12,453.08	134.75	134.46	149.43	-9,731.80	587.58	973.32	807.55	165.77	5.871	
20,900.00	11,615.61	21,657.98	12,453.60	136.10	135.82	149.43	-9,831.80	588.48	973.31	806.01	167.30	5.818	
21,000.00	11,616.14	21,757.98	12,454.13	137.45	137.18	149.43	-9,931.79	589.39	973.31	804.47	168.84	5.765	
21,100.00	11,616.66	21,857.98	12,454.65	138.81	138.54	149.43	-10,031.78	590.30	973.31	802.94	170.37	5.713	
21,200.00	11,617.19	21,957.98	12,455.18	140.16	139.90	149.43	-10,131.78	591.21	973.30	801.40	171.91	5.662	
21,300.00	11,617.71	22,057.98	12,455.70	141.52	141.26	149.43	-10,231.77	592.12	973.30	799.86	173.44	5.612	
21,400.00	11,618.24	22,157.98	12,456.23	142.87	142.62	149.43	-10,331.77	593.03	973.30	798.31	174.98	5.562	
21,500.00	11,618.76	22,257.98	12,456.75	144.23	143.98	149.43	-10,431.76	593.94	973.29	796.77	176.52	5.514	
21,600.00	11,619.29	22,357.98	12,457.28	145.58	145.34	149.43	-10,531.76	594.84	973.29	795.23	178.06	5.466	
21,700.00	11,619.81	22,457.98	12,457.80	146.94	146.70	149.43	-10,631.75	595.75	973.29	793.68	179.60	5.419	
21,800.00	11,620.34	22,557.98	12,458.33	148.29	148.06	149.43	-10,731.75	596.66	973.28	792.14	181.14	5.373	
21,900.00	11,620.86	22,657.98	12,458.85	149.65	149.34	149.43	-10,831.74	597.57	973.28	790.68	182.59	5.330	
21,945.36	11,621.10	22,703.35	12,459.09	150.26	149.89	149.43	-10,877.10	597.98	973.28	790.06	183.22	5.312	SF

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 216H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:				Offset Site Error:
														Offset Well Error:
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	
0.00	0.00	2.00	0.00	0.50	0.50	0.00	235.00	0.00	235.00					
100.00	100.00	102.00	100.00	0.98	0.99	0.00	235.00	0.00	235.00	233.03	1.97	119.100		
200.00	200.00	202.00	200.00	1.56	1.57	0.00	235.00	0.00	235.00	231.87	3.13	75.067		
300.00	300.00	302.00	300.00	1.98	1.99	0.00	235.00	0.00	235.00	231.03	3.97	59.205	CC, ES	
400.00	399.99	401.99	399.99	2.41	2.34	-130.23	235.00	0.00	235.84	231.15	4.69	50.247		
500.00	499.91	501.91	499.91	2.77	2.64	-130.92	235.00	0.00	238.40	233.08	5.32	44.784		
600.00	599.69	601.69	599.69	3.10	2.91	-132.04	235.00	0.00	242.74	236.84	5.90	41.156		
700.00	699.27	701.36	699.36	3.41	3.17	-133.54	235.00	0.00	248.97	242.53	6.44	38.680		
800.00	798.57	807.69	805.68	3.70	3.47	-135.54	233.49	-0.11	255.83	248.82	7.01	36.502		
900.00	897.62	913.12	911.01	3.83	3.72	-137.92	229.10	-0.45	261.79	254.39	7.40	35.355		
1,000.00	996.65	1,012.44	1,010.19	4.06	3.91	-140.15	223.91	-0.84	267.25	259.41	7.84	34.094		
1,100.00	1,095.67	1,111.75	1,109.37	4.28	4.10	-142.28	218.73	-1.23	273.09	264.83	8.26	33.049		
1,200.00	1,194.70	1,211.07	1,208.55	4.51	4.27	-144.33	213.55	-1.62	279.30	270.62	8.68	32.168		
1,300.00	1,293.62	1,314.30	1,311.61	4.72	4.39	-139.32	207.65	-2.17	285.50	276.49	9.01	31.673		
1,400.00	1,392.26	1,419.72	1,416.67	4.94	4.61	-136.26	199.05	-3.44	290.32	280.86	9.46	30.695		
1,500.00	1,490.54	1,520.96	1,517.35	5.17	4.75	-135.01	188.51	-5.28	294.49	284.67	9.82	30.002		
1,600.00	1,588.41	1,618.61	1,614.42	5.40	4.93	-134.97	178.06	-7.15	300.19	289.96	10.23	29.334		
1,700.00	1,685.98	1,715.90	1,711.13	5.58	5.11	-138.53	167.64	-9.00	307.80	297.20	10.60	29.030		
1,800.00	1,783.55	1,813.19	1,807.83	5.80	5.29	-142.36	157.22	-10.86	316.93	305.93	11.00	28.807		
1,900.00	1,881.12	1,910.47	1,904.54	6.04	5.48	-145.97	146.80	-12.71	327.44	316.05	11.39	28.739		
2,000.00	1,978.69	2,007.75	2,001.24	6.31	5.66	-149.35	136.38	-14.57	339.21	327.43	11.78	28.794		
2,100.00	2,076.26	2,105.04	2,097.95	6.58	5.84	-152.50	125.96	-16.42	352.11	339.95	12.16	28.949		
2,200.00	2,173.83	2,202.32	2,194.66	6.87	6.02	-155.43	115.54	-18.28	366.03	353.48	12.54	29.182		
2,300.00	2,271.40	2,299.60	2,291.36	7.15	6.20	-158.15	105.12	-20.14	380.84	367.92	12.92	29.476		
2,400.00	2,368.97	2,396.89	2,388.07	7.44	6.38	-160.66	94.70	-21.99	396.45	383.15	13.30	29.815		
2,500.00	2,466.54	2,494.17	2,484.78	7.73	6.56	-162.99	84.29	-23.85	412.77	399.10	13.67	30.189		
2,600.00	2,564.11	2,591.45	2,581.48	8.02	6.75	-165.13	73.87	-25.70	429.72	415.67	14.05	30.586		
2,700.00	2,661.68	2,688.74	2,678.19	8.31	6.93	-167.12	63.45	-27.56	447.22	432.79	14.43	31.000		
2,800.00	2,759.25	2,786.02	2,774.89	8.60	7.11	-168.96	53.03	-29.41	465.22	450.41	14.80	31.424		
2,900.00	2,856.82	2,883.30	2,871.60	8.89	7.29	-170.66	42.61	-31.27	483.65	468.47	15.18	31.854		
3,000.00	2,954.39	2,980.59	2,968.31	9.18	7.47	-172.24	32.19	-33.12	502.48	486.92	15.56	32.284		
3,100.00	3,051.96	3,077.87	3,065.01	9.48	7.65	-173.71	21.77	-34.98	521.65	505.71	15.95	32.714		
3,200.00	3,149.53	3,175.15	3,161.72	9.77	7.83	-175.07	11.35	-36.84	541.14	524.81	16.33	33.139		
3,300.00	3,247.10	3,272.44	3,258.42	10.07	8.01	-176.34	0.93	-38.69	560.90	544.19	16.71	33.559		
3,400.00	3,344.67	3,369.72	3,355.13	10.37	8.19	-177.53	-9.48	-40.55	580.92	563.82	17.10	33.971		
3,500.00	3,442.24	3,467.00	3,451.84	10.67	8.37	-178.63	-19.90	-42.40	601.16	583.67	17.49	34.376		
3,600.00	3,539.81	3,564.29	3,548.54	10.96	8.55	-179.66	-30.32	-44.26	621.60	603.72	17.88	34.772		
3,700.00	3,637.39	3,661.57	3,645.25	11.26	8.73	-179.37	-40.74	-46.11	642.23	623.96	18.27	35.158		
3,800.00	3,734.96	3,758.85	3,741.95	11.56	8.91	-178.46	-51.16	-47.97	663.02	644.36	18.66	35.535		
3,900.00	3,832.53	3,856.14	3,838.66	11.86	9.09	-177.61	-61.58	-49.83	683.97	664.91	19.05	35.902		
4,000.00	3,930.10	3,953.42	3,935.37	12.16	9.27	-176.80	-72.00	-51.68	705.05	685.60	19.44	36.260		
4,100.00	4,027.67	4,050.70	4,032.07	12.46	9.45	-176.04	-82.42	-53.54	726.26	706.42	19.84	36.607		
4,200.00	4,125.24	4,147.99	4,128.78	12.76	9.63	-175.33	-92.84	-55.39	747.58	727.35	20.23	36.945		
4,300.00	4,222.81	4,245.27	4,225.48	13.06	9.81	-174.66	-103.26	-57.25	769.01	748.38	20.63	37.274		
4,400.00	4,320.38	4,342.56	4,322.19	13.36	9.99	-174.02	-113.67	-59.10	790.54	769.51	21.03	37.593		
4,500.00	4,417.95	4,439.84	4,418.90	13.66	10.17	-173.41	-124.09	-60.96	812.15	790.72	21.43	37.903		
4,600.00	4,515.52	4,537.12	4,515.60	13.96	10.35	-172.84	-134.51	-62.82	833.85	812.02	21.83	38.203		
4,700.00	4,613.09	4,634.41	4,612.31	14.27	10.53	-172.29	-144.93	-64.67	855.62	833.40	22.23	38.496		
4,800.00	4,710.66	4,731.69	4,709.02	14.57	10.71	-171.78	-155.35	-66.53	877.47	854.84	22.63	38.779		
4,900.00	4,808.23	4,828.97	4,805.72	14.87	10.89	-171.28	-165.77	-68.38	899.38	876.35	23.03	39.055		
5,000.00	4,905.80	4,926.26	4,902.43	15.17	11.07	-170.81	-176.19	-70.24	921.35	897.92	23.43	39.323		
5,100.00	5,003.37	5,023.54	4,999.13	15.47	11.25	-170.37	-186.61	-72.09	943.38	919.54	23.83	39.582		

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 216H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:							Offset Well Error: 0.50 usft	
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Major Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
5,200.00	5,100.94	5,120.82	5,095.84	15.78	11.43	169.94	-197.03	-73.95	965.46	941.22	24.24	39.835		
5,300.00	5,198.51	5,218.11	5,192.55	16.08	11.61	169.53	-207.44	-75.80	987.59	962.95	24.64	40.080		
5,400.00	5,296.08	5,315.39	5,289.25	16.38	11.79	169.14	-217.86	-77.66	1,009.76	984.72	25.04	40.318		
5,500.00	5,393.65	5,412.67	5,385.96	16.69	11.97	168.77	-228.28	-79.52	1,031.98	1,006.53	25.45	40.550		
5,600.00	5,491.24	5,509.98	5,482.69	16.97	12.15	168.43	-238.70	-81.37	1,054.13	1,028.30	25.83	40.808		
5,700.00	5,589.24	5,607.66	5,579.79	17.25	12.33	168.12	-249.17	-83.24	1,074.45	1,048.21	26.25	40.939		
5,800.00	5,687.73	5,705.79	5,677.34	17.50	12.51	167.80	-259.68	-85.11	1,092.31	1,065.65	26.65	40.982		
5,900.00	5,786.63	5,804.31	5,775.27	17.73	12.70	167.45	-270.23	-86.99	1,107.68	1,080.63	27.06	40.942		
6,000.00	5,885.89	5,903.14	5,873.51	17.92	12.88	167.07	-280.81	-88.87	1,120.59	1,093.14	27.45	40.824		
6,100.00	5,985.43	6,002.22	5,972.00	18.09	13.06	166.67	-291.42	-90.76	1,131.02	1,103.19	27.83	40.634		
6,200.00	6,085.19	6,101.47	6,070.67	18.23	13.25	166.24	-302.05	-92.65	1,138.99	1,110.78	28.21	40.378		
6,300.00	6,185.09	6,200.84	6,169.45	18.33	13.43	165.77	-312.69	-94.55	1,144.49	1,115.93	28.57	40.063		
6,400.00	6,285.07	6,300.25	6,268.27	18.42	13.61	165.27	-323.34	-96.45	1,147.55	1,118.65	28.90	39.705		
6,500.00	6,385.07	6,399.66	6,367.09	18.44	13.80	-88.13	-333.99	-98.34	1,149.10	1,119.97	29.12	39.457		
6,600.00	6,485.07	6,499.07	6,465.91	18.48	13.98	-88.66	-344.63	-100.24	1,150.71	1,121.36	29.35	39.202		
6,700.00	6,585.07	6,598.47	6,564.72	18.52	14.17	-89.19	-355.28	-102.13	1,152.43	1,122.85	29.58	38.954		
6,800.00	6,685.07	6,702.32	6,668.05	18.56	14.35	-89.70	-365.45	-103.95	1,154.09	1,124.28	29.80	38.722		
6,900.00	6,785.07	6,807.59	6,773.04	18.60	14.54	-90.07	-372.98	-105.29	1,155.35	1,125.33	30.02	38.487		
7,000.00	6,885.07	6,913.21	6,878.54	18.64	14.72	-90.30	-377.67	-106.12	1,156.16	1,125.95	30.20	38.277		
7,100.00	6,985.07	7,019.00	6,984.32	18.68	14.87	-90.39	-379.49	-106.45	1,156.47	1,126.12	30.35	38.106		
7,200.00	7,085.07	7,119.76	7,085.07	18.72	14.88	-90.39	-379.51	-106.45	1,156.48	1,126.08	30.40	38.047		
7,300.00	7,185.07	7,219.76	7,185.07	18.76	14.91	-90.39	-379.51	-106.45	1,156.48	1,126.02	30.46	37.970		
7,400.00	7,285.07	7,319.76	7,285.07	18.80	14.93	-90.39	-379.51	-106.45	1,156.48	1,125.96	30.52	37.892		
7,500.00	7,385.07	7,419.76	7,385.07	18.85	14.96	-90.39	-379.51	-106.45	1,156.48	1,125.89	30.58	37.813		
7,600.00	7,485.07	7,519.76	7,485.07	18.89	14.99	-90.39	-379.51	-106.45	1,156.48	1,125.83	30.65	37.734		
7,700.00	7,585.07	7,619.76	7,585.07	18.93	15.01	-90.39	-379.51	-106.45	1,156.48	1,125.76	30.71	37.654		
7,800.00	7,685.07	7,719.76	7,685.07	18.97	15.04	-90.39	-379.51	-106.45	1,156.48	1,125.70	30.78	37.574		
7,900.00	7,785.07	7,819.76	7,785.07	19.01	15.07	-90.39	-379.51	-106.45	1,156.48	1,125.63	30.85	37.493		
8,000.00	7,885.07	7,919.76	7,885.07	19.06	15.10	-90.39	-379.51	-106.45	1,156.48	1,125.57	30.91	37.412		
8,100.00	7,985.07	8,019.76	7,985.07	19.10	15.12	-90.39	-379.51	-106.45	1,156.48	1,125.50	30.98	37.330		
8,200.00	8,085.07	8,119.76	8,085.07	19.14	15.15	-90.39	-379.51	-106.45	1,156.48	1,125.43	31.05	37.247		
8,300.00	8,185.07	8,219.76	8,185.07	19.19	15.18	-90.39	-379.51	-106.45	1,156.48	1,125.36	31.12	37.164		
8,400.00	8,285.07	8,319.76	8,285.07	19.23	15.21	-90.39	-379.51	-106.45	1,156.48	1,125.29	31.19	37.081		
8,500.00	8,385.07	8,419.76	8,385.07	19.27	15.24	-90.39	-379.51	-106.45	1,156.48	1,125.22	31.26	36.997		
8,600.00	8,485.07	8,519.76	8,485.07	19.32	15.27	-90.39	-379.51	-106.45	1,156.48	1,125.15	31.33	36.913		
8,700.00	8,585.07	8,619.76	8,585.07	19.36	15.31	-90.39	-379.51	-106.45	1,156.48	1,125.08	31.40	36.828		
8,800.00	8,685.07	8,719.76	8,685.07	19.41	15.34	-90.39	-379.51	-106.45	1,156.48	1,125.00	31.47	36.743		
8,900.00	8,785.07	8,819.76	8,785.07	19.45	15.37	-90.39	-379.51	-106.45	1,156.48	1,124.93	31.55	36.658		
9,000.00	8,885.07	8,919.76	8,885.07	19.50	15.40	-90.39	-379.51	-106.45	1,156.48	1,124.86	31.62	36.572		
9,100.00	8,985.07	9,019.76	8,985.07	19.54	15.43	-90.39	-379.51	-106.45	1,156.48	1,124.78	31.70	36.486		
9,200.00	9,085.07	9,119.76	9,085.07	19.59	15.47	-90.39	-379.51	-106.45	1,156.48	1,124.71	31.77	36.399		
9,300.00	9,185.07	9,219.76	9,185.07	19.63	15.50	-90.39	-379.51	-106.45	1,156.48	1,124.63	31.85	36.312		
9,400.00	9,285.07	9,319.76	9,285.07	19.68	15.53	-90.39	-379.51	-106.45	1,156.48	1,124.55	31.92	36.225		
9,500.00	9,385.07	9,419.76	9,385.07	19.73	15.57	-90.39	-379.51	-106.45	1,156.48	1,124.48	32.00	36.137		
9,600.00	9,485.07	9,519.76	9,485.07	19.77	15.60	-90.39	-379.51	-106.45	1,156.48	1,124.40	32.08	36.050		
9,700.00	9,585.07	9,619.76	9,585.07	19.82	15.64	-90.39	-379.51	-106.45	1,156.48	1,124.32	32.16	35.961		
9,800.00	9,685.07	9,719.76	9,685.07	19.87	15.67	-90.39	-379.51	-106.45	1,156.48	1,124.24	32.24	35.873		
9,900.00	9,785.07	9,819.76	9,785.07	19.91	15.71	-90.39	-379.51	-106.45	1,156.48	1,124.16	32.32	35.784		
10,000.00	9,885.07	9,919.76	9,885.07	19.96	15.74	-90.39	-379.51	-106.45	1,156.48	1,124.08	32.40	35.695		
10,100.00	9,985.07	10,019.76	9,985.07	20.01	15.78	-90.39	-379.51	-106.45	1,156.48	1,124.00	32.48	35.606		
10,200.00	10,085.07	10,119.76	10,085.07	20.06	15.81	-90.39	-379.51	-106.45	1,156.48	1,123.92	32.56	35.517		
10,300.00	10,185.07	10,219.76	10,185.07	20.10	15.85	-90.39	-379.51	-106.45	1,156.48	1,123.83	32.64	35.427		

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

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Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 216H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:		Offset Site Error:	0.00 usft
												Offset Well Error:	0.50 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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
10,400.00	10,285.07	10,319.76	10,285.07	20.15	15.89	-90.39	-379.51	-106.45	1,156.48	1,123.75	32.73	35.337	
10,500.00	10,385.07	10,419.76	10,385.07	20.20	15.92	-90.39	-379.51	-106.45	1,156.48	1,123.67	32.81	35.247	
10,600.00	10,485.07	10,519.76	10,485.07	20.25	15.96	-90.39	-379.51	-106.45	1,156.48	1,123.58	32.89	35.157	
10,700.00	10,585.07	10,619.76	10,585.07	20.30	16.00	-90.39	-379.51	-106.45	1,156.48	1,123.50	32.98	35.066	
10,800.00	10,685.07	10,719.76	10,685.07	20.35	16.04	-90.39	-379.51	-106.45	1,156.48	1,123.41	33.07	34.976	
10,900.00	10,785.07	10,819.76	10,785.07	20.40	16.08	-90.39	-379.51	-106.45	1,156.48	1,123.33	33.15	34.885	
11,000.00	10,885.07	10,919.76	10,885.07	20.45	16.12	-90.39	-379.51	-106.45	1,156.48	1,123.24	33.24	34.794	
11,100.00	10,985.07	11,019.76	10,985.07	20.50	16.16	-90.39	-379.51	-106.45	1,156.48	1,123.15	33.32	34.703	
11,200.00	11,084.72	11,119.40	11,084.72	20.59	16.20	86.15	-379.51	-106.45	1,155.99	1,122.61	33.38	34.635	
11,300.00	11,181.66	11,216.34	11,181.66	20.75	16.23	87.43	-379.51	-106.45	1,154.60	1,121.15	33.45	34.520	
11,400.00	11,272.97	11,307.65	11,272.97	20.95	16.27	89.38	-379.51	-106.45	1,153.39	1,119.85	33.55	34.383	
11,428.10	11,297.22	11,331.90	11,297.22	21.02	16.28	90.00	-379.51	-106.45	1,153.31	1,119.72	33.59	34.337	
11,500.00	11,355.85	11,390.54	11,355.85	21.20	16.30	91.61	-379.51	-106.45	1,154.05	1,120.38	33.67	34.271	
11,600.00	11,427.81	11,462.49	11,427.81	21.52	16.33	93.61	-379.51	-106.45	1,158.62	1,124.79	33.83	34.248	
11,700.00	11,486.64	11,521.33	11,486.64	21.92	16.36	94.90	-379.51	-106.45	1,169.10	1,135.09	34.00	34.382	
11,800.00	11,530.57	11,565.25	11,530.57	22.42	16.38	95.01	-379.51	-106.45	1,187.09	1,152.91	34.18	34.730	
11,900.00	11,558.25	11,592.94	11,558.25	23.01	16.39	93.60	-379.51	-106.45	1,213.41	1,179.07	34.34	35.334	
12,000.00	11,568.85	11,603.54	11,568.85	23.68	16.39	90.45	-379.51	-106.45	1,247.85	1,213.39	34.46	36.208	
12,100.00	11,569.43	11,604.11	11,569.43	24.45	16.39	90.16	-379.51	-106.45	1,290.67	1,256.10	34.57	37.336	
12,200.00	11,569.96	11,604.64	11,569.96	25.29	16.39	90.20	-379.51	-106.45	1,342.54	1,307.88	34.66	38.737	
12,300.00	11,570.48	13,075.94	12,430.46	26.19	24.10	127.90	-1,237.69	-98.65	1,399.98	1,349.16	50.82	27.547	
12,400.00	11,571.01	13,175.94	12,430.99	27.12	25.26	127.90	-1,337.68	-97.74	1,399.98	1,347.75	52.22	26.807	
12,500.00	11,571.53	13,275.94	12,431.51	28.09	26.44	127.90	-1,437.68	-96.83	1,399.97	1,346.29	53.68	26.079	
12,600.00	11,572.06	13,375.94	12,432.04	29.09	27.64	127.90	-1,537.67	-95.92	1,399.97	1,344.77	55.19	25.365	
12,700.00	11,572.58	13,475.94	12,432.56	30.12	28.85	127.90	-1,637.67	-95.01	1,399.96	1,343.21	56.75	24.669	
12,800.00	11,573.11	13,575.94	12,433.09	31.17	30.08	127.90	-1,737.66	-94.11	1,399.96	1,341.60	58.35	23.991	
12,900.00	11,573.63	13,675.94	12,433.61	32.24	31.32	127.90	-1,837.66	-93.20	1,399.95	1,339.95	60.00	23.334	
13,000.00	11,574.16	13,775.94	12,434.14	33.33	32.57	127.90	-1,937.65	-92.29	1,399.94	1,338.27	61.67	22.699	
13,100.00	11,574.68	13,875.94	12,434.66	34.44	33.83	127.90	-2,037.64	-91.38	1,399.94	1,336.55	63.39	22.085	
13,200.00	11,575.21	13,975.94	12,435.19	35.57	35.10	127.90	-2,137.64	-90.47	1,399.93	1,334.80	65.13	21.493	
13,300.00	11,575.73	14,075.94	12,435.71	36.71	36.37	127.90	-2,237.63	-89.56	1,399.93	1,333.02	66.91	20.923	
13,400.00	11,576.25	14,175.94	12,436.24	37.87	37.65	127.90	-2,337.63	-88.65	1,399.92	1,331.21	68.71	20.375	
13,500.00	11,576.78	14,275.94	12,436.76	39.04	38.94	127.90	-2,437.62	-87.74	1,399.92	1,329.38	70.53	19.847	
13,600.00	11,577.30	14,375.94	12,437.29	40.22	40.23	127.90	-2,537.62	-86.83	1,399.91	1,327.53	72.38	19.340	
13,700.00	11,577.83	14,475.94	12,437.81	41.41	41.53	127.90	-2,637.61	-85.93	1,399.90	1,325.65	74.25	18.853	
13,800.00	11,578.35	14,575.94	12,438.34	42.61	42.83	127.90	-2,737.61	-85.02	1,399.90	1,323.76	76.14	18.385	
13,900.00	11,578.88	14,675.94	12,438.86	43.82	44.14	127.90	-2,837.60	-84.11	1,399.89	1,321.84	78.05	17.936	
14,000.00	11,579.40	14,775.94	12,439.39	45.04	45.45	127.90	-2,937.60	-83.20	1,399.89	1,319.91	79.97	17.504	
14,100.00	11,579.93	14,875.94	12,439.91	46.27	46.76	127.90	-3,037.59	-82.29	1,399.88	1,317.97	81.91	17.090	
14,200.00	11,580.45	14,975.94	12,440.44	47.51	48.08	127.90	-3,137.58	-81.38	1,399.88	1,316.01	83.87	16.691	
14,300.00	11,580.98	15,075.94	12,440.97	48.75	49.40	127.90	-3,237.58	-80.47	1,399.87	1,314.03	85.84	16.309	
14,400.00	11,581.50	15,175.94	12,441.49	49.99	50.72	127.90	-3,337.57	-79.56	1,399.86	1,312.05	87.82	15.941	
14,500.00	11,582.03	15,275.94	12,442.02	51.25	52.04	127.90	-3,437.57	-78.65	1,399.86	1,310.05	89.81	15.587	
14,600.00	11,582.55	15,375.94	12,442.54	52.51	53.37	127.90	-3,537.56	-77.75	1,399.85	1,308.04	91.81	15.247	
14,700.00	11,583.08	15,475.94	12,443.07	53.77	54.70	127.90	-3,637.56	-76.84	1,399.85	1,306.02	93.83	14.919	
14,800.00	11,583.60	15,575.94	12,443.59	55.04	56.03	127.91	-3,737.55	-75.93	1,399.84	1,303.99	95.85	14.604	
14,900.00	11,584.13	15,675.94	12,444.12	56.31	57.36	127.91	-3,837.55	-75.02	1,399.84	1,301.95	97.88	14.301	
15,000.00	11,584.65	15,775.94	12,444.64	57.59	58.70	127.91	-3,937.54	-74.11	1,399.83	1,299.90	99.93	14.009	
15,100.00	11,585.18	15,875.94	12,445.17	58.87	60.03	127.91	-4,037.53	-73.20	1,399.83	1,297.85	101.98	13.727	
15,200.00	11,585.70	15,975.94	12,445.69	60.16	61.37	127.91	-4,137.53	-72.29	1,399.82	1,295.79	104.03	13.456	
15,300.00	11,586.23	16,075.94	12,446.22	61.45	62.71	127.91	-4,237.52	-71.38	1,399.81	1,293.72	106.10	13.194	
15,400.00	11,586.75	16,175.94	12,446.74	62.74	64.05	127.91	-4,337.52	-70.47	1,399.81	1,291.64	108.17	12.941	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 216H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:							Offset Well Error: 0.50 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance			Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Major Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)			
15,500.00	11,587.28	16,275.94	12,447.27	64.03	65.39	127.91	-4,437.51	-69.57	1,399.80	1,289.56	110.24	12.697		
15,600.00	11,587.80	16,375.94	12,447.79	65.33	66.73	127.91	-4,537.51	-68.66	1,399.80	1,287.47	112.33	12.462		
15,700.00	11,588.33	16,475.94	12,448.32	66.63	68.08	127.91	-4,637.50	-67.75	1,399.79	1,285.37	114.42	12.234		
15,800.00	11,588.85	16,575.94	12,448.84	67.93	69.42	127.91	-4,737.50	-66.84	1,399.79	1,283.28	116.51	12.014		
15,900.00	11,589.37	16,675.94	12,449.37	69.24	70.76	127.91	-4,837.49	-65.93	1,399.78	1,281.17	118.61	11.802		
16,000.00	11,589.90	16,775.94	12,449.89	70.55	72.11	127.91	-4,937.49	-65.02	1,399.77	1,279.06	120.71	11.596		
16,100.00	11,590.42	16,875.94	12,450.42	71.86	73.46	127.91	-5,037.48	-64.11	1,399.77	1,276.95	122.82	11.397		
16,200.00	11,590.95	16,975.94	12,450.94	73.17	74.81	127.91	-5,137.47	-63.20	1,399.76	1,274.83	124.94	11.204		
16,300.00	11,591.47	17,075.94	12,451.47	74.48	76.16	127.91	-5,237.47	-62.30	1,399.76	1,272.71	127.05	11.017		
16,400.00	11,592.00	17,175.94	12,451.99	75.80	77.50	127.91	-5,337.46	-61.39	1,399.75	1,270.58	129.17	10.836		
16,500.00	11,592.52	17,275.94	12,452.52	77.12	78.85	127.91	-5,437.46	-60.48	1,399.75	1,268.45	131.30	10.661		
16,600.00	11,593.05	17,375.94	12,453.04	78.44	80.21	127.91	-5,537.45	-59.57	1,399.74	1,266.32	133.43	10.491		
16,700.00	11,593.57	17,475.94	12,453.57	79.76	81.56	127.91	-5,637.45	-58.66	1,399.74	1,264.18	135.56	10.326		
16,800.00	11,594.10	17,575.94	12,454.09	81.08	82.91	127.91	-5,737.44	-57.75	1,399.73	1,262.04	137.69	10.166		
16,900.00	11,594.62	17,675.94	12,454.62	82.41	84.26	127.91	-5,837.44	-56.84	1,399.72	1,259.89	139.83	10.010		
17,000.00	11,595.15	17,775.94	12,455.14	83.73	85.62	127.91	-5,937.43	-55.93	1,399.72	1,257.75	141.97	9.859		
17,100.00	11,595.67	17,875.94	12,455.67	85.06	86.97	127.91	-6,037.42	-55.02	1,399.71	1,255.60	144.11	9.713		
17,200.00	11,596.20	17,975.94	12,456.19	86.39	88.32	127.91	-6,137.42	-54.12	1,399.71	1,253.45	146.26	9.570		
17,300.00	11,596.72	18,075.94	12,456.72	87.72	89.68	127.91	-6,237.41	-53.21	1,399.70	1,251.29	148.41	9.431		
17,400.00	11,597.25	18,175.94	12,457.24	89.05	91.03	127.91	-6,337.41	-52.30	1,399.70	1,249.14	150.56	9.297		
17,500.00	11,597.77	18,275.94	12,457.77	90.38	92.39	127.91	-6,437.40	-51.39	1,399.69	1,246.98	152.71	9.166		
17,600.00	11,598.30	18,375.94	12,458.29	91.71	93.74	127.91	-6,537.40	-50.48	1,399.68	1,244.82	154.87	9.038		
17,700.00	11,598.82	18,475.94	12,458.82	93.05	95.10	127.91	-6,637.39	-49.57	1,399.68	1,242.65	157.03	8.914		
17,800.00	11,599.35	18,575.94	12,459.34	94.38	96.46	127.91	-6,737.39	-48.66	1,399.67	1,240.49	159.19	8.793		
17,900.00	11,599.87	18,675.94	12,459.87	95.72	97.81	127.91	-6,837.38	-47.75	1,399.67	1,238.32	161.35	8.675		
18,000.00	11,600.40	18,775.94	12,460.39	97.05	99.17	127.91	-6,937.37	-46.84	1,399.66	1,236.15	163.51	8.560		
18,100.00	11,600.92	18,875.94	12,460.92	98.39	100.53	127.91	-7,037.37	-45.94	1,399.66	1,233.98	165.68	8.448		
18,200.00	11,601.44	18,975.94	12,461.44	99.73	101.89	127.91	-7,137.36	-45.03	1,399.65	1,231.81	167.84	8.339		
18,300.00	11,601.97	19,075.94	12,461.97	101.07	103.25	127.91	-7,237.36	-44.12	1,399.64	1,229.63	170.01	8.233		
18,400.00	11,602.49	19,175.94	12,462.49	102.41	104.60	127.91	-7,337.35	-43.21	1,399.64	1,227.46	172.18	8.129		
18,500.00	11,603.02	19,275.94	12,463.02	103.75	105.96	127.91	-7,437.35	-42.30	1,399.63	1,225.28	174.36	8.027		
18,600.00	11,603.54	19,375.94	12,463.54	105.09	107.32	127.91	-7,537.34	-41.39	1,399.63	1,223.10	176.53	7.929		
18,700.00	11,604.07	19,475.94	12,464.07	106.44	108.68	127.91	-7,637.34	-40.48	1,399.62	1,220.92	178.70	7.832		
18,800.00	11,604.59	19,575.94	12,464.59	107.78	110.04	127.91	-7,737.33	-39.57	1,399.62	1,218.74	180.88	7.738		
18,900.00	11,605.12	19,675.94	12,465.12	109.12	111.40	127.91	-7,837.33	-38.66	1,399.61	1,216.55	183.06	7.646		
19,000.00	11,605.64	19,775.94	12,465.64	110.47	112.76	127.91	-7,937.32	-37.76	1,399.61	1,214.37	185.24	7.556		
19,100.00	11,606.17	19,875.94	12,466.17	111.81	114.12	127.91	-8,037.31	-36.85	1,399.60	1,212.18	187.42	7.468		
19,200.00	11,606.69	19,975.94	12,466.69	113.16	115.48	127.91	-8,137.31	-35.94	1,399.59	1,209.99	189.60	7.382		
19,300.00	11,607.22	20,075.94	12,467.22	114.50	116.84	127.91	-8,237.30	-35.03	1,399.59	1,207.81	191.78	7.298		
19,400.00	11,607.74	20,175.94	12,467.74	115.85	118.20	127.91	-8,337.30	-34.12	1,399.58	1,205.62	193.97	7.216		
19,500.00	11,608.27	20,275.94	12,468.27	117.20	119.57	127.91	-8,437.29	-33.21	1,399.58	1,203.43	196.15	7.135		
19,600.00	11,608.79	20,375.94	12,468.79	118.54	120.93	127.91	-8,537.29	-32.30	1,399.57	1,201.23	198.34	7.056		
19,700.00	11,609.32	20,475.94	12,469.32	119.89	122.29	127.91	-8,637.28	-31.39	1,399.57	1,199.04	200.53	6.980		
19,800.00	11,609.84	20,575.94	12,469.84	121.24	123.65	127.91	-8,737.28	-30.48	1,399.56	1,196.85	202.71	6.904		
19,900.00	11,610.37	20,675.94	12,470.37	122.59	125.01	127.91	-8,837.27	-29.58	1,399.55	1,194.65	204.90	6.830		
20,000.00	11,610.89	20,775.94	12,470.89	123.94	126.37	127.92	-8,937.26	-28.67	1,399.55	1,192.46	207.09	6.758		
20,100.00	11,611.42	20,875.94	12,471.42	125.29	127.74	127.92	-9,037.26	-27.76	1,399.54	1,190.26	209.28	6.687		
20,200.00	11,611.94	20,975.94	12,471.94	126.64	129.10	127.92	-9,137.25	-26.85	1,399.54	1,188.06	211.47	6.618		
20,300.00	11,612.47	21,075.94	12,472.47	127.99	130.46	127.92	-9,237.25	-25.94	1,399.53	1,185.86	213.67	6.550		
20,400.00	11,612.99	21,175.94	12,472.99	129.34	131.82	127.92	-9,337.24	-25.03	1,399.53	1,183.67	215.86	6.483		
20,500.00	11,613.52	21,275.94	12,473.52	130.69	133.19	127.92	-9,437.24	-24.12	1,399.52	1,181.47	218.05	6.418		
20,600.00	11,614.04	21,375.94	12,474.04	132.04	134.55	127.92	-9,537.23	-23.21	1,399.52	1,179.27	220.25	6.354		

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 216H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:		Offset Site Error:	0.00 usft
												Offset Well Error:	0.50 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Reference	Offset	Reference	Offset	Reference	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
20,700.00	11,614.56	21,475.94	12,474.57	133.40	135.91	127.92	-9,637.23	-22.30	1,399.51	1,177.06	222.45	6.291	
20,800.00	11,615.09	21,575.94	12,475.09	134.75	137.28	127.92	-9,737.22	-21.40	1,399.50	1,174.86	224.64	6.230	
20,900.00	11,615.61	21,675.94	12,475.62	136.10	138.64	127.92	-9,837.22	-20.49	1,399.50	1,172.66	226.84	6.170	
21,000.00	11,616.14	21,775.94	12,476.14	137.45	140.00	127.92	-9,937.21	-19.58	1,399.49	1,170.46	229.04	6.110	
21,100.00	11,616.66	21,875.94	12,476.67	138.81	141.37	127.92	-10,037.20	-18.67	1,399.49	1,168.25	231.23	6.052	
21,200.00	11,617.19	21,975.94	12,477.19	140.16	142.73	127.92	-10,137.20	-17.76	1,399.48	1,166.05	233.43	5.995	
21,300.00	11,617.71	22,075.94	12,477.72	141.52	144.09	127.92	-10,237.19	-16.85	1,399.48	1,163.84	235.63	5.939	
21,400.00	11,618.24	22,175.94	12,478.24	142.87	145.46	127.92	-10,337.19	-15.94	1,399.47	1,161.64	237.83	5.884	
21,500.00	11,618.76	22,275.94	12,478.77	144.23	146.82	127.92	-10,437.18	-15.03	1,399.46	1,159.43	240.03	5.830	
21,600.00	11,619.29	22,375.94	12,479.29	145.58	148.19	127.92	-10,537.18	-14.13	1,399.46	1,157.22	242.24	5.777	
21,700.00	11,619.81	22,475.94	12,479.82	146.94	149.55	127.92	-10,637.17	-13.22	1,399.45	1,155.02	244.44	5.725	
21,800.00	11,620.34	22,575.94	12,480.35	148.29	150.91	127.92	-10,737.17	-12.31	1,399.45	1,152.81	246.64	5.674	
21,900.00	11,620.86	22,675.94	12,480.87	149.65	152.28	127.92	-10,837.16	-11.40	1,399.44	1,150.60	248.84	5.624	
21,944.29	11,621.09	22,719.79	12,481.10	150.25	152.85	127.92	-10,881.00	-11.00	1,399.44	1,149.66	249.78	5.603	
21,945.36	11,621.10	22,719.79	12,481.10	150.26	152.85	127.92	-10,881.00	-11.00	1,399.44	1,149.66	249.78	5.603	SF

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 218H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)

Offset Site Error: 0.00 usft

Offset Well Error: 0.50 usft

Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Reference (usft)	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
0.00	0.00	0.00	0.00	0.50	0.50	0.50	0.50	90.00	0.00	25.00	25.00				
100.00	100.00	100.00	100.00	0.98	0.98	0.98	0.98	90.00	0.00	25.00	25.00	23.04	1.96	12.741	
200.00	200.00	200.00	200.00	1.56	1.56	1.56	1.56	90.00	0.00	25.00	25.00	21.88	3.12	8.007	
300.00	300.00	300.00	300.00	1.98	1.98	1.98	1.98	90.00	0.00	25.00	25.00	21.04	3.96	6.309	CC
400.00	399.99	399.38	399.36	2.41	2.41	2.41	2.41	-41.03	-0.38	26.23	25.24	20.48	4.77	5.294	
500.00	499.91	498.74	498.65	2.77	2.77	2.77	2.77	-43.99	-1.53	29.94	26.02	20.58	5.44	4.781	
600.00	599.69	598.07	597.76	3.10	3.10	3.10	3.10	-48.52	-3.44	36.10	27.46	21.43	6.03	4.553	
700.00	699.27	697.35	696.63	3.41	3.41	3.41	3.41	-54.07	-6.11	44.73	29.74	23.18	6.55	4.538	
800.00	798.57	796.57	795.18	3.70	3.70	3.70	3.70	-60.00	-9.53	55.79	33.00	25.98	7.03	4.696	
900.00	897.62	896.17	893.83	3.83	3.83	3.83	3.83	-65.53	-13.58	68.87	37.24	30.00	7.25	5.140	
1,000.00	996.65	996.02	992.71	4.06	4.06	4.06	4.06	-69.93	-17.69	82.14	41.83	34.14	7.69	5.442	
1,100.00	1,095.67	1,095.87	1,091.58	4.28	4.28	4.28	4.28	-73.45	-21.80	95.41	46.62	38.48	8.14	5.730	
1,200.00	1,194.70	1,195.72	1,190.46	4.51	4.50	4.50	4.50	-76.31	-25.91	108.69	51.55	42.95	8.60	5.993	
1,300.00	1,293.62	1,295.60	1,289.37	4.72	4.72	4.72	4.72	-71.91	-30.02	121.97	55.53	46.48	9.05	6.136	
1,400.00	1,392.26	1,395.51	1,388.31	4.94	4.94	4.94	4.94	-69.54	-34.13	135.25	57.35	47.84	9.50	6.035	
1,500.00	1,490.54	1,495.39	1,487.21	5.17	5.16	5.16	5.16	-69.63	-38.24	148.53	57.23	47.27	9.96	5.746	
1,600.00	1,588.41	1,595.16	1,586.01	5.40	5.37	5.37	5.37	-72.40	-42.34	161.79	55.55	45.13	10.42	5.329	
1,700.00	1,685.98	1,694.83	1,684.71	5.58	5.58	5.58	5.58	-80.18	-46.45	175.05	53.59	42.72	10.86	4.932	
1,800.00	1,783.55	1,794.50	1,783.41	5.80	5.79	5.79	5.79	-88.87	-50.55	188.30	52.79	41.44	11.36	4.649	
1,814.00	1,797.21	1,808.45	1,797.23	5.83	5.82	5.82	5.82	-90.10	-51.12	190.15	52.78	41.35	11.43	4.619	
1,900.00	1,881.12	1,894.17	1,882.11	6.04	6.00	6.00	6.00	-97.61	-54.65	201.55	53.24	41.38	11.86	4.491	
2,000.00	1,978.69	1,993.84	1,980.81	6.31	6.21	6.21	6.21	-106.01	-58.75	214.80	54.90	42.55	12.35	4.445	
2,100.00	2,076.26	2,093.51	2,079.51	6.58	6.42	6.42	6.42	-113.77	-62.85	228.05	57.66	44.82	12.84	4.492	
2,200.00	2,173.83	2,193.18	2,178.21	6.87	6.63	6.63	6.63	-120.71	-66.96	241.30	61.38	48.07	13.31	4.611	
2,300.00	2,271.40	2,293.70	2,277.64	7.15	6.82	6.82	6.82	-126.29	-71.36	255.42	65.39	51.64	13.75	4.756	
2,400.00	2,368.97	2,394.74	2,377.16	7.44	7.07	7.07	7.07	-129.62	-76.66	272.02	68.18	53.95	14.23	4.792	
2,500.00	2,466.54	2,495.96	2,476.36	7.73	7.31	7.31	7.31	-131.13	-82.86	291.14	69.33	54.61	14.72	4.710	
2,600.00	2,564.11	2,597.22	2,575.04	8.02	7.57	7.57	7.57	-131.01	-89.94	312.73	68.68	53.45	15.23	4.510	
2,700.00	2,661.68	2,697.42	2,672.27	8.31	7.78	7.78	7.78	-129.79	-97.53	335.70	66.82	51.10	15.72	4.251	
2,800.00	2,759.25	2,797.39	2,769.27	8.60	8.05	8.05	8.05	-128.48	-105.12	358.66	64.97	48.72	16.25	3.998	
2,900.00	2,856.82	2,897.36	2,866.27	8.89	8.34	8.34	8.34	-127.09	-112.70	381.63	63.16	46.36	16.80	3.760	
3,000.00	2,954.39	2,997.33	2,963.28	9.18	8.64	8.64	8.64	-125.62	-120.29	404.59	61.38	44.03	17.36	3.537	
3,100.00	3,051.96	3,097.30	3,060.28	9.48	8.95	8.95	8.95	-124.07	-127.88	427.55	59.65	41.73	17.92	3.328	
3,200.00	3,149.53	3,197.27	3,157.28	9.77	9.25	9.25	9.25	-122.42	-135.46	450.51	57.97	39.46	18.51	3.132	
3,300.00	3,247.10	3,297.25	3,254.28	10.07	9.56	9.56	9.56	-120.68	-143.05	473.47	56.33	37.23	19.10	2.949	
3,400.00	3,344.67	3,397.22	3,351.29	10.37	9.88	9.88	9.88	-118.83	-150.64	496.44	54.75	35.05	19.71	2.778	
3,500.00	3,442.24	3,497.19	3,448.29	10.67	10.19	10.19	10.19	-116.88	-158.22	519.40	53.23	32.91	20.33	2.619	
3,600.00	3,539.81	3,597.16	3,545.29	10.96	10.50	10.50	10.50	-114.81	-165.81	542.36	51.78	30.82	20.96	2.470	
3,700.00	3,637.39	3,697.13	3,642.29	11.26	10.82	10.82	10.82	-112.63	-173.40	565.32	50.40	28.79	21.61	2.333	
3,800.00	3,734.96	3,797.10	3,739.30	11.56	11.14	11.14	11.14	-110.32	-180.98	588.28	49.09	26.83	22.26	2.205	
3,900.00	3,832.53	3,897.07	3,836.30	11.86	11.46	11.46	11.46	-107.90	-188.57	611.25	47.87	24.94	22.93	2.088	
4,000.00	3,930.10	3,997.05	3,933.30	12.16	11.78	11.78	11.78	-105.35	-196.16	634.21	46.74	23.13	23.61	1.980	Collision Risk Procedures Req.
4,100.00	4,027.67	4,097.02	4,030.30	12.46	12.10	12.10	12.10	-102.69	-203.74	657.17	45.71	21.41	24.29	1.882	Collision Risk Procedures Req.
4,200.00	4,125.24	4,196.99	4,127.31	12.76	12.42	12.42	12.42	-99.90	-211.33	680.13	44.78	19.80	24.98	1.793	Collision Risk Procedures Req.
4,300.00	4,222.81	4,296.96	4,224.31	13.06	12.75	12.75	12.75	-97.01	-218.92	703.09	43.96	18.29	25.66	1.713	Collision Risk Procedures Req.
4,400.00	4,320.38	4,396.93	4,321.31	13.36	13.07	13.07	13.07	-94.01	-226.50	726.06	43.25	16.91	26.34	1.642	Collision Risk Procedures Req.
4,500.00	4,417.95	4,496.90	4,418.31	13.66	13.39	13.39	13.39	-90.93	-234.09	749.02	42.67	15.65	27.02	1.579	Collision Risk Procedures Req.
4,600.00	4,515.52	4,596.87	4,515.32	13.97	13.72	13.72	13.72	-87.76	-241.68	771.98	42.21	14.54	27.67	1.525	Collision Risk Procedures Req.
4,700.00	4,613.09	4,696.85	4,612.32	14.27	14.04	14.04	14.04	-84.54	-249.26	794.94	41.89	13.58	28.31	1.480	Collision Avoidance Req.
4,800.00	4,710.66	4,796.82	4,709.32	14.57	14.37	14.37	14.37	-81.28	-256.85	817.90	41.70	12.77	28.93	1.442	Collision Avoidance Req.
4,889.27	4,797.76	4,886.07	4,795.92	14.84	14.66	14.66	14.66	-78.35	-263.62	838.40	41.64	12.19	29.45	1.414	Collision Avoidance Req.
4,900.00	4,808.23	4,896.79	4,806.32	14.87	14.70	14.70	14.70	-78.00	-264.44	840.87	41.64	12.13	29.52	1.411	Collision Avoidance Req.

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 218H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)

Offset Site Error: 0.00 usft

Offset Well Error: 0.50 usft

Reference		Offset		Semi Major Axis		Highside Toolface (")	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,000.00	4,905.80	4,996.76	4,903.33	15.17	15.02	-74.72	-272.02	863.83	41.73	11.65	30.07	1.387	Collision Avoidance Req.
5,100.00	5,003.37	5,096.73	5,000.33	15.47	15.35	-71.47	-279.61	886.79	41.95	11.34	30.60	1.371	Collision Avoidance Req.
5,200.00	5,100.94	5,196.70	5,097.33	15.78	15.68	-68.26	-287.20	909.75	42.30	11.20	31.10	1.360	Collision Avoidance Req., ES
5,300.00	5,198.51	5,296.68	5,194.33	16.08	16.01	-65.11	-294.78	932.71	42.78	11.22	31.56	1.355	Collision Avoidance Req., SF
5,400.00	5,296.08	5,396.65	5,291.34	16.38	16.34	-62.04	-302.37	955.68	43.39	11.39	32.00	1.356	Collision Avoidance Req.
5,500.00	5,393.65	5,496.62	5,388.34	16.69	16.67	-59.06	-309.96	978.64	44.12	11.71	32.41	1.361	Collision Avoidance Req.
5,600.00	5,491.24	5,596.59	5,485.34	16.97	17.00	-56.08	-317.54	1,001.60	45.03	12.26	32.77	1.374	Collision Avoidance Req.
5,700.00	5,589.24	5,696.49	5,582.27	17.25	17.33	-51.35	-325.12	1,024.55	47.25	14.30	32.95	1.434	Collision Avoidance Req.
5,800.00	5,687.73	5,796.24	5,679.06	17.50	17.66	-44.97	-332.69	1,047.46	51.58	18.69	32.89	1.568	Collision Risk Procedures Req.
5,900.00	5,786.63	5,896.62	5,776.63	17.73	17.96	-38.41	-340.10	1,069.88	57.97	25.24	32.72	1.771	Collision Risk Procedures Req.
6,000.00	5,885.89	5,997.52	5,875.26	17.92	18.26	-33.18	-346.76	1,090.04	65.06	32.40	32.66	1.992	Collision Risk Procedures Req.
6,100.00	5,985.43	6,098.65	5,974.65	18.09	18.53	-29.04	-352.62	1,107.77	72.59	39.90	32.68	2.221	
6,200.00	6,085.19	6,200.04	6,074.75	18.23	18.77	-25.74	-357.66	1,123.03	80.41	47.66	32.75	2.455	
6,300.00	6,185.09	6,301.67	6,175.49	18.33	18.98	-23.07	-361.88	1,135.78	88.44	55.58	32.86	2.691	
6,400.00	6,285.07	6,403.54	6,276.79	18.42	19.16	-20.89	-365.26	1,146.01	96.60	63.63	32.97	2.930	
6,500.00	6,385.07	6,505.74	6,378.66	18.44	19.31	87.91	-367.79	1,153.69	103.96	70.96	33.00	3.150	
6,600.00	6,485.07	6,608.29	6,481.07	18.48	19.43	88.90	-369.48	1,158.79	108.89	75.82	33.07	3.293	
6,700.00	6,585.07	6,711.06	6,583.80	18.52	19.52	89.35	-370.30	1,161.28	111.30	78.16	33.14	3.358	
6,800.00	6,685.07	6,812.33	6,685.07	18.56	19.55	89.39	-370.39	1,161.55	111.56	78.38	33.17	3.363	
6,900.00	6,785.07	6,912.33	6,785.07	18.60	19.59	89.39	-370.39	1,161.55	111.56	78.31	33.25	3.355	
7,000.00	6,885.07	7,012.33	6,885.07	18.64	19.62	89.39	-370.39	1,161.55	111.56	78.23	33.32	3.348	
7,100.00	6,985.07	7,112.33	6,985.07	18.68	19.66	89.39	-370.39	1,161.55	111.56	78.16	33.40	3.340	
7,200.00	7,085.07	7,212.33	7,085.07	18.72	19.70	89.39	-370.39	1,161.55	111.56	78.08	33.48	3.332	
7,300.00	7,185.07	7,312.33	7,185.07	18.76	19.74	89.39	-370.39	1,161.55	111.56	78.00	33.56	3.325	
7,400.00	7,285.07	7,412.33	7,285.07	18.80	19.78	89.39	-370.39	1,161.55	111.56	77.92	33.63	3.317	
7,500.00	7,385.07	7,512.33	7,385.07	18.85	19.82	89.39	-370.39	1,161.55	111.56	77.84	33.71	3.309	
7,600.00	7,485.07	7,612.33	7,485.07	18.89	19.86	89.39	-370.39	1,161.55	111.56	77.76	33.79	3.301	
7,700.00	7,585.07	7,712.33	7,585.07	18.93	19.90	89.39	-370.39	1,161.55	111.56	77.68	33.87	3.293	
7,800.00	7,685.07	7,812.33	7,685.07	18.97	19.94	89.39	-370.39	1,161.55	111.56	77.60	33.95	3.286	
7,900.00	7,785.07	7,912.33	7,785.07	19.01	19.98	89.39	-370.39	1,161.55	111.56	77.52	34.04	3.278	
8,000.00	7,885.07	8,012.33	7,885.07	19.06	20.02	89.39	-370.39	1,161.55	111.56	77.44	34.12	3.270	
8,100.00	7,985.07	8,112.33	7,985.07	19.10	20.06	89.39	-370.39	1,161.55	111.56	77.36	34.20	3.262	
8,200.00	8,085.07	8,212.33	8,085.07	19.14	20.10	89.39	-370.39	1,161.55	111.56	77.27	34.28	3.254	
8,300.00	8,185.07	8,312.33	8,185.07	19.19	20.14	89.39	-370.39	1,161.55	111.56	77.19	34.37	3.246	
8,400.00	8,285.07	8,412.33	8,285.07	19.23	20.18	89.39	-370.39	1,161.55	111.56	77.11	34.45	3.238	
8,500.00	8,385.07	8,512.33	8,385.07	19.27	20.22	89.39	-370.39	1,161.55	111.56	77.02	34.54	3.230	
8,600.00	8,485.07	8,612.33	8,485.07	19.32	20.27	89.39	-370.39	1,161.55	111.56	76.93	34.62	3.222	
8,700.00	8,585.07	8,712.33	8,585.07	19.36	20.31	89.39	-370.39	1,161.55	111.56	76.85	34.71	3.214	
8,800.00	8,685.07	8,812.33	8,685.07	19.41	20.35	89.39	-370.39	1,161.55	111.56	76.76	34.79	3.206	
8,900.00	8,785.07	8,912.33	8,785.07	19.45	20.39	89.39	-370.39	1,161.55	111.56	76.68	34.88	3.198	
9,000.00	8,885.07	9,012.33	8,885.07	19.50	20.44	89.39	-370.39	1,161.55	111.56	76.59	34.97	3.190	
9,100.00	8,985.07	9,112.33	8,985.07	19.54	20.48	89.39	-370.39	1,161.55	111.56	76.50	35.06	3.182	
9,200.00	9,085.07	9,212.33	9,085.07	19.59	20.52	89.39	-370.39	1,161.55	111.56	76.41	35.15	3.174	
9,300.00	9,185.07	9,312.33	9,185.07	19.63	20.57	89.39	-370.39	1,161.55	111.56	76.32	35.24	3.166	
9,400.00	9,285.07	9,412.33	9,285.07	19.68	20.61	89.39	-370.39	1,161.55	111.56	76.23	35.32	3.158	
9,500.00	9,385.07	9,512.33	9,385.07	19.73	20.66	89.39	-370.39	1,161.55	111.56	76.14	35.42	3.150	
9,600.00	9,485.07	9,612.33	9,485.07	19.77	20.70	89.39	-370.39	1,161.55	111.56	76.05	35.51	3.142	
9,700.00	9,585.07	9,712.33	9,585.07	19.82	20.75	89.39	-370.39	1,161.55	111.56	75.96	35.60	3.134	
9,800.00	9,685.07	9,812.33	9,685.07	19.87	20.79	89.39	-370.39	1,161.55	111.56	75.87	35.69	3.126	
9,900.00	9,785.07	9,912.33	9,785.07	19.91	20.84	89.39	-370.39	1,161.55	111.56	75.77	35.78	3.118	
10,000.00	9,885.07	10,012.33	9,885.07	19.96	20.88	89.39	-370.39	1,161.55	111.56	75.68	35.87	3.110	
10,100.00	9,985.07	10,112.33	9,985.07	20.01	20.93	89.39	-370.39	1,161.55	111.56	75.59	35.97	3.102	

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

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Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 218H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)

Offset Site Error: 0.00 usft

Offset Well Error: 0.50 usft

Reference		Offset		Semi Major Axis		Highside Toolface (")	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
10,200.00	10,085.07	10,212.33	10,085.07	20.06	20.97	89.39	-370.39	1,161.55	111.56	75.49	36.06	3.093	
10,300.00	10,185.07	10,312.33	10,185.07	20.10	21.02	89.39	-370.39	1,161.55	111.56	75.40	36.16	3.085	
10,400.00	10,285.07	10,412.33	10,285.07	20.15	21.07	89.39	-370.39	1,161.55	111.56	75.31	36.25	3.077	
10,500.00	10,385.07	10,512.33	10,385.07	20.20	21.11	89.39	-370.39	1,161.55	111.56	75.21	36.35	3.069	
10,600.00	10,485.07	10,612.33	10,485.07	20.25	21.16	89.39	-370.39	1,161.55	111.56	75.11	36.44	3.061	
10,700.00	10,585.07	10,712.33	10,585.07	20.30	21.21	89.39	-370.39	1,161.55	111.56	75.02	36.54	3.053	
10,800.00	10,685.07	10,812.33	10,685.07	20.35	21.25	89.39	-370.39	1,161.55	111.56	74.92	36.64	3.045	
10,900.00	10,785.07	10,912.33	10,785.07	20.40	21.30	89.39	-370.39	1,161.55	111.56	74.82	36.73	3.037	
11,000.00	10,885.07	11,012.33	10,885.07	20.45	21.35	89.39	-370.39	1,161.55	111.56	74.73	36.83	3.029	
11,100.00	10,985.07	11,112.33	10,985.07	20.50	21.40	89.39	-370.39	1,161.55	111.56	74.63	36.93	3.021	
11,200.00	11,084.72	11,211.98	11,084.72	20.59	21.44	-97.88	-370.39	1,161.55	112.30	75.03	37.27	3.013	
11,300.00	11,181.66	11,308.92	11,181.66	20.75	21.49	-108.61	-370.39	1,161.55	118.05	79.57	38.49	3.067	
11,400.00	11,272.97	11,400.22	11,272.97	20.95	21.53	-122.22	-370.39	1,161.55	137.04	96.61	40.42	3.390	
11,500.00	11,355.85	11,483.11	11,355.85	21.20	21.57	-133.53	-370.39	1,161.55	175.51	133.44	42.07	4.172	
11,600.00	11,427.81	11,555.07	11,427.81	21.52	21.61	-140.47	-370.39	1,161.55	233.26	190.25	43.00	5.424	
11,700.00	11,486.64	11,613.90	11,486.64	21.92	21.64	-142.99	-370.39	1,161.55	306.62	263.16	43.46	7.055	
11,800.00	11,530.57	11,657.83	11,530.57	22.42	21.66	-140.54	-370.39	1,161.55	391.56	347.87	43.69	8.963	
11,900.00	11,558.25	11,685.51	11,558.25	23.01	21.67	-129.20	-370.39	1,161.55	484.33	440.53	43.80	11.057	
12,000.00	11,568.85	11,696.11	11,568.85	23.68	21.68	-95.59	-370.39	1,161.55	581.44	537.58	43.86	13.258	
12,100.00	11,569.43	11,696.69	11,569.43	24.45	21.68	-91.53	-370.39	1,161.55	679.60	635.72	43.88	15.488	
12,200.00	11,569.96	11,697.22	11,569.96	25.29	21.68	-91.47	-370.39	1,161.55	777.64	733.75	43.89	17.717	
12,300.00	11,570.48	13,119.36	12,383.45	26.19	27.56	-168.64	-1,226.40	1,169.33	829.23	776.63	52.59	15.767	
12,400.00	11,571.01	13,219.36	12,383.98	27.12	28.45	-168.64	-1,326.40	1,170.24	829.23	776.42	52.81	15.703	
12,500.00	11,571.53	13,319.36	12,384.51	28.09	29.38	-168.64	-1,426.39	1,171.14	829.23	776.19	53.04	15.634	
12,600.00	11,572.06	13,419.36	12,385.03	29.09	30.34	-168.64	-1,526.39	1,172.05	829.23	775.94	53.29	15.560	
12,700.00	11,572.58	13,519.36	12,385.56	30.12	31.33	-168.64	-1,626.38	1,172.96	829.24	775.67	53.56	15.481	
12,800.00	11,573.11	13,619.36	12,386.08	31.17	32.34	-168.64	-1,726.38	1,173.87	829.24	775.39	53.85	15.398	
12,900.00	11,573.63	13,719.36	12,386.61	32.24	33.38	-168.64	-1,826.37	1,174.78	829.24	775.08	54.16	15.310	
13,000.00	11,574.16	13,819.36	12,387.14	33.33	34.44	-168.64	-1,926.37	1,175.69	829.24	774.76	54.49	15.219	
13,100.00	11,574.68	13,919.36	12,387.66	34.44	35.52	-168.64	-2,026.36	1,176.60	829.25	774.41	54.83	15.123	
13,200.00	11,575.21	14,019.36	12,388.19	35.57	36.61	-168.64	-2,126.36	1,177.50	829.25	774.05	55.20	15.024	
13,300.00	11,575.73	14,119.36	12,388.71	36.71	37.72	-168.64	-2,226.35	1,178.41	829.25	773.68	55.58	14.921	
13,400.00	11,576.25	14,219.36	12,389.24	37.87	38.85	-168.64	-2,326.34	1,179.32	829.25	773.28	55.97	14.816	
13,500.00	11,576.78	14,319.36	12,389.76	39.04	39.99	-168.64	-2,426.34	1,180.23	829.26	772.87	56.38	14.707	
13,600.00	11,577.30	14,419.36	12,390.29	40.22	41.14	-168.63	-2,526.33	1,181.14	829.26	772.45	56.81	14.596	
13,700.00	11,577.83	14,519.36	12,390.82	41.41	42.31	-168.63	-2,626.33	1,182.05	829.26	772.00	57.26	14.483	
13,800.00	11,578.35	14,619.36	12,391.34	42.61	43.48	-168.63	-2,726.32	1,182.96	829.26	771.55	57.72	14.368	
13,900.00	11,578.88	14,719.36	12,391.87	43.82	44.67	-168.63	-2,826.32	1,183.86	829.27	771.07	58.19	14.250	
14,000.00	11,579.40	14,819.36	12,392.39	45.04	45.87	-168.63	-2,926.31	1,184.77	829.27	770.59	58.68	14.132	
14,100.00	11,579.93	14,919.36	12,392.92	46.27	47.07	-168.63	-3,026.31	1,185.68	829.27	770.09	59.19	14.011	
14,200.00	11,580.45	15,019.36	12,393.45	47.51	48.28	-168.63	-3,126.30	1,186.59	829.27	769.57	59.70	13.890	
14,300.00	11,580.98	15,119.36	12,393.97	48.75	49.50	-168.63	-3,226.29	1,187.50	829.28	769.04	60.23	13.767	
14,400.00	11,581.50	15,219.36	12,394.50	49.99	50.73	-168.63	-3,326.29	1,188.41	829.28	768.50	60.78	13.644	
14,500.00	11,582.03	15,319.36	12,395.02	51.25	51.97	-168.63	-3,426.28	1,189.31	829.28	767.94	61.34	13.520	
14,600.00	11,582.55	15,419.36	12,395.55	52.51	53.21	-168.63	-3,526.28	1,190.22	829.28	767.38	61.91	13.396	
14,700.00	11,583.08	15,519.36	12,396.08	53.77	54.45	-168.63	-3,626.27	1,191.13	829.29	766.80	62.49	13.271	
14,800.00	11,583.60	15,619.36	12,396.60	55.04	55.71	-168.63	-3,726.27	1,192.04	829.29	766.21	63.08	13.146	
14,900.00	11,584.13	15,719.36	12,397.13	56.31	56.96	-168.63	-3,826.26	1,192.95	829.29	765.60	63.69	13.021	
15,000.00	11,584.65	15,819.36	12,397.65	57.59	58.22	-168.63	-3,926.26	1,193.86	829.29	764.99	64.30	12.896	
15,100.00	11,585.18	15,919.36	12,398.18	58.87	59.49	-168.63	-4,026.25	1,194.77	829.30	764.36	64.93	12.772	
15,200.00	11,585.70	16,019.36	12,398.70	60.16	60.76	-168.63	-4,126.25	1,195.67	829.30	763.73	65.57	12.648	
15,300.00	11,586.23	16,119.36	12,399.23	61.45	62.04	-168.63	-4,226.24	1,196.58	829.30	763.08	66.22	12.524	

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

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Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 218H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:		Offset Site Error:	0.00 usft
												Offset Well Error:	0.50 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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
15,400.00	11,586.75	16,219.36	12,399.76	62.74	63.31	-168.63	-4,326.23	1,197.49	829.30	762.43	66.88	12.401	
15,500.00	11,587.28	16,319.36	12,400.28	64.03	64.60	-168.63	-4,426.23	1,198.40	829.30	761.76	67.54	12.278	
15,600.00	11,587.80	16,419.36	12,400.81	65.33	65.88	-168.63	-4,526.22	1,199.31	829.31	761.09	68.22	12.156	
15,700.00	11,588.33	16,519.36	12,401.33	66.63	67.17	-168.63	-4,626.22	1,200.22	829.31	760.40	68.91	12.035	
15,800.00	11,588.85	16,619.36	12,401.86	67.93	68.46	-168.62	-4,726.21	1,201.13	829.31	759.71	69.60	11.915	
15,900.00	11,589.37	16,719.36	12,402.39	69.24	69.75	-168.62	-4,826.21	1,202.03	829.31	759.01	70.30	11.796	
16,000.00	11,589.90	16,819.36	12,402.91	70.55	71.05	-168.62	-4,926.20	1,202.94	829.32	758.30	71.02	11.678	
16,100.00	11,590.42	16,919.36	12,403.44	71.86	72.35	-168.62	-5,026.20	1,203.85	829.32	757.58	71.74	11.561	
16,200.00	11,590.95	17,019.36	12,403.96	73.17	73.65	-168.62	-5,126.19	1,204.76	829.32	756.86	72.46	11.445	
16,300.00	11,591.47	17,119.36	12,404.49	74.48	74.96	-168.62	-5,226.18	1,205.67	829.32	756.13	73.20	11.330	
16,400.00	11,592.00	17,219.36	12,405.01	75.80	76.26	-168.62	-5,326.18	1,206.58	829.33	755.39	73.94	11.216	
16,500.00	11,592.52	17,319.36	12,405.54	77.12	77.57	-168.62	-5,426.17	1,207.48	829.33	754.64	74.69	11.103	
16,600.00	11,593.05	17,419.36	12,406.07	78.44	78.88	-168.62	-5,526.17	1,208.39	829.33	753.88	75.45	10.992	
16,700.00	11,593.57	17,519.36	12,406.59	79.76	80.19	-168.62	-5,626.16	1,209.30	829.33	753.12	76.21	10.882	
16,800.00	11,594.10	17,619.36	12,407.12	81.08	81.51	-168.62	-5,726.16	1,210.21	829.34	752.36	76.98	10.773	
16,900.00	11,594.62	17,719.36	12,407.64	82.41	82.82	-168.62	-5,826.15	1,211.12	829.34	751.58	77.76	10.666	
17,000.00	11,595.15	17,819.36	12,408.17	83.73	84.14	-168.62	-5,926.15	1,212.03	829.34	750.80	78.54	10.559	
17,100.00	11,595.67	17,919.36	12,408.70	85.06	85.46	-168.62	-6,026.14	1,212.94	829.34	750.02	79.33	10.455	
17,200.00	11,596.20	18,019.36	12,409.22	86.39	86.78	-168.62	-6,126.14	1,213.84	829.35	749.22	80.12	10.351	
17,300.00	11,596.72	18,119.36	12,409.75	87.72	88.10	-168.62	-6,226.13	1,214.75	829.35	748.43	80.92	10.249	
17,400.00	11,597.25	18,219.36	12,410.27	89.05	89.43	-168.62	-6,326.12	1,215.66	829.35	747.62	81.73	10.148	
17,500.00	11,597.77	18,319.36	12,410.80	90.38	90.75	-168.62	-6,426.12	1,216.57	829.35	746.82	82.54	10.048	
17,600.00	11,598.30	18,419.36	12,411.32	91.71	92.08	-168.62	-6,526.11	1,217.48	829.36	746.00	83.35	9.950	
17,700.00	11,598.82	18,519.36	12,411.85	93.05	93.41	-168.62	-6,626.11	1,218.39	829.36	745.18	84.17	9.853	
17,800.00	11,599.35	18,619.36	12,412.38	94.38	94.73	-168.62	-6,726.10	1,219.30	829.36	744.36	85.00	9.757	
17,900.00	11,599.87	18,719.36	12,412.90	95.72	96.06	-168.61	-6,826.10	1,220.20	829.36	743.53	85.83	9.663	
18,000.00	11,600.40	18,819.36	12,413.43	97.05	97.39	-168.61	-6,926.09	1,221.11	829.37	742.70	86.67	9.570	
18,100.00	11,600.92	18,919.36	12,413.95	98.39	98.73	-168.61	-7,026.09	1,222.02	829.37	741.86	87.50	9.478	
18,200.00	11,601.44	19,019.36	12,414.48	99.73	100.06	-168.61	-7,126.08	1,222.93	829.37	741.02	88.35	9.388	
18,300.00	11,601.97	19,119.36	12,415.01	101.07	101.39	-168.61	-7,226.07	1,223.84	829.37	740.18	89.20	9.298	
18,400.00	11,602.49	19,219.36	12,415.53	102.41	102.73	-168.61	-7,326.07	1,224.75	829.38	739.33	90.05	9.210	
18,500.00	11,603.02	19,319.36	12,416.06	103.75	104.06	-168.61	-7,426.06	1,225.66	829.38	738.47	90.90	9.124	
18,600.00	11,603.54	19,419.36	12,416.58	105.09	105.40	-168.61	-7,526.06	1,226.56	829.38	737.62	91.76	9.038	
18,700.00	11,604.07	19,519.36	12,417.11	106.44	106.74	-168.61	-7,626.05	1,227.47	829.38	736.76	92.63	8.954	
18,800.00	11,604.59	19,619.36	12,417.64	107.78	108.07	-168.61	-7,726.05	1,228.38	829.38	735.89	93.49	8.871	
18,900.00	11,605.12	19,719.36	12,418.16	109.12	109.41	-168.61	-7,826.04	1,229.29	829.39	735.02	94.36	8.789	
19,000.00	11,605.64	19,819.36	12,418.69	110.47	110.75	-168.61	-7,926.04	1,230.20	829.39	734.15	95.24	8.709	
19,100.00	11,606.17	19,919.36	12,419.21	111.81	112.09	-168.61	-8,026.03	1,231.11	829.39	733.28	96.12	8.629	
19,200.00	11,606.69	20,019.36	12,419.74	113.16	113.43	-168.61	-8,126.02	1,232.01	829.39	732.40	97.00	8.551	
19,300.00	11,607.22	20,119.36	12,420.26	114.50	114.77	-168.61	-8,226.02	1,232.92	829.40	731.52	97.88	8.474	
19,400.00	11,607.74	20,219.36	12,420.79	115.85	116.12	-168.61	-8,326.01	1,233.83	829.40	730.63	98.77	8.397	
19,500.00	11,608.27	20,319.36	12,421.32	117.20	117.46	-168.61	-8,426.01	1,234.74	829.40	729.74	99.66	8.322	
19,600.00	11,608.79	20,419.36	12,421.84	118.54	118.80	-168.61	-8,526.00	1,235.65	829.40	728.85	100.55	8.249	
19,700.00	11,609.32	20,519.36	12,422.37	119.89	120.15	-168.61	-8,626.00	1,236.56	829.41	727.96	101.45	8.176	
19,800.00	11,609.84	20,619.36	12,422.89	121.24	121.49	-168.61	-8,725.99	1,237.47	829.41	727.06	102.35	8.104	
19,900.00	11,610.37	20,719.36	12,423.42	122.59	122.84	-168.61	-8,825.99	1,238.37	829.41	726.16	103.25	8.033	
20,000.00	11,610.89	20,819.36	12,423.95	123.94	124.18	-168.61	-8,925.98	1,239.28	829.41	725.26	104.15	7.964	
20,100.00	11,611.42	20,919.36	12,424.47	125.29	125.53	-168.60	-9,025.98	1,240.19	829.42	724.36	105.06	7.895	
20,200.00	11,611.94	21,019.36	12,425.00	126.64	126.87	-168.60	-9,125.97	1,241.10	829.42	723.45	105.97	7.827	
20,300.00	11,612.47	21,119.36	12,425.52	127.99	128.22	-168.60	-9,225.96	1,242.01	829.42	722.54	106.88	7.760	
20,400.00	11,612.99	21,219.36	12,426.05	129.34	129.57	-168.60	-9,325.96	1,242.92	829.42	721.63	107.79	7.695	
20,500.00	11,613.52	21,319.36	12,426.57	130.69	130.92	-168.60	-9,425.95	1,243.83	829.43	720.72	108.71	7.630	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 218H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)

Offset Site Error: 0.00 usft

Offset Well Error: 0.50 usft

Reference		Offset		Semi Major Axis		Highside Toolface (")	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
20,600.00	11,614.04	21,419.36	12,427.10	132.04	132.26	-168.60	-9,525.95	1,244.73	829.43	719.80	109.63	7.566	
20,700.00	11,614.56	21,519.36	12,427.63	133.40	133.61	-168.60	-9,625.94	1,245.64	829.43	718.88	110.55	7.503	
20,800.00	11,615.09	21,619.36	12,428.15	134.75	134.96	-168.60	-9,725.94	1,246.55	829.43	717.96	111.47	7.441	
20,900.00	11,615.61	21,719.36	12,428.68	136.10	136.31	-168.60	-9,825.93	1,247.46	829.44	717.04	112.40	7.380	
21,000.00	11,616.14	21,819.36	12,429.20	137.45	137.66	-168.60	-9,925.93	1,248.37	829.44	716.12	113.32	7.319	
21,100.00	11,616.66	21,919.36	12,429.73	138.81	139.01	-168.60	-10,025.92	1,249.28	829.44	715.19	114.25	7.260	
21,200.00	11,617.19	22,019.36	12,430.26	140.16	140.36	-168.60	-10,125.91	1,250.19	829.44	714.26	115.18	7.201	
21,300.00	11,617.71	22,119.36	12,430.78	141.52	141.71	-168.60	-10,225.91	1,251.09	829.45	713.33	116.12	7.143	
21,400.00	11,618.24	22,219.36	12,431.31	142.87	143.07	-168.60	-10,325.90	1,252.00	829.45	712.40	117.05	7.086	
21,500.00	11,618.76	22,319.36	12,431.83	144.23	144.42	-168.60	-10,425.90	1,252.91	829.45	711.46	117.99	7.030	
21,600.00	11,619.29	22,419.36	12,432.36	145.58	145.77	-168.60	-10,525.89	1,253.82	829.45	710.53	118.93	6.975	
21,700.00	11,619.81	22,519.36	12,432.88	146.94	147.12	-168.60	-10,625.89	1,254.73	829.46	709.59	119.87	6.920	
21,800.00	11,620.34	22,619.36	12,433.41	148.29	148.47	-168.60	-10,725.88	1,255.64	829.46	708.65	120.81	6.866	
21,900.00	11,620.86	22,719.36	12,433.94	149.65	149.83	-168.60	-10,825.88	1,256.54	829.46	707.71	121.75	6.813	
21,945.36	11,621.10	22,764.72	12,434.18	150.26	150.44	-168.60	-10,871.23	1,256.96	829.46	707.28	122.18	6.789	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 223H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:		Offset Site Error:	0.00 usft
												Offset Well Error:	0.50 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
0.00	0.00	2.00	0.00	0.50	0.50	6.07	235.00	25.00	236.33				
100.00	100.00	102.00	100.00	0.98	0.99	6.07	235.00	25.00	236.33	234.35	1.97	119.772	
200.00	200.00	202.00	200.00	1.56	1.57	6.07	235.00	25.00	236.33	233.20	3.13	75.490	
300.00	300.00	302.00	300.00	1.98	1.99	6.07	235.00	25.00	236.33	232.36	3.97	59.539	CC, ES
400.00	399.99	401.99	399.99	2.41	2.34	-124.18	235.00	25.00	237.06	232.37	4.68	50.601	
500.00	499.91	501.91	499.91	2.77	2.64	-124.93	235.00	25.00	239.29	233.98	5.31	45.086	
600.00	599.69	601.69	599.69	3.10	2.91	-126.15	235.00	25.00	243.09	237.22	5.88	41.371	
700.00	699.27	701.27	699.27	3.41	3.17	-127.78	235.00	25.00	248.61	242.20	6.41	38.793	
800.00	798.57	800.57	798.57	3.70	3.40	-129.77	235.00	25.00	256.01	249.09	6.92	37.009	
900.00	897.62	899.62	897.62	3.83	3.62	-132.01	235.00	25.00	265.07	257.79	7.28	36.395	
1,000.00	996.65	998.65	996.65	4.06	3.83	-134.16	235.00	25.00	274.63	266.89	7.74	35.487	
1,100.00	1,095.67	1,097.67	1,095.67	4.28	4.03	-136.16	235.00	25.00	284.54	276.37	8.18	34.789	
1,200.00	1,194.70	1,196.70	1,194.70	4.51	4.23	-138.02	235.00	25.00	294.79	286.17	8.62	34.198	
1,300.00	1,293.62	1,295.62	1,293.62	4.72	4.41	-132.58	235.00	25.00	305.25	296.22	9.03	33.792	
1,400.00	1,392.26	1,394.26	1,392.26	4.94	4.59	-128.62	235.00	25.00	316.00	306.55	9.45	33.438	
1,500.00	1,490.54	1,492.54	1,490.54	5.17	4.76	-126.19	235.00	25.00	327.29	317.42	9.86	33.179	
1,600.00	1,588.41	1,590.41	1,588.41	5.40	4.93	-124.96	235.00	25.00	339.38	329.10	10.28	33.022	
1,700.00	1,685.98	1,687.98	1,685.98	5.58	5.09	-127.37	235.00	25.00	352.44	341.79	10.65	33.102	
1,800.00	1,783.55	1,785.55	1,783.55	5.80	5.25	-130.06	235.00	25.00	366.35	355.31	11.05	33.164	
1,900.00	1,881.12	1,883.12	1,881.12	6.04	5.41	-132.55	235.00	25.00	381.02	369.58	11.44	33.306	
2,000.00	1,978.69	1,980.69	1,978.69	6.31	5.56	-134.85	235.00	25.00	396.35	384.53	11.83	33.512	
2,100.00	2,076.26	2,080.73	2,078.72	6.58	5.72	-137.15	234.38	24.42	412.05	399.84	12.20	33.766	
2,200.00	2,173.83	2,180.80	2,178.73	6.87	5.88	-139.62	231.87	22.09	427.71	415.16	12.55	34.085	
2,300.00	2,271.40	2,280.11	2,277.86	7.15	6.02	-142.21	227.48	18.01	443.57	430.68	12.88	34.427	
2,400.00	2,368.97	2,378.54	2,375.92	7.44	6.17	-144.92	221.28	12.23	459.85	446.63	13.21	34.801	
2,500.00	2,466.54	2,475.97	2,472.73	7.73	6.32	-147.71	213.32	4.83	476.79	463.26	13.54	35.218	
2,600.00	2,564.11	2,572.29	2,568.15	8.02	6.46	-150.56	203.67	-4.15	494.65	480.79	13.86	35.687	
2,700.00	2,661.68	2,667.40	2,662.00	8.31	6.61	-153.45	192.42	-14.62	513.64	499.46	14.18	36.216	
2,800.00	2,759.25	2,761.20	2,754.17	8.60	6.76	-156.34	179.66	-26.50	533.98	519.47	14.51	36.807	
2,900.00	2,856.82	2,854.40	2,845.38	8.89	6.89	-159.21	165.61	-39.56	555.83	540.99	14.84	37.457	
3,000.00	2,954.39	2,947.86	2,936.79	9.18	7.02	-161.90	151.39	-52.79	579.04	563.86	15.18	38.145	
3,100.00	3,051.96	3,041.32	3,028.21	9.48	7.14	-164.39	137.17	-66.03	603.47	587.94	15.53	38.858	
3,200.00	3,149.53	3,134.77	3,119.63	9.77	7.27	-166.70	122.95	-79.26	628.95	613.07	15.89	39.587	
3,300.00	3,247.10	3,228.23	3,211.04	10.07	7.41	-168.84	108.73	-92.49	655.38	639.13	16.25	40.322	
3,400.00	3,344.67	3,321.69	3,302.46	10.37	7.55	-170.81	94.50	-105.73	682.64	666.01	16.63	41.056	
3,500.00	3,442.24	3,415.15	3,393.87	10.67	7.69	-172.65	80.28	-118.96	710.64	693.63	17.01	41.781	
3,600.00	3,539.81	3,508.60	3,485.29	10.96	7.86	-174.34	66.06	-132.19	739.28	721.89	17.39	42.508	
3,700.00	3,637.39	3,602.06	3,576.71	11.26	8.05	-175.92	51.84	-145.42	768.51	750.73	17.78	43.213	
3,800.00	3,734.96	3,695.52	3,668.12	11.56	8.24	-177.38	37.62	-158.66	798.25	780.07	18.18	43.904	
3,900.00	3,832.53	3,788.97	3,759.54	11.86	8.45	-178.75	23.40	-171.89	828.46	809.87	18.58	44.578	
4,000.00	3,930.10	3,882.43	3,850.96	12.16	8.65	-179.99	9.17	-185.12	859.07	840.08	18.99	45.234	
4,100.00	4,027.67	3,975.89	3,942.37	12.46	8.86	-178.80	-5.05	-198.36	890.05	870.65	19.40	45.872	
4,200.00	4,125.24	4,069.35	4,033.79	12.76	9.08	-177.69	-19.27	-211.59	921.37	901.55	19.82	46.491	
4,300.00	4,222.81	4,162.80	4,125.20	13.06	9.30	-176.66	-33.49	-224.82	952.98	932.75	20.24	47.091	
4,400.00	4,320.38	4,256.26	4,216.62	13.36	9.52	-175.69	-47.71	-238.05	984.87	964.21	20.66	47.672	
4,500.00	4,417.95	4,349.72	4,308.04	13.66	9.74	-174.78	-61.93	-251.29	1,017.00	995.91	21.08	48.234	
4,600.00	4,515.52	4,443.18	4,399.45	13.96	9.97	-173.92	-76.16	-264.52	1,049.35	1,027.84	21.51	48.779	
4,700.00	4,613.09	4,536.63	4,490.87	14.27	10.20	-173.11	-90.38	-277.75	1,081.91	1,059.96	21.94	49.305	
4,800.00	4,710.66	4,630.09	4,582.28	14.57	10.43	-172.35	-104.60	-290.99	1,114.65	1,092.27	22.38	49.814	
4,900.00	4,808.23	4,723.55	4,673.70	14.87	10.66	-171.63	-118.82	-304.22	1,147.55	1,124.74	22.81	50.305	
5,000.00	4,905.80	4,817.01	4,765.12	15.17	10.90	-170.96	-133.04	-317.45	1,180.62	1,157.37	23.25	50.781	
5,100.00	5,003.37	4,910.46	4,856.53	15.47	11.14	-170.31	-147.26	-330.68	1,213.82	1,190.13	23.69	51.240	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 223H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)										Rule Assigned:				Offset Site Error:
														Offset Well Error:
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
5,200.00	5,100.94	5,003.92	4,947.95	15.78	11.38	169.70	-161.49	-343.92	1,247.16	1,223.03	24.13	51.684		
5,300.00	5,198.51	5,097.38	5,039.37	16.08	11.62	169.13	-175.71	-357.15	1,280.62	1,256.04	24.57	52.113		
5,400.00	5,296.08	5,190.84	5,130.78	16.38	11.86	168.58	-189.93	-370.38	1,314.18	1,289.16	25.02	52.528		
5,500.00	5,393.65	5,284.29	5,222.20	16.69	12.10	168.06	-204.15	-383.61	1,347.85	1,322.39	25.47	52.929		
5,600.00	5,491.24	5,377.78	5,313.65	16.97	12.35	167.59	-218.38	-396.85	1,381.52	1,355.63	25.89	53.359		
5,700.00	5,589.24	5,471.84	5,405.65	17.25	12.60	167.21	-232.69	-410.17	1,413.48	1,387.13	26.35	53.646		
5,800.00	5,687.73	5,566.61	5,498.35	17.50	12.85	166.82	-247.11	-423.59	1,443.10	1,416.30	26.80	53.846		
5,900.00	5,786.63	5,662.02	5,591.68	17.73	13.10	166.42	-261.63	-437.10	1,470.38	1,443.13	27.25	53.964		
6,000.00	5,885.89	5,758.01	5,685.57	17.92	13.36	166.01	-276.24	-450.69	1,495.31	1,467.62	27.69	54.006		
6,100.00	5,985.43	5,854.52	5,779.97	18.09	13.62	165.58	-290.92	-464.35	1,517.89	1,489.77	28.12	53.979		
6,200.00	6,085.19	5,951.47	5,874.80	18.23	13.88	165.13	-305.68	-478.08	1,538.11	1,509.57	28.54	53.891		
6,300.00	6,185.09	6,048.80	5,970.01	18.33	14.13	164.67	-320.49	-491.86	1,555.98	1,527.04	28.93	53.776		
6,400.00	6,285.07	6,180.20	6,098.92	18.42	14.46	164.04	-339.08	-509.16	1,570.54	1,541.10	29.44	53.338		
6,500.00	6,385.07	6,316.99	6,233.97	18.44	14.76	-89.40	-354.99	-523.96	1,581.29	1,551.44	29.85	52.981		
6,600.00	6,485.07	6,455.20	6,371.12	18.48	15.02	-89.85	-367.45	-535.56	1,589.65	1,559.44	30.21	52.613		
6,700.00	6,585.07	6,594.48	6,509.86	18.52	15.24	-90.17	-376.33	-543.82	1,595.60	1,565.06	30.54	52.246		
6,800.00	6,685.07	6,734.46	6,649.66	18.56	15.40	-90.36	-381.51	-548.64	1,599.07	1,568.25	30.81	51.896		
6,900.00	6,785.07	6,869.90	6,785.07	18.60	15.48	-90.41	-382.97	-550.00	1,600.04	1,569.06	30.98	51.641		
7,000.00	6,885.07	6,969.90	6,885.07	18.64	15.51	-90.41	-382.97	-550.00	1,600.04	1,568.99	31.05	51.526		
7,100.00	6,985.07	7,069.90	6,985.07	18.68	15.55	-90.41	-382.97	-550.00	1,600.04	1,568.91	31.13	51.395		
7,200.00	7,085.07	7,169.90	7,085.07	18.72	15.59	-90.41	-382.97	-550.00	1,600.04	1,568.83	31.21	51.263		
7,300.00	7,185.07	7,269.90	7,185.07	18.76	15.64	-90.41	-382.97	-550.00	1,600.04	1,568.75	31.29	51.131		
7,400.00	7,285.07	7,369.90	7,285.07	18.80	15.68	-90.41	-382.97	-550.00	1,600.04	1,568.67	31.37	50.998		
7,500.00	7,385.07	7,469.90	7,385.07	18.85	15.72	-90.41	-382.97	-550.00	1,600.04	1,568.58	31.46	50.865		
7,600.00	7,485.07	7,569.90	7,485.07	18.89	15.76	-90.41	-382.97	-550.00	1,600.04	1,568.50	31.54	50.732		
7,700.00	7,585.07	7,669.90	7,585.07	18.93	15.80	-90.41	-382.97	-550.00	1,600.04	1,568.42	31.62	50.599		
7,800.00	7,685.07	7,769.90	7,685.07	18.97	15.85	-90.41	-382.97	-550.00	1,600.04	1,568.33	31.71	50.465		
7,900.00	7,785.07	7,869.90	7,785.07	19.01	15.89	-90.41	-382.97	-550.00	1,600.04	1,568.25	31.79	50.331		
8,000.00	7,885.07	7,969.90	7,885.07	19.06	15.93	-90.41	-382.97	-550.00	1,600.04	1,568.17	31.88	50.197		
8,100.00	7,985.07	8,069.90	7,985.07	19.10	15.98	-90.41	-382.97	-550.00	1,600.04	1,568.08	31.96	50.062		
8,200.00	8,085.07	8,169.90	8,085.07	19.14	16.02	-90.41	-382.97	-550.00	1,600.04	1,567.99	32.05	49.927		
8,300.00	8,185.07	8,269.90	8,185.07	19.19	16.06	-90.41	-382.97	-550.00	1,600.04	1,567.91	32.13	49.792		
8,400.00	8,285.07	8,369.90	8,285.07	19.23	16.11	-90.41	-382.97	-550.00	1,600.04	1,567.82	32.22	49.657		
8,500.00	8,385.07	8,469.90	8,385.07	19.27	16.15	-90.41	-382.97	-550.00	1,600.04	1,567.73	32.31	49.522		
8,600.00	8,485.07	8,569.90	8,485.07	19.32	16.20	-90.41	-382.97	-550.00	1,600.04	1,567.64	32.40	49.386		
8,700.00	8,585.07	8,669.90	8,585.07	19.36	16.25	-90.41	-382.97	-550.00	1,600.04	1,567.55	32.49	49.250		
8,800.00	8,685.07	8,769.90	8,685.07	19.41	16.29	-90.41	-382.97	-550.00	1,600.04	1,567.46	32.58	49.115		
8,900.00	8,785.07	8,869.90	8,785.07	19.45	16.34	-90.41	-382.97	-550.00	1,600.04	1,567.37	32.67	48.979		
9,000.00	8,885.07	8,969.90	8,885.07	19.50	16.38	-90.41	-382.97	-550.00	1,600.04	1,567.28	32.76	48.843		
9,100.00	8,985.07	9,069.90	8,985.07	19.54	16.43	-90.41	-382.97	-550.00	1,600.04	1,567.19	32.85	48.707		
9,200.00	9,085.07	9,169.90	9,085.07	19.59	16.48	-90.41	-382.97	-550.00	1,600.04	1,567.10	32.94	48.571		
9,300.00	9,185.07	9,269.90	9,185.07	19.63	16.52	-90.41	-382.97	-550.00	1,600.04	1,567.01	33.04	48.435		
9,400.00	9,285.07	9,369.90	9,285.07	19.68	16.57	-90.41	-382.97	-550.00	1,600.04	1,566.91	33.13	48.298		
9,500.00	9,385.07	9,469.90	9,385.07	19.73	16.62	-90.41	-382.97	-550.00	1,600.04	1,566.82	33.22	48.162		
9,600.00	9,485.07	9,569.90	9,485.07	19.77	16.67	-90.41	-382.97	-550.00	1,600.04	1,566.72	33.32	48.026		
9,700.00	9,585.07	9,669.90	9,585.07	19.82	16.72	-90.41	-382.97	-550.00	1,600.04	1,566.63	33.41	47.890		
9,800.00	9,685.07	9,769.90	9,685.07	19.87	16.77	-90.41	-382.97	-550.00	1,600.04	1,566.53	33.51	47.754		
9,900.00	9,785.07	9,869.90	9,785.07	19.91	16.81	-90.41	-382.97	-550.00	1,600.04	1,566.44	33.60	47.617		
10,000.00	9,885.07	9,969.90	9,885.07	19.96	16.86	-90.41	-382.97	-550.00	1,600.04	1,566.34	33.70	47.481		
10,100.00	9,985.07	10,069.90	9,985.07	20.01	16.91	-90.41	-382.97	-550.00	1,600.04	1,566.25	33.80	47.345		
10,200.00	10,085.07	10,169.90	10,085.07	20.06	16.96	-90.41	-382.97	-550.00	1,600.04	1,566.15	33.89	47.209		
10,300.00	10,185.07	10,269.90	10,185.07	20.10	17.01	-90.41	-382.97	-550.00	1,600.04	1,566.05	33.99	47.073		

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

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Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 223H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:					Offset Well Error:		0.50 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
10,400.00	10,285.07	10,369.90	10,285.07	20.15	17.06	-90.41	-382.97	-550.00	1,600.04	1,565.95	34.09	46.938	
10,500.00	10,385.07	10,469.90	10,385.07	20.20	17.11	-90.41	-382.97	-550.00	1,600.04	1,565.85	34.19	46.802	
10,600.00	10,485.07	10,569.90	10,485.07	20.25	17.16	-90.41	-382.97	-550.00	1,600.04	1,565.75	34.29	46.666	
10,700.00	10,585.07	10,669.90	10,585.07	20.30	17.21	-90.41	-382.97	-550.00	1,600.04	1,565.65	34.39	46.531	
10,800.00	10,685.07	10,769.90	10,685.07	20.35	17.27	-90.41	-382.97	-550.00	1,600.04	1,565.55	34.49	46.395	
10,900.00	10,785.07	10,869.90	10,785.07	20.40	17.32	-90.41	-382.97	-550.00	1,600.04	1,565.45	34.59	46.260	
11,000.00	10,885.07	10,969.90	10,885.07	20.45	17.37	-90.41	-382.97	-550.00	1,600.04	1,565.35	34.69	46.125	
11,100.00	10,985.07	11,069.90	10,985.07	20.50	17.42	-90.41	-382.97	-550.00	1,600.04	1,565.25	34.79	45.990	
11,200.00	11,084.72	11,169.54	11,084.72	20.59	17.47	86.04	-382.97	-550.00	1,599.54	1,564.67	34.87	45.874	
11,300.00	11,181.66	11,266.49	11,181.66	20.75	17.52	87.02	-382.97	-550.00	1,598.04	1,563.05	34.99	45.670	
11,400.00	11,272.97	11,357.79	11,272.97	20.95	17.57	88.51	-382.97	-550.00	1,596.33	1,561.16	35.17	45.393	
11,486.59	11,345.32	11,430.15	11,345.32	21.17	17.61	90.00	-382.97	-550.00	1,595.62	1,560.26	35.37	45.115	
11,500.00	11,355.85	11,440.68	11,355.85	21.20	17.62	90.23	-382.97	-550.00	1,595.65	1,560.25	35.40	45.079	
11,600.00	11,427.81	11,512.63	11,427.81	21.52	17.65	91.83	-382.97	-550.00	1,597.51	1,561.83	35.67	44.782	
11,700.00	11,486.64	11,571.47	11,486.64	21.92	17.68	92.93	-382.97	-550.00	1,603.45	1,567.47	35.99	44.556	
11,800.00	11,530.57	11,615.40	11,530.57	22.42	17.71	93.20	-382.97	-550.00	1,614.78	1,578.45	36.32	44.458	
11,900.00	11,558.25	11,643.08	11,558.25	23.01	17.72	92.37	-382.97	-550.00	1,632.27	1,595.62	36.65	44.537	
12,000.00	11,568.85	11,653.68	11,568.85	23.68	17.73	90.30	-382.97	-550.00	1,656.04	1,619.09	36.95	44.821	
12,100.00	11,569.43	11,654.26	11,569.43	24.45	17.73	90.11	-382.97	-550.00	1,686.95	1,649.72	37.23	45.311	
12,200.00	11,569.96	11,654.78	11,569.96	25.29	17.73	90.14	-382.97	-550.00	1,726.31	1,688.82	37.49	46.051	
12,300.00	11,570.48	11,655.31	11,570.48	26.19	17.73	90.17	-382.97	-550.00	1,772.68	1,735.00	37.68	47.044	
12,400.00	11,571.01	11,655.83	11,571.01	27.12	17.73	90.19	-382.97	-550.00	1,823.47	1,785.62	37.85	48.175	
12,500.00	11,571.53	11,656.36	11,571.53	28.09	17.73	90.21	-382.97	-550.00	1,878.21	1,840.22	37.99	49.433	
12,600.00	11,572.06	13,794.36	12,799.05	29.09	28.79	129.55	-1,539.22	-477.06	1,926.96	1,871.01	55.95	34.440	
12,700.00	11,572.58	13,894.36	12,799.58	30.12	29.94	129.55	-1,639.21	-476.15	1,926.96	1,869.56	57.40	33.573	
12,800.00	11,573.11	13,994.36	12,800.10	31.17	31.11	129.55	-1,739.21	-475.24	1,926.95	1,868.06	58.89	32.723	
12,900.00	11,573.63	14,094.36	12,800.63	32.24	32.30	129.55	-1,839.20	-474.33	1,926.94	1,866.52	60.42	31.892	
13,000.00	11,574.16	14,194.36	12,801.15	33.33	33.49	129.55	-1,939.20	-473.42	1,926.94	1,864.95	61.99	31.083	
13,100.00	11,574.68	14,294.36	12,801.68	34.44	34.71	129.55	-2,039.19	-472.50	1,926.93	1,863.33	63.60	30.297	
13,200.00	11,575.21	14,394.36	12,802.21	35.57	35.93	129.55	-2,139.19	-471.59	1,926.93	1,861.68	65.25	29.534	
13,300.00	11,575.73	14,494.36	12,802.73	36.71	37.16	129.55	-2,239.18	-470.68	1,926.92	1,860.00	66.92	28.795	
13,400.00	11,576.25	14,594.36	12,803.26	37.87	38.40	129.55	-2,339.17	-469.77	1,926.91	1,858.29	68.62	28.080	
13,500.00	11,576.78	14,694.36	12,803.78	39.04	39.65	129.55	-2,439.17	-468.86	1,926.91	1,856.56	70.35	27.389	
13,600.00	11,577.30	14,794.36	12,804.31	40.22	40.91	129.55	-2,539.16	-467.95	1,926.90	1,854.79	72.11	26.722	
13,700.00	11,577.83	14,894.36	12,804.84	41.41	42.17	129.55	-2,639.16	-467.04	1,926.90	1,853.01	73.89	26.079	
13,800.00	11,578.35	14,994.36	12,805.36	42.61	43.44	129.55	-2,739.15	-466.13	1,926.89	1,851.20	75.69	25.459	
13,900.00	11,578.88	15,094.36	12,805.89	43.82	44.72	129.55	-2,839.15	-465.22	1,926.88	1,849.38	77.51	24.861	
14,000.00	11,579.40	15,194.36	12,806.41	45.04	46.00	129.55	-2,939.14	-464.31	1,926.88	1,847.53	79.35	24.284	
14,100.00	11,579.93	15,294.36	12,806.94	46.27	47.28	129.55	-3,039.14	-463.40	1,926.87	1,845.67	81.20	23.729	
14,200.00	11,580.45	15,394.36	12,807.47	47.51	48.57	129.55	-3,139.13	-462.49	1,926.87	1,843.79	83.08	23.194	
14,300.00	11,580.98	15,494.36	12,807.99	48.75	49.87	129.55	-3,239.12	-461.58	1,926.86	1,841.90	84.96	22.679	
14,400.00	11,581.50	15,594.36	12,808.52	49.99	51.16	129.55	-3,339.12	-460.67	1,926.85	1,839.99	86.87	22.182	
14,500.00	11,582.03	15,694.36	12,809.04	51.25	52.47	129.55	-3,439.11	-459.76	1,926.85	1,838.07	88.78	21.703	
14,600.00	11,582.55	15,794.36	12,809.57	52.51	53.77	129.55	-3,539.11	-458.85	1,926.84	1,836.13	90.71	21.242	
14,700.00	11,583.08	15,894.36	12,810.10	53.77	55.08	129.55	-3,639.10	-457.94	1,926.84	1,834.19	92.65	20.797	
14,800.00	11,583.60	15,994.36	12,810.62	55.04	56.39	129.55	-3,739.10	-457.03	1,926.83	1,832.23	94.60	20.368	
14,900.00	11,584.13	16,094.36	12,811.15	56.31	57.70	129.55	-3,839.09	-456.12	1,926.83	1,830.27	96.56	19.955	
15,000.00	11,584.65	16,194.36	12,811.67	57.59	59.02	129.56	-3,939.09	-455.21	1,926.82	1,828.29	98.53	19.556	
15,100.00	11,585.18	16,294.36	12,812.20	58.87	60.34	129.56	-4,039.08	-454.30	1,926.81	1,826.30	100.51	19.171	
15,200.00	11,585.70	16,394.36	12,812.73	60.16	61.66	129.56	-4,139.07	-453.39	1,926.81	1,824.31	102.50	18.799	
15,300.00	11,586.23	16,494.36	12,813.25	61.45	62.98	129.56	-4,239.07	-452.48	1,926.80	1,822.31	104.49	18.439	
15,400.00	11,586.75	16,594.36	12,813.78	62.74	64.30	129.56	-4,339.06	-451.57	1,926.80	1,820.30	106.50	18.092	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 223H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:				Offset Well Error:		0.50 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
15,500.00	11,587.28	16,694.36	12,814.30	64.03	65.63	129.56	-4,439.06	-450.66	1,926.79	1,818.28	108.51	17.757	
15,600.00	11,587.80	16,794.36	12,814.83	65.33	66.96	129.56	-4,539.05	-449.75	1,926.78	1,816.26	110.53	17.433	
15,700.00	11,588.33	16,894.36	12,815.36	66.63	68.29	129.56	-4,639.05	-448.84	1,926.78	1,814.23	112.55	17.119	
15,800.00	11,588.85	16,994.36	12,815.88	67.93	69.62	129.56	-4,739.04	-447.93	1,926.77	1,812.19	114.58	16.816	
15,900.00	11,589.37	17,094.36	12,816.41	69.24	70.95	129.56	-4,839.04	-447.02	1,926.77	1,810.15	116.62	16.522	
16,000.00	11,589.90	17,194.36	12,816.93	70.55	72.28	129.56	-4,939.03	-446.11	1,926.76	1,808.10	118.66	16.238	
16,100.00	11,590.42	17,294.36	12,817.46	71.86	73.62	129.56	-5,039.02	-445.20	1,926.75	1,806.05	120.71	15.962	
16,200.00	11,590.95	17,394.36	12,817.99	73.17	74.95	129.56	-5,139.02	-444.29	1,926.75	1,803.99	122.76	15.696	
16,300.00	11,591.47	17,494.36	12,818.51	74.48	76.29	129.56	-5,239.01	-443.38	1,926.74	1,801.93	124.81	15.437	
16,400.00	11,592.00	17,594.36	12,819.04	75.80	77.63	129.56	-5,339.01	-442.47	1,926.74	1,799.86	126.87	15.186	
16,500.00	11,592.52	17,694.36	12,819.56	77.12	78.97	129.56	-5,439.00	-441.56	1,926.73	1,797.79	128.94	14.943	
16,600.00	11,593.05	17,794.36	12,820.09	78.44	80.31	129.56	-5,539.00	-440.65	1,926.72	1,795.71	131.01	14.707	
16,700.00	11,593.57	17,894.36	12,820.62	79.76	81.65	129.56	-5,638.99	-439.74	1,926.72	1,793.64	133.08	14.478	
16,800.00	11,594.10	17,994.36	12,821.14	81.08	82.99	129.56	-5,738.99	-438.83	1,926.71	1,791.55	135.16	14.255	
16,900.00	11,594.62	18,094.36	12,821.67	82.41	84.34	129.56	-5,838.98	-437.92	1,926.71	1,789.47	137.24	14.039	
17,000.00	11,595.15	18,194.36	12,822.19	83.73	85.68	129.56	-5,938.98	-437.01	1,926.70	1,787.38	139.32	13.829	
17,100.00	11,595.67	18,294.36	12,822.72	85.06	87.03	129.56	-6,038.97	-436.10	1,926.69	1,785.28	141.41	13.625	
17,200.00	11,596.20	18,394.36	12,823.25	86.39	88.37	129.56	-6,138.96	-435.18	1,926.69	1,783.19	143.50	13.426	
17,300.00	11,596.72	18,494.36	12,823.77	87.72	89.72	129.56	-6,238.96	-434.27	1,926.68	1,781.09	145.59	13.233	
17,400.00	11,597.25	18,594.36	12,824.30	89.05	91.06	129.56	-6,338.95	-433.36	1,926.68	1,778.99	147.69	13.045	
17,500.00	11,597.77	18,694.36	12,824.82	90.38	92.41	129.56	-6,438.95	-432.45	1,926.67	1,776.88	149.79	12.863	
17,600.00	11,598.30	18,794.36	12,825.35	91.71	93.76	129.56	-6,538.94	-431.54	1,926.66	1,774.78	151.89	12.685	
17,700.00	11,598.82	18,894.36	12,825.88	93.05	95.11	129.56	-6,638.94	-430.63	1,926.66	1,772.67	153.99	12.511	
17,800.00	11,599.35	18,994.36	12,826.40	94.38	96.46	129.56	-6,738.93	-429.72	1,926.65	1,770.55	156.10	12.343	
17,900.00	11,599.87	19,094.36	12,826.93	95.72	97.81	129.56	-6,838.93	-428.81	1,926.65	1,768.44	158.21	12.178	
18,000.00	11,600.40	19,194.36	12,827.45	97.05	99.16	129.56	-6,938.92	-427.90	1,926.64	1,766.32	160.32	12.018	
18,100.00	11,600.92	19,294.36	12,827.98	98.39	100.51	129.56	-7,038.91	-426.99	1,926.63	1,764.20	162.43	11.861	
18,200.00	11,601.44	19,394.36	12,828.51	99.73	101.86	129.56	-7,138.91	-426.08	1,926.63	1,762.08	164.54	11.709	
18,300.00	11,601.97	19,494.36	12,829.03	101.07	103.21	129.56	-7,238.90	-425.17	1,926.62	1,759.96	166.66	11.560	
18,400.00	11,602.49	19,594.36	12,829.56	102.41	104.56	129.56	-7,338.90	-424.26	1,926.62	1,757.84	168.78	11.415	
18,500.00	11,603.02	19,694.36	12,830.08	103.75	105.92	129.56	-7,438.89	-423.35	1,926.61	1,755.71	170.90	11.273	
18,600.00	11,603.54	19,794.36	12,830.61	105.09	107.27	129.56	-7,538.89	-422.44	1,926.60	1,753.58	173.02	11.135	
18,700.00	11,604.07	19,894.36	12,831.14	106.44	108.62	129.56	-7,638.88	-421.53	1,926.60	1,751.45	175.14	11.000	
18,800.00	11,604.59	19,994.36	12,831.66	107.78	109.98	129.56	-7,738.88	-420.62	1,926.59	1,749.32	177.27	10.868	
18,900.00	11,605.12	20,094.36	12,832.19	109.12	111.33	129.56	-7,838.87	-419.71	1,926.59	1,747.19	179.40	10.739	
19,000.00	11,605.64	20,194.36	12,832.71	110.47	112.69	129.56	-7,938.86	-418.80	1,926.58	1,745.06	181.52	10.613	
19,100.00	11,606.17	20,294.36	12,833.24	111.81	114.04	129.56	-8,038.86	-417.89	1,926.57	1,742.92	183.65	10.490	
19,200.00	11,606.69	20,394.36	12,833.77	113.16	115.40	129.56	-8,138.85	-416.98	1,926.57	1,740.78	185.79	10.370	
19,300.00	11,607.22	20,494.36	12,834.29	114.50	116.75	129.56	-8,238.85	-416.07	1,926.56	1,738.64	187.92	10.252	
19,400.00	11,607.74	20,594.36	12,834.82	115.85	118.11	129.56	-8,338.84	-415.16	1,926.56	1,736.50	190.05	10.137	
19,500.00	11,608.27	20,694.36	12,835.34	117.20	119.47	129.56	-8,438.84	-414.25	1,926.55	1,734.36	192.19	10.024	
19,600.00	11,608.79	20,794.36	12,835.87	118.54	120.82	129.56	-8,538.83	-413.34	1,926.54	1,732.22	194.32	9.914	
19,700.00	11,609.32	20,894.36	12,836.40	119.89	122.18	129.56	-8,638.83	-412.43	1,926.54	1,730.08	196.46	9.806	
19,800.00	11,609.84	20,994.36	12,836.92	121.24	123.54	129.56	-8,738.82	-411.52	1,926.53	1,727.93	198.60	9.701	
19,900.00	11,610.37	21,094.36	12,837.45	122.59	124.89	129.56	-8,838.82	-410.61	1,926.53	1,725.79	200.74	9.597	
20,000.00	11,610.89	21,194.36	12,837.97	123.94	126.25	129.56	-8,938.81	-409.70	1,926.52	1,723.64	202.88	9.496	
20,100.00	11,611.42	21,294.36	12,838.50	125.29	127.61	129.56	-9,038.80	-408.79	1,926.51	1,721.49	205.02	9.397	
20,200.00	11,611.94	21,394.36	12,839.03	126.64	128.97	129.57	-9,138.80	-407.88	1,926.51	1,719.34	207.16	9.299	
20,300.00	11,612.47	21,494.36	12,839.55	127.99	130.33	129.57	-9,238.79	-406.97	1,926.50	1,717.19	209.31	9.204	
20,400.00	11,612.99	21,594.36	12,840.08	129.34	131.69	129.57	-9,338.79	-406.06	1,926.50	1,715.04	211.45	9.111	
20,500.00	11,613.52	21,694.36	12,840.60	130.69	133.04	129.57	-9,438.78	-405.15	1,926.49	1,712.89	213.60	9.019	
20,600.00	11,614.04	21,794.36	12,841.13	132.04	134.40	129.57	-9,538.78	-404.24	1,926.48	1,710.74	215.74	8.929	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 223H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:				Offset Well Error:		0.50 usft	
Reference		Offset		Semi Major Axis		Highside Toolface Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
20,700.00	11,614.56	21,894.36	12,841.66	133.40	135.76	129.57	-9,638.77	-403.33	1,926.48	1,708.59	217.89	8.841	
20,800.00	11,615.09	21,994.36	12,842.18	134.75	137.12	129.57	-9,738.77	-402.42	1,926.47	1,706.43	220.04	8.755	
20,900.00	11,615.61	22,094.36	12,842.71	136.10	138.48	129.57	-9,838.76	-401.51	1,926.47	1,704.28	222.19	8.670	
21,000.00	11,616.14	22,194.36	12,843.23	137.45	139.84	129.57	-9,938.75	-400.60	1,926.46	1,702.12	224.34	8.587	
21,100.00	11,616.66	22,294.36	12,843.76	138.81	141.20	129.57	-10,038.75	-399.69	1,926.45	1,699.97	226.49	8.506	
21,200.00	11,617.19	22,394.36	12,844.29	140.16	142.56	129.57	-10,138.74	-398.77	1,926.45	1,697.81	228.64	8.426	
21,300.00	11,617.71	22,494.36	12,844.81	141.52	143.92	129.57	-10,238.74	-397.86	1,926.44	1,695.65	230.79	8.347	
21,400.00	11,618.24	22,594.36	12,845.34	142.87	145.28	129.57	-10,338.73	-396.95	1,926.44	1,693.49	232.95	8.270	
21,500.00	11,618.76	22,694.36	12,845.86	144.23	146.64	129.57	-10,438.73	-396.04	1,926.43	1,691.33	235.10	8.194	
21,600.00	11,619.29	22,794.36	12,846.39	145.58	148.01	129.57	-10,538.72	-395.13	1,926.43	1,689.17	237.25	8.120	
21,700.00	11,619.81	22,894.36	12,846.92	146.94	149.37	129.57	-10,638.72	-394.22	1,926.42	1,687.01	239.41	8.047	
21,800.00	11,620.34	22,994.36	12,847.44	148.29	150.73	129.57	-10,738.71	-393.31	1,926.41	1,684.85	241.56	7.975	
21,900.00	11,620.86	23,094.36	12,847.97	149.65	152.09	129.57	-10,838.70	-392.40	1,926.41	1,682.69	243.72	7.904	
21,934.57	11,621.04	23,128.93	12,848.15	150.11	152.56	129.57	-10,873.27	-392.09	1,926.41	1,681.94	244.46	7.880	
21,945.36	11,621.10	23,139.21	12,848.20	150.26	152.71	129.57	-10,883.55	-392.00	1,926.40	1,681.72	244.69	7.873	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 224H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)

Offset Site Error: 0.00 usft

Offset Well Error: 0.50 usft

Reference		Offset		Semi Major Axis		Highside Toolface (")	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	2.00	0.00	0.50	0.50	26.57	50.00	25.00	55.90				
100.00	100.00	102.00	100.00	0.98	0.99	26.57	50.00	25.00	55.90	53.93	1.97	28.332	
200.00	200.00	202.00	200.00	1.56	1.57	26.57	50.00	25.00	55.90	52.77	3.13	17.857	
300.00	300.00	302.00	300.00	1.98	1.99	26.57	50.00	25.00	55.90	51.93	3.97	14.084	CC
400.00	399.99	401.99	399.99	2.41	2.34	-104.73	50.00	25.00	56.22	51.56	4.66	12.057	ES
500.00	499.91	501.91	499.91	2.77	2.64	-108.51	50.00	25.00	57.34	52.07	5.27	10.879	
600.00	599.69	601.69	599.69	3.10	2.91	-114.42	50.00	25.00	59.75	53.91	5.84	10.236	
700.00	699.27	701.27	699.27	3.41	3.17	-121.81	50.00	25.00	64.08	57.70	6.38	10.041	
800.00	798.57	800.57	798.57	3.70	3.40	-129.78	50.00	25.00	71.01	64.09	6.92	10.265	
900.00	897.62	899.62	897.62	3.83	3.62	-137.27	50.00	25.00	80.56	73.24	7.31	11.017	
1,000.00	996.65	998.65	996.65	4.06	3.83	-143.19	50.00	25.00	91.31	83.53	7.78	11.730	
1,100.00	1,095.67	1,097.67	1,095.67	4.28	4.03	-147.83	50.00	25.00	102.83	94.59	8.23	12.489	
1,200.00	1,194.70	1,196.70	1,194.70	4.51	4.23	-151.52	50.00	25.00	114.87	106.20	8.68	13.238	
1,300.00	1,293.62	1,295.62	1,293.62	4.72	4.41	-147.59	50.00	25.00	127.54	118.45	9.09	14.033	
1,400.00	1,392.26	1,394.26	1,392.26	4.94	4.59	-145.17	50.00	25.00	141.27	131.77	9.50	14.865	
1,500.00	1,490.54	1,492.54	1,490.54	5.17	4.76	-144.21	50.00	25.00	156.38	146.46	9.91	15.773	
1,600.00	1,588.41	1,590.41	1,588.41	5.40	4.93	-144.25	50.00	25.00	173.15	162.83	10.32	16.778	
1,700.00	1,685.98	1,687.98	1,685.98	5.58	5.09	-147.61	50.00	25.00	191.38	180.71	10.67	17.932	
1,800.00	1,783.55	1,790.26	1,783.55	5.80	5.28	-150.84	49.51	25.94	209.37	198.29	11.08	18.891	
1,900.00	1,881.12	1,894.22	1,881.12	6.04	5.46	-153.38	47.71	29.37	225.32	213.84	11.48	19.624	
2,000.00	1,978.69	1,999.15	1,978.69	6.31	5.63	-155.43	44.57	35.37	238.99	227.12	11.88	20.125	
2,100.00	2,076.26	2,104.88	2,102.13	6.58	5.81	-157.11	40.06	43.99	250.24	237.97	12.27	20.400	
2,200.00	2,173.83	2,211.28	2,207.75	6.87	5.99	-158.53	34.15	55.27	258.95	246.29	12.66	20.460	
2,300.00	2,271.40	2,318.17	2,313.48	7.15	6.17	-159.75	26.85	69.22	265.04	252.00	13.04	20.320	
2,400.00	2,368.97	2,425.40	2,419.04	7.44	6.36	-160.81	18.15	85.84	268.48	255.05	13.43	19.993	
2,500.00	2,466.54	2,532.79	2,524.21	7.73	6.54	-161.76	8.06	105.11	269.21	255.40	13.81	19.491	
2,600.00	2,564.11	2,640.17	2,628.71	8.02	6.70	-162.62	-3.39	126.99	267.22	253.07	14.16	18.877	
2,700.00	2,661.68	2,740.59	2,726.05	8.31	6.82	-163.40	-14.83	148.84	263.70	249.20	14.50	18.189	
2,800.00	2,759.25	2,840.46	2,822.86	8.60	6.97	-164.20	-26.21	170.57	260.21	245.33	14.88	17.485	
2,900.00	2,856.82	2,940.33	2,919.67	8.89	7.12	-165.02	-37.58	192.31	256.78	241.51	15.27	16.818	
3,000.00	2,954.39	3,040.21	3,016.49	9.18	7.30	-165.86	-48.96	214.04	253.40	237.73	15.67	16.175	
3,100.00	3,051.96	3,140.08	3,113.30	9.48	7.54	-166.72	-60.34	235.77	250.07	234.02	16.06	15.574	
3,200.00	3,149.53	3,239.95	3,210.11	9.77	7.79	-167.60	-71.72	257.51	246.81	230.36	16.45	15.001	
3,300.00	3,247.10	3,339.82	3,306.93	10.07	8.05	-168.51	-83.10	279.24	243.60	226.75	16.85	14.456	
3,400.00	3,344.67	3,439.70	3,403.74	10.37	8.31	-169.45	-94.47	300.98	240.46	223.21	17.25	13.937	
3,500.00	3,442.24	3,539.57	3,500.55	10.67	8.58	-170.40	-105.85	322.71	237.39	219.73	17.66	13.443	
3,600.00	3,539.81	3,639.44	3,597.37	10.96	8.85	-171.39	-117.23	344.45	234.38	216.31	18.07	12.973	
3,700.00	3,637.39	3,739.32	3,694.18	11.26	9.13	-172.39	-128.61	366.18	231.44	212.96	18.48	12.525	
3,800.00	3,734.96	3,839.19	3,790.99	11.56	9.42	-173.43	-139.98	387.91	228.58	209.68	18.89	12.098	
3,900.00	3,832.53	3,939.06	3,887.80	11.86	9.70	-174.49	-151.36	409.65	225.79	206.48	19.31	11.691	
4,000.00	3,930.10	4,038.93	3,984.62	12.16	9.99	-175.57	-162.74	431.38	223.08	203.34	19.74	11.302	
4,100.00	4,027.67	4,138.81	4,081.43	12.46	10.29	-176.68	-174.12	453.12	220.45	200.29	20.17	10.932	
4,200.00	4,125.24	4,238.68	4,178.24	12.76	10.58	-177.82	-185.50	474.85	217.91	197.31	20.60	10.578	
4,300.00	4,222.81	4,338.55	4,275.06	13.06	10.88	-178.98	-196.87	496.59	215.46	194.42	21.04	10.240	
4,400.00	4,320.38	4,438.43	4,371.87	13.36	11.18	-179.83	-208.25	518.32	213.10	191.61	21.49	9.917	
4,500.00	4,417.95	4,538.30	4,468.68	13.66	11.49	-178.61	-219.63	540.05	210.83	188.89	21.94	9.609	
4,600.00	4,515.52	4,638.17	4,565.49	13.96	11.79	-177.37	-231.01	561.79	208.66	186.25	22.40	9.314	
4,700.00	4,613.09	4,738.04	4,662.31	14.27	12.10	-176.10	-242.39	583.52	206.59	183.71	22.87	9.031	
4,800.00	4,710.66	4,837.92	4,759.12	14.57	12.41	-174.81	-253.76	605.26	204.62	181.26	23.35	8.762	
4,900.00	4,808.23	4,937.79	4,855.93	14.87	12.73	-173.49	-265.14	626.99	202.76	178.91	23.84	8.503	
5,000.00	4,905.80	5,037.66	4,952.75	15.17	13.04	-172.15	-276.52	648.73	201.00	176.66	24.35	8.256	
5,100.00	5,003.37	5,137.54	5,049.56	15.47	13.35	-170.79	-287.90	670.46	199.36	174.51	24.86	8.020	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 224H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)												Offset Site Error:	0.00 usft
Rule Assigned:												Offset Well Error:	0.50 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	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
5,200.00	5,100.94	5,237.41	5,146.37	15.78	13.67	169.40	-299.27	692.19	197.84	172.46	25.38	7.794	
5,300.00	5,198.51	5,337.28	5,243.19	16.08	13.99	168.00	-310.65	713.93	196.43	170.51	25.92	7.578	
5,400.00	5,296.08	5,435.76	5,338.67	16.38	14.30	166.61	-321.82	735.26	195.25	168.78	26.48	7.375	
5,421.51	5,317.07	5,456.29	5,358.63	16.45	14.37	166.34	-324.06	739.54	195.20	168.61	26.59	7.340	
5,500.00	5,393.65	5,531.22	5,431.66	16.69	14.59	165.47	-331.82	754.36	195.93	168.91	27.02	7.252	
5,600.00	5,491.24	5,626.67	5,525.16	16.97	14.85	164.63	-340.74	771.40	198.83	171.32	27.51	7.228	
5,700.00	5,589.24	5,722.09	5,619.06	17.25	15.09	163.99	-348.57	786.36	202.13	174.13	28.00	7.218	
5,800.00	5,687.73	5,817.47	5,713.33	17.50	15.30	163.46	-355.31	799.23	205.18	176.72	28.46	7.210	
5,900.00	5,786.63	5,912.83	5,807.91	17.73	15.49	163.06	-360.95	810.01	207.96	179.08	28.88	7.201	
6,000.00	5,885.89	6,008.16	5,902.74	17.92	15.65	162.76	-365.50	818.70	210.47	181.21	29.26	7.193	
6,100.00	5,985.43	6,103.47	5,997.75	18.09	15.79	162.56	-368.94	825.28	212.68	183.08	29.60	7.186	
6,200.00	6,085.19	6,200.00	6,094.14	18.23	15.90	162.47	-371.31	829.80	214.61	184.70	29.91	7.176	
6,300.00	6,185.09	6,293.98	6,188.09	18.33	15.99	162.47	-372.53	832.13	216.24	186.10	30.14	7.175	
6,400.00	6,285.07	6,390.97	6,285.07	18.42	16.02	162.54	-372.75	832.55	217.43	187.15	30.28	7.181	
6,500.00	6,385.07	6,490.97	6,385.07	18.44	16.07	-90.31	-372.75	832.55	217.45	187.10	30.35	7.164	
6,600.00	6,485.07	6,590.97	6,485.07	18.48	16.12	-90.31	-372.75	832.55	217.45	187.01	30.44	7.144	
6,700.00	6,585.07	6,690.97	6,585.07	18.52	16.16	-90.31	-372.75	832.55	217.45	186.93	30.53	7.123	
6,800.00	6,685.07	6,790.97	6,685.07	18.56	16.21	-90.31	-372.75	832.55	217.45	186.84	30.62	7.103	
6,900.00	6,785.07	6,890.97	6,785.07	18.60	16.26	-90.31	-372.75	832.55	217.45	186.75	30.70	7.082	
7,000.00	6,885.07	6,990.97	6,885.07	18.64	16.31	-90.31	-372.75	832.55	217.45	186.66	30.79	7.061	
7,100.00	6,985.07	7,090.97	6,985.07	18.68	16.36	-90.31	-372.75	832.55	217.45	186.57	30.88	7.041	
7,200.00	7,085.07	7,190.97	7,085.07	18.72	16.41	-90.31	-372.75	832.55	217.45	186.48	30.97	7.020	
7,300.00	7,185.07	7,290.97	7,185.07	18.76	16.46	-90.31	-372.75	832.55	217.45	186.39	31.07	7.000	
7,400.00	7,285.07	7,390.97	7,285.07	18.80	16.51	-90.31	-372.75	832.55	217.45	186.30	31.16	6.979	
7,500.00	7,385.07	7,490.97	7,385.07	18.85	16.56	-90.31	-372.75	832.55	217.45	186.20	31.25	6.959	
7,600.00	7,485.07	7,590.97	7,485.07	18.89	16.61	-90.31	-372.75	832.55	217.45	186.11	31.34	6.938	
7,700.00	7,585.07	7,690.97	7,585.07	18.93	16.67	-90.31	-372.75	832.55	217.45	186.02	31.44	6.917	
7,800.00	7,685.07	7,790.97	7,685.07	18.97	16.72	-90.31	-372.75	832.55	217.45	185.92	31.53	6.897	
7,900.00	7,785.07	7,890.97	7,785.07	19.01	16.77	-90.31	-372.75	832.55	217.45	185.83	31.62	6.876	
8,000.00	7,885.07	7,990.97	7,885.07	19.06	16.82	-90.31	-372.75	832.55	217.45	185.73	31.72	6.855	
8,100.00	7,985.07	8,090.97	7,985.07	19.10	16.87	-90.31	-372.75	832.55	217.45	185.64	31.82	6.835	
8,200.00	8,085.07	8,190.97	8,085.07	19.14	16.93	-90.31	-372.75	832.55	217.45	185.54	31.91	6.814	
8,300.00	8,185.07	8,290.97	8,185.07	19.19	16.98	-90.31	-372.75	832.55	217.45	185.45	32.01	6.794	
8,400.00	8,285.07	8,390.97	8,285.07	19.23	17.03	-90.31	-372.75	832.55	217.45	185.35	32.11	6.773	
8,500.00	8,385.07	8,490.97	8,385.07	19.27	17.09	-90.31	-372.75	832.55	217.45	185.25	32.20	6.753	
8,600.00	8,485.07	8,590.97	8,485.07	19.32	17.14	-90.31	-372.75	832.55	217.45	185.15	32.30	6.732	
8,700.00	8,585.07	8,690.97	8,585.07	19.36	17.19	-90.31	-372.75	832.55	217.45	185.05	32.40	6.711	
8,800.00	8,685.07	8,790.97	8,685.07	19.41	17.25	-90.31	-372.75	832.55	217.45	184.95	32.50	6.691	
8,900.00	8,785.07	8,890.97	8,785.07	19.45	17.30	-90.31	-372.75	832.55	217.45	184.85	32.60	6.670	
9,000.00	8,885.07	8,990.97	8,885.07	19.50	17.36	-90.31	-372.75	832.55	217.45	184.75	32.70	6.650	
9,100.00	8,985.07	9,090.97	8,985.07	19.54	17.41	-90.31	-372.75	832.55	217.45	184.65	32.80	6.630	
9,200.00	9,085.07	9,190.97	9,085.07	19.59	17.47	-90.31	-372.75	832.55	217.45	184.55	32.90	6.609	
9,300.00	9,185.07	9,290.97	9,185.07	19.63	17.52	-90.31	-372.75	832.55	217.45	184.45	33.00	6.589	
9,400.00	9,285.07	9,390.97	9,285.07	19.68	17.58	-90.31	-372.75	832.55	217.45	184.35	33.11	6.568	
9,500.00	9,385.07	9,490.97	9,385.07	19.73	17.63	-90.31	-372.75	832.55	217.45	184.24	33.21	6.548	
9,600.00	9,485.07	9,590.97	9,485.07	19.77	17.69	-90.31	-372.75	832.55	217.45	184.14	33.31	6.528	
9,700.00	9,585.07	9,690.97	9,585.07	19.82	17.74	-90.31	-372.75	832.55	217.45	184.04	33.42	6.508	
9,800.00	9,685.07	9,790.97	9,685.07	19.87	17.80	-90.31	-372.75	832.55	217.45	183.93	33.52	6.487	
9,900.00	9,785.07	9,890.97	9,785.07	19.91	17.86	-90.31	-372.75	832.55	217.45	183.83	33.62	6.467	
10,000.00	9,885.07	9,990.97	9,885.07	19.96	17.91	-90.31	-372.75	832.55	217.45	183.72	33.73	6.447	
10,100.00	9,985.07	10,090.97	9,985.07	20.01	17.97	-90.31	-372.75	832.55	217.45	183.62	33.84	6.427	
10,200.00	10,085.07	10,190.97	10,085.07	20.06	18.03	-90.31	-372.75	832.55	217.45	183.51	33.94	6.407	

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

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Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 224H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)							Rule Assigned:				Offset Well Error:		0.50 usft
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance			Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
10,300.00	10,185.07	10,290.97	10,185.07	20.10	18.08	-90.31	-372.75	832.55	217.45	183.41	34.05	6.387	
10,400.00	10,285.07	10,390.97	10,285.07	20.15	18.14	-90.31	-372.75	832.55	217.45	183.30	34.15	6.367	
10,500.00	10,385.07	10,490.97	10,385.07	20.20	18.20	-90.31	-372.75	832.55	217.45	183.19	34.26	6.347	
10,600.00	10,485.07	10,590.97	10,485.07	20.25	18.25	-90.31	-372.75	832.55	217.45	183.08	34.37	6.327	
10,700.00	10,585.07	10,690.97	10,585.07	20.30	18.31	-90.31	-372.75	832.55	217.45	182.98	34.48	6.307	
10,800.00	10,685.07	10,790.97	10,685.07	20.35	18.37	-90.31	-372.75	832.55	217.45	182.87	34.59	6.287	
10,900.00	10,785.07	10,890.97	10,785.07	20.40	18.43	-90.31	-372.75	832.55	217.45	182.76	34.70	6.267	
11,000.00	10,885.07	10,990.97	10,885.07	20.45	18.49	-90.31	-372.75	832.55	217.45	182.65	34.81	6.248	
11,100.00	10,985.07	11,090.97	10,985.07	20.50	18.55	-90.31	-372.75	832.55	217.45	182.54	34.92	6.228	
11,200.00	11,084.72	11,190.62	11,084.72	20.59	18.60	87.69	-372.75	832.55	217.06	182.18	34.88	6.222	SF
11,245.69	11,129.53	11,235.43	11,129.53	20.66	18.63	90.00	-372.75	832.55	216.88	182.08	34.80	6.231	
11,300.00	11,181.66	11,287.56	11,181.66	20.75	18.66	93.78	-372.75	832.55	217.41	182.75	34.66	6.273	
11,400.00	11,272.97	11,378.87	11,272.97	20.95	18.72	102.65	-372.75	832.55	223.90	189.45	34.44	6.500	
11,500.00	11,355.85	11,461.75	11,355.85	21.20	18.76	111.77	-372.75	832.55	243.78	209.24	34.54	7.057	
11,600.00	11,427.81	11,533.71	11,427.81	21.52	18.81	118.69	-372.75	832.55	282.22	247.18	35.04	8.053	
11,700.00	11,486.64	11,592.54	11,486.64	21.92	18.84	121.89	-372.75	832.55	339.57	303.86	35.71	9.509	
11,800.00	11,530.57	11,636.47	11,530.57	22.42	18.87	120.22	-372.75	832.55	412.59	376.28	36.30	11.365	
11,900.00	11,558.25	11,664.15	11,558.25	23.01	18.89	111.63	-372.75	832.55	496.79	460.04	36.74	13.521	
12,000.00	11,568.85	11,674.75	11,568.85	23.68	18.89	92.75	-372.75	832.55	587.73	550.70	37.04	15.868	
12,100.00	11,569.43	11,675.33	11,569.43	24.45	18.89	90.99	-372.75	832.55	682.13	644.90	37.23	18.321	
12,200.00	11,569.96	11,675.86	11,569.96	25.29	18.89	91.32	-372.75	832.55	778.81	741.44	37.37	20.841	
12,300.00	11,570.48	11,676.38	11,570.48	26.19	18.89	91.56	-372.75	832.55	876.75	839.28	37.47	23.398	
12,400.00	11,571.01	11,676.91	11,571.01	27.12	18.89	91.74	-372.75	832.55	975.13	937.57	37.56	25.963	
12,500.00	11,571.53	11,677.43	11,571.53	28.09	18.89	91.92	-372.75	832.55	1,073.81	1,036.17	37.64	28.531	
12,600.00	11,572.06	11,677.96	11,572.06	29.09	18.89	92.11	-372.75	832.55	1,172.71	1,135.00	37.71	31.099	
12,700.00	11,572.58	13,855.74	12,744.55	30.12	29.43	171.95	-1,627.48	843.95	1,183.64	1,127.75	55.88	21.180	
12,800.00	11,573.11	13,955.74	12,745.08	31.17	30.51	171.96	-1,727.48	844.86	1,183.64	1,127.42	56.21	21.057	
12,900.00	11,573.63	14,055.74	12,745.60	32.24	31.60	171.96	-1,827.47	845.77	1,183.64	1,127.08	56.55	20.930	
13,000.00	11,574.16	14,155.74	12,746.13	33.33	32.72	171.96	-1,927.47	846.68	1,183.64	1,126.73	56.91	20.799	
13,100.00	11,574.68	14,255.74	12,746.66	34.44	33.86	171.96	-2,027.46	847.58	1,183.64	1,126.36	57.28	20.664	
13,200.00	11,575.21	14,355.74	12,747.18	35.57	35.01	171.96	-2,127.46	848.49	1,183.64	1,125.97	57.67	20.526	
13,300.00	11,575.73	14,455.74	12,747.71	36.71	36.17	171.96	-2,227.45	849.40	1,183.64	1,125.57	58.07	20.385	
13,400.00	11,576.25	14,555.74	12,748.23	37.87	37.35	171.96	-2,327.45	850.31	1,183.64	1,125.16	58.48	20.241	
13,500.00	11,576.78	14,655.74	12,748.76	39.04	38.54	171.96	-2,427.44	851.22	1,183.64	1,124.73	58.90	20.094	
13,600.00	11,577.30	14,755.74	12,749.28	40.22	39.74	171.96	-2,527.43	852.13	1,183.64	1,124.29	59.34	19.945	
13,700.00	11,577.83	14,855.74	12,749.81	41.41	40.96	171.96	-2,627.43	853.04	1,183.64	1,123.84	59.80	19.795	
13,800.00	11,578.35	14,955.74	12,750.34	42.61	42.18	171.96	-2,727.42	853.94	1,183.64	1,123.38	60.26	19.642	
13,900.00	11,578.88	15,055.74	12,750.86	43.82	43.41	171.96	-2,827.42	854.85	1,183.64	1,122.90	60.74	19.488	
14,000.00	11,579.40	15,155.74	12,751.39	45.04	44.65	171.96	-2,927.41	855.76	1,183.64	1,122.41	61.23	19.332	
14,100.00	11,579.93	15,255.74	12,751.91	46.27	45.89	171.96	-3,027.41	856.67	1,183.64	1,121.91	61.73	19.176	
14,200.00	11,580.45	15,355.74	12,752.44	47.51	47.14	171.96	-3,127.40	857.58	1,183.64	1,121.40	62.24	19.018	
14,300.00	11,580.98	15,455.74	12,752.97	48.75	48.40	171.96	-3,227.40	858.49	1,183.64	1,120.88	62.76	18.860	
14,400.00	11,581.50	15,555.74	12,753.49	49.99	49.66	171.96	-3,327.39	859.40	1,183.64	1,120.34	63.29	18.701	
14,500.00	11,582.03	15,655.74	12,754.02	51.25	50.93	171.96	-3,427.38	860.30	1,183.64	1,119.80	63.84	18.541	
14,600.00	11,582.55	15,755.74	12,754.54	52.51	52.21	171.96	-3,527.38	861.21	1,183.64	1,119.25	64.39	18.382	
14,700.00	11,583.08	15,855.74	12,755.07	53.77	53.48	171.96	-3,627.37	862.12	1,183.64	1,118.68	64.96	18.222	
14,800.00	11,583.60	15,955.74	12,755.59	55.04	54.77	171.96	-3,727.37	863.03	1,183.64	1,118.11	65.53	18.063	
14,900.00	11,584.13	16,055.74	12,756.12	56.31	56.05	171.96	-3,827.36	863.94	1,183.64	1,117.52	66.11	17.903	
15,000.00	11,584.65	16,155.74	12,756.65	57.59	57.34	171.96	-3,927.36	864.85	1,183.64	1,116.93	66.71	17.744	
15,100.00	11,585.18	16,255.74	12,757.17	58.87	58.64	171.96	-4,027.35	865.76	1,183.64	1,116.33	67.31	17.586	
15,200.00	11,585.70	16,355.74	12,757.70	60.16	59.94	171.96	-4,127.35	866.66	1,183.64	1,115.72	67.92	17.428	
15,300.00	11,586.23	16,455.74	12,758.22	61.45	61.24	171.96	-4,227.34	867.57	1,183.64	1,115.10	68.54	17.270	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 224H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:				Offset Well Error: 0.50 usft			
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance			Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Major Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
15,400.00	11,586.75	16,555.74	12,758.75	62.74	62.54	171.96	-4,327.34	868.48	1,183.64	1,114.47	69.16	17.114	
15,500.00	11,587.28	16,655.74	12,759.28	64.03	63.85	171.96	-4,427.33	869.39	1,183.64	1,113.84	69.80	16.958	
15,600.00	11,587.80	16,755.74	12,759.80	65.33	65.15	171.96	-4,527.32	870.30	1,183.64	1,113.20	70.44	16.803	
15,700.00	11,588.33	16,855.74	12,760.33	66.63	66.46	171.97	-4,627.32	871.21	1,183.64	1,112.55	71.09	16.649	
15,800.00	11,588.85	16,955.74	12,760.85	67.93	67.78	171.97	-4,727.31	872.12	1,183.64	1,111.89	71.75	16.497	
15,900.00	11,589.37	17,055.74	12,761.38	69.24	69.09	171.97	-4,827.31	873.02	1,183.64	1,111.22	72.42	16.345	
16,000.00	11,589.90	17,155.74	12,761.91	70.55	70.41	171.97	-4,927.30	873.93	1,183.64	1,110.55	73.09	16.195	
16,100.00	11,590.42	17,255.74	12,762.43	71.86	71.73	171.97	-5,027.30	874.84	1,183.64	1,109.87	73.77	16.046	
16,200.00	11,590.95	17,355.74	12,762.96	73.17	73.05	171.97	-5,127.29	875.75	1,183.64	1,109.19	74.45	15.898	
16,300.00	11,591.47	17,455.74	12,763.48	74.48	74.37	171.97	-5,227.29	876.66	1,183.64	1,108.49	75.14	15.752	
16,400.00	11,592.00	17,555.74	12,764.01	75.80	75.70	171.97	-5,327.28	877.57	1,183.64	1,107.80	75.84	15.607	
16,500.00	11,592.52	17,655.74	12,764.53	77.12	77.02	171.97	-5,427.27	878.48	1,183.64	1,107.09	76.55	15.463	
16,600.00	11,593.05	17,755.74	12,765.06	78.44	78.35	171.97	-5,527.27	879.38	1,183.64	1,106.38	77.26	15.321	
16,700.00	11,593.57	17,855.74	12,765.59	79.76	79.68	171.97	-5,627.26	880.29	1,183.64	1,105.67	77.97	15.180	
16,800.00	11,594.10	17,955.74	12,766.11	81.08	81.01	171.97	-5,727.26	881.20	1,183.64	1,104.94	78.69	15.041	
16,900.00	11,594.62	18,055.74	12,766.64	82.41	82.34	171.97	-5,827.25	882.11	1,183.64	1,104.22	79.42	14.903	
17,000.00	11,595.15	18,155.74	12,767.16	83.73	83.67	171.97	-5,927.25	883.02	1,183.64	1,103.48	80.15	14.767	
17,100.00	11,595.67	18,255.74	12,767.69	85.06	85.01	171.97	-6,027.24	883.93	1,183.64	1,102.75	80.89	14.632	
17,200.00	11,596.20	18,355.74	12,768.22	86.39	86.34	171.97	-6,127.24	884.83	1,183.64	1,102.00	81.63	14.499	
17,300.00	11,596.72	18,455.74	12,768.74	87.72	87.68	171.97	-6,227.23	885.74	1,183.64	1,101.26	82.38	14.368	
17,400.00	11,597.25	18,555.74	12,769.27	89.05	89.01	171.97	-6,327.23	886.65	1,183.64	1,100.51	83.13	14.238	
17,500.00	11,597.77	18,655.74	12,769.79	90.38	90.35	171.97	-6,427.22	887.56	1,183.64	1,099.75	83.89	14.109	
17,600.00	11,598.30	18,755.74	12,770.32	91.71	91.69	171.97	-6,527.21	888.47	1,183.64	1,098.99	84.65	13.982	
17,700.00	11,598.82	18,855.74	12,770.85	93.05	93.03	171.97	-6,627.21	889.38	1,183.64	1,098.22	85.42	13.857	
17,800.00	11,599.35	18,955.74	12,771.37	94.38	94.37	171.97	-6,727.20	890.29	1,183.64	1,097.45	86.19	13.733	
17,900.00	11,599.87	19,055.74	12,771.90	95.72	95.71	171.97	-6,827.20	891.19	1,183.64	1,096.68	86.96	13.611	
18,000.00	11,600.40	19,155.74	12,772.42	97.05	97.05	171.97	-6,927.19	892.10	1,183.64	1,095.90	87.74	13.490	
18,100.00	11,600.92	19,255.74	12,772.95	98.39	98.40	171.97	-7,027.19	893.01	1,183.64	1,095.12	88.52	13.371	
18,200.00	11,601.44	19,355.74	12,773.47	99.73	99.74	171.97	-7,127.18	893.92	1,183.64	1,094.33	89.31	13.253	
18,300.00	11,601.97	19,455.74	12,774.00	101.07	101.08	171.97	-7,227.18	894.83	1,183.64	1,093.54	90.10	13.137	
18,400.00	11,602.49	19,555.74	12,774.53	102.41	102.43	171.97	-7,327.17	895.74	1,183.64	1,092.75	90.89	13.022	
18,500.00	11,603.02	19,655.74	12,775.05	103.75	103.78	171.97	-7,427.16	896.65	1,183.64	1,091.95	91.69	12.909	
18,600.00	11,603.54	19,755.74	12,775.58	105.09	105.12	171.98	-7,527.16	897.55	1,183.64	1,091.15	92.49	12.797	
18,700.00	11,604.07	19,855.74	12,776.10	106.44	106.47	171.98	-7,627.15	898.46	1,183.64	1,090.35	93.29	12.687	
18,800.00	11,604.59	19,955.74	12,776.63	107.78	107.82	171.98	-7,727.15	899.37	1,183.64	1,089.54	94.10	12.578	
18,900.00	11,605.12	20,055.74	12,777.16	109.12	109.16	171.98	-7,827.14	900.28	1,183.64	1,088.73	94.91	12.471	
19,000.00	11,605.64	20,155.74	12,777.68	110.47	110.51	171.98	-7,927.14	901.19	1,183.64	1,087.92	95.73	12.365	
19,100.00	11,606.17	20,255.74	12,778.21	111.81	111.86	171.98	-8,027.13	902.10	1,183.64	1,087.10	96.54	12.260	
19,200.00	11,606.69	20,355.74	12,778.73	113.16	113.21	171.98	-8,127.13	903.01	1,183.64	1,086.28	97.36	12.157	
19,300.00	11,607.22	20,455.74	12,779.26	114.50	114.56	171.98	-8,227.12	903.91	1,183.64	1,085.46	98.18	12.055	
19,400.00	11,607.74	20,555.74	12,779.79	115.85	115.91	171.98	-8,327.12	904.82	1,183.64	1,084.63	99.01	11.955	
19,500.00	11,608.27	20,655.74	12,780.31	117.20	117.26	171.98	-8,427.11	905.73	1,183.64	1,083.81	99.84	11.856	
19,600.00	11,608.79	20,755.74	12,780.84	118.54	118.61	171.98	-8,527.10	906.64	1,183.64	1,082.97	100.67	11.758	
19,700.00	11,609.32	20,855.74	12,781.36	119.89	119.96	171.98	-8,627.10	907.55	1,183.64	1,082.14	101.50	11.662	
19,800.00	11,609.84	20,955.74	12,781.89	121.24	121.31	171.98	-8,727.09	908.46	1,183.64	1,081.31	102.34	11.566	
19,900.00	11,610.37	21,055.74	12,782.41	122.59	122.67	171.98	-8,827.09	909.37	1,183.64	1,080.47	103.17	11.472	
20,000.00	11,610.89	21,155.74	12,782.94	123.94	124.02	171.98	-8,927.08	910.27	1,183.64	1,079.63	104.01	11.380	
20,100.00	11,611.42	21,255.74	12,783.47	125.29	125.37	171.98	-9,027.08	911.18	1,183.64	1,078.78	104.86	11.288	
20,200.00	11,611.94	21,355.74	12,783.99	126.64	126.73	171.98	-9,127.07	912.09	1,183.64	1,077.94	105.70	11.198	
20,300.00	11,612.47	21,455.74	12,784.52	127.99	128.08	171.98	-9,227.07	913.00	1,183.64	1,077.09	106.55	11.109	
20,400.00	11,612.99	21,555.74	12,785.04	129.34	129.43	171.98	-9,327.06	913.91	1,183.64	1,076.24	107.40	11.021	
20,500.00	11,613.52	21,655.74	12,785.57	130.69	130.79	171.98	-9,427.05	914.82	1,183.64	1,075.39	108.25	10.934	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Offset Design: Junior Mint Fed Pad - Junior Mint Fed 224H - OH - Plan #2

Survey Program: 0-MWD+HRGM+SAG+FDIR (rev.5)						Rule Assigned:		Offset Well Error:		0.50 usft		
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)		
20,600.00	11,614.04	21,755.74	12,786.10	132.04	132.14	171.98	-9,527.05	915.73	1,183.64	1,074.54	109.11	10.849
20,700.00	11,614.56	21,855.74	12,786.62	133.40	133.50	171.98	-9,627.04	916.63	1,183.64	1,073.68	109.96	10.764
20,800.00	11,615.09	21,955.74	12,787.15	134.75	134.85	171.98	-9,727.04	917.54	1,183.64	1,072.82	110.82	10.681
20,900.00	11,615.61	22,055.74	12,787.67	136.10	136.21	171.98	-9,827.03	918.45	1,183.64	1,071.96	111.68	10.599
21,000.00	11,616.14	22,155.74	12,788.20	137.45	137.57	171.98	-9,927.03	919.36	1,183.64	1,071.10	112.54	10.517
21,100.00	11,616.66	22,255.74	12,788.72	138.81	138.92	171.98	-10,027.02	920.27	1,183.64	1,070.24	113.40	10.437
21,200.00	11,617.19	22,355.74	12,789.25	140.16	140.28	171.98	-10,127.02	921.18	1,183.64	1,069.37	114.27	10.358
21,300.00	11,617.71	22,455.74	12,789.78	141.52	141.63	171.98	-10,227.01	922.09	1,183.64	1,068.51	115.14	10.280
21,400.00	11,618.24	22,555.74	12,790.30	142.87	142.99	171.98	-10,327.00	922.99	1,183.64	1,067.64	116.01	10.203
21,500.00	11,618.76	22,655.74	12,790.83	144.23	144.35	171.99	-10,427.00	923.90	1,183.64	1,066.77	116.88	10.127
21,600.00	11,619.29	22,755.74	12,791.35	145.58	145.71	171.99	-10,526.99	924.81	1,183.64	1,065.89	117.75	10.052
21,700.00	11,619.81	22,855.74	12,791.88	146.94	147.06	171.99	-10,626.99	925.72	1,183.64	1,065.02	118.62	9.978
21,800.00	11,620.34	22,955.74	12,792.41	148.29	148.42	171.99	-10,726.98	926.63	1,183.64	1,064.14	119.50	9.905
21,900.00	11,620.86	23,055.74	12,792.93	149.65	149.78	171.99	-10,826.98	927.54	1,183.64	1,063.27	120.38	9.833
21,945.36	11,621.10	23,101.10	12,793.17	150.26	150.40	171.99	-10,872.34	927.95	1,183.64	1,062.87	120.77	9.800

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Reference Depths are relative to GE 3220 + 26 @ 3246.00usft (26' KB)

Coordinates are relative to: Junior Mint Fed 158H

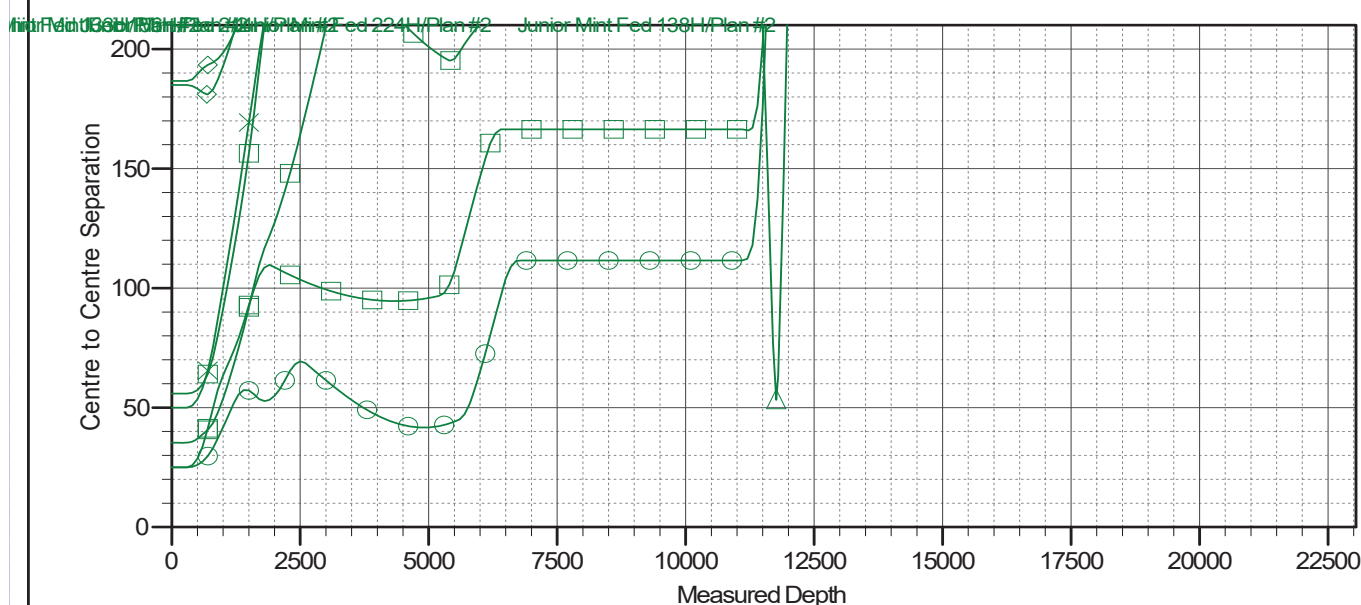
Offset Depths are relative to Offset Datum

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

Central Meridian is -104.3333333

Grid Convergence at Surface is: 0.52°

Ladder Plot



LEGEND

Junior Mint Fed 138H, OH, Plan#2 V0	Junior Mint Fed 134H, OH, Plan#2 V0	Junior Mint Fed 218H, OH, Plan#2 V0
Junior Mint Fed 133H, OH, Plan#2 V0	Junior Mint Fed 137H, OH, Plan#2 V0	Junior Mint Fed 213H, OH, Plan#2 V0
Junior Mint Fed 224H, OH, Plan#2 V0	(O) Montera Fed Com 702H, OH, Plan#1 V0	(O) Montera Fed Com 603H, OH, Plan#1 V0
Junior Mint Fed 223H, OH, Plan#2 V0	Junior Mint Fed 214H, OH, Plan#2 V0	
Junior Mint Fed 156H, OH, Plan#2 V0	Junior Mint Fed 216H, OH, Plan#2 V0	

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

Total Directional Anticollision Report



Company:	Civitas Resources	Local Co-ordinate Reference:	Well Junior Mint Fed 158H
Project:	Lea County, NM (NAD 83)	TVD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Reference Site:	Junior Mint Fed Pad	MD Reference:	GE 3220 + 26 @ 3246.00usft (26' KB)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Junior Mint Fed 158H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.50 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	.Total Directional Production DB
Reference Design:	Plan #2	Offset TVD Reference:	Reference Datum

Reference Depths are relative to GE 3220 + 26 @ 3246.00usft (26' KB)

Coordinates are relative to: Junior Mint Fed 158H

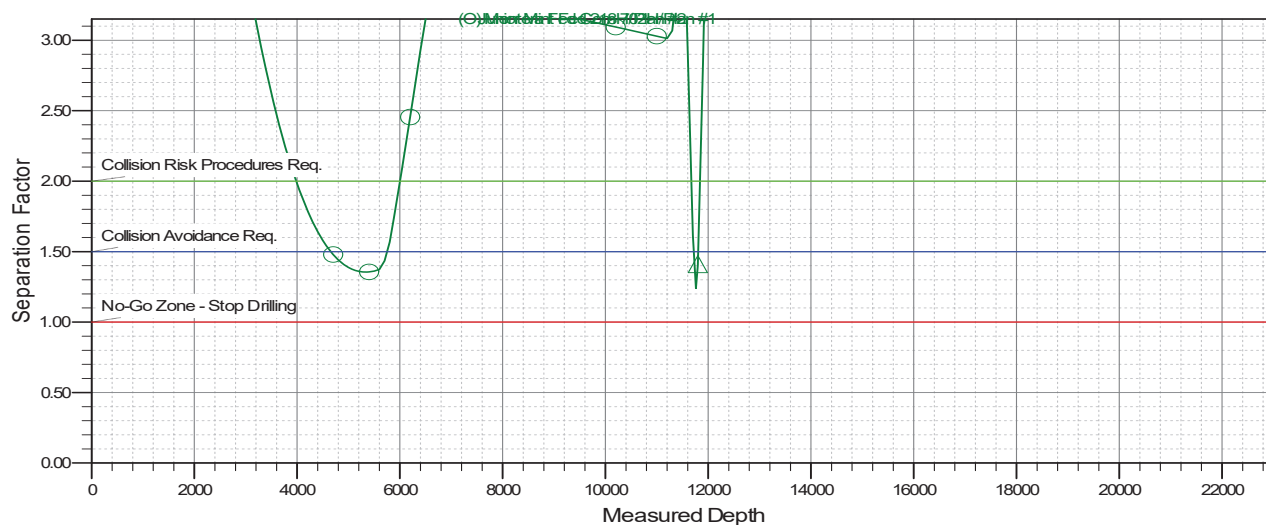
Offset Depths are relative to Offset Datum

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

Central Meridian is -104.3333333

Grid Convergence at Surface is: 0.52°

Separation Factor Plot



LEGEND

Junior Mint Fed 138H, OH, Plan#2 V0	Junior Mint Fed 134H, OH, Plan#2 V0	Junior Mint Fed 218H, OH, Plan#2 V0
Junior Mint Fed 133H, OH, Plan#2 V0	Junior Mint Fed 137H, OH, Plan#2 V0	Junior Mint Fed 213H, OH, Plan#2 V0
Junior Mint Fed 224H, OH, Plan#2 V0	(O) Monter a Fed Com 702H, OH, Plan#1 V0	(O) Monter a Fed Com 603H, OH, Plan#1 V0
Junior Mint Fed 223H, OH, Plan#2 V0	Junior Mint Fed 214H, OH, Plan#2 V0	
Junior Mint Fed 156H, OH, Plan#2 V0	Junior Mint Fed 216H, OH, Plan#2 V0	

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

8/18/2025 4:01:59PM

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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 AND ACREAGE DEDICATION PLAT

API Number 30-025-	Pool Code 98185	Pool Name WC-025 G-09 S253502B; LWR BONE SPRING
Property Code	Property Name JUNIOR MINT FED	Well Number 158H
OGRID No. 332195	Operator Name CIVITAS PERMIAN OPERATING, LLC	Ground Level Elevation 3222'
Surface Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal		Mineral Owner: ☐ State ☐ Fee ☐ Tribal ☒ Federal

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
O	10	25-S	35-E	-	350' S	1638' E	N 32.1385845	W 103.3521548	LEA

Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
P	22	25-S	35-E	-	5' S	495' E	N 32.1086021	W 103.3484632	LEA

Dedicated Acres 1280.00	Infill or Defining Well Infill	Defining Well API 30-025-54739 (131H)	Overlapping Spacing Unit (Y/N) N	Consolidated Code N/A
Order Numbers NSP			Well Setbacks are under Common Ownership: ☒ Yes ☐ No	

Kick Off Point (KOP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
A	15	25-S	35-E	-	100' N	495' E	N 32.1373429	W 103.3484588	LEA

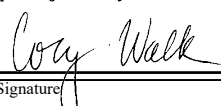
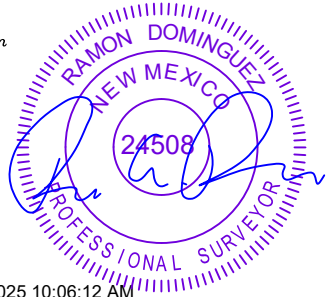
First Take Point (FTP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
A	15	25-S	35-E	-	100' N	495' E	N 32.1373429	W 103.3484588	LEA

Last Take Point (LTP)

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the N/S	Feet from the E/W	Latitude	Longitude	County
P	22	25-S	35-E	-	100' S	495' E	N 32.1088633	W 103.3484631	LEA

Unitized Area or Area of Uniform Intrest Y	Spacing Unity Type ☒ Horizontal ☐ Vertical	Ground Floor Elevation 3222'
--	--	--

OPERATOR CERTIFICATION <i>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.</i> <i>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.</i>  9-16-25		SURVEYORS CERTIFICATION <i>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.</i>  4/21/2025 10:06:12 AM	
Signature Cory Walk		Signature and Seal of Professional Surveyor	
Date		Date	
Print Name cory@permitswest.com		Certificate Number	Date of Survey 06/07/2022
E-mail Address			

C-102

Submit Electronically
Via OCD PermittingState of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION

Revised July 9, 2024

Submittal
Type:

- ☒ Initial Submittal
- ☐ Amended Report
- ☐ As Drilled

Property Name and Well Number

JUNIOR MINT FED 158H

SURFACE LOCATION (SHL)

NEW MEXICO EAST
NAD 1983
X=845039
Y=415536
LAT.: N 32.1385845
LONG.: W 103.3521548
350' FSL 1638' FEL

KICK OFF POINT (KOP) /
FIRST TAKE POINT (FTP)

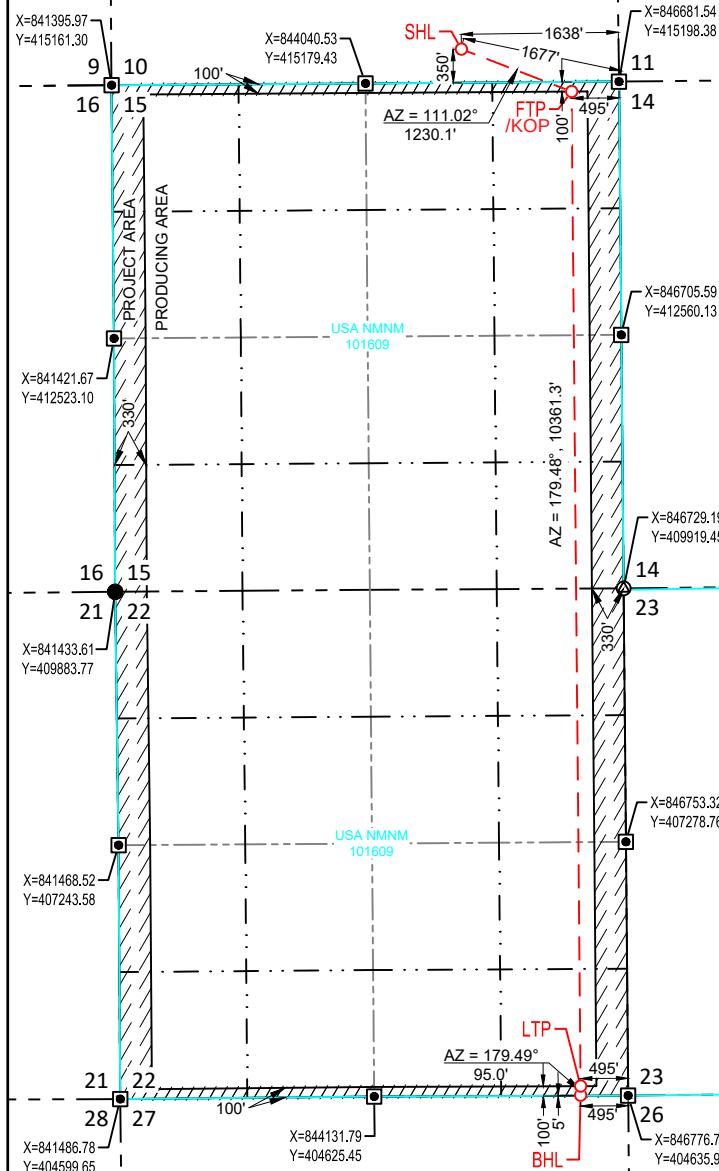
NEW MEXICO EAST
NAD 1983
X=846187
Y=415095
LAT.: N 32.1373429
LONG.: W 103.3484588
100' FNL 495' FEL

LAST TAKE POINT (LTP)

NEW MEXICO EAST
NAD 1983
X=846281
Y=404734
LAT.: N 32.1088633
LONG.: W 103.3484631
100' FSL 495' FEL

BOTTOM HOLE LOCATION (BHL)

NEW MEXICO EAST
NAD 1983
X=846282
Y=404639
LAT.: N 32.1086021
LONG.: W 103.3484632
5' FSL 495' FEL



SURVEYORS CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

06/07/2022

Date of Survey

Signature and Seal of Professional Surveyor:



State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: CIVITAS PERMIAN OPERATING, LLC **OGRID:** 332195 **Date:** 04/17/2025

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
<u>SEE ATTACHED</u>						

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

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

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
<u>SEE ATTACHED</u>						

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

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

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

Section 2 – Enhanced Plan**EFFECTIVE APRIL 1, 2022**

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

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

Section 4 - Notices

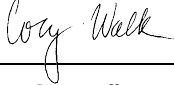
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

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

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

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

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

Signature: 
Printed Name: Cory Walk
Title: Consultant
E-mail Address: cory@permitswest.com
Date: 04/17/2025
Phone: (505) 466-8120
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

III. Well(s): Junior Mint E2 Pad

Well Name	API	ULSTR	Footages	Anticipated Oil (BBL/D)	Anticipated Gas (MCF/D)	Anticipated Produced Water (BBL/D)
Junior Mint Fed 113H	TBD	O-10-25S-35E	373' FSL/1477' FEL	620	800	960
Junior Mint Fed 117H	TBD	O-10-25S-35E	349' FSL/1558' FEL	620	800	960
Junior Mint Fed 118H	TBD	O-10-25S-35E	348' FSL/1452' FEL	620	800	960
Junior Mint Fed 123H	TBD	O-10-25S-35E	374' FSL/1558' FEL	620	800	960
Junior Mint Fed 124H	TBD	O-10-25S-35E	373' FSL/1453' FEL	620	800	960
Junior Mint Fed 133H	TBD	O-10-25S-35E	525' FSL/1740' FEL	620	800	960
Junior Mint Fed 134H	TBD	O-10-25S-35E	525' FSL/1715' FEL	620	800	960
Junior Mint Fed 138H	TBD	O-10-25S-35E	524' FSL/1635' FEL	620	800	960
Junior Mint Fed 156H	TBD	O-10-25S-35E	350' FSL/1663' FEL	620	800	960
Junior Mint Fed 158H	TBD	O-10-25S-35E	350' FSL/1638' FEL	620	800	960
Junior Mint Fed 213H	TBD	O-10-25S-35E	550' FSL/1740' FEL	620	800	960
Junior Mint Fed 214H	TBD	O-10-25S-35E	549' FSL/1635' FEL	620	800	960
Junior Mint Fed 216H	TBD	O-10-25S-35E	550' FSL/1715' FEL	620	800	960
Junior Mint Fed 218H	TBD	O-10-25S-35E	549' FSL/1610' FEL	620	800	960
Junior Mint Fed 223H	TBD	O-10-25S-35E	375' FSL/1663' FEL	620	800	960
Junior Mint Fed 224H	TBD	O-10-25S-35E	375' FSL/1637' FEL	620	800	960

V. Anticipated Schedule: Junior Mint E2 Pad

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Junior Mint Fed 113H	TBD	9/12/2026	12/11/2026	3/11/2027	3/31/2027	4/20/2027
Junior Mint Fed 117H	TBD	9/10/2026	12/9/2026	3/9/2027	3/29/2027	4/18/2027
Junior Mint Fed 118H	TBD	9/13/2026	12/12/2026	3/12/2027	4/1/2027	4/21/2027
Junior Mint Fed 123H	TBD	9/14/2026	12/13/2026	3/13/2027	4/2/2027	4/22/2027
Junior Mint Fed 124H	TBD	9/15/2026	12/14/2026	3/14/2027	4/3/2027	4/23/2027
Junior Mint Fed 133H	TBD	3/28/2026	6/26/2026	9/24/2026	10/14/2026	11/3/2026
Junior Mint Fed 134H	TBD	2/22/2026	5/23/2026	8/21/2026	9/10/2026	9/30/2026
Junior Mint Fed 138H	TBD	2/23/2026	5/24/2026	8/22/2026	9/11/2026	10/1/2026
Junior Mint Fed 156H	TBD	3/27/2026	6/25/2026	9/23/2026	10/13/2026	11/2/2026
Junior Mint Fed 158H	TBD	2/12/2026	5/13/2026	8/11/2026	8/31/2026	9/20/2026
Junior Mint Fed 213H	TBD	4/1/2026	6/30/2026	9/28/2026	10/18/2026	11/7/2026
Junior Mint Fed 214H	TBD	2/25/2026	5/26/2026	8/24/2026	9/13/2026	10/3/2026
Junior Mint Fed 216H	TBD	3/29/2026	6/27/2026	9/25/2026	10/15/2026	11/4/2026
Junior Mint Fed 218H	TBD	2/26/2026	5/27/2026	8/25/2026	9/14/2026	10/4/2026
Junior Mint Fed 223H	TBD	3/30/2026	6/28/2026	9/26/2026	10/16/2026	11/5/2026
Junior Mint Fed 224H	TBD	2/27/2026	5/28/2026	8/26/2026	9/15/2026	10/5/2026



Civitas Permian Operating Natural Gas Management Plan

VI. Separation Equipment:

Each surface facility design includes the following process equipment: Multiphase test measurement per upstream pad, 3-phase separators, a sales gas scrubber, heater treaters, a VRU compressor, multiple water and oil tanks, as well as flare knockouts (HP & LP), and flares (HP & LP - combined). All process vessels will be sized to separate oil, water, gas based upon typical/historical & predicted well performance. Each process vessel will be fitted with an appropriately sized PSV as per ASME code requirements to mitigate vessel rupture and loss of containment. Additionally, the process vessels will be fitted with pressure transmitters tied to the facility control system which will allow operations to monitor pressures and when necessary, shut in the facility to avoid vessel over-pressure and the potential vent of natural gas. Natural gas will preferentially be sold to pipeline, and only during upset/emergency conditions will gas be directed to the flare system. Aboveground steel oil tanks & water tanks will be fitted with 32 oz thief hatches as well as PRVs to protect the tanks from rupture/collapse. Additionally, the tank vapor outlets will preferentially be directed to the VRU and the sales gas pipeline. Only during process upsets/emergency conditions will tank vapors be directed to the LP flare system.

VII. Operational Practices:

- During drilling operations, gas meters will be installed at the shakers and Volume Totalizers will be installed on the pits. In the event that elevated gas levels, or a pit gain are observed, returns will be diverted to a gas buster. Gas coming off the gas buster will be combusted at the flare stack. A 10' or taller flare will be located at least 100' from the SHL.
- During completions operations, including stimulation and frac plug drill out operations, hydrocarbon production to surface is minimized. When gas production does occur, gas will be combusted at a flare stack. A 10' or taller flare will be located at least 100' from the SHL.
- During production operations, all process vessels (separators, heater treaters, tanks) will recompress (where necessary) and route gas outlets into the natural gas gathering pipeline. Gas will preferentially be routed to natural gas gathering pipeline and the flare system will be used only during emergencies, malfunction, or if the gas does not meet pipeline specifications. In the event of flaring off-specification gas, operations will pull gas samples twice a week and will also route gas back to pipeline as soon as the gas meets specification. Exceptions to this will include only those qualified emergencies as mentioned in the BLM Waste Prevention Rule.



- To comply with state performance standards, separation and storage equipment will be designed to handle the maximum anticipated throughput and pressure to minimize waste and reduce the likelihood of venting gas to atmosphere. Additionally, each storage tank (Oil & Water) will be fitted with a level transmitter to facilitate gauging of the tank without opening of the thief hatch. Any gas collected through the tank vent system is expected to be recompressed and routed to sales. However, in the event of an emergency, the tank vapor system will be designed to combust the gas using a flare stack fitted with a continuous or automatic ignitor. The flare stack will be properly anchored and will be located a minimum of 100 feet from the well and storage tanks. Operators will conduct weekly AVO inspections. These AVO inspection records will be stored for the required 5-year period and will be made available upon Division request.

VIII. Best Management Practices:

When performing routine or preventive maintenance on a vessel or tank, initially all inlet valves are closed, and the vessel or tank is allowed to depressurize through the normal outlet connections to gas sales and/or liquid tanks. Once the vessel or tank is depressurized to lowest acceptable sales outlet pressure, usually around 20 psig, a temporary low-pressure flowline is connected from the vessel or tank to the Vapor Recovery Unit (VRU) for further pressure reduction. Once depressurized to less than 1-2 psig, the remaining natural gas in the vessel or tank is vented to atmosphere through a controlled pressure relief valve. Once the vessel or tank is depressurized to atmospheric pressure, the vessel or tank can be safely opened, and maintenance performed.



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

Drilling Plan Data Report

04/11/2025

APD ID: 10400086508

Submission Date: 07/06/2022

Highlighted data
reflects the most
recent changes

Operator Name: TAP ROCK OPERATING LLC

Well Name: JUNIOR MINT FED

Well Number: 158H

Well Type: OIL WELL

Well Work Type: Drill

[Show Final Text](#)

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
9894189	QUATERNARY	3222	0	0	OTHER : Caliche	NONE	N
9894190	RUSTLER	2562	660	660	SALT	OTHER : Salt	N
9894191	TOP SALT	2122	1100	1100	SALT	OTHER : Salt	N
9894192	BASE OF SALT	-1698	4920	4960	SALT	OTHER : Salt	N
9894193	DELAWARE	-1938	5160	5203	OTHER, SANDSTONE : Mountain Group	NONE	N
9894194	LAMAR	-1943	5165	5208	SANDSTONE	NATURAL GAS, OIL	N
9894195	BELL CANYON	-1963	5185	5228	SANDSTONE	NATURAL GAS, OIL	N
9894196	RAMSEY SAND	-1983	5205	5248	SANDSTONE	NATURAL GAS, OIL	N
9894197	CHERRY CANYON	-2928	6150	6205	OTHER : Carbonate	NATURAL GAS, OIL	N
9894198	BRUSHY CANYON	-4398	7620	7694	SANDSTONE	NATURAL GAS, OIL	N
9894199	BONE SPRING LIME	-5708	8930	9020	OTHER : Carbonate	NATURAL GAS, OIL	N
9894200	UPPER AVALON SHALE	-5733	8955	9045	OTHER : Carbonate	NATURAL GAS, OIL	N
9894201	AVALON SAND	-5963	9185	9277	OTHER : Middle Carbonate	NATURAL GAS, OIL	N
9894202	BONE SPRING 1ST	-6943	10165	10257	SANDSTONE	NATURAL GAS, OIL	N
9894203	BONE SPRING 2ND	-7108	10330	10422	OTHER : Carbonate	NATURAL GAS, OIL	N
9894204	BONE SPRING 2ND	-7493	10715	10807	SANDSTONE	NATURAL GAS, OIL	N
9894205	BONE SPRING 3RD	-8043	11265	11368	OTHER : Carbonate	NATURAL GAS, OIL	Y

Operator Name: TAP ROCK OPERATING LLC**Well Name:** JUNIOR MINT FED**Well Number:** 158H**Section 2 - Blowout Prevention****Pressure Rating (PSI):** 5M**Rating Depth:** 15000

Equipment: At 21,923', a 5M pressure control system is required. The BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram, and 1 annular preventer will be used below surface casing to TD. See attachments for BOP and choke manifold diagrams. Also present will be an accumulator that meets the requirements of Onshore Order #2 for the pressure rating of the BOP stack. A rotating head will also be installed as needed. BOP will be inspected and operated as recommended in Onshore Order #2. A top drive check valve and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position. The wellhead will be a multi-bowl speed head.

Requesting Variance? YES

Variance request: Tap Rock requests a variance to run a multi-bowl speed head for setting the Intermediate and Production Strings. Tap Rock requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used. Tap Rock requests a variance to have the option of batch drilling this well with other wells on the same pad. In the event that this well is batch drilled, after cementing a casing string, a 5M dry hole cap with bleed off valve will be installed. The rig will then walk to another well on the pad. When the rig returns to this well and BOPs are installed, the operator will perform a full BOP test.

Testing Procedure: After surface casing is set and the BOP is nipped up, the BOP pressure tests will be made with a third party tester to 250 psi low, 5000 psi high, and the annular preventer will be tested to 250 psi low, 2500 psi high. The BOP will be tested in this manner after nipple-up if any break of the stack occurs.

Choke Diagram Attachment:

Choke_Diagram_032918_20220703110745.pdf

BOP Diagram Attachment:

10M_BOP_Stack_5M_Annular_Preventer_20220703110753.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	685	0	685	3222	2537	685	J-55	54.5	BUTT	1.13	1.15	DRY	1.6	DRY	1.6
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5258	0	5215	3221	-1993	5258	J-55	40	BUTT	1.13	1.15	DRY	1.6	DRY	1.6
3	PRODUCTION	8.75	5.5	NEW	NON API	N	0	11088	0	10996	3221	-7774	11088	P-110	20	OTHER - TXP	1.13	1.15	DRY	1.6	DRY	1.6
4	PRODUCTION	7.875	5.5	NEW	NON API	N	11088	21923	10996	11621	-7774	-8399	10835	P-110	20	OTHER - TXP	1.13	1.15	DRY	1.6	DRY	1.6

Operator Name: TAP ROCK OPERATING LLC

Well Name: JUNIOR MINT FED

Well Number: 158H

Casing Attachments

Casing ID: 1StringSURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20220703110815.pdf

Casing ID: 2StringINTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20220703110838.pdf

Casing ID: 3StringPRODUCTION

Inspection Document:

Spec Document:

5.5in_TXP_Casing_Spec_20220703110902.PDF

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Casing_Design_Assumptions_20220703110909.pdf

Operator Name: TAP ROCK OPERATING LLC**Well Name:** JUNIOR MINT FED**Well Number:** 158H**Casing Attachments****Casing ID:** 4 **String** PRODUCTION**Inspection Document:****Spec Document:**

5.5in_TXP_Casing_Spec_20220703110935.PDF

Tapered String Spec:**Casing Design Assumptions and Worksheet(s):**

Casing_Design_Assumptions_20220703110946.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	385	294	1.82	13.5	535	100	Class C	5% NCI + LCM
SURFACE	Tail		385	685	311	1.34	14.8	417	100	Class C	5% NCI + LCM
INTERMEDIATE	Lead		0	4258	653	3.21	11	2095	65	Class C	Bentonite + 1% CaCL2 + 8% NaCL+ LCM
INTERMEDIATE	Tail		4258	5258	306	1.33	14.8	407	30	Class C	5% NaCL + LCM
PRODUCTION	Lead		5058	1108 8	441	4.13	10.5	1820	20	Class H	Fluid Loss + Dispersant + Retarder + LCM
PRODUCTION	Tail		1108 8	2192 3	2268	1.53	13.2	3470	20	Class H	Fluid Loss + Dispersant + Retarder + LCM

Operator Name: TAP ROCK OPERATING LLC**Well Name:** JUNIOR MINT FED**Well Number:** 158H

Section 5 - Circulating Medium

Mud System Type: Closed**Will an air or gas system be Used?** NO**Description of the equipment for the circulating system in accordance with 43 CFR 3172:****Diagram of the equipment for the circulating system in accordance with 43 CFR 3172:**

Describe what will be on location to control well or mitigate other conditions: All necessary mud products (i.e., barite, pac) for weight addition and fluid loss control will always be on site. Mud program is subject to change due to hole conditions.

Describe the mud monitoring system utilized: Electronic Pason mud monitor system complying with Onshore Order 1 will be used.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	685	OTHER : Fresh Water Spud Mud	8.4	8.4							
685	5258	OTHER : Brine Water	10	10							
5258	21923	OTHER : Cut Brine	9	9							

Section 6 - Test, Logging, Coring

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

Electric Logging Program: No open-hole logs are planned at this time for the pilot hole. GR will be collected while drilling through the MWD tools from KOP to TD. A 2-person mud logging program will be used from KOP to TD. CBL w/ CCL from as far as gravity will let it fall to TOC.

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

CEMENT BOND LOG,GAMMA RAY LOG,MUD LOG/GEOLOGICAL LITHOLOGY LOG,

Coring operation description for the well:

No DSTs or cores are planned at this time.

Operator Name: TAP ROCK OPERATING LLC**Well Name:** JUNIOR MINT FED**Well Number:** 158H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5439**Anticipated Surface Pressure:** 2882**Anticipated Bottom Hole Temperature(F):** 190**Anticipated abnormal pressures, temperatures, or potential geologic hazards?** NO**Describe:****Contingency Plans geohazards description:****Contingency Plans geohazards****Hydrogen Sulfide drilling operations plan required?** YES**Hydrogen sulfide drilling operations**

JM_E2_H2S_Plan_v2_RDC_20221112074422.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

JM_158H_Horizontal_Plan_20220703111157.pdf

Other proposed operations facets description:**Other proposed operations facets attachment:**

CoFlex_Certs_20220703111249.pdf

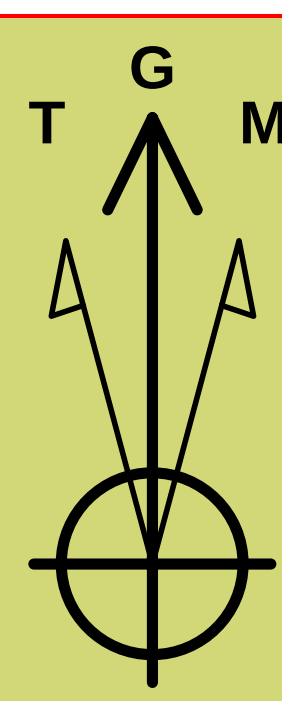
JM_158H_Anticollision_Report_20220703111259.pdf

Wellhead_3T_101619_20220703111308.pdf

Well_Control_Plan_10M_BOP_5M_Annular_20220703111309.pdf

JM_158H_Drill_Plan_v2_20221112074457.pdf

Other Variance attachment:

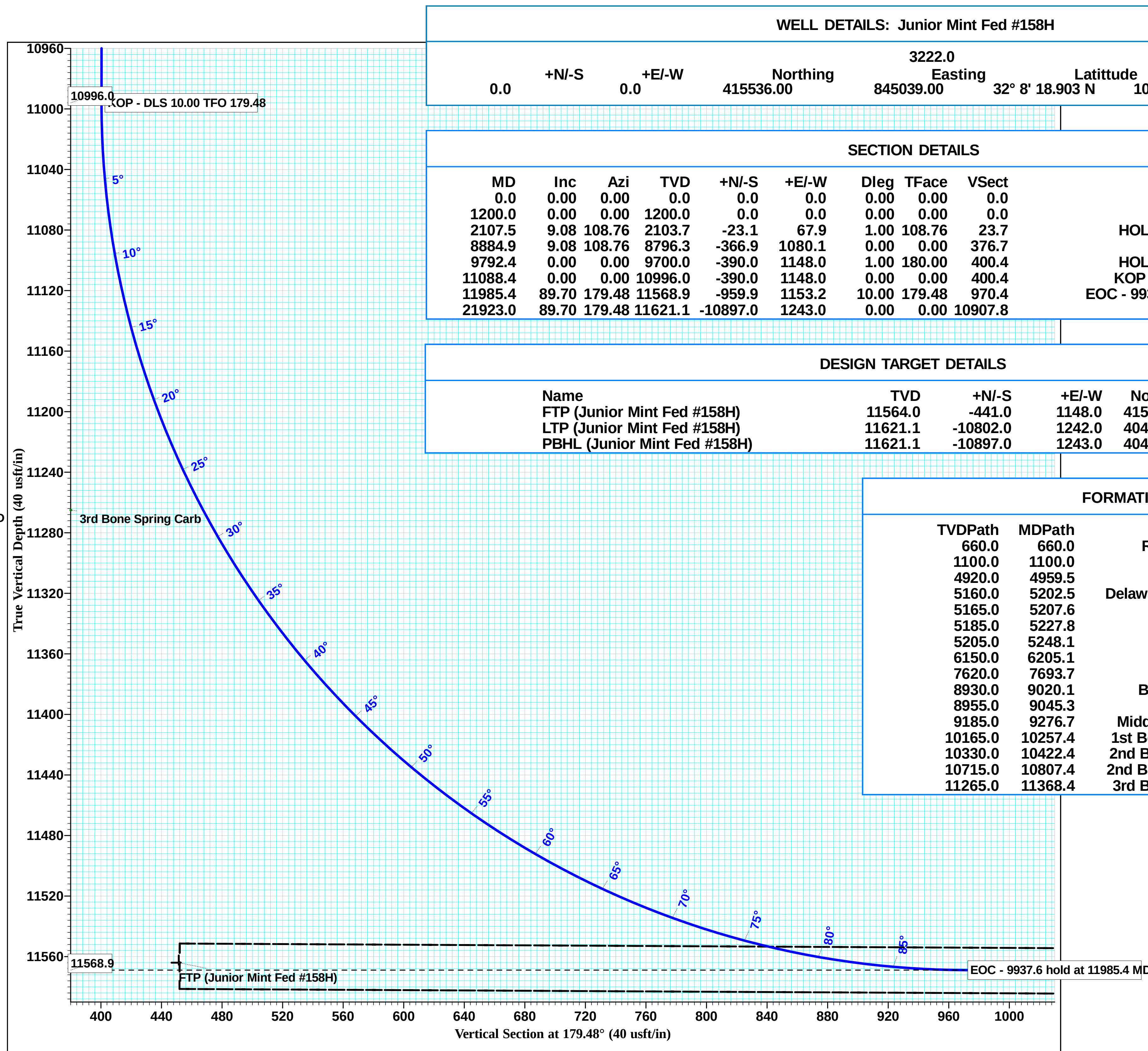
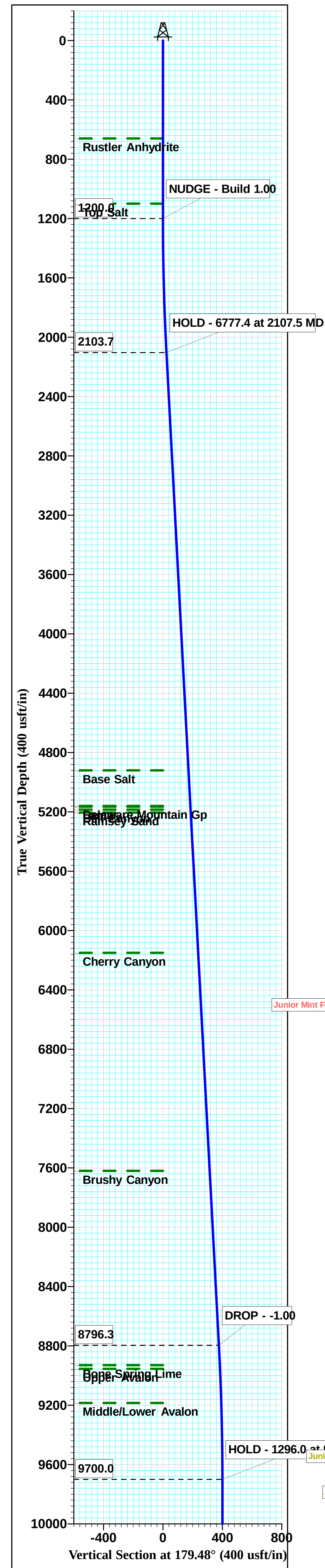


Azimuths to Grid North
True North: -0.52°
Magnetic North: 5.77°

Magnetic Field
Strength: 47396.2nT
Dip Angle: 59.95°
Date: 06/22/2022
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 5.77°

Tap Rock Resources, LLC
Project: Lea County, NM (NAD 83 NME)
Site: (Junior Mint Fed) Sec-15 T-25-S R-35-E
Well: Junior Mint Fed #158H
Wellbore: OWB
Design: Plan #1
Lat: 32° 8' 18.903 N
Long: 103° 21' 7.760 W
Pad GL: 3222.0
KB: KB @ 3248.0usft



WELL DETAILS: Junior Mint Fed #158H

	+N/-S	+E/-W	North	East	Latitude	Longitude
0.0	0.0	0.0	415536.00	845039.00	32° 8' 18.903 N	103° 21' 7.760 W

SECTION DETAILS

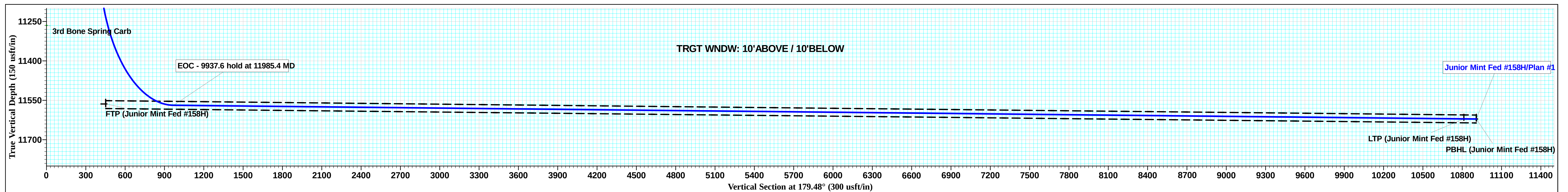
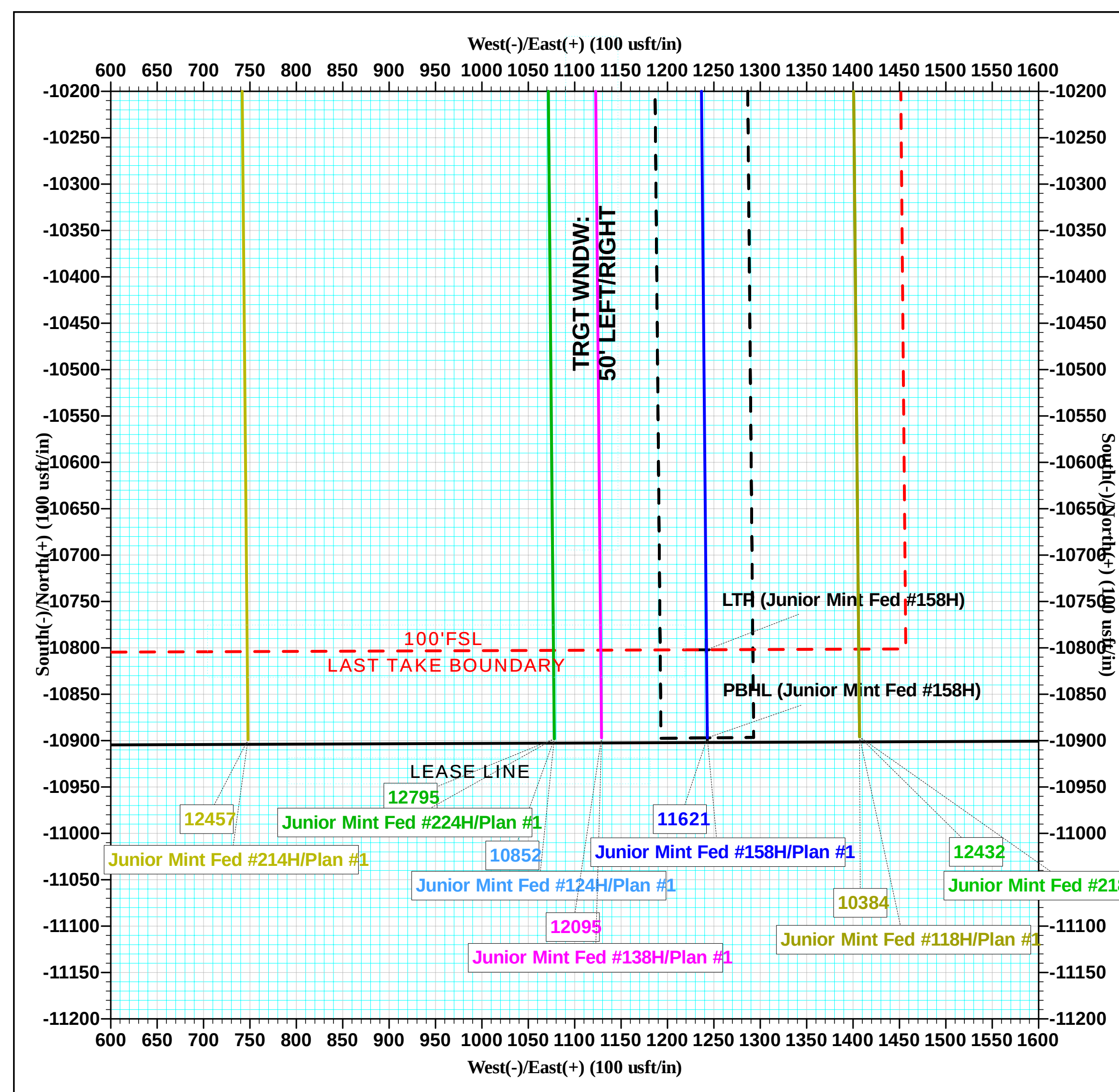
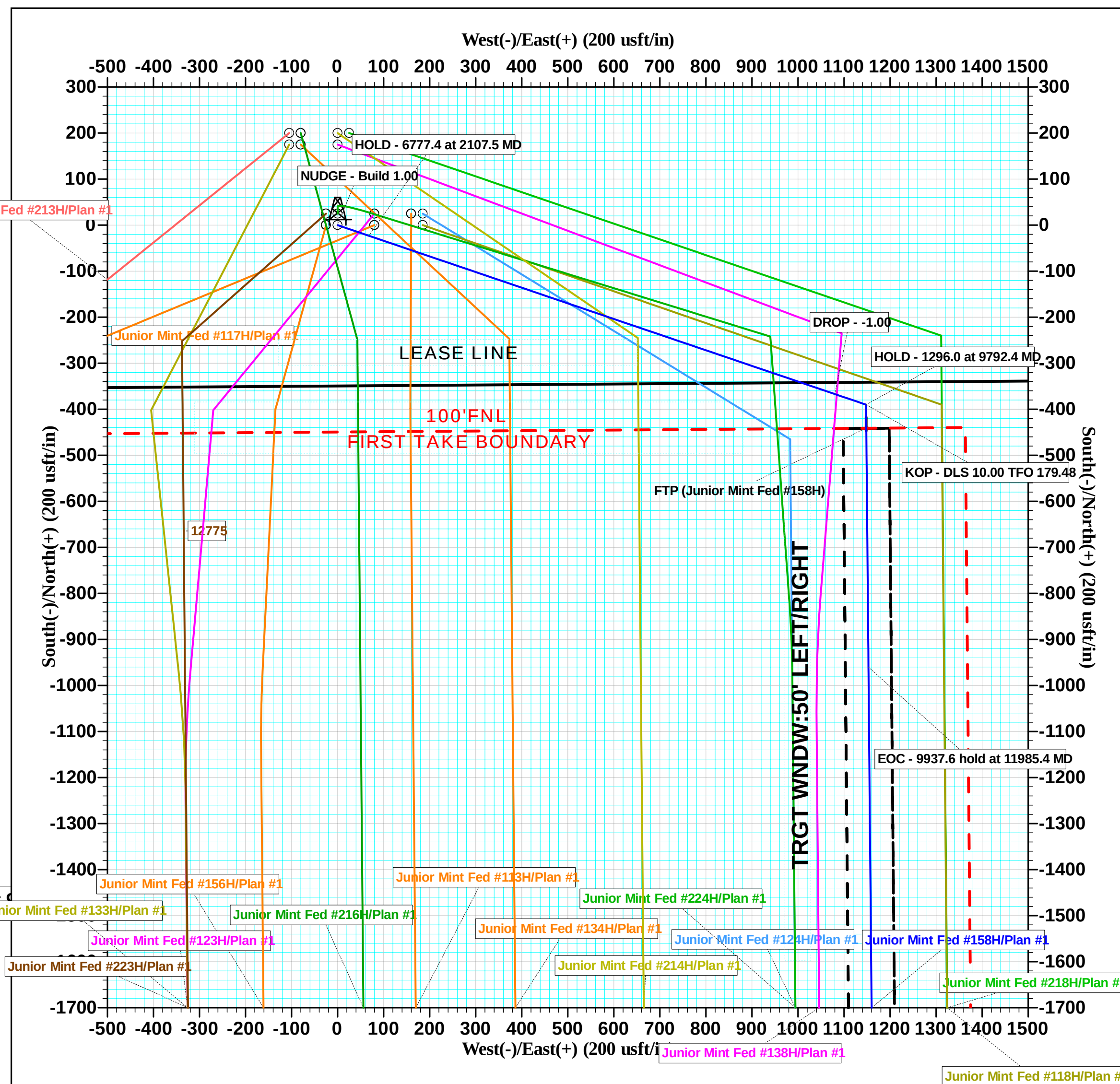
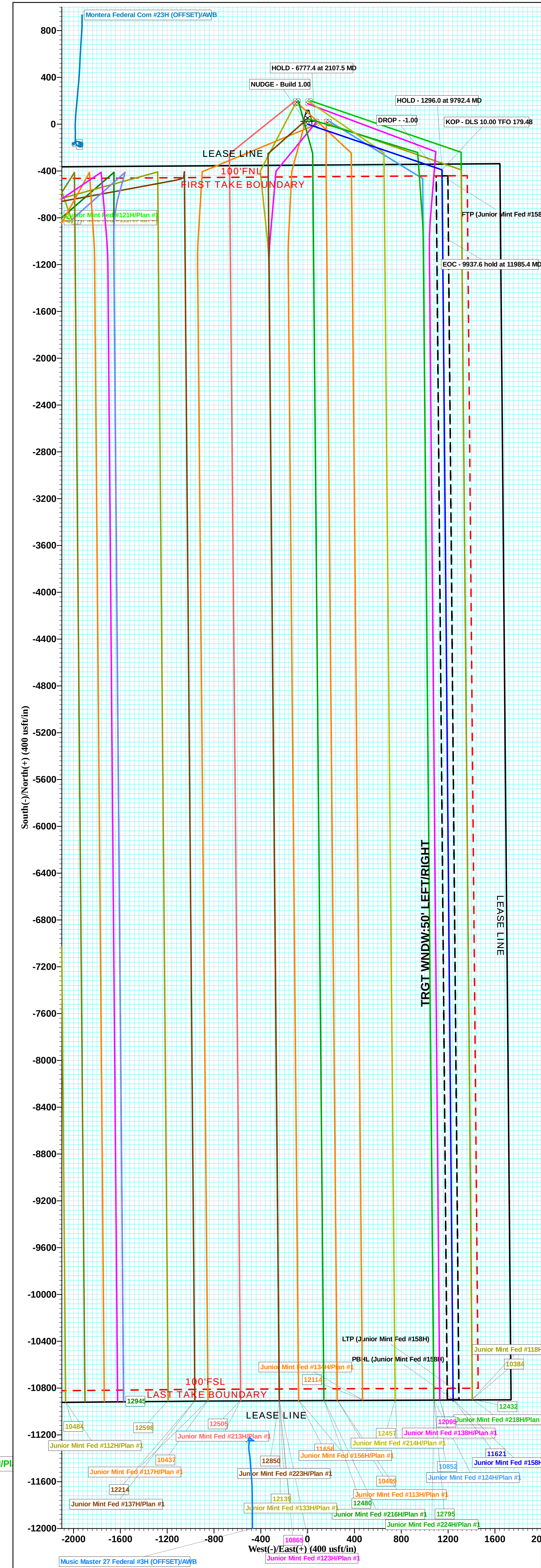
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSeet	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	NUDGE - Build 1.00
2107.5	9.08	108.76	2103.7	-23.1	67.9	1.00	108.76	23.7	HOLD - 6777.4 at 2107.5 MD
8884.9	9.08	108.76	8796.3	-366.9	1080.1	0.00	0.00	376.7	DROP - -1.00
9792.4	0.00	0.00	9700.0	-390.0	1148.0	1.00	180.00	400.4	HOLD - 1296.0 at 9792.4 MD
11088.4	0.00	0.00	10996.0	-390.0	1148.0	0.00	0.00	400.4	KOP - DLS 10.00 TFO 179.48
11985.4	89.70	179.48	11568.9	-959.9	1153.2	10.00	179.48	970.4	EOC - 9937.6 hold at 11985.4 MD
21923.0	89.70	179.48	11621.1	-10897.0	1243.0	0.00	0.00	10907.8	TD at 21923.0

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	North	East
FTP (Junior Mint Fed #158H)	11564.0	-441.0	1148.0	415095.00	846187.00
LTP (Junior Mint Fed #158H)	11621.1	-10802.0	1242.0	404734.00	846281.00
PBHL (Junior Mint Fed #158H)	11621.1	-10897.0	1243.0	404639.00	846282.00

FORMATIONS

TVDPath	MDPath	Formation
660.0	660.0	Rustler Anhydrite
1100.0	1100.0	Top Salt
4920.0	4959.5	Base Salt
5160.0	5202.5	Delaware Mountain Gp
5165.0	5207.6	Lamar
5185.0	5227.8	Bell Canyon
5205.0	5248.1	Ramsey Sand
6150.0	6205.1	Cherry Canyon
7620.0	7693.7	Brushy Canyon
8930.0	9020.1	Bone Spring Lime
8955.0	9045.3	Upper Avalon
9185.0	9276.7	Middle/Lower Avalon
10165.0	10257.4	1st Bone Spring Sand
10330.0	10422.4	2nd Bone Spring Carb
10715.0	10807.4	2nd Bone Spring Sand
11265.0	11368.4	3rd Bone Spring Carb



TRGT WNDW: 10' ABOVE / 10' BELOW

Junior Mint Fed #158H/Plan #1

LTP (Junior Mint Fed #158H)

PBHL (Junior Mint Fed #158H)

Vertical Section at 179.48° (300 usf/in)



Tap Rock Resources, LLC

**Lea County, NM (NAD 83 NME)
(Junior Mint Fed) Sec-15_T-25-S_R-35-E
Junior Mint Fed #158H**

OWB

Plan: Plan #1

Standard Planning Report

26 June, 2022





Intrepid Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Junior Mint Fed #158H
Company:	Tap Rock Resources, LLC	TVD Reference:	KB @ 3248.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3248.0usft
Site:	(Junior Mint Fed) Sec-15_T-25-S_R-35-E	North Reference:	Grid
Well:	Junior Mint Fed #158H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

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

Site		(Junior Mint Fed) Sec-15_T-25-S_R-35-E			
Site Position:		Northing:	414,725.00 usft	Latitude:	32° 8' 11.068 N
From:	Map	Easting:	842,925.00 usft	Longitude:	103° 21' 32.430 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.52 °

Well	Junior Mint Fed #158H					
Well Position	+N/-S	811.0 usft	Northing:	415,536.00 usft	Latitude:	32° 8' 18.903 N
	+E/-W	2,114.0 usft	Easting:	845,039.00 usft	Longitude:	103° 21' 7.760 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,222.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	06/22/22	6.29	59.95	47,396.17469303

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	179.48

Plan Survey Tool Program	Date	06/26/22		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	21,922.0	Plan #1 (OWB)	MWD
				OWSG MWD - Standard

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,107.5	9.08	108.76	2,103.7	-23.1	67.9	1.00	1.00	0.00	108.76	
8,884.9	9.08	108.76	8,796.3	-366.9	1,080.1	0.00	0.00	0.00	0.00	
9,792.4	0.00	0.00	9,700.0	-390.0	1,148.0	1.00	-1.00	0.00	180.00	
11,088.4	0.00	0.00	10,996.0	-390.0	1,148.0	0.00	0.00	0.00	0.00	
11,985.4	89.70	179.48	11,568.9	-959.9	1,153.2	10.00	10.00	20.01	179.48	
21,923.0	89.70	179.48	11,621.1	-10,897.0	1,243.0	0.00	0.00	0.00	0.00	PBHL (Junior Mint F



Intrepid Planning Report



Database: EDM 5000.15 Single User Db
Company: Tap Rock Resources, LLC
Project: Lea County, NM (NAD 83 NME)
Site: (Junior Mint Fed) Sec-15_T-25-S_R-35-E
Well: Junior Mint Fed #158H
Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference: Well Junior Mint Fed #158H
TVD Reference: KB @ 3248.0usft
MD Reference: KB @ 3248.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	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
NUDGE - Build 1.00									
1,300.0	1.00	108.76	1,300.0	-0.3	0.8	0.3	1.00	1.00	0.00
1,400.0	2.00	108.76	1,400.0	-1.1	3.3	1.2	1.00	1.00	0.00
1,500.0	3.00	108.76	1,499.9	-2.5	7.4	2.6	1.00	1.00	0.00
1,600.0	4.00	108.76	1,599.7	-4.5	13.2	4.6	1.00	1.00	0.00
1,700.0	5.00	108.76	1,699.4	-7.0	20.6	7.2	1.00	1.00	0.00
1,800.0	6.00	108.76	1,798.9	-10.1	29.7	10.4	1.00	1.00	0.00
1,900.0	7.00	108.76	1,898.3	-13.7	40.4	14.1	1.00	1.00	0.00
2,000.0	8.00	108.76	1,997.4	-17.9	52.8	18.4	1.00	1.00	0.00
2,107.5	9.08	108.76	2,103.7	-23.1	67.9	23.7	1.00	1.00	0.00
HOLD - 6777.4 at 2107.5 MD									
2,200.0	9.08	108.76	2,195.1	-27.8	81.7	28.5	0.00	0.00	0.00
2,300.0	9.08	108.76	2,293.8	-32.8	96.7	33.7	0.00	0.00	0.00
2,400.0	9.08	108.76	2,392.5	-37.9	111.6	38.9	0.00	0.00	0.00
2,500.0	9.08	108.76	2,491.3	-43.0	126.5	44.1	0.00	0.00	0.00
2,600.0	9.08	108.76	2,590.0	-48.1	141.5	49.3	0.00	0.00	0.00
2,700.0	9.08	108.76	2,688.8	-53.1	156.4	54.5	0.00	0.00	0.00
2,800.0	9.08	108.76	2,787.5	-58.2	171.3	59.8	0.00	0.00	0.00
2,900.0	9.08	108.76	2,886.3	-63.3	186.3	65.0	0.00	0.00	0.00
3,000.0	9.08	108.76	2,985.0	-68.4	201.2	70.2	0.00	0.00	0.00
3,100.0	9.08	108.76	3,083.8	-73.4	216.1	75.4	0.00	0.00	0.00
3,200.0	9.08	108.76	3,182.5	-78.5	231.1	80.6	0.00	0.00	0.00
3,300.0	9.08	108.76	3,281.3	-83.6	246.0	85.8	0.00	0.00	0.00
3,400.0	9.08	108.76	3,380.0	-88.6	260.9	91.0	0.00	0.00	0.00
3,500.0	9.08	108.76	3,478.8	-93.7	275.9	96.2	0.00	0.00	0.00
3,600.0	9.08	108.76	3,577.5	-98.8	290.8	101.4	0.00	0.00	0.00
3,700.0	9.08	108.76	3,676.3	-103.9	305.7	106.6	0.00	0.00	0.00
3,800.0	9.08	108.76	3,775.0	-108.9	320.7	111.8	0.00	0.00	0.00
3,900.0	9.08	108.76	3,873.8	-114.0	335.6	117.1	0.00	0.00	0.00
4,000.0	9.08	108.76	3,972.5	-119.1	350.5	122.3	0.00	0.00	0.00
4,100.0	9.08	108.76	4,071.3	-124.2	365.5	127.5	0.00	0.00	0.00
4,200.0	9.08	108.76	4,170.0	-129.2	380.4	132.7	0.00	0.00	0.00
4,300.0	9.08	108.76	4,268.8	-134.3	395.4	137.9	0.00	0.00	0.00
4,400.0	9.08	108.76	4,367.5	-139.4	410.3	143.1	0.00	0.00	0.00
4,500.0	9.08	108.76	4,466.3	-144.5	425.2	148.3	0.00	0.00	0.00
4,600.0	9.08	108.76	4,565.0	-149.5	440.2	153.5	0.00	0.00	0.00
4,700.0	9.08	108.76	4,663.8	-154.6	455.1	158.7	0.00	0.00	0.00
4,800.0	9.08	108.76	4,762.5	-159.7	470.0	163.9	0.00	0.00	0.00
4,900.0	9.08	108.76	4,861.3	-164.8	485.0	169.1	0.00	0.00	0.00
5,000.0	9.08	108.76	4,960.0	-169.8	499.9	174.4	0.00	0.00	0.00



Intrepid Planning Report



Database: EDM 5000.15 Single User Db
Company: Tap Rock Resources, LLC
Project: Lea County, NM (NAD 83 NME)
Site: (Junior Mint Fed) Sec-15_T-25-S_R-35-E
Well: Junior Mint Fed #158H
Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference: Well Junior Mint Fed #158H
TVD Reference: KB @ 3248.0usft
MD Reference: KB @ 3248.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,100.0	9.08	108.76	5,058.8	-174.9	514.8	179.6	0.00	0.00	0.00
5,200.0	9.08	108.76	5,157.5	-180.0	529.8	184.8	0.00	0.00	0.00
5,300.0	9.08	108.76	5,256.2	-185.0	544.7	190.0	0.00	0.00	0.00
5,400.0	9.08	108.76	5,355.0	-190.1	559.6	195.2	0.00	0.00	0.00
5,500.0	9.08	108.76	5,453.7	-195.2	574.6	200.4	0.00	0.00	0.00
5,600.0	9.08	108.76	5,552.5	-200.3	589.5	205.6	0.00	0.00	0.00
5,700.0	9.08	108.76	5,651.2	-205.3	604.4	210.8	0.00	0.00	0.00
5,800.0	9.08	108.76	5,750.0	-210.4	619.4	216.0	0.00	0.00	0.00
5,900.0	9.08	108.76	5,848.7	-215.5	634.3	221.2	0.00	0.00	0.00
6,000.0	9.08	108.76	5,947.5	-220.6	649.2	226.4	0.00	0.00	0.00
6,100.0	9.08	108.76	6,046.2	-225.6	664.2	231.7	0.00	0.00	0.00
6,200.0	9.08	108.76	6,145.0	-230.7	679.1	236.9	0.00	0.00	0.00
6,300.0	9.08	108.76	6,243.7	-235.8	694.0	242.1	0.00	0.00	0.00
6,400.0	9.08	108.76	6,342.5	-240.9	709.0	247.3	0.00	0.00	0.00
6,500.0	9.08	108.76	6,441.2	-245.9	723.9	252.5	0.00	0.00	0.00
6,600.0	9.08	108.76	6,540.0	-251.0	738.8	257.7	0.00	0.00	0.00
6,700.0	9.08	108.76	6,638.7	-256.1	753.8	262.9	0.00	0.00	0.00
6,800.0	9.08	108.76	6,737.5	-261.1	768.7	268.1	0.00	0.00	0.00
6,900.0	9.08	108.76	6,836.2	-266.2	783.7	273.3	0.00	0.00	0.00
7,000.0	9.08	108.76	6,935.0	-271.3	798.6	278.5	0.00	0.00	0.00
7,100.0	9.08	108.76	7,033.7	-276.4	813.5	283.7	0.00	0.00	0.00
7,200.0	9.08	108.76	7,132.5	-281.4	828.5	289.0	0.00	0.00	0.00
7,300.0	9.08	108.76	7,231.2	-286.5	843.4	294.2	0.00	0.00	0.00
7,400.0	9.08	108.76	7,330.0	-291.6	858.3	299.4	0.00	0.00	0.00
7,500.0	9.08	108.76	7,428.7	-296.7	873.3	304.6	0.00	0.00	0.00
7,600.0	9.08	108.76	7,527.5	-301.7	888.2	309.8	0.00	0.00	0.00
7,700.0	9.08	108.76	7,626.2	-306.8	903.1	315.0	0.00	0.00	0.00
7,800.0	9.08	108.76	7,725.0	-311.9	918.1	320.2	0.00	0.00	0.00
7,900.0	9.08	108.76	7,823.7	-317.0	933.0	325.4	0.00	0.00	0.00
8,000.0	9.08	108.76	7,922.4	-322.0	947.9	330.6	0.00	0.00	0.00
8,100.0	9.08	108.76	8,021.2	-327.1	962.9	335.8	0.00	0.00	0.00
8,200.0	9.08	108.76	8,119.9	-332.2	977.8	341.0	0.00	0.00	0.00
8,300.0	9.08	108.76	8,218.7	-337.3	992.7	346.2	0.00	0.00	0.00
8,400.0	9.08	108.76	8,317.4	-342.3	1,007.7	351.5	0.00	0.00	0.00
8,500.0	9.08	108.76	8,416.2	-347.4	1,022.6	356.7	0.00	0.00	0.00
8,600.0	9.08	108.76	8,514.9	-352.5	1,037.5	361.9	0.00	0.00	0.00
8,700.0	9.08	108.76	8,613.7	-357.5	1,052.5	367.1	0.00	0.00	0.00
8,800.0	9.08	108.76	8,712.4	-362.6	1,067.4	372.3	0.00	0.00	0.00
8,884.9	9.08	108.76	8,796.3	-366.9	1,080.1	376.7	0.00	0.00	0.00
DROP - -1.00									
8,900.0	8.92	108.76	8,811.2	-367.7	1,082.3	377.5	1.00	-1.00	0.00
9,000.0	7.92	108.76	8,910.1	-372.4	1,096.2	382.3	1.00	-1.00	0.00
9,100.0	6.92	108.76	9,009.3	-376.6	1,108.4	386.6	1.00	-1.00	0.00
9,200.0	5.92	108.76	9,108.6	-380.2	1,119.0	390.3	1.00	-1.00	0.00
9,300.0	4.92	108.76	9,208.2	-383.2	1,128.0	393.4	1.00	-1.00	0.00
9,400.0	3.92	108.76	9,307.9	-385.7	1,135.3	396.0	1.00	-1.00	0.00
9,500.0	2.92	108.76	9,407.7	-387.6	1,140.9	397.9	1.00	-1.00	0.00
9,600.0	1.92	108.76	9,507.6	-389.0	1,144.9	399.3	1.00	-1.00	0.00
9,700.0	0.92	108.76	9,607.6	-389.8	1,147.3	400.2	1.00	-1.00	0.00
9,792.4	0.00	0.00	9,700.0	-390.0	1,148.0	400.4	1.00	-1.00	0.00
HOLD - 1296.0 at 9792.4 MD									
9,800.0	0.00	0.00	9,707.6	-390.0	1,148.0	400.4	0.00	0.00	0.00
9,900.0	0.00	0.00	9,807.6	-390.0	1,148.0	400.4	0.00	0.00	0.00
10,000.0	0.00	0.00	9,907.6	-390.0	1,148.0	400.4	0.00	0.00	0.00



Intrepid Planning Report



Database: EDM 5000.15 Single User Db
Company: Tap Rock Resources, LLC
Project: Lea County, NM (NAD 83 NME)
Site: (Junior Mint Fed) Sec-15_T-25-S_R-35-E
Well: Junior Mint Fed #158H
Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference: Well Junior Mint Fed #158H
TVD Reference: KB @ 3248.0usft
MD Reference: KB @ 3248.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
10,100.0	0.00	0.00	10,007.6	-390.0	1,148.0	400.4	0.00	0.00	0.00
10,200.0	0.00	0.00	10,107.6	-390.0	1,148.0	400.4	0.00	0.00	0.00
10,300.0	0.00	0.00	10,207.6	-390.0	1,148.0	400.4	0.00	0.00	0.00
10,400.0	0.00	0.00	10,307.6	-390.0	1,148.0	400.4	0.00	0.00	0.00
10,500.0	0.00	0.00	10,407.6	-390.0	1,148.0	400.4	0.00	0.00	0.00
10,600.0	0.00	0.00	10,507.6	-390.0	1,148.0	400.4	0.00	0.00	0.00
10,700.0	0.00	0.00	10,607.6	-390.0	1,148.0	400.4	0.00	0.00	0.00
10,800.0	0.00	0.00	10,707.6	-390.0	1,148.0	400.4	0.00	0.00	0.00
10,900.0	0.00	0.00	10,807.6	-390.0	1,148.0	400.4	0.00	0.00	0.00
11,000.0	0.00	0.00	10,907.6	-390.0	1,148.0	400.4	0.00	0.00	0.00
11,088.4	0.00	0.00	10,996.0	-390.0	1,148.0	400.4	0.00	0.00	0.00
KOP - DLS 10.00 TFO 179.48									
11,100.0	1.16	179.48	11,007.6	-390.1	1,148.0	400.5	10.00	10.00	0.00
11,150.0	6.16	179.48	11,057.5	-393.3	1,148.0	403.7	10.00	10.00	0.00
11,200.0	11.16	179.48	11,106.9	-400.8	1,148.1	411.2	10.00	10.00	0.00
11,250.0	16.16	179.48	11,155.4	-412.6	1,148.2	423.0	10.00	10.00	0.00
11,300.0	21.16	179.48	11,202.8	-428.6	1,148.3	439.0	10.00	10.00	0.00
11,350.0	26.16	179.48	11,248.6	-448.7	1,148.5	459.1	10.00	10.00	0.00
11,400.0	31.16	179.48	11,292.5	-472.7	1,148.7	483.1	10.00	10.00	0.00
11,450.0	36.16	179.48	11,334.1	-500.4	1,149.0	510.8	10.00	10.00	0.00
11,500.0	41.16	179.48	11,373.1	-531.6	1,149.3	542.0	10.00	10.00	0.00
11,550.0	46.16	179.48	11,409.2	-566.1	1,149.6	576.5	10.00	10.00	0.00
11,600.0	51.16	179.48	11,442.3	-603.6	1,149.9	614.0	10.00	10.00	0.00
11,650.0	56.16	179.48	11,471.9	-643.9	1,150.3	654.3	10.00	10.00	0.00
11,700.0	61.16	179.48	11,497.9	-686.6	1,150.7	697.0	10.00	10.00	0.00
11,750.0	66.16	179.48	11,520.1	-731.3	1,151.1	741.8	10.00	10.00	0.00
11,800.0	71.16	179.48	11,538.3	-777.9	1,151.5	788.3	10.00	10.00	0.00
11,850.0	76.16	179.48	11,552.3	-825.9	1,151.9	836.3	10.00	10.00	0.00
11,900.0	81.16	179.48	11,562.1	-874.9	1,152.4	885.3	10.00	10.00	0.00
11,950.0	86.16	179.48	11,567.7	-924.5	1,152.8	935.0	10.00	10.00	0.00
11,985.4	89.70	179.48	11,568.9	-959.9	1,153.2	970.4	10.00	10.00	0.00
EOC - 9937.6 hold at 11985.4 MD									
12,000.0	89.70	179.48	11,569.0	-974.5	1,153.3	984.9	0.00	0.00	0.00
12,100.0	89.70	179.48	11,569.6	-1,074.5	1,154.2	1,084.9	0.00	0.00	0.00
12,200.0	89.70	179.48	11,570.1	-1,174.5	1,155.1	1,184.9	0.00	0.00	0.00
12,300.0	89.70	179.48	11,570.6	-1,274.5	1,156.0	1,284.9	0.00	0.00	0.00
12,400.0	89.70	179.48	11,571.1	-1,374.5	1,156.9	1,384.9	0.00	0.00	0.00
12,500.0	89.70	179.48	11,571.7	-1,474.5	1,157.8	1,484.9	0.00	0.00	0.00
12,600.0	89.70	179.48	11,572.2	-1,574.5	1,158.7	1,584.9	0.00	0.00	0.00
12,700.0	89.70	179.48	11,572.7	-1,674.5	1,159.6	1,684.9	0.00	0.00	0.00
12,800.0	89.70	179.48	11,573.2	-1,774.5	1,160.5	1,784.9	0.00	0.00	0.00
12,900.0	89.70	179.48	11,573.8	-1,874.5	1,161.4	1,884.9	0.00	0.00	0.00
13,000.0	89.70	179.48	11,574.3	-1,974.5	1,162.3	1,984.9	0.00	0.00	0.00
13,100.0	89.70	179.48	11,574.8	-2,074.5	1,163.2	2,084.9	0.00	0.00	0.00
13,200.0	89.70	179.48	11,575.3	-2,174.5	1,164.1	2,184.9	0.00	0.00	0.00
13,300.0	89.70	179.48	11,575.9	-2,274.4	1,165.0	2,284.9	0.00	0.00	0.00
13,400.0	89.70	179.48	11,576.4	-2,374.4	1,165.9	2,384.9	0.00	0.00	0.00
13,500.0	89.70	179.48	11,576.9	-2,474.4	1,166.8	2,484.9	0.00	0.00	0.00
13,600.0	89.70	179.48	11,577.4	-2,574.4	1,167.8	2,584.9	0.00	0.00	0.00
13,700.0	89.70	179.48	11,577.9	-2,674.4	1,168.7	2,684.9	0.00	0.00	0.00
13,800.0	89.70	179.48	11,578.5	-2,774.4	1,169.6	2,784.9	0.00	0.00	0.00
13,900.0	89.70	179.48	11,579.0	-2,874.4	1,170.5	2,884.9	0.00	0.00	0.00
14,000.0	89.70	179.48	11,579.5	-2,974.4	1,171.4	2,984.9	0.00	0.00	0.00
14,100.0	89.70	179.48	11,580.0	-3,074.4	1,172.3	3,084.9	0.00	0.00	0.00



Intrepid Planning Report



Database: EDM 5000.15 Single User Db
Company: Tap Rock Resources, LLC
Project: Lea County, NM (NAD 83 NME)
Site: (Junior Mint Fed) Sec-15_T-25-S_R-35-E
Well: Junior Mint Fed #158H
Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference: Well Junior Mint Fed #158H
TVD Reference: KB @ 3248.0usft
MD Reference: KB @ 3248.0usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
14,200.0	89.70	179.48	11,580.6	-3,174.4	1,173.2	3,184.9	0.00	0.00	0.00
14,300.0	89.70	179.48	11,581.1	-3,274.4	1,174.1	3,284.9	0.00	0.00	0.00
14,400.0	89.70	179.48	11,581.6	-3,374.4	1,175.0	3,384.9	0.00	0.00	0.00
14,500.0	89.70	179.48	11,582.1	-3,474.4	1,175.9	3,484.9	0.00	0.00	0.00
14,600.0	89.70	179.48	11,582.7	-3,574.4	1,176.8	3,584.9	0.00	0.00	0.00
14,700.0	89.70	179.48	11,583.2	-3,674.4	1,177.7	3,684.9	0.00	0.00	0.00
14,800.0	89.70	179.48	11,583.7	-3,774.4	1,178.6	3,784.9	0.00	0.00	0.00
14,900.0	89.70	179.48	11,584.2	-3,874.4	1,179.5	3,884.9	0.00	0.00	0.00
15,000.0	89.70	179.48	11,584.8	-3,974.4	1,180.4	3,984.9	0.00	0.00	0.00
15,100.0	89.70	179.48	11,585.3	-4,074.3	1,181.3	4,084.9	0.00	0.00	0.00
15,200.0	89.70	179.48	11,585.8	-4,174.3	1,182.2	4,184.9	0.00	0.00	0.00
15,300.0	89.70	179.48	11,586.3	-4,274.3	1,183.1	4,284.9	0.00	0.00	0.00
15,400.0	89.70	179.48	11,586.9	-4,374.3	1,184.0	4,384.9	0.00	0.00	0.00
15,500.0	89.70	179.48	11,587.4	-4,474.3	1,184.9	4,484.9	0.00	0.00	0.00
15,600.0	89.70	179.48	11,587.9	-4,574.3	1,185.8	4,584.9	0.00	0.00	0.00
15,700.0	89.70	179.48	11,588.4	-4,674.3	1,186.7	4,684.9	0.00	0.00	0.00
15,800.0	89.70	179.48	11,589.0	-4,774.3	1,187.6	4,784.9	0.00	0.00	0.00
15,900.0	89.70	179.48	11,589.5	-4,874.3	1,188.5	4,884.9	0.00	0.00	0.00
16,000.0	89.70	179.48	11,590.0	-4,974.3	1,189.4	4,984.9	0.00	0.00	0.00
16,100.0	89.70	179.48	11,590.5	-5,074.3	1,190.4	5,084.9	0.00	0.00	0.00
16,200.0	89.70	179.48	11,591.1	-5,174.3	1,191.3	5,184.9	0.00	0.00	0.00
16,300.0	89.70	179.48	11,591.6	-5,274.3	1,192.2	5,284.9	0.00	0.00	0.00
16,400.0	89.70	179.48	11,592.1	-5,374.3	1,193.1	5,384.9	0.00	0.00	0.00
16,500.0	89.70	179.48	11,592.6	-5,474.3	1,194.0	5,484.9	0.00	0.00	0.00
16,600.0	89.70	179.48	11,593.2	-5,574.3	1,194.9	5,584.9	0.00	0.00	0.00
16,700.0	89.70	179.48	11,593.7	-5,674.3	1,195.8	5,684.9	0.00	0.00	0.00
16,800.0	89.70	179.48	11,594.2	-5,774.3	1,196.7	5,784.9	0.00	0.00	0.00
16,900.0	89.70	179.48	11,594.7	-5,874.2	1,197.6	5,884.9	0.00	0.00	0.00
17,000.0	89.70	179.48	11,595.3	-5,974.2	1,198.5	5,984.9	0.00	0.00	0.00
17,100.0	89.70	179.48	11,595.8	-6,074.2	1,199.4	6,084.9	0.00	0.00	0.00
17,200.0	89.70	179.48	11,596.3	-6,174.2	1,200.3	6,184.9	0.00	0.00	0.00
17,300.0	89.70	179.48	11,596.8	-6,274.2	1,201.2	6,284.9	0.00	0.00	0.00
17,400.0	89.70	179.48	11,597.4	-6,374.2	1,202.1	6,384.9	0.00	0.00	0.00
17,500.0	89.70	179.48	11,597.9	-6,474.2	1,203.0	6,484.9	0.00	0.00	0.00
17,600.0	89.70	179.48	11,598.4	-6,574.2	1,203.9	6,584.9	0.00	0.00	0.00
17,700.0	89.70	179.48	11,598.9	-6,674.2	1,204.8	6,684.9	0.00	0.00	0.00
17,800.0	89.70	179.48	11,599.5	-6,774.2	1,205.7	6,784.9	0.00	0.00	0.00
17,900.0	89.70	179.48	11,600.0	-6,874.2	1,206.6	6,884.9	0.00	0.00	0.00
18,000.0	89.70	179.48	11,600.5	-6,974.2	1,207.5	6,984.9	0.00	0.00	0.00
18,100.0	89.70	179.48	11,601.0	-7,074.2	1,208.4	7,084.9	0.00	0.00	0.00
18,200.0	89.70	179.48	11,601.6	-7,174.2	1,209.3	7,184.9	0.00	0.00	0.00
18,300.0	89.70	179.48	11,602.1	-7,274.2	1,210.2	7,284.9	0.00	0.00	0.00
18,400.0	89.70	179.48	11,602.6	-7,374.2	1,211.1	7,384.9	0.00	0.00	0.00
18,500.0	89.70	179.48	11,603.1	-7,474.2	1,212.1	7,484.9	0.00	0.00	0.00
18,600.0	89.70	179.48	11,603.7	-7,574.2	1,213.0	7,584.9	0.00	0.00	0.00
18,700.0	89.70	179.48	11,604.2	-7,674.2	1,213.9	7,684.9	0.00	0.00	0.00
18,800.0	89.70	179.48	11,604.7	-7,774.1	1,214.8	7,784.8	0.00	0.00	0.00
18,900.0	89.70	179.48	11,605.2	-7,874.1	1,215.7	7,884.8	0.00	0.00	0.00
19,000.0	89.70	179.48	11,605.8	-7,974.1	1,216.6	7,984.8	0.00	0.00	0.00
19,100.0	89.70	179.48	11,606.3	-8,074.1	1,217.5	8,084.8	0.00	0.00	0.00
19,200.0	89.70	179.48	11,606.8	-8,174.1	1,218.4	8,184.8	0.00	0.00	0.00
19,300.0	89.70	179.48	11,607.3	-8,274.1	1,219.3	8,284.8	0.00	0.00	0.00
19,400.0	89.70	179.48	11,607.9	-8,374.1	1,220.2	8,384.8	0.00	0.00	0.00
19,500.0	89.70	179.48	11,608.4	-8,474.1	1,221.1	8,484.8	0.00	0.00	0.00



Intrepid Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Junior Mint Fed #158H
Company:	Tap Rock Resources, LLC	TVD Reference:	KB @ 3248.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3248.0usft
Site:	(Junior Mint Fed) Sec-15_T-25-S_R-35-E	North Reference:	Grid
Well:	Junior Mint Fed #158H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #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)
19,600.0	89.70	179.48	11,608.9	-8,574.1	1,222.0	8,584.8	0.00	0.00	0.00
19,700.0	89.70	179.48	11,609.4	-8,674.1	1,222.9	8,684.8	0.00	0.00	0.00
19,800.0	89.70	179.48	11,610.0	-8,774.1	1,223.8	8,784.8	0.00	0.00	0.00
19,900.0	89.70	179.48	11,610.5	-8,874.1	1,224.7	8,884.8	0.00	0.00	0.00
20,000.0	89.70	179.48	11,611.0	-8,974.1	1,225.6	8,984.8	0.00	0.00	0.00
20,100.0	89.70	179.48	11,611.5	-9,074.1	1,226.5	9,084.8	0.00	0.00	0.00
20,200.0	89.70	179.48	11,612.1	-9,174.1	1,227.4	9,184.8	0.00	0.00	0.00
20,300.0	89.70	179.48	11,612.6	-9,274.1	1,228.3	9,284.8	0.00	0.00	0.00
20,400.0	89.70	179.48	11,613.1	-9,374.1	1,229.2	9,384.8	0.00	0.00	0.00
20,500.0	89.70	179.48	11,613.6	-9,474.1	1,230.1	9,484.8	0.00	0.00	0.00
20,600.0	89.70	179.48	11,614.2	-9,574.0	1,231.0	9,584.8	0.00	0.00	0.00
20,700.0	89.70	179.48	11,614.7	-9,674.0	1,231.9	9,684.8	0.00	0.00	0.00
20,800.0	89.70	179.48	11,615.2	-9,774.0	1,232.8	9,784.8	0.00	0.00	0.00
20,900.0	89.70	179.48	11,615.7	-9,874.0	1,233.8	9,884.8	0.00	0.00	0.00
21,000.0	89.70	179.48	11,616.3	-9,974.0	1,234.7	9,984.8	0.00	0.00	0.00
21,100.0	89.70	179.48	11,616.8	-10,074.0	1,235.6	10,084.8	0.00	0.00	0.00
21,200.0	89.70	179.48	11,617.3	-10,174.0	1,236.5	10,184.8	0.00	0.00	0.00
21,300.0	89.70	179.48	11,617.8	-10,274.0	1,237.4	10,284.8	0.00	0.00	0.00
21,400.0	89.70	179.48	11,618.4	-10,374.0	1,238.3	10,384.8	0.00	0.00	0.00
21,500.0	89.70	179.48	11,618.9	-10,474.0	1,239.2	10,484.8	0.00	0.00	0.00
21,600.0	89.70	179.48	11,619.4	-10,574.0	1,240.1	10,584.8	0.00	0.00	0.00
21,700.0	89.70	179.48	11,619.9	-10,674.0	1,241.0	10,684.8	0.00	0.00	0.00
21,800.0	89.70	179.48	11,620.5	-10,774.0	1,241.9	10,784.8	0.00	0.00	0.00
21,900.0	89.70	179.48	11,621.0	-10,874.0	1,242.8	10,884.8	0.00	0.00	0.00
21,923.0	89.70	179.48	11,621.1	-10,897.0	1,243.0	10,907.8	0.00	0.00	0.00
TD at 21923.0									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP (Junior Mint Fed # - hit/miss target - Shape - Point	0.00	0.00	11,564.0	-441.0	1,148.0	415,095.00	846,187.00	32° 8' 14.436 N	103° 20' 54.457 W
- plan misses target center by 198.5usft at 11558.3usft MD (11415.0 TVD, -572.1 N, 1149.6 E)									
LTP (Junior Mint Fed # - hit/miss target - Shape - Point	0.00	0.00	11,621.1	-10,802.0	1,242.0	404,734.00	846,281.00	32° 6' 31.908 N	103° 20' 54.465 W
- plan misses target center by 0.5usft at 21828.0usft MD (11620.6 TVD, -10802.0 N, 1242.1 E)									
PBHL (Junior Mint Fec - plan hits target center - Rectangle (sides W100.0 H10,456.0 D30.0)	0.30	179.48	11,621.1	-10,897.0	1,243.0	404,639.00	846,282.00	32° 6' 30.968 N	103° 20' 54.464 W



Intrepid Planning Report



Database:	EDM 5000.15 Single User Db	Local Co-ordinate Reference:	Well Junior Mint Fed #158H
Company:	Tap Rock Resources, LLC	TVD Reference:	KB @ 3248.0usft
Project:	Lea County, NM (NAD 83 NME)	MD Reference:	KB @ 3248.0usft
Site:	(Junior Mint Fed) Sec-15_T-25-S_R-35-E	North Reference:	Grid
Well:	Junior Mint Fed #158H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
660.0	660.0	Rustler Anhydrite				
1,100.0	1,100.0	Top Salt				
4,959.5	4,920.0	Base Salt				
5,202.5	5,160.0	Delaware Mountain Gp				
5,207.6	5,165.0	Lamar				
5,227.8	5,185.0	Bell Canyon				
5,248.1	5,205.0	Ramsey Sand				
6,205.1	6,150.0	Cherry Canyon				
7,693.7	7,620.0	Brushy Canyon				
9,020.1	8,930.0	Bone Spring Lime				
9,045.3	8,955.0	Upper Avalon				
9,276.7	9,185.0	Middle/Lower Avalon				
10,257.4	10,165.0	1st Bone Spring Sand				
10,422.4	10,330.0	2nd Bone Spring Carb				
10,807.4	10,715.0	2nd Bone Spring Sand				
11,368.4	11,265.0	3rd Bone Spring Carb				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,200.0	1,200.0	0.0	0.0	NUDGE - Build 1.00	
2,107.5	2,103.7	-23.1	67.9	HOLD - 6777.4 at 2107.5 MD	
8,884.9	8,796.3	-366.9	1,080.1	DROP - -1.00	
9,792.4	9,700.0	-390.0	1,148.0	HOLD - 1296.0 at 9792.4 MD	
11,088.4	10,996.0	-390.0	1,148.0	KOP - DLS 10.00 TFO 179.48	
11,985.4	11,568.9	-959.9	1,153.2	EOC - 9937.6 hold at 11985.4 MD	
21,923.0	11,621.1	-10,897.0	1,243.0	TD at 21923.0	

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Tap Rock Operating LLC
WELL NAME & NO.:	Junior Mint Fed 158H
LOCATION:	Sec 10-24S-35E-NMP
COUNTY:	Lea County, New Mexico

COA

H2S	☐ Yes	☒ No	
Potash	☒ None	☐ Secretary	☐ R-111-P
Cave/Karst Potential	☒ Low	☐ Medium	☐ High
Cave/Karst Potential	☐ Critical		
Variance	☐ None	☒ Flex Hose	☐ Other
Wellhead	☐ Conventional	☒ Multibowl	☐ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☒ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☐ COM	☐ Unit

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **710** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface. ***Surface casing set depth adjusted per BLM geologist.***
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours

after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

- d. If cement falls back, remedial cementing will be done prior to drilling out that string.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above.
3. The minimum required fill of cement behind the **5-1/2** inch production casing is:
 - Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.
 - 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. 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.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

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)

☒ Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(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 Onshore Oil and Gas Order No. 2 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.

2. Wait on cement (WOC) for Potash Areas: 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 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: 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 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity 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

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

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 OOGO2.III.A.2.i 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 Onshore Order 2 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 Onshore Order No. 2.

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.



Hydrogen Sulfide Drilling

Operations Plan

Tap Rock Resources

1 H2S safety instructions to the following:

- Characteristics of H2S
- Physical effects and hazards
- Principal and operation of H2S detectors, warning system and briefing areas
- Evacuation procedures, routes and first aid
- Proper use of safety equipment & life support systems
- Essential personnel meeting medical evaluation criteria will receive additional training on the proper use of 30min pressure demand air packs

2 H2S Detection and Alarm Systems:

- H2S sensor/detectors to be located on the drilling rig floor, in the base of the sub structure / cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may be placed as deemed necessary
- An audio alarm system will be installed on the derrick floor and in the doghouse

3 Windssocks and / Wind Streamers:

- Windssocks at mud pit area should be high enough to be visible
- Windssock on the rig floor and / top of doghouse should be high enough to be visible

4 Condition Flags and Signs:

- Warning sign on access road to location
- Flags to be displayed on sign at entrance to location
 - Green Flag – Normal Safe Operation Condition
 - Yellow Flag – Potential Pressure and Danger
 - Red Flag – Danger (H2S present in dangerous concentrations) Only H2S trained personnel admitted on location

5 Well Control Equipment:

- See Drilling Operations Plan Schematics

6 Communication:

- While working under masks chalkboards will be used for communications
- Hand signals will be used where chalk board is inappropriate
- Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.



7 Drilling Stem Testing:

- No DST cores are planned at this time

8 Drilling contractor supervisor will be required to be familiar with the effects H₂S has on tubulars good and other mechanical equipment

9 If H₂S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H₂S scavengers if necessary

11 Emergency Contacts

Emergency Contacts		
Carlsbad Police Department	575.887.7551	911
Carlsbad Medical Center	575.887.4100	911
Eddy County Fire Service	575.628.5450	911
Eddy County Sherriff	575.887.7551	911
Lea County Fire Service	575.391.2983	911
Lea County Sherriff	575.396.3611	911
Jal Police Department	575.395.2121	911
Jal Fire Department	575.395.2221	911
Tap Rock Resources	720.772.5090	

Rig Diagram
Junior Mint Fed E2 Pad
Tap Rock Operating, LLC
10-25S-35E
Lea County, NM

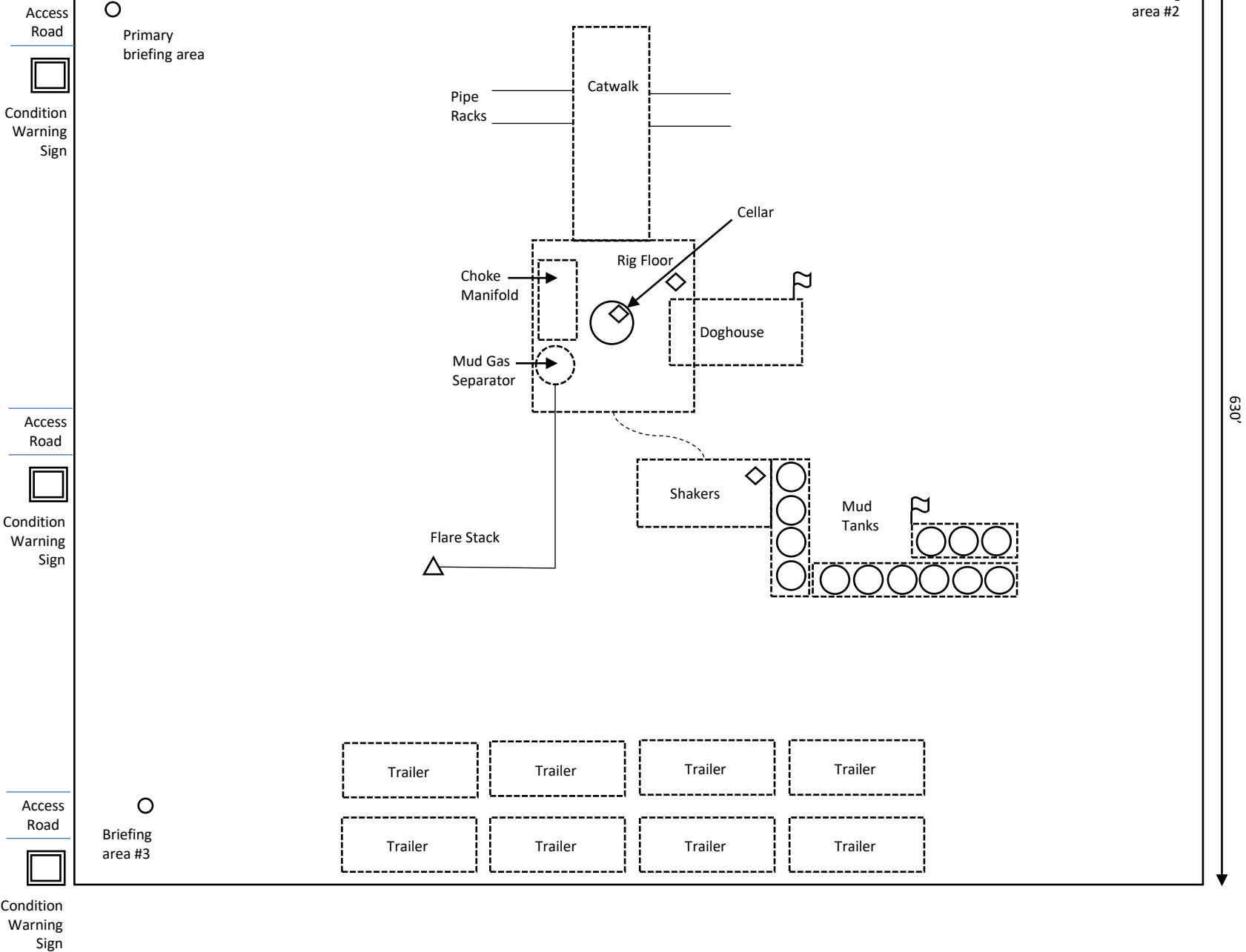
- N

↑
- Briefing Area
- Current Well
- △

Flare Stack
- ◇

H2S Monitor
- ⌚

Wind Indicator
- Mud Gas Separator

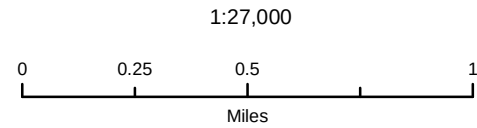


Tap Rock Operating LLC

Junior Mint Fed E2 Pad
H2S Contingency Plan:
2 Mile Radius Map

Sec. 10, Township 25S, Range 35E
Lea County, New Mexico

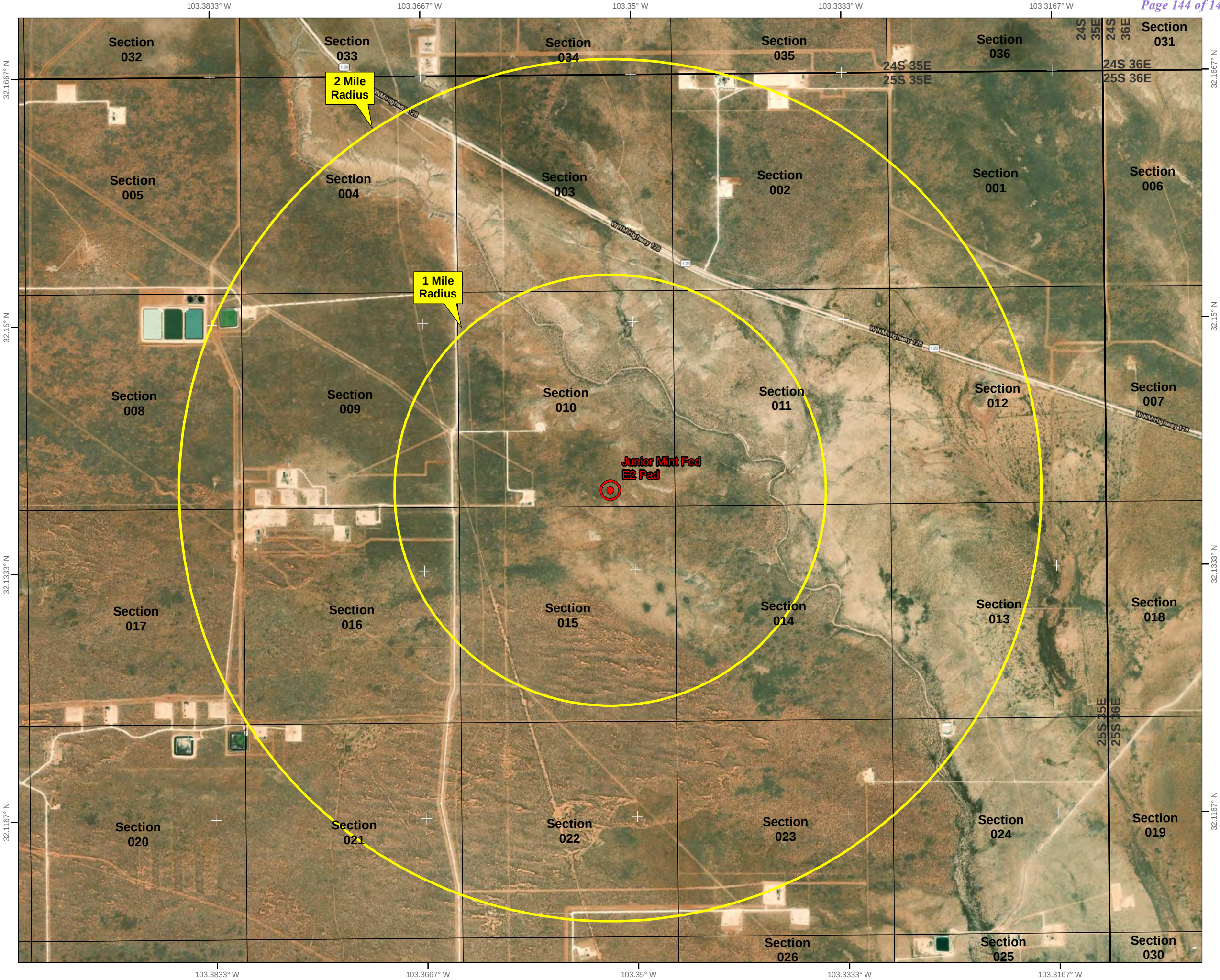
 Well Pad Location

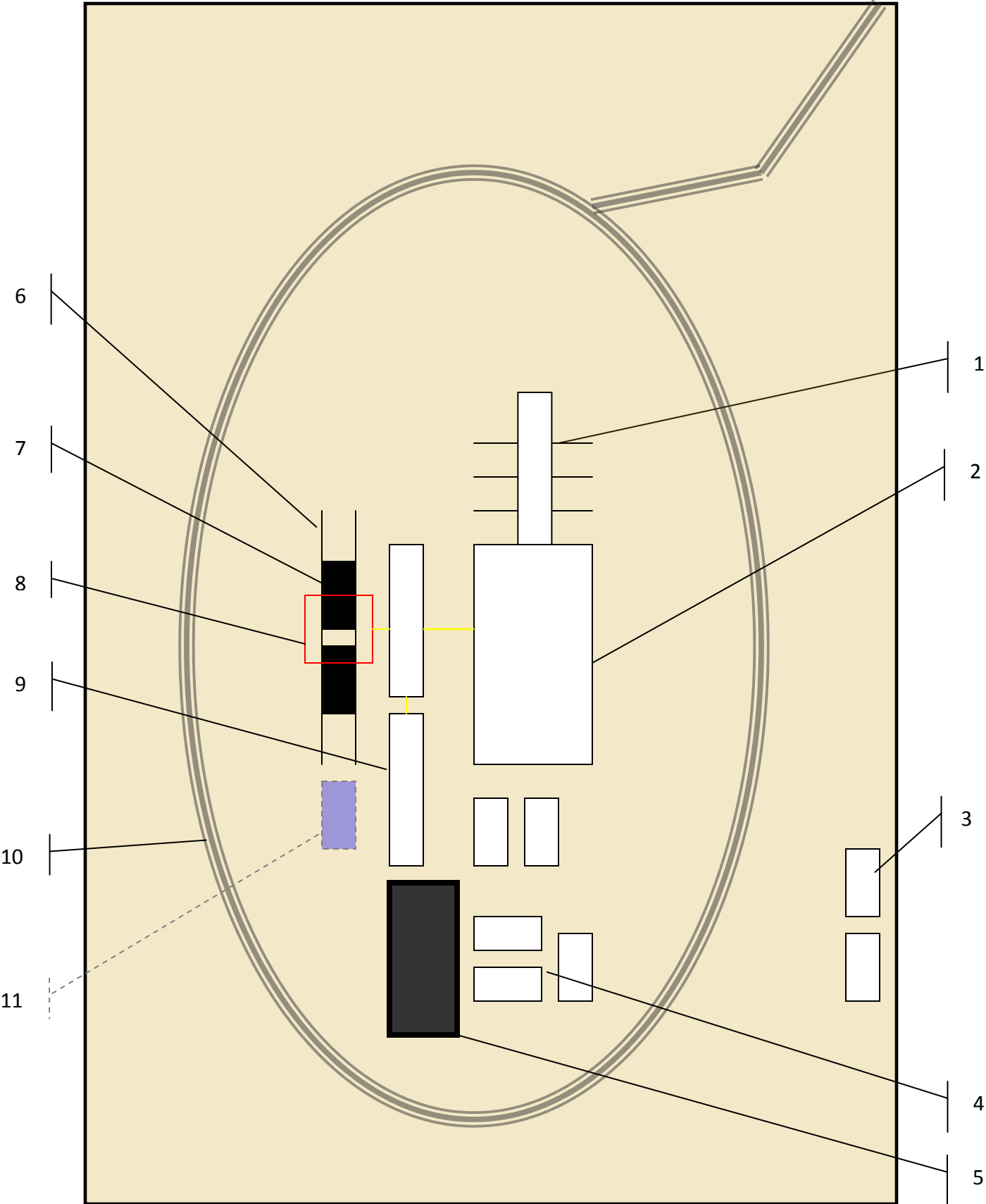


NAD 1983 New Mexico State Plane East
FIPS 3001 Feet



Prepared by Permits West, Inc., June 28, 2022
for Tap Rock Operating, LLC





Schematic Closed Loop Drilling Rig*

- 1. Pipe Rack
- 2. Drill Rig
- 3. House Trailers/ Offices
- 4. Generator/Fuel/Storage
- 5. Overflow-Frac Tank
- 6. Skids
- 7. Roll Offs
- 8. Hopper or Centrifuge
- 9. Mud Tanks
- 10. Loop Drive
- 11. Generator (only for use with centrifuge)

*Not drawn to scale: Closed loop system requires at least 30 feet beyond mud tanks. Ideally 60 feet would be available



Above: Centrifugal Closed Loop System



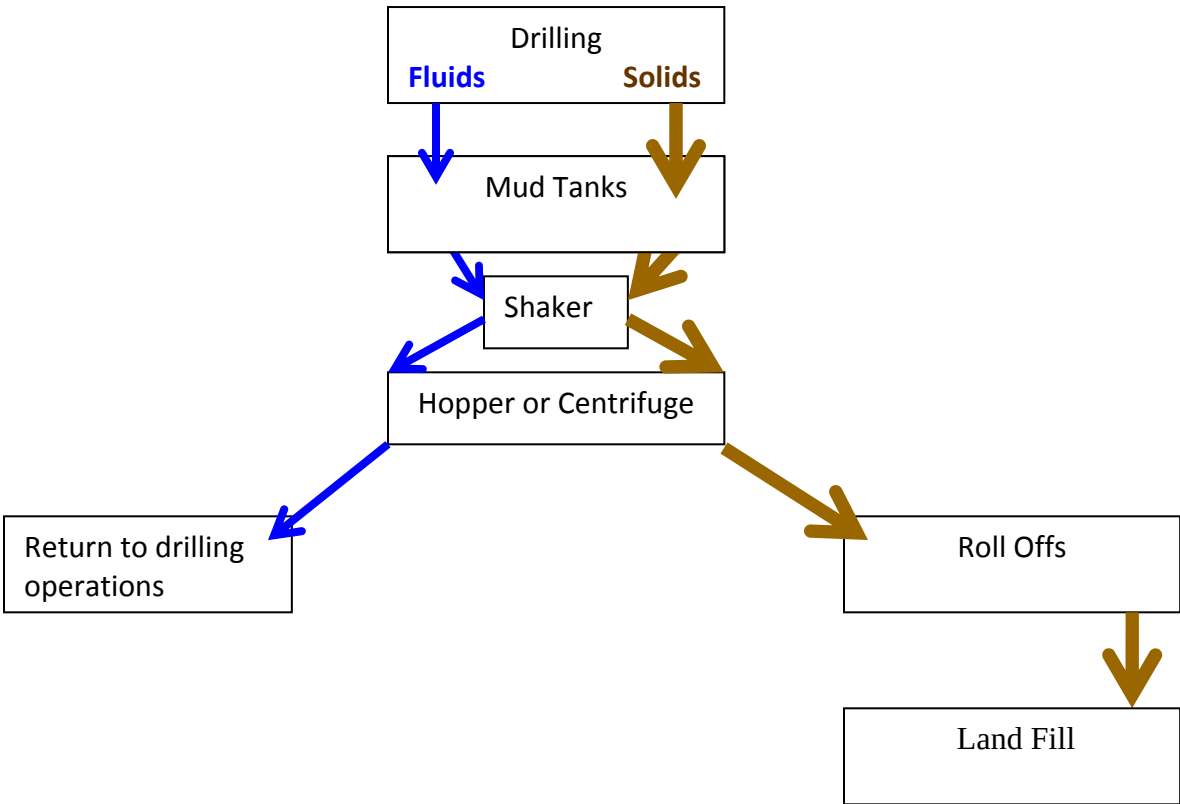
PROVIDING PERMITS for LAND USERS

37Verano Loop, Santa Fe, New Mexico 87508 (505) 466-8120



Closed Loop Drilling System: Mud tanks to right (1)
Hopper in air to settle out solids (2)
Water return pipe (3)
Shaker between hopper and mud tanks (4)
Roll offs on skids (5)

Flow Chart for Drilling Fluids and Solids



Photos Courtesy of Gandy Corporation Oil
Field Service



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

General Information
Phone: (505) 629-6116

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

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

ACKNOWLEDGMENTS

Action 526774

ACKNOWLEDGMENTS

Operator: Civitas Permian Operating, LLC 555 17th Street Denver, CO 80202	OGRID: 332195
	Action Number: 526774
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

ACKNOWLEDGMENTS

☒	I hereby certify that no additives containing PFAS chemicals will be added to the completion or recompletion of this well.
-------------------------------------	--

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

General Information
Phone: (505) 629-6116

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

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

CONDITIONS

Action 526774

CONDITIONS

Operator: Civitas Permian Operating, LLC 555 17th Street Denver, CO 80202	OGRID: 332195
	Action Number: 526774
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
permitsw	Cement is required to circulate on both surface and intermediate1 strings of casing.	11/16/2025
matthew.gomez	If cement does not circulate on any string, a Cement Bond Log (CBL) is required for that string of casing, if a CBL is unable to indicate sufficient cement coverage due to a lighter cement, a USI log may also be required. If strata isolation is not achieved, remediation will be required before further operations may commence.	12/12/2025
matthew.gomez	All conducted logs must be submitted to the OCD.	12/12/2025
matthew.gomez	Cement must be in place for at least eight hours and achieve a minimum compressive strength of 500 PSI before performing any further operations on the well.	12/12/2025
matthew.gomez	Administrative order required for non-standard spacing unit prior to production.	12/12/2025
matthew.gomez	Notify the OCD 24 hours prior to casing & cement.	12/16/2025
matthew.gomez	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string.	12/16/2025
matthew.gomez	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.	12/16/2025
matthew.gomez	File As Drilled C-102 and a directional Survey with C-104 completion packet.	12/16/2025