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

5. Lease Serial No.

6. If Indian, Allotee or Tribe Name

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

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

8. Lease Name and Well No.

[331213]

2. Name of Operator **[373986]**

9. API Well No.

30-025-49218

3a. Address

3b. Phone No. *(include area code)*

10. Field and Pool, or Exploratory **[96672]**

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface

At proposed prod. zone

11. Sec., T. R. M. or Blk. and Survey or Area

14. Distance in miles and direction from nearest town or post office*

12. County or Parish

13. State

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration

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	Name *(Printed/Typed)*	Date
Title		
Approved by *(Signature)*	Name *(Printed/Typed)*	Date
Title	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.

NGMP Rec 07/22/2021

KZ
07/22/2021

SL

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 06/03/2021

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws 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, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: 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 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., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. 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 Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Approval Date: 06/03/2021

Additional Operator Remarks

Location of Well

0. SHL: LOT 1 / 547 FNL / 523 FWL / TWSP: 26S / RANGE: 35E / SECTION: 30 / LAT: 32.0200651 / LONG: -103.4134313 (TVD: 0 feet, MD: 0 feet)

PPP: LOT 1 / 100 FNL / 330 FWL / TWSP: 26S / RANGE: 35E / SECTION: 30 / LAT: 32.0212946 / LONG: -103.4140542 (TVD: 12250 feet, MD: 12275 feet)

BHL: LOT 2 / 10 FSL / 330 FWL / TWSP: 26S / RANGE: 35E / SECTION: 31 / LAT: 32.0003159 / LONG: -103.4140526 (TVD: 12484 feet, MD: 20016 feet)

BLM Point of Contact

Name: TYLER HILL
Title: LIE
Phone: (575) 234-5972
Email: tjhill@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-025-49218	96672	WC-025 G-08 S263412K; Bone Spring

4 Property Code	5 Property Name	6 Well Number
331213	LOS VAQUEROS FED	321H
7 OGRID No.	**8 Operator Name**	**9 Elevation**
373986	TITUS OIL & GAS PRODUCTION LLC	3188'

[10] Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	30	26-S	35-E		547'	NORTH	523'	WEST	LEA

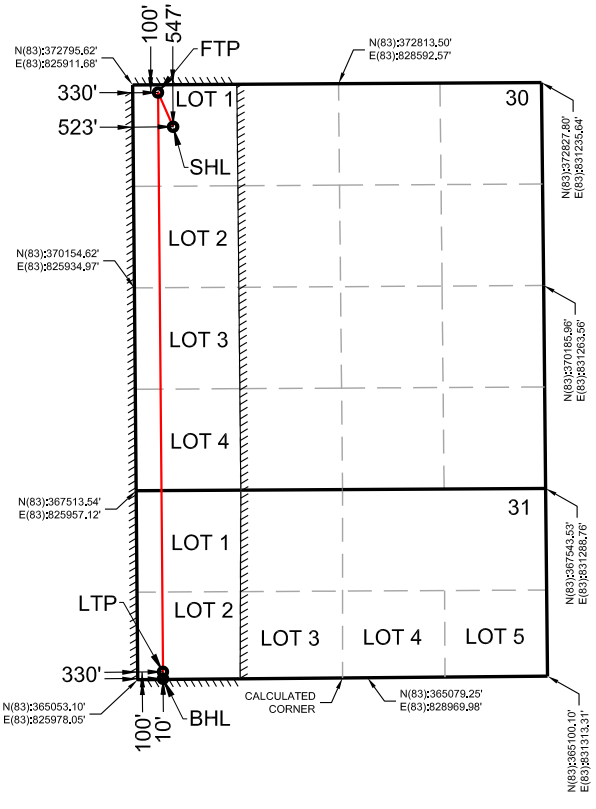
[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	31	26-S	35-E		10'	SOUTH	330'	WEST	LEA

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
240	Y		

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

16



SURFACE HOLE LOCATION (SHL)
NEW MEXICO EAST - NAD 83
X=826439.43 LAT.= 32.02006519° N
Y=372252.19 LONG.= 103.41343131° W
NEW MEXICO EAST - NAD 27
X=785251.12 LAT.= 32.01993891° N
Y=372195.10 LONG.= 103.41297089° W
547' FNL, 523' FWL - SECTION 30
547' FNL, 523' FWL - LEASE

FIRST TAKE POINT (FTP)
NEW MEXICO EAST - NAD 83
X=826242.56 LAT.= 32.02129469° N
Y=372697.83 LONG.= 103.41405424° W
NEW MEXICO EAST - NAD 27
X=785054.26 LAT.= 32.02116843° N
Y=372640.73 LONG.= 103.41359373° W
100' FNL, 330' FWL - SECTION 30
100' FNL, 330' FWL - LEASE

LAST TAKE POINT (LTP)
NEW MEXICO EAST - NAD 83
X=826307.19 LAT.= 32.00056333° N
Y=365155.98 LONG.= 103.41405269° W
NEW MEXICO EAST - NAD 27
X=785118.55 LAT.= 32.00043696° N
Y=365099.08 LONG.= 103.41359339° W
100' FSL, 330' FWL - SECTION 31
100' FSL, 330' FWL - LEASE

BOTTOM HOLE LOCATION (BHL)
NEW MEXICO EAST - NAD 83
X=826307.95 LAT.= 32.00031594° N
Y=365065.98 LONG.= 103.41405269° W
NEW MEXICO EAST - NAD 27
X=785119.31 LAT.= 32.00018957° N
Y=365009.09 LONG.= 103.41359340° W
10' FSL, 330' FWL - SECTION 31
10' FSL, 330' FWL - LEASE

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

7/13/2021
Signature Date

Ryan DeLong - Regulatory Manager
Printed Name

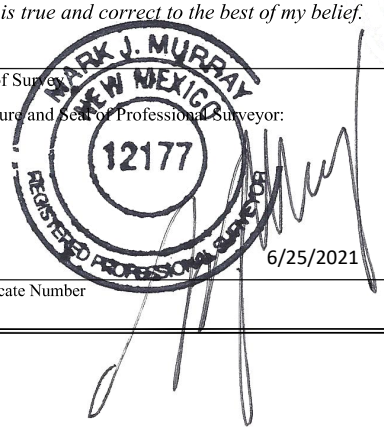
rdelong@titusoil.com
E-mail Address

[18] SURVEYOR CERTIFICATION

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

Date of Survey

Signature and Seal of Professional Surveyor:



6/25/2021
Certificate Number

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

Sundry Print Report

07/15/2021

Well Name: LOS VAQUEROS FED	**Well Location:** T26S / R35E / SEC 30 / LOT 1 /	**County or Parish/State:**
Well Number: 321H	**Type of Well:** OIL WELL	**Allottee or Tribe Name:**
Lease Number: NMNM062932	**Unit or CA Name:**	**Unit or CA Number:**
US Well Number:	**Well Status:** Approved Application for Permit to Drill	**Operator:** TITUS OIL AND GAS PRODUCTION LLC

Notice of Intent

Type of Submission: Notice of Intent

Type of Action Other

Date Sundry Submitted: 07/13/2021

Time Sundry Submitted: 03:57

Date proposed operation will begin: 07/20/2021

Procedure Description: Depth change from 12,484' TVD/20,016' MD to 12,485' TVD/20,487' MD; cement program changes to 2-stage intermediate; 5M annular variance requested; flex hose spec sheet updated to designated rig; supporting documentation updated to reflect these changes. Attachments: updated C-102, updated drilling plan, updated directional survey, updated AC report, updated flex hose spec sheet, 5M annular variance document

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

Slim_Hole___5M_Variance_Well_Plan_7.8.2019_20210713154843.pdf

7503_choke_hose_cert_1_29_21_20210713154843.pdf

Los_Vaqueros_Fed_321H___Plan_1_07_06_21_AC_Report_20210713154829.pdf

Los_Vaqueros_Fed_321H___Plan_1_07_06_21_20210713154819.pdf

Los_Vaqueros_Fed_321H___Sundry_Drlg_Plan___7.12.21_20210713154734.pdf

5789_Los_Vaqueros_Fed_321H_C102_SIGNED_20210713154723.pdf

Well Name: LOS VAQUEROS FED

Well Location: T26S / R35E / SEC 30 / LOT 1 /

County or Parish/State:

Well Number: 321H

Type of Well: OIL WELL

Allottee or Tribe Name:

Lease Number: NMNM062932

Unit or CA Name:

Unit or CA Number:

US Well Number:

Well Status: Approved Application for Permit to Drill

Operator: TITUS OIL AND GAS PRODUCTION LLC

Conditions of Approval

Specialist Review

Los_Vaqueros_Fed_321H_COA_20210715082313.pdf

Operator Certification

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 submission of Form 3160-5 or a Sundry Notice.

Operator Electronic Signature: RYAN DELONG

Signed on: JUL 13, 2021 03:54 PM

Name: TITUS OIL AND GAS PRODUCTION LLC

Title: Regulatory Manager

Street Address: 420 Throckmorton Street, Suite 1150

City: Fort Worth **State:** TX

Phone: (817) 852-6370

Email address: rdelong@titusoil.com

Field Representative

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

BLM Point of Contact

BLM POC Name: ZOTA M STEVENS

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5752345998

BLM POC Email Address: ZSTEVENS@BLM.GOV

Disposition: Approved

Disposition Date: 07/15/2021

Signature: Zota Stevens

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: Titus Oil & Gas Production, LLC **OGRID:** 373986 **Date:** 7 / 21 / 21

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
Los Vaqueros Fed Com 321H	New Well	Lot 1, Sec 30, T26S R35E	547' FNL & 523' FWL	1122	2070	3068
	30-025-49218					

IV. Central Delivery Point Name: El Campeon CTB 30 [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
Los Vaqueros Fed Com 321H	New Well	7/28/2021	10/20/2021	11/11/2021	12/28/2021	1/30/2022
	30-025-49218					

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:	Ryan DeLong
Title:	Regulatory Manager
E-mail Address:	rdelong@titusoil.com
Date:	7/21/2021
Phone:	817-852-6370

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

Approved By:	
Title:	
Approval Date:	
Conditions of Approval:	

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

Each surface facility design includes the following process equipment: 3-phase vertical separator (one per well), 3-phase heater treater (one per well), one or two sales gas scrubbers, two bulk free water knockouts, two bulk heater treaters, a vapor recover tower (VRT), a vapor recovery unit (VRU) compressor, multiple water and oil tanks, as well as flare liquid scrubbers (HP & LP), flares (HP & LP), and combustors. All process vessels will be sized to separate oil, water, and gas based upon historical & predicted well performance. Each process vessel will be fitted with the 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 with allow operations to monitor pressures and when necessary, shut-in the facility to avoid vessel over-pressure and potential flaring or venting of natural gas. Natural gas will be preferentially sent to pipeline, and only directed to the HP flare system in upset/emergency situations. Flash gas from the free water knockouts, bulk heater treaters, and VRT will be recompressed using a VRU compressor and will be preferentially redirected to gas sales pipeline. Oil tanks and water tanks will be fitted with 16 oz thief hatches as well as PRVs to protect the tank from rupture/collapse. The tank vapor outlets and tank vapor capture system will be sized to keep the tank pressures below 12 oz. the tank vapor capture system will include a scrubber and combustors. All tank vapors will be combusted to industry standards.

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:

- **During drilling operations -** Gas meters will be installed at the shakers and Volume Totalizers will be installed on the pits. If 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 Completion Operations, including stimulation and frac plug drill out operations:** hydrocarbon production to surface is minimized. If gas production does occur, gas will be combusted at a flare stack. A 10’ or taller flare will be located at least 100’ from SHL
- **During production operations:** All process vessels (separators, heater treaters, tanks) will recompress (where necessary) and route gas outlets into the natural gas gathering line. Gas will preferentially be routed to natural gas gathering pipeline and the flare system will only be used during emergency, 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 gas meets specifications. Exceptions to this will include only those qualified exceptions per the regulation 19.15.27.8 Subsection D.
- 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 atmospheric tank (oil & water) will be fitted with a level transmitter to facilitate gauging of the tank without opening 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 capture system will be designed to combust the gas using a combustor system with a continuous ignitor. The combustor 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

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

- When performing routine or preventive maintenance on a vessel or tank, initially all inlet valves are close, 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 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.

Titus Oil & Gas Production, LLC - Los Vaqueros Fed 321H

1. Geologic Formations

TVD of target	12,485' EOL	Pilot hole depth	NA
MD at TD:	20,487'	Deepest expected fresh water:	400'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	1015	Water	
Top of Salt	1500	Salt	
Base of Salt	5009	Salt	
Lamar	5334	Salt Water	
Delaware	5378	Salt Water	
Bone Spring Lime	9274	Oil/Gas	
1st Bone Spring	10600	Oil/Gas	
2nd Bone Spring	11062	Oil/Gas	
3rd Bone Spring	12174	Target Oil/Gas	
Wolfcamp	12571	Not Penetrated	
Wolfcamp X Sand	12590	Not Penetrated	
Wolfcamp Y Sand	12655	Not Penetrated	
Wolfcamp A	12702	Not Penetrated	
Wolfcamp B	13004	Not Penetrated	

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body
	From	To							
13.5"	0	1040	10.75"	45.5	J55	BTC	4.39	0.81	15.11
9.875"	0	12000	7.625"	29.7	HCL80	BTC	1.18	1.07	2.04
6.75"	0	11800	5.5"	20	P110	BTC	1.90	1.97	3.24
6.75"	11800	20,487	5"	18	P110	BTC	1.90	1.97	3.24
			BLM Minimum Safety Factor				1.125	1	1.6 Dry 1.8 Wet

Intermediate casing will be kept at least 1/3 full while running casing.to mitigate collapse.
Surface burst based on 0.7 frac gradient at the shoe with Gas Gradient 0.1 psi/ft to surface and
All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

The 5” casing will be run back 200’ into the intermediate casing to ensure the coupling OD clearance is greater than .422” for the cement bond tie in.

Titus Oil & Gas Production, LLC - Los Vaqueros Fed 321H

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	N
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary?	
Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	N
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	N
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

Titus Oil & Gas Production, LLC - Los Vaqueros Fed 321H

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	250	13.5	1.75	9	12	Lead: Class C + 4% Gel + 1% CaCl2
	250	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl2
Int	900	10.3	3.6	22.95	16	TXI Lightwieght Blend
	250	15.0	1.27	5.72	8	Tail: Class H
Prod	350	11.9	2.5	19	72	Lead: 50:50:10 H Blend
	950	14.2	1.3	6.2	19	Tail: 50:50:2 Class H Blend

Contigency remediation cement plan for intermediate casing if cmt is not circulated to surface:

1st Stage - Bradenhead Stage Notes

Operator will pump 1000+ sx of Class C and allow cement to fall into place. Operator will not put any fluid on top of the cement after the fall. This will leave annuls filled with air to TOC. We will WOC +/- 2 hrs (or when surface samples are firm enough) to ensure cement is set up. TOC will be above the Lamar allowing for the fill up stage.

2nd Stage - Fill Up Stage Notes

After WOC to allow the Bradenhead Stage to set up, operator will proceed with the Fill Up Stage. Since there is only air in the annulus (no fluid will be placed in annulus after bradenhead stage), we will pump cement with opposite valve set to allow air to displace out. Fill up cement will be mixed and pumped until returns are taken to surface to complete the fill up. This will confirm a solid column of cement in the annulus all the way to surface completing the top out job. Operator will WOC after cement returns have been taken to surface.

Casing String	TOC	% Excess
Surface	0’	50%
1st Intermediate	0’	50%
Production	11,500'	35% OH in Lateral (KOP to EOL)

Titus Oil & Gas Production, LLC - Los Vaqueros Fed 321H

4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	x	Tested to:
9-7/8”	13-5/8”	3M	Annular	x	3000 psi
			Blind Ram		3M
			Pipe Ram		
			Double Ram		
			Other*		
6-3/4”	13-5/8”	10M	Annular	x	5M
			Blind Ram	x	10M
			VBR Ram	x	
			VBR Ram	x	
			Other*		

See attached 5M Annular Variance Well Control plan for TItus Oil & Gas Production, LLC.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold.

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or 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. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
	N Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

Titus Oil & Gas Production, LLC - Los Vaqueros Fed 321H

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	9-5/8" Int shoe	Nova N-Gauge	8.4 - 9	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	10.8 - 11.8	35-45	<20

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing.	
Y	Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
N	No Logs are planned based on well control or offset log information.
N	Drill stem test? If yes, explain.
N	Coring? If yes, explain.

Additional logs planned		Interval
N	Resistivity	Pilot Hole TD to ICP
N	Density	Pilot Hole TD to ICP
Y	CBL	Production casing (If cement not circulated to surface)
Y	Mud log	Intermediate shoe to TD
N	PEX	

Titus Oil & Gas Production, LLC - Los Vaqueros Fed 321H

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	7665 psi at 12485' TVD
Abnormal Temperature	NO 180 Deg. F.

No abnormal pressure or temperature conditions are anticipated. Sufficient mud materials to maintain mud properties and weight increase requirements will be kept on location at all times.

Sufficient supplies of Paper/LCM for periodic sweeps to control seepage and losses will be maintained on location.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H2S is present
Y	H2S Plan attached

8. Other Facets of Operation

Y	Is it a walking operation?
N	Is casing pre-set?

x	H2S Plan.
x	BOP & Choke Schematics.
x	Directional Plan
x	Multibowl Schematic

TITUS OIL GAS LLC

Project: Lea County, NM - (NAD83 NME)
Site: Los Vaqueros Fed
Well: 321H
Wellbore: OH
Design: Plan 1 07-06-21
Rig: Est RKB

PHOENIX TECHNOLOGY SERVICES

Azimuths to Grid North
True North: -0.49°
Magnetic North: 5.86°

Magnetic Field
Strength: 47425.4nT
Dip Angle: 59.60°
Date: 8/15/2021
Model: MVHD

RKB @ 3211.00usft (Est RKB)
Ground Level: 3188.00

WELL DETAILS

Ground Level: 3188.00

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	372252.19	826439.43	32° 1' 12.234693 N	103° 24' 48.352776 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
BHL - Los Vaqueros Fed 321H	12485.00	-7186.21	-131.48	365065.98	826307.95	32° 0' 1.137347 N	103° 24' 50.589727 W
LTP - Los Vaqueros Fed 321H	12485.00	-7096.21	-132.24	365155.98	826307.19	32° 0' 2.027974 N	103° 24' 50.589666 W
FTP - Los Vaqueros Fed 321H	12520.00	445.64	-196.87	372697.83	826242.56	32° 1' 16.660927 N	103° 24' 50.595264 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
2	2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	0.00		KOP, Begin 1.50°/100' Build
3	2966.94	7.00	0.00	2965.77	28.50	0.00	1.50	0.00	-28.50		Hold 7.00° Inc at 0.00° Azm
4	9929.34	7.00	0.00	9876.23	877.50	0.00	0.00	0.00	-877.46		Begin 1.50°/100' Drop
5	10396.28	0.00	0.00	10342.00	906.00	0.00	1.50	180.00	-905.97		Begin Vertical Hold
6	12096.82	0.00	0.00	12042.54	906.00	0.00	0.00	0.00	-905.97		KOP2, Begin 12.00°/100' Build
7	12848.99	90.26	196.40	12520.00	445.88	-135.42	12.00	196.40	-447.02		LP, Hold 90.26° Inc, Begin 4.00°/100' Turn
8	13271.32	90.26	179.51	12518.06	29.13	-193.64	4.00	-89.95	-30.78		Hold 179.51° Azm
9	20487.00	90.26	179.51	12485.00	-7186.21	-131.48	0.00	0.00	7184.82	BHL - Los Vaqueros Fed 321H	TD at 20487.00

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

Local Origin: Well 321H, Grid North

Latitude: 32° 1' 12.234693 N
Longitude: 103° 24' 48.352776 W

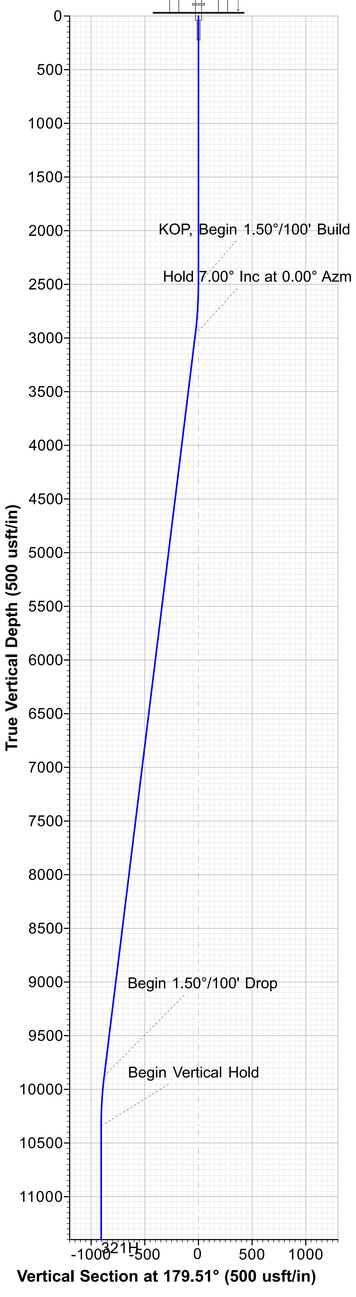
Grid East: 826439.43
Grid North: 372252.19
Scale Factor: 1.000

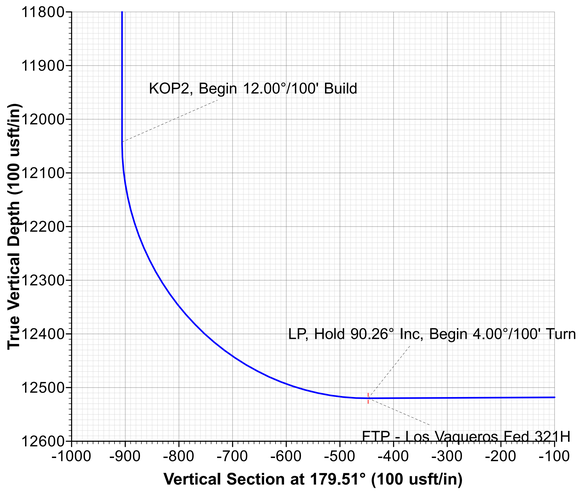
Geomagnetic Model: MVHD
Sample Date: 15-Aug-21
Magnetic Declination: 6.35°
Dip Angle from Horizontal: 59.60°
Magnetic Field Strength: 47425.41749138nT
To convert a Magnetic Direction to a True Direction, Add 6.35° East
To convert a Magnetic Direction to a Grid Direction, Add 5.86°

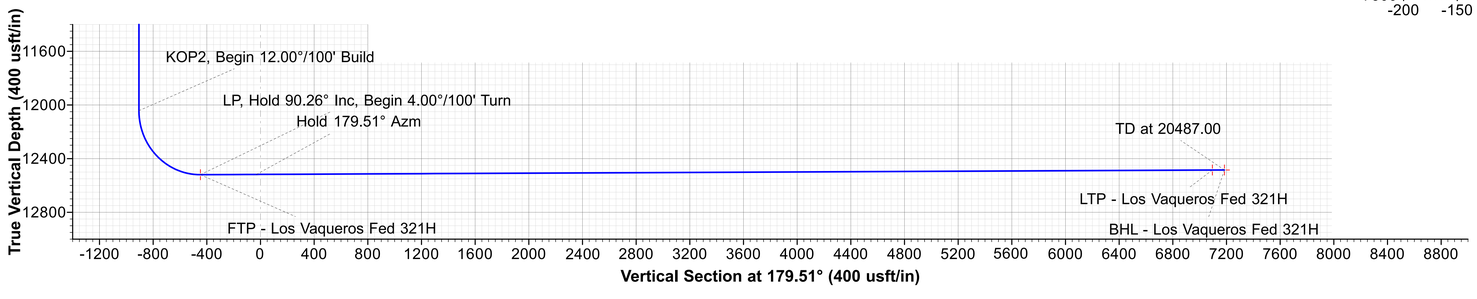
To convert a True Direction to a Grid Direction, Subtract 0.49°

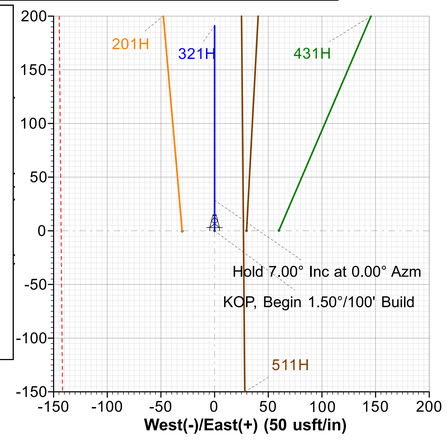
LEGEND

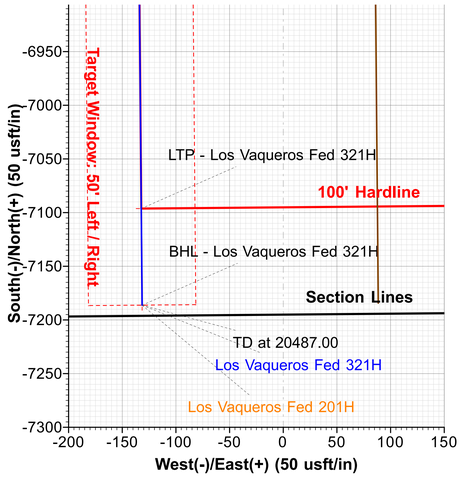
- 431H, OH, Plan 1 07-06-21 V0
- 201H, OH, Plan 1 07-06-21 V0
- Madera 19 WXY Fed Com 6H, OH, Surveys V0
- Medera 19 TB Fed 1H, OH, Surveys V0
- Madera 19 Fed Com 26-35-19 WB 5H, OH, Surveys V0
- Madera Federal 30-1, OH, Surveys V0
- Madera 19 WA Fed Com 2H, OH, Surveys V0
- Madera 19 WA Fed Com 2H, ST01, Surveys V0
- 511H, OH, Plan 1 07-06-21 V0
- Plan 1 07-06-21

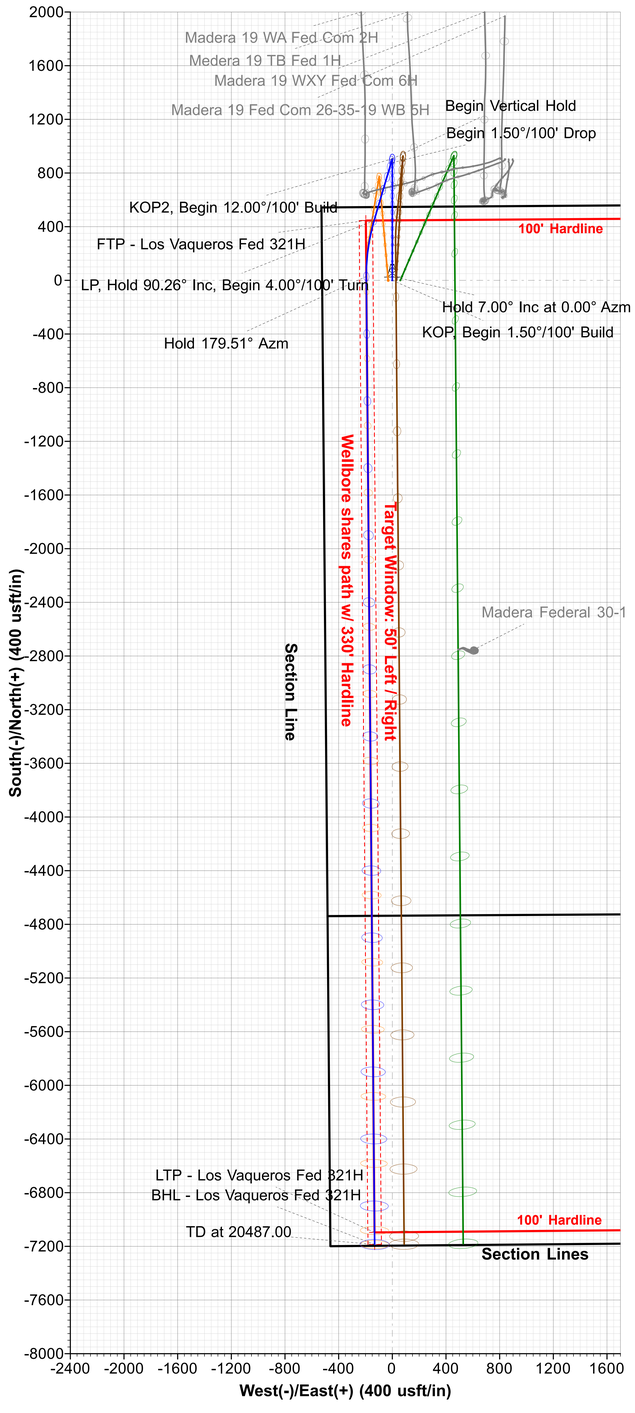












Date: 10:44, July 06 2021

PHOENIX
TECHNOLOGY SERVICES

Titus Oil & Gas Production, LLC

Lea County, NM - (NAD83 NME)
Los Vaqueros Fed
321H

OH

Plan: Plan 1 07-06-21

Standard Planning Report

06 July, 2021

TITUS
OIL GAS LLC

PHOENIX TECHNOLOGY SERVICES

Planning Report

TITUS OIL GAS LLC

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 321H
Company:	Titus Oil & Gas Production, LLC	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Project:	Lea County, NM - (NAD83 NME)	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site:	Los Vaqueros Fed	**North Reference:**	Grid
Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 07-06-21		

Project Lea County, NM - (NAD83 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 Los Vaqueros Fed

Site Position:		**Northing:**	372,252.47 usft	**Latitude:**	32° 1' 12.232410 N
From:	Map	**Easting:**	826,499.41 usft	**Longitude:**	103° 24' 47.656118 W
Position Uncertainty:	1.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.49 °

Well 321H

Well Position	**+N/-S**	-0.28 usft	**Northing:**	372,252.19 usft	**Latitude:**	32° 1' 12.234693 N
	+E/-W	-59.98 usft	**Easting:**	826,439.43 usft	**Longitude:**	103° 24' 48.352776 W
Position Uncertainty		1.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,188.00 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	MVHD	8/15/2021	6.35	59.60	47,425.41749138

Design Plan 1 07-06-21

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.51

Plan Survey Tool Program **Date** 7/6/2021

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	20,487.00	Plan 1 07-06-21 (OH)	MWD+HRGM	
				OWSG MWD + HRGM	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,966.94	7.00	0.00	2,965.77	28.50	0.00	1.50	1.50	0.00	0.00	
9,929.35	7.00	0.00	9,876.23	877.50	0.00	0.00	0.00	0.00	0.00	
10,396.28	0.00	0.00	10,342.00	906.00	0.00	1.50	-1.50	0.00	180.00	
12,096.82	0.00	0.00	12,042.54	906.00	0.00	0.00	0.00	0.00	0.00	
12,848.99	90.26	196.40	12,520.00	445.88	-135.42	12.00	12.00	0.00	196.40	
13,271.32	90.26	179.51	12,518.06	29.13	-193.64	4.00	0.00	-4.00	-89.95	
20,487.00	90.26	179.51	12,485.00	-7,186.21	-131.48	0.00	0.00	0.00	0.00	BHL - Los Vaqueros F

PHOENIX TECHNOLOGY SERVICES

Planning Report

TITUS OIL GAS LLC

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 321H
Company:	Titus Oil & Gas Production, LLC	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
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Site:	Los Vaqueros Fed	**North Reference:**	Grid
Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 07-06-21		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Begin 1.50°/100' Build									
2,600.00	1.50	0.00	2,599.99	1.31	0.00	-1.31	1.50	1.50	0.00
2,700.00	3.00	0.00	2,699.91	5.23	0.00	-5.23	1.50	1.50	0.00
2,800.00	4.50	0.00	2,799.69	11.77	0.00	-11.77	1.50	1.50	0.00
2,900.00	6.00	0.00	2,899.27	20.92	0.00	-20.92	1.50	1.50	0.00
2,966.94	7.00	0.00	2,965.77	28.50	0.00	-28.50	1.50	1.50	0.00
Hold 7.00° Inc at 0.00° Azm									
3,000.00	7.00	0.00	2,998.59	32.54	0.00	-32.54	0.00	0.00	0.00
3,100.00	7.00	0.00	3,097.85	44.73	0.00	-44.73	0.00	0.00	0.00
3,200.00	7.00	0.00	3,197.10	56.92	0.00	-56.92	0.00	0.00	0.00
3,300.00	7.00	0.00	3,296.35	69.12	0.00	-69.12	0.00	0.00	0.00
3,400.00	7.00	0.00	3,395.61	81.31	0.00	-81.31	0.00	0.00	0.00
3,500.00	7.00	0.00	3,494.86	93.51	0.00	-93.50	0.00	0.00	0.00
3,600.00	7.00	0.00	3,594.11	105.70	0.00	-105.70	0.00	0.00	0.00
3,700.00	7.00	0.00	3,693.37	117.89	0.00	-117.89	0.00	0.00	0.00
3,800.00	7.00	0.00	3,792.62	130.09	0.00	-130.08	0.00	0.00	0.00
3,900.00	7.00	0.00	3,891.88	142.28	0.00	-142.28	0.00	0.00	0.00
4,000.00	7.00	0.00	3,991.13	154.48	0.00	-154.47	0.00	0.00	0.00
4,100.00	7.00	0.00	4,090.38	166.67	0.00	-166.66	0.00	0.00	0.00
4,200.00	7.00	0.00	4,189.64	178.86	0.00	-178.86	0.00	0.00	0.00
4,300.00	7.00	0.00	4,288.89	191.06	0.00	-191.05	0.00	0.00	0.00
4,400.00	7.00	0.00	4,388.14	203.25	0.00	-203.24	0.00	0.00	0.00
4,500.00	7.00	0.00	4,487.40	215.45	0.00	-215.44	0.00	0.00	0.00
4,600.00	7.00	0.00	4,586.65	227.64	0.00	-227.63	0.00	0.00	0.00
4,700.00	7.00	0.00	4,685.91	239.83	0.00	-239.82	0.00	0.00	0.00
4,800.00	7.00	0.00	4,785.16	252.03	0.00	-252.02	0.00	0.00	0.00
4,900.00	7.00	0.00	4,884.41	264.22	0.00	-264.21	0.00	0.00	0.00
5,000.00	7.00	0.00	4,983.67	276.41	0.00	-276.40	0.00	0.00	0.00
5,100.00	7.00	0.00	5,082.92	288.61	0.00	-288.60	0.00	0.00	0.00
5,200.00	7.00	0.00	5,182.17	300.80	0.00	-300.79	0.00	0.00	0.00
5,300.00	7.00	0.00	5,281.43	313.00	0.00	-312.99	0.00	0.00	0.00
5,400.00	7.00	0.00	5,380.68	325.19	0.00	-325.18	0.00	0.00	0.00
5,500.00	7.00	0.00	5,479.94	337.38	0.00	-337.37	0.00	0.00	0.00
5,600.00	7.00	0.00	5,579.19	349.58	0.00	-349.57	0.00	0.00	0.00
5,700.00	7.00	0.00	5,678.44	361.77	0.00	-361.76	0.00	0.00	0.00
5,800.00	7.00	0.00	5,777.70	373.97	0.00	-373.95	0.00	0.00	0.00
5,900.00	7.00	0.00	5,876.95	386.16	0.00	-386.15	0.00	0.00	0.00
6,000.00	7.00	0.00	5,976.20	398.35	0.00	-398.34	0.00	0.00	0.00
6,100.00	7.00	0.00	6,075.46	410.55	0.00	-410.53	0.00	0.00	0.00
6,200.00	7.00	0.00	6,174.71	422.74	0.00	-422.73	0.00	0.00	0.00
6,300.00	7.00	0.00	6,273.97	434.94	0.00	-434.92	0.00	0.00	0.00
6,400.00	7.00	0.00	6,373.22	447.13	0.00	-447.11	0.00	0.00	0.00
6,500.00	7.00	0.00	6,472.47	459.32	0.00	-459.31	0.00	0.00	0.00
6,600.00	7.00	0.00	6,571.73	471.52	0.00	-471.50	0.00	0.00	0.00
6,700.00	7.00	0.00	6,670.98	483.71	0.00	-483.69	0.00	0.00	0.00
6,800.00	7.00	0.00	6,770.23	495.91	0.00	-495.89	0.00	0.00	0.00
6,900.00	7.00	0.00	6,869.49	508.10	0.00	-508.08	0.00	0.00	0.00
7,000.00	7.00	0.00	6,968.74	520.29	0.00	-520.27	0.00	0.00	0.00
7,100.00	7.00	0.00	7,068.00	532.49	0.00	-532.47	0.00	0.00	0.00
7,200.00	7.00	0.00	7,167.25	544.68	0.00	-544.66	0.00	0.00	0.00
7,300.00	7.00	0.00	7,266.50	556.88	0.00	-556.85	0.00	0.00	0.00

PHOENIX TECHNOLOGY SERVICES

Planning Report

TITUS OIL GAS LLC

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 321H
Company:	Titus Oil & Gas Production, LLC	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Project:	Lea County, NM - (NAD83 NME)	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site:	Los Vaqueros Fed	**North Reference:**	Grid
Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 07-06-21		

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)
7,400.00	7.00	0.00	7,365.76	569.07	0.00	-569.05	0.00	0.00	0.00
7,500.00	7.00	0.00	7,465.01	581.26	0.00	-581.24	0.00	0.00	0.00
7,600.00	7.00	0.00	7,564.26	593.46	0.00	-593.44	0.00	0.00	0.00
7,700.00	7.00	0.00	7,663.52	605.65	0.00	-605.63	0.00	0.00	0.00
7,800.00	7.00	0.00	7,762.77	617.84	0.00	-617.82	0.00	0.00	0.00
7,900.00	7.00	0.00	7,862.03	630.04	0.00	-630.02	0.00	0.00	0.00
8,000.00	7.00	0.00	7,961.28	642.23	0.00	-642.21	0.00	0.00	0.00
8,100.00	7.00	0.00	8,060.53	654.43	0.00	-654.40	0.00	0.00	0.00
8,200.00	7.00	0.00	8,159.79	666.62	0.00	-666.60	0.00	0.00	0.00
8,300.00	7.00	0.00	8,259.04	678.81	0.00	-678.79	0.00	0.00	0.00
8,400.00	7.00	0.00	8,358.29	691.01	0.00	-690.98	0.00	0.00	0.00
8,500.00	7.00	0.00	8,457.55	703.20	0.00	-703.18	0.00	0.00	0.00
8,600.00	7.00	0.00	8,556.80	715.40	0.00	-715.37	0.00	0.00	0.00
8,700.00	7.00	0.00	8,656.06	727.59	0.00	-727.56	0.00	0.00	0.00
8,800.00	7.00	0.00	8,755.31	739.78	0.00	-739.76	0.00	0.00	0.00
8,900.00	7.00	0.00	8,854.56	751.98	0.00	-751.95	0.00	0.00	0.00
9,000.00	7.00	0.00	8,953.82	764.17	0.00	-764.14	0.00	0.00	0.00
9,100.00	7.00	0.00	9,053.07	776.37	0.00	-776.34	0.00	0.00	0.00
9,200.00	7.00	0.00	9,152.32	788.56	0.00	-788.53	0.00	0.00	0.00
9,300.00	7.00	0.00	9,251.58	800.75	0.00	-800.72	0.00	0.00	0.00
9,400.00	7.00	0.00	9,350.83	812.95	0.00	-812.92	0.00	0.00	0.00
9,500.00	7.00	0.00	9,450.09	825.14	0.00	-825.11	0.00	0.00	0.00
9,600.00	7.00	0.00	9,549.34	837.34	0.00	-837.30	0.00	0.00	0.00
9,700.00	7.00	0.00	9,648.59	849.53	0.00	-849.50	0.00	0.00	0.00
9,800.00	7.00	0.00	9,747.85	861.72	0.00	-861.69	0.00	0.00	0.00
9,900.00	7.00	0.00	9,847.10	873.92	0.00	-873.89	0.00	0.00	0.00
9,929.35	7.00	0.00	9,876.23	877.50	0.00	-877.46	0.00	0.00	0.00
Begin 1.50°/100' Drop									
10,000.00	5.94	0.00	9,946.43	885.46	0.00	-885.43	1.50	-1.50	0.00
10,100.00	4.44	0.00	10,046.02	894.52	0.00	-894.48	1.50	-1.50	0.00
10,200.00	2.94	0.00	10,145.81	900.96	0.00	-900.93	1.50	-1.50	0.00
10,300.00	1.44	0.00	10,245.73	904.79	0.00	-904.75	1.50	-1.50	0.00
10,396.28	0.00	0.00	10,342.00	906.00	0.00	-905.97	1.50	-1.50	0.00
Begin Vertical Hold									
12,096.82	0.00	0.00	12,042.54	906.00	0.00	-905.97	0.00	0.00	0.00
KOP2, Begin 12.00°/100' Build									
12,100.00	0.38	196.40	12,045.72	905.99	0.00	-905.96	12.00	12.00	0.00
12,200.00	12.38	196.40	12,144.92	895.35	-3.14	-895.34	12.00	12.00	0.00
12,300.00	24.38	196.40	12,239.64	865.15	-12.02	-865.22	12.00	12.00	0.00
12,400.00	36.38	196.40	12,325.75	816.72	-26.28	-816.92	12.00	12.00	0.00
12,500.00	48.38	196.40	12,399.49	752.18	-45.27	-752.54	12.00	12.00	0.00
12,600.00	60.38	196.40	12,457.62	674.33	-68.18	-674.89	12.00	12.00	0.00
12,700.00	72.38	196.40	12,497.61	586.60	-94.00	-587.38	12.00	12.00	0.00
12,800.00	84.38	196.40	12,517.71	492.81	-121.61	-493.83	12.00	12.00	0.00
12,848.99	90.26	196.40	12,520.00	445.88	-135.42	-447.02	12.00	12.00	0.00
LP, Hold 90.26° Inc, Begin 4.00°/100' Turn									
12,900.00	90.26	194.36	12,519.77	396.70	-148.95	-397.96	4.00	0.00	-4.00
13,000.00	90.26	190.36	12,519.31	299.04	-170.35	-300.48	4.00	0.00	-4.00
13,100.00	90.26	186.36	12,518.85	200.12	-184.88	-201.70	4.00	0.00	-4.00
13,200.00	90.26	182.36	12,518.39	100.43	-192.48	-102.08	4.00	0.00	-4.00
13,271.32	90.26	179.51	12,518.06	29.13	-193.64	-30.78	4.00	0.00	-4.00
Hold 179.51° Azm									
13,300.00	90.26	179.51	12,517.93	0.45	-193.40	-2.11	0.00	0.00	0.00
13,400.00	90.26	179.51	12,517.47	-99.54	-192.54	97.89	0.00	0.00	0.00

PHOENIX TECHNOLOGY SERVICES

Planning Report

TITUS OIL GAS LLC

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 321H
Company:	Titus Oil & Gas Production, LLC	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Project:	Lea County, NM - (NAD83 NME)	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site:	Los Vaqueros Fed	**North Reference:**	Grid
Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 07-06-21		

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)
13,500.00	90.26	179.51	12,517.01	-199.54	-191.67	197.89	0.00	0.00	0.00
13,600.00	90.26	179.51	12,516.55	-299.53	-190.81	297.89	0.00	0.00	0.00
13,700.00	90.26	179.51	12,516.10	-399.53	-189.95	397.89	0.00	0.00	0.00
13,800.00	90.26	179.51	12,515.64	-499.52	-189.09	497.89	0.00	0.00	0.00
13,900.00	90.26	179.51	12,515.18	-599.52	-188.23	597.89	0.00	0.00	0.00
14,000.00	90.26	179.51	12,514.72	-699.51	-187.37	697.89	0.00	0.00	0.00
14,100.00	90.26	179.51	12,514.26	-799.51	-186.50	797.89	0.00	0.00	0.00
14,200.00	90.26	179.51	12,513.81	-899.51	-185.64	897.88	0.00	0.00	0.00
14,300.00	90.26	179.51	12,513.35	-999.50	-184.78	997.88	0.00	0.00	0.00
14,400.00	90.26	179.51	12,512.89	-1,099.50	-183.92	1,097.88	0.00	0.00	0.00
14,500.00	90.26	179.51	12,512.43	-1,199.49	-183.06	1,197.88	0.00	0.00	0.00
14,600.00	90.26	179.51	12,511.97	-1,299.49	-182.20	1,297.88	0.00	0.00	0.00
14,700.00	90.26	179.51	12,511.51	-1,399.48	-181.34	1,397.88	0.00	0.00	0.00
14,800.00	90.26	179.51	12,511.06	-1,499.48	-180.47	1,497.88	0.00	0.00	0.00
14,900.00	90.26	179.51	12,510.60	-1,599.47	-179.61	1,597.88	0.00	0.00	0.00
15,000.00	90.26	179.51	12,510.14	-1,699.47	-178.75	1,697.88	0.00	0.00	0.00
15,100.00	90.26	179.51	12,509.68	-1,799.46	-177.89	1,797.88	0.00	0.00	0.00
15,200.00	90.26	179.51	12,509.22	-1,899.46	-177.03	1,897.87	0.00	0.00	0.00
15,300.00	90.26	179.51	12,508.77	-1,999.45	-176.17	1,997.87	0.00	0.00	0.00
15,400.00	90.26	179.51	12,508.31	-2,099.45	-175.31	2,097.87	0.00	0.00	0.00
15,500.00	90.26	179.51	12,507.85	-2,199.44	-174.44	2,197.87	0.00	0.00	0.00
15,600.00	90.26	179.51	12,507.39	-2,299.44	-173.58	2,297.87	0.00	0.00	0.00
15,700.00	90.26	179.51	12,506.93	-2,399.43	-172.72	2,397.87	0.00	0.00	0.00
15,800.00	90.26	179.51	12,506.47	-2,499.43	-171.86	2,497.87	0.00	0.00	0.00
15,900.00	90.26	179.51	12,506.02	-2,599.42	-171.00	2,597.87	0.00	0.00	0.00
16,000.00	90.26	179.51	12,505.56	-2,699.42	-170.14	2,697.87	0.00	0.00	0.00
16,100.00	90.26	179.51	12,505.10	-2,799.42	-169.27	2,797.87	0.00	0.00	0.00
16,200.00	90.26	179.51	12,504.64	-2,899.41	-168.41	2,897.86	0.00	0.00	0.00
16,300.00	90.26	179.51	12,504.18	-2,999.41	-167.55	2,997.86	0.00	0.00	0.00
16,400.00	90.26	179.51	12,503.73	-3,099.40	-166.69	3,097.86	0.00	0.00	0.00
16,500.00	90.26	179.51	12,503.27	-3,199.40	-165.83	3,197.86	0.00	0.00	0.00
16,600.00	90.26	179.51	12,502.81	-3,299.39	-164.97	3,297.86	0.00	0.00	0.00
16,700.00	90.26	179.51	12,502.35	-3,399.39	-164.11	3,397.86	0.00	0.00	0.00
16,800.00	90.26	179.51	12,501.89	-3,499.38	-163.24	3,497.86	0.00	0.00	0.00
16,900.00	90.26	179.51	12,501.43	-3,599.38	-162.38	3,597.86	0.00	0.00	0.00
17,000.00	90.26	179.51	12,500.98	-3,699.37	-161.52	3,697.86	0.00	0.00	0.00
17,100.00	90.26	179.51	12,500.52	-3,799.37	-160.66	3,797.85	0.00	0.00	0.00
17,200.00	90.26	179.51	12,500.06	-3,899.36	-159.80	3,897.85	0.00	0.00	0.00
17,300.00	90.26	179.51	12,499.60	-3,999.36	-158.94	3,997.85	0.00	0.00	0.00
17,400.00	90.26	179.51	12,499.14	-4,099.35	-158.07	4,097.85	0.00	0.00	0.00
17,500.00	90.26	179.51	12,498.69	-4,199.35	-157.21	4,197.85	0.00	0.00	0.00
17,600.00	90.26	179.51	12,498.23	-4,299.34	-156.35	4,297.85	0.00	0.00	0.00
17,700.00	90.26	179.51	12,497.77	-4,399.34	-155.49	4,397.85	0.00	0.00	0.00
17,800.00	90.26	179.51	12,497.31	-4,499.33	-154.63	4,497.85	0.00	0.00	0.00
17,900.00	90.26	179.51	12,496.85	-4,599.33	-153.77	4,597.85	0.00	0.00	0.00
18,000.00	90.26	179.51	12,496.39	-4,699.32	-152.91	4,697.85	0.00	0.00	0.00
18,100.00	90.26	179.51	12,495.94	-4,799.32	-152.04	4,797.84	0.00	0.00	0.00
18,200.00	90.26	179.51	12,495.48	-4,899.32	-151.18	4,897.84	0.00	0.00	0.00
18,300.00	90.26	179.51	12,495.02	-4,999.31	-150.32	4,997.84	0.00	0.00	0.00
18,400.00	90.26	179.51	12,494.56	-5,099.31	-149.46	5,097.84	0.00	0.00	0.00
18,500.00	90.26	179.51	12,494.10	-5,199.30	-148.60	5,197.84	0.00	0.00	0.00
18,600.00	90.26	179.51	12,493.65	-5,299.30	-147.74	5,297.84	0.00	0.00	0.00
18,700.00	90.26	179.51	12,493.19	-5,399.29	-146.88	5,397.84	0.00	0.00	0.00
18,800.00	90.26	179.51	12,492.73	-5,499.29	-146.01	5,497.84	0.00	0.00	0.00

PHOENIX TECHNOLOGY SERVICES

Planning Report

TITUS OIL GAS LLC

Database:	USA Compass	**Local Co-ordinate Reference:**	Well 321H
Company:	Titus Oil & Gas Production, LLC	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Project:	Lea County, NM - (NAD83 NME)	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site:	Los Vaqueros Fed	**North Reference:**	Grid
Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 07-06-21		

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)
18,900.00	90.26	179.51	12,492.27	-5,599.28	-145.15	5,597.84	0.00	0.00	0.00
19,000.00	90.26	179.51	12,491.81	-5,699.28	-144.29	5,697.83	0.00	0.00	0.00
19,100.00	90.26	179.51	12,491.36	-5,799.27	-143.43	5,797.83	0.00	0.00	0.00
19,200.00	90.26	179.51	12,490.90	-5,899.27	-142.57	5,897.83	0.00	0.00	0.00
19,300.00	90.26	179.51	12,490.44	-5,999.26	-141.71	5,997.83	0.00	0.00	0.00
19,400.00	90.26	179.51	12,489.98	-6,099.26	-140.84	6,097.83	0.00	0.00	0.00
19,500.00	90.26	179.51	12,489.52	-6,199.25	-139.98	6,197.83	0.00	0.00	0.00
19,600.00	90.26	179.51	12,489.06	-6,299.25	-139.12	6,297.83	0.00	0.00	0.00
19,700.00	90.26	179.51	12,488.61	-6,399.24	-138.26	6,397.83	0.00	0.00	0.00
19,800.00	90.26	179.51	12,488.15	-6,499.24	-137.40	6,497.83	0.00	0.00	0.00
19,900.00	90.26	179.51	12,487.69	-6,599.23	-136.54	6,597.83	0.00	0.00	0.00
20,000.00	90.26	179.51	12,487.23	-6,699.23	-135.68	6,697.82	0.00	0.00	0.00
20,100.00	90.26	179.51	12,486.77	-6,799.22	-134.81	6,797.82	0.00	0.00	0.00
20,200.00	90.26	179.51	12,486.32	-6,899.22	-133.95	6,897.82	0.00	0.00	0.00
20,300.00	90.26	179.51	12,485.86	-6,999.22	-133.09	6,997.82	0.00	0.00	0.00
20,400.00	90.26	179.51	12,485.40	-7,099.21	-132.23	7,097.82	0.00	0.00	0.00
20,487.00	90.26	179.51	12,485.00	-7,186.21	-131.48	7,184.82	0.00	0.00	0.00
TD at 20487.00									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LTP - Los Vaqueros Fed	0.00	0.00	12,485.00	-7,096.21	-132.24	365,155.98	826,307.19	32° 0' 2.027974 N	103° 24' 50.589666 W
- plan misses target center by 0.41usft at 20397.00usft MD (12485.41 TVD, -7096.21 N, -132.26 E)									
- Point									
BHL - Los Vaqueros Fed	-0.26	179.51	12,485.00	-7,186.21	-131.48	365,065.98	826,307.95	32° 0' 1.137347 N	103° 24' 50.589727 W
- plan hits target center									
- Rectangle (sides W100.00 H7,632.13 D0.00)									
FTP - Los Vaqueros Fed	0.00	0.00	12,520.00	445.64	-196.87	372,697.83	826,242.56	32° 1' 16.660927 N	103° 24' 50.595264 W
- plan misses target center by 58.99usft at 12865.52usft MD (12519.92 TVD, 430.00 N, -140.00 E)									
- Point									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
20,487.00	12,485.00	20" Casing	20	24

PHOENIX TECHNOLOGY SERVICES

Planning Report

TITUS OIL GAS LLC

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Company:	Titus Oil & Gas Production, LLC	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Project:	Lea County, NM - (NAD83 NME)	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site:	Los Vaqueros Fed	**North Reference:**	Grid
Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan 1 07-06-21		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,500.00	2,500.00	0.00	0.00	KOP, Begin 1.50°/100' Build
2,966.94	2,965.77	28.50	0.00	Hold 7.00° Inc at 0.00° Azm
9,929.35	9,876.23	877.50	0.00	Begin 1.50°/100' Drop
10,396.28	10,342.00	906.00	0.00	Begin Vertical Hold
12,096.82	12,042.54	906.00	0.00	KOP2, Begin 12.00°/100' Build
12,848.99	12,520.00	445.88	-135.42	LP, Hold 90.26° Inc, Begin 4.00°/100' Turn
13,271.32	12,518.06	29.13	-193.64	Hold 179.51° Azm
20,487.00	12,485.00	-7,186.21	-131.48	TD at 20487.00

PHOENIX
TECHNOLOGY SERVICES

Titus Oil & Gas Production, LLC

Lea County, NM - (NAD83 NME)
Los Vaqueros Fed
321H

OH
Plan 1 07-06-21

Anticollision Report

06 July, 2021

TITUS
OIL GAS LLC

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Reference Plan 1 07-06-21

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 50,000.00usft	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 7/6/2021

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	20,487.00	Plan 1 07-06-21 (OH)	MWD+HRGM	OWSG MWD + HRGM

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Los Vaqueros Fed						
201H - OH - Plan 1 07-06-21	2,500.00	2,500.00	30.14	17.48	2.381	CC
201H - OH - Plan 1 07-06-21	2,600.00	2,599.99	30.18	17.24	2.333	ES
201H - OH - Plan 1 07-06-21	2,700.00	2,699.91	30.65	17.42	2.318	SF
431H - OH - Plan 1 07-06-21	2,500.00	2,499.00	59.98	47.32	4.738	CC, ES
431H - OH - Plan 1 07-06-21	20,486.04	20,787.12	720.10	514.13	3.496	SF
511H - OH - Plan 1 07-06-21	2,500.00	2,500.00	29.83	17.17	2.356	CC
511H - OH - Plan 1 07-06-21	2,700.00	2,699.91	30.11	16.90	2.279	ES
511H - OH - Plan 1 07-06-21	12,100.00	12,101.32	82.57	38.71	1.883	SF
Los Vaqueros Fed Offsets						
Madera 19 Fed Com 26-35-19 WB 5H - OH - Surveys	10,974.48	10,945.37	787.91	743.72	17.830	CC, ES
Madera 19 Fed Com 26-35-19 WB 5H - OH - Surveys	12,100.00	12,044.52	824.12	776.94	17.470	SF
Madera 19 WA Fed Com 2H - OH - Surveys	7,200.00	7,235.10	167.87	126.97	4.104	SF
Madera 19 WA Fed Com 2H - OH - Surveys	7,300.00	7,333.35	166.13	126.23	4.164	ES
Madera 19 WA Fed Com 2H - OH - Surveys	7,326.58	7,359.56	166.05	126.47	4.194	CC
Madera 19 WA Fed Com 2H - ST01 - Surveys	12,629.99	12,551.99	133.70	85.84	2.793	CC, ES
Madera 19 WA Fed Com 2H - ST01 - Surveys	12,700.00	12,558.43	150.43	93.52	2.643	SF
Madera 19 WXY Fed Com 6H - OH - Surveys	7,907.74	7,900.06	669.11	636.80	20.709	CC
Madera 19 WXY Fed Com 6H - OH - Surveys	8,000.00	7,990.20	669.30	636.59	20.459	ES
Madera 19 WXY Fed Com 6H - OH - Surveys	12,200.00	12,341.66	740.81	692.30	15.270	SF
Madera Federal 30-1 - OH - Surveys	16,060.72	12,489.27	782.26	712.62	11.232	CC, ES
Madera Federal 30-1 - OH - Surveys	16,100.00	12,488.94	783.24	713.26	11.192	SF
Medera 19 TB Fed 1H - OH - Surveys	8,126.63	8,147.99	146.43	113.17	4.402	CC
Medera 19 TB Fed 1H - OH - Surveys	8,200.00	8,220.72	146.71	112.98	4.350	ES
Medera 19 TB Fed 1H - OH - Surveys	8,800.00	8,816.68	166.15	125.80	4.117	SF

Offset Design: Los Vaqueros Fed - 201H - OH - Plan 1 07-06-21 — **Offset Site Error:** 1.00 usft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 1.00 usft

Rule Assigned: **Warning**

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
0.00	0.00	0.00	0.00	1.00	1.00	-90.59	-0.31	-30.14	30.14			
100.00	100.00	100.00	100.00	1.09	1.09	-90.59	-0.31	-30.14	30.14	27.96	2.19	13.785
200.00	200.00	200.00	200.00	1.61	1.61	-90.59	-0.31	-30.14	30.14	26.92	3.22	9.370
300.00	300.00	300.00	300.00	2.02	2.02	-90.59	-0.31	-30.14	30.14	26.11	4.03	7.470

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed - 201H - OH - Plan 1 07-06-21 — **Offset Site Error:** 1.00 usft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
400.00	400.00	400.00	400.00	2.36	2.36	-90.59	-0.31	-30.14	30.14	25.42	4.72	6.388	
500.00	500.00	500.00	500.00	2.66	2.66	-90.59	-0.31	-30.14	30.14	24.82	5.32	5.665	
600.00	600.00	600.00	600.00	2.93	2.93	-90.59	-0.31	-30.14	30.14	24.28	5.86	5.139	
700.00	700.00	700.00	700.00	3.18	3.18	-90.59	-0.31	-30.14	30.14	23.77	6.37	4.734	
800.00	800.00	800.00	800.00	3.42	3.42	-90.59	-0.31	-30.14	30.14	23.30	6.84	4.409	
900.00	900.00	900.00	900.00	3.64	3.64	-90.59	-0.31	-30.14	30.14	22.86	7.28	4.141	
1,000.00	1,000.00	1,000.00	1,000.00	3.85	3.85	-90.59	-0.31	-30.14	30.14	22.44	7.70	3.914	
1,100.00	1,100.00	1,100.00	1,100.00	4.05	4.05	-90.59	-0.31	-30.14	30.14	22.04	8.10	3.720	
1,200.00	1,200.00	1,200.00	1,200.00	4.24	4.24	-90.59	-0.31	-30.14	30.14	21.65	8.49	3.551	
1,300.00	1,300.00	1,300.00	1,300.00	4.43	4.43	-90.59	-0.31	-30.14	30.14	21.28	8.86	3.401	
1,400.00	1,400.00	1,400.00	1,400.00	4.61	4.61	-90.59	-0.31	-30.14	30.14	20.92	9.22	3.268	
1,500.00	1,500.00	1,500.00	1,500.00	4.79	4.79	-90.59	-0.31	-30.14	30.14	20.57	9.57	3.149	
1,600.00	1,600.00	1,600.00	1,600.00	4.96	4.96	-90.59	-0.31	-30.14	30.14	20.23	9.91	3.041	
1,700.00	1,700.00	1,700.00	1,700.00	5.12	5.12	-90.59	-0.31	-30.14	30.14	19.90	10.24	2.943	
1,800.00	1,800.00	1,800.00	1,800.00	5.28	5.28	-90.59	-0.31	-30.14	30.14	19.57	10.57	2.852	
1,900.00	1,900.00	1,900.00	1,900.00	5.44	5.44	-90.59	-0.31	-30.14	30.14	19.26	10.88	2.770	
2,000.00	2,000.00	2,000.00	2,000.00	5.60	5.60	-90.59	-0.31	-30.14	30.14	18.95	11.19	2.693	
2,100.00	2,100.00	2,100.00	2,100.00	5.75	5.75	-90.59	-0.31	-30.14	30.14	18.65	11.50	2.622	
2,200.00	2,200.00	2,200.00	2,200.00	5.90	5.90	-90.59	-0.31	-30.14	30.14	18.35	11.79	2.556	
2,300.00	2,300.00	2,300.00	2,300.00	6.04	6.04	-90.59	-0.31	-30.14	30.14	18.05	12.09	2.494	
2,400.00	2,400.00	2,400.00	2,400.00	6.19	6.19	-90.59	-0.31	-30.14	30.14	17.77	12.38	2.436	
2,500.00	2,500.00	2,500.00	2,500.00	6.33	6.33	-90.59	-0.31	-30.14	30.14	17.48	12.66	2.381	CC
2,501.90	2,501.90	2,501.90	2,501.90	6.33	6.33	-90.59	-0.31	-30.14	30.14	17.48	12.66	2.380	
2,600.00	2,599.99	2,599.99	2,599.99	6.55	6.47	-93.07	-0.31	-30.14	30.18	17.24	12.94	2.333	ES
2,700.00	2,699.91	2,699.91	2,699.91	6.90	6.61	-100.41	-0.31	-30.14	30.65	17.42	13.22	2.318	SF
2,800.00	2,799.69	2,799.69	2,799.69	7.25	6.74	-111.79	-0.31	-30.14	32.47	18.92	13.56	2.396	
2,900.00	2,899.27	2,899.27	2,899.27	7.60	6.88	-125.02	-0.31	-30.14	36.87	22.87	14.00	2.633	
3,000.00	2,998.59	2,998.59	2,998.59	7.80	7.01	-137.25	-0.31	-30.14	44.58	30.14	14.44	3.088	
3,100.00	3,097.85	3,097.85	3,097.85	8.00	7.14	-146.01	-0.31	-30.14	54.19	39.33	14.87	3.645	
3,200.00	3,197.10	3,197.10	3,197.10	8.23	7.27	-152.05	-0.31	-30.14	64.69	49.40	15.29	4.232	
3,300.00	3,296.35	3,296.35	3,296.35	8.46	7.39	-156.38	-0.31	-30.14	75.69	59.99	15.70	4.822	
3,400.00	3,395.61	3,395.61	3,395.61	8.72	7.52	-159.59	-0.31	-30.14	87.01	70.91	16.10	5.403	
3,500.00	3,494.86	3,494.86	3,494.86	8.98	7.65	-162.06	-0.31	-30.14	98.54	82.02	16.51	5.967	
3,600.00	3,594.11	3,594.11	3,594.11	9.26	7.77	-164.02	-0.31	-30.14	110.21	93.28	16.93	6.510	
3,700.00	3,693.37	3,693.37	3,693.37	9.55	7.89	-165.59	-0.31	-30.14	121.99	104.63	17.35	7.030	
3,800.00	3,792.62	3,792.62	3,792.62	9.85	8.01	-166.89	-0.31	-30.14	133.84	116.06	17.78	7.527	
3,900.00	3,891.88	3,891.88	3,891.88	10.15	8.13	-167.98	-0.31	-30.14	145.74	127.53	18.21	8.002	
4,000.00	3,991.13	3,991.13	3,991.13	10.47	8.25	-168.90	-0.31	-30.14	157.69	139.04	18.65	8.454	
4,100.00	4,090.38	4,090.38	4,090.38	10.79	8.37	-169.69	-0.31	-30.14	169.68	150.58	19.10	8.885	
4,200.00	4,189.64	4,189.64	4,189.64	11.12	8.49	-170.38	-0.31	-30.14	181.69	162.14	19.55	9.295	
4,300.00	4,288.89	4,288.89	4,288.89	11.45	8.61	-170.98	-0.31	-30.14	193.73	173.72	20.00	9.686	
4,400.00	4,388.14	4,388.14	4,388.14	11.79	8.72	-171.52	-0.31	-30.14	205.78	185.32	20.46	10.058	
4,500.00	4,487.40	4,487.40	4,487.40	12.13	8.84	-171.99	-0.31	-30.14	217.85	196.93	20.92	10.412	
4,600.00	4,586.65	4,586.65	4,586.65	12.48	8.95	-172.41	-0.31	-30.14	229.93	208.54	21.39	10.750	
4,700.00	4,685.91	4,685.91	4,685.91	12.84	9.07	-172.79	-0.31	-30.14	242.03	220.17	21.86	11.073	
4,800.00	4,785.16	4,785.16	4,785.16	13.19	9.18	-173.14	-0.31	-30.14	254.13	231.80	22.33	11.380	
4,900.00	4,884.41	4,884.41	4,884.41	13.55	9.29	-173.45	-0.31	-30.14	266.24	243.44	22.81	11.674	
5,000.00	4,983.67	4,983.67	4,983.67	13.92	9.40	-173.74	-0.31	-30.14	278.36	255.08	23.28	11.955	
5,100.00	5,082.92	5,089.59	5,089.59	14.29	9.57	-173.98	0.74	-30.23	289.53	265.70	23.84	12.147	
5,200.00	5,182.17	5,197.38	5,197.29	14.66	9.84	-174.09	4.77	-30.58	297.99	273.51	24.48	12.171	
5,300.00	5,281.43	5,305.59	5,305.26	15.03	10.13	-174.10	11.86	-31.20	303.68	278.55	25.14	12.080	
5,400.00	5,380.68	5,414.05	5,413.24	15.40	10.42	-173.99	22.02	-32.09	306.59	280.80	25.80	11.885	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

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Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
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Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed - 201H - OH - Plan 1 07-06-21 — **Offset Site Error:** 1.00 usft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,500.00	5,479.94	5,522.60	5,520.98	15.78	10.73	-173.78	35.25	-33.25	306.72	280.26	26.46	11.594	
5,600.00	5,579.19	5,628.64	5,625.82	16.16	11.03	-173.46	51.00	-34.63	304.17	277.08	27.10	11.225	
5,700.00	5,678.44	5,728.57	5,724.52	16.54	11.25	-173.13	66.57	-35.99	300.93	273.24	27.69	10.867	
5,800.00	5,777.70	5,828.50	5,823.22	16.93	11.45	-172.79	82.15	-37.35	297.70	269.43	28.27	10.530	
5,900.00	5,876.95	5,928.43	5,921.93	17.31	11.66	-172.44	97.72	-38.72	294.48	265.62	28.86	10.202	
6,000.00	5,976.20	6,028.37	6,020.63	17.70	11.89	-172.09	113.29	-40.08	291.27	261.80	29.47	9.884	
6,100.00	6,075.46	6,128.30	6,119.33	18.09	12.13	-171.72	128.87	-41.44	288.07	257.99	30.08	9.576	
6,200.00	6,174.71	6,228.23	6,218.03	18.48	12.39	-171.35	144.44	-42.80	284.89	254.18	30.71	9.277	
6,300.00	6,273.97	6,328.16	6,316.73	18.87	12.65	-170.98	160.01	-44.17	281.71	250.37	31.35	8.987	
6,400.00	6,373.22	6,428.09	6,415.43	19.26	12.92	-170.59	175.59	-45.53	278.55	246.56	31.99	8.707	
6,500.00	6,472.47	6,528.03	6,514.14	19.65	13.20	-170.19	191.16	-46.89	275.40	242.76	32.64	8.437	
6,600.00	6,571.73	6,627.96	6,612.84	20.05	13.49	-169.79	206.73	-48.25	272.27	238.96	33.30	8.176	
6,700.00	6,670.98	6,727.89	6,711.54	20.45	13.79	-169.37	222.31	-49.62	269.14	235.18	33.97	7.924	
6,800.00	6,770.23	6,827.82	6,810.24	20.84	14.10	-168.95	237.88	-50.98	266.04	231.40	34.64	7.681	
6,900.00	6,869.49	6,927.75	6,908.94	21.24	14.42	-168.51	253.45	-52.34	262.95	227.64	35.31	7.447	
7,000.00	6,968.74	7,027.69	7,007.65	21.64	14.74	-168.07	269.03	-53.70	259.87	223.88	35.99	7.221	
7,100.00	7,068.00	7,127.62	7,106.35	22.04	15.06	-167.61	284.60	-55.07	256.81	220.14	36.67	7.003	
7,200.00	7,167.25	7,227.55	7,205.05	22.44	15.40	-167.15	300.17	-56.43	253.77	216.41	37.35	6.794	
7,300.00	7,266.50	7,327.48	7,303.75	22.84	15.74	-166.67	315.75	-57.79	250.74	212.70	38.04	6.592	
7,400.00	7,365.76	7,427.42	7,402.45	23.24	16.08	-166.18	331.32	-59.15	247.73	209.01	38.72	6.398	
7,500.00	7,465.01	7,527.35	7,501.15	23.64	16.43	-165.68	346.89	-60.52	244.74	205.34	39.40	6.211	
7,600.00	7,564.26	7,627.28	7,599.86	24.05	16.78	-165.16	362.47	-61.88	241.77	201.68	40.09	6.031	
7,700.00	7,663.52	7,727.21	7,698.56	24.45	17.14	-164.64	378.04	-63.24	238.82	198.05	40.77	5.858	
7,800.00	7,762.77	7,827.14	7,797.26	24.85	17.51	-164.10	393.61	-64.60	235.89	194.44	41.44	5.692	
7,900.00	7,862.03	7,927.08	7,895.96	25.26	17.87	-163.54	409.19	-65.97	232.98	190.86	42.12	5.531	
8,000.00	7,961.28	8,027.01	7,994.66	25.66	18.24	-162.98	424.76	-67.33	230.09	187.30	42.79	5.377	
8,100.00	8,060.53	8,126.94	8,093.36	26.07	18.61	-162.40	440.33	-68.69	227.23	183.77	43.46	5.229	
8,200.00	8,159.79	8,226.87	8,192.07	26.48	18.99	-161.80	455.91	-70.05	224.39	180.27	44.12	5.086	
8,300.00	8,259.04	8,326.80	8,290.77	26.88	19.37	-161.19	471.48	-71.42	221.57	176.80	44.77	4.949	
8,400.00	8,358.29	8,426.74	8,389.47	27.29	19.75	-160.56	487.05	-72.78	218.78	173.37	45.42	4.817	
8,500.00	8,457.55	8,526.67	8,488.17	27.70	20.14	-159.92	502.63	-74.14	216.02	169.96	46.06	4.690	
8,600.00	8,556.80	8,626.60	8,586.87	28.11	20.52	-159.26	518.20	-75.50	213.29	166.60	46.69	4.569	
8,700.00	8,656.06	8,726.53	8,685.58	28.52	20.91	-158.58	533.77	-76.87	210.58	163.28	47.31	4.452	
8,800.00	8,755.31	8,826.46	8,784.28	28.92	21.31	-157.89	549.35	-78.23	207.91	159.99	47.91	4.339	
8,900.00	8,854.56	8,926.40	8,882.98	29.33	21.70	-157.18	564.92	-79.59	205.26	156.75	48.51	4.231	
9,000.00	8,953.82	9,026.33	8,981.68	29.74	22.10	-156.45	580.49	-80.95	202.65	153.55	49.10	4.128	
9,100.00	9,053.07	9,126.26	9,080.38	30.15	22.50	-155.70	596.07	-82.32	200.07	150.41	49.67	4.028	
9,200.00	9,152.32	9,226.19	9,179.08	30.56	22.90	-154.93	611.64	-83.68	197.53	147.31	50.22	3.933	
9,300.00	9,251.58	9,326.12	9,277.79	30.97	23.30	-154.14	627.21	-85.04	195.03	144.26	50.76	3.842	
9,400.00	9,350.83	9,426.06	9,376.49	31.39	23.70	-153.33	642.79	-86.40	192.56	141.27	51.28	3.755	
9,500.00	9,450.09	9,525.99	9,475.19	31.80	24.11	-152.50	658.36	-87.77	190.13	138.34	51.79	3.671	
9,600.00	9,549.34	9,625.92	9,573.89	32.21	24.51	-151.65	673.93	-89.13	187.74	135.47	52.27	3.592	
9,700.00	9,648.59	9,725.85	9,672.59	32.62	24.92	-150.78	689.51	-90.49	185.40	132.66	52.74	3.515	
9,800.00	9,747.85	9,825.78	9,771.29	33.03	25.33	-149.88	705.08	-91.85	183.09	129.92	53.18	3.443	
9,900.00	9,847.10	9,925.72	9,870.00	33.44	25.74	-148.96	720.65	-93.22	180.84	127.24	53.60	3.374	
10,000.00	9,946.43	10,023.41	9,966.56	33.84	26.13	-148.01	735.43	-94.51	178.46	124.50	53.95	3.308	
10,100.00	10,046.02	10,119.79	10,062.13	34.26	26.53	-147.06	747.77	-95.59	175.87	121.57	54.30	3.239	
10,200.00	10,145.81	10,216.25	10,158.07	34.65	26.95	-146.12	757.72	-96.46	173.12	118.52	54.60	3.171	
10,300.00	10,245.73	10,312.81	10,254.33	35.00	27.34	-145.19	765.26	-97.12	170.22	115.41	54.81	3.106	
10,400.00	10,345.72	10,409.47	10,350.85	35.20	27.70	-144.27	770.38	-97.57	167.15	112.32	54.83	3.049	
10,500.00	10,445.72	10,506.26	10,447.60	35.23	28.01	-143.66	773.06	-97.80	165.05	110.26	54.79	3.013	
10,600.00	10,545.72	10,604.38	10,545.72	35.27	28.12	-143.56	773.50	-97.84	164.71	109.87	54.84	3.004	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed - 201H - OH - Plan 1 07-06-21

Offset Site Error: 1.00 usft

Survey Program: 0-MWD+HRGM

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,633.36	10,579.08	10,637.74	10,579.08	35.29	28.14	-143.56	773.50	-97.84	164.71	109.84	54.87	3.002	
10,658.29	10,604.01	10,662.67	10,604.01	35.30	28.15	-143.56	773.50	-97.84	164.71	109.82	54.89	3.001	
10,700.00	10,645.72	10,694.90	10,636.22	35.31	28.09	-143.71	772.52	-98.00	165.86	111.21	54.65	3.035	
10,800.00	10,745.72	10,769.72	10,710.21	35.35	27.87	-145.30	762.03	-99.70	178.68	124.54	54.14	3.300	
10,900.00	10,845.72	10,839.65	10,777.07	35.40	27.61	-147.88	742.03	-102.94	205.41	151.86	53.56	3.835	
11,000.00	10,945.72	10,900.00	10,831.87	35.44	27.39	-150.47	717.18	-106.96	245.06	192.50	52.56	4.663	
11,100.00	11,045.72	10,957.56	10,880.79	35.48	27.17	-152.92	687.30	-111.80	295.86	244.18	51.68	5.725	
11,200.00	11,145.72	11,000.00	10,914.33	35.52	27.01	-154.61	661.66	-115.95	355.93	305.47	50.46	7.053	
11,300.00	11,245.72	11,050.00	10,950.71	35.56	26.84	-156.42	627.82	-121.43	423.27	373.33	49.95	8.474	
11,400.00	11,345.72	11,075.00	10,967.50	35.60	26.76	-157.24	609.55	-124.39	496.40	447.40	49.00	10.131	
11,500.00	11,445.72	11,109.22	10,988.87	35.64	26.66	-158.27	583.17	-128.67	574.01	525.37	48.64	11.801	
11,600.00	11,545.72	11,134.46	11,003.37	35.68	26.59	-158.97	562.78	-131.97	655.25	606.91	48.34	13.554	
11,700.00	11,645.72	11,150.00	11,011.75	35.73	26.55	-159.37	549.87	-134.06	739.40	691.28	48.12	15.364	
11,800.00	11,745.72	11,175.00	11,024.33	35.77	26.48	-159.98	528.54	-137.51	825.71	777.54	48.17	17.142	
11,900.00	11,845.72	11,191.65	11,032.07	35.81	26.45	-160.36	513.99	-139.87	913.93	865.69	48.24	18.945	
12,000.00	11,945.72	11,200.00	11,035.76	35.85	26.43	-160.55	506.59	-141.07	1,003.72	955.37	48.36	20.757	
12,100.00	12,045.72	11,225.00	11,046.00	35.89	26.38	2.49	484.09	-144.71	1,094.70	1,046.09	48.61	22.518	
12,200.00	12,144.92	11,225.00	11,046.00	35.58	26.38	1.71	484.09	-144.71	1,181.86	1,133.14	48.72	24.256	
12,300.00	12,239.64	11,250.00	11,055.05	35.19	26.33	1.10	461.08	-148.44	1,259.03	1,210.14	48.88	25.756	
12,400.00	12,325.75	11,275.00	11,062.85	34.77	26.30	0.74	437.64	-152.24	1,324.57	1,275.50	49.07	26.995	
12,500.00	12,399.49	11,300.00	11,069.41	34.40	26.27	0.50	413.83	-156.09	1,376.90	1,327.57	49.33	27.914	
12,600.00	12,457.62	11,325.00	11,074.69	34.09	26.24	0.33	389.71	-160.00	1,414.89	1,365.19	49.70	28.468	
12,700.00	12,497.61	11,350.00	11,078.69	33.87	26.22	0.19	365.35	-163.94	1,437.76	1,387.55	50.21	28.635	
12,800.00	12,517.71	11,365.28	11,080.50	33.78	26.22	0.11	350.38	-166.37	1,444.95	1,394.04	50.91	28.384	
12,900.00	12,519.77	11,389.94	11,082.38	33.79	26.21	0.13	326.11	-170.30	1,439.27	1,387.58	51.69	27.843	
13,000.00	12,519.31	11,417.61	11,082.99	33.82	26.21	0.17	298.80	-174.72	1,436.33	1,383.74	52.58	27.315	
13,007.60	12,519.27	11,417.61	11,082.99	33.82	26.21	0.17	298.80	-174.72	1,436.31	1,383.63	52.67	27.267	
13,100.00	12,518.85	11,506.53	11,082.35	33.85	26.24	0.10	210.65	-186.21	1,436.54	1,383.37	53.17	27.019	
13,200.00	12,518.39	11,606.59	11,081.63	33.88	26.27	0.02	110.81	-192.56	1,436.80	1,383.11	53.69	26.763	
13,300.00	12,517.93	11,706.59	11,080.91	33.89	26.29	-0.03	10.82	-192.70	1,437.06	1,382.82	54.24	26.495	
13,400.00	12,517.47	11,806.59	11,080.19	33.90	26.32	-0.03	-89.17	-191.85	1,437.32	1,382.49	54.83	26.213	
13,500.00	12,517.01	11,906.59	11,079.46	33.91	26.34	-0.03	-189.17	-191.00	1,437.59	1,382.11	55.47	25.915	
13,600.00	12,516.55	12,006.59	11,078.74	33.93	26.38	-0.03	-289.16	-190.15	1,437.85	1,381.70	56.15	25.608	
13,700.00	12,516.10	12,106.59	11,078.02	33.95	26.42	-0.03	-389.15	-189.30	1,438.11	1,381.25	56.86	25.292	
13,800.00	12,515.64	12,206.59	11,077.30	33.97	26.47	-0.03	-489.15	-188.45	1,438.37	1,380.77	57.61	24.968	
13,900.00	12,515.18	12,306.59	11,076.58	33.99	26.53	-0.03	-589.14	-187.60	1,438.64	1,380.25	58.39	24.640	
14,000.00	12,514.72	12,406.59	11,075.86	34.02	26.62	-0.03	-689.13	-186.74	1,438.90	1,379.70	59.20	24.307	
14,100.00	12,514.26	12,506.59	11,075.14	34.06	26.73	-0.03	-789.13	-185.89	1,439.16	1,379.12	60.04	23.971	
14,200.00	12,513.81	12,606.59	11,074.42	34.10	26.90	-0.03	-889.12	-185.04	1,439.43	1,378.52	60.91	23.632	
14,300.00	12,513.35	12,706.59	11,073.70	34.14	27.15	-0.03	-989.11	-184.19	1,439.69	1,377.88	61.81	23.293	
14,400.00	12,512.89	12,806.59	11,072.97	34.20	27.53	-0.03	-1,089.11	-183.34	1,439.95	1,377.22	62.73	22.954	
14,500.00	12,512.43	12,906.59	11,072.25	34.28	28.10	-0.03	-1,189.10	-182.49	1,440.22	1,376.54	63.68	22.616	
14,600.00	12,511.97	13,006.59	11,071.53	34.38	28.86	-0.03	-1,289.09	-181.64	1,440.48	1,375.82	64.65	22.280	
14,700.00	12,511.51	13,106.58	11,070.81	34.52	29.77	-0.03	-1,389.09	-180.79	1,440.74	1,375.09	65.65	21.945	
14,800.00	12,511.06	13,206.58	11,070.09	34.73	30.79	-0.02	-1,489.08	-179.94	1,441.00	1,374.33	66.67	21.614	
14,900.00	12,510.60	13,306.58	11,069.37	35.09	31.87	-0.02	-1,589.07	-179.09	1,441.27	1,373.56	67.71	21.286	
15,000.00	12,510.14	13,406.58	11,068.65	35.66	33.01	-0.02	-1,689.07	-178.24	1,441.53	1,372.76	68.77	20.961	
15,100.00	12,509.68	13,506.58	11,067.93	36.46	34.19	-0.02	-1,789.06	-177.39	1,441.79	1,371.94	69.85	20.641	
15,200.00	12,509.22	13,606.58	11,067.20	37.44	35.39	-0.02	-1,889.05	-176.54	1,442.06	1,371.11	70.95	20.326	
15,300.00	12,508.77	13,706.58	11,066.48	38.52	36.62	-0.02	-1,989.05	-175.69	1,442.32	1,370.26	72.06	20.015	
15,400.00	12,508.31	13,806.58	11,065.76	39.67	37.87	-0.02	-2,089.04	-174.84	1,442.58	1,369.39	73.19	19.709	
15,500.00	12,507.85	13,906.58	11,065.04	40.85	39.13	-0.02	-2,189.03	-173.99	1,442.85	1,368.50	74.34	19.408	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed - 201H - OH - Plan 1 07-06-21 — **Offset Site Error:** 1.00 usft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,600.00	12,507.39	14,006.58	11,064.32	42.07	40.41	-0.02	-2,289.03	-173.14	1,443.11	1,367.60	75.50	19.113	
15,700.00	12,506.93	14,106.58	11,063.60	43.31	41.69	-0.02	-2,389.02	-172.29	1,443.37	1,366.69	76.68	18.823	
15,800.00	12,506.47	14,206.58	11,062.88	44.57	42.99	-0.02	-2,489.01	-171.43	1,443.63	1,365.76	77.87	18.538	
15,900.00	12,506.02	14,306.58	11,062.16	45.84	44.30	-0.02	-2,589.01	-170.58	1,443.90	1,364.82	79.08	18.259	
16,000.00	12,505.56	14,406.58	11,061.44	47.12	45.62	-0.02	-2,689.00	-169.73	1,444.16	1,363.87	80.29	17.986	
16,100.00	12,505.10	14,506.58	11,060.71	48.41	46.94	-0.02	-2,788.99	-168.88	1,444.42	1,362.90	81.52	17.718	
16,200.00	12,504.64	14,606.58	11,059.99	49.71	48.27	-0.02	-2,888.99	-168.03	1,444.69	1,361.92	82.76	17.456	
16,300.00	12,504.18	14,706.58	11,059.27	51.02	49.61	-0.02	-2,988.98	-167.18	1,444.95	1,360.94	84.01	17.199	
16,400.00	12,503.73	14,806.58	11,058.55	52.34	50.96	-0.02	-3,088.97	-166.33	1,445.21	1,359.94	85.28	16.948	
16,500.00	12,503.27	14,906.58	11,057.83	53.67	52.30	-0.02	-3,188.97	-165.48	1,445.48	1,358.93	86.55	16.702	
16,600.00	12,502.81	15,006.58	11,057.11	55.00	53.66	-0.02	-3,288.96	-164.63	1,445.74	1,357.91	87.83	16.461	
16,700.00	12,502.35	15,106.58	11,056.39	56.33	55.01	-0.02	-3,388.96	-163.78	1,446.00	1,356.88	89.12	16.225	
16,800.00	12,501.89	15,206.58	11,055.67	57.67	56.38	-0.02	-3,488.95	-162.93	1,446.26	1,355.85	90.42	15.995	
16,900.00	12,501.43	15,306.58	11,054.94	59.02	57.74	-0.02	-3,588.94	-162.08	1,446.53	1,354.80	91.73	15.770	
17,000.00	12,500.98	15,406.58	11,054.22	60.37	59.11	-0.02	-3,688.94	-161.23	1,446.79	1,353.75	93.04	15.550	
17,100.00	12,500.52	15,506.58	11,053.50	61.73	60.48	-0.01	-3,788.93	-160.38	1,447.05	1,352.69	94.37	15.335	
17,200.00	12,500.06	15,606.58	11,052.78	63.08	61.86	-0.01	-3,888.92	-159.53	1,447.32	1,351.62	95.70	15.124	
17,300.00	12,499.60	15,706.58	11,052.06	64.45	63.23	-0.01	-3,988.92	-158.68	1,447.58	1,350.55	97.03	14.918	
17,400.00	12,499.14	15,806.58	11,051.34	65.81	64.61	-0.01	-4,088.91	-157.83	1,447.84	1,349.46	98.38	14.717	
17,500.00	12,498.69	15,906.58	11,050.62	67.18	66.00	-0.01	-4,188.90	-156.98	1,448.11	1,348.38	99.73	14.520	
17,600.00	12,498.23	16,006.57	11,049.90	68.55	67.38	-0.01	-4,288.90	-156.12	1,448.37	1,347.28	101.09	14.328	
17,700.00	12,497.77	16,106.57	11,049.18	69.92	68.77	-0.01	-4,388.89	-155.27	1,448.63	1,346.18	102.45	14.140	
17,800.00	12,497.31	16,206.57	11,048.45	71.30	70.16	-0.01	-4,488.88	-154.42	1,448.90	1,345.07	103.82	13.956	
17,900.00	12,496.85	16,306.57	11,047.73	72.68	71.55	-0.01	-4,588.88	-153.57	1,449.16	1,343.96	105.20	13.776	
18,000.00	12,496.39	16,406.57	11,047.01	74.06	72.94	-0.01	-4,688.87	-152.72	1,449.42	1,342.84	106.58	13.600	
18,100.00	12,495.94	16,506.57	11,046.29	75.44	74.34	-0.01	-4,788.86	-151.87	1,449.68	1,341.72	107.96	13.428	
18,200.00	12,495.48	16,606.57	11,045.57	76.83	75.73	-0.01	-4,888.86	-151.02	1,449.95	1,340.59	109.35	13.259	
18,300.00	12,495.02	16,706.57	11,044.85	78.21	77.13	-0.01	-4,988.85	-150.17	1,450.21	1,339.46	110.75	13.095	
18,400.00	12,494.56	16,806.57	11,044.13	79.60	78.53	-0.01	-5,088.84	-149.32	1,450.47	1,338.33	112.15	12.934	
18,500.00	12,494.10	16,906.57	11,043.41	80.99	79.93	-0.01	-5,188.84	-148.47	1,450.74	1,337.18	113.55	12.776	
18,600.00	12,493.65	17,006.57	11,042.68	82.38	81.33	-0.01	-5,288.83	-147.62	1,451.00	1,336.04	114.96	12.622	
18,700.00	12,493.19	17,106.57	11,041.96	83.78	82.73	-0.01	-5,388.82	-146.77	1,451.26	1,334.89	116.37	12.471	
18,800.00	12,492.73	17,206.57	11,041.24	85.17	84.14	-0.01	-5,488.82	-145.92	1,451.53	1,333.74	117.79	12.323	
18,900.00	12,492.27	17,306.57	11,040.52	86.57	85.54	-0.01	-5,588.81	-145.07	1,451.79	1,332.58	119.21	12.178	
19,000.00	12,491.81	17,406.57	11,039.80	87.96	86.95	-0.01	-5,688.80	-144.22	1,452.05	1,331.42	120.63	12.037	
19,100.00	12,491.36	17,506.57	11,039.08	89.36	88.35	-0.01	-5,788.80	-143.37	1,452.31	1,330.25	122.06	11.898	
19,200.00	12,490.90	17,606.57	11,038.36	90.76	89.76	-0.01	-5,888.79	-142.52	1,452.58	1,329.08	123.49	11.762	
19,300.00	12,490.44	17,706.57	11,037.64	92.16	91.17	-0.01	-5,988.78	-141.67	1,452.84	1,327.91	124.93	11.629	
19,400.00	12,489.98	17,806.57	11,036.92	93.56	92.58	0.00	-6,088.78	-140.81	1,453.10	1,326.74	126.36	11.499	
19,500.00	12,489.52	17,906.57	11,036.19	94.97	93.99	0.00	-6,188.77	-139.96	1,453.37	1,325.56	127.81	11.372	
19,600.00	12,489.06	18,006.57	11,035.47	96.37	95.40	0.00	-6,288.76	-139.11	1,453.63	1,324.38	129.25	11.247	
19,700.00	12,488.61	18,106.57	11,034.75	97.78	96.81	0.00	-6,388.76	-138.26	1,453.89	1,323.20	130.70	11.124	
19,800.00	12,488.15	18,206.57	11,034.03	99.18	98.22	0.00	-6,488.75	-137.41	1,454.16	1,322.01	132.15	11.004	
19,900.00	12,487.69	18,306.57	11,033.31	100.59	99.64	0.00	-6,588.75	-136.56	1,454.42	1,320.82	133.60	10.887	
20,000.00	12,487.23	18,406.57	11,032.59	101.99	101.05	0.00	-6,688.74	-135.71	1,454.68	1,319.63	135.05	10.771	
20,100.00	12,486.77	18,506.57	11,031.87	103.40	102.46	0.00	-6,788.73	-134.86	1,454.94	1,318.44	136.51	10.658	
20,200.00	12,486.32	18,606.57	11,031.15	104.81	103.88	0.00	-6,888.73	-134.01	1,455.21	1,317.24	137.97	10.547	
20,300.00	12,485.86	18,706.57	11,030.42	106.22	105.29	0.00	-6,988.72	-133.16	1,455.47	1,316.04	139.43	10.439	
20,400.00	12,485.40	18,806.57	11,029.70	107.63	106.71	0.00	-7,088.71	-132.31	1,455.73	1,314.84	140.89	10.332	
20,487.00	12,485.00	18,893.57	11,029.08	108.86	107.94	0.00	-7,175.71	-131.57	1,455.96	1,313.79	142.17	10.241	

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed - 431H - OH - Plan 1 07-06-21 — **Offset Site Error:** 1.00 usft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	1.00	1.00	1.00	89.73	0.28	59.98	59.99				
100.00	100.00	99.00	100.00	1.09	1.09	89.73	0.28	59.98	59.98	57.80	2.18	27.453	
200.00	200.00	199.00	200.00	1.61	1.60	89.73	0.28	59.98	59.98	56.77	3.21	18.684	
300.00	300.00	299.00	300.00	2.02	2.01	89.73	0.28	59.98	59.98	55.95	4.03	14.882	
400.00	400.00	399.00	400.00	2.36	2.36	89.73	0.28	59.98	59.98	55.27	4.72	12.721	
500.00	500.00	499.00	500.00	2.66	2.66	89.73	0.28	59.98	59.98	54.66	5.32	11.281	
600.00	600.00	599.00	600.00	2.93	2.93	89.73	0.28	59.98	59.98	54.12	5.86	10.232	
700.00	700.00	699.00	700.00	3.18	3.18	89.73	0.28	59.98	59.98	53.62	6.36	9.424	
800.00	800.00	799.00	800.00	3.42	3.42	89.73	0.28	59.98	59.98	53.15	6.83	8.776	
900.00	900.00	899.00	900.00	3.64	3.64	89.73	0.28	59.98	59.98	52.70	7.28	8.242	
1,000.00	1,000.00	999.00	1,000.00	3.85	3.85	89.73	0.28	59.98	59.98	52.28	7.70	7.791	
1,100.00	1,100.00	1,099.00	1,100.00	4.05	4.05	89.73	0.28	59.98	59.98	51.88	8.10	7.404	
1,200.00	1,200.00	1,199.00	1,200.00	4.24	4.24	89.73	0.28	59.98	59.98	51.49	8.49	7.067	
1,300.00	1,300.00	1,299.00	1,300.00	4.43	4.43	89.73	0.28	59.98	59.98	51.12	8.86	6.770	
1,400.00	1,400.00	1,399.00	1,400.00	4.61	4.61	89.73	0.28	59.98	59.98	50.76	9.22	6.505	
1,500.00	1,500.00	1,499.00	1,500.00	4.79	4.78	89.73	0.28	59.98	59.98	50.41	9.57	6.267	
1,600.00	1,600.00	1,599.00	1,600.00	4.96	4.95	89.73	0.28	59.98	59.98	50.07	9.91	6.052	
1,700.00	1,700.00	1,699.00	1,700.00	5.12	5.12	89.73	0.28	59.98	59.98	49.74	10.24	5.857	
1,800.00	1,800.00	1,799.00	1,800.00	5.28	5.28	89.73	0.28	59.98	59.98	49.42	10.57	5.677	
1,900.00	1,900.00	1,899.00	1,900.00	5.44	5.44	89.73	0.28	59.98	59.98	49.10	10.88	5.512	
2,000.00	2,000.00	1,999.00	2,000.00	5.60	5.59	89.73	0.28	59.98	59.98	48.79	11.19	5.360	
2,100.00	2,100.00	2,099.00	2,100.00	5.75	5.75	89.73	0.28	59.98	59.98	48.49	11.50	5.218	
2,200.00	2,200.00	2,199.00	2,200.00	5.90	5.90	89.73	0.28	59.98	59.98	48.19	11.79	5.086	
2,300.00	2,300.00	2,299.00	2,300.00	6.04	6.04	89.73	0.28	59.98	59.98	47.89	12.09	4.963	
2,400.00	2,400.00	2,399.00	2,400.00	6.19	6.19	89.73	0.28	59.98	59.98	47.61	12.37	4.847	
2,500.00	2,500.00	2,499.00	2,500.00	6.33	6.33	89.73	0.28	59.98	59.98	47.32	12.66	4.738	CC, ES
2,600.00	2,599.99	2,598.38	2,599.37	6.55	6.54	89.86	1.44	60.48	60.48	47.54	12.94	4.674	
2,700.00	2,699.91	2,697.74	2,698.65	6.90	6.88	90.17	4.98	62.00	62.01	48.77	13.24	4.683	
2,800.00	2,799.69	2,797.07	2,797.77	7.25	7.23	90.65	10.89	64.53	64.57	51.03	13.54	4.770	
2,900.00	2,899.27	2,896.35	2,896.64	7.60	7.58	91.25	19.16	68.09	68.16	54.33	13.83	4.929	
3,000.00	2,998.59	2,995.57	2,995.18	7.80	7.94	91.83	29.78	72.64	72.78	58.71	14.07	5.173	
3,100.00	3,097.85	3,094.90	3,093.52	8.00	8.16	91.11	42.67	78.18	78.33	64.02	14.30	5.476	
3,200.00	3,197.10	3,194.72	3,192.24	8.23	8.37	90.07	56.23	84.00	84.14	69.55	14.59	5.765	
3,300.00	3,296.35	3,294.54	3,290.96	8.46	8.61	89.16	69.79	89.82	89.98	75.07	14.91	6.035	
3,400.00	3,395.61	3,394.36	3,389.69	8.72	8.87	88.36	83.35	95.64	95.85	80.61	15.24	6.290	
3,500.00	3,494.86	3,494.18	3,488.41	8.98	9.13	87.65	96.91	101.46	101.72	86.15	15.57	6.532	
3,600.00	3,594.11	3,594.00	3,587.13	9.26	9.42	87.02	110.47	107.28	107.62	91.70	15.92	6.762	
3,700.00	3,693.37	3,693.82	3,685.86	9.55	9.71	86.46	124.03	113.11	113.52	97.25	16.27	6.978	
3,800.00	3,792.62	3,793.64	3,784.58	9.85	10.01	85.95	137.58	118.93	119.43	102.81	16.63	7.183	
3,900.00	3,891.88	3,893.46	3,883.30	10.15	10.33	85.49	151.14	124.75	125.36	108.36	16.99	7.377	
4,000.00	3,991.13	3,993.28	3,982.03	10.47	10.65	85.07	164.70	130.57	131.29	113.92	17.37	7.559	
4,100.00	4,090.38	4,093.10	4,080.75	10.79	10.98	84.69	178.26	136.39	137.22	119.47	17.75	7.732	
4,200.00	4,189.64	4,192.92	4,179.47	11.12	11.32	84.34	191.82	142.21	143.16	125.03	18.13	7.894	
4,300.00	4,288.89	4,292.74	4,278.19	11.45	11.66	84.01	205.38	148.03	149.11	130.58	18.53	8.048	
4,400.00	4,388.14	4,392.56	4,376.92	11.79	12.01	83.72	218.94	153.85	155.06	136.13	18.93	8.193	
4,500.00	4,487.40	4,492.38	4,475.64	12.13	12.37	83.44	232.50	159.68	161.01	141.68	19.33	8.330	
4,600.00	4,586.65	4,592.20	4,574.36	12.48	12.73	83.18	246.06	165.50	166.97	147.23	19.74	8.459	
4,700.00	4,685.91	4,692.02	4,673.09	12.84	13.10	82.95	259.62	171.32	172.93	152.78	20.15	8.581	
4,800.00	4,785.16	4,791.84	4,771.81	13.19	13.47	82.72	273.18	177.14	178.90	158.32	20.57	8.696	
4,900.00	4,884.41	4,891.66	4,870.53	13.55	13.84	82.51	286.74	182.96	184.86	163.87	20.99	8.806	
5,000.00	4,983.67	4,991.48	4,969.25	13.92	14.22	82.32	300.30	188.78	190.83	169.41	21.42	8.909	
5,100.00	5,082.92	5,091.30	5,067.98	14.29	14.60	82.14	313.86	194.60	196.80	174.95	21.85	9.007	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed - 431H - OH - Plan 1 07-06-21 — **Offset Site Error:** 1.00 usft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,182.17	5,191.12	5,166.70	14.66	14.99	81.96	327.42	200.42	202.77	180.49	22.28	9.099	
5,300.00	5,281.43	5,290.94	5,265.42	15.03	15.38	81.80	340.97	206.24	208.75	186.03	22.72	9.187	
5,400.00	5,380.68	5,390.76	5,364.15	15.40	15.77	81.65	354.53	212.07	214.72	191.56	23.16	9.270	
5,500.00	5,479.94	5,490.58	5,462.87	15.78	16.16	81.50	368.09	217.89	220.70	197.09	23.61	9.349	
5,600.00	5,579.19	5,590.40	5,561.59	16.16	16.56	81.36	381.65	223.71	226.68	202.63	24.05	9.424	
5,700.00	5,678.44	5,690.22	5,660.32	16.54	16.95	81.23	395.21	229.53	232.66	208.16	24.50	9.495	
5,800.00	5,777.70	5,790.04	5,759.04	16.93	17.35	81.11	408.77	235.35	238.64	213.69	24.95	9.563	
5,900.00	5,876.95	5,889.86	5,857.76	17.31	17.75	80.99	422.33	241.17	244.62	219.21	25.41	9.627	
6,000.00	5,976.20	5,989.68	5,956.48	17.70	18.16	80.88	435.89	246.99	250.61	224.74	25.87	9.689	
6,100.00	6,075.46	6,089.50	6,055.21	18.09	18.56	80.77	449.45	252.81	256.59	230.27	26.32	9.747	
6,200.00	6,174.71	6,189.31	6,153.93	18.48	18.97	80.67	463.01	258.64	262.58	235.79	26.79	9.803	
6,300.00	6,273.97	6,289.13	6,252.65	18.87	19.38	80.57	476.57	264.46	268.56	241.31	27.25	9.856	
6,400.00	6,373.22	6,388.95	6,351.38	19.26	19.79	80.48	490.13	270.28	274.55	246.83	27.71	9.906	
6,500.00	6,472.47	6,488.77	6,450.10	19.65	20.20	80.39	503.69	276.10	280.53	252.35	28.18	9.955	
6,600.00	6,571.73	6,588.59	6,548.82	20.05	20.61	80.30	517.25	281.92	286.52	257.87	28.65	10.001	
6,700.00	6,670.98	6,688.41	6,647.55	20.45	21.02	80.22	530.81	287.74	292.51	263.39	29.12	10.045	
6,800.00	6,770.23	6,788.23	6,746.27	20.84	21.44	80.14	544.36	293.56	298.50	268.91	29.59	10.087	
6,900.00	6,869.49	6,888.05	6,844.99	21.24	21.85	80.06	557.92	299.38	304.49	274.42	30.06	10.128	
7,000.00	6,968.74	6,987.87	6,943.71	21.64	22.27	79.99	571.48	305.21	310.48	279.94	30.54	10.167	
7,100.00	7,068.00	7,087.69	7,042.44	22.04	22.68	79.92	585.04	311.03	316.47	285.45	31.01	10.204	
7,200.00	7,167.25	7,187.51	7,141.16	22.44	23.10	79.85	598.60	316.85	322.46	290.97	31.49	10.239	
7,300.00	7,266.50	7,287.33	7,239.88	22.84	23.52	79.79	612.16	322.67	328.45	296.48	31.97	10.273	
7,400.00	7,365.76	7,387.15	7,338.61	23.24	23.94	79.73	625.72	328.49	334.44	301.99	32.45	10.306	
7,500.00	7,465.01	7,486.97	7,437.33	23.64	24.36	79.67	639.28	334.31	340.44	307.50	32.93	10.338	
7,600.00	7,564.26	7,586.79	7,536.05	24.05	24.78	79.61	652.84	340.13	346.43	313.01	33.41	10.368	
7,700.00	7,663.52	7,686.61	7,634.78	24.45	25.20	79.55	666.40	345.95	352.42	318.52	33.90	10.397	
7,800.00	7,762.77	7,786.43	7,733.50	24.85	25.62	79.50	679.96	351.78	358.41	324.03	34.38	10.425	
7,900.00	7,862.03	7,886.25	7,832.22	25.26	26.05	79.44	693.52	357.60	364.41	329.54	34.87	10.452	
8,000.00	7,961.28	7,986.07	7,930.94	25.66	26.47	79.39	707.08	363.42	370.40	335.05	35.35	10.478	
8,100.00	8,060.53	8,085.89	8,029.67	26.07	26.89	79.34	720.64	369.24	376.40	340.56	35.84	10.503	
8,200.00	8,159.79	8,185.71	8,128.39	26.48	27.32	79.30	734.20	375.06	382.39	346.06	36.33	10.527	
8,300.00	8,259.04	8,285.53	8,227.11	26.88	27.74	79.25	747.75	380.88	388.38	351.57	36.81	10.550	
8,400.00	8,358.29	8,385.35	8,325.84	27.29	28.17	79.20	761.31	386.70	394.38	357.08	37.30	10.572	
8,500.00	8,457.55	8,485.17	8,424.56	27.70	28.60	79.16	774.87	392.52	400.37	362.58	37.79	10.594	
8,600.00	8,556.80	8,584.99	8,523.28	28.11	29.02	79.12	788.43	398.34	406.37	368.09	38.28	10.614	
8,700.00	8,656.06	8,684.81	8,622.00	28.52	29.45	79.08	801.99	404.17	412.37	373.59	38.78	10.634	
8,800.00	8,755.31	8,784.63	8,720.73	28.92	29.88	79.04	815.55	409.99	418.36	379.09	39.27	10.654	
8,900.00	8,854.56	8,884.45	8,819.45	29.33	30.30	79.00	829.11	415.81	424.36	384.60	39.76	10.673	
9,000.00	8,953.82	8,984.27	8,918.17	29.74	30.73	78.96	842.67	421.63	430.35	390.10	40.25	10.691	
9,100.00	9,053.07	9,084.09	9,016.90	30.15	31.16	78.92	856.23	427.45	436.35	395.60	40.75	10.708	
9,200.00	9,152.32	9,183.91	9,115.62	30.56	31.59	78.89	869.79	433.27	442.35	401.10	41.24	10.725	
9,300.00	9,251.58	9,283.72	9,214.34	30.97	32.02	78.85	883.35	439.09	448.34	406.60	41.74	10.742	
9,400.00	9,350.83	9,386.57	9,316.09	31.39	32.45	78.85	897.07	444.99	454.20	411.98	42.22	10.758	
9,500.00	9,450.09	9,493.62	9,422.34	31.80	32.91	79.10	909.10	450.15	458.75	416.14	42.61	10.765	
9,600.00	9,549.34	9,600.64	9,528.88	32.21	33.37	79.65	918.38	454.13	461.76	418.88	42.88	10.769	
9,700.00	9,648.59	9,707.48	9,635.48	32.62	33.79	80.51	924.90	456.93	463.29	420.30	42.99	10.776	
9,800.00	9,747.85	9,813.95	9,741.87	33.03	34.15	81.67	928.67	458.55	463.45	420.50	42.95	10.790	
9,900.00	9,847.10	9,919.19	9,847.10	33.44	34.36	83.12	929.74	459.01	462.39	419.66	42.73	10.820	
10,000.00	9,946.43	10,018.52	9,946.43	33.84	34.41	84.52	929.74	459.01	461.14	418.67	42.47	10.858	
10,100.00	10,046.02	10,118.11	10,046.02	34.26	34.45	85.62	929.74	459.01	460.36	418.03	42.33	10.876	
10,200.00	10,145.81	10,217.90	10,145.81	34.65	34.48	86.42	929.74	459.01	459.91	417.64	42.27	10.879	
10,300.00	10,245.73	10,317.82	10,245.73	35.00	34.52	86.89	929.74	459.01	459.69	417.39	42.30	10.868	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed - 431H - OH - Plan 1 07-06-21

Offset Site Error: 1.00 usft

Survey Program: 0-MWD+HRGM

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	10,345.72	10,417.81	10,345.72	35.20	34.56	87.04	929.74	459.01	459.62	417.24	42.39	10.843	
10,500.00	10,445.72	10,517.81	10,445.72	35.23	34.60	87.04	929.74	459.01	459.62	417.12	42.50	10.814	
10,600.00	10,545.72	10,617.81	10,545.72	35.27	34.64	87.04	929.74	459.01	459.62	417.00	42.63	10.782	
10,700.00	10,645.72	10,717.81	10,645.72	35.31	34.68	87.04	929.74	459.01	459.62	416.87	42.75	10.751	
10,800.00	10,745.72	10,817.81	10,745.72	35.35	34.72	87.04	929.74	459.01	459.62	416.75	42.88	10.720	
10,900.00	10,845.72	10,917.81	10,845.72	35.40	34.76	87.04	929.74	459.01	459.62	416.62	43.00	10.689	
11,000.00	10,945.72	11,017.81	10,945.72	35.44	34.80	87.04	929.74	459.01	459.62	416.50	43.13	10.658	
11,100.00	11,045.72	11,117.81	11,045.72	35.48	34.84	87.04	929.74	459.01	459.62	416.37	43.25	10.627	
11,200.00	11,145.72	11,217.81	11,145.72	35.52	34.89	87.04	929.74	459.01	459.62	416.25	43.38	10.596	
11,300.00	11,245.72	11,317.81	11,245.72	35.56	34.93	87.04	929.74	459.01	459.62	416.12	43.50	10.565	
11,400.00	11,345.72	11,417.81	11,345.72	35.60	34.97	87.04	929.74	459.01	459.62	415.99	43.63	10.535	
11,500.00	11,445.72	11,517.81	11,445.72	35.64	35.01	87.04	929.74	459.01	459.62	415.87	43.75	10.505	
11,600.00	11,545.72	11,617.81	11,545.72	35.68	35.05	87.04	929.74	459.01	459.62	415.74	43.88	10.474	
11,700.00	11,645.72	11,717.81	11,645.72	35.73	35.09	87.04	929.74	459.01	459.62	415.62	44.01	10.444	
11,800.00	11,745.72	11,817.81	11,745.72	35.77	35.13	87.04	929.74	459.01	459.62	415.49	44.13	10.414	
11,900.00	11,845.72	11,917.81	11,845.72	35.81	35.17	87.04	929.74	459.01	459.62	415.36	44.26	10.384	
12,000.00	11,945.72	12,017.81	11,945.72	35.85	35.22	87.04	929.74	459.01	459.62	415.23	44.39	10.354	
12,010.02	11,955.74	12,027.83	11,955.74	35.86	35.22	-109.36	929.74	459.01	459.62	415.22	44.40	10.352	
12,100.00	12,045.72	12,117.81	12,045.72	35.89	35.26	-109.36	929.74	459.01	459.63	415.11	44.51	10.326	
12,200.00	12,144.92	12,217.01	12,144.92	35.58	35.30	-110.21	929.74	459.01	463.42	418.59	44.83	10.338	
12,300.00	12,239.64	12,311.74	12,239.64	35.19	35.34	-112.27	929.74	459.01	475.44	429.68	45.76	10.389	
12,400.00	12,325.75	12,397.85	12,325.75	34.77	35.38	-114.50	929.74	459.01	498.27	450.83	47.44	10.503	
12,500.00	12,399.49	12,508.55	12,435.61	34.40	35.09	-117.49	918.26	459.11	532.25	483.41	48.84	10.898	
12,600.00	12,457.62	12,646.07	12,563.69	34.09	34.56	-119.80	869.50	459.53	572.56	523.90	48.66	11.767	
12,700.00	12,497.61	12,820.76	12,697.60	33.87	33.92	-120.79	758.84	460.47	614.09	567.48	46.61	13.176	
12,800.00	12,517.71	13,039.13	12,795.34	33.78	33.44	-119.02	565.69	462.13	650.49	606.63	43.86	14.830	
12,900.00	12,519.77	13,205.34	12,808.77	33.79	33.43	-115.95	400.58	463.54	677.26	634.57	42.69	15.865	
13,000.00	12,519.31	13,302.82	12,808.31	33.82	33.49	-114.82	303.11	464.38	697.43	654.84	42.60	16.374	
13,100.00	12,518.85	13,401.61	12,807.84	33.85	33.56	-114.09	204.33	465.23	711.46	668.54	42.92	16.575	
13,200.00	12,518.39	13,501.23	12,807.37	33.88	33.64	-113.71	104.71	466.08	719.19	675.71	43.48	16.543	
13,300.00	12,517.93	13,601.20	12,806.90	33.89	33.73	-113.63	4.75	466.94	720.81	676.84	43.97	16.394	
13,400.00	12,517.47	13,701.20	12,806.43	33.90	33.84	-113.63	-95.25	467.79	720.80	676.32	44.48	16.206	
13,500.00	12,517.01	13,801.20	12,805.96	33.91	33.97	-113.63	-195.24	468.65	720.79	675.64	45.15	15.966	
13,600.00	12,516.55	13,901.20	12,805.48	33.93	34.11	-113.63	-295.24	469.51	720.78	674.81	45.96	15.681	
13,700.00	12,516.10	14,001.20	12,805.01	33.95	34.28	-113.63	-395.23	470.36	720.77	673.84	46.92	15.361	
13,800.00	12,515.64	14,101.20	12,804.54	33.97	34.47	-113.63	-495.23	471.22	720.76	672.74	48.02	15.011	
13,900.00	12,515.18	14,201.20	12,804.07	33.99	34.68	-113.63	-595.23	472.08	720.75	671.51	49.23	14.640	
14,000.00	12,514.72	14,301.20	12,803.60	34.02	34.93	-113.63	-695.22	472.93	720.74	670.17	50.56	14.254	
14,100.00	12,514.26	14,401.20	12,803.13	34.06	35.20	-113.63	-795.22	473.79	720.73	668.72	52.00	13.859	
14,200.00	12,513.81	14,501.20	12,802.65	34.10	35.52	-113.63	-895.21	474.65	720.72	667.18	53.54	13.461	
14,300.00	12,513.35	14,601.20	12,802.18	34.14	35.87	-113.63	-995.21	475.50	720.71	665.54	55.17	13.064	
14,400.00	12,512.89	14,701.20	12,801.71	34.20	36.27	-113.63	-1,095.20	476.36	720.70	663.82	56.87	12.672	
14,500.00	12,512.43	14,801.20	12,801.24	34.28	36.73	-113.62	-1,195.20	477.22	720.69	662.03	58.66	12.286	
14,600.00	12,511.97	14,901.20	12,800.77	34.38	37.23	-113.62	-1,295.19	478.07	720.68	660.17	60.51	11.910	
14,700.00	12,511.51	15,001.20	12,800.29	34.52	37.80	-113.62	-1,395.19	478.93	720.67	658.25	62.42	11.545	
14,800.00	12,511.06	15,101.20	12,799.82	34.73	38.42	-113.62	-1,495.18	479.79	720.66	656.27	64.39	11.191	
14,900.00	12,510.60	15,201.20	12,799.35	35.09	39.11	-113.62	-1,595.18	480.64	720.65	654.23	66.42	10.851	
15,000.00	12,510.14	15,301.20	12,798.88	35.66	39.85	-113.62	-1,695.17	481.50	720.64	652.15	68.48	10.523	
15,100.00	12,509.68	15,401.20	12,798.41	36.46	40.66	-113.62	-1,795.17	482.36	720.63	650.03	70.60	10.208	
15,200.00	12,509.22	15,501.20	12,797.94	37.44	41.52	-113.62	-1,895.16	483.21	720.62	647.87	72.75	9.906	
15,300.00	12,508.77	15,601.20	12,797.46	38.52	42.42	-113.62	-1,995.16	484.07	720.61	645.67	74.94	9.616	
15,400.00	12,508.31	15,701.20	12,796.99	39.67	43.38	-113.62	-2,095.15	484.93	720.60	643.44	77.16	9.339	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed - 431H - OH - Plan 1 07-06-21 — **Offset Site Error:** 1.00 usft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,500.00	12,507.85	15,801.20	12,796.52	40.85	44.38	-113.62	-2,195.15	485.78	720.59	641.18	79.41	9.075	
15,600.00	12,507.39	15,901.20	12,796.05	42.07	45.42	-113.62	-2,295.14	486.64	720.58	638.90	81.68	8.822	
15,700.00	12,506.93	16,001.20	12,795.58	43.31	46.49	-113.61	-2,395.14	487.50	720.57	636.58	83.99	8.580	
15,800.00	12,506.47	16,101.20	12,795.11	44.57	47.59	-113.61	-2,495.13	488.36	720.56	634.25	86.31	8.348	
15,900.00	12,506.02	16,201.20	12,794.63	45.84	48.72	-113.61	-2,595.13	489.21	720.55	631.89	88.66	8.127	
16,000.00	12,505.56	16,301.20	12,794.16	47.12	49.87	-113.61	-2,695.12	490.07	720.54	629.51	91.03	7.915	
16,100.00	12,505.10	16,401.20	12,793.69	48.41	51.05	-113.61	-2,795.12	490.93	720.53	627.12	93.42	7.713	
16,200.00	12,504.64	16,501.20	12,793.22	49.71	52.24	-113.61	-2,895.12	491.78	720.52	624.70	95.82	7.520	
16,300.00	12,504.18	16,601.20	12,792.75	51.02	53.45	-113.61	-2,995.11	492.64	720.51	622.28	98.24	7.334	
16,400.00	12,503.73	16,701.20	12,792.27	52.34	54.68	-113.61	-3,095.11	493.50	720.50	619.83	100.67	7.157	
16,500.00	12,503.27	16,801.20	12,791.80	53.67	55.92	-113.61	-3,195.10	494.35	720.49	617.38	103.12	6.987	
16,600.00	12,502.81	16,901.20	12,791.33	55.00	57.18	-113.61	-3,295.10	495.21	720.48	614.91	105.58	6.824	
16,700.00	12,502.35	17,001.20	12,790.86	56.33	58.44	-113.61	-3,395.09	496.07	720.47	612.43	108.05	6.668	
16,800.00	12,501.89	17,101.20	12,790.39	57.67	59.72	-113.61	-3,495.09	496.92	720.46	609.93	110.53	6.518	
16,900.00	12,501.43	17,201.20	12,789.92	59.02	61.01	-113.60	-3,595.08	497.78	720.45	607.43	113.02	6.374	
17,000.00	12,500.98	17,301.20	12,789.44	60.37	62.30	-113.60	-3,695.08	498.64	720.44	604.92	115.52	6.236	
17,100.00	12,500.52	17,401.20	12,788.97	61.73	63.60	-113.60	-3,795.07	499.49	720.43	602.40	118.03	6.104	
17,200.00	12,500.06	17,501.20	12,788.50	63.08	64.91	-113.60	-3,895.07	500.35	720.42	599.87	120.55	5.976	
17,300.00	12,499.60	17,601.20	12,788.03	64.45	66.23	-113.60	-3,995.06	501.21	720.41	597.33	123.08	5.853	
17,400.00	12,499.14	17,701.20	12,787.56	65.81	67.55	-113.60	-4,095.06	502.06	720.40	594.79	125.62	5.735	
17,500.00	12,498.69	17,801.20	12,787.09	67.18	68.88	-113.60	-4,195.05	502.92	720.40	592.24	128.16	5.621	
17,600.00	12,498.23	17,901.20	12,786.61	68.55	70.22	-113.60	-4,295.05	503.78	720.39	589.68	130.71	5.512	
17,700.00	12,497.77	18,001.20	12,786.14	69.92	71.55	-113.60	-4,395.04	504.63	720.38	587.12	133.26	5.406	
17,800.00	12,497.31	18,101.20	12,785.67	71.30	72.90	-113.60	-4,495.04	505.49	720.37	584.55	135.82	5.304	
17,900.00	12,496.85	18,201.20	12,785.20	72.68	74.24	-113.60	-4,595.03	506.35	720.36	581.97	138.39	5.205	
18,000.00	12,496.39	18,301.20	12,784.73	74.06	75.60	-113.60	-4,695.03	507.20	720.35	579.39	140.96	5.110	
18,100.00	12,495.94	18,401.20	12,784.25	75.44	76.95	-113.59	-4,795.02	508.06	720.34	576.80	143.53	5.019	
18,200.00	12,495.48	18,501.20	12,783.78	76.83	78.31	-113.59	-4,895.02	508.92	720.33	574.21	146.11	4.930	
18,300.00	12,495.02	18,601.20	12,783.31	78.21	79.67	-113.59	-4,995.01	509.77	720.32	571.62	148.70	4.844	
18,400.00	12,494.56	18,701.20	12,782.84	79.60	81.03	-113.59	-5,095.01	510.63	720.31	569.02	151.29	4.761	
18,500.00	12,494.10	18,801.20	12,782.37	80.99	82.40	-113.59	-5,195.01	511.49	720.30	566.42	153.88	4.681	
18,600.00	12,493.65	18,901.20	12,781.90	82.38	83.77	-113.59	-5,295.00	512.35	720.29	563.81	156.48	4.603	
18,700.00	12,493.19	19,001.20	12,781.42	83.78	85.14	-113.59	-5,395.00	513.20	720.28	561.20	159.08	4.528	
18,800.00	12,492.73	19,101.20	12,780.95	85.17	86.52	-113.59	-5,494.99	514.06	720.27	558.59	161.68	4.455	
18,900.00	12,492.27	19,201.20	12,780.48	86.57	87.90	-113.59	-5,594.99	514.92	720.26	555.97	164.29	4.384	
19,000.00	12,491.81	19,301.20	12,780.01	87.96	89.28	-113.59	-5,694.98	515.77	720.25	553.35	166.90	4.315	
19,100.00	12,491.36	19,401.20	12,779.54	89.36	90.66	-113.59	-5,794.98	516.63	720.24	550.73	169.51	4.249	
19,200.00	12,490.90	19,501.20	12,779.07	90.76	92.04	-113.59	-5,894.97	517.49	720.23	548.10	172.13	4.184	
19,300.00	12,490.44	19,601.20	12,778.59	92.16	93.43	-113.58	-5,994.97	518.34	720.22	545.47	174.75	4.121	
19,400.00	12,489.98	19,701.20	12,778.12	93.56	94.81	-113.58	-6,094.96	519.20	720.21	542.84	177.37	4.060	
19,500.00	12,489.52	19,801.20	12,777.65	94.97	96.20	-113.58	-6,194.96	520.06	720.20	540.21	179.99	4.001	
19,600.00	12,489.06	19,901.20	12,777.18	96.37	97.59	-113.58	-6,294.95	520.91	720.19	537.57	182.62	3.944	
19,700.00	12,488.61	20,001.20	12,776.71	97.78	98.98	-113.58	-6,394.95	521.77	720.18	534.93	185.25	3.888	
19,800.00	12,488.15	20,101.20	12,776.23	99.18	100.37	-113.58	-6,494.94	522.63	720.17	532.29	187.88	3.833	
19,900.00	12,487.69	20,201.20	12,775.76	100.59	101.77	-113.58	-6,594.94	523.48	720.16	529.65	190.51	3.780	
20,000.00	12,487.23	20,301.20	12,775.29	101.99	103.16	-113.58	-6,694.93	524.34	720.15	527.00	193.15	3.728	
20,100.00	12,486.77	20,401.20	12,774.82	103.40	104.56	-113.58	-6,794.93	525.20	720.14	524.36	195.79	3.678	
20,200.00	12,486.32	20,501.20	12,774.35	104.81	105.96	-113.58	-6,894.92	526.05	720.13	521.71	198.42	3.629	
20,300.00	12,485.86	20,601.20	12,773.88	106.22	107.36	-113.58	-6,994.92	526.91	720.12	519.06	201.06	3.582	
20,400.00	12,485.40	20,701.20	12,773.40	107.63	108.75	-113.58	-7,094.91	527.77	720.11	516.40	203.71	3.535	
20,486.04	12,485.00	20,787.12	12,773.00	108.84	109.96	-113.57	-7,180.83	528.50	720.10	514.13	205.98	3.496	SF
20,487.00	12,485.00	20,787.12	12,773.00	108.86	109.96	-113.57	-7,180.83	528.50	720.10	514.13	205.97	3.496	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed - 511H - OH - Plan 1 07-06-21 — **Offset Site Error:** 1.00 usft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	1.00	1.00	89.85	0.08	29.83	29.83				
100.00	100.00	100.00	100.00	1.09	1.09	89.85	0.08	29.83	29.83	27.64	2.19	13.642	
200.00	200.00	200.00	200.00	1.61	1.61	89.85	0.08	29.83	29.83	26.61	3.22	9.274	
300.00	300.00	300.00	300.00	2.02	2.02	89.85	0.08	29.83	29.83	25.80	4.03	7.393	
400.00	400.00	400.00	400.00	2.36	2.36	89.85	0.08	29.83	29.83	25.11	4.72	6.322	
500.00	500.00	500.00	500.00	2.66	2.66	89.85	0.08	29.83	29.83	24.51	5.32	5.607	
600.00	600.00	600.00	600.00	2.93	2.93	89.85	0.08	29.83	29.83	23.97	5.86	5.086	
700.00	700.00	700.00	700.00	3.18	3.18	89.85	0.08	29.83	29.83	23.46	6.37	4.685	
800.00	800.00	800.00	800.00	3.42	3.42	89.85	0.08	29.83	29.83	22.99	6.84	4.363	
900.00	900.00	900.00	900.00	3.64	3.64	89.85	0.08	29.83	29.83	22.55	7.28	4.098	
1,000.00	1,000.00	1,000.00	1,000.00	3.85	3.85	89.85	0.08	29.83	29.83	22.13	7.70	3.874	
1,100.00	1,100.00	1,100.00	1,100.00	4.05	4.05	89.85	0.08	29.83	29.83	21.73	8.10	3.681	
1,200.00	1,200.00	1,200.00	1,200.00	4.24	4.24	89.85	0.08	29.83	29.83	21.34	8.49	3.514	
1,300.00	1,300.00	1,300.00	1,300.00	4.43	4.43	89.85	0.08	29.83	29.83	20.97	8.86	3.366	
1,400.00	1,400.00	1,400.00	1,400.00	4.61	4.61	89.85	0.08	29.83	29.83	20.61	9.22	3.235	
1,500.00	1,500.00	1,500.00	1,500.00	4.79	4.79	89.85	0.08	29.83	29.83	20.26	9.57	3.116	
1,600.00	1,600.00	1,600.00	1,600.00	4.96	4.96	89.85	0.08	29.83	29.83	19.92	9.91	3.009	
1,700.00	1,700.00	1,700.00	1,700.00	5.12	5.12	89.85	0.08	29.83	29.83	19.59	10.24	2.912	
1,800.00	1,800.00	1,800.00	1,800.00	5.28	5.28	89.85	0.08	29.83	29.83	19.26	10.57	2.823	
1,900.00	1,900.00	1,900.00	1,900.00	5.44	5.44	89.85	0.08	29.83	29.83	18.95	10.88	2.741	
2,000.00	2,000.00	2,000.00	2,000.00	5.60	5.60	89.85	0.08	29.83	29.83	18.64	11.19	2.665	
2,100.00	2,100.00	2,100.00	2,100.00	5.75	5.75	89.85	0.08	29.83	29.83	18.33	11.50	2.595	
2,200.00	2,200.00	2,200.00	2,200.00	5.90	5.90	89.85	0.08	29.83	29.83	18.04	11.79	2.529	
2,300.00	2,300.00	2,300.00	2,300.00	6.04	6.04	89.85	0.08	29.83	29.83	17.74	12.09	2.468	
2,400.00	2,400.00	2,400.00	2,400.00	6.19	6.19	89.85	0.08	29.83	29.83	17.45	12.38	2.410	
2,500.00	2,500.00	2,500.00	2,500.00	6.33	6.33	89.85	0.08	29.83	29.83	17.17	12.66	2.356 CC	
2,600.00	2,599.99	2,599.96	2,599.94	6.55	6.55	89.85	1.39	29.90	29.90	16.96	12.94	2.311	
2,700.00	2,699.91	2,699.91	2,699.82	6.90	6.90	89.86	5.30	30.11	30.11	16.90	13.21	2.279 ES	
2,800.00	2,799.69	2,799.87	2,799.56	7.25	7.25	89.88	11.83	30.46	30.46	16.98	13.48	2.260	
2,900.00	2,899.27	2,899.82	2,899.09	7.60	7.60	89.91	20.96	30.96	30.96	17.21	13.75	2.252	
3,000.00	2,998.59	2,999.79	2,998.38	7.80	7.80	89.95	32.54	31.58	31.58	17.67	13.91	2.270	
3,100.00	3,097.85	3,099.79	3,097.63	8.00	8.00	90.00	44.71	32.24	32.24	18.08	14.16	2.276	
3,200.00	3,197.10	3,199.78	3,196.89	8.23	8.22	90.05	56.87	32.89	32.89	18.45	14.44	2.278	
3,300.00	3,296.35	3,299.78	3,296.14	8.46	8.46	90.09	69.04	33.55	33.55	18.83	14.72	2.279	
3,400.00	3,395.61	3,399.78	3,395.39	8.72	8.72	90.14	81.20	34.21	34.21	19.19	15.01	2.279	
3,500.00	3,494.86	3,499.78	3,494.65	8.98	8.98	90.18	93.37	34.86	34.86	19.56	15.30	2.278	
3,600.00	3,594.11	3,599.78	3,593.90	9.26	9.26	90.22	105.53	35.52	35.52	19.92	15.59	2.278	
3,700.00	3,693.37	3,699.77	3,693.15	9.55	9.55	90.26	117.70	36.17	36.18	20.28	15.89	2.276	
3,800.00	3,792.62	3,799.77	3,792.41	9.85	9.84	90.30	129.87	36.83	36.83	20.64	16.19	2.275	
3,900.00	3,891.88	3,899.77	3,891.66	10.15	10.15	90.34	142.03	37.49	37.49	21.00	16.49	2.273	
4,000.00	3,991.13	3,999.77	3,990.91	10.47	10.46	90.38	154.20	38.14	38.14	21.35	16.80	2.271	
4,100.00	4,090.38	4,099.77	4,090.16	10.79	10.78	90.41	166.36	38.80	38.80	21.70	17.10	2.269	
4,200.00	4,189.64	4,199.76	4,189.42	11.12	11.11	90.44	178.53	39.46	39.46	22.05	17.41	2.266	
4,300.00	4,288.89	4,299.76	4,288.67	11.45	11.45	90.48	190.69	40.11	40.11	22.39	17.72	2.264	
4,400.00	4,388.14	4,399.76	4,387.92	11.79	11.79	90.51	202.86	40.77	40.77	22.74	18.03	2.261	
4,500.00	4,487.40	4,499.76	4,487.18	12.13	12.13	90.54	215.02	41.42	41.43	23.08	18.35	2.258	
4,600.00	4,586.65	4,599.75	4,586.43	12.48	12.48	90.57	227.19	42.08	42.08	23.42	18.66	2.255	
4,700.00	4,685.91	4,699.75	4,685.68	12.84	12.83	90.60	239.36	42.74	42.74	23.76	18.98	2.252	
4,800.00	4,785.16	4,799.75	4,784.93	13.19	13.19	90.63	251.52	43.39	43.40	24.10	19.30	2.248	
4,900.00	4,884.41	4,899.75	4,884.19	13.55	13.55	90.65	263.69	44.05	44.05	24.43	19.62	2.245	
5,000.00	4,983.67	4,999.75	4,983.44	13.92	13.91	90.68	275.85	44.70	44.71	24.77	19.94	2.242	
5,100.00	5,082.92	5,099.74	5,082.69	14.29	14.28	90.70	288.02	45.36	45.37	25.10	20.27	2.238	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed - 511H - OH - Plan 1 07-06-21 — **Offset Site Error:** 1.00 usft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,182.17	5,199.74	5,181.95	14.66	14.65	90.73	300.18	46.02	46.02	25.43	20.59	2.235	
5,300.00	5,281.43	5,299.74	5,281.20	15.03	15.03	90.75	312.35	46.67	46.68	25.76	20.92	2.231	
5,400.00	5,380.68	5,399.74	5,380.45	15.40	15.40	90.78	324.52	47.33	47.33	26.09	21.25	2.228	
5,500.00	5,479.94	5,499.73	5,479.70	15.78	15.78	90.80	336.68	47.99	47.99	26.42	21.57	2.224	
5,600.00	5,579.19	5,599.73	5,578.96	16.16	16.16	90.82	348.85	48.64	48.65	26.74	21.90	2.221	
5,700.00	5,678.44	5,699.73	5,678.21	16.54	16.54	90.84	361.01	49.30	49.30	27.07	22.23	2.217	
5,800.00	5,777.70	5,799.73	5,777.46	16.93	16.92	90.86	373.18	49.95	49.96	27.39	22.57	2.214	
5,900.00	5,876.95	5,899.73	5,876.72	17.31	17.31	90.88	385.34	50.61	50.62	27.72	22.90	2.210	
6,000.00	5,976.20	5,999.72	5,975.97	17.70	17.69	90.90	397.51	51.27	51.27	28.04	23.23	2.207	
6,100.00	6,075.46	6,099.72	6,075.22	18.09	18.08	90.92	409.68	51.92	51.93	28.36	23.57	2.204	
6,200.00	6,174.71	6,199.72	6,174.47	18.48	18.47	90.94	421.84	52.58	52.59	28.69	23.90	2.200	
6,300.00	6,273.97	6,299.72	6,273.73	18.87	18.86	90.96	434.01	53.23	53.24	29.01	24.24	2.197	
6,400.00	6,373.22	6,399.72	6,372.98	19.26	19.26	90.98	446.17	53.89	53.90	29.33	24.57	2.193	
6,500.00	6,472.47	6,499.71	6,472.23	19.65	19.65	91.00	458.34	54.55	54.56	29.64	24.91	2.190	
6,600.00	6,571.73	6,599.71	6,571.49	20.05	20.04	91.01	470.50	55.20	55.21	29.96	25.25	2.187	
6,700.00	6,670.98	6,699.71	6,670.74	20.45	20.44	91.03	482.67	55.86	55.87	30.28	25.59	2.183	
6,800.00	6,770.23	6,799.71	6,769.99	20.84	20.84	91.05	494.83	56.52	56.53	30.60	25.93	2.180	
6,900.00	6,869.49	6,899.70	6,869.24	21.24	21.24	91.06	507.00	57.17	57.18	30.91	26.27	2.177	
7,000.00	6,968.74	6,999.70	6,968.50	21.64	21.63	91.08	519.17	57.83	57.84	31.23	26.61	2.174	
7,100.00	7,068.00	7,099.70	7,067.75	22.04	22.03	91.09	531.33	58.48	58.50	31.55	26.95	2.170	
7,200.00	7,167.25	7,199.70	7,167.00	22.44	22.43	91.11	543.50	59.14	59.15	31.86	27.29	2.167	
7,300.00	7,266.50	7,299.70	7,266.26	22.84	22.83	91.12	555.66	59.80	59.81	32.17	27.64	2.164	
7,400.00	7,365.76	7,399.69	7,365.51	23.24	23.24	91.14	567.83	60.45	60.47	32.49	27.98	2.161	
7,500.00	7,465.01	7,499.69	7,464.76	23.64	23.64	91.15	579.99	61.11	61.12	32.80	28.32	2.158	
7,600.00	7,564.26	7,599.69	7,564.01	24.05	24.04	91.17	592.16	61.77	61.78	33.11	28.67	2.155	
7,700.00	7,663.52	7,699.69	7,663.27	24.45	24.44	91.18	604.33	62.42	62.44	33.43	29.01	2.152	
7,800.00	7,762.77	7,799.69	7,762.52	24.85	24.85	91.19	616.49	63.08	63.09	33.74	29.36	2.149	
7,900.00	7,862.03	7,899.68	7,861.77	25.26	25.25	91.20	628.66	63.73	63.75	34.05	29.70	2.146	
8,000.00	7,961.28	7,999.68	7,961.03	25.66	25.66	91.22	640.82	64.39	64.41	34.36	30.05	2.144	
8,100.00	8,060.53	8,099.68	8,060.28	26.07	26.06	91.23	652.99	65.05	65.06	34.67	30.39	2.141	
8,200.00	8,159.79	8,199.68	8,159.53	26.48	26.47	91.24	665.15	65.70	65.72	34.98	30.74	2.138	
8,300.00	8,259.04	8,299.67	8,258.78	26.88	26.88	91.25	677.32	66.36	66.38	35.29	31.09	2.135	
8,400.00	8,358.29	8,399.67	8,358.04	27.29	27.29	91.27	689.49	67.01	67.03	35.60	31.43	2.133	
8,500.00	8,457.55	8,499.67	8,457.29	27.70	27.69	91.28	701.65	67.67	67.69	35.91	31.78	2.130	
8,600.00	8,556.80	8,599.67	8,556.54	28.11	28.10	91.29	713.82	68.33	68.35	36.22	32.13	2.127	
8,700.00	8,656.06	8,699.67	8,655.80	28.52	28.51	91.30	725.98	68.98	69.00	36.53	32.48	2.125	
8,800.00	8,755.31	8,799.66	8,755.05	28.92	28.92	91.31	738.15	69.64	69.66	36.83	32.83	2.122	
8,900.00	8,854.56	8,899.66	8,854.30	29.33	29.33	91.32	750.31	70.30	70.32	37.14	33.18	2.120	
9,000.00	8,953.82	8,999.66	8,953.56	29.74	29.74	91.33	762.48	70.95	70.97	37.45	33.52	2.117	
9,100.00	9,053.07	9,099.66	9,052.81	30.15	30.15	91.34	774.65	71.61	71.63	37.76	33.87	2.115	
9,200.00	9,152.32	9,199.66	9,152.06	30.56	30.56	91.35	786.81	72.26	72.29	38.06	34.22	2.112	
9,300.00	9,251.58	9,299.65	9,251.31	30.97	30.97	91.36	798.98	72.92	72.94	38.37	34.57	2.110	
9,400.00	9,350.83	9,399.65	9,350.57	31.39	31.38	91.37	811.14	73.58	73.60	38.68	34.92	2.107	
9,500.00	9,450.09	9,499.65	9,449.82	31.80	31.79	91.38	823.31	74.23	74.26	38.98	35.27	2.105	
9,600.00	9,549.34	9,599.65	9,549.07	32.21	32.20	91.39	835.47	74.89	74.91	39.29	35.63	2.103	
9,700.00	9,648.59	9,699.64	9,648.33	32.62	32.61	91.40	847.64	75.55	75.57	39.59	35.98	2.101	
9,800.00	9,747.85	9,799.64	9,747.58	33.03	33.02	91.41	859.80	76.20	76.23	39.90	36.33	2.098	
9,900.00	9,847.10	9,899.64	9,846.83	33.44	33.44	91.42	871.97	76.86	76.88	40.20	36.68	2.096	
10,000.00	9,946.43	9,999.63	9,946.08	33.84	33.85	90.95	884.14	77.51	77.53	40.52	37.01	2.095	
10,100.00	10,046.02	10,099.58	10,045.28	34.26	34.26	88.66	896.29	78.17	78.19	40.75	37.44	2.088	
10,200.00	10,145.81	10,199.65	10,144.70	34.65	34.66	85.13	907.63	78.78	79.07	40.89	38.18	2.071	
10,300.00	10,245.73	10,299.88	10,244.54	35.00	35.08	81.64	916.41	79.25	80.11	40.89	39.22	2.043	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed - 511H - OH - Plan 1 07-06-21 — **Offset Site Error:** 1.00 usft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	10,345.72	10,400.24	10,344.71	35.20	35.47	78.23	922.59	79.59	81.30	40.81	40.49	2.008	
10,500.00	10,445.72	10,500.77	10,445.18	35.23	35.82	75.83	926.14	79.78	82.28	40.73	41.55	1.980	
10,600.00	10,545.72	10,601.32	10,545.72	35.27	35.98	75.21	927.08	79.83	82.57	40.64	41.93	1.969	
10,700.00	10,645.72	10,701.32	10,645.72	35.31	36.01	75.21	927.08	79.83	82.57	40.51	42.05	1.963	
10,800.00	10,745.72	10,801.32	10,745.72	35.35	36.05	75.21	927.08	79.83	82.57	40.39	42.18	1.957	
10,900.00	10,845.72	10,901.32	10,845.72	35.40	36.09	75.21	927.08	79.83	82.57	40.26	42.31	1.952	
11,000.00	10,945.72	11,001.32	10,945.72	35.44	36.13	75.21	927.08	79.83	82.57	40.13	42.44	1.946	
11,100.00	11,045.72	11,101.32	11,045.72	35.48	36.17	75.21	927.08	79.83	82.57	40.00	42.56	1.940	
11,200.00	11,145.72	11,201.32	11,145.72	35.52	36.21	75.21	927.08	79.83	82.57	39.87	42.69	1.934	
11,300.00	11,245.72	11,301.32	11,245.72	35.56	36.25	75.21	927.08	79.83	82.57	39.75	42.82	1.928	
11,400.00	11,345.72	11,401.32	11,345.72	35.60	36.30	75.21	927.08	79.83	82.57	39.62	42.95	1.922	
11,500.00	11,445.72	11,501.32	11,445.72	35.64	36.34	75.21	927.08	79.83	82.57	39.49	43.08	1.917	
11,600.00	11,545.72	11,601.32	11,545.72	35.68	36.38	75.21	927.08	79.83	82.57	39.36	43.21	1.911	
11,700.00	11,645.72	11,701.32	11,645.72	35.73	36.42	75.21	927.08	79.83	82.57	39.23	43.34	1.905	
11,800.00	11,745.72	11,801.32	11,745.72	35.77	36.46	75.21	927.08	79.83	82.57	39.10	43.47	1.899	
11,900.00	11,845.72	11,901.32	11,845.72	35.81	36.50	75.21	927.08	79.83	82.57	38.97	43.60	1.894	
12,000.00	11,945.72	12,001.32	11,945.72	35.85	36.54	75.21	927.08	79.83	82.57	38.84	43.73	1.888	
12,010.02	11,955.74	12,011.34	11,955.74	35.86	36.55	-121.19	927.08	79.83	82.57	38.83	43.74	1.888	
12,100.00	12,045.72	12,101.32	12,045.72	35.89	36.58	-121.20	927.08	79.83	82.57	38.71	43.86	1.883 SF	
12,200.00	12,144.92	12,200.52	12,144.92	35.58	36.62	-126.68	927.08	79.83	88.83	42.39	46.44	1.913	
12,300.00	12,239.64	12,295.25	12,239.64	35.19	36.66	-137.74	927.08	79.83	110.78	57.74	53.04	2.089	
12,400.00	12,325.75	12,381.36	12,325.75	34.77	36.70	-147.14	927.08	79.83	153.09	93.86	59.23	2.585	
12,500.00	12,399.49	12,455.09	12,399.49	34.40	36.73	-152.36	927.08	79.83	215.04	152.15	62.89	3.419	
12,600.00	12,457.62	12,513.22	12,457.62	34.09	36.76	-153.31	927.08	79.83	292.90	228.11	64.79	4.521	
12,700.00	12,497.61	12,553.21	12,497.61	33.87	36.77	-148.16	927.08	79.83	382.29	316.48	65.81	5.809	
12,800.00	12,517.71	12,573.31	12,517.71	33.78	36.78	-123.28	927.08	79.83	478.72	412.29	66.43	7.206	
12,900.00	12,519.77	12,575.37	12,519.77	33.79	36.78	-88.34	927.08	79.83	577.62	510.71	66.91	8.633	
13,000.00	12,519.31	12,574.91	12,519.31	33.82	36.78	-88.69	927.08	79.83	676.04	608.64	67.39	10.031	
13,100.00	12,518.85	13,779.71	13,192.68	33.85	34.60	-162.74	195.74	25.22	705.85	646.61	59.24	11.916	
13,200.00	12,518.39	13,879.33	13,191.77	33.88	34.61	-162.02	96.13	26.08	707.98	648.37	59.61	11.877	
13,300.00	12,517.93	13,979.30	13,190.85	33.89	34.61	-161.87	-3.83	26.93	708.09	647.98	60.11	11.780	
13,400.00	12,517.47	14,079.30	13,189.94	33.90	34.62	-161.86	-103.82	27.79	707.65	646.98	60.68	11.663	
13,500.00	12,517.01	14,179.30	13,189.02	33.91	34.63	-161.85	-203.81	28.65	707.22	645.93	61.29	11.539	
13,600.00	12,516.55	14,279.30	13,188.10	33.93	34.65	-161.84	-303.80	29.51	706.78	644.84	61.94	11.410	
13,700.00	12,516.10	14,379.30	13,187.19	33.95	34.66	-161.83	-403.79	30.36	706.34	643.70	62.64	11.276	
13,800.00	12,515.64	14,479.30	13,186.27	33.97	34.68	-161.82	-503.79	31.22	705.90	642.53	63.38	11.138	
13,900.00	12,515.18	14,579.30	13,185.35	33.99	34.69	-161.81	-603.78	32.08	705.47	641.32	64.15	10.997	
14,000.00	12,514.72	14,679.30	13,184.44	34.02	34.71	-161.80	-703.77	32.94	705.03	640.07	64.96	10.853	
14,100.00	12,514.26	14,779.30	13,183.52	34.06	34.74	-161.78	-803.76	33.79	704.59	638.78	65.81	10.706	
14,200.00	12,513.81	14,879.29	13,182.60	34.10	34.76	-161.77	-903.75	34.65	704.16	637.46	66.70	10.558	
14,300.00	12,513.35	14,979.29	13,181.68	34.14	34.79	-161.76	-1,003.74	35.51	703.72	636.11	67.61	10.408	
14,400.00	12,512.89	15,079.29	13,180.77	34.20	34.82	-161.75	-1,103.73	36.37	703.28	634.72	68.56	10.258	
14,500.00	12,512.43	15,179.29	13,179.85	34.28	34.85	-161.74	-1,203.72	37.22	702.84	633.30	69.54	10.107	
14,600.00	12,511.97	15,279.29	13,178.93	34.38	34.89	-161.73	-1,303.71	38.08	702.41	631.86	70.55	9.956	
14,700.00	12,511.51	15,379.29	13,178.02	34.52	34.94	-161.72	-1,403.71	38.94	701.97	630.38	71.59	9.806	
14,800.00	12,511.06	15,479.29	13,177.10	34.73	35.00	-161.70	-1,503.70	39.80	701.53	628.88	72.65	9.656	
14,900.00	12,510.60	15,579.29	13,176.18	35.09	35.09	-161.69	-1,603.69	40.66	701.10	627.35	73.74	9.507	
15,000.00	12,510.14	15,679.29	13,175.26	35.66	35.31	-161.68	-1,703.68	41.51	700.66	625.80	74.86	9.360	
15,100.00	12,509.68	15,779.29	13,174.35	36.46	35.95	-161.67	-1,803.67	42.37	700.22	624.23	76.00	9.214	
15,200.00	12,509.22	15,879.28	13,173.43	37.44	36.99	-161.66	-1,903.66	43.23	699.79	622.63	77.16	9.070	
15,300.00	12,508.77	15,979.28	13,172.51	38.52	38.17	-161.65	-2,003.65	44.09	699.35	621.01	78.34	8.927	
15,400.00	12,508.31	16,079.28	13,171.60	39.67	39.39	-161.63	-2,103.64	44.94	698.91	619.37	79.55	8.786	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed - 511H - OH - Plan 1 07-06-21 — **Offset Site Error:** 1.00 usft

Survey Program: 0-MWD+HRGM — **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,500.00	12,507.85	16,179.28	13,170.68	40.85	40.64	-161.62	-2,203.63	45.80	698.48	617.71	80.77	8.648	
15,600.00	12,507.39	16,279.28	13,169.76	42.07	41.91	-161.61	-2,303.62	46.66	698.04	616.03	82.01	8.511	
15,700.00	12,506.93	16,379.28	13,168.85	43.31	43.19	-161.60	-2,403.62	47.52	697.60	614.33	83.27	8.377	
15,800.00	12,506.47	16,479.28	13,167.93	44.57	44.48	-161.59	-2,503.61	48.37	697.17	612.61	84.55	8.245	
15,900.00	12,506.02	16,579.28	13,167.01	45.84	45.78	-161.58	-2,603.60	49.23	696.73	610.88	85.85	8.116	
16,000.00	12,505.56	16,679.28	13,166.09	47.12	47.08	-161.57	-2,703.59	50.09	696.29	609.13	87.16	7.989	
16,100.00	12,505.10	16,779.27	13,165.18	48.41	48.40	-161.55	-2,803.58	50.95	695.86	607.37	88.49	7.864	
16,200.00	12,504.64	16,879.27	13,164.26	49.71	49.72	-161.54	-2,903.57	51.80	695.42	605.59	89.83	7.742	
16,300.00	12,504.18	16,979.27	13,163.34	51.02	51.05	-161.53	-3,003.56	52.66	694.98	603.80	91.18	7.622	
16,400.00	12,503.73	17,079.27	13,162.43	52.34	52.39	-161.52	-3,103.55	53.52	694.55	602.00	92.55	7.504	
16,500.00	12,503.27	17,179.27	13,161.51	53.67	53.73	-161.51	-3,203.54	54.38	694.11	600.18	93.93	7.389	
16,600.00	12,502.81	17,279.27	13,160.59	55.00	55.07	-161.50	-3,303.54	55.23	693.67	598.35	95.33	7.277	
16,700.00	12,502.35	17,379.27	13,159.67	56.33	56.42	-161.48	-3,403.53	56.09	693.24	596.50	96.73	7.166	
16,800.00	12,501.89	17,479.27	13,158.76	57.67	57.78	-161.47	-3,503.52	56.95	692.80	594.65	98.15	7.059	
16,900.00	12,501.43	17,579.27	13,157.84	59.02	59.14	-161.46	-3,603.51	57.81	692.37	592.79	99.58	6.953	
17,000.00	12,500.98	17,679.27	13,156.92	60.37	60.50	-161.45	-3,703.50	58.67	691.93	590.91	101.02	6.850	
17,100.00	12,500.52	17,779.26	13,156.01	61.73	61.86	-161.44	-3,803.49	59.52	691.49	589.03	102.46	6.749	
17,200.00	12,500.06	17,879.26	13,155.09	63.08	63.23	-161.42	-3,903.48	60.38	691.06	587.13	103.92	6.650	
17,300.00	12,499.60	17,979.26	13,154.17	64.45	64.60	-161.41	-4,003.47	61.24	690.62	585.23	105.39	6.553	
17,400.00	12,499.14	18,079.26	13,153.26	65.81	65.98	-161.40	-4,103.46	62.10	690.18	583.32	106.87	6.458	
17,500.00	12,498.69	18,179.26	13,152.34	67.18	67.35	-161.39	-4,203.45	62.95	689.75	581.40	108.35	6.366	
17,600.00	12,498.23	18,279.26	13,151.42	68.55	68.73	-161.38	-4,303.45	63.81	689.31	579.47	109.84	6.275	
17,700.00	12,497.77	18,379.26	13,150.50	69.92	70.11	-161.37	-4,403.44	64.67	688.88	577.53	111.34	6.187	
17,800.00	12,497.31	18,479.26	13,149.59	71.30	71.50	-161.35	-4,503.43	65.53	688.44	575.59	112.85	6.100	
17,900.00	12,496.85	18,579.26	13,148.67	72.68	72.88	-161.34	-4,603.42	66.38	688.00	573.64	114.37	6.016	
18,000.00	12,496.39	18,679.25	13,147.75	74.06	74.27	-161.33	-4,703.41	67.24	687.57	571.68	115.89	5.933	
18,100.00	12,495.94	18,779.25	13,146.84	75.44	75.66	-161.32	-4,803.40	68.10	687.13	569.71	117.42	5.852	
18,200.00	12,495.48	18,879.25	13,145.92	76.83	77.05	-161.31	-4,903.39	68.96	686.70	567.74	118.96	5.773	
18,300.00	12,495.02	18,979.25	13,145.00	78.21	78.44	-161.29	-5,003.38	69.81	686.26	565.76	120.50	5.695	
18,400.00	12,494.56	19,079.25	13,144.08	79.60	79.83	-161.28	-5,103.37	70.67	685.82	563.78	122.05	5.619	
18,500.00	12,494.10	19,179.25	13,143.17	80.99	81.23	-161.27	-5,203.37	71.53	685.39	561.79	123.60	5.545	
18,600.00	12,493.65	19,279.25	13,142.25	82.38	82.63	-161.26	-5,303.36	72.39	684.95	559.79	125.16	5.473	
18,700.00	12,493.19	19,379.25	13,141.33	83.78	84.02	-161.25	-5,403.35	73.24	684.52	557.79	126.73	5.401	
18,800.00	12,492.73	19,479.25	13,140.42	85.17	85.42	-161.23	-5,503.34	74.10	684.08	555.78	128.30	5.332	
18,900.00	12,492.27	19,579.25	13,139.50	86.57	86.82	-161.22	-5,603.33	74.96	683.64	553.77	129.88	5.264	
19,000.00	12,491.81	19,679.24	13,138.58	87.96	88.22	-161.21	-5,703.32	75.82	683.21	551.75	131.46	5.197	
19,100.00	12,491.36	19,779.24	13,137.67	89.36	89.63	-161.20	-5,803.31	76.68	682.77	549.73	133.04	5.132	
19,200.00	12,490.90	19,879.24	13,136.75	90.76	91.03	-161.19	-5,903.30	77.53	682.34	547.70	134.63	5.068	
19,300.00	12,490.44	19,979.24	13,135.83	92.16	92.44	-161.17	-6,003.29	78.39	681.90	545.67	136.23	5.006	
19,400.00	12,489.98	20,079.24	13,134.91	93.56	93.84	-161.16	-6,103.29	79.25	681.47	543.64	137.83	4.944	
19,500.00	12,489.52	20,179.24	13,134.00	94.97	95.25	-161.15	-6,203.28	80.11	681.03	541.60	139.43	4.884	
19,600.00	12,489.06	20,279.24	13,133.08	96.37	96.65	-161.14	-6,303.27	80.96	680.60	539.56	141.04	4.826	
19,700.00	12,488.61	20,379.24	13,132.16	97.78	98.06	-161.12	-6,403.26	81.82	680.16	537.51	142.65	4.768	
19,800.00	12,488.15	20,479.24	13,131.25	99.18	99.47	-161.11	-6,503.25	82.68	679.72	535.46	144.27	4.712	
19,900.00	12,487.69	20,579.24	13,130.33	100.59	100.88	-161.10	-6,603.24	83.54	679.29	533.40	145.89	4.656	
20,000.00	12,487.23	20,679.23	13,129.41	101.99	102.29	-161.09	-6,703.23	84.39	678.85	531.34	147.51	4.602	
20,100.00	12,486.77	20,779.23	13,128.50	103.40	103.70	-161.08	-6,803.22	85.25	678.42	529.28	149.14	4.549	
20,200.00	12,486.32	20,879.23	13,127.58	104.81	105.11	-161.06	-6,903.21	86.11	677.98	527.22	150.77	4.497	
20,300.00	12,485.86	20,979.23	13,126.66	106.22	106.53	-161.05	-7,003.20	86.97	677.55	525.15	152.40	4.446	
20,400.00	12,485.40	21,079.23	13,125.74	107.63	107.94	-161.04	-7,103.20	87.82	677.11	523.07	154.04	4.396	
20,482.79	12,485.02	21,160.32	13,125.00	108.80	109.08	-161.03	-7,184.28	88.52	676.75	521.52	155.24	4.360	
20,487.00	12,485.00	21,160.32	13,125.00	108.86	109.08	-161.03	-7,184.28	88.52	676.76	521.85	154.91	4.369	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

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PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 Fed Com 26-35-19 WB 5H - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 178-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.50	1.41	1.41	43.83	903.83	867.60	1,252.86				
100.00	100.00	103.68	104.18	1.48	1.42	43.84	903.58	867.62	1,252.69	1,249.79	2.90	432.057	
200.00	200.00	210.30	210.80	1.89	1.44	43.86	902.75	867.67	1,252.16	1,248.83	3.33	376.153	
300.00	300.00	311.23	311.72	2.25	1.49	43.90	901.41	867.58	1,251.14	1,247.41	3.74	334.831	
400.00	400.00	408.33	408.81	2.56	1.56	43.94	900.30	867.57	1,250.32	1,246.21	4.12	303.615	
500.00	500.00	507.45	507.92	2.84	1.65	43.98	899.22	867.76	1,249.67	1,245.17	4.49	278.085	
600.00	600.00	607.15	607.62	3.10	1.77	44.02	898.16	867.97	1,249.05	1,244.18	4.87	256.539	
700.00	700.00	707.06	707.53	3.34	1.91	44.06	897.13	868.18	1,248.45	1,243.21	5.24	238.120	
800.00	800.00	809.08	809.53	3.56	2.06	44.10	895.95	868.38	1,247.76	1,242.14	5.62	222.196	
900.00	900.00	909.65	910.10	3.77	2.21	44.14	894.80	868.39	1,246.95	1,240.97	5.98	208.360	
1,000.00	1,000.00	1,010.11	1,010.55	3.98	2.38	44.18	893.67	868.43	1,246.16	1,239.81	6.35	196.134	
1,100.00	1,100.00	1,110.97	1,111.41	4.17	2.55	44.21	892.55	868.25	1,245.24	1,238.52	6.72	185.265	
1,200.00	1,200.00	1,212.35	1,212.78	4.36	2.73	44.24	891.43	868.01	1,244.28	1,237.20	7.09	175.538	
1,300.00	1,300.00	1,312.46	1,312.89	4.54	2.91	44.25	890.44	867.50	1,243.23	1,235.78	7.45	166.851	
1,400.00	1,400.00	1,413.71	1,414.12	4.72	3.10	44.27	889.35	867.07	1,242.16	1,234.35	7.81	158.968	
1,500.00	1,500.00	1,516.22	1,516.63	4.89	3.29	44.29	888.16	866.49	1,240.93	1,232.75	8.18	151.763	
1,600.00	1,600.00	1,616.02	1,616.42	5.06	3.49	44.32	886.83	865.93	1,239.59	1,231.05	8.53	145.242	
1,700.00	1,700.00	1,714.00	1,714.39	5.22	3.68	44.35	885.48	865.61	1,238.37	1,229.48	8.89	139.328	
1,800.00	1,800.00	1,809.00	1,809.38	5.38	3.86	44.39	884.26	865.55	1,237.41	1,228.18	9.23	134.010	
1,900.00	1,900.00	1,903.00	1,903.38	5.53	4.05	44.42	883.40	865.70	1,236.87	1,227.30	9.57	129.183	
2,000.00	2,000.00	2,002.29	2,002.66	5.69	4.25	44.46	882.61	866.16	1,236.62	1,226.70	9.93	124.593	
2,097.75	2,097.75	2,097.38	2,097.75	5.83	4.44	44.52	881.72	866.92	1,236.52	1,226.25	10.27	120.458	
2,100.00	2,100.00	2,099.56	2,099.93	5.83	4.45	44.52	881.70	866.94	1,236.52	1,226.24	10.27	120.366	
2,200.00	2,200.00	2,197.05	2,197.40	5.98	4.64	44.58	880.87	867.96	1,236.65	1,226.03	10.62	116.452	
2,300.00	2,300.00	2,304.17	2,304.51	6.13	4.86	44.65	879.76	869.13	1,236.69	1,225.71	10.98	112.626	
2,400.00	2,400.00	2,429.86	2,430.16	6.27	5.12	44.78	876.60	869.93	1,235.37	1,223.99	11.38	108.603	
2,500.00	2,500.00	2,559.07	2,559.18	6.41	5.39	45.02	869.72	870.19	1,231.73	1,219.95	11.78	104.583	
2,600.00	2,599.99	2,691.38	2,690.92	6.63	5.69	45.58	857.64	870.99	1,224.83	1,212.60	12.23	100.140	
2,700.00	2,699.91	2,857.89	2,855.73	6.97	6.10	46.74	834.07	870.89	1,212.31	1,199.51	12.80	94.720	
2,800.00	2,799.69	2,969.22	2,965.34	7.32	6.39	47.80	814.76	868.62	1,194.45	1,181.17	13.28	89.943	
2,900.00	2,899.27	3,063.28	3,057.90	7.67	6.65	48.88	798.13	866.48	1,174.73	1,160.99	13.74	85.506	
3,000.00	2,998.59	3,164.08	3,157.07	7.87	6.94	50.10	780.24	864.31	1,153.78	1,139.67	14.12	81.734	
3,100.00	3,097.85	3,274.66	3,265.73	8.06	7.26	51.30	760.02	860.75	1,131.68	1,117.16	14.52	77.936	
3,200.00	3,197.10	3,369.90	3,359.25	8.29	7.55	52.38	742.34	856.98	1,109.28	1,094.35	14.93	74.300	
3,300.00	3,296.35	3,457.41	3,445.18	8.52	7.82	53.41	726.12	854.06	1,087.76	1,072.42	15.34	70.900	
3,400.00	3,395.61	3,548.19	3,534.39	8.78	8.10	54.54	709.44	851.72	1,067.35	1,051.58	15.77	67.701	
3,500.00	3,494.86	3,644.16	3,628.72	9.04	8.39	55.77	691.99	849.16	1,047.46	1,031.27	16.20	64.671	
3,600.00	3,594.11	3,740.98	3,723.90	9.32	8.69	57.05	674.47	846.47	1,028.04	1,011.41	16.63	61.804	
3,700.00	3,693.37	3,835.79	3,817.14	9.60	8.99	58.32	657.49	843.51	1,008.96	991.88	17.07	59.091	
3,800.00	3,792.62	3,925.80	3,905.92	9.90	9.26	59.47	643.12	839.97	990.75	973.24	17.50	56.602	
3,900.00	3,891.88	4,012.62	3,991.86	10.20	9.51	60.47	631.54	835.88	973.68	955.77	17.92	54.347	
4,000.00	3,991.13	4,095.22	4,073.93	10.51	9.73	61.31	623.13	831.67	958.21	939.90	18.31	52.330	
4,100.00	4,090.38	4,169.00	4,147.42	10.83	9.91	61.97	617.80	828.12	944.75	926.07	18.68	50.571	
4,200.00	4,189.64	4,254.61	4,232.88	11.16	10.09	62.63	614.26	824.46	933.37	914.32	19.05	49.004	
4,300.00	4,288.89	4,332.78	4,310.99	11.49	10.24	63.11	613.56	821.72	924.24	904.85	19.39	47.676	
4,400.00	4,388.14	4,418.89	4,397.06	11.83	10.39	63.56	615.00	819.51	917.18	897.46	19.73	46.497	
4,500.00	4,487.40	4,512.20	4,490.33	12.17	10.55	64.03	617.12	817.87	911.18	891.11	20.07	45.391	
4,600.00	4,586.65	4,599.60	4,577.72	12.52	10.69	64.52	618.85	817.17	906.03	885.62	20.41	44.384	
4,700.00	4,685.91	4,686.74	4,664.82	12.87	10.84	65.04	620.87	817.95	902.59	881.84	20.75	43.495	
4,800.00	4,785.16	4,781.55	4,759.59	13.23	11.00	65.64	622.86	819.84	900.18	879.07	21.10	42.653	
4,900.00	4,884.41	4,876.56	4,854.56	13.59	11.17	66.30	624.21	822.33	898.17	876.71	21.46	41.854	
5,000.00	4,983.67	4,966.73	4,944.67	13.95	11.33	66.99	624.92	825.76	897.14	875.33	21.80	41.146	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

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Offset Site Error: 1.00 usft

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Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,032.01	5,015.44	4,995.19	4,973.09	14.07	11.39	67.22	625.03	827.11	897.07	875.16	21.91	40.938	
5,100.00	5,082.92	5,066.65	5,044.46	14.32	11.52	67.82	625.08	830.75	897.12	874.95	22.17	40.467	
5,200.00	5,182.17	5,182.50	5,160.22	14.69	11.73	68.79	624.67	835.11	895.98	873.42	22.56	39.710	
5,300.00	5,281.43	5,284.13	5,261.82	15.06	11.92	69.60	624.38	837.56	893.78	870.86	22.92	38.993	
5,400.00	5,380.68	5,381.94	5,359.60	15.44	12.11	70.38	624.32	840.04	891.95	868.68	23.27	38.329	
5,500.00	5,479.94	5,484.49	5,462.12	15.81	12.30	71.19	624.26	842.43	890.11	866.49	23.63	37.676	
5,600.00	5,579.19	5,586.09	5,563.69	16.19	12.48	71.89	625.73	843.94	888.11	864.14	23.97	37.052	
5,700.00	5,678.44	5,685.26	5,662.81	16.57	12.65	72.46	628.92	844.73	886.10	861.80	24.30	36.459	
5,800.00	5,777.70	5,783.00	5,760.49	16.96	12.82	73.00	632.30	845.60	884.35	859.71	24.64	35.896	
5,900.00	5,876.95	5,886.75	5,864.17	17.34	13.00	73.59	635.79	846.54	882.67	857.69	24.98	35.338	
6,000.00	5,976.20	6,004.71	5,982.07	17.73	13.20	74.24	639.56	846.01	879.75	854.41	25.34	34.723	
6,100.00	6,075.46	6,109.94	6,087.22	18.12	13.39	74.80	642.88	843.63	875.11	849.44	25.68	34.084	
6,200.00	6,174.71	6,208.25	6,185.45	18.50	13.56	75.31	646.27	841.46	870.71	844.70	26.01	33.482	
6,300.00	6,273.97	6,306.46	6,283.59	18.90	13.74	75.84	649.48	839.40	866.44	840.10	26.34	32.900	
6,400.00	6,373.22	6,403.33	6,380.41	19.29	13.92	76.43	651.72	837.86	862.51	835.84	26.67	32.345	
6,500.00	6,472.47	6,501.47	6,478.54	19.68	14.11	77.11	653.02	836.80	858.95	831.95	27.00	31.815	
6,600.00	6,571.73	6,601.53	6,578.59	20.07	14.31	77.82	654.10	835.80	855.54	828.20	27.33	31.300	
6,700.00	6,670.98	6,697.54	6,674.60	20.47	14.49	78.53	654.92	834.98	852.36	824.70	27.66	30.815	
6,800.00	6,770.23	6,795.35	6,772.40	20.87	14.69	79.24	655.93	834.47	849.67	821.68	27.99	30.354	
6,900.00	6,869.49	6,893.59	6,870.63	21.26	14.88	79.98	656.80	834.11	847.26	818.94	28.32	29.913	
7,000.00	6,968.74	6,995.38	6,972.42	21.66	15.08	80.75	657.52	833.70	844.93	816.27	28.66	29.480	
7,100.00	7,068.00	7,096.10	7,073.14	22.06	15.28	81.52	658.19	833.04	842.49	813.49	28.99	29.057	
7,200.00	7,167.25	7,192.23	7,169.26	22.46	15.47	82.27	658.74	832.59	840.36	811.04	29.32	28.658	
7,300.00	7,266.50	7,294.69	7,271.72	22.86	15.67	83.08	659.24	832.04	838.33	808.67	29.66	28.260	
7,400.00	7,365.76	7,393.87	7,370.89	23.26	15.87	83.88	659.50	831.39	836.31	806.31	30.00	27.874	
7,500.00	7,465.01	7,492.63	7,469.66	23.66	16.07	84.68	659.79	830.77	834.49	804.15	30.34	27.502	
7,600.00	7,564.26	7,592.28	7,569.30	24.07	16.27	85.47	660.28	830.20	832.90	802.21	30.69	27.142	
7,700.00	7,663.52	7,694.10	7,671.12	24.47	16.47	86.32	660.36	829.40	831.24	800.20	31.04	26.780	
7,800.00	7,762.77	7,795.73	7,772.74	24.87	16.67	87.17	660.37	828.34	829.49	798.09	31.39	26.421	
7,900.00	7,862.03	7,894.37	7,871.38	25.28	16.87	87.97	660.71	827.07	827.69	795.94	31.75	26.069	
8,000.00	7,961.28	7,990.93	7,967.93	25.68	17.07	88.78	660.77	826.17	826.40	794.29	32.11	25.737	
8,100.00	8,060.53	8,094.22	8,071.21	26.09	17.28	89.66	660.63	825.23	825.32	792.84	32.49	25.403	
8,200.00	8,159.79	8,196.33	8,173.31	26.50	17.49	90.55	660.26	823.63	823.77	790.90	32.87	25.060	
8,300.00	8,259.04	8,294.42	8,271.39	26.90	17.69	91.42	659.81	822.06	822.37	789.12	33.26	24.729	
8,400.00	8,358.29	8,392.31	8,369.26	27.31	17.89	92.30	659.17	820.66	821.35	787.70	33.65	24.408	
8,500.00	8,457.55	8,493.14	8,470.09	27.72	18.10	93.22	658.38	819.20	820.53	786.47	34.06	24.091	
8,600.00	8,556.80	8,588.06	8,564.99	28.12	18.30	94.08	657.59	817.91	819.99	785.52	34.46	23.793	
8,700.00	8,656.06	8,687.93	8,664.85	28.53	18.51	94.99	656.83	816.85	819.96	785.07	34.89	23.502	
8,710.48	8,666.45	8,698.43	8,675.35	28.58	18.53	95.08	656.76	816.73	819.96	785.02	34.93	23.472	
8,714.02	8,669.97	8,701.97	8,678.89	28.59	18.54	95.12	656.74	816.69	819.96	785.01	34.95	23.462	
8,800.00	8,755.31	8,787.77	8,764.68	28.94	18.71	95.89	656.14	815.67	820.00	784.68	35.32	23.215	
8,900.00	8,854.56	8,883.21	8,860.12	29.35	18.91	96.75	655.46	814.73	820.44	784.69	35.76	22.945	
9,000.00	8,953.82	8,985.09	8,961.99	29.76	19.12	97.65	655.03	813.81	821.14	784.92	36.21	22.674	
9,100.00	9,053.07	9,085.58	9,062.47	30.17	19.32	98.52	654.90	812.69	821.77	785.10	36.67	22.407	
9,200.00	9,152.32	9,183.69	9,160.57	30.58	19.52	99.37	654.61	811.56	822.58	785.44	37.14	22.146	
9,300.00	9,251.58	9,278.02	9,254.90	30.99	19.72	100.17	654.64	810.78	823.84	786.24	37.61	21.906	
9,400.00	9,350.83	9,365.22	9,342.10	31.40	19.89	100.83	655.56	811.34	826.52	788.47	38.05	21.724	
9,500.00	9,450.09	9,468.79	9,445.62	31.81	20.09	101.49	658.19	812.75	829.74	791.22	38.52	21.542	
9,600.00	9,549.34	9,572.83	9,549.60	32.22	20.29	102.11	661.54	813.61	832.38	793.39	38.99	21.349	
9,700.00	9,648.59	9,682.65	9,659.36	32.64	20.50	102.77	664.96	814.12	834.85	795.36	39.49	21.142	
9,800.00	9,747.85	9,796.83	9,773.49	33.05	20.73	103.59	667.22	811.66	835.03	795.00	40.03	20.860	
9,900.00	9,847.10	9,901.91	9,878.51	33.46	20.95	104.49	667.32	808.02	834.60	794.01	40.59	20.563	

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PHOENIX TECHNOLOGY SERVICES

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10,000.00	9,946.43	10,011.15	9,987.64	33.86	21.17	105.39	667.46	803.17	833.25	792.11	41.14	20.253	
10,100.00	10,046.02	10,117.28	10,093.61	34.27	21.39	106.09	667.58	797.29	830.33	788.65	41.67	19.924	
10,200.00	10,145.81	10,220.10	10,196.23	34.67	21.61	106.60	667.47	790.95	826.23	784.07	42.16	19.597	
10,300.00	10,245.73	10,324.38	10,300.28	35.02	21.83	106.92	667.54	784.00	820.92	778.33	42.60	19.272	
10,400.00	10,345.72	10,426.67	10,402.32	35.21	22.04	107.01	668.24	776.95	814.48	771.54	42.94	18.968	
10,500.00	10,445.72	10,526.92	10,502.33	35.25	22.25	107.05	669.87	770.05	807.43	764.22	43.21	18.686	
10,600.00	10,545.72	10,623.23	10,598.40	35.29	22.45	107.04	671.96	763.81	800.60	757.13	43.47	18.419	
10,700.00	10,645.72	10,712.24	10,687.25	35.33	22.63	106.99	674.13	758.75	794.48	750.79	43.69	18.184	
10,800.00	10,745.72	10,794.59	10,769.52	35.37	22.79	106.89	676.46	755.96	790.40	746.52	43.88	18.013	
10,900.00	10,845.72	10,879.98	10,854.85	35.41	22.96	106.71	679.28	754.98	788.34	744.29	44.06	17.894	
10,974.48	10,920.20	10,945.37	10,920.20	35.44	23.09	106.57	681.32	755.20	787.91	743.72	44.19	17.830	CC, ES
11,000.00	10,945.72	10,967.98	10,942.80	35.45	23.14	106.52	681.94	755.43	787.96	743.72	44.24	17.812	
11,100.00	11,045.72	11,054.00	11,028.80	35.49	23.31	106.38	683.57	756.79	788.98	744.56	44.42	17.761	
11,200.00	11,145.72	11,149.06	11,123.82	35.53	23.50	106.27	684.48	759.22	791.18	746.54	44.65	17.720	
11,300.00	11,245.72	11,247.99	11,222.71	35.57	23.70	106.17	684.93	762.30	794.04	749.14	44.89	17.687	
11,400.00	11,345.72	11,350.55	11,325.22	35.62	23.90	106.09	685.30	765.13	796.59	751.43	45.16	17.641	
11,500.00	11,445.72	11,434.85	11,409.47	35.66	24.08	106.10	684.30	767.98	800.16	754.79	45.37	17.635	
11,600.00	11,545.72	11,531.87	11,506.37	35.70	24.28	106.18	681.95	772.08	804.90	759.24	45.65	17.631	
11,700.00	11,645.72	11,636.70	11,611.08	35.74	24.50	106.31	678.93	776.24	809.51	763.54	45.97	17.609	
11,800.00	11,745.72	11,742.76	11,717.03	35.78	24.72	106.48	675.49	779.44	813.31	767.01	46.30	17.565	
11,900.00	11,845.72	11,841.65	11,815.84	35.82	24.93	106.61	672.66	782.25	816.86	770.25	46.60	17.529	
12,000.00	11,945.72	11,941.66	11,915.77	35.87	25.14	106.67	670.71	785.62	820.65	773.76	46.89	17.503	
12,100.00	12,045.72	12,044.52	12,018.58	35.90	25.35	-89.67	669.10	788.87	824.12	776.94	47.17	17.470	SF
12,200.00	12,144.92	12,154.23	12,128.24	35.60	25.58	-90.15	667.63	791.57	826.86	779.66	47.19	17.521	
12,300.00	12,239.64	12,245.27	12,219.26	35.20	25.76	-91.76	666.98	793.06	829.37	782.56	46.81	17.719	
12,400.00	12,325.75	12,321.91	12,295.86	34.79	25.92	-93.61	665.68	795.36	835.94	789.76	46.18	18.103	
12,500.00	12,399.49	12,399.41	12,373.29	34.41	26.09	-95.63	663.69	797.69	848.00	802.46	45.53	18.623	
12,600.00	12,457.62	12,460.78	12,434.61	34.10	26.22	-96.49	661.74	799.35	867.92	822.88	45.04	19.268	
12,700.00	12,497.61	12,503.50	12,477.30	33.89	26.31	-95.36	660.46	800.42	897.70	852.81	44.89	19.999	
12,800.00	12,517.71	12,521.77	12,495.56	33.79	26.34	-91.31	660.44	800.84	937.82	892.67	45.15	20.772	
12,900.00	12,519.77	12,522.19	12,495.98	33.80	26.34	-88.26	660.44	800.85	986.02	940.24	45.78	21.539	
13,000.00	12,519.31	12,520.77	12,494.56	33.84	26.34	-88.25	660.43	800.82	1,036.52	989.65	46.88	22.112	
13,100.00	12,518.85	12,519.67	12,493.46	33.87	26.34	-88.27	660.42	800.79	1,088.15	1,039.92	48.23	22.563	
13,200.00	12,518.39	12,518.83	12,492.62	33.89	26.34	-88.31	660.41	800.77	1,140.53	1,090.94	49.59	22.999	
13,300.00	12,517.93	12,518.19	12,491.98	33.90	26.34	-88.34	660.41	800.76	1,193.55	1,142.82	50.73	23.525	
13,400.00	12,517.47	12,517.66	12,491.45	33.91	26.33	-88.31	660.41	800.75	1,250.92	1,199.19	51.74	24.179	
13,500.00	12,517.01	12,517.19	12,490.99	33.93	26.33	-88.29	660.41	800.74	1,313.42	1,260.74	52.67	24.935	
13,600.00	12,516.55	12,516.78	12,490.58	33.94	26.33	-88.26	660.40	800.73	1,380.33	1,326.79	53.53	25.784	
13,700.00	12,516.10	12,516.42	12,490.21	33.96	26.33	-88.24	660.40	800.72	1,451.05	1,396.74	54.31	26.718	
13,800.00	12,515.64	12,516.09	12,489.88	33.98	26.33	-88.22	660.40	800.71	1,525.06	1,470.05	55.01	27.724	
13,900.00	12,515.18	12,515.79	12,489.59	34.01	26.33	-88.21	660.40	800.70	1,601.89	1,546.26	55.63	28.796	
14,000.00	12,514.72	12,515.52	12,489.32	34.04	26.33	-88.19	660.40	800.70	1,681.16	1,624.97	56.18	29.922	
14,100.00	12,514.26	12,515.28	12,489.07	34.07	26.33	-88.18	660.40	800.69	1,762.54	1,705.86	56.68	31.097	
14,200.00	12,513.81	12,515.06	12,488.85	34.11	26.33	-88.16	660.40	800.69	1,845.75	1,788.63	57.12	32.314	
14,300.00	12,513.35	12,484.00	12,457.81	34.16	26.27	-86.39	660.93	799.94	1,931.27	1,873.56	57.70	33.469	
14,400.00	12,512.89	12,484.00	12,457.81	34.22	26.27	-86.39	660.93	799.94	2,017.45	1,959.40	58.06	34.749	
14,500.00	12,512.43	12,484.00	12,457.81	34.29	26.27	-86.39	660.93	799.94	2,104.86	2,046.48	58.38	36.056	
14,600.00	12,511.97	12,484.00	12,457.81	34.39	26.27	-86.39	660.93	799.94	2,193.35	2,134.68	58.67	37.387	
14,700.00	12,511.51	12,484.00	12,457.81	34.53	26.27	-86.39	660.93	799.94	2,282.78	2,223.85	58.93	38.738	
14,800.00	12,511.06	12,484.00	12,457.81	34.75	26.27	-86.39	660.93	799.94	2,373.06	2,313.89	59.17	40.107	
14,900.00	12,510.60	12,484.00	12,457.81	35.10	26.27	-86.39	660.93	799.94	2,464.09	2,404.70	59.39	41.492	
15,000.00	12,510.14	12,484.00	12,457.81	35.67	26.27	-86.39	660.93	799.94	2,555.79	2,496.20	59.59	42.891	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 Fed Com 26-35-19 WB 5H - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 178-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,100.00	12,509.68	12,484.00	12,457.81	36.47	26.27	-86.39	660.93	799.94	2,648.09	2,588.32	59.77	44.301	
15,200.00	12,509.22	12,484.00	12,457.81	37.45	26.27	-86.39	660.93	799.94	2,740.93	2,680.98	59.95	45.722	
15,300.00	12,508.77	12,484.00	12,457.81	38.53	26.27	-86.39	660.93	799.94	2,834.26	2,774.15	60.11	47.152	
15,400.00	12,508.31	12,484.00	12,457.81	39.68	26.27	-86.39	660.93	799.94	2,928.03	2,867.77	60.26	48.589	
15,500.00	12,507.85	12,484.00	12,457.81	40.87	26.27	-86.39	660.93	799.94	3,022.20	2,961.79	60.40	50.034	
15,600.00	12,507.39	12,484.00	12,457.81	42.08	26.27	-86.39	660.93	799.94	3,116.73	3,056.19	60.54	51.484	
15,700.00	12,506.93	12,484.00	12,457.81	43.32	26.27	-86.39	660.93	799.94	3,211.59	3,150.93	60.67	52.939	
15,800.00	12,506.47	12,484.00	12,457.81	44.58	26.27	-86.39	660.93	799.94	3,306.76	3,245.97	60.79	54.398	
15,900.00	12,506.02	12,484.00	12,457.81	45.85	26.27	-86.39	660.93	799.94	3,402.20	3,341.30	60.90	55.861	
16,000.00	12,505.56	12,484.00	12,457.81	47.13	26.27	-86.39	660.93	799.94	3,497.90	3,436.88	61.02	57.327	
16,100.00	12,505.10	12,484.00	12,457.81	48.42	26.27	-86.39	660.93	799.94	3,593.83	3,532.71	61.12	58.796	
16,200.00	12,504.64	12,484.00	12,457.81	49.72	26.27	-86.39	660.93	799.94	3,689.98	3,628.75	61.23	60.266	
16,300.00	12,504.18	12,484.00	12,457.81	51.03	26.27	-86.39	660.93	799.94	3,786.32	3,725.00	61.33	61.738	
16,400.00	12,503.73	12,484.00	12,457.81	52.35	26.27	-86.39	660.93	799.94	3,882.86	3,821.43	61.43	63.210	
16,500.00	12,503.27	12,484.00	12,457.81	53.68	26.27	-86.39	660.93	799.94	3,979.56	3,918.04	61.52	64.684	
16,600.00	12,502.81	12,484.00	12,457.81	55.01	26.27	-86.39	660.93	799.94	4,076.42	4,014.81	61.62	66.157	
16,700.00	12,502.35	12,484.00	12,457.81	56.34	26.27	-86.39	660.93	799.94	4,173.43	4,111.72	61.71	67.631	
16,800.00	12,501.89	12,484.00	12,457.81	57.68	26.27	-86.39	660.93	799.94	4,270.58	4,208.78	61.80	69.104	
16,900.00	12,501.43	12,484.00	12,457.81	59.03	26.27	-86.39	660.93	799.94	4,367.86	4,305.97	61.89	70.576	
17,000.00	12,500.98	12,484.00	12,457.81	60.38	26.27	-86.39	660.93	799.94	4,465.26	4,403.28	61.98	72.047	
17,100.00	12,500.52	12,484.00	12,457.81	61.73	26.27	-86.39	660.93	799.94	4,562.77	4,500.70	62.06	73.518	
17,200.00	12,500.06	12,484.00	12,457.81	63.09	26.27	-86.39	660.93	799.94	4,660.38	4,598.23	62.15	74.986	
17,300.00	12,499.60	12,484.00	12,457.81	64.45	26.27	-86.39	660.93	799.94	4,758.10	4,695.86	62.24	76.453	
17,400.00	12,499.14	12,484.00	12,457.81	65.82	26.27	-86.39	660.93	799.94	4,855.90	4,793.58	62.32	77.919	
17,500.00	12,498.69	12,484.00	12,457.81	67.19	26.27	-86.39	660.93	799.94	4,953.80	4,891.39	62.40	79.382	
17,600.00	12,498.23	12,484.00	12,457.81	68.56	26.27	-86.39	660.93	799.94	5,051.78	4,989.29	62.49	80.842	
17,700.00	12,497.77	12,484.00	12,457.81	69.93	26.27	-86.39	660.93	799.94	5,149.83	5,087.26	62.57	82.301	
17,800.00	12,497.31	12,484.00	12,457.81	71.31	26.27	-86.39	660.93	799.94	5,247.96	5,185.30	62.66	83.757	
17,900.00	12,496.85	12,484.00	12,457.81	72.68	26.27	-86.39	660.93	799.94	5,346.16	5,283.42	62.74	85.210	
18,000.00	12,496.39	12,484.00	12,457.81	74.07	26.27	-86.39	660.93	799.94	5,444.42	5,381.60	62.83	86.660	
18,100.00	12,495.94	12,484.00	12,457.81	75.45	26.27	-86.39	660.93	799.94	5,542.75	5,479.84	62.91	88.107	
18,200.00	12,495.48	12,484.00	12,457.81	76.83	26.27	-86.39	660.93	799.94	5,641.13	5,578.14	62.99	89.551	
18,300.00	12,495.02	12,484.00	12,457.81	78.22	26.27	-86.39	660.93	799.94	5,739.57	5,676.50	63.08	90.991	
18,400.00	12,494.56	12,484.00	12,457.81	79.61	26.27	-86.39	660.93	799.94	5,838.07	5,774.90	63.16	92.428	
18,500.00	12,494.10	12,484.00	12,457.81	81.00	26.27	-86.39	660.93	799.94	5,936.61	5,873.36	63.25	93.862	
18,600.00	12,493.65	12,484.00	12,457.81	82.39	26.27	-86.39	660.93	799.94	6,035.20	5,971.87	63.33	95.292	
18,700.00	12,493.19	12,484.00	12,457.81	83.78	26.27	-86.39	660.93	799.94	6,133.84	6,070.42	63.42	96.718	
18,800.00	12,492.73	12,484.00	12,457.81	85.18	26.27	-86.39	660.93	799.94	6,232.52	6,169.02	63.51	98.140	
18,900.00	12,492.27	12,484.00	12,457.81	86.57	26.27	-86.39	660.93	799.94	6,331.24	6,267.65	63.59	99.559	
19,000.00	12,491.81	12,484.00	12,457.81	87.97	26.27	-86.39	660.93	799.94	6,430.01	6,366.33	63.68	100.973	
19,100.00	12,491.36	12,484.00	12,457.81	89.37	26.27	-86.39	660.93	799.94	6,528.81	6,465.04	63.77	102.383	
19,200.00	12,490.90	12,484.00	12,457.81	90.77	26.27	-86.39	660.93	799.94	6,627.64	6,563.78	63.86	103.789	
19,300.00	12,490.44	12,484.00	12,457.81	92.17	26.27	-86.39	660.93	799.94	6,726.51	6,662.56	63.95	105.190	
19,400.00	12,489.98	12,484.00	12,457.81	93.57	26.27	-86.39	660.93	799.94	6,825.41	6,761.38	64.04	106.587	
19,500.00	12,489.52	12,484.00	12,457.81	94.97	26.27	-86.39	660.93	799.94	6,924.35	6,860.22	64.13	107.980	
19,600.00	12,489.06	12,484.00	12,457.81	96.38	26.27	-86.39	660.93	799.94	7,023.31	6,959.10	64.22	109.368	
19,700.00	12,488.61	12,484.00	12,457.81	97.78	26.27	-86.39	660.93	799.94	7,122.31	7,058.00	64.31	110.752	
19,800.00	12,488.15	12,484.00	12,457.81	99.19	26.27	-86.39	660.93	799.94	7,221.33	7,156.93	64.40	112.131	
19,900.00	12,487.69	12,484.00	12,457.81	100.59	26.27	-86.39	660.93	799.94	7,320.37	7,255.88	64.49	113.505	
20,000.00	12,487.23	12,484.00	12,457.81	102.00	26.27	-86.39	660.93	799.94	7,419.45	7,354.86	64.59	114.874	
20,100.00	12,486.77	12,484.00	12,457.81	103.41	26.27	-86.39	660.93	799.94	7,518.55	7,453.86	64.68	116.239	
20,200.00	12,486.32	12,484.00	12,457.81	104.82	26.27	-86.39	660.93	799.94	7,617.67	7,552.89	64.78	117.598	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 Fed Com 26-35-19 WB 5H - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 178-MWD

Rule Assigned:

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
20,300.00	12,485.86	12,484.00	12,457.81	106.23	26.27	-86.39	660.93	799.94	7,716.81	7,651.94	64.87	118.953	
20,400.00	12,485.40	12,484.00	12,457.81	107.64	26.27	-86.39	660.93	799.94	7,815.98	7,751.01	64.97	120.302	
20,487.00	12,485.00	12,484.00	12,457.81	108.86	26.27	-86.39	660.93	799.94	7,902.27	7,837.22	65.05	121.472	

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 WA Fed Com 2H - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 178-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.50	0.00	1.41	1.41	41.78	903.83	807.60	1,212.08				
100.00	100.00	100.36	99.86	1.48	1.42	41.77	903.97	807.46	1,212.09	1,209.19	2.90	418.087	
200.00	200.00	199.69	199.19	1.89	1.43	41.75	904.37	807.04	1,212.11	1,208.78	3.32	364.554	
300.00	300.00	297.39	296.89	2.25	1.48	41.71	905.05	806.52	1,212.27	1,208.54	3.73	324.876	
400.00	400.00	395.72	395.21	2.56	1.55	41.66	905.91	806.05	1,212.61	1,208.49	4.12	294.612	
500.00	500.00	495.72	495.20	2.84	1.65	41.63	906.69	805.79	1,213.02	1,208.53	4.49	270.344	
600.00	600.00	595.80	595.29	3.10	1.76	41.60	907.37	805.61	1,213.41	1,208.55	4.86	249.787	
700.00	700.00	694.98	694.46	3.34	1.89	41.57	908.05	805.47	1,213.83	1,208.59	5.23	232.048	
800.00	800.00	795.18	794.66	3.56	2.04	41.55	908.74	805.37	1,214.27	1,208.67	5.60	216.845	
900.00	900.00	895.38	894.86	3.77	2.19	41.52	909.43	805.25	1,214.71	1,208.74	5.97	203.608	
1,000.00	1,000.00	996.29	995.76	3.98	2.36	41.50	910.11	805.08	1,215.10	1,208.77	6.33	191.814	
1,100.00	1,100.00	1,096.47	1,095.94	4.17	2.53	41.47	910.77	804.79	1,215.40	1,208.70	6.70	181.318	
1,200.00	1,200.00	1,196.42	1,195.89	4.36	2.71	41.43	911.53	804.48	1,215.77	1,208.70	7.07	172.034	
1,300.00	1,300.00	1,299.64	1,299.10	4.54	2.89	41.40	912.17	804.15	1,216.02	1,208.59	7.43	163.595	
1,400.00	1,400.00	1,429.27	1,428.72	4.72	3.13	41.35	912.02	802.59	1,215.22	1,207.37	7.85	154.830	
1,500.00	1,500.00	1,611.80	1,610.83	4.89	3.50	41.13	906.82	792.01	1,209.08	1,200.73	8.35	144.715	
1,600.00	1,600.00	1,729.42	1,727.70	5.06	3.75	40.86	901.68	779.89	1,198.98	1,190.23	8.75	136.971	
1,700.00	1,700.00	1,828.13	1,825.72	5.22	3.97	40.60	897.28	769.00	1,188.39	1,179.28	9.12	130.367	
1,800.00	1,800.00	1,935.06	1,931.88	5.38	4.21	40.33	892.17	757.31	1,177.66	1,168.17	9.49	124.108	
1,900.00	1,900.00	2,067.49	2,063.00	5.53	4.55	39.90	885.19	740.17	1,165.32	1,155.41	9.91	117.549	
2,000.00	2,000.00	2,185.16	2,178.85	5.69	4.89	39.35	878.69	720.58	1,150.36	1,140.03	10.33	111.371	
2,100.00	2,100.00	2,288.24	2,280.04	5.83	5.21	38.79	873.23	701.76	1,134.64	1,123.90	10.73	105.696	
2,200.00	2,200.00	2,386.23	2,376.11	5.98	5.53	38.19	868.33	683.07	1,118.75	1,107.61	11.14	100.421	
2,300.00	2,300.00	2,470.00	2,458.34	6.13	5.79	37.67	864.56	667.54	1,103.70	1,092.18	11.52	95.819	
2,400.00	2,400.00	2,564.00	2,550.81	6.27	6.08	37.10	860.77	651.08	1,089.76	1,077.86	11.90	91.544	
2,500.00	2,500.00	2,658.00	2,643.34	6.41	6.37	36.53	857.23	634.90	1,076.33	1,064.03	12.30	87.491	
2,600.00	2,599.99	2,754.11	2,737.94	6.63	6.69	36.08	853.80	618.32	1,062.11	1,049.35	12.76	83.229	
2,700.00	2,699.91	2,850.27	2,832.62	6.97	7.00	35.71	850.60	601.76	1,046.12	1,032.81	13.31	78.609	
2,800.00	2,799.69	2,942.00	2,922.95	7.32	7.31	35.43	847.76	586.09	1,028.38	1,014.53	13.85	74.244	
2,900.00	2,899.27	3,036.00	3,015.60	7.67	7.61	35.23	845.18	570.38	1,009.09	994.69	14.40	70.059	
3,000.00	2,998.59	3,130.00	3,108.32	7.87	7.92	35.06	843.10	555.09	988.52	973.68	14.84	66.593	
3,100.00	3,097.85	3,218.59	3,195.79	8.06	8.20	34.79	841.49	541.15	968.12	952.84	15.28	63.363	
3,200.00	3,197.10	3,320.42	3,296.34	8.29	8.53	34.47	839.78	525.16	947.89	932.12	15.77	60.099	
3,300.00	3,296.35	3,423.91	3,398.41	8.52	8.88	34.11	837.71	508.17	927.03	910.74	16.29	56.911	
3,400.00	3,395.61	3,509.96	3,483.36	8.78	9.16	33.81	836.08	494.61	906.65	889.87	16.78	54.039	
3,500.00	3,494.86	3,611.80	3,584.02	9.04	9.49	33.48	834.32	479.20	886.79	869.48	17.31	51.243	
3,600.00	3,594.11	3,736.97	3,707.48	9.32	9.91	33.07	830.03	459.07	865.01	847.13	17.89	48.364	
3,700.00	3,693.37	3,844.44	3,813.14	9.60	10.30	32.68	824.18	440.36	840.90	822.45	18.45	45.580	
3,800.00	3,792.62	3,940.05	3,907.04	9.90	10.65	32.27	819.08	423.07	816.57	797.55	19.02	42.935	
3,900.00	3,891.88	4,031.09	3,996.46	10.20	10.99	31.85	814.64	406.58	792.66	773.06	19.60	40.448	
4,000.00	3,991.13	4,114.63	4,078.68	10.51	11.28	31.45	811.24	392.16	769.93	749.76	20.17	38.170	
4,100.00	4,090.38	4,200.61	4,163.58	10.83	11.57	31.07	809.04	378.79	749.32	728.57	20.75	36.116	
4,200.00	4,189.64	4,305.43	4,267.16	11.16	11.92	30.62	806.18	362.92	728.86	707.51	21.35	34.134	
4,300.00	4,288.89	4,407.55	4,367.94	11.49	12.26	30.16	802.29	346.93	707.26	685.30	21.96	32.202	
4,400.00	4,388.14	4,501.70	4,460.92	11.83	12.57	29.74	798.67	332.54	685.86	663.29	22.57	30.386	
4,500.00	4,487.40	4,595.61	4,553.77	12.17	12.87	29.34	795.23	318.95	665.04	641.86	23.18	28.690	
4,600.00	4,586.65	4,694.42	4,651.58	12.52	13.18	28.96	791.59	305.38	644.60	620.81	23.79	27.095	
4,700.00	4,685.91	4,799.12	4,755.18	12.87	13.51	28.57	786.82	291.07	623.47	599.06	24.40	25.549	
4,800.00	4,785.16	4,900.23	4,855.14	13.23	13.84	28.18	781.25	276.87	601.36	576.34	25.02	24.035	
4,900.00	4,884.41	5,005.83	4,959.45	13.59	14.19	27.76	774.65	261.81	578.54	552.90	25.64	22.565	
5,000.00	4,983.67	5,102.10	5,054.45	13.95	14.51	27.35	767.80	247.83	554.88	528.61	26.27	21.120	
5,100.00	5,082.92	5,196.45	5,147.63	14.32	14.83	26.94	761.39	234.47	531.68	504.76	26.92	19.753	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 WA Fed Com 2H - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 178-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,182.17	5,294.31	5,244.18	14.69	15.16	26.34	755.49	219.66	508.76	481.16	27.59	18.437	
5,300.00	5,281.43	5,385.40	5,334.00	15.06	15.48	25.62	750.71	205.27	486.30	457.99	28.31	17.176	
5,400.00	5,380.68	5,480.48	5,427.94	15.44	15.80	24.88	746.49	191.28	465.10	436.07	29.03	16.023	
5,500.00	5,479.94	5,578.75	5,525.01	15.81	16.13	24.01	742.20	176.54	443.93	414.17	29.76	14.917	
5,600.00	5,579.19	5,680.51	5,625.27	16.19	16.49	22.82	737.73	159.74	422.26	391.72	30.54	13.824	
5,700.00	5,678.44	5,777.48	5,720.70	16.57	16.84	21.48	733.26	143.09	400.33	368.96	31.37	12.761	
5,800.00	5,777.70	5,873.76	5,815.51	16.96	17.19	20.06	728.83	126.94	378.78	346.57	32.21	11.758	
5,900.00	5,876.95	5,970.84	5,911.20	17.34	17.53	18.55	724.26	111.20	357.56	324.49	33.07	10.814	
6,000.00	5,976.20	6,066.61	6,005.48	17.73	17.88	16.70	720.36	94.84	336.95	302.97	33.98	9.917	
6,100.00	6,075.46	6,164.64	6,101.73	18.12	18.25	14.29	716.76	76.62	316.74	281.78	34.96	9.060	
6,200.00	6,174.71	6,261.20	6,196.59	18.50	18.61	11.66	713.11	58.94	297.10	261.13	35.96	8.261	
6,300.00	6,273.97	6,357.68	6,291.51	18.90	18.97	8.84	709.54	42.05	278.36	241.40	36.96	7.532	
6,400.00	6,373.22	6,454.86	6,387.20	19.29	19.32	5.70	706.00	25.46	260.49	222.55	37.94	6.865	
6,500.00	6,472.47	6,552.31	6,483.19	19.68	19.67	2.16	702.41	9.03	243.49	204.59	38.91	6.259	
6,600.00	6,571.73	6,649.65	6,579.03	20.07	20.02	-1.93	698.77	-7.55	227.49	187.67	39.82	5.712	
6,700.00	6,670.98	6,746.79	6,674.70	20.47	20.38	-6.55	695.18	-24.06	212.87	172.22	40.65	5.236	
6,800.00	6,770.23	6,844.39	6,770.84	20.87	20.73	-11.78	691.60	-40.49	199.84	158.53	41.32	4.837	
6,900.00	6,869.49	6,942.27	6,867.26	21.26	21.08	-17.66	687.75	-56.85	188.45	146.71	41.74	4.515	
7,000.00	6,968.74	7,039.83	6,963.41	21.66	21.43	-24.12	683.78	-72.93	179.09	137.26	41.84	4.281	
7,100.00	7,068.00	7,137.36	7,059.63	22.06	21.77	-30.96	679.98	-88.42	172.17	130.61	41.56	4.143	
7,200.00	7,167.25	7,235.10	7,156.13	22.46	22.11	-38.07	676.40	-103.47	167.87	126.97	40.90	4.104 SF	
7,300.00	7,266.50	7,333.35	7,253.21	22.86	22.44	-45.34	672.90	-118.16	166.13	126.23	39.90	4.164 ES	
7,326.58	7,292.88	7,359.56	7,279.14	22.97	22.53	-47.25	671.99	-121.94	166.05	126.47	39.59	4.194 CC	
7,400.00	7,365.76	7,431.97	7,350.78	23.26	22.77	-52.48	669.46	-132.15	166.63	127.96	38.68	4.308	
7,500.00	7,465.01	7,530.67	7,448.48	23.66	23.09	-59.46	665.83	-145.66	169.24	131.88	37.36	4.529	
7,600.00	7,564.26	7,632.75	7,549.70	24.07	23.40	-66.18	662.07	-158.29	173.13	137.01	36.13	4.792	
7,700.00	7,663.52	7,732.85	7,649.26	24.47	23.68	-72.09	658.65	-168.11	176.84	141.69	35.15	5.031	
7,800.00	7,762.77	7,831.39	7,747.31	24.87	23.94	-77.54	655.43	-177.36	181.96	147.54	34.42	5.287	
7,900.00	7,862.03	7,930.35	7,845.80	25.28	24.21	-82.63	652.34	-186.48	188.50	154.54	33.97	5.549	
8,000.00	7,961.28	8,039.24	7,954.42	25.68	24.46	-87.57	649.66	-193.51	193.77	159.98	33.80	5.733	
8,100.00	8,060.53	8,144.57	8,059.71	26.09	24.64	-91.89	647.85	-195.38	195.49	161.61	33.88	5.770	
8,200.00	8,159.79	8,244.10	8,159.22	26.50	24.79	-95.83	646.42	-195.57	196.61	162.40	34.21	5.748	
8,300.00	8,259.04	8,342.94	8,258.05	26.90	24.94	-99.66	645.10	-195.87	198.75	164.02	34.74	5.722	
8,400.00	8,358.29	8,442.93	8,358.04	27.31	25.09	-103.38	644.01	-195.92	201.48	166.03	35.45	5.683	
8,500.00	8,457.55	8,542.22	8,457.33	27.72	25.23	-106.90	643.23	-195.79	204.77	168.45	36.32	5.638	
8,600.00	8,556.80	8,641.34	8,556.44	28.12	25.38	-110.34	642.28	-195.66	208.87	171.55	37.33	5.596	
8,700.00	8,656.06	8,741.09	8,656.19	28.53	25.52	-113.63	641.47	-195.42	213.55	175.13	38.43	5.557	
8,800.00	8,755.31	8,840.68	8,755.78	28.94	25.67	-116.68	641.09	-195.03	218.58	179.00	39.58	5.522	
8,900.00	8,854.56	8,939.53	8,854.62	29.35	25.81	-119.58	640.68	-194.64	224.21	183.44	40.78	5.498	
9,000.00	8,953.82	9,038.21	8,953.30	29.76	25.96	-122.37	639.99	-194.34	230.63	188.62	42.01	5.490	
9,100.00	9,053.07	9,137.79	9,052.88	30.17	26.10	-124.95	639.54	-194.30	237.64	194.41	43.23	5.497	
9,200.00	9,152.32	9,237.39	9,152.48	30.58	26.25	-127.35	639.33	-194.12	244.85	200.42	44.43	5.510	
9,300.00	9,251.58	9,336.96	9,252.05	30.99	26.40	-129.64	639.07	-193.76	252.36	206.73	45.63	5.530	
9,400.00	9,350.83	9,436.65	9,351.74	31.40	26.55	-131.72	639.20	-193.53	260.08	213.29	46.79	5.559	
9,500.00	9,450.09	9,535.49	9,450.58	31.81	26.70	-133.56	639.69	-193.60	268.09	220.21	47.88	5.599	
9,600.00	9,549.34	9,635.05	9,550.14	32.22	26.85	-135.39	639.85	-193.43	276.43	227.46	48.98	5.644	
9,700.00	9,648.59	9,734.12	9,649.19	32.64	27.00	-137.37	639.12	-192.28	285.03	234.90	50.13	5.686	
9,800.00	9,747.85	9,833.15	9,748.20	33.05	27.14	-139.43	637.73	-190.38	293.97	242.67	51.30	5.730	
9,900.00	9,847.10	9,929.42	9,844.46	33.46	27.28	-141.11	636.66	-189.72	303.80	251.45	52.35	5.803	
10,000.00	9,946.43	10,027.86	9,942.89	33.86	27.45	-142.39	636.16	-190.76	313.93	260.68	53.25	5.895	
10,100.00	10,046.02	10,128.50	10,043.52	34.27	27.62	-143.23	636.18	-192.33	322.08	268.04	54.03	5.961	
10,200.00	10,145.81	10,228.73	10,143.73	34.67	27.79	-143.72	636.40	-193.89	328.00	273.31	54.69	5.997	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 WA Fed Com 2H - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 178-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,300.00	10,245.73	10,329.15	10,244.14	35.02	27.97	-143.86	636.99	-195.46	331.54	276.33	55.21	6.005	
10,400.00	10,345.72	10,428.14	10,343.12	35.21	28.14	-143.79	637.16	-196.86	333.22	277.69	55.53	6.001	
10,500.00	10,445.72	10,527.42	10,442.39	35.25	28.32	-143.61	637.12	-198.15	334.02	278.33	55.69	5.997	
10,600.00	10,545.72	10,626.57	10,541.53	35.29	28.49	-143.42	636.80	-199.77	335.25	279.39	55.86	6.002	
10,700.00	10,645.72	10,729.32	10,644.25	35.33	28.68	-143.12	637.04	-201.77	336.23	280.21	56.02	6.002	
10,800.00	10,745.72	10,833.51	10,748.41	35.37	28.86	-142.64	638.92	-203.90	336.03	279.90	56.13	5.987	
10,900.00	10,845.72	10,933.68	10,848.55	35.41	29.03	-142.25	641.10	-205.11	335.04	278.79	56.24	5.957	
11,000.00	10,945.72	11,033.17	10,948.02	35.45	29.20	-141.93	642.82	-206.14	334.31	277.94	56.37	5.930	
11,100.00	11,045.72	11,132.25	11,047.08	35.49	29.37	-141.64	644.31	-207.12	333.74	277.23	56.51	5.906	
11,160.10	11,105.81	11,191.00	11,105.81	35.52	29.47	-141.44	645.16	-207.96	333.60	277.02	56.58	5.896	
11,200.00	11,145.72	11,229.84	11,144.65	35.53	29.54	-141.27	645.70	-208.75	333.66	277.05	56.62	5.894	
11,300.00	11,245.72	11,327.02	11,241.80	35.57	29.71	-140.91	646.45	-210.83	334.41	277.69	56.72	5.896	
11,400.00	11,345.72	11,427.86	11,342.63	35.62	29.90	-140.75	646.18	-212.26	335.51	278.60	56.91	5.895	
11,500.00	11,445.72	11,531.92	11,446.69	35.66	30.08	-140.65	646.32	-212.94	335.82	278.68	57.14	5.877	
11,600.00	11,545.72	11,633.37	11,548.14	35.70	30.25	-140.50	647.28	-213.29	335.32	277.98	57.34	5.848	
11,700.00	11,645.72	11,734.11	11,648.87	35.74	30.42	-140.33	648.60	-213.47	334.42	276.89	57.52	5.813	
11,800.00	11,745.72	11,832.14	11,746.89	35.78	30.58	-140.15	649.78	-213.83	333.73	276.03	57.69	5.784	
11,835.79	11,781.51	11,866.76	11,781.51	35.80	30.64	-140.07	650.12	-214.14	333.66	275.92	57.75	5.778	
11,900.00	11,845.72	11,928.57	11,843.31	35.82	30.75	-139.90	650.61	-215.04	333.88	276.05	57.83	5.773	
12,000.00	11,945.72	12,024.95	11,939.67	35.87	30.93	-139.66	650.59	-216.95	335.17	277.20	57.97	5.782	
12,100.00	12,045.72	12,123.31	12,038.00	35.90	31.10	23.87	648.74	-217.92	337.23	279.02	58.22	5.793	
12,200.00	12,144.92	12,130.00	12,044.68	35.60	31.12	23.60	648.50	-217.89	342.19	285.61	56.59	6.047	
12,300.00	12,239.64	12,130.00	12,044.68	35.20	31.12	22.90	648.50	-217.89	356.83	303.34	53.49	6.671	
12,400.00	12,325.75	12,130.00	12,044.68	34.79	31.12	21.84	648.50	-217.89	379.49	329.04	50.45	7.522	
12,500.00	12,399.49	12,130.00	12,044.68	34.41	31.12	20.55	648.50	-217.89	407.96	359.27	48.69	8.379	
12,600.00	12,457.62	12,130.00	12,044.68	34.10	31.12	19.17	648.50	-217.89	439.99	391.30	48.69	9.037	
12,700.00	12,497.61	12,130.00	12,044.68	33.89	31.12	17.81	648.50	-217.89	473.63	423.35	50.28	9.420	
12,800.00	12,517.71	12,130.00	12,044.68	33.79	31.12	16.55	648.50	-217.89	507.22	454.28	52.94	9.581	
12,900.00	12,519.77	12,130.00	12,044.68	33.80	31.12	15.19	648.50	-217.89	542.09	486.02	56.08	9.667	
13,000.00	12,519.31	12,130.00	12,044.68	33.84	31.12	12.96	648.50	-217.89	591.32	532.31	59.00	10.022	
13,100.00	12,518.85	12,130.00	12,044.68	33.87	31.12	9.82	648.50	-217.89	653.43	592.04	61.39	10.644	
13,200.00	12,518.39	12,130.00	12,044.68	33.89	31.12	5.75	648.50	-217.89	724.86	661.65	63.21	11.467	
13,300.00	12,517.93	12,130.00	12,044.68	33.90	31.12	2.27	648.50	-217.89	802.83	738.26	64.57	12.434	
13,400.00	12,517.47	12,130.00	12,044.68	33.91	31.12	2.27	648.50	-217.89	885.30	819.73	65.57	13.502	
13,500.00	12,517.01	12,130.00	12,044.68	33.93	31.12	2.27	648.50	-217.89	971.06	904.76	66.31	14.645	
13,600.00	12,516.55	12,130.00	12,044.68	33.94	31.12	2.27	648.50	-217.89	1,059.33	992.47	66.86	15.844	
13,700.00	12,516.10	12,130.00	12,044.68	33.96	31.12	2.27	648.50	-217.89	1,149.52	1,082.24	67.28	17.085	
13,800.00	12,515.64	12,130.00	12,044.68	33.98	31.12	2.27	648.50	-217.89	1,241.21	1,173.60	67.60	18.360	
13,900.00	12,515.18	12,130.00	12,044.68	34.01	31.12	2.27	648.50	-217.89	1,334.10	1,266.24	67.86	19.661	
14,000.00	12,514.72	12,130.00	12,044.68	34.04	31.12	2.27	648.50	-217.89	1,427.94	1,359.89	68.06	20.982	
14,100.00	12,514.26	12,130.00	12,044.68	34.07	31.12	2.27	648.50	-217.89	1,522.58	1,454.36	68.22	22.319	
14,200.00	12,513.81	12,130.00	12,044.68	34.11	31.12	2.27	648.50	-217.89	1,617.85	1,549.51	68.35	23.671	
14,300.00	12,513.35	12,130.00	12,044.68	34.16	31.12	2.27	648.50	-217.89	1,713.67	1,645.21	68.46	25.033	
14,400.00	12,512.89	12,130.00	12,044.68	34.22	31.12	2.27	648.50	-217.89	1,809.94	1,741.39	68.55	26.404	
14,500.00	12,512.43	12,130.00	12,044.68	34.29	31.12	2.27	648.50	-217.89	1,906.59	1,837.96	68.63	27.782	
14,600.00	12,511.97	12,130.00	12,044.68	34.39	31.12	2.27	648.50	-217.89	2,003.57	1,934.88	68.69	29.166	
14,700.00	12,511.51	12,130.00	12,044.68	34.53	31.12	2.27	648.50	-217.89	2,100.84	2,032.08	68.75	30.556	
14,800.00	12,511.06	12,130.00	12,044.68	34.75	31.12	2.27	648.50	-217.89	2,198.35	2,129.54	68.81	31.949	
14,900.00	12,510.60	12,130.00	12,044.68	35.10	31.12	2.27	648.50	-217.89	2,296.07	2,227.21	68.86	33.346	
15,000.00	12,510.14	12,130.00	12,044.68	35.67	31.12	2.27	648.50	-217.89	2,393.98	2,325.08	68.90	34.745	
15,100.00	12,509.68	12,130.00	12,044.68	36.47	31.12	2.27	648.50	-217.89	2,492.06	2,423.12	68.94	36.146	
15,200.00	12,509.22	12,130.00	12,044.68	37.45	31.12	2.27	648.50	-217.89	2,590.29	2,521.30	68.98	37.549	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 WA Fed Com 2H - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 178-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,300.00	12,508.77	12,130.00	12,044.68	38.53	31.12	2.27	648.50	-217.89	2,688.64	2,619.62	69.02	38.953	
15,400.00	12,508.31	12,130.00	12,044.68	39.68	31.12	2.27	648.50	-217.89	2,787.11	2,718.06	69.06	40.358	
15,500.00	12,507.85	12,130.00	12,044.68	40.87	31.12	2.27	648.50	-217.89	2,885.69	2,816.60	69.10	41.764	
15,600.00	12,507.39	12,130.00	12,044.68	42.08	31.12	2.27	648.50	-217.89	2,984.36	2,915.23	69.13	43.169	
15,700.00	12,506.93	12,130.00	12,044.68	43.32	31.12	2.27	648.50	-217.89	3,083.12	3,013.95	69.17	44.574	
15,800.00	12,506.47	12,130.00	12,044.68	44.58	31.12	2.27	648.50	-217.89	3,181.96	3,112.75	69.20	45.979	
15,900.00	12,506.02	12,130.00	12,044.68	45.85	31.12	2.27	648.50	-217.89	3,280.86	3,211.62	69.24	47.384	
16,000.00	12,505.56	12,130.00	12,044.68	47.13	31.12	2.27	648.50	-217.89	3,379.83	3,310.56	69.28	48.787	
16,100.00	12,505.10	12,130.00	12,044.68	48.42	31.12	2.27	648.50	-217.89	3,478.86	3,409.55	69.31	50.190	
16,200.00	12,504.64	12,130.00	12,044.68	49.72	31.12	2.27	648.50	-217.89	3,577.95	3,508.60	69.35	51.591	
16,300.00	12,504.18	12,130.00	12,044.68	51.03	31.12	2.27	648.50	-217.89	3,677.08	3,607.69	69.39	52.991	
16,400.00	12,503.73	12,130.00	12,044.68	52.35	31.12	2.27	648.50	-217.89	3,776.26	3,706.83	69.43	54.389	
16,500.00	12,503.27	12,130.00	12,044.68	53.68	31.12	2.27	648.50	-217.89	3,875.48	3,806.01	69.47	55.786	
16,600.00	12,502.81	12,130.00	12,044.68	55.01	31.12	2.27	648.50	-217.89	3,974.74	3,905.23	69.51	57.181	
16,700.00	12,502.35	12,130.00	12,044.68	56.34	31.12	2.27	648.50	-217.89	4,074.04	4,004.48	69.55	58.574	
16,800.00	12,501.89	12,130.00	12,044.68	57.68	31.12	2.27	648.50	-217.89	4,173.37	4,103.77	69.60	59.965	
16,900.00	12,501.43	12,130.00	12,044.68	59.03	31.12	2.27	648.50	-217.89	4,272.73	4,203.09	69.64	61.354	
17,000.00	12,500.98	12,130.00	12,044.68	60.38	31.12	2.27	648.50	-217.89	4,372.12	4,302.43	69.69	62.740	
17,100.00	12,500.52	12,130.00	12,044.68	61.73	31.12	2.27	648.50	-217.89	4,471.54	4,401.80	69.73	64.124	
17,200.00	12,500.06	12,130.00	12,044.68	63.09	31.12	2.27	648.50	-217.89	4,570.98	4,501.20	69.78	65.506	
17,300.00	12,499.60	12,130.00	12,044.68	64.45	31.12	2.27	648.50	-217.89	4,670.44	4,600.62	69.83	66.885	
17,400.00	12,499.14	12,130.00	12,044.68	65.82	31.12	2.27	648.50	-217.89	4,769.93	4,700.06	69.88	68.262	
17,500.00	12,498.69	12,130.00	12,044.68	67.19	31.12	2.27	648.50	-217.89	4,869.44	4,799.52	69.93	69.635	
17,600.00	12,498.23	12,130.00	12,044.68	68.56	31.12	2.27	648.50	-217.89	4,968.97	4,898.99	69.98	71.006	
17,700.00	12,497.77	12,130.00	12,044.68	69.93	31.12	2.27	648.50	-217.89	5,068.52	4,998.49	70.03	72.374	
17,800.00	12,497.31	12,130.00	12,044.68	71.31	31.12	2.27	648.50	-217.89	5,168.09	5,098.00	70.09	73.739	
17,900.00	12,496.85	12,130.00	12,044.68	72.68	31.12	2.27	648.50	-217.89	5,267.67	5,197.53	70.14	75.101	
18,000.00	12,496.39	12,130.00	12,044.68	74.07	31.12	2.27	648.50	-217.89	5,367.27	5,297.07	70.20	76.460	
18,100.00	12,495.94	12,130.00	12,044.68	75.45	31.12	2.27	648.50	-217.89	5,466.88	5,396.62	70.25	77.816	
18,200.00	12,495.48	12,130.00	12,044.68	76.83	31.12	2.27	648.50	-217.89	5,566.50	5,496.19	70.31	79.168	
18,300.00	12,495.02	12,130.00	12,044.68	78.22	31.12	2.27	648.50	-217.89	5,666.14	5,595.77	70.37	80.517	
18,400.00	12,494.56	12,130.00	12,044.68	79.61	31.12	2.27	648.50	-217.89	5,765.80	5,695.36	70.43	81.862	
18,500.00	12,494.10	12,130.00	12,044.68	81.00	31.12	2.27	648.50	-217.89	5,865.46	5,794.96	70.49	83.204	
18,600.00	12,493.65	12,130.00	12,044.68	82.39	31.12	2.27	648.50	-217.89	5,965.13	5,894.58	70.56	84.543	
18,700.00	12,493.19	12,130.00	12,044.68	83.78	31.12	2.27	648.50	-217.89	6,064.82	5,994.20	70.62	85.878	
18,800.00	12,492.73	12,130.00	12,044.68	85.18	31.12	2.27	648.50	-217.89	6,164.52	6,093.83	70.69	87.209	
18,900.00	12,492.27	12,130.00	12,044.68	86.57	31.12	2.27	648.50	-217.89	6,264.22	6,193.47	70.75	88.536	
19,000.00	12,491.81	12,130.00	12,044.68	87.97	31.12	2.27	648.50	-217.89	6,363.94	6,293.11	70.82	89.860	
19,100.00	12,491.36	12,130.00	12,044.68	89.37	31.12	2.27	648.50	-217.89	6,463.66	6,392.77	70.89	91.180	
19,200.00	12,490.90	12,130.00	12,044.68	90.77	31.12	2.27	648.50	-217.89	6,563.39	6,492.43	70.96	92.496	
19,300.00	12,490.44	12,130.00	12,044.68	92.17	31.12	2.27	648.50	-217.89	6,663.13	6,592.10	71.03	93.808	
19,400.00	12,489.98	12,130.00	12,044.68	93.57	31.12	2.27	648.50	-217.89	6,762.88	6,691.78	71.10	95.116	
19,500.00	12,489.52	12,130.00	12,044.68	94.97	31.12	2.27	648.50	-217.89	6,862.63	6,791.46	71.17	96.420	
19,600.00	12,489.06	12,130.00	12,044.68	96.38	31.12	2.27	648.50	-217.89	6,962.40	6,891.15	71.25	97.720	
19,700.00	12,488.61	12,130.00	12,044.68	97.78	31.12	2.27	648.50	-217.89	7,062.16	6,990.84	71.32	99.016	
19,800.00	12,488.15	12,130.00	12,044.68	99.19	31.12	2.27	648.50	-217.89	7,161.94	7,090.54	71.40	100.308	
19,900.00	12,487.69	12,130.00	12,044.68	100.59	31.12	2.27	648.50	-217.89	7,261.72	7,190.24	71.48	101.596	
20,000.00	12,487.23	12,130.00	12,044.68	102.00	31.12	2.27	648.50	-217.89	7,361.51	7,289.95	71.55	102.879	
20,100.00	12,486.77	12,130.00	12,044.68	103.41	31.12	2.27	648.50	-217.89	7,461.30	7,389.67	71.63	104.159	
20,200.00	12,486.32	12,130.00	12,044.68	104.82	31.12	2.27	648.50	-217.89	7,561.10	7,489.39	71.71	105.433	
20,300.00	12,485.86	12,130.00	12,044.68	106.23	31.12	2.27	648.50	-217.89	7,660.90	7,589.11	71.80	106.704	
20,400.00	12,485.40	12,130.00	12,044.68	107.64	31.12	2.27	648.50	-217.89	7,760.71	7,688.83	71.88	107.970	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 WA Fed Com 2H - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 178-MWD

Offset Well Error: 1.00 usft

Rule Assigned:

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
20,487.00	12,485.00	12,130.00	12,044.68	108.86	31.12	2.27	648.50	-217.89	7,847.55	7,775.60	71.95	109.068	

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 WA Fed Com 2H - ST01 - Surveys

Offset Site Error: 1.00 usft

Survey Program: 178-MWD, 12287-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.50	0.00	1.41	1.41	41.78	903.83	807.60	1,212.08				
100.00	100.00	100.36	99.86	1.48	1.42	41.77	903.97	807.46	1,212.09	1,209.19	2.90	418.087	
200.00	200.00	199.69	199.19	1.89	1.43	41.75	904.37	807.04	1,212.11	1,208.78	3.32	364.554	
300.00	300.00	297.39	296.89	2.25	1.48	41.71	905.05	806.52	1,212.27	1,208.54	3.73	324.876	
400.00	400.00	395.72	395.21	2.56	1.55	41.66	905.91	806.05	1,212.61	1,208.49	4.12	294.612	
500.00	500.00	495.72	495.20	2.84	1.65	41.63	906.69	805.79	1,213.02	1,208.53	4.49	270.344	
600.00	600.00	595.80	595.29	3.10	1.76	41.60	907.37	805.61	1,213.41	1,208.55	4.86	249.787	
700.00	700.00	694.98	694.46	3.34	1.89	41.57	908.05	805.47	1,213.83	1,208.59	5.23	232.048	
800.00	800.00	795.18	794.66	3.56	2.04	41.55	908.74	805.37	1,214.27	1,208.67	5.60	216.845	
900.00	900.00	895.38	894.86	3.77	2.19	41.52	909.43	805.25	1,214.71	1,208.74	5.97	203.608	
1,000.00	1,000.00	996.29	995.76	3.98	2.36	41.50	910.11	805.08	1,215.10	1,208.77	6.33	191.814	
1,100.00	1,100.00	1,096.47	1,095.94	4.17	2.53	41.47	910.77	804.79	1,215.40	1,208.70	6.70	181.318	
1,200.00	1,200.00	1,196.42	1,195.89	4.36	2.71	41.43	911.53	804.48	1,215.77	1,208.70	7.07	172.034	
1,300.00	1,300.00	1,299.64	1,299.10	4.54	2.89	41.40	912.17	804.15	1,216.02	1,208.59	7.43	163.595	
1,400.00	1,400.00	1,429.27	1,428.72	4.72	3.13	41.35	912.02	802.59	1,215.22	1,207.37	7.85	154.830	
1,500.00	1,500.00	1,611.80	1,610.83	4.89	3.50	41.13	906.82	792.01	1,209.08	1,200.73	8.35	144.715	
1,600.00	1,600.00	1,729.42	1,727.70	5.06	3.75	40.86	901.68	779.89	1,198.98	1,190.23	8.75	136.971	
1,700.00	1,700.00	1,828.13	1,825.72	5.22	3.97	40.60	897.28	769.00	1,188.39	1,179.28	9.12	130.367	
1,800.00	1,800.00	1,935.06	1,931.88	5.38	4.21	40.33	892.17	757.31	1,177.66	1,168.17	9.49	124.108	
1,900.00	1,900.00	2,067.49	2,063.00	5.53	4.55	39.90	885.19	740.17	1,165.32	1,155.41	9.91	117.549	
2,000.00	2,000.00	2,185.16	2,178.85	5.69	4.89	39.35	878.69	720.58	1,150.36	1,140.03	10.33	111.371	
2,100.00	2,100.00	2,288.24	2,280.04	5.83	5.21	38.79	873.23	701.76	1,134.64	1,123.90	10.73	105.696	
2,200.00	2,200.00	2,386.23	2,376.11	5.98	5.53	38.19	868.33	683.07	1,118.75	1,107.61	11.14	100.421	
2,300.00	2,300.00	2,470.00	2,458.34	6.13	5.79	37.67	864.56	667.54	1,103.70	1,092.18	11.52	95.819	
2,400.00	2,400.00	2,564.00	2,550.81	6.27	6.08	37.10	860.77	651.08	1,089.76	1,077.86	11.90	91.544	
2,500.00	2,500.00	2,658.00	2,643.34	6.41	6.37	36.53	857.23	634.90	1,076.33	1,064.03	12.30	87.491	
2,600.00	2,599.99	2,754.11	2,737.94	6.63	6.69	36.08	853.80	618.32	1,062.11	1,049.35	12.76	83.229	
2,700.00	2,699.91	2,850.27	2,832.62	6.97	7.00	35.71	850.60	601.76	1,046.12	1,032.81	13.31	78.609	
2,800.00	2,799.69	2,942.00	2,922.95	7.32	7.31	35.43	847.76	586.09	1,028.38	1,014.53	13.85	74.244	
2,900.00	2,899.27	3,036.00	3,015.60	7.67	7.61	35.23	845.18	570.38	1,009.09	994.69	14.40	70.059	
3,000.00	2,998.59	3,130.00	3,108.32	7.87	7.92	35.06	843.10	555.09	988.52	973.68	14.84	66.593	
3,100.00	3,097.85	3,218.59	3,195.79	8.06	8.20	34.79	841.49	541.15	968.12	952.84	15.28	63.363	
3,200.00	3,197.10	3,320.42	3,296.34	8.29	8.53	34.47	839.78	525.16	947.89	932.12	15.77	60.099	
3,300.00	3,296.35	3,423.91	3,398.41	8.52	8.88	34.11	837.71	508.17	927.03	910.74	16.29	56.911	
3,400.00	3,395.61	3,509.96	3,483.36	8.78	9.16	33.81	836.08	494.61	906.65	889.87	16.78	54.039	
3,500.00	3,494.86	3,611.80	3,584.02	9.04	9.49	33.48	834.32	479.20	886.79	869.48	17.31	51.243	
3,600.00	3,594.11	3,736.97	3,707.48	9.32	9.91	33.07	830.03	459.07	865.01	847.13	17.89	48.364	
3,700.00	3,693.37	3,844.44	3,813.14	9.60	10.30	32.68	824.18	440.36	840.90	822.45	18.45	45.580	
3,800.00	3,792.62	3,940.05	3,907.04	9.90	10.65	32.27	819.08	423.07	816.57	797.55	19.02	42.935	
3,900.00	3,891.88	4,031.09	3,996.46	10.20	10.99	31.85	814.64	406.58	792.66	773.06	19.60	40.448	
4,000.00	3,991.13	4,114.63	4,078.68	10.51	11.28	31.45	811.24	392.16	769.93	749.76	20.17	38.170	
4,100.00	4,090.38	4,200.61	4,163.58	10.83	11.57	31.07	809.04	378.79	749.32	728.57	20.75	36.116	
4,200.00	4,189.64	4,305.43	4,267.16	11.16	11.92	30.62	806.18	362.92	728.86	707.51	21.35	34.134	
4,300.00	4,288.89	4,407.55	4,367.94	11.49	12.26	30.16	802.29	346.93	707.26	685.30	21.96	32.202	
4,400.00	4,388.14	4,501.70	4,460.92	11.83	12.57	29.74	798.67	332.54	685.86	663.29	22.57	30.386	
4,500.00	4,487.40	4,595.61	4,553.77	12.17	12.87	29.34	795.23	318.95	665.04	641.86	23.18	28.690	
4,600.00	4,586.65	4,694.42	4,651.58	12.52	13.18	28.96	791.59	305.38	644.60	620.81	23.79	27.095	
4,700.00	4,685.91	4,799.12	4,755.18	12.87	13.51	28.57	786.82	291.07	623.47	599.06	24.40	25.549	
4,800.00	4,785.16	4,900.23	4,855.14	13.23	13.84	28.18	781.25	276.87	601.36	576.34	25.02	24.035	
4,900.00	4,884.41	5,005.83	4,959.45	13.59	14.19	27.76	774.65	261.81	578.54	552.90	25.64	22.565	
5,000.00	4,983.67	5,102.10	5,054.45	13.95	14.51	27.35	767.80	247.83	554.88	528.61	26.27	21.120	
5,100.00	5,082.92	5,196.45	5,147.63	14.32	14.83	26.94	761.39	234.47	531.68	504.76	26.92	19.753	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 WA Fed Com 2H - ST01 - Surveys

Offset Site Error: 1.00 usft

Survey Program: 178-MWD, 12287-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,182.17	5,294.31	5,244.18	14.69	15.16	26.34	755.49	219.66	508.76	481.16	27.59	18.437	
5,300.00	5,281.43	5,385.40	5,334.00	15.06	15.48	25.62	750.71	205.27	486.30	457.99	28.31	17.176	
5,400.00	5,380.68	5,480.48	5,427.94	15.44	15.80	24.88	746.49	191.28	465.10	436.07	29.03	16.023	
5,500.00	5,479.94	5,578.75	5,525.01	15.81	16.13	24.01	742.20	176.54	443.93	414.17	29.76	14.917	
5,600.00	5,579.19	5,680.51	5,625.27	16.19	16.49	22.82	737.73	159.74	422.26	391.72	30.54	13.824	
5,700.00	5,678.44	5,777.48	5,720.70	16.57	16.84	21.48	733.26	143.09	400.33	368.96	31.37	12.761	
5,800.00	5,777.70	5,873.76	5,815.51	16.96	17.19	20.06	728.83	126.94	378.78	346.57	32.21	11.758	
5,900.00	5,876.95	5,970.84	5,911.20	17.34	17.53	18.55	724.26	111.20	357.56	324.49	33.07	10.814	
6,000.00	5,976.20	6,066.61	6,005.48	17.73	17.88	16.70	720.36	94.84	336.95	302.97	33.98	9.917	
6,100.00	6,075.46	6,164.64	6,101.73	18.12	18.25	14.29	716.76	76.62	316.74	281.78	34.96	9.060	
6,200.00	6,174.71	6,261.20	6,196.59	18.50	18.61	11.66	713.11	58.94	297.10	261.13	35.96	8.261	
6,300.00	6,273.97	6,357.68	6,291.51	18.90	18.97	8.84	709.54	42.05	278.36	241.40	36.96	7.532	
6,400.00	6,373.22	6,454.86	6,387.20	19.29	19.32	5.70	706.00	25.46	260.49	222.55	37.94	6.865	
6,500.00	6,472.47	6,552.31	6,483.19	19.68	19.67	2.16	702.41	9.03	243.49	204.59	38.91	6.259	
6,600.00	6,571.73	6,649.65	6,579.03	20.07	20.02	-1.93	698.77	-7.55	227.49	187.67	39.82	5.712	
6,700.00	6,670.98	6,746.79	6,674.70	20.47	20.38	-6.55	695.18	-24.06	212.87	172.22	40.65	5.236	
6,800.00	6,770.23	6,844.39	6,770.84	20.87	20.73	-11.78	691.60	-40.49	199.84	158.53	41.32	4.837	
6,900.00	6,869.49	6,942.27	6,867.26	21.26	21.08	-17.66	687.75	-56.85	188.45	146.71	41.74	4.515	
7,000.00	6,968.74	7,039.83	6,963.41	21.66	21.43	-24.12	683.78	-72.93	179.09	137.26	41.84	4.281	
7,100.00	7,068.00	7,137.36	7,059.63	22.06	21.77	-30.96	679.98	-88.42	172.17	130.61	41.56	4.143	
7,200.00	7,167.25	7,235.10	7,156.13	22.46	22.11	-38.07	676.40	-103.47	167.87	126.97	40.90	4.104	
7,300.00	7,266.50	7,333.35	7,253.21	22.86	22.44	-45.34	672.90	-118.16	166.13	126.23	39.90	4.164	
7,326.58	7,292.88	7,359.56	7,279.14	22.97	22.53	-47.25	671.99	-121.94	166.05	126.47	39.59	4.194	
7,400.00	7,365.76	7,431.97	7,350.78	23.26	22.77	-52.48	669.46	-132.15	166.63	127.96	38.68	4.308	
7,500.00	7,465.01	7,530.67	7,448.48	23.66	23.09	-59.46	665.83	-145.66	169.24	131.88	37.36	4.529	
7,600.00	7,564.26	7,632.75	7,549.70	24.07	23.40	-66.18	662.07	-158.29	173.13	137.01	36.13	4.792	
7,700.00	7,663.52	7,732.85	7,649.26	24.47	23.68	-72.09	658.65	-168.11	176.84	141.69	35.15	5.031	
7,800.00	7,762.77	7,831.39	7,747.31	24.87	23.94	-77.54	655.43	-177.36	181.96	147.54	34.42	5.287	
7,900.00	7,862.03	7,930.35	7,845.80	25.28	24.21	-82.63	652.34	-186.48	188.50	154.54	33.97	5.549	
8,000.00	7,961.28	8,039.24	7,954.42	25.68	24.46	-87.57	649.66	-193.51	193.77	159.98	33.80	5.733	
8,100.00	8,060.53	8,144.57	8,059.71	26.09	24.64	-91.89	647.85	-195.38	195.49	161.61	33.88	5.770	
8,200.00	8,159.79	8,244.10	8,159.22	26.50	24.79	-95.83	646.42	-195.57	196.61	162.40	34.21	5.748	
8,300.00	8,259.04	8,342.94	8,258.05	26.90	24.94	-99.66	645.10	-195.87	198.75	164.02	34.74	5.722	
8,400.00	8,358.29	8,442.93	8,358.04	27.31	25.09	-103.38	644.01	-195.92	201.48	166.03	35.45	5.683	
8,500.00	8,457.55	8,542.22	8,457.33	27.72	25.23	-106.90	643.23	-195.79	204.77	168.45	36.32	5.638	
8,600.00	8,556.80	8,641.34	8,556.44	28.12	25.38	-110.34	642.28	-195.66	208.87	171.55	37.33	5.596	
8,700.00	8,656.06	8,741.09	8,656.19	28.53	25.52	-113.63	641.47	-195.42	213.55	175.13	38.43	5.557	
8,800.00	8,755.31	8,840.68	8,755.78	28.94	25.67	-116.68	641.09	-195.03	218.58	179.00	39.58	5.522	
8,900.00	8,854.56	8,939.53	8,854.62	29.35	25.81	-119.58	640.68	-194.64	224.21	183.44	40.78	5.498	
9,000.00	8,953.82	9,038.21	8,953.30	29.76	25.96	-122.37	639.99	-194.34	230.63	188.62	42.01	5.490	
9,100.00	9,053.07	9,137.79	9,052.88	30.17	26.10	-124.95	639.54	-194.30	237.64	194.41	43.23	5.497	
9,200.00	9,152.32	9,237.39	9,152.48	30.58	26.25	-127.35	639.33	-194.12	244.85	200.42	44.43	5.510	
9,300.00	9,251.58	9,336.96	9,252.05	30.99	26.40	-129.64	639.07	-193.76	252.36	206.73	45.63	5.530	
9,400.00	9,350.83	9,436.65	9,351.74	31.40	26.55	-131.72	639.20	-193.53	260.08	213.29	46.79	5.559	
9,500.00	9,450.09	9,535.49	9,450.58	31.81	26.70	-133.56	639.69	-193.60	268.09	220.21	47.88	5.599	
9,600.00	9,549.34	9,635.05	9,550.14	32.22	26.85	-135.39	639.85	-193.43	276.43	227.46	48.98	5.644	
9,700.00	9,648.59	9,734.12	9,649.19	32.64	27.00	-137.37	639.12	-192.28	285.03	234.90	50.13	5.686	
9,800.00	9,747.85	9,833.15	9,748.20	33.05	27.14	-139.43	637.73	-190.38	293.97	242.67	51.30	5.730	
9,900.00	9,847.10	9,929.42	9,844.46	33.46	27.28	-141.11	636.66	-189.72	303.80	251.45	52.35	5.803	
10,000.00	9,946.43	10,027.86	9,942.89	33.86	27.45	-142.39	636.16	-190.76	313.93	260.68	53.25	5.895	
10,100.00	10,046.02	10,128.50	10,043.52	34.27	27.62	-143.23	636.18	-192.33	322.08	268.04	54.03	5.961	
10,200.00	10,145.81	10,228.73	10,143.73	34.67	27.79	-143.72	636.40	-193.89	328.00	273.31	54.69	5.997	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 WA Fed Com 2H - ST01 - Surveys

Offset Site Error: 1.00 usft

Survey Program: 178-MWD, 12287-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,300.00	10,245.73	10,329.15	10,244.14	35.02	27.97	-143.86	636.99	-195.46	331.54	276.33	55.21	6.005	
10,400.00	10,345.72	10,428.14	10,343.12	35.21	28.14	-143.79	637.16	-196.86	333.22	277.69	55.53	6.001	
10,500.00	10,445.72	10,527.42	10,442.39	35.25	28.32	-143.61	637.12	-198.15	334.02	278.33	55.69	5.997	
10,600.00	10,545.72	10,626.57	10,541.53	35.29	28.49	-143.42	636.80	-199.77	335.25	279.39	55.86	6.002	
10,700.00	10,645.72	10,729.32	10,644.25	35.33	28.68	-143.12	637.04	-201.77	336.23	280.21	56.02	6.002	
10,800.00	10,745.72	10,833.51	10,748.41	35.37	28.86	-142.64	638.92	-203.90	336.03	279.90	56.13	5.987	
10,900.00	10,845.72	10,933.68	10,848.55	35.41	29.03	-142.25	641.10	-205.11	335.04	278.79	56.24	5.957	
11,000.00	10,945.72	11,033.17	10,948.02	35.45	29.20	-141.93	642.82	-206.14	334.31	277.94	56.37	5.930	
11,100.00	11,045.72	11,132.25	11,047.08	35.49	29.37	-141.64	644.31	-207.12	333.74	277.23	56.51	5.906	
11,160.10	11,105.81	11,191.00	11,105.81	35.52	29.47	-141.44	645.16	-207.96	333.60	277.02	56.58	5.896	
11,200.00	11,145.72	11,229.84	11,144.65	35.53	29.54	-141.27	645.70	-208.75	333.66	277.05	56.62	5.894	
11,300.00	11,245.72	11,327.02	11,241.80	35.57	29.71	-140.91	646.45	-210.83	334.41	277.69	56.72	5.896	
11,400.00	11,345.72	11,427.86	11,342.63	35.62	29.90	-140.75	646.18	-212.26	335.51	278.60	56.91	5.895	
11,500.00	11,445.72	11,531.92	11,446.69	35.66	30.08	-140.65	646.32	-212.94	335.82	278.68	57.14	5.877	
11,600.00	11,545.72	11,633.37	11,548.14	35.70	30.25	-140.50	647.28	-213.29	335.32	277.98	57.34	5.848	
11,700.00	11,645.72	11,734.11	11,648.87	35.74	30.42	-140.33	648.60	-213.47	334.42	276.89	57.52	5.813	
11,800.00	11,745.72	11,832.14	11,746.89	35.78	30.58	-140.15	649.78	-213.83	333.73	276.03	57.69	5.784	
11,835.79	11,781.51	11,866.76	11,781.51	35.80	30.64	-140.07	650.12	-214.14	333.66	275.92	57.75	5.778	
11,900.00	11,845.72	11,928.57	11,843.31	35.82	30.75	-139.90	650.61	-215.04	333.88	276.05	57.83	5.773	
12,000.00	11,945.72	12,024.95	11,939.67	35.87	30.93	-139.66	650.59	-216.95	335.17	277.20	57.97	5.782	
12,100.00	12,045.72	12,123.31	12,038.00	35.90	31.10	23.87	648.74	-217.92	337.23	279.02	58.22	5.793	
12,200.00	12,144.92	12,254.36	12,168.94	35.60	31.20	25.44	650.56	-215.40	324.89	267.01	57.89	5.613	
12,300.00	12,239.64	12,349.96	12,264.11	35.20	31.20	31.03	658.80	-211.68	288.18	231.68	56.49	5.101	
12,400.00	12,325.75	12,431.12	12,344.97	34.79	31.17	41.99	665.12	-209.03	238.22	184.19	54.03	4.409	
12,500.00	12,399.49	12,505.12	12,418.40	34.41	31.14	63.47	673.73	-206.15	179.98	130.65	49.33	3.649	
12,600.00	12,457.62	12,545.91	12,458.39	34.10	31.13	83.59	681.60	-204.80	136.81	91.20	45.61	3.000	
12,629.99	12,471.61	12,551.99	12,464.27	34.04	31.13	86.50	683.14	-204.70	133.70	85.84	47.86	2.793 CC, ES	
12,700.00	12,497.61	12,558.43	12,470.47	33.89	31.13	87.10	684.86	-204.63	150.43	93.52	56.91	2.643 SF	
12,800.00	12,517.71	12,554.09	12,466.29	33.79	31.13	75.10	683.69	-204.67	214.43	150.91	63.52	3.376	
12,900.00	12,519.77	12,540.82	12,453.45	33.80	31.13	61.54	680.39	-204.90	296.66	231.50	65.16	4.553	
13,000.00	12,519.31	12,508.00	12,421.25	33.84	31.14	45.80	674.16	-206.02	389.36	323.80	65.56	5.939	
13,100.00	12,518.85	12,508.00	12,421.25	33.87	31.14	36.39	674.16	-206.02	484.44	418.72	65.72	7.372	
13,200.00	12,518.39	12,508.00	12,421.25	33.89	31.14	20.42	674.16	-206.02	582.05	516.29	65.76	8.851	
13,300.00	12,517.93	12,508.00	12,421.25	33.90	31.14	3.91	674.16	-206.02	680.72	614.94	65.78	10.348	
13,400.00	12,517.47	12,508.00	12,421.25	33.91	31.14	3.91	674.16	-206.02	779.78	713.98	65.79	11.852	
13,500.00	12,517.01	12,488.04	12,401.50	33.93	31.15	3.70	671.36	-206.90	878.66	812.70	65.96	13.322	
13,600.00	12,516.55	12,480.36	12,393.90	33.94	31.15	3.62	670.37	-207.22	977.77	911.74	66.03	14.808	
13,700.00	12,516.10	12,473.33	12,386.93	33.96	31.16	3.56	669.51	-207.50	1,076.95	1,010.86	66.09	16.295	
13,800.00	12,515.64	12,466.88	12,380.53	33.98	31.16	3.50	668.75	-207.76	1,176.21	1,110.05	66.15	17.780	
13,900.00	12,515.18	12,460.93	12,374.62	34.01	31.16	3.45	668.07	-207.98	1,275.51	1,209.31	66.21	19.265	
14,000.00	12,514.72	12,455.43	12,369.15	34.04	31.16	3.41	667.48	-208.19	1,374.88	1,308.61	66.26	20.748	
14,100.00	12,514.26	12,450.33	12,364.08	34.07	31.16	3.37	666.94	-208.37	1,474.29	1,407.97	66.32	22.231	
14,200.00	12,513.81	12,445.58	12,359.37	34.11	31.17	3.33	666.47	-208.54	1,573.74	1,507.37	66.37	23.713	
14,300.00	12,513.35	12,441.16	12,354.97	34.16	31.17	3.30	666.04	-208.69	1,673.22	1,606.81	66.41	25.194	
14,400.00	12,512.89	12,413.00	12,326.92	34.22	31.18	3.09	663.67	-209.58	1,773.14	1,706.47	66.66	26.598	
14,500.00	12,512.43	12,413.00	12,326.92	34.29	31.18	3.09	663.67	-209.58	1,872.57	1,805.89	66.68	28.083	
14,600.00	12,511.97	12,413.00	12,326.92	34.39	31.18	3.09	663.67	-209.58	1,972.05	1,905.36	66.69	29.568	
14,700.00	12,511.51	12,413.00	12,326.92	34.53	31.18	3.09	663.67	-209.58	2,071.59	2,004.88	66.71	31.053	
14,800.00	12,511.06	12,413.00	12,326.92	34.75	31.18	3.09	663.67	-209.58	2,171.17	2,104.44	66.73	32.537	
14,900.00	12,510.60	12,413.00	12,326.92	35.10	31.18	3.09	663.67	-209.58	2,270.79	2,204.04	66.75	34.021	
15,000.00	12,510.14	12,430.56	12,344.43	35.67	31.17	3.23	664.93	-209.09	2,370.39	2,303.78	66.61	35.584	
15,100.00	12,509.68	12,418.94	12,332.85	36.47	31.18	3.13	664.10	-209.41	2,470.11	2,403.37	66.74	37.013	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 WA Fed Com 2H - ST01 - Surveys

Offset Site Error: 1.00 usft

Survey Program: 178-MWD, 12287-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,200.00	12,509.22	12,406.79	12,320.73	37.45	31.18	3.05	663.22	-209.77	2,569.81	2,502.95	66.86	38.433	
15,300.00	12,508.77	12,394.06	12,308.04	38.53	31.19	2.97	662.27	-210.16	2,669.50	2,602.50	67.00	39.845	
15,400.00	12,508.31	12,380.71	12,294.74	39.68	31.19	2.91	661.25	-210.60	2,769.17	2,702.03	67.14	41.247	
15,500.00	12,507.85	12,366.70	12,280.79	40.87	31.20	2.86	660.15	-211.08	2,868.83	2,801.54	67.28	42.639	
15,600.00	12,507.39	12,351.98	12,266.12	42.08	31.20	2.82	658.96	-211.61	2,968.47	2,901.03	67.44	44.020	
15,700.00	12,506.93	12,336.50	12,250.70	43.32	31.21	2.78	657.68	-212.20	3,068.09	3,000.49	67.60	45.389	
15,800.00	12,506.47	12,320.18	12,234.46	44.58	31.21	2.76	656.29	-212.85	3,167.69	3,099.92	67.76	46.747	
15,900.00	12,506.02	12,287.00	12,201.44	45.85	31.22	2.72	653.26	-214.20	3,267.20	3,199.12	68.07	47.996	
16,000.00	12,505.56	12,287.00	12,201.44	47.13	31.22	2.72	653.26	-214.20	3,366.73	3,298.62	68.11	49.433	
16,100.00	12,505.10	12,287.00	12,201.44	48.42	31.22	2.72	653.26	-214.20	3,466.29	3,398.15	68.14	50.869	
16,200.00	12,504.64	12,287.00	12,201.44	49.72	31.22	2.72	653.26	-214.20	3,565.88	3,497.70	68.18	52.302	
16,300.00	12,504.18	12,287.00	12,201.44	51.03	31.22	2.72	653.26	-214.20	3,665.49	3,597.27	68.22	53.734	
16,400.00	12,503.73	12,287.00	12,201.44	52.35	31.22	2.72	653.26	-214.20	3,765.11	3,696.86	68.25	55.163	
16,500.00	12,503.27	12,287.00	12,201.44	53.68	31.22	2.72	653.26	-214.20	3,864.76	3,796.47	68.29	56.590	
16,600.00	12,502.81	12,287.00	12,201.44	55.01	31.22	2.72	653.26	-214.20	3,964.43	3,896.09	68.33	58.015	
16,700.00	12,502.35	12,287.00	12,201.44	56.34	31.22	2.72	653.26	-214.20	4,064.11	3,995.73	68.38	59.437	
16,800.00	12,501.89	12,287.00	12,201.44	57.68	31.22	2.72	653.26	-214.20	4,163.81	4,095.39	68.42	60.856	
16,900.00	12,501.43	12,287.00	12,201.44	59.03	31.22	2.72	653.26	-214.20	4,263.52	4,195.05	68.47	62.273	
17,000.00	12,500.98	12,287.00	12,201.44	60.38	31.22	2.72	653.26	-214.20	4,363.24	4,294.73	68.51	63.686	
17,100.00	12,500.52	12,287.00	12,201.44	61.73	31.22	2.72	653.26	-214.20	4,462.98	4,394.42	68.56	65.097	
17,200.00	12,500.06	12,287.00	12,201.44	63.09	31.22	2.72	653.26	-214.20	4,562.73	4,494.12	68.61	66.505	
17,300.00	12,499.60	12,287.00	12,201.44	64.45	31.22	2.72	653.26	-214.20	4,662.49	4,593.83	68.66	67.910	
17,400.00	12,499.14	12,287.00	12,201.44	65.82	31.22	2.72	653.26	-214.20	4,762.26	4,693.55	68.71	69.312	
17,500.00	12,498.69	12,287.00	12,201.44	67.19	31.22	2.72	653.26	-214.20	4,862.04	4,793.28	68.76	70.710	
17,600.00	12,498.23	12,287.00	12,201.44	68.56	31.22	2.72	653.26	-214.20	4,961.82	4,893.01	68.81	72.105	
17,700.00	12,497.77	12,287.00	12,201.44	69.93	31.22	2.72	653.26	-214.20	5,061.62	4,992.75	68.87	73.497	
17,800.00	12,497.31	12,287.00	12,201.44	71.31	31.22	2.72	653.26	-214.20	5,161.42	5,092.50	68.92	74.886	
17,900.00	12,496.85	12,287.00	12,201.44	72.68	31.22	2.72	653.26	-214.20	5,261.24	5,192.25	68.98	76.270	
18,000.00	12,496.39	12,287.00	12,201.44	74.07	31.22	2.72	653.26	-214.20	5,361.05	5,292.01	69.04	77.652	
18,100.00	12,495.94	12,287.00	12,201.44	75.45	31.22	2.72	653.26	-214.20	5,460.88	5,391.78	69.10	79.030	
18,200.00	12,495.48	12,287.00	12,201.44	76.83	31.22	2.72	653.26	-214.20	5,560.71	5,491.55	69.16	80.404	
18,300.00	12,495.02	12,287.00	12,201.44	78.22	31.22	2.72	653.26	-214.20	5,660.55	5,591.33	69.22	81.774	
18,400.00	12,494.56	12,287.00	12,201.44	79.61	31.22	2.72	653.26	-214.20	5,760.39	5,691.11	69.29	83.140	
18,500.00	12,494.10	12,287.00	12,201.44	81.00	31.22	2.72	653.26	-214.20	5,860.24	5,790.89	69.35	84.503	
18,600.00	12,493.65	12,287.00	12,201.44	82.39	31.22	2.72	653.26	-214.20	5,960.09	5,890.68	69.41	85.862	
18,700.00	12,493.19	12,287.00	12,201.44	83.78	31.22	2.72	653.26	-214.20	6,059.95	5,990.47	69.48	87.217	
18,800.00	12,492.73	12,287.00	12,201.44	85.18	31.22	2.72	653.26	-214.20	6,159.81	6,090.26	69.55	88.567	
18,900.00	12,492.27	12,287.00	12,201.44	86.57	31.22	2.72	653.26	-214.20	6,259.68	6,190.06	69.62	89.914	
19,000.00	12,491.81	12,287.00	12,201.44	87.97	31.22	2.72	653.26	-214.20	6,359.55	6,289.86	69.69	91.257	
19,100.00	12,491.36	12,287.00	12,201.44	89.37	31.22	2.72	653.26	-214.20	6,459.43	6,389.67	69.76	92.595	
19,200.00	12,490.90	12,287.00	12,201.44	90.77	31.22	2.72	653.26	-214.20	6,559.31	6,489.48	69.83	93.929	
19,300.00	12,490.44	12,287.00	12,201.44	92.17	31.22	2.72	653.26	-214.20	6,659.19	6,589.28	69.91	95.259	
19,400.00	12,489.98	12,287.00	12,201.44	93.57	31.22	2.72	653.26	-214.20	6,759.08	6,689.10	69.98	96.585	
19,500.00	12,489.52	12,287.00	12,201.44	94.97	31.22	2.72	653.26	-214.20	6,858.97	6,788.91	70.06	97.906	
19,600.00	12,489.06	12,287.00	12,201.44	96.38	31.22	2.72	653.26	-214.20	6,958.86	6,888.73	70.13	99.223	
19,700.00	12,488.61	12,287.00	12,201.44	97.78	31.22	2.72	653.26	-214.20	7,058.76	6,988.54	70.21	100.536	
19,800.00	12,488.15	12,287.00	12,201.44	99.19	31.22	2.72	653.26	-214.20	7,158.65	7,088.36	70.29	101.844	
19,900.00	12,487.69	12,287.00	12,201.44	100.59	31.22	2.72	653.26	-214.20	7,258.56	7,188.18	70.37	103.147	
20,000.00	12,487.23	12,287.00	12,201.44	102.00	31.22	2.72	653.26	-214.20	7,358.46	7,288.01	70.45	104.447	
20,100.00	12,486.77	12,287.00	12,201.44	103.41	31.22	2.72	653.26	-214.20	7,458.37	7,387.83	70.53	105.741	
20,200.00	12,486.32	12,287.00	12,201.44	104.82	31.22	2.72	653.26	-214.20	7,558.28	7,487.66	70.62	107.031	
20,300.00	12,485.86	12,287.00	12,201.44	106.23	31.22	2.72	653.26	-214.20	7,658.19	7,587.48	70.70	108.316	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 WA Fed Com 2H - ST01 - Surveys

Offset Site Error: 1.00 usft

Survey Program: 178-MWD, 12287-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
20,400.00	12,485.40	12,287.00	12,201.44	107.64	31.22	2.72	653.26	-214.20	7,758.10	7,687.31	70.79	109.597	
20,487.00	12,485.00	12,287.00	12,201.44	108.86	31.22	2.72	653.26	-214.20	7,845.03	7,774.17	70.86	110.707	

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 WXY Fed Com 6H - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 180-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.53	0.03	1.41	1.41	44.80	903.83	897.61	1,273.82				
100.00	100.00	107.53	107.03	1.48	1.42	44.80	903.63	897.39	1,273.54	1,270.64	2.90	439.206	
200.00	200.00	212.34	211.83	1.89	1.43	44.80	903.06	896.78	1,272.74	1,269.41	3.33	382.369	
300.00	300.00	312.10	311.59	2.25	1.48	44.80	902.33	896.20	1,271.81	1,268.08	3.73	340.578	
400.00	400.00	407.83	407.31	2.56	1.55	44.81	901.71	895.77	1,271.04	1,266.93	4.11	308.912	
500.00	500.00	504.54	504.02	2.84	1.65	44.83	901.18	895.71	1,270.61	1,266.12	4.49	283.078	
600.00	600.00	604.37	603.85	3.10	1.76	44.85	900.66	895.81	1,270.31	1,265.45	4.86	261.311	
700.00	700.00	704.76	704.25	3.34	1.90	44.87	900.11	895.90	1,269.99	1,264.76	5.23	242.742	
800.00	800.00	803.86	803.34	3.56	2.04	44.89	899.59	895.99	1,269.68	1,264.08	5.60	226.702	
900.00	900.00	901.50	900.98	3.77	2.19	44.90	899.21	896.16	1,269.52	1,263.55	5.97	212.745	
1,000.00	1,000.00	1,000.95	1,000.43	3.98	2.36	44.92	898.88	896.43	1,269.48	1,263.14	6.34	200.351	
1,100.00	1,100.00	1,102.56	1,102.04	4.17	2.53	44.94	898.53	896.66	1,269.39	1,262.69	6.70	189.366	
1,200.00	1,200.00	1,202.30	1,201.78	4.36	2.71	44.95	898.33	896.66	1,269.25	1,262.19	7.07	179.636	
1,300.00	1,300.00	1,302.51	1,301.99	4.54	2.89	44.96	898.08	896.68	1,269.09	1,261.66	7.43	170.866	
1,400.00	1,400.00	1,403.54	1,403.02	4.72	3.07	44.97	897.65	896.86	1,268.91	1,261.12	7.79	162.911	
1,500.00	1,500.00	1,503.45	1,502.93	4.89	3.26	44.99	897.23	896.92	1,268.66	1,260.51	8.15	155.730	
1,600.00	1,600.00	1,605.77	1,605.24	5.06	3.45	45.00	896.84	896.89	1,268.36	1,259.86	8.51	149.094	
1,700.00	1,700.00	1,706.59	1,706.07	5.22	3.65	45.01	896.30	896.76	1,267.90	1,259.04	8.86	143.050	
1,800.00	1,800.00	1,808.09	1,807.56	5.38	3.84	45.03	895.64	896.66	1,267.37	1,258.15	9.22	137.452	
1,900.00	1,900.00	1,905.63	1,905.10	5.53	4.04	45.05	894.95	896.66	1,266.87	1,257.30	9.57	132.417	
2,000.00	2,000.00	2,003.51	2,002.98	5.69	4.23	45.08	894.28	896.88	1,266.55	1,256.64	9.91	127.766	
2,086.34	2,086.34	2,086.88	2,086.34	5.81	4.40	45.11	893.75	897.27	1,266.45	1,256.24	10.21	124.054	
2,100.00	2,100.00	2,100.09	2,099.55	5.83	4.42	45.12	893.67	897.35	1,266.45	1,256.19	10.26	123.487	
2,200.00	2,200.00	2,196.77	2,196.23	5.98	4.62	45.15	893.21	898.03	1,266.61	1,256.01	10.60	119.525	
2,300.00	2,300.00	2,292.08	2,291.53	6.13	4.81	45.19	893.00	898.90	1,267.10	1,256.16	10.93	115.883	
2,400.00	2,400.00	2,389.07	2,388.52	6.27	5.01	45.22	893.00	899.98	1,267.89	1,256.61	11.27	112.456	
2,500.00	2,500.00	2,488.99	2,488.44	6.41	5.21	45.26	893.14	901.21	1,268.87	1,257.25	11.62	109.205	
2,600.00	2,599.99	2,605.70	2,605.14	6.63	5.44	45.35	892.84	902.17	1,268.38	1,256.35	12.03	105.436	
2,700.00	2,699.91	2,757.85	2,757.21	6.97	5.75	45.72	888.61	901.56	1,263.51	1,250.95	12.56	100.566	
2,800.00	2,799.69	2,970.35	2,968.58	7.32	6.21	46.76	868.68	894.49	1,250.17	1,237.01	13.16	95.008	
2,900.00	2,899.27	3,122.33	3,118.31	7.67	6.57	47.88	845.93	881.97	1,227.39	1,213.76	13.64	89.996	
3,000.00	2,998.59	3,209.10	3,203.63	7.87	6.78	48.65	832.47	873.70	1,202.21	1,188.24	13.97	86.056	
3,100.00	3,097.85	3,296.47	3,289.67	8.06	7.01	49.27	819.41	865.93	1,177.61	1,163.29	14.32	82.249	
3,200.00	3,197.10	3,411.63	3,403.08	8.29	7.31	50.08	802.87	854.73	1,153.01	1,138.31	14.70	78.428	
3,300.00	3,296.35	3,503.84	3,493.80	8.52	7.56	50.66	790.35	843.97	1,127.58	1,112.50	15.08	74.780	
3,400.00	3,395.61	3,589.28	3,577.96	8.78	7.80	51.20	779.39	834.18	1,102.91	1,087.45	15.46	71.338	
3,500.00	3,494.86	3,677.25	3,664.76	9.04	8.04	51.77	768.87	824.48	1,079.24	1,063.39	15.85	68.092	
3,600.00	3,594.11	3,770.27	3,756.64	9.32	8.30	52.37	758.37	814.42	1,056.25	1,040.00	16.25	65.016	
3,700.00	3,693.37	3,862.67	3,847.94	9.60	8.57	53.00	747.91	804.79	1,033.68	1,017.04	16.65	62.096	
3,800.00	3,792.62	3,959.29	3,943.41	9.90	8.84	53.77	736.11	795.77	1,011.56	994.50	17.05	59.319	
3,900.00	3,891.88	4,044.64	4,027.78	10.20	9.08	54.48	725.81	788.06	989.96	972.50	17.46	56.711	
4,000.00	3,991.13	4,127.49	4,109.87	10.51	9.32	55.15	717.03	781.18	969.95	952.09	17.86	54.310	
4,100.00	4,090.38	4,219.39	4,201.06	10.83	9.57	55.95	707.67	774.63	951.31	933.04	18.27	52.076	
4,200.00	4,189.64	4,311.89	4,292.83	11.16	9.83	56.82	697.75	768.51	933.01	914.33	18.68	49.959	
4,300.00	4,288.89	4,399.83	4,380.19	11.49	10.07	57.66	689.16	763.18	915.90	896.82	19.08	48.005	
4,400.00	4,388.14	4,490.09	4,469.94	11.83	10.31	58.51	681.17	758.11	899.90	880.42	19.48	46.190	
4,500.00	4,487.40	4,578.59	4,558.04	12.17	10.54	59.35	674.02	753.56	884.95	865.06	19.88	44.511	
4,600.00	4,586.65	4,663.34	4,642.49	12.52	10.76	60.17	667.90	750.12	871.57	851.30	20.27	42.992	
4,700.00	4,685.91	4,749.94	4,728.88	12.87	10.97	61.02	662.29	747.72	859.89	839.23	20.66	41.620	
4,800.00	4,785.16	4,842.22	4,820.98	13.23	11.19	61.95	656.87	745.82	849.37	828.32	21.05	40.350	
4,900.00	4,884.41	4,929.45	4,908.08	13.59	11.39	62.83	652.25	744.82	840.17	818.74	21.43	39.211	
5,000.00	4,983.67	5,021.02	4,999.54	13.95	11.60	63.78	647.80	744.67	832.29	810.49	21.80	38.170	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 WXY Fed Com 6H - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 180-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,082.92	5,118.38	5,096.80	14.32	11.81	64.80	643.46	744.85	825.17	802.99	22.19	37.194	
5,200.00	5,182.17	5,217.08	5,195.43	14.69	12.02	65.82	639.47	744.91	818.39	795.83	22.56	36.275	
5,300.00	5,281.43	5,316.41	5,294.68	15.06	12.23	66.84	635.66	744.82	811.82	788.89	22.93	35.405	
5,400.00	5,380.68	5,415.55	5,393.76	15.44	12.44	67.86	632.04	744.65	805.50	782.21	23.29	34.579	
5,500.00	5,479.94	5,521.54	5,499.66	15.81	12.66	68.99	627.81	744.26	799.16	775.50	23.66	33.772	
5,600.00	5,579.19	5,640.36	5,618.33	16.19	12.92	70.24	622.72	741.53	791.20	767.16	24.04	32.913	
5,700.00	5,678.44	5,753.15	5,730.90	16.57	13.17	71.36	618.28	736.01	781.19	756.79	24.40	32.014	
5,800.00	5,777.70	5,878.56	5,855.84	16.96	13.47	72.58	613.25	726.46	768.83	744.07	24.76	31.056	
5,900.00	5,876.95	5,980.96	5,957.66	17.34	13.72	73.56	609.13	716.49	754.71	729.60	25.11	30.060	
6,000.00	5,976.20	6,079.19	6,055.34	17.73	13.97	74.52	605.22	706.71	740.60	715.15	25.46	29.092	
6,100.00	6,075.46	6,171.91	6,147.53	18.12	14.20	75.46	601.73	697.49	726.80	700.99	25.81	28.160	
6,200.00	6,174.71	6,253.03	6,228.33	18.50	14.39	76.24	599.76	690.71	715.05	688.89	26.16	27.334	
6,300.00	6,273.97	6,334.00	6,309.13	18.90	14.57	76.91	599.88	685.42	705.86	679.36	26.50	26.641	
6,400.00	6,373.22	6,428.00	6,403.00	19.29	14.76	77.60	601.54	680.76	698.68	671.85	26.83	26.041	
6,500.00	6,472.47	6,517.19	6,492.12	19.68	14.94	78.34	602.63	677.52	692.79	665.63	27.16	25.511	
6,600.00	6,571.73	6,617.84	6,592.72	20.07	15.13	79.29	602.68	674.51	687.47	659.98	27.49	25.006	
6,700.00	6,670.98	6,711.00	6,685.84	20.47	15.32	80.20	602.46	671.78	682.36	654.54	27.82	24.526	
6,800.00	6,770.23	6,806.00	6,780.83	20.87	15.51	81.17	602.14	670.22	678.67	650.51	28.16	24.102	
6,900.00	6,869.49	6,897.41	6,872.24	21.26	15.69	82.14	601.59	669.86	676.36	647.88	28.49	23.742	
7,000.00	6,968.74	6,996.24	6,971.06	21.66	15.89	83.22	600.83	669.59	674.42	645.58	28.83	23.390	
7,100.00	7,068.00	7,093.91	7,068.73	22.06	16.08	84.30	599.87	669.49	672.87	643.69	29.18	23.059	
7,200.00	7,167.25	7,195.79	7,170.60	22.46	16.28	85.43	598.98	669.21	671.42	641.88	29.54	22.728	
7,300.00	7,266.50	7,293.18	7,267.99	22.86	16.47	86.51	598.17	668.92	670.19	640.29	29.90	22.416	
7,400.00	7,365.76	7,390.41	7,365.22	23.26	16.67	87.60	597.26	668.89	669.49	639.22	30.26	22.121	
7,473.97	7,439.17	7,462.12	7,436.92	23.56	16.81	88.42	596.39	669.07	669.33	638.79	30.54	21.917	
7,500.00	7,465.01	7,488.19	7,462.99	23.66	16.86	88.72	596.02	669.17	669.33	638.69	30.64	21.846	
7,600.00	7,564.26	7,589.79	7,564.57	24.07	17.06	89.90	594.65	669.35	669.35	638.32	31.03	21.571	
7,700.00	7,663.52	7,690.98	7,665.76	24.47	17.26	91.07	593.30	669.04	669.16	637.73	31.43	21.290	
7,720.86	7,684.22	7,711.31	7,686.09	24.55	17.30	91.31	592.99	668.98	669.15	637.64	31.51	21.233	
7,800.00	7,762.77	7,791.15	7,765.91	24.87	17.46	92.26	591.59	668.71	669.24	637.39	31.84	21.016	
7,900.00	7,862.03	7,892.46	7,867.20	25.28	17.66	93.49	589.69	667.88	669.11	636.84	32.28	20.731	
7,907.74	7,869.71	7,900.06	7,874.80	25.31	17.68	93.58	589.55	667.81	669.11	636.80	32.31	20.709 CC	
8,000.00	7,961.28	7,990.20	7,964.92	25.68	17.87	94.66	587.88	667.08	669.30	636.59	32.71	20.459 ES	
8,100.00	8,060.53	8,089.04	8,063.74	26.09	18.07	95.87	585.76	666.44	669.97	636.80	33.17	20.197	
8,200.00	8,159.79	8,188.91	8,163.60	26.50	18.27	97.00	584.71	665.78	670.81	637.17	33.64	19.942	
8,300.00	8,259.04	8,285.75	8,260.43	26.90	18.47	98.04	584.35	665.29	671.96	637.86	34.10	19.707	
8,400.00	8,358.29	8,379.34	8,354.02	27.31	18.65	98.95	584.93	665.53	673.95	639.40	34.55	19.508	
8,500.00	8,457.55	8,474.03	8,448.71	27.72	18.83	99.86	585.37	666.59	676.98	641.97	35.01	19.338	
8,600.00	8,556.80	8,571.10	8,545.76	28.12	19.01	100.79	585.72	668.13	680.69	645.20	35.48	19.183	
8,700.00	8,656.06	8,671.17	8,645.82	28.53	19.20	101.72	586.32	669.89	684.70	648.73	35.98	19.031	
8,800.00	8,755.31	8,770.48	8,745.11	28.94	19.39	102.64	586.80	671.48	688.76	652.29	36.48	18.883	
8,900.00	8,854.56	8,870.35	8,844.97	29.35	19.57	103.57	587.13	673.04	693.01	656.01	36.99	18.735	
9,000.00	8,953.82	8,971.54	8,946.14	29.76	19.76	104.47	587.80	674.52	697.24	659.72	37.52	18.584	
9,100.00	9,053.07	9,072.11	9,046.71	30.17	19.95	105.36	588.60	675.78	701.41	663.36	38.05	18.435	
9,200.00	9,152.32	9,173.89	9,148.48	30.58	20.14	106.25	589.34	676.74	705.46	666.87	38.59	18.280	
9,300.00	9,251.58	9,272.10	9,246.68	30.99	20.33	107.11	590.03	677.61	709.64	670.50	39.14	18.133	
9,400.00	9,350.83	9,373.24	9,347.81	31.40	20.52	107.95	591.07	678.49	713.85	674.16	39.70	17.982	
9,500.00	9,450.09	9,473.64	9,448.19	31.81	20.71	108.72	592.88	679.59	718.19	677.94	40.25	17.844	
9,600.00	9,549.34	9,580.15	9,554.66	32.22	20.91	109.46	595.80	680.24	721.87	681.06	40.81	17.689	
9,700.00	9,648.59	9,673.96	9,648.42	32.64	21.09	110.12	598.40	680.47	725.33	684.00	41.33	17.548	
9,800.00	9,747.85	9,759.61	9,734.06	33.05	21.25	110.78	599.37	681.87	730.73	688.87	41.85	17.460	
9,900.00	9,847.10	9,855.40	9,829.83	33.46	21.43	111.65	598.38	683.83	737.45	695.00	42.45	17.371	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 WXY Fed Com 6H - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 180-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,000.00	9,946.43	9,959.05	9,933.43	33.86	21.64	112.72	595.73	684.98	743.85	700.74	43.11	17.255	
10,100.00	10,046.02	10,060.77	10,035.11	34.27	21.85	113.64	592.73	685.43	749.00	705.27	43.73	17.126	
10,200.00	10,145.81	10,162.54	10,136.84	34.67	22.07	114.34	589.89	685.66	752.98	708.67	44.31	16.995	
10,300.00	10,245.73	10,267.67	10,241.93	35.02	22.29	114.84	587.23	685.49	755.48	710.66	44.83	16.854	
10,400.00	10,345.72	10,372.23	10,346.47	35.21	22.51	115.09	585.38	684.81	756.15	710.93	45.22	16.720	
10,500.00	10,445.72	10,473.04	10,447.28	35.25	22.72	115.19	584.20	684.05	755.96	710.45	45.52	16.608	
10,600.00	10,545.72	10,580.69	10,554.92	35.29	22.94	115.25	583.82	683.10	755.32	709.49	45.83	16.481	
10,700.00	10,645.72	10,676.00	10,650.22	35.33	23.14	115.28	583.83	682.18	754.44	708.36	46.08	16.372	
10,770.22	10,715.94	10,741.72	10,715.94	35.36	23.27	115.29	583.78	681.97	754.26	708.01	46.25	16.310	
10,800.00	10,745.72	10,771.00	10,745.22	35.37	23.33	115.29	583.78	682.01	754.29	707.97	46.32	16.284	
10,900.00	10,845.72	10,866.05	10,840.27	35.41	23.52	115.25	583.99	682.61	754.77	708.22	46.55	16.214	
11,000.00	10,945.72	10,966.10	10,940.31	35.45	23.72	115.17	584.73	683.75	755.48	708.70	46.79	16.148	
11,100.00	11,045.72	11,065.88	11,040.07	35.49	23.91	115.03	586.08	685.20	756.22	709.22	47.00	16.088	
11,200.00	11,145.72	11,165.98	11,140.14	35.53	24.11	114.86	587.82	686.77	756.92	709.71	47.22	16.031	
11,300.00	11,245.72	11,262.40	11,236.54	35.57	24.29	114.72	589.08	688.39	757.89	710.47	47.42	15.984	
11,400.00	11,345.72	11,359.53	11,333.65	35.62	24.48	114.61	589.84	690.30	759.35	711.72	47.63	15.944	
11,500.00	11,445.72	11,461.83	11,435.93	35.66	24.67	114.49	590.63	692.33	760.84	712.98	47.86	15.897	
11,600.00	11,545.72	11,566.54	11,540.61	35.70	24.88	114.33	592.20	694.15	761.80	713.71	48.10	15.839	
11,700.00	11,645.72	11,674.29	11,648.34	35.74	25.09	114.17	593.94	695.26	762.09	713.75	48.34	15.765	
11,800.00	11,745.72	11,781.86	11,755.90	35.78	25.30	114.08	595.46	694.85	761.15	712.55	48.60	15.660	
11,900.00	11,845.72	11,883.69	11,857.71	35.82	25.50	114.03	596.73	693.73	759.64	710.78	48.86	15.548	
12,000.00	11,945.72	11,980.04	11,954.05	35.87	25.69	113.97	597.93	692.77	758.22	709.13	49.09	15.445	
12,100.00	12,045.72	12,096.89	12,070.85	35.90	25.92	-82.59	600.47	692.05	756.91	707.54	49.37	15.332	
12,200.00	12,144.92	12,341.66	12,303.28	35.60	26.20	-90.81	667.79	683.84	740.81	692.30	48.52	15.270 SF	
12,300.00	12,239.64	12,429.89	12,373.32	35.20	26.22	-98.69	721.16	683.03	722.29	675.18	47.11	15.332	
12,384.53	12,313.15	12,466.93	12,399.19	34.85	26.21	-102.24	747.66	683.08	716.26	670.18	46.08	15.545	
12,400.00	12,325.75	12,469.62	12,400.98	34.79	26.21	-102.42	749.67	683.08	716.48	670.55	45.93	15.599	
12,500.00	12,399.49	12,470.17	12,401.34	34.41	26.21	-101.06	750.08	683.08	728.36	683.15	45.21	16.111	
12,600.00	12,457.62	12,453.39	12,390.00	34.10	26.21	-96.18	737.72	683.07	756.95	711.94	45.01	16.818	
12,700.00	12,497.61	12,416.00	12,363.06	33.89	26.22	-87.94	711.80	683.00	798.45	753.17	45.28	17.634	
12,800.00	12,517.71	12,416.00	12,363.06	33.79	26.22	-81.11	711.80	683.00	848.10	802.04	46.06	18.412	
12,900.00	12,519.77	12,372.23	12,328.80	33.80	26.21	-75.27	684.60	683.25	901.06	854.17	46.89	19.217	
13,000.00	12,519.31	12,321.00	12,285.37	33.84	26.20	-73.07	657.51	684.44	955.97	907.91	48.07	19.887	
13,100.00	12,518.85	12,321.00	12,285.37	33.87	26.20	-73.82	657.51	684.44	1,009.67	960.09	49.58	20.365	
13,200.00	12,518.39	12,321.00	12,285.37	33.89	26.20	-74.56	657.51	684.44	1,064.72	1,013.65	51.06	20.851	
13,300.00	12,517.93	12,291.23	12,258.78	33.90	26.17	-73.50	644.18	685.51	1,119.83	1,067.53	52.30	21.412	
13,400.00	12,517.47	12,276.54	12,245.36	33.91	26.16	-72.71	638.23	686.12	1,179.15	1,125.73	53.42	22.073	
13,500.00	12,517.01	12,263.73	12,233.52	33.93	26.15	-72.03	633.40	686.68	1,243.25	1,188.79	54.46	22.830	
13,600.00	12,516.55	12,227.00	12,198.87	33.94	26.12	-70.06	621.36	688.51	1,312.32	1,256.89	55.43	23.674	
13,700.00	12,516.10	12,227.00	12,198.87	33.96	26.12	-70.06	621.36	688.51	1,383.67	1,327.40	56.27	24.589	
13,800.00	12,515.64	12,227.00	12,198.87	33.98	26.12	-70.06	621.36	688.51	1,458.39	1,401.38	57.01	25.581	
13,900.00	12,515.18	12,227.00	12,198.87	34.01	26.12	-70.06	621.36	688.51	1,535.99	1,478.33	57.66	26.639	
14,000.00	12,514.72	12,227.00	12,198.87	34.04	26.12	-70.06	621.36	688.51	1,616.06	1,557.83	58.23	27.753	
14,100.00	12,514.26	12,227.00	12,198.87	34.07	26.12	-70.06	621.36	688.51	1,698.24	1,639.51	58.73	28.916	
14,200.00	12,513.81	12,227.00	12,198.87	34.11	26.12	-70.06	621.36	688.51	1,782.24	1,723.07	59.17	30.120	
14,300.00	12,513.35	12,227.00	12,198.87	34.16	26.12	-70.06	621.36	688.51	1,867.82	1,808.25	59.56	31.359	
14,400.00	12,512.89	12,227.00	12,198.87	34.22	26.12	-70.06	621.36	688.51	1,954.76	1,894.85	59.91	32.629	
14,500.00	12,512.43	12,187.06	12,160.25	34.29	26.06	-67.93	611.41	690.32	2,041.12	1,980.73	60.40	33.794	
14,600.00	12,511.97	12,182.61	12,155.89	34.39	26.06	-67.69	610.51	690.48	2,129.89	2,069.19	60.70	35.087	
14,700.00	12,511.51	12,178.53	12,151.89	34.53	26.05	-67.47	609.72	690.61	2,219.57	2,158.59	60.98	36.398	
14,800.00	12,511.06	12,174.78	12,148.21	34.75	26.04	-67.28	609.02	690.73	2,310.07	2,248.84	61.23	37.727	
14,900.00	12,510.60	12,171.33	12,144.81	35.10	26.04	-67.09	608.40	690.84	2,401.29	2,339.83	61.46	39.071	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 WXY Fed Com 6H - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 180-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,000.00	12,510.14	12,133.00	12,106.85	35.67	25.98	-65.07	603.26	691.65	2,494.55	2,432.70	61.85	40.331	
15,100.00	12,509.68	12,133.00	12,106.85	36.47	25.98	-65.07	603.26	691.65	2,586.78	2,524.75	62.03	41.700	
15,200.00	12,509.22	12,133.00	12,106.85	37.45	25.98	-65.07	603.26	691.65	2,679.57	2,617.37	62.20	43.080	
15,300.00	12,508.77	12,133.00	12,106.85	38.53	25.98	-65.07	603.26	691.65	2,772.86	2,710.50	62.35	44.470	
15,400.00	12,508.31	12,133.00	12,106.85	39.68	25.98	-65.07	603.26	691.65	2,866.60	2,804.10	62.50	45.867	
15,500.00	12,507.85	12,133.00	12,106.85	40.87	25.98	-65.07	603.26	691.65	2,960.75	2,898.12	62.63	47.272	
15,600.00	12,507.39	12,133.00	12,106.85	42.08	25.98	-65.07	603.26	691.65	3,055.27	2,992.52	62.76	48.684	
15,700.00	12,506.93	12,133.00	12,106.85	43.32	25.98	-65.07	603.26	691.65	3,150.14	3,087.26	62.88	50.100	
15,800.00	12,506.47	12,133.00	12,106.85	44.58	25.98	-65.07	603.26	691.65	3,245.31	3,182.32	62.99	51.522	
15,900.00	12,506.02	12,133.00	12,106.85	45.85	25.98	-65.07	603.26	691.65	3,340.76	3,277.66	63.10	52.947	
16,000.00	12,505.56	12,133.00	12,106.85	47.13	25.98	-65.07	603.26	691.65	3,436.47	3,373.27	63.20	54.375	
16,100.00	12,505.10	12,133.00	12,106.85	48.42	25.98	-65.07	603.26	691.65	3,532.42	3,469.12	63.30	55.807	
16,200.00	12,504.64	12,133.00	12,106.85	49.72	25.98	-65.07	603.26	691.65	3,628.58	3,565.19	63.39	57.240	
16,300.00	12,504.18	12,133.00	12,106.85	51.03	25.98	-65.07	603.26	691.65	3,724.95	3,661.47	63.48	58.675	
16,400.00	12,503.73	12,133.00	12,106.85	52.35	25.98	-65.07	603.26	691.65	3,821.51	3,757.94	63.57	60.112	
16,500.00	12,503.27	12,133.00	12,106.85	53.68	25.98	-65.07	603.26	691.65	3,918.24	3,854.58	63.66	61.550	
16,600.00	12,502.81	12,133.00	12,106.85	55.01	25.98	-65.07	603.26	691.65	4,015.13	3,951.38	63.74	62.988	
16,700.00	12,502.35	12,133.00	12,106.85	56.34	25.98	-65.07	603.26	691.65	4,112.16	4,048.34	63.83	64.427	
16,800.00	12,501.89	12,133.00	12,106.85	57.68	25.98	-65.07	603.26	691.65	4,209.34	4,145.43	63.91	65.865	
16,900.00	12,501.43	12,133.00	12,106.85	59.03	25.98	-65.07	603.26	691.65	4,306.65	4,242.66	63.99	67.304	
17,000.00	12,500.98	12,133.00	12,106.85	60.38	25.98	-65.07	603.26	691.65	4,404.07	4,340.01	64.07	68.741	
17,100.00	12,500.52	12,133.00	12,106.85	61.73	25.98	-65.07	603.26	691.65	4,501.61	4,437.47	64.15	70.178	
17,200.00	12,500.06	12,133.00	12,106.85	63.09	25.98	-65.07	603.26	691.65	4,599.26	4,535.03	64.22	71.614	
17,300.00	12,499.60	12,133.00	12,106.85	64.45	25.98	-65.07	603.26	691.65	4,697.00	4,632.70	64.30	73.049	
17,400.00	12,499.14	12,133.00	12,106.85	65.82	25.98	-65.07	603.26	691.65	4,794.84	4,730.46	64.38	74.482	
17,500.00	12,498.69	12,133.00	12,106.85	67.19	25.98	-65.07	603.26	691.65	4,892.76	4,828.31	64.45	75.913	
17,600.00	12,498.23	12,133.00	12,106.85	68.56	25.98	-65.07	603.26	691.65	4,990.77	4,926.24	64.53	77.343	
17,700.00	12,497.77	12,133.00	12,106.85	69.93	25.98	-65.07	603.26	691.65	5,088.85	5,024.25	64.60	78.771	
17,800.00	12,497.31	12,133.00	12,106.85	71.31	25.98	-65.07	603.26	691.65	5,187.01	5,122.33	64.68	80.196	
17,900.00	12,496.85	12,133.00	12,106.85	72.68	25.98	-65.07	603.26	691.65	5,285.24	5,220.48	64.75	81.619	
18,000.00	12,496.39	12,133.00	12,106.85	74.07	25.98	-65.07	603.26	691.65	5,383.53	5,318.70	64.83	83.040	
18,100.00	12,495.94	12,133.00	12,106.85	75.45	25.98	-65.07	603.26	691.65	5,481.88	5,416.98	64.91	84.458	
18,200.00	12,495.48	12,133.00	12,106.85	76.83	25.98	-65.07	603.26	691.65	5,580.30	5,515.31	64.98	85.874	
18,300.00	12,495.02	12,133.00	12,106.85	78.22	25.98	-65.07	603.26	691.65	5,678.76	5,613.70	65.06	87.286	
18,400.00	12,494.56	12,133.00	12,106.85	79.61	25.98	-65.07	603.26	691.65	5,777.28	5,712.15	65.14	88.696	
18,500.00	12,494.10	12,133.00	12,106.85	81.00	25.98	-65.07	603.26	691.65	5,875.85	5,810.64	65.21	90.102	
18,600.00	12,493.65	12,133.00	12,106.85	82.39	25.98	-65.07	603.26	691.65	5,974.47	5,909.18	65.29	91.505	
18,700.00	12,493.19	12,133.00	12,106.85	83.78	25.98	-65.07	603.26	691.65	6,073.13	6,007.77	65.37	92.905	
18,800.00	12,492.73	12,133.00	12,106.85	85.18	25.98	-65.07	603.26	691.65	6,171.84	6,106.39	65.45	94.302	
18,900.00	12,492.27	12,133.00	12,106.85	86.57	25.98	-65.07	603.26	691.65	6,270.59	6,205.06	65.53	95.695	
19,000.00	12,491.81	12,133.00	12,106.85	87.97	25.98	-65.07	603.26	691.65	6,369.37	6,303.77	65.61	97.084	
19,100.00	12,491.36	12,133.00	12,106.85	89.37	25.98	-65.07	603.26	691.65	6,468.20	6,402.51	65.69	98.470	
19,200.00	12,490.90	12,133.00	12,106.85	90.77	25.98	-65.07	603.26	691.65	6,567.06	6,501.29	65.77	99.852	
19,300.00	12,490.44	12,133.00	12,106.85	92.17	25.98	-65.07	603.26	691.65	6,665.95	6,600.10	65.85	101.230	
19,400.00	12,489.98	12,133.00	12,106.85	93.57	25.98	-65.07	603.26	691.65	6,764.88	6,698.94	65.93	102.604	
19,500.00	12,489.52	12,133.00	12,106.85	94.97	25.98	-65.07	603.26	691.65	6,863.83	6,797.82	66.01	103.975	
19,600.00	12,489.06	12,133.00	12,106.85	96.38	25.98	-65.07	603.26	691.65	6,962.82	6,896.72	66.10	105.341	
19,700.00	12,488.61	12,133.00	12,106.85	97.78	25.98	-65.07	603.26	691.65	7,061.83	6,995.65	66.18	106.703	
19,800.00	12,488.15	12,133.00	12,106.85	99.19	25.98	-65.07	603.26	691.65	7,160.88	7,094.61	66.27	108.061	
19,900.00	12,487.69	12,133.00	12,106.85	100.59	25.98	-65.07	603.26	691.65	7,259.95	7,193.59	66.35	109.414	
20,000.00	12,487.23	12,133.00	12,106.85	102.00	25.98	-65.07	603.26	691.65	7,359.04	7,292.60	66.44	110.764	
20,100.00	12,486.77	12,133.00	12,106.85	103.41	25.98	-65.07	603.26	691.65	7,458.16	7,391.63	66.53	112.108	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera 19 WXY Fed Com 6H - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 180-MWD

Offset Well Error: 1.00 usft

Rule Assigned:

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
20,200.00	12,486.32	12,133.00	12,106.85	104.82	25.98	-65.07	603.26	691.65	7,557.30	7,490.69	66.61	113.449	
20,300.00	12,485.86	12,133.00	12,106.85	106.23	25.98	-65.07	603.26	691.65	7,656.46	7,589.76	66.70	114.785	
20,400.00	12,485.40	12,091.30	12,065.27	107.64	25.91	-62.92	600.15	692.10	7,754.75	7,687.73	67.02	115.713	
20,487.00	12,485.00	12,090.65	12,064.63	108.86	25.90	-62.89	600.11	692.11	7,841.04	7,773.94	67.10	116.859	

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera Federal 30-1 - OH - Surveys — **Offset Site Error:** 1.00 usft

Survey Program: 25-VESSI_GYRO_DROP — **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	22.00	1.41	1.41	169.89	-2,752.89	491.05	2,796.43				
100.00	100.00	76.00	98.00	1.48	1.42	169.88	-2,752.88	491.14	2,796.35	2,793.45	2.90	964.190	
200.00	200.00	178.27	200.27	1.89	1.44	169.88	-2,752.88	491.31	2,796.38	2,793.04	3.34	837.891	
300.00	300.00	279.18	301.18	2.25	1.49	169.88	-2,752.82	491.46	2,796.35	2,792.61	3.74	747.587	
400.00	400.00	381.22	403.22	2.56	1.56	169.88	-2,752.70	491.55	2,796.25	2,792.13	4.12	679.283	
500.00	500.00	481.25	503.25	2.84	1.64	169.87	-2,752.57	491.63	2,796.13	2,791.66	4.48	624.625	
600.00	600.00	580.81	602.81	3.10	1.74	169.87	-2,752.44	491.72	2,796.02	2,791.19	4.83	579.202	
700.00	700.00	680.94	702.94	3.34	1.85	169.87	-2,752.33	491.79	2,795.92	2,790.75	5.17	540.463	
800.00	800.00	780.08	802.08	3.56	1.96	169.87	-2,752.23	491.90	2,795.84	2,790.33	5.51	507.098	
900.00	900.00	879.81	901.81	3.77	2.09	169.86	-2,752.13	492.03	2,795.77	2,789.92	5.85	477.850	
1,000.00	1,000.00	982.09	1,004.09	3.98	2.23	169.86	-2,751.98	492.21	2,795.66	2,789.47	6.19	451.736	
1,100.00	1,100.00	1,082.80	1,104.80	4.17	2.37	169.85	-2,751.79	492.41	2,795.50	2,788.98	6.52	428.601	
1,200.00	1,200.00	1,182.88	1,204.88	4.36	2.51	169.85	-2,751.58	492.58	2,795.33	2,788.48	6.85	407.898	
1,300.00	1,300.00	1,283.39	1,305.39	4.54	2.66	169.85	-2,751.36	492.70	2,795.13	2,787.95	7.18	389.161	
1,400.00	1,400.00	1,383.84	1,405.84	4.72	2.82	169.85	-2,751.16	492.74	2,794.94	2,787.43	7.51	372.160	
1,500.00	1,500.00	1,482.79	1,504.79	4.89	2.97	169.85	-2,750.98	492.71	2,794.76	2,786.93	7.83	356.766	
1,600.00	1,600.00	1,583.42	1,605.42	5.06	3.12	169.85	-2,750.82	492.54	2,794.58	2,786.42	8.16	342.591	
1,700.00	1,700.00	1,683.32	1,705.31	5.22	3.28	169.85	-2,750.67	492.34	2,794.39	2,785.91	8.48	329.626	
1,777.86	1,777.86	1,755.87	1,777.86	5.34	3.39	169.86	-2,750.58	492.16	2,794.27	2,785.55	8.72	320.581	
1,800.00	1,800.00	1,775.00	1,797.00	5.38	3.42	169.86	-2,750.61	492.11	2,794.29	2,785.51	8.78	318.203	
1,900.00	1,900.00	1,869.42	1,891.41	5.53	3.56	169.86	-2,750.89	491.91	2,794.54	2,785.45	9.08	307.623	
2,000.00	2,000.00	1,969.12	1,991.11	5.69	3.72	169.87	-2,751.24	491.74	2,794.85	2,785.46	9.39	297.522	
2,100.00	2,100.00	2,067.32	2,089.31	5.83	3.87	169.87	-2,751.61	491.62	2,795.20	2,785.50	9.70	288.182	
2,200.00	2,200.00	2,178.89	2,200.88	5.98	4.05	169.87	-2,751.86	491.68	2,795.44	2,785.41	10.03	278.817	
2,300.00	2,300.00	2,280.85	2,302.84	6.13	4.22	169.86	-2,751.70	492.15	2,795.37	2,785.03	10.34	270.405	
2,400.00	2,400.00	2,380.88	2,402.87	6.27	4.39	169.84	-2,751.47	492.88	2,795.27	2,784.62	10.64	262.596	
2,500.00	2,500.00	2,480.38	2,502.37	6.41	4.55	169.83	-2,751.23	493.75	2,795.19	2,784.24	10.95	255.282	
2,503.32	2,503.32	2,483.74	2,505.72	6.42	4.56	169.82	-2,751.22	493.78	2,795.18	2,784.22	10.96	254.986	
2,600.00	2,599.99	2,580.73	2,602.71	6.63	4.72	169.80	-2,750.94	494.84	2,796.38	2,785.05	11.33	246.800	
2,700.00	2,699.91	2,681.99	2,703.96	6.97	4.89	169.78	-2,750.56	496.29	2,800.13	2,788.29	11.84	236.553	
2,800.00	2,799.69	2,783.97	2,805.93	7.32	5.07	169.75	-2,750.09	497.93	2,806.40	2,794.05	12.35	227.284	
2,900.00	2,899.27	2,885.75	2,907.68	7.67	5.24	169.72	-2,749.48	499.71	2,815.13	2,802.26	12.86	218.850	
3,000.00	2,998.59	2,985.07	3,006.99	7.87	5.41	169.71	-2,748.86	501.51	2,826.26	2,813.04	13.23	213.648	
3,100.00	3,097.85	3,085.50	3,107.40	8.06	5.58	169.71	-2,748.21	503.35	2,837.95	2,824.36	13.59	208.823	
3,200.00	3,197.10	3,186.41	3,208.29	8.29	5.76	169.72	-2,747.48	505.30	2,849.59	2,835.60	13.98	203.810	
3,300.00	3,296.35	3,286.68	3,308.53	8.52	5.93	169.71	-2,746.68	507.44	2,861.18	2,846.80	14.39	198.877	
3,400.00	3,395.61	3,387.29	3,409.10	8.78	6.10	169.71	-2,745.78	509.92	2,872.74	2,857.94	14.81	194.024	
3,500.00	3,494.86	3,487.76	3,509.53	9.04	6.28	169.69	-2,744.75	512.84	2,884.26	2,869.02	15.24	189.284	
3,600.00	3,594.11	3,587.00	3,608.71	9.32	6.45	169.67	-2,743.71	515.81	2,895.76	2,880.08	15.68	184.693	
3,700.00	3,693.37	3,684.93	3,706.60	9.60	6.62	169.65	-2,742.70	518.71	2,907.27	2,891.14	16.13	180.264	
3,800.00	3,792.62	3,780.84	3,802.48	9.90	6.78	169.65	-2,741.89	520.99	2,918.87	2,902.29	16.58	176.017	
3,900.00	3,891.88	3,875.00	3,896.62	10.20	6.95	169.65	-2,741.35	522.59	2,930.60	2,913.56	17.04	171.950	
4,000.00	3,991.13	3,954.33	3,975.95	10.51	7.08	169.67	-2,741.31	523.45	2,942.76	2,925.27	17.48	168.315	
4,100.00	4,090.38	4,039.84	4,061.46	10.83	7.23	169.70	-2,741.95	523.92	2,955.57	2,937.63	17.94	164.737	
4,200.00	4,189.64	4,163.42	4,185.03	11.16	7.44	169.74	-2,742.76	524.61	2,968.36	2,949.88	18.48	160.642	
4,300.00	4,288.89	4,271.12	4,292.73	11.49	7.63	169.78	-2,742.66	525.31	2,980.38	2,961.39	18.99	156.925	
4,400.00	4,388.14	4,372.43	4,394.03	11.83	7.80	169.81	-2,742.43	525.70	2,992.23	2,972.73	19.50	153.441	
4,500.00	4,487.40	4,472.83	4,494.44	12.17	7.98	169.85	-2,742.17	525.83	3,004.00	2,983.99	20.01	150.099	
4,600.00	4,586.65	4,571.04	4,592.65	12.52	8.15	169.88	-2,741.90	525.97	3,015.77	2,995.24	20.53	146.919	
4,700.00	4,685.91	4,665.49	4,687.09	12.87	8.31	169.91	-2,741.71	526.56	3,027.68	3,006.65	21.04	143.929	
4,800.00	4,785.16	4,764.28	4,785.88	13.23	8.49	169.94	-2,741.53	527.35	3,039.65	3,018.09	21.56	141.001	
4,900.00	4,884.41	4,850.00	4,871.60	13.59	8.64	169.95	-2,741.50	528.20	3,051.81	3,029.75	22.06	138.364	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera Federal 30-1 - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 25-VESSI_GYRO_DROP **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
5,000.00	4,983.67	4,936.21	4,957.79	13.95	8.79	169.96	-2,741.82	529.57	3,064.45	3,041.89	22.56	135.845	
5,100.00	5,082.92	5,030.80	5,052.36	14.32	8.95	169.97	-2,742.40	531.52	3,077.41	3,054.33	23.08	133.334	
5,200.00	5,182.17	5,130.15	5,151.69	14.69	9.13	169.97	-2,743.03	533.63	3,090.41	3,066.79	23.62	130.865	
5,300.00	5,281.43	5,226.76	5,248.27	15.06	9.29	169.98	-2,743.71	535.51	3,103.44	3,079.29	24.15	128.523	
5,400.00	5,380.68	5,321.08	5,342.58	15.44	9.46	169.99	-2,744.51	537.19	3,116.58	3,091.90	24.68	126.298	
5,500.00	5,479.94	5,420.38	5,441.86	15.81	9.63	170.00	-2,745.44	538.91	3,129.80	3,104.58	25.22	124.105	
5,600.00	5,579.19	5,519.41	5,540.87	16.19	9.80	170.01	-2,746.36	540.63	3,143.03	3,117.26	25.76	121.998	
5,700.00	5,678.44	5,618.37	5,639.81	16.57	9.98	170.02	-2,747.30	542.35	3,156.26	3,129.95	26.31	119.968	
5,800.00	5,777.70	5,716.17	5,737.59	16.96	10.15	170.03	-2,748.23	544.06	3,169.50	3,142.65	26.85	118.024	
5,900.00	5,876.95	5,813.89	5,835.30	17.34	10.32	170.04	-2,749.20	545.77	3,182.78	3,155.38	27.40	116.151	
6,000.00	5,976.20	5,910.51	5,931.89	17.73	10.49	170.05	-2,750.22	547.54	3,196.13	3,168.18	27.95	114.358	
6,100.00	6,075.46	6,009.43	6,030.79	18.12	10.66	170.05	-2,751.30	549.38	3,209.53	3,181.03	28.50	112.608	
6,200.00	6,174.71	6,107.11	6,128.44	18.50	10.83	170.06	-2,752.38	551.24	3,222.95	3,193.90	29.05	110.931	
6,300.00	6,273.97	6,206.92	6,228.22	18.90	11.00	170.07	-2,753.50	553.16	3,236.38	3,206.77	29.61	109.293	
6,400.00	6,373.22	6,309.16	6,330.44	19.29	11.18	170.07	-2,754.54	555.19	3,249.73	3,219.56	30.18	107.689	
6,500.00	6,472.47	6,413.64	6,434.90	19.68	11.37	170.08	-2,755.50	557.28	3,262.99	3,232.24	30.75	106.119	
6,600.00	6,571.73	6,513.49	6,534.73	20.07	11.54	170.08	-2,756.30	559.30	3,276.13	3,244.82	31.31	104.633	
6,700.00	6,670.98	6,612.66	6,633.88	20.47	11.72	170.09	-2,757.09	561.31	3,289.26	3,257.39	31.87	103.201	
6,800.00	6,770.23	6,711.86	6,733.05	20.87	11.89	170.09	-2,757.87	563.35	3,302.39	3,269.96	32.44	101.814	
6,900.00	6,869.49	6,809.47	6,830.63	21.26	12.06	170.09	-2,758.67	565.39	3,315.56	3,282.56	33.00	100.484	
7,000.00	6,968.74	6,908.01	6,929.15	21.66	12.24	170.10	-2,759.49	567.50	3,328.75	3,295.19	33.56	99.191	
7,100.00	7,068.00	7,007.64	7,028.75	22.06	12.41	170.10	-2,760.32	569.69	3,341.95	3,307.83	34.13	97.930	
7,200.00	7,167.25	7,105.92	7,127.00	22.46	12.58	170.10	-2,761.10	571.86	3,355.12	3,320.43	34.69	96.716	
7,300.00	7,266.50	7,203.44	7,224.50	22.86	12.76	170.10	-2,761.93	574.08	3,368.35	3,333.10	35.25	95.546	
7,400.00	7,365.76	7,302.50	7,323.52	23.26	12.93	170.10	-2,762.78	576.40	3,381.60	3,345.78	35.82	94.401	
7,500.00	7,465.01	7,400.74	7,421.73	23.66	13.10	170.10	-2,763.63	578.75	3,394.87	3,358.48	36.39	93.296	
7,600.00	7,564.26	7,497.44	7,518.39	24.07	13.27	170.09	-2,764.50	581.07	3,408.17	3,371.22	36.95	92.233	
7,700.00	7,663.52	7,585.72	7,606.64	24.47	13.43	170.09	-2,765.45	583.25	3,421.66	3,384.16	37.50	91.255	
7,800.00	7,762.77	7,683.42	7,704.30	24.87	13.60	170.09	-2,766.71	585.72	3,435.36	3,397.30	38.06	90.255	
7,900.00	7,862.03	7,781.43	7,802.28	25.28	13.78	170.09	-2,767.97	588.20	3,449.07	3,410.43	38.63	89.282	
8,000.00	7,961.28	7,878.85	7,899.66	25.68	13.95	170.08	-2,769.29	590.71	3,462.83	3,423.63	39.20	88.340	
8,100.00	8,060.53	7,984.16	8,004.92	26.09	14.13	170.08	-2,770.65	593.48	3,476.56	3,436.78	39.79	87.381	
8,200.00	8,159.79	8,084.49	8,105.21	26.50	14.31	170.07	-2,771.78	596.11	3,490.11	3,449.75	40.36	86.471	
8,300.00	8,259.04	8,205.86	8,226.53	26.90	14.52	170.06	-2,772.69	599.38	3,503.31	3,462.32	40.99	85.469	
8,400.00	8,358.29	8,302.42	8,323.06	27.31	14.70	170.06	-2,773.20	601.91	3,516.29	3,474.73	41.56	84.614	
8,500.00	8,457.55	8,401.74	8,422.35	27.72	14.87	170.05	-2,773.77	604.50	3,529.31	3,487.18	42.13	83.769	
8,600.00	8,556.80	8,542.58	8,563.13	28.12	15.12	170.04	-2,773.46	608.31	3,541.50	3,498.69	42.81	82.735	
8,700.00	8,656.06	8,644.60	8,665.11	28.53	15.30	170.03	-2,772.77	611.09	3,553.31	3,509.93	43.39	81.898	
8,800.00	8,755.31	8,753.63	8,774.10	28.94	15.49	170.02	-2,771.86	613.91	3,564.95	3,520.96	43.99	81.048	
8,900.00	8,854.56	8,853.74	8,874.17	29.35	15.67	170.01	-2,770.91	616.25	3,576.44	3,531.87	44.56	80.255	
9,000.00	8,953.82	8,957.34	8,977.75	29.76	15.85	170.01	-2,769.86	618.54	3,587.83	3,542.68	45.15	79.464	
9,100.00	9,053.07	9,054.94	9,075.33	30.17	16.03	170.01	-2,768.90	620.44	3,599.22	3,553.49	45.72	78.717	
9,200.00	9,152.32	9,158.97	9,179.33	30.58	16.21	170.01	-2,767.88	622.22	3,610.56	3,564.25	46.31	77.961	
9,300.00	9,251.58	9,257.72	9,278.06	30.99	16.38	170.02	-2,766.91	623.50	3,621.84	3,574.95	46.89	77.242	
9,400.00	9,350.83	9,359.67	9,380.01	31.40	16.56	170.04	-2,765.94	624.51	3,633.09	3,585.61	47.47	76.527	
9,500.00	9,450.09	9,459.99	9,480.32	31.81	16.74	170.06	-2,765.02	625.02	3,644.29	3,596.23	48.06	75.833	
9,600.00	9,549.34	9,561.77	9,582.09	32.22	16.92	170.09	-2,764.08	625.20	3,655.42	3,606.78	48.64	75.148	
9,700.00	9,648.59	9,661.16	9,681.49	32.64	17.09	170.12	-2,763.20	625.14	3,666.56	3,617.34	49.22	74.486	
9,800.00	9,747.85	9,758.72	9,779.04	33.05	17.25	170.15	-2,762.34	624.99	3,677.69	3,627.89	49.80	73.847	
9,900.00	9,847.10	9,854.92	9,875.24	33.46	17.42	170.18	-2,761.59	624.90	3,688.93	3,638.56	50.38	73.228	
10,000.00	9,946.43	9,949.20	9,969.52	33.86	17.58	170.23	-2,760.93	624.83	3,699.61	3,648.68	50.93	72.638	
10,100.00	10,046.02	10,050.88	10,071.20	34.27	17.76	170.28	-2,760.28	624.79	3,707.90	3,656.38	51.52	71.971	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera Federal 30-1 - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 25-VESSI_GYRO_DROP

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.00	10,145.81	10,149.95	10,170.26	34.67	17.93	170.31	-2,759.63	624.73	3,713.59	3,661.51	52.08	71.303	
10,300.00	10,245.73	10,258.44	10,278.74	35.02	18.12	170.32	-2,758.76	624.54	3,716.54	3,663.92	52.63	70.623	
10,400.00	10,345.72	10,360.57	10,380.88	35.21	18.29	170.33	-2,757.86	624.30	3,716.83	3,663.84	53.00	70.135	
10,500.00	10,445.72	10,454.96	10,475.26	35.25	18.45	170.33	-2,757.07	624.01	3,715.96	3,662.77	53.19	69.859	
10,600.00	10,545.72	10,554.59	10,574.89	35.29	18.62	170.34	-2,756.32	623.64	3,715.15	3,661.74	53.41	69.564	
10,700.00	10,645.72	10,650.00	10,670.29	35.33	18.79	170.34	-2,755.67	623.28	3,714.42	3,660.81	53.61	69.286	
10,800.00	10,745.72	10,737.70	10,757.99	35.37	18.94	170.35	-2,755.29	622.85	3,713.91	3,660.11	53.80	69.038	
10,900.00	10,845.72	10,833.05	10,853.34	35.41	19.10	170.35	-2,755.12	622.27	3,713.63	3,659.63	54.00	68.771	
10,980.35	10,926.07	10,905.78	10,926.07	35.44	19.22	170.36	-2,755.13	621.78	3,713.55	3,659.40	54.15	68.574	
11,000.00	10,945.72	10,923.73	10,944.02	35.45	19.25	170.36	-2,755.15	621.67	3,713.56	3,659.37	54.19	68.525	
11,100.00	11,045.72	11,026.00	11,046.28	35.49	19.42	170.37	-2,755.26	621.05	3,713.56	3,659.15	54.41	68.246	
11,108.30	11,054.02	11,033.74	11,054.02	35.49	19.43	170.37	-2,755.27	621.00	3,713.56	3,659.13	54.43	68.226	
11,200.00	11,145.72	11,125.69	11,145.98	35.53	19.59	170.38	-2,755.38	620.43	3,713.57	3,658.95	54.63	67.978	
11,300.00	11,245.72	11,227.18	11,247.46	35.57	19.76	170.39	-2,755.44	619.80	3,713.53	3,658.68	54.85	67.704	
11,400.00	11,345.72	11,328.04	11,348.32	35.62	19.93	170.40	-2,755.47	619.15	3,713.45	3,658.38	55.07	67.434	
11,500.00	11,445.72	11,428.80	11,449.08	35.66	20.10	170.41	-2,755.52	618.52	3,713.40	3,658.11	55.29	67.167	
11,600.00	11,545.72	11,525.71	11,545.98	35.70	20.26	170.42	-2,755.61	617.80	3,713.37	3,657.87	55.50	66.913	
11,682.31	11,628.03	11,607.75	11,628.03	35.73	20.40	170.43	-2,755.71	617.14	3,713.35	3,657.68	55.67	66.699	
11,700.00	11,645.72	11,625.00	11,645.27	35.74	20.43	170.44	-2,755.73	617.01	3,713.35	3,657.64	55.71	66.654	
11,800.00	11,745.72	11,731.36	11,751.63	35.78	20.61	170.45	-2,755.77	616.24	3,713.27	3,657.33	55.94	66.376	
11,900.00	11,845.72	11,836.11	11,856.38	35.82	20.79	170.46	-2,755.67	615.62	3,713.08	3,656.91	56.17	66.102	
12,000.00	11,945.72	11,938.16	11,958.42	35.87	20.97	170.46	-2,755.43	615.21	3,712.77	3,656.38	56.39	65.837	
12,100.00	12,045.72	12,038.66	12,058.92	35.90	21.14	-25.93	-2,755.14	614.82	3,712.42	3,655.82	56.61	65.581	
12,200.00	12,144.92	12,141.73	12,161.99	35.60	21.31	-26.56	-2,754.78	614.37	3,702.04	3,645.54	56.50	65.528	
12,300.00	12,239.64	12,236.29	12,256.55	35.20	21.48	-28.45	-2,754.41	613.91	3,673.32	3,617.05	56.26	65.287	
12,400.00	12,325.75	12,322.29	12,342.55	34.79	21.62	-31.93	-2,754.07	613.47	3,627.69	3,571.69	55.99	64.787	
12,500.00	12,399.49	12,395.45	12,415.71	34.41	21.75	-37.70	-2,753.78	613.10	3,567.28	3,511.56	55.72	64.019	
12,600.00	12,457.62	12,455.40	12,475.65	34.10	21.85	-46.95	-2,753.54	612.79	3,494.91	3,439.42	55.49	62.986	
12,700.00	12,497.61	12,493.77	12,514.03	33.89	21.92	-61.13	-2,753.39	612.58	3,413.96	3,358.66	55.29	61.741	
12,800.00	12,517.71	12,514.14	12,534.39	33.79	21.95	-80.61	-2,753.32	612.47	3,328.13	3,272.95	55.18	60.317	
12,900.00	12,519.77	12,516.03	12,536.28	33.80	21.96	-91.12	-2,753.31	612.46	3,240.77	3,185.64	55.13	58.785	
13,000.00	12,519.31	12,515.27	12,535.53	33.84	21.96	-91.28	-2,753.31	612.46	3,151.18	3,096.04	55.14	57.152	
13,100.00	12,518.85	12,514.47	12,534.73	33.87	21.95	-91.48	-2,753.32	612.47	3,059.22	3,004.05	55.17	55.449	
13,200.00	12,518.39	12,513.63	12,533.89	33.89	21.95	-91.77	-2,753.32	612.47	2,965.15	2,909.94	55.20	53.713	
13,300.00	12,517.93	12,512.76	12,533.02	33.90	21.95	-92.03	-2,753.32	612.48	2,869.31	2,814.09	55.22	51.965	
13,400.00	12,517.47	12,511.89	12,532.14	33.91	21.95	-91.97	-2,753.33	612.48	2,773.23	2,718.02	55.22	50.222	
13,500.00	12,517.01	12,511.01	12,531.27	33.93	21.95	-91.90	-2,753.33	612.49	2,677.45	2,622.22	55.23	48.481	
13,600.00	12,516.55	12,510.14	12,530.39	33.94	21.95	-91.84	-2,753.33	612.49	2,581.98	2,526.74	55.24	46.740	
13,700.00	12,516.10	12,509.27	12,529.52	33.96	21.95	-91.78	-2,753.34	612.50	2,486.87	2,431.60	55.26	45.001	
13,800.00	12,515.64	12,508.40	12,528.65	33.98	21.94	-91.71	-2,753.34	612.50	2,392.15	2,336.86	55.29	43.264	
13,900.00	12,515.18	12,507.53	12,527.79	34.01	21.94	-91.65	-2,753.34	612.51	2,297.89	2,242.56	55.33	41.530	
14,000.00	12,514.72	12,506.67	12,526.92	34.04	21.94	-91.59	-2,753.35	612.51	2,204.13	2,148.74	55.38	39.799	
14,100.00	12,514.26	12,505.81	12,526.06	34.07	21.94	-91.52	-2,753.35	612.52	2,110.94	2,055.49	55.45	38.072	
14,200.00	12,513.81	12,504.95	12,525.20	34.11	21.94	-91.46	-2,753.35	612.52	2,018.40	1,962.87	55.53	36.349	
14,300.00	12,513.35	12,504.09	12,524.35	34.16	21.94	-91.40	-2,753.36	612.52	1,926.61	1,870.98	55.63	34.631	
14,400.00	12,512.89	12,503.23	12,523.49	34.22	21.93	-91.33	-2,753.36	612.53	1,835.68	1,779.91	55.76	32.920	
14,500.00	12,512.43	12,502.38	12,522.64	34.29	21.93	-91.27	-2,753.36	612.53	1,745.73	1,689.81	55.92	31.217	
14,600.00	12,511.97	12,501.53	12,521.79	34.39	21.93	-91.21	-2,753.37	612.54	1,656.94	1,600.82	56.12	29.525	
14,700.00	12,511.51	12,500.68	12,520.94	34.53	21.93	-91.15	-2,753.37	612.54	1,569.50	1,513.14	56.37	27.844	
14,800.00	12,511.06	12,499.84	12,520.10	34.75	21.93	-91.09	-2,753.37	612.55	1,483.65	1,426.98	56.67	26.179	
14,900.00	12,510.60	12,499.00	12,519.26	35.10	21.93	-91.02	-2,753.37	612.55	1,399.68	1,342.62	57.05	24.533	
15,000.00	12,510.14	12,498.17	12,518.42	35.67	21.93	-90.96	-2,753.38	612.56	1,317.94	1,260.42	57.52	22.913	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera Federal 30-1 - OH - Surveys — **Offset Site Error:** 1.00 usft

Survey Program: 25-VESSI_GYRO_DROP — **Offset Well Error:** 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,100.00	12,509.68	12,497.33	12,517.58	36.47	21.92	-90.90	-2,753.38	612.56	1,238.88	1,180.79	58.09	21.325	
15,200.00	12,509.22	12,496.49	12,516.75	37.45	21.92	-90.84	-2,753.38	612.57	1,163.06	1,104.26	58.80	19.781	
15,300.00	12,508.77	12,495.65	12,515.91	38.53	21.92	-90.78	-2,753.39	612.57	1,091.13	1,031.48	59.65	18.292	
15,400.00	12,508.31	12,494.81	12,515.07	39.68	21.92	-90.72	-2,753.39	612.58	1,023.93	963.27	60.67	16.878	
15,500.00	12,507.85	12,493.98	12,514.23	40.87	21.92	-90.66	-2,753.39	612.58	962.45	900.59	61.86	15.558	
15,600.00	12,507.39	12,493.14	12,513.39	42.08	21.92	-90.59	-2,753.40	612.58	907.84	844.62	63.22	14.360	
15,700.00	12,506.93	12,492.30	12,512.55	43.32	21.92	-90.53	-2,753.40	612.59	861.41	796.71	64.71	13.312	
15,800.00	12,506.47	12,491.46	12,511.71	44.58	21.91	-90.47	-2,753.40	612.59	824.56	758.31	66.24	12.447	
15,900.00	12,506.02	12,490.62	12,510.87	45.85	21.91	-90.41	-2,753.41	612.60	798.60	730.88	67.72	11.792	
16,000.00	12,505.56	12,489.78	12,510.03	47.13	21.91	-90.35	-2,753.41	612.60	784.61	715.60	69.01	11.370	
16,060.72	12,505.28	12,489.27	12,509.52	47.91	21.91	-90.31	-2,753.41	612.61	782.26	712.62	69.64	11.232	CC, ES
16,100.00	12,505.10	12,488.94	12,509.19	48.42	21.91	-90.29	-2,753.41	612.61	783.24	713.26	69.98	11.192	SF
16,200.00	12,504.64	12,488.10	12,508.35	49.72	21.91	-90.23	-2,753.42	612.61	794.56	723.99	70.58	11.258	
16,300.00	12,504.18	12,487.26	12,507.51	51.03	21.91	-90.16	-2,753.42	612.62	818.04	747.26	70.78	11.558	
16,400.00	12,503.73	12,486.41	12,506.67	52.35	21.91	-90.10	-2,753.42	612.62	852.66	782.02	70.65	12.070	
16,500.00	12,503.27	12,485.57	12,505.83	53.68	21.90	-90.04	-2,753.43	612.63	897.16	826.90	70.26	12.770	
16,600.00	12,502.81	12,484.73	12,504.99	55.01	21.90	-89.98	-2,753.43	612.63	950.13	880.42	69.70	13.631	
16,700.00	12,502.35	12,483.89	12,504.15	56.34	21.90	-89.92	-2,753.43	612.63	1,010.24	941.18	69.06	14.628	
16,800.00	12,501.89	12,483.05	12,503.30	57.68	21.90	-89.86	-2,753.43	612.64	1,076.31	1,007.91	68.39	15.737	
16,900.00	12,501.43	12,482.20	12,502.46	59.03	21.90	-89.79	-2,753.44	612.64	1,147.29	1,079.56	67.73	16.939	
17,000.00	12,500.98	12,481.36	12,501.62	60.38	21.90	-89.73	-2,753.44	612.65	1,222.34	1,155.24	67.10	18.216	
17,100.00	12,500.52	12,480.52	12,500.77	61.73	21.90	-89.67	-2,753.44	612.65	1,300.76	1,234.24	66.52	19.554	
17,200.00	12,500.06	12,479.67	12,499.93	63.09	21.89	-89.61	-2,753.45	612.66	1,381.96	1,315.97	65.99	20.943	
17,300.00	12,499.60	12,478.83	12,499.09	64.45	21.89	-89.55	-2,753.45	612.66	1,465.49	1,399.98	65.51	22.372	
17,400.00	12,499.14	12,477.98	12,498.24	65.82	21.89	-89.48	-2,753.45	612.67	1,550.96	1,485.89	65.07	23.834	
17,500.00	12,498.69	12,477.14	12,497.40	67.19	21.89	-89.42	-2,753.46	612.67	1,638.09	1,573.40	64.69	25.323	
17,600.00	12,498.23	12,476.29	12,496.55	68.56	21.89	-89.36	-2,753.46	612.68	1,726.60	1,662.26	64.34	26.834	
17,700.00	12,497.77	12,475.47	12,495.72	69.93	21.89	-89.30	-2,753.46	612.68	1,816.31	1,752.28	64.04	28.363	
17,800.00	12,497.31	12,474.59	12,494.84	71.31	21.89	-89.24	-2,753.47	612.69	1,907.05	1,843.28	63.77	29.905	
17,900.00	12,496.85	12,473.71	12,493.96	72.68	21.88	-89.17	-2,753.47	612.69	1,998.67	1,935.13	63.53	31.460	
18,000.00	12,496.39	12,472.82	12,493.08	74.07	21.88	-89.11	-2,753.47	612.70	2,091.05	2,027.73	63.32	33.023	
18,100.00	12,495.94	12,471.93	12,492.19	75.45	21.88	-89.04	-2,753.48	612.70	2,184.11	2,120.97	63.14	34.594	
18,200.00	12,495.48	12,471.03	12,491.29	76.83	21.88	-88.98	-2,753.48	612.70	2,277.75	2,214.78	62.97	36.170	
18,300.00	12,495.02	12,470.14	12,490.39	78.22	21.88	-88.91	-2,753.48	612.71	2,371.91	2,309.08	62.83	37.750	
18,400.00	12,494.56	12,469.23	12,489.49	79.61	21.88	-88.84	-2,753.49	612.71	2,466.54	2,403.83	62.71	39.333	
18,500.00	12,494.10	12,468.33	12,488.58	81.00	21.87	-88.78	-2,753.49	612.72	2,561.57	2,498.96	62.60	40.919	
18,600.00	12,493.65	12,467.42	12,487.67	82.39	21.87	-88.71	-2,753.49	612.72	2,656.96	2,594.45	62.51	42.505	
18,700.00	12,493.19	12,466.50	12,486.76	83.78	21.87	-88.64	-2,753.50	612.73	2,752.68	2,690.25	62.43	44.092	
18,800.00	12,492.73	12,465.58	12,485.84	85.18	21.87	-88.58	-2,753.50	612.73	2,848.70	2,786.33	62.36	45.678	
18,900.00	12,492.27	12,464.66	12,484.92	86.57	21.87	-88.51	-2,753.51	612.74	2,944.98	2,882.67	62.31	47.264	
19,000.00	12,491.81	12,463.73	12,483.99	87.97	21.87	-88.44	-2,753.51	612.74	3,041.50	2,979.23	62.26	48.848	
19,100.00	12,491.36	12,462.80	12,483.06	89.37	21.87	-88.37	-2,753.51	612.75	3,138.24	3,076.01	62.23	50.430	
19,200.00	12,490.90	12,461.87	12,482.12	90.77	21.86	-88.30	-2,753.52	612.75	3,235.17	3,172.97	62.20	52.010	
19,300.00	12,490.44	12,460.93	12,481.18	92.17	21.86	-88.24	-2,753.52	612.76	3,332.29	3,270.10	62.18	53.588	
19,400.00	12,489.98	12,459.98	12,480.24	93.57	21.86	-88.17	-2,753.52	612.76	3,429.57	3,367.40	62.17	55.162	
19,500.00	12,489.52	12,459.03	12,479.29	94.97	21.86	-88.10	-2,753.53	612.77	3,527.00	3,464.84	62.17	56.733	
19,600.00	12,489.06	12,458.08	12,478.34	96.38	21.86	-88.03	-2,753.53	612.77	3,624.58	3,562.41	62.17	58.301	
19,700.00	12,488.61	12,457.12	12,477.38	97.78	21.86	-87.96	-2,753.54	612.78	3,722.28	3,660.10	62.18	59.865	
19,800.00	12,488.15	12,456.16	12,476.42	99.19	21.85	-87.89	-2,753.54	612.78	3,820.10	3,757.91	62.19	61.425	
19,900.00	12,487.69	12,455.19	12,475.45	100.59	21.85	-87.82	-2,753.54	612.79	3,918.03	3,855.82	62.21	62.981	
20,000.00	12,487.23	12,454.22	12,474.48	102.00	21.85	-87.75	-2,753.55	612.79	4,016.06	3,953.83	62.23	64.532	
20,100.00	12,486.77	12,453.25	12,473.51	103.41	21.85	-87.67	-2,753.55	612.80	4,114.19	4,051.93	62.26	66.080	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Madera Federal 30-1 - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 25-VESSI_GYRO_DROP

Rule Assigned:

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
20,200.00	12,486.32	12,452.27	12,472.53	104.82	21.85	-87.60	-2,753.56	612.81	4,212.41	4,150.11	62.29	67.622	
20,300.00	12,485.86	12,451.28	12,471.54	106.23	21.85	-87.53	-2,753.56	612.81	4,310.70	4,248.37	62.33	69.160	
20,400.00	12,485.40	12,450.30	12,470.55	107.64	21.84	-87.46	-2,753.57	612.82	4,409.08	4,346.71	62.37	70.692	
20,487.00	12,485.00	12,449.50	12,469.76	108.86	21.84	-87.40	-2,753.57	612.82	4,494.72	4,432.31	62.41	72.023	

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Medera 19 TB Fed 1H - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 178-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	-0.50	1.41	1.41	42.82	903.80	837.62	1,232.26				
100.00	100.00	93.19	92.69	1.48	1.42	42.83	903.87	837.96	1,232.56	1,229.66	2.90	425.209	
200.00	200.00	186.46	185.95	1.89	1.43	42.86	904.07	838.96	1,233.45	1,230.13	3.32	371.437	
300.00	300.00	284.96	284.45	2.25	1.47	42.91	904.25	840.48	1,234.63	1,230.91	3.72	331.564	
400.00	400.00	390.26	389.73	2.56	1.55	42.96	904.38	842.17	1,235.82	1,231.71	4.11	300.591	
500.00	500.00	506.64	506.10	2.84	1.66	43.01	903.88	843.07	1,236.04	1,231.54	4.50	274.845	
600.00	600.00	608.72	608.17	3.10	1.77	43.02	903.20	842.88	1,235.43	1,230.56	4.87	253.739	
700.00	700.00	710.48	709.93	3.34	1.91	43.04	902.43	842.62	1,234.70	1,229.46	5.24	235.451	
800.00	800.00	811.78	811.23	3.56	2.06	43.06	901.47	842.32	1,233.81	1,228.19	5.62	219.553	
900.00	900.00	910.63	910.08	3.77	2.21	43.07	900.62	842.02	1,232.97	1,226.98	5.99	205.974	
1,000.00	1,000.00	1,011.16	1,010.60	3.98	2.38	43.08	899.86	841.59	1,232.12	1,225.77	6.35	193.937	
1,100.00	1,100.00	1,111.29	1,110.73	4.17	2.55	43.09	899.18	841.05	1,231.26	1,224.54	6.72	183.199	
1,200.00	1,200.00	1,204.85	1,204.29	4.36	2.71	43.08	898.78	840.59	1,230.62	1,223.55	7.07	173.955	
1,300.00	1,300.00	1,301.03	1,300.47	4.54	2.89	43.08	898.76	840.43	1,230.49	1,223.06	7.43	165.599	
1,335.31	1,335.31	1,335.89	1,335.32	4.60	2.95	43.08	898.77	840.42	1,230.48	1,222.92	7.56	162.830	
1,400.00	1,400.00	1,399.23	1,398.66	4.72	3.07	43.08	898.78	840.45	1,230.51	1,222.73	7.79	157.988	
1,500.00	1,500.00	1,499.98	1,499.42	4.89	3.26	43.08	898.81	840.59	1,230.63	1,222.48	8.15	151.052	
1,600.00	1,600.00	1,602.17	1,601.61	5.06	3.45	43.10	898.59	840.76	1,230.59	1,222.08	8.50	144.696	
1,700.00	1,700.00	1,701.67	1,701.10	5.22	3.64	43.11	898.24	840.94	1,230.46	1,221.60	8.86	138.914	
1,800.00	1,800.00	1,852.56	1,851.96	5.38	3.94	43.09	896.52	838.63	1,228.72	1,219.41	9.31	132.029	
1,900.00	1,900.00	2,014.54	2,013.51	5.53	4.27	42.98	890.00	829.22	1,221.72	1,211.96	9.76	125.167	
2,000.00	2,000.00	2,155.68	2,153.70	5.69	4.58	42.71	882.72	814.70	1,211.01	1,200.84	10.17	119.019	
2,100.00	2,100.00	2,272.49	2,269.12	5.83	4.87	42.31	876.49	797.88	1,197.27	1,186.71	10.56	113.410	
2,200.00	2,200.00	2,367.72	2,363.16	5.98	5.10	41.97	871.32	783.78	1,183.27	1,172.36	10.91	108.474	
2,300.00	2,300.00	2,464.67	2,458.96	6.13	5.34	41.63	866.07	769.80	1,169.59	1,158.33	11.26	103.899	
2,400.00	2,400.00	2,558.18	2,551.39	6.27	5.57	41.30	861.11	756.61	1,156.24	1,144.64	11.60	99.642	
2,500.00	2,500.00	2,651.19	2,643.43	6.41	5.81	40.99	856.32	744.01	1,143.42	1,131.47	11.95	95.663	
2,600.00	2,599.99	2,757.20	2,748.31	6.63	6.10	40.80	850.86	729.64	1,129.65	1,117.28	12.37	91.329	
2,700.00	2,699.91	2,861.78	2,851.65	6.97	6.40	40.70	845.24	714.61	1,113.24	1,100.37	12.86	86.536	
2,800.00	2,799.69	2,954.84	2,943.63	7.32	6.67	40.73	840.26	701.35	1,094.99	1,081.65	13.34	82.059	
2,900.00	2,899.27	3,062.18	3,049.70	7.67	6.98	40.84	834.57	685.86	1,074.73	1,060.88	13.85	77.605	
3,000.00	2,998.59	3,175.07	3,160.88	7.87	7.34	40.93	828.01	667.43	1,050.99	1,036.73	14.26	73.690	
3,100.00	3,097.85	3,267.60	3,251.95	8.06	7.63	40.89	822.43	652.09	1,026.54	1,011.88	14.66	70.035	
3,200.00	3,197.10	3,353.59	3,336.71	8.29	7.90	40.86	817.67	638.38	1,002.87	987.81	15.07	66.561	
3,300.00	3,296.35	3,440.49	3,422.56	8.52	8.16	40.86	813.42	625.61	980.46	964.97	15.49	63.313	
3,400.00	3,395.61	3,544.66	3,525.56	8.78	8.48	40.90	808.04	611.07	958.35	942.41	15.93	60.146	
3,500.00	3,494.86	3,647.56	3,627.06	9.04	8.81	40.88	802.34	595.09	934.91	918.51	16.40	57.022	
3,600.00	3,594.11	3,742.13	3,720.38	9.32	9.11	40.84	797.75	580.44	912.02	895.16	16.86	54.089	
3,700.00	3,693.37	3,850.83	3,827.49	9.60	9.48	40.76	792.16	562.83	888.48	871.12	17.35	51.195	
3,800.00	3,792.62	3,959.06	3,933.82	9.90	9.86	40.61	786.10	543.58	863.57	845.71	17.86	48.340	
3,900.00	3,891.88	4,055.57	4,028.45	10.20	10.21	40.42	780.60	525.45	837.98	819.60	18.38	45.597	
4,000.00	3,991.13	4,137.01	4,108.44	10.51	10.49	40.27	776.40	510.73	813.26	794.37	18.89	43.062	
4,100.00	4,090.38	4,228.74	4,198.81	10.83	10.81	40.10	772.76	495.42	790.29	770.88	19.41	40.720	
4,200.00	4,189.64	4,343.93	4,312.07	11.16	11.22	39.83	767.80	475.06	766.50	746.54	19.96	38.399	
4,300.00	4,288.89	4,445.70	4,411.82	11.49	11.60	39.56	762.00	455.72	740.80	720.28	20.52	36.108	
4,400.00	4,388.14	4,532.89	4,497.39	11.83	11.91	39.35	757.03	439.71	715.51	694.44	21.07	33.960	
4,500.00	4,487.40	4,628.93	4,591.81	12.17	12.25	39.14	751.89	422.99	691.08	669.46	21.62	31.960	
4,600.00	4,586.65	4,730.84	4,692.07	12.52	12.61	39.01	745.43	405.88	666.30	644.13	22.17	30.053	
4,700.00	4,685.91	4,819.69	4,779.57	12.87	12.92	38.95	739.43	391.62	641.67	618.95	22.72	28.244	
4,800.00	4,785.16	4,911.21	4,869.90	13.23	13.23	38.96	733.58	378.21	618.16	594.90	23.26	26.581	
4,900.00	4,884.41	5,007.04	4,964.65	13.59	13.54	39.08	727.27	365.28	595.21	571.44	23.78	25.034	
5,000.00	4,983.67	5,113.46	5,069.76	13.95	13.89	39.20	719.83	350.42	571.69	547.40	24.29	23.537	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

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Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Medera 19 TB Fed 1H - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 178-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,082.92	5,213.48	5,168.30	14.32	14.24	39.22	712.51	334.94	546.97	522.14	24.83	22.031	
5,200.00	5,182.17	5,303.00	5,256.55	14.69	14.55	39.23	706.37	321.20	522.67	497.28	25.39	20.586	
5,300.00	5,281.43	5,395.35	5,347.79	15.06	14.86	39.28	700.66	308.11	499.62	473.68	25.94	19.263	
5,400.00	5,380.68	5,490.76	5,442.16	15.44	15.17	39.38	695.11	295.22	477.26	450.78	26.48	18.026	
5,500.00	5,479.94	5,595.87	5,545.92	15.81	15.52	39.33	689.19	279.55	454.16	427.14	27.02	16.808	
5,600.00	5,579.19	5,696.95	5,645.39	16.19	15.89	39.09	683.32	262.54	429.76	402.15	27.61	15.565	
5,700.00	5,678.44	5,793.83	5,740.67	16.57	16.24	38.85	677.26	246.12	404.94	376.73	28.22	14.352	
5,800.00	5,777.70	5,888.82	5,834.18	16.96	16.58	38.64	671.35	230.43	380.43	351.60	28.83	13.196	
5,900.00	5,876.95	5,984.02	5,927.97	17.34	16.92	38.42	665.72	215.11	356.42	326.97	29.44	12.105	
6,000.00	5,976.20	6,080.52	6,023.10	17.73	17.26	38.17	660.32	199.86	332.82	302.76	30.06	11.071	
6,100.00	6,075.46	6,174.80	6,116.06	18.12	17.58	37.92	654.94	185.14	309.28	278.58	30.70	10.075	
6,200.00	6,174.71	6,264.43	6,204.80	18.50	17.87	37.82	651.17	173.14	288.21	256.88	31.33	9.200	
6,300.00	6,273.97	6,359.11	6,298.82	18.90	18.14	38.09	647.13	162.72	268.55	236.70	31.85	8.431	
6,400.00	6,373.22	6,449.98	6,389.32	19.29	18.38	38.75	643.94	155.19	251.15	218.84	32.31	7.773	
6,500.00	6,472.47	6,541.10	6,480.29	19.68	18.57	39.83	642.04	150.49	236.84	204.19	32.65	7.254	
6,600.00	6,571.73	6,633.90	6,573.06	20.07	18.74	41.38	641.56	148.55	225.80	192.94	32.86	6.871	
6,700.00	6,670.98	6,732.60	6,671.76	20.47	18.90	43.25	641.88	147.60	216.34	183.33	33.01	6.554	
6,800.00	6,770.23	6,832.34	6,771.49	20.87	19.06	45.37	641.98	146.72	207.05	173.95	33.10	6.255	
6,900.00	6,869.49	6,931.43	6,870.58	21.26	19.23	47.72	641.97	145.98	198.07	164.93	33.13	5.978	
7,000.00	6,968.74	7,030.83	6,969.98	21.66	19.39	50.27	642.00	145.15	189.43	156.30	33.12	5.719	
7,100.00	7,068.00	7,128.72	7,067.87	22.06	19.54	52.99	642.12	144.39	181.30	148.24	33.06	5.484	
7,200.00	7,167.25	7,225.86	7,165.00	22.46	19.69	55.76	643.46	144.45	175.00	142.03	32.98	5.307	
7,300.00	7,266.50	7,324.83	7,263.94	22.86	19.84	58.63	645.52	144.82	169.82	136.93	32.89	5.163	
7,400.00	7,365.76	7,424.19	7,363.28	23.26	19.98	61.80	647.38	145.48	165.24	132.47	32.77	5.043	
7,500.00	7,465.01	7,523.94	7,463.01	23.66	20.13	65.10	649.32	146.09	161.17	128.53	32.64	4.937	
7,600.00	7,564.26	7,623.79	7,562.84	24.07	20.28	68.60	651.10	146.46	157.41	124.88	32.53	4.839	
7,700.00	7,663.52	7,723.27	7,662.32	24.47	20.43	72.39	652.47	146.84	154.13	121.70	32.43	4.752	
7,800.00	7,762.77	7,823.15	7,762.19	24.87	20.59	76.35	653.77	147.12	151.45	119.04	32.41	4.673	
7,900.00	7,862.03	7,923.15	7,862.18	25.28	20.75	80.43	655.03	147.01	149.12	116.62	32.50	4.589	
8,000.00	7,961.28	8,022.59	7,961.61	25.68	20.91	84.60	656.24	146.65	147.31	114.59	32.72	4.502	
8,100.00	8,060.53	8,121.61	8,060.63	26.09	21.07	88.97	657.10	146.44	146.46	113.34	33.12	4.422	
8,126.63	8,086.96	8,147.99	8,087.01	26.20	21.12	90.15	657.28	146.43	146.43	113.17	33.26	4.402 CC	
8,200.00	8,159.79	8,220.72	8,159.74	26.50	21.24	93.42	657.79	146.44	146.71	112.98	33.73	4.350 ES	
8,300.00	8,259.04	8,320.18	8,259.20	26.90	21.40	97.78	658.66	146.49	147.87	113.34	34.54	4.281	
8,400.00	8,358.29	8,419.25	8,358.26	27.31	21.56	102.01	659.59	146.62	149.95	114.43	35.52	4.222	
8,500.00	8,457.55	8,518.54	8,457.54	27.72	21.72	106.01	660.73	146.93	152.95	116.33	36.62	4.176	
8,600.00	8,556.80	8,617.91	8,556.90	28.12	21.88	109.81	661.95	147.30	156.70	118.88	37.82	4.144	
8,700.00	8,656.06	8,717.30	8,656.29	28.53	22.04	113.40	663.21	147.70	161.12	122.06	39.06	4.125	
8,800.00	8,755.31	8,816.68	8,755.66	28.94	22.21	116.86	664.30	148.02	166.15	125.80	40.35	4.117 SF	
8,900.00	8,854.56	8,916.17	8,855.14	29.35	22.37	120.16	665.25	148.25	171.75	130.09	41.66	4.123	
9,000.00	8,953.82	9,015.66	8,954.63	29.76	22.55	123.56	665.44	147.86	177.80	134.75	43.05	4.131	
9,100.00	9,053.07	9,114.86	9,053.82	30.17	22.73	126.96	665.01	147.03	184.44	139.98	44.46	4.149	
9,200.00	9,152.32	9,213.98	9,152.94	30.58	22.91	130.13	664.50	146.14	191.70	145.87	45.83	4.183	
9,300.00	9,251.58	9,312.91	9,251.87	30.99	23.09	133.02	664.07	145.43	199.58	152.47	47.12	4.236	
9,400.00	9,350.83	9,411.48	9,350.43	31.40	23.26	135.57	663.74	145.11	208.13	159.82	48.31	4.308	
9,500.00	9,450.09	9,510.82	9,449.77	31.81	23.44	137.85	663.48	145.20	217.29	167.87	49.42	4.397	
9,600.00	9,549.34	9,610.67	9,549.63	32.22	23.62	140.02	663.25	144.92	226.52	176.01	50.51	4.485	
9,700.00	9,648.59	9,708.87	9,647.81	32.64	23.80	142.16	662.55	144.06	236.04	184.47	51.57	4.577	
9,800.00	9,747.85	9,805.43	9,744.36	33.05	23.98	144.19	661.05	143.38	246.66	194.07	52.59	4.690	
9,900.00	9,847.10	9,904.86	9,843.77	33.46	24.16	146.09	659.06	143.11	258.18	204.59	53.58	4.818	
10,000.00	9,946.43	10,004.18	9,943.08	33.86	24.34	147.73	657.50	142.94	269.10	214.61	54.48	4.939	
10,100.00	10,046.02	10,103.81	10,042.70	34.27	24.53	148.98	656.01	142.85	278.03	222.74	55.29	5.028	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

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10,200.00	10,145.81	10,202.38	10,141.26	34.67	24.71	149.83	654.48	142.93	284.96	228.97	55.99	5.090	
10,300.00	10,245.73	10,302.95	10,241.82	35.02	24.89	150.36	652.93	143.22	289.75	233.16	56.60	5.120	
10,400.00	10,345.72	10,402.78	10,341.63	35.21	25.07	150.48	651.80	143.95	292.16	235.19	56.97	5.128	
10,500.00	10,445.72	10,501.00	10,439.83	35.25	25.24	150.31	650.78	145.53	293.86	236.74	57.12	5.144	
10,600.00	10,545.72	10,599.55	10,538.35	35.29	25.40	150.02	649.58	147.95	296.14	238.89	57.25	5.173	
10,700.00	10,645.72	10,701.39	10,640.11	35.33	25.56	149.45	648.89	151.76	298.62	241.27	57.35	5.207	
10,800.00	10,745.72	10,809.04	10,747.72	35.37	25.73	148.86	650.11	154.60	298.98	241.48	57.50	5.199	
10,900.00	10,845.72	10,912.02	10,850.64	35.41	25.89	148.27	652.79	156.57	297.75	240.16	57.59	5.170	
11,000.00	10,945.72	11,012.36	10,950.91	35.45	26.05	147.62	656.13	158.44	295.91	238.27	57.65	5.133	
11,100.00	11,045.72	11,110.73	11,049.20	35.49	26.21	146.93	659.31	160.66	294.41	236.75	57.66	5.106	
11,200.00	11,145.72	11,208.83	11,147.25	35.53	26.37	146.37	661.57	162.57	293.56	235.84	57.72	5.086	
11,300.00	11,245.72	11,307.80	11,246.19	35.57	26.53	145.86	663.28	164.60	293.27	235.48	57.79	5.075	
11,400.00	11,345.72	11,409.38	11,347.75	35.62	26.70	145.44	664.74	166.16	292.95	235.04	57.92	5.058	
11,500.00	11,445.72	11,511.62	11,449.97	35.66	26.88	145.15	666.52	166.79	291.87	233.79	58.08	5.025	
11,600.00	11,545.72	11,613.68	11,552.00	35.70	27.06	144.86	668.85	166.89	290.05	231.81	58.25	4.980	
11,700.00	11,645.72	11,713.10	11,651.39	35.74	27.24	144.61	671.29	166.73	287.96	229.56	58.40	4.931	
11,800.00	11,745.72	11,812.19	11,750.46	35.78	27.42	144.44	673.23	166.38	286.15	227.57	58.58	4.885	
11,900.00	11,845.72	11,913.03	11,851.29	35.82	27.60	144.30	675.10	165.92	284.39	225.61	58.78	4.838	
12,000.00	11,945.72	12,012.00	11,950.23	35.87	27.79	144.17	677.06	165.31	282.43	223.46	58.97	4.790	
12,100.00	12,045.72	12,113.78	12,052.00	35.90	27.98	-52.29	678.47	164.56	280.86	221.66	59.20	4.744	
12,200.00	12,144.92	12,277.71	12,212.28	35.60	28.19	-62.38	708.43	167.97	262.20	204.84	57.36	4.571	
12,300.00	12,239.64	12,395.69	12,313.81	35.20	28.25	-87.87	767.49	171.30	220.55	168.90	51.66	4.270	
12,394.38	12,321.21	12,436.05	12,343.75	34.81	28.26	-101.12	794.51	171.95	200.19	153.74	46.46	4.309	
12,400.00	12,325.75	12,437.15	12,344.53	34.79	28.26	-101.42	795.29	171.96	200.28	154.02	46.26	4.329	
12,500.00	12,399.49	12,442.57	12,348.33	34.41	28.26	-99.44	799.16	172.01	228.12	181.69	46.42	4.914	
12,600.00	12,457.62	12,430.93	12,340.11	34.10	28.26	-86.12	790.91	171.90	291.61	242.15	49.46	5.896	
12,700.00	12,497.61	12,410.05	12,324.78	33.89	28.25	-66.65	776.75	171.59	369.55	317.64	51.91	7.119	
12,800.00	12,517.71	12,390.00	12,309.37	33.79	28.25	-49.62	763.94	171.17	450.15	396.30	53.85	8.359	
12,900.00	12,519.77	12,356.48	12,282.17	33.80	28.23	-42.97	744.37	170.32	528.45	473.23	55.22	9.569	
13,000.00	12,519.31	12,332.90	12,262.05	33.84	28.22	-44.68	732.10	169.66	607.72	551.11	56.61	10.735	
13,100.00	12,518.85	12,295.00	12,228.23	33.87	28.21	-45.10	715.07	168.51	688.86	631.10	57.75	11.928	
13,200.00	12,518.39	12,295.00	12,228.23	33.89	28.21	-48.85	715.07	168.51	769.61	710.59	59.01	13.041	
13,300.00	12,517.93	12,295.00	12,228.23	33.90	28.21	-51.48	715.07	168.51	851.82	791.79	60.02	14.192	
13,400.00	12,517.47	12,295.00	12,228.23	33.91	28.21	-51.48	715.07	168.51	936.81	876.02	60.80	15.409	
13,500.00	12,517.01	12,260.42	12,196.05	33.93	28.17	-48.46	702.48	167.42	1,022.55	961.14	61.41	16.651	
13,600.00	12,516.55	12,251.35	12,187.45	33.94	28.16	-47.69	699.64	167.14	1,111.21	1,049.28	61.93	17.944	
13,700.00	12,516.10	12,243.39	12,179.84	33.96	28.15	-47.03	697.31	166.90	1,201.44	1,139.08	62.35	19.268	
13,800.00	12,515.64	12,201.00	12,138.66	33.98	28.11	-43.66	687.43	165.61	1,294.91	1,232.11	62.80	20.620	
13,900.00	12,515.18	12,201.00	12,138.66	34.01	28.11	-43.66	687.43	165.61	1,386.80	1,323.70	63.10	21.978	
14,000.00	12,514.72	12,201.00	12,138.66	34.04	28.11	-43.66	687.43	165.61	1,479.74	1,416.40	63.35	23.359	
14,100.00	12,514.26	12,201.00	12,138.66	34.07	28.11	-43.66	687.43	165.61	1,573.55	1,510.00	63.56	24.758	
14,200.00	12,513.81	12,201.00	12,138.66	34.11	28.11	-43.66	687.43	165.61	1,668.08	1,604.35	63.73	26.173	
14,300.00	12,513.35	12,201.00	12,138.66	34.16	28.11	-43.66	687.43	165.61	1,763.21	1,699.33	63.88	27.600	
14,400.00	12,512.89	12,201.00	12,138.66	34.22	28.11	-43.66	687.43	165.61	1,858.85	1,794.84	64.02	29.037	
14,500.00	12,512.43	12,201.00	12,138.66	34.29	28.11	-43.66	687.43	165.61	1,954.93	1,890.80	64.13	30.483	
14,600.00	12,511.97	12,201.00	12,138.66	34.39	28.11	-43.66	687.43	165.61	2,051.39	1,987.15	64.23	31.937	
14,700.00	12,511.51	12,201.00	12,138.66	34.53	28.11	-43.66	687.43	165.61	2,148.16	2,083.84	64.32	33.396	
14,800.00	12,511.06	12,201.00	12,138.66	34.75	28.11	-43.66	687.43	165.61	2,245.22	2,180.82	64.41	34.859	
14,900.00	12,510.60	12,201.00	12,138.66	35.10	28.11	-43.66	687.43	165.61	2,342.53	2,278.05	64.48	36.327	
15,000.00	12,510.14	12,201.00	12,138.66	35.67	28.11	-43.66	687.43	165.61	2,440.06	2,375.50	64.56	37.798	
15,100.00	12,509.68	12,201.00	12,138.66	36.47	28.11	-43.66	687.43	165.61	2,537.78	2,473.15	64.62	39.271	
15,200.00	12,509.22	12,201.00	12,138.66	37.45	28.11	-43.66	687.43	165.61	2,635.66	2,570.98	64.68	40.747	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Medera 19 TB Fed 1H - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 178-MWD

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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)	Rule Assigned: Distance Between Centres (usft)	Rule Assigned: Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,300.00	12,508.77	12,201.00	12,138.66	38.53	28.11	-43.66	687.43	165.61	2,733.71	2,668.96	64.74	42.223	
15,400.00	12,508.31	12,201.00	12,138.66	39.68	28.11	-43.66	687.43	165.61	2,831.89	2,767.08	64.80	43.701	
15,500.00	12,507.85	12,201.00	12,138.66	40.87	28.11	-43.66	687.43	165.61	2,930.19	2,865.33	64.86	45.179	
15,600.00	12,507.39	12,201.00	12,138.66	42.08	28.11	-43.66	687.43	165.61	3,028.60	2,963.69	64.91	46.658	
15,700.00	12,506.93	12,201.00	12,138.66	43.32	28.11	-43.66	687.43	165.61	3,127.11	3,062.15	64.96	48.137	
15,800.00	12,506.47	12,201.00	12,138.66	44.58	28.11	-43.66	687.43	165.61	3,225.72	3,160.70	65.02	49.615	
15,900.00	12,506.02	12,201.00	12,138.66	45.85	28.11	-43.66	687.43	165.61	3,324.41	3,259.34	65.07	51.092	
16,000.00	12,505.56	12,201.00	12,138.66	47.13	28.11	-43.66	687.43	165.61	3,423.17	3,358.06	65.12	52.569	
16,100.00	12,505.10	12,201.00	12,138.66	48.42	28.11	-43.66	687.43	165.61	3,522.01	3,456.84	65.17	54.045	
16,200.00	12,504.64	12,201.00	12,138.66	49.72	28.11	-43.66	687.43	165.61	3,620.91	3,555.69	65.22	55.519	
16,300.00	12,504.18	12,201.00	12,138.66	51.03	28.11	-43.66	687.43	165.61	3,719.86	3,654.59	65.27	56.992	
16,400.00	12,503.73	12,159.02	12,097.13	52.35	28.05	-40.65	681.40	164.72	3,817.01	3,751.43	65.58	58.203	
16,500.00	12,503.27	12,157.68	12,095.80	53.68	28.05	-40.56	681.26	164.70	3,915.96	3,850.32	65.64	59.658	
16,600.00	12,502.81	12,156.40	12,094.53	55.01	28.05	-40.47	681.13	164.69	4,014.96	3,949.26	65.70	61.110	
16,700.00	12,502.35	12,155.18	12,093.31	56.34	28.04	-40.39	681.01	164.67	4,114.00	4,048.24	65.76	62.560	
16,800.00	12,501.89	12,154.00	12,092.14	57.68	28.04	-40.31	680.89	164.66	4,213.09	4,147.27	65.82	64.008	
16,900.00	12,501.43	12,152.88	12,091.02	59.03	28.04	-40.24	680.78	164.65	4,312.21	4,246.33	65.88	65.454	
17,000.00	12,500.98	12,151.79	12,089.94	60.38	28.04	-40.17	680.68	164.64	4,411.37	4,345.43	65.94	66.897	
17,100.00	12,500.52	12,150.75	12,088.91	61.73	28.04	-40.10	680.59	164.63	4,510.57	4,444.56	66.00	68.338	
17,200.00	12,500.06	12,149.75	12,087.91	63.09	28.03	-40.03	680.50	164.62	4,609.80	4,543.73	66.07	69.776	
17,300.00	12,499.60	12,107.00	12,045.22	64.45	27.97	-37.40	678.35	164.61	4,710.85	4,644.47	66.38	70.965	
17,400.00	12,499.14	12,107.00	12,045.22	65.82	27.97	-37.40	678.35	164.61	4,810.06	4,743.62	66.44	72.397	
17,500.00	12,498.69	12,107.00	12,045.22	67.19	27.97	-37.40	678.35	164.61	4,909.30	4,842.80	66.50	73.827	
17,600.00	12,498.23	12,107.00	12,045.22	68.56	27.97	-37.40	678.35	164.61	5,008.56	4,942.01	66.56	75.253	
17,700.00	12,497.77	12,107.00	12,045.22	69.93	27.97	-37.40	678.35	164.61	5,107.86	5,041.24	66.62	76.677	
17,800.00	12,497.31	12,107.00	12,045.22	71.31	27.97	-37.40	678.35	164.61	5,207.18	5,140.51	66.68	78.097	
17,900.00	12,496.85	12,107.00	12,045.22	72.68	27.97	-37.40	678.35	164.61	5,306.53	5,239.79	66.74	79.514	
18,000.00	12,496.39	12,107.00	12,045.22	74.07	27.97	-37.40	678.35	164.61	5,405.90	5,339.11	66.80	80.928	
18,100.00	12,495.94	12,107.00	12,045.22	75.45	27.97	-37.40	678.35	164.61	5,505.30	5,438.44	66.86	82.339	
18,200.00	12,495.48	12,107.00	12,045.22	76.83	27.97	-37.40	678.35	164.61	5,604.72	5,537.79	66.93	83.746	
18,300.00	12,495.02	12,107.00	12,045.22	78.22	27.97	-37.40	678.35	164.61	5,704.15	5,637.16	66.99	85.149	
18,400.00	12,494.56	12,107.00	12,045.22	79.61	27.97	-37.40	678.35	164.61	5,803.61	5,736.56	67.06	86.549	
18,500.00	12,494.10	12,107.00	12,045.22	81.00	27.97	-37.40	678.35	164.61	5,903.09	5,835.96	67.12	87.945	
18,600.00	12,493.65	12,107.00	12,045.22	82.39	27.97	-37.40	678.35	164.61	6,002.58	5,935.39	67.19	89.338	
18,700.00	12,493.19	12,107.00	12,045.22	83.78	27.97	-37.40	678.35	164.61	6,102.09	6,034.83	67.26	90.726	
18,800.00	12,492.73	12,107.00	12,045.22	85.18	27.97	-37.40	678.35	164.61	6,201.61	6,134.28	67.33	92.111	
18,900.00	12,492.27	12,107.00	12,045.22	86.57	27.97	-37.40	678.35	164.61	6,301.15	6,233.75	67.40	93.492	
19,000.00	12,491.81	12,107.00	12,045.22	87.97	27.97	-37.40	678.35	164.61	6,400.71	6,333.24	67.47	94.868	
19,100.00	12,491.36	12,107.00	12,045.22	89.37	27.97	-37.40	678.35	164.61	6,500.27	6,432.73	67.54	96.241	
19,200.00	12,490.90	12,107.00	12,045.22	90.77	27.97	-37.40	678.35	164.61	6,599.86	6,532.24	67.62	97.609	
19,300.00	12,490.44	12,107.00	12,045.22	92.17	27.97	-37.40	678.35	164.61	6,699.45	6,631.76	67.69	98.973	
19,400.00	12,489.98	12,107.00	12,045.22	93.57	27.97	-37.40	678.35	164.61	6,799.05	6,731.29	67.76	100.333	
19,500.00	12,489.52	12,107.00	12,045.22	94.97	27.97	-37.40	678.35	164.61	6,898.67	6,830.83	67.84	101.689	
19,600.00	12,489.06	12,107.00	12,045.22	96.38	27.97	-37.40	678.35	164.61	6,998.30	6,930.38	67.92	103.040	
19,700.00	12,488.61	12,107.00	12,045.22	97.78	27.97	-37.40	678.35	164.61	7,097.94	7,029.94	68.00	104.387	
19,800.00	12,488.15	12,107.00	12,045.22	99.19	27.97	-37.40	678.35	164.61	7,197.59	7,129.51	68.08	105.730	
19,900.00	12,487.69	12,107.00	12,045.22	100.59	27.97	-37.40	678.35	164.61	7,297.24	7,229.09	68.16	107.067	
20,000.00	12,487.23	12,107.00	12,045.22	102.00	27.97	-37.40	678.35	164.61	7,396.91	7,328.67	68.24	108.401	
20,100.00	12,486.77	12,107.00	12,045.22	103.41	27.97	-37.40	678.35	164.61	7,496.59	7,428.27	68.32	109.729	
20,200.00	12,486.32	12,107.00	12,045.22	104.82	27.97	-37.40	678.35	164.61	7,596.27	7,527.87	68.40	111.054	
20,300.00	12,485.86	12,107.00	12,045.22	106.23	27.97	-37.40	678.35	164.61	7,695.96	7,627.48	68.49	112.373	
20,400.00	12,485.40	12,107.00	12,045.22	107.64	27.97	-37.40	678.35	164.61	7,795.66	7,727.09	68.57	113.688	

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

PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Offset Design: Los Vaqueros Fed Offsets - Medera 19 TB Fed 1H - OH - Surveys

Offset Site Error: 1.00 usft

Survey Program: 178-MWD

Rule Assigned:

Offset Well Error: 1.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset 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
20,487.00	12,485.00	12,107.00	12,045.22	108.86	27.97	-37.40	678.35	164.61	7,882.41	7,813.77	68.65	114.828	

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

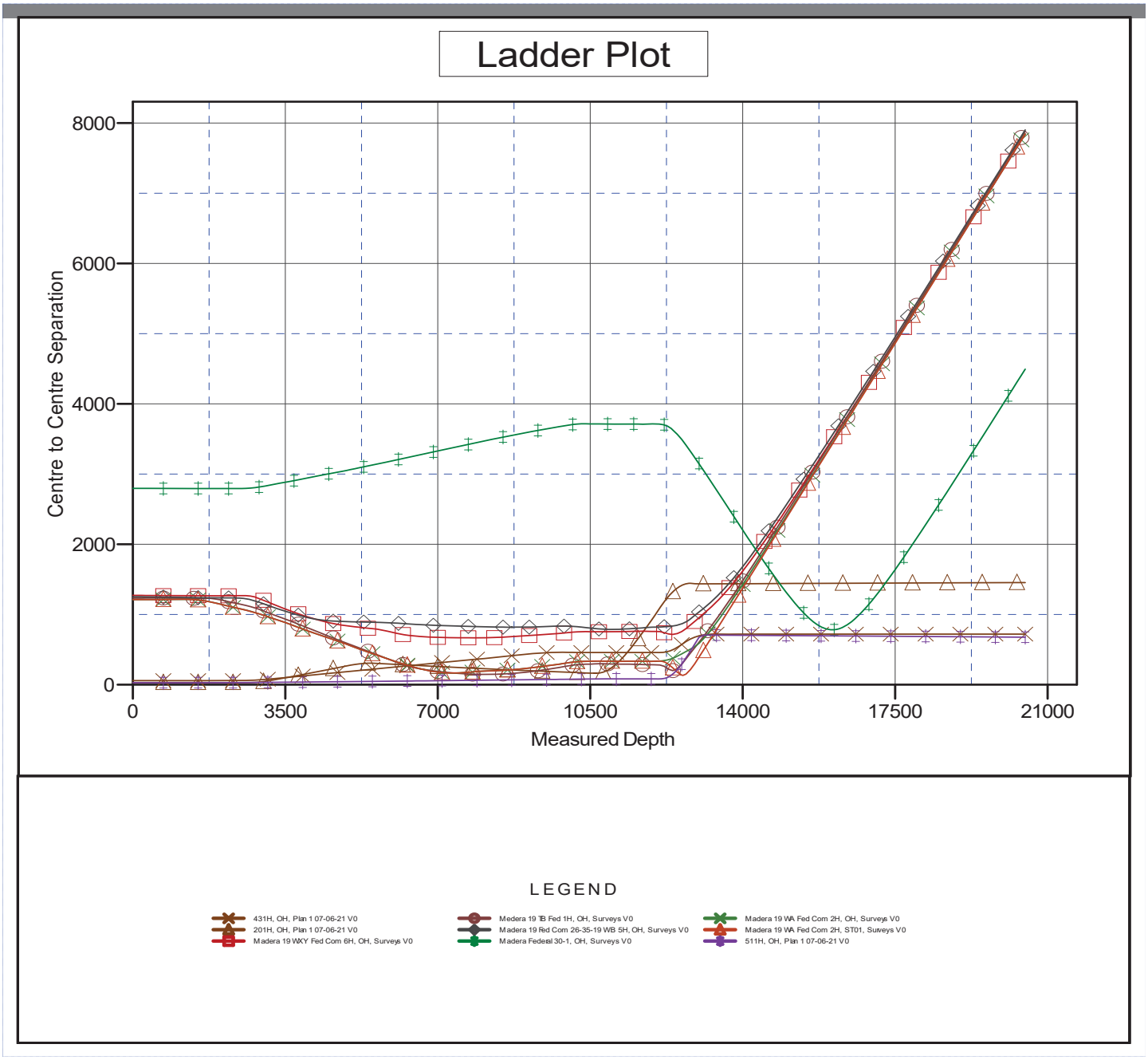
PHOENIX TECHNOLOGY SERVICES

Anticollision Report

TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Reference Depths are relative to RKB @ 3211.00usft (Est RKB)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 19' 60.000000 W
Coordinates are relative to: 321H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.49°



PHOENIX TECHNOLOGY SERVICES

Anticollision Report

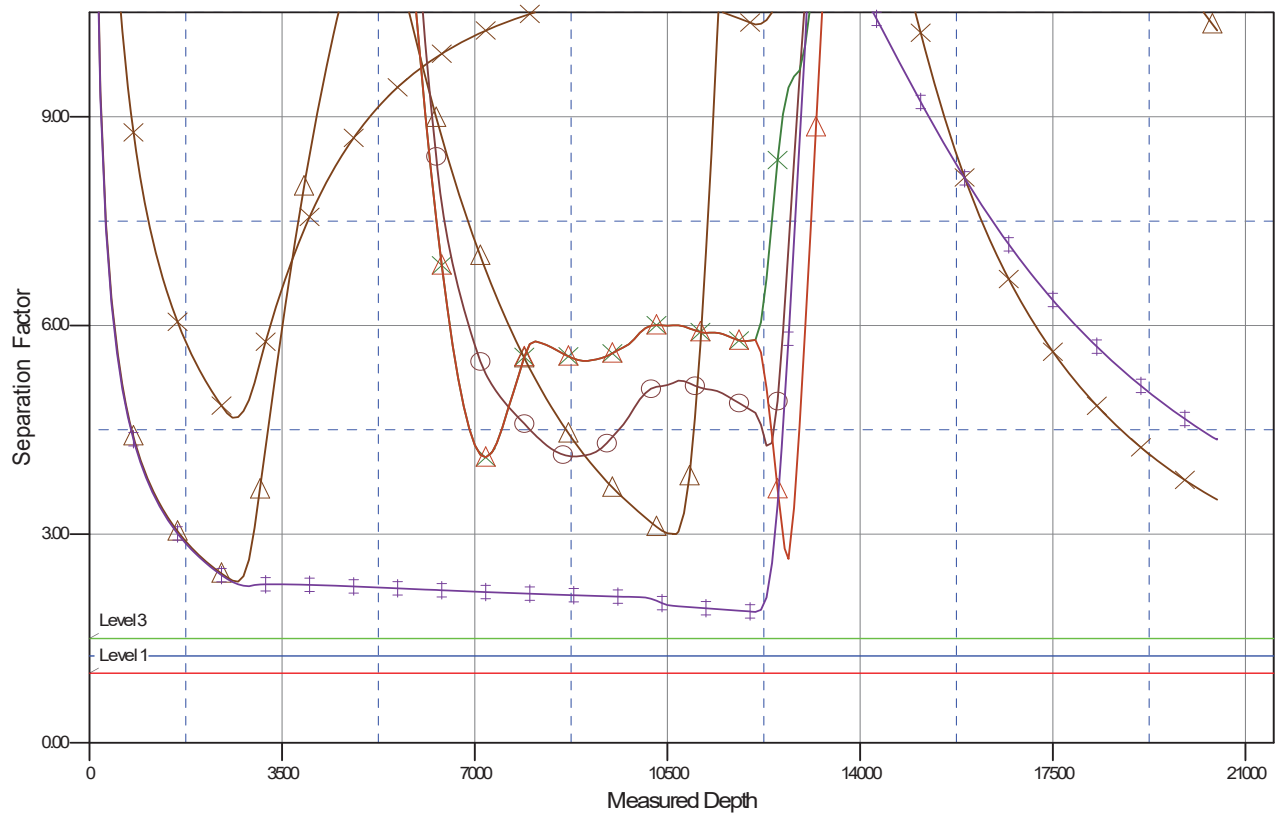
TITUS OIL GAS LLC

Company:	Titus Oil & Gas Production, LLC	**Local Co-ordinate Reference:**	Well 321H
Project:	Lea County, NM - (NAD83 NME)	**TVD Reference:**	RKB @ 3211.00usft (Est RKB)
Reference Site:	Los Vaqueros Fed	**MD Reference:**	RKB @ 3211.00usft (Est RKB)
Site Error:	1.00 usft	**North Reference:**	Grid
Reference Well:	321H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	1.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	USA Compass
Reference Design:	Plan 1 07-06-21	**Offset TVD Reference:**	Reference Datum

Reference Depths are relative to RKB @ 3211.00usft (Est RKB)
Offset Depths are relative to Offset Datum
Central Meridian is 104° 19' 60.000000 W

Coordinates are relative to: 321H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.49°

Separation Factor Plot



LEGEND

431H, OH, Plan 1 07-06-21 V0
201H, OH, Plan 1 07-06-21 V0
Madera 19 WXY Fed Com 6H, OH, Surveys V0
Medera 19 TB Fed 1H, OH, Surveys V0
Madera 19 Fed Com 26-35-19 WB 5H, OH, Surveys V0
Madera Federal 30-1, OH, Surveys V0
Madera 19 WA Fed Com 2H, OH, Surveys V0
Madera 19 WA Fed Com 2H, ST01, Surveys V0
511H, OH, Plan 1 07-06-21 V0

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

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Titus Oil and Gas**
LEASE NO.:	**NMNM062932**
LOCATION:	Section 23, T.26 S., R.34 E., NMPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	Los Vaqueros Fed 321H
SURFACE HOLE FOOTAGE:	547'/N & 523'/W
BOTTOM HOLE FOOTAGE	10'/N & 330'/W

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 **10-3/4** inch surface casing shall be set at approximately **1130** feet (a minimum of 25 feet (Lea County) into the Rustler Anhydrite and above the salt) and cemented to the surface.

    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.

2. The minimum required fill of cement behind the **7-5/8** inch intermediate casing is:
   - Cement to surface. If cement does not circulate see B.1.a, c-d above.

Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.

Operator has proposed to pump down 7-5/8" X 10-3/4" annulus. Operator must run a CBL from TD of the 7-5/8" casing to surface. Submit results to BLM.

3. The minimum required fill of cement behind the **5-1/2** x **5** 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 **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 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) 393-3612

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 intergrity 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 intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

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 when specified), 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 plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. 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

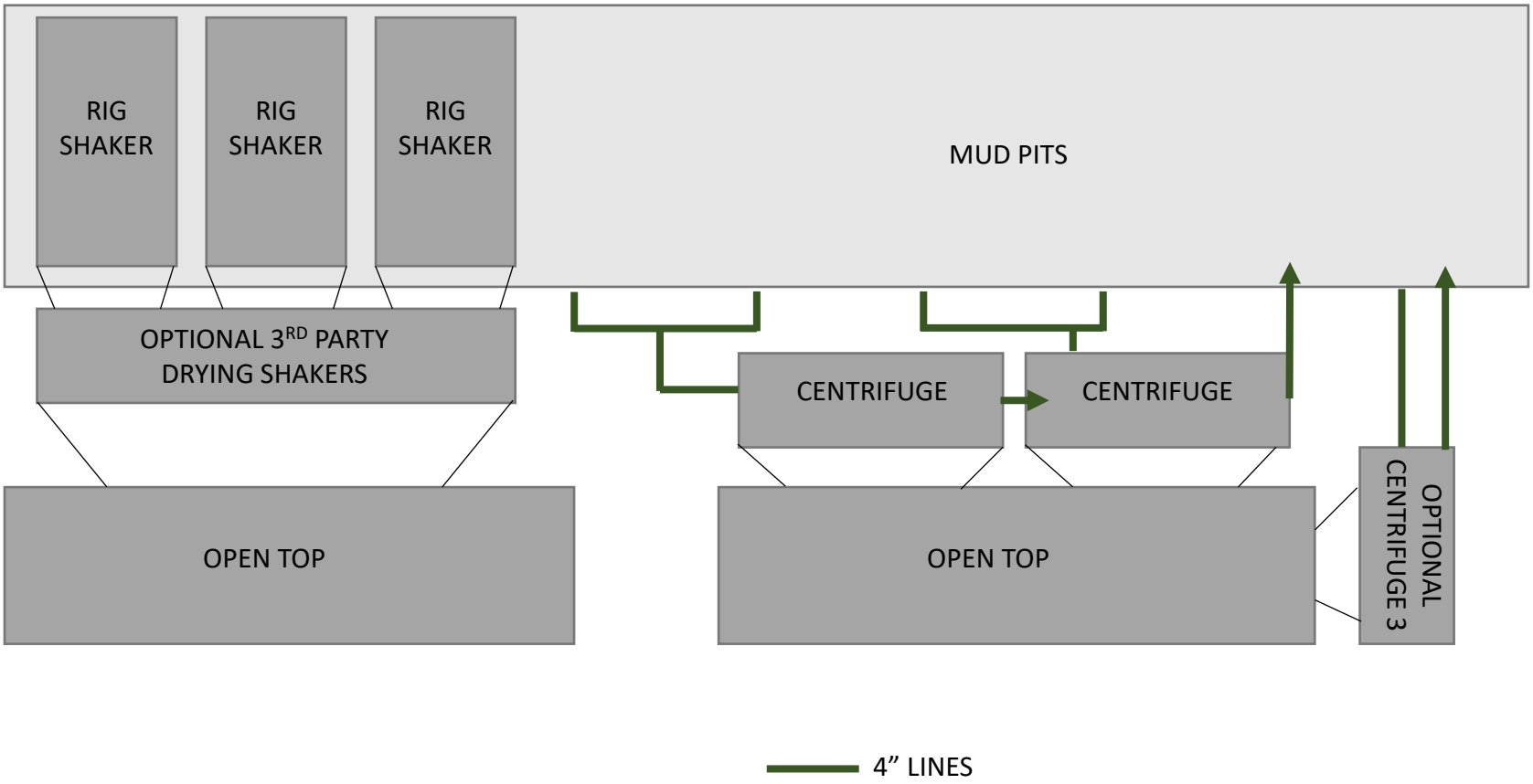
Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented. **Due to the Abnormal Pressure in this location the minimum max mud weight should be at least 12.5 ppg.**

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.
ZS 071521

CLOSED LOOP SCHEMATIC



District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 37486

CONDITIONS

Operator: Titus Oil & Gas Production, LLC 420 Throckmorton St, Ste 1150 Fort Worth, TX 76012	OGRID: 373986
	Action Number: 37486
	Action Type: [C-101] BLM - Federal/Indian Land Lease (Form 3160-3)

CONDITIONS

Created By	Condition	Condition Date
pkautz	Will require a File As Drilled C-102 and a Directional Survey with the C-104	7/22/2021
pkautz	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string	7/22/2021