

Form 3160-3
(June 2015)FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☐ DRILL ☐ REENTER		5. Lease Serial No.
1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other		6. If Indian, Allottee or Tribe Name
1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		7. If Unit or CA Agreement, Name and No.
2. Name of Operator		8. Lease Name and Well No.
3a. Address		9. API Well No. 30-025-52590
3b. Phone No. (include area code)		10. Field and Pool, or Exploratory
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. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification. |
| 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). | 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.

(Continued on page 2)

*(Instructions on page 2)



Approval Date: 02/16/2024

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 well, 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 directionally 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 well 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 will 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 connects this information to an 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 Connection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

Additional Operator Remarks

Location of Well

0. SHL: SWSE / 10 FSL / 1325 FEL / TWSP: 20S / RANGE: 34E / SECTION: 20 / LAT: 32.5513493 / LONG: -103.5781501 (TVD: 0 feet, MD: 0 feet)

PPP: SWSE / 100 FSL / 1650 FEL / TWSP: 20S / RANGE: 34E / SECTION: 20 / LAT: 32.5515788 / LONG: -103.579205 (TVD: 11003 feet, MD: 11058 feet)

BHL: NWNE / 10 FNL / 1650 FEL / TWSP: 20S / RANGE: 34E / SECTION: 17 / LAT: 32.5803877 / LONG: -103.5792254 (TVD: 11163 feet, MD: 21467 feet)

BLM Point of Contact

Name: GAVIN MICKWEE

Title: Land Law Examiner

Phone: (575) 234-5972

Email: GMICKWEE@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 30-025-52590		2 Pool Code 59500	TONTO;WOLFCAMP	
4 Property Code 335390	5 Property Name ROBIN FED		6 Well Number 203H	
7 OGRID No. 371449	8 Operator Name COLGATE ENERGY LLC		9 Elevation 3674.14'	

¹⁰ Surface Location

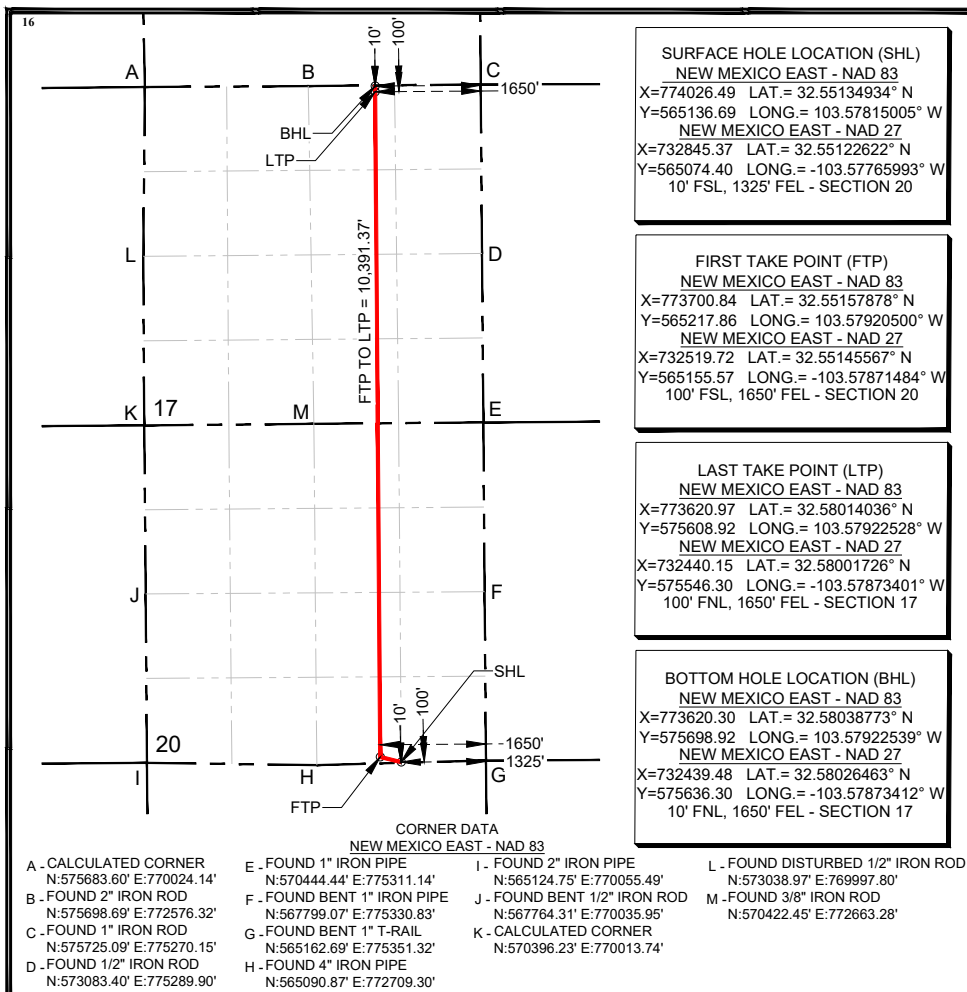
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	20	20-S	34-E		10'	SOUTH	1325'	EAST	LEA

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
B	17	20-S	34-E		10'	NORTH	1650'	EAST	LEA

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
320			

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.



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.

Signature _____ Date 05.16.2022

Mikah Thomas

Printed Name _____

mthomas@colgateenergy.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: _____

(12177)

Certificate Number

3/28/2022

State of New Mexico
Energy, Minerals and Natural Resources Department

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: Permian Resources Operating, LLC **OGRID:** 372165 **Date:** 8/29/2023

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	Anticipated Gas	Anticipated Prod Water
Robin Fed Com 111H		L-20-T20S-R34E	1680' FSL – 1255' FWL	730 BOPD	1062 MCFD	1729 BWPD
Robin Fed Com 112H		K-20-T20S-R34E	1680' FSL – 1375' FWL	730 BOPD	1062 MCFD	1729 BWPD
Robin Fed 113H		O-20-T20S-R34E	330' FSL – 1385' FEL	730 BOPD	1062 MCFD	1729 BWPD
Robin Fed 114H		P-20-T20S-R34E	330' FSL – 1265' FEL	730 BOPD	1062 MCFD	1729 BWPD
Robin Fed Com 121H		L-20-T20S-R34E	1680' FSL – 1285' FWL	869 BOPD	685 MCFD	3740 BWPD
Robin Fed Com 122H		L-20-T20S-R34E	1680' FSL – 1315' FWL	869 BOPD	685 MCFD	3740 BWPD
Robin Fed Com 123H		K-20-T20S-R34E	1680' FSL – 1345' FWL	869 BOPD	685 MCFD	3740 BWPD
Robin Fed Com 124H		K-20-T20S-R34E	1680' FSL – 1405' FWL	869 BOPD	685 MCFD	3740 BWPD
Robin Fed 125H		O-20-T20S-R34E	330' FSL – 1355' FEL	869 BOPD	685 MCFD	3740 BWPD
Robin Fed 126H		O-20-T20S-R34E	330' FSL – 1325' FEL	869 BOPD	685 MCFD	3740 BWPD
Robin Fed 127H		P-20-T20S-R34E	330' FSL – 1295' FEL	869 BOPD	685 MCFD	3740 BWPD
Robin Fed 128H		P-20-T20S-R34E	330' FSL – 1235' FEL	869 BOPD	685 MCFD	3740 BWPD
Robin Fed Com 131H		L-20-T20S-R34E	1480' FSL – 1285' FWL	949 BOPD	1059 MCFD	4116 BWPD
Robin Fed Com 132H		K-20-T20S-R34E	1480' FSL – 1345' FWL	1054 BOPD	1177 MCFD	4573 BWPD
Robin Fed 133H		O-20-T20S-R34E	10' FSL – 1355' FEL	1054 BOPD	1177 MCFD	4573 BWPD
Robin Fed 134H		P-20-T20S-R34E	10' FSL – 1295' FEL	1054 BOPD	1177 MCFD	4573 BWPD
Robin Fed Com 171H		L-20-T20S-R34E	1480' FSL – 1255' FWL	1054 BOPD	1177 MCFD	4573 BWPD
Robin Fed Com 172H		K-20-T20S-R34E	1480' FSL – 1405' FWL	1054 BOPD	1177 MCFD	4573 BWPD
Robin Fed 173H		O-20-T20S-R34E	10' FSL – 1385' FEL	1054 BOPD	1177 MCFD	4573 BWPD
Robin Fed 174H		P-20-T20S-R34E	10' FSL – 1235' FEL	1054 BOPD	1177 MCFD	4573 BWPD
Robin Fed Com 201H		L-20-T20S-R34E	1480' FSL – 1315' FWL	2100 BOPD	2100 MCFD	5000 BWPD
Robin Fed Com 202H		K-20-T20S-R34E	1480' FSL – 1375' FWL	2100 BOPD	2100 MCFD	5000 BWPD
Robin Fed 203H		O-20-T20S-R34E	10' FSL – 1325' FEL	2100 BOPD	2100 MCFD	5000 BWPD
Robin Fed 204H		P-20-T20S-R34E	10' FSL – 1265' FEL	2100 BOPD	2100 MCFD	5000 BWPD

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

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or 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
Robin Fed Com 111H		TBD	TBD	TBD	TBD	TBD
Robin Fed Com 112H		TBD	TBD	TBD	TBD	TBD
Robin Fed 113H		TBD	TBD	TBD	TBD	TBD
Robin Fed 114H		TBD	TBD	TBD	TBD	TBD
Robin Fed Com 121H		TBD	TBD	TBD	TBD	TBD
Robin Fed Com 122H		TBD	TBD	TBD	TBD	TBD
Robin Fed Com 123H		TBD	TBD	TBD	TBD	TBD
Robin Fed Com 124H		TBD	TBD	TBD	TBD	TBD
Robin Fed 125H		TBD	TBD	TBD	TBD	TBD
Robin Fed 126H		TBD	TBD	TBD	TBD	TBD
Robin Fed 127H		TBD	TBD	TBD	TBD	TBD
Robin Fed 128H		TBD	TBD	TBD	TBD	TBD
Robin Fed Com 131H		2/26/2024	3/13/2024	5/30/2024	6/23/2024	6/23/2024
Robin Fed Com 132H		4/1/2024	4/17/2024	5/30/2024	6/23/2024	6/23/2024
Robin Fed 133H		3/17/2024	4/2/2024	5/26/2024	6/23/2024	6/23/2024
Robin Fed 134H		4/21/2024	5/7/2024	5/26/2024	6/23/2024	6/23/2024
Robin Fed Com 171H		TBD	TBD	TBD	TBD	TBD
Robin Fed Com 172H		TBD	TBD	TBD	TBD	TBD
Robin Fed 173H		TBD	TBD	TBD	TBD	TBD
Robin Fed 174H		TBD	TBD	TBD	TBD	TBD
Robin Fed Com 201H		3/13/2024	4/1/2024	5/30/2024	6/23/2024	6/23/2024
Robin Fed Com 202H		4/2/2024	4/21/2024	5/26/2024	6/23/2024	6/23/2024
Robin Fed 203H		TBD	TBD	TBD	TBD	TBD
Robin Fed 204H		TBD	TBD	TBD	TBD	TBD

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

VII. Operations 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 Name	API	Anticipated Average Natural Gas Rate	Anticipated Volume of Natural Gas for the First Year
Robin Fed Com 111H		723 MCFD	263,988 MCF
Robin Fed Com 112H		723 MCFD	263,988 MCF
Robin Fed 113H		723 MCFD	263,988 MCF
Robin Fed 114H		723 MCFD	263,988 MCF
Robin Fed Com 121H		447 MCFD	163,156 MCF
Robin Fed Com 122H		447 MCFD	163,156 MCF
Robin Fed Com 123H		447 MCFD	163,156 MCF
Robin Fed Com 124H		447 MCFD	163,156 MCF
Robin Fed 125H		447 MCFD	163,156 MCF
Robin Fed 126H		447 MCFD	163,156 MCF
Robin Fed 127H		447 MCFD	163,156 MCF
Robin Fed 128H		447 MCFD	163,156 MCF
Robin Fed Com 131H		660 MCFD	240,985 MCF
Robin Fed Com 132H		734 MCFD	267,761 MCF
Robin Fed 133H		734 MCFD	267,761 MCF
Robin Fed 134H		734 MCFD	267,761 MCF
Robin Fed Com 171H		734 MCFD	267,761 MCF
Robin Fed Com 172H		734 MCFD	267,761 MCF
Robin Fed 173H		734 MCFD	267,761 MCF
Robin Fed 174H		734 MCFD	267,761 MCF
Robin Fed Com 201H		764 MCFD	279,754 MCF
Robin Fed Com 202H		764 MCFD	279,754 MCF
Robin Fed 203H		764 MCFD	279,754 MCF
Robin Fed 204H		764 MCFD	279,754 MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Volume of Natural Gas for the First Year
Targa	Targa-Versado Gathering System	C-18-T20S-R34E	6/23/2024	20 MMCFD

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 system(s) to which the well(s) will be connected.

XII. Line Capacity. 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 attached 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, not 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 and update for each Natural Gas Management Plan until the Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.
- (c) OCD may deny or conditionally approve and 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, 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: Tinlee Via

Title: Contract Drilling Engineer

E-mail Address: tinlee.via@permianres.com

Date: 9/29/2023

Phone: 512-755-6018

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

Approved By:

Title:

Approval Date:

Conditions of Approval:

Permian Resources Operating, LLC (372165)

Natural Gas Management Plan Descriptions**VI. Separation Equipment:**

Permian Resources Operating, LLC (Permian) utilizes a production forecast from our Reservoir Engineering team to appropriately size each permanent, 3-phase separator and heater treater utilized for production operations. Our goal is to maintain 5 minutes of retention time in the test vessel and 20 minutes in the heater treater at peak production rates. The gas produced is routed from the separator to the gas sales line.

VII. Operational Practices:*Drilling*

During Permian's drilling operations it is uncommon for venting or flaring to occur. If flaring is needed due to safety concerns, gas will be routed to a flare and volumes will be estimated.

Flowback

During completion/recompletion flowback operations, after separation flowback begins and as soon as it is technically feasible, Permian routes gas through a permanent separator and the controlled facility where the gas is either sold or flared through a high-pressure flare if needed.

Production

Per 19.15.27.8.D, Permian's facilities are designed to minimize waste. Our produced gas will only be vented or flared in an emergency or malfunction situation, except as allowed for normal operations noted in 19.15.27.8.D(2) & (4). All gas that is flared is metered. All gas that may be vented will be estimated.

Performance Standards

Permian utilizes a production forecast from our Reservoir Engineering team to appropriately size each permanent, 3-phase separator and heater treater utilized for production operations.

All of Permian's permanent storage tanks associated with production operations which are routed to a flare or control device are equipped with an automatic gauging system.

All of Permian's flare stacks, both currently installed and for future installation, are:

- 1) Appropriately sized and designed to ensure proper combustion efficiency.
- 2) Equipped with an automatic ignitor or continuous pilot.
- 3) Anchored and located at least 100 feet from the well and storage tanks.

Permian's field operations and HSE teams have implemented an AVO inspection schedule that adheres to the requirements of 19.15.27.8.E(5).

All of our operations and facilities are designed to minimize waste. We routinely employ the following methods and practices:

- Closed-loop systems
- Enclosed and properly sized tanks

Permian Resources Operating, LLC (372165)

- Vapor recovery units to maximize recovery of low-pressure gas streams and potential unauthorized emissions
- Low-emitting or electric engines whenever practical
- Combustors and flare stacks in the event of a malfunction or emergency
- Routine facility inspections to identify leaking components, functioning control devices, such as flares and combustors, and repair / replacement of malfunctioning components where applicable

Measurement or estimation

Permian measures or estimates the volumes of natural gas vented, flared and/or beneficially used for all of our drilling, completing and producing wells. We utilize accepted industry standards and methodology which can be independently verified. Annual GOR testing is completed on our wells and will be submitted as required by the OCD. None of our equipment is designed to allow diversion around metering elements except during inspection, maintenance and repair operations.

VIII. Best Management Practices:

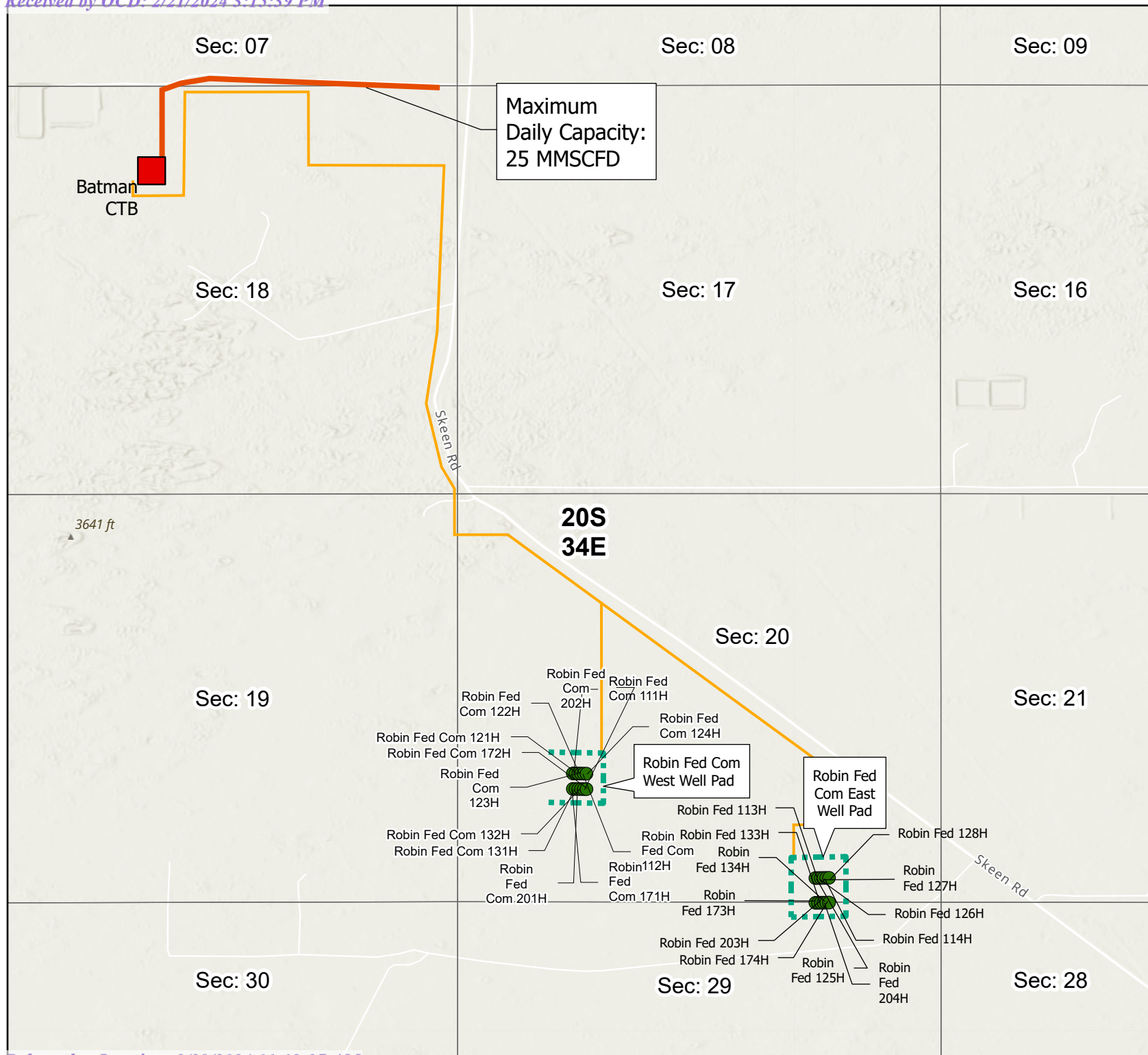
Permian Resources utilizes the following BMPs to minimize venting during active and planned maintenance activities:

- Use a closed-loop process wherever possible during planned maintenance activities, such as blowdowns, liquid removal, and work over operations.
- Employ low-emitting or electric engines for equipment, such as compressors
- Adhere to a strict preventative maintenance program which includes routine facility inspections, identification of component malfunctions, and repairing or replacing components such as hatches, seals, valves, etc. where applicable
- Utilize vapor recovery units (VRU's) to maximize recovery of volumes of low-pressure gas streams and potential unauthorized emissions
- Route low pressure gas and emissions streams to a combustion device to prevent venting where necessary

Enhanced Natural Gas Management Plan

Operator's Plan to Manage Production in Response to Increased Line Pressure

Permian Resources Operating, LLC (Permian) anticipates that its existing wells connected to the same portion of the natural gas gathering system will continue to meet anticipated increases in line pressure caused by the new wells. Permian will actively monitor line pressure throughout the field and will make necessary adjustments to existing production separators' pressures to send gas to sales. Permian also plans to implement automated alarms on all flare meters to alert of flaring events as they occur. The alarms will send notifications to field operations and engineering staff via text message and email at every occurrence of flaring. In addition, Permian plans to implement automated alarms on all flare meters to alert of any continuous flaring event that has continued for at least 4 hours. The alarms will send notifications to field operations and engineering management. Permian personnel will promptly respond to these alarms, communicate with midstream partners, and take the appropriate action to reduce flaring caused by high line pressure from new well production.



- CTB Facility
- Well Pad
- Robin SHL
- Gas Takeaway
- Flowlines



0 375 750 1,500 Feet

Spatial Reference
Name: GCS North American 1983
Datum: North American 1983
Map Units: Degree

This map and its contents are not a legal surveyed document. It is meant for the use of Permian Resources and its employees and cannot be shared without expressed written authorization.

PERMIAN
RESOURCES



NM APD NGMP
Robin Fed 113H/114H/125H
126H/127H/128H/133H/134H
173H/174H/203H/204H and
Fed Com 111H/112H/121H/122H
123H/124H/131H/132H/171H/172H
201H/202H

Lea County, New Mexico

Created Date: 08/01/23 Revised Date: 8/16/2023

Author: A. Brown Drafter: T. Douglass

Path: X:\GIS\Coal\Project\Map\113H_114H\125H_126H_127H_128H_133H_134H_173H_174H_203H_204H_111H_112H_121H_122H_123H_124H_131H_132H_171H_172H_201H_202H.aprx

**PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL**

OPERATOR'S NAME:	Colgate Energy LLC
LEASE NO.:	NMLC-0029512A, NMNM-013276
COUNTY:	Lea

Wells:

West Well Pad

Robin Fed Com 111H

Surface Hole Location: 1680 FSL and 1255 FWL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 330 FWL; Section 17, T. 20 S., R. 34 E

Robin Fed Com 112H

Surface Hole Location: 1680 FSL and 1375 FWL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 1650 FWL; Section 17, T. 20 S., R. 34 E

Robin Fed Com 121H

Surface Hole Location: 1680 FSL and 1285 FWL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 330 FWL; Section 17, T. 20 S., R. 34 E

Robin Fed Com 122H

Surface Hole Location: 1680 FSL and 1315 FWL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 990 FWL; Section 17, T. 20 S., R. 34 E

Robin Fed Com 123H

Surface Hole Location: 1680 FSL and 1345 FWL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 1650 FWL; Section 17, T. 20 S., R. 34 E

Robin Fed Com 124H

Surface Hole Location: 1680 FSL and 1405 FWL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 2310 FWL; Section 17, T. 20 S., R. 34 E

Robin Fed Com 131H

Surface Hole Location: 1480 FSL and 1285 FWL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 330 FWL; Section 17, T. 20 S., R. 34 E

Robin Fed Com 132H

Surface Hole Location: 1480 FSL and 1345 FWL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 1650 FWL; Section 17, T. 20 S., R. 34 E

Robin Fed Com 171H

Surface Hole Location: 1480 FSL and 1255 FWL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 990 FWL; Section 17, T. 20 S., R. 34 E

Robin Fed Com 172H

Surface Hole Location: 1480 FSL and 1405 FWL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 2310 FWL; Section 17, T. 20 S., R. 34 E

Robin Fed Com 201H

Surface Hole Location: 1480 FSL and 1315 FWL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 990 FWL; Section 17, T. 20 S., R. 34 E

Robin Fed Com 202H

Surface Hole Location: 1480 FSL and 1375 FWL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 2310 FWL; Section 17, T. 20 S., R. 34 E

East Well Pad

Robin Fed 113H

Surface Hole Location: 330 FSL and 1385 FEL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 2310 FEL; Section 17, T. 20 S., R. 34 E

Robin Fed Com 114H

Surface Hole Location: 330 FSL and 1265 FEL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 330 FEL; Section 17, T. 20 S., R. 34 E

Robin Fed 125H

Surface Hole Location: 330 FSL and 1355 FEL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 2310 FEL; Section 17, T. 20 S., R. 34 E

Robin Fed 126H

Surface Hole Location: 330 FSL and 1325 FEL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 1650 FEL; Section 17, T. 20 S., R. 34 E

Robin Fed 127H

Surface Hole Location: 330 FSL and 1295 FEL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 660 FEL; Section 17, T. 20 S., R. 34 E

Robin Fed 128H

Surface Hole Location: 330 FSL and 1235 FEL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 330 FEL; Section 17, T. 20 S., R. 34 E

Robin Fed 133H

Surface Hole Location: 10 FSL and 1355 FEL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 2310 FEL; Section 17, T. 20 S., R. 34 E

Robin Fed 134H

Surface Hole Location: 10 FSL and 1295 FEL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 990 FEL; Section 17, T. 20 S., R. 34 E

Robin Fed 173H

Surface Hole Location: 10 FSL and 1385 FEL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 1650 FEL; Section 17, T. 20 S., R. 34 E

Robin Fed 174H

Surface Hole Location: 10 FSL and 1235 FEL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 330 FEL; Section 17, T. 20 S., R. 34 E

Robin Fed 203H

Surface Hole Location: 10 FSL and 1325 FEL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 1650 FEL; Section 17, T. 20 S., R. 34 E

Robin Fed 204H

Surface Hole Location: 10 FSL and 1265 FEL; Section 20, T. 20 S., R. 34 E
Bottom Hole Location: 10 FNL and 330 FEL; Section 17, T. 20 S., R. 34 E

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
 - Lesser Prairie Chicken
- ☐ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Production (Post Drilling)**
 - Well Structures & Facilities
 - Pipelines
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

OR

If the entire project is covered under the Permian Basin Programmatic Agreement (cultural resources only):

The proponent has contributed funds commensurate to the undertaking into an account for offsite mitigation. Participation in the PA serves as mitigation for the effects of this project on cultural resources. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and the BLM will be notified as soon as possible within 24 hours. Work shall not resume until a Notice to Proceed is issued by the BLM. See information below discussing NAGPRA.

If the proposed project is split between a Class III inventory and a Permian Basin Programmatic Agreement contribution, the portion of the project covered under Class III inventory should default to the first paragraph stipulations.

The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes."

Any paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Watershed:

Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The topsoil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the pad area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

TANK BATTERY:

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

BURIED PIPELINES:

When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

Range:**Cattleguards**

Where a permanent cattlegaurd is approved, an appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

Fence Requirement

Where entry granted across a fence line, the fence must be braced and tied off on both sides of the passageway prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Livestock Watering Requirement

Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

Lesser Prairie Chicken:**Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken:**

Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, geophysical exploration other than 3-D operations, and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

Timing Limitation Exceptions:

The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

Ground-level Abandoned Well Marker to avoid raptor perching:

Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

Special Status Plant Species:

VRM IV:

Short-term mitigation measures include painting all above-ground structures that are not subject to safety requirements (including meter housing) Shale Green, which is a flat non-reflective paint color listed in the BLM Standard Environmental Color Chart (CC-001: June 2013). Long-term mitigation measures include the removal of wells and associated infrastructure following abandonment (end of cost-effective production). Previously impacted areas will be reclaimed by removing structures and caliche pads, returning disturbed areas to natural grade, and revegetating with an approved BLM seed mixture; thereby eliminating visual impacts.

Potash:

Lessees must comply with the 2012 Secretarial Potash Order. The Order is designed to manage the efficient development of oil, gas, and potash resources. Section 6 of the Order provides general provisions which must be followed to minimize conflict between the industries and ensure the safety of operations.

To minimize impacts to potash resources, the proposed well is confined within the boundaries of the established Robin Drill Island.

VI. CONSTRUCTION**A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972 .

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)**Exclosure Fencing**

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS**Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed twenty (20) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

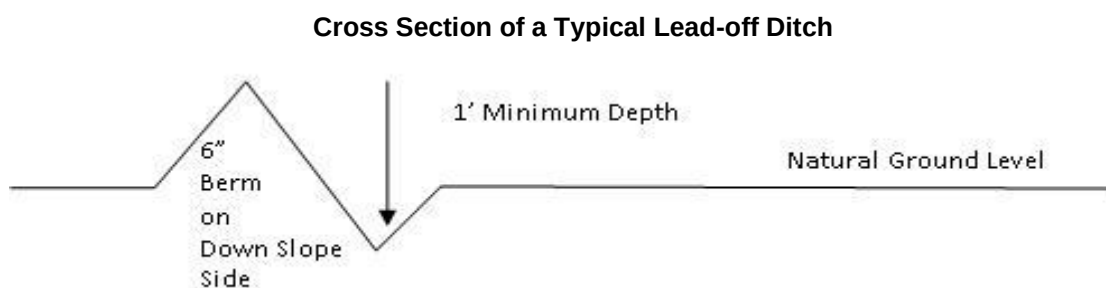
Turnouts

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Cattle guards

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Construction Steps

1. Salvage topsoil
2. Construct road

3. Redistribute topsoil
4. Revegetate slopes

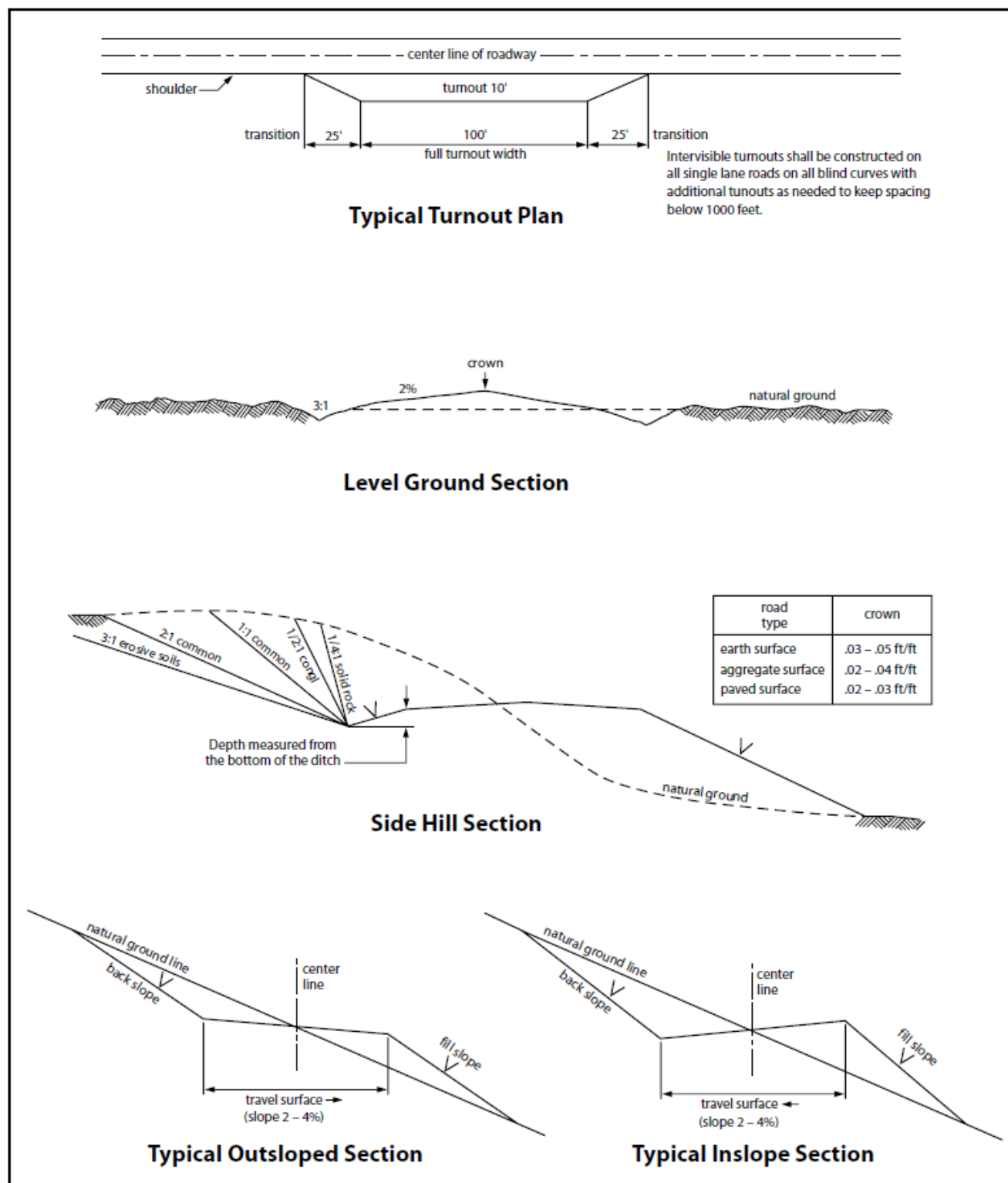


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

B. PIPELINES

- The BLM, Carlsbad Field Office, will be informed immediately if any subsurface drainage

channels, passages, or voids are intersected by trenching, and no pipe will be laid in the trench at that point until clearance has been issued by the Authorized Officer.

- If a void is encountered alignments may be rerouted to avoid the karst feature and lessen; the potential of subsidence or collapse of karst features, buildup of toxic or combustible gas, or other possible impacts to cave and karst resources from the buried pipeline.
- Special restoration stipulations or realignment may be required at such intersections, if any.
- A leak detection plan **will be submitted to the BLM Carlsbad Field Office for approval** prior to pipeline installation. The method could incorporate gauges to detect pressure drops, siting valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.
- Regular monitoring is required to quickly identify leaks for their immediate and proper treatment.
- All spills or leaks will be reported to the BLM immediately for their immediate and proper treatment.

BURIED PIPELINE STIPULATIONS

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Easement/Right-of-Way (unless the release or threatened release is wholly unrelated to the Easement/Right-of-Way holder's activity on the Easement/Right-of-Way), or resulting from the activity of the Easement/Right-of-Way holder on the Easement/Right-of-Way. This agreement

applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of 36 inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be 30 feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed 20 feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)
- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed 30 feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)
- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless

otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

- ☐ Seed Mixture 1
- ☐ Seed Mixture 2
- ☒ Seed Mixture 2/LPC
- ☐ Seed Mixture 3
- ☐ Seed Mixture 4
- ☐ Seed Mixture Aplomado Falcon Mixture

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

OR

If the entire project is covered under the Permian Basin Programmatic Agreement (cultural resources only):

The proponent has contributed funds commensurate to the undertaking into an account for offsite mitigation. Participation in the PA serves as mitigation for the effects of this project on cultural resources. If any human skeletal remains, funerary objects, sacred objects, or objects of cultural patrimony are discovered at any time during construction, all construction activities shall halt and the BLM will be notified as soon as possible within 24 hours. Work shall not resume until a Notice to Proceed is issued by the BLM. See Stipulation 17 for more information.

If the proposed project is split between a Class III inventory and a Permian Basin Programmatic Agreement contribution, the portion of the project covered under Class III inventory should default to the first paragraph stipulations.

17. The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of project work, the proponent shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The proponent or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes."

18. Any paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

19. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

20. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

- a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
- b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

VIII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture for LPC Sand/Shinnery Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed shall be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. Seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

<u>Species</u>	<u>lb/acre</u>
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Colgate
LEASE NO.:	NMNM13276
LOCATION:	Section 20, T.20 S, R.34 E., NMPM
COUNTY:	Lea County, New Mexico
WELL NAME & NO.:	Robin Fed 203H
SURFACE HOLE FOOTAGE:	10'/S & 1325'/E
BOTTOM HOLE FOOTAGE:	10'/N & 1650'/E

COA

H₂S	☐ Yes	☒ No		
Potash / WIPP	☐ None	☐ Secretary	☒ R-111-P	☐ WIPP
Cave / Karst	☒ Low	☐ Medium	☐ High	☐ Critical
Wellhead	☐ Conventional	☒ Multibowl	☐ Both	☐ Diverter
Cementing	☐ Primary Squeeze	☐ Cont. Squeeze	☐ EchoMeter	☐ DV Tool
Special Req	☐ Break Testing	☐ Water Disposal	☐ COM	☐ Unit
Variance	☒ Flex Hose	☐ Casing Clearance	☐ Pilot Hole	☒ Capitan Reef
Variance	☐ Four-String	☐ Offline Cementing	☒ Fluid-Filled	☐ Open Annulus
☐ Batch APD / Sundry				

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H₂S) Drilling Plan shall be activated 500 feet prior to drilling into the **Delaware Group** formation. As a result, the Hydrogen Sulfide area must meet all requirements from **43 CFR 3176**, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

1. The **13-3/8** inch surface casing shall be set at approximately **1620** feet (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite, above the salt, and below usable fresh water) 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

24 hours in the Potash Area or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
- d. If cement falls back, remedial cementing will be done prior to drilling out that string.

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

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing shall be set at **3256ft**:
 - Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.
 - a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job. **Excess calculates to 12%. Additional cement maybe required.**
 - b. Second stage above DV tool:
 - c. Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Excess calculates to 20%. Additional cement maybe required.**

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

- ❖ In R111 Potash Areas if cement does not circulate to surface on the first two salt protection casing strings, the cement on the 3rd casing salt string must come to surface.
- ❖ **Special Capitan Reef requirements.** If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:
(Use this for 3 string wells in the Capitan Reef, if 4 string well ensure FW based mud used across the Capitan interval)
 - Switch to freshwater mud to protect the Capitan Reef and use freshwater mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.
 - Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval.

If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.

Operator will sundry this APD for a four-string Casing Plan

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office. Operator shall provide method of verification. **Excess calculates to 19%. Additional cement maybe required.**

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

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 casing shoe shall be **5000 (5M)** psi.
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one-inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in 43 CFR 3172 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

Email **or** call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, BLM_NM_CFO_DrillingNotifications@BLM.GOV
(575) 361-2822

☒ Lea County

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

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

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the

following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in **43 CFR part 3170 Subpart 3172 and API STD 53 Sec. 5.3**.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's

requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in **43 CFR part 3170 Subpart 3172** must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead cement), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the cement plug. The BOPE test can be initiated after bumping the cement plug with the casing valve open. (only applies to single stage cement jobs, prior to the cement setting up.)

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

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

ZS 2/5/2024



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

Operator Certification Data Report

02/21/2024

Operator

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME:

Signed on: 05/18/2022

Title:

Street Address:

City:

State:

Zip:

Phone:

Email address:

Field

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:



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

Application Data

02/21/2024

APD ID: 10400085475	Submission Date: 05/21/2022	Highlighted data reflects the most recent changes Show Final Text
Operator Name: COLGATE OPERATING LLC		
Well Name: ROBIN FED	Well Number: 203H	
Well Type: OIL WELL	Well Work Type: Drill	

Section 1 - General

APD ID: 10400085475	Tie to previous NOS? N	Submission Date: 05/21/2022
BLM Office: Carlsbad	User: MIKAH X THOMAS	Title: Regulatory Manager
Federal/Indian APD: FED	Is the first lease penetrated for production Federal or Indian? FED	
Lease number: NMNM13276	Lease Acres:	
Surface access agreement in place?	Allotted?	Reservation:
Agreement in place? NO	Federal or Indian agreement:	
Agreement number:		
Agreement name:		
Keep application confidential? N		
Permitting Agent? NO	APD Operator: COLGATE OPERATING LLC	
Operator letter of		

Operator Info

Operator Organization Name: COLGATE OPERATING LLC		
Operator Address: 300 N MARIENFELD STREET SUITE 1000	Zip: 79701	
Operator PO Box:		
Operator City: MIDLAND	State: TX	
Operator Phone: (432)695-4272		
Operator Internet Address: MTHOMAS@COLGATEENERGY.COM		

Section 2 - Well Information

Well in Master Development Plan? NO	Master Development Plan name:	
Well in Master SUPO? NO	Master SUPO name:	
Well in Master Drilling Plan? NO	Master Drilling Plan name:	
Well Name: ROBIN FED	Well Number: 203H	Well API Number:
Field/Pool or Exploratory? Field and Pool	Field Name: WC-025 G-08 S203429P	Pool Name: Wolfcamp

Operator Name: COLGATE OPERATING LLC

Well Name: ROBIN FED

Well Number: 203H

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Is the proposed well in a Helium production area? N

Use Existing Well Pad? N

New surface disturbance?

Type of Well Pad: MULTIPLE WELL

Multiple Well Pad Name: Robin Pad East

Number: 2

Well Class: HORIZONTAL

Number of Legs: 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 27 Miles

Distance to nearest well: 1223 FT

Distance to lease line: 10 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: Robin_Fed_203H_Plat_C_102_Signed_20220518111430.pdf

Well work start Date: 08/31/2022

Duration: 90 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number: 12177

Reference Datum: KELLY BUSHING

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
SHL Leg #1	10	FSL	1325	FEL	20S	34E	20	Aliquot SWSE	32.5513493	- 103.5781501	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 13276	3674	0	0	Y
KOP Leg #1	59	FSL	1650	FEL	20S	34E	20	Aliquot SWSE	32.5514905	- 103.5792045	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 13276	- 6916	10596	10590	Y
PPP Leg #1-1	100	FSL	1650	FEL	20S	34E	20	Aliquot SWSE	32.5515788	- 103.579205	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 13276	- 7329	11058	11003	Y

Operator Name: COLGATE OPERATING LLC**Well Name:** ROBIN FED**Well Number:** 203H

Wellbore	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD	Will this well produce from this
EXIT Leg #1	100	FNL	165 0	FEL	20S	34E	17	Aliquot NWNE	32.58014 04	- 103.5792 253	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 13276	- 748 9	213 45	111 63	Y
BHL Leg #1	10	FNL	165 0	FEL	20S	34E	17	Aliquot NWNE	32.58038 77	- 103.5792 254	LEA	NEW MEXI CO	NEW MEXI CO	F	NMNM 13276	- 748 9	214 67	111 63	Y



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

Drilling Plan Data Report

02/21/2024

APD ID: 10400085475

Submission Date: 05/21/2022

Highlighted data
reflects the most
recent changes

Operator Name: COLGATE OPERATING LLC

Well Name: ROBIN FED

Well Number: 203H

Well Type: OIL WELL

Well Work Type: Drill

[Show Final Text](#)

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical	Measured Depth	Lithologies	Mineral Resources	Producing Formatio
12946598	QUATERNARY	3674	30	30	ALLUVIUM	NONE	N
12946608	RUSTLER	2115	1559	1559	ANHYDRITE, LIMESTONE, SALT	NONE	N
12946599	SALADO	2005	1669	1669	ANHYDRITE, SALT	NONE	N
12946600	TANSILL	420	3254	3255	ANHYDRITE, DOLOMITE	NONE	N
12946601	YATES	245	3429	3430	DOLOMITE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
12946602	SEVEN RIVERS	20	3654	3656	ANHYDRITE, DOLOMITE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
12946603	CAPITAN REEF	-280	3954	3956	LIMESTONE	NONE	N
12946604	QUEEN	-480	4154	4156	ANHYDRITE, DOLOMITE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
12946605	CHERRY CANYON	-1910	5584	5584	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
12946597	BRUSHY CANYON	-3120	6794	6794	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
12946606	BONE SPRING	-4805	8479	8484	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
12946607	BONE SPRING 1ST	-5880	9554	9560	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
12946630	BONE SPRING 2ND	-6455	10129	10135	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
12946633	BONE SPRING 3RD	-7190	10864	10882	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	N
12946632	Wolfcamp	-7410	11084	11192	LIMESTONE, SANDSTONE, SHALE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Operator Name: COLGATE OPERATING LLC**Well Name:** ROBIN FED**Well Number:** 203H**Pressure Rating (PSI):** 10M**Rating Depth:** 15000

Equipment: BOPE with working pressure ratings in excess of anticipated maximum surface pressure will be utilized for well control from drill out of surface casing to TMD. A rotating head will also be installed and utilized as needed. All BOPE connections shall be flanged, welded or clamped. All choke lines shall be straight unless targeted with running tees or tee blocks are used, and choke lines shall be anchored to prevent whip and reduce vibrations. All valves in the choke line & the choke manifold shall be full opening as to not cause restrictions and to allow for straight fluid paths to minimize potential erosion. All gauges utilized in the well control system shall be of a type designed for drilling fluid service. A top drive inside BOP valve will be utilized at all times. Subs equipped with full opening valves sized to fit the drill pipe and collars will be available on the rig floor in the open position. The key to operate said valve equipped subs will be on the rig floor at all times. The accumulator system will have sufficient capacity to open the HCR and close all three sets of rams plus the annular preventer while retaining at least 300 psi above precharge on the closing manifold (accumulator system shall be capable of doing so without using the closing unit pumps). The fluid reservoir capacity will be double the usable fluid volume of the accumulator system capacity, and the fluid level will be maintained at the manufacturer's recommended level. Prior to connecting the closing unit to the BOP stack, an accumulator precharge pressure test shall be performed to ensure the precharge pressure is within 100 psi of the desired precharge pressure (only nitrogen gas will be used to precharge). Two independent power sources will be made available at all times to power the closing unit pumps so that the pumps can automatically start when the closing valve manifold pressure has decreased to the preset level. Closing unit pumps will be sized to allow opening of HCR and closing of annular preventer on 5" drill pipe achieving at least 200 psi above precharge pressure with the accumulator system isolated from service in less than two minutes. A valve shall be installed in the closing line as close to the annular preventer as possible to act as a locking device; the valve shall be maintained in the open position and shall be closed only when the power source for the accumulator system is inoperative. Remote controls capable of opening and closing all preventers & the HCR shall be readily accessible to the driller; master controls with the same capability will be operable at the accumulator. The wellhead will be a multibowl speed head allowing for hangoff of intermediate casing & isolation of the 133/8 x 95/8 annulus without breaking the connection between the BOP & wellhead to install an additional casing head. A wear bushing will be installed & inspected frequently to guard against internal wear to wellhead. VBRs (variablebore rams) will be run in upper rambody of BOP stack to provide redundancy to annular preventer while RIH w/ production casing;

Requesting Variance? YES

Variance request: 1. Colgate Energy requests a variance to drill this well using a coflex line between the BOP and choke manifold. Certification for proposed coflex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used.

Testing Procedure: After surface casing is set and the BOPE installed, pressure tests of BOPE will be performed by a third party tester utilizing water and a test plug to 250 psi low and 5,000 psi high. To deem a pressure test successful, pressure must be maintained for ten minutes without any bleedoff. A valve on the wellhead below seat of test plug will be open at all time during BOPE tests to guard against damage to casing. The BOPE will be retested in this manner after any connection breaks or passage of allotted time (25 days). Any BOPE which fails to pass pressure tests after initial install will be replaced prior to drilling out of surface casing shoe. If at any time a BOPE component cannot function to secure the hole, the hole shall be secured utilizing a retrievable packer, and the nonfunctioning BOPE component shall be repair or replaced. After repair or replacement, a pressure test of the repaired or replaced component and any connections broken to repair or replace the nonfunctioning component will be tested in the same manner as described for initial install of BOPE. The annular preventer will be faction tested at least weekly, and the ramtype preventers will be function tested on each trip. BOPE pit level drills will be conducted weekly with each drilling crews. All pressure tests performed on BOPE and BOPE pit level drills will be logged in the drilling log. Isolation of 133/8" x 95/8" casing annulus shall be confirmed by pressure testing of wellhead sealing component after said sealing component is installed.

Choke Diagram Attachment:

Robin__10M_Choke_Layout_20220517173729.pdf

BOP Diagram Attachment:

Robin__BOP_Stack_20220517173735.pdf

Operator Name: COLGATE OPERATING LLC

Well Name: ROBIN FED

Well Number: 203H

Robin__10M_Choke_Layout_20220517173729.pdf

Robin__BOP_Stack_20220517173735.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	5.5	NEW	API	N	0	1620	0	1620	3674	2054	1620	J-55	54.5	BUTT	1.125	1.2	DRY	1.6	DRY	1.6
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5530	0	5497	0	-1823	5530	J-55	40	BUTT	1.125	1.2	DRY	1.6	DRY	1.6
3	PRODUCTION	8.7	5.5	NEW	API	N	0	21436	0	11163	0	-7489	21436	OTHER	17	OTHER - CDC HTQ	1.125	1.1	DRY	1.6	DRY	1.6

Casing Attachments

Casing ID: 1StringSURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Robin_Fed_203H__Casing_Design_Summary_20220518113747.pdf

Casing_Design_Assumptions_20220518113819.pdf

Operator Name: COLGATE OPERATING LLC

Well Name: ROBIN FEDWell Number: 203H

Casing Attachments

Casing ID: 2StringINTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

- Casing_Design_Assumptions_20220518102758.pdf
- Robin_Fed_203H__Casing_Design_Summary_20220518113709.pdf

Casing ID: 3StringPRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

- Casing_Design_Assumptions_20220518094806.pdf
- Robin_Fed_203H__Casing_Design_Summary_20220518113640.pdf
- Proprietary_Connections_Performance_Data_5.5000_17.0000_0.3040__P110_HP_20230223165434.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1290	1050	1.68	13.7	1764	100	ExtendaCem-CZ	None
SURFACE	Tail		1290	1620	340	1.35	14.8	459	100	HalCem-C	Accelerator
INTERMEDIATE	Lead	3730	0	2624	563	1.88	12.9	1058.44	50	EconoCem-HLC	5% salt + 5 lb/sk Kol-Seal

Operator Name: COLGATE OPERATING LLC**Well Name:** ROBIN FED**Well Number:** 203H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
INTERMEDIATE	Tail		2624	3730	326	1.33	14.8	433.58	25	HalCem-C	None
INTERMEDIATE	Lead		3730	4424	173	1.88	12.9	325.24	50	EconCem-HLC	5% Salt + 5 lb/sk Kol-Seal
INTERMEDIATE	Tail		4424	5530	230	1.33	14.8	305.9	25	HalCem-C	None
PRODUCTION	Lead		0	10370	1235	2.41	11.5	2785.96	25	Class H	POZ + extender + fluid loss + dispersant + retarder
PRODUCTION	Tail		10370	21436	2020	1.73	12.5	3074.21	25	Class H	POZ + extender + fluid loss + dispersant + retarder

Section 5 - Circulating Medium

Mud System Type: Closed**Will an air or gas system be Used?** NO**Description of the equipment for the circulating system in accordance with Onshore Order #2:****Diagram of the equipment for the circulating system in accordance with Onshore Order #2:****Describe what will be on location to control well or mitigate other conditions:** All necessary mud products for weight addition and fluid loss control will be on location at all times.

Describe the mud monitoring system utilized: Mud program is subject to change due to hole conditions. The mud monitoring system is an electronic Pason system satisfying requirements of Onshore Order #1. Both visual and electronic mud monitoring equipment will be utilized to detect volume changes indicating loss or gain of circulating system fluid volume. Slow pump rates will be taken & recorded hourly in the drilling log. Mud engineer will perform tests and provide written report at least every 12 hours while circulating. A trip tank will be utilized and trip sheet will be recorded to ensure wellbore is taking proper fill or displacing proper fluid volume during all tripping operations. Gas detecting equipment will be utilized to monitor for hydrocarbon gas at the shakers while drilling and/or circulating. H2S monitoring equipment with both visual & auditory alarms will be installed and operational at the shakers, rig floor and cellar while drilling and/or circulating. A flare system with an effective method for ignition & discharge more than 100 feet from the wellbore will be utilized to gather and burn all gas; lines will be straight unless targeted with running tees. A mud gas separator will be installed and operable at least 500 feet before first anticipated hydrocarbon zone.

Circulating Medium Table

Operator Name: COLGATE OPERATING LLC

Well Name: ROBIN FED

Well Number: 203H

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	1620	SPUD MUD	8.6	9							
1620	5530	SALT SATURATED	10	10.2							
5530	2143 6	OIL-BASED MUD	9	10							

Section 6 - Test, Logging, Coring

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

Directional surveys will be collected at no greater than 200' intervals while drilling through the MWD tools. A GR log will be collected while drilling through the MWD tools from intermediate casing to TD. No DSTs or cores are planned at this time. No temperature logs planned at this time.

CBL will be run to confirm TOC on production casing after rig is removed from location. A formation integrity test (FIT) will be performed on 95/8" casing string after

BOPE is installed to at least 1 ppge over planned section mud weight after drilling ten feet of new hole.

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

DIRECTIONAL SURVEY,GAMMA RAY LOG,

Coring operation description for the well:

No openhole logs are planned at this time.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 4680

Anticipated Surface Pressure: 2224

Anticipated Bottom Hole Temperature(F): 120

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations

Colgate_H2S_Contingency_Plan_20220510162250.pdf

Operator Name: COLGATE OPERATING LLC**Well Name:** ROBIN FED**Well Number:** 203H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

[_D03__Robin_Fed_203H_APD_Rev01_GEO_20230223165830.pdf](#)[_D03__Robin_Fed_203H_APD_Rev01_AC_20230223165832.pdf](#)

Other proposed operations facets description:

After surface casing is set and the BOPE installed, pressure tests of BOPE will be performed by a third party tester utilizing water and a test plug to 250 psi low and 5,000 psi high. To deem a pressure test successful, pressure must be maintained for ten minutes without any bleedoff. A valve on the wellhead below seat of test plug will be open at all time during BOPE tests to guard against damage to casing. The BOPE will be retested in this manner after any connection breaks or passage of allotted time (25 days). Any BOPE which fails to pass pressure tests after initial install will be replaced prior to drilling out of surface casing shoe. If at any time a BOPE component cannot function to secure the hole, the hole shall be secured utilizing a retrievable packer, and the nonfunctioning BOPE component shall be repair or replaced. After repair or replacement, a pressure test of the repaired or replaced component and any connections broken to repair or replace the nonfunctioning component will be tested in the same manner as described for initial install of BOPE. The annular preventer will be faction tested at least weekly, and the ramtype preventers will be function tested on each trip. BOPE pit level drills will be conducted weekly with each drilling crews. All pressure tests performed on BOPE and BOPE pit level drills will be logged in the drilling log. Isolation of 133/8" x 95/8" casing annulus shall be confirmed by pressure testing of wellhead sealing component after said sealing component is installed.

Casing will be tested by pressuring up to 1,500 psi and holding pressure for thirty minutes. A casing test will be deemed successful if test pressure does not decline more than 10% over the thirty minute period. Cement will be allowed to sit undisturbed for twentyfour hours and reach a minimum of 500 psi compressive strength across the "zone of interest" prior to testing casing and drilling out. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Cement will be placed on all casing strings utilizing the pump and plug method. A float will be installed in the casing shoe and float collar on all casing strings to hold cement in place once pumping is completed. A top plug will be utilized on all casing strings to prevent contamination of the cement by the displacement fluid. A preflush fluid will be pumped prior to cement to aid in removal of drilling mud from the wellbore, eliminate drilling mud contamination of the cement slurry and prepare the surface of both the wellbore and casing for cement.

No abnormal pressures or temperatures are expected. In accordance with Onshore Order No. 6, Colgate Energy does not anticipate that there will be enough H2S from the surface to the Wolfcamp formations to meet the BLMs minimum requirements for the submission of an H2S Drilling Operation Plan or Public Protection Plan for the drilling and completion of this well. Since we have an H2S safety package on all wells, attached is an H2S Drilling Operations Plan. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

Other proposed operations facets attachment:

[Choke_Hose_SN_53621_20220511064656.pdf](#)[Colgate_13_MBS_RP_20220511064642.PDF](#)[Robin__Overview_Map_20220517174412.pdf](#)[Robin_Fed_203H_APD_Procedure_Update_4.24.23_20230425094436.pdf](#)

Operator Name: COLGATE OPERATING LLC	
Well Name: ROBIN FED	Well Number: 203H

Other Variance attachment:

12.0"

13-5/8 5M

CASING HANGER, C-22, MBS-AW,
13-5/8 NOM X 5-1/2 CSG,
EXTRA CAPACITY

22.5"

13-5/8 5M

CSAING HANGER, MBS-W-EMS-22, FLTD,
13-5/8 NOM, 9-5/8 BC BOX BTM X
10.000 4TPI STUB ACME-2G-LH PIN TOP
W/ PACKOFF SUPPORT BUSHING

25.5"

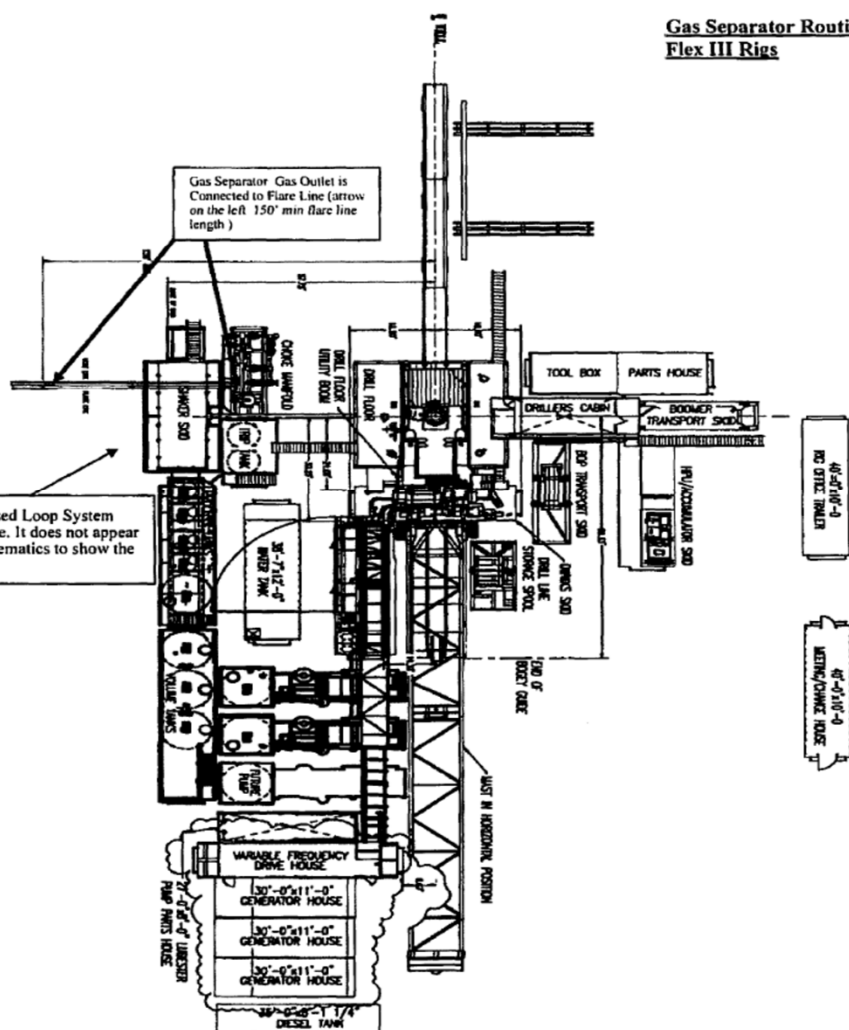
13-3/8 CASING

9-5/8 CASING

2 LP 5M

2-1/16 5M

26 OD BASEPLATE
W/(2) 3" X 3" GROUT PORTS



Colgate's Minimum Design Criteria

Burst, collapse and tension SF are calculated using Landmark's StressCheck (casing design) software. A sundry will be requested if any lesser grade or different size casing is substituted.

Casing Design Assumptions:

Surface

- 1) Burst Design Loads
 - a) Displacement to Gas
 - (1) Internal: Assumes a full column of gas in the casing with a gas gradient of 0.7 psi/ft in the absence of better information. It is limited to the controlling pressure based on the maximum expected pore pressure within the next drilling interval.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
 - b) Casing Pressure Test
 - (1) Internal: Displacement fluid plus surface pressure required to comply with regulatory casing test pressure requirements of Onshore Oil and Gas Order No. 2 and NM NMAC 19.15.16 of NMOCD regulations.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
- 2) Collapse Loads
 - a) Cementing
 - (1) Internal: Displacement fluid density.
 - (2) External: Mud weight from TOC to surface and cement slurry weight from TOC to shoe.
 - b) Lost Returns with Mud Drop
 - (1) Internal: Lost circulation at the TD of the next hole section and the fluid level falls to a depth where the hydrostatic pressure of the mud column equals pore pressure at the depth of the lost circulation zone.
 - (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
- 3) Tension Loads
 - a) Overpull Force
 1. Axial: Buoyant weight of the string plus planned 100,000 lbs applied in stuck pipe situation.
 - b) Green Cement Casing Test
 1. Axial: Buoyant weight of the string plus cement plug bump pressure load.

Intermediate I

- 1) Burst Design Loads
 - a) Displacement to Gas
 - (1) Internal: Assumes a full column of gas in the casing with a gas gradient of 0.7 psi/ft in the absence of better information. It is limited to the controlling pressure based on the maximum expected pore pressure within the next drilling interval.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
 - b) Casing Pressure Test
 - (1) Internal: Displacement fluid plus surface pressure required to comply with regulatory casing test pressure requirements of Onshore Oil and Gas Order No. 2 and NM NMAC 19.15.16 of NMOCD regulations.

- (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
- 2) Collapse Loads
 - a) Cementing
 - (1) Internal: Displacement fluid density.
 - (2) External: Mud weight from TOC to surface and cement slurry weight from TOC to shoe.
 - b) Lost Returns with Mud Drop
 - (1) Internal: Lost circulation at the TD of the next hole section and the fluid level falls to a depth where the hydrostatic pressure of the mud column equals pore pressure at the depth of the lost circulation zone.
 - (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
- 3) Tension Loads
 - a) Overpull Force
 - 1. Axial: Buoyant weight of the string plus planned 100,000 lbs applied in stuck pipe situation.
 - b) Green Cement Casing Test
 - 1. Axial: Buoyant weight of the string plus cement plug bump pressure load.

Intermediate or Intermediate II

- 1) Burst Design Loads
 - a) Gas Kick Profile
 - (1) Internal: Load profile based on influx encountered in lateral portion of wellbore with a maximum influx volume of 150 bbl and a kick intensity of 1.5 ppg using maximum anticipated MW of 9.9 ppg.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
 - b) Casing Pressure Test
 - (1) Internal: Displacement fluid plus surface pressure required to comply with regulatory casing test pressure requirements of Onshore Oil and Gas Order No. 2 and NM NMAC 19.15.16 of NMOCD regulations.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
- 2) Collapse Loads
 - a) Cementing
 - (1) Internal: Displacement fluid density.
 - (2) External: Mud weight from TOC to surface and cement slurry weight from TOC to shoe.
 - b) Lost Returns with Mud Drop
 - (1) Internal: Lost circulation at the deepest TVD of the next hole section and the fluid level falls to a depth where the hydrostatic pressure of the mud column equals pore pressure at the depth of the lost circulation zone.
 - (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
- 3) Tension Loads
 - a) Overpull Force
 - 1. Axial: Buoyant weight of the string plus planned 100,000 lbs applied in stuck pipe situation.
 - b) Green Cement Casing Test
 - 1. Axial: Buoyant weight of the string plus cement plug bump pressure load.

Production

- 1) Burst Design Loads
 - a) Injection Down Casing
 - (1) Internal: Surface pressure plus injection fluid gradient.
 - (2) External: Mud base-fluid density to top of cement and cement mix water gradient (8.4 ppg) below TOC.
 - b) Casing Pressure Test (Drilling)
 - (1) Internal: Displacement fluid plus surface pressure required to comply with regulatory casing test pressure requirements of Onshore Oil and Gas Order No. 2 and NM NMAC 19.15.16 of NMOCD regulations.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
 - c) Casing Pressure Test (Production)
 - (1) Internal: The design pressure test should be the greater of the planned test pressure prior to simulation down the casing, the regulatory test pressure, and the expected gas lift system pressure. The design test fluid should be the fluid associated with the pressure test having the greatest pressure.
 - (2) External: Mud base-fluid density to top of cement and cement mix water gradient (8.4 ppg) below TOC.
 - d) Tubing Leak
 - (1) Internal: SITP plus a packer fluid gradient to the top of packer.
 - (2) External: Mud base-fluid density to top of cement and cement mix water gradient (8.4 ppg) below TOC.
- 2) Collapse Loads
 - a) Cementing
 - (1) Internal: Displacement fluid density.
 - (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
 - b) Full Evacuation
 - (1) Internal: Full void pipe.
 - (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
- 3) Tension Loads
 - a) Overpull Force
 1. Axial: Buoyant weight of the string plus planned 100,000 lbs applied in stuck pipe situation.
 - b) Green Cement Casing Test
 1. Axial: Buoyant weight of the string plus cement plug bump pressure load.

File: APD-Rev00

Date: April 28, 2022 Page: 1

WELL SUMMARY										
1 2 3 4 5 6 7 8 9 10	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs)				Design Cost (\$)
						Burst	Collapse	Axial	Triaxial	
	Surface Casing	13 3/8", 54.500 ppf, J-55	BTC, J-55	30-1620	12.459	1.61	1.20	1.68	1.46	38,421 Total = 38,421
	Intermediate Casing	9 5/8", 40.000 ppf, J-55	BTC, J-55	30-5530	8.750 A	1.27	1.68	1.84	1.37	93,624 Total = 93,624
	Production Casing	5 1/2", 17.000 ppf, HP P-110	CDC-HTQ, BTC	30-21436	4.767	1.11	1.39	1.65	1.19	292,584 Total = 292,584
										Total = 424,629



U. S. Steel Tubular Products

5.500" 17.00lbs/ft (0.304" Wall) P110 HP USS-CDC HTQ[®]

3/5/2020 8:48:46 PM



MECHANICAL PROPERTIES	Pipe	USS-CDC HTQ [®]	
Minimum Yield Strength	125,000	--	psi
Maximum Yield Strength	140,000	--	psi
Minimum Tensile Strength	130,000	--	psi
DIMENSIONS	Pipe	USS-CDC HTQ [®]	
Outside Diameter	5.500	6.300	in.
Wall Thickness	0.304	--	in.
Inside Diameter	4.892	4.892	in.
Standard Drift	4.767	4.767	in.
Alternate Drift	--	--	in.
Coupling Length	--	9.250	in.
Nominal Linear Weight, T&C	17.00	--	lbs/ft
Plain End Weight	16.89	--	lbs/ft
SECTION AREA	Pipe	USS-CDC HTQ [®]	
Critical Area	4.962	4.962	sq. in.
Joint Efficiency	--	97.1	%
PERFORMANCE	Pipe	USS-CDC HTQ [®]	
Minimum Collapse Pressure	9,440	9,440	psi
External Pressure Leak Resistance	--	7,550	psi
Minimum Internal Yield Pressure	12,090	12,090	psi
Minimum Pipe Body Yield Strength	620,000	--	lbs
Joint Strength	--	602,000	lbs
Compression Rating	--	361,000	lbs
Reference Length	--	23,608	ft
Maximum Uniaxial Bend Rating	--	60.7	deg/100 ft
MAKE-UP DATA	Pipe	USS-CDC HTQ [®]	
Make-Up Loss	--	4.63	in.
Minimum Make-Up Torque	--	11,000	ft-lbs
Maximum Make-Up Torque	--	15,500	ft-lbs
Connection Yield Torque	--	19,200	ft-lbs

1. Other than proprietary collapse and connection values, performance properties have been calculated using standard equations defined by API 5C3 and do not incorporate any additional design or safety factors. Calculations assume nominal pipe OD, nominal wall thickness and Specified Minimum Yield Strength (SMYS).
2. Uniaxial bending rating shown is structural only, and equal to compression efficiency.
3. Torques have been calculated assuming a thread compound friction factor of 1.0 and are recommended only. Field make-up torques may require adjustment based on actual field conditions (e.g. make-up speed, temperature, thread compound, etc.).
4. Reference length is calculated by joint strength divided by nominal threaded and coupled weight with 1.5 safety factor.
5. Connection external pressure leak resistance has been verified to 80% API pipe body collapse pressure following the guidelines of API 5C5 Cal II.

Legal Notice

USS - CDC HTQ[®] (High Torque Casing Drilling Connection) is a trademark of U. S. Steel Corporation. This product is a modified API Buttress threaded and coupled connection designed for drilling with casing applications. All material contained in this publication is for general information only. This material should not therefore be used or relied upon for any specific application without independent competent professional examination and verification of accuracy, suitability and applicability. Anyone making use of this material does so at their own risk and assumes any and all liability resulting from such use. U. S. Steel disclaims any and all expressed or implied warranties of fitness for any general or particular application.

Colgate's Minimum Design Criteria

Burst, collapse and tension SF are calculated using Landmark's StressCheck (casing design) software. A sundry will be requested if any lesser grade or different size casing is substituted.

Casing Design Assumptions:

Surface

- 1) Burst Design Loads
 - a) Displacement to Gas
 - (1) Internal: Assumes a full column of gas in the casing with a gas gradient of 0.7 psi/ft in the absence of better information. It is limited to the controlling pressure based on the maximum expected pore pressure within the next drilling interval.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
 - b) Casing Pressure Test
 - (1) Internal: Displacement fluid plus surface pressure required to comply with regulatory casing test pressure requirements of Onshore Oil and Gas Order No. 2 and NM NMAC 19.15.16 of NMOCD regulations.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
- 2) Collapse Loads
 - a) Cementing
 - (1) Internal: Displacement fluid density.
 - (2) External: Mud weight from TOC to surface and cement slurry weight from TOC to shoe.
 - b) Lost Returns with Mud Drop
 - (1) Internal: Lost circulation at the TD of the next hole section and the fluid level falls to a depth where the hydrostatic pressure of the mud column equals pore pressure at the depth of the lost circulation zone.
 - (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
- 3) Tension Loads
 - a) Overpull Force
 1. Axial: Buoyant weight of the string plus planned 100,000 lbs applied in stuck pipe situation.
 - b) Green Cement Casing Test
 1. Axial: Buoyant weight of the string plus cement plug bump pressure load.

Intermediate I

- 1) Burst Design Loads
 - a) Displacement to Gas
 - (1) Internal: Assumes a full column of gas in the casing with a gas gradient of 0.7 psi/ft in the absence of better information. It is limited to the controlling pressure based on the maximum expected pore pressure within the next drilling interval.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
 - b) Casing Pressure Test
 - (1) Internal: Displacement fluid plus surface pressure required to comply with regulatory casing test pressure requirements of Onshore Oil and Gas Order No. 2 and NM NMAC 19.15.16 of NMOCD regulations.

- (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
- 2) Collapse Loads
 - a) Cementing
 - (1) Internal: Displacement fluid density.
 - (2) External: Mud weight from TOC to surface and cement slurry weight from TOC to shoe.
 - b) Lost Returns with Mud Drop
 - (1) Internal: Lost circulation at the TD of the next hole section and the fluid level falls to a depth where the hydrostatic pressure of the mud column equals pore pressure at the depth of the lost circulation zone.
 - (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
- 3) Tension Loads
 - a) Overpull Force
 - 1. Axial: Buoyant weight of the string plus planned 100,000 lbs applied in stuck pipe situation.
 - b) Green Cement Casing Test
 - 1. Axial: Buoyant weight of the string plus cement plug bump pressure load.

Intermediate or Intermediate II

- 1) Burst Design Loads
 - a) Gas Kick Profile
 - (1) Internal: Load profile based on influx encountered in lateral portion of wellbore with a maximum influx volume of 150 bbl and a kick intensity of 1.5 ppg using maximum anticipated MW of 9.9 ppg.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
 - b) Casing Pressure Test
 - (1) Internal: Displacement fluid plus surface pressure required to comply with regulatory casing test pressure requirements of Onshore Oil and Gas Order No. 2 and NM NMAC 19.15.16 of NMOCD regulations.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
- 2) Collapse Loads
 - a) Cementing
 - (1) Internal: Displacement fluid density.
 - (2) External: Mud weight from TOC to surface and cement slurry weight from TOC to shoe.
 - b) Lost Returns with Mud Drop
 - (1) Internal: Lost circulation at the deepest TVD of the next hole section and the fluid level falls to a depth where the hydrostatic pressure of the mud column equals pore pressure at the depth of the lost circulation zone.
 - (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
- 3) Tension Loads
 - a) Overpull Force
 - 1. Axial: Buoyant weight of the string plus planned 100,000 lbs applied in stuck pipe situation.
 - b) Green Cement Casing Test
 - 1. Axial: Buoyant weight of the string plus cement plug bump pressure load.

Production

- 1) Burst Design Loads
 - a) Injection Down Casing
 - (1) Internal: Surface pressure plus injection fluid gradient.
 - (2) External: Mud base-fluid density to top of cement and cement mix water gradient (8.4 ppg) below TOC.
 - b) Casing Pressure Test (Drilling)
 - (1) Internal: Displacement fluid plus surface pressure required to comply with regulatory casing test pressure requirements of Onshore Oil and Gas Order No. 2 and NM NMAC 19.15.16 of NMOCD regulations.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
 - c) Casing Pressure Test (Production)
 - (1) Internal: The design pressure test should be the greater of the planned test pressure prior to simulation down the casing, the regulatory test pressure, and the expected gas lift system pressure. The design test fluid should be the fluid associated with the pressure test having the greatest pressure.
 - (2) External: Mud base-fluid density to top of cement and cement mix water gradient (8.4 ppg) below TOC.
 - d) Tubing Leak
 - (1) Internal: SITP plus a packer fluid gradient to the top of packer.
 - (2) External: Mud base-fluid density to top of cement and cement mix water gradient (8.4 ppg) below TOC.
- 2) Collapse Loads
 - a) Cementing
 - (1) Internal: Displacement fluid density.
 - (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
 - b) Full Evacuation
 - (1) Internal: Full void pipe.
 - (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
- 3) Tension Loads
 - a) Overpull Force
 1. Axial: Buoyant weight of the string plus planned 100,000 lbs applied in stuck pipe situation.
 - b) Green Cement Casing Test
 1. Axial: Buoyant weight of the string plus cement plug bump pressure load.

WELL SUMMARY										
	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs)				Design Cost (\$)
						Burst	Collapse	Axial	Triaxial	
1	Surface Casing	13 3/8", 54.500 ppf, J-55	BTC, J-55	30-1620	12.459	1.61	1.20	1.68	1.46	38,421
2										Total = 38,421
3										
4	Intermediate Casing	9 5/8", 40.000 ppf, J-55	BTC, J-55	30-5530	8.750 A	1.27	1.68	1.84	1.37	93,624
5										Total = 93,624
6										
7	Production Casing	5 1/2", 17.000 ppf, HP P-110	CDC-HTQ, BTC	30-21436	4.767	1.11	1.39	1.65	1.19	292,584
8										Total = 292,584
9										
10										Total = 424,629

File: APD-Rev00

Date: April 28, 2022 Page: 1

WELL SUMMARY										
	String	OD/Weight/Grade	Connection	MD Interval (usft)	Drift Dia. (")	Minimum Safety Factor (Abs)				Design Cost (\$)
						Burst	Collapse	Axial	Triaxial	
1	Surface Casing	13 3/8", 54.500 ppf, J-55	BTC, J-55	30-1620	12.459	1.61	1.20	1.68	1.46	38,421
2										Total = 38,421
3	Intermediate Casing	9 5/8", 40.000 ppf, J-55	BTC, J-55	30-5530	8.750 A	1.27	1.68	1.84	1.37	93,624
4										Total = 93,624
5	Production Casing	5 1/2", 17.000 ppf, HP P-110	CDC-HTQ, BTC	30-21436	4.767	1.11	1.39	1.65	1.19	292,584
6										Total = 292,584
7										
8										
9										
10										Total = 424,629

Colgate's Minimum Design Criteria

Burst, collapse and tension SF are calculated using Landmark's StressCheck (casing design) software. A sundry will be requested if any lesser grade or different size casing is substituted.

Casing Design Assumptions:

Surface

- 1) Burst Design Loads
 - a) Displacement to Gas
 - (1) Internal: Assumes a full column of gas in the casing with a gas gradient of 0.7 psi/ft in the absence of better information. It is limited to the controlling pressure based on the maximum expected pore pressure within the next drilling interval.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
 - b) Casing Pressure Test
 - (1) Internal: Displacement fluid plus surface pressure required to comply with regulatory casing test pressure requirements of Onshore Oil and Gas Order No. 2 and NM NMAC 19.15.16 of NMOCD regulations.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
- 2) Collapse Loads
 - a) Cementing
 - (1) Internal: Displacement fluid density.
 - (2) External: Mud weight from TOC to surface and cement slurry weight from TOC to shoe.
 - b) Lost Returns with Mud Drop
 - (1) Internal: Lost circulation at the TD of the next hole section and the fluid level falls to a depth where the hydrostatic pressure of the mud column equals pore pressure at the depth of the lost circulation zone.
 - (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
- 3) Tension Loads
 - a) Overpull Force
 1. Axial: Buoyant weight of the string plus planned 100,000 lbs applied in stuck pipe situation.
 - b) Green Cement Casing Test
 1. Axial: Buoyant weight of the string plus cement plug bump pressure load.

Intermediate I

- 1) Burst Design Loads
 - a) Displacement to Gas
 - (1) Internal: Assumes a full column of gas in the casing with a gas gradient of 0.7 psi/ft in the absence of better information. It is limited to the controlling pressure based on the maximum expected pore pressure within the next drilling interval.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
 - b) Casing Pressure Test
 - (1) Internal: Displacement fluid plus surface pressure required to comply with regulatory casing test pressure requirements of Onshore Oil and Gas Order No. 2 and NM NMAC 19.15.16 of NMOCD regulations.

- (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
- 2) Collapse Loads
 - a) Cementing
 - (1) Internal: Displacement fluid density.
 - (2) External: Mud weight from TOC to surface and cement slurry weight from TOC to shoe.
 - b) Lost Returns with Mud Drop
 - (1) Internal: Lost circulation at the TD of the next hole section and the fluid level falls to a depth where the hydrostatic pressure of the mud column equals pore pressure at the depth of the lost circulation zone.
 - (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
- 3) Tension Loads
 - a) Overpull Force
 - 1. Axial: Buoyant weight of the string plus planned 100,000 lbs applied in stuck pipe situation.
 - b) Green Cement Casing Test
 - 1. Axial: Buoyant weight of the string plus cement plug bump pressure load.

Intermediate or Intermediate II

- 1) Burst Design Loads
 - a) Gas Kick Profile
 - (1) Internal: Load profile based on influx encountered in lateral portion of wellbore with a maximum influx volume of 150 bbl and a kick intensity of 1.5 ppg using maximum anticipated MW of 9.9 ppg.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
 - b) Casing Pressure Test
 - (1) Internal: Displacement fluid plus surface pressure required to comply with regulatory casing test pressure requirements of Onshore Oil and Gas Order No. 2 and NM NMAC 19.15.16 of NMOCD regulations.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
- 2) Collapse Loads
 - a) Cementing
 - (1) Internal: Displacement fluid density.
 - (2) External: Mud weight from TOC to surface and cement slurry weight from TOC to shoe.
 - b) Lost Returns with Mud Drop
 - (1) Internal: Lost circulation at the deepest TVD of the next hole section and the fluid level falls to a depth where the hydrostatic pressure of the mud column equals pore pressure at the depth of the lost circulation zone.
 - (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
- 3) Tension Loads
 - a) Overpull Force
 - 1. Axial: Buoyant weight of the string plus planned 100,000 lbs applied in stuck pipe situation.
 - b) Green Cement Casing Test
 - 1. Axial: Buoyant weight of the string plus cement plug bump pressure load.

Production

- 1) Burst Design Loads
 - a) Injection Down Casing
 - (1) Internal: Surface pressure plus injection fluid gradient.
 - (2) External: Mud base-fluid density to top of cement and cement mix water gradient (8.4 ppg) below TOC.
 - b) Casing Pressure Test (Drilling)
 - (1) Internal: Displacement fluid plus surface pressure required to comply with regulatory casing test pressure requirements of Onshore Oil and Gas Order No. 2 and NM NMAC 19.15.16 of NMOCD regulations.
 - (2) External: Mud weight to TOC and cement mix water gradient (8.4 ppg) below TOC.
 - c) Casing Pressure Test (Production)
 - (1) Internal: The design pressure test should be the greater of the planned test pressure prior to simulation down the casing, the regulatory test pressure, and the expected gas lift system pressure. The design test fluid should be the fluid associated with the pressure test having the greatest pressure.
 - (2) External: Mud base-fluid density to top of cement and cement mix water gradient (8.4 ppg) below TOC.
 - d) Tubing Leak
 - (1) Internal: SITP plus a packer fluid gradient to the top of packer.
 - (2) External: Mud base-fluid density to top of cement and cement mix water gradient (8.4 ppg) below TOC.
- 2) Collapse Loads
 - a) Cementing
 - (1) Internal: Displacement fluid density.
 - (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
 - b) Full Evacuation
 - (1) Internal: Full void pipe.
 - (2) External: Mud weight to TOC and cement slurry(s) density below TOC.
- 3) Tension Loads
 - a) Overpull Force
 1. Axial: Buoyant weight of the string plus planned 100,000 lbs applied in stuck pipe situation.
 - b) Green Cement Casing Test
 1. Axial: Buoyant weight of the string plus cement plug bump pressure load.



H₂S Contingency Plan



Table of Contents

I. EMERGENCY ASSISTANCE TELEPHONE LIST3

II. H₂S CONTINGENCY PLAN SECTION5

III. OPERATING PROCEDURES7

IV. OPERATING CONDITIONS 10

V. EMERGENCY PROCEDURES 11

VI. POST EMERGENCY ACTIONS..... 14

VII. IGNITION PROCEDURES..... 15

VIII. TRAINING PROGRAM..... 16

IX. EMERGENCY EQUIPMENT 16

X. CHECKLISTS..... 20

XI. BRIEFING PROCEDURES..... 22

XII. EVACUATION PLAN..... 23

XIII. APPENDICES AND GENERAL INFORMATION 24

I. EMERGENCY ASSISTANCE TELEPHONE LIST**PUBLIC SAFETY****911 or****Sheriff's Department:**

Eddy County Sherriff's Office (575) 887-7551

Fire Department:

Carlsbad Fire Department (575) 885-3125

Artesia Fire Department (575) 746-5051

Ambulance:

Elite Medical Transport (Carlsbad) (915) 542-1144

Trans Aero MedEvac (Artesia) (970) 657-7449

Hospitals:

Carlsbad Medical Center (575) 887-4100

Artesia General Hospital (575) 748-3333

New Mexico Dept. of Transportation:

Highway & Transportation Department (505) 795- 1401

New Mexico Railroad Commission:

Main Line (505) 476-3441

OSHA 24 Hr. Reporting

(800) 321-6742

(8 hrs. after death or 24 hrs. after in-patient, amputation, loss of an eye)

Office Contacts**911 or****Colgate Energy LLC.** (432) 695-4222**Vice President of Operations:**

Casey McCain (432) 664-6140

Drilling Engineering Supervisor

Rafael Madrid (432) 556-6387

Drilling Engineering Technical Adviser

Steven Segrest (405) 550-0277

Operations Superintendent

Rick Lawson (432) 530- 3188

Drilling Superintendent

Daniel Cameron (405) 933-0435

Onsite Supervision (H&P 481 Rig Managers)

Juan Gutierrez (970)394-4768

Jonathan Jackson (970)394-4768

Onsite Supervision (H&P 481 Company Men)

Pierre Dupuis (432)438-0114

Eric Rutherford (432)438-0114

Rolando Torres (432)438-0114

Trevor Hein (432)438-0114

Emergency Accommodations

Safety Solutions Office (432) 563-0400

Safety Solutions Dispatch (432) 556-2002

Craig Strasner (432) 894-0341 (Cell)

II. H₂S CONTINGENCY PLAN SECTION

Scope:

This contingency plan provides an organized plan of action for alerting and protecting the public within an area of exposure prior to an intentional release or following the accidental release of a potentially hazardous volume of hydrogen sulfide. The plan establishes guidelines for all personnel whose work activity may involve exposure to Hydrogen Sulfide Gas (H₂S).

Objective:

Prevent any and all accidents and prevent the uncontrolled release of H₂S into the atmosphere.

Provide proper evacuation procedures to cope with emergencies.

Provide immediate and adequate medical attention should an injury occur.

Purpose, Distribution and Updating of Contingency Plan:

The Purpose of this contingency plan is to protect the general public from the harmful effects of H₂S accidentally escaping from the subject producing well. This plan is designed to accomplish its purpose by assuring the preparedness necessary to:

1. Minimize the possibility of releasing H₂S into the atmosphere during related operations.
2. Provide for the logical, efficient, and safe emergency actions required to protect the general public in the event of an accidental release of a potentially hazardous quantity of H₂S.

Supplemental information is included with this plan and is intended as reference material for anyone needing a more detailed understanding of the many factors pertinent to H₂S drilling operations safety. The release of a potentially hazardous quantity of H₂S is highly unlikely. If such a release should occur however, obviously the exact time, rate, duration, and other pertinent facts will be known in advance thus, this contingency plan must necessarily be somewhat general. The plan does review in detail, as is reasonably possible, the type of accidental release that could possibly endanger the general public, the probable extent of such danger, and the emergency actions generally appropriate. In the event of such an accidental release, the specific actions to be taken will have to be determined at the time of release by the responsible personnel at the drilling location. Complete familiarity with this plan will help such personnel make the proper decisions rapidly. Familiarity with this plan is so required all operators, operator representatives, and drilling contractor supervisory personnel who could possibly be on duty at the drilling location at the time of an H₂S emergency.

IT IS THE RESPONSIBILITY OF THE OPERATOR TO ASSURE SUCH FAMILIARITY BEFORE DRILLING WITHIN 1000' OR THREE DAYS PRIOR TO PENETRATION OF THE SHALLOWEST FORMATION KNOWN OR SUSPECTED TO CONTAIN H₂S IN POTENTIALLY HAZARDOUS QUANTITIES, AND ALSO TO ASSURE THE TIMELY ACCOMPLISHMENT OF ALL THE OTHER ACTION SPECIFIED HERE IN.

As this contingency plan was prepared considerably in advance of the anticipated H₂S operation, the plan must be kept current if it is to effectively serve its purpose. The operators will be responsible for seeing that all copies are updated. Updating the plan is required when any changes to the personnel Call List (Section) including telephone numbers occur or when any pertinent data or plans for the well are altered. The plan must also be updated when any changes in the general public likely to be within the exposure area in the event of an

accidental release from the well bore of a potentially hazardous quantity of H₂S. Two copies of this plan shall be retained at the office of Colgate Energy. Two copies shall be retained at the drilling location.

Discussion of Plan:

Suspected Problem Zones:

Implementation: This plan, with all details, is to be fully implemented 1000' before drilling into the first sour zone.

Emergency Response Procedure: This section outlines the conditions and denotes steps to be taken in the event of an emergency.

Emergency Equipment and Procedure: This section outlines the safety and emergency equipment that will be required for the drilling of this well.

Training Provisions: This section outlines the training provisions that must be adhered to 1000' before drilling into the first sour zone.

Emergency call list: Included are the telephone numbers of all persons that would need to be contacted, should an H₂S emergency occur.

Briefing: This section deals with the briefing of all persons involved with the drilling of this well.

Public Safety: Public Safety Personnel will be made aware of the drilling of this well.

Check Lists: Status check lists and procedural check lists have been included to ensure adherence to the plan.

General Information: A general information section has been included to supply support information.

III. OPERATING PROCEDURES

A. Blowout Preventer Drills

Due to the special piping and Mani folding necessary to handle poisonous gas, particular care will be taken to ensure that all rig personnel are completely familiar with their jobs during the drills. The Drilling Consultant and Tool Pusher (Rig Superintendent) are thoroughly familiar with the additional controls and piping necessary.

B. H₂S Alarm Drills

The Company Man and/ or designee will conduct frequent H₂S alarm drills for each crew by injecting a trace of H₂S where the detector will give an alarm. Under these conditions all personnel on location will put on air equipment and remain masked until all clear is announced.

C. Surface Annular Preventer/ Diverter System Testing

After installation of the surface annular preventer, Hydraulic Control Valve and diverter system, both are to be function tested. They also should be function tested frequently while drilling surface hole.

D. Blowout Preventer

After installation of the Blowout Preventer Stack, the stack will be pressure tested. The Choke manifold is also to be pressure tested at this time. This procedure will be repeated as required by the NMOCD, the BLM, or if any of the stack is nipped down. Also, at this time, the Blind and Pipe Rams are checked for correct operation.

E. Well Control Practice Drills and Safety Meeting for Crew Members

Pit drills are for the purpose of acquainting each member of the drilling crew with his duties in the event of an emergency. Drills will be held with each crew as frequently as required to thoroughly familiarize each man with his duties. Drills are to be held at least weekly from that time forward.

1. BOP Drill while on Bottom Drilling:

A. Signal will be three or more long blast given by driller on the horn.

B. Procedure will be as follows:

1. Tool Pusher: Supervises entire operation.

2. Driller

a. Gives signal.

b. Picks up Kelly.

c. Stops pumps.

d. Observes flow.

e. Signal to close (pipe rams if necessary).

f. Check that Choke Manifold is closed.

g. Record drill pipe pressure, casing pressure and determine mud volume gain.

3. Motorman

a. Go to closing unit and standby for signal to close BOP.

b. Close BOP in signal.

c. Check on BOP closing.

d. Go to floor to assist driller. (NOTE: During test drills the BOP

need not be completely closed at the discretion of the supervisor. Supervisor should make it very clear that it is a test drill only!)

4. Derrickman
 - a. Check pumps.
 - b. Go to floor for directions from the driller.
 5. Floorman
 - a. Go to manifold.
 - b. Observe and record pressure.
 - c. Check manifold and BOP for leaks.
 - d. Check with driller for additional instructions.
2. BOP Drill While Making Trip:
- A. During trip driller will fill hole every five (5) stands and check the pits to be sure hole is taking mud.
 - B. Drill Procedure is as follows:
 1. Driller
 - a. Order Safety valve installed.
 - b. Alert those not on the floor.
 - c. Go to stations as described in above drill.
3. Safety Meetings
- A. Every person involved in the operating will be informed of the characteristics of H₂S, its danger and safety procedures to be used when it is encountered, and recommended first-aid procedure for regular rig personnel. This will be done through a series of talks made before spud.
 - B. The Safety Advisor or Drilling Supervisor will conduct these training sessions and will repeat them as deemed necessary by him or as instructed by Colgate Energy. Talks may include the following subjects:
 1. Dangers of Hydrogen Sulfide (H₂S).
 2. Use and limitations of air equipment.
 3. Use of resuscitator.
 4. Organize Buddy System.
 5. First Aid procedures.
 6. Use of H₂S detection devices.
 7. Designate responsible people.
 8. Explain rig layout and policy to visitors.
 - a. Designate smoking and safety or Muster area.
 - b. Emphasize the importance of wind directions.
 9. Describe and explain operation of BOP stack, manifold, separator, and pit piping. Include maximum allowable pressure for casing procedure.
 10. Explain functions of Safety Supervisor.
 11. Explain organize H₂S Drills.
 12. Explain the overall emergency plan with emphasis given to the evacuation phase of the plans.

- Note: The above talks will be attended by every person involved in the operation. When drilling has reached a depth where H₂S is anticipated, temporary service personnel and visitors will be directed to the Drilling Consultant, who will designate the air equipment to be used by them in case of emergency, acquaint them with the dangers involved and be sure of their safety while they are in the area. He will point out the Briefing Areas, Windsocks, and Smoking Areas. He may refuse entrance to anyone, who in his opinion should not be admitted because of lack of safety equipment, special operations in progress or for other reasons involving personnel safety.

F. Outside Service Personnel

All service people such as cementing crews, logging crews, specialist, mechanics, and welders will furnish their own safety equipment. The Company Man/ or designee will be sure that the number of people on location does not exceed the number of masks on location, and they have been briefed regarding safety procedures. He will also be sure each of these people know about smoking and "Briefing Areas" and know what to do in case of an emergency alert or drill. Visitors will be restricted, except with special permission from the Drilling Consultant, when H₂S might be encountered. They will be briefed as to what to do in case of an alert or drill.

G. Onsite/ off shift workers

All workers that are staying on site must be identified as to where they are staying while off tour. If a drill/ or emergency takes place related to an H₂S release, each crew must have a designated person(s) that will wake them up and ensure that they are cleared to the appropriate muster area immediately.

H. Simultaneous Operations (SIMOPS)

If work is going on adjacent to the location is the responsibility of the Drilling Consultant or designee to communicate any applicable risks that may affect personnel working on that adjacent location. In the case of an H₂S drill or event, there should be a designated crew member that is responsible for contacting personnel on adjacent locations. This could include just communication on potential events or in case of an event, notification to evacuate location. Drilling Consultant or designee are the Point of Contact and oversee all activities at such point of an H₂S event occurrence.

I. Area Residences/ Occupied Locations/ Public Roads

Any occupied residences/ businesses that are within a reasonable perimeter of the location (attached map will identify a 3000' radius around location) should be identified as part of this contingency and a reasonable effort will be made to gain contact information for them. As part of the briefing of the contingency plan, the team reviewing should identify where these potential receptors are and plan on who will contact them in case of a release that may impact that area.

J. Drilling Fluids

Drilling Fluid Monitoring – On Any Hazardous H₂S gas well, the earlier the warning of danger the better chance to control operations. Mud Company will be in daily contact with Colgate Energy Consultant. The Mud Engineer will take samples of the mud, analyze these samples, and make necessary recommendations to prevent H₂S gas from the formation, the pH will be increased as necessary for corrosion control.

pH Control – For normal drilling, pH of 10.5 – 11.5. Would be enough for corrosion protection. If there is an influx of H₂S gas from the formation, the pH will be increased as necessary for corrosion control.

H₂S Scavengers – If necessary H₂S scavengers will be added to the drilling mud.

IV. OPERATING CONDITIONS

A. Posting Well Condition Flags

Post the green, yellow or red well condition flag, as appropriate, on the well condition sign at the location entrance, and take necessary precautions as indicated below:

1. **Green Flag:** Potential Danger- When Drilling in known H₂S zones or when H₂S has been detected in the drilling fluid atmosphere. Protective breathing equipment shall be inspected, and all personnel on duty shall be alerted to be ready to use this equipment.
2. **Yellow Flag:** Potential Danger- When the threshold limit value of H₂S (10 PPM) or of SO₂ (5 PPM) is reached. If the concentration of H₂S or SO₂ reaches 10 PPM, protective breathing equipment shall be worn by all working personnel, and non-working personnel shall go to the upwind Safe Briefing Area.
3. **Red Flag:** Extreme danger*- When the ambient concentration of H₂S or SO₂ is reasonably believed or determined to have exceeded the potentially hazardous level. All non-essential personnel shall leave the drilling location taking the route most likely to exposure to escaping gas.

B. Requiring Air Masks Conditions

1. Whenever air masks are used, the person must be clean shaven as shown in the APC Guidelines
2. When breaking out any line where H₂S can reasonably be expected.
3. When sampling air in areas to determine if toxic concentrations of H₂S exist.
4. When working in areas where 10 PPM or more of H₂S has been detected.
5. At any time, there is doubt as to the H₂S level in the area to be entered.

C. Kick Procedure

1. It is very important that the driller be continuously alert, especially when approaching a gas formation.
2. Should gas come into the well bore, it is very important to be aware of a kick at the earliest time.
3. If a kick is identified, follow appropriate diverter or shut in procedures according to the situation that is presented utilizing appropriate kick procedures.

V. EMERGENCY PROCEDURES

- I. In the event of any evidence of H₂S level above 10ppm, take the following steps immediately:
 - a. Secure breathing apparatus.
 - b. Order non-essential personnel out of the danger zone.
 - c. Take steps to determine if the H₂S level can be corrected or suppressed, and if so, proceed with normal operations.
- II. If uncontrollable conditions occur, proceed with the following:
 - a. Take steps to protect and/or remove any public downwind of the rig, including partial evacuation or isolation. Notify necessary public safety personnel.
 - b. Remove all personnel to the Safe Briefing Area.
 - c. Notify public safety personnel for help with maintaining roadblocks, thus limiting traffic and implementing evacuation.
 - d. Determine and proceed with the best possible plan to regain control of the well. Maintain tight security and safety measures.
- III. Responsibility
 - a. The Company Approved Supervisor shall be responsible for the total implementation of the plan.
 - b. The Company Approved Supervisor shall be in complete command during any emergency.
 - c. The Company Approved Supervisor shall designate a backup Supervisor if he/she is not available.
- IV. Actions to be taken
 - a. Assign specific tasks to drilling location personnel
 - b. Evacuate the general public from the exposure area
 - c. Cordon off the exposure area to prevent entry by unauthorized persons
 - d. Request assistance if and as needed and initiate emergency notifications
 - e. Stop the dispersion of H₂S
 - f. Complete emergency notifications as required
 - g. Return the situation to normal

EMERGENCY PROCEDURE IMPLEMENTATION**I. Drilling or Tripping****a. All Personnel**

- i. When alarm sounds, don escape unit and report to upwind Safe Briefing Area.
- ii. Check status of other personnel (buddy system).
- iii. Secure breathing apparatus.
- iv. Wait for orders from supervisor.

b. Drilling Consultant

- i. Report to the upwind Safe Briefing Area.
- ii. Don Breathing Apparatus and return to the point of release with the Tool Pusher or Driller (buddy system).
- iii. Determine the concentration of H₂S.
- iv. Assess the situation and take appropriate control measures.

c. Tool Pusher

- i. Report to the upwind Safe Briefing Area.
- ii. Don Breathing Apparatus and return to the point of release with the Drilling Consultant or the Driller (buddy system).
- iii. Determine the concentration of H₂S.
- iv. Assess the situation and take appropriate control measures.

d. Driller

- i. Check the status of other personnel (in a rescue attempt, always use the buddy system).
- ii. Assign the least essential person to notify the Drilling Consultant and Tool Pusher, in the event of their absence.
- iii. Assume the responsibility of the Drilling Consultant and the Tool Pusher until they arrive, in the event of their absence.

e. Derrick Man and Floor Hands

- i. Remain in the upwind Safe Briefing Area until otherwise instructed by a supervisor.

f. Mud Engineer

- i. Report to the upwind Safe Briefing Area.
- ii. When instructed, begin check of mud for pH level and H₂S level.

g. Safety Personnel

- i. Don Breathing Apparatus.
- ii. Check status of personnel.
- iii. Wait for instructions from Drilling Consultant or Tool Pusher.

II. Taking a Kick

- a.* All Personnel report to the upwind Safe Briefing Area.
- b.* Follow standard BOP/ diverter procedures.

III. Open Hole Logging

- a.* All unnecessary personnel should leave the rig floor.
- b.* Drilling Consultant and Safety Personnel should monitor the conditions and make necessary safety equipment recommendations.

IV. Running Casing or Plugging

- a.* Follow "Drilling or Tripping" procedures.
- b.* Assure that all personnel have access to protective equipment.

VI. POST EMERGENCY ACTIONS

In the event this plan is activated, the following post emergency actions shall be taken in an effort to reduce the possibility of a reoccurrence of the type of problem that required its activation, and/or assure that any future activation of a similar plan will be as effective as possible.

- A. Review the factors that caused or permitted the emergency occur, and if the need is indicated, modify operating, maintenance and/or surveillance procedures.
- B. If the need is indicated, retrain employees in blowout prevention, H₂S emergency procedures and etc.
- C. Clean up, recharge, restock, repair, and/ or replace H₂S emergency equipment as necessary, and return it to its proper place. (For whatever rental equipment is used, this will be the responsibility of Rental Company).
- D. See that future H₂S drilling contingency plans are modified accordingly, if the need is indicated.

VII. IGNITION PROCEDURES

Responsibilities:

The decision to ignite the well is the responsibility of the DRILLING CONSULTANT in concurrence with the STATE POLICE. In the event the Drilling Consultant is incapacitated, it becomes the responsibility of the RIG TOOL PUSHER. This decision should be made only as a last resort and in a situation where it is clear that:

1. Human life and property are endangered.
2. There is no hope of controlling the blowout under the prevailing conditions.

If time permits, notify the main office, but do not delay if human life is in danger. Initiate the first phase of the evacuation plan.

Instructions for Igniting the Well:

1. Two people are required for the actual igniting operation. Both men must wear self-contained breathing apparatus and must use a full body harness and attach a retrievable safety line to the D-Ring in the back. One man must monitor the atmosphere for explosive gases with the LEL monitor, while the Drilling Consultant is responsible for igniting the well.
2. The primary method to ignite is a 25mm flare gun with a range of approximately 500 feet.
3. Ignite from upwind and do not approach any closer than is warranted.
4. Select the ignition site best suited for protection and which offers an easy escape route.
5. Before igniting, check for the presence of combustible gases.
6. After igniting, continue emergency actions and procedures as before.
7. All unassigned personnel will limit their actions to those directed by the Drilling Consultant.

Note: After the well is ignited, burning Hydrogen Sulfide will convert to Sulfur Dioxide, which is also highly toxic. Also, both are heavier than air. Do not assume the area is safe even after the well is ignited.

VIII. TRAINING PROGRAM

When working in an area where Hydrogen Sulfide (H₂S) might be encountered, definite training requirements must be carried out. The Company Supervisor will ensure that all personnel, at the well site, have had adequate training in the following:

1. Hazards and characteristics of Hydrogen Sulfide (H₂S).
2. Physicals effects of Hydrogen Sulfide on the human body.
3. Toxicity of Hydrogen Sulfide and Sulfur Dioxide.
4. H₂S detection, Emergency alarm and sensor location.
5. Don and Doff of SCBA and be clean shaven.
6. Emergency rescue.
7. Resuscitators.
8. First aid and artificial resuscitation.
9. The effects of Hydrogen Sulfide on metals.
10. Location safety.

Service company personnel and visiting personnel must be notified if the zone contains H₂S, and each service company must provide adequate training and equipment for their employees before they arrive at the well site.

IX. EMERGENCY EQUIPMENT

Lease Entrance Sign:

Should be located at the lease entrance with the following information:

CAUTION – POTENTIAL POISON GAS
HYDROGEN SULFIDE
NO ADMITTANCE WITHOUT AUTHORIZATION

Respiratory Equipment:

- Fresh air breathing equipment should be placed at the safe briefing areas and should include the following:
- Two SCBA's at each briefing area.
- Enough airline units to operate safely, anytime the H₂S concentration reaches the IDLH level (100 ppm).

- Cascade system with enough breathing air hose and manifolds to reach the rig floor, the derrickman and the other operation areas.

Windssocks or Wind Streamers:

- A minimum of two 10" windssocks located at strategic locations so that they may be seen from any point on location.
- Wind streamers (if preferred) should always be placed at various locations on the well site to ensure wind consciousness. (Corners of location).

Hydrogen Sulfide Detector and Alarms:

- 1 - Four channel H₂S monitor with alarms.
- Three (3) sensors located as follows: #1 – Rig Floor, #2 – Shale Shaker, #3 – Cellar.
- Gastec or Draeger pump with tubes.
- Sensor test gas.

Well Condition Sign and Flags:

The Well Condition Sign w/flags should be placed a minimum of 150' before you enter the location. It should have three (3) color coded flags (green, yellow and red) that will be used to denote the following location conditions:

GREEN – Normal Operating Conditions
YELLOW – Potential Danger
RED – Danger, H₂S Gas Present

Auxiliary Rescue Equipment:

- Stretcher
- 2 – 100' Rescue lines.
- First Aid kit properly stocked.

Mud Inspection Equipment:

Garret Gas Train or Hach Tester for inspection of Hydrogen Sulfide in the drilling mud system.

Fire Extinguishers:

Adequate fire extinguishers shall be located at strategic locations.

Blowout Preventer:

- The well shall have hydraulic BOP equipment for the anticipated bottom hole pressure (BHP).
- The BOP should be tested upon installation.
- BOP, Choke Line and Kill Line will be tested as specified by Operator.

Confined Space Monitor:

There should be a portable multi-gas monitor with at least 3 sensors (O₂, LEL H₂S), preferably 4 (O₂, LEL, H₂S, CO). This instrument should be used to test the atmosphere of any confined space before entering. It should also be used for atmospheric testing for LEL gas before beginning any type of Hot Work. Proper calibration documentation will need to be provided.

Communication Equipment:

- Proper communication equipment such as cell phones or 2-way radios should be available at the rig.
- Radio communication shall be available for communication between the company man's trailer, rig floor and the tool pusher's trailer.
- Communication equipment shall be available on the vehicles.

Special Control Equipment:

- Hydraulic BOP equipment with remote control on the ground.
- Rotating head at the surface casing point.

Evacuation Plan:

- Evacuation routes should be established prior to spudding the well.
- Should be discussed with all rig personnel.

Designated Areas:***Parking and Visitor area:***

- All vehicles are to be parked at a pre-determined safe distance from the wellhead.
- Designated smoking area.

Safe Briefing Areas:

- Two Safe Briefing Areas shall be designated on either side of the location at the maximum allowable distance from the well bore so they offset prevailing winds, or they are at a 180-degree angle if wind directions tend to shift in the area.
- Personal protective equipment should be stored at both briefing areas and if a moveable cascade trailer is used, it should be kept upwind of existing winds. When wind is from the prevailing direction, both briefing areas should be accessible.

Note:

- Additional equipment will be available at the H₂S Provider Safety office.
- Additional personal H₂S monitors are available for all employees on location.
- Automatic Flare Igniters are recommended for installation on the rig.

X. CHECKLISTS**Rig-up & Equipment Status Check List**

Note: Initial & Date each item as they are implemented. Multiple wells require additional Columns to be Dated/ Initialed

	Date & Initial 1 st Well	Date & Initial 2 nd Well	Date & Initial 3 rd Well	Date & Initial 4 th Well
Sign at location entrance.				
Two (2) windsocks (in required locations).				
Wind Streamers (if required).				
SCBA's on location (Minimum of 2 @ each Muster Area)				
Air packs (working packs and escape packs), inspected and ready for use.				
Spare bottles for each air pack (if required).				
Cascade system and hose line hook up.				
Choke manifold hooked-up and tested. (before drilling out surface casing.)				
Remote Hydraulic BOP control tested (before drilling out surface casing).				
BOP tested (before drilling out surface casing).				
Safe Briefing Areas set-up				
Well Condition sign and flags on location and ready.				
Hydrogen Sulfide detection/ alarm system hooked-up & tested.				
Stretcher on location				
2 – 100' Lifelines on location.				
1 – 20# Fire Extinguisher in safety trailer.				
Confined Space monitor on location and tested.				
All rig crews and supervisor trained (as required).				
All rig crews and supervision medically qualified and fit tested on proper respirators				
Access restricted for unauthorized personnel.				
Pre-spud meeting held reviewing Contingencies				
Drills on H ₂ S and well control procedures.				
All outside service contractors advised of potential H ₂ S on the well.				
25mm Flare Gun on location w/flares.				

Procedural Check List

Perform the following on each tour:

1. Check fire extinguishers to see that they have the proper charge.
2. Check breathing equipment to ensure that they have not been tampered with.
3. Check pressure on the supply air bottles to make sure they are capable of recharging.
4. Make sure all the Hydrogen Sulfide detection systems are operative.
5. Ensure that all BOP/ Surface Annular/ Diverter systems are functioning and operational.

Perform the following each week:

1. Check each piece of breathing equipment to make sure that they are fully charged and operational. This requires that the air cylinder be opened, and the mask assembly be put on and tested to make sure that the regulators and masks are properly working. Negative and Positive pressure should be conducted on all masks.
2. BOP skills.
3. Check supply pressure on BOP accumulator stand-by source.
4. Check all breathing air mask assemblies to see that straps are loosened and turned back, ready for use.
5. Check pressure on cascade air cylinders to make sure they are fully charged and ready to use for refill purposes if necessary.
6. Check all cascade system regulators to make sure they work properly.
7. Perform breathing drills with on-site personnel.
8. Check the following supplies for availability (may be with H₂S Techs On-call):
 - Stretcher
 - Safety Belts and Ropes
 - Spare air Bottles
 - Spare Oxygen Bottles (if resuscitator required)
 - Gas Detector Pump and Tubes
 - Emergency telephone lists
 - Test the Confined Space Monitor to verify the batteries are good.

XI. BRIEFING PROCEDURES

The following scheduled briefings will be held to ensure the effective drilling and operation of this project:

Pre-Spud Meeting

Date: Prior to spudding the well.

Attendance: Drilling Supervisor
 Drilling Engineer
 Drilling Consultant
 Rig Tool Pushers
 Rig Drillers
 Mud Engineer
 All Safety Personnel
 Key Service Company Personnel

Purpose: Review and discuss the well program, step-by-step, to insure complete understanding of assignments and responsibilities.

XII. EVACUATION PLAN

General Plan

The direct lines of action prepared by Colgate Energy to protect the public from hazardous gas situations are as follows:

1. When the company approved supervisor (Drilling Consultant, Tool Pusher or Driller) determine that Hydrogen Sulfide gas cannot be limited to the well location, and the public will be involved, he will activate the evacuation plan. Escape routes are noted on the area map.
2. Company safety personnel or designee will notify the appropriate local government agency that a hazardous condition exists, and evacuation needs to be implemented.
3. Company approved safety personnel that have been trained in the use of the proper emergency equipment will be utilized.
4. Law enforcement personnel (State Police, Local Police Department, Fire Department, and the Sheriff's Department) will be called to aid in setting up and maintaining roadblocks. Also, they will aid in evacuation of the public if necessary.

NOTE: Law enforcement personnel will not be asked to come into a contaminated area. Their assistance will be limited to uncontaminated areas. Constant radio contact will be maintained with them.

5. After the discharge of gas has been controlled, "Company" personnel will determine when the area is safe for re-entry.
6. If a major release is secured, all exposed housing, vehicles, rig buildings, and low-lying areas and other structures downwind must be tested and clear with SCBAs donned to ensure that all residual H₂S is cleared. Fans, or opening of doors is recommended to ensure that areas are cleared out as part of this process.

XIII. APPENDICES AND GENERAL INFORMATION

Radius of Exposure Affected Notification List

(within a 65' radius of exposure @100ppm)

The geologic zones that will be encountered during drilling are known to contain hazardous quantities of H₂S. The accompanying map illustrates the affected areas of the community. The residents within this radius will be notified via a hand delivered written notice describing the activities, potential hazards, conditions of evacuation, evacuation drill siren alarms and other precautionary measures.

Evacuee Description: Residents:

Notification Process:

A continuous siren audible to all residence will be activated, signaling evacuation of previously notified and informed residents.

Evacuation Plan:

All evacuees will migrate lateral to the wind direction.

The Operating Company will identify all home bound or highly susceptible individuals and make special evacuation preparations, interfacing with the local and emergency medical service as necessary.

Toxic Effects of H₂S Poisoning

Hydrogen Sulfide is extremely toxic. The acceptable ceiling concentration for eight-hour exposure is 10 PPM, which is .001% by volume. Hydrogen Sulfide is heavier than air (specific gravity – 1.192) and is colorless and transparent. Hydrogen Sulfide is almost as toxic as Hydrogen Cyanide and is 5-6 times more toxic than Carbon Monoxide. Occupational exposure limits for Hydrogen Sulfide and other gases are compared below in Table 1. Toxicity table for H₂S and physical effects are shown in Table 2.

Table 1
Permissible Exposure Limits of Various Gases

<u>Common Name</u>	<u>Symbol</u>	<u>Sp. Gravity</u>	<u>TLV</u>	<u>STEL</u>	<u>IDLH</u>
Hydrogen Cyanide	HCN	.94	4.7 ppm	4.7 ppm	50 ppm
Hydrogen Sulfide	H ₂ S	1.192	10 ppm	15 ppm	100 ppm
Sulfide Dioxide	SO ₂	2.21	2 ppm	5 ppm	100 ppm
Chlorine	CL	2.45	.5 ppm	1 ppm	10 ppm
Carbon Monoxide	CO	.97	25 ppm	200 ppm	1200 ppm
Carbon Dioxide	CO ₂	1.52	5000 ppm	30,000 ppm	40,000 ppm
Methane	CH ₄	.55	5% LEL	15% UEL	

Definitions

- A. TLV – Threshold Limit Value is the concentration employees may be exposed based on a TWA (time weighted average) for eight (8) hours in one day for 40 hours in one (1) week. This is set by ACGIH (American Conference of Governmental Hygienists) and regulated by OSHA.
- B. STEL – Short Term Exposure Limit is the 15-minute average concentration an employee may be exposed to providing that the highest exposure never exceeds the OEL (Occupational Exposure Limit). The OEL for H₂S is 20 PPM.
- C. IDLH – Immediately Dangerous to Life and Health is the concentration that has been determined by the ACGIH to cause serious health problems or death if exposed to this level. The IDLH for H₂S is 100 PPM.
- D. TWA – Time Weighted Average is the average concentration of any chemical or gas for an eight (8) hour period. This is the concentration that any employee may be exposed based on a TWA.

Toxicity Table of H₂S

<u>Percent %</u>	<u>PPM</u>	<u>Physical Effects</u>
.0001	1	Can smell less than 1 ppm.
.001	10	TLV for 8 hours of exposure.
.0015	15	STEL for 15 minutes of exposure.
.01	100	Immediately Dangerous to Life & Health. Kills sense of smell in 3 to 5 minutes.
.02	200	Kills sense of smell quickly, may burn eyes and throat.
.05	500	Dizziness, cessation of breathing begins in a few minutes .
.07	700	Unconscious quickly, death will result if not rescued promptly.
.10	1000	Death will result unless rescued promptly. Artificial resuscitation may be necessary.

PHYSICAL PROPERTIES OF H₂S

The properties of all gases are usually described in the context of seven major categories:

- COLOR
- ODOR
- VAPOR DENSITY
- EXPLOSIVE LIMITS
- FLAMMABILITY
- SOLUBILITY (IN WATER)
- BOILING POINT

Hydrogen Sulfide is no exception. Information from these categories should be considered in order to provide a complete picture of the properties of the gas.

COLOR – TRANSPARENT

Hydrogen Sulfide is colorless, so it is invisible. This fact simply means that you can't rely on your eyes to detect its presence. In fact, that makes this gas extremely dangerous to be around.

ODOR – ROTTEN EGGS

Hydrogen Sulfide has a distinctive offensive smell, like "rotten eggs". For this reason, it earned its common name "sour gas". However, H₂S, even in low concentrations, is so toxic that it attacks and quickly impairs a victim's sense of smell, so it could be fatal to rely on your nose as a detection device.

VAPOR DENSITY – SPECIFIC GRAVITY OF 1.192

Hydrogen Sulfide is heavier than air, so it tends to settle in low-lying areas like pits, cellars or tanks. If you find yourself in a location where H₂S is known to exist, protect yourself. Whenever possible, work in an area upwind and keep to higher ground.

EXPLOSIVE LIMITS – 4.0% TO 44%

Mixed with the right proportion of air or oxygen, H₂S will ignite and burn or explode, producing another alarming element of danger besides poisoning.

FLAMMABILITY

Hydrogen Sulfide will burn readily with a distinctive clear blue flame, producing Sulfur Dioxide (SO₂), another hazardous gas that irritates the eyes and lungs.

SOLUBILITY – 4 TO 1 RATIO WITH WATER

Hydrogen Sulfide can be dissolved in liquids, which means that it can be present in any container or vessel used to carry or hold well fluids including oil, water, emulsion and sludge. The solubility of H₂S is dependent on temperature and pressure, but if conditions are right, simply agitating a fluid containing H₂S may release the gas into the air.

BOILING POINT – (-77° Fahrenheit)

Liquefied Hydrogen Sulfide boils at a very low temperature, so it is usually found as a gas.

RESPIRATOR USE

The Occupational Safety and Health Administration (OSHA) regulate the use of respiratory protection to protect the health of employees. OSHA's requirements are written in the Code of Federal Regulations, Title 29, Part 1910, Section 134, Respiratory Protection. This regulation requires that all employees who might be required to wear respirators, shall complete an OSHA mandated medical evaluation questionnaire. The employee then should be fit tested prior to wearing any respirator while being exposed to hazardous gases.

Written procedures shall be prepared covering safe use of respirators in dangerous atmospheric situations, which might be encountered in normal operations or in emergencies. Personnel shall be familiar with these procedures and the available respirators.

Respirators shall be inspected prior to and after each use to make sure that the respirator has been properly cleaned, disinfected and that the respirator works properly. The unit should be fully charged prior to being used.

Anyone who may use respirators shall be properly trained in how to properly seal the face piece. They shall wear respirators in normal air and then in a test atmosphere. (Note: Such items as facial hair (beard or sideburns) and eyeglass temple pieces will not allow a proper seal.) Anyone who may be expected to wear respirators should have these items removed before entering a toxic atmosphere. A special mask must be obtained for anyone who must wear eyeglasses. Contact lenses should not be allowed.

Respirators shall be worn during the following conditions:

- A. Any employee who works near the top or on the top of any tank unless tests reveal less than 20 ppm of H₂S.
- B. When breaking out any line where H₂S can reasonably be expected.
- C. When sampling air in areas where H₂S may be present.
- D. When working in areas where the concentration of H₂S exceeds the Threshold Limit Value for H₂S (10 ppm).
- E. At any time where there is a doubt as to the H₂S level in the area to be entered.

EMERGENCY RESCUE PROCEDURES

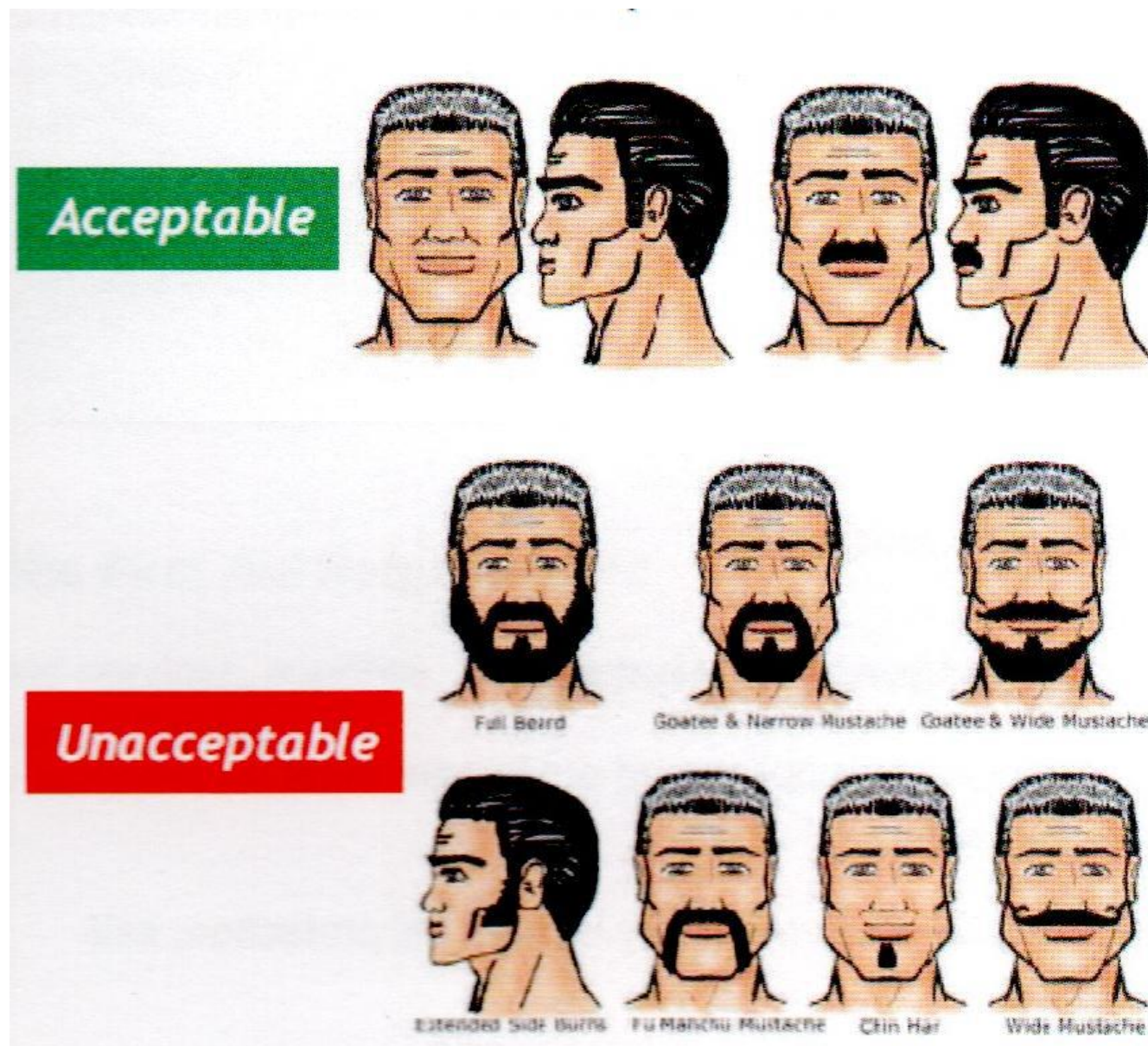
DO NOT PANIC!!!

Remain Calm – Think

1. Before attempting any rescue, you must first get out of the hazardous area yourself. Go to a safe briefing area.
2. Sound alarm and activate the 911 system.
3. Put on breathing apparatus. At least two persons should do this, when available use the buddy system.
4. Rescue the victim and return them to a safe briefing area.
5. Perform an initial assessment and begin proper First Aid/CPR procedures.
6. Keep victim lying down with a blanket or coat, etc., under the shoulders to keep airway open. Conserve body heat and do not leave unattended.
7. If the eyes are affected by H₂S, wash them thoroughly with potable water. For slight irritation, cold compresses are helpful.
8. In case a person has only minor exposure and does not lose consciousness totally, it's best if he doesn't return to work until the following day.
9. Any personnel overcome by H₂S should always be examined by medical personnel. They should always be transported to a hospital or doctor.

Facial Hair – Clean Shaven Examples

Purpose: To define clean shaven expectations in the field for: 1) Respirator Use, if applicable and 2) First Aid Administration, if situation occurs related to H₂S exposure, having no facial hair can greatly benefit response time and treatment ability.





Colgate Energy

(Permit) Eddy County, NM (83-NME)

(Permit) Robin Fed DSU

(D03) Robin Fed 203H - Slot (D03)

Permit

Plan: APD-Rev01

Standard Planning Report - Geographic

02 May, 2022



Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Company:	Colgate Energy	TVD Reference:	3674+30 @ 3704.00usft
Project:	(Permit) Eddy County, NM (83-NME)	MD Reference:	3674+30 @ 3704.00usft
Site:	(Permit) Robin Fed DSU	North Reference:	Grid
Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Permit		
Design:	APD-Rev01		

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

Site		(Permit) Robin Fed DSU			
Site Position:		Northing:	566,789.01 usft	Latitude:	32.55594366
From:	Map	Easting:	771,298.22 usft	Longitude:	-103.58696631
Position Uncertainty:		0.00 usft	Slot Radius:	13-3/16 "	

Well		(D03) Robin Fed 203H - Slot (D03)				
Well Position	+N/-S	0.00 usft	Northing:	565,136.69 usft	Latitude:	32.55134934
	+E/-W	0.00 usft	Easting:	774,026.49 usft	Longitude:	-103.57815005
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,674.00 usft
Grid Convergence:		0.41 °				

Wellbore	Permit				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	3/15/2022	6.49	60.17	47,606.61805364

Design	APD-Rev01				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	359.56	

Plan Survey Tool Program	Date	4/28/2022			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	21,436.63 APD-Rev01 (Permit)	MWD+IFR1+SAG+FDIR (SQC	OWSG MWD + IFR1 + Sag + f	

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	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,341.78	2.13	278.58	1,341.75	0.39	-2.60	1.50	1.50	0.00	278.58	
10,064.29	2.13	278.58	10,058.25	48.68	-322.67	0.00	0.00	0.00	0.00	
10,206.07	0.00	0.00	10,200.00	49.07	-325.27	1.50	-1.50	0.00	180.00	
10,596.11	0.00	0.00	10,590.04	49.07	-325.27	0.00	0.00	0.00	0.00	
11,496.11	90.00	359.56	11,163.00	622.01	-329.68	10.00	10.00	-0.05	359.56	
21,436.63	90.00	359.56	11,163.00	10,562.23	-406.19	0.00	0.00	0.00	0.00	03-PBHL(R-203H)



Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Company:	Colgate Energy	TVD Reference:	3674+30 @ 3704.00usft
Project:	(Permit) Eddy County, NM (83-NME)	MD Reference:	3674+30 @ 3704.00usft
Site:	(Permit) Robin Fed DSU	North Reference:	Grid
Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Permit		
Design:	APD-Rev01		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	565,136.69	774,026.49	32.55134934	-103.57815005
100.00	0.00	0.00	100.00	0.00	0.00	565,136.69	774,026.49	32.55134934	-103.57815005
200.00	0.00	0.00	200.00	0.00	0.00	565,136.69	774,026.49	32.55134934	-103.57815005
300.00	0.00	0.00	300.00	0.00	0.00	565,136.69	774,026.49	32.55134934	-103.57815005
400.00	0.00	0.00	400.00	0.00	0.00	565,136.69	774,026.49	32.55134934	-103.57815005
500.00	0.00	0.00	500.00	0.00	0.00	565,136.69	774,026.49	32.55134934	-103.57815005
600.00	0.00	0.00	600.00	0.00	0.00	565,136.69	774,026.49	32.55134934	-103.57815005
700.00	0.00	0.00	700.00	0.00	0.00	565,136.69	774,026.49	32.55134934	-103.57815005
800.00	0.00	0.00	800.00	0.00	0.00	565,136.69	774,026.49	32.55134934	-103.57815005
900.00	0.00	0.00	900.00	0.00	0.00	565,136.69	774,026.49	32.55134934	-103.57815005
1,000.00	0.00	0.00	1,000.00	0.00	0.00	565,136.69	774,026.49	32.55134934	-103.57815005
1,100.00	0.00	0.00	1,100.00	0.00	0.00	565,136.69	774,026.49	32.55134934	-103.57815005
1,200.00	0.00	0.00	1,200.00	0.00	0.00	565,136.69	774,026.49	32.55134934	-103.57815005
1,300.00	1.50	278.58	1,299.99	0.20	-1.29	565,136.89	774,025.19	32.55134990	-103.57815425
1,341.78	2.13	278.58	1,341.75	0.39	-2.60	565,137.09	774,023.89	32.55135047	-103.57815849
1,400.00	2.13	278.58	1,399.93	0.71	-4.74	565,137.41	774,021.75	32.55135139	-103.57816541
1,500.00	2.13	278.58	1,499.86	1.27	-8.41	565,137.96	774,018.08	32.55135299	-103.57817731
1,559.18	2.13	278.58	1,559.00	1.60	-10.58	565,138.29	774,015.91	32.55135393	-103.57818435
Rustler									
1,600.00	2.13	278.58	1,599.79	1.82	-12.08	565,138.51	774,014.41	32.55135458	-103.57818920
1,669.26	2.13	278.58	1,669.00	2.21	-14.62	565,138.90	774,011.87	32.55135568	-103.57819744
Salado									
1,700.00	2.13	278.58	1,699.72	2.38	-15.75	565,139.07	774,010.74	32.55135617	-103.57820110
1,800.00	2.13	278.58	1,799.65	2.93	-19.42	565,139.62	774,007.07	32.55135777	-103.57821299
1,900.00	2.13	278.58	1,899.58	3.48	-23.09	565,140.18	774,003.40	32.55135936	-103.57822489
2,000.00	2.13	278.58	1,999.51	4.04	-26.75	565,140.73	773,999.73	32.55136095	-103.57823678
2,100.00	2.13	278.58	2,099.45	4.59	-30.42	565,141.28	773,996.06	32.55136255	-103.57824868
2,200.00	2.13	278.58	2,199.38	5.14	-34.09	565,141.84	773,992.39	32.55136414	-103.57826057
2,300.00	2.13	278.58	2,299.31	5.70	-37.76	565,142.39	773,988.72	32.55136573	-103.57827247
2,400.00	2.13	278.58	2,399.24	6.25	-41.43	565,142.94	773,985.06	32.55136732	-103.57828436
2,500.00	2.13	278.58	2,499.17	6.80	-45.10	565,143.50	773,981.39	32.55136892	-103.57829626
2,600.00	2.13	278.58	2,599.10	7.36	-48.77	565,144.05	773,977.72	32.55137051	-103.57830816
2,700.00	2.13	278.58	2,699.03	7.91	-52.44	565,144.60	773,974.05	32.55137210	-103.57832005
2,800.00	2.13	278.58	2,798.96	8.46	-56.11	565,145.16	773,970.38	32.55137370	-103.57833195
2,900.00	2.13	278.58	2,898.89	9.02	-59.78	565,145.71	773,966.71	32.55137529	-103.57834384
3,000.00	2.13	278.58	2,998.83	9.57	-63.45	565,146.26	773,963.04	32.55137688	-103.57835574
3,100.00	2.13	278.58	3,098.76	10.13	-67.12	565,146.82	773,959.37	32.55137848	-103.57836763
3,200.00	2.13	278.58	3,198.69	10.68	-70.79	565,147.37	773,955.70	32.55138007	-103.57837953
3,255.35	2.13	278.58	3,254.00	10.99	-72.82	565,147.68	773,953.67	32.55138095	-103.57838611
Tansill									
3,300.00	2.13	278.58	3,298.62	11.23	-74.46	565,147.93	773,952.03	32.55138166	-103.57839142
3,400.00	2.13	278.58	3,398.55	11.79	-78.13	565,148.48	773,948.36	32.55138325	-103.57840332
3,430.47	2.13	278.58	3,429.00	11.95	-79.24	565,148.65	773,947.24	32.55138374	-103.57840694
Yates									
3,500.00	2.13	278.58	3,498.48	12.34	-81.80	565,149.03	773,944.69	32.55138485	-103.57841521
3,600.00	2.13	278.58	3,598.41	12.89	-85.47	565,149.59	773,941.02	32.55138644	-103.57842711
3,655.63	2.13	278.58	3,654.00	13.20	-87.51	565,149.89	773,938.98	32.55138733	-103.57843373
Seven Rivers									
3,700.00	2.13	278.58	3,698.34	13.45	-89.13	565,150.14	773,937.35	32.55138803	-103.57843900
3,800.00	2.13	278.58	3,798.27	14.00	-92.80	565,150.69	773,933.68	32.55138963	-103.57845090
3,900.00	2.13	278.58	3,898.21	14.55	-96.47	565,151.25	773,930.01	32.55139122	-103.57846280
3,955.83	2.13	278.58	3,954.00	14.86	-98.52	565,151.56	773,927.96	32.55139211	-103.57846944
Capitan									
4,000.00	2.13	278.58	3,998.14	15.11	-100.14	565,151.80	773,926.34	32.55139281	-103.57847469



Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Company:	Colgate Energy	TVD Reference:	3674+30 @ 3704.00usft
Project:	(Permit) Eddy County, NM (83-NME)	MD Reference:	3674+30 @ 3704.00usft
Site:	(Permit) Robin Fed DSU	North Reference:	Grid
Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Permit		
Design:	APD-Rev01		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
4,100.00	2.13	278.58	4,098.07	15.66	-103.81	565,152.35	773,922.67	32.55139441	-103.57848659	
4,155.97	2.13	278.58	4,154.00	15.97	-105.87	565,152.66	773,920.62	32.55139530	-103.57849324	
Queen										
4,200.00	2.13	278.58	4,198.00	16.21	-107.48	565,152.91	773,919.01	32.55139600	-103.57849848	
4,300.00	2.13	278.58	4,297.93	16.77	-111.15	565,153.46	773,915.34	32.55139759	-103.57851038	
4,400.00	2.13	278.58	4,397.86	17.32	-114.82	565,154.01	773,911.67	32.55139918	-103.57852227	
4,500.00	2.13	278.58	4,497.79	17.88	-118.49	565,154.57	773,908.00	32.55140078	-103.57853417	
4,600.00	2.13	278.58	4,597.72	18.43	-122.16	565,155.12	773,904.33	32.55140237	-103.57854606	
4,700.00	2.13	278.58	4,697.65	18.98	-125.83	565,155.68	773,900.66	32.55140396	-103.57855796	
4,800.00	2.13	278.58	4,797.59	19.54	-129.50	565,156.23	773,896.99	32.55140556	-103.57856985	
4,900.00	2.13	278.58	4,897.52	20.09	-133.17	565,156.78	773,893.32	32.55140715	-103.57858175	
5,000.00	2.13	278.58	4,997.45	20.64	-136.84	565,157.34	773,889.65	32.55140874	-103.57859364	
5,100.00	2.13	278.58	5,097.38	21.20	-140.51	565,157.89	773,885.98	32.55141034	-103.57860554	
5,200.00	2.13	278.58	5,197.31	21.75	-144.18	565,158.44	773,882.31	32.55141193	-103.57861744	
5,300.00	2.13	278.58	5,297.24	22.30	-147.85	565,159.00	773,878.64	32.55141352	-103.57862933	
5,400.00	2.13	278.58	5,397.17	22.86	-151.52	565,159.55	773,874.97	32.55141511	-103.57864123	
5,500.00	2.13	278.58	5,497.10	23.41	-155.18	565,160.10	773,871.30	32.55141671	-103.57865312	
5,586.96	2.13	278.58	5,584.00	23.89	-158.38	565,160.59	773,868.11	32.55141809	-103.57866347	
Delaware Sands										
5,600.00	2.13	278.58	5,597.03	23.96	-158.85	565,160.66	773,867.63	32.55141830	-103.57866502	
5,700.00	2.13	278.58	5,696.97	24.52	-162.52	565,161.21	773,863.96	32.55141989	-103.57867691	
5,800.00	2.13	278.58	5,796.90	25.07	-166.19	565,161.76	773,860.29	32.55142149	-103.57868881	
5,900.00	2.13	278.58	5,896.83	25.63	-169.86	565,162.32	773,856.62	32.55142308	-103.57870070	
6,000.00	2.13	278.58	5,996.76	26.18	-173.53	565,162.87	773,852.96	32.55142467	-103.57871260	
6,100.00	2.13	278.58	6,096.69	26.73	-177.20	565,163.43	773,849.29	32.55142627	-103.57872449	
6,200.00	2.13	278.58	6,196.62	27.29	-180.87	565,163.98	773,845.62	32.55142786	-103.57873639	
6,300.00	2.13	278.58	6,296.55	27.84	-184.54	565,164.53	773,841.95	32.55142945	-103.57874829	
6,400.00	2.13	278.58	6,396.48	28.39	-188.21	565,165.09	773,838.28	32.55143104	-103.57876018	
6,500.00	2.13	278.58	6,496.41	28.95	-191.88	565,165.64	773,834.61	32.55143264	-103.57877208	
6,600.00	2.13	278.58	6,596.35	29.50	-195.55	565,166.19	773,830.94	32.55143423	-103.57878397	
6,700.00	2.13	278.58	6,696.28	30.05	-199.22	565,166.75	773,827.27	32.55143582	-103.57879587	
6,800.00	2.13	278.58	6,796.21	30.61	-202.89	565,167.30	773,823.60	32.55143742	-103.57880776	
6,900.00	2.13	278.58	6,896.14	31.16	-206.56	565,167.85	773,819.93	32.55143901	-103.57881966	
7,000.00	2.13	278.58	6,996.07	31.71	-210.23	565,168.41	773,816.26	32.55144060	-103.57883155	
7,100.00	2.13	278.58	7,096.00	32.27	-213.90	565,168.96	773,812.59	32.55144220	-103.57884345	
7,200.00	2.13	278.58	7,195.93	32.82	-217.57	565,169.51	773,808.92	32.55144379	-103.57885534	
7,300.00	2.13	278.58	7,295.86	33.38	-221.23	565,170.07	773,805.25	32.55144538	-103.57886724	
7,400.00	2.13	278.58	7,395.79	33.93	-224.90	565,170.62	773,801.58	32.55144697	-103.57887913	
7,500.00	2.13	278.58	7,495.73	34.48	-228.57	565,171.18	773,797.91	32.55144857	-103.57889103	
7,600.00	2.13	278.58	7,595.66	35.04	-232.24	565,171.73	773,794.24	32.55145016	-103.57890293	
7,700.00	2.13	278.58	7,695.59	35.59	-235.91	565,172.28	773,790.58	32.55145175	-103.57891482	
7,800.00	2.13	278.58	7,795.52	36.14	-239.58	565,172.84	773,786.91	32.55145335	-103.57892672	
7,900.00	2.13	278.58	7,895.45	36.70	-243.25	565,173.39	773,783.24	32.55145494	-103.57893861	
8,000.00	2.13	278.58	7,995.38	37.25	-246.92	565,173.94	773,779.57	32.55145653	-103.57895051	
8,100.00	2.13	278.58	8,095.31	37.80	-250.59	565,174.50	773,775.90	32.55145812	-103.57896240	
8,200.00	2.13	278.58	8,195.24	38.36	-254.26	565,175.05	773,772.23	32.55145972	-103.57897430	
8,300.00	2.13	278.58	8,295.17	38.91	-257.93	565,175.60	773,768.56	32.55146131	-103.57898619	
8,400.00	2.13	278.58	8,395.11	39.46	-261.60	565,176.16	773,764.89	32.55146290	-103.57899809	
8,483.95	2.13	278.58	8,479.00	39.93	-264.68	565,176.62	773,761.81	32.55146424	-103.57900808	
Bone Spring										
8,500.00	2.13	278.58	8,495.04	40.02	-265.27	565,176.71	773,761.22	32.55146450	-103.57900998	
8,600.00	2.13	278.58	8,594.97	40.57	-268.94	565,177.26	773,757.55	32.55146609	-103.57902188	
8,700.00	2.13	278.58	8,694.90	41.13	-272.61	565,177.82	773,753.88	32.55146768	-103.57903377	
8,800.00	2.13	278.58	8,794.83	41.68	-276.28	565,178.37	773,750.21	32.55146928	-103.57904567	



Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Company:	Colgate Energy	TVD Reference:	3674+30 @ 3704.00usft
Project:	(Permit) Eddy County, NM (83-NME)	MD Reference:	3674+30 @ 3704.00usft
Site:	(Permit) Robin Fed DSU	North Reference:	Grid
Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Permit		
Design:	APD-Rev01		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,900.00	2.13	278.58	8,894.76	42.23	-279.95	565,178.93	773,746.54	32.55147087	-103.57905757
9,000.00	2.13	278.58	8,994.69	42.79	-283.61	565,179.48	773,742.87	32.55147246	-103.57906946
9,100.00	2.13	278.58	9,094.62	43.34	-287.28	565,180.03	773,739.20	32.55147405	-103.57908136
9,200.00	2.13	278.58	9,194.55	43.89	-290.95	565,180.59	773,735.53	32.55147565	-103.57909325
9,300.00	2.13	278.58	9,294.49	44.45	-294.62	565,181.14	773,731.86	32.55147724	-103.57910515
9,400.00	2.13	278.58	9,394.42	45.00	-298.29	565,181.69	773,728.19	32.55147883	-103.57911704
9,500.00	2.13	278.58	9,494.35	45.55	-301.96	565,182.25	773,724.53	32.55148043	-103.57912894
9,559.69	2.13	278.58	9,554.00	45.88	-304.15	565,182.58	773,722.33	32.55148138	-103.57913604
FBSG									
9,600.00	2.13	278.58	9,594.28	46.11	-305.63	565,182.80	773,720.86	32.55148202	-103.57914083
9,700.00	2.13	278.58	9,694.21	46.66	-309.30	565,183.35	773,717.19	32.55148361	-103.57915273
9,800.00	2.13	278.58	9,794.14	47.21	-312.97	565,183.91	773,713.52	32.55148520	-103.57916462
9,900.00	2.13	278.58	9,894.07	47.77	-316.64	565,184.46	773,709.85	32.55148680	-103.57917652
10,000.00	2.13	278.58	9,994.00	48.32	-320.31	565,185.01	773,706.18	32.55148839	-103.57918842
10,064.29	2.13	278.58	10,058.25	48.68	-322.67	565,185.37	773,703.82	32.55148941	-103.57919606
10,100.00	1.59	278.58	10,093.94	48.85	-323.81	565,185.54	773,702.67	32.55148991	-103.57919978
10,135.07	1.07	278.58	10,129.00	48.97	-324.62	565,185.66	773,701.87	32.55149026	-103.57920238
SBSG									
10,206.07	0.00	0.00	10,200.00	49.07	-325.27	565,185.76	773,701.22	32.55149054	-103.57920450
10,300.00	0.00	0.00	10,293.93	49.07	-325.27	565,185.76	773,701.22	32.55149054	-103.57920450
10,400.00	0.00	0.00	10,393.93	49.07	-325.27	565,185.76	773,701.22	32.55149054	-103.57920450
10,500.00	0.00	0.00	10,493.93	49.07	-325.27	565,185.76	773,701.22	32.55149054	-103.57920450
10,596.11	0.00	0.00	10,590.04	49.07	-325.27	565,185.76	773,701.22	32.55149054	-103.57920450
KOP: 10596.11' MD, 51.57' VS, 10590.04' TVD									
10,599.08	0.30	359.56	10,593.00	49.08	-325.27	565,185.77	773,701.22	32.55149056	-103.57920450
00-EON(R-203H)									
10,600.00	0.39	359.56	10,593.93	49.08	-325.27	565,185.78	773,701.22	32.55149058	-103.57920450
10,650.00	5.39	359.56	10,643.85	51.60	-325.29	565,188.29	773,701.20	32.55149750	-103.57920450
10,700.00	10.39	359.56	10,693.36	58.46	-325.34	565,195.15	773,701.15	32.55151636	-103.57920452
10,750.00	15.39	359.56	10,742.08	69.61	-325.43	565,206.30	773,701.06	32.55154700	-103.57920454
10,788.75	19.26	359.56	10,779.07	81.15	-325.52	565,217.84	773,700.97	32.55157872	-103.57920456
100FSL									
10,800.00	20.39	359.56	10,789.65	84.96	-325.55	565,221.66	773,700.94	32.55158921	-103.57920457
10,850.00	25.39	359.56	10,835.70	104.40	-325.70	565,241.10	773,700.79	32.55164264	-103.57920461
10,881.76	28.56	359.56	10,864.00	118.81	-325.81	565,255.50	773,700.68	32.55168224	-103.57920464
TBSG									
10,900.00	30.39	359.56	10,879.88	127.78	-325.88	565,264.48	773,700.61	32.55170690	-103.57920465
10,950.00	35.39	359.56	10,921.85	154.93	-326.08	565,291.62	773,700.40	32.55178151	-103.57920471
11,000.00	40.39	359.56	10,961.30	185.62	-326.32	565,322.31	773,700.17	32.55186588	-103.57920477
11,050.00	45.39	359.56	10,997.92	219.64	-326.58	565,356.33	773,699.90	32.55195938	-103.57920484
11,057.98	46.19	359.56	11,003.48	225.35	-326.63	565,362.05	773,699.86	32.55197509	-103.57920485
01-FTP(R-203H)									
11,100.00	50.39	359.56	11,031.44	256.72	-326.87	565,393.41	773,699.62	32.55206130	-103.57920491
11,150.00	55.39	359.56	11,061.60	296.58	-327.18	565,433.27	773,699.31	32.55217086	-103.57920499
11,191.67	59.56	359.56	11,084.00	331.70	-327.45	565,468.39	773,699.04	32.55226741	-103.57920506
WFMP									
11,200.00	60.39	359.56	11,088.17	338.91	-327.50	565,475.61	773,698.99	32.55228723	-103.57920507
11,250.00	65.39	359.56	11,110.95	383.40	-327.84	565,520.10	773,698.64	32.55240952	-103.57920516
11,300.00	70.39	359.56	11,129.76	429.71	-328.20	565,566.40	773,698.29	32.55253680	-103.57920526
11,350.00	75.39	359.56	11,144.47	477.48	-328.57	565,614.17	773,697.92	32.55266810	-103.57920535
11,400.00	80.39	359.56	11,154.96	526.35	-328.94	565,663.04	773,697.54	32.55280243	-103.57920545
11,450.00	85.39	359.56	11,161.14	575.95	-329.33	565,712.64	773,697.16	32.55293876	-103.57920555



Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Company:	Colgate Energy	TVD Reference:	3674+30 @ 3704.00usft
Project:	(Permit) Eddy County, NM (83-NME)	MD Reference:	3674+30 @ 3704.00usft
Site:	(Permit) Robin Fed DSU	North Reference:	Grid
Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Permit		
Design:	APD-Rev01		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
11,496.11	90.00	359.56	11,163.00	622.01	-329.68	565,758.70	773,696.81	32.55306536	-103.57920564	
EOC: 11496.11' MD, 624.52' VS, 11163.00' TVD										
11,500.00	90.00	359.56	11,163.00	625.90	-329.71	565,762.59	773,696.78	32.55307606	-103.57920565	
11,600.00	90.00	359.56	11,163.00	725.89	-330.48	565,862.59	773,696.01	32.55335091	-103.57920585	
11,700.00	90.00	359.56	11,163.00	825.89	-331.25	565,962.58	773,695.24	32.55362577	-103.57920605	
11,800.00	90.00	359.56	11,163.00	925.89	-332.02	566,062.58	773,694.47	32.55390063	-103.57920625	
11,900.00	90.00	359.56	11,163.00	1,025.89	-332.79	566,162.58	773,693.70	32.55417549	-103.57920644	
12,000.00	90.00	359.56	11,163.00	1,125.88	-333.56	566,262.58	773,692.93	32.55445035	-103.57920664	
12,100.00	90.00	359.56	11,163.00	1,225.88	-334.33	566,362.57	773,692.16	32.55472521	-103.57920684	
12,200.00	90.00	359.56	11,163.00	1,325.88	-335.10	566,462.57	773,691.39	32.55500007	-103.57920704	
12,300.00	90.00	359.56	11,163.00	1,425.87	-335.87	566,562.57	773,690.62	32.55527493	-103.57920724	
12,400.00	90.00	359.56	11,163.00	1,525.87	-336.64	566,662.56	773,689.85	32.55554979	-103.57920744	
12,500.00	90.00	359.56	11,163.00	1,625.87	-337.41	566,762.56	773,689.08	32.55582465	-103.57920764	
12,600.00	90.00	359.56	11,163.00	1,725.87	-338.18	566,862.56	773,688.31	32.55609951	-103.57920784	
12,700.00	90.00	359.56	11,163.00	1,825.86	-338.95	566,962.55	773,687.54	32.55637437	-103.57920804	
12,800.00	90.00	359.56	11,163.00	1,925.86	-339.72	567,062.55	773,686.77	32.55664922	-103.57920824	
12,900.00	90.00	359.56	11,163.00	2,025.86	-340.49	567,162.55	773,686.00	32.55692408	-103.57920844	
13,000.00	90.00	359.56	11,163.00	2,125.85	-341.26	567,262.55	773,685.23	32.55719894	-103.57920864	
13,100.00	90.00	359.56	11,163.00	2,225.85	-342.02	567,362.54	773,684.46	32.55747380	-103.57920884	
13,200.00	90.00	359.56	11,163.00	2,325.85	-342.79	567,462.54	773,683.69	32.55774866	-103.57920903	
13,300.00	90.00	359.56	11,163.00	2,425.84	-343.56	567,562.54	773,682.92	32.55802352	-103.57920923	
13,400.00	90.00	359.56	11,163.00	2,525.84	-344.33	567,662.53	773,682.15	32.55829838	-103.57920943	
13,500.00	90.00	359.56	11,163.00	2,625.84	-345.10	567,762.53	773,681.38	32.55857324	-103.57920963	
13,600.00	90.00	359.56	11,163.00	2,725.84	-345.87	567,862.53	773,680.61	32.55884810	-103.57920983	
13,700.00	90.00	359.56	11,163.00	2,825.83	-346.64	567,962.53	773,679.84	32.55912296	-103.57921003	
13,800.00	90.00	359.56	11,163.00	2,925.83	-347.41	568,062.52	773,679.07	32.55939782	-103.57921023	
13,900.00	90.00	359.56	11,163.00	3,025.83	-348.18	568,162.52	773,678.31	32.55967267	-103.57921043	
14,000.00	90.00	359.56	11,163.00	3,125.82	-348.95	568,262.52	773,677.54	32.55994753	-103.57921063	
14,100.00	90.00	359.56	11,163.00	3,225.82	-349.72	568,362.51	773,676.77	32.56022239	-103.57921083	
14,200.00	90.00	359.56	11,163.00	3,325.82	-350.49	568,462.51	773,676.00	32.56049725	-103.57921102	
14,300.00	90.00	359.56	11,163.00	3,425.81	-351.26	568,562.51	773,675.23	32.56077211	-103.57921122	
14,400.00	90.00	359.56	11,163.00	3,525.81	-352.03	568,662.50	773,674.46	32.56104697	-103.57921142	
14,500.00	90.00	359.56	11,163.00	3,625.81	-352.80	568,762.50	773,673.69	32.56132183	-103.57921162	
14,600.00	90.00	359.56	11,163.00	3,725.81	-353.57	568,862.50	773,672.92	32.56159669	-103.57921182	
14,700.00	90.00	359.56	11,163.00	3,825.80	-354.34	568,962.50	773,672.15	32.56187155	-103.57921202	
14,800.00	90.00	359.56	11,163.00	3,925.80	-355.11	569,062.49	773,671.38	32.56214640	-103.57921222	
14,900.00	90.00	359.56	11,163.00	4,025.80	-355.88	569,162.49	773,670.61	32.56242126	-103.57921242	
15,000.00	90.00	359.56	11,163.00	4,125.79	-356.65	569,262.49	773,669.84	32.56269612	-103.57921262	
15,100.00	90.00	359.56	11,163.00	4,225.79	-357.42	569,362.48	773,669.07	32.56297098	-103.57921281	
15,200.00	90.00	359.56	11,163.00	4,325.79	-358.19	569,462.48	773,668.30	32.56324584	-103.57921301	
15,300.00	90.00	359.56	11,163.00	4,425.79	-358.96	569,562.48	773,667.53	32.56352070	-103.57921321	
15,400.00	90.00	359.56	11,163.00	4,525.78	-359.73	569,662.47	773,666.76	32.56379556	-103.57921341	
15,500.00	90.00	359.56	11,163.00	4,625.78	-360.50	569,762.47	773,665.99	32.56407042	-103.57921361	
15,600.00	90.00	359.56	11,163.00	4,725.78	-361.27	569,862.47	773,665.22	32.56434528	-103.57921381	
15,700.00	90.00	359.56	11,163.00	4,825.77	-362.04	569,962.47	773,664.45	32.56462013	-103.57921401	
15,800.00	90.00	359.56	11,163.00	4,925.77	-362.81	570,062.46	773,663.68	32.56489499	-103.57921421	
15,900.00	90.00	359.56	11,163.00	5,025.77	-363.58	570,162.46	773,662.91	32.56516985	-103.57921440	
16,000.00	90.00	359.56	11,163.00	5,125.76	-364.35	570,262.46	773,662.14	32.56544471	-103.57921460	
16,100.00	90.00	359.56	11,163.00	5,225.76	-365.12	570,362.45	773,661.37	32.56571957	-103.57921480	
16,200.00	90.00	359.56	11,163.00	5,325.76	-365.88	570,462.45	773,660.60	32.56599443	-103.57921500	
16,300.00	90.00	359.56	11,163.00	5,425.76	-366.65	570,562.45	773,659.83	32.56626929	-103.57921520	
16,400.00	90.00	359.56	11,163.00	5,525.75	-367.42	570,662.45	773,659.06	32.56654415	-103.57921540	
16,500.00	90.00	359.56	11,163.00	5,625.75	-368.19	570,762.44	773,658.29	32.56681900	-103.57921560	
16,600.00	90.00	359.56	11,163.00	5,725.75	-368.96	570,862.44	773,657.52	32.56709386	-103.57921579	



Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Company:	Colgate Energy	TVD Reference:	3674+30 @ 3704.00usft
Project:	(Permit) Eddy County, NM (83-NME)	MD Reference:	3674+30 @ 3704.00usft
Site:	(Permit) Robin Fed DSU	North Reference:	Grid
Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Permit		
Design:	APD-Rev01		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
16,700.00	90.00	359.56	11,163.00	5,825.74	-369.73	570,962.44	773,656.75	32.56736872	-103.57921599
16,800.00	90.00	359.56	11,163.00	5,925.74	-370.50	571,062.43	773,655.98	32.56764358	-103.57921619
16,900.00	90.00	359.56	11,163.00	6,025.74	-371.27	571,162.43	773,655.21	32.56791844	-103.57921639
17,000.00	90.00	359.56	11,163.00	6,125.73	-372.04	571,262.43	773,654.45	32.56819330	-103.57921659
17,100.00	90.00	359.56	11,163.00	6,225.73	-372.81	571,362.42	773,653.68	32.56846816	-103.57921679
17,200.00	90.00	359.56	11,163.00	6,325.73	-373.58	571,462.42	773,652.91	32.56874301	-103.57921699
17,300.00	90.00	359.56	11,163.00	6,425.73	-374.35	571,562.42	773,652.14	32.56901787	-103.57921718
17,400.00	90.00	359.56	11,163.00	6,525.72	-375.12	571,662.42	773,651.37	32.56929273	-103.57921738
17,500.00	90.00	359.56	11,163.00	6,625.72	-375.89	571,762.41	773,650.60	32.56956759	-103.57921758
17,600.00	90.00	359.56	11,163.00	6,725.72	-376.66	571,862.41	773,649.83	32.56984245	-103.57921778
17,700.00	90.00	359.56	11,163.00	6,825.71	-377.43	571,962.41	773,649.06	32.57011731	-103.57921798
17,800.00	90.00	359.56	11,163.00	6,925.71	-378.20	572,062.40	773,648.29	32.57039217	-103.57921818
17,900.00	90.00	359.56	11,163.00	7,025.71	-378.97	572,162.40	773,647.52	32.57066702	-103.57921837
18,000.00	90.00	359.56	11,163.00	7,125.71	-379.74	572,262.40	773,646.75	32.57094188	-103.57921857
18,100.00	90.00	359.56	11,163.00	7,225.70	-380.51	572,362.39	773,645.98	32.57121674	-103.57921877
18,200.00	90.00	359.56	11,163.00	7,325.70	-381.28	572,462.39	773,645.21	32.57149160	-103.57921897
18,300.00	90.00	359.56	11,163.00	7,425.70	-382.05	572,562.39	773,644.44	32.57176646	-103.57921917
18,400.00	90.00	359.56	11,163.00	7,525.69	-382.82	572,662.39	773,643.67	32.57204132	-103.57921937
18,500.00	90.00	359.56	11,163.00	7,625.69	-383.59	572,762.38	773,642.90	32.57231618	-103.57921956
18,600.00	90.00	359.56	11,163.00	7,725.69	-384.36	572,862.38	773,642.13	32.57259103	-103.57921976
18,700.00	90.00	359.56	11,163.00	7,825.68	-385.13	572,962.38	773,641.36	32.57286589	-103.57921996
18,800.00	90.00	359.56	11,163.00	7,925.68	-385.90	573,062.37	773,640.59	32.57314075	-103.57922016
18,900.00	90.00	359.56	11,163.00	8,025.68	-386.67	573,162.37	773,639.82	32.57341561	-103.57922036
19,000.00	90.00	359.56	11,163.00	8,125.68	-387.44	573,262.37	773,639.05	32.57369047	-103.57922056
19,100.00	90.00	359.56	11,163.00	8,225.67	-388.21	573,362.37	773,638.28	32.57396533	-103.57922075
19,200.00	90.00	359.56	11,163.00	8,325.67	-388.98	573,462.36	773,637.51	32.57424018	-103.57922095
19,300.00	90.00	359.56	11,163.00	8,425.67	-389.74	573,562.36	773,636.74	32.57451504	-103.57922115
19,400.00	90.00	359.56	11,163.00	8,525.66	-390.51	573,662.36	773,635.97	32.57478990	-103.57922135
19,500.00	90.00	359.56	11,163.00	8,625.66	-391.28	573,762.35	773,635.20	32.57506476	-103.57922155
19,600.00	90.00	359.56	11,163.00	8,725.66	-392.05	573,862.35	773,634.43	32.57533962	-103.57922174
19,700.00	90.00	359.56	11,163.00	8,825.65	-392.82	573,962.35	773,633.66	32.57561448	-103.57922194
19,800.00	90.00	359.56	11,163.00	8,925.65	-393.59	574,062.34	773,632.89	32.57588933	-103.57922214
19,900.00	90.00	359.56	11,163.00	9,025.65	-394.36	574,162.34	773,632.12	32.57616419	-103.57922234
20,000.00	90.00	359.56	11,163.00	9,125.65	-395.13	574,262.34	773,631.35	32.57643905	-103.57922254
20,100.00	90.00	359.56	11,163.00	9,225.64	-395.90	574,362.34	773,630.59	32.57671391	-103.57922273
20,200.00	90.00	359.56	11,163.00	9,325.64	-396.67	574,462.33	773,629.82	32.57698877	-103.57922293
20,300.00	90.00	359.56	11,163.00	9,425.64	-397.44	574,562.33	773,629.05	32.57726363	-103.57922313
20,400.00	90.00	359.56	11,163.00	9,525.63	-398.21	574,662.33	773,628.28	32.57753848	-103.57922333
20,500.00	90.00	359.56	11,163.00	9,625.63	-398.98	574,762.32	773,627.51	32.57781334	-103.57922353
20,600.00	90.00	359.56	11,163.00	9,725.63	-399.75	574,862.32	773,626.74	32.57808820	-103.57922372
20,700.00	90.00	359.56	11,163.00	9,825.63	-400.52	574,962.32	773,625.97	32.57836306	-103.57922392
20,800.00	90.00	359.56	11,163.00	9,925.62	-401.29	575,062.31	773,625.20	32.57863792	-103.57922412
20,900.00	90.00	359.56	11,163.00	10,025.62	-402.06	575,162.31	773,624.43	32.57891277	-103.57922432
21,000.00	90.00	359.56	11,163.00	10,125.62	-402.83	575,262.31	773,623.66	32.57918763	-103.57922452
21,100.00	90.00	359.56	11,163.00	10,225.61	-403.60	575,362.31	773,622.89	32.57946249	-103.57922471
21,200.00	90.00	359.56	11,163.00	10,325.61	-404.37	575,462.30	773,622.12	32.57973735	-103.57922491
21,300.00	90.00	359.56	11,163.00	10,425.61	-405.14	575,562.30	773,621.35	32.58001221	-103.57922511
21,346.55	90.00	359.56	11,163.00	10,472.16	-405.50	575,608.85	773,620.99	32.58014015	-103.57922520
100FNL									
21,346.62	90.00	359.56	11,163.00	10,472.23	-405.50	575,608.92	773,620.99	32.58014036	-103.57922520
02-LTP(R-203H)									
21,400.00	90.00	359.56	11,163.00	10,525.60	-405.91	575,662.30	773,620.58	32.58028707	-103.57922531
21,436.63	90.00	359.56	11,163.00	10,562.23	-406.19	575,698.92	773,620.30	32.58038774	-103.57922538
TD: 21436.63' MD, 10565.04' VS, 11163.00' TVD - 03-PBHL(R-203H)									



Planning Report - Geographic

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Company:	Colgate Energy	TVD Reference:	3674+30 @ 3704.00usft
Project:	(Permit) Eddy County, NM (83-NME)	MD Reference:	3674+30 @ 3704.00usft
Site:	(Permit) Robin Fed DSU	North Reference:	Grid
Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Permit		
Design:	APD-Rev01		

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
00-EON(R-203H) - plan misses target center by 85.17usft at 10599.08usft MD (10593.00 TVD, 49.08 N, -325.27 E) - Point	0.00	0.00	10,593.00	49.07	-410.44	565,185.76	773,616.05	32.55149220	-103.57948089
02-LTP(R-203H) - plan misses target center by 0.02usft at 21346.62usft MD (11163.00 TVD, 10472.23 N, -405.50 E) - Point	0.00	0.00	11,163.00	10,472.23	-405.52	575,608.92	773,620.97	32.58014036	-103.57922528
03-PBHL(R-203H) - plan hits target center - Point	0.00	0.00	11,163.00	10,562.23	-406.19	575,698.92	773,620.30	32.58038774	-103.57922538
01-FTP(R-203H) - plan misses target center by 215.03usft at 11057.98usft MD (11003.48 TVD, 225.35 N, -326.63 E) - Point	0.00	0.00	11,163.00	81.17	-325.65	565,217.86	773,700.84	32.55157878	-103.57920499

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
21,442.46		20" Casing	20	24

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,559.18	1,559.00	Rustler				
1,669.26	1,669.00	Salado				
3,255.35	3,254.00	Tansill				
3,430.47	3,429.00	Yates				
3,655.63	3,654.00	Seven Rivers				
3,955.83	3,954.00	Capitan				
4,155.97	4,154.00	Queen				
5,586.96	5,584.00	Delaware Sands				
8,483.95	8,479.00	Bone Spring				
9,559.69	9,554.00	FBSG				
10,135.07	10,129.00	SBSG				
10,881.76	10,864.00	TBSG				
11,191.67	11,084.00	WFMP				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
10,596.11	10,590.04	49.07	-325.27	KOP: 10596.11' MD, 51.57' VS, 10590.04' TVD	
10,788.75	10,779.07	81.15	-325.52	100FSL	
11,496.11	11,163.00	622.01	-329.68	EOC: 11496.11' MD, 624.52' VS, 11163.00' TVD	
21,346.55	11,163.00	10,472.16	-405.50	100FNL	
21,436.63	11,163.00	10,562.23	-406.19	TD: 21436.63' MD, 10565.04' VS, 11163.00' TVD	



Colgate Energy

(Permit) Eddy County, NM (83-NME)

(Permit) Robin Fed DSU

(D03) Robin Fed 203H

Permit

APD-Rev01

Anticollision Report

02 May, 2022



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Reference	APD-Rev01		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum separation factor of 25	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	4/28/2022		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	21,436.63	APD-Rev01 (Permit)	MWD+IFR1+SAG+FDIR	(SQ OWSG MWD + IFR1 + Sag + FDIR Correction)

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
(Permit) Robin Fed DSU						
(A01) Robin Fed Com 111H - Permit - APD-Rev00	21,436.63	18,553.60	3,625.77	3,453.51	21.048	CC, ES, SF
(A02) Robin Fed Com 121H - Permit - APD-Rev01	21,436.63	19,489.02	3,326.13	3,142.75	18.138	CC, ES, SF
(A03) Robin Fed Com 122H - Permit - APD-Rev01	21,436.63	19,081.32	2,796.17	2,619.69	15.844	CC, ES, SF
(A04) Robin Fed Com 123H - Permit - APD-Rev01	21,436.03	19,470.07	2,044.96	1,865.78	11.413	CC
(A04) Robin Fed Com 123H - Permit - APD-Rev01	21,436.63	19,470.07	2,044.96	1,865.78	11.413	ES, SF
(A05) Robin Fed Com 112H - Permit - APD-Rev00	21,436.03	18,558.26	2,502.36	2,347.10	16.117	CC
(A05) Robin Fed Com 112H - Permit - APD-Rev00	21,436.63	18,558.26	2,502.36	2,347.10	16.117	ES, SF
(A06) Robin Fed Com 124H - Permit - APD-Rev01	21,434.87	19,169.22	1,626.03	1,469.43	10.383	CC
(A06) Robin Fed Com 124H - Permit - APD-Rev01	21,436.63	19,169.22	1,626.03	1,469.41	10.382	ES, SF
(B01) Robin Fed Com 171H - Permit - APD-Rev01	21,436.63	19,760.41	2,630.29	2,445.98	14.271	CC, ES, SF
(B02) Robin Fed Com 131H - Permit - APD-Rev00	21,436.63	20,039.23	3,267.28	3,080.83	17.523	CC, ES, SF
(B03) Robin Fed Com 201H - Permit - APD-Rev00	21,436.63	20,114.19	2,606.38	2,419.75	13.966	CC, ES, SF
(B04) Robin Fed Com 132H - Permit - APD-Rev00	12,347.89	10,850.00	1,939.43	1,860.87	24.689	CC
(B04) Robin Fed Com 132H - Permit - APD-Rev00	21,436.63	20,027.22	1,947.83	1,761.54	10.456	ES, SF
(B05) Robin Fed Com 202H - Permit - APD-Rev00	21,434.88	20,193.55	1,286.41	1,100.28	6.911	CC
(B05) Robin Fed Com 202H - Permit - APD-Rev00	21,436.63	20,193.55	1,286.41	1,100.27	6.911	ES, SF
(B06) Robin Fed Com 172H - Permit - APD-Rev01	21,435.68	19,798.74	1,334.15	1,153.74	7.395	CC
(B06) Robin Fed Com 172H - Permit - APD-Rev01	21,436.63	19,798.74	1,334.15	1,153.74	7.395	ES, SF
(C01) Robin Fed 113H - Permit - APD-Rev01	2,294.39	2,289.37	309.69	293.88	19.596	CC
(C01) Robin Fed 113H - Permit - APD-Rev01	2,500.00	2,493.80	310.47	293.20	17.976	ES
(C01) Robin Fed 113H - Permit - APD-Rev01	9,400.00	9,422.54	693.17	626.58	10.410	SF
(C02) Robin Fed 125H - Permit - APD-Rev01	3,616.92	3,614.29	278.53	253.25	11.018	CC
(C02) Robin Fed 125H - Permit - APD-Rev01	4,000.00	3,996.41	279.84	251.81	9.983	ES
(C02) Robin Fed 125H - Permit - APD-Rev01	21,436.63	20,891.18	891.97	728.73	5.464	SF
(C03) Robin Fed 126H - Permit - APD-Rev01	9,789.36	9,796.30	104.23	35.08	1.507	CC
(C03) Robin Fed 126H - Permit - APD-Rev01	9,800.00	9,806.12	104.30	35.08	1.507	ES, SF
(C04) Robin Fed 127H - Permit - APD-Rev01	2,021.49	2,020.65	313.35	299.51	22.628	CC
(C04) Robin Fed 127H - Permit - APD-Rev01	2,200.00	2,198.12	313.94	298.84	20.784	ES
(C04) Robin Fed 127H - Permit - APD-Rev01	21,436.63	20,828.15	1,158.14	981.79	6.567	SF
(C05) Robin Fed 114H - Permit - APD-Rev01	2,000.00	1,995.39	326.51	312.83	23.853	CC, ES
(C05) Robin Fed 114H - Permit - APD-Rev01	21,436.63	19,930.52	2,032.10	1,882.74	13.606	SF
(C06) Robin Fed 128H - Permit - APD-Rev01	2,100.00	2,089.93	347.67	333.29	24.180	CC, ES
(C06) Robin Fed 128H - Permit - APD-Rev01	21,436.63	20,445.78	1,661.47	1,493.53	9.893	SF
(D01) Robin Fed 173H - Permit - APD-Rev01	915.99	917.99	60.03	53.92	9.828	CC
(D01) Robin Fed 173H - Permit - APD-Rev01	1,000.00	1,001.97	60.03	53.32	8.946	ES
(D01) Robin Fed 173H - Permit - APD-Rev01	10,417.20	10,446.28	196.48	122.89	2.670	SF
(D02) Robin Fed 133H - Permit - APD-Rev01	1,116.33	1,117.33	30.01	22.47	3.980	CC

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Summary

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
(Permit) Robin Fed DSU						
(D02) Robin Fed 133H - Permit - APD-Rev01	1,341.78	1,341.67	30.07	20.95	3.298	ES
(D02) Robin Fed 133H - Permit - APD-Rev01	1,400.00	1,399.42	30.55	21.04	3.212	SF
(D04) Robin Fed 134H - Permit - APD-Rev01	1,000.00	1,000.00	29.99	23.29	4.474	CC, ES
(D04) Robin Fed 134H - Permit - APD-Rev01	21,436.63	21,311.05	669.10	474.04	3.430	SF
(D05) Robin Fed 204H - Permit - APD-Rev01	1,200.00	1,200.00	60.01	51.87	7.375	CC, ES
(D05) Robin Fed 204H - Permit - APD-Rev01	21,436.63	21,457.12	1,320.00	1,123.09	6.704	SF
(D06) Robin Fed 174H - Permit - APD-Rev01	1,000.00	999.00	89.97	83.27	13.429	CC, ES
(D06) Robin Fed 174H - Permit - APD-Rev01	21,436.63	21,101.89	1,366.64	1,174.31	7.106	SF

Offset Design: (Permit) Robin Fed DSU - (A01) Robin Fed Com 111H - Permit - APD-Rev00

Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)														Offset Site Error: 0.00 usft	
Reference Offset				Semi Major Axis		Offset Wellbore Centre				Rule Assigned: Distance				Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
19,600.00	11,163.00	16,732.85	9,571.00	84.26	70.77	-64.34	8,718.11	-3,668.22	3,634.66	3,488.76	145.90	24.912			
19,700.00	11,163.00	16,832.84	9,571.00	85.02	71.54	-64.33	8,818.11	-3,668.45	3,634.18	3,486.86	147.31	24.670			
19,800.00	11,163.00	16,932.84	9,571.00	85.79	72.30	-64.33	8,918.11	-3,668.68	3,633.69	3,484.96	148.73	24.432			
19,900.00	11,163.00	17,032.84	9,571.00	86.56	73.06	-64.33	9,018.11	-3,668.91	3,633.20	3,483.06	150.15	24.198			
20,000.00	11,163.00	17,132.84	9,571.00	87.33	73.83	-64.32	9,118.11	-3,669.14	3,632.72	3,481.15	151.57	23.967			
20,100.00	11,163.00	17,232.84	9,571.00	88.11	74.60	-64.32	9,218.10	-3,669.37	3,632.23	3,479.24	153.00	23.741			
20,200.00	11,163.00	17,332.84	9,571.00	88.88	75.37	-64.32	9,318.10	-3,669.60	3,631.75	3,477.32	154.42	23.518			
20,300.00	11,163.00	17,432.84	9,571.00	89.66	76.15	-64.31	9,418.10	-3,669.83	3,631.26	3,475.40	155.86	23.299			
20,400.00	11,163.00	17,532.83	9,571.00	90.44	76.92	-64.31	9,518.10	-3,670.06	3,630.77	3,473.48	157.29	23.083			
20,500.00	11,163.00	17,632.83	9,571.00	91.21	77.70	-64.31	9,618.10	-3,670.29	3,630.29	3,471.55	158.73	22.870			
20,600.00	11,163.00	17,732.83	9,571.00	92.00	78.48	-64.30	9,718.09	-3,670.52	3,629.80	3,469.63	160.18	22.661			
20,700.00	11,163.00	17,832.83	9,571.00	92.78	79.26	-64.30	9,818.09	-3,670.75	3,629.32	3,467.69	161.62	22.456			
20,800.00	11,163.00	17,932.83	9,571.00	93.56	80.04	-64.29	9,918.09	-3,670.98	3,628.83	3,465.76	163.07	22.253			
20,900.00	11,163.00	18,032.83	9,571.00	94.35	80.83	-64.29	10,018.09	-3,671.21	3,628.34	3,463.82	164.52	22.054			
21,000.00	11,163.00	18,132.83	9,571.00	95.14	81.62	-64.29	10,118.09	-3,671.44	3,627.86	3,461.88	165.98	21.858			
21,100.00	11,163.00	18,232.82	9,571.00	95.92	82.40	-64.28	10,218.09	-3,671.67	3,627.37	3,459.94	167.43	21.665			
21,200.00	11,163.00	18,332.82	9,571.00	96.71	83.19	-64.28	10,318.08	-3,671.90	3,626.89	3,457.99	168.89	21.475			
21,300.00	11,163.00	18,432.82	9,571.00	97.51	83.98	-64.28	10,418.08	-3,672.13	3,626.40	3,456.05	170.35	21.287			
21,400.00	11,163.00	18,532.82	9,571.00	98.30	84.78	-64.27	10,518.08	-3,672.36	3,625.91	3,454.10	171.82	21.103			
21,436.63	11,163.00	18,553.60	9,571.00	98.59	84.94	-64.27	10,538.86	-3,672.41	3,625.77	3,453.51	172.26	21.048	CC, ES, SF		

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (A02) Robin Fed Com 121H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
18,100.00	11,163.00	16,168.30	10,516.00	73.04	61.81	-79.17	7,218.16	-3,664.78	3,343.78	3,209.91	133.87	24.977	
18,200.00	11,163.00	16,268.30	10,516.00	73.77	62.50	-79.17	7,318.15	-3,665.01	3,343.25	3,207.98	135.27	24.715	
18,300.00	11,163.00	16,368.30	10,516.00	74.50	63.20	-79.17	7,418.15	-3,665.24	3,342.72	3,206.04	136.68	24.456	
18,400.00	11,163.00	16,468.30	10,516.00	75.24	63.90	-79.17	7,518.15	-3,665.47	3,342.19	3,204.09	138.10	24.202	
18,500.00	11,163.00	16,568.30	10,516.00	75.97	64.60	-79.17	7,618.15	-3,665.70	3,341.66	3,202.14	139.52	23.951	
18,600.00	11,163.00	16,668.29	10,516.00	76.72	65.31	-79.17	7,718.15	-3,665.93	3,341.13	3,200.18	140.95	23.705	
18,700.00	11,163.00	16,768.29	10,516.00	77.46	66.02	-79.16	7,818.15	-3,666.16	3,340.60	3,198.22	142.38	23.462	
18,800.00	11,163.00	16,868.29	10,516.00	78.21	66.74	-79.16	7,918.14	-3,666.39	3,340.07	3,196.25	143.82	23.224	
18,900.00	11,163.00	16,968.29	10,516.00	78.95	67.46	-79.16	8,018.14	-3,666.62	3,339.54	3,194.27	145.27	22.989	
19,000.00	11,163.00	17,068.29	10,516.00	79.71	68.18	-79.16	8,118.14	-3,666.85	3,339.01	3,192.29	146.72	22.758	
19,100.00	11,163.00	17,168.29	10,516.00	80.46	68.91	-79.16	8,218.14	-3,667.08	3,338.48	3,190.30	148.18	22.530	
19,200.00	11,163.00	17,268.29	10,516.00	81.21	69.64	-79.16	8,318.14	-3,667.31	3,337.95	3,188.31	149.64	22.306	
19,300.00	11,163.00	17,368.28	10,516.00	81.97	70.37	-79.15	8,418.14	-3,667.54	3,337.42	3,186.31	151.11	22.086	
19,400.00	11,163.00	17,468.28	10,516.00	82.73	71.10	-79.15	8,518.13	-3,667.77	3,336.89	3,184.30	152.58	21.869	
19,500.00	11,163.00	17,568.28	10,516.00	83.49	71.84	-79.15	8,618.13	-3,668.00	3,336.36	3,182.30	154.06	21.656	
19,600.00	11,163.00	17,668.28	10,516.00	84.26	72.58	-79.15	8,718.13	-3,668.23	3,335.83	3,180.28	155.54	21.446	
19,700.00	11,163.00	17,768.28	10,516.00	85.02	73.32	-79.15	8,818.13	-3,668.46	3,335.30	3,178.27	157.03	21.240	
19,800.00	11,163.00	17,868.28	10,516.00	85.79	74.07	-79.15	8,918.13	-3,668.69	3,334.77	3,176.24	158.52	21.036	
19,900.00	11,163.00	17,968.28	10,516.00	86.56	74.82	-79.14	9,018.12	-3,668.92	3,334.24	3,174.22	160.02	20.836	
20,000.00	11,163.00	18,068.27	10,516.00	87.33	75.57	-79.14	9,118.12	-3,669.15	3,333.71	3,172.19	161.52	20.639	
20,100.00	11,163.00	18,168.27	10,516.00	88.11	76.32	-79.14	9,218.12	-3,669.38	3,333.18	3,170.15	163.03	20.446	
20,200.00	11,163.00	18,268.27	10,516.00	88.88	77.08	-79.14	9,318.12	-3,669.61	3,332.65	3,168.11	164.53	20.255	
20,300.00	11,163.00	18,368.27	10,516.00	89.66	77.84	-79.14	9,418.12	-3,669.83	3,332.12	3,166.07	166.05	20.067	
20,400.00	11,163.00	18,468.27	10,516.00	90.44	78.60	-79.13	9,518.12	-3,670.06	3,331.59	3,164.02	167.56	19.883	
20,500.00	11,163.00	18,568.27	10,516.00	91.21	79.36	-79.13	9,618.11	-3,670.29	3,331.06	3,161.97	169.08	19.701	
20,600.00	11,163.00	18,668.27	10,516.00	92.00	80.13	-79.13	9,718.11	-3,670.52	3,330.53	3,159.92	170.61	19.522	
20,700.00	11,163.00	18,768.26	10,516.00	92.78	80.89	-79.13	9,818.11	-3,670.75	3,330.00	3,157.86	172.13	19.345	
20,800.00	11,163.00	18,868.26	10,516.00	93.56	81.66	-79.13	9,918.11	-3,670.98	3,329.47	3,155.80	173.66	19.172	
20,900.00	11,163.00	18,968.26	10,516.00	94.35	82.43	-79.13	10,018.11	-3,671.21	3,328.93	3,153.74	175.20	19.001	
21,000.00	11,163.00	19,068.26	10,516.00	95.14	83.21	-79.12	10,118.11	-3,671.44	3,328.40	3,151.67	176.73	18.833	
21,100.00	11,163.00	19,168.26	10,516.00	95.92	83.98	-79.12	10,218.10	-3,671.67	3,327.87	3,149.60	178.27	18.667	
21,200.00	11,163.00	19,268.26	10,516.00	96.71	84.76	-79.12	10,318.10	-3,671.90	3,327.34	3,147.53	179.82	18.504	
21,300.00	11,163.00	19,368.26	10,516.00	97.51	85.53	-79.12	10,418.10	-3,672.13	3,326.81	3,145.45	181.36	18.343	
21,400.00	11,163.00	19,468.25	10,516.00	98.30	86.31	-79.12	10,518.10	-3,672.36	3,326.28	3,143.37	182.91	18.185	
21,436.63	11,163.00	19,489.02	10,516.00	98.59	86.48	-79.12	10,538.86	-3,672.41	3,326.13	3,142.75	183.37	18.138	CC, ES, SF

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (A03) Robin Fed Com 122H - Permit - APD-Rev01													Offset Site Error:	0.00 usft
Survey Program:		0-MWD+IFR1+SAG+FDIR (SQC2)					Rule Assigned:				Offset Well Error:	0.00 usft		
Reference	Offset	Semi Major Axis		Distance		Warning								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
16,900.00	11,163.00	14,558.47	10,131.00	64.54	53.05	-68.94	6,019.92	-3,002.34	2,819.35	2,706.48	112.87	24.978		
17,000.00	11,163.00	14,658.47	10,131.00	65.23	53.69	-68.94	6,119.92	-3,002.56	2,818.84	2,704.70	114.14	24.697		
17,100.00	11,163.00	14,758.46	10,131.00	65.92	54.34	-68.93	6,219.92	-3,002.79	2,818.33	2,702.92	115.41	24.421		
17,200.00	11,163.00	14,858.46	10,131.00	66.62	55.00	-68.93	6,319.92	-3,003.01	2,817.81	2,701.13	116.69	24.149		
17,300.00	11,163.00	14,958.46	10,131.00	67.32	55.66	-68.93	6,419.92	-3,003.23	2,817.30	2,699.33	117.97	23.881		
17,400.00	11,163.00	15,058.46	10,131.00	68.02	56.32	-68.92	6,519.91	-3,003.45	2,816.79	2,697.52	119.27	23.616		
17,500.00	11,163.00	15,158.46	10,131.00	68.73	56.99	-68.92	6,619.91	-3,003.67	2,816.28	2,695.70	120.58	23.356		
17,600.00	11,163.00	15,258.46	10,131.00	69.44	57.67	-68.91	6,719.91	-3,003.89	2,815.77	2,693.87	121.89	23.100		
17,700.00	11,163.00	15,358.46	10,131.00	70.15	58.35	-68.91	6,819.91	-3,004.11	2,815.25	2,692.04	123.22	22.848		
17,800.00	11,163.00	15,458.45	10,131.00	70.87	59.04	-68.91	6,919.91	-3,004.33	2,814.74	2,690.20	124.55	22.600		
17,900.00	11,163.00	15,558.45	10,131.00	71.59	59.73	-68.90	7,019.91	-3,004.55	2,814.23	2,688.35	125.89	22.356		
18,000.00	11,163.00	15,658.45	10,131.00	72.31	60.42	-68.90	7,119.90	-3,004.77	2,813.72	2,686.49	127.23	22.115		
18,100.00	11,163.00	15,758.45	10,131.00	73.04	61.12	-68.89	7,219.90	-3,005.00	2,813.21	2,684.62	128.58	21.879		
18,200.00	11,163.00	15,858.45	10,131.00	73.77	61.83	-68.89	7,319.90	-3,005.22	2,812.70	2,682.75	129.94	21.646		
18,300.00	11,163.00	15,958.45	10,131.00	74.50	62.54	-68.89	7,419.90	-3,005.44	2,812.18	2,680.88	131.31	21.417		
18,400.00	11,163.00	16,058.44	10,131.00	75.24	63.25	-68.88	7,519.90	-3,005.66	2,811.67	2,678.99	132.68	21.191		
18,500.00	11,163.00	16,158.44	10,131.00	75.97	63.96	-68.88	7,619.89	-3,005.88	2,811.16	2,677.10	134.06	20.970		
18,600.00	11,163.00	16,258.44	10,131.00	76.72	64.68	-68.87	7,719.89	-3,006.10	2,810.65	2,675.21	135.44	20.752		
18,700.00	11,163.00	16,358.44	10,131.00	77.46	65.41	-68.87	7,819.89	-3,006.32	2,810.14	2,673.30	136.83	20.537		
18,800.00	11,163.00	16,458.44	10,131.00	78.21	66.13	-68.87	7,919.89	-3,006.54	2,809.62	2,671.40	138.23	20.326		
18,900.00	11,163.00	16,558.44	10,131.00	78.95	66.86	-68.86	8,019.89	-3,006.76	2,809.11	2,669.48	139.63	20.118		
19,000.00	11,163.00	16,658.44	10,131.00	79.71	67.60	-68.86	8,119.89	-3,006.98	2,808.60	2,667.57	141.04	19.914		
19,100.00	11,163.00	16,758.43	10,131.00	80.46	68.33	-68.85	8,219.88	-3,007.21	2,808.09	2,665.64	142.45	19.713		
19,200.00	11,163.00	16,858.43	10,131.00	81.21	69.07	-68.85	8,319.88	-3,007.43	2,807.58	2,663.71	143.86	19.516		
19,300.00	11,163.00	16,958.43	10,131.00	81.97	69.81	-68.85	8,419.88	-3,007.65	2,807.07	2,661.78	145.28	19.321		
19,400.00	11,163.00	17,058.43	10,131.00	82.73	70.56	-68.84	8,519.88	-3,007.87	2,806.55	2,659.84	146.71	19.130		
19,500.00	11,163.00	17,158.43	10,131.00	83.49	71.31	-68.84	8,619.88	-3,008.09	2,806.04	2,657.90	148.14	18.942		
19,600.00	11,163.00	17,258.43	10,131.00	84.26	72.06	-68.83	8,719.88	-3,008.31	2,805.53	2,655.96	149.58	18.757		
19,700.00	11,163.00	17,358.43	10,131.00	85.02	72.81	-68.83	8,819.87	-3,008.53	2,805.02	2,654.01	151.01	18.575		
19,800.00	11,163.00	17,458.42	10,131.00	85.79	73.56	-68.83	8,919.87	-3,008.75	2,804.51	2,652.05	152.46	18.395		
19,900.00	11,163.00	17,558.42	10,131.00	86.56	74.32	-68.82	9,019.87	-3,008.97	2,804.00	2,650.09	153.90	18.219		
20,000.00	11,163.00	17,658.42	10,131.00	87.33	75.08	-68.82	9,119.87	-3,009.19	2,803.48	2,648.13	155.36	18.046		
20,100.00	11,163.00	17,758.42	10,131.00	88.11	75.84	-68.81	9,219.87	-3,009.42	2,802.97	2,646.16	156.81	17.875		
20,200.00	11,163.00	17,858.42	10,131.00	88.88	76.61	-68.81	9,319.86	-3,009.64	2,802.46	2,644.19	158.27	17.707		
20,300.00	11,163.00	17,958.42	10,131.00	89.66	77.38	-68.81	9,419.86	-3,009.86	2,801.95	2,642.22	159.73	17.542		
20,400.00	11,163.00	18,058.41	10,131.00	90.44	78.14	-68.80	9,519.86	-3,010.08	2,801.44	2,640.24	161.20	17.379		
20,500.00	11,163.00	18,158.41	10,131.00	91.21	78.91	-68.80	9,619.86	-3,010.30	2,800.93	2,638.26	162.67	17.219		
20,600.00	11,163.00	18,258.41	10,131.00	92.00	79.69	-68.79	9,719.86	-3,010.52	2,800.42	2,636.28	164.14	17.061		
20,700.00	11,163.00	18,358.41	10,131.00	92.78	80.46	-68.79	9,819.86	-3,010.74	2,799.90	2,634.29	165.61	16.906		
20,800.00	11,163.00	18,458.41	10,131.00	93.56	81.24	-68.78	9,919.85	-3,010.96	2,799.39	2,632.30	167.09	16.754		
20,900.00	11,163.00	18,558.41	10,131.00	94.35	82.02	-68.78	10,019.85	-3,011.18	2,798.88	2,630.31	168.57	16.603		
21,000.00	11,163.00	18,658.41	10,131.00	95.14	82.80	-68.78	10,119.85	-3,011.41	2,798.37	2,628.31	170.06	16.455		
21,100.00	11,163.00	18,758.40	10,131.00	95.92	83.58	-68.77	10,219.85	-3,011.63	2,797.86	2,626.31	171.54	16.310		
21,200.00	11,163.00	18,858.40	10,131.00	96.71	84.36	-68.77	10,319.85	-3,011.85	2,797.35	2,624.31	173.03	16.166		
21,300.00	11,163.00	18,958.40	10,131.00	97.51	85.15	-68.76	10,419.85	-3,012.07	2,796.84	2,622.31	174.53	16.025		
21,400.00	11,163.00	19,058.40	10,131.00	98.30	85.93	-68.76	10,519.84	-3,012.29	2,796.32	2,620.30	176.02	15.886		
21,436.63	11,163.00	19,081.32	10,131.00	98.59	86.11	-68.76	10,542.76	-3,012.34	2,796.17	2,619.69	176.48	15.844 CC, ES, SF		

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (A04) Robin Fed Com 123H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
13,900.00	11,163.00	11,944.68	10,516.00	46.78	39.57	-72.46	3,021.29	-2,335.10	2,083.80	2,000.21	83.60	24.927	
14,000.00	11,163.00	12,044.68	10,516.00	47.25	39.87	-72.46	3,121.29	-2,335.33	2,083.29	1,998.95	84.34	24.701	
14,100.00	11,163.00	12,144.68	10,516.00	47.73	40.20	-72.45	3,221.29	-2,335.55	2,082.77	1,997.66	85.11	24.471	
14,200.00	11,163.00	12,244.67	10,516.00	48.22	40.53	-72.45	3,321.29	-2,335.78	2,082.25	1,996.35	85.91	24.238	
14,300.00	11,163.00	12,344.67	10,516.00	48.73	40.89	-72.44	3,421.29	-2,336.01	2,081.74	1,995.01	86.73	24.003	
14,400.00	11,163.00	12,444.67	10,516.00	49.24	41.26	-72.44	3,521.28	-2,336.24	2,081.22	1,993.65	87.58	23.765	
14,500.00	11,163.00	12,544.67	10,516.00	49.76	41.64	-72.43	3,621.28	-2,336.47	2,080.71	1,992.26	88.45	23.525	
14,600.00	11,163.00	12,644.67	10,516.00	50.29	42.04	-72.43	3,721.28	-2,336.69	2,080.19	1,990.85	89.34	23.284	
14,700.00	11,163.00	12,744.67	10,516.00	50.83	42.45	-72.42	3,821.28	-2,336.92	2,079.67	1,989.42	90.25	23.042	
14,800.00	11,163.00	12,844.67	10,516.00	51.38	42.87	-72.42	3,921.28	-2,337.15	2,079.16	1,987.97	91.19	22.800	
14,900.00	11,163.00	12,944.66	10,516.00	51.94	43.31	-72.41	4,021.28	-2,337.38	2,078.64	1,986.49	92.15	22.557	
15,000.00	11,163.00	13,044.66	10,516.00	52.51	43.76	-72.41	4,121.27	-2,337.61	2,078.13	1,985.00	93.13	22.315	
15,100.00	11,163.00	13,144.66	10,516.00	53.08	44.22	-72.41	4,221.27	-2,337.84	2,077.61	1,983.48	94.13	22.073	
15,200.00	11,163.00	13,244.66	10,516.00	53.66	44.70	-72.40	4,321.27	-2,338.06	2,077.09	1,981.95	95.14	21.831	
15,300.00	11,163.00	13,344.66	10,516.00	54.25	45.19	-72.40	4,421.27	-2,338.29	2,076.58	1,980.40	96.18	21.591	
15,400.00	11,163.00	13,444.66	10,516.00	54.85	45.68	-72.39	4,521.27	-2,338.52	2,076.06	1,978.83	97.23	21.351	
15,500.00	11,163.00	13,544.66	10,516.00	55.45	46.19	-72.39	4,621.27	-2,338.75	2,075.54	1,977.24	98.30	21.113	
15,600.00	11,163.00	13,644.65	10,516.00	56.06	46.71	-72.38	4,721.26	-2,338.98	2,075.03	1,975.64	99.39	20.877	
15,700.00	11,163.00	13,744.65	10,516.00	56.68	47.24	-72.38	4,821.26	-2,339.21	2,074.51	1,974.02	100.50	20.643	
15,800.00	11,163.00	13,844.65	10,516.00	57.31	47.78	-72.37	4,921.26	-2,339.43	2,074.00	1,972.38	101.62	20.410	
15,900.00	11,163.00	13,944.65	10,516.00	57.94	48.33	-72.37	5,021.26	-2,339.66	2,073.48	1,970.73	102.75	20.179	
16,000.00	11,163.00	14,044.65	10,516.00	58.57	48.89	-72.37	5,121.26	-2,339.89	2,072.96	1,969.06	103.90	19.951	
16,100.00	11,163.00	14,144.65	10,516.00	59.22	49.46	-72.36	5,221.25	-2,340.12	2,072.45	1,967.38	105.07	19.725	
16,200.00	11,163.00	14,244.65	10,516.00	59.86	50.03	-72.36	5,321.25	-2,340.35	2,071.93	1,965.69	106.24	19.502	
16,300.00	11,163.00	14,344.64	10,516.00	60.52	50.61	-72.35	5,421.25	-2,340.57	2,071.42	1,963.98	107.43	19.281	
16,400.00	11,163.00	14,444.64	10,516.00	61.18	51.21	-72.35	5,521.25	-2,340.80	2,070.90	1,962.26	108.64	19.062	
16,500.00	11,163.00	14,544.64	10,516.00	61.84	51.81	-72.34	5,621.25	-2,341.03	2,070.38	1,960.53	109.85	18.847	
16,600.00	11,163.00	14,644.64	10,516.00	62.51	52.41	-72.34	5,721.25	-2,341.26	2,069.87	1,958.79	111.08	18.634	
16,700.00	11,163.00	14,744.64	10,516.00	63.18	53.03	-72.33	5,821.24	-2,341.49	2,069.35	1,957.03	112.32	18.423	
16,800.00	11,163.00	14,844.64	10,516.00	63.86	53.65	-72.33	5,921.24	-2,341.72	2,068.84	1,955.26	113.57	18.216	
16,900.00	11,163.00	14,944.63	10,516.00	64.54	54.27	-72.32	6,021.24	-2,341.94	2,068.32	1,953.49	114.83	18.011	
17,000.00	11,163.00	15,044.63	10,516.00	65.23	54.91	-72.32	6,121.24	-2,342.17	2,067.80	1,951.70	116.11	17.810	
17,100.00	11,163.00	15,144.63	10,516.00	65.92	55.55	-72.31	6,221.24	-2,342.40	2,067.29	1,949.90	117.39	17.611	
17,200.00	11,163.00	15,244.63	10,516.00	66.62	56.20	-72.31	6,321.24	-2,342.63	2,066.77	1,948.09	118.68	17.415	
17,300.00	11,163.00	15,344.63	10,516.00	67.32	56.85	-72.31	6,421.23	-2,342.86	2,066.26	1,946.28	119.98	17.222	
17,400.00	11,163.00	15,444.63	10,516.00	68.02	57.51	-72.30	6,521.23	-2,343.08	2,065.74	1,944.45	121.29	17.031	
17,500.00	11,163.00	15,544.63	10,516.00	68.73	58.17	-72.30	6,621.23	-2,343.31	2,065.22	1,942.61	122.61	16.844	
17,600.00	11,163.00	15,644.62	10,516.00	69.44	58.84	-72.29	6,721.23	-2,343.54	2,064.71	1,940.77	123.94	16.659	
17,700.00	11,163.00	15,744.62	10,516.00	70.15	59.51	-72.29	6,821.23	-2,343.77	2,064.19	1,938.92	125.27	16.477	
17,800.00	11,163.00	15,844.62	10,516.00	70.87	60.19	-72.28	6,921.23	-2,344.00	2,063.68	1,937.06	126.62	16.298	
17,900.00	11,163.00	15,944.62	10,516.00	71.59	60.87	-72.28	7,021.22	-2,344.23	2,063.16	1,935.19	127.97	16.122	
18,000.00	11,163.00	16,044.62	10,516.00	72.31	61.56	-72.27	7,121.22	-2,344.45	2,062.65	1,933.32	129.33	15.949	
18,100.00	11,163.00	16,144.62	10,516.00	73.04	62.25	-72.27	7,221.22	-2,344.68	2,062.13	1,931.43	130.70	15.778	
18,200.00	11,163.00	16,244.62	10,516.00	73.77	62.95	-72.26	7,321.22	-2,344.91	2,061.61	1,929.54	132.07	15.610	
18,300.00	11,163.00	16,344.61	10,516.00	74.50	63.65	-72.26	7,421.22	-2,345.14	2,061.10	1,927.65	133.45	15.445	
18,400.00	11,163.00	16,444.61	10,516.00	75.24	64.35	-72.26	7,521.22	-2,345.37	2,060.58	1,925.75	134.84	15.282	
18,500.00	11,163.00	16,544.61	10,516.00	75.97	65.06	-72.25	7,621.21	-2,345.59	2,060.07	1,923.84	136.23	15.122	
18,600.00	11,163.00	16,644.61	10,516.00	76.72	65.78	-72.25	7,721.21	-2,345.82	2,059.55	1,921.92	137.63	14.965	
18,700.00	11,163.00	16,744.61	10,516.00	77.46	66.49	-72.24	7,821.21	-2,346.05	2,059.04	1,920.00	139.03	14.810	
18,800.00	11,163.00	16,844.61	10,516.00	78.21	67.21	-72.24	7,921.21	-2,346.28	2,058.52	1,918.07	140.45	14.657	
18,900.00	11,163.00	16,944.61	10,516.00	78.95	67.93	-72.23	8,021.21	-2,346.51	2,058.00	1,916.14	141.86	14.507	
19,000.00	11,163.00	17,044.60	10,516.00	79.71	68.66	-72.23	8,121.20	-2,346.74	2,057.49	1,914.20	143.28	14.359	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (A04) Robin Fed Com 123H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
19,100.00	11,163.00	17,144.60	10,516.00	80.46	69.39	-72.22	8,221.20	-2,346.96	2,056.97	1,912.26	144.71	14.214	
19,200.00	11,163.00	17,244.60	10,516.00	81.21	70.12	-72.22	8,321.20	-2,347.19	2,056.46	1,910.31	146.14	14.071	
19,300.00	11,163.00	17,344.60	10,516.00	81.97	70.86	-72.21	8,421.20	-2,347.42	2,055.94	1,908.36	147.58	13.931	
19,400.00	11,163.00	17,444.60	10,516.00	82.73	71.60	-72.21	8,521.20	-2,347.65	2,055.43	1,906.40	149.02	13.793	
19,500.00	11,163.00	17,544.60	10,516.00	83.49	72.34	-72.20	8,621.20	-2,347.88	2,054.91	1,904.44	150.47	13.656	
19,600.00	11,163.00	17,644.60	10,516.00	84.26	73.08	-72.20	8,721.19	-2,348.10	2,054.39	1,902.47	151.92	13.523	
19,700.00	11,163.00	17,744.59	10,516.00	85.02	73.83	-72.20	8,821.19	-2,348.33	2,053.88	1,900.50	153.38	13.391	
19,800.00	11,163.00	17,844.59	10,516.00	85.79	74.58	-72.19	8,921.19	-2,348.56	2,053.36	1,898.52	154.84	13.261	
19,900.00	11,163.00	17,944.59	10,516.00	86.56	75.33	-72.19	9,021.19	-2,348.79	2,052.85	1,896.54	156.30	13.134	
20,000.00	11,163.00	18,044.59	10,516.00	87.33	76.08	-72.18	9,121.19	-2,349.02	2,052.33	1,894.56	157.77	13.008	
20,100.00	11,163.00	18,144.59	10,516.00	88.11	76.84	-72.18	9,221.19	-2,349.25	2,051.82	1,892.57	159.24	12.885	
20,200.00	11,163.00	18,244.59	10,516.00	88.88	77.60	-72.17	9,321.18	-2,349.47	2,051.30	1,890.58	160.72	12.763	
20,300.00	11,163.00	18,344.59	10,516.00	89.66	78.36	-72.17	9,421.18	-2,349.70	2,050.79	1,888.59	162.20	12.644	
20,400.00	11,163.00	18,444.58	10,516.00	90.44	79.12	-72.16	9,521.18	-2,349.93	2,050.27	1,886.59	163.68	12.526	
20,500.00	11,163.00	18,544.58	10,516.00	91.21	79.89	-72.16	9,621.18	-2,350.16	2,049.76	1,884.58	165.17	12.410	
20,600.00	11,163.00	18,644.58	10,516.00	92.00	80.65	-72.15	9,721.18	-2,350.39	2,049.24	1,882.58	166.66	12.296	
20,700.00	11,163.00	18,744.58	10,516.00	92.78	81.42	-72.15	9,821.18	-2,350.61	2,048.72	1,880.57	168.16	12.184	
20,800.00	11,163.00	18,844.58	10,516.00	93.56	82.20	-72.14	9,921.17	-2,350.84	2,048.21	1,878.56	169.65	12.073	
20,900.00	11,163.00	18,944.58	10,516.00	94.35	82.97	-72.14	10,021.17	-2,351.07	2,047.69	1,876.54	171.15	11.964	
21,000.00	11,163.00	19,044.57	10,516.00	95.14	83.74	-72.14	10,121.17	-2,351.30	2,047.18	1,874.52	172.66	11.857	
21,100.00	11,163.00	19,144.57	10,516.00	95.92	84.52	-72.13	10,221.17	-2,351.53	2,046.66	1,872.50	174.16	11.752	
21,200.00	11,163.00	19,244.57	10,516.00	96.71	85.30	-72.13	10,321.17	-2,351.76	2,046.15	1,870.48	175.67	11.648	
21,300.00	11,163.00	19,344.57	10,516.00	97.51	86.08	-72.12	10,421.17	-2,351.98	2,045.63	1,868.45	177.18	11.545	
21,400.00	11,163.00	19,444.57	10,516.00	98.30	86.86	-72.12	10,521.16	-2,352.21	2,045.12	1,866.42	178.70	11.445	
21,436.03	11,163.00	19,470.07	10,516.00	98.58	87.06	-72.12	10,546.66	-2,352.27	2,044.96	1,865.78	179.18	11.413 CC	
21,436.63	11,163.00	19,470.07	10,516.00	98.59	87.06	-72.12	10,546.66	-2,352.27	2,044.96	1,865.78	179.18	11.413 ES, SF	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (A05) Robin Fed Com 112H - Permit - APD-Rev00											Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)											Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	
17,200.00	11,163.00	14,333.00	9,571.00	66.62	53.80	-51.38	6,321.41	-2,343.01	2,520.51	2,418.61	24.734
17,300.00	11,163.00	14,433.00	9,571.00	67.32	54.48	-51.38	6,421.41	-2,343.23	2,520.08	2,417.02	24.452
17,400.00	11,163.00	14,533.00	9,571.00	68.02	55.16	-51.37	6,521.41	-2,343.45	2,519.65	2,415.43	24.175
17,500.00	11,163.00	14,633.00	9,571.00	68.73	55.84	-51.36	6,621.41	-2,343.67	2,519.22	2,413.83	23.903
17,600.00	11,163.00	14,732.99	9,571.00	69.44	56.53	-51.35	6,721.41	-2,343.89	2,518.79	2,412.22	23.634
17,700.00	11,163.00	14,832.99	9,571.00	70.15	57.23	-51.35	6,821.40	-2,344.10	2,518.36	2,410.61	23.370
17,800.00	11,163.00	14,932.99	9,571.00	70.87	57.93	-51.34	6,921.40	-2,344.32	2,517.93	2,408.98	23.111
17,900.00	11,163.00	15,032.99	9,571.00	71.59	58.64	-51.33	7,021.40	-2,344.54	2,517.50	2,407.36	22.856
18,000.00	11,163.00	15,132.99	9,571.00	72.31	59.34	-51.32	7,121.40	-2,344.76	2,517.07	2,405.72	22.605
18,100.00	11,163.00	15,232.99	9,571.00	73.04	60.06	-51.31	7,221.40	-2,344.98	2,516.65	2,404.08	22.358
18,200.00	11,163.00	15,332.98	9,571.00	73.77	60.78	-51.31	7,321.40	-2,345.20	2,516.22	2,402.44	22.115
18,300.00	11,163.00	15,432.98	9,571.00	74.50	61.50	-51.30	7,421.39	-2,345.42	2,515.79	2,400.79	21.877
18,400.00	11,163.00	15,532.98	9,571.00	75.24	62.22	-51.29	7,521.39	-2,345.64	2,515.36	2,399.13	21.642
18,500.00	11,163.00	15,632.98	9,571.00	75.97	62.95	-51.28	7,621.39	-2,345.86	2,514.93	2,397.47	21.411
18,600.00	11,163.00	15,732.98	9,571.00	76.72	63.68	-51.28	7,721.39	-2,346.08	2,514.50	2,395.80	21.185
18,700.00	11,163.00	15,832.98	9,571.00	77.46	64.42	-51.27	7,821.39	-2,346.30	2,514.07	2,394.13	20.962
18,800.00	11,163.00	15,932.98	9,571.00	78.21	65.16	-51.26	7,921.38	-2,346.52	2,513.64	2,392.46	20.743
18,900.00	11,163.00	16,032.97	9,571.00	78.95	65.90	-51.25	8,021.38	-2,346.74	2,513.21	2,390.78	20.527
19,000.00	11,163.00	16,132.97	9,571.00	79.71	66.64	-51.24	8,121.38	-2,346.95	2,512.78	2,389.09	20.315
19,100.00	11,163.00	16,232.97	9,571.00	80.46	67.39	-51.24	8,221.38	-2,347.17	2,512.35	2,387.40	20.107
19,200.00	11,163.00	16,332.97	9,571.00	81.21	68.14	-51.23	8,321.38	-2,347.39	2,511.92	2,385.71	19.902
19,300.00	11,163.00	16,432.97	9,571.00	81.97	68.89	-51.22	8,421.38	-2,347.61	2,511.49	2,384.01	19.701
19,400.00	11,163.00	16,532.97	9,571.00	82.73	69.65	-51.21	8,521.37	-2,347.83	2,511.06	2,382.31	19.503
19,500.00	11,163.00	16,632.97	9,571.00	83.49	70.40	-51.20	8,621.37	-2,348.05	2,510.63	2,380.61	19.309
19,600.00	11,163.00	16,732.96	9,571.00	84.26	71.17	-51.20	8,721.37	-2,348.27	2,510.20	2,378.90	19.118
19,700.00	11,163.00	16,832.96	9,571.00	85.02	71.93	-51.19	8,821.37	-2,348.49	2,509.78	2,377.19	18.929
19,800.00	11,163.00	16,932.96	9,571.00	85.79	72.69	-51.18	8,921.37	-2,348.71	2,509.35	2,375.48	18.744
19,900.00	11,163.00	17,032.96	9,571.00	86.56	73.46	-51.17	9,021.37	-2,348.93	2,508.92	2,373.76	18.563
20,000.00	11,163.00	17,132.96	9,571.00	87.33	74.23	-51.17	9,121.36	-2,349.15	2,508.49	2,372.04	18.384
20,100.00	11,163.00	17,232.96	9,571.00	88.11	75.00	-51.16	9,221.36	-2,349.37	2,508.06	2,370.31	18.208
20,200.00	11,163.00	17,332.95	9,571.00	88.88	75.78	-51.15	9,321.36	-2,349.58	2,507.63	2,368.59	18.035
20,300.00	11,163.00	17,432.95	9,571.00	89.66	76.55	-51.14	9,421.36	-2,349.80	2,507.20	2,366.86	17.864
20,400.00	11,163.00	17,532.95	9,571.00	90.44	77.33	-51.13	9,521.36	-2,350.02	2,506.77	2,365.12	17.697
20,500.00	11,163.00	17,632.95	9,571.00	91.21	78.11	-51.13	9,621.35	-2,350.24	2,506.35	2,363.39	17.532
20,600.00	11,163.00	17,732.95	9,571.00	92.00	78.89	-51.12	9,721.35	-2,350.46	2,505.92	2,361.65	17.370
20,700.00	11,163.00	17,832.95	9,571.00	92.78	79.67	-51.11	9,821.35	-2,350.68	2,505.49	2,359.91	17.211
20,800.00	11,163.00	17,932.95	9,571.00	93.56	80.46	-51.10	9,921.35	-2,350.90	2,505.06	2,358.17	17.054
20,900.00	11,163.00	18,032.94	9,571.00	94.35	81.24	-51.09	10,021.35	-2,351.12	2,504.63	2,356.42	16.900
21,000.00	11,163.00	18,132.94	9,571.00	95.14	82.03	-51.09	10,121.35	-2,351.34	2,504.20	2,354.68	16.748
21,100.00	11,163.00	18,232.94	9,571.00	95.92	82.82	-51.08	10,221.34	-2,351.56	2,503.77	2,352.93	16.598
21,200.00	11,163.00	18,332.94	9,571.00	96.71	83.61	-51.07	10,321.34	-2,351.78	2,503.35	2,351.18	16.451
21,300.00	11,163.00	18,432.94	9,571.00	97.51	84.40	-51.06	10,421.34	-2,352.00	2,502.92	2,349.42	16.306
21,400.00	11,163.00	18,532.94	9,571.00	98.30	85.20	-51.05	10,521.34	-2,352.21	2,502.49	2,347.67	16.164
21,436.03	11,163.00	18,558.26	9,571.00	98.58	85.40	-51.05	10,546.66	-2,352.27	2,502.36	2,347.10	16.117 CC
21,436.63	11,163.00	18,558.26	9,571.00	98.59	85.40	-51.05	10,546.66	-2,352.27	2,502.36	2,347.10	16.117 ES, SF

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (A06) Robin Fed Com 124H - Permit - APD-Rev01													Offset Site Error:	0.00 usft
Survey Program:		0-MWD+IFR1+SAG+FDIR (SQC2)					Rule Assigned:						Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:						Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,700.00	11,163.00	10,500.00	10,146.64	42.14	36.28	-53.23	1,881.40	-1,672.71	1,665.76	1,598.95	66.81	24.932		
12,800.00	11,163.00	10,541.49	10,148.00	42.45	36.29	-53.26	1,922.86	-1,672.80	1,663.48	1,596.33	67.15	24.773		
12,900.00	11,163.00	10,641.49	10,148.00	42.77	36.31	-53.25	2,022.86	-1,673.03	1,663.04	1,595.56	67.48	24.645		
13,000.00	11,163.00	10,741.49	10,148.00	43.11	36.35	-53.24	2,122.86	-1,673.25	1,662.60	1,594.76	67.84	24.507		
13,100.00	11,163.00	10,841.49	10,148.00	43.47	36.42	-53.23	2,222.86	-1,673.48	1,662.17	1,593.93	68.23	24.360		
13,200.00	11,163.00	10,941.49	10,148.00	43.83	36.54	-53.22	2,322.86	-1,673.70	1,661.73	1,593.08	68.65	24.204		
13,300.00	11,163.00	11,041.49	10,148.00	44.22	36.69	-53.21	2,422.85	-1,673.93	1,661.29	1,592.19	69.10	24.040		
13,400.00	11,163.00	11,141.48	10,148.00	44.61	36.87	-53.19	2,522.85	-1,674.15	1,660.86	1,591.27	69.58	23.868		
13,500.00	11,163.00	11,241.48	10,148.00	45.02	37.07	-53.18	2,622.85	-1,674.38	1,660.42	1,590.33	70.09	23.689		
13,600.00	11,163.00	11,341.48	10,148.00	45.44	37.30	-53.17	2,722.85	-1,674.60	1,659.99	1,589.36	70.63	23.503		
13,700.00	11,163.00	11,441.48	10,148.00	45.88	37.54	-53.16	2,822.85	-1,674.83	1,659.55	1,588.36	71.19	23.311		
13,800.00	11,163.00	11,541.48	10,148.00	46.32	37.81	-53.15	2,922.84	-1,675.05	1,659.11	1,587.33	71.78	23.113		
13,900.00	11,163.00	11,641.48	10,148.00	46.78	38.10	-53.14	3,022.84	-1,675.28	1,658.68	1,586.28	72.40	22.910		
14,000.00	11,163.00	11,741.48	10,148.00	47.25	38.40	-53.13	3,122.84	-1,675.50	1,658.24	1,585.20	73.04	22.703		
14,100.00	11,163.00	11,841.47	10,148.00	47.73	38.72	-53.12	3,222.84	-1,675.73	1,657.81	1,584.10	73.71	22.492		
14,200.00	11,163.00	11,941.47	10,148.00	48.22	39.05	-53.10	3,322.84	-1,675.95	1,657.37	1,582.97	74.40	22.278		
14,300.00	11,163.00	12,041.47	10,148.00	48.73	39.41	-53.09	3,422.84	-1,676.17	1,656.93	1,581.83	75.11	22.060		
14,400.00	11,163.00	12,141.47	10,148.00	49.24	39.77	-53.08	3,522.83	-1,676.40	1,656.50	1,580.65	75.85	21.841		
14,500.00	11,163.00	12,241.47	10,148.00	49.76	40.16	-53.07	3,622.83	-1,676.62	1,656.06	1,579.46	76.60	21.619		
14,600.00	11,163.00	12,341.47	10,148.00	50.29	40.56	-53.06	3,722.83	-1,676.85	1,655.63	1,578.24	77.38	21.395		
14,700.00	11,163.00	12,441.47	10,148.00	50.83	40.97	-53.05	3,822.83	-1,677.07	1,655.19	1,577.01	78.18	21.171		
14,800.00	11,163.00	12,541.46	10,148.00	51.38	41.39	-53.04	3,922.83	-1,677.30	1,654.76	1,575.75	79.00	20.945		
14,900.00	11,163.00	12,641.46	10,148.00	51.94	41.84	-53.03	4,022.83	-1,677.52	1,654.32	1,574.48	79.84	20.720		
15,000.00	11,163.00	12,741.46	10,148.00	52.51	42.29	-53.01	4,122.82	-1,677.75	1,653.89	1,573.18	80.70	20.494		
15,100.00	11,163.00	12,841.46	10,148.00	53.08	42.75	-53.00	4,222.82	-1,677.97	1,653.45	1,571.87	81.58	20.268		
15,200.00	11,163.00	12,941.46	10,148.00	53.66	43.23	-52.99	4,322.82	-1,678.20	1,653.02	1,570.54	82.47	20.043		
15,300.00	11,163.00	13,041.46	10,148.00	54.25	43.72	-52.98	4,422.82	-1,678.42	1,652.58	1,569.20	83.38	19.819		
15,400.00	11,163.00	13,141.45	10,148.00	54.85	44.22	-52.97	4,522.82	-1,678.65	1,652.15	1,567.83	84.31	19.595		
15,500.00	11,163.00	13,241.45	10,148.00	55.45	44.74	-52.96	4,622.82	-1,678.87	1,651.71	1,566.45	85.26	19.373		
15,600.00	11,163.00	13,341.45	10,148.00	56.06	45.26	-52.95	4,722.81	-1,679.10	1,651.28	1,565.06	86.22	19.153		
15,700.00	11,163.00	13,441.45	10,148.00	56.68	45.79	-52.93	4,822.81	-1,679.32	1,650.84	1,563.65	87.19	18.934		
15,800.00	11,163.00	13,541.45	10,148.00	57.31	46.34	-52.92	4,922.81	-1,679.55	1,650.41	1,562.23	88.18	18.717		
15,900.00	11,163.00	13,641.45	10,148.00	57.94	46.89	-52.91	5,022.81	-1,679.77	1,649.97	1,560.79	89.18	18.502		
16,000.00	11,163.00	13,741.45	10,148.00	58.57	47.45	-52.90	5,122.81	-1,680.00	1,649.54	1,559.34	90.20	18.289		
16,100.00	11,163.00	13,841.44	10,148.00	59.22	48.02	-52.89	5,222.80	-1,680.22	1,649.10	1,557.88	91.22	18.078		
16,200.00	11,163.00	13,941.44	10,148.00	59.86	48.61	-52.88	5,322.80	-1,680.45	1,648.67	1,556.40	92.26	17.869		
16,300.00	11,163.00	14,041.44	10,148.00	60.52	49.19	-52.87	5,422.80	-1,680.67	1,648.23	1,554.92	93.32	17.663		
16,400.00	11,163.00	14,141.44	10,148.00	61.18	49.79	-52.85	5,522.80	-1,680.90	1,647.80	1,553.42	94.38	17.459		
16,500.00	11,163.00	14,241.44	10,148.00	61.84	50.40	-52.84	5,622.80	-1,681.12	1,647.37	1,551.91	95.46	17.258		
16,600.00	11,163.00	14,341.44	10,148.00	62.51	51.01	-52.83	5,722.80	-1,681.35	1,646.93	1,550.39	96.54	17.059		
16,700.00	11,163.00	14,441.44	10,148.00	63.18	51.63	-52.82	5,822.79	-1,681.57	1,646.50	1,548.86	97.64	16.863		
16,800.00	11,163.00	14,541.43	10,148.00	63.86	52.25	-52.81	5,922.79	-1,681.80	1,646.06	1,547.32	98.74	16.670		
16,900.00	11,163.00	14,641.43	10,148.00	64.54	52.89	-52.80	6,022.79	-1,682.02	1,645.63	1,545.77	99.86	16.480		
17,000.00	11,163.00	14,741.43	10,148.00	65.23	53.53	-52.79	6,122.79	-1,682.25	1,645.19	1,544.21	100.98	16.292		
17,100.00	11,163.00	14,841.43	10,148.00	65.92	54.17	-52.77	6,222.79	-1,682.47	1,644.76	1,542.64	102.12	16.107		
17,200.00	11,163.00	14,941.43	10,148.00	66.62	54.82	-52.76	6,322.79	-1,682.69	1,644.33	1,541.07	103.26	15.924		
17,300.00	11,163.00	15,041.43	10,148.00	67.32	55.48	-52.75	6,422.78	-1,682.92	1,643.89	1,539.48	104.41	15.745		
17,400.00	11,163.00	15,141.43	10,148.00	68.02	56.14	-52.74	6,522.78	-1,683.14	1,643.46	1,537.89	105.57	15.568		
17,500.00	11,163.00	15,241.42	10,148.00	68.73	56.81	-52.73	6,622.78	-1,683.37	1,643.03	1,536.29	106.73	15.394		
17,600.00	11,163.00	15,341.42	10,148.00	69.44	57.49	-52.72	6,722.78	-1,683.59	1,642.59	1,534.68	107.91	15.222		
17,700.00	11,163.00	15,441.42	10,148.00	70.15	58.17	-52.71	6,822.78	-1,683.82	1,642.16	1,533.07	109.09	15.053		
17,800.00	11,163.00	15,541.42	10,148.00	70.87	58.85	-52.69	6,922.78	-1,684.04	1,641.73	1,531.45	110.28	14.887		

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (A06) Robin Fed Com 124H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
17,900.00	11,163.00	15,641.42	10,148.00	71.59	59.54	-52.68	7,022.77	-1,684.27	1,641.29	1,529.82	111.47	14.724	
18,000.00	11,163.00	15,741.42	10,148.00	72.31	60.23	-52.67	7,122.77	-1,684.49	1,640.86	1,528.19	112.67	14.563	
18,100.00	11,163.00	15,841.41	10,148.00	73.04	60.93	-52.66	7,222.77	-1,684.72	1,640.43	1,526.55	113.88	14.405	
18,200.00	11,163.00	15,941.41	10,148.00	73.77	61.63	-52.65	7,322.77	-1,684.94	1,639.99	1,524.90	115.09	14.249	
18,300.00	11,163.00	16,041.41	10,148.00	74.50	62.34	-52.64	7,422.77	-1,685.17	1,639.56	1,523.25	116.31	14.096	
18,400.00	11,163.00	16,141.41	10,148.00	75.24	63.05	-52.62	7,522.77	-1,685.39	1,639.13	1,521.59	117.54	13.946	
18,500.00	11,163.00	16,241.41	10,148.00	75.97	63.76	-52.61	7,622.76	-1,685.62	1,638.69	1,519.93	118.77	13.797	
18,600.00	11,163.00	16,341.41	10,148.00	76.72	64.48	-52.60	7,722.76	-1,685.84	1,638.26	1,518.26	120.00	13.652	
18,700.00	11,163.00	16,441.41	10,148.00	77.46	65.20	-52.59	7,822.76	-1,686.07	1,637.83	1,516.58	121.24	13.508	
18,800.00	11,163.00	16,541.40	10,148.00	78.21	65.92	-52.58	7,922.76	-1,686.29	1,637.40	1,514.91	122.49	13.368	
18,900.00	11,163.00	16,641.40	10,148.00	78.95	66.65	-52.57	8,022.76	-1,686.52	1,636.96	1,513.22	123.74	13.229	
19,000.00	11,163.00	16,741.40	10,148.00	79.71	67.38	-52.55	8,122.75	-1,686.74	1,636.53	1,511.53	125.00	13.093	
19,100.00	11,163.00	16,841.40	10,148.00	80.46	68.12	-52.54	8,222.75	-1,686.97	1,636.10	1,509.84	126.25	12.959	
19,200.00	11,163.00	16,941.40	10,148.00	81.21	68.85	-52.53	8,322.75	-1,687.19	1,635.66	1,508.15	127.52	12.827	
19,300.00	11,163.00	17,041.40	10,148.00	81.97	69.59	-52.52	8,422.75	-1,687.42	1,635.23	1,506.45	128.79	12.697	
19,400.00	11,163.00	17,141.40	10,148.00	82.73	70.34	-52.51	8,522.75	-1,687.64	1,634.80	1,504.74	130.06	12.570	
19,500.00	11,163.00	17,241.39	10,148.00	83.49	71.08	-52.50	8,622.75	-1,687.87	1,634.37	1,503.03	131.33	12.444	
19,600.00	11,163.00	17,341.39	10,148.00	84.26	71.83	-52.49	8,722.74	-1,688.09	1,633.94	1,501.32	132.61	12.321	
19,700.00	11,163.00	17,441.39	10,148.00	85.02	72.58	-52.47	8,822.74	-1,688.32	1,633.50	1,499.61	133.90	12.200	
19,800.00	11,163.00	17,541.39	10,148.00	85.79	73.34	-52.46	8,922.74	-1,688.54	1,633.07	1,497.89	135.18	12.080	
19,900.00	11,163.00	17,641.39	10,148.00	86.56	74.09	-52.45	9,022.74	-1,688.77	1,632.64	1,496.17	136.47	11.963	
20,000.00	11,163.00	17,741.39	10,148.00	87.33	74.85	-52.44	9,122.74	-1,688.99	1,632.21	1,494.44	137.77	11.848	
20,100.00	11,163.00	17,841.39	10,148.00	88.11	75.61	-52.43	9,222.74	-1,689.21	1,631.78	1,492.71	139.06	11.734	
20,200.00	11,163.00	17,941.38	10,148.00	88.88	76.37	-52.42	9,322.73	-1,689.44	1,631.34	1,490.98	140.36	11.622	
20,300.00	11,163.00	18,041.38	10,148.00	89.66	77.14	-52.40	9,422.73	-1,689.66	1,630.91	1,489.25	141.67	11.512	
20,400.00	11,163.00	18,141.38	10,148.00	90.44	77.91	-52.39	9,522.73	-1,689.89	1,630.48	1,487.51	142.97	11.404	
20,500.00	11,163.00	18,241.38	10,148.00	91.21	78.68	-52.38	9,622.73	-1,690.11	1,630.05	1,485.77	144.28	11.298	
20,600.00	11,163.00	18,341.38	10,148.00	92.00	79.45	-52.37	9,722.73	-1,690.34	1,629.62	1,484.03	145.59	11.193	
20,700.00	11,163.00	18,441.38	10,148.00	92.78	80.22	-52.36	9,822.73	-1,690.56	1,629.19	1,482.28	146.90	11.090	
20,800.00	11,163.00	18,541.37	10,148.00	93.56	81.00	-52.35	9,922.72	-1,690.79	1,628.75	1,480.53	148.22	10.989	
20,900.00	11,163.00	18,641.37	10,148.00	94.35	81.77	-52.33	10,022.72	-1,691.01	1,628.32	1,478.78	149.54	10.889	
21,000.00	11,163.00	18,741.37	10,148.00	95.14	82.55	-52.32	10,122.72	-1,691.24	1,627.89	1,477.03	150.86	10.791	
21,100.00	11,163.00	18,841.37	10,148.00	95.92	83.33	-52.31	10,222.72	-1,691.46	1,627.46	1,475.28	152.19	10.694	
21,200.00	11,163.00	18,941.37	10,148.00	96.71	84.11	-52.30	10,322.72	-1,691.69	1,627.03	1,473.52	153.51	10.599	
21,300.00	11,163.00	19,041.37	10,148.00	97.51	84.90	-52.29	10,422.71	-1,691.91	1,626.60	1,471.76	154.84	10.505	
21,400.00	11,163.00	19,141.37	10,148.00	98.30	85.68	-52.27	10,522.71	-1,692.14	1,626.17	1,470.00	156.17	10.413	
21,434.87	11,163.00	19,169.22	10,148.00	98.57	85.90	-52.27	10,550.57	-1,692.20	1,626.03	1,469.43	156.60	10.383 CC	
21,436.63	11,163.00	19,169.22	10,148.00	98.59	85.90	-52.27	10,550.57	-1,692.20	1,626.03	1,469.41	156.62	10.382 ES, SF	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (B01) Robin Fed Com 171H - Permit - APD-Rev01											Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)											Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	
16,000.00	11,163.00	14,337.31	10,791.00	58.57	48.93	-82.33	5,119.67	-2,999.81	2,659.27	2,552.10	24.813
16,100.00	11,163.00	14,437.31	10,791.00	59.22	49.48	-82.33	5,219.67	-3,000.04	2,658.74	2,550.38	24.537
16,200.00	11,163.00	14,537.31	10,791.00	59.86	50.04	-82.33	5,319.67	-3,000.27	2,658.20	2,548.65	24.263
16,300.00	11,163.00	14,637.31	10,791.00	60.52	50.61	-82.32	5,419.67	-3,000.50	2,657.67	2,546.90	23.992
16,400.00	11,163.00	14,737.30	10,791.00	61.18	51.19	-82.32	5,519.67	-3,000.73	2,657.14	2,545.14	23.724
16,500.00	11,163.00	14,837.30	10,791.00	61.84	51.78	-82.32	5,619.67	-3,000.96	2,656.60	2,543.36	23.460
16,600.00	11,163.00	14,937.30	10,791.00	62.51	52.37	-82.32	5,719.66	-3,001.19	2,656.07	2,541.57	23.198
16,700.00	11,163.00	15,037.30	10,791.00	63.18	52.97	-82.32	5,819.66	-3,001.43	2,655.54	2,539.77	22.940
16,800.00	11,163.00	15,137.30	10,791.00	63.86	53.58	-82.32	5,919.66	-3,001.66	2,655.00	2,537.96	22.685
16,900.00	11,163.00	15,237.30	10,791.00	64.54	54.20	-82.31	6,019.66	-3,001.89	2,654.47	2,536.14	22.433
17,000.00	11,163.00	15,337.30	10,791.00	65.23	54.82	-82.31	6,119.66	-3,002.12	2,653.93	2,534.31	22.185
17,100.00	11,163.00	15,437.29	10,791.00	65.92	55.45	-82.31	6,219.66	-3,002.35	2,653.40	2,532.46	21.940
17,200.00	11,163.00	15,537.29	10,791.00	66.62	56.08	-82.31	6,319.65	-3,002.58	2,652.87	2,530.61	21.699
17,300.00	11,163.00	15,637.29	10,791.00	67.32	56.72	-82.31	6,419.65	-3,002.81	2,652.33	2,528.74	21.461
17,400.00	11,163.00	15,737.29	10,791.00	68.02	57.37	-82.31	6,519.65	-3,003.04	2,651.80	2,526.87	21.227
17,500.00	11,163.00	15,837.29	10,791.00	68.73	58.03	-82.30	6,619.65	-3,003.27	2,651.27	2,524.99	20.995
17,600.00	11,163.00	15,937.29	10,791.00	69.44	58.68	-82.30	6,719.65	-3,003.51	2,650.73	2,523.10	20.768
17,700.00	11,163.00	16,037.29	10,791.00	70.15	59.35	-82.30	6,819.65	-3,003.74	2,650.20	2,521.19	20.544
17,800.00	11,163.00	16,137.28	10,791.00	70.87	60.02	-82.30	6,919.64	-3,003.97	2,649.66	2,519.28	20.323
17,900.00	11,163.00	16,237.28	10,791.00	71.59	60.69	-82.30	7,019.64	-3,004.20	2,649.13	2,517.37	20.105
18,000.00	11,163.00	16,337.28	10,791.00	72.31	61.37	-82.30	7,119.64	-3,004.43	2,648.60	2,515.44	19.891
18,100.00	11,163.00	16,437.28	10,791.00	73.04	62.05	-82.30	7,219.64	-3,004.66	2,648.06	2,513.51	19.680
18,200.00	11,163.00	16,537.28	10,791.00	73.77	62.74	-82.29	7,319.64	-3,004.89	2,647.53	2,511.57	19.473
18,300.00	11,163.00	16,637.28	10,791.00	74.50	63.43	-82.29	7,419.63	-3,005.12	2,647.00	2,509.62	19.268
18,400.00	11,163.00	16,737.28	10,791.00	75.24	64.13	-82.29	7,519.63	-3,005.35	2,646.46	2,507.66	19.067
18,500.00	11,163.00	16,837.27	10,791.00	75.97	64.83	-82.29	7,619.63	-3,005.59	2,645.93	2,505.70	18.869
18,600.00	11,163.00	16,937.27	10,791.00	76.72	65.53	-82.29	7,719.63	-3,005.82	2,645.39	2,503.73	18.674
18,700.00	11,163.00	17,037.27	10,791.00	77.46	66.24	-82.29	7,819.63	-3,006.05	2,644.86	2,501.76	18.483
18,800.00	11,163.00	17,137.27	10,791.00	78.21	66.95	-82.28	7,919.63	-3,006.28	2,644.33	2,499.78	18.294
18,900.00	11,163.00	17,237.27	10,791.00	78.95	67.67	-82.28	8,019.62	-3,006.51	2,643.79	2,497.79	18.108
19,000.00	11,163.00	17,337.27	10,791.00	79.71	68.39	-82.28	8,119.62	-3,006.74	2,643.26	2,495.80	17.925
19,100.00	11,163.00	17,437.26	10,791.00	80.46	69.11	-82.28	8,219.62	-3,006.97	2,642.73	2,493.80	17.745
19,200.00	11,163.00	17,537.26	10,791.00	81.21	69.84	-82.28	8,319.62	-3,007.20	2,642.19	2,491.80	17.568
19,300.00	11,163.00	17,637.26	10,791.00	81.97	70.57	-82.28	8,419.62	-3,007.43	2,641.66	2,489.79	17.394
19,400.00	11,163.00	17,737.26	10,791.00	82.73	71.30	-82.28	8,519.62	-3,007.66	2,641.12	2,487.78	17.223
19,500.00	11,163.00	17,837.26	10,791.00	83.49	72.03	-82.27	8,619.61	-3,007.90	2,640.59	2,485.76	17.054
19,600.00	11,163.00	17,937.26	10,791.00	84.26	72.77	-82.27	8,719.61	-3,008.13	2,640.06	2,483.73	16.888
19,700.00	11,163.00	18,037.26	10,791.00	85.02	73.51	-82.27	8,819.61	-3,008.36	2,639.52	2,481.70	16.725
19,800.00	11,163.00	18,137.25	10,791.00	85.79	74.25	-82.27	8,919.61	-3,008.59	2,638.99	2,479.67	16.564
19,900.00	11,163.00	18,237.25	10,791.00	86.56	75.00	-82.27	9,019.61	-3,008.82	2,638.46	2,477.63	16.406
20,000.00	11,163.00	18,337.25	10,791.00	87.33	75.75	-82.27	9,119.61	-3,009.05	2,637.92	2,475.59	16.250
20,100.00	11,163.00	18,437.25	10,791.00	88.11	76.50	-82.26	9,219.60	-3,009.28	2,637.39	2,473.54	16.097
20,200.00	11,163.00	18,537.25	10,791.00	88.88	77.25	-82.26	9,319.60	-3,009.51	2,636.85	2,471.49	15.946
20,300.00	11,163.00	18,637.25	10,791.00	89.66	78.01	-82.26	9,419.60	-3,009.74	2,636.32	2,469.44	15.798
20,400.00	11,163.00	18,737.25	10,791.00	90.44	78.77	-82.26	9,519.60	-3,009.98	2,635.79	2,467.38	15.651
20,500.00	11,163.00	18,837.24	10,791.00	91.21	79.53	-82.26	9,619.60	-3,010.21	2,635.25	2,465.32	15.508
20,600.00	11,163.00	18,937.24	10,791.00	92.00	80.29	-82.26	9,719.60	-3,010.44	2,634.72	2,463.26	15.366
20,700.00	11,163.00	19,037.24	10,791.00	92.78	81.05	-82.25	9,819.59	-3,010.67	2,634.19	2,461.19	15.227
20,800.00	11,163.00	19,137.24	10,791.00	93.56	81.82	-82.25	9,919.59	-3,010.90	2,633.65	2,459.11	15.089
20,900.00	11,163.00	19,237.24	10,791.00	94.35	82.59	-82.25	10,019.59	-3,011.13	2,633.12	2,457.04	14.954
21,000.00	11,163.00	19,337.24	10,791.00	95.14	83.36	-82.25	10,119.59	-3,011.36	2,632.59	2,454.96	14.821
21,100.00	11,163.00	19,437.24	10,791.00	95.92	84.13	-82.25	10,219.59	-3,011.59	2,632.05	2,452.88	14.690

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (B01) Robin Fed Com 171H - Permit - APD-Rev01													Offset Site Error: 0.00 usft	
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: Distance				Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
21,200.00	11,163.00	19,537.23	10,791.00	96.71	84.90	-82.25	10,319.59	-3,011.82	2,631.52	2,450.79	180.73	14.561		
21,300.00	11,163.00	19,637.23	10,791.00	97.51	85.68	-82.25	10,419.58	-3,012.06	2,630.98	2,448.70	182.28	14.434		
21,400.00	11,163.00	19,737.23	10,791.00	98.30	86.46	-82.24	10,519.58	-3,012.29	2,630.45	2,446.61	183.84	14.309		
21,436.63	11,163.00	19,760.41	10,791.00	98.59	86.64	-82.24	10,542.76	-3,012.34	2,630.29	2,445.98	184.31	14.271	CC, ES, SF	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (B02) Robin Fed Com 131H - Permit - APD-Rev00													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
17,800.00	11,163.00	16,418.37	11,066.00	70.87	61.46	-88.61	6,918.01	-3,663.93	3,286.71	3,154.39	132.32	24.839	
17,900.00	11,163.00	16,518.37	11,066.00	71.59	62.13	-88.61	7,018.01	-3,664.16	3,286.17	3,152.47	133.71	24.577	
18,000.00	11,163.00	16,618.37	11,066.00	72.31	62.80	-88.60	7,118.01	-3,664.39	3,285.64	3,150.53	135.10	24.319	
18,100.00	11,163.00	16,718.36	11,066.00	73.04	63.48	-88.60	7,218.01	-3,664.63	3,285.10	3,148.59	136.51	24.065	
18,200.00	11,163.00	16,818.36	11,066.00	73.77	64.16	-88.60	7,318.01	-3,664.86	3,284.57	3,146.65	137.92	23.815	
18,300.00	11,163.00	16,918.36	11,066.00	74.50	64.85	-88.60	7,418.00	-3,665.10	3,284.03	3,144.69	139.34	23.569	
18,400.00	11,163.00	17,018.36	11,066.00	75.24	65.54	-88.60	7,518.00	-3,665.33	3,283.50	3,142.73	140.77	23.326	
18,500.00	11,163.00	17,118.36	11,066.00	75.97	66.23	-88.60	7,618.00	-3,665.57	3,282.96	3,140.76	142.20	23.087	
18,600.00	11,163.00	17,218.36	11,066.00	76.72	66.93	-88.60	7,718.00	-3,665.80	3,282.43	3,138.79	143.64	22.852	
18,700.00	11,163.00	17,318.36	11,066.00	77.46	67.63	-88.60	7,818.00	-3,666.03	3,281.89	3,136.81	145.08	22.621	
18,800.00	11,163.00	17,418.35	11,066.00	78.21	68.34	-88.60	7,917.99	-3,666.27	3,281.36	3,134.82	146.54	22.393	
18,900.00	11,163.00	17,518.35	11,066.00	78.95	69.05	-88.60	8,017.99	-3,666.50	3,280.82	3,132.83	148.00	22.168	
19,000.00	11,163.00	17,618.35	11,066.00	79.71	69.76	-88.60	8,117.99	-3,666.74	3,280.29	3,130.83	149.46	21.948	
19,100.00	11,163.00	17,718.35	11,066.00	80.46	70.48	-88.60	8,217.99	-3,666.97	3,279.75	3,128.82	150.93	21.730	
19,200.00	11,163.00	17,818.35	11,066.00	81.21	71.20	-88.60	8,317.99	-3,667.21	3,279.22	3,126.81	152.40	21.516	
19,300.00	11,163.00	17,918.35	11,066.00	81.97	71.92	-88.60	8,417.99	-3,667.44	3,278.68	3,124.80	153.89	21.306	
19,400.00	11,163.00	18,018.35	11,066.00	82.73	72.65	-88.60	8,517.98	-3,667.67	3,278.15	3,122.77	155.37	21.099	
19,500.00	11,163.00	18,118.34	11,066.00	83.49	73.38	-88.60	8,617.98	-3,667.91	3,277.61	3,120.75	156.86	20.895	
19,600.00	11,163.00	18,218.34	11,066.00	84.26	74.11	-88.60	8,717.98	-3,668.14	3,277.08	3,118.72	158.36	20.694	
19,700.00	11,163.00	18,318.34	11,066.00	85.02	74.84	-88.60	8,817.98	-3,668.38	3,276.54	3,116.68	159.86	20.496	
19,800.00	11,163.00	18,418.34	11,066.00	85.79	75.58	-88.60	8,917.98	-3,668.61	3,276.00	3,114.64	161.37	20.302	
19,900.00	11,163.00	18,518.34	11,066.00	86.56	76.32	-88.60	9,017.98	-3,668.85	3,275.47	3,112.59	162.88	20.110	
20,000.00	11,163.00	18,618.34	11,066.00	87.33	77.07	-88.60	9,117.97	-3,669.08	3,274.93	3,110.54	164.39	19.922	
20,100.00	11,163.00	18,718.34	11,066.00	88.11	77.81	-88.60	9,217.97	-3,669.31	3,274.40	3,108.49	165.91	19.736	
20,200.00	11,163.00	18,818.33	11,066.00	88.88	78.56	-88.60	9,317.97	-3,669.55	3,273.86	3,106.43	167.43	19.553	
20,300.00	11,163.00	18,918.33	11,066.00	89.66	79.31	-88.60	9,417.97	-3,669.78	3,273.33	3,104.37	168.96	19.374	
20,400.00	11,163.00	19,018.33	11,066.00	90.44	80.06	-88.60	9,517.97	-3,670.02	3,272.79	3,102.30	170.49	19.196	
20,500.00	11,163.00	19,118.33	11,066.00	91.21	80.82	-88.60	9,617.97	-3,670.25	3,272.26	3,100.23	172.02	19.022	
20,600.00	11,163.00	19,218.33	11,066.00	92.00	81.57	-88.60	9,717.96	-3,670.49	3,271.72	3,098.16	173.56	18.850	
20,700.00	11,163.00	19,318.33	11,066.00	92.78	82.33	-88.60	9,817.96	-3,670.72	3,271.19	3,096.08	175.10	18.681	
20,800.00	11,163.00	19,418.33	11,066.00	93.56	83.10	-88.60	9,917.96	-3,670.96	3,270.65	3,094.00	176.65	18.515	
20,900.00	11,163.00	19,518.32	11,066.00	94.35	83.86	-88.60	10,017.96	-3,671.19	3,270.12	3,091.92	178.20	18.351	
21,000.00	11,163.00	19,618.32	11,066.00	95.14	84.62	-88.60	10,117.96	-3,671.42	3,269.58	3,089.83	179.75	18.189	
21,100.00	11,163.00	19,718.32	11,066.00	95.92	85.39	-88.60	10,217.96	-3,671.66	3,269.05	3,087.74	181.31	18.030	
21,200.00	11,163.00	19,818.32	11,066.00	96.71	86.16	-88.60	10,317.95	-3,671.89	3,268.51	3,085.65	182.87	17.874	
21,300.00	11,163.00	19,918.32	11,066.00	97.51	86.93	-88.60	10,417.95	-3,672.13	3,267.98	3,083.55	184.43	17.719	
21,400.00	11,163.00	20,018.32	11,066.00	98.30	87.70	-88.60	10,517.95	-3,672.36	3,267.44	3,081.45	185.99	17.568	
21,436.63	11,163.00	20,039.23	11,066.00	98.59	87.87	-88.60	10,538.86	-3,672.41	3,267.28	3,080.83	186.46	17.523 CC, ES, SF	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (B03) Robin Fed Com 201H - Permit - APD-Rev00													Offset Site Error:	0.00 usft	
Survey Program:		0-MWD+IFR1+SAG+FDIR (SQC2)						Rule Assigned:						Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance			Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)				
15,700.00	11,163.00	14,390.45	11,176.00	56.68	49.10	-90.63	4,820.00	-2,999.82	2,637.95	2,532.19	105.75	24.944			
15,800.00	11,163.00	14,490.45	11,176.00	57.31	49.62	-90.63	4,920.00	-3,000.04	2,637.40	2,530.50	106.90	24.672			
15,900.00	11,163.00	14,590.45	11,176.00	57.94	50.15	-90.63	5,020.00	-3,000.26	2,636.85	2,528.79	108.06	24.403			
16,000.00	11,163.00	14,690.45	11,176.00	58.57	50.69	-90.63	5,120.00	-3,000.47	2,636.29	2,527.06	109.23	24.135			
16,100.00	11,163.00	14,790.45	11,176.00	59.22	51.23	-90.63	5,219.99	-3,000.69	2,635.74	2,525.32	110.42	23.870			
16,200.00	11,163.00	14,890.45	11,176.00	59.86	51.79	-90.63	5,319.99	-3,000.91	2,635.19	2,523.57	111.62	23.608			
16,300.00	11,163.00	14,990.44	11,176.00	60.52	52.35	-90.63	5,419.99	-3,001.13	2,634.64	2,521.80	112.84	23.348			
16,400.00	11,163.00	15,090.44	11,176.00	61.18	52.93	-90.63	5,519.99	-3,001.35	2,634.09	2,520.02	114.07	23.091			
16,500.00	11,163.00	15,190.44	11,176.00	61.84	53.51	-90.63	5,619.99	-3,001.57	2,633.54	2,518.22	115.32	22.838			
16,600.00	11,163.00	15,290.44	11,176.00	62.51	54.09	-90.63	5,719.99	-3,001.79	2,632.99	2,516.42	116.57	22.587			
16,700.00	11,163.00	15,390.44	11,176.00	63.18	54.69	-90.63	5,819.98	-3,002.01	2,632.44	2,514.60	117.84	22.339			
16,800.00	11,163.00	15,490.44	11,176.00	63.86	55.29	-90.63	5,919.98	-3,002.23	2,631.89	2,512.77	119.12	22.094			
16,900.00	11,163.00	15,590.43	11,176.00	64.54	55.90	-90.63	6,019.98	-3,002.44	2,631.34	2,510.92	120.41	21.852			
17,000.00	11,163.00	15,690.43	11,176.00	65.23	56.52	-90.63	6,119.98	-3,002.66	2,630.79	2,509.07	121.72	21.614			
17,100.00	11,163.00	15,790.43	11,176.00	65.92	57.14	-90.63	6,219.98	-3,002.88	2,630.24	2,507.21	123.03	21.379			
17,200.00	11,163.00	15,890.43	11,176.00	66.62	57.77	-90.63	6,319.98	-3,003.10	2,629.68	2,505.33	124.35	21.147			
17,300.00	11,163.00	15,990.43	11,176.00	67.32	58.40	-90.63	6,419.97	-3,003.32	2,629.13	2,503.45	125.69	20.918			
17,400.00	11,163.00	16,090.43	11,176.00	68.02	59.04	-90.63	6,519.97	-3,003.54	2,628.58	2,501.55	127.03	20.692			
17,500.00	11,163.00	16,190.43	11,176.00	68.73	59.69	-90.63	6,619.97	-3,003.76	2,628.03	2,499.65	128.39	20.470			
17,600.00	11,163.00	16,290.42	11,176.00	69.44	60.34	-90.63	6,719.97	-3,003.98	2,627.48	2,497.73	129.75	20.251			
17,700.00	11,163.00	16,390.42	11,176.00	70.15	61.00	-90.63	6,819.97	-3,004.19	2,626.93	2,495.81	131.12	20.035			
17,800.00	11,163.00	16,490.42	11,176.00	70.87	61.66	-90.63	6,919.96	-3,004.41	2,626.38	2,493.88	132.50	19.822			
17,900.00	11,163.00	16,590.42	11,176.00	71.59	62.33	-90.63	7,019.96	-3,004.63	2,625.83	2,491.94	133.89	19.612			
18,000.00	11,163.00	16,690.42	11,176.00	72.31	63.00	-90.63	7,119.96	-3,004.85	2,625.28	2,490.00	135.28	19.406			
18,100.00	11,163.00	16,790.42	11,176.00	73.04	63.68	-90.63	7,219.96	-3,005.07	2,624.73	2,488.04	136.69	19.203			
18,200.00	11,163.00	16,890.41	11,176.00	73.77	64.36	-90.63	7,319.96	-3,005.29	2,624.18	2,486.08	138.10	19.003			
18,300.00	11,163.00	16,990.41	11,176.00	74.50	65.04	-90.63	7,419.96	-3,005.51	2,623.63	2,484.11	139.51	18.805			
18,400.00	11,163.00	17,090.41	11,176.00	75.24	65.73	-90.63	7,519.95	-3,005.73	2,623.07	2,482.13	140.94	18.611			
18,500.00	11,163.00	17,190.41	11,176.00	75.97	66.43	-90.63	7,619.95	-3,005.94	2,622.52	2,480.15	142.37	18.420			
18,600.00	11,163.00	17,290.41	11,176.00	76.72	67.13	-90.63	7,719.95	-3,006.16	2,621.97	2,478.16	143.81	18.232			
18,700.00	11,163.00	17,390.41	11,176.00	77.46	67.83	-90.63	7,819.95	-3,006.38	2,621.42	2,476.17	145.26	18.047			
18,800.00	11,163.00	17,490.41	11,176.00	78.21	68.53	-90.63	7,919.95	-3,006.60	2,620.87	2,474.16	146.71	17.864			
18,900.00	11,163.00	17,590.40	11,176.00	78.95	69.24	-90.63	8,019.95	-3,006.82	2,620.32	2,472.15	148.17	17.685			
19,000.00	11,163.00	17,690.40	11,176.00	79.71	69.95	-90.63	8,119.94	-3,007.04	2,619.77	2,470.14	149.63	17.508			
19,100.00	11,163.00	17,790.40	11,176.00	80.46	70.67	-90.63	8,219.94	-3,007.26	2,619.22	2,468.12	151.10	17.334			
19,200.00	11,163.00	17,890.40	11,176.00	81.21	71.39	-90.63	8,319.94	-3,007.48	2,618.67	2,466.09	152.57	17.163			
19,300.00	11,163.00	17,990.40	11,176.00	81.97	72.11	-90.63	8,419.94	-3,007.70	2,618.12	2,464.06	154.05	16.995			
19,400.00	11,163.00	18,090.40	11,176.00	82.73	72.84	-90.63	8,519.94	-3,007.91	2,617.57	2,462.03	155.54	16.829			
19,500.00	11,163.00	18,190.40	11,176.00	83.49	73.57	-90.63	8,619.93	-3,008.13	2,617.02	2,459.98	157.03	16.666			
19,600.00	11,163.00	18,290.39	11,176.00	84.26	74.30	-90.64	8,719.93	-3,008.35	2,616.46	2,457.94	158.53	16.505			
19,700.00	11,163.00	18,390.39	11,176.00	85.02	75.03	-90.64	8,819.93	-3,008.57	2,615.91	2,455.89	160.03	16.347			
19,800.00	11,163.00	18,490.39	11,176.00	85.79	75.77	-90.64	8,919.93	-3,008.79	2,615.36	2,453.83	161.53	16.191			
19,900.00	11,163.00	18,590.39	11,176.00	86.56	76.51	-90.64	9,019.93	-3,009.01	2,614.81	2,451.77	163.04	16.038			
20,000.00	11,163.00	18,690.39	11,176.00	87.33	77.25	-90.64	9,119.93	-3,009.23	2,614.26	2,449.71	164.56	15.887			
20,100.00	11,163.00	18,790.39	11,176.00	88.11	78.00	-90.64	9,219.92	-3,009.45	2,613.71	2,447.64	166.07	15.738			
20,200.00	11,163.00	18,890.38	11,176.00	88.88	78.75	-90.64	9,319.92	-3,009.66	2,613.16	2,445.56	167.60	15.592			
20,300.00	11,163.00	18,990.38	11,176.00	89.66	79.50	-90.64	9,419.92	-3,009.88	2,612.61	2,443.49	169.12	15.448			
20,400.00	11,163.00	19,090.38	11,176.00	90.44	80.25	-90.64	9,519.92	-3,010.10	2,612.06	2,441.40	170.65	15.306			
20,500.00	11,163.00	19,190.38	11,176.00	91.21	81.00	-90.64	9,619.92	-3,010.32	2,611.51	2,439.32	172.19	15.167			
20,600.00	11,163.00	19,290.38	11,176.00	92.00	81.76	-90.64	9,719.92	-3,010.54	2,610.96	2,437.23	173.73	15.029			
20,700.00	11,163.00	19,390.38	11,176.00	92.78	82.52	-90.64	9,819.91	-3,010.76	2,610.41	2,435.14	175.27	14.894			
20,800.00	11,163.00	19,490.38	11,176.00	93.56	83.28	-90.64	9,919.91	-3,010.98	2,609.85	2,433.04	176.81	14.761			

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (B03) Robin Fed Com 201H - Permit - APD-Rev00													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)							Rule Assigned:						Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance			Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
20,900.00	11,163.00	19,590.37	11,176.00	94.35	84.04	-90.64	10,019.91	-3,011.20	2,609.30	2,430.94	178.36	14.629		
21,000.00	11,163.00	19,690.37	11,176.00	95.14	84.81	-90.64	10,119.91	-3,011.41	2,608.75	2,428.84	179.91	14.500		
21,100.00	11,163.00	19,790.37	11,176.00	95.92	85.57	-90.64	10,219.91	-3,011.63	2,608.20	2,426.73	181.47	14.373		
21,200.00	11,163.00	19,890.37	11,176.00	96.71	86.34	-90.64	10,319.91	-3,011.85	2,607.65	2,424.62	183.03	14.247		
21,300.00	11,163.00	19,990.37	11,176.00	97.51	87.11	-90.64	10,419.90	-3,012.07	2,607.10	2,422.51	184.59	14.124		
21,400.00	11,163.00	20,090.37	11,176.00	98.30	87.89	-90.64	10,519.90	-3,012.29	2,606.55	2,420.40	186.15	14.002		
21,436.63	11,163.00	20,114.19	11,176.00	98.59	88.07	-90.64	10,543.72	-3,012.34	2,606.38	2,419.75	186.63	13.966	CC, ES, SF	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (B04) Robin Fed Com 132H - Permit - APD-Rev00													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
12,200.00	11,163.00	10,800.00	10,774.94	40.83	38.16	-78.94	1,432.83	-2,240.27	1,944.10	1,866.26	77.84	24.976	
12,300.00	11,163.00	10,832.37	10,802.36	41.06	38.25	-79.76	1,449.44	-2,244.72	1,939.85	1,861.54	78.31	24.771	
12,347.89	11,163.00	10,850.00	10,816.88	41.18	38.30	-80.20	1,459.10	-2,247.31	1,939.43	1,860.87	78.55	24.689 CC	
12,400.00	11,163.00	10,850.00	10,816.88	41.31	38.30	-80.20	1,459.10	-2,247.31	1,940.13	1,861.44	78.69	24.656	
12,500.00	11,163.00	10,900.00	10,856.28	41.57	38.43	-81.38	1,488.80	-2,255.26	1,944.60	1,865.34	79.27	24.533	
12,600.00	11,163.00	10,928.36	10,877.40	41.84	38.49	-82.02	1,507.09	-2,260.16	1,953.10	1,873.39	79.70	24.505	
12,700.00	11,163.00	10,970.75	10,907.15	42.14	38.59	-82.92	1,536.24	-2,267.97	1,965.34	1,885.14	80.20	24.506	
12,800.00	11,163.00	11,019.75	10,938.65	42.45	38.70	-83.87	1,572.48	-2,277.69	1,980.91	1,900.21	80.70	24.545	
12,900.00	11,163.00	11,501.84	11,066.00	42.77	39.39	-87.67	2,021.30	-2,332.76	1,993.92	1,911.89	82.04	24.304	
13,000.00	11,163.00	11,601.84	11,066.00	43.11	39.50	-87.67	2,121.29	-2,332.99	1,993.38	1,910.89	82.50	24.164	
13,100.00	11,163.00	11,701.84	11,066.00	43.47	39.63	-87.67	2,221.29	-2,333.22	1,992.84	1,909.86	82.98	24.015	
13,200.00	11,163.00	11,801.83	11,066.00	43.83	39.78	-87.67	2,321.29	-2,333.45	1,992.30	1,908.80	83.51	23.858	
13,300.00	11,163.00	11,901.83	11,066.00	44.22	39.94	-87.67	2,421.29	-2,333.67	1,991.76	1,907.70	84.06	23.694	
13,400.00	11,163.00	12,001.83	11,066.00	44.61	40.13	-87.67	2,521.29	-2,333.90	1,991.22	1,906.58	84.65	23.524	
13,500.00	11,163.00	12,101.83	11,066.00	45.02	40.33	-87.67	2,621.29	-2,334.13	1,990.68	1,905.42	85.26	23.348	
13,600.00	11,163.00	12,201.83	11,066.00	45.44	40.55	-87.67	2,721.28	-2,334.36	1,990.14	1,904.23	85.91	23.166	
13,700.00	11,163.00	12,301.83	11,066.00	45.88	40.79	-87.67	2,821.28	-2,334.59	1,989.60	1,903.02	86.59	22.979	
13,800.00	11,163.00	12,401.83	11,066.00	46.32	41.05	-87.67	2,921.28	-2,334.82	1,989.06	1,901.77	87.29	22.787	
13,900.00	11,163.00	12,501.82	11,066.00	46.78	41.32	-87.67	3,021.28	-2,335.05	1,988.52	1,900.50	88.02	22.591	
14,000.00	11,163.00	12,601.82	11,066.00	47.25	41.61	-87.66	3,121.28	-2,335.28	1,987.98	1,899.20	88.78	22.391	
14,100.00	11,163.00	12,701.82	11,066.00	47.73	41.92	-87.66	3,221.28	-2,335.51	1,987.44	1,897.87	89.57	22.188	
14,200.00	11,163.00	12,801.82	11,066.00	48.22	42.24	-87.66	3,321.27	-2,335.73	1,986.90	1,896.51	90.39	21.982	
14,300.00	11,163.00	12,901.82	11,066.00	48.73	42.58	-87.66	3,421.27	-2,335.96	1,986.36	1,895.13	91.23	21.774	
14,400.00	11,163.00	13,001.82	11,066.00	49.24	42.93	-87.66	3,521.27	-2,336.19	1,985.82	1,893.73	92.09	21.564	
14,500.00	11,163.00	13,101.82	11,066.00	49.76	43.30	-87.66	3,621.27	-2,336.42	1,985.28	1,892.30	92.98	21.352	
14,600.00	11,163.00	13,201.81	11,066.00	50.29	43.68	-87.66	3,721.27	-2,336.65	1,984.74	1,890.85	93.89	21.139	
14,700.00	11,163.00	13,301.81	11,066.00	50.83	44.07	-87.66	3,821.27	-2,336.88	1,984.20	1,889.37	94.83	20.924	
14,800.00	11,163.00	13,401.81	11,066.00	51.38	44.48	-87.66	3,921.26	-2,337.11	1,983.66	1,887.87	95.78	20.710	
14,900.00	11,163.00	13,501.81	11,066.00	51.94	44.90	-87.66	4,021.26	-2,337.34	1,983.12	1,886.35	96.76	20.494	
15,000.00	11,163.00	13,601.81	11,066.00	52.51	45.34	-87.66	4,121.26	-2,337.57	1,982.58	1,884.81	97.76	20.279	
15,100.00	11,163.00	13,701.81	11,066.00	53.08	45.78	-87.66	4,221.26	-2,337.79	1,982.04	1,883.25	98.78	20.064	
15,200.00	11,163.00	13,801.81	11,066.00	53.66	46.24	-87.66	4,321.26	-2,338.02	1,981.50	1,881.67	99.82	19.850	
15,300.00	11,163.00	13,901.80	11,066.00	54.25	46.71	-87.66	4,421.26	-2,338.25	1,980.96	1,880.07	100.88	19.636	
15,400.00	11,163.00	14,001.80	11,066.00	54.85	47.19	-87.66	4,521.25	-2,338.48	1,980.42	1,878.45	101.96	19.423	
15,500.00	11,163.00	14,101.80	11,066.00	55.45	47.68	-87.66	4,621.25	-2,338.71	1,979.88	1,876.82	103.06	19.212	
15,600.00	11,163.00	14,201.80	11,066.00	56.06	48.19	-87.65	4,721.25	-2,338.94	1,979.33	1,875.17	104.17	19.001	
15,700.00	11,163.00	14,301.80	11,066.00	56.68	48.70	-87.65	4,821.25	-2,339.17	1,978.79	1,873.50	105.30	18.792	
15,800.00	11,163.00	14,401.80	11,066.00	57.31	49.22	-87.65	4,921.25	-2,339.40	1,978.25	1,871.81	106.45	18.585	
15,900.00	11,163.00	14,501.80	11,066.00	57.94	49.75	-87.65	5,021.25	-2,339.62	1,977.71	1,870.11	107.61	18.379	
16,000.00	11,163.00	14,601.79	11,066.00	58.57	50.29	-87.65	5,121.24	-2,339.85	1,977.17	1,868.39	108.78	18.175	
16,100.00	11,163.00	14,701.79	11,066.00	59.22	50.85	-87.65	5,221.24	-2,340.08	1,976.63	1,866.66	109.98	17.973	
16,200.00	11,163.00	14,801.79	11,066.00	59.86	51.40	-87.65	5,321.24	-2,340.31	1,976.09	1,864.91	111.18	17.773	
16,300.00	11,163.00	14,901.79	11,066.00	60.52	51.97	-87.65	5,421.24	-2,340.54	1,975.55	1,863.15	112.40	17.576	
16,400.00	11,163.00	15,001.79	11,066.00	61.18	52.55	-87.65	5,521.24	-2,340.77	1,975.01	1,861.38	113.64	17.380	
16,500.00	11,163.00	15,101.79	11,066.00	61.84	53.13	-87.65	5,621.23	-2,341.00	1,974.47	1,859.59	114.88	17.187	
16,600.00	11,163.00	15,201.78	11,066.00	62.51	53.72	-87.65	5,721.23	-2,341.23	1,973.93	1,857.79	116.14	16.996	
16,700.00	11,163.00	15,301.78	11,066.00	63.18	54.32	-87.65	5,821.23	-2,341.46	1,973.39	1,855.98	117.41	16.807	
16,800.00	11,163.00	15,401.78	11,066.00	63.86	54.93	-87.65	5,921.23	-2,341.68	1,972.85	1,854.15	118.70	16.621	
16,900.00	11,163.00	15,501.78	11,066.00	64.54	55.54	-87.65	6,021.23	-2,341.91	1,972.31	1,852.32	119.99	16.437	
17,000.00	11,163.00	15,601.78	11,066.00	65.23	56.16	-87.65	6,121.23	-2,342.14	1,971.77	1,850.47	121.29	16.256	
17,100.00	11,163.00	15,701.78	11,066.00	65.92	56.78	-87.65	6,221.22	-2,342.37	1,971.23	1,848.62	122.61	16.077	
17,200.00	11,163.00	15,801.78	11,066.00	66.62	57.41	-87.64	6,321.22	-2,342.60	1,970.69	1,846.75	123.94	15.901	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (B04) Robin Fed Com 132H - Permit - APD-Rev00											Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)											Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	
17,300.00	11,163.00	15,901.77	11,066.00	67.32	58.05	-87.64	6,421.22	-2,342.83	1,970.15	1,844.88	15.727
17,400.00	11,163.00	16,001.77	11,066.00	68.02	58.70	-87.64	6,521.22	-2,343.06	1,969.61	1,842.99	15.555
17,500.00	11,163.00	16,101.77	11,066.00	68.73	59.35	-87.64	6,621.22	-2,343.29	1,969.07	1,841.09	15.386
17,600.00	11,163.00	16,201.77	11,066.00	69.44	60.00	-87.64	6,721.22	-2,343.52	1,968.53	1,839.19	15.220
17,700.00	11,163.00	16,301.77	11,066.00	70.15	60.66	-87.64	6,821.21	-2,343.74	1,967.99	1,837.28	15.056
17,800.00	11,163.00	16,401.77	11,066.00	70.87	61.33	-87.64	6,921.21	-2,343.97	1,967.45	1,835.35	14.894
17,900.00	11,163.00	16,501.77	11,066.00	71.59	62.00	-87.64	7,021.21	-2,344.20	1,966.91	1,833.42	14.735
18,000.00	11,163.00	16,601.76	11,066.00	72.31	62.67	-87.64	7,121.21	-2,344.43	1,966.37	1,831.49	14.579
18,100.00	11,163.00	16,701.76	11,066.00	73.04	63.35	-87.64	7,221.21	-2,344.66	1,965.83	1,829.54	14.424
18,200.00	11,163.00	16,801.76	11,066.00	73.77	64.03	-87.64	7,321.21	-2,344.89	1,965.29	1,827.59	14.272
18,300.00	11,163.00	16,901.76	11,066.00	74.50	64.72	-87.64	7,421.20	-2,345.12	1,964.74	1,825.63	14.123
18,400.00	11,163.00	17,001.76	11,066.00	75.24	65.41	-87.64	7,521.20	-2,345.35	1,964.20	1,823.66	13.975
18,500.00	11,163.00	17,101.76	11,066.00	75.97	66.11	-87.64	7,621.20	-2,345.58	1,963.66	1,821.68	13.831
18,600.00	11,163.00	17,201.76	11,066.00	76.72	66.81	-87.64	7,721.20	-2,345.80	1,963.12	1,819.70	13.688
18,700.00	11,163.00	17,301.75	11,066.00	77.46	67.52	-87.63	7,821.20	-2,346.03	1,962.58	1,817.72	13.547
18,800.00	11,163.00	17,401.75	11,066.00	78.21	68.22	-87.63	7,921.20	-2,346.26	1,962.04	1,815.72	13.409
18,900.00	11,163.00	17,501.75	11,066.00	78.95	68.94	-87.63	8,021.19	-2,346.49	1,961.50	1,813.72	13.273
19,000.00	11,163.00	17,601.75	11,066.00	79.71	69.65	-87.63	8,121.19	-2,346.72	1,960.96	1,811.72	13.139
19,100.00	11,163.00	17,701.75	11,066.00	80.46	70.37	-87.63	8,221.19	-2,346.95	1,960.42	1,809.70	13.007
19,200.00	11,163.00	17,801.75	11,066.00	81.21	71.09	-87.63	8,321.19	-2,347.18	1,959.88	1,807.69	12.878
19,300.00	11,163.00	17,901.75	11,066.00	81.97	71.82	-87.63	8,421.19	-2,347.41	1,959.34	1,805.67	12.750
19,400.00	11,163.00	18,001.74	11,066.00	82.73	72.55	-87.63	8,521.18	-2,347.63	1,958.80	1,803.64	12.624
19,500.00	11,163.00	18,101.74	11,066.00	83.49	73.28	-87.63	8,621.18	-2,347.86	1,958.26	1,801.61	12.501
19,600.00	11,163.00	18,201.74	11,066.00	84.26	74.01	-87.63	8,721.18	-2,348.09	1,957.72	1,799.57	12.379
19,700.00	11,163.00	18,301.74	11,066.00	85.02	74.75	-87.63	8,821.18	-2,348.32	1,957.18	1,797.53	12.259
19,800.00	11,163.00	18,401.74	11,066.00	85.79	75.49	-87.63	8,921.18	-2,348.55	1,956.64	1,795.48	12.141
19,900.00	11,163.00	18,501.74	11,066.00	86.56	76.23	-87.63	9,021.18	-2,348.78	1,956.10	1,793.43	12.025
20,000.00	11,163.00	18,601.74	11,066.00	87.33	76.97	-87.63	9,121.17	-2,349.01	1,955.56	1,791.37	11.911
20,100.00	11,163.00	18,701.73	11,066.00	88.11	77.72	-87.63	9,221.17	-2,349.24	1,955.02	1,789.31	11.798
20,200.00	11,163.00	18,801.73	11,066.00	88.88	78.47	-87.62	9,321.17	-2,349.47	1,954.48	1,787.25	11.688
20,300.00	11,163.00	18,901.73	11,066.00	89.66	79.22	-87.62	9,421.17	-2,349.69	1,953.94	1,785.18	11.579
20,400.00	11,163.00	19,001.73	11,066.00	90.44	79.98	-87.62	9,521.17	-2,349.92	1,953.40	1,783.11	11.471
20,500.00	11,163.00	19,101.73	11,066.00	91.21	80.73	-87.62	9,621.17	-2,350.15	1,952.86	1,781.03	11.366
20,600.00	11,163.00	19,201.73	11,066.00	92.00	81.49	-87.62	9,721.16	-2,350.38	1,952.32	1,778.96	11.262
20,700.00	11,163.00	19,301.72	11,066.00	92.78	82.25	-87.62	9,821.16	-2,350.61	1,951.78	1,776.87	11.159
20,800.00	11,163.00	19,401.72	11,066.00	93.56	83.02	-87.62	9,921.16	-2,350.84	1,951.24	1,774.79	11.058
20,900.00	11,163.00	19,501.72	11,066.00	94.35	83.78	-87.62	10,021.16	-2,351.07	1,950.70	1,772.70	10.959
21,000.00	11,163.00	19,601.72	11,066.00	95.14	84.55	-87.62	10,121.16	-2,351.30	1,950.15	1,770.60	10.861
21,100.00	11,163.00	19,701.72	11,066.00	95.92	85.32	-87.62	10,221.16	-2,351.53	1,949.61	1,768.51	10.765
21,200.00	11,163.00	19,801.72	11,066.00	96.71	86.09	-87.62	10,321.15	-2,351.75	1,949.07	1,766.41	10.670
21,300.00	11,163.00	19,901.72	11,066.00	97.51	86.86	-87.62	10,421.15	-2,351.98	1,948.53	1,764.30	10.577
21,400.00	11,163.00	20,001.71	11,066.00	98.30	87.63	-87.62	10,521.15	-2,352.21	1,947.99	1,762.20	10.485
21,436.03	11,163.00	20,027.22	11,066.00	98.58	87.83	-87.62	10,546.66	-2,352.27	1,947.83	1,761.54	10.456
21,436.63	11,163.00	20,027.22	11,066.00	98.59	87.83	-87.62	10,546.66	-2,352.27	1,947.83	1,761.54	10.456 ES, SF

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (B05) Robin Fed Com 202H - Permit - APD-Rev00												Offset Site Error:	0.00 usft
Survey Program:		0-MWD+IFR1+SAG+FDIR (SQC2)						Rule Assigned:				Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance			Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		
11,200.00	11,088.17	10,850.00	10,809.78	39.30	38.53	-64.28	1,384.74	-1,892.35	1,900.22	1,823.43	76.79	24.745	
11,250.00	11,110.95	10,874.92	10,832.82	39.39	38.60	-66.89	1,393.95	-1,890.02	1,878.77	1,801.83	76.94	24.418	
11,300.00	11,129.76	10,900.00	10,855.57	39.48	38.68	-69.72	1,404.18	-1,887.43	1,856.60	1,779.50	77.10	24.082	
11,350.00	11,144.47	10,900.00	10,855.57	39.56	38.68	-72.14	1,404.18	-1,887.43	1,833.78	1,756.71	77.08	23.792	
11,400.00	11,154.96	10,924.02	10,876.90	39.63	38.75	-75.25	1,414.88	-1,884.73	1,810.55	1,733.31	77.24	23.441	
11,450.00	11,161.14	10,950.00	10,899.43	39.68	38.82	-78.54	1,427.42	-1,881.55	1,787.26	1,709.83	77.42	23.084	
11,496.11	11,163.00	10,950.00	10,899.43	39.73	38.82	-80.94	1,427.42	-1,881.55	1,765.72	1,688.29	77.44	22.802	
11,500.00	11,163.00	10,950.00	10,899.43	39.73	38.82	-80.94	1,427.42	-1,881.55	1,763.93	1,686.49	77.44	22.778	
11,600.00	11,163.00	10,983.51	10,927.59	39.84	38.91	-81.93	1,445.02	-1,877.10	1,719.56	1,641.84	77.72	22.125	
11,700.00	11,163.00	11,019.19	10,956.35	39.96	39.00	-82.96	1,465.49	-1,871.92	1,678.90	1,600.87	78.03	21.516	
11,800.00	11,163.00	11,061.62	10,988.74	40.10	39.09	-84.13	1,492.03	-1,865.20	1,641.92	1,563.53	78.39	20.946	
11,900.00	11,163.00	11,112.26	11,024.64	40.25	39.19	-85.43	1,526.64	-1,856.45	1,608.42	1,529.63	78.78	20.415	
12,000.00	11,163.00	11,172.70	11,063.15	40.43	39.29	-86.86	1,571.76	-1,845.03	1,578.04	1,498.84	79.20	19.924	
12,100.00	11,163.00	11,244.30	11,102.12	40.62	39.38	-88.32	1,629.94	-1,830.31	1,550.21	1,470.58	79.63	19.469	
12,200.00	11,163.00	11,327.57	11,137.61	40.83	39.46	-89.67	1,702.89	-1,811.85	1,524.14	1,444.11	80.03	19.044	
12,300.00	11,163.00	11,421.26	11,164.05	41.06	39.52	-90.71	1,789.92	-1,789.83	1,498.95	1,418.54	80.41	18.642	
12,400.00	11,163.00	11,521.70	11,175.75	41.31	39.60	-91.20	1,886.50	-1,765.39	1,473.86	1,393.10	80.76	18.250	
12,500.00	11,163.00	11,600.00	11,176.00	41.57	39.67	-91.22	1,962.56	-1,746.82	1,449.38	1,368.29	81.09	17.873	
12,600.00	11,163.00	11,657.07	11,176.00	41.84	39.73	-91.23	2,018.30	-1,734.57	1,427.00	1,345.56	81.44	17.522	
12,700.00	11,163.00	11,722.62	11,176.00	42.14	39.80	-91.24	2,082.60	-1,721.87	1,406.87	1,325.05	81.82	17.195	
12,800.00	11,163.00	11,800.00	11,176.00	42.45	39.90	-91.26	2,158.87	-1,708.77	1,389.07	1,306.84	82.23	16.893	
12,900.00	11,163.00	11,855.40	11,176.00	42.77	39.98	-91.26	2,213.67	-1,700.66	1,373.41	1,290.77	82.64	16.619	
13,000.00	11,163.00	11,922.51	11,176.00	43.11	40.08	-91.27	2,280.25	-1,692.26	1,360.13	1,277.05	83.09	16.370	
13,100.00	11,163.00	12,000.00	11,176.00	43.47	40.20	-91.28	2,357.35	-1,684.51	1,349.24	1,265.67	83.57	16.146	
13,200.00	11,163.00	12,057.81	11,176.00	43.83	40.30	-91.29	2,414.99	-1,680.08	1,340.59	1,256.55	84.04	15.952	
13,300.00	11,163.00	12,125.85	11,176.00	44.22	40.43	-91.29	2,482.93	-1,676.36	1,334.36	1,249.82	84.54	15.784	
13,400.00	11,163.00	12,200.00	11,176.00	44.61	40.57	-91.29	2,557.04	-1,674.15	1,330.52	1,245.45	85.07	15.641	
13,500.00	11,163.00	12,265.71	11,176.00	45.02	40.70	-91.29	2,622.75	-1,673.77	1,329.01	1,243.42	85.59	15.528	
13,600.00	11,163.00	12,365.71	11,176.00	45.44	40.91	-91.29	2,722.75	-1,674.00	1,328.47	1,242.24	86.23	15.407	
13,700.00	11,163.00	12,465.71	11,176.00	45.88	41.14	-91.29	2,822.75	-1,674.23	1,327.93	1,241.04	86.89	15.283	
13,800.00	11,163.00	12,565.70	11,176.00	46.32	41.38	-91.30	2,922.74	-1,674.47	1,327.40	1,239.81	87.59	15.155	
13,900.00	11,163.00	12,665.70	11,176.00	46.78	41.65	-91.30	3,022.74	-1,674.70	1,326.86	1,238.55	88.31	15.025	
14,000.00	11,163.00	12,765.70	11,176.00	47.25	41.92	-91.30	3,122.74	-1,674.93	1,326.32	1,237.26	89.06	14.893	
14,100.00	11,163.00	12,865.70	11,176.00	47.73	42.22	-91.30	3,222.74	-1,675.16	1,325.79	1,235.95	89.84	14.758	
14,200.00	11,163.00	12,965.70	11,176.00	48.22	42.53	-91.30	3,322.74	-1,675.40	1,325.25	1,234.61	90.64	14.621	
14,300.00	11,163.00	13,065.70	11,176.00	48.73	42.86	-91.30	3,422.74	-1,675.63	1,324.71	1,233.24	91.47	14.483	
14,400.00	11,163.00	13,165.70	11,176.00	49.24	43.20	-91.30	3,522.73	-1,675.86	1,324.17	1,231.85	92.32	14.343	
14,500.00	11,163.00	13,265.69	11,176.00	49.76	43.55	-91.30	3,622.73	-1,676.09	1,323.64	1,230.44	93.20	14.202	
14,600.00	11,163.00	13,365.69	11,176.00	50.29	43.92	-91.30	3,722.73	-1,676.33	1,323.10	1,229.00	94.10	14.060	
14,700.00	11,163.00	13,465.69	11,176.00	50.83	44.30	-91.30	3,822.73	-1,676.56	1,322.56	1,227.53	95.03	13.918	
14,800.00	11,163.00	13,565.69	11,176.00	51.38	44.70	-91.30	3,922.73	-1,676.79	1,322.03	1,226.05	95.98	13.775	
14,900.00	11,163.00	13,665.69	11,176.00	51.94	45.11	-91.30	4,022.73	-1,677.02	1,321.49	1,224.54	96.95	13.631	
15,000.00	11,163.00	13,765.69	11,176.00	52.51	45.53	-91.30	4,122.72	-1,677.26	1,320.95	1,223.02	97.94	13.488	
15,100.00	11,163.00	13,865.69	11,176.00	53.08	45.97	-91.30	4,222.72	-1,677.49	1,320.41	1,221.47	98.95	13.345	
15,200.00	11,163.00	13,965.68	11,176.00	53.66	46.42	-91.30	4,322.72	-1,677.72	1,319.88	1,219.90	99.98	13.202	
15,300.00	11,163.00	14,065.68	11,176.00	54.25	46.87	-91.30	4,422.72	-1,677.95	1,319.34	1,218.31	101.03	13.059	
15,400.00	11,163.00	14,165.68	11,176.00	54.85	47.34	-91.30	4,522.72	-1,678.19	1,318.80	1,216.71	102.10	12.917	
15,500.00	11,163.00	14,265.68	11,176.00	55.45	47.83	-91.30	4,622.72	-1,678.42	1,318.27	1,215.08	103.18	12.776	
15,600.00	11,163.00	14,365.68	11,176.00	56.06	48.32	-91.30	4,722.71	-1,678.65	1,317.73	1,213.44	104.29	12.636	
15,700.00	11,163.00	14,465.68	11,176.00	56.68	48.82	-91.31	4,822.71	-1,678.88	1,317.19	1,211.78	105.41	12.496	
15,800.00	11,163.00	14,565.68	11,176.00	57.31	49.33	-91.31	4,922.71	-1,679.12	1,316.66	1,210.11	106.55	12.358	
15,900.00	11,163.00	14,665.67	11,176.00	57.94	49.86	-91.31	5,022.71	-1,679.35	1,316.12	1,208.42	107.70	12.220	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (B05) Robin Fed Com 202H - Permit - APD-Rev00												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)												Offset Well Error:	0.00 usft
Rule Assigned:												Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
16,000.00	11,163.00	14,765.67	11,176.00	58.57	50.39	-91.31	5,122.71	-1,679.58	1,315.58	1,206.71	108.87	12.084	
16,100.00	11,163.00	14,865.67	11,176.00	59.22	50.93	-91.31	5,222.70	-1,679.81	1,315.04	1,204.99	110.05	11.949	
16,200.00	11,163.00	14,965.67	11,176.00	59.86	51.48	-91.31	5,322.70	-1,680.05	1,314.51	1,203.25	111.25	11.816	
16,300.00	11,163.00	15,065.67	11,176.00	60.52	52.04	-91.31	5,422.70	-1,680.28	1,313.97	1,201.50	112.47	11.683	
16,400.00	11,163.00	15,165.67	11,176.00	61.18	52.60	-91.31	5,522.70	-1,680.51	1,313.43	1,199.74	113.69	11.553	
16,500.00	11,163.00	15,265.67	11,176.00	61.84	53.18	-91.31	5,622.70	-1,680.74	1,312.90	1,197.96	114.93	11.423	
16,600.00	11,163.00	15,365.66	11,176.00	62.51	53.76	-91.31	5,722.70	-1,680.98	1,312.36	1,196.18	116.18	11.296	
16,700.00	11,163.00	15,465.66	11,176.00	63.18	54.35	-91.31	5,822.69	-1,681.21	1,311.82	1,194.37	117.45	11.169	
16,800.00	11,163.00	15,565.66	11,176.00	63.86	54.95	-91.31	5,922.69	-1,681.44	1,311.28	1,192.56	118.72	11.045	
16,900.00	11,163.00	15,665.66	11,176.00	64.54	55.55	-91.31	6,022.69	-1,681.67	1,310.75	1,190.74	120.01	10.922	
17,000.00	11,163.00	15,765.66	11,176.00	65.23	56.16	-91.31	6,122.69	-1,681.91	1,310.21	1,188.90	121.31	10.800	
17,100.00	11,163.00	15,865.66	11,176.00	65.92	56.78	-91.31	6,222.69	-1,682.14	1,309.67	1,187.05	122.62	10.681	
17,200.00	11,163.00	15,965.66	11,176.00	66.62	57.41	-91.31	6,322.69	-1,682.37	1,309.14	1,185.19	123.94	10.562	
17,300.00	11,163.00	16,065.65	11,176.00	67.32	58.04	-91.31	6,422.68	-1,682.60	1,308.60	1,183.33	125.27	10.446	
17,400.00	11,163.00	16,165.65	11,176.00	68.02	58.67	-91.31	6,522.68	-1,682.84	1,308.06	1,181.45	126.61	10.331	
17,500.00	11,163.00	16,265.65	11,176.00	68.73	59.31	-91.31	6,622.68	-1,683.07	1,307.53	1,179.56	127.96	10.218	
17,600.00	11,163.00	16,365.65	11,176.00	69.44	59.96	-91.32	6,722.68	-1,683.30	1,306.99	1,177.67	129.32	10.106	
17,700.00	11,163.00	16,465.65	11,176.00	70.15	60.62	-91.32	6,822.68	-1,683.53	1,306.45	1,175.76	130.69	9.997	
17,800.00	11,163.00	16,565.65	11,176.00	70.87	61.27	-91.32	6,922.68	-1,683.77	1,305.91	1,173.85	132.07	9.888	
17,900.00	11,163.00	16,665.65	11,176.00	71.59	61.94	-91.32	7,022.67	-1,684.00	1,305.38	1,171.93	133.45	9.782	
18,000.00	11,163.00	16,765.64	11,176.00	72.31	62.61	-91.32	7,122.67	-1,684.23	1,304.84	1,170.00	134.84	9.677	
18,100.00	11,163.00	16,865.64	11,176.00	73.04	63.28	-91.32	7,222.67	-1,684.46	1,304.30	1,168.06	136.25	9.573	
18,200.00	11,163.00	16,965.64	11,176.00	73.77	63.96	-91.32	7,322.67	-1,684.70	1,303.77	1,166.11	137.65	9.471	
18,300.00	11,163.00	17,065.64	11,176.00	74.50	64.64	-91.32	7,422.67	-1,684.93	1,303.23	1,164.16	139.07	9.371	
18,400.00	11,163.00	17,165.64	11,176.00	75.24	65.33	-91.32	7,522.67	-1,685.16	1,302.69	1,162.20	140.49	9.272	
18,500.00	11,163.00	17,265.64	11,176.00	75.97	66.02	-91.32	7,622.66	-1,685.39	1,302.15	1,160.23	141.92	9.175	
18,600.00	11,163.00	17,365.64	11,176.00	76.72	66.71	-91.32	7,722.66	-1,685.63	1,301.62	1,158.26	143.36	9.079	
18,700.00	11,163.00	17,465.63	11,176.00	77.46	67.41	-91.32	7,822.66	-1,685.86	1,301.08	1,156.28	144.80	8.985	
18,800.00	11,163.00	17,565.63	11,176.00	78.21	68.12	-91.32	7,922.66	-1,686.09	1,300.54	1,154.29	146.25	8.892	
18,900.00	11,163.00	17,665.63	11,176.00	78.95	68.82	-91.32	8,022.66	-1,686.32	1,300.01	1,152.30	147.71	8.801	
19,000.00	11,163.00	17,765.63	11,176.00	79.71	69.53	-91.32	8,122.66	-1,686.56	1,299.47	1,150.30	149.17	8.711	
19,100.00	11,163.00	17,865.63	11,176.00	80.46	70.25	-91.32	8,222.65	-1,686.79	1,298.93	1,148.30	150.64	8.623	
19,200.00	11,163.00	17,965.63	11,176.00	81.21	70.96	-91.32	8,322.65	-1,687.02	1,298.40	1,146.29	152.11	8.536	
19,300.00	11,163.00	18,065.63	11,176.00	81.97	71.68	-91.32	8,422.65	-1,687.25	1,297.86	1,144.27	153.59	8.450	
19,400.00	11,163.00	18,165.62	11,176.00	82.73	72.41	-91.33	8,522.65	-1,687.49	1,297.32	1,142.25	155.07	8.366	
19,500.00	11,163.00	18,265.62	11,176.00	83.49	73.13	-91.33	8,622.65	-1,687.72	1,296.78	1,140.22	156.56	8.283	
19,600.00	11,163.00	18,365.62	11,176.00	84.26	73.86	-91.33	8,722.65	-1,687.95	1,296.25	1,138.19	158.06	8.201	
19,700.00	11,163.00	18,465.62	11,176.00	85.02	74.59	-91.33	8,822.64	-1,688.18	1,295.71	1,136.16	159.55	8.121	
19,800.00	11,163.00	18,565.62	11,176.00	85.79	75.33	-91.33	8,922.64	-1,688.42	1,295.17	1,134.12	161.06	8.042	
19,900.00	11,163.00	18,665.62	11,176.00	86.56	76.07	-91.33	9,022.64	-1,688.65	1,294.64	1,132.07	162.57	7.964	
20,000.00	11,163.00	18,765.62	11,176.00	87.33	76.81	-91.33	9,122.64	-1,688.88	1,294.10	1,130.02	164.08	7.887	
20,100.00	11,163.00	18,865.61	11,176.00	88.11	77.55	-91.33	9,222.64	-1,689.11	1,293.56	1,127.97	165.59	7.812	
20,200.00	11,163.00	18,965.61	11,176.00	88.88	78.30	-91.33	9,322.63	-1,689.35	1,293.02	1,125.91	167.12	7.737	
20,300.00	11,163.00	19,065.61	11,176.00	89.66	79.05	-91.33	9,422.63	-1,689.58	1,292.49	1,123.85	168.64	7.664	
20,400.00	11,163.00	19,165.61	11,176.00	90.44	79.80	-91.33	9,522.63	-1,689.81	1,291.95	1,121.78	170.17	7.592	
20,500.00	11,163.00	19,265.61	11,176.00	91.21	80.55	-91.33	9,622.63	-1,690.04	1,291.41	1,119.71	171.70	7.521	
20,600.00	11,163.00	19,365.61	11,176.00	92.00	81.30	-91.33	9,722.63	-1,690.28	1,290.88	1,117.64	173.24	7.451	
20,700.00	11,163.00	19,465.61	11,176.00	92.78	82.06	-91.33	9,822.63	-1,690.51	1,290.34	1,115.56	174.78	7.383	
20,800.00	11,163.00	19,565.60	11,176.00	93.56	82.82	-91.33	9,922.62	-1,690.74	1,289.80	1,113.48	176.32	7.315	
20,900.00	11,163.00	19,665.60	11,176.00	94.35	83.58	-91.33	10,022.62	-1,690.97	1,289.27	1,111.39	177.87	7.248	
21,000.00	11,163.00	19,765.60	11,176.00	95.14	84.35	-91.33	10,122.62	-1,691.21	1,288.73	1,109.31	179.42	7.183	
21,100.00	11,163.00	19,865.60	11,176.00	95.92	85.11	-91.33	10,222.62	-1,691.44	1,288.19	1,107.21	180.98	7.118	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (B05) Robin Fed Com 202H - Permit - APD-Rev00													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: Distance				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
21,200.00	11,163.00	19,965.60	11,176.00	96.71	85.88	-91.34	10,322.62	-1,691.67	1,287.65	1,105.12	182.53	7.054		
21,300.00	11,163.00	20,065.60	11,176.00	97.51	86.65	-91.34	10,422.62	-1,691.90	1,287.12	1,103.02	184.09	6.992		
21,400.00	11,163.00	20,165.60	11,176.00	98.30	87.42	-91.34	10,522.61	-1,692.14	1,286.58	1,100.92	185.66	6.930		
21,434.88	11,163.00	20,193.55	11,176.00	98.57	87.64	-91.34	10,550.57	-1,692.20	1,286.41	1,100.28	186.13	6.911 CC		
21,436.63	11,163.00	20,193.55	11,176.00	98.59	87.64	-91.34	10,550.57	-1,692.20	1,286.41	1,100.27	186.14	6.911 ES, SF		

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (B06) Robin Fed Com 172H - Permit - APD-Rev01												Offset Site Error:	0.00 usft
Survey Program:		0-MWD+IFR1+SAG+FDIR (SQC2)						Rule Assigned:				Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
11,300.00	11,129.76	10,650.00	10,574.50	39.48	37.80	-58.65	1,475.22	-1,750.76	1,845.67	1,771.37	74.30	24.842	
11,350.00	11,144.47	10,669.12	10,589.02	39.56	37.84	-61.12	1,487.23	-1,747.54	1,822.91	1,748.57	74.34	24.521	
11,400.00	11,154.96	10,700.00	10,611.58	39.63	37.91	-64.03	1,507.59	-1,742.08	1,799.13	1,724.62	74.52	24.144	
11,450.00	11,161.14	10,700.00	10,611.58	39.68	37.91	-66.66	1,507.59	-1,742.08	1,774.11	1,699.69	74.42	23.839	
11,496.11	11,163.00	10,716.09	10,622.87	39.73	37.94	-69.54	1,518.66	-1,739.12	1,750.48	1,675.97	74.51	23.493	
11,500.00	11,163.00	10,717.28	10,623.70	39.73	37.94	-69.57	1,519.50	-1,738.90	1,748.46	1,673.95	74.52	23.464	
11,600.00	11,163.00	10,750.00	10,645.60	39.84	38.00	-70.28	1,542.97	-1,732.61	1,698.23	1,623.50	74.72	22.727	
11,700.00	11,163.00	10,785.73	10,667.89	39.96	38.06	-71.00	1,569.94	-1,725.38	1,651.00	1,576.03	74.97	22.022	
11,800.00	11,163.00	10,825.42	10,690.55	40.10	38.12	-71.73	1,601.40	-1,716.95	1,606.79	1,531.53	75.26	21.349	
11,900.00	11,163.00	10,853.88	10,705.39	40.25	38.15	-72.21	1,624.86	-1,710.66	1,565.71	1,490.23	75.48	20.742	
12,000.00	11,163.00	10,900.00	10,727.01	40.43	38.20	-72.92	1,664.41	-1,700.98	1,528.20	1,452.36	75.84	20.150	
12,100.00	11,163.00	10,923.26	10,736.80	40.62	38.22	-73.24	1,685.05	-1,696.60	1,494.68	1,418.61	76.07	19.648	
12,200.00	11,163.00	10,950.00	10,747.09	40.83	38.24	-73.58	1,709.29	-1,692.00	1,465.37	1,389.02	76.35	19.193	
12,300.00	11,163.00	11,000.00	10,763.54	41.06	38.28	-74.14	1,755.92	-1,684.67	1,440.30	1,363.55	76.76	18.764	
12,400.00	11,163.00	11,026.04	10,770.62	41.31	38.29	-74.38	1,780.78	-1,681.53	1,419.37	1,342.30	77.07	18.418	
12,500.00	11,163.00	11,050.00	10,776.22	41.57	38.30	-74.58	1,803.94	-1,679.05	1,403.01	1,325.62	77.39	18.129	
12,600.00	11,163.00	11,100.00	10,785.04	41.84	38.33	-74.88	1,852.99	-1,675.17	1,390.68	1,312.89	77.79	17.876	
12,700.00	11,163.00	11,150.00	10,789.94	42.14	38.35	-75.05	1,902.69	-1,673.07	1,382.96	1,304.78	78.17	17.691	
12,800.00	11,163.00	11,186.68	10,791.01	42.45	38.37	-75.09	1,939.34	-1,672.67	1,379.48	1,300.96	78.52	17.569	
12,900.00	11,163.00	11,270.17	10,791.01	42.77	38.43	-75.08	2,022.83	-1,672.86	1,378.86	1,299.95	78.91	17.475	
13,000.00	11,163.00	11,370.17	10,791.01	43.11	38.53	-75.07	2,122.83	-1,673.09	1,378.33	1,299.00	79.34	17.373	
13,100.00	11,163.00	11,470.17	10,791.01	43.47	38.65	-75.07	2,222.83	-1,673.31	1,377.81	1,298.01	79.80	17.266	
13,200.00	11,163.00	11,570.17	10,791.00	43.83	38.80	-75.06	2,322.83	-1,673.54	1,377.28	1,296.99	80.30	17.152	
13,300.00	11,163.00	11,670.17	10,791.00	44.22	38.97	-75.06	2,422.83	-1,673.77	1,376.76	1,295.94	80.82	17.034	
13,400.00	11,163.00	11,770.16	10,791.00	44.61	39.15	-75.05	2,522.83	-1,673.99	1,376.24	1,294.85	81.38	16.910	
13,500.00	11,163.00	11,870.16	10,791.00	45.02	39.36	-75.05	2,622.82	-1,674.22	1,375.71	1,293.74	81.97	16.782	
13,600.00	11,163.00	11,970.16	10,791.00	45.44	39.58	-75.04	2,722.82	-1,674.45	1,375.19	1,292.59	82.59	16.650	
13,700.00	11,163.00	12,070.16	10,791.00	45.88	39.82	-75.03	2,822.82	-1,674.67	1,374.66	1,291.42	83.24	16.513	
13,800.00	11,163.00	12,170.16	10,791.00	46.32	40.08	-75.03	2,922.82	-1,674.90	1,374.14	1,290.21	83.92	16.374	
13,900.00	11,163.00	12,270.16	10,791.00	46.78	40.36	-75.02	3,022.82	-1,675.13	1,373.61	1,288.98	84.63	16.231	
14,000.00	11,163.00	12,370.16	10,791.00	47.25	40.65	-75.02	3,122.82	-1,675.35	1,373.09	1,287.72	85.37	16.085	
14,100.00	11,163.00	12,470.15	10,791.00	47.73	40.96	-75.01	3,222.81	-1,675.58	1,372.56	1,286.44	86.13	15.937	
14,200.00	11,163.00	12,570.15	10,791.00	48.22	41.28	-75.00	3,322.81	-1,675.81	1,372.04	1,285.13	86.91	15.786	
14,300.00	11,163.00	12,670.15	10,791.00	48.73	41.62	-75.00	3,422.81	-1,676.03	1,371.52	1,283.79	87.73	15.634	
14,400.00	11,163.00	12,770.15	10,791.00	49.24	41.98	-74.99	3,522.81	-1,676.26	1,370.99	1,282.43	88.57	15.480	
14,500.00	11,163.00	12,870.15	10,791.00	49.76	42.35	-74.99	3,622.81	-1,676.49	1,370.47	1,281.04	89.43	15.325	
14,600.00	11,163.00	12,970.15	10,791.00	50.29	42.73	-74.98	3,722.80	-1,676.72	1,369.94	1,279.63	90.31	15.169	
14,700.00	11,163.00	13,070.15	10,791.00	50.83	43.13	-74.98	3,822.80	-1,676.94	1,369.42	1,278.20	91.22	15.012	
14,800.00	11,163.00	13,170.14	10,791.00	51.38	43.54	-74.97	3,922.80	-1,677.17	1,368.89	1,276.74	92.15	14.855	
14,900.00	11,163.00	13,270.14	10,791.00	51.94	43.96	-74.96	4,022.80	-1,677.40	1,368.37	1,275.27	93.10	14.697	
15,000.00	11,163.00	13,370.14	10,791.00	52.51	44.40	-74.96	4,122.80	-1,677.62	1,367.85	1,273.77	94.08	14.540	
15,100.00	11,163.00	13,470.14	10,791.00	53.08	44.85	-74.95	4,222.80	-1,677.85	1,367.32	1,272.25	95.07	14.382	
15,200.00	11,163.00	13,570.14	10,791.00	53.66	45.31	-74.95	4,322.79	-1,678.08	1,366.80	1,270.71	96.08	14.225	
15,300.00	11,163.00	13,670.14	10,791.00	54.25	45.79	-74.94	4,422.79	-1,678.30	1,366.27	1,269.16	97.11	14.069	
15,400.00	11,163.00	13,770.13	10,791.00	54.85	46.27	-74.93	4,522.79	-1,678.53	1,365.75	1,267.58	98.16	13.913	
15,500.00	11,163.00	13,870.13	10,791.00	55.45	46.77	-74.93	4,622.79	-1,678.76	1,365.22	1,265.99	99.23	13.758	
15,600.00	11,163.00	13,970.13	10,791.00	56.06	47.27	-74.92	4,722.79	-1,678.98	1,364.70	1,264.38	100.32	13.604	
15,700.00	11,163.00	14,070.13	10,791.00	56.68	47.79	-74.92	4,822.79	-1,679.21	1,364.18	1,262.76	101.42	13.451	
15,800.00	11,163.00	14,170.13	10,791.00	57.31	48.31	-74.91	4,922.78	-1,679.44	1,363.65	1,261.12	102.54	13.299	
15,900.00	11,163.00	14,270.13	10,791.00	57.94	48.85	-74.90	5,022.78	-1,679.66	1,363.13	1,259.46	103.67	13.149	
16,000.00	11,163.00	14,370.13	10,791.00	58.57	49.40	-74.90	5,122.78	-1,679.89	1,362.60	1,257.79	104.82	13.000	
16,100.00	11,163.00	14,470.12	10,791.00	59.22	49.95	-74.89	5,222.78	-1,680.12	1,362.08	1,256.10	105.98	12.852	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (B06) Robin Fed Com 172H - Permit - APD-Rev01												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)												Offset Well Error:	0.00 usft
Rule Assigned:													
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre	Distance	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
16,200.00	11,163.00	14,570.12	10,791.00	59.86	50.51	-74.89	5,322.78	-1,680.34	1,361.56	1,254.40	107.16	12.706	
16,300.00	11,163.00	14,670.12	10,791.00	60.52	51.09	-74.88	5,422.78	-1,680.57	1,361.03	1,252.68	108.35	12.562	
16,400.00	11,163.00	14,770.12	10,791.00	61.18	51.67	-74.87	5,522.77	-1,680.80	1,360.51	1,250.95	109.55	12.419	
16,500.00	11,163.00	14,870.12	10,791.00	61.84	52.25	-74.87	5,622.77	-1,681.02	1,359.98	1,249.21	110.77	12.278	
16,600.00	11,163.00	14,970.12	10,791.00	62.51	52.85	-74.86	5,722.77	-1,681.25	1,359.46	1,247.46	112.00	12.138	
16,700.00	11,163.00	15,070.12	10,791.00	63.18	53.45	-74.86	5,822.77	-1,681.48	1,358.94	1,245.70	113.24	12.001	
16,800.00	11,163.00	15,170.11	10,791.00	63.86	54.06	-74.85	5,922.77	-1,681.70	1,358.41	1,243.92	114.49	11.865	
16,900.00	11,163.00	15,270.11	10,791.00	64.54	54.68	-74.84	6,022.77	-1,681.93	1,357.89	1,242.13	115.75	11.731	
17,000.00	11,163.00	15,370.11	10,791.00	65.23	55.30	-74.84	6,122.76	-1,682.16	1,357.36	1,240.33	117.03	11.599	
17,100.00	11,163.00	15,470.11	10,791.00	65.92	55.93	-74.83	6,222.76	-1,682.38	1,356.84	1,238.53	118.31	11.468	
17,200.00	11,163.00	15,570.11	10,791.00	66.62	56.57	-74.83	6,322.76	-1,682.61	1,356.32	1,236.71	119.61	11.340	
17,300.00	11,163.00	15,670.11	10,791.00	67.32	57.21	-74.82	6,422.76	-1,682.84	1,355.79	1,234.88	120.91	11.213	
17,400.00	11,163.00	15,770.11	10,791.00	68.02	57.86	-74.81	6,522.76	-1,683.07	1,355.27	1,233.04	122.23	11.088	
17,500.00	11,163.00	15,870.10	10,791.00	68.73	58.51	-74.81	6,622.75	-1,683.29	1,354.74	1,231.19	123.55	10.965	
17,600.00	11,163.00	15,970.10	10,791.00	69.44	59.17	-74.80	6,722.75	-1,683.52	1,354.22	1,229.34	124.88	10.844	
17,700.00	11,163.00	16,070.10	10,791.00	70.15	59.84	-74.80	6,822.75	-1,683.75	1,353.70	1,227.47	126.22	10.725	
17,800.00	11,163.00	16,170.10	10,791.00	70.87	60.51	-74.79	6,922.75	-1,683.97	1,353.17	1,225.60	127.57	10.607	
17,900.00	11,163.00	16,270.10	10,791.00	71.59	61.18	-74.78	7,022.75	-1,684.20	1,352.65	1,223.72	128.93	10.492	
18,000.00	11,163.00	16,370.10	10,791.00	72.31	61.86	-74.78	7,122.75	-1,684.43	1,352.12	1,221.83	130.29	10.378	
18,100.00	11,163.00	16,470.10	10,791.00	73.04	62.54	-74.77	7,222.74	-1,684.65	1,351.60	1,219.94	131.66	10.266	
18,200.00	11,163.00	16,570.09	10,791.00	73.77	63.23	-74.77	7,322.74	-1,684.88	1,351.08	1,218.04	133.04	10.155	
18,300.00	11,163.00	16,670.09	10,791.00	74.50	63.92	-74.76	7,422.74	-1,685.11	1,350.55	1,216.13	134.43	10.047	
18,400.00	11,163.00	16,770.09	10,791.00	75.24	64.62	-74.75	7,522.74	-1,685.33	1,350.03	1,214.21	135.82	9.940	
18,500.00	11,163.00	16,870.09	10,791.00	75.97	65.32	-74.75	7,622.74	-1,685.56	1,349.51	1,212.29	137.22	9.835	
18,600.00	11,163.00	16,970.09	10,791.00	76.72	66.03	-74.74	7,722.74	-1,685.79	1,348.98	1,210.36	138.62	9.731	
18,700.00	11,163.00	17,070.09	10,791.00	77.46	66.73	-74.74	7,822.73	-1,686.01	1,348.46	1,208.42	140.04	9.629	
18,800.00	11,163.00	17,170.08	10,791.00	78.21	67.45	-74.73	7,922.73	-1,686.24	1,347.93	1,206.48	141.45	9.529	
18,900.00	11,163.00	17,270.08	10,791.00	78.95	68.16	-74.72	8,022.73	-1,686.47	1,347.41	1,204.53	142.88	9.431	
19,000.00	11,163.00	17,370.08	10,791.00	79.71	68.88	-74.72	8,122.73	-1,686.69	1,346.89	1,202.58	144.31	9.334	
19,100.00	11,163.00	17,470.08	10,791.00	80.46	69.60	-74.71	8,222.73	-1,686.92	1,346.36	1,200.62	145.74	9.238	
19,200.00	11,163.00	17,570.08	10,791.00	81.21	70.33	-74.71	8,322.73	-1,687.15	1,345.84	1,198.66	147.18	9.144	
19,300.00	11,163.00	17,670.08	10,791.00	81.97	71.06	-74.70	8,422.72	-1,687.37	1,345.32	1,196.69	148.63	9.052	
19,400.00	11,163.00	17,770.08	10,791.00	82.73	71.79	-74.69	8,522.72	-1,687.60	1,344.79	1,194.72	150.08	8.961	
19,500.00	11,163.00	17,870.07	10,791.00	83.49	72.52	-74.69	8,622.72	-1,687.83	1,344.27	1,192.74	151.53	8.871	
19,600.00	11,163.00	17,970.07	10,791.00	84.26	73.26	-74.68	8,722.72	-1,688.05	1,343.74	1,190.75	152.99	8.783	
19,700.00	11,163.00	18,070.07	10,791.00	85.02	74.00	-74.68	8,822.72	-1,688.28	1,343.22	1,188.77	154.45	8.697	
19,800.00	11,163.00	18,170.07	10,791.00	85.79	74.74	-74.67	8,922.71	-1,688.51	1,342.70	1,186.78	155.92	8.611	
19,900.00	11,163.00	18,270.07	10,791.00	86.56	75.49	-74.66	9,022.71	-1,688.73	1,342.17	1,184.78	157.40	8.527	
20,000.00	11,163.00	18,370.07	10,791.00	87.33	76.24	-74.66	9,122.71	-1,688.96	1,341.65	1,182.78	158.87	8.445	
20,100.00	11,163.00	18,470.07	10,791.00	88.11	76.99	-74.65	9,222.71	-1,689.19	1,341.13	1,180.77	160.35	8.364	
20,200.00	11,163.00	18,570.06	10,791.00	88.88	77.74	-74.64	9,322.71	-1,689.42	1,340.60	1,178.77	161.84	8.284	
20,300.00	11,163.00	18,670.06	10,791.00	89.66	78.50	-74.64	9,422.71	-1,689.64	1,340.08	1,176.75	163.33	8.205	
20,400.00	11,163.00	18,770.06	10,791.00	90.44	79.26	-74.63	9,522.70	-1,689.87	1,339.56	1,174.74	164.82	8.127	
20,500.00	11,163.00	18,870.06	10,791.00	91.21	80.02	-74.63	9,622.70	-1,690.10	1,339.03	1,172.72	166.32	8.051	
20,600.00	11,163.00	18,970.06	10,791.00	92.00	80.78	-74.62	9,722.70	-1,690.32	1,338.51	1,170.69	167.82	7.976	
20,700.00	11,163.00	19,070.06	10,791.00	92.78	81.54	-74.61	9,822.70	-1,690.55	1,337.99	1,168.67	169.32	7.902	
20,800.00	11,163.00	19,170.06	10,791.00	93.56	82.31	-74.61	9,922.70	-1,690.78	1,337.46	1,166.64	170.82	7.829	
20,900.00	11,163.00	19,270.05	10,791.00	94.35	83.07	-74.60	10,022.70	-1,691.00	1,336.94	1,164.61	172.33	7.758	
21,000.00	11,163.00	19,370.05	10,791.00	95.14	83.84	-74.60	10,122.69	-1,691.23	1,336.42	1,162.57	173.85	7.687	
21,100.00	11,163.00	19,470.05	10,791.00	95.92	84.62	-74.59	10,222.69	-1,691.46	1,335.89	1,160.53	175.36	7.618	
21,200.00	11,163.00	19,570.05	10,791.00	96.71	85.39	-74.58	10,322.69	-1,691.68	1,335.37	1,158.49	176.88	7.550	
21,300.00	11,163.00	19,670.05	10,791.00	97.51	86.17	-74.58	10,422.69	-1,691.91	1,334.85	1,156.44	178.40	7.482	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (B06) Robin Fed Com 172H - Permit - APD-Rev01													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
21,400.00	11,163.00	19,770.05	10,791.00	98.30	86.94	-74.57	10,522.69	-1,692.14	1,334.32	1,154.40	179.93	7.416		
21,435.68	11,163.00	19,798.74	10,791.00	98.58	87.18	-74.57	10,551.38	-1,692.20	1,334.15	1,153.74	180.41	7.395 CC		
21,436.63	11,163.00	19,798.74	10,791.00	98.59	87.18	-74.57	10,551.38	-1,692.20	1,334.15	1,153.74	180.42	7.395 ES, SF		

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C01) Robin Fed 113H - Permit - APD-Rev01													Offset Site Error:	0.00 usft
Survey Program:		0-MWD+IFR1+SAG+FDIR (SQC2)							Rule Assigned:				Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance			Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)			
1,900.00	1,899.58	1,897.26	1,893.93	6.52	6.49	63.41	300.71	-119.80	312.57	299.56	13.00	24.037		
2,000.00	1,999.51	1,996.68	1,992.38	6.87	6.84	61.46	296.62	-133.04	311.30	297.58	13.71	22.704		
2,100.00	2,099.45	2,096.11	2,090.84	7.22	7.20	59.50	292.53	-146.27	310.39	295.97	14.42	21.525		
2,200.00	2,199.38	2,195.53	2,189.29	7.58	7.55	57.53	288.44	-159.50	309.85	294.72	15.13	20.478		
2,294.39	2,293.70	2,289.37	2,282.22	7.91	7.89	55.67	284.58	-171.99	309.69	293.88	15.80	19.596	CC	
2,300.00	2,299.31	2,294.95	2,287.74	7.93	7.91	55.56	284.35	-172.73	309.69	293.84	15.84	19.547		
2,400.00	2,399.24	2,394.37	2,386.20	8.29	8.27	53.59	280.26	-185.96	309.90	293.34	16.56	18.717		
2,500.00	2,499.17	2,493.80	2,484.65	8.65	8.63	51.62	276.17	-199.20	310.47	293.20	17.27	17.976	ES	
2,600.00	2,599.10	2,593.22	2,583.10	9.00	9.00	49.66	272.08	-212.43	311.42	293.43	17.99	17.314		
2,700.00	2,699.03	2,692.64	2,681.55	9.36	9.36	47.71	267.99	-225.66	312.73	294.03	18.70	16.722		
2,800.00	2,798.96	2,792.06	2,780.01	9.71	9.72	45.79	263.90	-238.89	314.41	294.99	19.42	16.192		
2,900.00	2,898.89	2,891.48	2,878.46	10.07	10.09	43.88	259.81	-252.13	316.44	296.30	20.13	15.717		
3,000.00	2,998.83	2,990.91	2,976.91	10.43	10.45	42.00	255.72	-265.36	318.81	297.96	20.85	15.292		
3,100.00	3,098.76	3,090.33	3,075.37	10.78	10.82	40.16	251.63	-278.59	321.53	299.97	21.56	14.910		
3,200.00	3,198.69	3,189.75	3,173.82	11.14	11.18	38.34	247.54	-291.82	324.58	302.30	22.28	14.568		
3,300.00	3,298.62	3,289.17	3,272.27	11.50	11.55	36.56	243.45	-305.05	327.96	304.96	22.99	14.262		
3,400.00	3,398.55	3,388.60	3,370.73	11.86	11.91	34.81	239.36	-318.29	331.64	307.93	23.71	13.988		
3,500.00	3,498.48	3,488.02	3,469.18	12.21	12.28	33.11	235.27	-331.52	335.63	311.21	24.42	13.742		
3,600.00	3,598.41	3,587.44	3,567.63	12.57	12.65	31.45	231.18	-344.75	339.92	314.78	25.14	13.522		
3,700.00	3,698.34	3,686.86	3,666.08	12.93	13.01	29.83	227.09	-357.98	344.48	318.63	25.85	13.325		
3,800.00	3,798.27	3,786.29	3,764.54	13.29	13.38	28.25	223.00	-371.22	349.31	322.75	26.57	13.149		
3,900.00	3,898.21	3,885.71	3,862.99	13.65	13.75	26.72	218.91	-384.45	354.41	327.13	27.28	12.992		
4,000.00	3,998.14	3,985.13	3,961.44	14.00	14.12	25.23	214.82	-397.68	359.75	331.76	27.99	12.852		
4,100.00	4,098.07	4,084.55	4,059.90	14.36	14.48	23.78	210.73	-410.91	365.33	336.62	28.70	12.728		
4,200.00	4,198.00	4,183.98	4,158.35	14.72	14.85	22.38	206.64	-424.15	371.13	341.72	29.41	12.617		
4,300.00	4,297.93	4,283.40	4,256.80	15.08	15.22	21.02	202.55	-437.38	377.15	347.03	30.13	12.519		
4,400.00	4,397.86	4,382.82	4,355.26	15.44	15.59	19.71	198.46	-450.61	383.38	352.54	30.84	12.432		
4,500.00	4,497.79	4,482.24	4,453.71	15.80	15.96	18.43	194.37	-463.84	389.80	358.25	31.55	12.355		
4,600.00	4,597.72	4,581.66	4,552.16	16.15	16.33	17.20	190.28	-477.07	396.41	364.15	32.26	12.288		
4,700.00	4,697.65	4,681.09	4,650.61	16.51	16.70	16.01	186.19	-490.31	403.20	370.23	32.97	12.229		
4,800.00	4,797.59	4,780.51	4,749.07	16.87	17.07	14.86	182.10	-503.54	410.16	376.47	33.68	12.177		
4,900.00	4,897.52	4,879.93	4,847.52	17.23	17.44	13.75	178.01	-516.77	417.27	382.88	34.39	12.133		
5,000.00	4,997.45	4,979.35	4,945.97	17.59	17.81	12.68	173.92	-530.00	424.54	389.44	35.10	12.094		
5,100.00	5,097.38	5,078.78	5,044.43	17.95	18.18	11.64	169.83	-543.24	431.95	396.14	35.81	12.061		
5,200.00	5,197.31	5,178.20	5,142.88	18.31	18.54	10.64	165.74	-556.47	439.50	402.98	36.52	12.033		
5,300.00	5,297.24	5,277.62	5,241.33	18.67	18.91	9.67	161.65	-569.70	447.18	409.95	37.23	12.010		
5,400.00	5,397.17	5,377.04	5,339.78	19.02	19.28	8.73	157.56	-582.93	454.98	417.04	37.94	11.991		
5,500.00	5,497.10	5,476.47	5,438.24	19.38	19.65	7.82	153.47	-596.17	462.90	424.25	38.66	11.975		
5,600.00	5,597.03	5,575.89	5,536.69	19.74	20.02	6.95	149.38	-609.40	470.94	431.57	39.37	11.963		
5,700.00	5,696.97	5,675.31	5,635.14	20.10	20.39	6.11	145.29	-622.63	479.07	439.00	40.08	11.954		
5,800.00	5,796.90	5,774.73	5,733.60	20.46	20.76	5.29	141.20	-635.86	487.31	446.53	40.79	11.948		
5,900.00	5,896.83	5,874.16	5,832.05	20.82	21.14	4.50	137.11	-649.09	495.65	454.15	41.50	11.944		
6,000.00	5,996.76	5,973.58	5,930.50	21.18	21.51	3.74	133.02	-662.33	504.07	461.86	42.21	11.943		
6,100.00	6,096.69	6,073.00	6,028.96	21.54	21.88	3.00	128.93	-675.56	512.58	469.66	42.92	11.943		
6,200.00	6,196.62	6,172.42	6,127.41	21.90	22.25	2.28	124.84	-688.79	521.18	477.55	43.63	11.946		
6,300.00	6,296.55	6,271.84	6,225.86	22.25	22.62	1.59	120.75	-702.02	529.85	485.51	44.34	11.950		
6,400.00	6,396.48	6,371.27	6,324.31	22.61	22.99	0.92	116.66	-715.26	538.59	493.54	45.05	11.955		
6,500.00	6,496.41	6,470.69	6,422.77	22.97	23.36	0.28	112.57	-728.49	547.41	501.65	45.76	11.962		
6,600.00	6,596.35	6,570.11	6,521.22	23.33	23.73	-0.35	108.48	-741.72	556.29	509.82	46.47	11.970		
6,700.00	6,696.28	6,669.53	6,619.67	23.69	24.10	-0.96	104.39	-754.95	565.24	518.05	47.18	11.980		
6,800.00	6,796.21	6,768.96	6,718.13	24.05	24.47	-1.54	100.30	-768.19	574.25	526.35	47.89	11.990		
6,900.00	6,896.14	6,868.38	6,816.58	24.41	24.84	-2.11	96.21	-781.42	583.31	534.71	48.61	12.001		

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C01) Robin Fed 113H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,000.00	6,996.07	6,967.80	6,915.03	24.77	25.21	-2.67	92.12	-794.65	592.44	543.12	49.32	12.013	
7,100.00	7,096.00	7,067.22	7,013.48	25.13	25.58	-3.20	88.03	-807.88	601.61	551.58	50.03	12.025	
7,200.00	7,195.93	7,166.65	7,111.94	25.49	25.95	-3.72	83.94	-821.11	610.84	560.10	50.74	12.039	
7,300.00	7,295.86	7,266.07	7,210.39	25.85	26.32	-4.23	79.85	-834.35	620.11	568.66	51.45	12.052	
7,400.00	7,395.79	7,365.49	7,308.84	26.21	26.69	-4.72	75.76	-847.58	629.44	577.27	52.16	12.067	
7,500.00	7,495.73	7,464.91	7,407.30	26.57	27.07	-5.19	71.67	-860.81	638.80	585.93	52.88	12.081	
7,600.00	7,595.66	7,564.34	7,505.75	26.92	27.44	-5.65	67.58	-874.04	648.21	594.62	53.59	12.096	
7,700.00	7,695.59	7,663.76	7,604.20	27.28	27.81	-6.10	63.49	-887.28	657.66	603.36	54.30	12.112	
7,800.00	7,795.52	7,763.18	7,702.66	27.64	28.18	-6.54	59.40	-900.51	667.15	612.14	55.01	12.127	
7,900.00	7,895.45	7,862.60	7,801.11	28.00	28.55	-6.96	55.31	-913.74	676.67	620.95	55.72	12.143	
8,000.00	7,995.38	7,962.02	7,899.56	28.36	28.92	-7.37	51.22	-926.97	686.23	629.80	56.44	12.160	
8,100.00	8,095.31	8,061.45	7,998.01	28.72	29.29	-7.77	47.13	-940.20	695.83	638.68	57.15	12.176	
8,200.00	8,195.24	8,167.04	8,102.60	29.08	29.69	-8.18	42.83	-954.11	705.33	647.42	57.91	12.181	
8,300.00	8,295.17	8,288.17	8,222.93	29.44	30.13	-8.57	38.74	-967.36	712.61	653.86	58.75	12.129	
8,400.00	8,395.11	8,409.81	8,344.15	29.80	30.57	-8.86	35.76	-976.98	716.87	657.32	59.55	12.037	
8,500.00	8,495.04	8,531.71	8,465.88	30.16	31.01	-9.06	33.93	-982.93	718.09	657.78	60.32	11.905	
8,600.00	8,594.97	8,653.63	8,587.77	30.52	31.43	-9.17	33.24	-985.16	716.27	655.24	61.03	11.736	
8,700.00	8,694.90	8,755.76	8,689.90	30.88	31.77	-9.22	33.23	-985.18	712.62	650.90	61.72	11.546	
8,800.00	8,794.83	8,855.69	8,789.83	31.24	32.10	-9.27	33.23	-985.18	708.95	646.54	62.41	11.359	
8,900.00	8,894.76	8,955.62	8,889.76	31.60	32.43	-9.32	33.23	-985.18	705.29	642.19	63.11	11.176	
9,000.00	8,994.69	9,055.55	8,989.69	31.95	32.77	-9.37	33.23	-985.18	701.63	637.83	63.80	10.998	
9,100.00	9,094.62	9,155.77	9,089.85	32.31	33.10	-9.24	35.40	-985.20	697.96	633.46	64.49	10.822	
9,200.00	9,194.55	9,253.46	9,185.98	32.67	33.41	-7.90	52.13	-985.33	694.43	629.23	65.20	10.650	
9,300.00	9,294.49	9,343.34	9,270.75	33.03	33.68	-5.49	81.73	-985.55	692.19	626.27	65.92	10.500	
9,328.08	9,322.55	9,366.73	9,291.95	33.13	33.75	-4.68	91.58	-985.63	692.05	625.93	66.12	10.467	
9,400.00	9,394.42	9,422.54	9,340.81	33.39	33.89	-2.47	118.52	-985.84	693.17	626.58	66.58	10.410 SF	
9,500.00	9,494.35	9,490.39	9,396.32	33.75	34.05	0.71	157.46	-986.14	699.48	632.43	67.05	10.432	
9,600.00	9,594.28	9,550.00	9,440.99	34.11	34.16	3.88	196.89	-986.44	712.90	645.71	67.19	10.610	
9,700.00	9,694.21	9,600.00	9,475.14	34.47	34.25	6.76	233.39	-986.72	734.57	667.68	66.89	10.982	
9,800.00	9,794.14	9,636.06	9,497.72	34.83	34.30	8.93	261.50	-986.94	764.90	698.86	66.04	11.583	
9,900.00	9,894.07	9,670.15	9,517.41	35.19	34.34	11.03	289.32	-987.15	803.78	738.93	64.85	12.394	
10,000.00	9,994.00	9,700.00	9,533.26	35.55	34.38	12.89	314.61	-987.35	850.62	787.19	63.43	13.411	
10,064.29	10,058.25	9,715.48	9,540.96	35.78	34.39	13.86	328.03	-987.45	884.55	822.15	62.40	14.176	
10,100.00	10,093.94	9,723.89	9,544.99	35.91	34.40	14.48	335.42	-987.51	904.71	842.88	61.83	14.633	
10,206.07	10,200.00	9,750.00	9,556.80	36.28	34.42	-64.95	358.70	-987.68	970.55	910.33	60.22	16.117	
10,300.00	10,293.93	9,750.00	9,556.80	36.61	34.42	-64.95	358.70	-987.68	1,034.74	976.24	58.50	17.688	
10,400.00	10,393.93	9,779.64	9,568.90	36.95	34.44	-63.06	385.76	-987.89	1,106.74	1,049.39	57.35	19.299	
10,500.00	10,493.93	9,800.00	9,576.40	37.30	34.46	-61.78	404.68	-988.04	1,182.55	1,126.37	56.18	21.049	
10,596.11	10,590.04	9,800.00	9,576.40	37.63	34.46	-61.78	404.68	-988.04	1,258.20	1,203.30	54.90	22.916	
10,600.00	10,593.93	9,800.00	9,576.40	37.65	34.46	-60.89	404.68	-988.04	1,261.32	1,206.46	54.86	22.993	
10,650.00	10,643.85	9,800.00	9,576.40	37.82	34.46	-55.34	404.68	-988.04	1,301.04	1,246.80	54.24	23.987	
10,700.00	10,693.36	9,820.50	9,583.26	37.99	34.47	-49.49	423.99	-988.19	1,339.48	1,285.56	53.93	24.839	
15,200.00	11,163.00	13,720.55	9,613.00	53.66	49.27	-23.13	4,320.71	-1,018.18	1,680.07	1,612.17	67.90	24.744	
15,300.00	11,163.00	13,820.55	9,613.00	54.25	49.90	-23.13	4,420.71	-1,018.95	1,680.07	1,611.42	68.65	24.474	
15,400.00	11,163.00	13,920.55	9,613.00	54.85	50.54	-23.13	4,520.70	-1,019.72	1,680.07	1,610.66	69.41	24.207	
15,500.00	11,163.00	14,020.55	9,613.00	55.45	51.18	-23.13	4,620.70	-1,020.48	1,680.07	1,609.90	70.17	23.942	
15,600.00	11,163.00	14,120.55	9,613.00	56.06	51.83	-23.13	4,720.70	-1,021.25	1,680.07	1,609.12	70.94	23.681	
15,700.00	11,163.00	14,220.55	9,613.00	56.68	52.49	-23.13	4,820.69	-1,022.02	1,680.07	1,608.34	71.73	23.423	
15,800.00	11,163.00	14,320.55	9,613.00	57.31	53.15	-23.13	4,920.69	-1,022.79	1,680.07	1,607.55	72.52	23.168	
15,900.00	11,163.00	14,420.55	9,613.00	57.94	53.82	-23.13	5,020.69	-1,023.56	1,680.07	1,606.76	73.31	22.917	
16,000.00	11,163.00	14,520.55	9,613.00	58.57	54.49	-23.13	5,120.69	-1,024.33	1,680.07	1,605.95	74.12	22.668	
16,100.00	11,163.00	14,620.55	9,613.00	59.22	55.17	-23.13	5,220.68	-1,025.10	1,680.07	1,605.14	74.93	22.423	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C01) Robin Fed 113H - Permit - APD-Rev01												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)												Offset Well Error:	0.00 usft
Reference												Rule Assigned:	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
16,200.00	11,163.00	14,720.55	9,613.00	59.86	55.85	-23.13	5,320.68	-1,025.87	1,680.07	1,604.33	75.74	22.181	
16,300.00	11,163.00	14,820.55	9,613.00	60.52	56.54	-23.13	5,420.68	-1,026.64	1,680.07	1,603.50	76.57	21.943	
16,400.00	11,163.00	14,920.55	9,613.00	61.18	57.24	-23.13	5,520.67	-1,027.41	1,680.07	1,602.67	77.39	21.708	
16,500.00	11,163.00	15,020.55	9,613.00	61.84	57.94	-23.13	5,620.67	-1,028.18	1,680.07	1,601.84	78.23	21.476	
16,600.00	11,163.00	15,120.55	9,613.00	62.51	58.64	-23.13	5,720.67	-1,028.95	1,680.07	1,601.00	79.07	21.248	
16,700.00	11,163.00	15,220.55	9,613.00	63.18	59.35	-23.13	5,820.66	-1,029.72	1,680.07	1,600.15	79.92	21.023	
16,800.00	11,163.00	15,320.55	9,613.00	63.86	60.06	-23.13	5,920.66	-1,030.49	1,680.07	1,599.30	80.77	20.801	
16,900.00	11,163.00	15,420.55	9,613.00	64.54	60.77	-23.13	6,020.66	-1,031.26	1,680.07	1,598.44	81.63	20.582	
17,000.00	11,163.00	15,520.55	9,613.00	65.23	61.49	-23.13	6,120.66	-1,032.03	1,680.07	1,597.58	82.49	20.367	
17,100.00	11,163.00	15,620.55	9,613.00	65.92	62.22	-23.13	6,220.65	-1,032.80	1,680.07	1,596.71	83.36	20.155	
17,200.00	11,163.00	15,720.55	9,613.00	66.62	62.94	-23.13	6,320.65	-1,033.57	1,680.07	1,595.84	84.23	19.946	
17,300.00	11,163.00	15,820.55	9,613.00	67.32	63.67	-23.13	6,420.65	-1,034.34	1,680.07	1,594.96	85.11	19.741	
17,400.00	11,163.00	15,920.55	9,613.00	68.02	64.41	-23.13	6,520.64	-1,035.11	1,680.07	1,594.08	85.99	19.539	
17,500.00	11,163.00	16,020.55	9,613.00	68.73	65.14	-23.13	6,620.64	-1,035.88	1,680.07	1,593.20	86.87	19.339	
17,600.00	11,163.00	16,120.55	9,613.00	69.44	65.88	-23.13	6,720.64	-1,036.65	1,680.07	1,592.31	87.76	19.143	
17,700.00	11,163.00	16,220.55	9,613.00	70.15	66.63	-23.13	6,820.64	-1,037.41	1,680.07	1,591.41	88.66	18.950	
17,800.00	11,163.00	16,320.55	9,613.00	70.87	67.37	-23.13	6,920.63	-1,038.18	1,680.07	1,590.51	89.56	18.760	
17,900.00	11,163.00	16,420.55	9,613.00	71.59	68.12	-23.13	7,020.63	-1,038.95	1,680.07	1,589.61	90.46	18.573	
18,000.00	11,163.00	16,520.55	9,613.00	72.31	68.87	-23.13	7,120.63	-1,039.72	1,680.07	1,588.71	91.36	18.389	
18,100.00	11,163.00	16,620.55	9,613.00	73.04	69.63	-23.13	7,220.62	-1,040.49	1,680.07	1,587.80	92.27	18.208	
18,200.00	11,163.00	16,720.55	9,613.00	73.77	70.38	-23.13	7,320.62	-1,041.26	1,680.07	1,586.88	93.19	18.029	
18,300.00	11,163.00	16,820.55	9,613.00	74.50	71.14	-23.13	7,420.62	-1,042.03	1,680.07	1,585.97	94.10	17.854	
18,400.00	11,163.00	16,920.55	9,613.00	75.24	71.91	-23.13	7,520.61	-1,042.80	1,680.07	1,585.05	95.02	17.681	
18,500.00	11,163.00	17,020.55	9,613.00	75.97	72.67	-23.13	7,620.61	-1,043.57	1,680.07	1,584.12	95.94	17.511	
18,600.00	11,163.00	17,120.55	9,613.00	76.72	73.44	-23.13	7,720.61	-1,044.34	1,680.07	1,583.20	96.87	17.343	
18,700.00	11,163.00	17,220.55	9,613.00	77.46	74.20	-23.13	7,820.61	-1,045.11	1,680.07	1,582.27	97.80	17.179	
18,800.00	11,163.00	17,320.55	9,613.00	78.21	74.98	-23.13	7,920.60	-1,045.88	1,680.07	1,581.34	98.73	17.017	
18,900.00	11,163.00	17,420.55	9,613.00	78.95	75.75	-23.13	8,020.60	-1,046.65	1,680.07	1,580.40	99.67	16.857	
19,000.00	11,163.00	17,520.55	9,613.00	79.71	76.52	-23.13	8,120.60	-1,047.42	1,680.07	1,579.46	100.60	16.700	
19,100.00	11,163.00	17,620.55	9,613.00	80.46	77.30	-23.13	8,220.59	-1,048.19	1,680.07	1,578.52	101.54	16.545	
19,200.00	11,163.00	17,720.55	9,613.00	81.21	78.08	-23.13	8,320.59	-1,048.96	1,680.07	1,577.58	102.49	16.393	
19,300.00	11,163.00	17,820.55	9,613.00	81.97	78.86	-23.13	8,420.59	-1,049.73	1,680.07	1,576.63	103.43	16.243	
19,400.00	11,163.00	17,920.55	9,613.00	82.73	79.64	-23.13	8,520.58	-1,050.50	1,680.07	1,575.69	104.38	16.095	
19,500.00	11,163.00	18,020.55	9,613.00	83.49	80.42	-23.13	8,620.58	-1,051.27	1,680.07	1,574.74	105.33	15.950	
19,600.00	11,163.00	18,120.55	9,613.00	84.26	81.21	-23.13	8,720.58	-1,052.04	1,680.07	1,573.78	106.29	15.807	
19,700.00	11,163.00	18,220.55	9,613.00	85.02	82.00	-23.13	8,820.58	-1,052.81	1,680.07	1,572.83	107.24	15.666	
19,800.00	11,163.00	18,320.55	9,613.00	85.79	82.78	-23.13	8,920.57	-1,053.58	1,680.07	1,571.87	108.20	15.528	
19,900.00	11,163.00	18,420.55	9,613.00	86.56	83.57	-23.13	9,020.57	-1,054.35	1,680.07	1,570.91	109.16	15.391	
20,000.00	11,163.00	18,520.55	9,613.00	87.33	84.37	-23.13	9,120.57	-1,055.11	1,680.07	1,569.95	110.12	15.257	
20,100.00	11,163.00	18,620.55	9,613.00	88.11	85.16	-23.13	9,220.56	-1,055.88	1,680.07	1,568.98	111.08	15.124	
20,200.00	11,163.00	18,720.55	9,613.00	88.88	85.95	-23.13	9,320.56	-1,056.65	1,680.07	1,568.02	112.05	14.994	
20,300.00	11,163.00	18,820.55	9,613.00	89.66	86.75	-23.13	9,420.56	-1,057.42	1,680.07	1,567.05	113.02	14.865	
20,400.00	11,163.00	18,920.55	9,613.00	90.44	87.55	-23.13	9,520.56	-1,058.19	1,680.07	1,566.08	113.99	14.739	
20,500.00	11,163.00	19,020.55	9,613.00	91.21	88.35	-23.13	9,620.55	-1,058.96	1,680.07	1,565.11	114.96	14.614	
20,600.00	11,163.00	19,120.55	9,613.00	92.00	89.15	-23.13	9,720.55	-1,059.73	1,680.07	1,564.13	115.93	14.492	
20,700.00	11,163.00	19,220.55	9,613.00	92.78	89.95	-23.13	9,820.55	-1,060.50	1,680.07	1,563.16	116.91	14.371	
20,800.00	11,163.00	19,320.55	9,613.00	93.56	90.75	-23.13	9,920.54	-1,061.27	1,680.07	1,562.18	117.89	14.251	
20,900.00	11,163.00	19,420.55	9,613.00	94.35	91.55	-23.13	10,020.54	-1,062.04	1,680.07	1,561.20	118.87	14.134	
21,000.00	11,163.00	19,520.55	9,613.00	95.14	92.36	-23.13	10,120.54	-1,062.81	1,680.07	1,560.22	119.85	14.018	
21,100.00	11,163.00	19,620.55	9,613.00	95.92	93.16	-23.13	10,220.53	-1,063.58	1,680.07	1,559.24	120.83	13.904	
21,200.00	11,163.00	19,720.55	9,613.00	96.71	93.97	-23.13	10,320.53	-1,064.35	1,680.07	1,558.25	121.81	13.792	
21,300.00	11,163.00	19,820.55	9,613.00	97.51	94.78	-23.13	10,420.53	-1,065.12	1,680.07	1,557.27	122.80	13.682	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C01) Robin Fed 113H - Permit - APD-Rev01													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
21,400.00	11,163.00	19,920.55	9,613.00	98.30	95.58	-23.13	10,520.53	-1,065.89	1,680.07	1,556.28	123.79	13.572		
21,434.93	11,163.00	19,955.48	9,613.00	98.57	95.87	-23.13	10,555.46	-1,066.16	1,680.07	1,555.94	124.13	13.535		
21,436.63	11,163.00	19,955.78	9,613.00	98.59	95.87	-23.13	10,555.76	-1,066.16	1,680.07	1,555.92	124.15	13.533		



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C02) Robin Fed 125H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
1,800.00	1,799.65	1,801.91	1,800.15	6.17	6.14	71.73	305.16	-71.28	306.69	294.39	12.31	24.920	
1,900.00	1,899.58	1,901.66	1,899.39	6.52	6.49	70.52	301.73	-80.74	303.80	290.79	13.01	23.351	
2,000.00	1,999.51	2,001.41	1,998.63	6.87	6.85	69.29	298.30	-90.21	301.05	287.34	13.72	21.948	
2,100.00	2,099.45	2,101.16	2,097.87	7.22	7.20	68.04	294.87	-99.67	298.44	284.02	14.42	20.691	
2,200.00	2,199.38	2,200.91	2,197.11	7.58	7.56	66.77	291.44	-109.14	295.98	280.84	15.13	19.558	
2,300.00	2,299.31	2,300.66	2,296.36	7.93	7.91	65.47	288.01	-118.60	293.66	277.82	15.84	18.534	
2,400.00	2,399.24	2,400.41	2,395.60	8.29	8.27	64.16	284.58	-128.06	291.50	274.94	16.56	17.606	
2,500.00	2,499.17	2,500.16	2,494.84	8.65	8.63	62.82	281.15	-137.53	289.50	272.22	17.27	16.763	
2,600.00	2,599.10	2,599.91	2,594.08	9.00	8.98	61.47	277.72	-146.99	287.65	269.66	17.98	15.994	
2,700.00	2,699.03	2,699.66	2,693.32	9.36	9.34	60.10	274.29	-156.46	285.97	267.27	18.70	15.292	
2,800.00	2,798.96	2,799.41	2,792.56	9.71	9.70	58.72	270.86	-165.92	284.45	265.03	19.42	14.650	
2,900.00	2,898.89	2,899.16	2,891.80	10.07	10.06	57.32	267.43	-175.39	283.10	262.97	20.13	14.062	
3,000.00	2,998.83	2,998.91	2,991.04	10.43	10.42	55.91	264.00	-184.85	281.92	261.07	20.85	13.522	
3,100.00	3,098.76	3,098.66	3,090.28	10.78	10.78	54.49	260.57	-194.32	280.91	259.35	21.57	13.025	
3,200.00	3,198.69	3,198.41	3,189.52	11.14	11.15	53.06	257.14	-203.78	280.08	257.80	22.29	12.568	
3,300.00	3,298.62	3,298.16	3,288.76	11.50	11.51	51.63	253.71	-213.25	279.43	256.43	23.00	12.147	
3,400.00	3,398.55	3,397.91	3,388.00	11.86	11.87	50.18	250.28	-222.71	278.95	255.23	23.72	11.759	
3,500.00	3,498.48	3,497.66	3,487.24	12.21	12.23	48.73	246.85	-232.18	278.65	254.21	24.44	11.402	
3,600.00	3,598.41	3,597.41	3,586.48	12.57	12.59	47.29	243.42	-241.64	278.53	253.37	25.16	11.071	
3,616.92	3,615.32	3,614.29	3,603.28	12.63	12.65	47.04	242.84	-243.24	278.53	253.25	25.28	11.018 CC	
3,700.00	3,698.34	3,697.16	3,685.73	12.93	12.96	45.84	239.99	-251.10	278.59	252.71	25.88	10.766	
3,800.00	3,798.27	3,796.91	3,784.97	13.29	13.32	44.39	236.56	-260.57	278.83	252.23	26.60	10.484	
3,900.00	3,898.21	3,896.66	3,884.21	13.65	13.68	42.94	233.13	-270.03	279.25	251.93	27.31	10.224	
4,000.00	3,998.14	3,996.41	3,983.45	14.00	14.04	41.50	229.70	-279.50	279.84	251.81	28.03	9.983 ES	
4,100.00	4,098.07	4,096.16	4,082.69	14.36	14.41	40.07	226.27	-288.96	280.61	251.86	28.75	9.761	
4,200.00	4,198.00	4,195.91	4,181.93	14.72	14.77	38.65	222.84	-298.43	281.56	252.09	29.47	9.555	
4,300.00	4,297.93	4,295.66	4,281.17	15.08	15.13	37.23	219.41	-307.89	282.68	252.50	30.18	9.365	
4,400.00	4,397.86	4,395.41	4,380.41	15.44	15.50	35.83	215.98	-317.36	283.97	253.07	30.90	9.189	
4,500.00	4,497.79	4,495.16	4,479.65	15.80	15.86	34.44	212.55	-326.82	285.43	253.81	31.62	9.027	
4,600.00	4,597.72	4,594.91	4,578.89	16.15	16.23	33.07	209.12	-336.29	287.06	254.73	32.34	8.878	
4,700.00	4,697.65	4,694.66	4,678.13	16.51	16.59	31.71	205.69	-345.75	288.85	255.80	33.05	8.739	
4,800.00	4,797.59	4,794.41	4,777.37	16.87	16.95	30.37	202.26	-355.22	290.80	257.04	33.77	8.612	
4,900.00	4,897.52	4,894.16	4,876.61	17.23	17.32	29.05	198.83	-364.68	292.91	258.43	34.48	8.494	
5,000.00	4,997.45	4,993.91	4,975.86	17.59	17.68	27.75	195.40	-374.14	295.18	259.98	35.20	8.386	
5,100.00	5,097.38	5,093.66	5,075.10	17.95	18.05	26.47	191.97	-383.61	297.59	261.68	35.91	8.286	
5,200.00	5,197.31	5,193.41	5,174.34	18.31	18.41	25.21	188.54	-393.07	300.15	263.52	36.63	8.194	
5,300.00	5,297.24	5,293.16	5,273.58	18.67	18.78	23.97	185.11	-402.54	302.86	265.51	37.34	8.110	
5,400.00	5,397.17	5,392.91	5,372.82	19.02	19.14	22.75	181.68	-412.00	305.70	267.64	38.06	8.032	
5,500.00	5,497.10	5,492.66	5,472.06	19.38	19.51	21.56	178.25	-421.47	308.68	269.91	38.77	7.961	
5,600.00	5,597.03	5,592.41	5,571.30	19.74	19.87	20.39	174.82	-430.93	311.79	272.30	39.49	7.896	
5,700.00	5,696.97	5,692.16	5,670.54	20.10	20.24	19.24	171.39	-440.40	315.03	274.83	40.20	7.837	
5,800.00	5,796.90	5,791.91	5,769.78	20.46	20.60	18.12	167.96	-449.86	318.39	277.48	40.91	7.782	
5,900.00	5,896.83	5,891.66	5,869.02	20.82	20.96	17.02	164.53	-459.33	321.88	280.25	41.63	7.732	
6,000.00	5,996.76	5,991.41	5,968.26	21.18	21.33	15.95	161.10	-468.79	325.47	283.13	42.34	7.687	
6,100.00	6,096.69	6,091.16	6,067.50	21.54	21.69	14.90	157.67	-478.25	329.19	286.13	43.05	7.646	
6,200.00	6,196.62	6,190.91	6,166.74	21.90	22.06	13.87	154.24	-487.72	333.01	289.24	43.77	7.609	
6,300.00	6,296.55	6,290.66	6,265.99	22.25	22.42	12.86	150.81	-497.18	336.93	292.45	44.48	7.575	
6,400.00	6,396.48	6,390.41	6,365.23	22.61	22.79	11.88	147.38	-506.65	340.96	295.77	45.19	7.545	
6,500.00	6,496.41	6,490.16	6,464.47	22.97	23.16	10.93	143.95	-516.11	345.08	299.18	45.90	7.518	
6,600.00	6,596.35	6,589.91	6,563.71	23.33	23.52	9.99	140.52	-525.58	349.30	302.68	46.62	7.493	
6,700.00	6,696.28	6,689.66	6,662.95	23.69	23.89	9.08	137.09	-535.04	353.61	306.28	47.33	7.471	
6,800.00	6,796.21	6,789.41	6,762.19	24.05	24.25	8.19	133.66	-544.51	358.00	309.96	48.04	7.452	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C02) Robin Fed 125H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
6,900.00	6,896.14	6,889.16	6,861.43	24.41	24.62	7.32	130.23	-553.97	362.48	313.73	48.75	7.435	
7,000.00	6,996.07	6,988.91	6,960.67	24.77	24.98	6.47	126.80	-563.44	367.05	317.58	49.46	7.420	
7,100.00	7,096.00	7,088.66	7,059.91	25.13	25.35	5.65	123.37	-572.90	371.69	321.51	50.18	7.408	
7,200.00	7,195.93	7,188.41	7,159.15	25.49	25.71	4.84	119.94	-582.37	376.40	325.51	50.89	7.397	
7,300.00	7,295.86	7,288.16	7,258.39	25.85	26.08	4.06	116.51	-591.83	381.19	329.59	51.60	7.387	
7,400.00	7,395.79	7,387.91	7,357.63	26.21	26.44	3.29	113.08	-601.29	386.05	333.74	52.31	7.380	
7,500.00	7,495.73	7,487.66	7,456.87	26.57	26.81	2.54	109.65	-610.76	390.98	337.95	53.03	7.373	
7,600.00	7,595.66	7,587.41	7,556.12	26.92	27.17	1.81	106.22	-620.22	395.97	342.23	53.74	7.368	
7,700.00	7,695.59	7,687.16	7,655.36	27.28	27.54	1.10	102.79	-629.69	401.02	346.57	54.45	7.365	
7,800.00	7,795.52	7,786.91	7,754.60	27.64	27.90	0.41	99.36	-639.15	406.13	350.97	55.16	7.362	
7,900.00	7,895.45	7,886.66	7,853.84	28.00	28.27	-0.26	95.93	-648.62	411.30	355.43	55.87	7.361	
8,000.00	7,995.38	7,986.41	7,953.08	28.36	28.64	-0.92	92.50	-658.08	416.53	359.94	56.59	7.361	
8,100.00	8,095.31	8,086.16	8,052.32	28.72	29.00	-1.56	89.07	-667.55	421.81	364.51	57.30	7.361	
8,200.00	8,195.24	8,185.91	8,151.56	29.08	29.37	-2.19	85.64	-677.01	427.14	369.13	58.01	7.363	
8,300.00	8,295.17	8,285.66	8,250.80	29.44	29.73	-2.80	82.21	-686.48	432.53	373.80	58.72	7.365	
8,400.00	8,395.11	8,385.41	8,350.04	29.80	30.10	-3.40	78.78	-695.94	437.95	378.52	59.44	7.368	
8,500.00	8,495.04	8,485.16	8,449.28	30.16	30.46	-3.98	75.35	-705.41	443.43	383.28	60.15	7.372	
8,600.00	8,594.97	8,584.91	8,548.52	30.52	30.83	-4.54	71.92	-714.87	448.95	388.09	60.86	7.376	
8,700.00	8,694.90	8,684.66	8,647.76	30.88	31.20	-5.10	68.49	-724.33	454.51	392.94	61.58	7.381	
8,800.00	8,794.83	8,784.41	8,747.00	31.24	31.56	-5.64	65.06	-733.80	460.12	397.83	62.29	7.387	
8,900.00	8,894.76	8,884.16	8,846.25	31.60	31.93	-6.16	61.63	-743.26	465.76	402.76	63.00	7.393	
9,000.00	8,994.69	8,983.91	8,945.49	31.95	32.29	-6.68	58.20	-752.73	471.44	407.73	63.71	7.399	
9,100.00	9,094.62	9,083.66	9,044.73	32.31	32.66	-7.18	54.77	-762.19	477.16	412.74	64.43	7.406	
9,200.00	9,194.55	9,183.41	9,143.97	32.67	33.02	-7.67	51.34	-771.66	482.92	417.78	65.14	7.414	
9,300.00	9,294.49	9,283.16	9,243.21	33.03	33.39	-8.15	47.91	-781.12	488.71	422.85	65.85	7.421	
9,400.00	9,394.42	9,382.91	9,342.45	33.39	33.76	-8.61	44.48	-790.59	494.53	427.96	66.57	7.429	
9,500.00	9,494.35	9,482.66	9,441.69	33.75	34.12	-9.07	41.05	-800.05	500.38	433.10	67.28	7.437	
9,600.00	9,594.28	9,580.54	9,549.07	34.11	34.52	-9.53	37.53	-809.77	505.81	437.77	68.05	7.433	
9,700.00	9,694.21	9,704.84	9,663.09	34.47	34.93	-9.90	34.84	-817.20	508.71	439.88	68.83	7.391	
9,800.00	9,794.14	9,819.28	9,777.44	34.83	35.34	-10.14	33.31	-821.42	508.77	439.21	69.56	7.314	
9,900.00	9,894.07	9,930.92	9,889.07	35.19	35.73	-10.27	32.93	-822.47	506.05	435.78	70.26	7.202	
10,000.00	9,994.00	10,026.01	9,984.16	35.55	36.05	-10.31	33.14	-822.55	502.50	431.53	70.96	7.081	
10,057.34	10,051.31	10,069.94	10,027.98	35.76	36.20	-10.03	35.85	-823.64	501.72	430.36	71.36	7.030	
10,064.29	10,058.25	10,075.24	10,033.24	35.78	36.21	-9.98	36.38	-823.85	501.73	430.32	71.41	7.026	
10,100.00	10,093.94	10,100.00	10,057.78	35.91	36.30	-9.64	39.49	-825.10	502.34	430.71	71.63	7.013	
10,206.07	10,200.00	10,179.84	10,135.51	36.28	36.56	-89.20	56.16	-831.76	510.02	437.84	72.19	7.065	
10,300.00	10,293.93	10,250.00	10,201.18	36.61	36.77	-86.68	78.96	-840.88	523.88	451.35	72.52	7.223	
10,400.00	10,393.93	10,300.00	10,245.91	36.95	36.92	-84.48	99.67	-849.17	545.42	473.19	72.23	7.551	
10,500.00	10,493.93	10,360.36	10,297.06	37.30	37.07	-81.47	129.38	-861.05	574.74	502.91	71.82	8.002	
10,596.11	10,590.04	10,400.00	10,328.70	37.63	37.17	-79.34	151.54	-869.91	610.61	539.89	70.72	8.634	
10,600.00	10,593.93	10,400.00	10,328.70	37.65	37.17	-78.73	151.54	-869.91	612.25	541.62	70.63	8.669	
10,650.00	10,643.85	10,431.72	10,352.78	37.82	37.23	-74.81	170.70	-877.58	633.28	562.98	70.30	9.009	
10,700.00	10,693.36	10,450.00	10,366.13	37.99	37.27	-71.67	182.30	-882.21	655.19	585.65	69.54	9.422	
10,750.00	10,742.08	10,477.38	10,385.36	38.16	37.32	-68.34	200.39	-889.45	677.45	608.41	69.04	9.812	
10,800.00	10,789.65	10,500.00	10,400.53	38.32	37.36	-65.39	215.97	-895.68	699.83	631.43	68.40	10.231	
10,850.00	10,835.70	10,522.91	10,415.21	38.48	37.40	-62.65	232.30	-902.21	722.05	654.27	67.79	10.652	
10,900.00	10,879.88	10,550.00	10,431.64	38.62	37.44	-60.10	252.30	-910.21	743.91	676.59	67.33	11.049	
10,950.00	10,921.85	10,568.22	10,442.11	38.75	37.46	-57.90	266.14	-915.75	765.15	698.49	66.66	11.479	
11,000.00	10,961.30	10,600.00	10,459.22	38.87	37.50	-55.86	291.00	-925.69	785.77	719.35	66.42	11.831	
11,050.00	10,997.92	10,615.35	10,466.95	38.99	37.52	-54.12	303.32	-930.60	805.28	739.49	65.80	12.239	
11,100.00	11,031.44	10,650.00	10,483.32	39.09	37.55	-52.59	331.97	-941.15	823.39	757.67	65.73	12.527	
11,150.00	11,061.60	10,689.35	10,500.09	39.20	37.58	-51.30	365.87	-951.99	839.58	773.80	65.78	12.764	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C02) Robin Fed 125H - Permit - APD-Rev01													Offset Site Error:	0.00 usft
Survey Program:		0-MWD+IFR1+SAG+FDIR (SQC2)					Rule Assigned:				Offset Well Error:	0.00 usft		
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance			Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
11,200.00	11,088.17	10,726.97	10,514.24	39.30	37.60	-50.23	399.49	-961.17	853.75	787.95	65.80	12.976		
11,250.00	11,110.95	10,764.99	10,526.62	39.39	37.62	-49.37	434.51	-969.25	865.81	799.98	65.83	13.152		
11,300.00	11,129.76	10,800.00	10,536.25	39.48	37.64	-48.69	467.57	-975.57	875.71	809.87	65.85	13.299		
11,350.00	11,144.47	10,842.06	10,545.53	39.56	37.64	-48.20	508.11	-981.74	883.37	817.41	65.96	13.392		
11,400.00	11,154.96	10,881.02	10,551.86	39.63	37.65	-47.88	546.30	-986.03	888.75	822.70	66.05	13.456		
11,450.00	11,161.14	10,920.18	10,555.99	39.68	37.65	-47.74	585.13	-988.93	891.82	825.67	66.15	13.483		
11,496.11	11,163.00	10,956.41	10,557.81	39.73	37.65	-47.75	621.29	-990.35	892.59	826.34	66.25	13.473		
11,500.00	11,163.00	10,959.47	10,557.88	39.73	37.65	-47.75	624.34	-990.42	892.57	826.31	66.26	13.471		
11,540.84	11,163.00	10,996.83	10,558.00	39.78	37.67	-47.76	661.70	-990.78	892.54	826.20	66.34	13.454		
11,600.00	11,163.00	11,055.99	10,558.00	39.84	37.74	-47.76	720.86	-991.23	892.53	826.07	66.46	13.430		
11,700.00	11,163.00	11,155.99	10,558.00	39.96	37.86	-47.76	820.86	-991.99	892.53	825.84	66.69	13.384		
11,800.00	11,163.00	11,255.99	10,558.00	40.10	38.00	-47.76	920.85	-992.75	892.52	825.58	66.94	13.333		
11,900.00	11,163.00	11,355.99	10,558.00	40.25	38.16	-47.76	1,020.85	-993.52	892.52	825.29	67.23	13.276		
12,000.00	11,163.00	11,455.99	10,558.00	40.43	38.34	-47.76	1,120.85	-994.28	892.51	824.97	67.54	13.214		
12,100.00	11,163.00	11,555.99	10,558.00	40.62	38.54	-47.76	1,220.85	-995.04	892.50	824.62	67.88	13.147		
12,200.00	11,163.00	11,655.99	10,558.00	40.83	38.75	-47.76	1,320.84	-995.80	892.50	824.24	68.25	13.076		
12,300.00	11,163.00	11,755.99	10,558.00	41.06	38.99	-47.76	1,420.84	-996.56	892.49	823.84	68.65	13.000		
12,400.00	11,163.00	11,855.99	10,558.00	41.31	39.24	-47.76	1,520.84	-997.33	892.49	823.41	69.08	12.920		
12,500.00	11,163.00	11,955.99	10,558.00	41.57	39.50	-47.76	1,620.83	-998.09	892.48	822.95	69.53	12.837		
12,600.00	11,163.00	12,055.99	10,558.00	41.84	39.79	-47.76	1,720.83	-998.85	892.47	822.47	70.00	12.749		
12,700.00	11,163.00	12,155.99	10,558.00	42.14	40.09	-47.76	1,820.83	-999.61	892.47	821.96	70.50	12.658		
12,800.00	11,163.00	12,255.99	10,558.00	42.45	40.41	-47.76	1,920.83	-1,000.37	892.46	821.43	71.03	12.565		
12,900.00	11,163.00	12,355.99	10,558.00	42.77	40.74	-47.76	2,020.82	-1,001.13	892.46	820.88	71.58	12.468		
13,000.00	11,163.00	12,455.99	10,558.00	43.11	41.09	-47.75	2,120.82	-1,001.90	892.45	820.30	72.16	12.368		
13,100.00	11,163.00	12,555.99	10,558.00	43.47	41.45	-47.75	2,220.82	-1,002.66	892.45	819.69	72.75	12.267		
13,200.00	11,163.00	12,655.99	10,558.00	43.83	41.83	-47.75	2,320.81	-1,003.42	892.44	819.07	73.37	12.163		
13,300.00	11,163.00	12,755.99	10,558.00	44.22	42.22	-47.75	2,420.81	-1,004.18	892.43	818.42	74.01	12.058		
13,400.00	11,163.00	12,855.99	10,558.00	44.61	42.63	-47.75	2,520.81	-1,004.94	892.43	817.75	74.68	11.950		
13,500.00	11,163.00	12,955.99	10,558.00	45.02	43.05	-47.75	2,620.81	-1,005.71	892.42	817.06	75.36	11.842		
13,600.00	11,163.00	13,055.99	10,558.00	45.44	43.48	-47.75	2,720.80	-1,006.47	892.42	816.35	76.07	11.732		
13,700.00	11,163.00	13,155.99	10,558.00	45.88	43.92	-47.75	2,820.80	-1,007.23	892.41	815.62	76.79	11.621		
13,800.00	11,163.00	13,255.99	10,558.00	46.32	44.38	-47.75	2,920.80	-1,007.99	892.41	814.87	77.53	11.510		
13,900.00	11,163.00	13,355.99	10,558.00	46.78	44.85	-47.75	3,020.79	-1,008.75	892.40	814.10	78.30	11.398		
14,000.00	11,163.00	13,455.99	10,558.00	47.25	45.33	-47.75	3,120.79	-1,009.51	892.39	813.32	79.08	11.285		
14,100.00	11,163.00	13,555.99	10,558.00	47.73	45.83	-47.75	3,220.79	-1,010.28	892.39	812.51	79.87	11.173		
14,200.00	11,163.00	13,655.99	10,558.00	48.22	46.33	-47.75	3,320.79	-1,011.04	892.38	811.69	80.69	11.060		
14,300.00	11,163.00	13,755.99	10,558.00	48.73	46.85	-47.75	3,420.78	-1,011.80	892.38	810.86	81.52	10.947		
14,400.00	11,163.00	13,855.99	10,558.00	49.24	47.37	-47.75	3,520.78	-1,012.56	892.37	810.00	82.37	10.834		
14,500.00	11,163.00	13,955.99	10,558.00	49.76	47.90	-47.75	3,620.78	-1,013.32	892.36	809.14	83.23	10.722		
14,600.00	11,163.00	14,055.99	10,558.00	50.29	48.45	-47.75	3,720.77	-1,014.09	892.36	808.25	84.11	10.610		
14,700.00	11,163.00	14,155.99	10,558.00	50.83	49.00	-47.75	3,820.77	-1,014.85	892.35	807.35	85.00	10.498		
14,800.00	11,163.00	14,255.99	10,558.00	51.38	49.56	-47.75	3,920.77	-1,015.61	892.35	806.44	85.91	10.388		
14,900.00	11,163.00	14,355.99	10,558.00	51.94	50.13	-47.75	4,020.76	-1,016.37	892.34	805.52	86.83	10.277		
15,000.00	11,163.00	14,455.99	10,558.00	52.51	50.71	-47.75	4,120.76	-1,017.13	892.34	804.58	87.76	10.168		
15,100.00	11,163.00	14,555.99	10,558.00	53.08	51.30	-47.75	4,220.76	-1,017.90	892.33	803.62	88.71	10.059		
15,200.00	11,163.00	14,655.99	10,558.00	53.66	51.90	-47.75	4,320.76	-1,018.66	892.32	802.66	89.66	9.952		
15,300.00	11,163.00	14,755.99	10,558.00	54.25	52.50	-47.75	4,420.75	-1,019.42	892.32	801.68	90.63	9.845		
15,400.00	11,163.00	14,855.99	10,558.00	54.85	53.11	-47.75	4,520.75	-1,020.18	892.31	800.70	91.62	9.740		
15,500.00	11,163.00	14,955.99	10,558.00	55.45	53.73	-47.75	4,620.75	-1,020.94	892.31	799.70	92.61	9.635		
15,600.00	11,163.00	15,055.99	10,558.00	56.06	54.35	-47.75	4,720.74	-1,021.70	892.30	798.69	93.62	9.532		
15,700.00	11,163.00	15,155.99	10,558.00	56.68	54.98	-47.75	4,820.74	-1,022.47	892.30	797.66	94.63	9.429		
15,800.00	11,163.00	15,255.99	10,558.00	57.31	55.62	-47.75	4,920.74	-1,023.23	892.29	796.63	95.66	9.328		

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C02) Robin Fed 125H - Permit - APD-Rev01													Offset Site Error:	0.00 usft
Survey Program:		0-MWD+IFR1+SAG+FDIR (SQC2)					Rule Assigned:				Offset Well Error:	0.00 usft		
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance			Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
15,900.00	11,163.00	15,355.99	10,558.00	57.94	56.26	-47.75	5,020.74	-1,023.99	892.28	795.59	96.69	9.228		
16,000.00	11,163.00	15,455.99	10,558.00	58.57	56.91	-47.74	5,120.73	-1,024.75	892.28	794.54	97.74	9.129		
16,100.00	11,163.00	15,555.99	10,558.00	59.22	57.56	-47.74	5,220.73	-1,025.51	892.27	793.48	98.79	9.032		
16,200.00	11,163.00	15,655.99	10,558.00	59.86	58.22	-47.74	5,320.73	-1,026.28	892.27	792.41	99.85	8.936		
16,300.00	11,163.00	15,755.99	10,558.00	60.52	58.89	-47.74	5,420.72	-1,027.04	892.26	791.33	100.93	8.841		
16,400.00	11,163.00	15,855.99	10,558.00	61.18	59.56	-47.74	5,520.72	-1,027.80	892.26	790.25	102.01	8.747		
16,500.00	11,163.00	15,955.99	10,558.00	61.84	60.23	-47.74	5,620.72	-1,028.56	892.25	789.15	103.09	8.655		
16,600.00	11,163.00	16,055.99	10,558.00	62.51	60.91	-47.74	5,720.72	-1,029.32	892.24	788.05	104.19	8.564		
16,700.00	11,163.00	16,155.99	10,558.00	63.18	61.60	-47.74	5,820.71	-1,030.08	892.24	786.94	105.30	8.474		
16,800.00	11,163.00	16,255.99	10,558.00	63.86	62.29	-47.74	5,920.71	-1,030.85	892.23	785.82	106.41	8.385		
16,900.00	11,163.00	16,355.99	10,558.00	64.54	62.98	-47.74	6,020.71	-1,031.61	892.23	784.70	107.53	8.298		
17,000.00	11,163.00	16,455.99	10,558.00	65.23	63.68	-47.74	6,120.70	-1,032.37	892.22	783.57	108.65	8.212		
17,100.00	11,163.00	16,555.99	10,558.00	65.92	64.38	-47.74	6,220.70	-1,033.13	892.21	782.43	109.78	8.127		
17,200.00	11,163.00	16,655.99	10,558.00	66.62	65.09	-47.74	6,320.70	-1,033.89	892.21	781.29	110.92	8.043		
17,300.00	11,163.00	16,755.99	10,558.00	67.32	65.80	-47.74	6,420.70	-1,034.66	892.20	780.13	112.07	7.961		
17,400.00	11,163.00	16,855.99	10,558.00	68.02	66.51	-47.74	6,520.69	-1,035.42	892.20	778.98	113.22	7.880		
17,500.00	11,163.00	16,955.99	10,558.00	68.73	67.23	-47.74	6,620.69	-1,036.18	892.19	777.81	114.38	7.800		
17,600.00	11,163.00	17,055.99	10,558.00	69.44	67.95	-47.74	6,720.69	-1,036.94	892.19	776.64	115.54	7.722		
17,700.00	11,163.00	17,155.99	10,558.00	70.15	68.67	-47.74	6,820.68	-1,037.70	892.18	775.47	116.71	7.644		
17,800.00	11,163.00	17,255.99	10,558.00	70.87	69.40	-47.74	6,920.68	-1,038.47	892.17	774.29	117.88	7.568		
17,900.00	11,163.00	17,355.99	10,558.00	71.59	70.13	-47.74	7,020.68	-1,039.23	892.17	773.10	119.06	7.493		
18,000.00	11,163.00	17,455.99	10,558.00	72.31	70.86	-47.74	7,120.67	-1,039.99	892.16	771.91	120.25	7.419		
18,100.00	11,163.00	17,555.99	10,558.00	73.04	71.60	-47.74	7,220.67	-1,040.75	892.16	770.72	121.44	7.347		
18,200.00	11,163.00	17,655.99	10,558.00	73.77	72.34	-47.74	7,320.67	-1,041.51	892.15	769.52	122.63	7.275		
18,300.00	11,163.00	17,755.99	10,558.00	74.50	73.08	-47.74	7,420.67	-1,042.27	892.15	768.31	123.83	7.204		
18,400.00	11,163.00	17,855.99	10,558.00	75.24	73.82	-47.74	7,520.66	-1,043.04	892.14	767.10	125.04	7.135		
18,500.00	11,163.00	17,955.99	10,558.00	75.97	74.57	-47.74	7,620.66	-1,043.80	892.13	765.89	126.25	7.067		
18,600.00	11,163.00	18,055.99	10,558.00	76.72	75.32	-47.74	7,720.66	-1,044.56	892.13	764.67	127.46	6.999		
18,700.00	11,163.00	18,155.99	10,558.00	77.46	76.07	-47.74	7,820.65	-1,045.32	892.12	763.45	128.67	6.933		
18,800.00	11,163.00	18,255.99	10,558.00	78.21	76.83	-47.74	7,920.65	-1,046.08	892.12	762.22	129.90	6.868		
18,900.00	11,163.00	18,355.99	10,558.00	78.95	77.58	-47.73	8,020.65	-1,046.85	892.11	760.99	131.12	6.804		
19,000.00	11,163.00	18,455.99	10,558.00	79.71	78.34	-47.73	8,120.65	-1,047.61	892.10	759.76	132.35	6.741		
19,100.00	11,163.00	18,555.99	10,558.00	80.46	79.10	-47.73	8,220.64	-1,048.37	892.10	758.52	133.58	6.678		
19,200.00	11,163.00	18,655.99	10,558.00	81.21	79.87	-47.73	8,320.64	-1,049.13	892.09	757.28	134.82	6.617		
19,300.00	11,163.00	18,755.99	10,558.00	81.97	80.63	-47.73	8,420.64	-1,049.89	892.09	756.03	136.06	6.557		
19,400.00	11,163.00	18,855.99	10,558.00	82.73	81.40	-47.73	8,520.63	-1,050.65	892.08	754.78	137.30	6.497		
19,500.00	11,163.00	18,955.99	10,558.00	83.49	82.17	-47.73	8,620.63	-1,051.42	892.08	753.53	138.55	6.439		
19,600.00	11,163.00	19,055.99	10,558.00	84.26	82.94	-47.73	8,720.63	-1,052.18	892.07	752.27	139.80	6.381		
19,700.00	11,163.00	19,155.99	10,558.00	85.02	83.72	-47.73	8,820.63	-1,052.94	892.06	751.01	141.05	6.324		
19,800.00	11,163.00	19,255.99	10,558.00	85.79	84.49	-47.73	8,920.62	-1,053.70	892.06	749.75	142.31	6.269		
19,900.00	11,163.00	19,355.99	10,558.00	86.56	85.27	-47.73	9,020.62	-1,054.46	892.05	748.49	143.56	6.214		
20,000.00	11,163.00	19,455.99	10,558.00	87.33	86.05	-47.73	9,120.62	-1,055.23	892.05	747.22	144.83	6.159		
20,100.00	11,163.00	19,555.99	10,558.00	88.11	86.83	-47.73	9,220.61	-1,055.99	892.04	745.95	146.09	6.106		
20,200.00	11,163.00	19,655.99	10,558.00	88.88	87.61	-47.73	9,320.61	-1,056.75	892.04	744.68	147.36	6.053		
20,300.00	11,163.00	19,755.99	10,558.00	89.66	88.39	-47.73	9,420.61	-1,057.51	892.03	743.40	148.63	6.002		
20,400.00	11,163.00	19,855.99	10,558.00	90.44	89.18	-47.73	9,520.61	-1,058.27	892.02	742.12	149.90	5.951		
20,500.00	11,163.00	19,955.99	10,558.00	91.21	89.96	-47.73	9,620.60	-1,059.04	892.02	740.84	151.18	5.900		
20,600.00	11,163.00	20,055.99	10,558.00	92.00	90.75	-47.73	9,720.60	-1,059.80	892.01	739.56	152.46	5.851		
20,700.00	11,163.00	20,155.99	10,558.00	92.78	91.54	-47.73	9,820.60	-1,060.56	892.01	738.27	153.74	5.802		
20,800.00	11,163.00	20,255.99	10,558.00	93.56	92.33	-47.73	9,920.59	-1,061.32	892.00	736.98	155.02	5.754		
20,900.00	11,163.00	20,355.99	10,558.00	94.35	93.12	-47.73	10,020.59	-1,062.08	892.00	735.69	156.30	5.707		
21,000.00	11,163.00	20,455.99	10,558.00	95.14	93.92	-47.73	10,120.59	-1,062.84	891.99	734.40	157.59	5.660		

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C02) Robin Fed 125H - Permit - APD-Rev01														Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
21,100.00	11,163.00	20,555.99	10,558.00	95.92	94.71	-47.73	10,220.58	-1,063.61	891.98	733.10	158.88	5.614			
21,200.00	11,163.00	20,655.99	10,558.00	96.71	95.51	-47.73	10,320.58	-1,064.37	891.98	731.81	160.17	5.569			
21,300.00	11,163.00	20,755.99	10,558.00	97.51	96.30	-47.73	10,420.58	-1,065.13	891.97	730.51	161.47	5.524			
21,400.00	11,163.00	20,855.99	10,558.00	98.30	97.10	-47.73	10,520.58	-1,065.89	891.97	729.21	162.76	5.480			
21,435.40	11,163.00	20,891.18	10,558.00	98.58	97.38	-47.73	10,555.76	-1,066.16	891.96	728.74	163.22	5.465			
21,436.63	11,163.00	20,891.18	10,558.00	98.59	97.38	-47.73	10,555.76	-1,066.16	891.97	728.73	163.24	5.464 SF			

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C03) Robin Fed 126H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
1,800.00	1,799.65	1,807.35	1,806.16	6.17	6.14	79.10	300.96	-31.95	298.52	286.21	12.30	24.266	
1,900.00	1,899.58	1,907.21	1,905.73	6.52	6.49	78.54	296.85	-38.29	293.97	280.97	13.00	22.610	
2,000.00	1,999.51	2,007.06	2,005.30	6.87	6.84	77.96	292.74	-44.64	289.45	275.75	13.70	21.122	
2,100.00	2,099.45	2,106.91	2,104.86	7.22	7.19	77.36	288.62	-50.99	284.97	270.56	14.41	19.779	
2,200.00	2,199.38	2,206.77	2,204.43	7.58	7.54	76.75	284.51	-57.33	280.51	265.40	15.11	18.561	
2,300.00	2,299.31	2,306.62	2,304.00	7.93	7.90	76.11	280.40	-63.68	276.09	260.27	15.82	17.452	
2,400.00	2,399.24	2,406.48	2,403.57	8.29	8.25	75.46	276.29	-70.03	271.71	255.18	16.53	16.438	
2,500.00	2,499.17	2,506.33	2,503.14	8.65	8.61	74.78	272.18	-76.37	267.36	250.12	17.24	15.509	
2,600.00	2,599.10	2,606.19	2,602.70	9.00	8.96	74.08	268.06	-82.72	263.05	245.10	17.95	14.655	
2,700.00	2,699.03	2,706.04	2,702.27	9.36	9.32	73.36	263.95	-89.07	258.78	240.12	18.66	13.867	
2,800.00	2,798.96	2,805.90	2,801.84	9.71	9.68	72.61	259.84	-95.42	254.55	235.18	19.37	13.139	
2,900.00	2,898.89	2,905.75	2,901.41	10.07	10.03	71.84	255.73	-101.76	250.37	230.28	20.09	12.464	
3,000.00	2,998.83	3,005.61	3,000.97	10.43	10.39	71.04	251.62	-108.11	246.23	225.43	20.80	11.838	
3,100.00	3,098.76	3,105.46	3,100.54	10.78	10.75	70.21	247.50	-114.46	242.15	220.63	21.52	11.254	
3,200.00	3,198.69	3,205.31	3,200.11	11.14	11.11	69.36	243.39	-120.80	238.11	215.88	22.23	10.711	
3,300.00	3,298.62	3,305.17	3,299.68	11.50	11.47	68.48	239.28	-127.15	234.13	211.19	22.95	10.203	
3,400.00	3,398.55	3,405.02	3,399.25	11.86	11.82	67.56	235.17	-133.50	230.21	206.55	23.66	9.728	
3,500.00	3,498.48	3,504.88	3,498.81	12.21	12.18	66.62	231.06	-139.84	226.35	201.97	24.38	9.284	
3,600.00	3,598.41	3,604.73	3,598.38	12.57	12.54	65.64	226.94	-146.19	222.55	197.46	25.10	8.867	
3,700.00	3,698.34	3,704.59	3,697.95	12.93	12.90	64.63	222.83	-152.54	218.82	193.01	25.82	8.476	
3,800.00	3,798.27	3,804.44	3,797.52	13.29	13.26	63.58	218.72	-158.89	215.16	188.63	26.54	8.109	
3,900.00	3,898.21	3,904.30	3,897.08	13.65	13.62	62.50	214.61	-165.23	211.58	184.32	27.25	7.763	
4,000.00	3,998.14	4,004.15	3,996.65	14.00	13.98	61.39	210.50	-171.58	208.07	180.10	27.97	7.438	
4,100.00	4,098.07	4,104.01	4,096.22	14.36	14.34	60.23	206.38	-177.93	204.64	175.95	28.69	7.132	
4,200.00	4,198.00	4,203.86	4,195.79	14.72	14.70	59.04	202.27	-184.27	201.30	171.89	29.41	6.844	
4,300.00	4,297.93	4,303.71	4,295.36	15.08	15.07	57.80	198.16	-190.62	198.05	167.92	30.13	6.573	
4,400.00	4,397.86	4,403.57	4,394.92	15.44	15.43	56.53	194.05	-196.97	194.90	164.04	30.85	6.317	
4,500.00	4,497.79	4,503.42	4,494.49	15.80	15.79	55.21	189.94	-203.31	191.84	160.27	31.57	6.076	
4,600.00	4,597.72	4,603.28	4,594.06	16.15	16.15	53.86	185.83	-209.66	188.89	156.60	32.29	5.849	
4,700.00	4,697.65	4,703.13	4,693.63	16.51	16.51	52.46	181.71	-216.01	186.05	153.04	33.01	5.635	
4,800.00	4,797.59	4,802.99	4,793.19	16.87	16.87	51.01	177.60	-222.36	183.32	149.59	33.73	5.434	
4,900.00	4,897.52	4,902.84	4,892.76	17.23	17.23	49.53	173.49	-228.70	180.72	146.26	34.46	5.245	
5,000.00	4,997.45	5,002.70	4,992.33	17.59	17.59	48.00	169.38	-235.05	178.23	143.06	35.18	5.067	
5,100.00	5,097.38	5,102.55	5,091.90	17.95	17.96	46.43	165.27	-241.40	175.88	139.99	35.90	4.900	
5,200.00	5,197.31	5,202.41	5,191.47	18.31	18.32	44.82	161.15	-247.74	173.67	137.05	36.62	4.743	
5,300.00	5,297.24	5,302.26	5,291.03	18.67	18.68	43.17	157.04	-254.09	171.59	134.25	37.34	4.596	
5,400.00	5,397.17	5,402.12	5,390.60	19.02	19.04	41.49	152.93	-260.44	169.66	131.61	38.06	4.458	
5,500.00	5,497.10	5,501.97	5,490.17	19.38	19.40	39.76	148.82	-266.78	167.88	129.11	38.78	4.330	
5,600.00	5,597.03	5,601.82	5,589.74	19.74	19.77	38.00	144.71	-273.13	166.26	126.77	39.50	4.210	
5,700.00	5,696.97	5,701.68	5,689.30	20.10	20.13	36.20	140.59	-279.48	164.80	124.59	40.21	4.098	
5,800.00	5,796.90	5,801.53	5,788.87	20.46	20.49	34.38	136.48	-285.82	163.50	122.57	40.93	3.994	
5,900.00	5,896.83	5,901.39	5,888.44	20.82	20.85	32.53	132.37	-292.17	162.37	120.73	41.65	3.899	
6,000.00	5,996.76	6,001.24	5,988.01	21.18	21.21	30.65	128.26	-298.52	161.42	119.05	42.37	3.810	
6,100.00	6,096.69	6,101.10	6,087.58	21.54	21.58	28.76	124.15	-304.87	160.64	117.56	43.08	3.729	
6,200.00	6,196.62	6,200.95	6,187.14	21.90	21.94	26.84	120.03	-311.21	160.04	116.24	43.80	3.654	
6,300.00	6,296.55	6,300.81	6,286.71	22.25	22.30	24.92	115.92	-317.56	159.61	115.10	44.51	3.586	
6,400.00	6,396.48	6,400.66	6,386.28	22.61	22.66	22.99	111.81	-323.91	159.37	114.14	45.23	3.524	
6,482.43	6,478.86	6,482.97	6,468.35	22.91	22.96	21.39	108.42	-329.14	159.31	113.49	45.82	3.477	
6,500.00	6,496.41	6,500.52	6,485.85	22.97	23.03	21.05	107.70	-330.25	159.31	113.37	45.94	3.468	
6,600.00	6,596.35	6,600.37	6,585.41	23.33	23.39	19.12	103.59	-336.60	159.44	112.78	46.65	3.417	
6,700.00	6,696.28	6,700.22	6,684.98	23.69	23.75	17.19	99.48	-342.95	159.74	112.37	47.37	3.372	
6,800.00	6,796.21	6,800.08	6,784.55	24.05	24.11	15.27	95.36	-349.29	160.23	112.15	48.08	3.333	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C03) Robin Fed 126H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Rule Assigned:		Distance		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
6,900.00	6,896.14	6,899.93	6,884.12	24.41	24.48	13.36	91.25	-355.64	160.89	112.10	48.79	3.298	
7,000.00	6,996.07	6,999.79	6,983.69	24.77	24.84	11.47	87.14	-361.99	161.74	112.24	49.50	3.267	
7,100.00	7,096.00	7,099.64	7,083.25	25.13	25.20	9.60	83.03	-368.34	162.75	112.54	50.21	3.242	
7,200.00	7,195.93	7,199.50	7,182.82	25.49	25.56	7.76	78.92	-374.68	163.94	113.02	50.92	3.220	
7,300.00	7,295.86	7,299.35	7,282.39	25.85	25.93	5.95	74.80	-381.03	165.30	113.67	51.63	3.202	
7,400.00	7,395.79	7,399.21	7,381.96	26.21	26.29	4.17	70.69	-387.38	166.81	114.48	52.34	3.187	
7,500.00	7,495.73	7,499.06	7,481.52	26.57	26.65	2.42	66.58	-393.72	168.49	115.45	53.04	3.176	
7,600.00	7,595.66	7,598.92	7,581.09	26.92	27.01	0.70	62.47	-400.07	170.32	116.57	53.75	3.169	
7,700.00	7,695.59	7,698.77	7,680.66	27.28	27.38	-0.97	58.36	-406.42	172.30	117.84	54.46	3.164	
7,800.00	7,795.52	7,801.19	7,782.83	27.64	27.75	-2.51	54.51	-412.35	173.92	118.73	55.19	3.152	
7,900.00	7,895.45	7,904.84	7,886.38	28.00	28.12	-3.50	52.07	-416.12	173.60	117.70	55.90	3.105	
8,000.00	7,995.38	8,008.50	7,990.03	28.36	28.49	-3.92	51.16	-417.53	171.17	114.57	56.60	3.024	
8,100.00	8,095.31	8,108.79	8,090.31	28.72	28.83	-4.01	51.15	-417.54	167.48	110.19	57.29	2.923	
8,200.00	8,195.24	8,208.72	8,190.24	29.08	29.16	-4.10	51.15	-417.54	163.78	105.80	57.99	2.825	
8,300.00	8,295.17	8,308.65	8,290.17	29.44	29.49	-4.20	51.15	-417.54	160.08	101.40	58.68	2.728	
8,400.00	8,395.11	8,408.58	8,390.11	29.80	29.83	-4.30	51.15	-417.54	156.38	97.01	59.37	2.634	
8,500.00	8,495.04	8,508.51	8,490.04	30.16	30.17	-4.40	51.15	-417.54	152.68	92.61	60.06	2.542	
8,600.00	8,594.97	8,608.44	8,589.97	30.52	30.50	-4.51	51.15	-417.54	148.98	88.22	60.76	2.452	
8,700.00	8,694.90	8,708.37	8,689.90	30.88	30.84	-4.63	51.15	-417.54	145.28	83.83	61.45	2.364	
8,800.00	8,794.83	8,808.30	8,789.83	31.24	31.18	-4.75	51.15	-417.54	141.58	79.43	62.15	2.278	
8,900.00	8,894.76	8,908.24	8,889.76	31.60	31.51	-4.87	51.15	-417.54	137.88	75.04	62.84	2.194	
9,000.00	8,994.69	9,008.17	8,989.69	31.95	31.85	-5.01	51.15	-417.54	134.19	70.65	63.54	2.112	
9,100.00	9,094.62	9,108.10	9,089.62	32.31	32.19	-5.15	51.15	-417.54	130.49	66.25	64.24	2.031	
9,200.00	9,194.55	9,208.03	9,189.55	32.67	32.53	-5.30	51.15	-417.54	126.79	61.86	64.93	1.953	
9,300.00	9,294.49	9,307.96	9,289.49	33.03	32.87	-5.46	51.15	-417.54	123.10	57.47	65.63	1.876	
9,400.00	9,394.42	9,407.89	9,389.42	33.39	33.21	-5.63	51.15	-417.54	119.41	53.08	66.33	1.800	
9,500.00	9,494.35	9,507.82	9,489.35	33.75	33.55	-5.81	51.15	-417.54	115.71	48.69	67.02	1.726	
9,600.00	9,594.28	9,607.75	9,589.28	34.11	33.89	-6.00	51.15	-417.54	112.02	44.30	67.72	1.654	
9,700.00	9,694.21	9,707.81	9,690.87	34.47	34.23	-1.86	59.21	-415.84	107.29	38.87	68.42	1.568	
9,789.36	9,783.51	9,796.30	9,774.69	34.79	34.51	9.64	79.74	-411.52	104.23	35.08	69.15	1.507 CC	
9,800.00	9,794.14	9,806.12	9,783.98	34.83	34.54	11.41	82.84	-410.86	104.30	35.08	69.22	1.507 ES, SF	
9,900.00	9,894.07	9,892.27	9,862.82	35.19	34.79	29.53	116.65	-403.74	114.11	45.25	68.86	1.657	
10,000.00	9,994.00	9,966.57	9,925.99	35.55	34.99	45.41	154.81	-395.70	144.89	78.98	65.91	2.198	
10,064.29	10,058.25	10,008.16	9,958.99	35.78	35.10	52.97	179.57	-390.48	174.98	111.59	63.39	2.760	
10,100.00	10,093.94	10,029.31	9,975.05	35.91	35.15	56.60	193.05	-387.64	194.52	132.51	62.01	3.137	
10,206.07	10,200.00	10,084.80	10,014.64	36.28	35.27	-16.63	231.05	-379.63	261.92	203.51	58.41	4.484	
10,300.00	10,293.93	10,125.91	10,041.45	36.61	35.36	-12.71	261.53	-373.21	329.67	273.80	55.87	5.901	
10,400.00	10,393.93	10,162.83	10,063.58	36.95	35.43	-9.83	290.45	-367.11	407.27	353.57	53.70	7.585	
10,500.00	10,493.93	10,200.00	10,083.88	37.30	35.50	-7.42	320.91	-360.69	489.10	436.73	52.37	9.340	
10,596.11	10,590.04	10,212.54	10,090.27	37.63	35.52	-6.70	331.47	-358.47	570.66	520.35	50.31	11.344	
10,600.00	10,593.93	10,212.54	10,090.27	37.65	35.52	-6.19	331.47	-358.47	574.03	523.82	50.21	11.432	
10,650.00	10,643.85	10,233.68	10,100.52	37.82	35.56	-4.48	349.58	-354.81	616.00	565.97	50.04	12.311	
10,700.00	10,693.36	10,250.00	10,108.01	37.99	35.58	-3.45	363.84	-352.15	656.34	606.81	49.52	13.253	
10,750.00	10,742.08	10,250.00	10,108.01	38.16	35.58	-3.10	363.84	-352.15	695.00	646.74	48.26	14.401	
10,800.00	10,789.65	10,277.59	10,119.79	38.32	35.63	-2.23	388.43	-347.97	731.19	683.05	48.13	15.191	
10,850.00	10,835.70	10,300.00	10,128.54	38.48	35.66	-1.68	408.83	-344.89	765.56	717.82	47.73	16.038	
10,900.00	10,879.88	10,300.00	10,128.54	38.62	35.66	-1.56	408.83	-344.89	797.73	751.20	46.53	17.146	
10,950.00	10,921.85	10,326.90	10,138.04	38.75	35.70	-1.13	433.77	-341.57	827.37	781.13	46.24	17.894	
11,000.00	10,961.30	10,350.00	10,145.32	38.87	35.73	-0.83	455.55	-339.04	854.82	809.02	45.80	18.663	
11,050.00	10,997.92	10,350.00	10,145.32	38.99	35.73	-0.79	455.55	-339.04	879.91	835.15	44.76	19.658	
11,100.00	11,031.44	10,379.90	10,153.50	39.09	35.77	-0.53	484.16	-336.23	902.13	857.61	44.52	20.264	
11,150.00	11,061.60	10,400.00	10,158.22	39.20	35.80	-0.39	503.64	-334.63	921.97	877.91	44.06	20.927	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C03) Robin Fed 126H - Permit - APD-Rev01												Offset Site Error:	0.00 usft	
Survey Program:		0-MWD+IFR1+SAG+FDIR (SQC2)							Rule Assigned:				Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
11,200.00	11,088.17	10,416.64	10,161.63	39.30	35.81	-0.30	519.89	-333.49	939.16	895.59	43.56	21.558		
11,250.00	11,110.95	10,450.00	10,167.14	39.39	35.85	-0.16	552.73	-331.71	953.96	910.57	43.40	21.983		
11,300.00	11,129.76	10,450.00	10,167.14	39.48	35.85	-0.16	552.73	-331.71	965.50	922.72	42.78	22.569		
11,350.00	11,144.47	10,473.12	10,169.90	39.56	35.87	-0.09	575.67	-330.86	974.53	931.97	42.56	22.896		
11,400.00	11,154.96	10,500.00	10,172.02	39.63	35.90	-0.04	602.46	-330.28	980.90	938.47	42.43	23.119		
11,450.00	11,161.14	10,511.28	10,172.55	39.68	35.91	-0.03	613.73	-330.17	984.31	942.05	42.26	23.291		
11,496.11	11,163.00	10,534.73	10,173.00	39.73	35.93	-0.02	637.17	-330.18	985.11	942.87	42.24	23.320		
11,500.00	11,163.00	10,534.73	10,173.00	39.73	35.93	-0.02	637.17	-330.18	985.06	942.82	42.24	23.319		
11,512.02	11,163.00	10,535.47	10,173.00	39.75	35.93	-0.02	637.91	-330.19	984.99	942.75	42.25	23.316		
11,600.00	11,163.00	10,623.45	10,173.00	39.84	36.01	-0.02	725.89	-330.86	984.99	942.66	42.34	23.265		
11,700.00	11,163.00	10,723.45	10,173.00	39.96	36.11	-0.02	825.89	-331.63	984.99	942.53	42.46	23.197		
11,800.00	11,163.00	10,823.45	10,173.00	40.10	36.24	-0.02	925.89	-332.39	984.99	942.39	42.61	23.119		
11,900.00	11,163.00	10,923.45	10,173.00	40.25	36.39	-0.02	1,025.88	-333.16	984.99	942.23	42.77	23.032		
12,000.00	11,163.00	11,023.45	10,173.00	40.43	36.56	-0.02	1,125.88	-333.93	984.99	942.05	42.95	22.935		
12,100.00	11,163.00	11,123.45	10,173.00	40.62	36.75	-0.02	1,225.88	-334.69	984.99	941.85	43.15	22.829		
12,200.00	11,163.00	11,223.45	10,173.00	40.83	36.96	-0.02	1,325.87	-335.46	984.99	941.63	43.36	22.714		
12,300.00	11,163.00	11,323.45	10,173.00	41.06	37.19	-0.02	1,425.87	-336.22	984.99	941.39	43.60	22.592		
12,400.00	11,163.00	11,423.45	10,173.00	41.31	37.44	-0.02	1,525.87	-336.99	984.99	941.14	43.85	22.462		
12,500.00	11,163.00	11,523.45	10,173.00	41.57	37.71	-0.02	1,625.86	-337.76	984.99	940.87	44.12	22.324		
12,600.00	11,163.00	11,623.45	10,173.00	41.84	38.00	-0.02	1,725.86	-338.52	984.99	940.58	44.41	22.180		
12,700.00	11,163.00	11,723.45	10,173.00	42.14	38.31	-0.02	1,825.86	-339.29	984.99	940.28	44.71	22.029		
12,800.00	11,163.00	11,823.45	10,173.00	42.45	38.63	-0.02	1,925.86	-340.05	984.99	939.96	45.03	21.872		
12,900.00	11,163.00	11,923.45	10,173.00	42.77	38.97	-0.02	2,025.85	-340.82	984.99	939.62	45.37	21.710		
13,000.00	11,163.00	12,023.45	10,173.00	43.11	39.33	-0.02	2,125.85	-341.58	984.99	939.27	45.72	21.543		
13,100.00	11,163.00	12,123.45	10,173.00	43.47	39.70	-0.02	2,225.85	-342.35	984.99	938.91	46.09	21.372		
13,200.00	11,163.00	12,223.45	10,173.00	43.83	40.09	-0.02	2,325.84	-343.12	984.99	938.52	46.47	21.196		
13,300.00	11,163.00	12,323.45	10,173.00	44.22	40.49	-0.02	2,425.84	-343.88	985.00	938.13	46.87	21.017		
13,400.00	11,163.00	12,423.45	10,173.00	44.61	40.91	-0.02	2,525.84	-344.65	985.00	937.72	47.28	20.834		
13,500.00	11,163.00	12,523.45	10,173.00	45.02	41.34	-0.02	2,625.84	-345.41	985.00	937.29	47.70	20.649		
13,600.00	11,163.00	12,623.45	10,173.00	45.44	41.78	-0.02	2,725.83	-346.18	985.00	936.85	48.14	20.461		
13,700.00	11,163.00	12,723.45	10,173.00	45.88	42.24	-0.02	2,825.83	-346.94	985.00	936.40	48.59	20.271		
13,800.00	11,163.00	12,823.45	10,173.00	46.32	42.71	-0.02	2,925.83	-347.71	985.00	935.94	49.05	20.079		
13,900.00	11,163.00	12,923.45	10,173.00	46.78	43.19	-0.02	3,025.82	-348.48	985.00	935.46	49.53	19.887		
14,000.00	11,163.00	13,023.45	10,173.00	47.25	43.69	-0.02	3,125.82	-349.24	985.00	934.98	50.02	19.693		
14,100.00	11,163.00	13,123.45	10,173.00	47.73	44.19	-0.02	3,225.82	-350.01	985.00	934.48	50.52	19.498		
14,200.00	11,163.00	13,223.45	10,173.00	48.22	44.71	-0.02	3,325.82	-350.77	985.00	933.97	51.03	19.303		
14,300.00	11,163.00	13,323.45	10,173.00	48.73	45.24	-0.02	3,425.81	-351.54	985.00	933.44	51.55	19.107		
14,400.00	11,163.00	13,423.45	10,173.00	49.24	45.77	-0.02	3,525.81	-352.30	985.00	932.91	52.08	18.912		
14,500.00	11,163.00	13,523.45	10,173.00	49.76	46.32	-0.02	3,625.81	-353.07	985.00	932.37	52.63	18.717		
14,600.00	11,163.00	13,623.45	10,173.00	50.29	46.88	-0.02	3,725.80	-353.84	985.00	931.82	53.18	18.523		
14,700.00	11,163.00	13,723.45	10,173.00	50.83	47.45	-0.02	3,825.80	-354.60	985.00	931.26	53.74	18.329		
14,800.00	11,163.00	13,823.45	10,173.00	51.38	48.02	-0.02	3,925.80	-355.37	985.00	930.68	54.31	18.136		
14,900.00	11,163.00	13,923.45	10,173.00	51.94	48.61	-0.01	4,025.79	-356.13	985.00	930.10	54.89	17.944		
15,000.00	11,163.00	14,023.45	10,173.00	52.51	49.20	-0.01	4,125.79	-356.90	985.00	929.51	55.48	17.753		
15,100.00	11,163.00	14,123.45	10,173.00	53.08	49.80	-0.01	4,225.79	-357.67	985.00	928.92	56.08	17.564		
15,200.00	11,163.00	14,223.45	10,173.00	53.66	50.41	-0.01	4,325.79	-358.43	985.00	928.31	56.69	17.376		
15,300.00	11,163.00	14,323.45	10,173.00	54.25	51.02	-0.01	4,425.78	-359.20	985.00	927.70	57.30	17.190		
15,400.00	11,163.00	14,423.45	10,173.00	54.85	51.65	-0.01	4,525.78	-359.96	985.00	927.07	57.92	17.005		
15,500.00	11,163.00	14,523.45	10,173.00	55.45	52.28	-0.01	4,625.78	-360.73	985.00	926.44	58.55	16.823		
15,600.00	11,163.00	14,623.45	10,173.00	56.06	52.91	-0.01	4,725.77	-361.49	985.00	925.81	59.19	16.642		
15,700.00	11,163.00	14,723.45	10,173.00	56.68	53.56	-0.01	4,825.77	-362.26	985.00	925.16	59.83	16.463		
15,800.00	11,163.00	14,823.45	10,173.00	57.31	54.21	-0.01	4,925.77	-363.03	985.00	924.51	60.48	16.285		

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C03) Robin Fed 126H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
15,900.00	11,163.00	14,923.45	10,173.00	57.94	54.86	-0.01	5,025.77	-363.79	985.00	923.86	61.14	16.110	
16,000.00	11,163.00	15,023.45	10,173.00	58.57	55.52	-0.01	5,125.76	-364.56	985.00	923.19	61.80	15.938	
16,100.00	11,163.00	15,123.45	10,173.00	59.22	56.19	-0.01	5,225.76	-365.32	985.00	922.52	62.47	15.767	
16,200.00	11,163.00	15,223.45	10,173.00	59.86	56.86	-0.01	5,325.76	-366.09	985.00	921.85	63.15	15.598	
16,300.00	11,163.00	15,323.45	10,173.00	60.52	57.54	-0.01	5,425.75	-366.85	985.00	921.17	63.83	15.432	
16,400.00	11,163.00	15,423.45	10,173.00	61.18	58.22	-0.01	5,525.75	-367.62	985.00	920.48	64.52	15.267	
16,500.00	11,163.00	15,523.45	10,173.00	61.84	58.91	-0.01	5,625.75	-368.39	985.00	919.79	65.21	15.105	
16,600.00	11,163.00	15,623.45	10,173.00	62.51	59.60	-0.01	5,725.74	-369.15	985.00	919.09	65.91	14.945	
16,700.00	11,163.00	15,723.45	10,173.00	63.18	60.30	-0.01	5,825.74	-369.92	985.00	918.39	66.61	14.788	
16,800.00	11,163.00	15,823.45	10,173.00	63.86	61.00	-0.01	5,925.74	-370.68	985.00	917.68	67.32	14.632	
16,900.00	11,163.00	15,923.45	10,173.00	64.54	61.70	-0.01	6,025.74	-371.45	985.00	916.97	68.03	14.479	
17,000.00	11,163.00	16,023.45	10,173.00	65.23	62.41	-0.01	6,125.73	-372.22	985.00	916.25	68.75	14.328	
17,100.00	11,163.00	16,123.45	10,173.00	65.92	63.12	-0.01	6,225.73	-372.98	985.00	915.53	69.47	14.179	
17,200.00	11,163.00	16,223.45	10,173.00	66.62	63.84	-0.01	6,325.73	-373.75	985.00	914.80	70.19	14.033	
17,300.00	11,163.00	16,323.45	10,173.00	67.32	64.56	-0.01	6,425.72	-374.51	985.00	914.07	70.92	13.888	
17,400.00	11,163.00	16,423.45	10,173.00	68.02	65.28	-0.01	6,525.72	-375.28	985.00	913.34	71.66	13.746	
17,500.00	11,163.00	16,523.45	10,173.00	68.73	66.01	-0.01	6,625.72	-376.04	985.00	912.60	72.39	13.606	
17,600.00	11,163.00	16,623.45	10,173.00	69.44	66.74	-0.01	6,725.72	-376.81	985.00	911.86	73.14	13.468	
17,700.00	11,163.00	16,723.45	10,173.00	70.15	67.47	-0.01	6,825.71	-377.58	985.00	911.12	73.88	13.332	
17,800.00	11,163.00	16,823.45	10,173.00	70.87	68.21	-0.01	6,925.71	-378.34	985.00	910.37	74.63	13.198	
17,900.00	11,163.00	16,923.45	10,173.00	71.59	68.95	-0.01	7,025.71	-379.11	985.00	909.61	75.38	13.066	
18,000.00	11,163.00	17,023.45	10,173.00	72.31	69.69	-0.01	7,125.70	-379.87	985.00	908.86	76.14	12.937	
18,100.00	11,163.00	17,123.45	10,173.00	73.04	70.44	-0.01	7,225.70	-380.64	985.00	908.10	76.90	12.809	
18,200.00	11,163.00	17,223.45	10,173.00	73.77	71.19	-0.01	7,325.70	-381.40	985.00	907.34	77.66	12.683	
18,300.00	11,163.00	17,323.45	10,173.00	74.50	71.94	-0.01	7,425.69	-382.17	985.00	906.57	78.43	12.559	
18,400.00	11,163.00	17,423.45	10,173.00	75.24	72.69	-0.01	7,525.69	-382.94	985.00	905.80	79.20	12.438	
18,500.00	11,163.00	17,523.45	10,173.00	75.97	73.45	-0.01	7,625.69	-383.70	985.00	905.03	79.97	12.318	
18,600.00	11,163.00	17,623.45	10,173.00	76.72	74.21	-0.01	7,725.69	-384.47	985.00	904.26	80.74	12.199	
18,700.00	11,163.00	17,723.45	10,173.00	77.46	74.97	-0.01	7,825.68	-385.23	985.00	903.48	81.52	12.083	
18,800.00	11,163.00	17,823.45	10,173.00	78.21	75.73	-0.01	7,925.68	-386.00	985.00	902.70	82.30	11.969	
18,900.00	11,163.00	17,923.45	10,173.00	78.95	76.50	-0.01	8,025.68	-386.77	985.00	901.92	83.08	11.856	
19,000.00	11,163.00	18,023.45	10,173.00	79.71	77.26	-0.01	8,125.67	-387.53	985.00	901.13	83.87	11.745	
19,100.00	11,163.00	18,123.45	10,173.00	80.46	78.03	-0.01	8,225.67	-388.30	985.00	900.35	84.65	11.636	
19,200.00	11,163.00	18,223.45	10,173.00	81.21	78.80	-0.01	8,325.67	-389.06	985.00	899.56	85.44	11.528	
19,300.00	11,163.00	18,323.45	10,173.00	81.97	79.58	0.00	8,425.67	-389.83	985.00	898.76	86.24	11.422	
19,400.00	11,163.00	18,423.45	10,173.00	82.73	80.35	0.00	8,525.66	-390.59	985.00	897.97	87.03	11.318	
19,500.00	11,163.00	18,523.45	10,173.00	83.49	81.13	0.00	8,625.66	-391.36	985.00	897.17	87.83	11.215	
19,600.00	11,163.00	18,623.45	10,173.00	84.26	81.91	0.00	8,725.66	-392.13	985.00	896.37	88.63	11.114	
19,700.00	11,163.00	18,723.45	10,173.00	85.02	82.69	0.00	8,825.65	-392.89	985.00	895.57	89.43	11.015	
19,800.00	11,163.00	18,823.45	10,173.00	85.79	83.47	0.00	8,925.65	-393.66	985.00	894.77	90.23	10.917	
19,900.00	11,163.00	18,923.45	10,173.00	86.56	84.25	0.00	9,025.65	-394.42	985.00	893.96	91.03	10.820	
20,000.00	11,163.00	19,023.45	10,173.00	87.33	85.04	0.00	9,125.65	-395.19	985.00	893.16	91.84	10.725	
20,100.00	11,163.00	19,123.45	10,173.00	88.11	85.83	0.00	9,225.64	-395.95	985.00	892.35	92.65	10.631	
20,200.00	11,163.00	19,223.45	10,173.00	88.88	86.62	0.00	9,325.64	-396.72	985.00	891.54	93.46	10.539	
20,300.00	11,163.00	19,323.45	10,173.00	89.66	87.41	0.00	9,425.64	-397.49	985.00	890.73	94.27	10.448	
20,400.00	11,163.00	19,423.45	10,173.00	90.44	88.20	0.00	9,525.63	-398.25	985.00	889.91	95.09	10.359	
20,500.00	11,163.00	19,523.45	10,173.00	91.21	88.99	0.00	9,625.63	-399.02	985.00	889.10	95.90	10.271	
20,600.00	11,163.00	19,623.45	10,173.00	92.00	89.78	0.00	9,725.63	-399.78	985.00	888.28	96.72	10.184	
20,700.00	11,163.00	19,723.45	10,173.00	92.78	90.58	0.00	9,825.62	-400.55	985.00	887.46	97.54	10.098	
20,800.00	11,163.00	19,823.45	10,173.00	93.56	91.38	0.00	9,925.62	-401.31	985.00	886.64	98.36	10.014	
20,900.00	11,163.00	19,923.45	10,173.00	94.35	92.17	0.00	10,025.62	-402.08	985.00	885.82	99.18	9.931	
21,000.00	11,163.00	20,023.45	10,173.00	95.14	92.97	0.00	10,125.62	-402.85	985.00	884.99	100.01	9.849	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C03) Robin Fed 126H - Permit - APD-Rev01													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
21,100.00	11,163.00	20,123.45	10,173.00	95.92	93.77	0.00	10,225.61	-403.61	985.00	884.17	100.83	9.769		
21,200.00	11,163.00	20,223.45	10,173.00	96.71	94.57	0.00	10,325.61	-404.38	985.00	883.34	101.66	9.689		
21,300.00	11,163.00	20,323.45	10,173.00	97.51	95.38	0.00	10,425.61	-405.14	985.00	882.51	102.49	9.611		
21,400.00	11,163.00	20,423.45	10,173.00	98.30	96.18	0.00	10,525.60	-405.91	985.00	881.68	103.32	9.534		
21,436.63	11,163.00	20,460.08	10,173.00	98.59	96.48	0.00	10,562.23	-406.19	985.00	881.38	103.62	9.506		

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C04) Robin Fed 127H - Permit - APD-Rev01														Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)														Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
1,900.00	1,899.58	1,899.86	1,898.53	6.52	6.48	97.63	304.66	64.36	313.63	300.63	13.00	24.134			
2,000.00	1,999.51	1,999.28	1,997.70	6.87	6.83	99.58	301.79	70.87	313.36	299.66	13.70	22.878			
2,021.49	2,020.99	2,020.65	2,019.01	6.95	6.90	100.00	301.18	72.27	313.35	299.51	13.85	22.628 CC			
2,100.00	2,099.45	2,098.70	2,096.86	7.22	7.18	101.54	298.93	77.38	313.47	299.07	14.40	21.768			
2,200.00	2,199.38	2,198.12	2,196.03	7.58	7.53	103.49	296.07	83.89	313.94	298.84	15.11	20.784 ES			
2,300.00	2,299.31	2,297.54	2,295.19	7.93	7.88	105.44	293.21	90.40	314.78	298.97	15.81	19.909			
2,400.00	2,399.24	2,396.95	2,394.36	8.29	8.23	107.37	290.35	96.91	315.99	299.47	16.52	19.130			
2,500.00	2,499.17	2,496.37	2,493.52	8.65	8.59	109.28	287.48	103.42	317.56	300.33	17.23	18.435			
2,600.00	2,599.10	2,595.79	2,592.68	9.00	8.94	111.18	284.62	109.94	319.48	301.55	17.93	17.814			
2,700.00	2,699.03	2,695.21	2,691.85	9.36	9.29	113.05	281.76	116.45	321.75	303.11	18.64	17.259			
2,800.00	2,798.96	2,794.63	2,791.01	9.71	9.65	114.89	278.90	122.96	324.37	305.01	19.35	16.761			
2,900.00	2,898.89	2,894.05	2,890.18	10.07	10.01	116.70	276.03	129.47	327.31	307.25	20.06	16.315			
3,000.00	2,998.83	2,993.47	2,989.34	10.43	10.36	118.48	273.17	135.98	330.58	309.81	20.77	15.915			
3,100.00	3,098.76	3,092.89	3,088.50	10.78	10.72	120.22	270.31	142.49	334.17	312.69	21.48	15.556			
3,200.00	3,198.69	3,192.31	3,187.67	11.14	11.07	121.93	267.45	149.00	338.06	315.87	22.19	15.233			
3,300.00	3,298.62	3,291.72	3,286.83	11.50	11.43	123.59	264.59	155.51	342.25	319.34	22.90	14.943			
3,400.00	3,398.55	3,391.14	3,386.00	11.86	11.79	125.22	261.72	162.02	346.72	323.10	23.61	14.682			
3,500.00	3,498.48	3,490.56	3,485.16	12.21	12.14	126.80	258.86	168.53	351.46	327.13	24.33	14.448			
3,600.00	3,598.41	3,589.98	3,584.33	12.57	12.50	128.33	256.00	175.04	356.46	331.43	25.04	14.238			
3,700.00	3,698.34	3,689.40	3,683.49	12.93	12.86	129.83	253.14	181.55	361.72	335.97	25.75	14.049			
3,800.00	3,798.27	3,788.82	3,782.65	13.29	13.22	131.28	250.27	188.06	367.21	340.76	26.46	13.879			
3,900.00	3,898.21	3,888.24	3,881.82	13.65	13.57	132.69	247.41	194.57	372.94	345.77	27.17	13.726			
4,000.00	3,998.14	3,987.66	3,980.98	14.00	13.93	134.05	244.55	201.08	378.89	351.01	27.88	13.590			
4,100.00	4,098.07	4,087.08	4,080.15	14.36	14.29	135.37	241.69	207.59	385.04	356.45	28.59	13.467			
4,200.00	4,198.00	4,186.49	4,179.31	14.72	14.65	136.65	238.83	214.10	391.39	362.09	29.30	13.357			
4,300.00	4,297.93	4,285.91	4,278.47	15.08	15.01	137.89	235.96	220.62	397.94	367.92	30.01	13.258			
4,400.00	4,397.86	4,385.33	4,377.64	15.44	15.37	139.09	233.10	227.13	404.66	373.94	30.73	13.170			
4,500.00	4,497.79	4,484.75	4,476.80	15.80	15.72	140.25	230.24	233.64	411.56	380.12	31.44	13.092			
4,600.00	4,597.72	4,584.17	4,575.97	16.15	16.08	141.37	227.38	240.15	418.62	386.47	32.15	13.021			
4,700.00	4,697.65	4,683.59	4,675.13	16.51	16.44	142.46	224.52	246.66	425.83	392.97	32.86	12.959			
4,800.00	4,797.59	4,783.01	4,774.30	16.87	16.80	143.50	221.65	253.17	433.19	399.62	33.57	12.904			
4,900.00	4,897.52	4,882.43	4,873.46	17.23	17.16	144.52	218.79	259.68	440.70	406.41	34.28	12.855			
5,000.00	4,997.45	4,981.85	4,972.62	17.59	17.52	145.49	215.93	266.19	448.33	413.34	34.99	12.812			
5,100.00	5,097.38	5,081.26	5,071.79	17.95	17.88	146.44	213.07	272.70	456.09	420.39	35.71	12.774			
5,200.00	5,197.31	5,180.68	5,170.95	18.31	18.24	147.35	210.20	279.21	463.97	427.56	36.42	12.740			
5,300.00	5,297.24	5,280.10	5,270.12	18.67	18.60	148.24	207.34	285.72	471.97	434.84	37.13	12.711			
5,400.00	5,397.17	5,379.52	5,369.28	19.02	18.96	149.09	204.48	292.23	480.07	442.23	37.84	12.686			
5,500.00	5,497.10	5,478.94	5,468.44	19.38	19.32	149.92	201.62	298.74	488.28	449.73	38.55	12.665			
5,600.00	5,597.03	5,578.36	5,567.61	19.74	19.68	150.71	198.76	305.25	496.58	457.32	39.27	12.647			
5,700.00	5,696.97	5,677.78	5,666.77	20.10	20.03	151.49	195.89	311.76	504.98	465.00	39.98	12.632			
5,800.00	5,796.90	5,777.20	5,765.94	20.46	20.39	152.23	193.03	318.27	513.46	472.78	40.69	12.619			
5,900.00	5,896.83	5,876.62	5,865.10	20.82	20.75	152.95	190.17	324.79	522.03	480.63	41.40	12.609			
6,000.00	5,996.76	5,976.03	5,964.27	21.18	21.11	153.65	187.31	331.30	530.68	488.57	42.11	12.601			
6,100.00	6,096.69	6,075.45	6,063.43	21.54	21.47	154.33	184.44	337.81	539.41	496.58	42.83	12.595			
6,200.00	6,196.62	6,174.87	6,162.59	21.90	21.83	154.98	181.58	344.32	548.21	504.67	43.54	12.592			
6,300.00	6,296.55	6,274.29	6,261.76	22.25	22.19	155.62	178.72	350.83	557.07	512.82	44.25	12.589			
6,400.00	6,396.48	6,373.71	6,360.92	22.61	22.55	156.23	175.86	357.34	566.01	521.04	44.96	12.588			
6,500.00	6,496.41	6,473.13	6,460.09	22.97	22.91	156.83	173.00	363.85	575.00	529.33	45.68	12.589			
6,600.00	6,596.35	6,572.55	6,559.25	23.33	23.27	157.40	170.13	370.36	584.06	537.67	46.39	12.591			
6,700.00	6,696.28	6,671.97	6,658.41	23.69	23.63	157.96	167.27	376.87	593.17	546.07	47.10	12.594			
6,800.00	6,796.21	6,771.39	6,757.58	24.05	23.99	158.51	164.41	383.38	602.34	554.53	47.81	12.598			
6,900.00	6,896.14	6,870.80	6,856.74	24.41	24.35	159.03	161.55	389.89	611.56	563.03	48.53	12.603			

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C04) Robin Fed 127H - Permit - APD-Rev01												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,000.00	6,996.07	6,970.22	6,955.91	24.77	24.71	159.54	158.68	396.40	620.83	571.59	49.24	12.609	
7,100.00	7,096.00	7,069.64	7,055.07	25.13	25.07	160.04	155.82	402.91	630.14	580.19	49.95	12.615	
7,200.00	7,195.93	7,169.06	7,154.24	25.49	25.43	160.52	152.96	409.42	639.51	588.84	50.66	12.622	
7,300.00	7,295.86	7,268.48	7,253.40	25.85	25.79	160.99	150.10	415.93	648.91	597.54	51.38	12.630	
7,400.00	7,395.79	7,367.90	7,352.56	26.21	26.15	161.44	147.24	422.44	658.36	606.27	52.09	12.639	
7,500.00	7,495.73	7,467.32	7,451.73	26.57	26.51	161.88	144.37	428.96	667.85	615.04	52.80	12.648	
7,600.00	7,595.66	7,566.74	7,550.89	26.92	26.87	162.31	141.51	435.47	677.37	623.86	53.52	12.657	
7,700.00	7,695.59	7,666.15	7,650.06	27.28	27.23	162.73	138.65	441.98	686.93	632.71	54.23	12.667	
7,800.00	7,795.52	7,765.57	7,749.22	27.64	27.59	163.13	135.79	448.49	696.53	641.59	54.94	12.677	
7,900.00	7,895.45	7,864.99	7,848.38	28.00	27.95	163.53	132.92	455.00	706.16	650.51	55.66	12.688	
8,000.00	7,995.38	7,964.41	7,947.55	28.36	28.31	163.91	130.06	461.51	715.83	659.46	56.37	12.699	
8,100.00	8,095.31	8,063.83	8,046.71	28.72	28.67	164.28	127.20	468.02	725.52	668.44	57.08	12.710	
8,200.00	8,195.24	8,163.25	8,145.88	29.08	29.03	164.65	124.34	474.53	735.24	677.45	57.80	12.721	
8,300.00	8,295.17	8,262.67	8,245.04	29.44	29.39	165.00	121.48	481.04	745.00	686.49	58.51	12.733	
8,400.00	8,395.11	8,362.09	8,344.21	29.80	29.75	165.35	118.61	487.55	754.78	695.55	59.22	12.745	
8,500.00	8,495.04	8,461.51	8,443.37	30.16	30.11	165.68	115.75	494.06	764.58	704.65	59.94	12.757	
8,600.00	8,594.97	8,560.92	8,542.53	30.52	30.47	166.01	112.89	500.57	774.42	713.77	60.65	12.769	
8,700.00	8,694.90	8,660.34	8,641.70	30.88	30.83	166.33	110.03	507.08	784.27	722.91	61.36	12.781	
8,800.00	8,794.83	8,759.76	8,740.86	31.24	31.19	166.64	107.17	513.59	794.15	732.08	62.08	12.793	
8,900.00	8,894.76	8,859.18	8,840.03	31.60	31.55	166.95	104.30	520.10	804.06	741.26	62.79	12.805	
9,000.00	8,994.69	8,958.60	8,939.19	31.95	31.92	167.24	101.44	526.61	813.98	750.48	63.51	12.818	
9,100.00	9,094.62	9,058.02	9,038.35	32.31	32.28	167.53	98.58	533.13	823.93	759.71	64.22	12.830	
9,200.00	9,194.55	9,157.44	9,137.52	32.67	32.64	167.81	95.72	539.64	833.89	768.96	64.93	12.842	
9,300.00	9,294.49	9,256.86	9,236.68	33.03	33.00	168.09	92.85	546.15	843.88	778.23	65.65	12.855	
9,400.00	9,394.42	9,356.28	9,335.85	33.39	33.36	168.36	89.99	552.66	853.88	787.52	66.36	12.867	
9,500.00	9,494.35	9,455.69	9,435.01	33.75	33.72	168.62	87.13	559.17	863.91	796.83	67.08	12.880	
9,600.00	9,594.28	9,555.11	9,534.18	34.11	34.08	168.88	84.27	565.68	873.95	806.16	67.79	12.892	
9,700.00	9,694.21	9,660.22	9,639.02	34.47	34.46	169.14	81.28	572.47	883.94	815.40	68.54	12.897	
9,800.00	9,794.14	9,766.23	9,744.88	34.83	34.91	169.37	78.85	578.00	891.89	822.50	69.39	12.852	
9,900.00	9,894.07	9,912.81	9,891.43	35.19	35.35	169.48	78.09	579.73	896.88	826.68	70.20	12.777	
10,000.00	9,994.00	10,008.75	9,987.37	35.55	35.67	169.52	78.14	579.74	900.55	829.67	70.88	12.706	
10,064.29	10,058.25	10,050.00	10,028.57	35.78	35.81	169.41	80.12	580.13	903.71	832.46	71.24	12.685	
10,100.00	10,093.94	10,082.18	10,060.54	35.91	35.92	169.20	83.69	580.82	905.78	834.31	71.47	12.673	
10,206.07	10,200.00	10,157.24	10,133.95	36.28	36.17	168.87	98.80	583.76	912.50	840.47	72.03	12.669	
10,300.00	10,293.93	10,219.52	10,192.91	36.61	36.36	168.66	118.41	587.57	920.59	848.18	72.41	12.713	
10,400.00	10,393.93	10,280.35	10,248.07	36.95	36.54	168.12	143.51	592.45	933.40	860.74	72.67	12.845	
10,500.00	10,493.93	10,335.05	10,295.11	37.30	36.68	168.48	170.87	597.76	951.20	878.48	72.72	13.081	
10,596.11	10,590.04	10,381.87	10,333.12	37.63	36.79	168.90	197.69	602.98	973.50	900.96	72.55	13.419	
10,600.00	10,593.93	10,383.65	10,334.52	37.65	36.80	169.18	198.77	603.19	974.51	901.98	72.53	13.435	
10,650.00	10,643.85	10,400.00	10,347.21	37.82	36.84	169.25	208.89	605.15	987.98	915.71	72.27	13.671	
10,700.00	10,693.36	10,429.72	10,369.51	37.99	36.90	169.91	228.16	608.90	1,001.95	929.80	72.15	13.887	
10,750.00	10,742.08	10,450.00	10,384.14	38.16	36.94	170.90	241.95	611.58	1,016.35	944.49	71.86	14.143	
10,800.00	10,789.65	10,476.02	10,402.15	38.32	36.99	171.82	260.38	615.16	1,030.91	959.28	71.64	14.391	
10,850.00	10,835.70	10,500.00	10,417.99	38.48	37.04	172.80	278.06	618.60	1,045.47	974.11	71.36	14.650	
10,900.00	10,879.88	10,522.47	10,432.12	38.62	37.07	173.80	295.20	621.93	1,059.85	988.79	71.06	14.915	
10,950.00	10,921.85	10,550.00	10,448.50	38.75	37.12	174.80	316.92	626.15	1,073.91	1,003.07	70.84	15.160	
11,000.00	10,961.30	10,568.97	10,459.16	38.87	37.15	175.80	332.33	629.15	1,087.47	1,016.97	70.50	15.426	
11,050.00	10,997.92	10,601.25	10,476.08	38.99	37.19	176.80	359.31	634.39	1,100.52	1,030.16	70.37	15.640	
11,100.00	11,031.44	10,622.45	10,486.36	39.09	37.22	177.80	377.53	637.78	1,112.62	1,042.52	70.10	15.872	
11,150.00	11,061.60	10,650.00	10,498.76	39.20	37.26	178.80	401.79	641.86	1,123.57	1,053.61	69.95	16.062	
11,200.00	11,088.17	10,691.70	10,515.39	39.30	37.31	179.80	439.63	647.28	1,133.07	1,063.08	69.99	16.190	
11,250.00	11,110.95	10,726.35	10,527.21	39.39	37.35	180.80	471.97	651.09	1,141.16	1,071.21	69.95	16.313	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C04) Robin Fed 127H - Permit - APD-Rev01												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)												Offset Well Error:	0.00 usft
Reference												Rule Assigned:	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
11,300.00	11,129.76	10,761.03	10,537.17	39.48	37.39	59.58	505.04	654.26	1,147.76	1,077.81	69.94	16.410	
11,350.00	11,144.47	10,800.00	10,546.07	39.56	37.44	59.12	542.87	657.03	1,152.81	1,082.83	69.98	16.473	
11,400.00	11,154.96	10,830.53	10,551.34	39.63	37.47	58.82	572.89	658.61	1,156.27	1,086.28	69.99	16.521	
11,450.00	11,161.14	10,865.35	10,555.50	39.68	37.51	58.70	607.44	659.77	1,158.13	1,088.09	70.05	16.534	
11,496.11	11,163.00	10,900.00	10,557.65	39.73	37.54	58.73	642.01	660.24	1,158.43	1,088.30	70.13	16.518	
11,500.00	11,163.00	10,900.00	10,557.65	39.73	37.54	58.73	642.01	660.24	1,158.40	1,088.26	70.14	16.516	
11,547.57	11,163.00	10,939.10	10,558.00	39.78	37.57	58.74	681.11	660.06	1,158.29	1,088.06	70.22	16.495	
11,600.00	11,163.00	10,991.53	10,558.00	39.84	37.62	58.74	733.53	659.65	1,158.29	1,087.97	70.32	16.472	
11,700.00	11,163.00	11,091.53	10,558.00	39.96	37.73	58.74	833.53	658.88	1,158.28	1,087.75	70.53	16.422	
11,800.00	11,163.00	11,191.53	10,558.00	40.10	37.86	58.74	933.53	658.11	1,158.28	1,087.50	70.78	16.364	
11,900.00	11,163.00	11,291.53	10,558.00	40.25	38.01	58.74	1,033.52	657.34	1,158.28	1,087.21	71.07	16.299	
12,000.00	11,163.00	11,391.53	10,558.00	40.43	38.19	58.74	1,133.52	656.57	1,158.28	1,086.90	71.38	16.227	
12,100.00	11,163.00	11,491.53	10,558.00	40.62	38.38	58.74	1,233.52	655.80	1,158.28	1,086.55	71.73	16.148	
12,200.00	11,163.00	11,591.53	10,558.00	40.83	38.58	58.74	1,333.51	655.03	1,158.28	1,086.17	72.11	16.063	
12,300.00	11,163.00	11,691.53	10,558.00	41.06	38.81	58.74	1,433.51	654.26	1,158.28	1,085.76	72.52	15.972	
12,400.00	11,163.00	11,791.53	10,558.00	41.31	39.06	58.74	1,533.51	653.48	1,158.27	1,085.31	72.96	15.875	
12,500.00	11,163.00	11,891.53	10,558.00	41.57	39.32	58.74	1,633.51	652.71	1,158.27	1,084.84	73.43	15.773	
12,600.00	11,163.00	11,991.53	10,558.00	41.84	39.60	58.74	1,733.50	651.94	1,158.27	1,084.34	73.94	15.666	
12,700.00	11,163.00	12,091.53	10,558.00	42.14	39.89	58.74	1,833.50	651.17	1,158.27	1,083.80	74.47	15.554	
12,800.00	11,163.00	12,191.53	10,558.00	42.45	40.21	58.74	1,933.50	650.40	1,158.27	1,083.24	75.03	15.438	
12,900.00	11,163.00	12,291.53	10,558.00	42.77	40.54	58.74	2,033.49	649.63	1,158.27	1,082.65	75.61	15.318	
13,000.00	11,163.00	12,391.53	10,558.00	43.11	40.88	58.74	2,133.49	648.86	1,158.26	1,082.04	76.23	15.195	
13,100.00	11,163.00	12,491.53	10,558.00	43.47	41.24	58.74	2,233.49	648.08	1,158.26	1,081.40	76.87	15.068	
13,200.00	11,163.00	12,591.53	10,558.00	43.83	41.61	58.74	2,333.49	647.31	1,158.26	1,080.73	77.54	14.939	
13,300.00	11,163.00	12,691.53	10,558.00	44.22	42.00	58.74	2,433.48	646.54	1,158.26	1,080.03	78.23	14.806	
13,400.00	11,163.00	12,791.53	10,558.00	44.61	42.41	58.74	2,533.48	645.77	1,158.26	1,079.32	78.94	14.672	
13,500.00	11,163.00	12,891.53	10,558.00	45.02	42.82	58.74	2,633.48	645.00	1,158.26	1,078.57	79.68	14.536	
13,600.00	11,163.00	12,991.53	10,558.00	45.44	43.25	58.74	2,733.47	644.23	1,158.26	1,077.81	80.45	14.397	
13,700.00	11,163.00	13,091.53	10,558.00	45.88	43.70	58.74	2,833.47	643.46	1,158.25	1,077.02	81.23	14.258	
13,800.00	11,163.00	13,191.53	10,558.00	46.32	44.15	58.74	2,933.47	642.68	1,158.25	1,076.21	82.04	14.118	
13,900.00	11,163.00	13,291.53	10,558.00	46.78	44.62	58.74	3,033.46	641.91	1,158.25	1,075.38	82.87	13.976	
14,000.00	11,163.00	13,391.53	10,558.00	47.25	45.10	58.74	3,133.46	641.14	1,158.25	1,074.53	83.72	13.834	
14,100.00	11,163.00	13,491.53	10,558.00	47.73	45.59	58.74	3,233.46	640.37	1,158.25	1,073.66	84.59	13.692	
14,200.00	11,163.00	13,591.53	10,558.00	48.22	46.09	58.74	3,333.46	639.60	1,158.25	1,072.76	85.48	13.549	
14,300.00	11,163.00	13,691.53	10,558.00	48.73	46.60	58.74	3,433.45	638.83	1,158.25	1,071.85	86.39	13.407	
14,400.00	11,163.00	13,791.53	10,558.00	49.24	47.13	58.74	3,533.45	638.06	1,158.24	1,070.93	87.32	13.264	
14,500.00	11,163.00	13,891.53	10,558.00	49.76	47.66	58.74	3,633.45	637.28	1,158.24	1,069.98	88.26	13.123	
14,600.00	11,163.00	13,991.53	10,558.00	50.29	48.20	58.74	3,733.44	636.51	1,158.24	1,069.02	89.23	12.981	
14,700.00	11,163.00	14,091.53	10,558.00	50.83	48.75	58.74	3,833.44	635.74	1,158.24	1,068.04	90.20	12.840	
14,800.00	11,163.00	14,191.53	10,558.00	51.38	49.32	58.74	3,933.44	634.97	1,158.24	1,067.04	91.20	12.700	
14,900.00	11,163.00	14,291.53	10,558.00	51.94	49.88	58.74	4,033.43	634.20	1,158.24	1,066.03	92.21	12.561	
15,000.00	11,163.00	14,391.53	10,558.00	52.51	50.46	58.74	4,133.43	633.43	1,158.24	1,065.00	93.23	12.423	
15,100.00	11,163.00	14,491.53	10,558.00	53.08	51.05	58.74	4,233.43	632.66	1,158.23	1,063.96	94.27	12.286	
15,200.00	11,163.00	14,591.53	10,558.00	53.66	51.64	58.74	4,333.43	631.88	1,158.23	1,062.91	95.33	12.150	
15,300.00	11,163.00	14,691.53	10,558.00	54.25	52.24	58.74	4,433.42	631.11	1,158.23	1,061.84	96.39	12.016	
15,400.00	11,163.00	14,791.53	10,558.00	54.85	52.85	58.74	4,533.42	630.34	1,158.23	1,060.76	97.47	11.883	
15,500.00	11,163.00	14,891.53	10,558.00	55.45	53.47	58.74	4,633.42	629.57	1,158.23	1,059.66	98.57	11.751	
15,600.00	11,163.00	14,991.53	10,558.00	56.06	54.09	58.74	4,733.41	628.80	1,158.23	1,058.56	99.67	11.621	
15,700.00	11,163.00	15,091.53	10,558.00	56.68	54.72	58.74	4,833.41	628.03	1,158.23	1,057.44	100.79	11.492	
15,800.00	11,163.00	15,191.53	10,558.00	57.31	55.36	58.74	4,933.41	627.26	1,158.22	1,056.31	101.92	11.365	
15,900.00	11,163.00	15,291.53	10,558.00	57.94	56.00	58.74	5,033.40	626.49	1,158.22	1,055.17	103.06	11.239	
16,000.00	11,163.00	15,391.53	10,558.00	58.57	56.65	58.74	5,133.40	625.71	1,158.22	1,054.02	104.21	11.115	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C04) Robin Fed 127H - Permit - APD-Rev01													Offset Site Error:	0.00 usft
Survey Program:		0-MWD+IFR1+SAG+FDIR (SQC2)						Rule Assigned:				Offset Well Error:	0.00 usft	
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance				Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
16,100.00	11,163.00	15,491.53	10,558.00	59.22	57.30	58.74	5,233.40	624.94	1,158.22	1,052.85	105.37	10.992		
16,200.00	11,163.00	15,591.53	10,558.00	59.86	57.96	58.74	5,333.40	624.17	1,158.22	1,051.68	106.54	10.872		
16,300.00	11,163.00	15,691.53	10,558.00	60.52	58.63	58.74	5,433.39	623.40	1,158.22	1,050.50	107.72	10.752		
16,400.00	11,163.00	15,791.53	10,558.00	61.18	59.30	58.74	5,533.39	622.63	1,158.22	1,049.31	108.91	10.635		
16,500.00	11,163.00	15,891.53	10,558.00	61.84	59.97	58.74	5,633.39	621.86	1,158.21	1,048.11	110.11	10.519		
16,600.00	11,163.00	15,991.53	10,558.00	62.51	60.65	58.74	5,733.38	621.09	1,158.21	1,046.90	111.31	10.405		
16,700.00	11,163.00	16,091.53	10,558.00	63.18	61.33	58.74	5,833.38	620.31	1,158.21	1,045.68	112.53	10.292		
16,800.00	11,163.00	16,191.53	10,558.00	63.86	62.02	58.74	5,933.38	619.54	1,158.21	1,044.45	113.76	10.182		
16,900.00	11,163.00	16,291.53	10,558.00	64.54	62.72	58.74	6,033.38	618.77	1,158.21	1,043.22	114.99	10.072		
17,000.00	11,163.00	16,391.53	10,558.00	65.23	63.41	58.74	6,133.37	618.00	1,158.21	1,041.98	116.23	9.965		
17,100.00	11,163.00	16,491.53	10,558.00	65.92	64.12	58.74	6,233.37	617.23	1,158.20	1,040.73	117.48	9.859		
17,200.00	11,163.00	16,591.53	10,558.00	66.62	64.82	58.74	6,333.37	616.46	1,158.20	1,039.47	118.73	9.755		
17,300.00	11,163.00	16,691.53	10,558.00	67.32	65.53	58.74	6,433.36	615.69	1,158.20	1,038.21	119.99	9.652		
17,400.00	11,163.00	16,791.53	10,558.00	68.02	66.25	58.74	6,533.36	614.91	1,158.20	1,036.94	121.26	9.551		
17,500.00	11,163.00	16,891.53	10,558.00	68.73	66.96	58.74	6,633.36	614.14	1,158.20	1,035.66	122.54	9.452		
17,600.00	11,163.00	16,991.53	10,558.00	69.44	67.68	58.74	6,733.35	613.37	1,158.20	1,034.38	123.82	9.354		
17,700.00	11,163.00	17,091.53	10,558.00	70.15	68.41	58.74	6,833.35	612.60	1,158.20	1,033.09	125.11	9.258		
17,800.00	11,163.00	17,191.53	10,558.00	70.87	69.13	58.74	6,933.35	611.83	1,158.19	1,031.79	126.40	9.163		
17,900.00	11,163.00	17,291.53	10,558.00	71.59	69.86	58.74	7,033.35	611.06	1,158.19	1,030.49	127.70	9.070		
18,000.00	11,163.00	17,391.53	10,558.00	72.31	70.60	58.74	7,133.34	610.29	1,158.19	1,029.18	129.01	8.978		
18,100.00	11,163.00	17,491.53	10,558.00	73.04	71.33	58.74	7,233.34	609.51	1,158.19	1,027.87	130.32	8.887		
18,200.00	11,163.00	17,591.53	10,558.00	73.77	72.07	58.74	7,333.34	608.74	1,158.19	1,026.55	131.63	8.798		
18,300.00	11,163.00	17,691.53	10,558.00	74.50	72.81	58.74	7,433.33	607.97	1,158.19	1,025.23	132.96	8.711		
18,400.00	11,163.00	17,791.53	10,558.00	75.24	73.56	58.74	7,533.33	607.20	1,158.19	1,023.90	134.28	8.625		
18,500.00	11,163.00	17,891.53	10,558.00	75.97	74.31	58.74	7,633.33	606.43	1,158.18	1,022.57	135.61	8.540		
18,600.00	11,163.00	17,991.53	10,558.00	76.72	75.06	58.74	7,733.32	605.66	1,158.18	1,021.23	136.95	8.457		
18,700.00	11,163.00	18,091.53	10,558.00	77.46	75.81	58.74	7,833.32	604.89	1,158.18	1,019.89	138.29	8.375		
18,800.00	11,163.00	18,191.53	10,558.00	78.21	76.56	58.74	7,933.32	604.11	1,158.18	1,018.54	139.64	8.294		
18,900.00	11,163.00	18,291.53	10,558.00	78.95	77.32	58.74	8,033.32	603.34	1,158.18	1,017.19	140.99	8.215		
19,000.00	11,163.00	18,391.53	10,558.00	79.71	78.08	58.74	8,133.31	602.57	1,158.18	1,015.84	142.34	8.137		
19,100.00	11,163.00	18,491.53	10,558.00	80.46	78.84	58.74	8,233.31	601.80	1,158.18	1,014.48	143.70	8.060		
19,200.00	11,163.00	18,591.53	10,558.00	81.21	79.60	58.74	8,333.31	601.03	1,158.17	1,013.12	145.06	7.984		
19,300.00	11,163.00	18,691.53	10,558.00	81.97	80.37	58.74	8,433.30	600.26	1,158.17	1,011.75	146.42	7.910		
19,400.00	11,163.00	18,791.53	10,558.00	82.73	81.14	58.74	8,533.30	599.49	1,158.17	1,010.38	147.79	7.836		
19,500.00	11,163.00	18,891.53	10,558.00	83.49	81.91	58.74	8,633.30	598.71	1,158.17	1,009.00	149.17	7.764		
19,600.00	11,163.00	18,991.53	10,558.00	84.26	82.68	58.74	8,733.29	597.94	1,158.17	1,007.62	150.54	7.693		
19,700.00	11,163.00	19,091.53	10,558.00	85.02	83.45	58.74	8,833.29	597.17	1,158.17	1,006.24	151.92	7.623		
19,800.00	11,163.00	19,191.53	10,558.00	85.79	84.23	58.74	8,933.29	596.40	1,158.17	1,004.86	153.31	7.555		
19,900.00	11,163.00	19,291.53	10,558.00	86.56	85.00	58.74	9,033.29	595.63	1,158.16	1,003.47	154.69	7.487		
20,000.00	11,163.00	19,391.53	10,558.00	87.33	85.78	58.74	9,133.28	594.86	1,158.16	1,002.08	156.08	7.420		
20,100.00	11,163.00	19,491.53	10,558.00	88.11	86.56	58.74	9,233.28	594.09	1,158.16	1,000.69	157.48	7.355		
20,200.00	11,163.00	19,591.53	10,558.00	88.88	87.34	58.74	9,333.28	593.32	1,158.16	999.29	158.87	7.290		
20,300.00	11,163.00	19,691.53	10,558.00	89.66	88.13	58.74	9,433.27	592.54	1,158.16	997.89	160.27	7.226		
20,400.00	11,163.00	19,791.53	10,558.00	90.44	88.91	58.74	9,533.27	591.77	1,158.16	996.48	161.67	7.164		
20,500.00	11,163.00	19,891.53	10,558.00	91.21	89.70	58.74	9,633.27	591.00	1,158.16	995.08	163.08	7.102		
20,600.00	11,163.00	19,991.53	10,558.00	92.00	90.49	58.74	9,733.27	590.23	1,158.15	993.67	164.48	7.041		
20,700.00	11,163.00	20,091.53	10,558.00	92.78	91.28	58.74	9,833.26	589.46	1,158.15	992.26	165.89	6.981		
20,800.00	11,163.00	20,191.53	10,558.00	93.56	92.07	58.74	9,933.26	588.69	1,158.15	990.84	167.31	6.922		
20,900.00	11,163.00	20,291.53	10,558.00	94.35	92.86	58.74	10,033.26	587.92	1,158.15	989.43	168.72	6.864		
21,000.00	11,163.00	20,391.53	10,558.00	95.14	93.65	58.74	10,133.25	587.14	1,158.15	988.01	170.14	6.807		
21,100.00	11,163.00	20,491.53	10,558.00	95.92	94.45	58.74	10,233.25	586.37	1,158.15	986.59	171.56	6.751		
21,200.00	11,163.00	20,591.53	10,558.00	96.71	95.24	58.74	10,333.25	585.60	1,158.15	985.16	172.98	6.695		

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C04) Robin Fed 127H - Permit - APD-Rev01													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: Distance				Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
21,300.00	11,163.00	20,691.53	10,558.00	97.51	96.04	58.74	10,433.24	584.83	1,158.14	983.74	174.40	6.641		
21,400.00	11,163.00	20,791.53	10,558.00	98.30	96.84	58.74	10,533.24	584.06	1,158.14	982.31	175.83	6.587		
21,436.63	11,163.00	20,828.15	10,558.00	98.59	97.13	58.74	10,569.87	583.78	1,158.14	981.79	176.35	6.567 SF		



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C05) Robin Fed 114H - Permit - APD-Rev01														Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
2,000.00	1,999.51	1,995.39	1,993.20	6.87	6.82	105.86	301.26	108.40	326.51	312.83	13.69	23.853	CC, ES		
2,100.00	2,099.45	2,094.62	2,092.06	7.22	7.17	107.98	298.04	116.44	328.16	313.77	14.39	22.802			
2,200.00	2,199.38	2,193.86	2,190.91	7.58	7.52	110.09	294.82	124.49	330.26	315.16	15.10	21.877			
2,300.00	2,299.31	2,293.09	2,289.77	7.93	7.87	112.16	291.60	132.53	332.81	317.00	15.80	21.061			
2,400.00	2,399.24	2,392.33	2,388.62	8.29	8.23	114.20	288.38	140.57	335.79	319.28	16.51	20.340			
2,500.00	2,499.17	2,491.56	2,487.48	8.65	8.58	116.20	285.16	148.61	339.19	321.98	17.22	19.702			
2,600.00	2,599.10	2,590.79	2,586.33	9.00	8.94	118.16	281.94	156.66	343.01	325.09	17.92	19.137			
2,700.00	2,699.03	2,690.03	2,685.19	9.36	9.29	120.08	278.72	164.70	347.22	328.59	18.63	18.636			
2,800.00	2,798.96	2,789.26	2,784.04	9.71	9.65	121.95	275.50	172.74	351.82	332.48	19.34	18.191			
2,900.00	2,898.89	2,888.50	2,882.90	10.07	10.00	123.77	272.28	180.79	356.79	336.74	20.05	17.796			
3,000.00	2,998.83	2,987.73	2,981.75	10.43	10.36	125.54	269.06	188.83	362.11	341.35	20.76	17.444			
3,100.00	3,098.76	3,086.96	3,080.61	10.78	10.72	127.25	265.83	196.87	367.76	346.30	21.47	17.132			
3,200.00	3,198.69	3,186.20	3,179.46	11.14	11.07	128.92	262.61	204.91	373.74	351.57	22.18	16.853			
3,300.00	3,298.62	3,285.43	3,278.32	11.50	11.43	130.53	259.39	212.96	380.03	357.15	22.89	16.606			
3,400.00	3,398.55	3,384.67	3,377.18	11.86	11.79	132.09	256.17	221.00	386.61	363.02	23.60	16.385			
3,500.00	3,498.48	3,483.90	3,476.03	12.21	12.15	133.59	252.95	229.04	393.47	369.17	24.30	16.189			
3,600.00	3,598.41	3,583.14	3,574.89	12.57	12.51	135.04	249.73	237.08	400.59	375.58	25.01	16.014			
3,700.00	3,698.34	3,682.37	3,673.74	12.93	12.87	136.44	246.51	245.13	407.96	382.24	25.72	15.859			
3,800.00	3,798.27	3,781.60	3,772.60	13.29	13.22	137.80	243.29	253.17	415.57	389.14	26.43	15.721			
3,900.00	3,898.21	3,880.84	3,871.45	13.65	13.58	139.10	240.07	261.21	423.40	396.26	27.14	15.599			
4,000.00	3,998.14	3,980.07	3,970.31	14.00	13.94	140.35	236.85	269.25	431.45	403.59	27.85	15.490			
4,100.00	4,098.07	4,079.31	4,069.16	14.36	14.30	141.56	233.63	277.30	439.69	411.12	28.56	15.393			
4,200.00	4,198.00	4,178.54	4,168.02	14.72	14.66	142.73	230.41	285.34	448.12	418.85	29.27	15.308			
4,300.00	4,297.93	4,277.78	4,266.87	15.08	15.02	143.85	227.19	293.38	456.73	426.75	29.98	15.233			
4,400.00	4,397.86	4,377.01	4,365.73	15.44	15.38	144.93	223.97	301.42	465.51	434.82	30.69	15.166			
4,500.00	4,497.79	4,476.24	4,464.58	15.80	15.74	145.97	220.75	309.47	474.45	443.04	31.40	15.108			
4,600.00	4,597.72	4,575.48	4,563.44	16.15	16.10	146.97	217.53	317.51	483.54	451.42	32.11	15.057			
4,700.00	4,697.65	4,674.71	4,662.29	16.51	16.46	147.93	214.31	325.55	492.77	459.94	32.82	15.012			
4,800.00	4,797.59	4,773.95	4,761.15	16.87	16.82	148.86	211.09	333.59	502.13	468.60	33.53	14.974			
4,900.00	4,897.52	4,873.18	4,860.01	17.23	17.18	149.76	207.86	341.64	511.62	477.38	34.24	14.940			
5,000.00	4,997.45	4,972.41	4,958.86	17.59	17.54	150.62	204.64	349.68	521.23	486.28	34.96	14.912			
5,100.00	5,097.38	5,071.65	5,057.72	17.95	17.90	151.45	201.42	357.72	530.96	495.29	35.67	14.887			
5,200.00	5,197.31	5,170.88	5,156.57	18.31	18.26	152.25	198.20	365.77	540.79	504.41	36.38	14.867			
5,300.00	5,297.24	5,270.12	5,255.43	18.67	18.62	153.02	194.98	373.81	550.72	513.64	37.09	14.850			
5,400.00	5,397.17	5,369.35	5,354.28	19.02	18.98	153.77	191.76	381.85	560.75	522.96	37.80	14.836			
5,500.00	5,497.10	5,468.59	5,453.14	19.38	19.34	154.49	188.54	389.89	570.87	532.36	38.51	14.825			
5,600.00	5,597.03	5,567.82	5,551.99	19.74	19.70	155.18	185.32	397.94	581.08	541.86	39.22	14.816			
5,700.00	5,696.97	5,667.05	5,650.85	20.10	20.06	155.85	182.10	405.98	591.37	551.44	39.93	14.810			
5,800.00	5,796.90	5,766.29	5,749.70	20.46	20.42	156.50	178.88	414.02	601.74	561.09	40.64	14.806			
5,900.00	5,896.83	5,865.52	5,848.56	20.82	20.78	157.13	175.66	422.06	612.18	570.82	41.35	14.804			
6,000.00	5,996.76	5,964.76	5,947.41	21.18	21.14	157.73	172.44	430.11	622.69	580.62	42.06	14.803			
6,100.00	6,096.69	6,063.99	6,046.27	21.54	21.50	158.31	169.22	438.15	633.26	590.49	42.78	14.804			
6,200.00	6,196.62	6,163.22	6,145.12	21.90	21.87	158.88	166.00	446.19	643.90	600.42	43.49	14.807			
6,300.00	6,296.55	6,262.46	6,243.98	22.25	22.23	159.43	162.78	454.23	654.60	610.40	44.20	14.811			
6,400.00	6,396.48	6,361.69	6,342.83	22.61	22.59	159.95	159.56	462.28	665.36	620.45	44.91	14.816			
6,500.00	6,496.41	6,460.93	6,441.69	22.97	22.95	160.47	156.34	470.32	676.17	630.55	45.62	14.821			
6,600.00	6,596.35	6,560.16	6,540.55	23.33	23.31	160.96	153.12	478.36	687.03	640.70	46.33	14.828			
6,700.00	6,696.28	6,659.40	6,639.40	23.69	23.67	161.44	149.89	486.40	697.95	650.90	47.04	14.836			
6,800.00	6,796.21	6,758.63	6,738.26	24.05	24.03	161.91	146.67	494.45	708.91	661.15	47.76	14.844			
6,900.00	6,896.14	6,857.86	6,837.11	24.41	24.39	162.36	143.45	502.49	719.91	671.45	48.47	14.853			
7,000.00	6,996.07	6,957.10	6,935.97	24.77	24.75	162.80	140.23	510.53	730.96	681.78	49.18	14.863			
7,100.00	7,096.00	7,056.33	7,034.82	25.13	25.11	163.23	137.01	518.58	742.05	692.16	49.89	14.873			

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C05) Robin Fed 114H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,200.00	7,195.93	7,155.57	7,133.68	25.49	25.48	163.64	133.79	526.62	753.18	702.58	50.60	14.884	
7,300.00	7,295.86	7,254.80	7,232.53	25.85	25.84	164.04	130.57	534.66	764.35	713.03	51.32	14.895	
7,400.00	7,395.79	7,354.04	7,331.39	26.21	26.20	164.43	127.35	542.70	775.55	723.52	52.03	14.906	
7,500.00	7,495.73	7,453.27	7,430.24	26.57	26.56	164.81	124.13	550.75	786.79	734.05	52.74	14.918	
7,600.00	7,595.66	7,552.50	7,529.10	26.92	26.92	165.17	120.91	558.79	798.06	744.60	53.45	14.930	
7,700.00	7,695.59	7,651.74	7,627.95	27.28	27.28	165.53	117.69	566.83	809.36	755.19	54.17	14.942	
7,800.00	7,795.52	7,750.97	7,726.81	27.64	27.64	165.88	114.47	574.87	820.69	765.81	54.88	14.955	
7,900.00	7,895.45	7,850.21	7,825.66	28.00	28.00	166.22	111.25	582.92	832.05	776.46	55.59	14.968	
8,000.00	7,995.38	7,949.44	7,924.52	28.36	28.37	166.55	108.03	590.96	843.44	787.14	56.30	14.980	
8,100.00	8,095.31	8,048.67	8,023.37	28.72	28.73	166.87	104.81	599.00	854.85	797.84	57.02	14.993	
8,200.00	8,195.24	8,147.91	8,122.23	29.08	29.09	167.18	101.59	607.04	866.30	808.57	57.73	15.006	
8,300.00	8,295.17	8,247.14	8,221.09	29.44	29.45	167.48	98.37	615.09	877.76	819.32	58.44	15.020	
8,400.00	8,395.11	8,346.38	8,319.94	29.80	29.81	167.78	95.15	623.13	889.25	830.10	59.15	15.033	
8,500.00	8,495.04	8,445.61	8,418.80	30.16	30.17	168.06	91.92	631.17	900.76	840.90	59.87	15.046	
8,600.00	8,594.97	8,544.85	8,517.65	30.52	30.53	168.35	88.70	639.21	912.30	851.72	60.58	15.060	
8,700.00	8,694.90	8,658.23	8,630.65	30.88	30.95	168.64	85.22	647.90	923.47	862.09	61.38	15.045	
8,800.00	8,794.83	8,786.11	8,758.33	31.24	31.41	168.88	82.67	654.29	932.00	869.76	62.24	14.974	
8,900.00	8,894.76	8,914.62	8,886.81	31.60	31.86	169.00	81.70	656.71	937.49	874.43	63.06	14.867	
9,000.00	8,994.69	9,017.50	8,989.69	31.95	32.21	169.04	81.69	656.73	941.15	877.39	63.76	14.760	
9,100.00	9,094.62	9,100.00	9,072.18	32.31	32.49	169.03	82.55	657.01	945.27	880.87	64.41	14.677	
9,200.00	9,194.55	9,161.44	9,133.21	32.67	32.70	168.67	88.93	659.13	952.82	887.89	64.93	14.674	
9,300.00	9,294.49	9,221.49	9,191.85	33.03	32.90	167.98	101.13	663.18	964.43	899.07	65.36	14.756	
9,400.00	9,394.42	9,278.21	9,245.71	33.39	33.08	167.03	117.93	668.75	980.38	914.71	65.67	14.930	
9,500.00	9,494.35	9,330.86	9,293.91	33.75	33.23	165.91	137.99	675.40	1,000.99	935.17	65.82	15.208	
9,600.00	9,594.28	9,379.06	9,336.18	34.11	33.36	164.70	159.96	682.69	1,026.55	960.75	65.80	15.602	
9,700.00	9,694.21	9,422.78	9,372.70	34.47	33.47	163.47	182.74	690.25	1,057.26	991.67	65.59	16.119	
9,800.00	9,794.14	9,450.00	9,394.48	34.83	33.54	162.65	198.24	695.39	1,093.32	1,028.30	65.02	16.815	
9,900.00	9,894.07	9,500.00	9,432.37	35.19	33.65	161.04	229.18	705.65	1,134.27	1,069.57	64.70	17.531	
10,000.00	9,994.00	9,529.16	9,453.10	35.55	33.70	160.06	248.64	712.10	1,180.34	1,116.35	63.98	18.447	
10,064.29	10,058.25	9,550.00	9,467.27	35.78	33.74	159.34	263.15	716.92	1,212.48	1,148.95	63.53	19.084	
10,100.00	10,093.94	9,550.00	9,467.27	35.91	33.74	159.45	263.15	716.92	1,231.06	1,167.98	63.08	19.515	
10,206.07	10,200.00	9,584.56	9,489.51	36.28	33.80	77.17	288.25	725.24	1,287.83	1,225.54	62.29	20.675	
10,300.00	10,293.93	9,600.00	9,498.92	36.61	33.82	76.62	299.87	729.10	1,341.16	1,279.83	61.32	21.870	
10,400.00	10,393.93	9,626.90	9,514.52	36.95	33.86	75.64	320.67	736.00	1,401.66	1,341.16	60.50	23.169	
10,500.00	10,493.93	9,650.00	9,527.07	37.30	33.89	74.80	339.07	742.10	1,465.79	1,406.13	59.66	24.571	
15,400.00	11,163.00	13,893.89	9,613.00	54.85	50.42	40.50	4,535.86	959.88	2,031.87	1,950.24	81.63	24.890	
15,500.00	11,163.00	13,993.89	9,613.00	55.45	51.06	40.50	4,635.86	959.12	2,031.87	1,949.29	82.58	24.605	
15,600.00	11,163.00	14,093.89	9,613.00	56.06	51.70	40.50	4,735.86	958.36	2,031.88	1,948.34	83.54	24.323	
15,700.00	11,163.00	14,193.89	9,613.00	56.68	52.35	40.50	4,835.85	957.59	2,031.88	1,947.38	84.50	24.045	
15,800.00	11,163.00	14,293.89	9,613.00	57.31	53.01	40.50	4,935.85	956.83	2,031.89	1,946.41	85.48	23.770	
15,900.00	11,163.00	14,393.89	9,613.00	57.94	53.68	40.50	5,035.85	956.06	2,031.89	1,945.43	86.46	23.500	
16,000.00	11,163.00	14,493.89	9,613.00	58.57	54.34	40.50	5,135.85	955.30	2,031.89	1,944.43	87.46	23.233	
16,100.00	11,163.00	14,593.89	9,613.00	59.22	55.02	40.50	5,235.84	954.54	2,031.90	1,943.44	88.46	22.969	
16,200.00	11,163.00	14,693.89	9,613.00	59.86	55.70	40.50	5,335.84	953.77	2,031.90	1,942.43	89.47	22.710	
16,300.00	11,163.00	14,793.89	9,613.00	60.52	56.38	40.50	5,435.84	953.01	2,031.90	1,941.41	90.49	22.454	
16,400.00	11,163.00	14,893.89	9,613.00	61.18	57.07	40.50	5,535.83	952.24	2,031.91	1,940.39	91.52	22.202	
16,500.00	11,163.00	14,993.89	9,613.00	61.84	57.77	40.50	5,635.83	951.48	2,031.91	1,939.36	92.55	21.954	
16,600.00	11,163.00	15,093.89	9,613.00	62.51	58.47	40.50	5,735.83	950.72	2,031.92	1,938.32	93.59	21.710	
16,700.00	11,163.00	15,193.89	9,613.00	63.18	59.17	40.50	5,835.82	949.95	2,031.92	1,937.28	94.64	21.470	
16,800.00	11,163.00	15,293.89	9,613.00	63.86	59.88	40.50	5,935.82	949.19	2,031.92	1,936.23	95.70	21.233	
16,900.00	11,163.00	15,393.89	9,613.00	64.54	60.59	40.50	6,035.82	948.43	2,031.93	1,935.17	96.76	21.000	
17,000.00	11,163.00	15,493.89	9,613.00	65.23	61.31	40.50	6,135.82	947.66	2,031.93	1,934.11	97.83	20.771	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C05) Robin Fed 114H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
17,100.00	11,163.00	15,593.89	9,613.00	65.92	62.03	40.50	6,235.81	946.90	2,031.93	1,933.04	98.90	20.545	
17,200.00	11,163.00	15,693.89	9,613.00	66.62	62.75	40.50	6,335.81	946.13	2,031.94	1,931.96	99.98	20.324	
17,300.00	11,163.00	15,793.89	9,613.00	67.32	63.48	40.50	6,435.81	945.37	2,031.94	1,930.88	101.07	20.105	
17,400.00	11,163.00	15,893.89	9,613.00	68.02	64.21	40.50	6,535.80	944.61	2,031.95	1,929.79	102.16	19.890	
17,500.00	11,163.00	15,993.89	9,613.00	68.73	64.94	40.50	6,635.80	943.84	2,031.95	1,928.70	103.25	19.679	
17,600.00	11,163.00	16,093.89	9,613.00	69.44	65.68	40.50	6,735.80	943.08	2,031.95	1,927.60	104.36	19.471	
17,700.00	11,163.00	16,193.89	9,613.00	70.15	66.42	40.50	6,835.80	942.31	2,031.96	1,926.50	105.46	19.267	
17,800.00	11,163.00	16,293.89	9,613.00	70.87	67.17	40.51	6,935.79	941.55	2,031.96	1,925.39	106.57	19.066	
17,900.00	11,163.00	16,393.89	9,613.00	71.59	67.91	40.51	7,035.79	940.79	2,031.97	1,924.27	107.69	18.868	
18,000.00	11,163.00	16,493.89	9,613.00	72.31	68.66	40.51	7,135.79	940.02	2,031.97	1,923.16	108.81	18.674	
18,100.00	11,163.00	16,593.89	9,613.00	73.04	69.41	40.51	7,235.78	939.26	2,031.97	1,922.03	109.94	18.483	
18,200.00	11,163.00	16,693.89	9,613.00	73.77	70.17	40.51	7,335.78	938.50	2,031.98	1,920.91	111.07	18.295	
18,300.00	11,163.00	16,793.89	9,613.00	74.50	70.92	40.51	7,435.78	937.73	2,031.98	1,919.78	112.20	18.110	
18,400.00	11,163.00	16,893.89	9,613.00	75.24	71.68	40.51	7,535.78	936.97	2,031.98	1,918.64	113.34	17.928	
18,500.00	11,163.00	16,993.89	9,613.00	75.97	72.45	40.51	7,635.77	936.20	2,031.99	1,917.50	114.48	17.749	
18,600.00	11,163.00	17,093.89	9,613.00	76.72	73.21	40.51	7,735.77	935.44	2,031.99	1,916.36	115.63	17.573	
18,700.00	11,163.00	17,193.89	9,613.00	77.46	73.98	40.51	7,835.77	934.68	2,032.00	1,915.22	116.78	17.400	
18,800.00	11,163.00	17,293.89	9,613.00	78.21	74.74	40.51	7,935.76	933.91	2,032.00	1,914.07	117.93	17.230	
18,900.00	11,163.00	17,393.89	9,613.00	78.95	75.51	40.51	8,035.76	933.15	2,032.00	1,912.91	119.09	17.063	
19,000.00	11,163.00	17,493.89	9,613.00	79.71	76.29	40.51	8,135.76	932.38	2,032.01	1,911.76	120.25	16.898	
19,100.00	11,163.00	17,593.89	9,613.00	80.46	77.06	40.51	8,235.75	931.62	2,032.01	1,910.60	121.41	16.736	
19,200.00	11,163.00	17,693.89	9,613.00	81.21	77.84	40.51	8,335.75	930.86	2,032.01	1,909.43	122.58	16.577	
19,300.00	11,163.00	17,793.89	9,613.00	81.97	78.62	40.51	8,435.75	930.09	2,032.02	1,908.27	123.75	16.420	
19,400.00	11,163.00	17,893.89	9,613.00	82.73	79.40	40.51	8,535.75	929.33	2,032.02	1,907.10	124.92	16.266	
19,500.00	11,163.00	17,993.89	9,613.00	83.49	80.18	40.51	8,635.74	928.56	2,032.03	1,905.93	126.10	16.114	
19,600.00	11,163.00	18,093.89	9,613.00	84.26	80.96	40.51	8,735.74	927.80	2,032.03	1,904.75	127.28	15.965	
19,700.00	11,163.00	18,193.89	9,613.00	85.02	81.75	40.51	8,835.74	927.04	2,032.03	1,903.57	128.46	15.818	
19,800.00	11,163.00	18,293.89	9,613.00	85.79	82.54	40.51	8,935.73	926.27	2,032.04	1,902.39	129.64	15.674	
19,900.00	11,163.00	18,393.89	9,613.00	86.56	83.32	40.51	9,035.73	925.51	2,032.04	1,901.21	130.83	15.532	
20,000.00	11,163.00	18,493.89	9,613.00	87.33	84.11	40.51	9,135.73	924.75	2,032.04	1,900.02	132.02	15.392	
20,100.00	11,163.00	18,593.89	9,613.00	88.11	84.91	40.51	9,235.73	923.98	2,032.05	1,898.84	133.21	15.254	
20,200.00	11,163.00	18,693.89	9,613.00	88.88	85.70	40.51	9,335.72	923.22	2,032.05	1,897.64	134.41	15.119	
20,300.00	11,163.00	18,793.89	9,613.00	89.66	86.49	40.51	9,435.72	922.45	2,032.06	1,896.45	135.60	14.985	
20,400.00	11,163.00	18,893.89	9,613.00	90.44	87.29	40.51	9,535.72	921.69	2,032.06	1,895.26	136.80	14.854	
20,500.00	11,163.00	18,993.89	9,613.00	91.21	88.09	40.51	9,635.71	920.93	2,032.06	1,894.06	138.01	14.725	
20,600.00	11,163.00	19,093.89	9,613.00	92.00	88.88	40.51	9,735.71	920.16	2,032.07	1,892.86	139.21	14.597	
20,700.00	11,163.00	19,193.89	9,613.00	92.78	89.68	40.51	9,835.71	919.40	2,032.07	1,891.66	140.41	14.472	
20,800.00	11,163.00	19,293.89	9,613.00	93.56	90.48	40.51	9,935.71	918.63	2,032.07	1,890.45	141.62	14.349	
20,900.00	11,163.00	19,393.89	9,613.00	94.35	91.29	40.51	10,035.70	917.87	2,032.08	1,889.25	142.83	14.227	
21,000.00	11,163.00	19,493.89	9,613.00	95.14	92.09	40.51	10,135.70	917.11	2,032.08	1,888.04	144.04	14.107	
21,100.00	11,163.00	19,593.89	9,613.00	95.92	92.89	40.51	10,235.70	916.34	2,032.09	1,886.83	145.26	13.989	
21,200.00	11,163.00	19,693.89	9,613.00	96.71	93.70	40.51	10,335.69	915.58	2,032.09	1,885.62	146.47	13.873	
21,300.00	11,163.00	19,793.89	9,613.00	97.51	94.51	40.51	10,435.69	914.82	2,032.09	1,884.40	147.69	13.759	
21,400.00	11,163.00	19,893.89	9,613.00	98.30	95.31	40.51	10,535.69	914.05	2,032.10	1,883.19	148.91	13.646	
21,436.63	11,163.00	19,930.52	9,613.00	98.59	95.61	40.51	10,572.31	913.77	2,032.10	1,882.74	149.36	13.606 SF	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C06) Robin Fed 128H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,100.00	2,099.45	2,089.93	2,086.83	7.22	7.16	113.16	300.02	152.70	347.67	333.29	14.38	24.180	CC, ES
2,200.00	2,199.38	2,189.02	2,185.44	7.58	7.51	115.26	296.85	161.92	351.56	336.48	15.08	23.309	
2,300.00	2,299.31	2,288.11	2,284.05	7.93	7.87	117.31	293.68	171.13	355.92	340.13	15.79	22.544	
2,400.00	2,399.24	2,387.19	2,382.65	8.29	8.22	119.31	290.51	180.35	360.73	344.23	16.49	21.872	
2,500.00	2,499.17	2,486.28	2,481.26	8.65	8.58	121.25	287.34	189.56	365.97	348.77	17.20	21.278	
2,600.00	2,599.10	2,585.37	2,579.87	9.00	8.93	123.14	284.17	198.77	371.63	353.72	17.91	20.755	
2,700.00	2,699.03	2,684.46	2,678.48	9.36	9.29	124.97	281.00	207.99	377.68	359.07	18.61	20.291	
2,800.00	2,798.96	2,783.54	2,777.08	9.71	9.64	126.74	277.83	217.20	384.11	364.79	19.32	19.881	
2,900.00	2,898.89	2,882.63	2,875.69	10.07	10.00	128.46	274.66	226.41	390.90	370.87	20.03	19.518	
3,000.00	2,998.83	2,981.72	2,974.30	10.43	10.36	130.11	271.49	235.63	398.03	377.30	20.74	19.196	
3,100.00	3,098.76	3,080.81	3,072.91	10.78	10.71	131.71	268.32	244.84	405.49	384.04	21.44	18.909	
3,200.00	3,198.69	3,179.90	3,171.52	11.14	11.07	133.24	265.15	254.06	413.24	391.09	22.15	18.655	
3,300.00	3,298.62	3,278.98	3,270.12	11.50	11.43	134.72	261.98	263.27	421.29	398.43	22.86	18.429	
3,400.00	3,398.55	3,378.07	3,368.73	11.86	11.79	136.15	258.81	272.48	429.61	406.04	23.57	18.228	
3,500.00	3,498.48	3,477.16	3,467.34	12.21	12.15	137.52	255.64	281.70	438.18	413.91	24.28	18.049	
3,600.00	3,598.41	3,576.25	3,565.95	12.57	12.51	138.84	252.47	290.91	447.00	422.02	24.99	17.891	
3,700.00	3,698.34	3,675.34	3,664.55	12.93	12.87	140.10	249.30	300.12	456.05	430.35	25.69	17.749	
3,800.00	3,798.27	3,774.42	3,763.16	13.29	13.23	141.32	246.13	309.34	465.31	438.90	26.40	17.623	
3,900.00	3,898.21	3,873.51	3,861.77	13.65	13.59	142.49	242.96	318.55	474.77	447.66	27.11	17.512	
4,000.00	3,998.14	3,972.60	3,960.38	14.00	13.95	143.61	239.79	327.77	484.42	456.60	27.82	17.412	
4,100.00	4,098.07	4,071.69	4,058.98	14.36	14.31	144.69	236.62	336.98	494.25	465.72	28.53	17.324	
4,200.00	4,198.00	4,170.77	4,157.59	14.72	14.67	145.73	233.45	346.19	504.25	475.01	29.24	17.246	
4,300.00	4,297.93	4,269.86	4,256.20	15.08	15.03	146.73	230.28	355.41	514.41	484.46	29.95	17.177	
4,400.00	4,397.86	4,368.95	4,354.81	15.44	15.39	147.69	227.11	364.62	524.71	494.06	30.66	17.116	
4,500.00	4,497.79	4,468.04	4,453.41	15.80	15.75	148.61	223.94	373.84	535.16	503.80	31.37	17.062	
4,600.00	4,597.72	4,567.13	4,552.02	16.15	16.11	149.50	220.77	383.05	545.74	513.67	32.08	17.015	
4,700.00	4,697.65	4,666.21	4,650.63	16.51	16.47	150.35	217.60	392.26	556.45	523.66	32.78	16.973	
4,800.00	4,797.59	4,765.30	4,749.24	16.87	16.83	151.17	214.43	401.48	567.27	533.78	33.49	16.937	
4,900.00	4,897.52	4,864.39	4,847.84	17.23	17.19	151.96	211.26	410.69	578.21	544.00	34.20	16.905	
5,000.00	4,997.45	4,963.48	4,946.45	17.59	17.55	152.72	208.09	419.90	589.25	554.33	34.91	16.878	
5,100.00	5,097.38	5,062.57	5,045.06	17.95	17.91	153.45	204.92	429.12	600.39	564.77	35.62	16.854	
5,200.00	5,197.31	5,161.65	5,143.67	18.31	18.27	154.16	201.75	438.33	611.62	575.29	36.33	16.834	
5,300.00	5,297.24	5,260.74	5,242.28	18.67	18.63	154.84	198.58	447.55	622.95	585.90	37.04	16.817	
5,400.00	5,397.17	5,359.83	5,340.88	19.02	19.00	155.50	195.41	456.76	634.35	596.60	37.75	16.803	
5,500.00	5,497.10	5,458.92	5,439.49	19.38	19.36	156.13	192.24	465.97	645.84	607.38	38.46	16.791	
5,600.00	5,597.03	5,558.00	5,538.10	19.74	19.72	156.74	189.07	475.19	657.40	618.23	39.17	16.782	
5,700.00	5,696.97	5,657.09	5,636.71	20.10	20.08	157.33	185.90	484.40	669.04	629.15	39.88	16.775	
5,800.00	5,796.90	5,756.18	5,735.31	20.46	20.44	157.90	182.73	493.62	680.74	640.14	40.59	16.770	
5,900.00	5,896.83	5,855.27	5,833.92	20.82	20.80	158.45	179.56	502.83	692.50	651.20	41.30	16.766	
6,000.00	5,996.76	5,954.36	5,932.53	21.18	21.16	158.99	176.39	512.04	704.33	662.32	42.01	16.764	
6,100.00	6,096.69	6,053.44	6,031.14	21.54	21.53	159.50	173.22	521.26	716.22	673.49	42.73	16.763	
6,200.00	6,196.62	6,152.53	6,129.74	21.90	21.89	160.00	170.05	530.47	728.16	684.72	43.44	16.764	
6,300.00	6,296.55	6,251.62	6,228.35	22.25	22.25	160.48	166.88	539.68	740.15	696.01	44.15	16.766	
6,400.00	6,396.48	6,350.71	6,326.96	22.61	22.61	160.95	163.71	548.90	752.20	707.34	44.86	16.769	
6,500.00	6,496.41	6,449.80	6,425.57	22.97	22.97	161.40	160.54	558.11	764.29	718.72	45.57	16.772	
6,600.00	6,596.35	6,548.88	6,524.17	23.33	23.33	161.84	157.37	567.33	776.43	730.15	46.28	16.777	
6,700.00	6,696.28	6,647.97	6,622.78	23.69	23.70	162.26	154.20	576.54	788.61	741.62	46.99	16.782	
6,800.00	6,796.21	6,747.06	6,721.39	24.05	24.06	162.67	151.03	585.75	800.83	753.13	47.70	16.788	
6,900.00	6,896.14	6,846.15	6,820.00	24.41	24.42	163.07	147.86	594.97	813.09	764.68	48.41	16.795	
7,000.00	6,996.07	6,945.23	6,918.60	24.77	24.78	163.46	144.69	604.18	825.39	776.27	49.12	16.802	
7,100.00	7,096.00	7,044.32	7,017.21	25.13	25.14	163.84	141.52	613.39	837.73	787.89	49.84	16.810	
7,200.00	7,195.93	7,143.41	7,115.82	25.49	25.51	164.20	138.35	622.61	850.10	799.55	50.55	16.818	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C06) Robin Fed 128H - Permit - APD-Rev01												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)												Offset Well Error:	0.00 usft
Reference												Rule Assigned:	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
7,300.00	7,295.86	7,242.50	7,214.43	25.85	25.87	164.56	135.18	631.82	862.50	811.25	51.26	16.827	
7,400.00	7,395.79	7,341.59	7,313.03	26.21	26.23	164.90	132.01	641.04	874.94	822.97	51.97	16.835	
7,500.00	7,495.73	7,440.67	7,411.64	26.57	26.59	165.23	128.84	650.25	887.41	834.72	52.68	16.845	
7,600.00	7,595.66	7,539.76	7,510.25	26.92	26.95	165.56	125.67	659.46	899.90	846.51	53.39	16.854	
7,700.00	7,695.59	7,638.85	7,608.86	27.28	27.32	165.88	122.50	668.68	912.42	858.32	54.11	16.864	
7,800.00	7,795.52	7,737.94	7,707.47	27.64	27.68	166.19	119.33	677.89	924.97	870.16	54.82	16.874	
7,900.00	7,895.45	7,837.03	7,806.07	28.00	28.04	166.49	116.16	687.11	937.55	882.02	55.53	16.884	
8,000.00	7,995.38	7,936.11	7,904.68	28.36	28.40	166.78	112.99	696.32	950.15	893.91	56.24	16.894	
8,100.00	8,095.31	8,035.20	8,003.29	28.72	28.76	167.06	109.82	705.53	962.77	905.82	56.95	16.905	
8,200.00	8,195.24	8,134.29	8,101.90	29.08	29.13	167.34	106.65	714.75	975.42	917.75	57.66	16.915	
8,300.00	8,295.17	8,233.38	8,200.50	29.44	29.49	167.61	103.48	723.96	988.09	929.71	58.38	16.926	
8,400.00	8,395.11	8,332.46	8,299.11	29.80	29.85	167.87	100.31	733.17	1,000.78	941.69	59.09	16.937	
8,500.00	8,495.04	8,431.55	8,397.72	30.16	30.21	168.13	97.14	742.39	1,013.49	953.69	59.80	16.947	
8,600.00	8,594.97	8,530.64	8,496.33	30.52	30.57	168.38	93.97	751.60	1,026.22	965.70	60.51	16.958	
8,700.00	8,694.90	8,630.70	8,596.39	30.88	30.93	168.66	90.41	761.94	1,038.15	976.77	61.37	16.915	
8,800.00	8,794.83	8,731.14	8,696.81	31.24	31.30	168.86	87.97	769.02	1,047.00	984.75	62.25	16.818	
8,900.00	8,894.76	8,831.29	8,796.86	31.60	31.66	168.97	87.05	771.71	1,052.61	989.53	63.08	16.686	
9,000.00	8,994.69	8,931.22	8,896.81	31.95	32.01	169.01	87.04	771.73	1,056.27	992.49	63.79	16.560	
9,100.00	9,094.62	9,031.15	8,996.74	32.31	32.37	169.05	87.04	771.73	1,059.92	995.43	64.48	16.438	
9,200.00	9,194.55	9,131.08	9,096.67	32.67	32.73	169.09	87.04	771.73	1,063.56	998.38	65.18	16.318	
9,300.00	9,294.49	9,231.02	9,196.61	33.03	33.09	169.13	87.04	771.73	1,067.20	1,001.33	65.87	16.201	
9,400.00	9,394.42	9,331.05	9,296.65	33.39	33.45	169.16	87.04	771.73	1,070.85	1,004.28	66.57	16.087	
9,500.00	9,494.35	9,431.08	9,396.68	33.75	33.81	169.20	87.04	771.73	1,074.49	1,007.23	67.26	15.974	
9,600.00	9,594.28	9,531.01	9,496.71	34.11	34.17	169.23	87.11	771.75	1,078.17	1,010.22	67.95	15.867	
9,700.00	9,694.21	9,631.04	9,596.74	34.47	34.53	169.01	91.75	772.86	1,083.80	1,015.27	68.53	15.815	
9,800.00	9,794.14	9,731.07	9,696.77	34.83	34.89	168.43	103.33	775.64	1,092.67	1,023.62	69.05	15.824	
9,900.00	9,894.07	9,831.10	9,796.70	35.19	35.25	167.58	120.27	779.71	1,105.07	1,035.59	69.48	15.905	
10,000.00	9,994.00	9,931.13	9,896.73	35.55	35.61	166.53	141.34	784.77	1,121.37	1,051.58	69.79	16.068	
10,064.29	10,058.25	9,995.38	9,960.91	35.78	35.84	165.78	156.38	788.38	1,134.10	1,064.18	69.92	16.220	
10,100.00	10,093.94	9,971.51	9,937.04	35.91	35.97	165.39	164.83	790.41	1,141.81	1,071.85	69.96	16.321	
10,206.07	10,200.00	9,966.66	9,902.21	36.28	36.34	82.79	190.92	796.67	1,166.42	1,096.48	69.94	16.677	
10,300.00	10,293.93	10,000.00	9,935.76	36.61	36.67	81.84	210.53	801.38	1,191.69	1,122.00	69.69	17.100	
10,400.00	10,393.93	10,050.00	9,973.26	36.95	37.01	80.32	242.66	809.09	1,223.53	1,154.05	69.48	17.609	
10,500.00	10,493.93	10,076.21	9,991.72	37.30	37.36	79.47	260.74	813.43	1,260.42	1,191.55	68.87	18.302	
10,596.11	10,590.04	10,100.00	10,007.74	37.63	37.69	78.68	277.85	817.54	1,300.63	1,232.46	68.17	19.078	
10,600.00	10,593.93	10,100.00	10,007.74	37.65	37.71	78.93	277.85	817.54	1,302.36	1,234.23	68.13	19.116	
10,650.00	10,643.85	10,120.17	10,020.72	37.82	37.88	75.85	292.85	821.14	1,324.61	1,256.76	67.85	19.522	
10,700.00	10,693.36	10,135.02	10,029.94	37.99	38.05	73.01	304.18	823.86	1,347.05	1,279.57	67.48	19.962	
10,750.00	10,742.08	10,150.00	10,038.93	38.16	38.22	70.26	315.83	826.66	1,369.43	1,302.33	67.11	20.407	
10,800.00	10,789.65	10,165.95	10,048.14	38.32	38.38	67.62	328.48	829.70	1,391.52	1,324.78	66.74	20.850	
10,850.00	10,835.70	10,181.91	10,057.00	38.48	38.54	65.13	341.40	832.80	1,413.11	1,346.73	66.38	21.289	
10,900.00	10,879.88	10,200.00	10,066.59	38.62	38.68	62.80	356.31	836.38	1,434.01	1,367.95	66.05	21.709	
10,950.00	10,921.85	10,200.00	10,066.59	38.75	38.81	60.85	356.31	836.38	1,454.24	1,388.73	65.50	22.201	
11,000.00	10,961.30	10,231.25	10,082.00	38.87	38.93	58.77	382.74	842.72	1,473.06	1,407.67	65.39	22.527	
11,050.00	10,997.92	10,250.00	10,090.53	38.99	39.05	57.03	398.98	846.62	1,490.93	1,425.79	65.14	22.889	
11,100.00	11,031.44	10,250.00	10,090.53	39.09	39.15	55.54	398.98	846.62	1,507.73	1,443.04	64.69	23.307	
11,150.00	11,061.60	10,281.99	10,103.80	39.20	39.26	54.17	427.28	853.41	1,522.73	1,458.07	64.66	23.549	
11,200.00	11,088.17	10,300.00	10,110.55	39.30	39.36	53.02	443.51	857.31	1,536.46	1,471.95	64.51	23.819	
11,250.00	11,110.95	10,316.20	10,116.17	39.39	39.45	52.06	458.28	860.86	1,548.64	1,484.26	64.38	24.056	
11,300.00	11,129.76	10,333.34	10,121.64	39.48	39.54	51.28	474.08	864.65	1,559.20	1,494.89	64.31	24.246	
11,350.00	11,144.47	10,350.00	10,126.50	39.56	39.62	50.67	489.57	868.37	1,568.09	1,503.80	64.29	24.391	
11,400.00	11,154.96	10,367.57	10,131.11	39.63	39.69	50.23	506.06	872.33	1,575.28	1,510.95	64.33	24.486	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C06) Robin Fed 128H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference													
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
				Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
11,450.00	11,161.14	10,400.00	10,138.26	39.68	35.95	50.10	536.81	879.71	1,580.94	1,516.41	64.53	24.498	
11,496.11	11,163.00	10,400.00	10,138.26	39.73	35.95	49.85	536.81	879.71	1,584.22	1,519.65	64.57	24.535	
11,500.00	11,163.00	10,400.00	10,138.26	39.73	35.95	49.85	536.81	879.71	1,584.46	1,519.88	64.57	24.537	
11,600.00	11,163.00	10,450.00	10,145.74	39.84	35.98	50.33	584.87	891.25	1,592.85	1,527.83	65.02	24.497	
11,700.00	11,163.00	10,470.60	10,147.57	39.96	35.99	50.50	604.82	896.04	1,605.02	1,539.66	65.36	24.556	
11,800.00	11,163.00	10,505.68	10,148.97	40.10	36.01	50.73	638.90	904.22	1,621.35	1,555.58	65.78	24.650	
11,900.00	11,163.00	10,660.62	10,149.00	40.25	36.16	51.48	790.40	936.58	1,638.55	1,572.21	66.33	24.703	
12,000.00	11,163.00	10,841.29	10,149.00	40.43	36.42	52.10	968.96	963.91	1,651.10	1,584.21	66.89	24.683	
12,100.00	11,163.00	11,024.93	10,149.00	40.62	36.74	52.48	1,151.85	980.11	1,658.70	1,591.28	67.43	24.601	
12,200.00	11,163.00	11,210.09	10,149.00	40.83	37.12	52.60	1,336.93	984.54	1,661.22	1,593.29	67.92	24.457	
12,210.87	11,163.00	11,230.24	10,149.00	40.86	37.17	52.60	1,357.08	984.30	1,661.18	1,593.21	67.97	24.438	
12,300.00	11,163.00	11,309.15	10,149.00	41.06	37.35	52.60	1,435.99	983.78	1,661.22	1,592.90	68.32	24.315	
12,400.00	11,163.00	11,409.15	10,149.00	41.31	37.60	52.60	1,535.98	983.01	1,661.22	1,592.47	68.75	24.164	
12,500.00	11,163.00	11,509.15	10,149.00	41.57	37.86	52.60	1,635.98	982.25	1,661.23	1,592.02	69.21	24.004	
12,600.00	11,163.00	11,609.15	10,149.00	41.84	38.14	52.60	1,735.98	981.48	1,661.23	1,591.54	69.69	23.837	
12,700.00	11,163.00	11,709.15	10,149.00	42.14	38.44	52.60	1,835.97	980.71	1,661.23	1,591.03	70.20	23.663	
12,800.00	11,163.00	11,809.15	10,149.00	42.45	38.76	52.60	1,935.97	979.95	1,661.23	1,590.49	70.74	23.482	
12,900.00	11,163.00	11,909.15	10,149.00	42.77	39.09	52.60	2,035.97	979.18	1,661.24	1,589.92	71.31	23.295	
13,000.00	11,163.00	12,009.15	10,149.00	43.11	39.44	52.60	2,135.97	978.42	1,661.24	1,589.33	71.91	23.103	
13,100.00	11,163.00	12,109.15	10,149.00	43.47	39.81	52.60	2,235.96	977.65	1,661.24	1,588.72	72.52	22.906	
13,200.00	11,163.00	12,209.15	10,149.00	43.83	40.19	52.60	2,335.96	976.88	1,661.24	1,588.08	73.17	22.704	
13,300.00	11,163.00	12,309.15	10,149.00	44.22	40.58	52.60	2,435.96	976.12	1,661.25	1,587.41	73.84	22.499	
13,400.00	11,163.00	12,409.15	10,149.00	44.61	40.99	52.60	2,535.95	975.35	1,661.25	1,586.72	74.53	22.290	
13,500.00	11,163.00	12,509.15	10,149.00	45.02	41.41	52.60	2,635.95	974.59	1,661.25	1,586.01	75.24	22.078	
13,600.00	11,163.00	12,609.15	10,149.00	45.44	41.85	52.60	2,735.95	973.82	1,661.26	1,585.28	75.98	21.864	
13,700.00	11,163.00	12,709.15	10,149.00	45.88	42.30	52.60	2,835.94	973.05	1,661.26	1,584.52	76.74	21.648	
13,800.00	11,163.00	12,809.15	10,149.00	46.32	42.76	52.60	2,935.94	972.29	1,661.26	1,583.74	77.52	21.431	
13,900.00	11,163.00	12,909.15	10,149.00	46.78	43.24	52.60	3,035.94	971.52	1,661.26	1,582.95	78.32	21.212	
14,000.00	11,163.00	13,009.15	10,149.00	47.25	43.72	52.60	3,135.94	970.75	1,661.27	1,582.13	79.14	20.992	
14,100.00	11,163.00	13,109.15	10,149.00	47.73	44.22	52.60	3,235.93	969.99	1,661.27	1,581.29	79.98	20.772	
14,200.00	11,163.00	13,209.15	10,149.00	48.22	44.73	52.60	3,335.93	969.22	1,661.27	1,580.44	80.83	20.552	
14,300.00	11,163.00	13,309.15	10,149.00	48.73	45.25	52.60	3,435.93	968.46	1,661.27	1,579.57	81.71	20.332	
14,400.00	11,163.00	13,409.15	10,149.00	49.24	45.78	52.60	3,535.92	967.69	1,661.28	1,578.68	82.60	20.112	
14,500.00	11,163.00	13,509.15	10,149.00	49.76	46.32	52.60	3,635.92	966.92	1,661.28	1,577.77	83.51	19.893	
14,600.00	11,163.00	13,609.15	10,149.00	50.29	46.87	52.60	3,735.92	966.16	1,661.28	1,576.85	84.44	19.675	
14,700.00	11,163.00	13,709.15	10,149.00	50.83	47.43	52.60	3,835.92	965.39	1,661.29	1,575.91	85.38	19.458	
14,800.00	11,163.00	13,809.15	10,149.00	51.38	48.00	52.60	3,935.91	964.62	1,661.29	1,574.95	86.33	19.242	
14,900.00	11,163.00	13,909.15	10,149.00	51.94	48.58	52.60	4,035.91	963.86	1,661.29	1,573.98	87.31	19.028	
15,000.00	11,163.00	14,009.15	10,149.00	52.51	49.17	52.60	4,135.91	963.09	1,661.29	1,573.00	88.29	18.816	
15,100.00	11,163.00	14,109.15	10,149.00	53.08	49.76	52.60	4,235.90	962.33	1,661.30	1,572.00	89.29	18.605	
15,200.00	11,163.00	14,209.15	10,149.00	53.66	50.36	52.60	4,335.90	961.56	1,661.30	1,570.99	90.30	18.397	
15,300.00	11,163.00	14,309.15	10,149.00	54.25	50.97	52.60	4,435.90	960.79	1,661.30	1,569.97	91.33	18.190	
15,400.00	11,163.00	14,409.15	10,149.00	54.85	51.59	52.60	4,535.90	960.03	1,661.30	1,568.94	92.37	17.986	
15,500.00	11,163.00	14,509.15	10,149.00	55.45	52.21	52.60	4,635.89	959.26	1,661.31	1,567.89	93.42	17.783	
15,600.00	11,163.00	14,609.15	10,149.00	56.06	52.84	52.60	4,735.89	958.49	1,661.31	1,566.83	94.48	17.584	
15,700.00	11,163.00	14,709.15	10,149.00	56.68	53.48	52.60	4,835.89	957.73	1,661.31	1,565.76	95.55	17.386	
15,800.00	11,163.00	14,809.15	10,149.00	57.31	54.13	52.60	4,935.88	956.96	1,661.32	1,564.68	96.64	17.191	
15,900.00	11,163.00	14,909.15	10,149.00	57.94	54.78	52.60	5,035.88	956.20	1,661.32	1,563.59	97.73	16.999	
16,000.00	11,163.00	15,009.15	10,149.00	58.57	55.43	52.60	5,135.88	955.43	1,661.32	1,562.48	98.84	16.809	
16,100.00	11,163.00	15,109.15	10,149.00	59.22	56.09	52.60	5,235.87	954.66	1,661.32	1,561.37	99.95	16.621	
16,200.00	11,163.00	15,209.15	10,149.00	59.86	56.76	52.60	5,335.87	953.90	1,661.33	1,560.25	101.08	16.437	
16,300.00	11,163.00	15,309.15	10,149.00	60.52	57.43	52.60	5,435.87	953.13	1,661.33	1,559.12	102.21	16.254	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (C06) Robin Fed 128H - Permit - APD-Rev01													Offset Site Error:	0.00 usft
Survey Program:		0-MWD+IFR1+SAG+FDIR (SQC2)					Rule Assigned:				Offset Well Error:	0.00 usft		
Reference	Offset	Offset		Semi Major Axis		Offset Wellbore Centre			Distance			Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
16,400.00	11,163.00	15,409.15	10,149.00	61.18	58.11	52.60	5,535.87	952.36	1,661.33	1,557.98	103.35	16.075		
16,500.00	11,163.00	15,509.15	10,149.00	61.84	58.79	52.60	5,635.86	951.60	1,661.33	1,556.83	104.50	15.898		
16,600.00	11,163.00	15,609.15	10,149.00	62.51	59.48	52.60	5,735.86	950.83	1,661.34	1,555.68	105.66	15.723		
16,700.00	11,163.00	15,709.15	10,149.00	63.18	60.17	52.60	5,835.86	950.07	1,661.34	1,554.51	106.83	15.552		
16,800.00	11,163.00	15,809.15	10,149.00	63.86	60.87	52.60	5,935.85	949.30	1,661.34	1,553.34	108.00	15.383		
16,900.00	11,163.00	15,909.15	10,149.00	64.54	61.57	52.60	6,035.85	948.53	1,661.35	1,552.16	109.18	15.216		
17,000.00	11,163.00	16,009.15	10,149.00	65.23	62.27	52.60	6,135.85	947.77	1,661.35	1,550.97	110.37	15.052		
17,100.00	11,163.00	16,109.15	10,149.00	65.92	62.98	52.60	6,235.85	947.00	1,661.35	1,549.78	111.57	14.891		
17,200.00	11,163.00	16,209.15	10,149.00	66.62	63.70	52.60	6,335.84	946.23	1,661.35	1,548.58	112.77	14.732		
17,300.00	11,163.00	16,309.15	10,149.00	67.32	64.41	52.60	6,435.84	945.47	1,661.36	1,547.37	113.98	14.575		
17,400.00	11,163.00	16,409.15	10,149.00	68.02	65.13	52.60	6,535.84	944.70	1,661.36	1,546.16	115.20	14.421		
17,500.00	11,163.00	16,509.15	10,149.00	68.73	65.86	52.60	6,635.83	943.94	1,661.36	1,544.94	116.42	14.270		
17,600.00	11,163.00	16,609.15	10,149.00	69.44	66.58	52.60	6,735.83	943.17	1,661.36	1,543.71	117.65	14.121		
17,700.00	11,163.00	16,709.15	10,149.00	70.15	67.31	52.60	6,835.83	942.40	1,661.37	1,542.48	118.89	13.974		
17,800.00	11,163.00	16,809.15	10,149.00	70.87	68.05	52.60	6,935.82	941.64	1,661.37	1,541.24	120.13	13.830		
17,900.00	11,163.00	16,909.15	10,149.00	71.59	68.78	52.60	7,035.82	940.87	1,661.37	1,540.00	121.37	13.688		
18,000.00	11,163.00	17,009.15	10,149.00	72.31	69.52	52.60	7,135.82	940.10	1,661.38	1,538.75	122.62	13.549		
18,100.00	11,163.00	17,109.15	10,149.00	73.04	70.27	52.60	7,235.82	939.34	1,661.38	1,537.50	123.88	13.411		
18,200.00	11,163.00	17,209.15	10,149.00	73.77	71.01	52.60	7,335.81	938.57	1,661.38	1,536.24	125.14	13.276		
18,300.00	11,163.00	17,309.15	10,149.00	74.50	71.76	52.60	7,435.81	937.81	1,661.38	1,534.98	126.41	13.143		
18,400.00	11,163.00	17,409.15	10,149.00	75.24	72.51	52.60	7,535.81	937.04	1,661.39	1,533.71	127.68	13.012		
18,500.00	11,163.00	17,509.15	10,149.00	75.97	73.26	52.60	7,635.80	936.27	1,661.39	1,532.44	128.95	12.884		
18,600.00	11,163.00	17,609.15	10,149.00	76.72	74.02	52.60	7,735.80	935.51	1,661.39	1,531.16	130.23	12.757		
18,700.00	11,163.00	17,709.15	10,149.00	77.46	74.78	52.60	7,835.80	934.74	1,661.40	1,529.88	131.52	12.633		
18,800.00	11,163.00	17,809.15	10,149.00	78.21	75.54	52.60	7,935.80	933.97	1,661.40	1,528.59	132.81	12.510		
18,900.00	11,163.00	17,909.15	10,149.00	78.95	76.30	52.60	8,035.79	933.21	1,661.40	1,527.30	134.10	12.390		
19,000.00	11,163.00	18,009.15	10,149.00	79.71	77.06	52.60	8,135.79	932.44	1,661.40	1,526.01	135.39	12.271		
19,100.00	11,163.00	18,109.15	10,149.00	80.46	77.83	52.60	8,235.79	931.68	1,661.41	1,524.71	136.69	12.154		
19,200.00	11,163.00	18,209.15	10,149.00	81.21	78.60	52.60	8,335.78	930.91	1,661.41	1,523.41	138.00	12.039		
19,300.00	11,163.00	18,309.15	10,149.00	81.97	79.37	52.60	8,435.78	930.14	1,661.41	1,522.11	139.30	11.926		
19,400.00	11,163.00	18,409.15	10,149.00	82.73	80.14	52.60	8,535.78	929.38	1,661.41	1,520.80	140.62	11.815		
19,500.00	11,163.00	18,509.15	10,149.00	83.49	80.92	52.60	8,635.77	928.61	1,661.42	1,519.49	141.93	11.706		
19,600.00	11,163.00	18,609.15	10,149.00	84.26	81.69	52.60	8,735.77	927.84	1,661.42	1,518.17	143.25	11.598		
19,700.00	11,163.00	18,709.15	10,149.00	85.02	82.47	52.60	8,835.77	927.08	1,661.42	1,516.85	144.57	11.492		
19,800.00	11,163.00	18,809.15	10,149.00	85.79	83.25	52.60	8,935.77	926.31	1,661.43	1,515.53	145.89	11.388		
19,900.00	11,163.00	18,909.15	10,149.00	86.56	84.03	52.60	9,035.76	925.55	1,661.43	1,514.21	147.22	11.285		
20,000.00	11,163.00	19,009.15	10,149.00	87.33	84.82	52.60	9,135.76	924.78	1,661.43	1,512.88	148.55	11.184		
20,100.00	11,163.00	19,109.15	10,149.00	88.11	85.60	52.60	9,235.76	924.01	1,661.43	1,511.55	149.88	11.085		
20,200.00	11,163.00	19,209.15	10,149.00	88.88	86.39	52.61	9,335.75	923.25	1,661.44	1,510.22	151.22	10.987		
20,300.00	11,163.00	19,309.15	10,149.00	89.66	87.18	52.61	9,435.75	922.48	1,661.44	1,508.88	152.56	10.891		
20,400.00	11,163.00	19,409.15	10,149.00	90.44	87.97	52.61	9,535.75	921.71	1,661.44	1,507.54	153.90	10.796		
20,500.00	11,163.00	19,509.15	10,149.00	91.21	88.76	52.61	9,635.75	920.95	1,661.44	1,506.20	155.24	10.702		
20,600.00	11,163.00	19,609.15	10,149.00	92.00	89.55	52.61	9,735.74	920.18	1,661.45	1,504.86	156.59	10.610		
20,700.00	11,163.00	19,709.15	10,149.00	92.78	90.34	52.61	9,835.74	919.42	1,661.45	1,503.51	157.94	10.520		
20,800.00	11,163.00	19,809.15	10,149.00	93.56	91.14	52.61	9,935.74	918.65	1,661.45	1,502.17	159.29	10.431		
20,900.00	11,163.00	19,909.15	10,149.00	94.35	91.93	52.61	10,035.73	917.88	1,661.46	1,500.81	160.64	10.343		
21,000.00	11,163.00	20,009.15	10,149.00	95.14	92.73	52.61	10,135.73	917.12	1,661.46	1,499.46	162.00	10.256		
21,100.00	11,163.00	20,109.15	10,149.00	95.92	93.53	52.61	10,235.73	916.35	1,661.46	1,498.11	163.35	10.171		
21,200.00	11,163.00	20,209.15	10,149.00	96.71	94.33	52.61	10,335.72	915.58	1,661.46	1,496.75	164.72	10.087		
21,300.00	11,163.00	20,309.15	10,149.00	97.51	95.13	52.61	10,435.72	914.82	1,661.47	1,495.39	166.08	10.004		
21,400.00	11,163.00	20,409.15	10,149.00	98.30	95.93	52.61	10,535.72	914.05	1,661.47	1,494.03	167.44	9.923		
21,436.63	11,163.00	20,445.78	10,149.00	98.59	96.23	52.61	10,572.34	913.77	1,661.47	1,493.53	167.94	9.893 SF		

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D01) Robin Fed 173H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
400.00	400.00	402.00	402.00	1.20	1.21	-91.56	-1.63	-60.01	60.03	57.62	2.41	24.921	
500.00	500.00	502.00	502.00	1.56	1.57	-91.56	-1.63	-60.01	60.03	56.91	3.13	19.205	
600.00	600.00	602.00	602.00	1.92	1.92	-91.56	-1.63	-60.01	60.03	56.19	3.84	15.622	
700.00	700.00	702.00	702.00	2.28	2.28	-91.56	-1.63	-60.01	60.03	55.47	4.56	13.166	
800.00	800.00	802.00	802.00	2.63	2.64	-91.56	-1.63	-60.01	60.03	54.76	5.28	11.377	
900.00	900.00	902.00	902.00	2.99	3.00	-91.56	-1.63	-60.01	60.03	54.04	5.99	10.016	
915.99	915.99	917.99	917.99	3.05	3.06	-91.56	-1.63	-60.01	60.03	53.92	6.11	9.828 CC	
1,000.00	1,000.00	1,001.97	1,001.97	3.35	3.36	-91.56	-1.63	-60.01	60.03	53.32	6.71	8.946 ES	
1,100.00	1,100.00	1,100.00	1,099.99	3.71	3.70	-91.35	-1.45	-61.31	61.36	53.95	7.41	8.280	
1,200.00	1,200.00	1,198.74	1,198.65	4.07	4.04	-90.80	-0.91	-65.13	65.22	57.12	8.11	8.047	
1,300.00	1,299.99	1,296.88	1,296.58	4.42	4.39	-8.75	-0.03	-71.43	70.34	61.56	8.79	8.007	
1,341.78	1,341.75	1,337.85	1,337.41	4.56	4.53	-8.52	0.44	-74.80	72.47	63.41	9.06	7.995	
1,400.00	1,399.93	1,394.87	1,394.17	4.77	4.73	-8.18	1.20	-80.20	75.87	66.41	9.45	8.025	
1,500.00	1,499.86	1,492.54	1,491.17	5.11	5.08	-7.51	2.78	-91.41	83.70	73.59	10.12	8.272	
1,600.00	1,599.79	1,591.51	1,589.25	5.46	5.43	-6.82	4.62	-104.57	93.38	82.58	10.80	8.643	
1,700.00	1,699.72	1,691.03	1,687.85	5.81	5.79	-6.24	6.49	-117.88	103.16	91.65	11.50	8.969	
1,800.00	1,799.65	1,790.54	1,786.46	6.17	6.15	-5.77	8.36	-131.19	112.94	100.74	12.20	9.256	
1,900.00	1,899.58	1,890.06	1,885.06	6.52	6.50	-5.38	10.23	-144.51	122.72	109.82	12.90	9.512	
2,000.00	1,999.51	1,989.58	1,983.67	6.87	6.87	-5.04	12.09	-157.82	132.52	118.91	13.60	9.741	
2,100.00	2,099.45	2,089.09	2,082.27	7.22	7.23	-4.75	13.96	-171.13	142.31	128.00	14.31	9.946	
2,200.00	2,199.38	2,188.61	2,180.88	7.58	7.59	-4.49	15.83	-184.44	152.11	137.10	15.01	10.132	
2,300.00	2,299.31	2,288.13	2,279.48	7.93	7.95	-4.27	17.70	-197.75	161.91	146.19	15.72	10.300	
2,400.00	2,399.24	2,387.64	2,378.09	8.29	8.32	-4.07	19.56	-211.06	171.72	155.29	16.43	10.454	
2,500.00	2,499.17	2,487.16	2,476.69	8.65	8.68	-3.90	21.43	-224.37	181.52	164.39	17.13	10.594	
2,600.00	2,599.10	2,586.68	2,575.30	9.00	9.04	-3.74	23.30	-237.68	191.33	173.49	17.84	10.723	
2,700.00	2,699.03	2,686.19	2,673.90	9.36	9.41	-3.60	25.17	-250.99	201.14	182.59	18.55	10.842	
2,800.00	2,798.96	2,785.71	2,772.51	9.71	9.77	-3.47	27.03	-264.30	210.95	191.69	19.26	10.952	
2,900.00	2,898.89	2,885.23	2,871.11	10.07	10.14	-3.35	28.90	-277.62	220.76	200.79	19.97	11.054	
3,000.00	2,998.83	2,984.74	2,969.72	10.43	10.51	-3.24	30.77	-290.93	230.57	209.89	20.68	11.149	
3,100.00	3,098.76	3,084.26	3,068.32	10.78	10.87	-3.14	32.64	-304.24	240.38	218.99	21.39	11.237	
3,200.00	3,198.69	3,183.78	3,166.93	11.14	11.24	-3.05	34.51	-317.55	250.20	228.09	22.10	11.319	
3,300.00	3,298.62	3,283.29	3,265.53	11.50	11.60	-2.97	36.37	-330.86	260.01	237.20	22.82	11.396	
3,400.00	3,398.55	3,382.81	3,364.13	11.86	11.97	-2.89	38.24	-344.17	269.82	246.30	23.53	11.469	
3,500.00	3,498.48	3,482.33	3,462.74	12.21	12.34	-2.81	40.11	-357.48	279.64	255.40	24.24	11.537	
3,600.00	3,598.41	3,581.84	3,561.34	12.57	12.70	-2.75	41.98	-370.79	289.45	264.50	24.95	11.601	
3,700.00	3,698.34	3,681.36	3,659.95	12.93	13.07	-2.68	43.84	-384.10	299.27	273.61	25.66	11.661	
3,800.00	3,798.27	3,780.88	3,758.55	13.29	13.44	-2.62	45.71	-397.42	309.09	282.71	26.38	11.718	
3,900.00	3,898.21	3,880.39	3,857.16	13.65	13.81	-2.57	47.58	-410.73	318.90	291.81	27.09	11.772	
4,000.00	3,998.14	3,979.91	3,955.76	14.00	14.17	-2.52	49.45	-424.04	328.72	300.91	27.80	11.823	
4,100.00	4,098.07	4,079.43	4,054.37	14.36	14.54	-2.47	51.31	-437.35	338.53	310.02	28.52	11.871	
4,200.00	4,198.00	4,178.94	4,152.97	14.72	14.91	-2.42	53.18	-450.66	348.35	319.12	29.23	11.917	
4,300.00	4,297.93	4,278.46	4,251.58	15.08	15.28	-2.38	55.05	-463.97	358.17	328.22	29.94	11.961	
4,400.00	4,397.86	4,377.97	4,350.18	15.44	15.65	-2.33	56.92	-477.28	367.99	337.33	30.66	12.003	
4,500.00	4,497.79	4,479.12	4,450.40	15.80	16.02	-2.29	58.81	-490.78	377.77	346.39	31.39	12.036	
4,600.00	4,597.72	4,589.87	4,560.40	16.15	16.43	-2.26	60.60	-503.54	385.72	353.54	32.18	11.986	
4,700.00	4,697.65	4,701.04	4,671.14	16.51	16.83	-2.24	61.95	-513.18	390.76	357.81	32.96	11.857	
4,800.00	4,797.59	4,812.45	4,782.35	16.87	17.23	-2.24	62.86	-519.62	392.90	359.19	33.71	11.656	
4,900.00	4,897.52	4,923.89	4,893.74	17.23	17.62	-2.25	63.31	-522.86	392.12	357.69	34.43	11.388	
5,000.00	4,997.45	5,029.60	4,999.45	17.59	17.99	-2.27	63.37	-523.27	388.79	353.65	35.14	11.065	
5,100.00	5,097.38	5,129.53	5,099.38	17.95	18.33	-2.29	63.37	-523.27	385.08	349.24	35.84	10.745	
5,200.00	5,197.31	5,229.46	5,199.31	18.31	18.67	-2.32	63.37	-523.27	381.37	344.83	36.54	10.436	
5,300.00	5,297.24	5,329.39	5,299.24	18.67	19.02	-2.34	63.37	-523.27	377.66	340.42	37.25	10.139	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D01) Robin Fed 173H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,400.00	5,397.17	5,429.32	5,399.17	19.02	19.36	-2.36	63.37	-523.27	373.96	336.00	37.95	9.853	
5,500.00	5,497.10	5,529.25	5,499.10	19.38	19.71	-2.38	63.37	-523.27	370.25	331.59	38.66	9.578	
5,600.00	5,597.03	5,629.19	5,599.03	19.74	20.05	-2.41	63.37	-523.27	366.54	327.18	39.36	9.312	
5,700.00	5,696.97	5,729.12	5,698.97	20.10	20.40	-2.43	63.37	-523.27	362.83	322.76	40.07	9.055	
5,800.00	5,796.90	5,829.05	5,798.90	20.46	20.75	-2.46	63.37	-523.27	359.12	318.35	40.77	8.808	
5,900.00	5,896.83	5,928.98	5,898.83	20.82	21.09	-2.48	63.37	-523.27	355.42	313.94	41.48	8.568	
6,000.00	5,996.76	6,028.91	5,998.76	21.18	21.44	-2.51	63.37	-523.27	351.71	309.52	42.19	8.337	
6,100.00	6,096.69	6,128.84	6,098.69	21.54	21.79	-2.54	63.37	-523.27	348.00	305.11	42.90	8.113	
6,200.00	6,196.62	6,228.77	6,198.62	21.90	22.14	-2.56	63.37	-523.27	344.30	300.69	43.60	7.896	
6,300.00	6,296.55	6,328.70	6,298.55	22.25	22.48	-2.59	63.37	-523.27	340.59	296.28	44.31	7.686	
6,400.00	6,396.48	6,428.64	6,398.48	22.61	22.83	-2.62	63.37	-523.27	336.88	291.86	45.02	7.483	
6,500.00	6,496.41	6,528.57	6,498.41	22.97	23.18	-2.65	63.37	-523.27	333.17	287.45	45.73	7.286	
6,600.00	6,596.35	6,628.50	6,598.35	23.33	23.53	-2.68	63.37	-523.27	329.47	283.03	46.44	7.095	
6,700.00	6,696.28	6,728.43	6,698.28	23.69	23.88	-2.71	63.37	-523.27	325.76	278.62	47.14	6.910	
6,800.00	6,796.21	6,828.36	6,798.21	24.05	24.23	-2.74	63.37	-523.27	322.05	274.20	47.85	6.730	
6,900.00	6,896.14	6,928.29	6,898.14	24.41	24.58	-2.77	63.37	-523.27	318.35	269.78	48.56	6.555	
7,000.00	6,996.07	7,028.22	6,998.07	24.77	24.93	-2.81	63.37	-523.27	314.64	265.37	49.27	6.386	
7,100.00	7,096.00	7,128.15	7,098.00	25.13	25.28	-2.84	63.37	-523.27	310.93	260.95	49.98	6.221	
7,200.00	7,195.93	7,228.08	7,197.93	25.49	25.63	-2.87	63.37	-523.27	307.23	256.53	50.69	6.061	
7,300.00	7,295.86	7,328.02	7,297.86	25.85	25.98	-2.91	63.37	-523.27	303.52	252.12	51.40	5.905	
7,400.00	7,395.79	7,427.95	7,397.79	26.21	26.33	-2.95	63.37	-523.27	299.82	247.70	52.11	5.753	
7,500.00	7,495.73	7,527.88	7,497.73	26.57	26.69	-2.98	63.37	-523.27	296.11	243.29	52.82	5.606	
7,600.00	7,595.66	7,627.81	7,597.66	26.92	27.04	-3.02	63.37	-523.27	292.40	238.87	53.53	5.462	
7,700.00	7,695.59	7,727.74	7,697.59	27.28	27.39	-3.06	63.37	-523.27	288.70	234.45	54.25	5.322	
7,800.00	7,795.52	7,827.67	7,797.52	27.64	27.74	-3.10	63.37	-523.27	284.99	230.04	54.96	5.186	
7,900.00	7,895.45	7,927.60	7,897.45	28.00	28.09	-3.14	63.37	-523.27	281.29	225.62	55.67	5.053	
8,000.00	7,995.38	8,027.53	7,997.38	28.36	28.44	-3.18	63.37	-523.27	277.58	221.20	56.38	4.924	
8,100.00	8,095.31	8,127.46	8,097.31	28.72	28.80	-3.22	63.37	-523.27	273.88	216.79	57.09	4.797	
8,200.00	8,195.24	8,227.40	8,197.24	29.08	29.15	-3.27	63.37	-523.27	270.17	212.37	57.80	4.674	
8,300.00	8,295.17	8,327.33	8,297.17	29.44	29.50	-3.31	63.37	-523.27	266.47	207.95	58.51	4.554	
8,400.00	8,395.11	8,427.26	8,397.11	29.80	29.85	-3.36	63.37	-523.27	262.76	203.54	59.22	4.437	
8,500.00	8,495.04	8,527.19	8,497.04	30.16	30.21	-3.41	63.37	-523.27	259.06	199.12	59.94	4.322	
8,600.00	8,594.97	8,627.12	8,596.97	30.52	30.56	-3.46	63.37	-523.27	255.35	194.70	60.65	4.210	
8,700.00	8,694.90	8,727.05	8,696.90	30.88	30.91	-3.51	63.37	-523.27	251.65	190.29	61.36	4.101	
8,800.00	8,794.83	8,826.98	8,796.83	31.24	31.27	-3.56	63.37	-523.27	247.94	185.87	62.07	3.994	
8,900.00	8,894.76	8,926.91	8,896.76	31.60	31.62	-3.62	63.37	-523.27	244.24	181.46	62.78	3.890	
9,000.00	8,994.69	9,026.84	8,996.69	31.95	31.97	-3.67	63.37	-523.27	240.54	177.04	63.50	3.788	
9,100.00	9,094.62	9,126.78	9,096.62	32.31	32.33	-3.73	63.37	-523.27	236.83	172.62	64.21	3.688	
9,200.00	9,194.55	9,226.71	9,196.55	32.67	32.68	-3.79	63.37	-523.27	233.13	168.21	64.92	3.591	
9,300.00	9,294.49	9,326.64	9,296.49	33.03	33.03	-3.85	63.37	-523.27	229.43	163.79	65.63	3.496	
9,400.00	9,394.42	9,426.57	9,396.42	33.39	33.39	-3.91	63.37	-523.27	225.73	159.38	66.35	3.402	
9,500.00	9,494.35	9,526.50	9,496.35	33.75	33.74	-3.98	63.37	-523.27	222.02	154.96	67.06	3.311	
9,600.00	9,594.28	9,626.43	9,596.28	34.11	34.10	-4.05	63.37	-523.27	218.32	150.55	67.77	3.221	
9,700.00	9,694.21	9,726.36	9,696.21	34.47	34.45	-4.12	63.37	-523.27	214.62	146.13	68.49	3.134	
9,800.00	9,794.14	9,826.29	9,796.14	34.83	34.80	-4.19	63.37	-523.27	210.92	141.72	69.20	3.048	
9,900.00	9,894.07	9,926.22	9,896.07	35.19	35.16	-4.26	63.37	-523.27	207.22	137.31	69.91	2.964	
10,000.00	9,994.00	10,026.16	9,996.00	35.55	35.51	-4.34	63.37	-523.27	203.52	132.89	70.63	2.882	
10,064.29	10,058.25	10,090.40	10,060.25	35.78	35.74	-4.39	63.37	-523.27	201.14	130.05	71.08	2.830	
10,100.00	10,093.94	10,126.09	10,095.94	35.91	35.87	-4.42	63.37	-523.27	199.98	128.65	71.34	2.803	
10,206.07	10,200.00	10,232.15	10,202.00	36.28	36.24	-85.87	63.37	-523.27	198.52	126.43	72.09	2.754	
10,300.00	10,293.93	10,328.99	10,298.70	36.61	36.58	-84.85	66.84	-522.51	198.06	125.34	72.72	2.723	
10,400.00	10,393.93	10,429.78	10,397.38	36.95	36.93	-79.08	86.30	-518.25	196.54	123.09	73.45	2.676	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D01) Robin Fed 173H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQ2)													Offset Well Error: 0.00 usft
Reference													
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
10,417.20	10,411.13	10,446.28	10,413.13	37.01	36.98	-77.65	91.09	-517.20	196.48	122.89	73.59	2.670 SF	
10,500.00	10,493.93	10,521.17	10,482.58	37.30	37.22	-69.58	118.30	-511.24	198.89	124.71	74.17	2.681	
10,596.11	10,590.04	10,600.00	10,551.12	37.63	37.44	-58.90	156.24	-502.94	211.48	137.28	74.20	2.850	
10,600.00	10,593.93	10,600.00	10,551.12	37.65	37.44	-58.39	156.24	-502.94	212.26	138.20	74.06	2.866	
10,650.00	10,643.85	10,636.74	10,581.09	37.82	37.53	-52.47	176.98	-498.39	223.34	149.88	73.46	3.040	
10,700.00	10,693.36	10,672.06	10,608.57	37.99	37.61	-47.21	198.66	-493.65	235.62	163.13	72.49	3.251	
10,750.00	10,742.08	10,706.60	10,634.06	38.16	37.68	-42.52	221.41	-488.67	248.59	177.38	71.21	3.491	
10,800.00	10,789.65	10,740.45	10,657.65	38.32	37.75	-38.36	245.13	-483.47	261.82	192.13	69.69	3.757	
10,850.00	10,835.70	10,773.71	10,679.38	38.48	37.81	-34.70	269.71	-478.09	274.99	207.00	67.98	4.045	
10,900.00	10,879.88	10,800.00	10,695.50	38.62	37.85	-31.92	290.00	-473.65	287.90	222.26	65.64	4.386	
10,950.00	10,921.85	10,838.70	10,717.46	38.75	37.90	-28.59	321.12	-466.84	300.04	235.85	64.19	4.674	
11,000.00	10,961.30	10,870.56	10,733.90	38.87	37.94	-26.05	347.77	-461.00	311.54	249.35	62.19	5.009	
11,050.00	10,997.92	10,900.00	10,747.71	38.99	37.97	-23.90	373.17	-455.44	322.15	262.13	60.02	5.367	
11,100.00	11,031.44	10,933.26	10,761.69	39.09	38.00	-21.77	402.64	-448.99	331.74	273.58	58.16	5.704	
11,150.00	11,061.60	10,964.19	10,773.10	39.20	38.03	-19.95	430.72	-442.84	340.24	284.04	56.20	6.055	
11,200.00	11,088.17	11,000.00	10,784.35	39.30	38.06	-18.08	463.93	-435.57	347.61	293.00	54.61	6.366	
11,250.00	11,110.95	11,025.41	10,791.03	39.39	38.09	-16.81	487.87	-430.33	353.62	301.07	52.55	6.730	
11,300.00	11,129.76	11,050.00	10,796.46	39.48	38.11	-15.67	511.30	-425.20	358.46	307.75	50.71	7.069	
11,350.00	11,144.47	11,086.00	10,802.53	39.56	38.15	-14.18	545.95	-417.61	361.81	312.30	49.51	7.308	
11,400.00	11,154.96	11,116.14	10,805.90	39.63	38.18	-13.01	575.21	-411.20	363.86	315.55	48.31	7.531	
11,450.00	11,161.14	11,150.00	10,807.80	39.68	38.21	-11.78	608.23	-403.97	364.53	317.12	47.41	7.688	
11,496.11	11,163.00	11,179.02	10,808.00	39.73	38.23	-10.79	636.58	-397.80	363.73	316.97	46.76	7.779	
11,500.00	11,163.00	11,182.72	10,808.00	39.73	38.23	-10.66	640.21	-397.03	363.57	316.85	46.72	7.782	
11,600.00	11,163.00	11,278.75	10,808.00	39.84	38.32	-7.67	734.45	-378.64	360.34	314.49	45.85	7.860	
11,700.00	11,163.00	11,375.99	10,808.00	39.96	38.43	-5.12	830.47	-363.25	358.46	313.14	45.32	7.910	
11,800.00	11,163.00	11,474.24	10,808.00	40.10	38.56	-3.04	927.94	-351.02	357.51	312.45	45.06	7.934	
11,900.00	11,163.00	11,573.27	10,808.00	40.25	38.70	-1.49	1,026.57	-342.08	357.12	312.12	45.00	7.936	
12,000.00	11,163.00	11,672.86	10,808.00	40.43	38.87	-0.48	1,126.00	-336.54	357.01	311.94	45.07	7.921	
12,100.00	11,163.00	11,772.77	10,808.00	40.62	39.05	-0.02	1,225.88	-334.45	357.00	311.78	45.22	7.894	
12,113.71	11,163.00	11,786.48	10,808.00	40.65	39.08	0.00	1,239.58	-334.43	357.00	311.75	45.25	7.889	
12,200.00	11,163.00	11,872.77	10,808.00	40.83	39.25	0.01	1,325.88	-335.04	357.00	311.57	45.43	7.858	
12,300.00	11,163.00	11,972.77	10,808.00	41.06	39.47	0.01	1,425.87	-335.81	357.00	311.34	45.66	7.819	
12,400.00	11,163.00	12,072.77	10,808.00	41.31	39.71	0.01	1,525.87	-336.58	357.00	311.10	45.90	7.778	
12,500.00	11,163.00	12,172.77	10,808.00	41.57	39.96	0.01	1,625.87	-337.35	357.00	310.84	46.16	7.735	
12,600.00	11,163.00	12,272.77	10,808.00	41.84	40.23	0.01	1,725.87	-338.12	357.00	310.57	46.43	7.689	
12,700.00	11,163.00	12,372.77	10,808.00	42.14	40.52	0.01	1,825.86	-338.89	357.00	310.28	46.72	7.641	
12,800.00	11,163.00	12,472.77	10,808.00	42.45	40.82	0.01	1,925.86	-339.66	357.00	309.97	47.03	7.591	
12,900.00	11,163.00	12,572.77	10,808.00	42.77	41.15	0.01	2,025.86	-340.43	357.00	309.65	47.35	7.539	
13,000.00	11,163.00	12,672.77	10,808.00	43.11	41.48	0.01	2,125.85	-341.20	357.00	309.31	47.69	7.486	
13,100.00	11,163.00	12,772.77	10,808.00	43.47	41.83	0.01	2,225.85	-341.97	357.00	308.96	48.04	7.431	
13,200.00	11,163.00	12,872.77	10,808.00	43.83	42.20	0.01	2,325.85	-342.74	357.00	308.59	48.41	7.374	
13,300.00	11,163.00	12,972.77	10,808.00	44.22	42.58	0.01	2,425.84	-343.51	357.00	308.21	48.79	7.317	
13,400.00	11,163.00	13,072.77	10,808.00	44.61	42.98	0.01	2,525.84	-344.28	357.00	307.81	49.19	7.258	
13,500.00	11,163.00	13,172.77	10,808.00	45.02	43.39	0.01	2,625.84	-345.05	357.00	307.40	49.60	7.198	
13,600.00	11,163.00	13,272.77	10,808.00	45.44	43.81	0.01	2,725.84	-345.82	357.00	306.98	50.02	7.138	
13,700.00	11,163.00	13,372.77	10,808.00	45.88	44.24	0.01	2,825.83	-346.59	357.00	306.55	50.45	7.076	
13,800.00	11,163.00	13,472.77	10,808.00	46.32	44.69	0.01	2,925.83	-347.36	357.00	306.10	50.90	7.014	
13,900.00	11,163.00	13,572.77	10,808.00	46.78	45.15	0.01	3,025.83	-348.13	357.00	305.64	51.36	6.951	
14,000.00	11,163.00	13,672.77	10,808.00	47.25	45.62	0.01	3,125.82	-348.91	357.00	305.17	51.83	6.888	
14,100.00	11,163.00	13,772.77	10,808.00	47.73	46.11	0.01	3,225.82	-349.68	357.00	304.69	52.31	6.824	
14,200.00	11,163.00	13,872.77	10,808.00	48.22	46.60	0.01	3,325.82	-350.45	357.00	304.19	52.81	6.761	
14,300.00	11,163.00	13,972.77	10,808.00	48.73	47.10	0.01	3,425.82	-351.22	357.00	303.69	53.31	6.697	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D01) Robin Fed 173H - Permit - APD-Rev01												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)												Offset Well Error:	0.00 usft
Reference												Rule Assigned:	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
14,400.00	11,163.00	14,072.77	10,808.00	49.24	47.62	0.01	3,525.81	-351.99	357.00	303.17	53.83	6.632	
14,500.00	11,163.00	14,172.77	10,808.00	49.76	48.15	0.01	3,625.81	-352.76	357.00	302.65	54.35	6.568	
14,600.00	11,163.00	14,272.77	10,808.00	50.29	48.68	0.01	3,725.81	-353.53	357.00	302.11	54.89	6.504	
14,700.00	11,163.00	14,372.77	10,808.00	50.83	49.23	0.01	3,825.80	-354.30	357.00	301.57	55.43	6.440	
14,800.00	11,163.00	14,472.77	10,808.00	51.38	49.78	0.01	3,925.80	-355.07	357.00	301.01	55.99	6.376	
14,900.00	11,163.00	14,572.77	10,808.00	51.94	50.34	0.01	4,025.80	-355.84	357.00	300.45	56.55	6.313	
15,000.00	11,163.00	14,672.77	10,808.00	52.51	50.91	0.01	4,125.79	-356.61	357.00	299.88	57.12	6.249	
15,100.00	11,163.00	14,772.77	10,808.00	53.08	51.49	0.01	4,225.79	-357.38	357.00	299.29	57.71	6.186	
15,200.00	11,163.00	14,872.77	10,808.00	53.66	52.08	0.01	4,325.79	-358.15	357.00	298.70	58.30	6.124	
15,300.00	11,163.00	14,972.77	10,808.00	54.25	52.67	0.01	4,425.79	-358.92	357.00	298.11	58.89	6.062	
15,400.00	11,163.00	15,072.77	10,808.00	54.85	53.28	0.01	4,525.78	-359.69	357.00	297.50	59.50	6.000	
15,500.00	11,163.00	15,172.77	10,808.00	55.45	53.89	0.01	4,625.78	-360.46	357.00	296.89	60.11	5.939	
15,600.00	11,163.00	15,272.77	10,808.00	56.06	54.50	0.01	4,725.78	-361.23	357.00	296.27	60.73	5.878	
15,700.00	11,163.00	15,372.77	10,808.00	56.68	55.13	0.01	4,825.77	-362.00	357.00	295.64	61.36	5.818	
15,800.00	11,163.00	15,472.77	10,808.00	57.31	55.76	0.01	4,925.77	-362.77	357.00	295.00	62.00	5.758	
15,900.00	11,163.00	15,572.77	10,808.00	57.94	56.39	0.01	5,025.77	-363.54	357.00	294.36	62.64	5.699	
16,000.00	11,163.00	15,672.77	10,808.00	58.57	57.03	0.01	5,125.76	-364.31	357.00	293.71	63.29	5.641	
16,100.00	11,163.00	15,772.77	10,808.00	59.22	57.68	0.01	5,225.76	-365.08	357.00	293.06	63.94	5.583	
16,200.00	11,163.00	15,872.77	10,808.00	59.86	58.33	0.01	5,325.76	-365.85	357.00	292.40	64.60	5.526	
16,300.00	11,163.00	15,972.77	10,808.00	60.52	58.99	0.01	5,425.76	-366.62	357.00	291.73	65.27	5.470	
16,400.00	11,163.00	16,072.77	10,808.00	61.18	59.66	0.01	5,525.75	-367.39	357.00	291.06	65.94	5.414	
16,500.00	11,163.00	16,172.77	10,808.00	61.84	60.33	0.00	5,625.75	-368.16	357.00	290.38	66.62	5.359	
16,600.00	11,163.00	16,272.77	10,808.00	62.51	61.00	0.00	5,725.75	-368.93	357.00	289.70	67.31	5.304	
16,700.00	11,163.00	16,372.77	10,808.00	63.18	61.68	0.00	5,825.74	-369.70	357.00	289.01	67.99	5.250	
16,800.00	11,163.00	16,472.77	10,808.00	63.86	62.36	0.00	5,925.74	-370.47	357.00	288.31	68.69	5.197	
16,900.00	11,163.00	16,572.77	10,808.00	64.54	63.05	0.00	6,025.74	-371.24	357.00	287.61	69.39	5.145	
17,000.00	11,163.00	16,672.77	10,808.00	65.23	63.75	0.00	6,125.74	-372.01	357.00	286.91	70.09	5.093	
17,100.00	11,163.00	16,772.77	10,808.00	65.92	64.44	0.00	6,225.73	-372.78	357.00	286.20	70.80	5.042	
17,200.00	11,163.00	16,872.77	10,808.00	66.62	65.14	0.00	6,325.73	-373.56	357.00	285.49	71.51	4.992	
17,300.00	11,163.00	16,972.77	10,808.00	67.32	65.85	0.00	6,425.73	-374.33	357.00	284.77	72.23	4.943	
17,400.00	11,163.00	17,072.77	10,808.00	68.02	66.56	0.00	6,525.72	-375.10	357.00	284.05	72.95	4.894	
17,500.00	11,163.00	17,172.77	10,808.00	68.73	67.27	0.00	6,625.72	-375.87	357.00	283.32	73.68	4.845	
17,600.00	11,163.00	17,272.77	10,808.00	69.44	67.98	0.00	6,725.72	-376.64	357.00	282.59	74.41	4.798	
17,700.00	11,163.00	17,372.77	10,808.00	70.15	68.70	0.00	6,825.71	-377.41	357.00	281.86	75.14	4.751	
17,800.00	11,163.00	17,472.77	10,808.00	70.87	69.43	0.00	6,925.71	-378.18	357.00	281.12	75.88	4.705	
17,900.00	11,163.00	17,572.77	10,808.00	71.59	70.15	0.00	7,025.71	-378.95	357.00	280.38	76.62	4.659	
18,000.00	11,163.00	17,672.77	10,808.00	72.31	70.88	0.00	7,125.71	-379.72	357.00	279.64	77.36	4.615	
18,100.00	11,163.00	17,772.77	10,808.00	73.04	71.61	0.00	7,225.70	-380.49	357.00	278.89	78.11	4.570	
18,200.00	11,163.00	17,872.77	10,808.00	73.77	72.35	0.00	7,325.70	-381.26	357.00	278.14	78.86	4.527	
18,300.00	11,163.00	17,972.77	10,808.00	74.50	73.09	0.00	7,425.70	-382.03	357.00	277.38	79.62	4.484	
18,400.00	11,163.00	18,072.77	10,808.00	75.24	73.83	0.00	7,525.69	-382.80	357.00	276.62	80.38	4.442	
18,500.00	11,163.00	18,172.77	10,808.00	75.97	74.57	0.00	7,625.69	-383.57	357.00	275.86	81.14	4.400	
18,600.00	11,163.00	18,272.77	10,808.00	76.72	75.32	0.00	7,725.69	-384.34	357.00	275.10	81.90	4.359	
18,700.00	11,163.00	18,372.77	10,808.00	77.46	76.06	0.00	7,825.68	-385.11	357.00	274.33	82.67	4.318	
18,800.00	11,163.00	18,472.77	10,808.00	78.21	76.82	0.00	7,925.68	-385.88	357.00	273.56	83.44	4.279	
18,900.00	11,163.00	18,572.77	10,808.00	78.95	77.57	0.00	8,025.68	-386.65	357.00	272.79	84.21	4.239	
19,000.00	11,163.00	18,672.77	10,808.00	79.71	78.32	0.00	8,125.68	-387.42	357.00	272.01	84.99	4.201	
19,100.00	11,163.00	18,772.77	10,808.00	80.46	79.08	0.00	8,225.67	-388.19	357.00	271.23	85.77	4.163	
19,200.00	11,163.00	18,872.77	10,808.00	81.21	79.84	0.00	8,325.67	-388.96	357.00	270.45	86.55	4.125	
19,300.00	11,163.00	18,972.77	10,808.00	81.97	80.61	0.00	8,425.67	-389.73	357.00	269.67	87.33	4.088	
19,400.00	11,163.00	19,072.77	10,808.00	82.73	81.37	0.00	8,525.66	-390.50	357.00	268.89	88.11	4.052	
19,500.00	11,163.00	19,172.77	10,808.00	83.49	82.14	0.00	8,625.66	-391.27	357.00	268.10	88.90	4.016	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D01) Robin Fed 173H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
19,600.00	11,163.00	19,272.77	10,808.00	84.26	82.90	0.00	8,725.66	-392.04	357.00	267.31	89.69	3.980	
19,700.00	11,163.00	19,372.77	10,808.00	85.02	83.67	0.00	8,825.66	-392.81	357.00	266.52	90.48	3.945	
19,800.00	11,163.00	19,472.77	10,808.00	85.79	84.45	0.00	8,925.65	-393.58	357.00	265.72	91.28	3.911	
19,900.00	11,163.00	19,572.77	10,808.00	86.56	85.22	0.00	9,025.65	-394.35	357.00	264.92	92.08	3.877	
20,000.00	11,163.00	19,672.77	10,808.00	87.33	86.00	0.00	9,125.65	-395.12	357.00	264.13	92.87	3.844	
20,100.00	11,163.00	19,772.77	10,808.00	88.11	86.77	0.00	9,225.64	-395.89	357.00	263.33	93.67	3.811	
20,200.00	11,163.00	19,872.77	10,808.00	88.88	87.55	0.00	9,325.64	-396.66	357.00	262.52	94.48	3.779	
20,300.00	11,163.00	19,972.77	10,808.00	89.66	88.33	0.00	9,425.64	-397.43	357.00	261.72	95.28	3.747	
20,400.00	11,163.00	20,072.77	10,808.00	90.44	89.12	0.00	9,525.63	-398.20	357.00	260.91	96.09	3.715	
20,500.00	11,163.00	20,172.77	10,808.00	91.21	89.90	0.00	9,625.63	-398.98	357.00	260.10	96.90	3.684	
20,600.00	11,163.00	20,272.77	10,808.00	92.00	90.69	0.00	9,725.63	-399.75	357.00	259.29	97.71	3.654	
20,700.00	11,163.00	20,372.77	10,808.00	92.78	91.47	0.00	9,825.63	-400.52	357.00	258.48	98.52	3.624	
20,800.00	11,163.00	20,472.77	10,808.00	93.56	92.26	0.00	9,925.62	-401.29	357.00	257.67	99.33	3.594	
20,900.00	11,163.00	20,572.77	10,808.00	94.35	93.05	0.00	10,025.62	-402.06	357.00	256.85	100.15	3.565	
21,000.00	11,163.00	20,672.77	10,808.00	95.14	93.84	0.00	10,125.62	-402.83	357.00	256.04	100.96	3.536	
21,100.00	11,163.00	20,772.77	10,808.00	95.92	94.63	0.00	10,225.61	-403.60	357.00	255.22	101.78	3.508	
21,200.00	11,163.00	20,872.77	10,808.00	96.71	95.43	0.00	10,325.61	-404.37	357.00	254.40	102.60	3.479	
21,300.00	11,163.00	20,972.77	10,808.00	97.51	96.22	0.00	10,425.61	-405.14	357.00	253.58	103.42	3.452	
21,400.00	11,163.00	21,072.77	10,808.00	98.30	97.02	0.00	10,525.60	-405.91	357.00	252.75	104.25	3.425	
21,436.63	11,163.00	21,109.40	10,808.00	98.59	97.31	0.00	10,562.23	-406.19	357.00	252.45	104.55	3.415	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D02) Robin Fed 133H - Permit - APD-Rev01													Offset Site Error:	0.00 usft
Survey Program:		0-MWD+IFR1+SAG+FDIR (SQC2)							Rule Assigned:				Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance			Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)			
300.00	300.00	301.00	301.00	0.84	0.85	-91.62	-0.85	-30.00	30.01	28.32	1.69	17.775		
400.00	400.00	401.00	401.00	1.20	1.20	-91.62	-0.85	-30.00	30.01	27.61	2.41	12.477		
500.00	500.00	501.00	501.00	1.56	1.56	-91.62	-0.85	-30.00	30.01	26.89	3.12	9.612		
600.00	600.00	601.00	601.00	1.92	1.92	-91.62	-0.85	-30.00	30.01	26.17	3.84	7.817		
700.00	700.00	701.00	701.00	2.28	2.28	-91.62	-0.85	-30.00	30.01	25.46	4.56	6.587		
800.00	800.00	801.00	801.00	2.63	2.64	-91.62	-0.85	-30.00	30.01	24.74	5.27	5.692		
900.00	900.00	901.00	901.00	2.99	3.00	-91.62	-0.85	-30.00	30.01	24.02	5.99	5.010		
1,000.00	1,000.00	1,001.00	1,001.00	3.35	3.36	-91.62	-0.85	-30.00	30.01	23.31	6.71	4.475		
1,100.00	1,100.00	1,101.00	1,101.00	3.71	3.71	-91.62	-0.85	-30.00	30.01	22.59	7.42	4.043		
1,116.33	1,116.33	1,117.33	1,117.33	3.77	3.77	-91.62	-0.85	-30.00	30.01	22.47	7.54	3.980 CC		
1,200.00	1,200.00	1,200.99	1,200.99	4.07	4.07	-91.62	-0.85	-30.00	30.01	21.87	8.14	3.687		
1,208.06	1,208.06	1,208.99	1,208.99	4.10	4.10	-10.20	-0.85	-30.01	30.01	21.82	8.20	3.662		
1,300.00	1,299.99	1,300.00	1,299.99	4.42	4.42	-10.61	-0.87	-31.31	30.05	21.22	8.83	3.402		
1,341.78	1,341.75	1,341.67	1,341.63	4.56	4.56	-11.03	-0.90	-32.63	30.07	20.95	9.12	3.298 ES		
1,400.00	1,399.93	1,399.42	1,399.33	4.77	4.76	-11.67	-0.94	-35.20	30.55	21.04	9.51	3.212 SF		
1,500.00	1,499.86	1,498.56	1,498.25	5.11	5.10	-12.55	-1.05	-41.66	33.44	23.25	10.19	3.282		
1,600.00	1,599.79	1,597.75	1,597.04	5.46	5.45	-13.04	-1.21	-50.59	38.81	27.95	10.87	3.572		
1,700.00	1,699.72	1,697.57	1,696.39	5.81	5.80	-13.36	-1.38	-60.24	44.86	33.30	11.56	3.881		
1,800.00	1,799.65	1,797.38	1,795.74	6.17	6.15	-13.61	-1.55	-69.89	50.91	38.65	12.26	4.153		
1,900.00	1,899.58	1,897.20	1,895.09	6.52	6.50	-13.80	-1.71	-79.54	56.96	44.01	12.96	4.396		
2,000.00	1,999.51	1,997.02	1,994.44	6.87	6.86	-13.95	-1.88	-89.20	63.02	49.36	13.66	4.614		
2,100.00	2,099.45	2,096.83	2,093.79	7.22	7.22	-14.08	-2.05	-98.85	69.07	54.71	14.36	4.809		
2,200.00	2,199.38	2,196.65	2,193.13	7.58	7.57	-14.19	-2.22	-108.50	75.12	60.05	15.07	4.986		
2,300.00	2,299.31	2,296.47	2,292.48	7.93	7.93	-14.28	-2.39	-118.15	81.17	65.40	15.77	5.147		
2,400.00	2,399.24	2,396.28	2,391.83	8.29	8.29	-14.36	-2.56	-127.80	87.23	70.75	16.48	5.294		
2,500.00	2,499.17	2,496.10	2,491.18	8.65	8.65	-14.43	-2.73	-137.46	93.28	76.10	17.18	5.428		
2,600.00	2,599.10	2,595.92	2,590.53	9.00	9.00	-14.49	-2.89	-147.11	99.33	81.44	17.89	5.552		
2,700.00	2,699.03	2,695.73	2,689.88	9.36	9.36	-14.54	-3.06	-156.76	105.39	86.79	18.60	5.666		
2,800.00	2,798.96	2,795.55	2,789.23	9.71	9.72	-14.59	-3.23	-166.41	111.44	92.13	19.31	5.771		
2,900.00	2,898.89	2,895.37	2,888.58	10.07	10.08	-14.63	-3.40	-176.07	117.49	97.47	20.02	5.869		
3,000.00	2,998.83	2,995.18	2,987.92	10.43	10.45	-14.67	-3.57	-185.72	123.55	102.82	20.73	5.960		
3,100.00	3,098.76	3,095.00	3,087.27	10.78	10.81	-14.71	-3.74	-195.37	129.60	108.16	21.44	6.045		
3,200.00	3,198.69	3,194.82	3,186.62	11.14	11.17	-14.74	-3.91	-205.02	135.66	113.50	22.15	6.124		
3,300.00	3,298.62	3,294.63	3,285.97	11.50	11.53	-14.77	-4.07	-214.67	141.71	118.85	22.86	6.198		
3,400.00	3,398.55	3,394.45	3,385.32	11.86	11.89	-14.79	-4.24	-224.33	147.76	124.19	23.57	6.268		
3,500.00	3,498.48	3,494.27	3,484.67	12.21	12.25	-14.82	-4.41	-233.98	153.82	129.53	24.29	6.334		
3,600.00	3,598.41	3,594.08	3,584.02	12.57	12.61	-14.84	-4.58	-243.63	159.87	134.87	25.00	6.395		
3,700.00	3,698.34	3,693.90	3,683.36	12.93	12.98	-14.86	-4.75	-253.28	165.93	140.21	25.71	6.454		
3,800.00	3,798.27	3,793.72	3,782.71	13.29	13.34	-14.88	-4.92	-262.94	171.98	145.56	26.42	6.509		
3,900.00	3,898.21	3,893.53	3,882.06	13.65	13.70	-14.90	-5.08	-272.59	178.03	150.90	27.14	6.561		
4,000.00	3,998.14	3,993.35	3,981.41	14.00	14.06	-14.92	-5.25	-282.24	184.09	156.24	27.85	6.610		
4,100.00	4,098.07	4,093.17	4,080.76	14.36	14.43	-14.93	-5.42	-291.89	190.14	161.58	28.56	6.657		
4,200.00	4,198.00	4,192.98	4,180.11	14.72	14.79	-14.95	-5.59	-301.54	196.20	166.92	29.28	6.702		
4,300.00	4,297.93	4,292.80	4,279.46	15.08	15.15	-14.96	-5.76	-311.20	202.25	172.26	29.99	6.744		
4,400.00	4,397.86	4,392.62	4,378.80	15.44	15.52	-14.97	-5.93	-320.85	208.30	177.60	30.70	6.784		
4,500.00	4,497.79	4,492.43	4,478.15	15.80	15.88	-14.99	-6.10	-330.50	214.36	182.94	31.42	6.823		
4,600.00	4,597.72	4,592.25	4,577.50	16.15	16.24	-15.00	-6.26	-340.15	220.41	188.28	32.13	6.860		
4,700.00	4,697.65	4,692.06	4,676.85	16.51	16.60	-15.01	-6.43	-349.81	226.47	193.62	32.85	6.895		
4,800.00	4,797.59	4,791.88	4,776.20	16.87	16.97	-15.02	-6.60	-359.46	232.52	198.96	33.56	6.929		
4,900.00	4,897.52	4,891.70	4,875.55	17.23	17.33	-15.03	-6.77	-369.11	238.57	204.30	34.27	6.961		
5,000.00	4,997.45	4,991.51	4,974.90	17.59	17.69	-15.04	-6.94	-378.76	244.63	209.64	34.99	6.992		
5,100.00	5,097.38	5,091.33	5,074.25	17.95	18.06	-15.05	-7.11	-388.41	250.68	214.98	35.70	7.021		

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D02) Robin Fed 133H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,200.00	5,197.31	5,191.15	5,173.59	18.31	18.42	-15.06	-7.27	-398.07	256.74	220.32	36.42	7.050	
5,300.00	5,297.24	5,290.96	5,272.94	18.67	18.79	-15.07	-7.44	-407.72	262.79	225.66	37.13	7.077	
5,400.00	5,397.17	5,390.78	5,372.29	19.02	19.15	-15.07	-7.61	-417.37	268.85	231.00	37.85	7.103	
5,500.00	5,497.10	5,490.60	5,471.64	19.38	19.51	-15.08	-7.78	-427.02	274.90	236.34	38.56	7.129	
5,600.00	5,597.03	5,590.41	5,570.99	19.74	19.88	-15.09	-7.95	-436.68	280.95	241.68	39.28	7.153	
5,700.00	5,696.97	5,690.23	5,670.34	20.10	20.24	-15.10	-8.12	-446.33	287.01	247.02	39.99	7.177	
5,800.00	5,796.90	5,790.05	5,769.69	20.46	20.60	-15.10	-8.29	-455.98	293.06	252.36	40.71	7.199	
5,900.00	5,896.83	5,889.86	5,869.03	20.82	20.97	-15.11	-8.45	-465.63	299.12	257.69	41.42	7.221	
6,000.00	5,996.76	5,989.68	5,968.38	21.18	21.33	-15.11	-8.62	-475.28	305.17	263.03	42.14	7.242	
6,100.00	6,096.69	6,089.50	6,067.73	21.54	21.70	-15.12	-8.79	-484.94	311.22	268.37	42.85	7.263	
6,200.00	6,196.62	6,189.31	6,167.08	21.90	22.06	-15.13	-8.96	-494.59	317.28	273.71	43.57	7.282	
6,300.00	6,296.55	6,289.13	6,266.43	22.25	22.42	-15.13	-9.13	-504.24	323.33	279.05	44.28	7.301	
6,400.00	6,396.48	6,388.95	6,365.78	22.61	22.79	-15.14	-9.30	-513.89	329.39	284.39	45.00	7.320	
6,500.00	6,496.41	6,488.76	6,465.13	22.97	23.15	-15.14	-9.46	-523.55	335.44	289.73	45.71	7.338	
6,600.00	6,596.35	6,588.58	6,564.47	23.33	23.52	-15.15	-9.63	-533.20	341.50	295.07	46.43	7.355	
6,700.00	6,696.28	6,688.40	6,663.82	23.69	23.88	-15.15	-9.80	-542.85	347.55	300.40	47.14	7.372	
6,800.00	6,796.21	6,790.07	6,765.02	24.05	24.25	-15.16	-9.97	-552.63	353.56	305.68	47.88	7.385	
6,900.00	6,896.14	6,900.24	6,874.86	24.41	24.65	-15.15	-9.82	-561.15	357.65	308.99	48.65	7.351	
7,000.00	6,996.07	7,005.21	6,979.69	24.77	25.03	-15.12	-9.29	-566.70	359.24	309.85	49.39	7.274	
7,100.00	7,096.00	7,105.21	7,079.56	25.13	25.39	-15.10	-8.74	-571.63	360.50	310.39	50.11	7.195	
7,200.00	7,195.93	7,205.20	7,179.42	25.49	25.75	-15.08	-8.18	-576.56	361.76	310.93	50.82	7.118	
7,300.00	7,295.86	7,305.19	7,279.29	25.85	26.11	-15.05	-7.62	-581.50	363.01	311.48	51.54	7.044	
7,400.00	7,395.79	7,405.18	7,379.16	26.21	26.47	-15.03	-7.07	-586.43	364.27	312.02	52.25	6.971	
7,500.00	7,495.73	7,505.17	7,479.03	26.57	26.83	-15.01	-6.51	-591.37	365.53	312.56	52.97	6.901	
7,600.00	7,595.66	7,605.17	7,578.90	26.92	27.19	-14.99	-5.95	-596.30	366.79	313.10	53.69	6.832	
7,700.00	7,695.59	7,705.16	7,678.77	27.28	27.55	-14.96	-5.39	-601.23	368.04	313.64	54.40	6.765	
7,800.00	7,795.52	7,805.15	7,778.64	27.64	27.91	-14.94	-4.84	-606.17	369.30	314.18	55.12	6.700	
7,900.00	7,895.45	7,905.14	7,878.51	28.00	28.26	-14.92	-4.28	-611.10	370.56	314.73	55.83	6.637	
8,000.00	7,995.38	8,005.13	7,978.37	28.36	28.62	-14.90	-3.72	-616.04	371.82	315.27	56.55	6.575	
8,100.00	8,095.31	8,105.13	8,078.24	28.72	28.98	-14.87	-3.16	-620.97	373.08	315.81	57.27	6.515	
8,200.00	8,195.24	8,205.12	8,178.11	29.08	29.34	-14.85	-2.61	-625.90	374.33	316.35	57.98	6.456	
8,300.00	8,295.17	8,305.11	8,277.98	29.44	29.70	-14.83	-2.05	-630.84	375.59	316.89	58.70	6.399	
8,400.00	8,395.11	8,405.10	8,377.85	29.80	30.06	-14.81	-1.49	-635.77	376.85	317.44	59.41	6.343	
8,500.00	8,495.04	8,505.09	8,477.72	30.16	30.42	-14.79	-0.94	-640.71	378.11	317.98	60.13	6.288	
8,600.00	8,594.97	8,605.09	8,577.59	30.52	30.78	-14.77	-0.38	-645.64	379.37	318.52	60.85	6.235	
8,700.00	8,694.90	8,705.08	8,677.45	30.88	31.14	-14.75	0.18	-650.57	380.63	319.06	61.56	6.183	
8,800.00	8,794.83	8,805.07	8,777.32	31.24	31.50	-14.72	0.74	-655.51	381.88	319.60	62.28	6.132	
8,900.00	8,894.76	8,905.06	8,877.19	31.60	31.86	-14.70	1.29	-660.44	383.14	320.15	63.00	6.082	
9,000.00	8,994.69	9,005.05	8,977.06	31.95	32.22	-14.68	1.85	-665.38	384.40	320.69	63.71	6.033	
9,100.00	9,094.62	9,105.05	9,076.93	32.31	32.58	-14.66	2.41	-670.31	385.66	321.23	64.43	5.986	
9,200.00	9,194.55	9,205.04	9,176.80	32.67	32.94	-14.64	2.97	-675.24	386.92	321.77	65.15	5.939	
9,300.00	9,294.49	9,305.03	9,276.67	33.03	33.30	-14.62	3.52	-680.18	388.18	322.32	65.86	5.894	
9,400.00	9,394.42	9,405.02	9,376.53	33.39	33.66	-14.60	4.08	-685.11	389.44	322.86	66.58	5.849	
9,500.00	9,494.35	9,505.01	9,476.40	33.75	34.02	-14.58	4.64	-690.05	390.69	323.40	67.29	5.806	
9,600.00	9,594.28	9,605.01	9,576.27	34.11	34.38	-14.56	5.19	-694.98	391.95	323.94	68.01	5.763	
9,700.00	9,694.21	9,705.00	9,676.14	34.47	34.74	-14.54	5.75	-699.91	393.21	324.49	68.73	5.721	
9,800.00	9,794.14	9,804.99	9,776.01	34.83	35.10	-14.52	6.31	-704.85	394.47	325.03	69.44	5.680	
9,900.00	9,894.07	9,904.98	9,876.88	35.19	35.46	-14.50	6.87	-709.78	395.73	325.57	70.16	5.640	
10,000.00	9,994.00	10,004.97	9,975.75	35.55	35.82	-14.48	7.42	-714.72	396.99	326.11	70.88	5.601	
10,064.29	10,058.25	10,069.26	10,039.95	35.78	36.05	-14.47	7.78	-717.89	397.80	326.46	71.34	5.576	
10,100.00	10,093.94	10,104.96	10,075.61	35.91	36.18	-14.46	7.98	-719.65	398.41	326.82	71.59	5.565	
10,206.07	10,200.00	10,210.97	10,181.48	36.28	36.56	-95.79	8.57	-724.88	402.13	329.79	72.35	5.558	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D02) Robin Fed 133H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
10,300.00	10,293.93	10,314.63	10,285.07	36.61	36.93	-95.67	9.02	-728.83	405.66	332.63	73.03	5.555	
10,400.00	10,393.93	10,424.50	10,394.93	36.95	37.32	-95.63	9.15	-730.00	406.69	332.98	73.71	5.518	
10,410.84	10,404.77	10,435.34	10,405.77	36.99	37.35	-95.63	9.15	-730.00	406.69	332.91	73.78	5.512	
10,500.00	10,493.93	10,522.83	10,493.26	37.30	37.65	-95.61	9.30	-730.04	406.72	332.32	74.40	5.466	
10,596.11	10,590.04	10,607.24	10,577.20	37.63	37.94	-94.49	17.13	-732.27	408.48	333.40	75.08	5.441	
10,600.00	10,593.93	10,610.59	10,580.50	37.65	37.96	-93.95	17.69	-732.42	408.62	333.51	75.10	5.441	
10,650.00	10,643.85	10,653.45	10,622.37	37.82	38.10	-92.77	26.43	-734.91	411.00	335.57	75.43	5.449	
10,700.00	10,693.36	10,695.83	10,663.00	37.99	38.24	-91.57	38.01	-738.19	414.54	338.82	75.73	5.474	
10,750.00	10,742.08	10,737.76	10,702.21	38.16	38.37	-90.38	52.27	-742.24	419.17	343.18	75.99	5.516	
10,800.00	10,789.65	10,779.28	10,739.86	38.32	38.50	-89.21	69.08	-747.01	424.81	348.59	76.22	5.573	
10,850.00	10,835.70	10,820.39	10,775.81	38.48	38.62	-88.06	88.26	-752.46	431.39	354.97	76.42	5.645	
10,900.00	10,879.88	10,861.14	10,809.93	38.62	38.73	-86.94	109.68	-758.54	438.82	362.24	76.58	5.730	
10,950.00	10,921.85	10,900.00	10,840.92	38.75	38.82	-85.87	132.22	-764.94	447.02	370.32	76.70	5.828	
11,000.00	10,961.30	10,941.67	10,872.30	38.87	38.92	-84.84	158.57	-772.42	455.89	379.05	76.84	5.933	
11,050.00	10,997.92	10,981.51	10,900.37	38.99	39.00	-83.86	185.76	-780.14	465.38	388.42	76.96	6.047	
11,100.00	11,031.44	11,021.13	10,926.27	39.09	39.07	-82.94	214.60	-788.33	475.39	398.31	77.07	6.168	
11,150.00	11,061.60	11,060.56	10,949.92	39.20	39.13	-82.07	244.93	-796.94	485.84	408.65	77.20	6.293	
11,200.00	11,088.17	11,100.00	10,971.36	39.30	39.19	-81.27	276.77	-805.98	496.67	419.34	77.34	6.422	
11,250.00	11,110.95	11,139.04	10,990.29	39.39	39.24	-80.53	309.60	-815.30	507.80	430.32	77.49	6.553	
11,300.00	11,129.76	11,178.19	11,006.89	39.48	39.29	-79.84	343.70	-824.98	519.17	441.51	77.66	6.685	
11,350.00	11,144.47	11,217.35	11,021.04	39.56	39.33	-79.23	378.82	-834.95	530.70	452.85	77.85	6.817	
11,400.00	11,154.96	11,256.57	11,032.68	39.63	39.38	-78.67	414.85	-845.18	542.34	464.29	78.05	6.948	
11,450.00	11,161.14	11,300.00	11,042.55	39.68	39.43	-78.25	455.52	-856.73	554.04	475.76	78.29	7.077	
11,496.11	11,163.00	11,332.40	11,047.80	39.73	39.46	-77.79	486.27	-865.46	564.79	486.33	78.46	7.198	
11,500.00	11,163.00	11,335.48	11,048.21	39.73	39.47	-77.85	489.21	-866.30	565.70	487.22	78.48	7.208	
11,600.00	11,163.00	11,418.91	11,053.00	39.84	39.56	-78.78	569.28	-889.01	590.60	511.78	78.82	7.493	
11,700.00	11,163.00	11,541.24	11,053.00	39.96	39.71	-79.33	687.73	-919.51	614.38	535.22	79.17	7.761	
11,800.00	11,163.00	11,665.97	11,053.00	40.10	39.89	-79.76	809.74	-945.38	634.06	554.52	79.54	7.972	
11,900.00	11,163.00	11,792.71	11,053.00	40.25	40.10	-80.07	934.74	-966.20	649.49	569.56	79.94	8.125	
12,000.00	11,163.00	11,920.99	11,053.00	40.43	40.33	-80.29	1,062.08	-981.62	660.59	580.23	80.36	8.220	
12,100.00	11,163.00	12,050.32	11,053.00	40.62	40.60	-80.41	1,191.03	-991.38	667.28	586.47	80.81	8.257	
12,200.00	11,163.00	12,180.18	11,053.00	40.83	40.88	-80.46	1,320.82	-995.32	669.51	588.23	81.27	8.238	
12,300.00	11,163.00	12,280.17	11,053.00	41.06	41.12	-80.46	1,420.81	-996.09	669.51	587.76	81.74	8.190	
12,400.00	11,163.00	12,380.17	11,053.00	41.31	41.37	-80.46	1,520.81	-996.86	669.50	587.26	82.24	8.141	
12,500.00	11,163.00	12,480.17	11,053.00	41.57	41.64	-80.46	1,620.80	-997.62	669.50	586.73	82.78	8.088	
12,600.00	11,163.00	12,580.17	11,053.00	41.84	41.92	-80.46	1,720.80	-998.39	669.50	586.16	83.34	8.033	
12,700.00	11,163.00	12,680.17	11,053.00	42.14	42.22	-80.46	1,820.80	-999.16	669.50	585.56	83.94	7.976	
12,800.00	11,163.00	12,780.17	11,053.00	42.45	42.54	-80.46	1,920.79	-999.92	669.49	584.93	84.56	7.917	
12,900.00	11,163.00	12,880.17	11,053.00	42.77	42.87	-80.46	2,020.79	-1,000.69	669.49	584.27	85.22	7.856	
13,000.00	11,163.00	12,980.17	11,053.00	43.11	43.22	-80.46	2,120.79	-1,001.46	669.49	583.58	85.91	7.793	
13,100.00	11,163.00	13,080.17	11,053.00	43.47	43.58	-80.46	2,220.79	-1,002.22	669.49	582.87	86.62	7.729	
13,200.00	11,163.00	13,180.17	11,053.00	43.83	43.95	-80.46	2,320.78	-1,002.99	669.48	582.12	87.36	7.663	
13,300.00	11,163.00	13,280.17	11,053.00	44.22	44.34	-80.46	2,420.78	-1,003.76	669.48	581.35	88.13	7.596	
13,400.00	11,163.00	13,380.17	11,053.00	44.61	44.75	-80.46	2,520.78	-1,004.53	669.48	580.55	88.93	7.529	
13,500.00	11,163.00	13,480.17	11,053.00	45.02	45.16	-80.46	2,620.77	-1,005.29	669.48	579.73	89.75	7.460	
13,600.00	11,163.00	13,580.17	11,053.00	45.44	45.59	-80.46	2,720.77	-1,006.06	669.47	578.88	90.59	7.390	
13,700.00	11,163.00	13,680.17	11,053.00	45.88	46.03	-80.46	2,820.77	-1,006.83	669.47	578.01	91.46	7.320	
13,800.00	11,163.00	13,780.17	11,053.00	46.32	46.49	-80.46	2,920.77	-1,007.59	669.47	577.11	92.36	7.249	
13,900.00	11,163.00	13,880.17	11,053.00	46.78	46.95	-80.46	3,020.76	-1,008.36	669.46	576.19	93.27	7.177	
14,000.00	11,163.00	13,980.17	11,053.00	47.25	47.43	-80.46	3,120.76	-1,009.13	669.46	575.25	94.21	7.106	
14,100.00	11,163.00	14,080.17	11,053.00	47.73	47.91	-80.46	3,220.76	-1,009.90	669.46	574.29	95.17	7.034	
14,200.00	11,163.00	14,180.17	11,053.00	48.22	48.41	-80.46	3,320.75	-1,010.66	669.46	573.30	96.16	6.962	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D02) Robin Fed 133H - Permit - APD-Rev01													Offset Site Error:	0.00 usft
Survey Program:		0-MWD+IFR1+SAG+FDIR (SQC2)							Rule Assigned:				Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance			Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)			
14,300.00	11,163.00	14,280.17	11,053.00	48.73	48.92	-80.46	3,420.75	-1,011.43	669.45	572.30	97.16	6.890		
14,400.00	11,163.00	14,380.17	11,053.00	49.24	49.44	-80.46	3,520.75	-1,012.20	669.45	571.27	98.18	6.819		
14,500.00	11,163.00	14,480.17	11,053.00	49.76	49.96	-80.46	3,620.74	-1,012.96	669.45	570.23	99.22	6.747		
14,600.00	11,163.00	14,580.17	11,053.00	50.29	50.50	-80.46	3,720.74	-1,013.73	669.45	569.17	100.28	6.676		
14,700.00	11,163.00	14,680.17	11,053.00	50.83	51.05	-80.46	3,820.74	-1,014.50	669.44	568.09	101.36	6.605		
14,800.00	11,163.00	14,780.17	11,053.00	51.38	51.60	-80.46	3,920.74	-1,015.26	669.44	566.99	102.45	6.534		
14,900.00	11,163.00	14,880.17	11,053.00	51.94	52.17	-80.46	4,020.73	-1,016.03	669.44	565.88	103.56	6.464		
15,000.00	11,163.00	14,980.17	11,053.00	52.51	52.74	-80.46	4,120.73	-1,016.80	669.44	564.75	104.69	6.394		
15,100.00	11,163.00	15,080.17	11,053.00	53.08	53.32	-80.46	4,220.73	-1,017.57	669.43	563.60	105.83	6.325		
15,200.00	11,163.00	15,180.17	11,053.00	53.66	53.90	-80.46	4,320.72	-1,018.33	669.43	562.44	106.99	6.257		
15,300.00	11,163.00	15,280.17	11,053.00	54.25	54.50	-80.46	4,420.72	-1,019.10	669.43	561.26	108.17	6.189		
15,400.00	11,163.00	15,380.17	11,053.00	54.85	55.10	-80.46	4,520.72	-1,019.87	669.43	560.07	109.35	6.122		
15,500.00	11,163.00	15,480.17	11,053.00	55.45	55.71	-80.46	4,620.72	-1,020.63	669.42	558.87	110.56	6.055		
15,600.00	11,163.00	15,580.17	11,053.00	56.06	56.32	-80.46	4,720.71	-1,021.40	669.42	557.65	111.77	5.989		
15,700.00	11,163.00	15,680.17	11,053.00	56.68	56.95	-80.46	4,820.71	-1,022.17	669.42	556.42	113.00	5.924		
15,800.00	11,163.00	15,780.17	11,053.00	57.31	57.57	-80.46	4,920.71	-1,022.94	669.42	555.18	114.24	5.860		
15,900.00	11,163.00	15,880.17	11,053.00	57.94	58.21	-80.46	5,020.70	-1,023.70	669.41	553.92	115.49	5.796		
16,000.00	11,163.00	15,980.17	11,053.00	58.57	58.85	-80.46	5,120.70	-1,024.47	669.41	552.65	116.76	5.733		
16,100.00	11,163.00	16,080.17	11,053.00	59.22	59.50	-80.46	5,220.70	-1,025.24	669.41	551.38	118.03	5.671		
16,200.00	11,163.00	16,180.17	11,053.00	59.86	60.15	-80.46	5,320.69	-1,026.00	669.41	550.09	119.32	5.610		
16,300.00	11,163.00	16,280.17	11,053.00	60.52	60.80	-80.46	5,420.69	-1,026.77	669.40	548.79	120.62	5.550		
16,400.00	11,163.00	16,380.17	11,053.00	61.18	61.47	-80.46	5,520.69	-1,027.54	669.40	547.48	121.92	5.490		
16,500.00	11,163.00	16,480.17	11,053.00	61.84	62.13	-80.46	5,620.69	-1,028.30	669.40	546.16	123.24	5.432		
16,600.00	11,163.00	16,580.17	11,053.00	62.51	62.80	-80.46	5,720.68	-1,029.07	669.39	544.83	124.57	5.374		
16,700.00	11,163.00	16,680.17	11,053.00	63.18	63.48	-80.46	5,820.68	-1,029.84	669.39	543.49	125.90	5.317		
16,800.00	11,163.00	16,780.17	11,053.00	63.86	64.16	-80.45	5,920.68	-1,030.61	669.39	542.14	127.25	5.260		
16,900.00	11,163.00	16,880.17	11,053.00	64.54	64.85	-80.45	6,020.67	-1,031.37	669.39	540.78	128.60	5.205		
17,000.00	11,163.00	16,980.17	11,053.00	65.23	65.54	-80.45	6,120.67	-1,032.14	669.38	539.42	129.97	5.150		
17,100.00	11,163.00	17,080.17	11,053.00	65.92	66.23	-80.45	6,220.67	-1,032.91	669.38	538.04	131.34	5.097		
17,200.00	11,163.00	17,180.17	11,053.00	66.62	66.93	-80.45	6,320.67	-1,033.67	669.38	536.66	132.72	5.044		
17,300.00	11,163.00	17,280.17	11,053.00	67.32	67.63	-80.45	6,420.66	-1,034.44	669.38	535.27	134.10	4.992		
17,400.00	11,163.00	17,380.17	11,053.00	68.02	68.34	-80.45	6,520.66	-1,035.21	669.37	533.88	135.50	4.940		
17,500.00	11,163.00	17,480.17	11,053.00	68.73	69.05	-80.45	6,620.66	-1,035.97	669.37	532.47	136.90	4.890		
17,600.00	11,163.00	17,580.17	11,053.00	69.44	69.76	-80.45	6,720.65	-1,036.74	669.37	531.06	138.31	4.840		
17,700.00	11,163.00	17,680.17	11,053.00	70.15	70.48	-80.45	6,820.65	-1,037.51	669.37	529.64	139.72	4.791		
17,800.00	11,163.00	17,780.17	11,053.00	70.87	71.20	-80.45	6,920.65	-1,038.28	669.36	528.22	141.14	4.742		
17,900.00	11,163.00	17,880.17	11,053.00	71.59	71.92	-80.45	7,020.64	-1,039.04	669.36	526.79	142.57	4.695		
18,000.00	11,163.00	17,980.17	11,053.00	72.31	72.65	-80.45	7,120.64	-1,039.81	669.36	525.35	144.01	4.648		
18,100.00	11,163.00	18,080.17	11,053.00	73.04	73.37	-80.45	7,220.64	-1,040.58	669.36	523.91	145.45	4.602		
18,200.00	11,163.00	18,180.17	11,053.00	73.77	74.11	-80.45	7,320.64	-1,041.34	669.35	522.46	146.89	4.557		
18,300.00	11,163.00	18,280.17	11,053.00	74.50	74.84	-80.45	7,420.63	-1,042.11	669.35	521.00	148.35	4.512		
18,400.00	11,163.00	18,380.17	11,053.00	75.24	75.58	-80.45	7,520.63	-1,042.88	669.35	519.54	149.80	4.468		
18,500.00	11,163.00	18,480.17	11,053.00	75.97	76.32	-80.45	7,620.63	-1,043.65	669.35	518.08	151.27	4.425		
18,600.00	11,163.00	18,580.17	11,053.00	76.72	77.06	-80.45	7,720.62	-1,044.41	669.34	516.61	152.74	4.382		
18,700.00	11,163.00	18,680.17	11,053.00	77.46	77.81	-80.45	7,820.62	-1,045.18	669.34	515.13	154.21	4.340		
18,800.00	11,163.00	18,780.17	11,053.00	78.21	78.56	-80.45	7,920.62	-1,045.95	669.34	513.65	155.69	4.299		
18,900.00	11,163.00	18,880.17	11,053.00	78.95	79.31	-80.45	8,020.62	-1,046.71	669.34	512.16	157.17	4.259		
19,000.00	11,163.00	18,980.17	11,053.00	79.71	80.06	-80.45	8,120.61	-1,047.48	669.33	510.67	158.66	4.219		
19,100.00	11,163.00	19,080.17	11,053.00	80.46	80.81	-80.45	8,220.61	-1,048.25	669.33	509.18	160.15	4.179		
19,200.00	11,163.00	19,180.17	11,053.00	81.21	81.57	-80.45	8,320.61	-1,049.01	669.33	507.68	161.65	4.141		
19,300.00	11,163.00	19,280.17	11,053.00	81.97	82.33	-80.45	8,420.60	-1,049.78	669.32	506.18	163.15	4.103		
19,400.00	11,163.00	19,380.17	11,053.00	82.73	83.09	-80.45	8,520.60	-1,050.55	669.32	504.67	164.65	4.065		

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D02) Robin Fed 133H - Permit - APD-Rev01												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
19,500.00	11,163.00	19,480.17	11,053.00	83.49	83.86	-80.45	8,620.60	-1,051.32	669.32	503.16	166.16	4.028	
19,600.00	11,163.00	19,580.17	11,053.00	84.26	84.62	-80.45	8,720.59	-1,052.08	669.32	501.64	167.68	3.992	
19,700.00	11,163.00	19,680.17	11,053.00	85.02	85.39	-80.45	8,820.59	-1,052.85	669.31	500.12	169.19	3.956	
19,800.00	11,163.00	19,780.17	11,053.00	85.79	86.16	-80.45	8,920.59	-1,053.62	669.31	498.60	170.71	3.921	
19,900.00	11,163.00	19,880.17	11,053.00	86.56	86.93	-80.45	9,020.59	-1,054.38	669.31	497.07	172.24	3.886	
20,000.00	11,163.00	19,980.17	11,053.00	87.33	87.70	-80.45	9,120.58	-1,055.15	669.31	495.54	173.77	3.852	
20,100.00	11,163.00	20,080.17	11,053.00	88.11	88.48	-80.45	9,220.58	-1,055.92	669.30	494.01	175.30	3.818	
20,200.00	11,163.00	20,180.17	11,053.00	88.88	89.25	-80.45	9,320.58	-1,056.69	669.30	492.47	176.83	3.785	
20,300.00	11,163.00	20,280.17	11,053.00	89.66	90.03	-80.45	9,420.57	-1,057.45	669.30	490.93	178.37	3.752	
20,400.00	11,163.00	20,380.17	11,053.00	90.44	90.81	-80.45	9,520.57	-1,058.22	669.30	489.39	179.91	3.720	
20,500.00	11,163.00	20,480.17	11,053.00	91.21	91.59	-80.45	9,620.57	-1,058.99	669.29	487.84	181.46	3.688	
20,600.00	11,163.00	20,580.17	11,053.00	92.00	92.37	-80.45	9,720.57	-1,059.75	669.29	486.29	183.00	3.657	
20,700.00	11,163.00	20,680.17	11,053.00	92.78	93.16	-80.45	9,820.56	-1,060.52	669.29	484.74	184.55	3.627	
20,800.00	11,163.00	20,780.17	11,053.00	93.56	93.94	-80.45	9,920.56	-1,061.29	669.29	483.18	186.11	3.596	
20,900.00	11,163.00	20,880.17	11,053.00	94.35	94.73	-80.45	10,020.56	-1,062.05	669.28	481.62	187.66	3.566	
21,000.00	11,163.00	20,980.17	11,053.00	95.14	95.52	-80.45	10,120.55	-1,062.82	669.28	480.06	189.22	3.537	
21,100.00	11,163.00	21,080.17	11,053.00	95.92	96.31	-80.45	10,220.55	-1,063.59	669.28	478.50	190.78	3.508	
21,200.00	11,163.00	21,180.17	11,053.00	96.71	97.10	-80.45	10,320.55	-1,064.36	669.28	476.93	192.35	3.480	
21,300.00	11,163.00	21,280.17	11,053.00	97.51	97.89	-80.45	10,420.54	-1,065.12	669.27	475.36	193.91	3.451	
21,400.00	11,163.00	21,380.17	11,053.00	98.30	98.68	-80.45	10,520.54	-1,065.89	669.27	473.79	195.48	3.424	
21,435.23	11,163.00	21,415.39	11,053.00	98.58	98.96	-80.45	10,555.76	-1,066.16	669.27	473.24	196.03	3.414	
21,436.63	11,163.00	21,415.39	11,053.00	98.59	98.96	-80.45	10,555.76	-1,066.16	669.27	473.22	196.05	3.414	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D04) Robin Fed 134H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
300.00	300.00	300.00	300.00	0.84	0.84	88.45	0.81	29.98	29.99	28.31	1.68	17.801	
400.00	400.00	400.00	400.00	1.20	1.20	88.45	0.81	29.98	29.99	27.59	2.40	12.487	
500.00	500.00	500.00	500.00	1.56	1.56	88.45	0.81	29.98	29.99	26.87	3.12	9.616	
600.00	600.00	600.00	600.00	1.92	1.92	88.45	0.81	29.98	29.99	26.16	3.84	7.819	
700.00	700.00	700.00	700.00	2.28	2.28	88.45	0.81	29.98	29.99	25.44	4.55	6.588	
800.00	800.00	800.00	800.00	2.63	2.63	88.45	0.81	29.98	29.99	24.72	5.27	5.691	
900.00	900.00	900.00	900.00	2.99	2.99	88.45	0.81	29.98	29.99	24.00	5.99	5.010	
1,000.00	1,000.00	1,000.00	1,000.00	3.35	3.35	88.45	0.81	29.98	29.99	23.29	6.70	4.474	CC, ES
1,100.00	1,100.00	1,099.21	1,099.20	3.71	3.70	88.00	1.09	31.24	31.27	23.86	7.41	4.220	
1,200.00	1,200.00	1,198.87	1,198.80	4.07	4.05	86.97	1.82	34.50	34.57	26.46	8.11	4.262	
1,300.00	1,299.99	1,298.75	1,298.62	4.42	4.40	167.91	2.59	37.93	39.32	30.51	8.81	4.463	
1,341.78	1,341.75	1,340.44	1,340.29	4.56	4.54	167.96	2.91	39.36	42.06	32.96	9.10	4.622	
1,400.00	1,399.93	1,398.52	1,398.32	4.77	4.75	168.11	3.36	41.35	46.19	36.69	9.50	4.860	
1,500.00	1,499.86	1,498.26	1,498.01	5.11	5.10	168.32	4.13	44.77	53.29	43.09	10.20	5.225	
1,600.00	1,599.79	1,598.01	1,597.70	5.46	5.45	168.48	4.90	48.20	60.39	49.49	10.90	5.541	
1,700.00	1,699.72	1,697.76	1,697.38	5.81	5.80	168.60	5.66	51.62	67.49	55.89	11.60	5.819	
1,800.00	1,799.65	1,797.51	1,797.07	6.17	6.15	168.71	6.43	55.05	74.59	62.29	12.30	6.064	
1,900.00	1,899.58	1,897.25	1,896.75	6.52	6.51	168.79	7.20	58.47	81.69	68.68	13.00	6.282	
2,000.00	1,999.51	1,997.00	1,996.44	6.87	6.86	168.86	7.97	61.89	88.79	75.08	13.71	6.477	
2,100.00	2,099.45	2,096.75	2,096.13	7.22	7.22	168.92	8.74	65.32	95.89	81.47	14.41	6.652	
2,200.00	2,199.38	2,196.50	2,195.81	7.58	7.57	168.97	9.50	68.74	102.99	87.87	15.12	6.811	
2,300.00	2,299.31	2,296.24	2,295.50	7.93	7.93	169.02	10.27	72.16	110.09	94.26	15.83	6.955	
2,400.00	2,399.24	2,395.99	2,395.18	8.29	8.28	169.06	11.04	75.59	117.19	100.65	16.54	7.087	
2,500.00	2,499.17	2,495.74	2,494.87	8.65	8.64	169.09	11.81	79.01	124.29	107.04	17.24	7.207	
2,600.00	2,599.10	2,595.49	2,594.55	9.00	9.00	169.12	12.57	82.43	131.39	113.43	17.95	7.318	
2,700.00	2,699.03	2,695.23	2,694.24	9.36	9.35	169.15	13.34	85.86	138.49	119.82	18.66	7.420	
2,800.00	2,798.96	2,794.98	2,793.93	9.71	9.71	169.18	14.11	89.28	145.59	126.21	19.37	7.515	
2,900.00	2,898.89	2,894.73	2,893.61	10.07	10.07	169.20	14.88	92.70	152.69	132.60	20.08	7.602	
3,000.00	2,998.83	2,994.48	2,993.30	10.43	10.42	169.22	15.65	96.13	159.79	138.99	20.79	7.684	
3,100.00	3,098.76	3,094.22	3,092.98	10.78	10.78	169.24	16.41	99.55	166.89	145.38	21.51	7.760	
3,200.00	3,198.69	3,193.97	3,192.67	11.14	11.14	169.26	17.18	102.97	173.99	151.77	22.22	7.831	
3,300.00	3,298.62	3,293.72	3,292.36	11.50	11.49	169.27	17.95	106.40	181.09	158.16	22.93	7.898	
3,400.00	3,398.55	3,393.47	3,392.04	11.86	11.85	169.29	18.72	109.82	188.19	164.55	23.64	7.960	
3,500.00	3,498.48	3,493.22	3,491.73	12.21	12.21	169.30	19.49	113.24	195.29	170.93	24.35	8.019	
3,600.00	3,598.41	3,592.96	3,591.41	12.57	12.56	169.31	20.25	116.67	202.39	177.32	25.06	8.075	
3,700.00	3,698.34	3,692.71	3,691.10	12.93	12.92	169.33	21.02	120.09	209.49	183.71	25.78	8.127	
3,800.00	3,798.27	3,792.46	3,790.79	13.29	13.28	169.34	21.79	123.51	216.59	190.10	26.49	8.176	
3,900.00	3,898.21	3,892.21	3,890.47	13.65	13.64	169.35	22.56	126.94	223.69	196.48	27.20	8.223	
4,000.00	3,998.14	3,991.95	3,990.16	14.00	13.99	169.36	23.32	130.36	230.79	202.87	27.91	8.268	
4,100.00	4,098.07	4,091.70	4,089.84	14.36	14.35	169.37	24.09	133.78	237.89	209.26	28.63	8.310	
4,200.00	4,198.00	4,191.45	4,189.53	14.72	14.71	169.38	24.86	137.21	244.99	215.65	29.34	8.350	
4,300.00	4,297.93	4,291.20	4,289.22	15.08	15.07	169.38	25.63	140.63	252.09	222.03	30.05	8.388	
4,400.00	4,397.86	4,390.94	4,388.90	15.44	15.42	169.39	26.40	144.05	259.19	228.42	30.77	8.424	
4,500.00	4,497.79	4,490.69	4,488.59	15.80	15.78	169.40	27.16	147.48	266.29	234.81	31.48	8.459	
4,600.00	4,597.72	4,590.44	4,588.27	16.15	16.14	169.41	27.93	150.90	273.39	241.19	32.19	8.492	
4,700.00	4,697.65	4,690.19	4,687.96	16.51	16.50	169.41	28.70	154.32	280.49	247.58	32.91	8.524	
4,800.00	4,797.59	4,789.93	4,787.64	16.87	16.85	169.42	29.47	157.75	287.59	253.97	33.62	8.554	
4,900.00	4,897.52	4,889.68	4,887.33	17.23	17.21	169.43	30.24	161.17	294.69	260.35	34.33	8.583	
5,000.00	4,997.45	4,989.43	4,987.02	17.59	17.57	169.43	31.00	164.59	301.79	266.74	35.05	8.611	
5,100.00	5,097.38	5,089.18	5,086.70	17.95	17.93	169.44	31.77	168.02	308.89	273.13	35.76	8.637	
5,200.00	5,197.31	5,188.92	5,186.39	18.31	18.29	169.44	32.54	171.44	315.99	279.51	36.48	8.663	
5,300.00	5,297.24	5,288.67	5,286.07	18.67	18.64	169.45	33.31	174.86	323.09	285.90	37.19	8.688	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D04) Robin Fed 134H - Permit - APD-Rev01														Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
5,400.00	5,397.17	5,388.42	5,385.76	19.02	19.00	169.45	34.08	178.29	330.19	292.29	37.90	8.711			
5,500.00	5,497.10	5,488.17	5,485.45	19.38	19.36	169.46	34.84	181.71	337.29	298.67	38.62	8.734			
5,600.00	5,597.03	5,587.92	5,585.13	19.74	19.72	169.46	35.61	185.13	344.39	305.06	39.33	8.756			
5,700.00	5,696.97	5,687.66	5,684.82	20.10	20.07	169.47	36.38	188.56	351.49	311.44	40.05	8.777			
5,800.00	5,796.90	5,787.41	5,784.50	20.46	20.43	169.47	37.15	191.98	358.59	317.83	40.76	8.797			
5,900.00	5,896.83	5,887.16	5,884.19	20.82	20.79	169.47	37.91	195.40	365.69	324.22	41.47	8.817			
6,000.00	5,996.76	5,986.91	5,983.88	21.18	21.15	169.48	38.68	198.83	372.79	330.60	42.19	8.836			
6,100.00	6,096.69	6,086.65	6,083.56	21.54	21.51	169.48	39.45	202.25	379.89	336.99	42.90	8.855			
6,200.00	6,196.62	6,186.40	6,183.25	21.90	21.86	169.48	40.22	205.67	386.99	343.37	43.62	8.872			
6,300.00	6,296.55	6,286.15	6,282.93	22.25	22.22	169.49	40.99	209.10	394.09	349.76	44.33	8.889			
6,400.00	6,396.48	6,385.90	6,382.62	22.61	22.58	169.49	41.75	212.52	401.19	356.15	45.05	8.906			
6,500.00	6,496.41	6,485.64	6,482.30	22.97	22.94	169.49	42.52	215.94	408.29	362.53	45.76	8.922			
6,600.00	6,596.35	6,585.39	6,581.99	23.33	23.30	169.50	43.29	219.37	415.39	368.92	46.48	8.938			
6,700.00	6,696.28	6,685.14	6,681.68	23.69	23.66	169.50	44.06	222.79	422.49	375.30	47.19	8.953			
6,800.00	6,796.21	6,784.89	6,781.36	24.05	24.01	169.50	44.83	226.21	429.59	381.69	47.90	8.968			
6,900.00	6,896.14	6,884.63	6,881.05	24.41	24.37	169.51	45.59	229.64	436.69	388.07	48.62	8.982			
7,000.00	6,996.07	6,984.38	6,980.73	24.77	24.73	169.51	46.36	233.06	443.79	394.46	49.33	8.996			
7,100.00	7,096.00	7,084.13	7,080.42	25.13	25.09	169.51	47.13	236.48	450.89	400.85	50.05	9.009			
7,200.00	7,195.93	7,183.88	7,180.11	25.49	25.45	169.51	47.90	239.91	457.99	407.23	50.76	9.022			
7,300.00	7,295.86	7,283.62	7,279.79	25.85	25.80	169.52	48.66	243.33	465.09	413.62	51.48	9.035			
7,400.00	7,395.79	7,383.37	7,379.48	26.21	26.16	169.52	49.43	246.75	472.20	420.00	52.19	9.047			
7,500.00	7,495.73	7,483.12	7,479.16	26.57	26.52	169.52	50.20	250.18	479.30	426.39	52.91	9.059			
7,600.00	7,595.66	7,582.87	7,578.85	26.92	26.88	169.52	50.97	253.60	486.40	432.77	53.62	9.071			
7,700.00	7,695.59	7,682.61	7,678.54	27.28	27.24	169.52	51.74	257.02	493.50	439.16	54.34	9.082			
7,800.00	7,795.52	7,782.36	7,778.22	27.64	27.59	169.53	52.50	260.45	500.60	445.54	55.05	9.093			
7,900.00	7,895.45	7,882.11	7,877.91	28.00	27.95	169.53	53.27	263.87	507.70	451.93	55.77	9.104			
8,000.00	7,995.38	7,981.86	7,977.59	28.36	28.31	169.53	54.04	267.29	514.80	458.31	56.48	9.114			
8,100.00	8,095.31	8,081.61	8,077.28	28.72	28.67	169.53	54.81	270.72	521.90	464.70	57.20	9.125			
8,200.00	8,195.24	8,181.35	8,176.96	29.08	29.03	169.53	55.58	274.14	529.00	471.09	57.91	9.134			
8,300.00	8,295.17	8,281.10	8,276.65	29.44	29.39	169.54	56.34	277.56	536.10	477.47	58.63	9.144			
8,400.00	8,395.11	8,380.85	8,376.34	29.80	29.74	169.54	57.11	280.99	543.20	483.86	59.34	9.154			
8,500.00	8,495.04	8,480.60	8,476.02	30.16	30.10	169.54	57.88	284.41	550.30	490.24	60.06	9.163			
8,600.00	8,594.97	8,580.34	8,575.71	30.52	30.46	169.54	58.65	287.84	557.40	496.63	60.77	9.172			
8,700.00	8,694.90	8,680.09	8,675.39	30.88	30.82	169.54	59.41	291.26	564.50	503.01	61.49	9.181			
8,800.00	8,794.83	8,779.84	8,775.08	31.24	31.18	169.54	60.18	294.68	571.60	509.40	62.20	9.189			
8,900.00	8,894.76	8,879.59	8,874.77	31.60	31.53	169.55	60.95	298.11	578.70	515.78	62.92	9.198			
9,000.00	8,994.69	8,979.33	8,974.45	31.95	31.89	169.55	61.72	301.53	585.80	522.17	63.63	9.206			
9,100.00	9,094.62	9,079.08	9,074.14	32.31	32.25	169.55	62.49	304.95	592.90	528.55	64.35	9.214			
9,200.00	9,194.55	9,178.83	9,173.82	32.67	32.61	169.55	63.25	308.38	600.00	534.94	65.06	9.222			
9,300.00	9,294.49	9,278.58	9,273.51	33.03	32.97	169.55	64.02	311.80	607.10	541.32	65.78	9.230			
9,400.00	9,394.42	9,378.32	9,373.20	33.39	33.33	169.55	64.79	315.22	614.20	547.71	66.49	9.237			
9,500.00	9,494.35	9,478.07	9,472.88	33.75	33.68	169.55	65.56	318.65	621.30	554.09	67.21	9.244			
9,600.00	9,594.28	9,577.82	9,572.57	34.11	34.04	169.56	66.33	322.07	628.40	560.48	67.92	9.252			
9,700.00	9,694.21	9,677.57	9,672.25	34.47	34.40	169.56	67.09	325.49	635.50	566.86	68.64	9.259			
9,800.00	9,794.14	9,777.31	9,771.94	34.83	34.76	169.56	67.86	328.92	642.60	573.25	69.35	9.266			
9,900.00	9,894.07	9,878.26	9,872.82	35.19	35.12	169.56	68.64	332.37	649.70	579.62	70.08	9.271			
10,000.00	9,994.00	9,998.25	9,992.79	35.55	35.55	169.60	69.10	334.43	655.07	584.19	70.89	9.241			
10,064.29	10,058.25	10,063.71	10,058.25	35.78	35.77	169.63	69.10	334.44	657.43	586.08	71.34	9.215			
10,100.00	10,093.94	10,099.40	10,093.94	35.91	35.90	169.66	69.10	334.44	658.57	586.97	71.60	9.198			
10,206.07	10,200.00	10,205.46	10,200.00	36.28	36.27	88.26	69.10	334.44	660.01	587.68	72.34	9.124			
10,300.00	10,293.93	10,299.39	10,293.93	36.61	36.59	88.26	69.10	334.44	660.01	587.03	72.99	9.043			
10,400.00	10,393.93	10,399.39	10,393.93	36.95	36.94	88.26	69.10	334.44	660.01	586.33	73.68	8.958			

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D04) Robin Fed 134H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
10,411.32	10,405.25	10,410.71	10,405.25	36.99	36.98	88.26	69.10	334.44	660.01	586.25	73.76	8.948	
10,500.00	10,493.93	10,499.03	10,493.57	37.30	37.29	88.25	69.26	334.44	660.02	585.64	74.37	8.874	
10,596.11	10,590.04	10,591.48	10,585.41	37.63	37.60	87.41	78.87	334.36	660.32	585.30	75.03	8.801	
10,600.00	10,593.93	10,595.13	10,589.01	37.65	37.62	87.79	79.56	334.36	660.35	585.30	75.05	8.799	
10,650.00	10,643.85	10,641.83	10,634.44	37.82	37.77	87.02	90.29	334.28	660.77	585.39	75.38	8.766	
10,700.00	10,693.36	10,687.90	10,678.26	37.99	37.92	86.27	104.48	334.17	661.29	585.59	75.70	8.736	
10,750.00	10,742.08	10,733.40	10,720.28	38.16	38.07	85.55	121.90	334.03	661.89	585.89	76.00	8.709	
10,800.00	10,789.65	10,778.37	10,760.32	38.32	38.20	84.87	142.33	333.88	662.56	586.28	76.28	8.686	
10,850.00	10,835.70	10,822.85	10,798.23	38.48	38.32	84.22	165.57	333.70	663.28	586.74	76.54	8.665	
10,900.00	10,879.88	10,866.90	10,833.89	38.62	38.44	83.62	191.42	333.50	664.03	587.25	76.78	8.648	
10,950.00	10,921.85	10,910.56	10,867.16	38.75	38.54	83.06	219.66	333.28	664.79	587.79	77.00	8.633	
11,000.00	10,961.30	10,953.86	10,897.95	38.87	38.65	82.55	250.10	333.05	665.54	588.34	77.20	8.621	
11,050.00	10,997.92	11,000.00	10,928.13	38.99	38.75	82.06	284.98	332.78	666.26	588.87	77.39	8.609	
11,100.00	11,031.44	11,039.59	10,951.71	39.09	38.84	81.68	316.77	332.54	666.92	589.40	77.52	8.603	
11,150.00	11,061.60	11,082.08	10,974.52	39.20	38.93	81.33	352.62	332.26	667.52	589.86	77.66	8.596	
11,200.00	11,088.17	11,124.39	10,994.52	39.30	39.01	81.04	389.88	331.98	668.04	590.26	77.78	8.589	
11,250.00	11,110.95	11,166.54	11,011.67	39.39	39.09	80.80	428.38	331.68	668.47	590.58	77.89	8.582	
11,300.00	11,129.76	11,208.57	11,025.90	39.48	39.16	80.62	467.91	331.38	668.80	590.81	77.99	8.575	
11,350.00	11,144.47	11,250.00	11,037.05	39.56	39.23	80.51	507.80	331.07	669.01	590.93	78.09	8.568	
11,400.00	11,154.96	11,292.42	11,045.45	39.63	39.28	80.45	549.37	330.75	669.12	590.93	78.18	8.558	
11,450.00	11,161.14	11,334.30	11,050.71	39.68	39.33	80.46	590.91	330.43	669.10	590.82	78.28	8.548	
11,496.11	11,163.00	11,372.95	11,052.86	39.73	39.38	80.52	629.49	330.13	668.99	590.62	78.37	8.537	
11,500.00	11,163.00	11,376.21	11,052.92	39.73	39.38	80.53	632.75	330.11	668.97	590.60	78.37	8.536	
11,511.61	11,163.00	11,386.03	11,053.00	39.75	39.39	80.54	642.57	330.03	668.96	590.56	78.40	8.533	
11,600.00	11,163.00	11,474.43	11,053.00	39.84	39.48	80.54	730.96	329.36	668.96	590.38	78.58	8.514	
11,700.00	11,163.00	11,574.43	11,053.00	39.96	39.60	80.54	830.96	328.59	668.96	590.15	78.82	8.488	
11,800.00	11,163.00	11,674.43	11,053.00	40.10	39.74	80.54	930.96	327.82	668.96	589.87	79.09	8.458	
11,900.00	11,163.00	11,774.43	11,053.00	40.25	39.89	80.54	1,030.95	327.05	668.96	589.56	79.40	8.425	
12,000.00	11,163.00	11,874.43	11,053.00	40.43	40.07	80.54	1,130.95	326.28	668.97	589.22	79.75	8.388	
12,100.00	11,163.00	11,974.43	11,053.00	40.62	40.26	80.54	1,230.95	325.51	668.97	588.84	80.13	8.348	
12,200.00	11,163.00	12,074.43	11,053.00	40.83	40.47	80.54	1,330.95	324.75	668.97	588.42	80.55	8.305	
12,300.00	11,163.00	12,174.43	11,053.00	41.06	40.70	80.54	1,430.94	323.98	668.97	587.97	81.00	8.259	
12,400.00	11,163.00	12,274.43	11,053.00	41.31	40.94	80.54	1,530.94	323.21	668.97	587.49	81.48	8.210	
12,500.00	11,163.00	12,374.43	11,053.00	41.57	41.21	80.54	1,630.94	322.44	668.97	586.97	82.00	8.158	
12,600.00	11,163.00	12,474.43	11,053.00	41.84	41.48	80.54	1,730.93	321.67	668.97	586.42	82.55	8.104	
12,700.00	11,163.00	12,574.43	11,053.00	42.14	41.78	80.54	1,830.93	320.91	668.98	585.84	83.13	8.047	
12,800.00	11,163.00	12,674.43	11,053.00	42.45	42.09	80.54	1,930.93	320.14	668.98	585.23	83.75	7.988	
12,900.00	11,163.00	12,774.43	11,053.00	42.77	42.41	80.54	2,030.93	319.37	668.98	584.59	84.39	7.927	
13,000.00	11,163.00	12,874.43	11,053.00	43.11	42.75	80.54	2,130.92	318.60	668.98	583.92	85.06	7.865	
13,100.00	11,163.00	12,974.43	11,053.00	43.47	43.11	80.54	2,230.92	317.83	668.98	583.22	85.77	7.800	
13,200.00	11,163.00	13,074.43	11,053.00	43.83	43.48	80.54	2,330.92	317.06	668.98	582.49	86.50	7.734	
13,300.00	11,163.00	13,174.43	11,053.00	44.22	43.86	80.54	2,430.91	316.30	668.99	581.73	87.25	7.667	
13,400.00	11,163.00	13,274.43	11,053.00	44.61	44.26	80.54	2,530.91	315.53	668.99	580.95	88.04	7.599	
13,500.00	11,163.00	13,374.43	11,053.00	45.02	44.67	80.54	2,630.91	314.76	668.99	580.14	88.85	7.529	
13,600.00	11,163.00	13,474.43	11,053.00	45.44	45.09	80.54	2,730.90	313.99	668.99	579.30	89.69	7.459	
13,700.00	11,163.00	13,574.43	11,053.00	45.88	45.53	80.54	2,830.90	313.22	668.99	578.44	90.55	7.388	
13,800.00	11,163.00	13,674.43	11,053.00	46.32	45.98	80.54	2,930.90	312.46	668.99	577.56	91.43	7.317	
13,900.00	11,163.00	13,774.43	11,053.00	46.78	46.44	80.54	3,030.90	311.69	668.99	576.65	92.34	7.245	
14,000.00	11,163.00	13,874.43	11,053.00	47.25	46.91	80.54	3,130.89	310.92	669.00	575.72	93.27	7.172	
14,100.00	11,163.00	13,974.43	11,053.00	47.73	47.39	80.54	3,230.89	310.15	669.00	574.77	94.23	7.100	
14,200.00	11,163.00	14,074.43	11,053.00	48.22	47.88	80.54	3,330.89	309.38	669.00	573.80	95.20	7.027	
14,300.00	11,163.00	14,174.43	11,053.00	48.73	48.39	80.54	3,430.88	308.61	669.00	572.80	96.20	6.954	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D04) Robin Fed 134H - Permit - APD-Rev01												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
14,400.00	11,163.00	14,274.43	11,053.00	49.24	48.90	80.54	3,530.88	307.85	669.00	571.79	97.21	6.882	
14,500.00	11,163.00	14,374.43	11,053.00	49.76	49.43	80.54	3,630.88	307.08	669.00	570.75	98.25	6.809	
14,600.00	11,163.00	14,474.43	11,053.00	50.29	49.96	80.54	3,730.88	306.31	669.00	569.70	99.30	6.737	
14,700.00	11,163.00	14,574.43	11,053.00	50.83	50.50	80.54	3,830.87	305.54	669.01	568.63	100.38	6.665	
14,800.00	11,163.00	14,674.43	11,053.00	51.38	51.05	80.54	3,930.87	304.77	669.01	567.54	101.47	6.593	
14,900.00	11,163.00	14,774.43	11,053.00	51.94	51.61	80.54	4,030.87	304.00	669.01	566.44	102.57	6.522	
15,000.00	11,163.00	14,874.43	11,053.00	52.51	52.18	80.54	4,130.86	303.24	669.01	565.31	103.70	6.452	
15,100.00	11,163.00	14,974.43	11,053.00	53.08	52.76	80.54	4,230.86	302.47	669.01	564.17	104.84	6.381	
15,200.00	11,163.00	15,074.43	11,053.00	53.66	53.34	80.54	4,330.86	301.70	669.01	563.02	105.99	6.312	
15,300.00	11,163.00	15,174.43	11,053.00	54.25	53.93	80.54	4,430.85	300.93	669.01	561.85	107.16	6.243	
15,400.00	11,163.00	15,274.43	11,053.00	54.85	54.53	80.54	4,530.85	300.16	669.02	560.67	108.35	6.175	
15,500.00	11,163.00	15,374.43	11,053.00	55.45	55.14	80.54	4,630.85	299.40	669.02	559.47	109.55	6.107	
15,600.00	11,163.00	15,474.43	11,053.00	56.06	55.75	80.54	4,730.85	298.63	669.02	558.26	110.76	6.040	
15,700.00	11,163.00	15,574.43	11,053.00	56.68	56.37	80.54	4,830.84	297.86	669.02	557.04	111.98	5.974	
15,800.00	11,163.00	15,674.43	11,053.00	57.31	57.00	80.54	4,930.84	297.09	669.02	555.80	113.22	5.909	
15,900.00	11,163.00	15,774.43	11,053.00	57.94	57.63	80.54	5,030.84	296.32	669.02	554.55	114.47	5.844	
16,000.00	11,163.00	15,874.43	11,053.00	58.57	58.27	80.54	5,130.83	295.55	669.02	553.29	115.73	5.781	
16,100.00	11,163.00	15,974.43	11,053.00	59.22	58.91	80.54	5,230.83	294.79	669.03	552.02	117.01	5.718	
16,200.00	11,163.00	16,074.43	11,053.00	59.86	59.56	80.54	5,330.83	294.02	669.03	550.73	118.29	5.656	
16,300.00	11,163.00	16,174.43	11,053.00	60.52	60.22	80.54	5,430.83	293.25	669.03	549.44	119.59	5.594	
16,400.00	11,163.00	16,274.43	11,053.00	61.18	60.88	80.54	5,530.82	292.48	669.03	548.13	120.90	5.534	
16,500.00	11,163.00	16,374.43	11,053.00	61.84	61.55	80.54	5,630.82	291.71	669.03	546.82	122.21	5.474	
16,600.00	11,163.00	16,474.43	11,053.00	62.51	62.22	80.54	5,730.82	290.95	669.03	545.49	123.54	5.416	
16,700.00	11,163.00	16,574.43	11,053.00	63.18	62.89	80.54	5,830.81	290.18	669.03	544.16	124.87	5.358	
16,800.00	11,163.00	16,674.43	11,053.00	63.86	63.57	80.54	5,930.81	289.41	669.04	542.82	126.22	5.301	
16,900.00	11,163.00	16,774.43	11,053.00	64.54	64.26	80.54	6,030.81	288.64	669.04	541.46	127.57	5.244	
17,000.00	11,163.00	16,874.43	11,053.00	65.23	64.94	80.54	6,130.80	287.87	669.04	540.10	128.94	5.189	
17,100.00	11,163.00	16,974.43	11,053.00	65.92	65.64	80.54	6,230.80	287.10	669.04	538.73	130.31	5.134	
17,200.00	11,163.00	17,074.43	11,053.00	66.62	66.33	80.54	6,330.80	286.34	669.04	537.36	131.69	5.081	
17,300.00	11,163.00	17,174.43	11,053.00	67.32	67.04	80.54	6,430.80	285.57	669.04	535.97	133.07	5.028	
17,400.00	11,163.00	17,274.43	11,053.00	68.02	67.74	80.54	6,530.79	284.80	669.05	534.58	134.47	4.976	
17,500.00	11,163.00	17,374.43	11,053.00	68.73	68.45	80.54	6,630.79	284.03	669.05	533.18	135.87	4.924	
17,600.00	11,163.00	17,474.43	11,053.00	69.44	69.16	80.54	6,730.79	283.26	669.05	531.77	137.28	4.874	
17,700.00	11,163.00	17,574.43	11,053.00	70.15	69.88	80.54	6,830.78	282.50	669.05	530.36	138.69	4.824	
17,800.00	11,163.00	17,674.43	11,053.00	70.87	70.60	80.54	6,930.78	281.73	669.05	528.94	140.11	4.775	
17,900.00	11,163.00	17,774.43	11,053.00	71.59	71.32	80.54	7,030.78	280.96	669.05	527.51	141.54	4.727	
18,000.00	11,163.00	17,874.43	11,053.00	72.31	72.04	80.54	7,130.77	280.19	669.05	526.08	142.98	4.679	
18,100.00	11,163.00	17,974.43	11,053.00	73.04	72.77	80.54	7,230.77	279.42	669.06	524.64	144.42	4.633	
18,200.00	11,163.00	18,074.43	11,053.00	73.77	73.50	80.54	7,330.77	278.65	669.06	523.19	145.87	4.587	
18,300.00	11,163.00	18,174.43	11,053.00	74.50	74.24	80.54	7,430.77	277.89	669.06	521.74	147.32	4.542	
18,400.00	11,163.00	18,274.43	11,053.00	75.24	74.97	80.54	7,530.76	277.12	669.06	520.28	148.78	4.497	
18,500.00	11,163.00	18,374.43	11,053.00	75.97	75.71	80.54	7,630.76	276.35	669.06	518.82	150.24	4.453	
18,600.00	11,163.00	18,474.43	11,053.00	76.72	76.46	80.54	7,730.76	275.58	669.06	517.35	151.71	4.410	
18,700.00	11,163.00	18,574.43	11,053.00	77.46	77.20	80.54	7,830.75	274.81	669.06	515.88	153.19	4.368	
18,800.00	11,163.00	18,674.43	11,053.00	78.21	77.95	80.54	7,930.75	274.05	669.07	514.40	154.66	4.326	
18,900.00	11,163.00	18,774.43	11,053.00	78.95	78.70	80.54	8,030.75	273.28	669.07	512.92	156.15	4.285	
19,000.00	11,163.00	18,874.43	11,053.00	79.71	79.45	80.54	8,130.75	272.51	669.07	511.43	157.64	4.244	
19,100.00	11,163.00	18,974.43	11,053.00	80.46	80.21	80.54	8,230.74	271.74	669.07	509.94	159.13	4.205	
19,200.00	11,163.00	19,074.43	11,053.00	81.21	80.96	80.54	8,330.74	270.97	669.07	508.44	160.63	4.165	
19,300.00	11,163.00	19,174.43	11,053.00	81.97	81.72	80.54	8,430.74	270.20	669.07	506.94	162.13	4.127	
19,400.00	11,163.00	19,274.43	11,053.00	82.73	82.48	80.54	8,530.73	269.44	669.07	505.44	163.64	4.089	
19,500.00	11,163.00	19,374.43	11,053.00	83.49	83.25	80.54	8,630.73	268.67	669.08	503.93	165.15	4.051	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D04) Robin Fed 134H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Rule Assigned:		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
19,600.00	11,163.00	19,474.43	11,053.00	84.26	84.01	80.54	8,730.73	267.90	669.08	502.41	166.66	4.015	
19,700.00	11,163.00	19,574.43	11,053.00	85.02	84.78	80.54	8,830.72	267.13	669.08	500.90	168.18	3.978	
19,800.00	11,163.00	19,674.43	11,053.00	85.79	85.55	80.54	8,930.72	266.36	669.08	499.38	169.70	3.943	
19,900.00	11,163.00	19,774.43	11,053.00	86.56	86.32	80.54	9,030.72	265.60	669.08	497.85	171.23	3.908	
20,000.00	11,163.00	19,874.43	11,053.00	87.33	87.09	80.54	9,130.72	264.83	669.08	496.33	172.76	3.873	
20,100.00	11,163.00	19,974.43	11,053.00	88.11	87.87	80.54	9,230.71	264.06	669.08	494.79	174.29	3.839	
20,200.00	11,163.00	20,074.43	11,053.00	88.88	88.64	80.54	9,330.71	263.29	669.09	493.26	175.83	3.805	
20,300.00	11,163.00	20,174.43	11,053.00	89.66	89.42	80.54	9,430.71	262.52	669.09	491.72	177.37	3.772	
20,400.00	11,163.00	20,274.43	11,053.00	90.44	90.20	80.54	9,530.70	261.75	669.09	490.18	178.91	3.740	
20,500.00	11,163.00	20,374.43	11,053.00	91.21	90.98	80.54	9,630.70	260.99	669.09	488.64	180.45	3.708	
20,600.00	11,163.00	20,474.43	11,053.00	92.00	91.76	80.54	9,730.70	260.22	669.09	487.09	182.00	3.676	
20,700.00	11,163.00	20,574.43	11,053.00	92.78	92.55	80.54	9,830.70	259.45	669.09	485.54	183.55	3.645	
20,800.00	11,163.00	20,674.43	11,053.00	93.56	93.33	80.54	9,930.69	258.68	669.09	483.99	185.11	3.615	
20,900.00	11,163.00	20,774.43	11,053.00	94.35	94.12	80.54	10,030.69	257.91	669.10	482.43	186.67	3.584	
21,000.00	11,163.00	20,874.43	11,053.00	95.14	94.91	80.54	10,130.69	257.14	669.10	480.87	188.23	3.555	
21,100.00	11,163.00	20,974.43	11,053.00	95.92	95.70	80.54	10,230.68	256.38	669.10	479.31	189.79	3.525	
21,200.00	11,163.00	21,074.43	11,053.00	96.71	96.49	80.54	10,330.68	255.61	669.10	477.75	191.35	3.497	
21,300.00	11,163.00	21,174.43	11,053.00	97.51	97.28	80.54	10,430.68	254.84	669.10	476.18	192.92	3.468	
21,400.00	11,163.00	21,274.43	11,053.00	98.30	98.07	80.54	10,530.67	254.07	669.10	474.61	194.49	3.440	
21,436.63	11,163.00	21,311.05	11,053.00	98.59	98.36	80.54	10,567.30	253.79	669.10	474.04	195.07	3.430 SF	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D05) Robin Fed 204H - Permit - APD-Rev01													Offset Site Error:	0.00 usft
Survey Program:		0-MWD+IFR1+SAG+FDIR (SQC2)						Rule Assigned:				Offset Well Error:	0.00 usft	
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance			Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
400.00	400.00	400.00	400.00	1.20	1.20	88.46	1.61	59.99	60.01	57.61	2.40	24.987		
500.00	500.00	500.00	500.00	1.56	1.56	88.46	1.61	59.99	60.01	56.89	3.12	19.242		
600.00	600.00	600.00	600.00	1.92	1.92	88.46	1.61	59.99	60.01	56.18	3.84	15.646		
700.00	700.00	700.00	700.00	2.28	2.28	88.46	1.61	59.99	60.01	55.46	4.55	13.182		
800.00	800.00	800.00	800.00	2.63	2.63	88.46	1.61	59.99	60.01	54.74	5.27	11.388		
900.00	900.00	900.00	900.00	2.99	2.99	88.46	1.61	59.99	60.01	54.03	5.99	10.025		
1,000.00	1,000.00	1,000.00	1,000.00	3.35	3.35	88.46	1.61	59.99	60.01	53.31	6.70	8.952		
1,100.00	1,100.00	1,100.00	1,100.00	3.71	3.71	88.46	1.61	59.99	60.01	52.59	7.42	8.087		
1,200.00	1,200.00	1,200.00	1,200.00	4.07	4.07	88.46	1.61	59.99	60.01	51.87	8.14	7.375 CC, ES		
1,300.00	1,299.99	1,298.39	1,298.38	4.42	4.41	170.00	1.74	61.25	62.58	53.75	8.83	7.087		
1,341.78	1,341.75	1,339.41	1,339.38	4.56	4.56	170.11	1.86	62.52	65.18	56.07	9.12	7.151		
1,400.00	1,399.93	1,396.43	1,396.35	4.77	4.75	170.25	2.11	65.02	69.86	60.35	9.51	7.347		
1,500.00	1,499.86	1,494.02	1,493.73	5.11	5.09	170.34	2.73	71.25	79.90	69.72	10.18	7.850		
1,600.00	1,599.79	1,591.05	1,590.37	5.46	5.43	170.28	3.59	79.89	92.47	81.62	10.84	8.528		
1,700.00	1,699.72	1,688.95	1,687.66	5.81	5.78	170.14	4.66	90.67	107.12	95.60	11.52	9.299		
1,800.00	1,799.65	1,787.83	1,785.92	6.17	6.13	170.03	5.77	101.78	122.01	109.80	12.21	9.992		
1,900.00	1,899.58	1,886.72	1,884.17	6.52	6.48	169.94	6.87	112.89	136.89	123.98	12.90	10.608		
2,000.00	1,999.51	1,985.60	1,982.42	6.87	6.83	169.87	7.98	124.00	151.77	138.17	13.60	11.160		
2,100.00	2,099.45	2,084.49	2,080.68	7.22	7.18	169.82	9.08	135.11	166.66	152.36	14.30	11.657		
2,200.00	2,199.38	2,183.38	2,178.93	7.58	7.54	169.77	10.19	146.22	181.54	166.54	14.99	12.107		
2,300.00	2,299.31	2,282.26	2,277.18	7.93	7.89	169.73	11.29	157.33	196.42	180.73	15.69	12.516		
2,400.00	2,399.24	2,381.15	2,375.44	8.29	8.25	169.69	12.40	168.44	211.31	194.91	16.39	12.889		
2,500.00	2,499.17	2,480.04	2,473.69	8.65	8.60	169.66	13.50	179.55	226.19	209.10	17.10	13.231		
2,600.00	2,599.10	2,578.92	2,571.95	9.00	8.96	169.64	14.60	190.66	241.07	223.28	17.80	13.546		
2,700.00	2,699.03	2,677.81	2,670.20	9.36	9.32	169.61	15.71	201.77	255.96	237.46	18.50	13.836		
2,800.00	2,798.96	2,776.69	2,768.45	9.71	9.68	169.59	16.81	212.88	270.84	251.64	19.20	14.104		
2,900.00	2,898.89	2,875.58	2,866.71	10.07	10.03	169.57	17.92	223.99	285.73	265.82	19.91	14.353		
3,000.00	2,998.83	2,974.47	2,964.96	10.43	10.39	169.56	19.02	235.10	300.61	280.00	20.61	14.585		
3,100.00	3,098.76	3,073.35	3,063.22	10.78	10.75	169.54	20.13	246.21	315.49	294.18	21.32	14.801		
3,200.00	3,198.69	3,172.24	3,161.47	11.14	11.11	169.53	21.23	257.32	330.38	308.36	22.02	15.003		
3,300.00	3,298.62	3,271.12	3,259.72	11.50	11.47	169.51	22.34	268.43	345.26	322.54	22.73	15.192		
3,400.00	3,398.55	3,370.01	3,357.98	11.86	11.83	169.50	23.44	279.54	360.15	336.71	23.43	15.369		
3,500.00	3,498.48	3,468.90	3,456.23	12.21	12.19	169.49	24.55	290.65	375.03	350.89	24.14	15.536		
3,600.00	3,598.41	3,567.78	3,554.48	12.57	12.55	169.48	25.65	301.76	389.92	365.07	24.85	15.693		
3,700.00	3,698.34	3,666.67	3,652.74	12.93	12.91	169.47	26.76	312.87	404.80	379.25	25.55	15.842		
3,800.00	3,798.27	3,765.55	3,750.99	13.29	13.27	169.46	27.86	323.98	419.68	393.42	26.26	15.982		
3,900.00	3,898.21	3,864.44	3,849.25	13.65	13.63	169.46	28.97	335.09	434.57	407.60	26.97	16.115		
4,000.00	3,998.14	3,963.33	3,947.50	14.00	13.99	169.45	30.07	346.20	449.45	421.78	27.67	16.241		
4,100.00	4,098.07	4,062.21	4,045.75	14.36	14.35	169.44	31.18	357.31	464.34	435.95	28.38	16.360		
4,200.00	4,198.00	4,161.10	4,144.01	14.72	14.71	169.44	32.28	368.42	479.22	450.13	29.09	16.474		
4,300.00	4,297.93	4,259.98	4,242.26	15.08	15.07	169.43	33.39	379.53	494.11	464.31	29.80	16.582		
4,400.00	4,397.86	4,358.87	4,340.51	15.44	15.43	169.42	34.49	390.64	508.99	478.48	30.51	16.685		
4,500.00	4,497.79	4,457.76	4,438.77	15.80	15.79	169.42	35.60	401.75	523.87	492.66	31.21	16.783		
4,600.00	4,597.72	4,556.64	4,537.02	16.15	16.15	169.41	36.70	412.86	538.76	506.84	31.92	16.877		
4,700.00	4,697.65	4,655.53	4,635.28	16.51	16.51	169.41	37.81	423.97	553.64	521.01	32.63	16.966		
4,800.00	4,797.59	4,754.42	4,733.53	16.87	16.88	169.40	38.91	435.08	568.53	535.19	33.34	17.052		
4,900.00	4,897.52	4,853.30	4,831.78	17.23	17.24	169.40	40.02	446.19	583.41	549.36	34.05	17.134		
5,000.00	4,997.45	4,952.19	4,930.04	17.59	17.60	169.40	41.12	457.30	598.30	563.54	34.76	17.213		
5,100.00	5,097.38	5,051.07	5,028.29	17.95	17.96	169.39	42.23	468.41	613.18	577.71	35.47	17.288		
5,200.00	5,197.31	5,149.96	5,126.54	18.31	18.32	169.39	43.33	479.52	628.06	591.89	36.18	17.361		
5,300.00	5,297.24	5,248.85	5,224.80	18.67	18.68	169.38	44.44	490.62	642.95	606.06	36.89	17.430		
5,400.00	5,397.17	5,347.73	5,323.05	19.02	19.04	169.38	45.54	501.73	657.83	620.24	37.60	17.497		

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D05) Robin Fed 204H - Permit - APD-Rev01													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Semi Major Axis (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,500.00	5,497.10	5,446.62	5,421.31	19.38	19.41	169.38		46.65	512.84	672.72	634.41	38.31	17.562	
5,600.00	5,597.03	5,545.50	5,519.56	19.74	19.77	169.37		47.75	523.95	687.60	648.59	39.02	17.624	
5,700.00	5,696.97	5,644.39	5,617.81	20.10	20.13	169.37		48.85	535.06	702.49	662.76	39.73	17.684	
5,800.00	5,796.90	5,743.28	5,716.07	20.46	20.49	169.37		49.96	546.17	717.37	676.94	40.43	17.741	
5,900.00	5,896.83	5,842.16	5,814.32	20.82	20.85	169.37		51.06	557.28	732.25	691.11	41.14	17.797	
6,000.00	5,996.76	5,941.05	5,912.58	21.18	21.21	169.36		52.17	568.39	747.14	705.28	41.85	17.851	
6,100.00	6,096.69	6,039.93	6,010.83	21.54	21.58	169.36		53.27	579.50	762.02	719.46	42.56	17.903	
6,200.00	6,196.62	6,138.82	6,109.08	21.90	21.94	169.36		54.38	590.61	776.91	733.63	43.28	17.953	
6,300.00	6,296.55	6,237.71	6,207.34	22.25	22.30	169.36		55.48	601.72	791.79	747.81	43.99	18.001	
6,400.00	6,396.48	6,336.59	6,305.59	22.61	22.66	169.35		56.59	612.83	806.68	761.98	44.70	18.048	
6,500.00	6,496.41	6,435.48	6,403.84	22.97	23.02	169.35		57.69	623.94	821.56	776.15	45.41	18.094	
6,600.00	6,596.35	6,534.36	6,502.10	23.33	23.39	169.35		58.80	635.05	836.44	790.33	46.12	18.138	
6,700.00	6,696.28	6,633.25	6,600.35	23.69	23.75	169.35		59.90	646.16	851.33	804.50	46.83	18.180	
6,800.00	6,796.21	6,732.14	6,698.61	24.05	24.11	169.35		61.01	657.27	866.21	818.68	47.54	18.222	
6,900.00	6,896.14	6,831.02	6,796.86	24.41	24.47	169.34		62.11	668.38	881.10	832.85	48.25	18.262	
7,000.00	6,996.07	6,929.91	6,895.11	24.77	24.83	169.34		63.22	679.49	895.98	847.02	48.96	18.301	
7,100.00	7,096.00	7,028.79	6,993.37	25.13	25.20	169.34		64.32	690.60	910.87	861.20	49.67	18.338	
7,200.00	7,195.93	7,127.68	7,091.62	25.49	25.56	169.34		65.43	701.71	925.75	875.37	50.38	18.375	
7,300.00	7,295.86	7,226.57	7,189.87	25.85	25.92	169.34		66.53	712.82	940.63	889.54	51.09	18.411	
7,400.00	7,395.79	7,325.45	7,288.13	26.21	26.28	169.33		67.64	723.93	955.52	903.72	51.80	18.445	
7,500.00	7,495.73	7,424.34	7,386.38	26.57	26.64	169.33		68.74	735.04	970.40	917.89	52.51	18.479	
7,600.00	7,595.66	7,523.23	7,484.64	26.92	27.01	169.33		69.85	746.15	985.29	932.06	53.22	18.512	
7,700.00	7,695.59	7,622.11	7,582.89	27.28	27.37	169.33		70.95	757.26	1,000.17	946.24	53.94	18.544	
7,800.00	7,795.52	7,721.00	7,681.14	27.64	27.73	169.33		72.06	768.37	1,015.06	960.41	54.65	18.575	
7,900.00	7,895.45	7,819.88	7,779.40	28.00	28.09	169.33		73.16	779.48	1,029.94	974.58	55.36	18.605	
8,000.00	7,995.38	7,918.77	7,877.65	28.36	28.45	169.33		74.27	790.59	1,044.83	988.76	56.07	18.635	
8,100.00	8,095.31	8,017.66	7,975.90	28.72	28.82	169.32		75.37	801.70	1,059.71	1,002.93	56.78	18.663	
8,200.00	8,195.24	8,116.54	8,074.16	29.08	29.18	169.32		76.48	812.81	1,074.59	1,017.10	57.49	18.691	
8,300.00	8,295.17	8,215.43	8,172.41	29.44	29.54	169.32		77.58	823.92	1,089.48	1,031.27	58.20	18.718	
8,400.00	8,395.11	8,314.31	8,270.67	29.80	29.90	169.32		78.69	835.03	1,104.36	1,045.45	58.92	18.745	
8,500.00	8,495.04	8,413.20	8,368.92	30.16	30.27	169.32		79.79	846.14	1,119.25	1,059.62	59.63	18.771	
8,600.00	8,594.97	8,512.09	8,467.17	30.52	30.63	169.32		80.90	857.25	1,134.13	1,073.79	60.34	18.796	
8,700.00	8,694.90	8,612.66	8,567.10	30.88	31.14	169.32		82.22	870.54	1,147.25	1,085.94	61.31	18.813	
8,800.00	8,794.83	8,715.09	8,669.28	31.24	31.65	169.35		83.04	878.77	1,156.68	1,094.46	62.22	18.850	
8,900.00	8,894.76	8,818.32	8,774.48	31.60	32.16	169.39		83.33	881.72	1,162.40	1,099.33	63.07	18.831	
9,000.00	8,994.69	8,918.54	8,874.69	31.95	32.51	169.42		83.33	881.73	1,166.05	1,102.28	63.77	18.824	
9,100.00	9,094.62	9,018.47	8,974.62	32.31	32.85	169.45		83.33	881.73	1,169.70	1,105.22	64.47	18.812	
9,200.00	9,194.55	9,118.40	9,074.55	32.67	33.19	169.49		83.33	881.73	1,173.35	1,108.17	65.18	18.803	
9,300.00	9,294.49	9,218.33	9,174.49	33.03	33.53	169.52		83.33	881.73	1,177.00	1,111.12	65.88	17.866	
9,400.00	9,394.42	9,318.26	9,274.42	33.39	33.87	169.55		83.33	881.73	1,180.65	1,114.06	66.58	17.733	
9,500.00	9,494.35	9,418.19	9,374.35	33.75	34.22	169.59		83.33	881.73	1,184.29	1,117.01	67.28	17.602	
9,600.00	9,594.28	9,518.12	9,474.28	34.11	34.56	169.62		83.33	881.73	1,187.94	1,119.96	67.99	17.473	
9,700.00	9,694.21	9,618.05	9,574.21	34.47	34.90	169.65		83.33	881.73	1,191.60	1,122.91	68.69	17.348	
9,800.00	9,794.14	9,717.99	9,674.14	34.83	35.25	169.68		83.33	881.73	1,195.25	1,125.85	69.39	17.225	
9,900.00	9,894.07	9,817.92	9,774.07	35.19	35.59	169.71		83.33	881.73	1,198.90	1,128.80	70.10	17.104	
10,000.00	9,994.00	9,917.85	9,874.00	35.55	35.94	169.75		83.33	881.73	1,202.55	1,131.75	70.80	16.985	
10,064.29	10,058.25	10,014.10	10,058.25	35.78	36.16	169.77		83.33	881.73	1,204.90	1,133.64	71.25	16.910	
10,100.00	10,093.94	10,139.78	10,093.94	35.91	36.28	169.78		83.33	881.73	1,206.04	1,134.53	71.50	16.867	
10,206.07	10,200.00	10,245.84	10,200.00	36.28	36.65	88.37		83.33	881.73	1,207.49	1,135.24	72.24	16.714	
10,300.00	10,293.93	10,339.77	10,293.93	36.61	36.97	88.37		83.33	881.73	1,207.49	1,134.59	72.90	16.565	
10,400.00	10,393.93	10,439.77	10,393.93	36.95	37.32	88.37		83.33	881.73	1,207.49	1,133.90	73.59	16.408	
10,500.00	10,493.93	10,539.77	10,493.93	37.30	37.66	88.37		83.33	881.73	1,207.49	1,133.20	74.28	16.255	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D05) Robin Fed 204H - Permit - APD-Rev01												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
10,512.85	10,506.78	10,552.63	10,506.78	37.34	37.71	88.37	83.33	881.73	1,207.49	1,133.11	74.37	16.236	
10,596.11	10,590.04	10,632.69	10,586.85	37.63	37.98	88.37	83.36	881.74	1,207.50	1,132.56	74.94	16.112	
10,600.00	10,593.93	10,635.15	10,589.30	37.65	37.99	88.81	83.38	881.74	1,207.51	1,132.54	74.97	16.107	
10,650.00	10,643.85	10,666.68	10,620.80	37.82	38.10	88.78	84.64	882.07	1,208.03	1,132.77	75.26	16.052	
10,700.00	10,693.36	10,700.00	10,653.96	37.99	38.22	88.73	87.80	882.89	1,209.23	1,133.68	75.55	16.006	
10,750.00	10,742.08	10,729.76	10,683.37	38.16	38.32	88.66	92.18	884.02	1,211.08	1,135.28	75.81	15.976	
10,800.00	10,789.65	10,761.32	10,714.25	38.32	38.43	88.57	98.45	885.64	1,213.61	1,137.55	76.06	15.957	
10,850.00	10,835.70	10,800.00	10,751.55	38.48	38.56	88.53	108.35	888.20	1,216.82	1,140.48	76.33	15.941	
10,900.00	10,879.88	10,824.54	10,774.82	38.62	38.64	88.36	115.89	890.15	1,220.62	1,144.09	76.52	15.951	
10,950.00	10,921.85	10,850.00	10,798.59	38.75	38.73	88.16	124.73	892.44	1,225.11	1,148.41	76.70	15.973	
11,000.00	10,961.30	10,887.97	10,833.22	38.87	38.84	88.08	139.78	896.33	1,230.19	1,153.24	76.95	15.987	
11,050.00	10,997.92	10,919.82	10,861.42	38.99	38.94	87.92	154.09	900.03	1,235.92	1,158.77	77.15	16.019	
11,100.00	11,031.44	10,950.00	10,887.36	39.09	39.03	87.72	169.04	903.90	1,242.27	1,164.92	77.35	16.061	
11,150.00	11,061.60	10,983.87	10,915.44	39.20	39.12	87.55	187.36	908.63	1,249.21	1,171.65	77.56	16.107	
11,200.00	11,088.17	11,016.14	10,941.11	39.30	39.20	87.34	206.28	913.53	1,256.73	1,178.97	77.76	16.162	
11,250.00	11,110.95	11,050.00	10,966.83	39.39	39.28	87.14	227.60	919.04	1,264.82	1,186.85	77.97	16.223	
11,300.00	11,129.76	11,081.35	10,989.44	39.48	39.35	86.88	248.62	924.48	1,273.45	1,195.30	78.16	16.293	
11,350.00	11,144.47	11,114.40	11,011.95	39.56	39.42	86.63	272.04	930.53	1,282.62	1,204.26	78.35	16.370	
11,400.00	11,154.96	11,150.00	11,034.59	39.63	39.49	86.42	298.63	937.41	1,292.28	1,213.73	78.55	16.451	
11,450.00	11,161.14	11,181.70	11,053.28	39.68	39.54	86.11	323.42	943.82	1,302.42	1,223.70	78.73	16.544	
11,496.11	11,163.00	11,213.43	11,070.55	39.73	39.59	85.86	349.18	950.48	1,312.17	1,233.29	78.88	16.635	
11,500.00	11,163.00	11,216.14	11,071.95	39.73	39.59	85.93	351.42	951.06	1,313.01	1,234.12	78.89	16.643	
11,600.00	11,163.00	11,620.50	11,163.00	39.84	39.99	90.00	735.95	988.73	1,319.25	1,239.64	79.60	16.573	
11,700.00	11,163.00	11,720.50	11,163.00	39.96	40.09	90.00	835.94	987.97	1,319.25	1,239.41	79.84	16.524	
11,800.00	11,163.00	11,820.50	11,163.00	40.10	40.20	90.00	935.94	987.20	1,319.26	1,239.15	80.11	16.467	
11,900.00	11,163.00	11,920.50	11,163.00	40.25	40.34	90.00	1,035.94	986.44	1,319.27	1,238.85	80.42	16.404	
12,000.00	11,163.00	12,020.50	11,163.00	40.43	40.50	90.00	1,135.94	985.68	1,319.28	1,238.51	80.77	16.334	
12,100.00	11,163.00	12,120.50	11,163.00	40.62	40.68	90.00	1,235.93	984.92	1,319.28	1,238.13	81.15	16.257	
12,200.00	11,163.00	12,220.50	11,163.00	40.83	40.88	90.00	1,335.93	984.16	1,319.29	1,237.73	81.57	16.175	
12,300.00	11,163.00	12,320.50	11,163.00	41.06	41.10	90.00	1,435.93	983.39	1,319.30	1,237.28	82.02	16.086	
12,400.00	11,163.00	12,420.50	11,163.00	41.31	41.33	90.00	1,535.92	982.63	1,319.31	1,236.81	82.50	15.991	
12,500.00	11,163.00	12,520.50	11,163.00	41.57	41.58	90.00	1,635.92	981.87	1,319.31	1,236.30	83.02	15.892	
12,600.00	11,163.00	12,620.50	11,163.00	41.84	41.85	90.00	1,735.92	981.11	1,319.32	1,235.75	83.57	15.787	
12,700.00	11,163.00	12,720.50	11,163.00	42.14	42.14	90.00	1,835.92	980.35	1,319.33	1,235.18	84.15	15.678	
12,800.00	11,163.00	12,820.50	11,163.00	42.45	42.44	90.00	1,935.91	979.58	1,319.34	1,234.57	84.77	15.565	
12,900.00	11,163.00	12,920.50	11,163.00	42.77	42.76	90.00	2,035.91	978.82	1,319.34	1,233.93	85.41	15.447	
13,000.00	11,163.00	13,020.50	11,163.00	43.11	43.09	90.00	2,135.91	978.06	1,319.35	1,233.27	86.08	15.326	
13,100.00	11,163.00	13,120.50	11,163.00	43.47	43.44	90.00	2,235.90	977.30	1,319.36	1,232.57	86.79	15.202	
13,200.00	11,163.00	13,220.50	11,163.00	43.83	43.80	90.00	2,335.90	976.54	1,319.37	1,231.85	87.52	15.075	
13,300.00	11,163.00	13,320.50	11,163.00	44.22	44.18	90.00	2,435.90	975.77	1,319.38	1,231.09	88.28	14.945	
13,400.00	11,163.00	13,420.50	11,163.00	44.61	44.57	90.00	2,535.90	975.01	1,319.38	1,230.31	89.07	14.813	
13,500.00	11,163.00	13,520.50	11,163.00	45.02	44.97	90.00	2,635.89	974.25	1,319.39	1,229.51	89.88	14.679	
13,600.00	11,163.00	13,620.50	11,163.00	45.44	45.39	90.00	2,735.89	973.49	1,319.40	1,228.68	90.72	14.543	
13,700.00	11,163.00	13,720.50	11,163.00	45.88	45.82	90.00	2,835.89	972.73	1,319.41	1,227.82	91.59	14.406	
13,800.00	11,163.00	13,820.50	11,163.00	46.32	46.26	90.00	2,935.88	971.96	1,319.41	1,226.94	92.48	14.267	
13,900.00	11,163.00	13,920.50	11,163.00	46.78	46.71	90.00	3,035.88	971.20	1,319.42	1,226.03	93.39	14.128	
14,000.00	11,163.00	14,020.50	11,163.00	47.25	47.18	90.00	3,135.88	970.44	1,319.43	1,225.10	94.33	13.988	
14,100.00	11,163.00	14,120.50	11,163.00	47.73	47.65	90.00	3,235.87	969.68	1,319.44	1,224.15	95.28	13.847	
14,200.00	11,163.00	14,220.50	11,163.00	48.22	48.14	90.00	3,335.87	968.92	1,319.44	1,223.18	96.26	13.706	
14,300.00	11,163.00	14,320.50	11,163.00	48.73	48.64	90.00	3,435.87	968.15	1,319.45	1,222.19	97.27	13.565	
14,400.00	11,163.00	14,420.50	11,163.00	49.24	49.14	90.00	3,535.87	967.39	1,319.46	1,221.17	98.29	13.425	
14,500.00	11,163.00	14,520.50	11,163.00	49.76	49.66	90.00	3,635.86	966.63	1,319.47	1,220.14	99.33	13.284	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D05) Robin Fed 204H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Rule Assigned:													
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,600.00	11,163.00	14,620.50	11,163.00	50.29	50.19	90.00	3,735.86	965.87	1,319.48	1,219.09	100.39	13.144	
14,700.00	11,163.00	14,720.50	11,163.00	50.83	50.73	90.00	3,835.86	965.11	1,319.48	1,218.02	101.47	13.004	
14,800.00	11,163.00	14,820.50	11,163.00	51.38	51.27	90.00	3,935.85	964.34	1,319.49	1,216.93	102.56	12.865	
14,900.00	11,163.00	14,920.50	11,163.00	51.94	51.83	90.00	4,035.85	963.58	1,319.50	1,215.82	103.68	12.727	
15,000.00	11,163.00	15,020.50	11,163.00	52.51	52.39	90.00	4,135.85	962.82	1,319.51	1,214.70	104.81	12.590	
15,100.00	11,163.00	15,120.50	11,163.00	53.08	52.96	90.00	4,235.85	962.06	1,319.51	1,213.56	105.95	12.454	
15,200.00	11,163.00	15,220.50	11,163.00	53.66	53.54	90.00	4,335.84	961.30	1,319.52	1,212.41	107.12	12.319	
15,300.00	11,163.00	15,320.50	11,163.00	54.25	54.13	90.00	4,435.84	960.53	1,319.53	1,211.24	108.29	12.185	
15,400.00	11,163.00	15,420.50	11,163.00	54.85	54.72	90.00	4,535.84	959.77	1,319.54	1,210.05	109.49	12.052	
15,500.00	11,163.00	15,520.50	11,163.00	55.45	55.32	90.00	4,635.83	959.01	1,319.54	1,208.85	110.69	11.921	
15,600.00	11,163.00	15,620.50	11,163.00	56.06	55.93	90.00	4,735.83	958.25	1,319.55	1,207.64	111.91	11.791	
15,700.00	11,163.00	15,720.50	11,163.00	56.68	56.54	90.00	4,835.83	957.49	1,319.56	1,206.41	113.15	11.662	
15,800.00	11,163.00	15,820.50	11,163.00	57.31	57.17	90.00	4,935.83	956.72	1,319.57	1,205.17	114.39	11.535	
15,900.00	11,163.00	15,920.50	11,163.00	57.94	57.79	90.00	5,035.82	955.96	1,319.58	1,203.92	115.65	11.410	
16,000.00	11,163.00	16,020.50	11,163.00	58.57	58.43	90.00	5,135.82	955.20	1,319.58	1,202.66	116.92	11.286	
16,100.00	11,163.00	16,120.50	11,163.00	59.22	59.07	90.00	5,235.82	954.44	1,319.59	1,201.38	118.21	11.163	
16,200.00	11,163.00	16,220.50	11,163.00	59.86	59.71	90.00	5,335.81	953.68	1,319.60	1,200.10	119.50	11.043	
16,300.00	11,163.00	16,320.50	11,163.00	60.52	60.36	90.00	5,435.81	952.91	1,319.61	1,198.80	120.81	10.923	
16,400.00	11,163.00	16,420.50	11,163.00	61.18	61.02	90.00	5,535.81	952.15	1,319.61	1,197.49	122.12	10.806	
16,500.00	11,163.00	16,520.50	11,163.00	61.84	61.68	90.00	5,635.81	951.39	1,319.62	1,196.17	123.45	10.690	
16,600.00	11,163.00	16,620.50	11,163.00	62.51	62.35	90.00	5,735.80	950.63	1,319.63	1,194.84	124.78	10.575	
16,700.00	11,163.00	16,720.50	11,163.00	63.18	63.02	90.00	5,835.80	949.87	1,319.64	1,193.51	126.13	10.463	
16,800.00	11,163.00	16,820.50	11,163.00	63.86	63.69	90.00	5,935.80	949.10	1,319.64	1,192.16	127.48	10.351	
16,900.00	11,163.00	16,920.50	11,163.00	64.54	64.38	90.00	6,035.79	948.34	1,319.65	1,190.80	128.85	10.242	
17,000.00	11,163.00	17,020.50	11,163.00	65.23	65.06	90.00	6,135.79	947.58	1,319.66	1,189.44	130.22	10.134	
17,100.00	11,163.00	17,120.50	11,163.00	65.92	65.75	90.00	6,235.79	946.82	1,319.67	1,188.06	131.60	10.028	
17,200.00	11,163.00	17,220.50	11,163.00	66.62	66.44	90.00	6,335.78	946.06	1,319.67	1,186.68	132.99	9.923	
17,300.00	11,163.00	17,320.50	11,163.00	67.32	67.14	90.00	6,435.78	945.29	1,319.68	1,185.29	134.39	9.820	
17,400.00	11,163.00	17,420.50	11,163.00	68.02	67.84	90.00	6,535.78	944.53	1,319.69	1,183.90	135.80	9.718	
17,500.00	11,163.00	17,520.50	11,163.00	68.73	68.55	90.00	6,635.78	943.77	1,319.70	1,182.49	137.21	9.618	
17,600.00	11,163.00	17,620.50	11,163.00	69.44	69.26	90.00	6,735.77	943.01	1,319.71	1,181.08	138.63	9.520	
17,700.00	11,163.00	17,720.50	11,163.00	70.15	69.97	90.00	6,835.77	942.25	1,319.71	1,179.66	140.05	9.423	
17,800.00	11,163.00	17,820.50	11,163.00	70.87	70.68	90.00	6,935.77	941.48	1,319.72	1,178.23	141.49	9.327	
17,900.00	11,163.00	17,920.50	11,163.00	71.59	71.40	90.00	7,035.76	940.72	1,319.73	1,176.80	142.93	9.233	
18,000.00	11,163.00	18,020.50	11,163.00	72.31	72.13	90.00	7,135.76	939.96	1,319.74	1,175.36	144.38	9.141	
18,100.00	11,163.00	18,120.50	11,163.00	73.04	72.85	90.00	7,235.76	939.20	1,319.74	1,173.92	145.83	9.050	
18,200.00	11,163.00	18,220.50	11,163.00	73.77	73.58	90.00	7,335.76	938.44	1,319.75	1,172.46	147.29	8.960	
18,300.00	11,163.00	18,320.50	11,163.00	74.50	74.31	90.00	7,435.75	937.67	1,319.76	1,171.01	148.75	8.872	
18,400.00	11,163.00	18,420.50	11,163.00	75.24	75.04	90.00	7,535.75	936.91	1,319.77	1,169.54	150.22	8.785	
18,500.00	11,163.00	18,520.50	11,163.00	75.97	75.78	90.00	7,635.75	936.15	1,319.77	1,168.08	151.70	8.700	
18,600.00	11,163.00	18,620.50	11,163.00	76.72	76.52	90.00	7,735.74	935.39	1,319.78	1,166.60	153.18	8.616	
18,700.00	11,163.00	18,720.50	11,163.00	77.46	77.26	90.00	7,835.74	934.63	1,319.79	1,165.12	154.67	8.533	
18,800.00	11,163.00	18,820.50	11,163.00	78.21	78.01	90.00	7,935.74	933.86	1,319.80	1,163.64	156.16	8.452	
18,900.00	11,163.00	18,920.50	11,163.00	78.95	78.76	90.00	8,035.74	933.10	1,319.81	1,162.15	157.65	8.371	
19,000.00	11,163.00	19,020.50	11,163.00	79.71	79.51	90.00	8,135.73	932.34	1,319.81	1,160.66	159.16	8.293	
19,100.00	11,163.00	19,120.50	11,163.00	80.46	80.26	90.00	8,235.73	931.58	1,319.82	1,159.16	160.66	8.215	
19,200.00	11,163.00	19,220.50	11,163.00	81.21	81.01	90.00	8,335.73	930.82	1,319.83	1,157.66	162.17	8.138	
19,300.00	11,163.00	19,320.50	11,163.00	81.97	81.77	90.00	8,435.72	930.05	1,319.84	1,156.15	163.69	8.063	
19,400.00	11,163.00	19,420.50	11,163.00	82.73	82.53	90.00	8,535.72	929.29	1,319.84	1,154.64	165.21	7.989	
19,500.00	11,163.00	19,520.50	11,163.00	83.49	83.29	90.00	8,635.72	928.53	1,319.85	1,153.12	166.73	7.916	
19,600.00	11,163.00	19,620.50	11,163.00	84.26	84.05	90.00	8,735.72	927.77	1,319.86	1,151.60	168.26	7.844	
19,700.00	11,163.00	19,720.50	11,163.00	85.02	84.82	90.00	8,835.71	927.01	1,319.87	1,150.08	169.79	7.774	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D05) Robin Fed 204H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
19,800.00	11,163.00	19,820.50	11,163.00	85.79	85.58	90.00	8,935.71	926.24	1,319.87	1,148.55	171.32	7.704	
19,900.00	11,163.00	19,920.50	11,163.00	86.56	86.35	90.00	9,035.71	925.48	1,319.88	1,147.02	172.86	7.635	
20,000.00	11,163.00	20,020.50	11,163.00	87.33	87.12	90.00	9,135.70	924.72	1,319.89	1,145.49	174.40	7.568	
20,100.00	11,163.00	20,120.50	11,163.00	88.11	87.90	90.00	9,235.70	923.96	1,319.90	1,143.95	175.95	7.502	
20,200.00	11,163.00	20,220.50	11,163.00	88.88	88.67	90.00	9,335.70	923.20	1,319.91	1,142.41	177.50	7.436	
20,300.00	11,163.00	20,320.50	11,163.00	89.66	89.44	90.00	9,435.69	922.43	1,319.91	1,140.86	179.05	7.372	
20,400.00	11,163.00	20,420.50	11,163.00	90.44	90.22	90.00	9,535.69	921.67	1,319.92	1,139.31	180.61	7.308	
20,500.00	11,163.00	20,520.50	11,163.00	91.21	91.00	90.00	9,635.69	920.91	1,319.93	1,137.76	182.17	7.246	
20,600.00	11,163.00	20,620.50	11,163.00	92.00	91.78	90.00	9,735.69	920.15	1,319.94	1,136.21	183.73	7.184	
20,700.00	11,163.00	20,720.50	11,163.00	92.78	92.56	90.00	9,835.68	919.39	1,319.94	1,134.65	185.30	7.123	
20,800.00	11,163.00	20,820.50	11,163.00	93.56	93.35	90.00	9,935.68	918.62	1,319.95	1,133.09	186.86	7.064	
20,900.00	11,163.00	20,920.50	11,163.00	94.35	94.13	90.00	10,035.68	917.86	1,319.96	1,131.52	188.43	7.005	
21,000.00	11,163.00	21,020.50	11,163.00	95.14	94.92	90.00	10,135.67	917.10	1,319.97	1,129.96	190.01	6.947	
21,100.00	11,163.00	21,120.50	11,163.00	95.92	95.71	90.00	10,235.67	916.34	1,319.97	1,128.39	191.59	6.890	
21,200.00	11,163.00	21,220.50	11,163.00	96.71	96.50	90.00	10,335.67	915.58	1,319.98	1,126.82	193.16	6.833	
21,300.00	11,163.00	21,320.50	11,163.00	97.51	97.29	90.00	10,435.67	914.81	1,319.99	1,125.24	194.75	6.778	
21,400.00	11,163.00	21,420.50	11,163.00	98.30	98.08	90.00	10,535.66	914.05	1,320.00	1,123.67	196.33	6.723	
21,436.63	11,163.00	21,457.12	11,163.00	98.59	98.37	90.00	10,572.29	913.77	1,320.00	1,123.09	196.91	6.704 SF	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D06) Robin Fed 174H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
600.00	600.00	599.00	599.00	1.92	1.91	88.45	2.44	89.94	89.97	86.14	3.83	23.479	
700.00	700.00	699.00	699.00	2.28	2.27	88.45	2.44	89.94	89.97	85.42	4.55	19.779	
800.00	800.00	799.00	799.00	2.63	2.63	88.45	2.44	89.94	89.97	84.71	5.27	17.086	
900.00	900.00	899.00	899.00	2.99	2.99	88.45	2.44	89.94	89.97	83.99	5.98	15.038	
1,000.00	1,000.00	999.00	999.00	3.35	3.35	88.45	2.44	89.94	89.97	83.27	6.70	13.429 CC, ES	
1,100.00	1,100.00	1,096.71	1,096.70	3.71	3.69	88.40	2.55	91.16	91.22	83.82	7.40	12.329	
1,200.00	1,200.00	1,194.26	1,194.18	4.07	4.03	88.25	2.90	94.86	95.02	86.94	8.09	11.748	
1,300.00	1,299.99	1,291.46	1,291.18	4.42	4.37	169.56	3.47	101.01	102.65	93.88	8.77	11.709	
1,341.78	1,341.75	1,331.87	1,331.45	4.56	4.51	169.57	3.78	104.29	107.34	98.30	9.05	11.865	
1,400.00	1,399.93	1,387.96	1,387.30	4.77	4.71	169.59	4.27	109.54	114.92	105.49	9.43	12.182	
1,500.00	1,499.86	1,484.44	1,483.15	5.11	5.05	169.58	5.29	120.43	129.86	119.76	10.10	12.860	
1,600.00	1,599.79	1,583.20	1,581.18	5.46	5.40	169.55	6.40	132.35	145.57	134.78	10.79	13.496	
1,700.00	1,699.72	1,681.96	1,679.21	5.81	5.75	169.53	7.51	144.26	161.28	149.80	11.48	14.052	
1,800.00	1,799.65	1,780.72	1,777.24	6.17	6.10	169.51	8.63	156.18	176.99	164.82	12.17	14.542	
1,900.00	1,899.58	1,879.48	1,875.27	6.52	6.46	169.49	9.74	168.10	192.70	179.83	12.87	14.977	
2,000.00	1,999.51	1,978.23	1,973.30	6.87	6.81	169.48	10.85	180.01	208.41	194.85	13.56	15.366	
2,100.00	2,099.45	2,076.99	2,071.33	7.22	7.17	169.47	11.97	191.93	224.12	209.86	14.26	15.715	
2,200.00	2,199.38	2,175.75	2,169.36	7.58	7.53	169.46	13.08	203.84	239.83	224.87	14.96	16.030	
2,300.00	2,299.31	2,274.51	2,267.39	7.93	7.88	169.45	14.19	215.76	255.54	239.88	15.66	16.317	
2,400.00	2,399.24	2,373.27	2,365.43	8.29	8.24	169.44	15.30	227.67	271.25	254.89	16.36	16.578	
2,500.00	2,499.17	2,472.02	2,463.46	8.65	8.60	169.43	16.42	239.59	286.96	269.90	17.06	16.816	
2,600.00	2,599.10	2,570.78	2,561.49	9.00	8.96	169.43	17.53	251.51	302.67	284.90	17.77	17.035	
2,700.00	2,699.03	2,669.54	2,659.52	9.36	9.32	169.42	18.64	263.42	318.38	299.91	18.47	17.237	
2,800.00	2,798.96	2,768.30	2,757.55	9.71	9.68	169.42	19.76	275.34	334.09	314.92	19.17	17.424	
2,900.00	2,898.89	2,867.06	2,855.58	10.07	10.04	169.41	20.87	287.25	349.80	329.93	19.88	17.597	
3,000.00	2,998.83	2,965.82	2,953.61	10.43	10.40	169.41	21.98	299.17	365.51	344.93	20.58	17.758	
3,100.00	3,098.76	3,064.57	3,051.64	10.78	10.76	169.40	23.09	311.08	381.23	359.94	21.29	17.908	
3,200.00	3,198.69	3,163.33	3,149.67	11.14	11.12	169.40	24.21	323.00	396.94	374.94	21.99	18.047	
3,300.00	3,298.62	3,262.09	3,247.70	11.50	11.48	169.40	25.32	334.92	412.65	389.95	22.70	18.178	
3,400.00	3,398.55	3,360.85	3,345.73	11.86	11.84	169.39	26.43	346.83	428.36	404.95	23.41	18.301	
3,500.00	3,498.48	3,459.61	3,443.76	12.21	12.20	169.39	27.55	358.75	444.07	419.96	24.11	18.417	
3,600.00	3,598.41	3,558.36	3,541.79	12.57	12.57	169.39	28.66	370.66	459.78	434.96	24.82	18.525	
3,700.00	3,698.34	3,657.12	3,639.82	12.93	12.93	169.38	29.77	382.58	475.49	449.96	25.53	18.628	
3,800.00	3,798.27	3,755.88	3,737.85	13.29	13.29	169.38	30.88	394.50	491.20	464.97	26.23	18.725	
3,900.00	3,898.21	3,854.64	3,835.88	13.65	13.65	169.38	32.00	406.41	506.91	479.97	26.94	18.816	
4,000.00	3,998.14	3,953.40	3,933.91	14.00	14.01	169.38	33.11	418.33	522.62	494.97	27.65	18.903	
4,100.00	4,098.07	4,052.16	4,031.94	14.36	14.37	169.38	34.22	430.24	538.33	509.98	28.36	18.985	
4,200.00	4,198.00	4,150.91	4,129.97	14.72	14.74	169.37	35.34	442.16	554.04	524.98	29.06	19.064	
4,300.00	4,297.93	4,249.67	4,228.00	15.08	15.10	169.37	36.45	454.07	569.75	539.98	29.77	19.138	
4,400.00	4,397.86	4,348.43	4,326.03	15.44	15.46	169.37	37.56	465.99	585.46	554.99	30.48	19.209	
4,500.00	4,497.79	4,447.19	4,424.06	15.80	15.82	169.37	38.67	477.91	601.17	569.99	31.19	19.276	
4,600.00	4,597.72	4,545.95	4,522.09	16.15	16.18	169.37	39.79	489.82	616.89	584.99	31.90	19.341	
4,700.00	4,697.65	4,644.70	4,620.12	16.51	16.55	169.37	40.90	501.74	632.60	599.99	32.60	19.402	
4,800.00	4,797.59	4,743.46	4,718.15	16.87	16.91	169.36	42.01	513.65	648.31	614.99	33.31	19.461	
4,900.00	4,897.52	4,842.22	4,816.18	17.23	17.27	169.36	43.13	525.57	664.02	630.00	34.02	19.518	
5,000.00	4,997.45	4,940.98	4,914.21	17.59	17.63	169.36	44.24	537.49	679.73	645.00	34.73	19.572	
5,100.00	5,097.38	5,039.74	5,012.24	17.95	18.00	169.36	45.35	549.40	695.44	660.00	35.44	19.623	
5,200.00	5,197.31	5,138.50	5,110.28	18.31	18.36	169.36	46.46	561.32	711.15	675.00	36.15	19.673	
5,300.00	5,297.24	5,237.25	5,208.31	18.67	18.72	169.36	47.58	573.23	726.86	690.00	36.86	19.721	
5,400.00	5,397.17	5,336.01	5,306.34	19.02	19.08	169.36	48.69	585.15	742.57	705.00	37.57	19.767	
5,500.00	5,497.10	5,434.77	5,404.37	19.38	19.45	169.36	49.80	597.06	758.28	720.01	38.28	19.811	
5,600.00	5,597.03	5,533.53	5,502.40	19.74	19.81	169.36	50.92	608.98	773.99	735.01	38.99	19.853	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D06) Robin Fed 174H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,700.00	5,696.97	5,632.29	5,600.43	20.10	20.17	169.35	52.03	620.90	789.70	750.01	39.69	19.894	
5,800.00	5,796.90	5,731.04	5,698.46	20.46	20.54	169.35	53.14	632.81	805.41	765.01	40.40	19.934	
5,900.00	5,896.83	5,829.80	5,796.49	20.82	20.90	169.35	54.25	644.73	821.12	780.01	41.11	19.972	
6,000.00	5,996.76	5,928.56	5,894.52	21.18	21.26	169.35	55.37	656.64	836.83	795.01	41.82	20.009	
6,100.00	6,096.69	6,027.32	5,992.55	21.54	21.62	169.35	56.48	668.56	852.55	810.01	42.53	20.044	
6,200.00	6,196.62	6,126.08	6,090.58	21.90	21.99	169.35	57.59	680.47	868.26	825.01	43.24	20.078	
6,300.00	6,296.55	6,224.84	6,188.61	22.25	22.35	169.35	58.71	692.39	883.97	840.01	43.95	20.112	
6,400.00	6,396.48	6,323.59	6,286.64	22.61	22.71	169.35	59.82	704.31	899.68	855.01	44.66	20.144	
6,500.00	6,496.41	6,422.35	6,384.67	22.97	23.08	169.35	60.93	716.22	915.39	870.01	45.37	20.175	
6,600.00	6,596.35	6,521.11	6,482.70	23.33	23.44	169.35	62.04	728.14	931.10	885.02	46.08	20.205	
6,700.00	6,696.28	6,619.87	6,580.73	23.69	23.80	169.35	63.16	740.05	946.81	900.02	46.79	20.234	
6,800.00	6,796.21	6,718.63	6,678.76	24.05	24.16	169.35	64.27	751.97	962.52	915.02	47.50	20.262	
6,900.00	6,896.14	6,817.38	6,776.79	24.41	24.53	169.35	65.38	763.89	978.23	930.02	48.21	20.289	
7,000.00	6,996.07	6,916.14	6,874.82	24.77	24.89	169.35	66.50	775.80	993.94	945.02	48.92	20.316	
7,100.00	7,096.00	7,014.90	6,972.85	25.13	25.25	169.35	67.61	787.72	1,009.65	960.02	49.63	20.342	
7,200.00	7,195.93	7,113.66	7,070.88	25.49	25.62	169.34	68.72	799.63	1,025.36	975.02	50.35	20.367	
7,300.00	7,295.86	7,212.42	7,168.91	25.85	25.98	169.34	69.84	811.55	1,041.07	990.02	51.06	20.391	
7,400.00	7,395.79	7,311.17	7,266.94	26.21	26.34	169.34	70.95	823.46	1,056.78	1,005.02	51.77	20.414	
7,500.00	7,495.73	7,409.93	7,364.97	26.57	26.71	169.34	72.06	835.38	1,072.49	1,020.02	52.48	20.437	
7,600.00	7,595.66	7,508.69	7,463.00	26.92	27.07	169.34	73.17	847.30	1,088.21	1,035.02	53.19	20.460	
7,700.00	7,695.59	7,607.45	7,561.03	27.28	27.43	169.34	74.29	859.21	1,103.92	1,050.02	53.90	20.481	
7,800.00	7,795.52	7,706.21	7,659.06	27.64	27.80	169.34	75.40	871.13	1,119.63	1,065.02	54.61	20.502	
7,900.00	7,895.45	7,804.97	7,757.09	28.00	28.16	169.34	76.51	883.04	1,135.34	1,080.02	55.32	20.523	
8,000.00	7,995.38	7,903.72	7,855.13	28.36	28.52	169.34	77.63	894.96	1,151.05	1,095.02	56.03	20.543	
8,100.00	8,095.31	8,002.48	7,953.16	28.72	28.88	169.34	78.74	906.88	1,166.76	1,110.02	56.74	20.562	
8,200.00	8,195.24	8,101.24	8,051.19	29.08	29.25	169.34	79.85	918.79	1,182.47	1,125.02	57.45	20.581	
8,300.00	8,295.17	8,200.00	8,149.22	29.44	29.61	169.34	80.96	930.71	1,198.18	1,140.02	58.16	20.600	
8,400.00	8,395.11	8,298.76	8,247.25	29.80	29.97	169.34	82.08	942.62	1,213.89	1,155.01	58.88	20.618	
8,500.00	8,495.04	8,397.51	8,345.28	30.16	30.34	169.34	83.19	954.54	1,229.60	1,170.01	59.59	20.635	
8,600.00	8,594.97	8,499.28	8,446.29	30.52	30.71	169.34	84.34	966.81	1,245.30	1,184.99	60.32	20.645	
8,700.00	8,694.90	8,646.56	8,592.83	30.88	31.25	169.35	85.70	981.41	1,258.88	1,197.56	61.32	20.531	
8,800.00	8,794.83	8,795.18	8,741.17	31.24	31.78	169.37	86.54	990.44	1,268.60	1,206.35	62.25	20.379	
8,900.00	8,894.76	8,944.71	8,890.65	31.60	32.31	169.41	86.85	993.72	1,274.45	1,211.34	63.11	20.194	
9,000.00	8,994.69	9,047.75	8,993.69	31.95	32.66	169.44	86.85	993.73	1,278.10	1,214.29	63.82	20.027	
9,100.00	9,094.62	9,147.68	9,093.62	32.31	33.00	169.47	86.85	993.73	1,281.75	1,217.23	64.52	19.866	
9,200.00	9,194.55	9,247.62	9,193.55	32.67	33.34	169.50	86.85	993.73	1,285.40	1,220.18	65.22	19.709	
9,300.00	9,294.49	9,347.55	9,293.49	33.03	33.68	169.53	86.85	993.73	1,289.05	1,223.13	65.92	19.555	
9,400.00	9,394.42	9,447.48	9,393.42	33.39	34.02	169.56	86.85	993.73	1,292.70	1,226.08	66.62	19.404	
9,500.00	9,494.35	9,547.41	9,493.35	33.75	34.36	169.59	86.85	993.73	1,296.35	1,229.03	67.32	19.256	
9,600.00	9,594.28	9,647.34	9,593.28	34.11	34.70	169.62	86.85	993.73	1,300.00	1,231.98	68.02	19.111	
9,700.00	9,694.21	9,747.27	9,693.21	34.47	35.04	169.65	86.85	993.73	1,303.65	1,234.92	68.73	18.969	
9,800.00	9,794.14	9,847.20	9,793.14	34.83	35.39	169.68	86.85	993.73	1,307.30	1,237.87	69.43	18.830	
9,900.00	9,894.07	9,947.13	9,893.07	35.19	35.73	169.71	86.85	993.73	1,310.95	1,240.82	70.13	18.693	
10,000.00	9,994.00	10,047.06	9,993.00	35.55	36.07	169.73	86.85	993.73	1,314.60	1,243.77	70.83	18.559	
10,064.29	10,058.25	10,111.31	10,057.25	35.78	36.29	169.75	86.85	993.73	1,316.95	1,245.67	71.29	18.474	
10,100.00	10,093.94	10,147.00	10,092.94	35.91	36.42	169.77	86.85	993.73	1,318.09	1,246.56	71.54	18.425	
10,206.07	10,200.00	10,253.06	10,199.00	36.28	36.78	88.36	86.85	993.73	1,319.54	1,247.26	72.28	18.257	
10,214.33	10,208.25	10,261.31	10,207.25	36.31	36.81	88.36	86.85	993.73	1,319.54	1,247.21	72.33	18.242	
10,300.00	10,293.93	10,344.15	10,290.00	36.61	37.09	88.24	89.49	993.71	1,319.60	1,246.68	72.92	18.097	
10,400.00	10,393.93	10,436.37	10,380.69	36.95	37.40	87.54	105.67	993.59	1,320.13	1,246.54	73.59	17.939	
10,500.00	10,493.93	10,521.45	10,461.07	37.30	37.67	86.34	133.32	993.38	1,321.72	1,247.49	74.23	17.806	
10,596.11	10,590.04	10,594.22	10,525.94	37.63	37.88	84.92	166.19	993.13	1,325.09	1,250.30	74.79	17.718	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D06) Robin Fed 174H - Permit - APD-Rev01												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)												Offset Well Error:	0.00 usft
Reference												Rule Assigned:	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
10,600.00	10,593.93	10,600.00	10,530.91	37.65	37.90	85.22	169.15	993.10	1,325.28	1,250.46	74.82	17.713	
10,650.00	10,643.85	10,631.96	10,557.80	37.82	37.98	84.28	186.40	992.97	1,327.86	1,252.79	75.07	17.689	
10,700.00	10,693.36	10,666.29	10,585.57	37.99	38.07	83.30	206.59	992.82	1,330.75	1,255.44	75.31	17.671	
10,750.00	10,742.08	10,700.00	10,611.61	38.16	38.14	82.35	227.98	992.65	1,333.86	1,258.34	75.52	17.662	
10,800.00	10,789.65	10,733.38	10,636.12	38.32	38.21	81.43	250.63	992.48	1,337.13	1,261.42	75.71	17.661	
10,850.00	10,835.70	10,766.26	10,658.93	38.48	38.27	80.55	274.31	992.30	1,340.48	1,264.60	75.88	17.667	
10,900.00	10,879.88	10,800.00	10,680.88	38.62	38.33	79.69	299.93	992.11	1,343.84	1,267.82	76.02	17.677	
10,950.00	10,921.85	10,830.99	10,699.68	38.75	38.38	78.93	324.56	991.92	1,347.15	1,271.02	76.13	17.695	
11,000.00	10,961.30	10,862.93	10,717.64	38.87	38.42	78.21	350.97	991.72	1,350.35	1,274.12	76.23	17.715	
11,050.00	10,997.92	10,900.00	10,736.60	38.99	38.46	77.49	382.81	991.47	1,353.39	1,277.06	76.33	17.730	
11,100.00	11,031.44	10,926.15	10,748.71	39.09	38.49	76.95	405.98	991.30	1,356.17	1,279.81	76.37	17.758	
11,150.00	11,061.60	10,950.00	10,758.83	39.20	38.51	76.49	427.58	991.13	1,358.73	1,282.35	76.39	17.788	
11,200.00	11,088.17	10,988.70	10,773.31	39.30	38.53	75.98	463.46	990.86	1,360.92	1,284.44	76.47	17.797	
11,250.00	11,110.95	11,019.79	10,783.16	39.39	38.55	75.61	492.94	990.63	1,362.78	1,286.26	76.52	17.810	
11,300.00	11,129.76	11,050.00	10,791.20	39.48	38.57	75.32	522.06	990.41	1,364.26	1,287.70	76.56	17.820	
11,350.00	11,144.47	11,081.73	10,797.97	39.56	38.58	75.11	553.05	990.17	1,365.34	1,288.73	76.61	17.821	
11,400.00	11,154.96	11,112.63	10,802.90	39.63	38.59	74.98	583.55	989.94	1,366.01	1,289.33	76.67	17.816	
11,450.00	11,161.14	11,150.00	10,806.66	39.68	38.60	74.93	620.72	989.66	1,366.26	1,289.51	76.75	17.801	
11,496.11	11,163.00	11,171.97	10,807.74	39.73	38.60	74.97	642.66	989.49	1,366.07	1,289.26	76.81	17.785	
11,500.00	11,163.00	11,174.37	10,807.81	39.73	38.60	74.97	645.06	989.47	1,366.04	1,289.22	76.82	17.783	
11,523.74	11,163.00	11,189.10	10,808.00	39.76	38.61	74.98	659.79	989.36	1,365.96	1,289.10	76.86	17.773	
11,600.00	11,163.00	11,265.27	10,808.00	39.84	38.65	74.98	735.95	988.78	1,365.97	1,288.95	77.02	17.735	
11,700.00	11,163.00	11,365.27	10,808.00	39.96	38.75	74.98	835.95	988.02	1,365.97	1,288.71	77.26	17.680	
11,800.00	11,163.00	11,465.27	10,808.00	40.10	38.88	74.98	935.95	987.26	1,365.98	1,288.44	77.54	17.616	
11,900.00	11,163.00	11,565.27	10,808.00	40.25	39.04	74.98	1,035.95	986.49	1,365.99	1,288.13	77.86	17.544	
12,000.00	11,163.00	11,665.27	10,808.00	40.43	39.22	74.98	1,135.94	985.73	1,365.99	1,287.78	78.21	17.466	
12,100.00	11,163.00	11,765.27	10,808.00	40.62	39.42	74.98	1,235.94	984.97	1,366.00	1,287.40	78.60	17.380	
12,200.00	11,163.00	11,865.27	10,808.00	40.83	39.63	74.98	1,335.94	984.20	1,366.01	1,286.99	79.02	17.288	
12,300.00	11,163.00	11,965.27	10,808.00	41.06	39.87	74.98	1,435.93	983.44	1,366.01	1,286.54	79.47	17.189	
12,400.00	11,163.00	12,065.27	10,808.00	41.31	40.12	74.98	1,535.93	982.68	1,366.02	1,286.06	79.96	17.084	
12,500.00	11,163.00	12,165.27	10,808.00	41.57	40.38	74.98	1,635.93	981.92	1,366.03	1,285.55	80.48	16.974	
12,600.00	11,163.00	12,265.27	10,808.00	41.84	40.67	74.98	1,735.93	981.15	1,366.04	1,285.01	81.03	16.859	
12,700.00	11,163.00	12,365.27	10,808.00	42.14	40.97	74.98	1,835.92	980.39	1,366.04	1,284.43	81.61	16.738	
12,800.00	11,163.00	12,465.27	10,808.00	42.45	41.29	74.98	1,935.92	979.63	1,366.05	1,283.82	82.22	16.614	
12,900.00	11,163.00	12,565.27	10,808.00	42.77	41.62	74.98	2,035.92	978.87	1,366.06	1,283.19	82.87	16.485	
13,000.00	11,163.00	12,665.27	10,808.00	43.11	41.97	74.98	2,135.91	978.10	1,366.06	1,282.52	83.54	16.352	
13,100.00	11,163.00	12,765.27	10,808.00	43.47	42.33	74.98	2,235.91	977.34	1,366.07	1,281.83	84.24	16.216	
13,200.00	11,163.00	12,865.27	10,808.00	43.83	42.70	74.98	2,335.91	976.58	1,366.08	1,281.11	84.97	16.077	
13,300.00	11,163.00	12,965.27	10,808.00	44.22	43.09	74.98	2,435.91	975.82	1,366.08	1,280.36	85.73	15.935	
13,400.00	11,163.00	13,065.27	10,808.00	44.61	43.50	74.98	2,535.90	975.05	1,366.09	1,279.58	86.51	15.791	
13,500.00	11,163.00	13,165.27	10,808.00	45.02	43.92	74.98	2,635.90	974.29	1,366.10	1,278.78	87.32	15.645	
13,600.00	11,163.00	13,265.27	10,808.00	45.44	44.35	74.98	2,735.90	973.53	1,366.10	1,277.95	88.15	15.497	
13,700.00	11,163.00	13,365.27	10,808.00	45.88	44.79	74.98	2,835.89	972.77	1,366.11	1,277.10	89.01	15.348	
13,800.00	11,163.00	13,465.27	10,808.00	46.32	45.25	74.98	2,935.89	972.00	1,366.12	1,276.23	89.89	15.198	
13,900.00	11,163.00	13,565.27	10,808.00	46.78	45.71	74.98	3,035.89	971.24	1,366.12	1,275.33	90.79	15.047	
14,000.00	11,163.00	13,665.27	10,808.00	47.25	46.19	74.98	3,135.89	970.48	1,366.13	1,274.41	91.72	14.895	
14,100.00	11,163.00	13,765.27	10,808.00	47.73	46.68	74.98	3,235.88	969.72	1,366.14	1,273.47	92.67	14.742	
14,200.00	11,163.00	13,865.27	10,808.00	48.22	47.18	74.98	3,335.88	968.95	1,366.15	1,272.51	93.64	14.590	
14,300.00	11,163.00	13,965.27	10,808.00	48.73	47.69	74.98	3,435.88	968.19	1,366.15	1,271.53	94.62	14.438	
14,400.00	11,163.00	14,065.27	10,808.00	49.24	48.22	74.98	3,535.87	967.43	1,366.16	1,270.53	95.63	14.285	
14,500.00	11,163.00	14,165.27	10,808.00	49.76	48.75	74.98	3,635.87	966.67	1,366.17	1,269.51	96.66	14.134	
14,600.00	11,163.00	14,265.27	10,808.00	50.29	49.29	74.98	3,735.87	965.90	1,366.17	1,268.47	97.71	13.982	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D06) Robin Fed 174H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
14,700.00	11,163.00	14,365.27	10,808.00	50.83	49.84	74.98	3,835.86	965.14	1,366.18	1,267.41	98.77	13.832	
14,800.00	11,163.00	14,465.27	10,808.00	51.38	50.40	74.98	3,935.86	964.38	1,366.19	1,266.33	99.85	13.682	
14,900.00	11,163.00	14,565.27	10,808.00	51.94	50.96	74.98	4,035.86	963.62	1,366.19	1,265.24	100.95	13.533	
15,000.00	11,163.00	14,665.27	10,808.00	52.51	51.54	74.98	4,135.86	962.85	1,366.20	1,264.14	102.06	13.386	
15,100.00	11,163.00	14,765.27	10,808.00	53.08	52.12	74.98	4,235.85	962.09	1,366.21	1,263.01	103.19	13.239	
15,200.00	11,163.00	14,865.27	10,808.00	53.66	52.71	74.98	4,335.85	961.33	1,366.21	1,261.88	104.34	13.094	
15,300.00	11,163.00	14,965.27	10,808.00	54.25	53.31	74.98	4,435.85	960.57	1,366.22	1,260.72	105.50	12.950	
15,400.00	11,163.00	15,065.27	10,808.00	54.85	53.92	74.98	4,535.84	959.80	1,366.23	1,259.56	106.67	12.808	
15,500.00	11,163.00	15,165.27	10,808.00	55.45	54.53	74.98	4,635.84	959.04	1,366.24	1,258.38	107.86	12.667	
15,600.00	11,163.00	15,265.27	10,808.00	56.06	55.15	74.98	4,735.84	958.28	1,366.24	1,257.18	109.06	12.527	
15,700.00	11,163.00	15,365.27	10,808.00	56.68	55.78	74.98	4,835.84	957.52	1,366.25	1,255.98	110.27	12.390	
15,800.00	11,163.00	15,465.27	10,808.00	57.31	56.41	74.98	4,935.83	956.75	1,366.26	1,254.76	111.50	12.254	
15,900.00	11,163.00	15,565.27	10,808.00	57.94	57.05	74.98	5,035.83	955.99	1,366.26	1,253.53	112.74	12.119	
16,000.00	11,163.00	15,665.27	10,808.00	58.57	57.69	74.98	5,135.83	955.23	1,366.27	1,252.28	113.99	11.986	
16,100.00	11,163.00	15,765.27	10,808.00	59.22	58.34	74.98	5,235.82	954.47	1,366.28	1,251.03	115.25	11.855	
16,200.00	11,163.00	15,865.27	10,808.00	59.86	59.00	74.98	5,335.82	953.70	1,366.28	1,249.76	116.52	11.726	
16,300.00	11,163.00	15,965.27	10,808.00	60.52	59.66	74.98	5,435.82	952.94	1,366.29	1,248.49	117.80	11.598	
16,400.00	11,163.00	16,065.27	10,808.00	61.18	60.33	74.98	5,535.82	952.18	1,366.30	1,247.20	119.09	11.473	
16,500.00	11,163.00	16,165.27	10,808.00	61.84	61.00	74.98	5,635.81	951.42	1,366.30	1,245.91	120.40	11.348	
16,600.00	11,163.00	16,265.27	10,808.00	62.51	61.68	74.98	5,735.81	950.65	1,366.31	1,244.60	121.71	11.226	
16,700.00	11,163.00	16,365.27	10,808.00	63.18	62.36	74.98	5,835.81	949.89	1,366.32	1,243.29	123.03	11.106	
16,800.00	11,163.00	16,465.27	10,808.00	63.86	63.04	74.98	5,935.80	949.13	1,366.32	1,241.97	124.36	10.987	
16,900.00	11,163.00	16,565.27	10,808.00	64.54	63.73	74.98	6,035.80	948.37	1,366.33	1,240.64	125.70	10.870	
17,000.00	11,163.00	16,665.27	10,808.00	65.23	64.43	74.98	6,135.80	947.60	1,366.34	1,239.30	127.04	10.755	
17,100.00	11,163.00	16,765.27	10,808.00	65.92	65.12	74.98	6,235.80	946.84	1,366.35	1,237.95	128.40	10.641	
17,200.00	11,163.00	16,865.27	10,808.00	66.62	65.83	74.98	6,335.79	946.08	1,366.35	1,236.59	129.76	10.530	
17,300.00	11,163.00	16,965.27	10,808.00	67.32	66.53	74.98	6,435.79	945.32	1,366.36	1,235.23	131.13	10.420	
17,400.00	11,163.00	17,065.27	10,808.00	68.02	67.24	74.98	6,535.79	944.55	1,366.37	1,233.86	132.51	10.311	
17,500.00	11,163.00	17,165.27	10,808.00	68.73	67.96	74.98	6,635.78	943.79	1,366.37	1,232.48	133.89	10.205	
17,600.00	11,163.00	17,265.27	10,808.00	69.44	68.67	74.98	6,735.78	943.03	1,366.38	1,231.09	135.29	10.100	
17,700.00	11,163.00	17,365.27	10,808.00	70.15	69.39	74.98	6,835.78	942.27	1,366.39	1,229.70	136.69	9.997	
17,800.00	11,163.00	17,465.27	10,808.00	70.87	70.12	74.98	6,935.77	941.50	1,366.39	1,228.30	138.09	9.895	
17,900.00	11,163.00	17,565.27	10,808.00	71.59	70.84	74.98	7,035.77	940.74	1,366.40	1,226.90	139.50	9.795	
18,000.00	11,163.00	17,665.27	10,808.00	72.31	71.57	74.98	7,135.77	939.98	1,366.41	1,225.49	140.92	9.696	
18,100.00	11,163.00	17,765.27	10,808.00	73.04	72.31	74.98	7,235.77	939.22	1,366.41	1,224.07	142.34	9.599	
18,200.00	11,163.00	17,865.27	10,808.00	73.77	73.04	74.99	7,335.76	938.45	1,366.42	1,222.65	143.77	9.504	
18,300.00	11,163.00	17,965.27	10,808.00	74.50	73.78	74.99	7,435.76	937.69	1,366.43	1,221.22	145.21	9.410	
18,400.00	11,163.00	18,065.27	10,808.00	75.24	74.52	74.99	7,535.76	936.93	1,366.43	1,219.79	146.65	9.318	
18,500.00	11,163.00	18,165.27	10,808.00	75.97	75.27	74.99	7,635.75	936.16	1,366.44	1,218.35	148.09	9.227	
18,600.00	11,163.00	18,265.27	10,808.00	76.72	76.01	74.99	7,735.75	935.40	1,366.45	1,216.90	149.54	9.137	
18,700.00	11,163.00	18,365.27	10,808.00	77.46	76.76	74.99	7,835.75	934.64	1,366.46	1,215.46	151.00	9.049	
18,800.00	11,163.00	18,465.27	10,808.00	78.21	77.52	74.99	7,935.75	933.88	1,366.46	1,214.00	152.46	8.963	
18,900.00	11,163.00	18,565.27	10,808.00	78.95	78.27	74.99	8,035.74	933.11	1,366.47	1,212.54	153.93	8.877	
19,000.00	11,163.00	18,665.27	10,808.00	79.71	79.03	74.99	8,135.74	932.35	1,366.48	1,211.08	155.40	8.793	
19,100.00	11,163.00	18,765.27	10,808.00	80.46	79.78	74.99	8,235.74	931.59	1,366.48	1,209.61	156.87	8.711	
19,200.00	11,163.00	18,865.27	10,808.00	81.21	80.55	74.99	8,335.73	930.83	1,366.49	1,208.14	158.35	8.630	
19,300.00	11,163.00	18,965.27	10,808.00	81.97	81.31	74.99	8,435.73	930.06	1,366.50	1,206.66	159.83	8.550	
19,400.00	11,163.00	19,065.27	10,808.00	82.73	82.07	74.99	8,535.73	929.30	1,366.50	1,205.18	161.32	8.471	
19,500.00	11,163.00	19,165.27	10,808.00	83.49	82.84	74.99	8,635.73	928.54	1,366.51	1,203.70	162.81	8.393	
19,600.00	11,163.00	19,265.27	10,808.00	84.26	83.61	74.99	8,735.72	927.78	1,366.52	1,202.21	164.30	8.317	
19,700.00	11,163.00	19,365.27	10,808.00	85.02	84.38	74.99	8,835.72	927.01	1,366.52	1,200.72	165.80	8.242	
19,800.00	11,163.00	19,465.27	10,808.00	85.79	85.15	74.99	8,935.72	926.25	1,366.53	1,199.23	167.31	8.168	

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



Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Offset Design: (Permit) Robin Fed DSU - (D06) Robin Fed 174H - Permit - APD-Rev01													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+FDIR (SQC2)													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
19,900.00	11,163.00	19,565.27	10,808.00	86.56	85.93	74.99	9,035.71	925.49	1,366.54	1,197.73	168.81	8.095	
20,000.00	11,163.00	19,665.27	10,808.00	87.33	86.70	74.99	9,135.71	924.73	1,366.55	1,196.22	170.32	8.023	
20,100.00	11,163.00	19,765.27	10,808.00	88.11	87.48	74.99	9,235.71	923.96	1,366.55	1,194.72	171.83	7.953	
20,200.00	11,163.00	19,865.27	10,808.00	88.88	88.26	74.99	9,335.71	923.20	1,366.56	1,193.21	173.35	7.883	
20,300.00	11,163.00	19,965.27	10,808.00	89.66	89.04	74.99	9,435.70	922.44	1,366.57	1,191.70	174.87	7.815	
20,400.00	11,163.00	20,065.27	10,808.00	90.44	89.82	74.99	9,535.70	921.68	1,366.57	1,190.18	176.39	7.747	
20,500.00	11,163.00	20,165.27	10,808.00	91.21	90.61	74.99	9,635.70	920.91	1,366.58	1,188.66	177.92	7.681	
20,600.00	11,163.00	20,265.27	10,808.00	92.00	91.39	74.99	9,735.69	920.15	1,366.59	1,187.14	179.44	7.616	
20,700.00	11,163.00	20,365.27	10,808.00	92.78	92.18	74.99	9,835.69	919.39	1,366.59	1,185.62	180.97	7.551	
20,800.00	11,163.00	20,465.27	10,808.00	93.56	92.97	74.99	9,935.69	918.63	1,366.60	1,184.09	182.51	7.488	
20,900.00	11,163.00	20,565.27	10,808.00	94.35	93.76	74.99	10,035.68	917.86	1,366.61	1,182.56	184.04	7.425	
21,000.00	11,163.00	20,665.27	10,808.00	95.14	94.55	74.99	10,135.68	917.10	1,366.61	1,181.03	185.58	7.364	
21,100.00	11,163.00	20,765.27	10,808.00	95.92	95.34	74.99	10,235.68	916.34	1,366.62	1,179.50	187.13	7.303	
21,200.00	11,163.00	20,865.27	10,808.00	96.71	96.13	74.99	10,335.68	915.58	1,366.63	1,177.96	188.67	7.243	
21,300.00	11,163.00	20,965.27	10,808.00	97.51	96.93	74.99	10,435.67	914.81	1,366.63	1,176.42	190.22	7.185	
21,400.00	11,163.00	21,065.27	10,808.00	98.30	97.72	74.99	10,535.67	914.05	1,366.64	1,174.88	191.77	7.127	
21,436.63	11,163.00	21,101.89	10,808.00	98.59	98.02	74.99	10,572.30	913.77	1,366.64	1,174.31	192.33	7.106 SF	

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

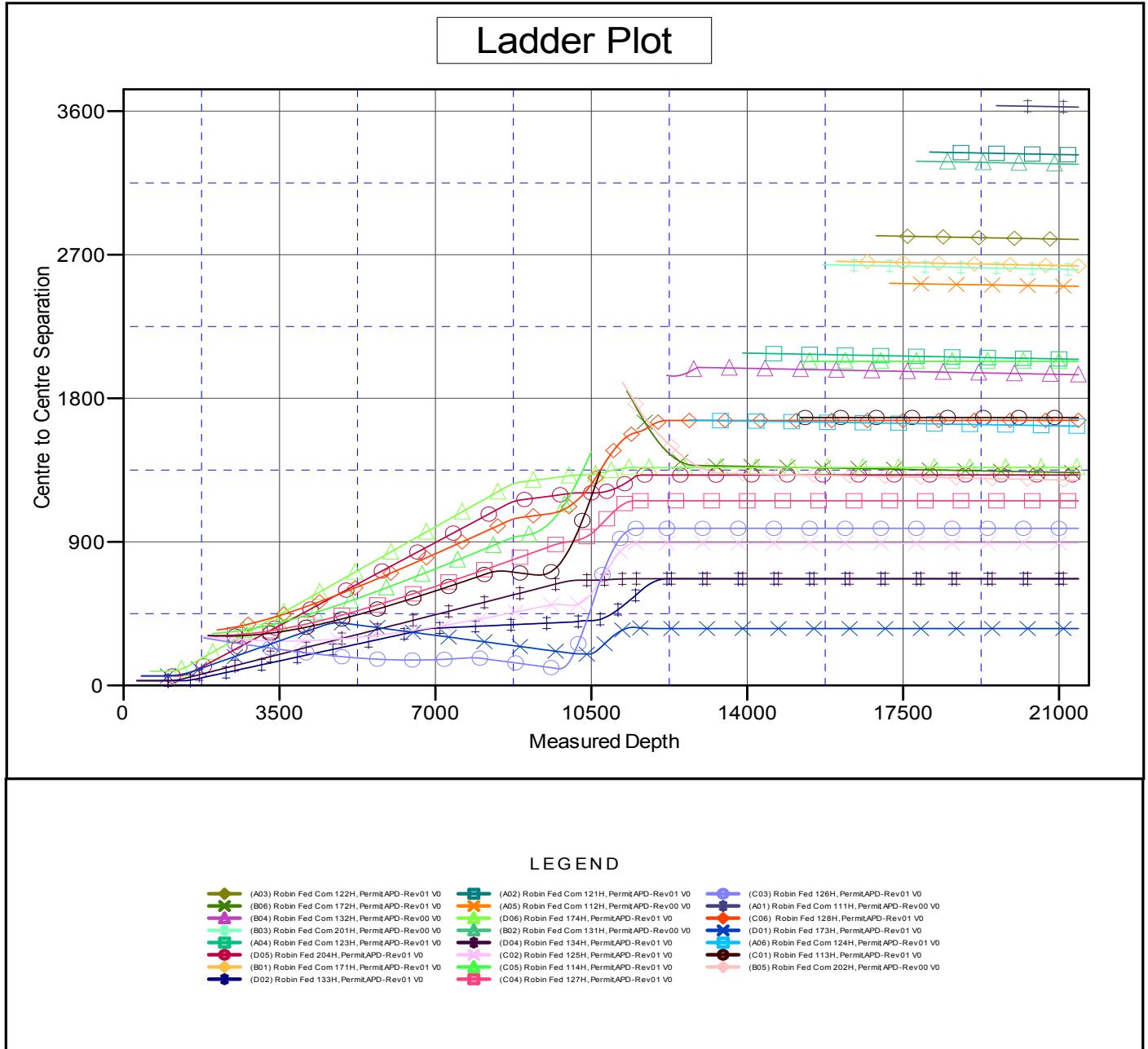


Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 3674+30 @ 3704.00usft
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.33333334

Coordinates are relative to: (D03) Robin Fed 203H - Slot (D03)
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.41°



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



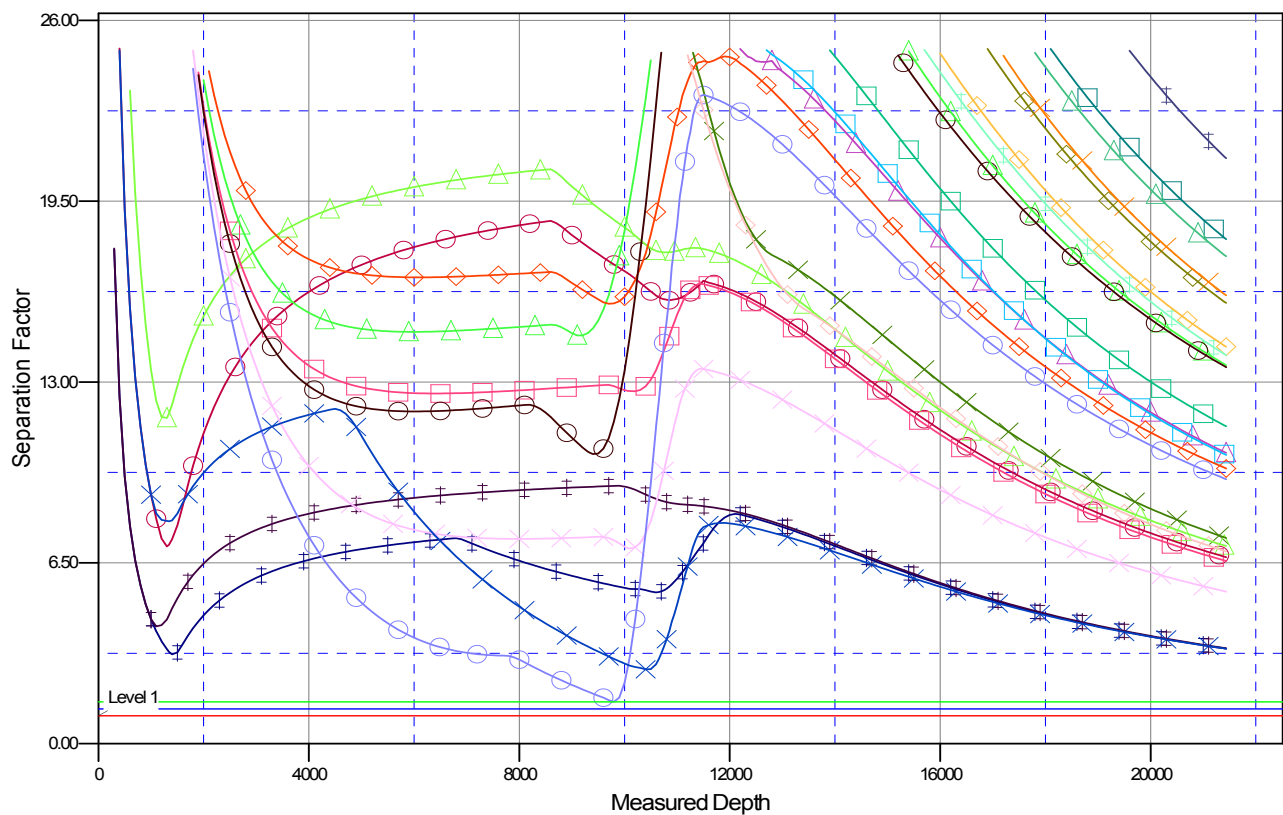
Anticollision Report

Company:	Colgate Energy	Local Co-ordinate Reference:	Well (D03) Robin Fed 203H - Slot (D03)
Project:	(Permit) Eddy County, NM (83-NME)	TVD Reference:	3674+30 @ 3704.00usft
Reference Site:	(Permit) Robin Fed DSU	MD Reference:	3674+30 @ 3704.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	(D03) Robin Fed 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Permit	Database:	EDM 5000.14 Single User Db
Reference Design:	APD-Rev01	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 3674+30 @ 3704.00usft
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.33333334

Coordinates are relative to: (D03) Robin Fed 203H - Slot (D03)
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.41°

Separation Factor Plot



LEGEND

(A03) Robin Fed Com 122H, PermitAPD-Rev01 V0	(A02) Robin Fed Com 121H, PermitAPD-Rev01 V0	(C03) Robin Fed 126H, PermitAPD-Rev01 V0
(B06) Robin Fed Com 172H, PermitAPD-Rev01 V0	(A05) Robin Fed Com 112H, PermitAPD-Rev00 V0	(A01) Robin Fed Com 111H, PermitAPD-Rev00 V0
(B04) Robin Fed Com 132H, PermitAPD-Rev00 V0	(D06) Robin Fed 174H, PermitAPD-Rev01 V0	(C06) Robin Fed 128H, PermitAPD-Rev01 V0
(B03) Robin Fed Com 201H, PermitAPD-Rev00 V0	(B02) Robin Fed Com 131H, PermitAPD-Rev00 V0	(D01) Robin Fed 173H, PermitAPD-Rev01 V0
(A04) Robin Fed Com 123H, PermitAPD-Rev01 V0	(D04) Robin Fed 134H, PermitAPD-Rev01 V0	(A06) Robin Fed Com 124H, PermitAPD-Rev01 V0
(D05) Robin Fed 204H, PermitAPD-Rev01 V0	(C02) Robin Fed 125H, PermitAPD-Rev01 V0	(C01) Robin Fed 113H, PermitAPD-Rev01 V0
(B01) Robin Fed Com 171H, PermitAPD-Rev01 V0	(C05) Robin Fed 114H, PermitAPD-Rev01 V0	(B05) Robin Fed Com 202H, PermitAPD-Rev00 V0
(D02) Robin Fed 133H, PermitAPD-Rev01 V0	(C04) Robin Fed 127H, PermitAPD-Rev01 V0	

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



Certificate of Conformity

ContiTech

Certificate Number 1036465	COM Order Reference 1036465	Customer Name & Address HELMERICH & PAYNE DRILLING CO 1434 SOUTH BOULDER AVE TULSA, OK 74119 USA
Customer Purchase Order No:	740122520	
Project:		
Test Center Address ContiTech Oil & Marine Corp. 11535 Brittmoore Park Drive Houston, TX 77041 USA	Accepted by COM Inspection Signed: Gerson Mejia-Lazo Date: 11/29/17	Accepted by Client Inspection

We certify that the items detailed below meet the requirements of the customer's Purchase Order referenced above, and are in conformance with the specifications given below.

Item	Part No.	Description	Qty	Serial Number	Specifications
60		RECERTIFICATION - 3" ID 10K Choke and Kill Hose x 35 ft OAL	1	64526	ContiTech Standard
90		RECERTIFICATION - 3" ID 10K Choke and Kill Hose x 35 ft OAL	1	53621	ContiTech Standard



Hydrostatic Test Certificate

ContiTech

Certificate Number 1036465	COM Order Reference 1036465	Customer Name & Address HELMERICH & PAYNE DRILLING CO 1434 SOUTH BOULDER AVE TULSA, OK 74119 USA	
Customer Purchase Order No: 740122520		Project:	
Test Center Address ContiTech Oil & Marine Corp. 11535 Brittmoore Park Drive Houston, TX 77041 USA		Accepted by COM Inspection Signed: Gerson Mejia-Lazo Date: 2/27/18	Accepted by Client Inspection

We certify that the goods detailed hereon have been inspected as described below by our Quality Management System, and to the best of our knowledge are found to conform the requirements of the above referenced purchase order as issued to ContiTech Oil & Marine Corporation.

Item	Part No.	Description	Qty	Serial Number	Work. Press.	Test Press.	Test Time (minutes)
60		RECERTIFICATION - 3" ID 10K Choke and Kill Hose x 35 ft OAL	1	64526	10,000 psi	15,000 psi	60
90		RECERTIFICATION - 3" ID 10K Choke and Kill Hose x 35 ft OAL	1	53621	10,000 psi	15,000 psi	60

Hose Inspection Report

ContiTech Oil & Marine

Customer	Customer Reference #	COM Reference #	COM Inspector	Date of Inspection
H&P Drilling	740122520	1036465	A. Jaimes	02/22/2018

Hose Manufacturer	Contitech Rubber Industrial
-------------------	-----------------------------

Hose Serial #	53621	Date of Manufacture	08/2008
Hose I.D.	3"	Working Pressure	10000PSI
Hose Type	Choke and Kill	Test Pressure	15000PSI
Manufacturing Standard	API 16C		

Connections

End A: 4.1/16" 10Kpsi API Spec 6A Type 6BX Flange	End B: 4.1/16" 10Kpsi API Spec 6A Type 6BX Flange
• No damage	• No damage
Material: Carbon Steel	Material: Carbon Steel
Seal Face: BX155	Seal Face: BX155
Length Before Hydro Test: 35'	Length After Hydro test: 35'

Conclusion: Hose #53621 passed the external inspection with no notable damage to the armor. Internal video inspection showed no damage to the hose liner. Hose #53621 passed the hydrostatic pressure test by holding a pressure of 15,000PSI for 60 minutes. Hose #53621 is suitable for continued service.

Recommendations: In general the hose should be inspected on a regular on-going basis. The frequency and degree of the inspection should as a minimum follow these guidelines:

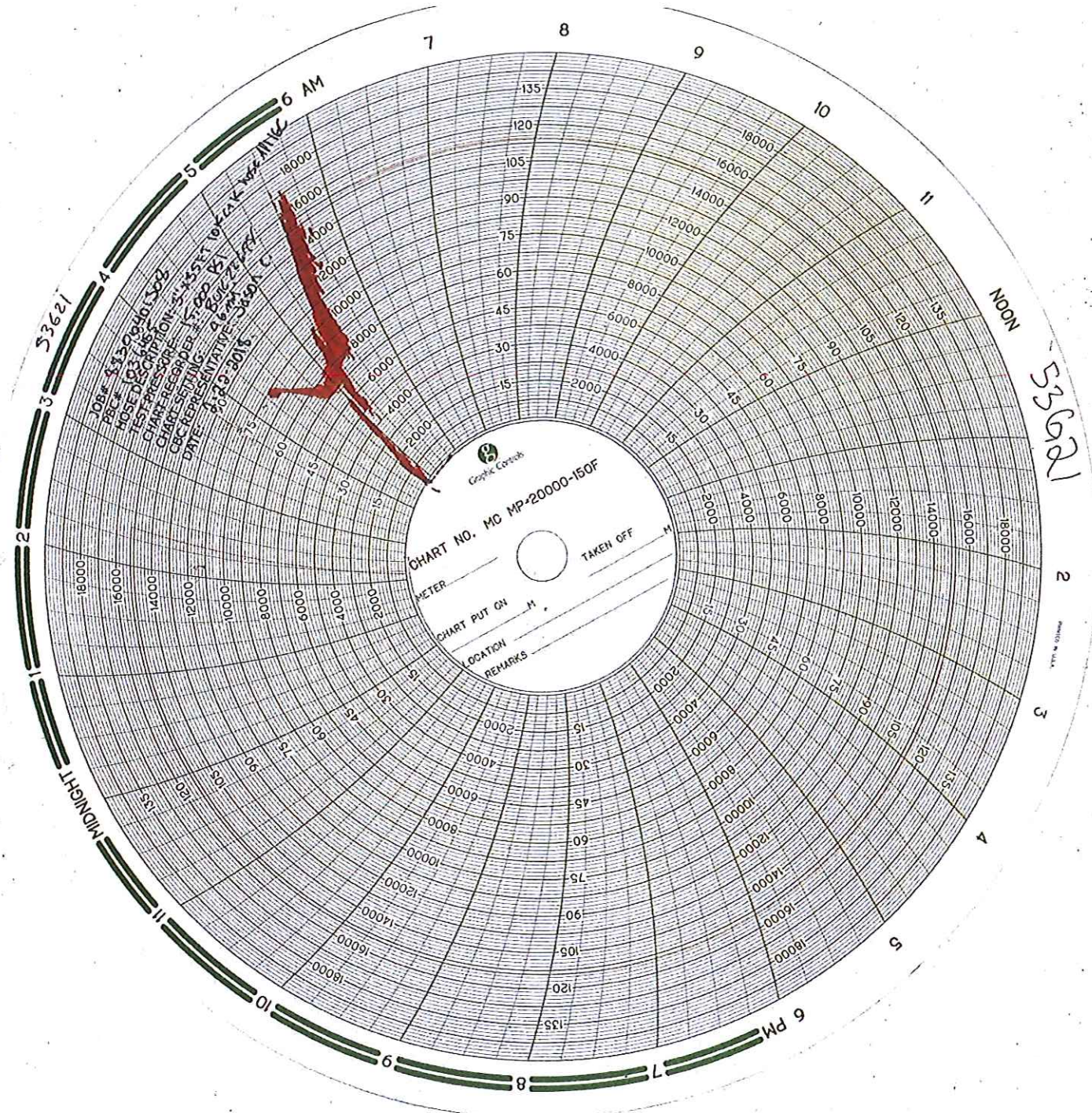
Visual inspection: Every 3 to 6 months (or during installation/removal)
 Annual: In-situ pressure test (in addition to the 3 to 6 monthly inspections)
 Initial 5 years service: Major inspection
 2nd Major inspection: Following subsequent 3 year life cycle
 (Detailed description of test regime available upon request, QCP 206-1)

****NOTE:** There are a number of critical elements in the hose that cannot be thoroughly checked through standard inspection techniques. Away from dissecting the hose body, the best way to evaluate the condition of the hose is through review of the operating conditions recorded during the hose service life, in particular maximums and peak conditions.

Issued By: Alejandro Jaimes
 Date: 2/27/2018

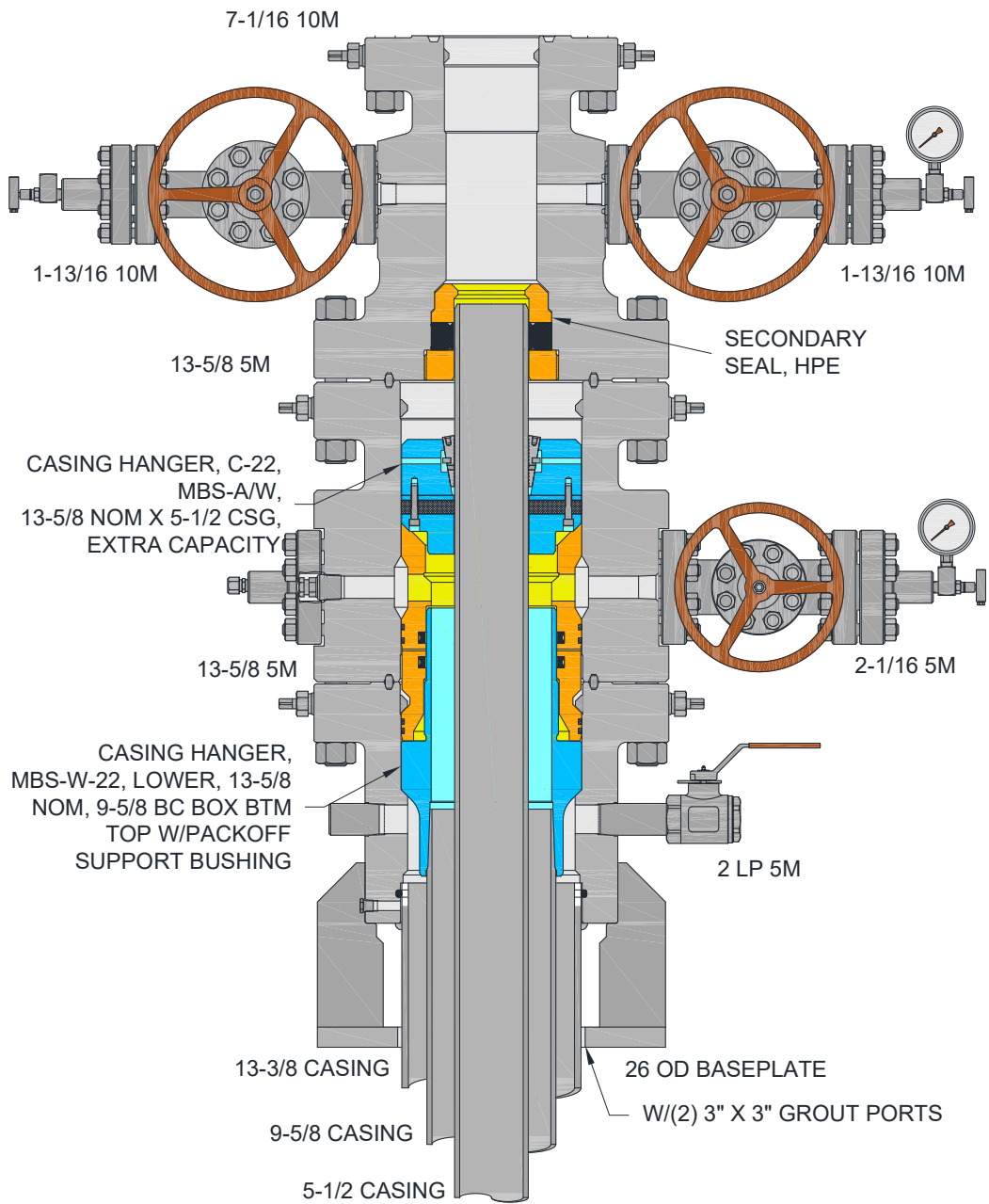
Checked By: Roger Suarez
 Date: 2/27/2018

Page 1 of 1
 QF97





MULTI-BOWL WELLHEAD SYSTEM RUNNING PROCEDURE



	Prepared By:	Reviewed By:	Rev:	EQ #:	Page 1 of 23
	LAP			4070	
	Date: 4/22/21	Date:	Date:		

Table of Contents

1.0 DIAGRAM OF STACK-UP	3
2.0 CASING HEAD SECTION	4
3.0 TEST PLUG SECTION.....	6
4.0 WEAR BUSHING SECTION	7
5.0 LOWER CASING HANGER SECTION.....	8
6.0 PACKOFF SUPPORT BUSHING SECTION.....	10
7.0 TEST PLUG FOR PACKOFF SECTION	13
8.0 C-22 HANGER SECTION	14
9.0 TUBING HEAD SECTION.....	16
10.0 EMERGENCY CASING HANGER C-21 SECTION	19
APPENDIX A: RECOMMENDED PROCEDURE FOR FIELD WELDING PIPE TO WELLHEAD PARTS FOR LOW PRESSURE SEAL	21



Prepared By:

Reviewed By:

Rev:

EQ #:

LAP

Date: 4/22/21

Date:

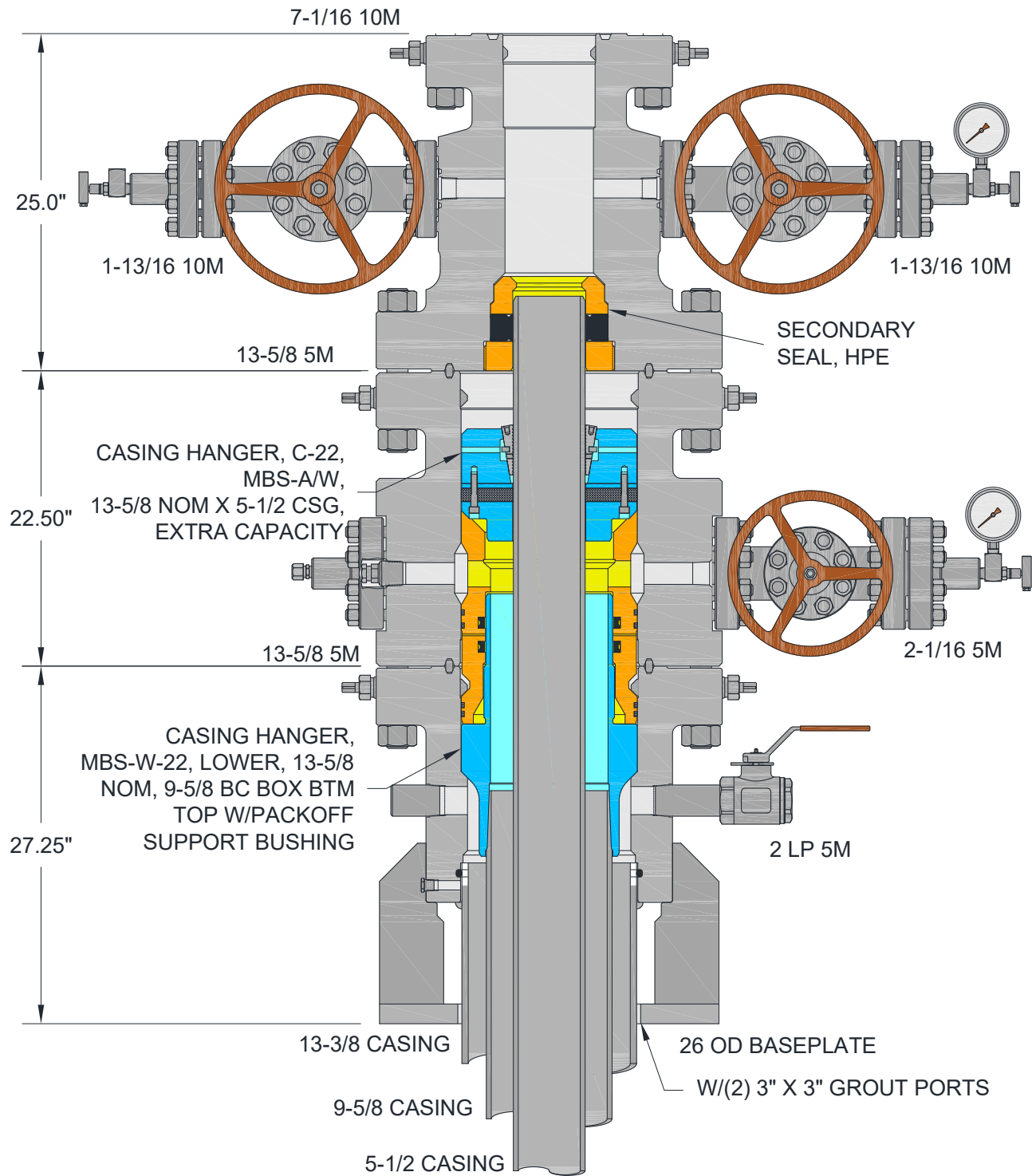
Date:

4070

Page 2 of 23

1.0 DIAGRAM OF STACK-UP

1.1 DIMENSIONS FOR CONFIGURATION



Prepared By:	Reviewed By:	Rev:	EQ #:	Page 3 of 23
LAP			4070	
Date: 4/22/21	Date:	Date:		

2.0 CASING HEAD SECTION

2.1 PREPARATION

- 2.1.1 Check and record Multi-bowl Assembly part numbers and serial numbers.
- 2.1.2 Inspect assembly's upper and lower bowl. Ensure seal areas are in good condition and free from damage.
- 2.1.3 Inspect ring groove for burrs, damage and any defects. If burrs exist, redress using emery cloth.
- 2.1.4 Ensure SOW O-Ring is in good condition. Replace if damaged.

2.2 LANDING

- 2.2.1 Determine 13-3/8" casing cutoff height. Cut and bevel accordingly.
- 2.2.2 Clean scale off casing OD.
- 2.2.3 Lift Multi-bowl Assembly with certified wire rope harness or landing & flange and lower carefully over casing stub.
- 2.2.4 Ensure Multi-bowl Assembly is level and outlet orientation will match flow lines. Remove 1/2" NPT pipe plug from bottom of casing head.
- 2.2.5 Tack weld Multi-bowl SOW to casing at four points. Recheck level.

NOTE: DO NOT USE HOT HEADS OR SIMILAR METHODS OF PREHEATING, AS IT MAY DAMAGE SEALS AND PACKING

- 2.2.6 Preheat casing and Multi-bowl to specifications, 3" on either side of weld areas. Use heat sensitive crayons to monitor temperature limits.
- 2.2.7 Complete external weld. Perform post weld heat treatment.

NOTE: STEPS 2.2.4 TO 2.2.6 ARE TO BE COMPLETED BY OPERATOR'S AUTHORIZED WELDER ONLY. SEE SECTION 3.0 FOR FIELD WELDING PROCEDURE.

- 2.2.8 When weld is cool, test weld to 80% of casing collapse for minimum of 15 minutes. Use only water as test fluid, do not use oil.
- 2.2.9 Bleed off pressure after successful test. Replace pipe plug.
- 2.2.10 Install outlet accessories as required.



Prepared By:

Reviewed By:

Rev:

EQ #:

LAP

Date: 4/22/21

Date:

Date:

4070

Page 4 of 23

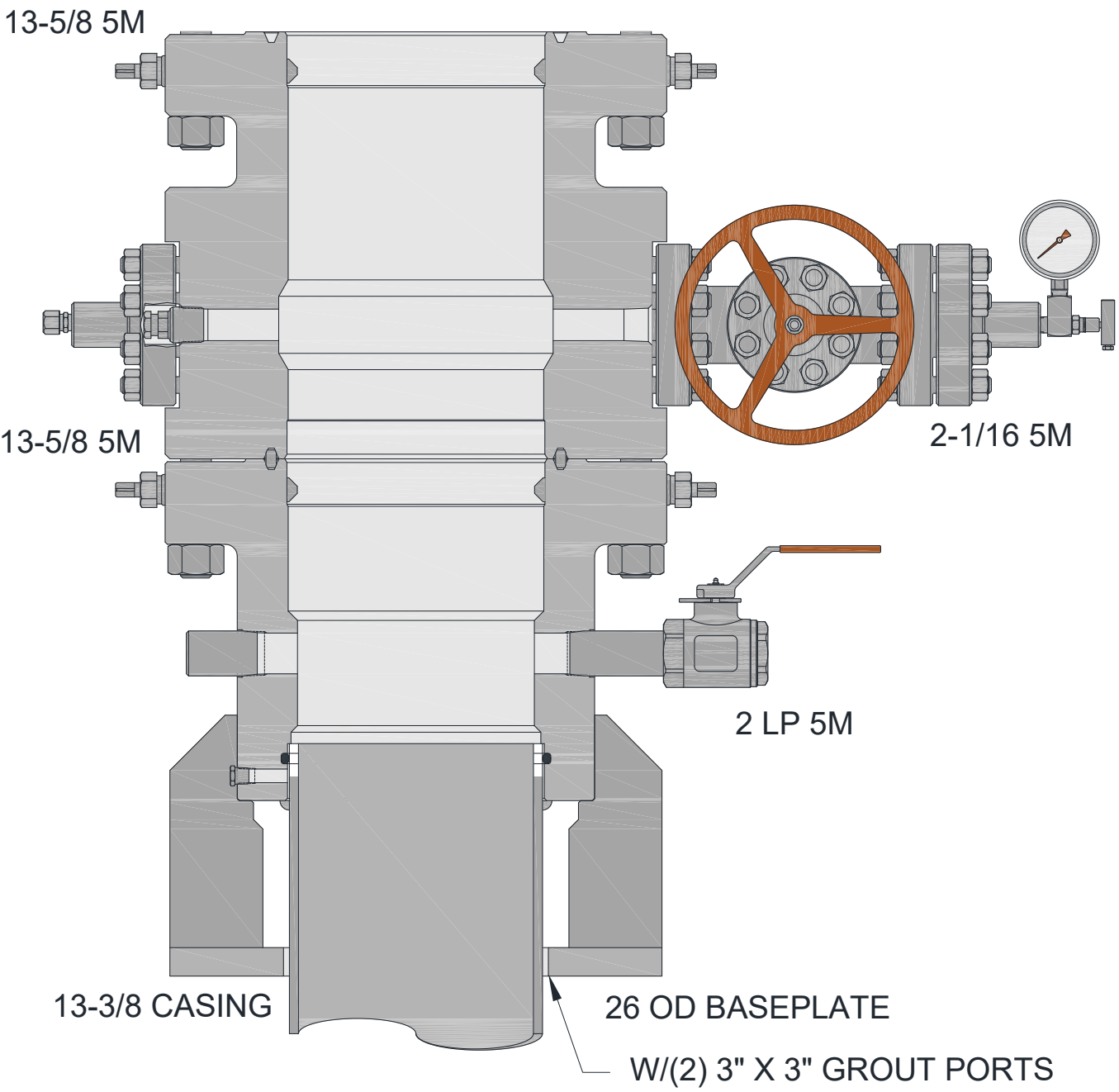


FIGURE 1 – LANDING MULTI-BOWL

	Prepared By:	Reviewed By:	Rev:	EQ #:	Page 5 of 23
	LAP			4070	
	Date: 4/22/21	Date:	Date:		

3.0 TEST PLUG SECTION

3.1 PREPARATION

- 3.1.1 Check and record BOP Test Plug Assembly part & serial numbers.
- 3.1.2 Inspect test plug's LP threads and Tool Joint threads for damage. Ensure O-rings & lift lugs are in good condition.

3.2 RUNNING – TEST PLUG

- 3.2.1 Make up a joint of drill pipe to test plug. Ensure O-rings are in down position.

NOTE: IF PUMPING THROUGH DRILL PIPE, MAKE SURE 1/2" LP PIPE PLUGS ARE REMOVED. IF PRESSURIZING THROUGH CHOKE OR KILL LINE, 1/2" LP PIPE PLUGS MUST BE INSTALLED AND DRILL PIPE MUST BE PROPERLY TORQUED TO TEST PLUG.

- 3.2.2 Open casing head outlet valve to check for leakage during BOP test.
- 3.2.3 Lightly oil test plug's O-rings.
- 3.2.4 Lower test plug through BOP and riser stack, land on casing head load shoulder.
- 3.2.5 Test BOP stack per operator's requirements. Never exceed connection's max working pressure. Monitor any leakage through open outlet valve.

3.3 RETRIEVING – TEST PLUG

- 3.3.1 After a successful test, release pressure and open BOP rams.
- 3.3.2 Drain fluid from BOP stack.
- 3.3.3 Pull and retrieve test plug slowly to avoid damage to seals.
- 3.3.4 Close casing head outlet valve.
- 3.3.5 Inspect test plug for damage. Replace O-rings if necessary. Clean, grease, store.



Prepared By:

Reviewed By:

Rev:

EQ #:

LAP

Date: 4/22/21

Date:

Date:

4070

Page 6 of 23

4.0 WEAR BUSHING SECTION

4.1 PREPARATION

- 4.1.1 Check and record wear bushing and running tool part and serial numbers.
- 4.1.2 Inspect wear bushing for damage, ensuring bore, slots are clean and the bore is the correct ID.
- 4.1.3 Inspect running tool for damage, ensure threads and slots are clean.

4.2 RUNNING

- 4.2.1 Make up drill pipe to running tool. Ensure lift lugs are in the down position.
- 4.2.2 Lower running tool into wear bushing. Rotate 1/4 turn clockwise to lock position.
- 4.2.3 Slowly lower wear bushing through BOP stack and riser, land on casing head load shoulder.
- 4.2.4 Run in two Lockscrews, 180° apart, for retention.
- 4.2.5 Remove Running Tool from Wear Bushing by rotating drill pipe counter-clockwise 1/4 turn and slowly lifting it straight up.

4.2.5.1 NOTE: WHILE RETRIEVING THE TOOL, MONITOR THE WEIGHT INDICATOR TO ENSURE THE TOOL IS PROPERLY DISENGAGED.

- 4.2.6 Inspect the Running Tool for any visible damage.
- 4.2.7 Proceed with drilling for next casing size.

4.3 RETRIEVING – WEAR BUSHING

- 4.3.1 Make up drill pipe to Running Tool. Ensure lift lugs are in the down position.
- 4.3.2 Slowly lower Running Tool through BOP stack until it lands on Wear Bushing.
- 4.3.3 Slowly Rotate tool until it drop. This indicates the lift lugs have aligned with j-slots of the Wear Bushing.
- 4.3.4 Slack off all weight to make sure tool is down.
- 4.3.5 Rotate tool 1/4 turn clockwise to fully engage in Wear Bushing.
- 4.3.6 Retract the two engaged Lockscrews, 180° apart.
- 4.3.7 Inspect Running Tool and Wear Bushing for any damage. Clean, grease, & store.
- 4.3.8 Proceed to running next casing.



Prepared By:

Reviewed By:

Rev:

EQ #:

LAP

Date: 4/22/21

Date:

Date:

4070

Page 7 of 23

5.0 LOWER CASING HANGER SECTION

5.1 PREPARATION

- 5.1.1 Inspect Mandrel Casing Hanger's casing thread and ACME running threads for damage. Ensure neck seal area is clean and in good condition.
- 5.1.2 Inspect the Running Tool's casing thread and running thread for any damage. Ensure bore and O-ring is clean and in good condition.
- 5.1.3 Verify Running Tool's .50" width OD groove is painted with fluorescent yellow.

5.2 INSTALLATION

- 5.2.1 Make up the Running Tool to the Hanger by rotating counter-clockwise 8 to 9 turns until it bottoms out on the Hanger.

NOTE: DO NOT TORQUE TO HANGER.

- 5.2.2 Pressure test the Running Tool's seal through the 1/8 LP test port for at least 15 minutes. Do not exceed 5,000psi test pressure.
- 5.2.3 After a successful test, release pressure.
- 5.2.4 Lower the Hanger onto the last joint of casing run. Make up the connection to the API threads recommended optimum torque.
- 5.2.5 Verify all lock-screws are fully retracted.
- 5.2.6 Slowly and carefully lower the Hanger through the BOP and land it in the Multi-bowl.
- 5.2.7 Slack off all weight on the casing.
- 5.2.8 Visually verify the yellow paint marking on the Running Tool is in the center of the upper-most outlet of the Multi-bowl indicating that the Hanger is properly landed.

NOTE: ENSURE THAT THE WELL IS SAFE AND THERE IS NO PRESSURE BEFORE OPENING THE UPPERMOST OUTLET VALVE. CLOSE THE OUTLET AFTER VISUAL INSPECTION.

- 5.2.9 Cement as required.
- 5.2.10 Back off Running Tool by rotating clockwise until thread jump can be felt.
- 5.2.11 Retrieve the landing joint and running tool to the rig floor.
- 5.2.12 Inspect the running tool for any damage. Clean, grease, and store.
- 5.2.13 Proceed to next operation.



Prepared By:

Reviewed By:

Rev:

EQ #:

LAP

Date: 4/22/21

Date:

Date:

4070

Page 8 of 23

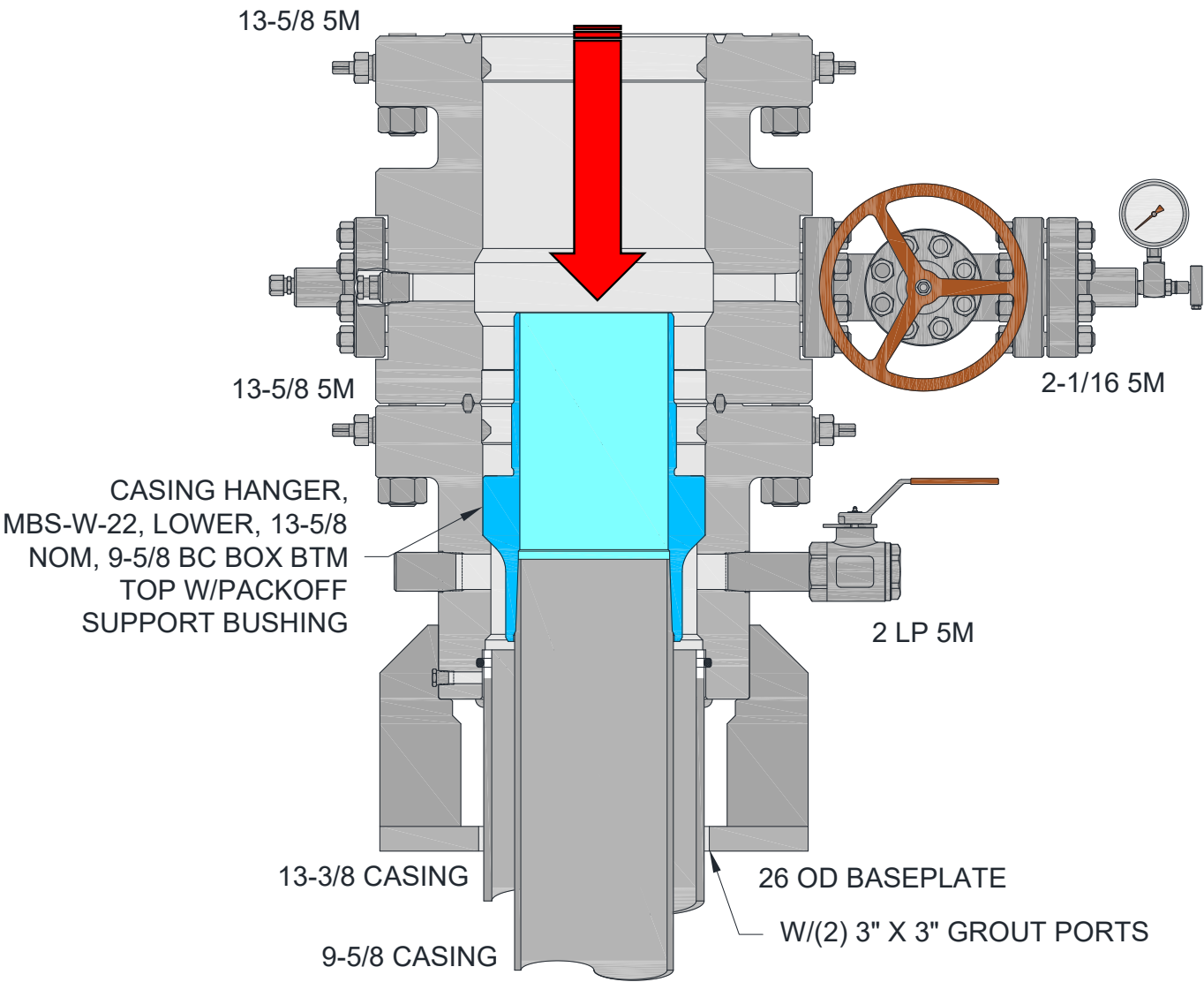


FIGURE 2 –CASING HANGER MANDREL

	Prepared By:	Reviewed By:	Rev:	EQ #:	Page 9 of 23
	LAP			4070	
	Date: 4/22/21	Date:	Date:		

6.0 PACKOFF SUPPORT BUSHING SECTION

6.1 PREPARATION

- 6.1.1 Check and record Pack-off Support Bushing and Running Tool part and serial numbers.
- 6.1.2 Inspect the Pack-offs elastomeric seals, bore, and OD for any damage. Ensure that all are clean and in good condition.
- 6.1.3 Inspect the Running Tool's IF thread for any damage. Ensure all are clean and in good condition.
- 6.1.4 Wash out Multi-bowl and top of casing hanger landing flutes and open lower valves in lower head.

NOTE: WASHING CAN BE DONE MANUALLY USING PRESSURIZED HOSE OR WITH A WASH TOOL.

6.2 INSTALLATION

- 6.2.1 Make up a landing joint to the Running Tool. Ensure to power tight the landing joint to the Running tool per API thread's specification.
- 6.2.2 Lightly oil the Pack-offs elastomeric seals and running threads.
- 6.2.3 Lower Running Tool into Pack-off and rotate 1/4 turn clockwise to lock position.
- 6.2.4 Verify all Lock-screws are fully retracted.
- 6.2.5 Slowly and carefully lower the Pack-off through the BOP and land it on the Hanger inside the Multi-bowl.

NOTE: HEAVY DRILL PIPE OR DRILL COLLAR MIGHT BE REQUIRED AS ADDITIONAL WEIGHT TO PULL DOWN THE PACK-OFF INTO ITS LANDING POSITION.

- 6.2.6 Verify that the Pack-off has landed properly by making measurement on its setting depth.
- 6.2.7 Run Lock-screws in pairs, 180 degrees apart, at the lower Multi-bowl. Tighten gland nuts to 350 ft.-lbs and Lock-screws to 450 ft.-lbs.
- 6.2.8 Pull the Running Tool to 2,000 lbs to confirm that the Pack-off has been successfully locked down.
- 6.2.9 Slack off tension.



Prepared By:

Reviewed By:

Rev:

EQ #:

LAP

Date: 4/22/21

Date:

Date:

4070

Page 10 of
23

- 6.2.10 Locate the two Flange Test Ports on the upper Multi-bowl and remove the test cap from each of the fittings.
- 6.2.11 Attach a bleeder tool to one of the fittings and open the tool.
- 6.2.12 Attach a hydraulic test pump to the other fitting and pump hydraulic fluid until a continuous stream flows from the bleeder tool. Close the bleeder tool.
- 6.2.13 Perform pressure test to 5,000 psi for at least 15 minutes.

NOTE: IN CASE OF TESTING AGAINST A CASING, DO NOT EXCEED 80% OF CASING COLLAPSE.

- 6.2.14 After a successful test, release pressure. Replace test caps.
- 6.2.15 Remove the Running Tool from Pack-off by rotating the drill pipe counter-clockwise 1/4 turn and slowly lifting it straight up.

NOTE: WHILE RETRIEVING THE TOOL, MONITOR THE WEIGHT INDICATOR TO ENSURE THE TOOL IS PROPERLY DISENGAGED.

- 6.2.16 Retrieve the Running Tool to the rig floor.
- 6.2.17 Inspect the Running Tool for any damage. Clean, grease, and store.
- 6.2.18 Proceed to next operation.

	Prepared By:	Reviewed By:	Rev:	EQ #:	Page 11 of 23
	LAP			4070	
	Date: 4/22/21	Date:	Date:		

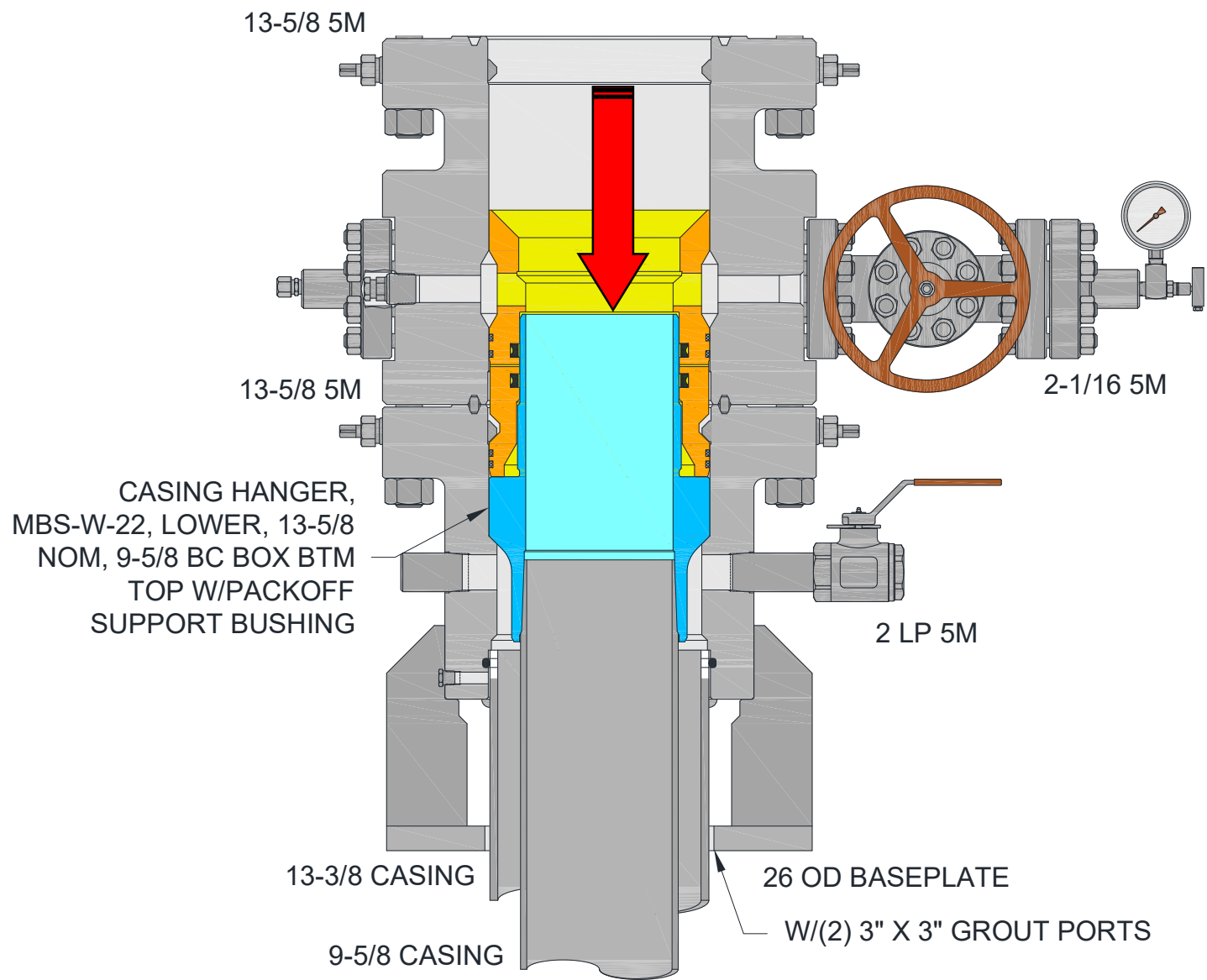


FIGURE 3 – PACKOFF SUPPORT BUSHING

	Prepared By:	Reviewed By:	Rev:	EQ #:	Page 12 of 23
	LAP			4070	
	Date: 4/22/21	Date:	Date:		

7.0 TEST PLUG FOR PACKOFF SECTION

7.1 PREPARATION

- 7.1.1 Check and record the BOP Test plug Assembly part number and serial number.
- 7.1.2 Inspect test plug's LP & tool joints threads for damage. Ensure O-ring & lift lugs are in good condition.

7.2 RUNNING

- 7.2.1 Make up a joint of drill pipe to test plug. Ensure O-ring is down and lift lugs are up.

NOTE: IF IT IS INTENDED TO TEST BY PUMPING THROUGH DRILL PIPE, MAKE SURE THAT THE FOUR 1/2" LP PIPE PLUGS ARE REMOVED. HOWEVER, IF TEST IS TO BE DONE BY PRESSURIZING THROUGH THE CHOKE OR KILL LINE, THE FOUR 1/2" LP PIPE PLUGS SHOULD BE INSTALLED AND DRILL PIPE MUST BE PROPERLY TORQUED TO THE TEST PLUG.

- 7.2.2 Verify lock-screws in the top flange are fully retracted.
- 7.2.3 Open Multi-bowl upper valve to check for leakage past test plug during BOP test.
- 7.2.4 Lightly oil test plug's O-ring.
- 7.2.5 Lower test plug through BOP stack until it lands on Pack-off Support Bushing.
- 7.2.6 Test BOP stack per operator's requirements. Never exceed connection's maximum working pressure. Monitor any leakage through open lower valve.

7.3 RETRIEVING

- 7.3.1 After a successful test, release pressure and open BOP rams.
- 7.3.2 Drain the fluid from BOP stack.
- 7.3.3 Pull and retrieve the test plug slowly to avoid damage.
- 7.3.4 Close the Multi-bowl upper outlet valve.
- 7.3.5 Inspect test plug for damage. Replace O-ring if necessary. Clean, grease, & store.



Prepared By:

Reviewed By:

Rev:

EQ #:

LAP

Date: 4/22/21

Date:

Date:

4070

Page 13 of
23

8.0 C-22 HANGER SECTION

8.1 PREPARATION

- 8.1.1 Check and record Slip Casing Hanger Assembly Part serial numbers.
- 8.1.2 Inspect Slip Casing Hanger, Ensure all screws are in place & seals are in good condition.

8.2 INSTALLATION

- 8.2.1 Cement casing as required.
- 8.2.2 Drain multi-bowl
- 8.2.3 Separate Upper Multi-bowl from BOP.

NOTE: ENSURE WELL IS SAFE AND THERE IS NO PRESSURE BEFORE BREAKING CONNECTION.

- 8.2.4 Lift BOP and suspend above Upper Multi-bowl high enough to install Hanger.
- 8.2.5 Washout as necessary.
- 8.2.6 Place two boards on Upper Multi-bowl top flange against casing.
- 8.2.7 Wrap Hanger around casing using boards as support.
- 8.2.8 Replace latch screw
- 8.2.9 Grease Hanger body and remove slip retaining screws.
- 8.2.10 Remove boards and lower Hanger into Multi-bowl.

NOTE: ENSURE TO CENTER CASING AS MUCH AS POSSIBLE USING CAT-LINE.

- 8.2.11 Ensure Hanger is properly seated by tapping down on slip bowl.
- 8.2.12 Engage slip segments evenly by hammering down on top of segments.
- 8.2.13 Pull tension on casing to desired weight then slack off tension to set load to energize packing.
- 8.2.14 Rough cut casing approximately 18” above casing spool top flange.
- 8.2.15 Clean ring groove and install ring gasket into top flange.
- 8.2.16 Final cut casing at 5-3/4” +/-1/8” above top flange and bevel cut stub to specifications.

NOTE: ENSURE STUB IS PROPERLY BEVELED WITHOUT ANY ROUGH EDGES THAT COULD DAMAGE THE PACK-OFF SEALS, PICK-UP LANDING JOINT WITH PRE-INSTALLED MANDREL CASING HANGER RUNNING TOOL.

	Prepared By:	Reviewed By:	Rev:	EQ #:	Page 14 of 23
	LAP			4070	
	Date: 4/22/21	Date:	Date:		

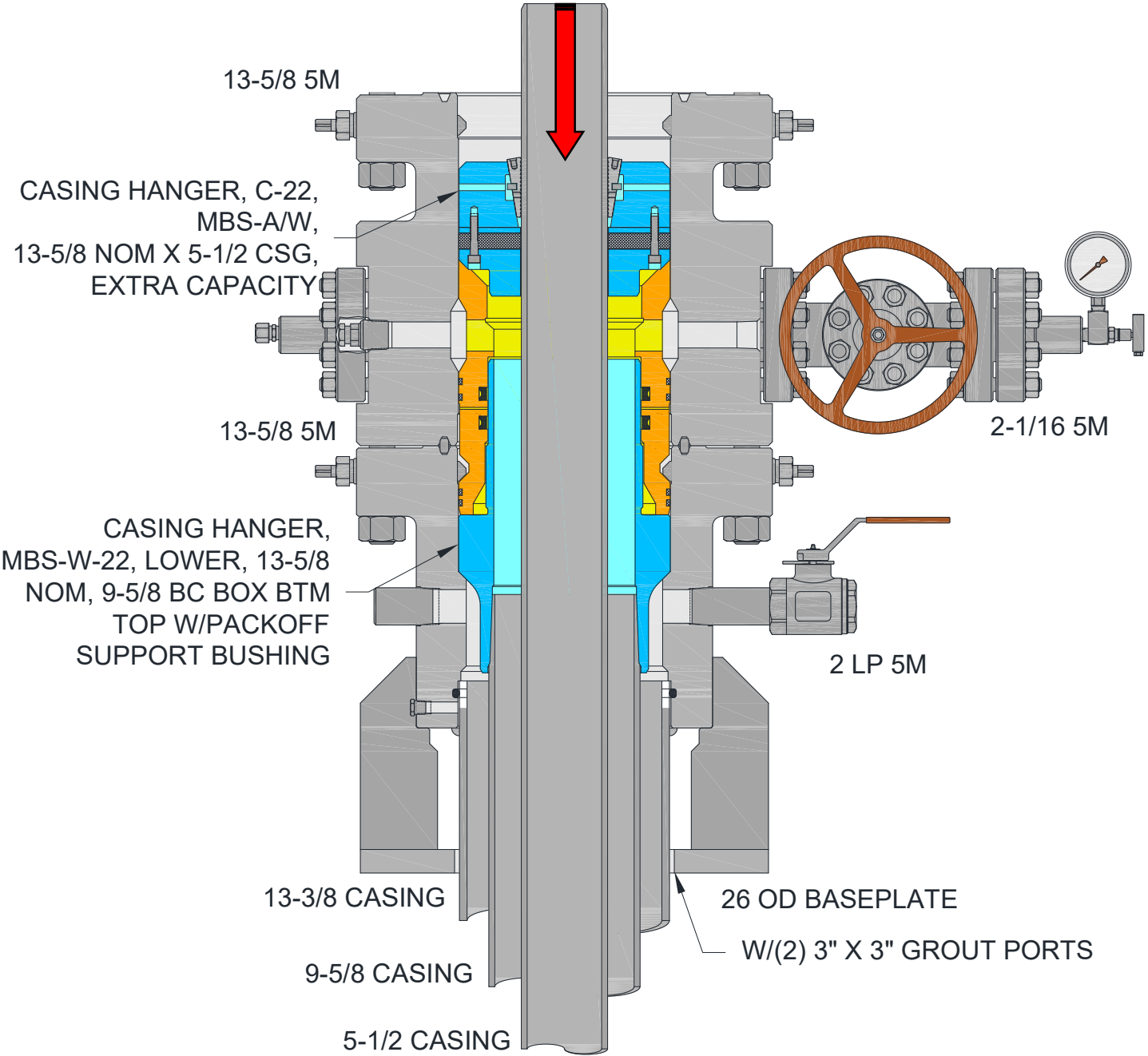


FIGURE 4 – HANGER INSTALLED

	Prepared By:	Reviewed By:	Rev:	EQ #:	Page 15 of 23
	LAP			4070	
	Date: 4/22/21	Date:	Date:		

9.0 **TUBING HEAD SECTION**

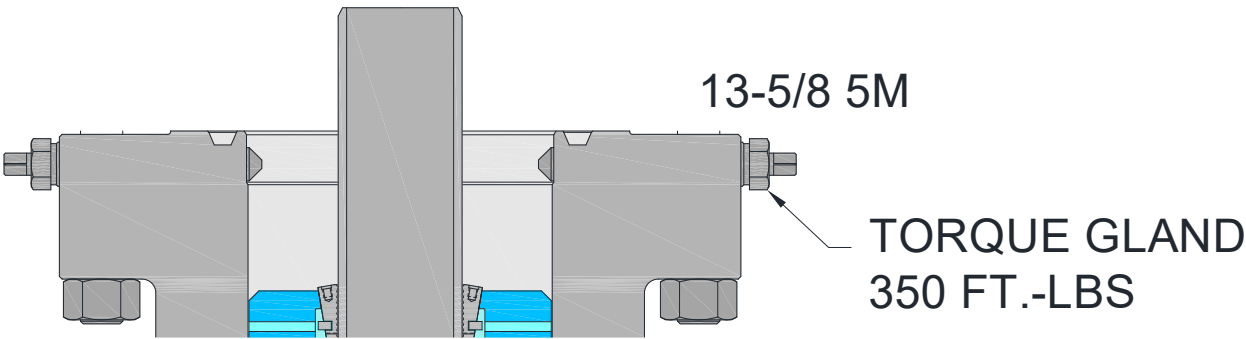
9.1 **PREPARATION**

- 9.1.1 Check & record tubing head assembly part & serial numbers.
- 9.1.2 Inspect tubing head’s bowl & ring groove for burrs, damage and/or any defects.
Ensure seal areas are in good condition and free from damage. If burrs exist, redress using emery cloth.
- 9.1.3 Ensure bore and FS seals are clean and in good condition.

9.2 **INSTALLATION**

- 9.2.1 Place ring gasket into casing spool ring groove.
- 9.2.2 Slowly and carefully lift and orient tubing head assembly over casing spool and casing hanger neck. Line up casing spool to bolt holes on casing head.
- 9.2.3 Lower tubing head and install onto casing spool. Nipple up tubing head to API recommended specifications.
- 9.2.4 Locate 1/2 LP flange test port on Tubing Head bottom flange remove fitting test cap.
- 9.2.5 Torque lock-screw glands to 350 ft.-lbs on the upper multi-bowl flange.

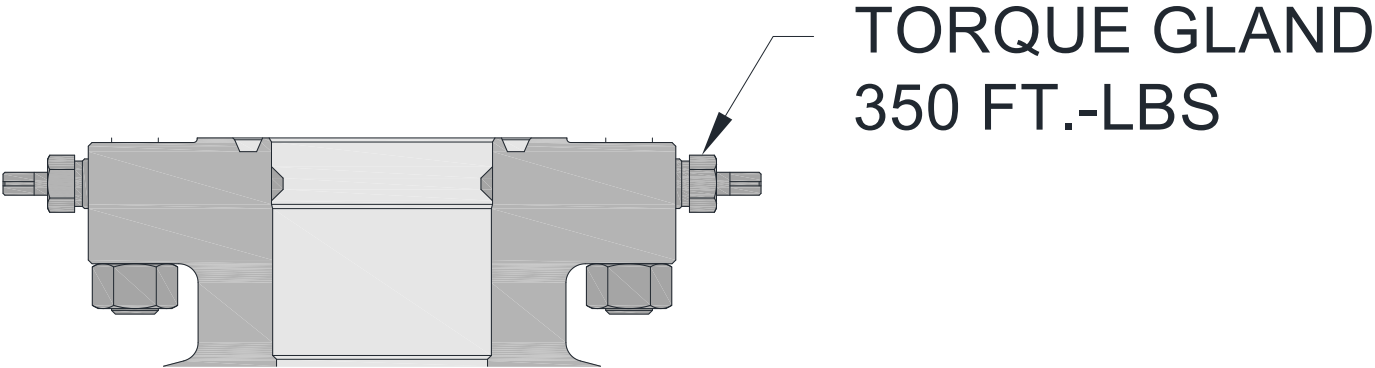
See reference 1



REFERENCE – 1

	Prepared By:	Reviewed By:	Rev:	EQ #:	Page 16 of 23
	LAP			4070	
	Date: 4/22/21	Date:	Date:		

- 9.2.6 Attach hydraulic test pump to fitting and pressure test flange to 5,000 psi or 80% of collapse of casing whichever is less, Perform test for at least 15 minutes.
- 9.2.7 After successful test, release pressure, detach test pump and reinstall cap.
- 9.2.8 Torque lock-screws glands to 350 ft.-lbs before nipple up of BOP's on 7-1/16" flange.
See reference 2



REFERENCE - 2

- 9.2.9 Nipple up BOP to casing spool assembly.
- 9.2.10 Proceed to drilling and running next casing size.

NOTE: SECONDARY SEAL WILL BE INSTALLED AND LANDED WITH TUBING HEAD.

	Prepared By:	Reviewed By:	Rev:	EQ #:	Page 17 of 23
	LAP			4070	
	Date: 4/22/21	Date:	Date:		

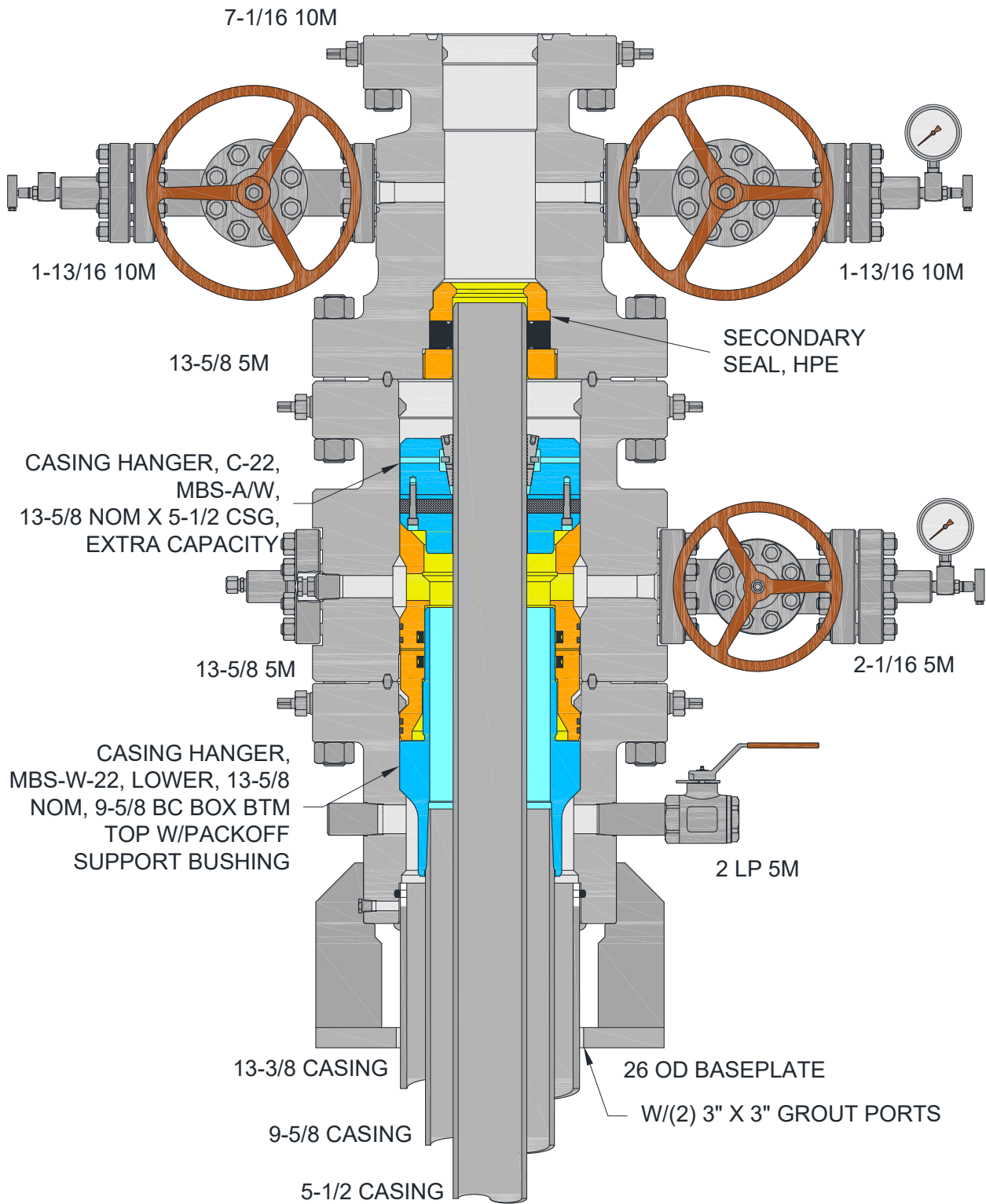


FIGURE 5 – TUBING HEAD SECTION

	Prepared By:	Reviewed By:	Rev:	EQ #:	Page 18 of 23
	LAP			4070	
	Date: 4/22/21	Date:	Date:		

10.0 EMERGENCY CASING HANGER C-21 SECTION

10.1 PREPARATION

- 10.1.1 If casing becomes stuck, follow the steps outlined below.
- 10.1.2 With casing suspended break flange connection between casing spool & casing head, lift & secure the casing spool & BOP at a safe working distance above casing head.
- 10.1.3 Examine the C-21 casing hanger for damage.

10.2 INSTALLATION

- 10.2.1 Place two boards on casing to support the casing hanger.
- 10.2.2 Remove the latch screw to open the hanger.
- 10.2.3 Wrap hanger around the casing & replace the latch screw, remove slip retainer screws.
- 10.2.4 Prepare to lower the hanger.
- 10.2.5 Remove the boards & carefully lower the hanger. If necessary, use a cat line or tugger to centralize the casing.
- 10.2.6 When the hanger is landed on load shoulder pull tension on the casing to desired hanging weight & then slack off.
- 10.2.7 Nipple up casing spool & BOP to casing head.

	Prepared By:	Reviewed By:	Rev:	EQ #:	Page 19 of 23
	LAP			4070	
	Date: 4/22/21	Date:	Date:		

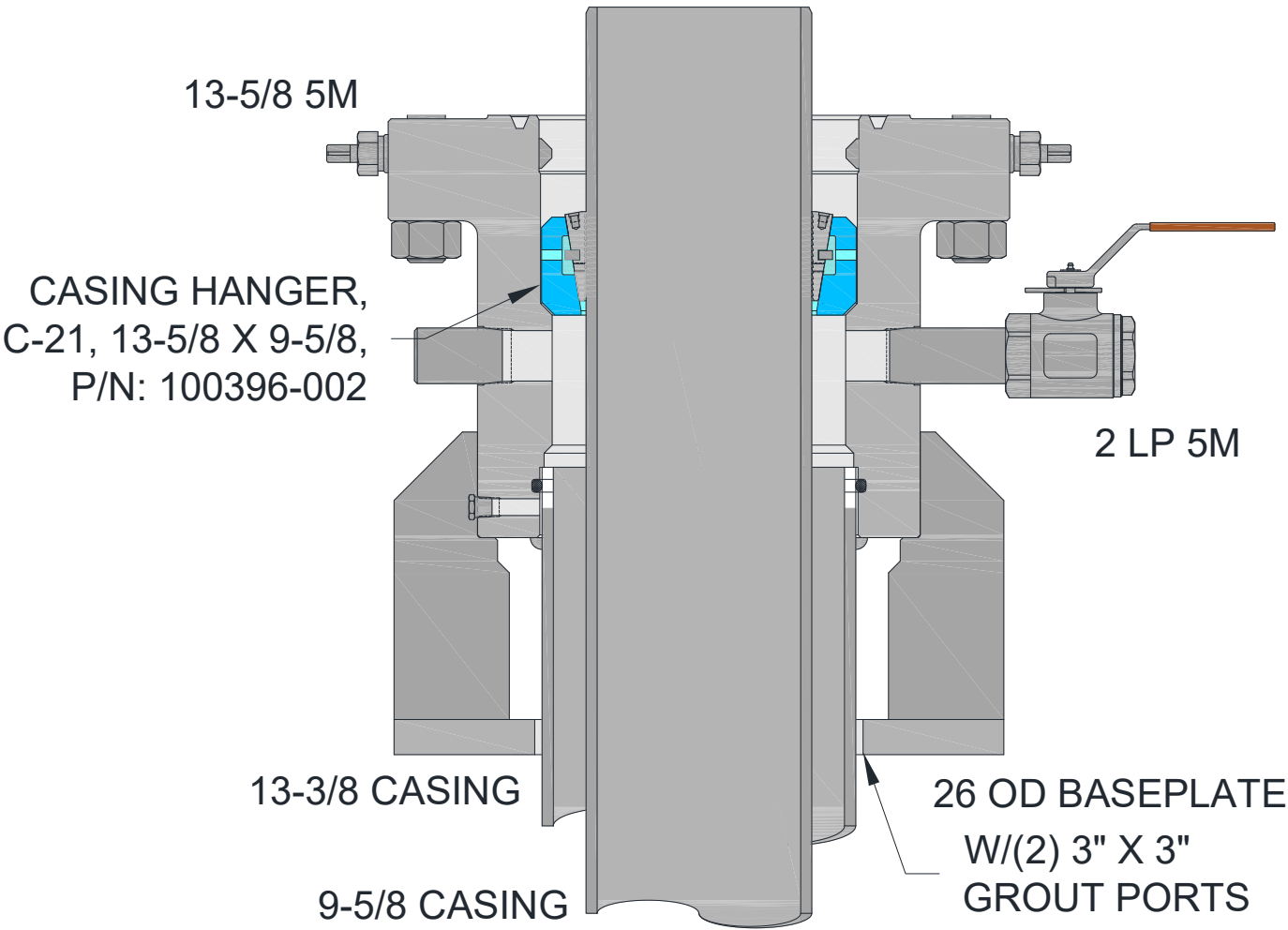


FIGURE 6 – EMERGENCY CASING HANGER

	Prepared By:	Reviewed By:	Rev:	EQ #:	Page 20 of 23
	LAP			4070	
	Date: 4/22/21	Date:	Date:		

APPENDIX A: RECOMMENDED PROCEDURE FOR FIELD WELDING PIPE TO WELLHEAD PARTS FOR LOW PRESSURE SEAL

The following procedure is a direct extraction (except for the numeric, footnote designators) from the 20th Edition of the API 6A. Editorial footnotes have been added to provide additional information that may be of benefit when developing procedures for specific field welding applications. The recommended procedure and footnotes are for general information purposes and it should be mentioned that Encore is not responsible for determining or administering any field welding practices. The organization performing the welding should qualify their welding procedure(s) and welder(s) in accordance with applicable codes and standards. The success of any field weld should be verified by subsequent hydrostatic test at the direction of the customer.

1. **Introduction and Scope** - The following recommended procedure has been prepared with particular regard to attaining pressure-tight welds when attaching casing heads, flanges, etc., to casing. Although most of the high strength casing used (such as P-110) is not normally considered field weldable, some success may be obtained by using the following or similar procedures.

CAUTION: IN SOME WELLHEADS, THE SEAL WELD IS ALSO A STRUCTURAL WELD AND CAN BE SUBJECTED TO HIGH TENSILE STRESSES. CONSIDERATION MUST THEREFORE BE GIVEN BY COMPETENT AUTHORITY TO THE MECHANICAL PROPERTIES OF THE WELD AND ITS HEAT AFFECTED ZONE.

2. The steels used in wellhead parts and in casing are high strength steels that are susceptible to cracking when welded. It is imperative that the finished weld and adjacent metal be free from cracks. The heat from welding also affects the mechanical properties. This is especially serious if the weld is subjected to service tension stresses.
3. This procedure is offered only as a recommendation. The responsibility for welding lies with the user and results are largely governed by the welder's skill. Weld-ability of these several makes and grades of casing varies widely, thus placing added responsibility on the welder. Transporting a qualified welder to the job, rather than using a less-skilled man who may be at hand, will, in most cases, prove economically. The responsible operating representative should ascertain the welder's qualifications and if necessary, assure himself by instruction or demonstration, that the welder is able to perform the work satisfactorily.

	Prepared By:	Reviewed By:	Rev:	EQ #:	Page 21 of 23
	LAP			4070	
	Date: 4/22/21	Date:	Date:		

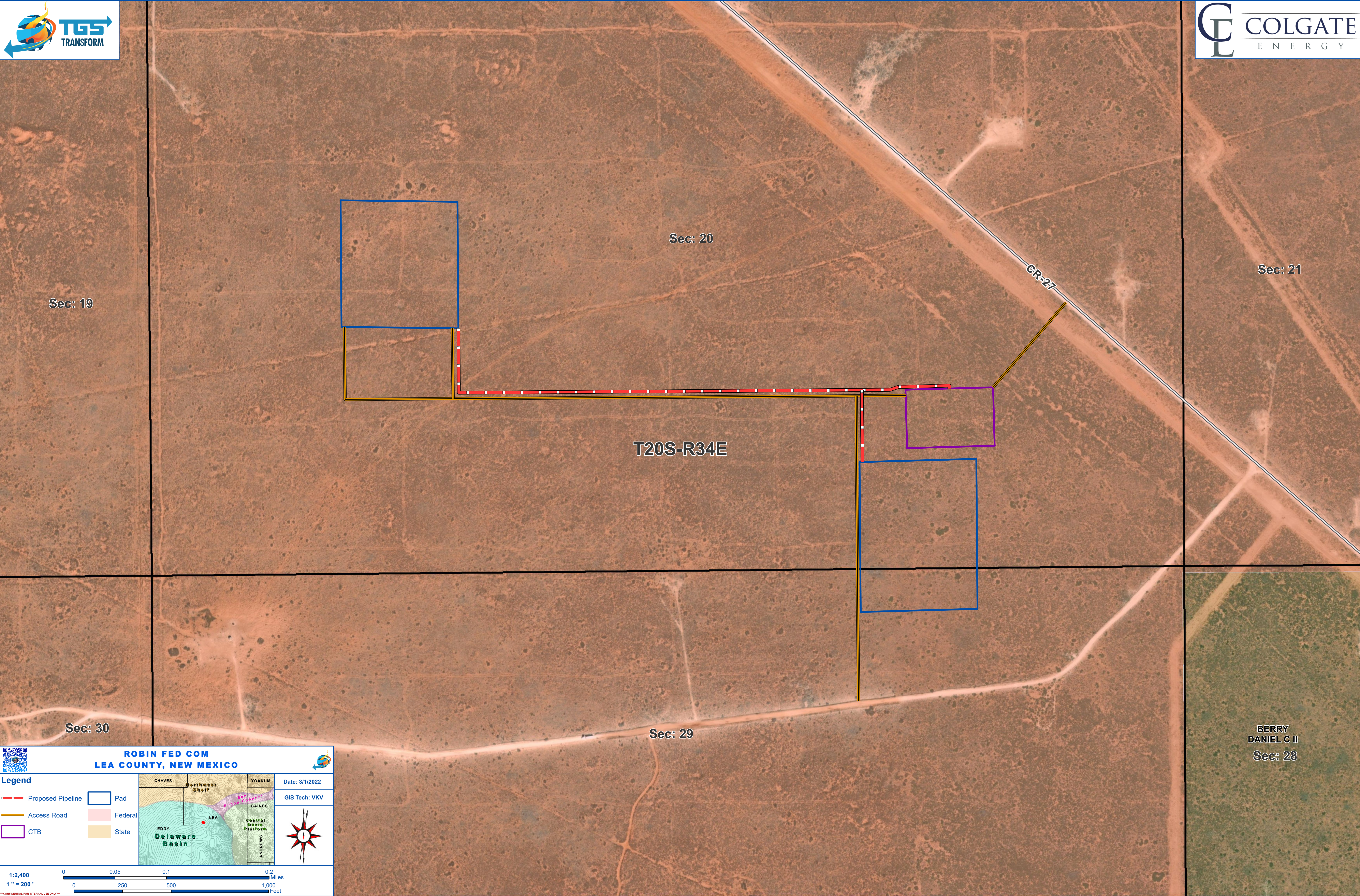
4. **Welding Conditions** - Unfavorable welding conditions must be avoided or minimized in every way possible, as even the most skilled welder cannot successfully weld steels that are susceptible to cracking under adverse working conditions, or when the work is rushed. Work above the welder on the drilling floor should be avoided. The weld should be protected from dripping mud, water, and oil and from wind, rain, or other adverse weather conditions. The drilling mud, water, or other fluids must be lowered in the casing and kept at a low level until the weld has properly cooled. It is the responsibility of the user to provide supervision that will assure favorable working conditions, adequate time, and the necessary cooperation of the rig personnel.
5. **Welding** - The welding should be done by the shielded metal-arc or other approved process.
6. **Filler Metal** - After the root pass, low hydrogen electrodes or filler wires of a yield strength equal to the casing yield strength should be used. The low hydrogen electrodes include classes EXX15, EXX16, EX18, and EXX28 of AWS A5.1 (latest edition): *Mild Steel Covered Arc-Welding Electrodes** and AWS A5.5 (latest edition): *Low Alloy Steel Covered Arc-Welding Electrodes**. Low hydrogen electrodes should not be exposed to the atmosphere until ready for use. Electrodes exposed to atmosphere should be dried 1 to 2 hours at 500 to 600°F (260 to 316°C) just before use.
*Available from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.
7. **Preparation of Base Metal** - The area to be welded should be dry and free of any paint, grease, scale, rust, or dirt.
8. **Preheating** - Both the casing and the wellhead member should be preheated to 250-400°F (121 to 204°C) for a distance of at least 3 inches (76.2mm) on either side of the weld location, using a suitable preheating torch. Before applying preheat, the fluid should be bailed out of the casing to a point several inches (mm) below the weld location. The preheat temperature should be checked by the use of heat sensitive crayons. Special attention must be given to preheating the thick sections of wellhead parts to be welded, to insure uniform heating and expansion with respect to the relatively thin casing.

NOTE: PREHEATING MAY HAVE TO BE MODIFIED BECAUSE OF THE EFFECT OF TEMPERATURE ON ADJACENT PACKING ELEMENTS WHICH MAY BE DAMAGED BY EXPOSURE TO TEMPERATURES 200°F (93°C) AND HIGHER. TEMPERATURE LIMITATIONS OF THE PACKING MATERIALS SHOULD BE DETERMINED BEFORE THE APPLICATION OF PREHEAT.

	Prepared By:	Reviewed By:	Rev:	EQ #:	Page 22 of 23
	LAP			4070	
	Date: 4/22/21	Date:	Date:		

9. **Welding Technique** - Use a 1/8" or 5/32" (3.2 or 4.0mm) E6010 electrodes and step weld the first beat (root pass); that is, weld approximately 2 to 4 inches (50 to 100mm) and then move diametrically opposite this point and weld 2 to 4 inches (50 to 100mm). Then weld 2 to 4 inches (50 to 100mm) halfway between the first two welds, more diametrically opposite this weld, and so on until the first pass is completed. The second pass should be made with 5/32" (4.0mm) low hydrogen electrode of the proper strength and may be continuous. The balance of the welding groove may then be filled with continuous passes without back stepping or lacing, using a 3/16" (4.8mm) low hydrogen electrode. All beads should be stringer beads with good penetration, and each bead after the root pass should be thoroughly peened before applying the next bead. There should be no undercutting and welds shall be workmanlike in appearance.
- Test ports should be open when welding is performed to prevent pressure build-up within the test cavity.
 - During welding temperature of base metal on either side of weld should be maintained at 250°F (121°C) minimum.
 - Care should be taken to insure that the welding cable is properly grounded to the casing, but ground wire should not be welded to the casing or the wellhead. Ground wire should be firmly clamped to the casing, the wellhead, or fixed in position between pipe slips. Bad contact may cause sparking, with resultant hard spots beneath which incipient cracks may develop; the welding cable should not be grounded to the steel derrick, nor to the rotary-table base.
10. **Cleaning** - All slag or flux remaining on any welding bead should be removed before laying the next bead. This also applies to the completed weld.
11. **Defects** - Any cracks or blow holes that appear on any bead should be removed to sound metal by chipping or grinding before depositing the next bead.
12. **Post heating** - For the removal of all brittle areas on high strength steel casing, a post heat temperature of 1050-1100°F (566 to 593°C) is desirable. It is recognized, however, that this temperature is difficult or impossible to obtain in the field, and that the mechanical properties of the wellhead parts and the pipe may be considerably reduced by these temperatures. As a practical matter, the temperature range of 500-900°F (260-482°C) has been used with satisfactory results.
13. **Cooling** - Rapid cooling must be avoided. To assure slow cooling, welds should be protected from extreme weather conditions (cold, rain, high winds, etc.). By the use of a blanket made from suitable insulating material. Particular attention should be given to maintaining uniform cooling of the thick sections of the wellhead parts and the relatively thin casing will pull away from the head or hanger if allowed to cool more rapidly. The welds should cool in air to 250°F (121°C) (measured with a heat sensitive crayon) prior to permitting the mud to rise in the casing.

	Prepared By:	Reviewed By:	Rev:	EQ #:	Page 23 of 23
	LAP			4070	
	Date: 4/22/21	Date:	Date:		



Drilling Program
Colgate Energy
 Robin Fed 203H
 10' FSL & 1,325' FEL (SHL)
 Sec 20-T20S-R34E
 Lea County, New Mexico

The estimated tops of geologic formations are as follows:

Formation:	TVD	Subsea
Rustler	1559	2145
Salado	1669	2035
Tansill	3254	450
Yates	3429	275
Seven Rivers	3654	50
Capitan	3954	-250
Queen	4154	-450
Cherry Canyon	5584	-1880
Brushy Canyon	6794	-3120
Bone Spring Lime	8479	-4775
1st Bone Spring Sand*	9554	-5850
2nd Bone Spring Sand*	10129	-6425
3rd Bone Spring Sand*	10864	-7160
Wolfcamp XY Sand*	11084	-7380

Formations anticipated to contain fresh water, oil or gas are as follows:

Water	Fresh water is anticipated at 65' and will be protected by setting a water string at 1620' and cementing to surface.
Water	The Capitan Reef is anticipated to contain usable water and will be protected by setting an intermediate casing string at 5530' and cementing to surface using a stage tool.
Hydrocarbons	Oil and gas are anticipated in the above (*) formations. These zones will be protected by casing as necessary.

Proposed casing program is as follows:

Name	Hole Size	Casing Size	Weight & Grade	Thread Collar	Top Csg	Setting Depth	Collapse	Burst	Tension
Surface	17 1/2	13 3/8	54.5# J-55 (new)	BTC	0	1,620'	1.125	1.2	1.6
Intermediate	12 1/4	9 5/8	40# J-55 (new)	BTC	0	5,530'	1.125	1.2	1.6
Production	8 3/4	5 1/2	17# HPP-110 (new)	CDC HTQ	0	21,436'	1.125	1.1	1.6

SF Values will meet or exceed

Proposed cementing program is as follows:

Name	Slurry	Sacks	Yield	Weight	Excess	Top Cement	Blend
Surface	Lead	1050	1.68	13.7	100%	0'	ExtendaCem-CZ
	Tail	340	1.35	14.8	100%	1,290'	HalCem-C + accelerator
Intermediate	Lead	173	1.88	12.9	50%	3,730'	EconoCem-HLC + 5 % salt + 5 lb/sk Kol-Seal
	Tail	230	1.33	14.8	25%	4,424'	HalCem-C
2nd Stage	Lead	563	1.88	12.9	50%	0'	EconoCem-HLC + 5 % salt + 5 lb/sk Kol-Seal
	Tail	326	1.33	14.8	25%	2,624'	HalCem-C
Production	Lead	1235	2.41	11.5	25%	0'	Class H + POZ + extender + fluid loss + dispersant + retarder
	Tail	2020	1.73	12.5	25%	10,370'	Class H + POZ + extender + fluid loss + dispersant + retarder

Proposed casing and cementing accessories are as follows: (Casing will be centralized per Onshore Order 2.III.B.1.f)

Surface:	1 centralizer 5' above shoe held in place with stop ring; 1 centralizer per joint for following 2 joints then every other joint to surface
Intermediate:	2 centralizers on 1st joint, 1 centralizer on 2nd joint, 1 centralizer every 4th joint to surface Stage tool will be placed at approximately 3730' to ensure intermediate casing string is adequately cemented.
Production:	2 centralizers on bottom joint, 1 centralizer on 2nd joint, 1 centralizer every 3rd joint to 5030'

Proposed pressure control equipment is as follows (see schematics below):

BOPE with working pressure ratings in excess of anticipated maximum surface pressure will be utilized for well control from drill out of surface casing to TMD. A rotating head will also be installed and utilized as needed. All BOPE connections shall be flanged, welded or clamped. All choke lines shall be straight unless targeted with running tees or tee blocks are used, and choke lines shall be anchored to prevent whip and reduce vibrations. All valves in the choke line & the choke manifold shall be full opening as to not cause restrictions and to allow for straight fluid paths to minimize potential erosion. All gauges utilized in the well control system shall be of a type designed for drilling fluid service. A top drive inside BOP valve will be utilized at all times. Subs equipped with full opening valves sized to fit the drill pipe and collars will be available on the rig floor in the open position. The key to operate said valve equipped subs will be on the rig floor at all times. The accumulator system will have sufficient capacity to open the HCR and close all three sets of rams plus the annular preventer while retaining at least 300 psi above precharge on the closing manifold (accumulator system shall be capable of doing so without using the closing unit pumps). The fluid reservoir capacity will be double the usable fluid volume of the accumulator system capacity, and the fluid level will be maintained at the manufacturer's recommended level. Prior to connecting the closing unit to the BOP stack, an accumulator precharge pressure test shall be performed to ensure the precharge pressure is within 100 psi of the desired precharge pressure (only nitrogen gas will be used to precharge). Two independent power sources will be made available at all times to power the closing unit pumps so that the pumps can automatically start when the closing valve manifold pressure has decreased to the pre-set level. Closing unit pumps will be sized to allow opening of HCR and closing of annular preventer on 5" drill pipe achieving at least 200 psi above precharge pressure with the accumulator system isolated from service in less than two minutes. A valve shall be installed in the closing line as close to the annular preventer as possible to act as a locking device; the valve shall be maintained in the open position and shall be closed only when the power source for the accumulator system is inoperative. Remote controls capable of opening and closing all preventers & the HCR shall be readily accessible to the driller; master controls with the same capability will be operable at the accumulator. The wellhead will be a multi-bowl speed head allowing for hang-off of intermediate casing & isolation of the 13-3/8" x 9-5/8" annulus without breaking the connection between the BOP & wellhead to install an additional casing head. A wear bushing will be installed & inspected frequently to guard against internal wear to wellhead. VBRs (variable-bore rams) will be run in upper ram-body of BOP stack to provide redundancy to annular preventer while RIH w/ production casing;

A request for variance of pressure control equipment as follows:

1. Colgate Energy requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used.

BOPE will be tested per the following procedure:

After surface casing is set and the BOPE installed, pressure tests of BOPE will be performed by a third party tester utilizing water and a test plug to 250 psi low and 5,000 psi high. To deem a pressure test successful, pressure must be maintained for ten minutes without any bleed-off. A valve on the wellhead below seat of test plug will be open at all time during BOPE tests to guard against damage to casing. The BOPE will be re-tested in this manner after any connection breaks or passage of allotted time (25 days). Any BOPE which fails to pass pressure tests after initial install will be replaced prior to drilling out of surface casing shoe. If at any time a BOPE component cannot function to secure the hole, the hole shall be secured utilizing a retrievable packer, and the non-functioning BOPE component shall be repair or replaced. After repair or replacement, a pressure test of the repaired or replaced component and any connections broken to repair or replace the non-functioning component will be tested in the same manner as described for initial install of BOPE. The annular preventer will be faction tested at least weekly, and the ram-type preventers will be function tested on each trip. BOPE pit level drills will be conducted weekly with each drilling crews. All pressure tests performed on BOPE and BOPE pit level drills will be logged in the drilling log. Isolation of 13-3/8" x 9-5/8" casing annulus shall be confirmed by pressure testing of wellhead sealing component after said sealing component is installed.

Each casing string will be tested once installed in the wellbore per the following procedure:

Casing will be tested by pressuring up to 1,500 psi and holding pressure for thirty minutes. A casing test will be deemed successful if test pressure does not decline more than 10% over the thirty minute period. Cement will be allowed to sit undisturbed for twenty-four hours and reach a minimum of 500 psi compressive strength across the "zone of interest" prior to testing casing and drilling out. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Each casing string will be cemented per the following cementing procedure:

Cement will be placed on all casing strings utilizing the pump and plug method. A float will be installed in the casing shoe and float collar on all casing strings to hold cement in place once pumping is completed. A top plug will be utilized on all casing strings to prevent contamination of the cement by the displacement fluid. A preflush fluid will be pumped prior to cement to aid in removal of drilling mud from the wellbore, eliminate drilling mud contamination of the cement slurry and prepare the surface of both the wellbore and casing for cement.

Proposed mud system is as follows:

<u>Name</u>	<u>Hole Size</u>	<u>Mud Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>	<u>Type Mud</u>
Surface	17-1/2"	8.6 - 9.0	28 - 34	NC	FW Spud Mud
Intermediate*	12-1/4"	10.0 - 10.2	30 - 32	NC	Brine Water
Production	8-3/4"	9.0 - 10.0	32 - 35	-	OBM

All necessary mud products for weight addition and fluid loss control will be on location at all times. Mud program is subject to change due to hole conditions. The mud monitoring system is an electronic Pason system satisfying requirements of Onshore Order #1. Both visual and electronic mud monitoring equipment will be utilized to detect volume changes indicating loss or gain of circulating system fluid volume. Slow pump rates will be taken & recorded hourly in the drilling log. Mud engineer will perform tests and provide written report at least every 12 hours while circulating. A trip tank will be utilized and trip sheet will be recorded to ensure wellbore is taking proper fill or displacing proper fluid volume during all tripping operations. Gas detecting equipment will be utilized to monitor for hydrocarbon gas at the shakers while drilling and/or circulating. H₂S monitoring equipment with both visual & auditory alarms will be installed and operational at the shakers, rig floor and cellar while drilling and/or circulating. A flare system with an effective method for ignition & discharge more than 100 feet from the wellbore will be utilized to gather and burn all gas; lines will be straight unless targeted with running tees. A mud gas separator will be installed and operable at least 500 feet before first anticipated hydrocarbon zone.

*If loss circulation is encountered in Capitan Reef, only fresh water will be pumped down drill string for remainder of hole section.

Proposed testing, surveying, logging and coring program is as follows:

No open-hole logs are planned at this time. Directional surveys will be collected at no greater than 200' intervals while drilling through the MWD tools. A GR log will be collected while drilling through the MWD tools from intermediate casing to TD. No DSTs or cores are planned at this time. No temperature logs planned at this time. CBL will be run to confirm TOC on production casing after rig is removed from location. A formation integrity test (FIT) will be performed on 9-5/8" casing string after BOPE is installed to at least 1 ppg over planned section mud weight after drilling ten feet of new hole.

Anticipated potential hazards are as follows:

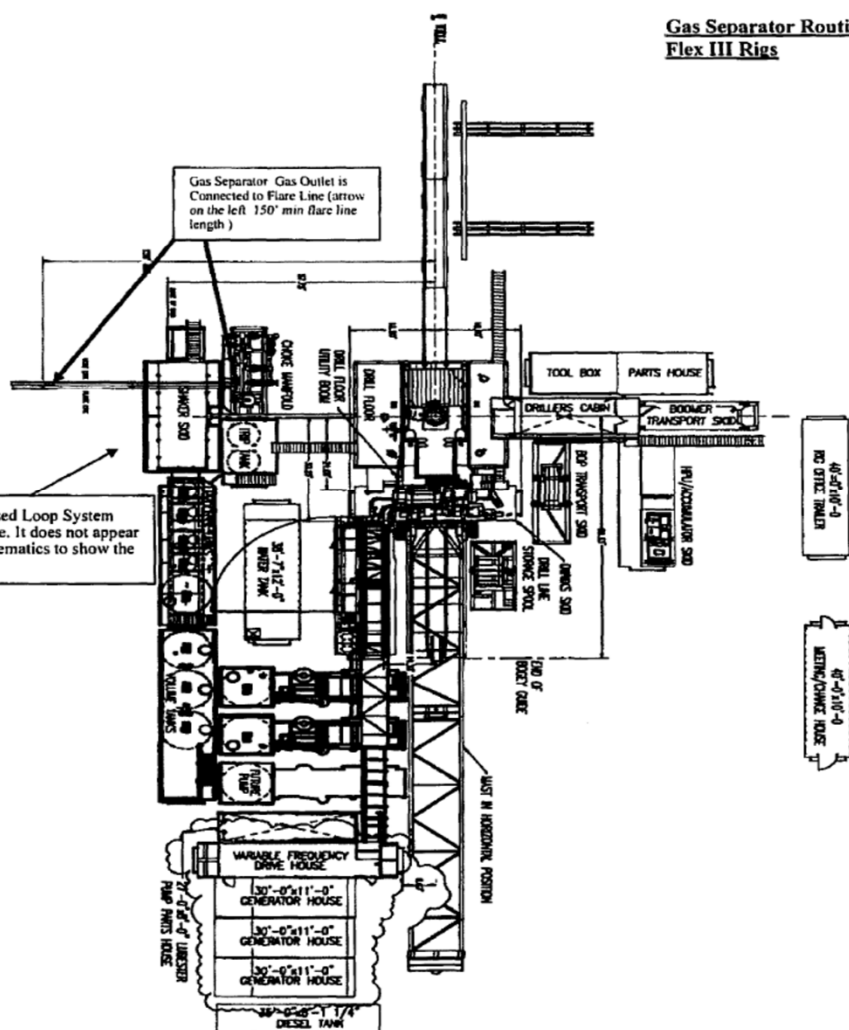
No abnormal pressures or temperatures are expected. In accordance with Onshore Order No. 6, Colgate Energy does not anticipate that there will be enough H₂S from the surface to the Wolfcamp formations to meet the BLM's minimum requirements for the submission of an "H₂S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have an H₂S safety package on all wells, attached is an "H₂S Drilling Operations Plan". Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

Estimated BHP: 8.3 lbs/gal gradient or less

Estimated BHT: 120° F

Planned commencement of operations is as follows:

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take 30 days. If production casing is run an additional 60 days will be required to complete and construct surface facilities.



12.0"

13-5/8 5M

CASING HANGER, C-22, MBS-AW,
13-5/8 NOM X 5-1/2 CSG,
EXTRA CAPACITY

22.5"

13-5/8 5M

CSAING HANGER, MBS-W-EMS-22, FLTD,
13-5/8 NOM, 9-5/8 BC BOX BTM X
10.000 4TPI STUB ACME-2G-LH PIN TOP
W/ PACKOFF SUPPORT BUSHING

25.5"

13-3/8 CASING

9-5/8 CASING

2 LP 5M

2-1/16 5M

26 OD BASEPLATE
W/(2) 3" X 3" GROUT PORTS



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

PWD Data Report

02/21/2024

APD ID: 10400085475

Submission Date: 05/21/2022

Operator Name: COLGATE OPERATING LLC

Well Name: ROBIN FED

Well Number: 203H

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined

Would you like to utilize Lined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit

Pit liner description:

Pit liner manufacturers

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule

Lined pit reclamation description:

Lined pit reclamation

Leak detection system description:

Leak detection system

Operator Name: COLGATE OPERATING LLC

Well Name: ROBIN FED

Well Number: 203H

Lined pit Monitor description:

Lined pit Monitor

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information

Section 3 - Unlined

Would you like to utilize Unlined Pit PWD options? N

Produced Water Disposal (PWD) Location:

PWD disturbance (acres):

PWD surface owner:

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit

Precipitated solids disposal:

Describe precipitated solids disposal:

Precipitated solids disposal

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule

Unlined pit reclamation description:

Unlined pit reclamation

Unlined pit Monitor description:

Unlined pit Monitor

Do you propose to put the produced water to beneficial use?

Beneficial use user

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic

State

Unlined Produced Water Pit Estimated

Unlined pit: do you have a reclamation bond for the pit?

Operator Name: COLGATE OPERATING LLC**Well Name:** ROBIN FED**Well Number:** 203H**Is the reclamation bond a rider under the BLM bond?****Unlined pit bond number:****Unlined pit bond amount:****Additional bond information****Section 4 -****Would you like to utilize Injection PWD options?** N**Produced Water Disposal (PWD) Location:****PWD surface owner:****PWD disturbance (acres):****Injection PWD discharge volume (bbl/day):****Injection well mineral owner:****Injection well type:****Injection well number:****Injection well name:****Assigned injection well API number?****Injection well API number:****Injection well new surface disturbance (acres):****Minerals protection information:****Mineral protection****Underground Injection Control (UIC) Permit?****UIC Permit****Section 5 - Surface****Would you like to utilize Surface Discharge PWD options?** N**Produced Water Disposal (PWD) Location:****PWD surface owner:****PWD disturbance (acres):****Surface discharge PWD discharge volume (bbl/day):****Surface Discharge NPDES Permit?****Surface Discharge NPDES Permit attachment:****Surface Discharge site facilities information:****Surface discharge site facilities map:****Section 6 -****Would you like to utilize Other PWD options?** N**Produced Water Disposal (PWD) Location:****PWD surface owner:****PWD disturbance (acres):****Other PWD discharge volume (bbl/day):**

Operator Name: COLGATE OPERATING LLC

Well Name: ROBIN FED

Well Number: 203H

Other PWD type description:

Other PWD type

Have other regulatory requirements been met?

Other regulatory requirements



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

Bond Info Data

02/21/2024

APD ID: 10400085475

Submission Date: 05/21/2022

Highlighted data
reflects the most
recent changes
[Show Final Text](#)

Operator Name: COLGATE OPERATING LLC

Well Name: ROBIN FED

Well Number: 203H

Well Type: OIL WELL

Well Work Type: Drill

Bond

Federal/Indian APD: FED

BLM Bond number:

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond 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 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 316428

CONDITIONS

Operator: COLGATE OPERATING, LLC 300 North Marienfeld Street Midland, TX 79701	OGRID: 371449
	Action Number: 316428
	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	2/29/2024
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	2/29/2024
pkautz	Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system	2/29/2024
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	2/29/2024
pkautz	If cement does not circulate on any string, a CBL is required for that string of casing	2/29/2024