

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

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

1a. Type of work: ☐ DRILL ☐ REENTER 1b. Type of Well: ☐ Oil Well ☐ Gas Well ☐ Other 1c. Type of Completion: ☐ Hydraulic Fracturing ☐ Single Zone ☐ Multiple Zone		5. Lease Serial No. 6. If Indian, Allottee or Tribe Name 7. If Unit or CA Agreement, Name and No. 8. Lease Name and Well No. [332964]	
2. Name of Operator [229137]		9. API Well No. 30-025-50281	
3a. Address		3b. Phone No. (include area code)	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		10. Field and Pool, or Exploratory [98177] XXXX	
11. Sec., T. R. M. or Blk. and Survey or Area		12. County or Parish	
13. State		14. Distance in miles and direction from nearest town or post office*	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)		16. No of acres in lease	
17. Spacing Unit dedicated to this well		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	
19. Proposed Depth		20. BLM/BIA Bond No. in file	
21. Elevations (Show whether DF, KDB, RT, GL, etc.)		22. Approximate date work will start*	
23. Estimated duration		24. Attachments	
The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)			
1. Well plat certified by a registered surveyor. 2. A Drilling Plan. 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).		4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). 5. Operator certification. 6. Such other site specific information and/or plans as may be requested by the BLM.	
25. Signature		Name (Printed/Typed)	
Title		Date	
Approved by (Signature)		Name (Printed/Typed)	
Title		Office	
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Conditions of approval, if any, are attached.			
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.			

NGMP Rec 05/26/2022

SL

(Continued on page 2)



Approval Date: 05/25/2022

KZ
06/27/2022

*(Instructions on page 2)

Additional Operator Remarks

Location of Well

0. SHL: NWNE / 270 FNL / 1370 FEL / TWSP: 23S / RANGE: 33E / SECTION: 18 / LAT: 32.311278 / LONG: -103.607356 (TVD: 0 feet, MD: 0 feet)

PPP: NWNE / 1 FNL / 2310 FEL / TWSP: 23S / RANGE: 33E / SECTION: 19 / LAT: 32.297517 / LONG: -103.610385 (TVD: 12494 feet, MD: 17600 feet)

PPP: NWNE / 100 FNL / 2310 FEL / TWSP: 23S / RANGE: 33E / SECTION: 18 / LAT: 32.311755 / LONG: -103.610399 (TVD: 12307 feet, MD: 12400 feet)

BHL: SWSE / 50 FSL / 2310 FEL / TWSP: 23S / RANGE: 33E / SECTION: 30 / LAT: 32.268622 / LONG: -103.610356 (TVD: 12550 feet, MD: 27982 feet)

BLM Point of Contact

Name: Gavin Mickwee

Title: Land Law Examiner

Phone: (575) 234-5972

Email: gmickwee@blm.gov

CONFIDENTIAL

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG
LEASE NO.:	NMLC0068848
LOCATION:	Section 18, T.23 S., R.33 E., NMPPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	Meat Lover Fed Com 604H
SURFACE HOLE FOOTAGE:	270'/N & 1370'/E
BOTTOM HOLE FOOTAGE:	50'/S & 2310'/E

COA

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

A. HYDROGEN SULFIDE

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

B. CASING

1. The **10-3/4** inch surface casing shall be set at approximately **1390** feet (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8**

- hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
- c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the 7-5/8 inch intermediate casing is: Cement to surface. If cement does not circulate see B.1.a, c-d above. **Excess calculates to 22%. Additional cement maybe required.**
Wait on cement (WOC) time for a primary cement job is to include the tail cement slurry due to cave/karst.
3. The minimum required fill of cement behind the 5-1/2 inch production casing is:
- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. **Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).**
2. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M) psi. Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
 - b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
 - e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)**Communitization Agreement**

- The operator will submit a Communitization Agreement to the Santa Fe Office, 301 Dinosaur Trail Santa Fe, New Mexico 87508, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

GENERAL REQUIREMENTS

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

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

☒ Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

☒ Lea County

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

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.
 - a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).

- b. When the operator proposes to set surface casing with Spudder Rig
 - Notify the BLM when moving in and removing the Spudder Rig.
 - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
 - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.
2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.
2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.
3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing integrity test can be done (prior to the cement setting up) immediately after bumping the plug.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.
5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.
6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.
7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.
3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.
4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:
 - a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.

- b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
 - c. Manufacturer representative shall install the test plug for the initial BOP test.
 - d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
 - e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
- 5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).
 - c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
 - d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall

have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

- e. The results of the test shall be reported to the appropriate BLM office.
- f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
- g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

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.

ZS031622

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240
Phone: (505) 393-6161 Fax: (505) 393-0720

DISTRICT II
811 S. FIRST ST., ARTESIA, NM 88210
Phone: (505) 748-1283 Fax: (505) 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) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

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

☐ AMENDED REPORT

WC-025 G-09 S223332A;UPR

WOLFCAMP

API Number 30-025- 50281	Pool Code 98135 98177	Pool Name WC-025 G-09 S223332A;UPR Upper Wolfcamp
Property Code 332964	Property Name MEAT LOVER FEDERAL COM	Well Number 604H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3716.2'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	18	23-S	33-E		270	NORTH	1370	EAST	LEA

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
O	30	23-S	33-E		50	SOUTH	2310	EAST	LEA
Dedicated Acres 960	Joint or Infill	Consolidation Code	Order No.						

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

NAD 83 NME SURFACE LOCATION Y=477734.9 N X=765620.9 E LAT.=32.311278° N LONG.=103.607356° W POINT LEGEND <table border="1"> <tr><td>1</td><td>Y=478009.2 N X=766988.7 E</td></tr> <tr><td>2</td><td>Y=475375.3 N X=767010.1 E</td></tr> <tr><td>3</td><td>Y=472734.4 N X=767030.7 E</td></tr> <tr><td>4</td><td>Y=470093.2 N X=767050.5 E</td></tr> <tr><td>5</td><td>Y=467452.4 N X=767070.1 E</td></tr> <tr><td>6</td><td>Y=464812.8 N X=767089.5 E</td></tr> <tr><td>7</td><td>Y=462171.8 N X=767108.8 E</td></tr> <tr><td>8</td><td>Y=462158.9 N X=764470.6 E</td></tr> <tr><td>9</td><td>Y=467438.7 N X=764429.6 E</td></tr> <tr><td>10</td><td>Y=472720.5 N X=764390.1 E</td></tr> <tr><td>11</td><td>Y=478000.9 N X=764351.0 E</td></tr> </table> NAD 83 NME PROPOSED BOTTOM HOLE LOCATION Y=462210.5 N X=764798.4 E LAT.=32.268622° N LONG.=103.610356° W	1	Y=478009.2 N X=766988.7 E	2	Y=475375.3 N X=767010.1 E	3	Y=472734.4 N X=767030.7 E	4	Y=470093.2 N X=767050.5 E	5	Y=467452.4 N X=767070.1 E	6	Y=464812.8 N X=767089.5 E	7	Y=462171.8 N X=767108.8 E	8	Y=462158.9 N X=764470.6 E	9	Y=467438.7 N X=764429.6 E	10	Y=472720.5 N X=764390.1 E	11	Y=478000.9 N X=764351.0 E	LOT 1 11' S.L. 1370' 270' 39.72 Ac LOT 2 39.19 Ac LOT 3 38.79 Ac LOT 4 38.26 Ac SECTION 18 SECTION 19 LOT 1 37.95 Ac LOT 2 37.96 Ac LOT 3 37.97 Ac LOT 4 37.99 Ac SECTION 19 SECTION 30 LOT 1 37.99 Ac LOT 2 38.00 Ac LOT 3 38.00 Ac LOT 4 38.00 Ac 50' B.H. 2310' FTP 100' FNL & 2310' FEL Y=477902.0 N X=764679.5 E LAT.=32.311755° N LONG.=103.610399° W GRID AZ. TO FTP 280°03'50" LEASE X-ING LAT.=32.297517° N LONG.=103.610385° W LEASE X-ING LAT.=32.282998° N LONG.=103.610371° W LTP 100' FSL & 2310' FEL Y=462260.5 N X=764798.0 E LAT.=32.268760° N LONG.=103.610357° W	OPERATOR CERTIFICATION I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Stan Wagner</i> 9/7/21 Signature Date Stan Wagner Printed Name E-mail Address 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. MAY 28, 2021 Date of Survey Signature & Seal of Professional Surveyor <i>Chad Harcrow</i> 6/9/21 Certificate No. CHAD HARCROW 17777 W.O. # 21-536 DRAWN BY: AH
1	Y=478009.2 N X=766988.7 E																							
2	Y=475375.3 N X=767010.1 E																							
3	Y=472734.4 N X=767030.7 E																							
4	Y=470093.2 N X=767050.5 E																							
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9	Y=467438.7 N X=764429.6 E																							
10	Y=472720.5 N X=764390.1 E																							
11	Y=478000.9 N X=764351.0 E																							

Intent ☒ As Drilled ☐

API # 30-025-		
Operator Name: COG Operating LLC	Property Name: Meat Lover Federal Com	Well Number 604H

Kick Off Point (KOP)

UL B	Section 18	Township 23S	Range 33E	Lot	Feet	From N/S	Feet	From E/W	County Lea
Latitude					Longitude			NAD NAD 83	

First Take Point (FTP)

UL B	Section 18	Township 23S	Range 33E	Lot	Feet 100	From N/S North	Feet 2310	From E/W East	County Lea
Latitude 32.311755					Longitude -103.610399			NAD NAD 83	

Last Take Point (LTP)

UL O	Section 30	Township 23S	Range 33E	Lot	Feet 100	From N/S South	Feet 2310	From E/W East	County Lea
Latitude 32.268760					Longitude -103.610357			NAD NAD 83	

Is this well the defining well for the Horizontal Spacing Unit? ☐ NoIs this well an infill well? ☐ Yes

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API # 30-025-		
Operator Name: COG Operating LLC	Property Name: Meat Lover Federal Com	Well Number 602H

KZ 06/29/2018

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

Submit Electronically
Via E-permitting

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: COG Operating LLC

OGRID: 239137

Date: 08/18/2021

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

If Other, please describe: _____

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

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Meat Lover Fed Com 601H	30-025-	A-18-23S-33E	270 FNL & 1280 FEL	± 1400	± 2240	± 4900
Meat Lover Fed Com 602H	30-025-	A-18-23S-33E	270 FNL & 1310 FEL	± 1400	± 2240	± 4900
Meat Lover Fed Com 603H	30-025-	B-18-23S-33E	270 FNL & 1340 FEL	± 1400	± 2240	± 4900
Meat Lover Fed Com 604H	30-025-50281	B-18-23S-33E	270 FNL & 1370 FEL	± 1400	± 2240	± 4900

IV. Central Delivery Point Name: Meat Lover Fed Com 18 B CTB 210 FNL & 2240 FEL 18-23S-33E [See 19.15.27.9(D)(1) NMAC]

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

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Meat Lover Fed Com	Pending	± 6/1/2024	± 25 days from spud	TBD	TBD	TBD
601H, 602H, 603H, 604H	30-025-50281					

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

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

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

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

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

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

IX. Anticipated Natural Gas Production:

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

X. Natural Gas Gathering System (NGGS):

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

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

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

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

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

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

Section 3 - Certifications

Effective May 25, 2021

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

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

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

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

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

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

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

Section 4 - Notices

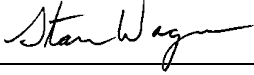
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

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

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

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

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

Signature: 
Printed Name: Stan Wagner
Title: Regulatory Advisor
E-mail Address: stan.s.wagner@conocophillips.com
Date: 08/18/2021
Phone: 432-253-9685
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:

VI. Separation Equipment

How Operator will size separation equipment to optimize gas capture:

All ConocoPhillips production facility equipment will be sized per industry standards (API 12J) with adequate retention time to effectively separate all phases of production. Each project will take into consideration the number of wells and type curves for each formation pool to ensure adequate facility capacity. Design considerations will also include review of all piping, tanks, VRU's and associated equipment to ensure optimized gas capture minimized risk of release.

VII. Operational Practices

Actions Operator will take to comply with the requirements below:

B. Drilling Operations

- During drilling, flare stacks will be located a minimum of 100 feet from the nearest surface hole location. All gas is captured or combusted. If an emergency or malfunction occurs, gas will be flared or vented for public health, safety, and the environment and be properly reported to the NMOCD pursuant to 19.15.27.8.G.
- Measure or estimate the volume of natural gas that is vented, flared or beneficially used during drilling, completion and production operations, regardless of the reason or authorization for such venting or flaring.

C. Completion Operations

- During completion operations, operator does not produce oil or gas but maintains adequate well control through completion operations.
- Individual well test separators will be set to properly separate gas and liquids. A temporary test separator will be utilized initially to process volumes. In addition, separators will be tied into flowback tanks which will be tied into the gas processing equipment for sales down a pipeline.

D. Venting and flaring during production operations

- During each phase of well life (drilling, completion and production) of a ConocoPhillips well, COP personnel will follow all necessary procedures to ensure both the operation and the equipment are within the NMAC 19.15.27.8 Subsection D guidelines.
- During well operations that require unloading of the well to atmospheric pressure, all reasonable actions will be taken to minimize vented gas
- Through the life of the well all flaring shall be measured, and venting events quantified using the data available and industry best practice.

E. Performance standards for separation, storage tank and flare equipment

- All storage tanks and separation equipment are designed minimize risk of liquid or vapor release and optimize gas capture. This includes automation for automatic gauging and pressure monitoring.

- All flare stacks are equipped with auto ignition devices and/or continuous pilots and are designed to operate at maximum combustion efficiency pursuant NMAC 19.15.27.8 Subsection E. Flares will follow COP spacing guidelines to ensure they are a safe distance from combustibles and operations equipment.
- COP personnel will conduct routine AVO inspections on a regular basis per NMAC 19.15.27.8 Subsection E guidelines.

F. Measurement of vented and flared natural gas.

- Measurement equipment will be installed to quantify gas flared during drilling, completion and production of the well.
- All measurement devices installed will meet accuracy ratings per AGA and API standards.
- Measurement devices will be installed without manifolds that allow diversion of gas around the metering element, except for the sole purpose of inspection of servicing the measurement device.

VIII. Best Management Practices

- Operator will curtail or shut in production, within reasonable limits, during upset conditions to minimize venting and flaring.
- When feasible, Operator will use equipment to capture gas that would otherwise be vented or flared.
- During completions and production operations Operator will minimize blowdowns to atmosphere
- When feasible, Operator will use electric or air actuated equipment to reduce bleed emissions

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1. Geologic Formations

TVD of target	12,470' EOL	Pilot hole depth	NA
MD at TD:	27,982'	Deepest expected fresh water:	345'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	1310	Water	
Top of Salt	1804	Salt	
Base of Salt	4788	Salt	
Lamar	5074	Salt Water	
Bell Canyon	5149	Salt Water	
Cherry Canyon	5953	Oil/Gas	
Brushy Canyon	7420	Oil/Gas	
Bone Spring Lime	8892	Oil/Gas	
1st Bone Spring Sand	10124	Oil/Gas	
2nd Bone Spring Sand	10740	Oil/Gas	
3rd Bone Spring Sand	11984	Oil/Gas	
Wolfcamp A	12470	Target	
Wolfcamp B	0	Not Penetrated	
Wolfcamp D	0	Not Penetrated	

2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body	SF Joint
	From	To								
14.75"	0	1350	10.75"	45.5	N80	BTC	4.00	1.67	16.93	17.86
9.875"	0	8500	7.625"	29.7	HCL80	BTC	1.56	1.07	2.88	2.90
8.750"	8500	11800	7.625"	29.7	P110 RY	W 513	1.33	1.42	2.68	1.61
6.75"	0	11300	5.5"	23	P110	BTC	1.98	2.34	2.80	2.79
6.75"	11300	27,982	5.5"	23	P110	W441	1.79	2.12	2.54	2.31
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

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

The 5 1/2" talon casing will be run back 200' into the intermediate casing to ensure the coupling OD clearance is greater than .422" for the cement bond tie in.

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

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3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	644	13.5	1.75	9	12	Lead: Class C + 4% Gel + 1% CaCl ₂
	250	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl ₂
Inter. Stage 1	840	10.3	3.3	22	24	Halliburton tunded light
	250	14.8	1.35	6.6	8	Tail: Class H
Prod	524	12.7	2	10.7	72	Lead: 50:50:10 H Blend
	1573	14.4	1.24	5.7	19	Tail: 50:50:2 Class H Blend

If losses are encountered in the intermediate section a DV/ECP tool will be run ~50' above the Lamar Lime top, cement will be adjusted accordingly if this contingency is necessary.

Volumes Subject to Observed Hole Conditions and/or Fluid Caliper Results

Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
Surface	0'	50%
1 st Intermediate	0'	50%
Production	11,300'	35% OH in Lateral (KOP to EOL)

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4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
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BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	x	Tested to:
9-7/8"	13-5/8"	5M	Annular	x	2500psi
			Blind Ram	x	5000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		
6-3/4"	13-5/8"	10M	5M Annular	x	5000psi
			Blind Ram	x	10000psi
			Pipe Ram	x	
			Double Ram	x	
			Other*		

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

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

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
N	Are anchors required by manufacturer?
Y	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

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5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	7-5/8" Int shoe	Brine Diesel Emulsion	8.4 - 9	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	9.6 - 12.5	35-45	<20

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

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

6. Logging and Testing Procedures

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

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

ConocoPhillips - Meat Lover Fed Com 604H**7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	8110 psi at 12470' TVD
Abnormal Temperature	NO 180 Deg. F.

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

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

Hydrogen Sulfide (H ₂ S) monitors will be installed prior to drilling out the surface shoe. If H ₂ S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
N	H ₂ S is present
Y	H ₂ S Plan attached

8. Other Facets of Operation

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

x	H ₂ S Plan.
x	BOP & Choke Schematics.
x	Directional Plan

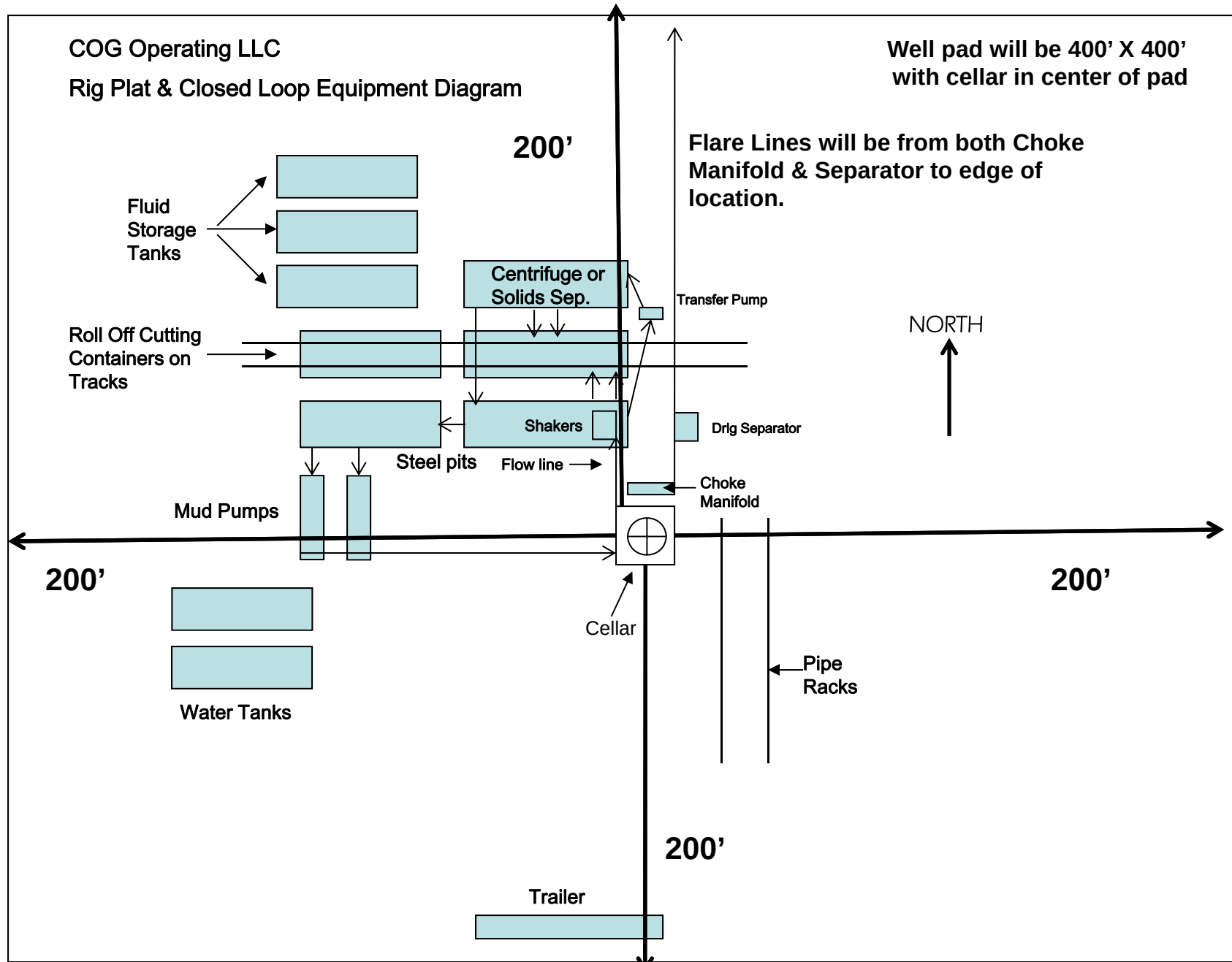


Exhibit 1

"I further certify that COG will comply with Rule 19.15.17 NMAC by using a Closed Loop System."

DELAWARE BASIN EAST

BULLDOG PROSPECT (NM-E)

MEAT LOVER FED COM PROJECT

MEAT LOVER FED COM #604H

OWB

PWP1

Anticollision Report

07 July, 2021

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Reference	PWP1
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	Stations
Depth Range:	Unlimited
Results Limited by:	Maximum centre distance of 1,000.0usft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Pedal Curve
Casing Method:	Not applied

Survey Tool Program	Date	7/7/2021
From (usft)	To (usft)	Survey (Wellbore)
0.0	11,931.7	PWP1 (OWB)
11,932.0	27,982.9	PWP1 (OWB)
		Tool Name
		Standard Keeper 104
		MWD+IFR1+FDIR
		Description
		Standard Wireline Keeper ver 1.0.4
		OWSG MWD + IFR1 + 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						
MEAT LOVER FED COM PROJECT						
BRINNINSTOOL UNIT #3-P&A'd - OWB - AWP	22,079.7	12,489.2	359.1	20.5	1.061	Advise and Monitor, CC, I
JAGUAR `18` STATE #2H - OWB - AWP	16,375.6	12,589.6	935.2	853.7	11.477	
JAGUAR `18` STATE #2H - OWB - AWP	16,400.0	12,573.0	935.3	853.7	11.462	
JAGUAR `18` STATE #2H - OWB - AWP	16,500.0	12,517.6	938.5	856.3	11.427	SF
JAGUAR `18` STATE #3H - OWB - AWP	9,800.0	14,158.0	307.5	239.9	4.547	SF
JAGUAR `18` STATE #3H - OWB - AWP	9,832.5	14,158.0	305.8	238.6	4.555	CC, ES
MEAT LOVER FED COM #601H - OWB - PWP1	2,500.0	2,499.6	89.9	77.2	7.092	CC, ES, SF
MEAT LOVER FED COM #602H - OWB - PWP1	2,416.6	2,416.9	59.9	47.5	4.843	CC
MEAT LOVER FED COM #602H - OWB - PWP1	2,500.0	2,500.0	59.9	47.2	4.725	ES, SF
MEAT LOVER FED COM #603H - OWB - PWP1	2,501.5	2,501.7	29.9	23.0	4.335	CC, ES
MEAT LOVER FED COM #603H - OWB - PWP1	27,982.9	27,947.6	660.0	386.9	2.417	SF
MEAT LOVER FED COM #605H - OWB - PWP1	22,168.1	22,165.5	546.2	364.1	2.999	CC
MEAT LOVER FED COM #605H - OWB - PWP1	27,982.9	27,978.0	593.3	315.1	2.132	ES, SF

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

TD Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
MEAT LOVER FED COM PROJECT						
BRINNINSTOOL UNIT #3-P&A'd - OWB - AWP	27,982.9	12,520.8				Out of Range @TD
JAGUAR `18` STATE #2H - OWB - AWP	27,982.9	11,410.0				Out of Range @TD
JAGUAR `18` STATE #3H - OWB - AWP	27,982.9	9,350.0				Out of Range @TD
MEAT LOVER FED COM #601H - OWB - PWP1	27,982.9	27,976.3				Out of Range @TD
MEAT LOVER FED COM #602H - OWB - PWP1	27,982.9	27,945.6				Out of Range @TD
MEAT LOVER FED COM #603H - OWB - PWP1	27,982.9	27,947.6	660.0	386.9	2.417 SF	
MEAT LOVER FED COM #605H - OWB - PWP1	27,982.9	27,978.0	593.3	315.1	2.132 ES, SF	

Offset Design: MEAT LOVER FED COM PROJECT - BRINNINSTOOL UNIT #3-P&A'd - OWB - AWP

Survey Program: 15760-INC-ONLY													Offset Site Error:	0.0 usft
Reference Offset				Semi Major Axis		Offset Wellbore Centre			Rule Assigned:				Offset Well Error:	5.0 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	
21,200.0	12,513.7	12,484.5	12,484.5	78.6	252.4	-89.15	-9,631.1	-551.4	943.9	656.5	287.45	3.284		
21,272.3	12,514.1	12,484.9	12,484.9	79.2	252.4	-89.22	-9,631.1	-551.4	876.1	587.0	289.12	3.030		
21,300.0	12,514.3	12,485.1	12,485.1	79.5	252.4	-89.27	-9,631.1	-551.4	850.4	560.6	289.84	2.934		
21,400.0	12,514.8	12,485.6	12,485.6	80.3	252.5	-89.42	-9,631.1	-551.4	759.6	466.6	293.06	2.592		
21,451.1	12,515.1	12,485.9	12,485.9	80.7	252.5	-89.48	-9,631.1	-551.4	714.9	419.7	295.13	2.422		
21,500.0	12,515.3	12,486.1	12,486.1	81.2	252.5	-89.52	-9,631.1	-551.4	673.1	375.6	297.42	2.263		
21,600.0	12,515.8	12,486.6	12,486.6	82.0	252.5	-89.61	-9,631.1	-551.4	591.0	288.0	303.04	1.950	Advise and Monitor	
21,700.0	12,516.4	12,487.2	12,487.2	82.8	252.5	-89.69	-9,631.1	-551.4	515.4	205.2	310.13	1.662	Advise and Monitor	
21,800.0	12,516.9	12,487.7	12,487.7	83.7	252.5	-89.78	-9,631.1	-551.4	449.3	130.7	318.69	1.410	Advise and Monitor	
21,900.0	12,517.4	12,488.2	12,488.2	84.5	252.5	-89.86	-9,631.1	-551.4	397.8	69.8	327.92	1.213	Advise and Monitor	
21,990.5	12,517.9	12,488.7	12,488.7	85.3	252.5	-89.93	-9,631.1	-551.4	368.6	33.6	335.03	1.100	Advise and Monitor	
22,000.0	12,517.9	12,488.7	12,488.7	85.4	252.5	-89.94	-9,631.1	-551.4	366.8	31.1	335.60	1.093	Advise and Monitor	
22,079.7	12,518.4	12,489.2	12,489.2	86.1	252.5	-90.00	-9,631.1	-551.4	359.1	20.5	338.56	1.061	Advise and Monitor, CC, ES, SF	
22,100.0	12,518.5	12,489.3	12,489.3	86.2	252.5	-90.01	-9,631.1	-551.4	359.6	20.9	338.72	1.062	Advise and Monitor	
22,200.0	12,519.0	12,489.8	12,489.8	87.1	252.5	-90.09	-9,631.1	-551.4	376.3	40.2	336.08	1.120	Advise and Monitor	
22,300.0	12,519.5	12,490.3	12,490.3	87.9	252.6	-90.16	-9,631.1	-551.4	414.0	84.6	329.37	1.257	Advise and Monitor	
22,347.9	12,519.8	12,490.6	12,490.6	88.4	252.6	-90.19	-9,631.1	-551.4	438.0	112.5	325.51	1.346	Advise and Monitor	
22,400.0	12,520.1	12,490.9	12,490.9	88.8	252.6	-90.23	-9,631.1	-551.4	467.9	146.7	321.24	1.457	Advise and Monitor	
22,500.0	12,520.6	12,491.4	12,491.4	89.7	252.6	-90.31	-9,631.1	-551.4	535.0	221.3	313.65	1.706	Advise and Monitor	
22,600.0	12,521.1	12,491.9	12,491.9	90.5	252.6	-90.39	-9,631.1	-551.4	611.1	303.8	307.31	1.989	Advise and Monitor	
22,700.0	12,521.6	12,492.4	12,492.4	91.4	252.6	-90.48	-9,631.1	-551.4	693.4	391.1	302.27	2.294		
22,800.0	12,522.1	12,492.9	12,492.9	92.2	252.6	-90.56	-9,631.1	-551.4	779.8	481.4	298.34	2.614		
22,887.9	12,522.6	12,493.4	12,493.4	93.0	252.6	-90.63	-9,631.1	-551.4	858.1	562.5	295.61	2.903		
22,900.0	12,522.7	12,493.5	12,493.5	93.1	252.6	-90.65	-9,631.1	-551.4	869.1	573.8	295.28	2.943		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: MEAT LOVER FED COM PROJECT - BRINNINSTOOL UNIT #3-P&A'd - OWB - AWP													Offset Site Error:	0.0 usft
Survey Program:	15760-INC-ONLY		Offset	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:		Offset Well Error:		5.0 usft	
Reference	Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference Offset (usft)		+N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
	23,000.0	12,523.2	12,494.0	12,494.0	93.9	252.6	-90.81	-9,631.1	-551.4	961.3	668.3	293.03	3.281	

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: MEAT LOVER FED COM PROJECT - JAGUAR '18' STATE #2H - OWB - AWP													Offset Site Error:	0.0 usft
Survey Program: 128-MWD													Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
15,300.0	12,482.8	13,562.5	12,184.8	29.8	51.8	73.71	-2,958.4	-1,869.6	998.2	918.5	79.71	12.523		
15,400.0	12,483.4	13,476.1	12,181.7	30.6	51.0	73.35	-3,044.0	-1,859.0	988.3	908.5	79.71	12.398		
15,500.0	12,483.9	13,383.7	12,177.6	31.3	50.1	72.92	-3,135.7	-1,848.2	979.2	899.6	79.66	12.294		
15,600.0	12,484.4	13,287.3	12,175.4	32.1	49.3	72.61	-3,231.6	-1,838.2	970.9	891.3	79.61	12.196		
15,700.0	12,484.9	13,199.2	12,176.1	32.9	48.6	72.50	-3,319.4	-1,830.8	963.4	883.7	79.74	12.082		
15,800.0	12,485.5	13,100.8	12,178.0	33.7	47.9	72.46	-3,417.4	-1,823.6	956.7	876.9	79.79	11.990		
15,900.0	12,486.0	13,005.8	12,178.2	34.5	47.2	72.33	-3,512.2	-1,816.2	950.1	870.2	79.92	11.888		
16,000.0	12,486.5	12,920.1	12,179.7	35.3	46.6	72.29	-3,597.7	-1,810.7	944.4	864.2	80.20	11.775		
16,100.0	12,487.0	12,840.3	12,180.5	36.1	46.1	72.26	-3,677.4	-1,807.2	940.7	860.2	80.57	11.676		
16,200.0	12,487.6	12,744.0	12,182.0	36.9	45.5	72.29	-3,773.7	-1,804.4	938.4	857.5	80.84	11.608		
16,300.0	12,488.1	12,645.4	12,181.7	37.7	45.0	72.19	-3,872.2	-1,801.0	936.1	855.0	81.12	11.539		
16,375.6	12,488.5	12,589.6	12,179.0	38.3	44.7	71.98	-3,927.9	-1,798.9	935.2	853.7	81.48	11.477 CC		
16,400.0	12,488.6	12,573.0	12,177.4	38.5	44.6	71.87	-3,944.4	-1,798.3	935.3	853.7	81.60	11.462 ES		
16,500.0	12,489.1	12,517.6	12,169.4	39.3	44.3	71.37	-3,999.2	-1,797.0	938.5	856.3	82.13	11.427 SF		
16,600.0	12,489.7	12,461.5	12,157.9	40.1	44.1	70.71	-4,054.1	-1,797.2	946.6	864.0	82.57	11.464		
16,700.0	12,490.2	12,392.3	12,138.6	40.9	43.8	69.62	-4,120.5	-1,798.6	959.0	876.1	82.86	11.573		
16,800.0	12,490.7	12,304.5	12,104.8	41.7	43.4	67.71	-4,201.5	-1,797.5	973.7	890.7	82.98	11.734		
16,900.0	12,491.2	12,233.8	12,072.6	42.5	43.1	65.88	-4,264.3	-1,794.8	990.7	907.6	83.11	11.920		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: MEAT LOVER FED COM PROJECT - JAGUAR '18' STATE #3H - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 5112-MWD												Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,900.0	8,870.5	14,158.0	9,775.0	10.6	78.7	-56.65	-72.1	-901.2	981.4	921.3	60.02	16.350	
9,000.0	8,970.0	14,158.0	9,775.0	10.8	78.7	-56.65	-72.1	-901.2	886.9	826.1	60.74	14.600	
9,100.0	9,069.6	14,158.0	9,775.0	10.9	78.7	-56.65	-72.1	-901.2	793.8	732.2	61.58	12.891	
9,200.0	9,169.1	14,158.0	9,775.0	11.0	78.7	-56.65	-72.1	-901.2	702.5	640.0	62.55	11.232	
9,300.0	9,268.6	14,158.0	9,775.0	11.1	78.7	-56.65	-72.1	-901.2	614.0	550.4	63.69	9.641	
9,400.0	9,368.1	14,158.0	9,775.0	11.3	78.7	-56.65	-72.1	-901.2	529.7	464.6	65.03	8.145	
9,500.0	9,467.7	14,158.0	9,775.0	11.4	78.7	-56.65	-72.1	-901.2	451.7	385.2	66.51	6.792	
9,600.0	9,567.2	14,158.0	9,775.0	11.5	78.7	-56.65	-72.1	-901.2	384.1	316.2	67.88	5.659	
9,700.0	9,666.7	14,158.0	9,775.0	11.6	78.7	-56.65	-72.1	-901.2	333.3	264.8	68.47	4.867	
9,800.0	9,766.2	14,158.0	9,775.0	11.8	78.7	-56.65	-72.1	-901.2	307.5	239.9	67.63	4.547 SF	
9,832.5	9,798.6	14,158.0	9,775.0	11.8	78.7	-56.65	-72.1	-901.2	305.8	238.6	67.14	4.555 CC, ES	
9,900.0	9,865.8	14,158.0	9,775.0	11.9	78.7	-56.65	-72.1	-901.2	313.1	247.1	66.06	4.740	
10,000.0	9,965.3	14,158.0	9,775.0	12.0	78.7	-56.65	-72.1	-901.2	348.7	284.3	64.37	5.416	
10,100.0	10,064.8	14,158.0	9,775.0	12.1	78.7	-56.65	-72.1	-901.2	406.3	343.5	62.80	6.469	
10,200.0	10,164.3	14,158.0	9,775.0	12.3	78.7	-56.65	-72.1	-901.2	478.1	416.4	61.69	7.750	
10,300.0	10,263.9	14,158.0	9,775.0	12.4	78.7	-56.65	-72.1	-901.2	558.6	497.6	61.07	9.147	
10,400.0	10,363.4	14,158.0	9,775.0	12.5	78.7	-56.65	-72.1	-901.2	644.6	583.8	60.82	10.600	
10,500.0	10,462.9	14,158.0	9,775.0	12.6	78.7	-56.65	-72.1	-901.2	734.2	673.4	60.79	12.077	
10,600.0	10,562.4	14,158.0	9,775.0	12.8	78.7	-56.65	-72.1	-901.2	826.2	765.3	60.92	13.562	
10,700.0	10,662.0	14,158.0	9,775.0	12.9	78.7	-56.65	-72.1	-901.2	919.8	858.7	61.14	15.045	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: MEAT LOVER FED COM PROJECT - MEAT LOVER FED COM #601H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning	
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.0	0.0	0.0	0.0	3.0	3.0	89.81	0.3	89.9	89.9	83.9	6.00	14.977		
100.0	100.0	99.6	99.6	3.0	3.0	89.81	0.3	89.9	89.9	83.9	6.04	14.884		
200.0	200.0	199.6	199.6	3.0	3.0	89.81	0.3	89.9	89.9	83.9	6.12	14.689		
300.0	300.0	299.6	299.6	3.0	3.1	89.81	0.3	89.9	89.9	83.8	6.24	14.407		
400.0	400.0	399.6	399.6	3.0	3.2	89.81	0.3	89.9	89.9	83.7	6.40	14.056		
500.0	500.0	499.6	499.6	3.1	3.4	89.81	0.3	89.9	89.9	83.5	6.58	13.656		
600.0	600.0	599.6	599.6	3.1	3.6	89.81	0.3	89.9	89.9	83.3	6.80	13.225		
700.0	700.0	699.6	699.6	3.1	3.8	89.81	0.3	89.9	89.9	83.1	7.04	12.778		
800.0	800.0	799.6	799.6	3.2	4.0	89.81	0.3	89.9	89.9	82.9	7.29	12.327		
900.0	900.0	899.6	899.6	3.2	4.2	89.81	0.3	89.9	89.9	82.6	7.57	11.880		
1,000.0	1,000.0	999.6	999.6	3.2	4.5	89.81	0.3	89.9	89.9	82.3	7.86	11.444		
1,100.0	1,100.0	1,099.6	1,099.6	3.3	4.8	89.81	0.3	89.9	89.9	82.0	8.16	11.022		
1,200.0	1,200.0	1,199.6	1,199.6	3.4	5.1	89.81	0.3	89.9	89.9	81.7	8.47	10.616		
1,300.0	1,300.0	1,299.6	1,299.6	3.4	5.3	89.81	0.3	89.9	89.9	81.4	8.79	10.229		
1,400.0	1,400.0	1,399.6	1,399.6	3.5	5.6	89.81	0.3	89.9	89.9	81.1	9.12	9.861		
1,500.0	1,500.0	1,499.6	1,499.6	3.5	6.0	89.81	0.3	89.9	89.9	80.8	9.45	9.512		
1,600.0	1,600.0	1,599.6	1,599.6	3.6	6.3	89.81	0.3	89.9	89.9	80.4	9.79	9.180		
1,700.0	1,700.0	1,699.6	1,699.6	3.7	6.6	89.81	0.3	89.9	89.9	80.1	10.14	8.867		
1,800.0	1,800.0	1,799.6	1,799.6	3.8	6.9	89.81	0.3	89.9	89.9	79.8	10.49	8.570		
1,900.0	1,900.0	1,899.6	1,899.6	3.9	7.2	89.81	0.3	89.9	89.9	79.4	10.85	8.289		
2,000.0	2,000.0	1,999.6	1,999.6	3.9	7.6	89.81	0.3	89.9	89.9	79.1	11.21	8.023		
2,100.0	2,100.0	2,099.6	2,099.6	4.0	7.9	89.81	0.3	89.9	89.9	78.7	11.57	7.771		
2,200.0	2,200.0	2,199.6	2,199.6	4.1	8.2	89.81	0.3	89.9	89.9	78.3	11.94	7.532		
2,300.0	2,300.0	2,299.6	2,299.6	4.2	8.6	89.81	0.3	89.9	89.9	78.0	12.30	7.306		
2,400.0	2,400.0	2,399.6	2,399.6	4.3	8.9	89.81	0.3	89.9	89.9	77.6	12.68	7.092 CC, ES, SF		
2,500.0	2,500.0	2,499.6	2,499.6	4.4	9.2	89.81	0.3	89.9	89.9	77.2	13.03	7.157		
2,600.0	2,600.0	2,596.5	2,596.5	4.5	9.6	167.96	0.6	91.5	93.2	80.2	13.37	7.725		
2,700.0	2,699.8	2,692.8	2,692.6	4.5	9.9	167.94	1.7	96.2	103.3	89.9	13.63	8.504		
2,779.2	2,778.8	2,768.2	2,767.8	4.5	10.1	167.91	3.0	102.2	115.9	102.3	13.71	8.746		
2,800.0	2,799.5	2,788.0	2,787.5	4.6	10.2	167.91	3.4	104.0	119.9	106.2	14.08	9.868		
2,900.0	2,899.0	2,886.2	2,885.2	4.6	10.5	167.90	5.4	113.5	138.9	124.8	14.46	10.926		
3,000.0	2,998.5	2,984.4	2,982.9	4.7	10.8	167.89	7.5	122.9	158.0	143.5	14.84	11.926		
3,100.0	3,098.0	3,082.5	3,080.6	4.7	11.2	167.88	9.5	132.3	177.0	162.2	15.23	12.872		
3,200.0	3,197.6	3,180.7	3,178.3	4.8	11.5	167.88	11.6	141.8	196.1	180.8	15.63	13.766		
3,300.0	3,297.1	3,278.9	3,276.0	4.8	11.8	167.87	13.6	151.2	215.1	199.5	16.03	14.611		
3,400.0	3,396.6	3,377.0	3,373.7	4.9	12.2	167.87	15.7	160.6	234.2	218.1	16.43	15.411		
3,500.0	3,496.1	3,475.2	3,471.4	5.0	12.5	167.87	17.7	170.1	253.2	236.8	16.84	16.169		
3,600.0	3,595.7	3,573.4	3,569.1	5.0	12.8	167.86	19.8	179.5	272.2	255.4	17.25	16.887		
3,700.0	3,695.2	3,671.5	3,666.8	5.1	13.2	167.86	21.8	188.9	291.3	274.0	17.66	17.568		
3,800.0	3,794.7	3,769.7	3,764.5	5.2	13.5	167.86	23.9	198.4	310.3	292.7	18.08	18.214		
3,900.0	3,894.2	3,867.9	3,862.2	5.3	13.9	167.86	25.9	207.8	329.4	311.3	18.51	18.828		
4,000.0	3,993.8	3,966.0	3,959.9	5.4	14.2	167.85	28.0	217.2	348.4	329.9	18.93	19.411		
4,100.0	4,093.3	4,064.2	4,057.5	5.4	14.6	167.85	30.0	226.7	367.5	348.6	19.36	19.965		
4,200.0	4,192.8	4,162.4	4,155.2	5.5	14.9	167.85	32.1	236.1	386.5	367.2	19.79	20.493		
4,300.0	4,292.3	4,260.6	4,252.9	5.6	15.2	167.85	34.1	245.5	405.6	385.8	20.22	20.995		
4,400.0	4,391.9	4,358.7	4,350.6	5.7	15.6	167.85	36.2	255.0	424.6	404.4	20.66	21.474		
4,500.0	4,491.4	4,456.9	4,448.3	5.8	15.9	167.85	38.3	264.4	443.7	423.0	21.10	21.930		
4,600.0	4,590.9	4,555.1	4,546.0	5.9	16.3	167.85	40.3	273.9	462.7	441.6	21.54	22.366		
4,700.0	4,690.4	4,653.2	4,643.7	6.0	16.6	167.85	42.4	283.3	481.8	460.2	21.98	22.781		
4,800.0	4,790.0	4,751.4	4,741.4	6.1	17.0	167.85	44.4	292.7	500.8	478.8	22.43	23.179		
4,900.0	4,889.5	4,849.6	4,839.1	6.2	17.3	167.84	46.5	302.2	519.9	497.4	22.87	23.559		
5,000.0	4,989.0	4,947.7	4,936.8	6.3	17.7	167.84	48.5	311.6	538.9	516.0				

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: MEAT LOVER FED COM PROJECT - MEAT LOVER FED COM #601H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Rule Assigned: Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,088.5	5,045.9	5,034.5	6.4	18.0	167.84	50.6	321.0	558.0	534.6	23.32	23.922		
5,200.0	5,188.1	5,144.1	5,132.2	6.5	18.4	167.84	52.6	330.5	577.0	553.2	23.77	24.270		
5,300.0	5,287.6	5,242.3	5,229.9	6.6	18.7	167.84	54.7	339.9	596.0	571.8	24.23	24.604		
5,400.0	5,387.1	5,340.4	5,327.6	6.7	19.1	167.84	56.7	349.3	615.1	590.4	24.68	24.924		
5,500.0	5,486.6	5,438.6	5,425.3	6.8	19.4	167.84	58.8	358.8	634.1	609.0	25.13	25.230		
5,600.0	5,586.2	5,536.8	5,522.9	6.9	19.8	167.84	60.8	368.2	653.2	627.6	25.59	25.525		
5,700.0	5,685.7	5,634.9	5,620.6	7.0	20.1	167.84	62.9	377.6	672.2	646.2	26.05	25.808		
5,800.0	5,785.2	5,733.1	5,718.3	7.1	20.5	167.84	64.9	387.1	691.3	664.8	26.51	26.079		
5,900.0	5,884.7	5,831.3	5,816.0	7.2	20.8	167.84	67.0	396.5	710.3	683.4	26.97	26.341		
6,000.0	5,984.3	5,929.4	5,913.7	7.3	21.2	167.84	69.0	405.9	729.4	701.9	27.43	26.592		
6,100.0	6,083.8	6,027.6	6,011.4	7.4	21.5	167.84	71.1	415.4	748.4	720.5	27.89	26.834		
6,200.0	6,183.3	6,125.8	6,109.1	7.5	21.9	167.84	73.1	424.8	767.5	739.1	28.35	27.067		
6,300.0	6,282.8	6,223.9	6,206.8	7.6	22.2	167.84	75.2	434.2	786.5	757.7	28.82	27.292		
6,400.0	6,382.4	6,322.1	6,304.5	7.7	22.6	167.84	77.2	443.7	805.6	776.3	29.28	27.508		
6,500.0	6,481.9	6,420.3	6,402.2	7.8	22.9	167.84	79.3	453.1	824.6	794.9	29.75	27.717		
6,600.0	6,581.4	6,518.5	6,499.9	7.9	23.3	167.84	81.3	462.5	843.7	813.4	30.22	27.919		
6,700.0	6,681.0	6,616.6	6,597.6	8.1	23.6	167.84	83.4	472.0	862.7	832.0	30.69	28.114		
6,800.0	6,780.5	6,714.8	6,695.3	8.2	24.0	167.84	85.4	481.4	881.8	850.6	31.16	28.302		
6,900.0	6,880.0	6,813.0	6,793.0	8.3	24.3	167.84	87.5	490.8	900.8	869.2	31.63	28.483		
7,000.0	6,979.5	6,911.1	6,890.7	8.4	24.7	167.84	89.5	500.3	919.8	887.7	32.10	28.659		
7,100.0	7,079.1	7,009.3	6,988.3	8.5	25.0	167.84	91.6	509.7	938.9	906.3	32.57	28.829		
7,200.0	7,178.6	7,107.5	7,086.0	8.6	25.4	167.84	93.6	519.1	957.9	924.9	33.04	28.993		
7,300.0	7,278.1	7,205.6	7,183.7	8.7	25.7	167.84	95.7	528.6	977.0	943.5	33.51	29.152		
7,400.0	7,377.6	7,303.8	7,281.4	8.9	26.1	167.84	97.8	538.0	996.0	962.0	33.99	29.307		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: MEAT LOVER FED COM PROJECT - MEAT LOVER FED COM #602H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning	
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.0	0.0	0.3	0.3	3.0	3.0	89.81	0.2	59.9	59.9	53.9	6.00	9.979		
100.0	100.0	100.3	100.3	3.0	3.0	89.81	0.2	59.9	59.9	53.9	6.04	9.917		
200.0	200.0	200.3	200.3	3.0	3.0	89.81	0.2	59.9	59.9	53.9	6.12	9.786		
300.0	300.0	300.3	300.3	3.0	3.1	89.81	0.2	59.9	59.9	53.7	6.24	9.598		
400.0	400.0	400.3	400.3	3.0	3.2	89.81	0.2	59.9	59.9	53.5	6.40	9.364		
500.0	500.0	500.3	500.3	3.1	3.4	89.81	0.2	59.9	59.9	53.3	6.58	9.097		
600.0	600.0	600.3	600.3	3.1	3.6	89.81	0.2	59.9	59.9	53.1	6.80	8.810		
700.0	700.0	700.3	700.3	3.1	3.8	89.81	0.2	59.9	59.9	52.9	7.04	8.512		
800.0	800.0	800.3	800.3	3.2	4.0	89.81	0.2	59.9	59.9	52.6	7.29	8.211		
900.0	900.0	900.3	900.3	3.2	4.2	89.81	0.2	59.9	59.9	52.3	7.57	7.914		
1,000.0	1,000.0	1,000.3	1,000.3	3.2	4.5	89.81	0.2	59.9	59.9	52.0	7.86	7.623		
1,100.0	1,100.0	1,100.3	1,100.3	3.3	4.8	89.81	0.2	59.9	59.9	51.7	8.16	7.342		
1,200.0	1,200.0	1,200.3	1,200.3	3.4	5.1	89.81	0.2	59.9	59.9	51.4	8.47	7.072		
1,300.0	1,300.0	1,300.3	1,300.3	3.4	5.3	89.81	0.2	59.9	59.9	51.1	8.79	6.814		
1,400.0	1,400.0	1,400.3	1,400.3	3.5	5.6	89.81	0.2	59.9	59.9	50.8	9.12	6.569		
1,500.0	1,500.0	1,500.3	1,500.3	3.5	6.0	89.81	0.2	59.9	59.9	50.4	9.45	6.336		
1,600.0	1,600.0	1,600.3	1,600.3	3.6	6.3	89.81	0.2	59.9	59.9	50.1	9.79	6.115		
1,700.0	1,700.0	1,700.3	1,700.3	3.7	6.6	89.81	0.2	59.9	59.9	49.8	10.14	5.906		
1,800.0	1,800.0	1,800.3	1,800.3	3.8	6.9	89.81	0.2	59.9	59.9	49.4	10.49	5.709		
1,900.0	1,900.0	1,900.3	1,900.3	3.9	7.2	89.81	0.2	59.9	59.9	49.1	10.85	5.522		
2,000.0	2,000.0	2,000.3	2,000.3	3.9	7.6	89.81	0.2	59.9	59.9	48.7	11.21	5.344		
2,100.0	2,100.0	2,100.3	2,100.3	4.0	7.9	89.81	0.2	59.9	59.9	48.3	11.57	5.177		
2,200.0	2,200.0	2,200.3	2,200.3	4.1	8.2	89.81	0.2	59.9	59.9	48.0	11.94	5.018		
2,300.0	2,300.0	2,300.3	2,300.3	4.2	8.6	89.81	0.2	59.9	59.9	47.6	12.31	4.867		
2,400.0	2,400.0	2,400.3	2,400.3	4.3	8.9	89.81	0.2	59.9	59.9	47.5	12.37	4.843 CC		
2,416.6	2,416.6	2,416.9	2,416.9	4.3	8.9	89.81	0.2	59.9	59.9	47.2	12.68	4.725 ES, SF		
2,500.0	2,500.0	2,500.0	2,500.0	4.4	9.2	89.81	0.2	59.9	59.9	50.0	13.04	4.838		
2,600.0	2,600.0	2,598.4	2,598.4	4.5	9.6	167.48	1.1	61.3	63.1	59.2	13.39	5.422		
2,700.0	2,699.8	2,696.0	2,695.8	4.5	9.9	166.27	3.7	65.6	72.6	70.9	13.67	6.187		
2,779.2	2,778.8	2,773.0	2,772.6	4.5	10.1	165.14	7.0	70.9	84.5	74.3	13.74	6.409		
2,800.0	2,799.5	2,793.5	2,793.0	4.6	10.2	164.91	7.9	72.4	88.1					
2,900.0	2,899.0	2,892.0	2,891.2	4.6	10.5	164.02	12.4	79.7	105.1	91.0	14.11	7.446		
3,000.0	2,998.5	2,990.6	2,989.3	4.7	10.9	163.38	16.9	87.0	122.1	107.6	14.49	8.428		
3,100.0	3,098.0	3,089.1	3,087.5	4.7	11.2	162.89	21.4	94.3	139.2	124.3	14.87	9.358		
3,200.0	3,197.6	3,187.6	3,185.6	4.8	11.6	162.51	25.9	101.6	156.2	140.9	15.25	10.240		
3,300.0	3,297.1	3,286.2	3,283.8	4.8	11.9	162.21	30.5	108.9	173.3	157.6	15.64	11.075		
3,400.0	3,396.6	3,384.7	3,382.0	4.9	12.2	161.96	35.0	116.3	190.3	174.3	16.04	11.866		
3,500.0	3,496.1	3,483.2	3,480.1	5.0	12.6	161.75	39.5	123.6	207.4	190.9	16.44	12.617		
3,600.0	3,595.7	3,581.7	3,578.3	5.0	12.9	161.57	44.0	130.9	224.4	207.6	16.84	13.329		
3,700.0	3,695.2	3,680.3	3,676.4	5.1	13.3	161.42	48.5	138.2	241.5	224.3	17.24	14.006		
3,800.0	3,794.7	3,778.8	3,774.6	5.2	13.6	161.29	53.0	145.5	258.6	240.9	17.65	14.648		
3,900.0	3,894.2	3,877.3	3,872.7	5.3	13.9	161.18	57.5	152.8	275.6	257.6	18.06	15.258		
4,000.0	3,993.8	3,975.9	3,970.9	5.4	14.3	161.07	62.0	160.1	292.7	274.2	18.48	15.838		
4,100.0	4,093.3	4,074.4	4,069.0	5.4	14.6	160.98	66.5	167.4	309.8	290.9	18.90	16.390		
4,200.0	4,192.8	4,172.9	4,167.2	5.5	15.0	160.90	71.0	174.7	326.8	307.5	19.32	16.915		
4,300.0	4,292.3	4,271.5	4,265.4	5.6	15.3	160.83	75.5	182.0	343.9	324.2	19.75	17.416		
4,400.0	4,391.9	4,370.0	4,363.5	5.7	15.7	160.76	80.1	189.3	361.0	340.8	20.17	17.893		
4,500.0	4,491.4	4,468.5	4,461.7	5.8	16.0	160.70	84.6	196.7	378.0	357.4	20.60	18.348		
4,600.0	4,590.9	4,567.1	4,559.8	5.9	16.4	160.65	89.1	204.0	395.1	374.1	21.04	18.782		
4,700.0	4,690.4	4,665.6	4,658.0	6.0	16.7	160.60	93.6	211.3	412.2	390.7	21.47	19.197		
4,800.0	4,790.0	4,764.1	4,756.1	6.1	17.1	160.55	98.1	218.6	429.3	407.3	21.91	19.593		
4,900.0	4,889.5	4,862.7	4,854.3	6.2	17.4	160.51	102.6	225.9	446.3	424.0	22.35	19.972		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: MEAT LOVER FED COM PROJECT - MEAT LOVER FED COM #602H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,000.0	4,989.0	4,961.2	4,952.5	6.3	17.8	160.47	107.1	233.2	463.4	440.6	22.79	20.335	
5,100.0	5,088.5	5,059.7	5,050.6	6.4	18.1	160.43	111.6	240.5	480.5	457.2	23.23	20.682	
5,200.0	5,188.1	5,158.3	5,148.8	6.5	18.5	160.39	116.1	247.8	497.5	473.9	23.68	21.015	
5,300.0	5,287.6	5,256.8	5,246.9	6.6	18.8	160.36	120.6	255.1	514.6	490.5	24.12	21.333	
5,400.0	5,387.1	5,355.3	5,345.1	6.7	19.2	160.33	125.1	262.4	531.7	507.1	24.57	21.639	
5,500.0	5,486.6	5,453.8	5,443.2	6.8	19.5	160.30	129.7	269.7	548.8	523.7	25.02	21.933	
5,600.0	5,586.2	5,552.4	5,541.4	6.9	19.9	160.28	134.2	277.0	565.8	540.4	25.47	22.214	
5,700.0	5,685.7	5,650.9	5,639.6	7.0	20.2	160.25	138.7	284.4	582.9	557.0	25.92	22.485	
5,800.0	5,785.2	5,749.4	5,737.7	7.1	20.6	160.23	143.2	291.7	600.0	573.6	26.38	22.745	
5,900.0	5,884.7	5,848.0	5,835.9	7.2	20.9	160.21	147.7	299.0	617.0	590.2	26.83	22.996	
6,000.0	5,984.3	5,946.5	5,934.0	7.3	21.3	160.19	152.2	306.3	634.1	606.8	27.29	23.236	
6,100.0	6,083.8	6,045.0	6,032.2	7.4	21.6	160.17	156.7	313.6	651.2	623.4	27.75	23.468	
6,200.0	6,183.3	6,143.6	6,130.3	7.5	22.0	160.15	161.2	320.9	668.3	640.1	28.21	23.692	
6,300.0	6,282.8	6,242.1	6,228.5	7.6	22.3	160.13	165.7	328.2	685.3	656.7	28.67	23.907	
6,400.0	6,382.4	6,340.6	6,326.7	7.7	22.7	160.11	170.2	335.5	702.4	673.3	29.13	24.115	
6,500.0	6,481.9	6,439.2	6,424.8	7.8	23.0	160.10	174.7	342.8	719.5	689.9	29.59	24.315	
6,600.0	6,581.4	6,537.7	6,523.0	7.9	23.4	160.08	179.2	350.1	736.6	706.5	30.05	24.509	
6,700.0	6,681.0	6,647.6	6,632.5	8.1	23.8	160.09	183.9	357.6	753.0	722.5	30.55	24.650	
6,800.0	6,780.5	6,760.2	6,744.9	8.2	24.2	160.16	187.5	363.5	767.7	736.7	31.05	24.728	
6,900.0	6,880.0	6,873.3	6,857.9	8.3	24.6	160.30	189.9	367.4	780.6	749.1	31.54	24.747	
7,000.0	6,979.5	6,986.9	6,971.5	8.4	25.0	160.50	191.2	369.5	791.7	759.7	32.04	24.711	
7,100.0	7,079.1	7,094.8	7,079.4	8.5	25.4	160.74	191.4	369.8	801.2	768.7	32.52	24.636	
7,200.0	7,178.6	7,194.3	7,178.9	8.6	25.7	160.96	191.4	369.8	810.4	777.4	32.99	24.564	
7,300.0	7,278.1	7,293.8	7,278.4	8.7	26.1	161.19	191.4	369.8	819.6	786.2	33.46	24.493	
7,400.0	7,377.6	7,393.4	7,377.9	8.9	26.4	161.40	191.4	369.8	828.9	794.9	33.93	24.425	
7,500.0	7,477.2	7,492.9	7,477.5	9.0	26.8	161.62	191.4	369.8	838.1	803.7	34.41	24.358	
7,600.0	7,576.7	7,592.4	7,577.0	9.1	27.1	161.82	191.4	369.8	847.3	812.5	34.88	24.293	
7,700.0	7,676.2	7,691.9	7,676.5	9.2	27.5	162.03	191.4	369.8	856.6	821.2	35.35	24.229	
7,800.0	7,775.7	7,791.5	7,776.0	9.3	27.8	162.22	191.4	369.8	865.9	830.0	35.83	24.167	
7,900.0	7,875.3	7,891.0	7,875.6	9.4	28.2	162.42	191.4	369.8	875.1	838.8	36.30	24.107	
8,000.0	7,974.8	7,990.5	7,975.1	9.6	28.5	162.61	191.4	369.8	884.4	847.6	36.78	24.048	
8,100.0	8,074.3	8,090.0	8,074.6	9.7	28.9	162.80	191.4	369.8	893.7	856.5	37.25	23.990	
8,200.0	8,173.8	8,189.6	8,174.1	9.8	29.2	162.98	191.4	369.8	903.0	865.3	37.73	23.934	
8,300.0	8,273.4	8,289.1	8,273.7	9.9	29.6	163.16	191.4	369.8	912.3	874.1	38.21	23.879	
8,400.0	8,372.9	8,388.6	8,373.2	10.0	29.9	163.33	191.4	369.8	921.6	883.0	38.68	23.825	
8,500.0	8,472.4	8,488.1	8,472.7	10.2	30.3	163.50	191.4	369.8	931.0	891.8	39.16	23.773	
8,600.0	8,571.9	8,587.7	8,572.2	10.3	30.6	163.67	191.4	369.8	940.3	900.7	39.64	23.722	
8,700.0	8,671.5	8,687.2	8,671.8	10.4	31.0	163.84	191.4	369.8	949.7	909.5	40.12	23.672	
8,800.0	8,771.0	8,786.7	8,771.3	10.5	31.3	164.00	191.4	369.8	959.0	918.4	40.60	23.623	
8,900.0	8,870.5	8,886.2	8,870.8	10.6	31.7	164.16	191.4	369.8	968.4	927.3	41.08	23.575	
9,000.0	8,970.0	8,985.8	8,970.3	10.8	32.0	164.31	191.4	369.8	977.7	936.2	41.56	23.528	
9,100.0	9,069.6	9,085.3	9,069.9	10.9	32.4	164.47	191.4	369.8	987.1	945.1	42.04	23.483	
9,200.0	9,169.1	9,184.8	9,169.4	11.0	32.7	164.62	191.4	369.8	996.5	954.0	42.52	23.438	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: MEAT LOVER FED COM PROJECT - MEAT LOVER FED COM #603H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11913-MWD+IFR1+FDIR													Offset Well Error:	3.0 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)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Rule Assigned: Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.2	0.2	3.0	3.0	3.0	89.81	0.1	29.9	29.9	23.9	6.00	4.983	
100.0	100.0	100.2	100.2	3.0	3.0	3.0	89.81	0.1	29.9	29.9	23.9	6.00	4.981	
200.0	200.0	200.2	200.2	3.0	3.0	3.0	89.81	0.1	29.9	29.9	23.9	6.01	4.976	
300.0	300.0	300.2	300.2	3.0	3.0	3.0	89.81	0.1	29.9	29.9	23.9	6.02	4.968	
400.0	400.0	400.2	400.2	3.0	3.0	3.0	89.81	0.1	29.9	29.9	23.9	6.03	4.958	
500.0	500.0	500.2	500.2	3.1	3.1	3.1	89.81	0.1	29.9	29.9	23.9	6.05	4.945	
600.0	600.0	600.2	600.2	3.1	3.1	3.1	89.81	0.1	29.9	29.9	23.8	6.07	4.930	
700.0	700.0	700.2	700.2	3.1	3.1	3.1	89.81	0.1	29.9	29.9	23.8	6.09	4.912	
800.0	800.0	800.2	800.2	3.2	3.2	3.2	89.81	0.1	29.9	29.9	23.8	6.11	4.892	
900.0	900.0	900.2	900.2	3.2	3.2	3.2	89.81	0.1	29.9	29.9	23.8	6.14	4.869	
1,000.0	1,000.0	1,000.2	1,000.2	3.2	3.2	3.2	89.81	0.1	29.9	29.9	23.8	6.17	4.845	
1,100.0	1,100.0	1,100.2	1,100.2	3.3	3.3	3.3	89.81	0.1	29.9	29.9	23.7	6.21	4.818	
1,200.0	1,200.0	1,200.2	1,200.2	3.4	3.4	3.4	89.81	0.1	29.9	29.9	23.7	6.24	4.789	
1,300.0	1,300.0	1,300.2	1,300.2	3.4	3.4	3.4	89.81	0.1	29.9	29.9	23.6	6.28	4.759	
1,400.0	1,400.0	1,400.2	1,400.2	3.5	3.5	3.5	89.81	0.1	29.9	29.9	23.6	6.33	4.727	
1,500.0	1,500.0	1,500.2	1,500.2	3.5	3.5	3.5	89.81	0.1	29.9	29.9	23.5	6.37	4.693	
1,600.0	1,600.0	1,600.2	1,600.2	3.6	3.6	3.6	89.81	0.1	29.9	29.9	23.5	6.42	4.658	
1,700.0	1,700.0	1,700.2	1,700.2	3.7	3.7	3.7	89.81	0.1	29.9	29.9	23.4	6.47	4.621	
1,800.0	1,800.0	1,800.2	1,800.2	3.8	3.8	3.8	89.81	0.1	29.9	29.9	23.4	6.52	4.583	
1,900.0	1,900.0	1,900.2	1,900.2	3.9	3.9	3.9	89.81	0.1	29.9	29.9	23.3	6.58	4.544	
2,000.0	2,000.0	2,000.2	2,000.2	3.9	3.9	3.9	89.81	0.1	29.9	29.9	23.3	6.64	4.504	
2,100.0	2,100.0	2,100.2	2,100.2	4.0	4.0	4.0	89.81	0.1	29.9	29.9	23.2	6.70	4.463	
2,200.0	2,200.0	2,200.2	2,200.2	4.1	4.1	4.1	89.81	0.1	29.9	29.9	23.1	6.76	4.421	
2,300.0	2,300.0	2,300.2	2,300.2	4.2	4.2	4.2	89.81	0.1	29.9	29.9	23.1	6.83	4.379	
2,400.0	2,400.0	2,400.2	2,400.2	4.3	4.3	4.3	89.81	0.1	29.9	29.9	23.0	6.90	4.336	
2,500.0	2,500.0	2,500.2	2,500.2	4.4	4.4	4.4	89.81	0.1	29.9	29.9	23.0	6.90	4.335 CC, ES	
2,501.5	2,501.5	2,501.7	2,501.7	4.4	4.4	4.4	167.97	0.1	29.9	29.9	23.1	6.97	4.322	
2,600.0	2,600.0	2,601.1	2,601.1	4.5	4.5	4.5	166.90	1.0	28.4	30.1	23.1	7.04	4.375	
2,700.0	2,699.8	2,702.0	2,701.8	4.5	4.5	4.5	163.78	3.8	23.8	30.8	23.8	7.10	4.494	
2,779.2	2,778.8	2,781.6	2,781.1	4.5	4.6	4.6	160.26	7.2	18.2	31.9	24.8	7.12	4.553	
2,800.0	2,799.5	2,802.3	2,801.8	4.6	4.6	4.6	159.45	8.1	16.7	32.4	25.3	7.21	4.845	
2,900.0	2,899.0	2,902.3	2,901.4	4.6	4.7	4.7	155.86	12.7	9.2	34.9	27.7	7.30	5.143	
3,000.0	2,998.5	3,002.2	3,001.0	4.7	4.8	4.8	152.76	17.2	1.8	37.6	30.2	7.40	5.445	
3,100.0	3,098.0	3,102.2	3,100.5	4.7	4.8	4.8	150.08	21.7	-5.6	40.3	32.9	7.49	5.750	
3,200.0	3,197.6	3,202.1	3,200.1	4.8	4.9	4.9	147.74	26.2	-13.1	43.1	35.6	7.59	6.054	
3,300.0	3,297.1	3,302.1	3,299.7	4.8	5.0	5.0	145.69	30.7	-20.5	45.9	38.3	7.68	6.358	
3,400.0	3,396.6	3,402.0	3,399.2	4.9	5.1	5.1	143.88	35.3	-28.0	48.8	41.2	7.78	6.658	
3,500.0	3,496.1	3,502.0	3,498.8	5.0	5.1	5.1	142.27	39.8	-35.4	51.8	44.0	7.88	6.955	
3,600.0	3,595.7	3,601.9	3,598.4	5.0	5.2	5.2	140.84	44.3	-42.9	54.8	46.9	7.98	7.248	
3,700.0	3,695.2	3,701.9	3,697.9	5.1	5.3	5.3	139.56	48.8	-50.3	57.8	49.8	8.08	7.535	
3,800.0	3,794.7	3,801.8	3,797.5	5.2	5.4	5.4	138.40	53.4	-57.8	60.9	52.8	8.18	7.816	
3,900.0	3,894.2	3,901.8	3,897.1	5.3	5.5	5.5	137.36	57.9	-65.2	63.9	55.7	8.28	8.090	
4,000.0	3,993.8	4,001.7	3,996.6	5.4	5.6	5.6	136.41	62.4	-72.6	67.0	58.7	8.39	8.358	
4,100.0	4,093.3	4,101.6	4,096.2	5.4	5.7	5.7	135.55	66.9	-80.1	70.1	61.7	8.50	8.619	
4,200.0	4,192.8	4,201.6	4,195.8	5.5	5.8	5.8	134.76	71.5	-87.5	73.2	64.7	8.61	8.872	
4,300.0	4,292.3	4,301.5	4,295.3	5.6	5.9	5.9	134.03	76.0	-95.0	76.4	67.8	8.72	9.118	
4,400.0	4,391.9	4,401.5	4,394.9	5.7	6.0	6.0	133.36	80.5	-102.4	79.5	70.8	8.84	9.356	
4,500.0	4,491.4	4,501.4	4,494.4	5.8	6.1	6.1	132.75	85.0	-109.9	82.7	73.8	8.95	9.587	
4,600.0	4,590.9	4,601.4	4,594.0	5.9	6.2	6.2	132.17	89.6	-117.3	85.8	76.9	9.07	9.810	
4,700.0	4,690.4	4,701.3	4,693.6	6.0	6.3	6.3	131.64	94.1	-124.8	89.0	79.9	9.20	10.025	
4,800.0	4,790.0	4,801.3	4,793.1	6.1	6.4	6.4	131.15	98.6	-132.2	92.2	83.0	9.32	10.232	
4,900.0	4,889.5	4,901.2	4,892.7	6.2	6.5	6.5	130.69	103.1	-139.6	95.4	86.0	9.32	10.232	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: MEAT LOVER FED COM PROJECT - MEAT LOVER FED COM #603H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11913-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning	
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,000.0	4,989.0	5,001.2	4,992.3	6.3	6.6	130.25	107.6	-147.1	98.6	89.1	9.45	10.432		
5,100.0	5,088.5	5,101.1	5,091.8	6.4	6.7	129.85	112.2	-154.5	101.8	92.2	9.58	10.624		
5,200.0	5,188.1	5,201.1	5,191.4	6.5	6.8	129.47	116.7	-162.0	105.0	95.2	9.71	10.808		
5,300.0	5,287.6	5,301.0	5,291.0	6.6	6.9	129.11	121.2	-169.4	108.2	98.3	9.85	10.986		
5,400.0	5,387.1	5,400.9	5,390.5	6.7	7.0	128.77	125.7	-176.9	111.4	101.4	9.98	11.156		
5,500.0	5,486.6	5,500.9	5,490.1	6.8	7.1	128.46	130.3	-184.3	114.6	104.5	10.12	11.319		
5,600.0	5,586.2	5,600.8	5,589.7	6.9	7.2	128.16	134.8	-191.8	117.8	107.5	10.27	11.475		
5,700.0	5,685.7	5,700.8	5,689.2	7.0	7.3	127.87	139.3	-199.2	121.0	110.6	10.41	11.624		
5,800.0	5,785.2	5,800.7	5,788.8	7.1	7.5	127.60	143.8	-206.6	124.2	113.7	10.56	11.767		
5,900.0	5,884.7	5,900.7	5,888.4	7.2	7.6	127.34	148.4	-214.1	127.5	116.8	10.71	11.903		
6,000.0	5,984.3	6,000.6	5,987.9	7.3	7.7	127.10	152.9	-221.5	130.7	119.8	10.86	12.033		
6,100.0	6,083.8	6,100.6	6,087.5	7.4	7.8	126.87	157.4	-229.0	133.9	122.9	11.01	12.158		
6,200.0	6,183.3	6,200.5	6,187.1	7.5	7.9	126.65	161.9	-236.4	137.1	126.0	11.17	12.276		
6,300.0	6,282.8	6,300.5	6,286.6	7.6	8.0	126.44	166.4	-243.9	140.4	129.0	11.33	12.389		
6,400.0	6,382.4	6,400.4	6,386.2	7.7	8.1	126.24	171.0	-251.3	143.6	132.1	11.49	12.496		
6,500.0	6,481.9	6,500.4	6,485.8	7.8	8.2	126.04	175.5	-258.8	146.9	135.2	11.66	12.598		
6,600.0	6,581.4	6,600.0	6,585.1	7.9	8.4	125.98	179.8	-265.9	150.2	138.4	11.82	12.706		
6,700.0	6,681.0	6,699.0	6,683.8	8.1	8.5	126.50	183.3	-271.6	154.0	142.0	11.98	12.859		
6,800.0	6,780.5	6,798.0	6,782.7	8.2	8.6	127.58	185.9	-275.9	158.3	146.2	12.12	13.064		
6,900.0	6,880.0	6,896.9	6,881.6	8.3	8.7	129.16	187.6	-278.7	163.3	151.0	12.26	13.315		
7,000.0	6,979.5	6,995.6	6,980.2	8.4	8.8	131.19	188.4	-280.0	169.0	156.6	12.43	13.600		
7,100.0	7,079.1	7,094.6	7,079.3	8.5	8.9	133.52	188.5	-280.2	175.6	162.9	12.61	13.918		
7,200.0	7,178.6	7,194.1	7,178.8	8.6	9.0	135.73	188.5	-280.2	182.4	169.6	12.81	14.239		
7,300.0	7,278.1	7,293.7	7,278.3	8.7	9.1	137.78	188.5	-280.2	189.5	176.5	13.02	14.557		
7,400.0	7,377.6	7,393.2	7,377.8	8.9	9.2	139.68	188.5	-280.2	196.8	183.6	13.24	14.873		
7,500.0	7,477.2	7,492.7	7,477.4	9.0	9.3	141.44	188.5	-280.2	204.4	190.9	13.46	15.186		
7,600.0	7,576.7	7,592.2	7,576.9	9.1	9.5	143.08	188.5	-280.2	212.1	198.4	13.69	15.496		
7,700.0	7,676.2	7,691.8	7,676.4	9.2	9.6	144.60	188.5	-280.2	220.0	206.0	13.92	15.805		
7,800.0	7,775.7	7,791.3	7,775.9	9.3	9.7	146.01	188.5	-280.2	228.0	213.8	14.15	16.111		
7,900.0	7,875.3	7,890.8	7,875.5	9.4	9.8	147.33	188.5	-280.2	236.1	221.7	14.38	16.415		
8,000.0	7,974.8	7,990.3	7,975.0	9.6	9.9	148.56	188.5	-280.2	244.4	229.7	14.62	16.717		
8,100.0	8,074.3	8,089.9	8,074.5	9.7	10.0	149.71	188.5	-280.2	252.7	237.9	14.85	17.016		
8,200.0	8,173.8	8,189.4	8,174.0	9.8	10.1	150.79	188.5	-280.2	261.2	246.1	15.09	17.313		
8,300.0	8,273.4	8,288.9	8,273.6	9.9	10.2	151.79	188.5	-280.2	269.7	254.4	15.32	17.606		
8,400.0	8,372.9	8,388.4	8,373.1	10.0	10.3	152.74	188.5	-280.2	278.4	262.8	15.55	17.897		
8,500.0	8,472.4	8,488.0	8,472.6	10.2	10.5	153.63	188.5	-280.2	287.0	271.3	15.78	18.185		
8,600.0	8,571.9	8,587.5	8,572.1	10.3	10.6	154.47	188.5	-280.2	295.8	279.8	16.02	18.470		
8,700.0	8,671.5	8,687.0	8,671.7	10.4	10.7	155.25	188.5	-280.2	304.6	288.4	16.24	18.752		
8,800.0	8,771.0	8,786.5	8,771.2	10.5	10.8	156.00	188.5	-280.2	313.5	297.0	16.47	19.030		
8,900.0	8,870.5	8,886.1	8,870.7	10.6	10.9	156.70	188.5	-280.2	322.4	305.7	16.70	19.306		
9,000.0	8,970.0	8,985.6	8,970.2	10.8	11.0	157.37	188.5	-280.2	331.4	314.5	16.93	19.577		
9,100.0	9,069.6	9,085.1	9,069.8	10.9	11.1	158.00	188.5	-280.2	340.4	323.2	17.15	19.845		
9,200.0	9,169.1	9,184.6	9,169.3	11.0	11.3	158.59	188.5	-280.2	349.4	332.1	17.38	20.110		
9,300.0	9,268.6	9,284.2	9,268.8	11.1	11.4	159.16	188.5	-280.2	358.5	340.9	17.60	20.371		
9,400.0	9,368.1	9,383.7	9,368.3	11.3	11.5	159.70	188.5	-280.2	367.6	349.8	17.82	20.629		
9,500.0	9,467.7	9,483.2	9,467.9	11.4	11.6	160.21	188.5	-280.2	376.8	358.7	18.04	20.883		
9,600.0	9,567.2	9,582.8	9,567.4	11.5	11.7	160.70	188.5	-280.2	386.0	367.7	18.26	21.133		
9,700.0	9,666.7	9,682.3	9,666.9	11.6	11.8	161.17	188.5	-280.2	395.2	376.7	18.48	21.380		
9,800.0	9,766.2	9,781.8	9,766.4	11.8	12.0	161.61	188.5	-280.2	404.4	385.7	18.70	21.623		
9,900.0	9,865.8	9,881.3	9,866.0	11.9	12.1	162.04	188.5	-280.2	413.6	394.7	18.92	21.863		
10,000.0	9,965.3	9,980.9	9,965.5	12.0	12.2	162.44	188.5	-280.2	422.9	403.8	19.14	22.099		
10,100.0	10,064.8	10,080.4	10,065.0	12.1	12.3	162.83	188.5	-280.2	432.2	412.8	19.35	22.332		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: MEAT LOVER FED COM PROJECT - MEAT LOVER FED COM #603H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11913-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning	
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
10,200.0	10,164.3	10,179.9	10,164.5	12.3	12.4	163.21	188.5	-280.2	441.5	421.9	19.57	22.562		
10,300.0	10,263.9	10,279.4	10,264.1	12.4	12.6	163.56	188.5	-280.2	450.8	431.1	19.78	22.787		
10,400.0	10,363.4	10,379.0	10,363.6	12.5	12.7	163.91	188.5	-280.2	460.2	440.2	20.00	23.010		
10,500.0	10,462.9	10,478.5	10,463.1	12.6	12.8	164.23	188.5	-280.2	469.5	449.3	20.21	23.229		
10,600.0	10,562.4	10,578.0	10,562.6	12.8	12.9	164.55	188.5	-280.2	478.9	458.5	20.43	23.445		
10,700.0	10,662.0	10,677.5	10,662.2	12.9	13.0	164.85	188.5	-280.2	488.3	467.7	20.64	23.658		
10,800.0	10,761.5	10,777.1	10,761.7	13.0	13.2	165.15	188.5	-280.2	497.7	476.9	20.85	23.867		
10,900.0	10,861.0	10,876.6	10,861.2	13.1	13.3	165.43	188.5	-280.2	507.1	486.1	21.07	24.073		
11,000.0	10,960.5	10,976.1	10,960.7	13.3	13.4	165.70	188.5	-280.2	516.6	495.3	21.28	24.276		
11,100.0	11,060.1	11,075.6	11,060.3	13.4	13.5	165.96	188.5	-280.2	526.0	504.5	21.49	24.476		
11,200.0	11,159.6	11,175.2	11,159.8	13.5	13.6	166.21	188.5	-280.2	535.4	513.7	21.70	24.673		
11,300.0	11,259.1	11,274.7	11,259.3	13.7	13.8	166.46	188.5	-280.2	544.9	523.0	21.91	24.867		
11,400.0	11,358.6	11,374.2	11,358.8	13.8	13.9	166.69	188.5	-280.2	554.4	532.2	22.12	25.058		
11,500.0	11,458.2	11,473.7	11,458.4	13.9	14.0	166.92	188.5	-280.2	563.8	541.5	22.33	25.247		
11,600.0	11,557.7	11,573.3	11,557.9	14.0	14.1	167.14	188.5	-280.2	573.3	550.8	22.54	25.432		
11,700.0	11,657.2	11,672.8	11,657.4	14.2	14.2	167.35	188.5	-280.2	582.8	560.1	22.75	25.614		
11,800.0	11,756.7	11,772.3	11,756.9	14.3	14.4	167.56	188.5	-280.2	592.3	569.4	22.96	25.794		
11,900.0	11,856.3	11,871.8	11,856.5	14.4	14.5	167.76	188.5	-280.2	601.8	578.7	23.17	25.971		
11,931.7	11,887.8	11,903.4	11,888.0	14.5	14.5	167.82	188.5	-280.2	604.8	581.6	23.24	26.027		
11,950.0	11,906.0	11,921.6	11,906.2	14.5	14.6	-173.03	188.4	-280.2	606.6	583.3	23.31	26.028		
12,000.0	11,955.7	11,971.2	11,955.7	14.5	14.6	-133.42	185.5	-280.1	611.3	588.0	23.32	26.212		
12,050.0	12,005.0	12,020.8	12,004.8	14.5	14.6	-116.12	178.3	-280.1	616.0	592.7	23.34	26.397		
12,100.0	12,053.4	12,070.4	12,053.1	14.5	14.7	-107.81	166.9	-280.0	620.7	597.3	23.36	26.572		
12,150.0	12,100.7	12,120.0	12,100.1	14.5	14.7	-103.01	151.3	-279.9	625.2	601.8	23.39	26.732		
12,200.0	12,146.5	12,169.6	12,145.7	14.5	14.7	-99.86	131.7	-279.7	629.5	606.1	23.43	26.874		
12,250.0	12,190.3	12,219.3	12,189.5	14.5	14.7	-97.61	108.3	-279.6	633.7	610.2	23.48	26.993		
12,300.0	12,232.0	12,268.9	12,231.0	14.6	14.8	-95.92	81.1	-279.4	637.7	614.1	23.54	27.085		
12,350.0	12,271.1	12,318.6	12,270.1	14.6	14.8	-94.59	50.5	-279.1	641.4	617.8	23.63	27.146		
12,400.0	12,307.4	12,368.4	12,306.4	14.6	14.9	-93.53	16.5	-278.9	644.8	621.1	23.73	27.170		
12,450.0	12,340.6	12,418.1	12,339.6	14.7	14.9	-92.66	-20.5	-278.6	648.0	624.1	23.86	27.153		
12,500.0	12,370.5	12,467.9	12,369.5	14.7	15.0	-91.95	-60.3	-278.3	650.8	626.8	24.02	27.093		
12,550.0	12,396.7	12,517.7	12,395.9	14.8	15.0	-91.38	-102.5	-278.0	653.3	629.1	24.21	26.987		
12,600.0	12,419.2	12,567.6	12,418.5	14.9	15.1	-90.91	-147.0	-277.7	655.4	631.0	24.42	26.835		
12,650.0	12,437.7	12,617.5	12,437.2	14.9	15.1	-90.55	-193.2	-277.3	657.2	632.5	24.67	26.638		
12,700.0	12,452.2	12,667.4	12,451.8	15.0	15.2	-90.28	-240.9	-277.0	658.5	633.6	24.95	26.399		
12,750.0	12,462.4	12,717.3	12,462.2	15.1	15.2	-90.10	-289.8	-276.6	659.5	634.2	25.25	26.122		
12,800.0	12,468.3	12,767.3	12,468.3	15.2	15.3	-90.01	-339.3	-276.2	660.0	634.5	25.57	25.813		
12,840.5	12,470.0	12,807.8	12,470.0	15.3	15.3	-89.99	-379.8	-275.9	660.2	634.3	25.85	25.543		
12,900.0	12,470.3	12,867.3	12,470.4	15.4	15.3	-89.99	-439.3	-275.5	660.2	633.9	26.29	25.115		
13,000.0	12,470.8	12,967.3	12,470.9	15.7	15.4	-89.99	-539.3	-274.7	660.2	633.1	27.10	24.363		
13,100.0	12,471.3	13,067.3	12,471.4	16.0	15.5	-89.99	-639.3	-274.0	660.2	632.2	27.99	23.585		
13,200.0	12,471.9	13,167.3	12,471.9	16.4	15.7	-89.99	-739.3	-273.2	660.2	631.2	28.96	22.796		
13,300.0	12,472.4	13,267.3	12,472.5	16.8	15.8	-89.99	-839.3	-272.5	660.2	630.2	30.00	22.007		
13,400.0	12,472.9	13,367.3	12,473.0	17.2	16.0	-89.99	-939.3	-271.7	660.2	629.1	31.10	21.230		
13,500.0	12,473.4	13,467.3	12,473.5	17.7	16.3	-89.99	-1,039.3	-271.0	660.2	627.9	32.25	20.471		
13,600.0	12,473.9	13,567.3	12,474.1	18.2	16.6	-89.99	-1,139.2	-270.3	660.2	626.7	33.45	19.735		
13,700.0	12,474.5	13,667.3	12,474.6	18.8	17.0	-89.99	-1,239.2	-269.5	660.2	625.5	34.70	19.027		
13,800.0	12,475.0	13,767.3	12,475.1	19.3	17.5	-89.99	-1,339.2	-268.8	660.2	624.2	35.98	18.347		
13,900.0	12,475.5	13,867.3	12,475.6	19.9	18.0	-89.99	-1,439.2	-268.0	660.2	622.9	37.30	17.697		
14,000.0	12,476.0	13,967.3	12,476.2	20.6	18.6	-89.99	-1,539.2	-267.3	660.2	621.5	38.66	17.078		
14,100.0	12,476.6	14,067.3	12,476.7	21.2	19.3	-89.99	-1,639.2	-266.5	660.2	620.1	40.04	16.489		
14,200.0	12,477.1	14,167.3	12,477.2	21.8	19.9	-89.99	-1,739.2	-265.8	660.2	618.7	41.44	15.929		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: MEAT LOVER FED COM PROJECT - MEAT LOVER FED COM #603H - OWB - PWP1													Offset Site Error:
Survey Program: 0-Standard Keeper 104, 11913-MWD+IFR1+FDIR													0.0 usft
Rule Assigned:													Offset Well Error:
3.0 usft													
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,300.0	12,477.6	14,267.3	12,477.7	22.5	20.6	-89.99	-1,839.2	-265.0	660.2	617.3	42.87	15.398	
14,400.0	12,478.1	14,367.3	12,478.3	23.2	21.4	-89.99	-1,939.2	-264.3	660.2	615.8	44.32	14.894	
14,500.0	12,478.7	14,467.3	12,478.8	23.9	22.1	-90.00	-2,039.2	-263.5	660.2	614.4	45.79	14.416	
14,600.0	12,479.2	14,567.3	12,479.3	24.6	22.9	-90.00	-2,139.2	-262.8	660.1	612.9	47.28	13.963	
14,700.0	12,479.7	14,667.3	12,479.9	25.3	23.6	-90.00	-2,239.2	-262.0	660.1	611.4	48.78	13.533	
14,800.0	12,480.2	14,767.3	12,480.4	26.1	24.4	-90.00	-2,339.2	-261.3	660.1	609.8	50.30	13.124	
14,900.0	12,480.8	14,867.3	12,480.9	26.8	25.2	-90.00	-2,439.2	-260.5	660.1	608.3	51.83	12.737	
15,000.0	12,481.3	14,967.3	12,481.4	27.5	25.9	-90.00	-2,539.2	-259.8	660.1	606.8	53.37	12.369	
15,100.0	12,481.8	15,067.3	12,482.0	28.3	26.7	-90.00	-2,639.2	-259.1	660.1	605.2	54.92	12.019	
15,200.0	12,482.3	15,167.3	12,482.5	29.0	27.5	-90.00	-2,739.2	-258.3	660.1	603.7	56.49	11.687	
15,300.0	12,482.8	15,267.3	12,483.0	29.8	28.3	-90.00	-2,839.2	-257.6	660.1	602.1	58.06	11.370	
15,400.0	12,483.4	15,367.3	12,483.6	30.6	29.1	-90.00	-2,939.2	-256.8	660.1	600.5	59.64	11.069	
15,500.0	12,483.9	15,467.3	12,484.1	31.3	30.0	-90.00	-3,039.2	-256.1	660.1	598.9	61.23	10.782	
15,600.0	12,484.4	15,567.3	12,484.6	32.1	30.8	-90.00	-3,139.2	-255.3	660.1	597.3	62.82	10.508	
15,700.0	12,484.9	15,667.3	12,485.1	32.9	31.6	-90.00	-3,239.2	-254.6	660.1	595.7	64.43	10.246	
15,800.0	12,485.5	15,767.3	12,485.7	33.7	32.4	-90.00	-3,339.2	-253.8	660.1	594.1	66.04	9.997	
15,900.0	12,486.0	15,867.3	12,486.2	34.5	33.2	-90.00	-3,439.2	-253.1	660.1	592.5	67.65	9.758	
16,000.0	12,486.5	15,967.3	12,486.7	35.3	34.0	-90.00	-3,539.1	-252.3	660.1	590.9	69.27	9.530	
16,100.0	12,487.0	16,067.3	12,487.3	36.1	34.9	-90.00	-3,639.1	-251.6	660.1	589.2	70.90	9.311	
16,200.0	12,487.6	16,167.3	12,487.8	36.9	35.7	-90.00	-3,739.1	-250.8	660.1	587.6	72.53	9.102	
16,300.0	12,488.1	16,267.3	12,488.3	37.7	36.5	-90.00	-3,839.1	-250.1	660.1	586.0	74.16	8.901	
16,400.0	12,488.6	16,367.3	12,488.8	38.5	37.4	-90.00	-3,939.1	-249.4	660.1	584.3	75.80	8.709	
16,500.0	12,489.1	16,467.3	12,489.4	39.3	38.2	-90.00	-4,039.1	-248.6	660.1	582.7	77.44	8.524	
16,600.0	12,489.7	16,567.3	12,489.9	40.1	39.0	-90.00	-4,139.1	-247.9	660.1	581.0	79.09	8.347	
16,700.0	12,490.2	16,667.3	12,490.4	40.9	39.9	-90.00	-4,239.1	-247.1	660.1	579.4	80.74	8.176	
16,800.0	12,490.7	16,767.3	12,491.0	41.7	40.7	-90.00	-4,339.1	-246.4	660.1	577.7	82.39	8.012	
16,900.0	12,491.2	16,867.3	12,491.5	42.5	41.5	-90.00	-4,439.1	-245.6	660.1	576.1	84.05	7.854	
17,000.0	12,491.8	16,967.3	12,492.0	43.4	42.4	-90.00	-4,539.1	-244.9	660.1	574.4	85.70	7.702	
17,100.0	12,492.3	17,067.3	12,492.5	44.2	43.2	-90.01	-4,639.1	-244.1	660.1	572.8	87.37	7.556	
17,200.0	12,492.8	17,167.3	12,493.1	45.0	44.0	-90.01	-4,739.1	-243.4	660.1	571.1	89.03	7.415	
17,300.0	12,493.3	17,267.3	12,493.6	45.8	44.9	-90.01	-4,839.1	-242.6	660.1	569.4	90.70	7.278	
17,400.0	12,493.8	17,367.3	12,494.1	46.6	45.7	-90.01	-4,939.1	-241.9	660.1	567.8	92.36	7.147	
17,500.0	12,494.4	17,467.3	12,494.6	47.5	46.6	-90.01	-5,039.1	-241.1	660.1	566.1	94.03	7.020	
17,600.0	12,494.9	17,567.3	12,495.2	48.3	47.4	-90.01	-5,139.1	-240.4	660.1	564.4	95.71	6.897	
17,700.0	12,495.4	17,667.3	12,495.7	49.1	48.3	-90.01	-5,239.1	-239.6	660.1	562.7	97.38	6.779	
17,800.0	12,495.9	17,767.3	12,496.2	50.0	49.1	-90.01	-5,339.1	-238.9	660.1	561.1	99.06	6.664	
17,900.0	12,496.5	17,867.3	12,496.8	50.8	50.0	-90.01	-5,439.1	-238.2	660.1	559.4	100.74	6.553	
18,000.0	12,497.0	17,967.3	12,497.3	51.6	50.8	-90.01	-5,539.1	-237.4	660.1	557.7	102.41	6.445	
18,100.0	12,497.5	18,067.3	12,497.8	52.5	51.6	-90.01	-5,639.1	-236.7	660.1	556.0	104.10	6.341	
18,200.0	12,498.0	18,167.3	12,498.3	53.3	52.5	-90.01	-5,739.1	-235.9	660.1	554.3	105.78	6.240	
18,300.0	12,498.6	18,267.3	12,498.9	54.1	53.3	-90.01	-5,839.1	-235.2	660.1	552.6	107.46	6.143	
18,400.0	12,499.1	18,367.3	12,499.4	55.0	54.2	-90.01	-5,939.0	-234.4	660.1	551.0	109.15	6.048	
18,500.0	12,499.6	18,467.3	12,499.9	55.8	55.0	-90.01	-6,039.0	-233.7	660.1	549.3	110.84	5.956	
18,600.0	12,500.1	18,567.3	12,500.5	56.6	55.9	-90.01	-6,139.0	-232.9	660.1	547.6	112.52	5.866	
18,700.0	12,500.7	18,667.3	12,501.0	57.5	56.7	-90.01	-6,239.0	-232.2	660.1	545.9	114.21	5.780	
18,800.0	12,501.2	18,767.3	12,501.5	58.3	57.6	-90.01	-6,339.0	-231.4	660.1	544.2	115.90	5.695	
18,900.0	12,501.7	18,867.3	12,502.0	59.2	58.4	-90.01	-6,439.0	-230.7	660.1	542.5	117.59	5.613	
19,000.0	12,502.2	18,967.3	12,502.6	60.0	59.3	-90.01	-6,539.0	-229.9	660.1	540.8	119.29	5.534	
19,100.0	12,502.7	19,067.3	12,503.1	60.8	60.1	-90.01	-6,639.0	-229.2	660.1	539.1	120.98	5.456	
19,200.0	12,503.3	19,167.3	12,503.6	61.7	61.0	-90.01	-6,739.0	-228.5	660.1	537.4	122.68	5.381	
19,300.0	12,503.8	19,267.3	12,504.2	62.5	61.9	-90.01	-6,839.0	-227.7	660.1	535.7	124.37	5.308	
19,400.0	12,504.3	19,367.3	12,504.7	63.4	62.7	-90.01	-6,939.0	-227.0	660.1	534.0	126.07	5.236	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: MEAT LOVER FED COM PROJECT - MEAT LOVER FED COM #603H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11913-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
19,500.0	12,504.8	19,467.3	12,505.2	64.2	63.6	-90.01	-7,039.0	-226.2	660.1	532.3	127.76	5.167	
19,600.0	12,505.4	19,567.3	12,505.7	65.1	64.4	-90.01	-7,139.0	-225.5	660.1	530.6	129.46	5.099	
19,700.0	12,505.9	19,667.3	12,506.3	65.9	65.3	-90.02	-7,239.0	-224.7	660.1	528.9	131.16	5.033	
19,800.0	12,506.4	19,767.3	12,506.8	66.7	66.1	-90.02	-7,339.0	-224.0	660.1	527.2	132.86	4.968	
19,900.0	12,506.9	19,867.3	12,507.3	67.6	67.0	-90.02	-7,439.0	-223.2	660.1	525.5	134.56	4.906	
20,000.0	12,507.5	19,967.3	12,507.8	68.4	67.8	-90.02	-7,539.0	-222.5	660.1	523.8	136.26	4.844	
20,100.0	12,508.0	20,067.3	12,508.4	69.3	68.7	-90.02	-7,639.0	-221.7	660.1	522.1	137.96	4.785	
20,200.0	12,508.5	20,167.3	12,508.9	70.1	69.5	-90.02	-7,739.0	-221.0	660.1	520.4	139.66	4.726	
20,300.0	12,509.0	20,267.3	12,509.4	71.0	70.4	-90.02	-7,839.0	-220.2	660.1	518.7	141.37	4.669	
20,400.0	12,509.6	20,367.3	12,510.0	71.8	71.3	-90.02	-7,939.0	-219.5	660.1	517.0	143.07	4.614	
20,500.0	12,510.1	20,467.3	12,510.5	72.7	72.1	-90.02	-8,039.0	-218.7	660.1	515.3	144.78	4.559	
20,600.0	12,510.6	20,567.3	12,511.0	73.5	73.0	-90.02	-8,139.0	-218.0	660.1	513.6	146.48	4.506	
20,700.0	12,511.1	20,667.3	12,511.5	74.4	73.8	-90.02	-8,239.0	-217.3	660.1	511.9	148.18	4.454	
20,800.0	12,511.6	20,767.3	12,512.1	75.2	74.7	-90.02	-8,339.0	-216.5	660.1	510.2	149.89	4.404	
20,900.0	12,512.2	20,867.3	12,512.6	76.1	75.5	-90.02	-8,438.9	-215.8	660.1	508.5	151.60	4.354	
21,000.0	12,512.7	20,967.3	12,513.1	76.9	76.4	-90.02	-8,538.9	-215.0	660.1	506.8	153.30	4.306	
21,100.0	12,513.2	21,067.3	12,513.7	77.8	77.2	-90.02	-8,638.9	-214.3	660.1	505.1	155.01	4.258	
21,200.0	12,513.7	21,167.3	12,514.2	78.6	78.1	-90.02	-8,738.9	-213.5	660.1	503.4	156.72	4.212	
21,272.3	12,514.1	21,239.6	12,514.6	79.2	78.7	-90.02	-8,811.2	-213.0	660.1	502.1	157.95	4.179	
21,272.3	12,514.1	21,239.6	12,514.6	79.2	78.7	-90.02	-8,811.2	-213.0	660.1	502.1	157.95	4.179	
21,300.0	12,514.3	21,267.3	12,514.7	79.5	79.0	-90.02	-8,838.9	-212.8	660.2	501.8	158.42	4.167	
21,400.0	12,514.8	21,367.3	12,515.2	80.3	79.8	-90.04	-8,938.9	-212.0	662.9	502.8	160.13	4.140	
21,451.1	12,515.1	21,418.2	12,515.5	80.7	80.3	-90.04	-8,989.9	-211.6	665.7	504.7	161.00	4.135	
21,500.0	12,515.3	21,467.1	12,515.8	81.2	80.7	-90.04	-9,038.7	-211.3	668.7	506.9	161.83	4.132	
21,600.0	12,515.8	21,566.9	12,516.3	82.0	81.5	-90.04	-9,138.5	-210.5	674.9	511.4	163.53	4.127	
21,700.0	12,516.4	21,666.7	12,516.8	82.8	82.4	-90.04	-9,238.3	-209.8	681.2	515.9	165.23	4.123	
21,800.0	12,516.9	21,766.5	12,517.3	83.7	83.2	-90.04	-9,338.1	-209.1	687.4	520.5	166.93	4.118	
21,900.0	12,517.4	21,866.3	12,517.9	84.5	84.1	-90.04	-9,437.9	-208.3	693.6	525.0	168.64	4.113	
21,990.5	12,517.9	21,966.7	12,518.4	85.3	84.9	-90.04	-9,528.3	-207.6	699.3	529.1	170.18	4.109	
22,000.0	12,517.9	21,966.1	12,518.4	85.4	85.0	-90.04	-9,537.7	-207.6	699.9	529.5	170.34	4.109	
22,100.0	12,518.5	22,066.0	12,518.9	86.2	85.8	-90.03	-9,637.6	-206.8	704.0	532.0	172.04	4.092	
22,200.0	12,519.0	22,166.0	12,519.5	87.1	86.7	-90.02	-9,737.6	-206.1	704.7	530.9	173.75	4.056	
22,300.0	12,519.5	22,266.0	12,520.0	87.9	87.5	-90.01	-9,837.6	-205.3	701.9	526.4	175.47	4.000	
22,347.9	12,519.8	22,313.8	12,520.2	88.4	87.9	-90.00	-9,885.4	-205.0	699.3	523.0	176.29	3.967	
22,400.0	12,520.1	22,365.8	12,520.5	88.8	88.4	-90.00	-9,937.4	-204.6	696.0	518.9	177.18	3.929	
22,500.0	12,520.6	22,465.6	12,521.0	89.7	89.2	-90.00	-10,037.2	-203.8	689.8	510.9	178.89	3.856	
22,600.0	12,521.1	22,565.4	12,521.6	90.5	90.1	-90.00	-10,137.0	-203.1	683.6	503.0	180.60	3.785	
22,700.0	12,521.6	22,665.2	12,522.1	91.4	91.0	-90.00	-10,236.8	-202.3	677.4	495.0	182.32	3.715	
22,800.0	12,522.1	22,765.0	12,522.6	92.2	91.8	-90.00	-10,336.6	-201.6	671.1	487.1	184.03	3.647	
22,887.9	12,522.6	22,864.8	12,523.1	93.0	92.6	-90.01	-10,436.4	-200.9	665.7	480.1	185.74	3.588	
22,900.0	12,522.7	22,864.8	12,523.1	93.1	92.7	-90.01	-10,436.4	-200.9	664.9	479.2	185.75	3.580	
23,000.0	12,523.2	22,964.7	12,523.7	93.9	93.5	-90.02	-10,536.3	-200.1	660.9	473.4	187.46	3.525	
23,066.5	12,523.6	23,031.2	12,524.0	94.5	94.1	-90.02	-10,602.8	-199.6	660.1	471.5	188.60	3.500	
23,100.0	12,523.7	23,064.7	12,524.2	94.8	94.4	-90.02	-10,636.3	-199.4	660.1	470.9	189.17	3.489	
23,200.0	12,524.3	23,164.7	12,524.7	95.6	95.2	-90.02	-10,736.3	-198.6	660.1	469.2	190.89	3.458	
23,300.0	12,524.8	23,264.7	12,525.3	96.5	96.1	-90.02	-10,836.3	-197.9	660.1	467.5	192.60	3.427	
23,400.0	12,525.3	23,364.7	12,525.8	97.4	97.0	-90.02	-10,936.3	-197.1	660.1	465.8	194.32	3.397	
23,500.0	12,525.9	23,464.7	12,526.3	98.2	97.8	-90.02	-11,036.3	-196.4	660.1	464.0	196.03	3.367	
23,600.0	12,526.4	23,564.7	12,526.8	99.1	98.7	-90.02	-11,136.3	-195.6	660.1	462.3	197.75	3.338	
23,700.0	12,527.0	23,664.7	12,527.4	99.9	99.5	-90.02	-11,236.3	-194.9	660.1	460.6	199.46	3.309	
23,800.0	12,527.5	23,764.7	12,527.9	100.8	100.4	-90.02	-11,336.3	-194.1	660.1	458.9	201.18	3.281	
23,900.0	12,528.0	23,864.7	12,528.4	101.6	101.3	-90.02	-11,436.3	-193.4	660.1	457.2	202.90	3.253	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: MEAT LOVER FED COM PROJECT - MEAT LOVER FED COM #603H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11913-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
24,000.0	12,528.6	23,964.7	12,529.0	102.5	102.1	-90.02	-11,536.3	-192.6	660.1	455.5	204.61	3.226	
24,100.0	12,529.1	24,064.7	12,529.5	103.3	103.0	-90.01	-11,636.2	-191.9	660.1	453.7	206.33	3.199	
24,200.0	12,529.7	24,164.7	12,530.0	104.2	103.8	-90.01	-11,736.2	-191.1	660.1	452.0	208.04	3.173	
24,300.0	12,530.2	24,264.7	12,530.5	105.1	104.7	-90.01	-11,836.2	-190.4	660.1	450.3	209.76	3.147	
24,400.0	12,530.7	24,364.7	12,531.1	105.9	105.6	-90.01	-11,936.2	-189.7	660.1	448.6	211.48	3.121	
24,500.0	12,531.3	24,464.7	12,531.6	106.8	106.4	-90.01	-12,036.2	-188.9	660.1	446.9	213.19	3.096	
24,600.0	12,531.8	24,564.7	12,532.1	107.6	107.3	-90.01	-12,136.2	-188.2	660.1	445.1	214.91	3.071	
24,700.0	12,532.3	24,664.7	12,532.7	108.5	108.1	-90.01	-12,236.2	-187.4	660.1	443.4	216.63	3.047	
24,800.0	12,532.9	24,764.7	12,533.2	109.3	109.0	-90.01	-12,336.2	-186.7	660.1	441.7	218.35	3.023	
24,900.0	12,533.4	24,864.7	12,533.7	110.2	109.9	-90.01	-12,436.2	-185.9	660.1	440.0	220.06	2.999	
25,000.0	12,534.0	24,964.7	12,534.2	111.1	110.7	-90.01	-12,536.2	-185.2	660.1	438.3	221.78	2.976	
25,100.0	12,534.5	25,064.7	12,534.8	111.9	111.6	-90.01	-12,636.2	-184.4	660.1	436.6	223.50	2.953	
25,200.0	12,535.0	25,164.7	12,535.3	112.8	112.5	-90.01	-12,736.2	-183.7	660.0	434.8	225.22	2.931	
25,300.0	12,535.6	25,264.7	12,535.8	113.6	113.3	-90.00	-12,836.2	-182.9	660.0	433.1	226.94	2.909	
25,400.0	12,536.1	25,364.7	12,536.4	114.5	114.2	-90.00	-12,936.2	-182.2	660.0	431.4	228.66	2.887	
25,500.0	12,536.6	25,464.7	12,536.9	115.3	115.0	-90.00	-13,036.2	-181.4	660.0	429.7	230.37	2.865	
25,600.0	12,537.2	25,564.7	12,537.4	116.2	115.9	-90.00	-13,136.2	-180.7	660.0	428.0	232.09	2.844	
25,700.0	12,537.7	25,664.7	12,537.9	117.1	116.8	-90.00	-13,236.2	-180.0	660.0	426.2	233.81	2.823	
25,800.0	12,538.3	25,764.7	12,538.5	117.9	117.6	-90.00	-13,336.2	-179.2	660.0	424.5	235.53	2.802	
25,900.0	12,538.8	25,864.7	12,539.0	118.8	118.5	-90.00	-13,436.2	-178.5	660.0	422.8	237.25	2.782	
26,000.0	12,539.3	25,964.7	12,539.5	119.6	119.3	-90.00	-13,536.2	-177.7	660.0	421.1	238.97	2.762	
26,100.0	12,539.9	26,064.7	12,540.0	120.5	120.2	-90.00	-13,636.2	-177.0	660.0	419.3	240.69	2.742	
26,200.0	12,540.4	26,164.7	12,540.6	121.3	121.1	-90.00	-13,736.2	-176.2	660.0	417.6	242.41	2.723	
26,300.0	12,540.9	26,264.7	12,541.1	122.2	121.9	-90.00	-13,836.2	-175.5	660.0	415.9	244.13	2.704	
26,400.0	12,541.5	26,364.7	12,541.6	123.1	122.8	-90.00	-13,936.2	-174.7	660.0	414.2	245.85	2.685	
26,500.0	12,542.0	26,464.7	12,542.2	123.9	123.6	-89.99	-14,036.1	-174.0	660.0	412.5	247.57	2.666	
26,600.0	12,542.6	26,564.7	12,542.7	124.8	124.5	-89.99	-14,136.1	-173.2	660.0	410.7	249.29	2.648	
26,700.0	12,543.1	26,664.7	12,543.2	125.6	125.4	-89.99	-14,236.1	-172.5	660.0	409.0	251.01	2.630	
26,800.0	12,543.6	26,764.7	12,543.7	126.5	126.2	-89.99	-14,336.1	-171.7	660.0	407.3	252.73	2.612	
26,900.0	12,544.2	26,864.7	12,544.3	127.4	127.1	-89.99	-14,436.1	-171.0	660.0	405.6	254.45	2.594	
27,000.0	12,544.7	26,964.7	12,544.8	128.2	128.0	-89.99	-14,536.1	-170.2	660.0	403.9	256.17	2.577	
27,100.0	12,545.3	27,064.7	12,545.3	129.1	128.8	-89.99	-14,636.1	-169.5	660.0	402.1	257.89	2.559	
27,200.0	12,545.8	27,164.7	12,545.9	129.9	129.7	-89.99	-14,736.1	-168.8	660.0	400.4	259.61	2.542	
27,300.0	12,546.3	27,264.7	12,546.4	130.8	130.5	-89.99	-14,836.1	-168.0	660.0	398.7	261.33	2.526	
27,400.0	12,546.9	27,364.7	12,546.9	131.7	131.4	-89.99	-14,936.1	-167.3	660.0	397.0	263.05	2.509	
27,500.0	12,547.4	27,464.7	12,547.4	132.5	132.3	-89.99	-15,036.1	-166.5	660.0	395.2	264.77	2.493	
27,600.0	12,547.9	27,564.7	12,548.0	133.4	133.1	-89.99	-15,136.1	-165.8	660.0	393.5	266.49	2.477	
27,700.0	12,548.5	27,664.7	12,548.5	134.2	134.0	-89.98	-15,236.1	-165.0	660.0	391.8	268.21	2.461	
27,800.0	12,549.0	27,764.7	12,549.0	135.1	134.8	-89.98	-15,336.1	-164.3	660.0	390.1	269.93	2.445	
27,900.0	12,549.6	27,864.7	12,549.6	135.9	135.7	-89.98	-15,436.1	-163.5	660.0	388.4	271.66	2.430	
27,982.9	12,550.0	27,947.6	12,550.0	136.7	136.4	-89.98	-15,519.0	-162.9	660.0	386.9	273.08	2.417 SF	

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: MEAT LOVER FED COM PROJECT - MEAT LOVER FED COM #605H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning	
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
10,400.0	10,363.4	10,496.0	10,458.9	12.5	37.7	-12.05	154.1	-1,718.7	984.0	934.7	49.34	19.942		
10,500.0	10,462.9	10,594.2	10,556.6	12.6	38.0	-12.05	156.2	-1,709.3	965.0	915.2	49.83	19.366		
10,600.0	10,562.4	10,692.4	10,654.3	12.8	38.4	-12.04	158.3	-1,700.0	946.1	895.8	50.32	18.801		
10,700.0	10,662.0	10,790.5	10,752.0	12.9	38.7	-12.04	160.3	-1,690.6	927.2	876.3	50.81	18.247		
10,800.0	10,761.5	10,888.7	10,849.8	13.0	39.1	-12.04	162.4	-1,681.3	908.2	856.9	51.30	17.703		
10,900.0	10,861.0	10,986.9	10,947.5	13.1	39.4	-12.04	164.4	-1,672.0	889.3	837.5	51.79	17.169		
11,000.0	10,960.5	11,085.1	11,045.2	13.3	39.8	-12.03	166.5	-1,662.6	870.3	818.0	52.28	16.646		
11,100.0	11,060.1	11,183.3	11,142.9	13.4	40.2	-12.03	168.5	-1,653.3	851.4	798.6	52.78	16.132		
11,200.0	11,159.6	11,281.5	11,240.7	13.5	40.5	-12.03	170.6	-1,644.0	832.4	779.2	53.27	15.627		
11,300.0	11,259.1	11,379.7	11,338.4	13.7	40.9	-12.02	172.6	-1,634.6	813.5	759.7	53.76	15.131		
11,400.0	11,358.6	11,477.9	11,436.1	13.8	41.2	-12.02	174.7	-1,625.3	794.5	740.3	54.25	14.645		
11,500.0	11,458.2	11,576.1	11,533.8	13.9	41.6	-12.01	176.8	-1,616.0	775.6	720.8	54.75	14.167		
11,600.0	11,557.7	11,674.2	11,631.6	14.0	41.9	-12.01	178.8	-1,606.6	756.6	701.4	55.24	13.697		
11,700.0	11,657.2	11,772.4	11,729.3	14.2	42.3	-12.01	180.9	-1,597.3	737.7	682.0	55.73	13.236		
11,800.0	11,756.7	11,870.6	11,827.0	14.3	42.7	-12.00	182.9	-1,588.0	718.8	662.5	56.23	12.783		
11,900.0	11,856.3	11,969.1	11,925.0	14.4	43.0	-12.12	183.4	-1,578.6	699.8	643.1	56.72	12.338		
11,931.7	11,887.8	12,000.1	11,955.8	14.5	43.1	-12.39	181.0	-1,575.6	693.8	636.9	56.86	12.201		
11,950.0	11,906.0	12,017.9	11,973.4	14.5	43.2	6.73	178.8	-1,573.9	690.3	633.3	57.02	12.108		
12,000.0	11,955.7	12,066.2	12,020.6	14.5	43.3	46.29	170.2	-1,569.4	680.9	623.8	57.16	11.912		
12,050.0	12,005.0	12,114.0	12,066.5	14.5	43.5	63.55	157.7	-1,564.9	671.7	614.4	57.30	11.723		
12,100.0	12,053.4	12,161.4	12,110.9	14.5	43.6	71.82	141.6	-1,560.5	662.6	605.2	57.42	11.540		
12,150.0	12,100.7	12,208.5	12,153.5	14.5	43.8	76.58	122.0	-1,556.3	653.8	596.3	57.53	11.364		
12,200.0	12,146.5	12,255.2	12,194.0	14.5	43.9	79.70	99.2	-1,552.3	645.3	587.7	57.64	11.196		
12,250.0	12,190.3	12,301.7	12,232.4	14.5	44.0	81.92	73.2	-1,548.5	637.3	579.5	57.74	11.036		
12,300.0	12,232.0	12,347.9	12,268.3	14.6	44.1	83.59	44.4	-1,544.8	629.6	571.8	57.84	10.886		
12,350.0	12,271.1	12,393.9	12,301.7	14.6	44.2	84.90	12.9	-1,541.4	622.5	564.6	57.94	10.744		
12,400.0	12,307.4	12,439.7	12,332.3	14.6	44.3	85.94	-21.0	-1,538.3	615.9	557.9	58.04	10.612		
12,450.0	12,340.6	12,485.3	12,360.0	14.7	44.4	86.79	-57.1	-1,535.4	609.9	551.8	58.15	10.489		
12,500.0	12,370.5	12,530.9	12,384.7	14.7	44.5	87.48	-95.3	-1,532.8	604.6	546.3	58.26	10.377		
12,550.0	12,396.7	12,576.3	12,406.3	14.8	44.6	88.04	-135.1	-1,530.5	599.9	541.5	58.39	10.274		
12,600.0	12,419.2	12,621.6	12,424.6	14.9	44.7	88.49	-176.5	-1,528.4	595.9	537.4	58.53	10.182		
12,650.0	12,437.7	12,666.9	12,439.6	14.9	44.7	88.83	-219.2	-1,526.7	592.6	533.9	58.68	10.100		
12,700.0	12,452.2	12,712.1	12,451.2	15.0	44.8	89.08	-262.8	-1,525.3	590.1	531.3	58.84	10.029		
12,750.0	12,462.4	12,757.2	12,459.3	15.1	44.9	89.25	-307.2	-1,524.3	588.3	529.3	59.01	9.970		
12,800.0	12,468.3	12,802.3	12,463.9	15.2	44.9	89.33	-352.1	-1,523.5	587.4	528.2	59.19	9.923		
12,837.7	12,470.0	12,836.4	12,465.0	15.3	45.0	89.33	-386.1	-1,523.2	587.2	527.8	59.33	9.896		
12,840.5	12,470.0	12,839.2	12,465.0	15.3	45.0	89.33	-388.9	-1,523.2	587.2	527.8	59.34	9.894		
12,900.0	12,470.3	12,898.7	12,465.4	15.4	45.0	89.33	-448.4	-1,522.7	587.2	527.6	59.58	9.856		
13,000.0	12,470.8	12,998.7	12,465.9	15.7	45.2	89.33	-548.4	-1,522.0	587.2	527.2	60.02	9.784		
13,100.0	12,471.3	13,098.7	12,466.4	16.0	45.3	89.34	-648.4	-1,521.3	587.3	526.7	60.52	9.703		
13,200.0	12,471.9	13,198.7	12,466.9	16.4	45.4	89.34	-748.4	-1,520.6	587.3	526.2	61.07	9.616		
13,300.0	12,472.4	13,298.7	12,467.5	16.8	45.6	89.34	-848.4	-1,519.9	587.3	525.7	61.68	9.523		
13,400.0	12,472.9	13,398.7	12,468.0	17.2	45.8	89.34	-948.4	-1,519.2	587.4	525.1	62.33	9.424		
13,500.0	12,473.4	13,498.7	12,468.5	17.7	45.9	89.34	-1,048.4	-1,518.5	587.4	524.4	63.03	9.320		
13,600.0	12,473.9	13,598.7	12,469.1	18.2	46.1	89.34	-1,148.4	-1,517.8	587.5	523.7	63.76	9.213		
13,700.0	12,474.5	13,698.7	12,469.6	18.8	46.3	89.34	-1,248.4	-1,517.1	587.5	523.0	64.54	9.103		
13,800.0	12,475.0	13,798.7	12,470.1	19.3	46.6	89.34	-1,348.4	-1,516.4	587.5	522.2	65.35	8.990		
13,900.0	12,475.5	13,898.7	12,470.6	19.9	46.8	89.34	-1,448.4	-1,515.7	587.6	521.4	66.20	8.876		
14,000.0	12,476.0	13,998.7	12,471.2	20.6	47.1	89.34	-1,548.3	-1,515.0	587.6	520.5	67.08	8.760		
14,100.0	12,476.6	14,098.7	12,471.7	21.2	47.3	89.34	-1,648.3	-1,514.3	587.7	519.7	67.99	8.643		
14,200.0	12,477.1	14,198.7	12,472.2	21.8	47.6	89.34	-1,748.3	-1,513.6	587.7	518.8	68.93	8.526		
14,300.0	12,477.6	14,298.7	12,472.8	22.5	47.9	89.34	-1,848.3	-1,512.9	587.7	517.8	69.90	8.408		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: MEAT LOVER FED COM PROJECT - MEAT LOVER FED COM #605H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning	
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
14,400.0	12,478.1	14,398.7	12,473.3	23.2	48.2	89.34	-1,948.3	-1,512.1	587.8	516.9	70.90	8.291		
14,500.0	12,478.7	14,498.7	12,473.8	23.9	48.5	89.34	-2,048.3	-1,511.4	587.8	515.9	71.92	8.174		
14,600.0	12,479.2	14,598.7	12,474.3	24.6	48.9	89.34	-2,148.3	-1,510.7	587.9	514.9	72.96	8.057		
14,700.0	12,479.7	14,698.7	12,474.9	25.3	49.2	89.34	-2,248.3	-1,510.0	587.9	513.9	74.03	7.942		
14,800.0	12,480.2	14,798.7	12,475.4	26.1	49.6	89.34	-2,348.3	-1,509.3	588.0	512.8	75.11	7.828		
14,900.0	12,480.8	14,898.7	12,475.9	26.8	49.9	89.34	-2,448.3	-1,508.6	588.0	511.8	76.22	7.714		
15,000.0	12,481.3	14,998.7	12,476.5	27.5	50.3	89.34	-2,548.3	-1,507.9	588.0	510.7	77.35	7.603		
15,100.0	12,481.8	15,098.7	12,477.0	28.3	50.7	89.35	-2,648.3	-1,507.2	588.1	509.6	78.49	7.492		
15,200.0	12,482.3	15,198.7	12,477.5	29.0	51.1	89.35	-2,748.3	-1,506.5	588.1	508.5	79.66	7.383		
15,300.0	12,482.8	15,298.7	12,478.0	29.8	51.5	89.35	-2,848.3	-1,505.8	588.2	507.3	80.84	7.276		
15,400.0	12,483.4	15,398.7	12,478.6	30.6	51.9	89.35	-2,948.3	-1,505.1	588.2	506.2	82.03	7.170		
15,500.0	12,483.9	15,498.7	12,479.1	31.3	52.4	89.35	-3,048.3	-1,504.4	588.2	505.0	83.25	7.066		
15,600.0	12,484.4	15,598.7	12,479.6	32.1	52.8	89.35	-3,148.3	-1,503.7	588.3	503.8	84.47	6.964		
15,700.0	12,484.9	15,698.7	12,480.1	32.9	53.3	89.35	-3,248.3	-1,503.0	588.3	502.6	85.72	6.864		
15,800.0	12,485.5	15,798.7	12,480.7	33.7	53.7	89.35	-3,348.3	-1,502.3	588.4	501.4	86.97	6.765		
15,900.0	12,486.0	15,898.7	12,481.2	34.5	54.2	89.35	-3,448.3	-1,501.6	588.4	500.2	88.24	6.668		
16,000.0	12,486.5	15,998.7	12,481.7	35.3	54.7	89.35	-3,548.3	-1,500.8	588.4	498.9	89.53	6.573		
16,100.0	12,487.0	16,098.7	12,482.3	36.1	55.2	89.35	-3,648.3	-1,500.1	588.5	497.7	90.82	6.480		
16,200.0	12,487.6	16,198.7	12,482.8	36.9	55.7	89.35	-3,748.3	-1,499.4	588.5	496.4	92.13	6.388		
16,300.0	12,488.1	16,298.7	12,483.3	37.7	56.2	89.35	-3,848.3	-1,498.7	588.6	495.1	93.45	6.298		
16,400.0	12,488.6	16,398.7	12,483.8	38.5	56.7	89.35	-3,948.3	-1,498.0	588.6	493.8	94.78	6.210		
16,500.0	12,489.1	16,498.7	12,484.4	39.3	57.3	89.35	-4,048.2	-1,497.3	588.6	492.5	96.12	6.124		
16,600.0	12,489.7	16,598.7	12,484.9	40.1	57.8	89.35	-4,148.2	-1,496.6	588.7	491.2	97.47	6.040		
16,700.0	12,490.2	16,698.7	12,485.4	40.9	58.4	89.35	-4,248.2	-1,495.9	588.7	489.9	98.83	5.957		
16,800.0	12,490.7	16,798.7	12,486.0	41.7	58.9	89.35	-4,348.2	-1,495.2	588.8	488.6	100.20	5.876		
16,900.0	12,491.2	16,898.7	12,486.5	42.5	59.5	89.35	-4,448.2	-1,494.5	588.8	487.2	101.58	5.797		
17,000.0	12,491.8	16,998.7	12,487.0	43.4	60.0	89.35	-4,548.2	-1,493.8	588.9	485.9	102.97	5.719		
17,100.0	12,492.3	17,098.7	12,487.5	44.2	60.6	89.35	-4,648.2	-1,493.1	588.9	484.5	104.37	5.643		
17,200.0	12,492.8	17,198.7	12,488.1	45.0	61.2	89.36	-4,748.2	-1,492.4	588.9	483.2	105.77	5.568		
17,300.0	12,493.3	17,298.7	12,488.6	45.8	61.8	89.36	-4,848.2	-1,491.7	589.0	481.8	107.19	5.495		
17,400.0	12,493.8	17,398.7	12,489.1	46.6	62.4	89.36	-4,948.2	-1,491.0	589.0	480.4	108.61	5.423		
17,500.0	12,494.4	17,498.7	12,489.7	47.5	63.0	89.36	-5,048.2	-1,490.2	589.1	479.0	110.04	5.353		
17,600.0	12,494.9	17,598.7	12,490.2	48.3	63.6	89.36	-5,148.2	-1,489.5	589.1	477.6	111.48	5.285		
17,700.0	12,495.4	17,698.7	12,490.7	49.1	64.2	89.36	-5,248.2	-1,488.8	589.1	476.2	112.92	5.217		
17,800.0	12,495.9	17,798.7	12,491.2	50.0	64.8	89.36	-5,348.2	-1,488.1	589.2	474.8	114.37	5.151		
17,900.0	12,496.5	17,898.7	12,491.8	50.8	65.4	89.36	-5,448.2	-1,487.4	589.2	473.4	115.83	5.087		
18,000.0	12,497.0	17,998.7	12,492.3	51.6	66.1	89.36	-5,548.2	-1,486.7	589.3	472.0	117.29	5.024		
18,100.0	12,497.5	18,098.7	12,492.8	52.5	66.7	89.36	-5,648.2	-1,486.0	589.3	470.5	118.76	4.962		
18,200.0	12,498.0	18,198.7	12,493.4	53.3	67.3	89.36	-5,748.2	-1,485.3	589.3	469.1	120.24	4.901		
18,300.0	12,498.6	18,298.7	12,493.9	54.1	68.0	89.36	-5,848.2	-1,484.6	589.4	467.7	121.72	4.842		
18,400.0	12,499.1	18,398.7	12,494.4	55.0	68.6	89.36	-5,948.2	-1,483.9	589.4	466.2	123.21	4.784		
18,500.0	12,499.6	18,498.7	12,494.9	55.8	69.3	89.36	-6,048.2	-1,483.2	589.5	464.8	124.70	4.727		
18,600.0	12,500.1	18,598.7	12,495.5	56.6	69.9	89.36	-6,148.2	-1,482.5	589.5	463.3	126.20	4.671		
18,700.0	12,500.7	18,698.7	12,496.0	57.5	70.6	89.36	-6,248.2	-1,481.8	589.5	461.8	127.71	4.616		
18,800.0	12,501.2	18,798.7	12,496.5	58.3	71.3	89.36	-6,348.2	-1,481.1	589.6	460.4	129.22	4.563		
18,900.0	12,501.7	18,898.7	12,497.0	59.2	71.9	89.36	-6,448.2	-1,480.4	589.6	458.9	130.73	4.510		
19,000.0	12,502.2	18,998.7	12,497.6	60.0	72.6	89.36	-6,548.2	-1,479.6	589.7	457.4	132.25	4.459		
19,100.0	12,502.7	19,098.7	12,498.1	60.8	73.3	89.36	-6,648.1	-1,478.9	589.7	455.9	133.77	4.408		
19,200.0	12,503.3	19,198.7	12,498.6	61.7	74.0	89.37	-6,748.1	-1,478.2	589.8	454.5	135.30	4.359		
19,300.0	12,503.8	19,298.7	12,499.2	62.5	74.7	89.37	-6,848.1	-1,477.5	589.8	453.0	136.83	4.310		
19,400.0	12,504.3	19,398.7	12,499.7	63.4	75.4	89.37	-6,948.1	-1,476.8	589.8	451.5	138.37	4.263		
19,500.0	12,504.8	19,498.7	12,500.2	64.2	76.1	89.37	-7,048.1	-1,476.1	589.9	450.0	139.91	4.216		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: MEAT LOVER FED COM PROJECT - MEAT LOVER FED COM #605H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning	
							+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
19,600.0	12,505.4	19,598.7	12,500.7	65.1	76.7	89.37	-7,148.1	-1,475.4	589.9	448.5	141.45	4.170		
19,700.0	12,505.9	19,698.7	12,501.3	65.9	77.4	89.37	-7,248.1	-1,474.7	590.0	447.0	143.00	4.126		
19,800.0	12,506.4	19,798.7	12,501.8	66.7	78.2	89.37	-7,348.1	-1,474.0	590.0	445.4	144.55	4.082		
19,900.0	12,506.9	19,898.7	12,502.3	67.6	78.9	89.37	-7,448.1	-1,473.3	590.0	443.9	146.11	4.038		
20,000.0	12,507.5	19,998.7	12,502.9	68.4	79.6	89.37	-7,548.1	-1,472.6	590.1	442.4	147.67	3.996		
20,100.0	12,508.0	20,098.7	12,503.4	69.3	80.3	89.37	-7,648.1	-1,471.9	590.1	440.9	149.23	3.954		
20,200.0	12,508.5	20,198.7	12,503.9	70.1	81.0	89.37	-7,748.1	-1,471.2	590.2	439.4	150.80	3.914		
20,300.0	12,509.0	20,298.7	12,504.4	71.0	81.7	89.37	-7,848.1	-1,470.5	590.2	437.8	152.36	3.874		
20,400.0	12,509.6	20,398.7	12,505.0	71.8	82.4	89.37	-7,948.1	-1,469.8	590.2	436.3	153.94	3.834		
20,500.0	12,510.1	20,498.7	12,505.5	72.7	83.2	89.37	-8,048.1	-1,469.0	590.3	434.8	155.51	3.796		
20,600.0	12,510.6	20,598.7	12,506.0	73.5	83.9	89.37	-8,148.1	-1,468.3	590.3	433.2	157.09	3.758		
20,700.0	12,511.1	20,698.7	12,506.6	74.4	84.6	89.37	-8,248.1	-1,467.6	590.4	431.7	158.67	3.721		
20,800.0	12,511.6	20,798.7	12,507.1	75.2	85.4	89.37	-8,348.1	-1,466.9	590.4	430.2	160.25	3.684		
20,900.0	12,512.2	20,898.7	12,507.6	76.1	86.1	89.37	-8,448.1	-1,466.2	590.4	428.6	161.84	3.648		
21,000.0	12,512.7	20,998.7	12,508.1	76.9	86.8	89.37	-8,548.1	-1,465.5	590.5	427.1	163.43	3.613		
21,100.0	12,513.2	21,098.7	12,508.7	77.8	87.6	89.37	-8,648.1	-1,464.8	590.5	425.5	165.02	3.578		
21,200.0	12,513.7	21,198.7	12,509.2	78.6	88.3	89.37	-8,748.1	-1,464.1	590.6	424.0	166.62	3.544		
21,272.3	12,514.1	21,270.9	12,509.6	79.2	88.9	89.38	-8,820.4	-1,463.6	590.6	422.8	167.77	3.520		
21,300.0	12,514.3	21,298.7	12,509.7	79.5	89.1	89.37	-8,848.1	-1,463.4	590.5	422.3	168.21	3.510		
21,400.0	12,514.8	21,398.6	12,510.3	80.3	89.8	89.36	-8,948.0	-1,462.7	587.8	418.0	169.81	3.462		
21,451.1	12,515.1	21,449.6	12,510.5	80.7	90.2	89.35	-8,999.0	-1,462.3	585.1	414.5	170.62	3.429		
21,500.0	12,515.3	21,498.5	12,510.8	81.2	90.5	89.35	-9,047.8	-1,462.0	582.1	410.7	171.40	3.396		
21,600.0	12,515.8	21,598.3	12,511.3	82.0	91.3	89.34	-9,147.7	-1,461.3	575.9	402.9	173.00	3.329		
21,700.0	12,516.4	21,698.1	12,511.8	82.8	92.0	89.33	-9,247.5	-1,460.6	569.7	395.1	174.59	3.263		
21,800.0	12,516.9	21,797.9	12,512.4	83.7	92.8	89.33	-9,347.3	-1,459.9	563.5	387.3	176.19	3.198		
21,900.0	12,517.4	21,897.7	12,512.9	84.5	93.6	89.32	-9,447.1	-1,459.2	557.3	379.5	177.79	3.134		
21,990.5	12,517.9	21,988.1	12,513.4	85.3	94.2	89.31	-9,537.4	-1,458.5	551.7	372.4	179.24	3.078		
22,000.0	12,517.9	21,997.5	12,513.4	85.4	94.3	89.31	-9,546.9	-1,458.5	551.1	371.7	179.39	3.072		
22,100.0	12,518.5	22,097.4	12,513.9	86.2	95.1	89.32	-9,646.8	-1,457.8	547.0	366.0	181.00	3.022		
22,168.1	12,518.8	22,165.5	12,514.3	86.8	95.6	89.33	-9,714.9	-1,457.3	546.2	364.1	182.10	2.999 CC		
22,200.0	12,519.0	22,197.4	12,514.5	87.1	95.8	89.33	-9,746.8	-1,457.0	546.3	363.7	182.62	2.992		
22,300.0	12,519.5	22,297.3	12,515.0	87.9	96.6	89.34	-9,846.7	-1,456.3	549.2	365.0	184.24	2.981		
22,347.9	12,519.8	22,345.2	12,515.3	88.4	97.0	89.35	-9,894.5	-1,456.0	551.8	366.8	185.02	2.983		
22,400.0	12,520.1	22,397.2	12,515.5	88.8	97.4	89.35	-9,946.5	-1,455.6	555.1	369.2	185.86	2.987		
22,500.0	12,520.6	22,497.0	12,516.1	89.7	98.1	89.36	-10,046.3	-1,454.9	561.3	373.9	187.48	2.994		
22,600.0	12,521.1	22,596.8	12,516.6	90.5	98.9	89.37	-10,146.1	-1,454.2	567.6	378.5	189.11	3.002		
22,700.0	12,521.6	22,696.6	12,517.1	91.4	99.7	89.38	-10,245.9	-1,453.5	573.9	383.2	190.74	3.009		
22,800.0	12,522.1	22,796.4	12,517.6	92.2	100.4	89.38	-10,345.7	-1,452.8	580.2	387.8	192.36	3.016		
22,887.9	12,522.6	22,884.1	12,518.1	93.0	101.1	89.39	-10,433.5	-1,452.2	585.7	391.9	193.80	3.022		
22,900.0	12,522.7	22,896.2	12,518.2	93.1	101.2	89.39	-10,445.5	-1,452.1	586.4	392.4	193.99	3.023		
23,000.0	12,523.2	22,996.1	12,518.7	93.9	102.0	89.39	-10,545.4	-1,451.4	590.5	394.9	195.63	3.019		
23,066.5	12,523.6	23,062.6	12,519.0	94.5	102.5	89.38	-10,611.9	-1,450.9	591.3	394.6	196.71	3.006		
23,100.0	12,523.7	23,096.1	12,519.2	94.8	102.8	89.38	-10,645.4	-1,450.7	591.3	394.1	197.26	2.998		
23,200.0	12,524.3	23,196.1	12,519.7	95.6	103.5	89.38	-10,745.4	-1,450.0	591.4	392.5	198.89	2.973		
23,300.0	12,524.8	23,296.1	12,520.3	96.5	104.3	89.38	-10,845.4	-1,449.3	591.4	390.9	200.53	2.949		
23,400.0	12,525.3	23,396.1	12,520.8	97.4	105.1	89.38	-10,945.4	-1,448.6	591.4	389.3	202.16	2.926		
23,500.0	12,525.9	23,496.1	12,521.3	98.2	105.9	89.37	-11,045.4	-1,447.9	591.5	387.7	203.80	2.902		
23,600.0	12,526.4	23,596.1	12,521.9	99.1	106.7	89.37	-11,145.4	-1,447.2	591.5	386.1	205.44	2.879		
23,700.0	12,527.0	23,696.1	12,522.4	99.9	107.4	89.37	-11,245.4	-1,446.5	591.6	384.5	207.08	2.857		
23,800.0	12,527.5	23,796.1	12,522.9	100.8	108.2	89.37	-11,345.4	-1,445.7	591.6	382.9	208.72	2.834		
23,900.0	12,528.0	23,896.1	12,523.4	101.6	109.0	89.37	-11,445.4	-1,445.0	591.7	381.3	210.37	2.812		
24,000.0	12,528.6	23,996.1	12,524.0	102.5	109.8	89.37	-11,545.4	-1,444.3	591.7	379.7	212.01	2.791		

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design: MEAT LOVER FED COM PROJECT - MEAT LOVER FED COM #605H - OWB - PWP1												Offset Site Error:	0.0 usft		
Survey Program: 0-MWD+IFR1+FDIR				Reference		Offset	Semi Major Axis			Offset Wellbore Centre		Rule Assigned:		Offset Well Error:	3.0 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		
24,100.0	12,529.1	24,096.1	12,524.5	103.3	110.6	89.37	-11,645.4	-1,443.6	591.7	378.1	213.66	2.770			
24,200.0	12,529.7	24,196.1	12,525.0	104.2	111.4	89.37	-11,745.4	-1,442.9	591.8	376.5	215.30	2.749			
24,300.0	12,530.2	24,296.1	12,525.6	105.1	112.2	89.37	-11,845.4	-1,442.2	591.8	374.9	216.95	2.728			
24,400.0	12,530.7	24,396.1	12,526.1	105.9	113.0	89.37	-11,945.4	-1,441.5	591.9	373.3	218.60	2.707			
24,500.0	12,531.3	24,496.1	12,526.6	106.8	113.7	89.37	-12,045.4	-1,440.8	591.9	371.6	220.25	2.687			
24,600.0	12,531.8	24,596.1	12,527.1	107.6	114.5	89.36	-12,145.4	-1,440.1	591.9	370.0	221.90	2.668			
24,700.0	12,532.3	24,696.1	12,527.7	108.5	115.3	89.36	-12,245.4	-1,439.4	592.0	368.4	223.56	2.648			
24,800.0	12,532.9	24,796.1	12,528.2	109.3	116.1	89.36	-12,345.4	-1,438.7	592.0	366.8	225.21	2.629			
24,900.0	12,533.4	24,896.1	12,528.7	110.2	116.9	89.36	-12,445.4	-1,438.0	592.1	365.2	226.87	2.610			
25,000.0	12,534.0	24,996.1	12,529.3	111.1	117.7	89.36	-12,545.4	-1,437.3	592.1	363.6	228.52	2.591			
25,100.0	12,534.5	25,096.1	12,529.8	111.9	118.5	89.36	-12,645.4	-1,436.6	592.2	362.0	230.18	2.573			
25,200.0	12,535.0	25,196.1	12,530.3	112.8	119.3	89.36	-12,745.3	-1,435.9	592.2	360.4	231.84	2.554			
25,300.0	12,535.6	25,296.1	12,530.8	113.6	120.1	89.36	-12,845.3	-1,435.1	592.2	358.7	233.50	2.536			
25,400.0	12,536.1	25,396.1	12,531.4	114.5	120.9	89.36	-12,945.3	-1,434.4	592.3	357.1	235.16	2.519			
25,500.0	12,536.6	25,496.1	12,531.9	115.3	121.7	89.36	-13,045.3	-1,433.7	592.3	355.5	236.82	2.501			
25,600.0	12,537.2	25,596.1	12,532.4	116.2	122.5	89.36	-13,145.3	-1,433.0	592.4	353.9	238.48	2.484			
25,700.0	12,537.7	25,696.1	12,532.9	117.1	123.3	89.35	-13,245.3	-1,432.3	592.4	352.3	240.14	2.467			
25,800.0	12,538.3	25,796.1	12,533.5	117.9	124.1	89.35	-13,345.3	-1,431.6	592.4	350.6	241.80	2.450			
25,900.0	12,538.8	25,896.1	12,534.0	118.8	124.9	89.35	-13,445.3	-1,430.9	592.5	349.0	243.47	2.434			
26,000.0	12,539.3	25,996.1	12,534.5	119.6	125.8	89.35	-13,545.3	-1,430.2	592.5	347.4	245.13	2.417			
26,100.0	12,539.9	26,096.1	12,535.1	120.5	126.6	89.35	-13,645.3	-1,429.5	592.6	345.8	246.80	2.401			
26,200.0	12,540.4	26,196.1	12,535.6	121.3	127.4	89.35	-13,745.3	-1,428.8	592.6	344.1	248.47	2.385			
26,300.0	12,540.9	26,296.1	12,536.1	122.2	128.2	89.35	-13,845.3	-1,428.1	592.6	342.5	250.13	2.369			
26,400.0	12,541.5	26,396.1	12,536.6	123.1	129.0	89.35	-13,945.3	-1,427.4	592.7	340.9	251.80	2.354			
26,500.0	12,542.0	26,496.1	12,537.2	123.9	129.8	89.35	-14,045.3	-1,426.7	592.7	339.3	253.47	2.338			
26,600.0	12,542.6	26,596.1	12,537.7	124.8	130.6	89.35	-14,145.3	-1,426.0	592.8	337.6	255.14	2.323			
26,700.0	12,543.1	26,696.1	12,538.2	125.6	131.4	89.35	-14,245.3	-1,425.3	592.8	336.0	256.81	2.308			
26,800.0	12,543.6	26,796.1	12,538.8	126.5	132.2	89.34	-14,345.3	-1,424.6	592.9	334.4	258.48	2.294			
26,900.0	12,544.2	26,896.1	12,539.3	127.4	133.0	89.34	-14,445.3	-1,423.8	592.9	332.7	260.16	2.279			
27,000.0	12,544.7	26,996.1	12,539.8	128.2	133.9	89.34	-14,545.3	-1,423.1	592.9	331.1	261.83	2.265			
27,100.0	12,545.3	27,096.1	12,540.3	129.1	134.7	89.34	-14,645.3	-1,422.4	593.0	329.5	263.50	2.250			
27,200.0	12,545.8	27,196.1	12,540.9	129.9	135.5	89.34	-14,745.3	-1,421.7	593.0	327.8	265.18	2.236			
27,300.0	12,546.3	27,296.1	12,541.4	130.8	136.3	89.34	-14,845.3	-1,421.0	593.1	326.2	266.85	2.222			
27,400.0	12,546.9	27,396.1	12,541.9	131.7	137.1	89.34	-14,945.3	-1,420.3	593.1	324.6	268.53	2.209			
27,500.0	12,547.4	27,496.1	12,542.5	132.5	137.9	89.34	-15,045.3	-1,419.6	593.1	322.9	270.20	2.195			
27,600.0	12,547.9	27,596.1	12,543.0	133.4	138.7	89.34	-15,145.3	-1,418.9	593.2	321.3	271.88	2.182			
27,700.0	12,548.5	27,696.1	12,543.5	134.2	139.6	89.34	-15,245.3	-1,418.2	593.2	319.7	273.56	2.169			
27,800.0	12,549.0	27,796.1	12,544.0	135.1	140.4	89.34	-15,345.2	-1,417.5	593.3	318.0	275.24	2.155			
27,900.0	12,549.6	27,896.1	12,544.6	135.9	141.2	89.34	-15,445.2	-1,416.8	593.3	316.4	276.92	2.143			
27,900.0	12,549.6	27,896.1	12,544.6	135.9	141.2	89.34	-15,445.2	-1,416.8	593.3	316.4	276.92	2.143			
27,982.9	12,550.0	27,978.0	12,545.0	136.7	141.9	89.33	-15,527.1	-1,416.2	593.3	315.1	278.29	2.132 ES, SF			

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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to *KB=30' @ 3746.2usft (TBD)

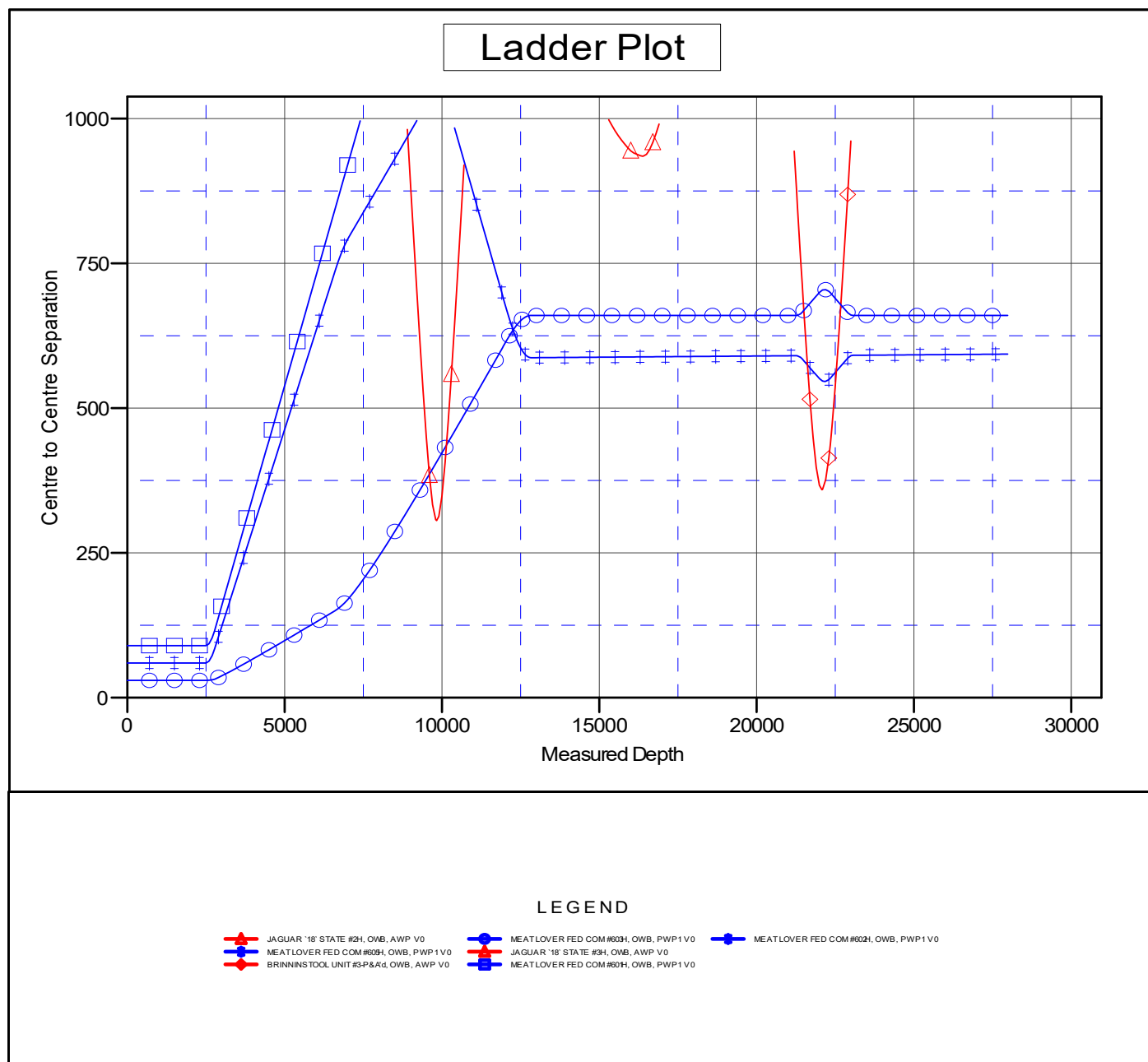
Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: MEAT LOVER FED COM #604H

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30

Grid Convergence at Surface is: 0.39°



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

ConocoPhillips

Anticollision Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Reference Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	MEAT LOVER FED COM #604H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	EDT 15 Central Prod
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to *KB=30' @ 3746.2usft (TBD)

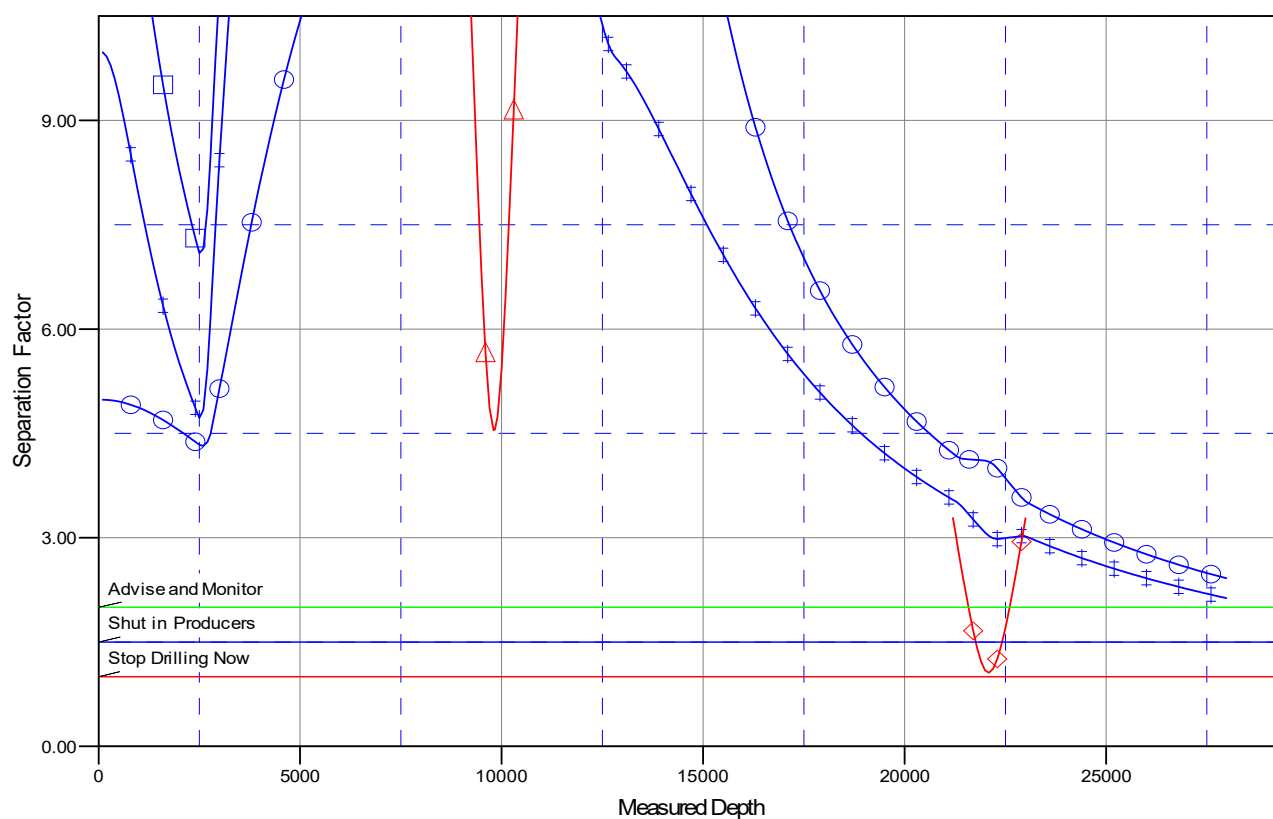
Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: MEAT LOVER FED COM #604H

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30

Grid Convergence at Surface is: 0.39°

Separation Factor Plot**LEGEND**

- ▲ JAGUAR '18' STATE #2H, OWB, AWP V0
- MEATLOVER FED COM #603H, OWB, PWP1 V0
- ◆ JAGUAR '18' STATE #3H, OWB, AWP V0
- MEATLOVER FED COM #602H, OWB, PWP1 V0
- MEATLOVER FED COM #604H, OWB, PWP1 V0
- ◆ BRINNINSTOOL UNIT #3-P&Ad, OWB, AWP V0

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

DELAWARE BASIN EAST

**BULLDOG PROSPECT (NM-E)
MEAT LOVER FED COM PROJECT
MEAT LOVER FED COM #604H**

OWB

Plan: PWP1

Standard Survey Report

07 July, 2021

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Well:	MEAT LOVER FED COM #604H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	EDT 15 Central Prod

Project	BULLDOG PROSPECT (NM-E)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Well	MEAT LOVER FED COM #604H				
Well Position	+N/-S	0.0 usft	Northing:	477,675.20 usft	Latitude: 32° 18' 40.157 N
	+E/-W	0.0 usft	Easting:	724,437.70 usft	Longitude: 103° 36' 24.742 W
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft	Ground Level: 3,716.2 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2021	7/7/2021	6.55	60.00	47,752.61640742

Design	PWP1				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	183.03	

Survey Tool Program	Date	7/7/2021			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,931.7	PWP1 (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
11,932.0	27,982.9	PWP1 (OWB)	MWD+IFR1+FDIR	OWSG MWD + IFR1 + FDIR Correction	

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00	

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Well:	MEAT LOVER FED COM #604H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	EDT 15 Central Prod

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
2,600.0	2.00	281.84	2,600.0	0.4	-1.7	-0.3	2.00	2.00	0.00
2,700.0	4.00	281.84	2,699.8	1.4	-6.8	-1.1	2.00	2.00	0.00
2,779.2	5.58	281.84	2,778.8	2.8	-13.3	-2.1	2.00	2.00	0.00
Start 9152.5 hold at 2779.2 MD									
2,800.0	5.58	281.84	2,799.5	3.2	-15.3	-2.4	0.00	0.00	0.00
2,900.0	5.58	281.84	2,899.0	5.2	-24.8	-3.9	0.00	0.00	0.00
3,000.0	5.58	281.84	2,998.5	7.2	-34.3	-5.4	0.00	0.00	0.00
3,100.0	5.58	281.84	3,098.0	9.2	-43.9	-6.9	0.00	0.00	0.00
3,200.0	5.58	281.84	3,197.6	11.2	-53.4	-8.3	0.00	0.00	0.00
3,300.0	5.58	281.84	3,297.1	13.2	-62.9	-9.8	0.00	0.00	0.00
3,400.0	5.58	281.84	3,396.6	15.2	-72.4	-11.3	0.00	0.00	0.00
3,500.0	5.58	281.84	3,496.1	17.2	-82.0	-12.8	0.00	0.00	0.00
3,600.0	5.58	281.84	3,595.7	19.2	-91.5	-14.3	0.00	0.00	0.00
3,700.0	5.58	281.84	3,695.2	21.2	-101.0	-15.8	0.00	0.00	0.00
3,800.0	5.58	281.84	3,794.7	23.2	-110.5	-17.3	0.00	0.00	0.00
3,900.0	5.58	281.84	3,894.2	25.2	-120.1	-18.8	0.00	0.00	0.00
4,000.0	5.58	281.84	3,993.8	27.2	-129.6	-20.3	0.00	0.00	0.00
4,100.0	5.58	281.84	4,093.3	29.2	-139.1	-21.8	0.00	0.00	0.00
4,200.0	5.58	281.84	4,192.8	31.2	-148.6	-23.2	0.00	0.00	0.00
4,300.0	5.58	281.84	4,292.3	33.1	-158.1	-24.7	0.00	0.00	0.00
4,400.0	5.58	281.84	4,391.9	35.1	-167.7	-26.2	0.00	0.00	0.00
4,500.0	5.58	281.84	4,491.4	37.1	-177.2	-27.7	0.00	0.00	0.00
4,600.0	5.58	281.84	4,590.9	39.1	-186.7	-29.2	0.00	0.00	0.00
4,700.0	5.58	281.84	4,690.4	41.1	-196.2	-30.7	0.00	0.00	0.00
4,800.0	5.58	281.84	4,790.0	43.1	-205.8	-32.2	0.00	0.00	0.00
4,900.0	5.58	281.84	4,889.5	45.1	-215.3	-33.7	0.00	0.00	0.00
5,000.0	5.58	281.84	4,989.0	47.1	-224.8	-35.2	0.00	0.00	0.00
5,100.0	5.58	281.84	5,088.5	49.1	-234.3	-36.6	0.00	0.00	0.00
5,200.0	5.58	281.84	5,188.1	51.1	-243.9	-38.1	0.00	0.00	0.00
5,300.0	5.58	281.84	5,287.6	53.1	-253.4	-39.6	0.00	0.00	0.00
5,400.0	5.58	281.84	5,387.1	55.1	-262.9	-41.1	0.00	0.00	0.00

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Well:	MEAT LOVER FED COM #604H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	EDT 15 Central Prod

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,500.0	5.58	281.84	5,486.6	57.1	-272.4	-42.6	0.00	0.00	0.00	
5,600.0	5.58	281.84	5,586.2	59.1	-282.0	-44.1	0.00	0.00	0.00	
5,700.0	5.58	281.84	5,685.7	61.1	-291.5	-45.6	0.00	0.00	0.00	
5,800.0	5.58	281.84	5,785.2	63.1	-301.0	-47.1	0.00	0.00	0.00	
5,900.0	5.58	281.84	5,884.7	65.1	-310.5	-48.6	0.00	0.00	0.00	
6,000.0	5.58	281.84	5,984.3	67.1	-320.1	-50.0	0.00	0.00	0.00	
6,100.0	5.58	281.84	6,083.8	69.1	-329.6	-51.5	0.00	0.00	0.00	
6,200.0	5.58	281.84	6,183.3	71.1	-339.1	-53.0	0.00	0.00	0.00	
6,300.0	5.58	281.84	6,282.8	73.1	-348.6	-54.5	0.00	0.00	0.00	
6,400.0	5.58	281.84	6,382.4	75.1	-358.2	-56.0	0.00	0.00	0.00	
6,500.0	5.58	281.84	6,481.9	77.1	-367.7	-57.5	0.00	0.00	0.00	
6,600.0	5.58	281.84	6,581.4	79.1	-377.2	-59.0	0.00	0.00	0.00	
6,700.0	5.58	281.84	6,681.0	81.1	-386.7	-60.5	0.00	0.00	0.00	
6,800.0	5.58	281.84	6,780.5	83.1	-396.3	-62.0	0.00	0.00	0.00	
6,900.0	5.58	281.84	6,880.0	85.1	-405.8	-63.5	0.00	0.00	0.00	
7,000.0	5.58	281.84	6,979.5	87.0	-415.3	-64.9	0.00	0.00	0.00	
7,100.0	5.58	281.84	7,079.1	89.0	-424.8	-66.4	0.00	0.00	0.00	
7,200.0	5.58	281.84	7,178.6	91.0	-434.3	-67.9	0.00	0.00	0.00	
7,300.0	5.58	281.84	7,278.1	93.0	-443.9	-69.4	0.00	0.00	0.00	
7,400.0	5.58	281.84	7,377.6	95.0	-453.4	-70.9	0.00	0.00	0.00	
7,500.0	5.58	281.84	7,477.2	97.0	-462.9	-72.4	0.00	0.00	0.00	
7,600.0	5.58	281.84	7,576.7	99.0	-472.4	-73.9	0.00	0.00	0.00	
7,700.0	5.58	281.84	7,676.2	101.0	-482.0	-75.4	0.00	0.00	0.00	
7,800.0	5.58	281.84	7,775.7	103.0	-491.5	-76.9	0.00	0.00	0.00	
7,900.0	5.58	281.84	7,875.3	105.0	-501.0	-78.3	0.00	0.00	0.00	
8,000.0	5.58	281.84	7,974.8	107.0	-510.5	-79.8	0.00	0.00	0.00	
8,100.0	5.58	281.84	8,074.3	109.0	-520.1	-81.3	0.00	0.00	0.00	
8,200.0	5.58	281.84	8,173.8	111.0	-529.6	-82.8	0.00	0.00	0.00	
8,300.0	5.58	281.84	8,273.4	113.0	-539.1	-84.3	0.00	0.00	0.00	
8,400.0	5.58	281.84	8,372.9	115.0	-548.6	-85.8	0.00	0.00	0.00	
8,500.0	5.58	281.84	8,472.4	117.0	-558.2	-87.3	0.00	0.00	0.00	
8,600.0	5.58	281.84	8,571.9	119.0	-567.7	-88.8	0.00	0.00	0.00	
8,700.0	5.58	281.84	8,671.5	121.0	-577.2	-90.3	0.00	0.00	0.00	
8,800.0	5.58	281.84	8,771.0	123.0	-586.7	-91.8	0.00	0.00	0.00	
8,900.0	5.58	281.84	8,870.5	125.0	-596.3	-93.2	0.00	0.00	0.00	
9,000.0	5.58	281.84	8,970.0	127.0	-605.8	-94.7	0.00	0.00	0.00	
9,100.0	5.58	281.84	9,069.6	129.0	-615.3	-96.2	0.00	0.00	0.00	
9,200.0	5.58	281.84	9,169.1	131.0	-624.8	-97.7	0.00	0.00	0.00	
9,300.0	5.58	281.84	9,268.6	133.0	-634.4	-99.2	0.00	0.00	0.00	
9,400.0	5.58	281.84	9,368.1	135.0	-643.9	-100.7	0.00	0.00	0.00	
9,500.0	5.58	281.84	9,467.7	137.0	-653.4	-102.2	0.00	0.00	0.00	
9,600.0	5.58	281.84	9,567.2	139.0	-662.9	-103.7	0.00	0.00	0.00	
9,700.0	5.58	281.84	9,666.7	140.9	-672.5	-105.2	0.00	0.00	0.00	
9,800.0	5.58	281.84	9,766.2	142.9	-682.0	-106.6	0.00	0.00	0.00	

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Well:	MEAT LOVER FED COM #604H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	EDT 15 Central Prod

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,900.0	5.58	281.84	9,865.8	144.9	-691.5	-108.1	0.00	0.00	0.00
10,000.0	5.58	281.84	9,965.3	146.9	-701.0	-109.6	0.00	0.00	0.00
10,100.0	5.58	281.84	10,064.8	148.9	-710.5	-111.1	0.00	0.00	0.00
10,200.0	5.58	281.84	10,164.3	150.9	-720.1	-112.6	0.00	0.00	0.00
10,300.0	5.58	281.84	10,263.9	152.9	-729.6	-114.1	0.00	0.00	0.00
10,400.0	5.58	281.84	10,363.4	154.9	-739.1	-115.6	0.00	0.00	0.00
10,500.0	5.58	281.84	10,462.9	156.9	-748.6	-117.1	0.00	0.00	0.00
10,600.0	5.58	281.84	10,562.4	158.9	-758.2	-118.6	0.00	0.00	0.00
10,700.0	5.58	281.84	10,662.0	160.9	-767.7	-120.0	0.00	0.00	0.00
10,800.0	5.58	281.84	10,761.5	162.9	-777.2	-121.5	0.00	0.00	0.00
10,900.0	5.58	281.84	10,861.0	164.9	-786.7	-123.0	0.00	0.00	0.00
11,000.0	5.58	281.84	10,960.5	166.9	-796.3	-124.5	0.00	0.00	0.00
11,100.0	5.58	281.84	11,060.1	168.9	-805.8	-126.0	0.00	0.00	0.00
11,200.0	5.58	281.84	11,159.6	170.9	-815.3	-127.5	0.00	0.00	0.00
11,300.0	5.58	281.84	11,259.1	172.9	-824.8	-129.0	0.00	0.00	0.00
11,400.0	5.58	281.84	11,358.6	174.9	-834.4	-130.5	0.00	0.00	0.00
11,500.0	5.58	281.84	11,458.2	176.9	-843.9	-132.0	0.00	0.00	0.00
11,600.0	5.58	281.84	11,557.7	178.9	-853.4	-133.5	0.00	0.00	0.00
11,700.0	5.58	281.84	11,657.2	180.9	-862.9	-134.9	0.00	0.00	0.00
11,800.0	5.58	281.84	11,756.7	182.9	-872.5	-136.4	0.00	0.00	0.00
11,900.0	5.58	281.84	11,856.3	184.9	-882.0	-137.9	0.00	0.00	0.00
11,931.7	5.58	281.84	11,887.8	185.5	-885.0	-138.4	0.00	0.00	0.00
Start DLS 10.00 TFO -102.24									
12,000.0	7.85	223.44	11,955.7	182.8	-891.5	-135.3	10.00	3.31	-85.48
12,100.0	16.55	198.30	12,053.4	164.3	-900.7	-116.4	10.00	8.70	-25.14
12,200.0	26.18	190.75	12,146.5	129.0	-909.3	-80.7	10.00	9.63	-7.55
12,300.0	36.01	187.10	12,232.0	78.0	-917.0	-29.4	10.00	9.82	-3.65
12,400.0	45.90	184.86	12,307.4	12.9	-923.7	36.0	10.00	9.89	-2.24
12,500.0	55.82	183.26	12,370.5	-64.4	-929.1	113.5	10.00	9.92	-1.59
12,600.0	65.76	182.01	12,419.2	-151.4	-933.1	200.6	10.00	9.94	-1.25
12,700.0	75.71	180.94	12,452.2	-245.7	-935.5	294.9	10.00	9.95	-1.07
12,800.0	85.66	179.96	12,468.3	-344.2	-936.2	393.3	10.00	9.95	-0.98
12,840.5	89.70	179.57	12,470.0	-384.7	-936.1	433.8	10.00	9.95	-0.95
Start 8431.8 hold at 12840.5 MD									
12,900.0	89.70	179.57	12,470.3	-444.2	-935.6	493.1	0.00	0.00	0.00
13,000.0	89.70	179.57	12,470.8	-544.2	-934.9	592.9	0.00	0.00	0.00
13,100.0	89.70	179.57	12,471.3	-644.2	-934.1	692.7	0.00	0.00	0.00
13,200.0	89.70	179.57	12,471.9	-744.2	-933.4	792.6	0.00	0.00	0.00
13,300.0	89.70	179.57	12,472.4	-844.2	-932.6	892.4	0.00	0.00	0.00
13,400.0	89.70	179.57	12,472.9	-944.2	-931.9	992.2	0.00	0.00	0.00
13,500.0	89.70	179.57	12,473.4	-1,044.2	-931.1	1,092.0	0.00	0.00	0.00
13,600.0	89.70	179.57	12,473.9	-1,144.2	-930.4	1,191.8	0.00	0.00	0.00
13,700.0	89.70	179.57	12,474.5	-1,244.2	-929.6	1,291.6	0.00	0.00	0.00

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Well:	MEAT LOVER FED COM #604H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	EDT 15 Central Prod

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,800.0	89.70	179.57	12,475.0	-1,344.2	-928.9	1,391.5	0.00	0.00	0.00
13,900.0	89.70	179.57	12,475.5	-1,444.2	-928.2	1,491.3	0.00	0.00	0.00
14,000.0	89.70	179.57	12,476.0	-1,544.2	-927.4	1,591.1	0.00	0.00	0.00
14,100.0	89.70	179.57	12,476.6	-1,644.2	-926.7	1,690.9	0.00	0.00	0.00
14,200.0	89.70	179.57	12,477.1	-1,744.2	-925.9	1,790.7	0.00	0.00	0.00
14,300.0	89.70	179.57	12,477.6	-1,844.1	-925.2	1,890.5	0.00	0.00	0.00
14,400.0	89.70	179.57	12,478.1	-1,944.1	-924.4	1,990.3	0.00	0.00	0.00
14,500.0	89.70	179.57	12,478.7	-2,044.1	-923.7	2,090.2	0.00	0.00	0.00
14,600.0	89.70	179.57	12,479.2	-2,144.1	-922.9	2,190.0	0.00	0.00	0.00
14,700.0	89.70	179.57	12,479.7	-2,244.1	-922.2	2,289.8	0.00	0.00	0.00
14,800.0	89.70	179.57	12,480.2	-2,344.1	-921.4	2,389.6	0.00	0.00	0.00
14,900.0	89.70	179.57	12,480.8	-2,444.1	-920.7	2,489.4	0.00	0.00	0.00
15,000.0	89.70	179.57	12,481.3	-2,544.1	-919.9	2,589.2	0.00	0.00	0.00
15,100.0	89.70	179.57	12,481.8	-2,644.1	-919.2	2,689.1	0.00	0.00	0.00
15,200.0	89.70	179.57	12,482.3	-2,744.1	-918.4	2,788.9	0.00	0.00	0.00
15,300.0	89.70	179.57	12,482.8	-2,844.1	-917.7	2,888.7	0.00	0.00	0.00
15,400.0	89.70	179.57	12,483.4	-2,944.1	-916.9	2,988.5	0.00	0.00	0.00
15,500.0	89.70	179.57	12,483.9	-3,044.1	-916.2	3,088.3	0.00	0.00	0.00
15,600.0	89.70	179.57	12,484.4	-3,144.1	-915.4	3,188.1	0.00	0.00	0.00
15,700.0	89.70	179.57	12,484.9	-3,244.1	-914.7	3,288.0	0.00	0.00	0.00
15,800.0	89.70	179.57	12,485.5	-3,344.1	-913.9	3,387.8	0.00	0.00	0.00
15,900.0	89.70	179.57	12,486.0	-3,444.1	-913.2	3,487.6	0.00	0.00	0.00
16,000.0	89.70	179.57	12,486.5	-3,544.1	-912.5	3,587.4	0.00	0.00	0.00
16,100.0	89.70	179.57	12,487.0	-3,644.1	-911.7	3,687.2	0.00	0.00	0.00
16,200.0	89.70	179.57	12,487.6	-3,744.1	-911.0	3,787.0	0.00	0.00	0.00
16,300.0	89.70	179.57	12,488.1	-3,844.1	-910.2	3,886.9	0.00	0.00	0.00
16,400.0	89.70	179.57	12,488.6	-3,944.1	-909.5	3,986.7	0.00	0.00	0.00
16,500.0	89.70	179.57	12,489.1	-4,044.1	-908.7	4,086.5	0.00	0.00	0.00
16,600.0	89.70	179.57	12,489.7	-4,144.1	-908.0	4,186.3	0.00	0.00	0.00
16,700.0	89.70	179.57	12,490.2	-4,244.0	-907.2	4,286.1	0.00	0.00	0.00
16,800.0	89.70	179.57	12,490.7	-4,344.0	-906.5	4,385.9	0.00	0.00	0.00
16,900.0	89.70	179.57	12,491.2	-4,444.0	-905.7	4,485.8	0.00	0.00	0.00
17,000.0	89.70	179.57	12,491.8	-4,544.0	-905.0	4,585.6	0.00	0.00	0.00
17,100.0	89.70	179.57	12,492.3	-4,644.0	-904.2	4,685.4	0.00	0.00	0.00
17,200.0	89.70	179.57	12,492.8	-4,744.0	-903.5	4,785.2	0.00	0.00	0.00
17,300.0	89.70	179.57	12,493.3	-4,844.0	-902.7	4,885.0	0.00	0.00	0.00
17,400.0	89.70	179.57	12,493.8	-4,944.0	-902.0	4,984.8	0.00	0.00	0.00
17,500.0	89.70	179.57	12,494.4	-5,044.0	-901.2	5,084.6	0.00	0.00	0.00
17,600.0	89.70	179.57	12,494.9	-5,144.0	-900.5	5,184.5	0.00	0.00	0.00
17,700.0	89.70	179.57	12,495.4	-5,244.0	-899.7	5,284.3	0.00	0.00	0.00
17,800.0	89.70	179.57	12,495.9	-5,344.0	-899.0	5,384.1	0.00	0.00	0.00
17,900.0	89.70	179.57	12,496.5	-5,444.0	-898.3	5,483.9	0.00	0.00	0.00
18,000.0	89.70	179.57	12,497.0	-5,544.0	-897.5	5,583.7	0.00	0.00	0.00
18,100.0	89.70	179.57	12,497.5	-5,644.0	-896.8	5,683.5	0.00	0.00	0.00

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Well:	MEAT LOVER FED COM #604H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	EDT 15 Central Prod

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,200.0	89.70	179.57	12,498.0	-5,744.0	-896.0	5,783.4	0.00	0.00	0.00
18,300.0	89.70	179.57	12,498.6	-5,844.0	-895.3	5,883.2	0.00	0.00	0.00
18,400.0	89.70	179.57	12,499.1	-5,944.0	-894.5	5,983.0	0.00	0.00	0.00
18,500.0	89.70	179.57	12,499.6	-6,044.0	-893.8	6,082.8	0.00	0.00	0.00
18,600.0	89.70	179.57	12,500.1	-6,144.0	-893.0	6,182.6	0.00	0.00	0.00
18,700.0	89.70	179.57	12,500.7	-6,244.0	-892.3	6,282.4	0.00	0.00	0.00
18,800.0	89.70	179.57	12,501.2	-6,344.0	-891.5	6,382.3	0.00	0.00	0.00
18,900.0	89.70	179.57	12,501.7	-6,444.0	-890.8	6,482.1	0.00	0.00	0.00
19,000.0	89.70	179.57	12,502.2	-6,544.0	-890.0	6,581.9	0.00	0.00	0.00
19,100.0	89.70	179.57	12,502.7	-6,643.9	-889.3	6,681.7	0.00	0.00	0.00
19,200.0	89.70	179.57	12,503.3	-6,743.9	-888.5	6,781.5	0.00	0.00	0.00
19,300.0	89.70	179.57	12,503.8	-6,843.9	-887.8	6,881.3	0.00	0.00	0.00
19,400.0	89.70	179.57	12,504.3	-6,943.9	-887.0	6,981.2	0.00	0.00	0.00
19,500.0	89.70	179.57	12,504.8	-7,043.9	-886.3	7,081.0	0.00	0.00	0.00
19,600.0	89.70	179.57	12,505.4	-7,143.9	-885.5	7,180.8	0.00	0.00	0.00
19,700.0	89.70	179.57	12,505.9	-7,243.9	-884.8	7,280.6	0.00	0.00	0.00
19,800.0	89.70	179.57	12,506.4	-7,343.9	-884.0	7,380.4	0.00	0.00	0.00
19,900.0	89.70	179.57	12,506.9	-7,443.9	-883.3	7,480.2	0.00	0.00	0.00
20,000.0	89.70	179.57	12,507.5	-7,543.9	-882.6	7,580.0	0.00	0.00	0.00
20,100.0	89.70	179.57	12,508.0	-7,643.9	-881.8	7,679.9	0.00	0.00	0.00
20,200.0	89.70	179.57	12,508.5	-7,743.9	-881.1	7,779.7	0.00	0.00	0.00
20,300.0	89.70	179.57	12,509.0	-7,843.9	-880.3	7,879.5	0.00	0.00	0.00
20,400.0	89.70	179.57	12,509.6	-7,943.9	-879.6	7,979.3	0.00	0.00	0.00
20,500.0	89.70	179.57	12,510.1	-8,043.9	-878.8	8,079.1	0.00	0.00	0.00
20,600.0	89.70	179.57	12,510.6	-8,143.9	-878.1	8,178.9	0.00	0.00	0.00
20,700.0	89.70	179.57	12,511.1	-8,243.9	-877.3	8,278.8	0.00	0.00	0.00
20,800.0	89.70	179.57	12,511.6	-8,343.9	-876.6	8,378.6	0.00	0.00	0.00
20,900.0	89.70	179.57	12,512.2	-8,443.9	-875.8	8,478.4	0.00	0.00	0.00
21,000.0	89.70	179.57	12,512.7	-8,543.9	-875.1	8,578.2	0.00	0.00	0.00
21,100.0	89.70	179.57	12,513.2	-8,643.9	-874.3	8,678.0	0.00	0.00	0.00
21,200.0	89.70	179.57	12,513.7	-8,743.9	-873.6	8,777.8	0.00	0.00	0.00
21,272.3	89.70	179.57	12,514.1	-8,816.1	-873.0	8,850.0	0.00	0.00	0.00
Start DLS 2.00 TFO 90.04									
21,300.0	89.70	180.13	12,514.3	-8,843.9	-873.0	8,877.7	2.00	0.00	2.00
21,400.0	89.70	182.13	12,514.8	-8,943.8	-874.9	8,977.6	2.00	0.00	2.00
21,451.1	89.70	183.15	12,515.1	-8,994.8	-877.3	9,028.7	2.00	0.00	2.00
Start 539.5 hold at 21451.1 MD									
21,500.0	89.70	183.15	12,515.3	-9,043.7	-880.0	9,077.6	0.00	0.00	0.00
21,600.0	89.70	183.15	12,515.8	-9,143.5	-885.5	9,177.6	0.00	0.00	0.00
21,700.0	89.70	183.15	12,516.4	-9,243.4	-890.9	9,277.6	0.00	0.00	0.00
21,800.0	89.70	183.15	12,516.9	-9,343.2	-896.4	9,377.6	0.00	0.00	0.00
21,900.0	89.70	183.15	12,517.4	-9,443.1	-901.9	9,477.6	0.00	0.00	0.00
21,990.5	89.70	183.15	12,517.9	-9,533.5	-906.9	9,568.1	0.00	0.00	0.00

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Well:	MEAT LOVER FED COM #604H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	EDT 15 Central Prod

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Start DLS 2.00 TFO -90.01									
22,000.0	89.70	182.96	12,517.9	-9,542.9	-907.4	9,577.6	2.00	0.00	-2.00
22,100.0	89.70	180.96	12,518.5	-9,642.9	-910.8	9,677.6	2.00	0.00	-2.00
22,200.0	89.70	178.96	12,519.0	-9,742.9	-910.7	9,777.4	2.00	0.00	-2.00
22,300.0	89.70	176.96	12,519.5	-9,842.8	-907.2	9,877.0	2.00	0.00	-2.00
22,347.9	89.70	176.00	12,519.8	-9,890.6	-904.2	9,924.6	2.00	0.00	-2.00
Start 540.0 hold at 22347.9 MD									
22,400.0	89.70	176.00	12,520.1	-9,942.6	-900.6	9,976.3	0.00	0.00	0.00
22,500.0	89.70	176.00	12,520.6	-10,042.3	-893.6	10,075.6	0.00	0.00	0.00
22,600.0	89.70	176.00	12,521.1	-10,142.1	-886.7	10,174.8	0.00	0.00	0.00
22,700.0	89.70	176.00	12,521.6	-10,241.8	-879.7	10,274.1	0.00	0.00	0.00
22,800.0	89.70	176.00	12,522.1	-10,341.6	-872.7	10,373.3	0.00	0.00	0.00
22,887.9	89.70	176.00	12,522.6	-10,429.3	-866.6	10,460.5	0.00	0.00	0.00
Start DLS 2.00 TFO 90.14									
22,900.0	89.70	176.24	12,522.7	-10,441.4	-865.8	10,472.5	2.00	0.00	2.00
23,000.0	89.69	178.24	12,523.2	-10,541.2	-860.9	10,572.0	2.00	0.00	2.00
23,066.5	89.69	179.57	12,523.6	-10,607.7	-859.7	10,638.3	2.00	0.00	2.00
Start 4916.4 hold at 23066.5 MD									
23,100.0	89.69	179.57	12,523.7	-10,641.2	-859.4	10,671.8	0.00	0.00	0.00
23,200.0	89.69	179.57	12,524.3	-10,741.2	-858.7	10,771.6	0.00	0.00	0.00
23,300.0	89.69	179.57	12,524.8	-10,841.2	-857.9	10,871.4	0.00	0.00	0.00
23,400.0	89.69	179.57	12,525.3	-10,941.2	-857.2	10,971.2	0.00	0.00	0.00
23,500.0	89.69	179.57	12,525.9	-11,041.2	-856.4	11,071.1	0.00	0.00	0.00
23,600.0	89.69	179.57	12,526.4	-11,141.2	-855.7	11,170.9	0.00	0.00	0.00
23,700.0	89.69	179.57	12,527.0	-11,241.2	-854.9	11,270.7	0.00	0.00	0.00
23,800.0	89.69	179.57	12,527.5	-11,341.2	-854.2	11,370.5	0.00	0.00	0.00
23,900.0	89.69	179.57	12,528.0	-11,441.2	-853.4	11,470.3	0.00	0.00	0.00
24,000.0	89.69	179.57	12,528.6	-11,541.2	-852.7	11,570.1	0.00	0.00	0.00
24,100.0	89.69	179.57	12,529.1	-11,641.2	-851.9	11,670.0	0.00	0.00	0.00
24,200.0	89.69	179.57	12,529.7	-11,741.2	-851.2	11,769.8	0.00	0.00	0.00
24,300.0	89.69	179.57	12,530.2	-11,841.2	-850.4	11,869.6	0.00	0.00	0.00
24,400.0	89.69	179.57	12,530.7	-11,941.2	-849.7	11,969.4	0.00	0.00	0.00
24,500.0	89.69	179.57	12,531.3	-12,041.2	-849.0	12,069.2	0.00	0.00	0.00
24,600.0	89.69	179.57	12,531.8	-12,141.2	-848.2	12,169.0	0.00	0.00	0.00
24,700.0	89.69	179.57	12,532.3	-12,241.1	-847.5	12,268.8	0.00	0.00	0.00
24,800.0	89.69	179.57	12,532.9	-12,341.1	-846.7	12,368.7	0.00	0.00	0.00
24,900.0	89.69	179.57	12,533.4	-12,441.1	-846.0	12,468.5	0.00	0.00	0.00
25,000.0	89.69	179.57	12,534.0	-12,541.1	-845.2	12,568.3	0.00	0.00	0.00
25,100.0	89.69	179.57	12,534.5	-12,641.1	-844.5	12,668.1	0.00	0.00	0.00
25,200.0	89.69	179.57	12,535.0	-12,741.1	-843.7	12,767.9	0.00	0.00	0.00
25,300.0	89.69	179.57	12,535.6	-12,841.1	-843.0	12,867.7	0.00	0.00	0.00
25,400.0	89.69	179.57	12,536.1	-12,941.1	-842.2	12,967.6	0.00	0.00	0.00
25,500.0	89.69	179.57	12,536.6	-13,041.1	-841.5	13,067.4	0.00	0.00	0.00
25,600.0	89.69	179.57	12,537.2	-13,141.1	-840.7	13,167.2	0.00	0.00	0.00

ConocoPhillips

Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Well:	MEAT LOVER FED COM #604H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	EDT 15 Central Prod

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
25,700.0	89.69	179.57	12,537.7	-13,241.1	-840.0	13,267.0	0.00	0.00	0.00
25,800.0	89.69	179.57	12,538.3	-13,341.1	-839.2	13,366.8	0.00	0.00	0.00
25,900.0	89.69	179.57	12,538.8	-13,441.1	-838.5	13,466.6	0.00	0.00	0.00
26,000.0	89.69	179.57	12,539.3	-13,541.1	-837.7	13,566.5	0.00	0.00	0.00
26,100.0	89.69	179.57	12,539.9	-13,641.1	-837.0	13,666.3	0.00	0.00	0.00
26,200.0	89.69	179.57	12,540.4	-13,741.1	-836.2	13,766.1	0.00	0.00	0.00
26,300.0	89.69	179.57	12,540.9	-13,841.1	-835.5	13,865.9	0.00	0.00	0.00
26,400.0	89.69	179.57	12,541.5	-13,941.1	-834.7	13,965.7	0.00	0.00	0.00
26,500.0	89.69	179.57	12,542.0	-14,041.1	-834.0	14,065.5	0.00	0.00	0.00
26,600.0	89.69	179.57	12,542.6	-14,141.1	-833.2	14,165.4	0.00	0.00	0.00
26,700.0	89.69	179.57	12,543.1	-14,241.1	-832.5	14,265.2	0.00	0.00	0.00
26,800.0	89.69	179.57	12,543.6	-14,341.1	-831.7	14,365.0	0.00	0.00	0.00
26,900.0	89.69	179.57	12,544.2	-14,441.1	-831.0	14,464.8	0.00	0.00	0.00
27,000.0	89.69	179.57	12,544.7	-14,541.1	-830.3	14,564.6	0.00	0.00	0.00
27,100.0	89.69	179.57	12,545.3	-14,641.0	-829.5	14,664.4	0.00	0.00	0.00
27,200.0	89.69	179.57	12,545.8	-14,741.0	-828.8	14,764.2	0.00	0.00	0.00
27,300.0	89.69	179.57	12,546.3	-14,841.0	-828.0	14,864.1	0.00	0.00	0.00
27,400.0	89.69	179.57	12,546.9	-14,941.0	-827.3	14,963.9	0.00	0.00	0.00
27,500.0	89.69	179.57	12,547.4	-15,041.0	-826.5	15,063.7	0.00	0.00	0.00
27,600.0	89.69	179.57	12,547.9	-15,141.0	-825.8	15,163.5	0.00	0.00	0.00
27,700.0	89.69	179.57	12,548.5	-15,241.0	-825.0	15,263.3	0.00	0.00	0.00
27,800.0	89.69	179.57	12,549.0	-15,341.0	-824.3	15,363.1	0.00	0.00	0.00
27,900.0	89.69	179.57	12,549.6	-15,441.0	-823.5	15,463.0	0.00	0.00	0.00
27,982.9	89.69	179.57	12,550.0	-15,523.9	-822.9	15,545.7	0.00	0.00	0.00
TD at 27982.9									

Design Targets

Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP (MEAT LOVER F	- Shape	0.00	0.00	12,470.0	167.1	-941.4	477,842.30	723,496.30	32° 18' 41.873 N	103° 36' 35.698 W
- plan misses target center by 224.8usft at 12400.0usft MD (12307.4 TVD, 12.9 N, -923.7 E)										
- Circle (radius 50.0)										
POI#1 (MEAT LOVER	- Point	0.00	0.00	12,518.9	-9,533.5	-906.9	468,141.70	723,530.80	32° 17' 5.879 N	103° 36' 36.058 W
- plan misses target center by 1.0usft at 21990.6usft MD (12517.9 TVD, -9533.5 N, -906.9 E)										
PBHL (MEAT LOVER	- plan hits target center	-0.30	359.57	12,550.0	-15,523.9	-822.9	462,151.30	723,614.80	32° 16' 6.595 N	103° 36' 35.550 W
- Rectangle (sides W100.0 H15,740.0 D20.0)										
LTP (MEAT LOVER F	- Point	0.00	0.00	12,550.0	-15,473.9	-823.3	462,201.30	723,614.40	32° 16' 7.090 N	103° 36' 35.551 W
- plan misses target center by 32.9usft at 27900.0usft MD (12549.6 TVD, -15441.0 N, -823.5 E)										

ConocoPhillips

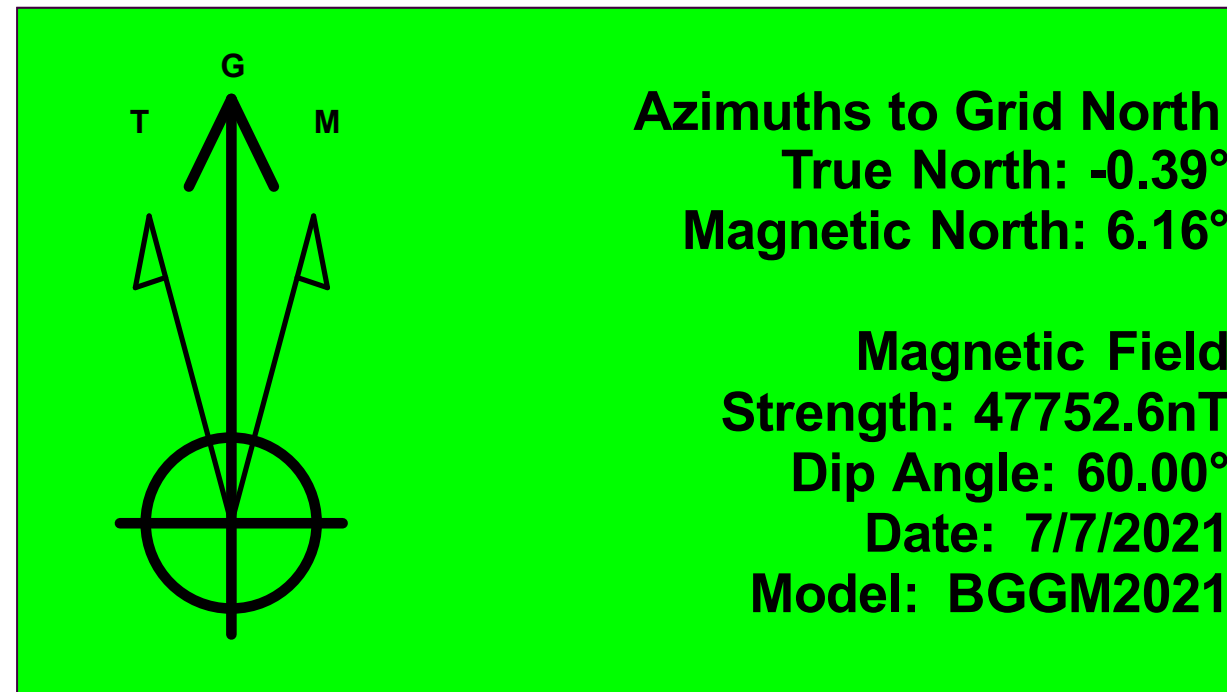
Survey Report

Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well MEAT LOVER FED COM #604H
Project:	BULLDOG PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3746.2usft (TBD)
Site:	MEAT LOVER FED COM PROJECT	MD Reference:	*KB=30' @ 3746.2usft (TBD)
Well:	MEAT LOVER FED COM #604H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	EDT 15 Central Prod

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2500	2500	0	0	Start Build 2.00
2779	2779	3	-13	Start 9152.5 hold at 2779.2 MD
11,932	11,888	185	-885	Start DLS 10.00 TFO -102.24
12,841	12,470	-385	-936	Start 8431.8 hold at 12840.5 MD
21,272	12,514	-8816	-873	Start DLS 2.00 TFO 90.04
21,451	12,515	-8995	-877	Start 539.5 hold at 21451.1 MD
21,991	12,518	-9534	-907	Start DLS 2.00 TFO -90.01
22,348	12,520	-9891	-904	Start 540.0 hold at 22347.9 MD
22,888	12,523	-10,429	-867	Start DLS 2.00 TFO 90.14
23,066	12,524	-10,608	-860	Start 4916.4 hold at 23066.5 MD
27,983	12,550	-15,524	-823	TD at 27982.9

Checked By: _____ Approved By: _____ Date: _____



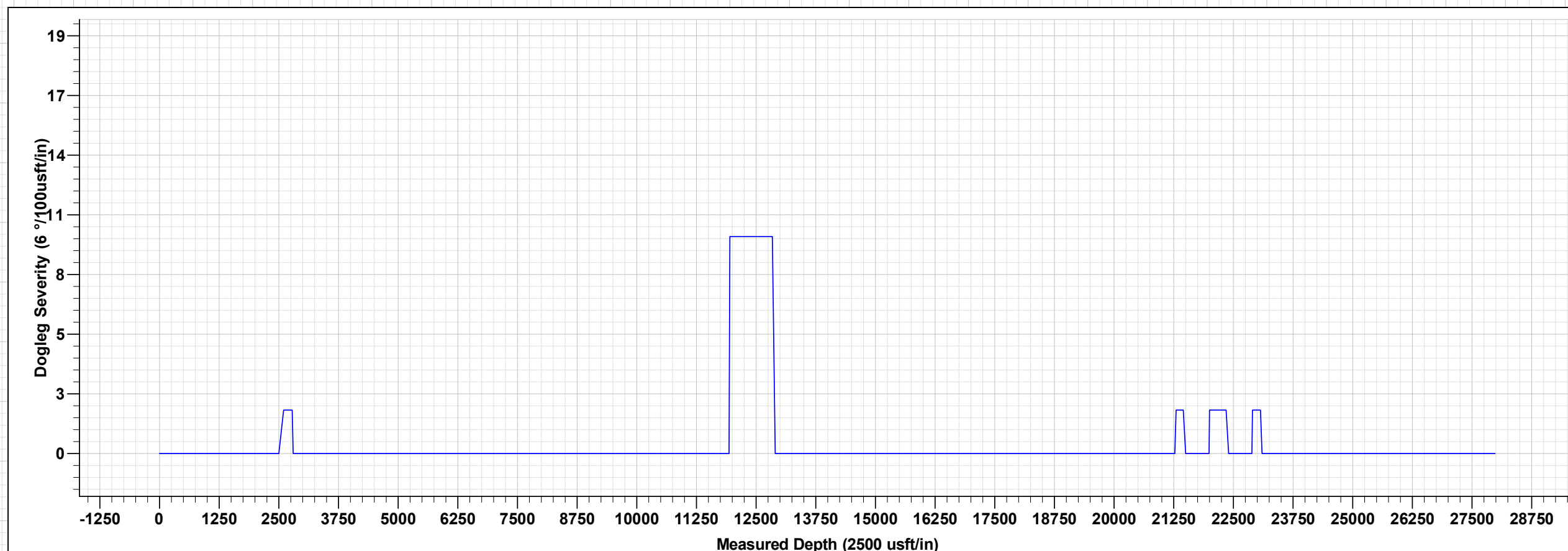
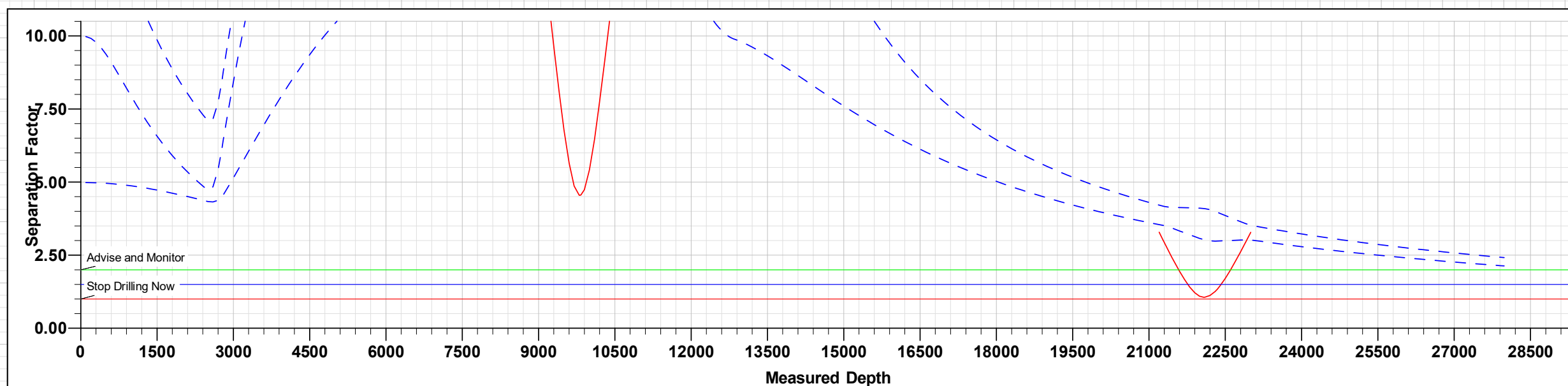
Project: BULLDOG PROSPECT (NM-E)
Site: MEAT LOVER FED COM PROJECT
Well: MEAT LOVER FED COM #604H
Wellbore: OWB
Design: PWP1
GL: 3716.2
*KB=30' @ 3746.2usft (TBD)

WELL DETAILS: MEAT LOVER FED COM #604H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	477675.20	724437.70	32° 18' 40.157 N	103° 36' 24.742 W

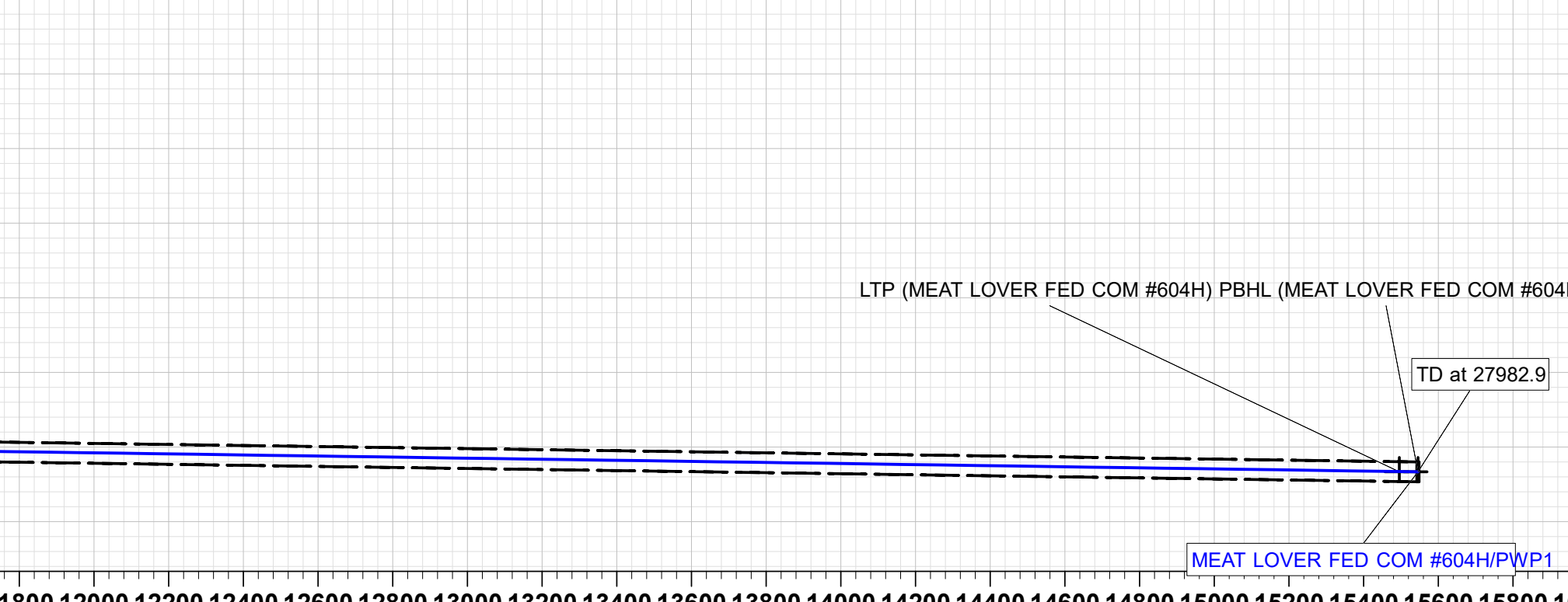
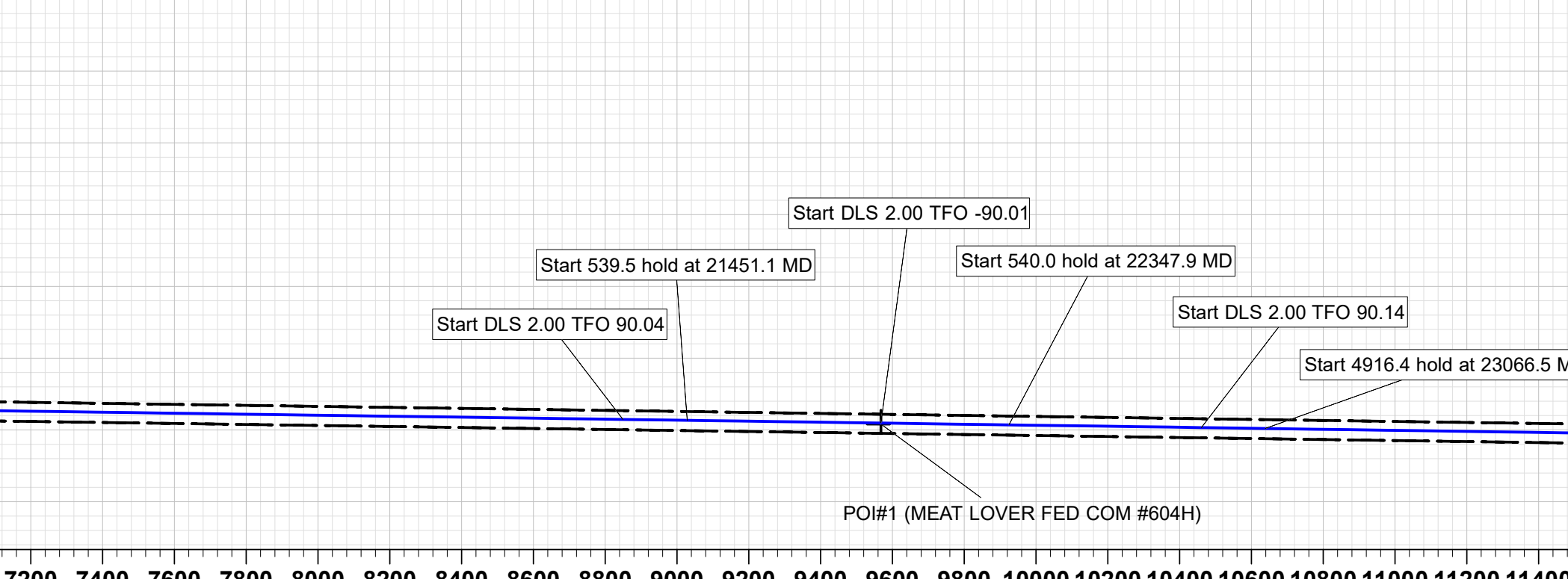
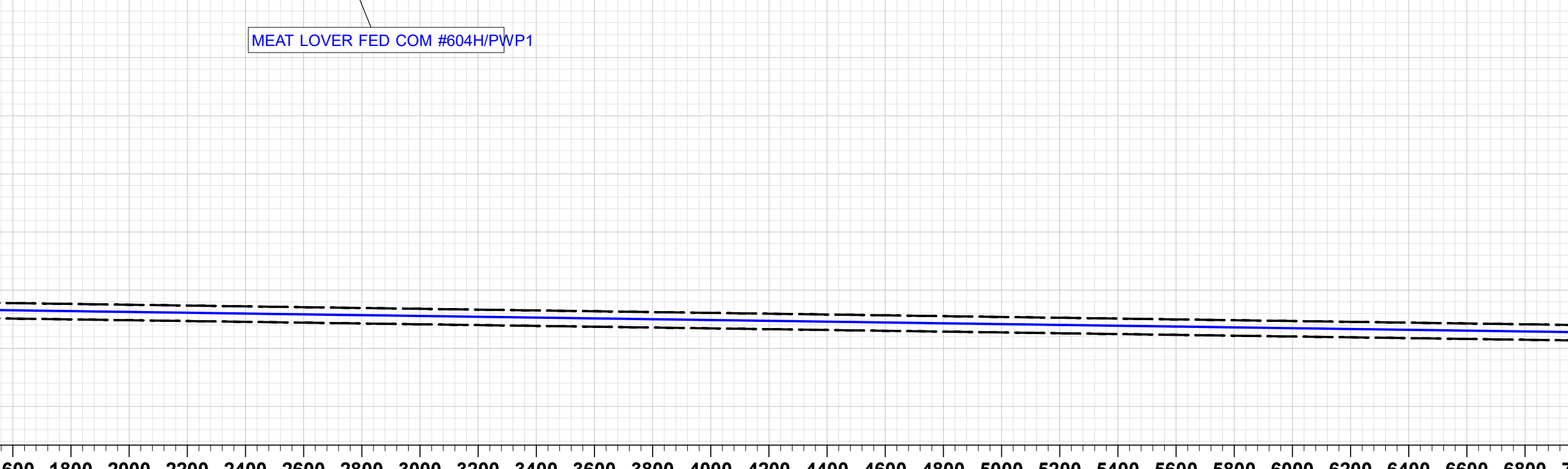
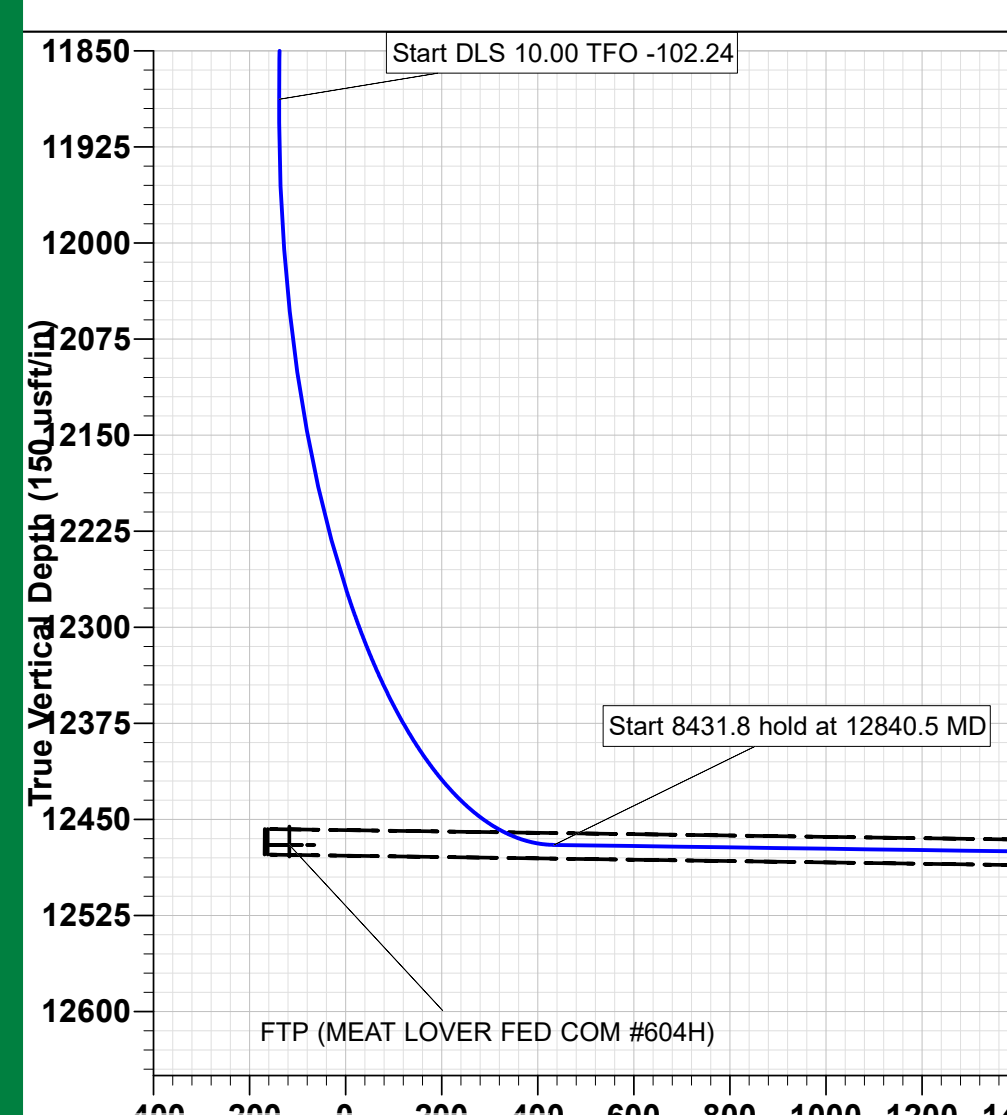
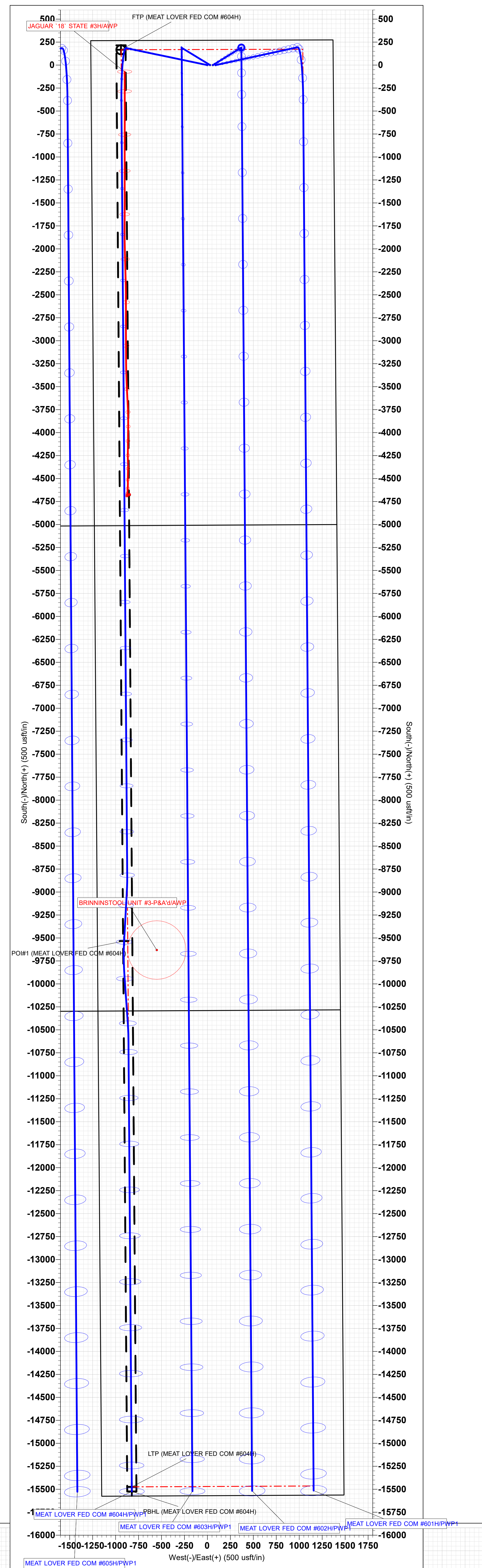
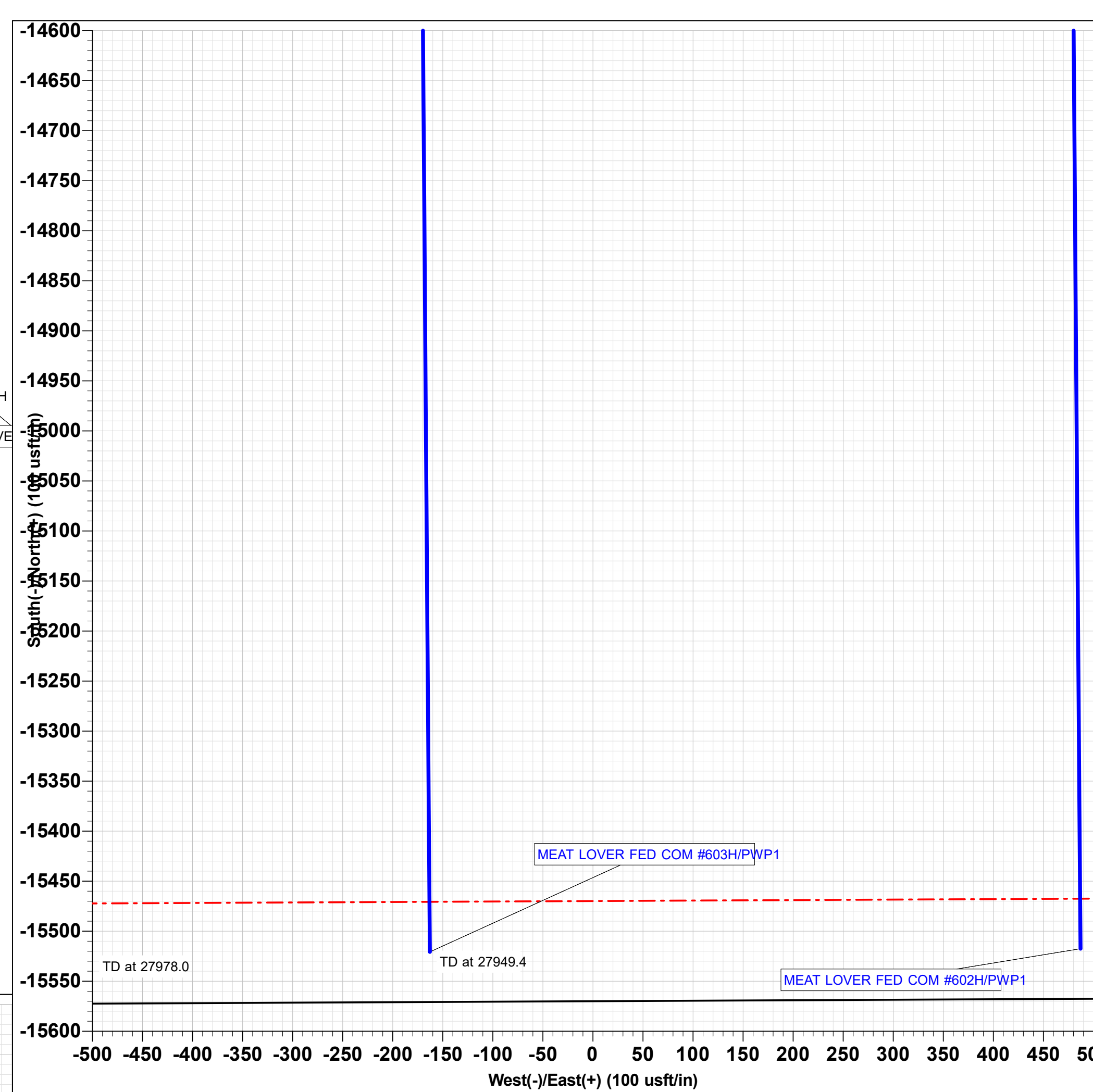
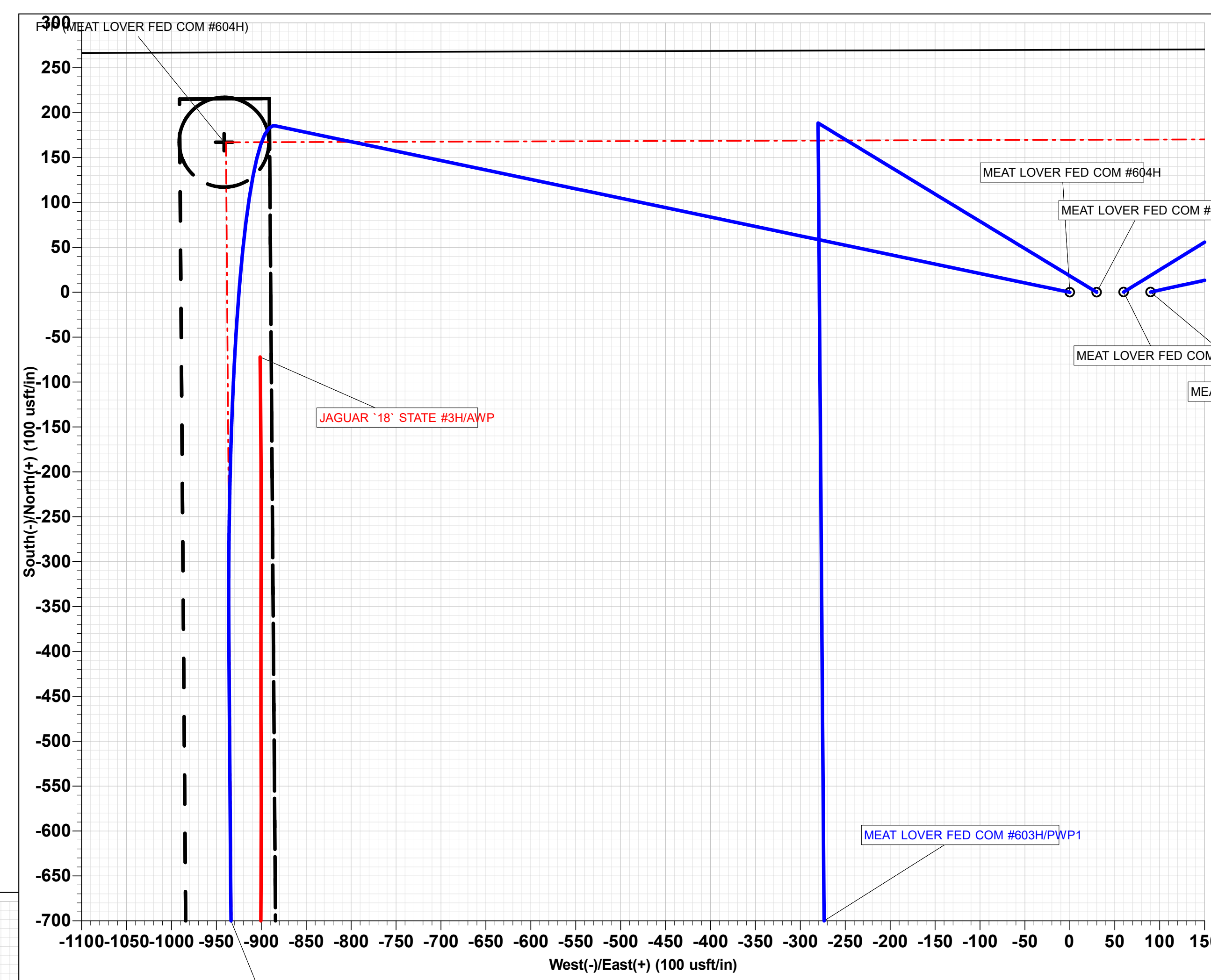
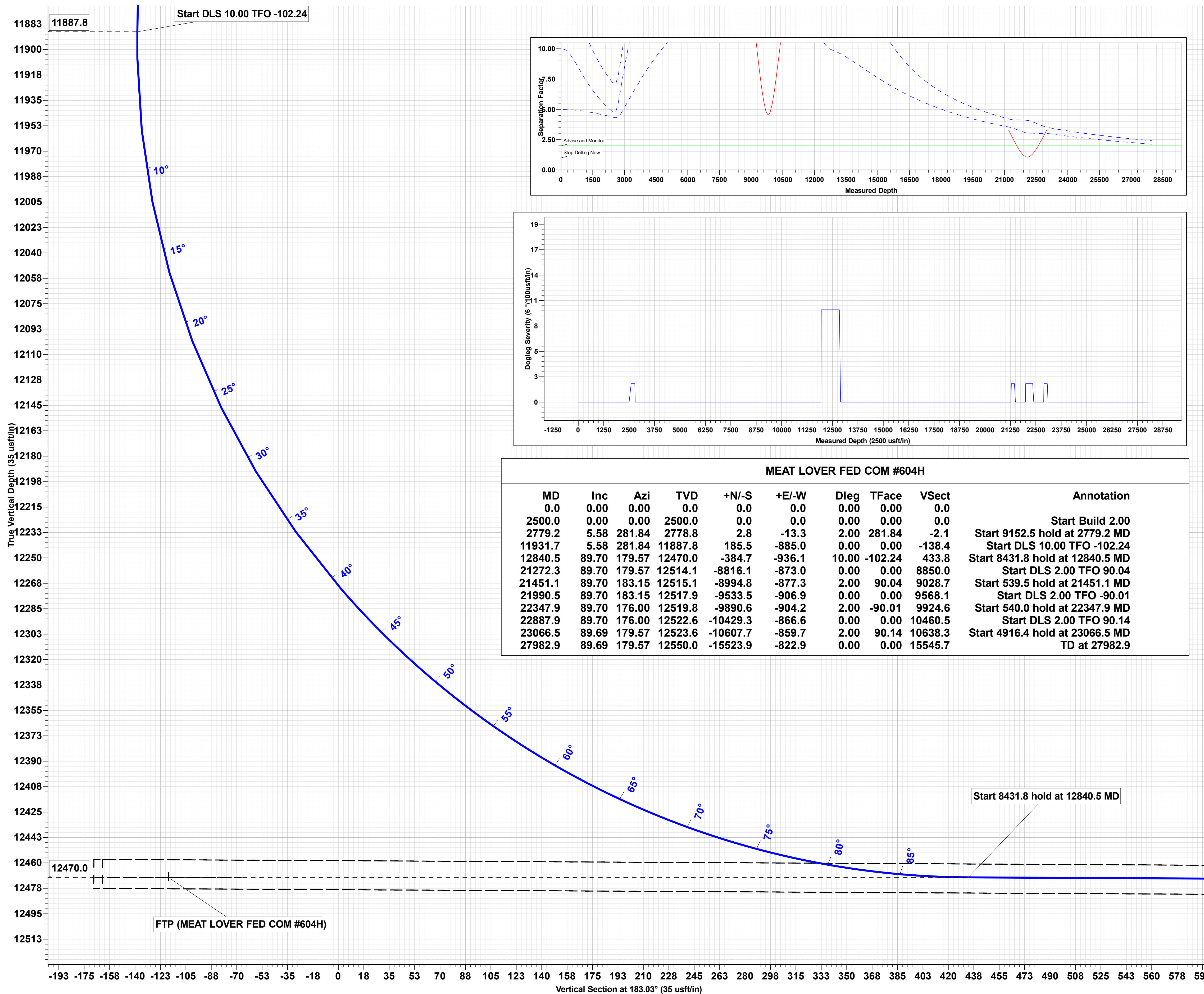
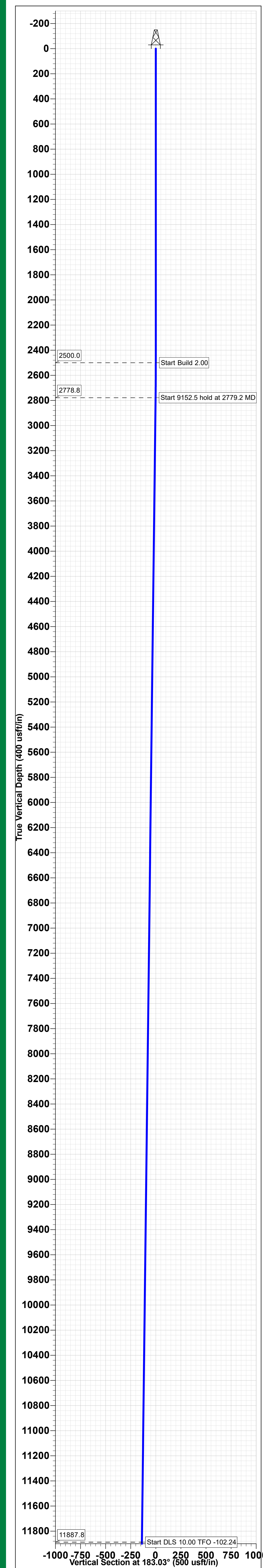
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FTP (MEAT LOVER FED COM #604H)	12470.0	167.1	-941.4	477842.30	723496.30	32° 18' 41.873 N	103° 36' 35.898 W
POH# (MEAT LOVER FED COM #604H)	12518.9	-9533.5	-906.9	468141.70	723530.80	32° 17' 5.879 N	103° 36' 36.058 W
LTP (MEAT LOVER FED COM #604H)	12550.0	-15473.9	-823.3	462201.30	723614.40	32° 16' 7.090 N	103° 36' 35.551 W
PBHL (MEAT LOVER FED COM #604H)	12550.0	-15523.9	-822.9	462151.30	723614.80	32° 16' 6.595 N	103° 36' 35.550 W



MEAT LOVER FED COM #604H

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2500.0	0.00	0.00	2500.0	0.0	0.0	0.00	0.00	0.0	Start Build 2.00
2779.2	5.58	281.84	2778.8	2.8	-13.3	2.00	281.84	-2.1	Start 9152.5 hold at 2779.2 MD
11931.7	5.58	281.84	11887.8	185.5	-885.0	0.00	0.00	-138.4	Start DLS 10.00 TFO -102.24
12840.5	89.70	179.57	12470.0	-384.7	-936.1	10.00	-102.24	433.8	Start 8431.8 hold at 12840.5 MD
21272.3	89.70	179.57	12514.1	-8816.1	-873.0	0.00	0.00	8850.0	Start DLS 2.00 TFO 90.04
21451.1	89.70	183.15	12515.1	-8994.8	-877.3	2.00	90.04	9028.7	Start 539.5 hold at 21451.1 MD
21990.5	89.70	183.15	12517.9	-9533.5	-906.9	0.00	0.00	9568.1	Start DLS 2.00 TFO -90.01
22347.9	89.70	176.00	12519.8	-9890.6	-904.2	2.00	-90.01	9924.6	Start 540.0 hold at 22347.9 MD
22887.9	89.70	176.00	12522.6	-10429.3	-866.6	0.00	0.00	10460.5	Start DLS 2.00 TFO 90.14
23066.5	89.69	179.57	12523.6	-10607.7	-859.7	2.00	90.14	10638.3	Start 4916.4 hold at 23066.5 MD
27982.9	89.69	179.57	12550.0	-15523.9	-822.9	0.00	0.00	15545.7	TD at 27982.9



COG PRODUCTION LLC
HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. HYDROGEN SULFIDE TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

- a. The hazards and characteristics of hydrogen sulfide (H₂S).
- b. The proper use and maintenance of personal protective equipment and life support systems.
- c. The proper use of H₂S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
- d. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

- a. The effects of H₂S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
- b. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
- c. The contents and requirements of the H₂S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H₂S zone (within 3 days or 500 feet) and weekly H₂S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H₂S Drilling Operations Plan and the Public Protection Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

2. H₂S SAFETY EQUIPMENT AND SYSTEMS

Note: All H₂S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H₂S. If H₂S greater than 100 ppm is encountered in the gas stream we will shut in and install H₂S equipment.

- a. Well Control Equipment:
 - Flare line.
 - Choke manifold with remotely operated choke.
 - Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.
 - Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head.

- b. Protective equipment for essential personnel:
Mark II Surviveair 30-minute units located in the dog house and at briefing areas.
- c. H2S detection and monitoring equipment:
2 - portable H2S monitor positioned on location for best coverage and response. These units have warning lights and audible sirens when H2S levels of 20 ppm are reached.
- d. Visual warning systems:
Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate. See example attached.
- e. Mud Program:
The mud program has been designed to minimize the volume of H2S circulated to the surface.
- f. Metallurgy:
All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.
- g. Communication:
Company vehicles equipped with cellular telephone.

COG PRODUCTION LLC has conducted a review to determine if an H2S contingency plan is required for the above referenced well. We were able to conclude that any potential hazardous volume would be minimal. H2S concentrations of wells in this area from surface to TD are low enough; therefore, we do not believe that an H2S contingency plan is necessary.

W A R N I N G

**YOU ARE ENTERING AN H₂S AREA
AUTHORIZED PERSONNEL ONLY**

- 1. BEARDS OR CONTACT LENSES NOT ALLOWED***
- 2. HARD HATS REQUIRED***
- 3. SMOKING IN DESIGNATED AREAS ONLY***
- 4. BE WIND CONSCIOUS AT ALL TIMES***
- 5. CK WITH COG OPERATING LLC FOREMAN AT MAIN OFFICE***

COG PRODUCTION LLC

1-575-748-6940

EMERGENCY CALL LIST

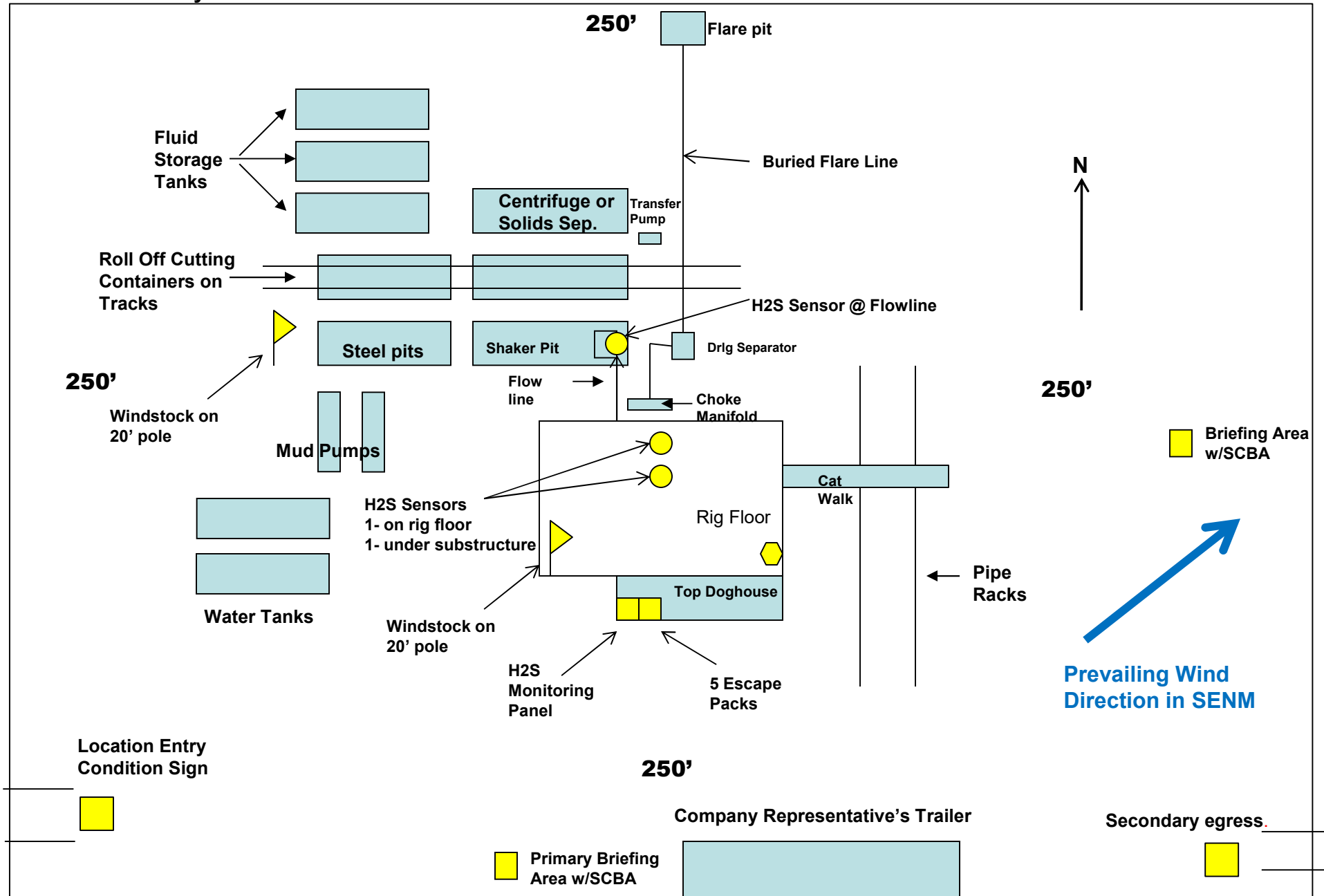
	<u>OFFICE</u>	<u>MOBILE</u>
COG PRODUCTION LLC OFFICE	575-748-6940	
PARKER SIMMONS	432-250-8045	432-250-8045

EMERGENCY RESPONSE NUMBERS

	<u>OFFICE</u>
STATE POLICE	575-748-9718
EDDY COUNTY SHERIFF	575-746-2701
EMERGENCY MEDICAL SERVICES (AMBULANCE)	911 or 575-746-2701
EDDY COUNTY EMERGENCY MANAGEMENT (HARRY BURGESS)	575-887-9511
STATE EMERGENCY RESPONSE CENTER (SERC)	575-476-9620
CARLSBAD POLICE DEPARTMENT	575-885-2111
CARLSBAD FIRE DEPARTMENT	575-885-3125
NEW MEXICO OIL CONSERVATION DIVISION	575-748-1283
INDIAN FIRE & SAFETY	800-530-8693
HALLIBURTON SERVICES	800-844-8451

COG Production LLC
H₂S Equipment Schematic
Terrain: Shinnery sand hills.

Well pad will be 500' X 500'
with cellar in center of pad



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 111222

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 111222
	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	6/28/2022
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	6/28/2022
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	6/28/2022
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	6/28/2022