

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. [325390]
2. Name of Operator [229137]		9. API Well No. 30-025-49889
3a. Address	3b. Phone No. (include area code)	10. Field and Pool, or Exploratory [98180]
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		11. Sec., T. R. M. or Blk. and Survey or Area
14. Distance in miles and direction from nearest town or post office*		12. County or Parish 13. State
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
24. Attachments		

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

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

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

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
 Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NGMP Rec 03/10/2022

SL

(Continued on page 2)



Approval Date: 03/09/2022

KZ
03/17/2022

*(Instructions on page 2)

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) 334-6176 Fax: (505) 334-6170

DISTRICT IV

1220 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462State 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

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025- 49889	Pool Code 98180	Pool Name WC-025 G-09 S253309P; Upper Wolfcamp
Property Code 325390	Property Name HARRIER FEDERAL COM	Well Number 703H
OGRID No. 229137 229137	Operator Name COG OPERATING, LLC	Elevation 3366.5'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	35	25-S	32-E		890	NORTH	955	WEST	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
M	2	26-S	32-E		50	SOUTH	995	WEST	LEA
Dedicated Acres 640	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 <u>SURFACE LOCATION</u> Y=397803.3 N X=752592.0 E LAT.=32.091804° N LONG.=103.651167° W <table border="1"> <thead> <tr> <th colspan="2">POINT LEGEND</th> </tr> </thead> <tbody> <tr><td>1</td><td>Y=398686.8 N X=751636.5 E</td></tr> <tr><td>2</td><td>Y=396042.9 N X=751638.1 E</td></tr> <tr><td>3</td><td>Y=393397.2 N X=751651.4 E</td></tr> <tr><td>4</td><td>Y=390723.7 N X=751673.0 E</td></tr> <tr><td>5</td><td>Y=388048.2 N X=751701.8 E</td></tr> <tr><td>6</td><td>Y=388067.3 N X=754374.2 E</td></tr> <tr><td>7</td><td>Y=393414.5 N X=754276.4 E</td></tr> <tr><td>8</td><td>Y=398704.8 N X=754294.7 E</td></tr> </tbody> </table> NAD 83 NME <u>PROPOSED BOTTOM HOLE LOCATION</u> Y=388105.3 N X=752696.2 E LAT.=32.065145° N LONG.=103.651029° W	POINT LEGEND		1	Y=398686.8 N X=751636.5 E	2	Y=396042.9 N X=751638.1 E	3	Y=393397.2 N X=751651.4 E	4	Y=390723.7 N X=751673.0 E	5	Y=388048.2 N X=751701.8 E	6	Y=388067.3 N X=754374.2 E	7	Y=393414.5 N X=754276.4 E	8	Y=398704.8 N X=754294.7 E	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> 6/18/21 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. MARCH 29, 2021 Date of Survey Signature & Seal of Professional Surveyor <i>Chad L. Harcrow</i> 4/2/21 Certificate No. CHAD HARCROW 17777 W.O. # 21-306 DRAWN BY: AH
POINT LEGEND																				
1	Y=398686.8 N X=751636.5 E																			
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8	Y=398704.8 N X=754294.7 E																			

Intent ☒ As Drilled ☐API #
30-025-

Operator Name:	Property Name:	Well Number
COG Operating LLC	Harrier Federal Com	703H

Kick Off Point (KOP)

UL D	Section 35	Township 25S	Range 32E	Lot	Feet	From N/S	Feet	From E/W	County Lea
Latitude					Longitude				NAD 83

First Take Point (FTP)

UL D	Section 35	Township 25S	Range 32E	Lot	Feet 100	From N/S North	Feet 995	From E/W West	County Lea
Latitude 32.093976					Longitude -103.651024				NAD 83

Last Take Point (LTP)

UL M	Section 2	Township 26S	Range 32E	Lot	Feet 100	From N/S South	Feet 995	From E/W West	County Lea
Latitude 32.065282					Longitude -103.651029				NAD 83

Is this well the defining well for the Horizontal Spacing Unit?

☒ Yes

Is this well an infill well?

☐ No

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:	Property Name:	Well Number
COG Operating LLC	Harrier Federal Com	703H

KZ 06/29/2018

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

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

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: COG Operating LLC

OGRID: 239137

Date: 06/10/2021

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
Harrier Federal Com 701H	30-025-	D-35-25S-32E	845 FNL & 985 FWL	± 2000	± 5630	± 2220
Harrier Federal Com 702H	30-025-	D-35-25S-32E	845 FNL & 955 FWL	± 2000	± 5630	± 2220
Harrier Federal Com 703H	30-025-	D-35-25S-32E	890 FNL & 955 FWL	± 2000	± 5630	± 2220
Harrier Federal Com 704H	30-025-	D-35-25S-32E	890 FNL & 925 FWL	± 2000	± 5630	± 2220
Harrier Federal Com 801H	30-025-	D-35-25S-32E	845 FNL & 985 FWL	± 2000	± 5630	± 2220
Harrier Federal Com 802H	30-025-	D-35-25S-32E	845 FNL & 925 FWL	± 2000	± 5630	± 2220

IV. Central Delivery Point Name: Harrier Fed Com 2 N CTB 780 FSL & 1835 FWL 2-26S-32E [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
Harrier Federal Com	Pending	± 10/1/2022	± 25 days from spud	TBD	TBD	TBD
701H, 702H, 703H, 704H, 801H, 802H	30-025-49889					

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

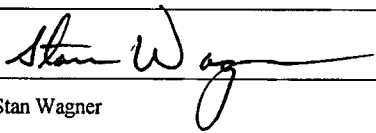
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(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:	06/10/2021
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:

Initial separation equipment will be sized with adequate retention time to effectively separate all phases of production and capture gas prior to liquid phases entering storage tanks.

VII. Operational Practices

Actions Operator will take to comply with the requirements below:

- Install VCU on all vent lines from tanks to combust gas emitted due to normal tank breathing
- All flare stacks are equipped with auto ignition devices and are located at a minimum of 150' from storage tanks and wellheads
- Install meters on all flare lines to quantify volume of gas being flared during an upset condition
- A properly sized mud gas separator and flare stack located a minimum of 100 feet from the nearest surface hole location will be used to combust natural gas from normal drilling operations. Will report natural gas vented or flared due to an emergency or malfunction.

VIII. Best Management Practices

Operator's best management practices to minimize venting during active and planned maintenance:

Operations plan will be to shut in production for planned maintenance activities that may result in venting of natural gas.

PECOS DISTRICT DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	COG
LEASE NO.:	NMNM108973
LOCATION:	Section 35, T.25 S., R.32 E., NMPPM
COUNTY:	Lea County, New Mexico

WELL NAME & NO.:	Harrier Fed Com 703H
SURFACE HOLE FOOTAGE:	890'/N & 955'/W
BOTTOM HOLE FOOTAGE:	50'/S & 995'/W

COA

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

A. HYDROGEN SULFIDE

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

B. CASING

1. The **10-3/4** inch surface casing shall be set at approximately **850** 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.

Option 2:

Operator is approved to run a DV Tool, the depth may be adjusted as long as the cement is changed proportionally. Operator shall contact BLM before running The DV Tool.

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.

ZS 022822

COG Operating, LLC - Harrier Federal Com 703H

1. Geologic Formations

TVD of target	12,343' EOL	Pilot hole depth	NA
MD at TD:	22,500'	Deepest expected fresh water:	207'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	746	Water	
Top of Salt	1109	Salt	
Base of Salt	4505	Salt	
Lamar	4701	Salt Water	
Bell Canyon	4736	Salt Water	
Cherry Canyon	5727	Oil/Gas	
Brushy Canyon	7293	Oil/Gas	
Bone Spring Lime	8856	Oil/Gas	
1st Bone Spring Sand	9820	Oil/Gas	
2nd Bone Spring Sand	10438	Oil/Gas	
3rd Bone Spring Sand	11603	Oil/Gas	
Wolfcamp A	12226	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	1050	10.75"	45.5	N80	BTC	5.14	1.71	21.77	22.96
9.875"	0	8300	7.625"	29.7	HCL80	BTC	1.60	1.08	2.95	2.97
8.750"	8300	11800	7.625"	29.7	HCP110	FJM	1.21	1.39	2.68	1.59
6.75"	0	11300	5.5"	23	P110	BTC	1.98	2.34	2.80	2.79
6.75"	11300	22,500	5.5"	23	P110	Talon	1.81	2.14	2.57	2.49
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.

COG Operating, LLC - Harrier Federal Com 703H

	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?	

COG Operating, LLC - Harrier Federal Com 703H

3. Cementing Program

Casing	# Sk	Wt. lb/ gal	Yld ft3/ sack	H ₂ O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	501	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
	1018	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)

COG Operating, LLC - Harrier Federal Com 703H

4. Pressure Control Equipment

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

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	x	Tested to:
9-7/8"	13-5/8"	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	

COG Operating, LLC - Harrier Federal Com 703H

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	8025 psi at 12343' TVD
Abnormal Temperature	NO 180 Deg. F.

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

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

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

N H₂S is present

Y H₂S Plan attached

8. Other Facets of Operation

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

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

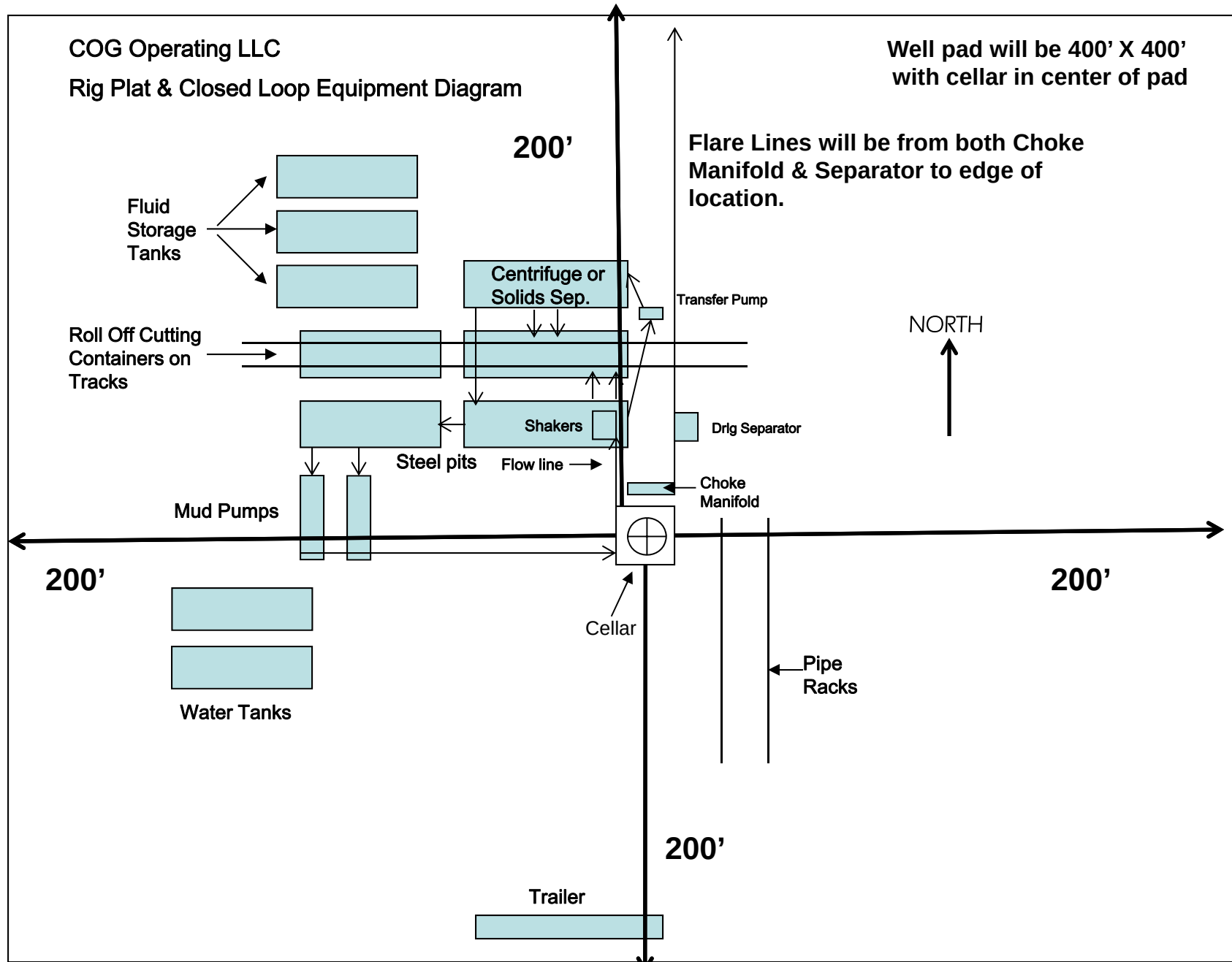


Exhibit 1

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

DELAWARE BASIN EAST

LEA PROSPECT (NM-E)

HARRIER FEDERAL PROJECT (LEA 2632)

HARRIER FED COM #703H

OWB

PWP1

Anticollision Report

04 May, 2021

The ConocoPhillips logo is displayed on a light yellow rectangular background. It features the company name "ConocoPhillips" in a bold, black, sans-serif font. Above the "o" in "Phillips", there is a red stylized flame or checkmark icon.

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Anticollision Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Reference	PWP1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum ellipse separation of 2,000.0 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	5/4/2021		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	22,287.5	PWP1 (OWB)	MWD+IFR1+FDIR	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
HARRIER FEDERAL PROJECT (LEA 2632)						
HARRIER 35 FEDERAL COM #1H - OWB - ACTUAL WE	13,644.8	13,889.2	321.0	261.1	5.359	CC, ES
HARRIER 35 FEDERAL COM #1H - OWB - ACTUAL WE	13,800.0	13,878.5	356.4	282.5	4.819	SF
HARRIER FED COM #101H - OWB - AWP	9,673.2	19,176.9	225.6	106.6	1.896	Advise and Monitor, CC, I
HARRIER FED COM #102H - OWB - AWP	9,117.0	18,699.3	568.2	450.8	4.841	CC, ES, SF
HARRIER FED COM #201H - OWB - AWB	9,348.4	18,933.7	219.3	101.7	1.865	Advise and Monitor, CC, I
HARRIER FED COM #202H - OWB - AWP	4,800.3	4,800.0	809.9	788.2	37.315	CC, ES
HARRIER FED COM #202H - OWB - AWP	9,300.0	9,507.6	987.7	945.8	23.573	SF
HARRIER FED COM #302H - OWB - AWP	10,238.6	19,685.5	746.3	625.0	6.153	CC, ES, SF
HARRIER FED COM #303H - OWB - AWP	9,239.3	18,643.2	228.9	112.0	1.958	Advise and Monitor, CC, I
HARRIER FED COM #304H - OWB - AWP	10,117.7	19,835.6	590.7	468.9	4.850	CC, ES, SF
HARRIER FED COM #305H - OWB - AWP	9,563.0	19,275.0	656.3	536.6	5.486	CC, ES
HARRIER FED COM #305H - OWB - AWP	9,600.0	19,277.2	657.3	537.5	5.486	SF
HARRIER FED COM #701H - OWB - PWP1	2,500.0	2,498.9	30.0	17.3	2.366	CC, ES, SF
HARRIER FED COM #702H - OWB - PWP1	2,500.0	2,499.4	45.0	31.4	3.303	CC, ES
HARRIER FED COM #702H - OWB - PWP1	11,000.0	10,997.3	145.0	95.5	2.927	SF
HARRIER FED COM #704H - OWB - PWP1	2,416.6	2,416.8	30.0	17.6	2.426	CC
HARRIER FED COM #704H - OWB - PWP1	2,500.0	2,500.0	30.0	17.3	2.366	ES, SF
HARRIER FED COM #801H - OWB - PWP1	2,416.1	2,417.8	54.2	41.2	4.170	CC
HARRIER FED COM #801H - OWB - PWP1	2,500.0	2,501.7	54.3	40.9	4.061	ES
HARRIER FED COM #801H - OWB - PWP1	22,287.8	22,529.4	417.2	241.7	2.378	SF
HARRIER FED COM #802H - OWB - PWP1	2,500.0	2,499.7	53.8	40.5	4.032	CC, ES
HARRIER FED COM #802H - OWB - PWP1	2,600.0	2,597.9	55.4	41.7	4.024	SF

Offset Design	HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER 35 FEDERAL COM #1H - OWB - ACTUAL WE											Offset Site Error:	0.0 usft
Survey Program:	100-MWD											Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,700.0	12,327.3	14,050.2	11,986.3	44.1	68.2	40.91	-1,042.1	557.2	982.9	875.8	107.14	9.174	
12,800.0	12,327.7	14,018.3	11,988.2	44.1	67.6	34.55	-1,044.1	589.0	893.2	787.6	105.60	8.459	
12,900.0	12,328.1	13,992.9	11,989.6	44.2	67.1	28.14	-1,045.6	614.3	803.9	700.1	103.82	7.743	
13,000.0	12,328.5	13,970.0	11,990.7	44.3	66.7	21.60	-1,047.0	637.1	715.7	614.2	101.59	7.046	
13,100.0	12,328.9	13,950.0	11,991.5	44.5	66.3	15.31	-1,048.2	657.1	629.6	531.0	98.63	6.384	
13,200.0	12,329.3	13,932.9	11,992.2	44.6	66.0	9.62	-1,049.2	674.1	547.1	452.5	94.52	5.788	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER 35 FEDERAL COM #1H - OWB - ACTUAL WE													Offset Site Error:	0.0 usft
Survey Program: 100-MWD													Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis			Distance								Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
13,300.0	12,329.7	13,918.0	11,992.9	44.7	65.7	4.67	-1,050.1	688.9	470.4	381.7	88.61	5.308		
13,400.0	12,330.1	13,906.5	11,993.4	44.9	65.5	0.81	-1,050.9	700.5	403.3	323.2	80.16	5.031		
13,462.3	12,330.3	13,901.5	11,993.7	45.0	65.4	-0.90	-1,051.2	705.4	369.0	295.5	73.56	5.017		
13,500.0	12,330.4	13,899.0	11,993.8	45.0	65.4	-1.35	-1,051.4	708.0	352.0	282.7	69.34	5.077		
13,600.0	12,330.8	13,892.2	11,994.2	45.2	65.3	-2.55	-1,051.8	714.7	324.1	263.5	60.58	5.350		
13,644.8	12,331.0	13,889.2	11,994.4	45.3	65.2	-3.09	-1,052.0	717.7	321.0	261.1	59.90	5.359 CC, ES		
13,700.0	12,331.2	13,885.4	11,994.6	45.4	65.1	-3.76	-1,052.2	721.5	325.7	262.9	62.78	5.188		
13,800.0	12,331.6	13,878.5	11,995.0	45.6	65.0	-4.99	-1,052.7	728.3	356.4	282.5	73.97	4.819 SF		
13,900.0	12,332.0	13,871.7	11,995.3	45.8	64.9	-6.19	-1,053.1	735.1	409.7	324.8	84.92	4.825		
14,000.0	12,332.4	13,865.4	11,995.7	46.0	64.8	-7.31	-1,053.5	741.4	478.2	385.5	92.64	5.162		
14,100.0	12,332.8	13,859.3	11,996.0	46.2	64.6	-8.40	-1,054.0	747.5	556.2	458.5	97.65	5.696		
14,200.0	12,333.2	13,853.2	11,996.3	46.5	64.5	-9.47	-1,054.3	753.5	640.3	539.4	100.87	6.347		
14,300.0	12,333.6	13,847.3	11,996.6	46.8	64.4	-10.51	-1,054.7	759.5	728.3	625.3	102.99	7.071		
14,400.0	12,334.0	13,841.4	11,996.9	47.0	64.3	-11.54	-1,055.1	765.3	819.1	714.7	104.42	7.844		
14,500.0	12,334.4	13,835.0	11,997.2	47.3	64.2	-12.65	-1,055.5	771.7	911.7	806.3	105.40	8.650		

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #101H - OWB - AWP												Offset Well Error:	3.0 usft
Survey Program: 100-Standard Keeper 104, 8898-MWD+IFR1+FDIR													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,700.0	8,687.5	19,146.7	9,516.9	31.0	84.4	51.41	233.8	485.5	998.6	903.2	95.42	10.465	
8,800.0	8,787.1	19,149.8	9,516.8	31.4	84.4	50.63	237.0	485.4	901.5	805.4	96.10	9.381	
8,900.0	8,886.7	19,152.9	9,516.7	31.7	84.4	49.85	240.1	485.3	805.1	708.2	96.91	8.308	
9,000.0	8,986.2	19,156.0	9,516.6	32.1	84.5	49.07	243.2	485.3	709.7	611.8	97.91	7.249	
9,100.0	9,085.8	19,159.1	9,516.5	32.5	84.5	48.29	246.3	485.2	615.8	516.6	99.19	6.208	
9,200.0	9,185.4	19,162.2	9,516.4	32.8	84.5	47.50	249.4	485.2	524.1	423.1	100.93	5.192	
9,300.0	9,285.0	19,165.3	9,516.3	33.2	84.5	46.72	252.5	485.1	436.0	332.6	103.40	4.217	
9,400.0	9,384.6	19,168.4	9,516.2	33.5	84.6	45.93	255.6	485.0	354.3	247.2	107.01	3.311	
9,500.0	9,484.2	19,171.4	9,516.1	33.9	84.6	45.18	258.6	485.0	284.4	172.3	112.09	2.537	
9,600.0	9,583.8	19,174.5	9,516.0	34.2	84.6	44.39	261.7	484.9	237.2	119.7	117.49	2.019	
9,673.2	9,656.7	19,176.9	9,515.9	34.5	84.6	43.79	264.0	484.9	225.6	106.6	119.00	1.896 Advise and Monitor, CC, ES, SF	
9,700.0	9,683.3	19,177.8	9,515.9	34.6	84.6	43.56	264.9	484.8	227.2	108.6	118.63	1.915 Advise and Monitor	
9,800.0	9,782.9	19,181.2	9,515.8	35.0	84.7	42.70	268.3	484.8	258.8	144.8	114.01	2.270	
9,900.0	9,882.5	19,184.7	9,515.7	35.3	84.7	41.81	271.8	484.7	319.8	211.2	108.61	2.945	
10,000.0	9,982.1	19,188.4	9,515.6	35.7	84.7	40.87	275.5	484.6	396.9	292.0	104.92	3.783	
10,100.0	10,081.7	19,192.2	9,515.4	36.0	84.8	39.90	279.4	484.5	482.5	379.8	102.75	4.696	
10,200.0	10,181.3	19,196.3	9,515.3	36.4	84.8	38.88	283.4	484.4	572.8	471.2	101.53	5.641	
10,300.0	10,280.9	19,200.5	9,515.2	36.8	84.8	37.81	287.7	484.3	665.8	564.9	100.88	6.600	
10,400.0	10,380.5	19,205.0	9,515.1	37.1	84.9	36.70	292.1	484.2	760.6	660.0	100.57	7.563	
10,500.0	10,480.0	19,209.6	9,515.0	37.5	84.9	35.54	296.8	484.1	856.5	756.0	100.47	8.525	
10,600.0	10,579.6	19,214.5	9,514.9	37.8	85.0	34.32	301.7	484.0	953.2	852.7	100.50	9.485	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #102H - OWB - AWP												Offset Well Error:	3.0 usft
Survey Program: 100-Standard Keeper 104, 8457-MWD+IFR1+FDIR													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,300.0	8,289.1	18,655.4	9,020.7	29.6	84.6	-139.51	180.3	-343.0	994.0	894.6	99.34	10.006	
8,400.0	8,388.7	18,659.7	9,020.7	30.0	84.6	-139.08	184.6	-343.0	913.8	812.8	101.03	9.045	
8,500.0	8,488.3	18,664.2	9,020.6	30.3	84.7	-138.63	189.1	-343.0	837.9	734.9	103.01	8.135	
8,600.0	8,587.9	18,669.0	9,020.6	30.7	84.7	-138.15	193.9	-343.0	767.5	662.2	105.30	7.289	
8,700.0	8,687.5	18,674.1	9,020.6	31.0	84.8	-137.64	198.9	-343.0	704.3	596.4	107.88	6.529	
8,800.0	8,787.1	18,679.5	9,020.6	31.4	84.8	-137.10	204.4	-343.0	650.3	539.7	110.66	5.877	
8,900.0	8,886.7	18,685.3	9,020.5	31.7	84.9	-136.51	210.1	-343.0	608.1	494.7	113.41	5.362	
9,000.0	8,986.2	18,691.5	9,020.5	32.1	84.9	-135.89	216.3	-343.0	580.1	464.4	115.73	5.012	
9,100.0	9,085.8	18,698.1	9,020.6	32.5	85.0	-135.22	223.0	-343.0	568.5	451.2	117.22	4.850	
9,117.0	9,102.8	18,699.3	9,020.6	32.5	85.0	-135.11	224.1	-343.0	568.2	450.8	117.37	4.841 CC, ES, SF	
9,200.0	9,185.4	18,705.2	9,020.6	32.8	85.0	-134.51	230.1	-343.0	574.2	456.6	117.60	4.883	
9,300.0	9,285.0	18,712.9	9,020.6	33.2	85.1	-133.73	237.8	-343.0	596.8	479.9	116.93	5.104	
9,400.0	9,384.6	18,719.8	9,020.7	33.5	85.2	-133.04	244.7	-343.0	634.5	518.9	115.52	5.492	
9,500.0	9,484.2	18,726.7	9,020.7	33.9	85.2	-132.35	251.6	-343.0	684.7	570.9	113.76	6.019	
9,600.0	9,583.8	18,733.5	9,020.8	34.2	85.3	-131.66	258.4	-343.0	744.9	633.0	111.96	6.654	
9,700.0	9,683.3	18,740.3	9,020.9	34.6	85.3	-130.98	265.2	-343.0	813.0	702.7	110.32	7.370	
9,800.0	9,782.9	18,747.1	9,020.9	35.0	85.4	-130.31	272.0	-343.0	887.1	778.2	108.90	8.146	
9,900.0	9,882.5	18,753.8	9,021.0	35.3	85.5	-129.64	278.6	-343.0	965.8	858.1	107.72	8.966	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #201H - OWB - AWB												Offset Site Error:	0.0 usft
Survey Program: 100-Standard Keeper 104, 8506-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,400.0	8,388.7	18,906.1	9,224.9	30.0	84.2	-141.87	212.9	19.8	972.6	879.8	92.81	10.479	
8,500.0	8,488.3	18,900.0	9,225.1	30.3	84.1	-143.42	206.8	19.8	875.5	782.2	93.30	9.384	
8,600.0	8,587.9	18,900.0	9,225.1	30.7	84.1	-143.42	206.8	19.8	779.2	685.2	93.96	8.293	
8,700.0	8,687.5	18,900.0	9,225.1	31.0	84.1	-143.42	206.8	19.8	683.9	589.1	94.80	7.215	
8,800.0	8,787.1	18,900.0	9,225.1	31.4	84.1	-143.42	206.8	19.8	590.2	494.3	95.92	6.153	
8,900.0	8,886.7	18,914.6	9,224.7	31.7	84.3	-139.67	221.4	19.9	498.7	401.0	97.66	5.106	
9,000.0	8,986.2	18,917.8	9,224.7	32.1	84.3	-138.82	224.7	19.9	411.3	311.2	100.15	4.107	
9,100.0	9,085.8	18,921.6	9,224.6	32.5	84.3	-137.85	228.4	19.9	331.1	227.1	104.04	3.183	
9,200.0	9,185.4	18,925.9	9,224.5	32.8	84.4	-136.72	232.7	20.0	264.7	154.9	109.85	2.410	
9,300.0	9,285.0	18,930.9	9,224.5	33.2	84.4	-135.41	237.7	20.0	224.6	108.5	116.09	1.935 Advise and Monitor	
9,348.4	9,333.2	18,933.7	9,224.5	33.3	84.4	-134.70	240.5	20.0	219.3	101.7	117.62	1.865 Advise and Monitor, CC, ES, SF	
9,400.0	9,384.6	18,936.9	9,224.4	33.5	84.5	-133.87	243.7	20.0	225.3	107.9	117.34	1.920 Advise and Monitor	
9,500.0	9,484.2	18,944.0	9,224.5	33.9	84.5	-132.02	250.8	20.1	266.4	153.4	113.01	2.357	
9,600.0	9,583.8	18,952.6	9,224.5	34.2	84.6	-129.77	259.4	20.1	333.3	225.1	108.24	3.079	
9,700.0	9,683.3	18,963.4	9,224.7	34.6	84.7	-127.01	270.2	20.2	413.6	308.7	104.96	3.941	
9,800.0	9,782.9	18,977.2	9,225.1	35.0	84.8	-123.52	284.0	20.3	500.8	397.9	102.97	4.864	
9,900.0	9,882.5	18,995.4	9,225.8	35.3	85.0	-119.04	302.2	20.5	591.9	490.0	101.81	5.813	
10,000.0	9,982.1	18,980.1	9,225.7	35.7	84.8	-122.79	286.9	20.4	685.1	584.1	101.02	6.782	
10,100.0	10,081.7	19,016.2	9,226.8	36.0	85.1	-114.18	323.0	20.6	780.0	679.2	100.78	7.739	
10,200.0	10,181.3	19,026.4	9,227.2	36.4	85.2	-111.88	333.2	20.7	875.8	775.2	100.63	8.703	
10,300.0	10,280.9	19,036.6	9,227.7	36.8	85.3	-109.69	343.3	20.8	972.3	871.7	100.61	9.664	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-Standard Keeper 104, 8598-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	1.0	1.0	3.0	3.0	-56.95	450.3	-692.2	825.8				
100.0	100.0	96.8	96.8	3.0	3.0	-56.94	450.6	-692.3	826.0	820.0	6.00	137.605	
200.0	200.0	195.6	195.6	3.0	3.0	-56.89	451.4	-692.3	826.5	820.4	6.04	136.797	
300.0	300.0	293.6	293.6	3.1	3.0	-56.83	452.5	-692.2	827.0	820.9	6.12	135.048	
400.0	400.0	398.9	398.9	3.2	3.0	-56.77	453.3	-691.9	827.2	820.9	6.25	132.452	
442.4	442.4	441.4	441.3	3.3	3.0	-56.75	453.6	-691.7	827.2	820.8	6.31	131.149	
500.0	500.0	498.0	498.0	3.4	3.0	-56.71	454.0	-691.4	827.2	820.8	6.40	129.228	
600.0	600.0	594.5	594.4	3.6	3.1	-56.65	454.9	-691.2	827.5	820.9	6.59	125.567	
700.0	700.0	694.4	694.3	3.8	3.1	-56.61	455.7	-691.4	828.0	821.2	6.81	121.581	
800.0	800.0	791.7	791.7	4.0	3.1	-56.56	456.7	-691.5	828.7	821.7	7.06	117.455	
900.0	900.0	888.0	887.9	4.2	3.2	-56.51	457.9	-692.1	829.9	822.6	7.32	113.312	
1,000.0	1,000.0	989.6	989.5	4.5	3.2	-56.48	458.8	-692.8	831.0	823.4	7.62	109.125	
1,100.0	1,100.0	1,088.5	1,088.5	4.8	3.3	-56.47	459.7	-693.6	832.2	824.2	7.92	105.021	
1,200.0	1,200.0	1,190.1	1,190.0	5.1	3.3	-56.43	460.7	-694.2	833.2	825.0	8.25	101.033	
1,300.0	1,300.0	1,286.3	1,286.2	5.3	3.4	-56.40	461.8	-695.1	834.6	826.0	8.58	97.246	
1,400.0	1,400.0	1,388.0	1,387.9	5.6	3.4	-56.37	462.9	-696.0	836.0	827.0	8.93	93.592	
1,500.0	1,500.0	1,485.8	1,485.7	6.0	3.5	-56.32	464.3	-696.8	837.4	828.1	9.29	90.152	
1,600.0	1,600.0	1,581.4	1,581.3	6.3	3.5	-56.28	465.8	-697.8	839.2	829.5	9.65	86.933	
1,700.0	1,700.0	1,683.3	1,683.2	6.6	3.6	-56.25	467.3	-699.3	841.2	831.2	10.03	83.847	
1,800.0	1,800.0	1,806.0	1,805.9	6.9	3.7	-56.18	468.9	-700.0	842.5	832.1	10.42	80.883	
1,900.0	1,900.0	1,907.2	1,907.0	7.2	3.7	-56.10	469.4	-698.5	841.6	830.9	10.74	78.347	
2,000.0	2,000.0	2,002.9	2,002.8	7.6	3.7	-56.02	470.0	-697.4	841.0	829.9	11.08	75.916	
2,100.0	2,100.0	2,100.0	2,099.8	7.9	3.8	-55.94	470.8	-696.5	840.7	829.3	11.43	73.575	
2,200.0	2,200.0	2,200.0	2,199.8	8.2	3.9	-55.87	471.6	-695.8	840.6	828.8	11.78	71.329	
2,241.4	2,241.4	2,240.5	2,240.3	8.4	3.9	-55.84	471.9	-695.6	840.6	828.6	11.93	70.434	
2,300.0	2,300.0	2,298.8	2,298.6	8.6	3.9	-55.80	472.4	-695.3	840.6	828.4	12.15	69.189	
2,400.0	2,400.0	2,399.2	2,399.0	8.9	4.0	-55.74	473.2	-694.7	840.6	828.0	12.52	67.158	
2,500.0	2,500.0	2,500.1	2,499.9	9.2	4.1	-55.68	473.9	-694.2	840.5	827.6	12.89	65.229	
2,521.1	2,521.1	2,520.2	2,520.0	9.3	4.1	-55.67	474.1	-694.1	840.5	827.5	12.96	64.836	
2,600.0	2,600.0	2,598.3	2,598.1	9.6	4.2	-55.63	474.5	-693.8	840.6	827.3	13.26	63.385	
2,700.0	2,700.0	2,698.7	2,698.5	9.9	4.2	-55.61	474.8	-693.7	840.6	827.0	13.64	61.628	
2,800.0	2,800.0	2,798.2	2,798.0	10.3	4.3	-55.61	474.8	-693.7	840.6	826.6	14.03	59.911	
2,900.0	2,900.0	2,899.7	2,899.5	10.6	4.3	-55.61	474.9	-693.9	840.8	826.4	14.44	58.237	
2,909.6	2,909.6	2,908.7	2,908.5	10.6	4.3	-55.61	474.9	-693.9	840.8	826.3	14.47	58.092	
3,000.0	3,000.0	3,000.0	2,999.8	10.9	4.3	-55.63	474.7	-694.0	840.8	826.0	14.81	56.756	
3,100.0	3,100.0	3,104.1	3,103.9	11.3	4.3	-55.63	474.4	-693.7	840.5	825.3	15.16	55.430	
3,200.0	3,200.0	3,211.1	3,210.8	11.6	4.3	-55.60	474.2	-692.5	839.4	823.9	15.52	54.097	
3,300.0	3,300.0	3,316.6	3,316.4	12.0	4.3	-55.55	473.7	-690.6	837.7	821.8	15.87	52.768	
3,400.0	3,400.0	3,417.0	3,416.8	12.3	4.4	-55.49	473.3	-688.3	835.6	819.3	16.24	51.456	
3,500.0	3,500.0	3,520.5	3,520.2	12.7	4.4	-55.38	473.1	-685.5	833.2	816.6	16.61	50.166	
3,600.0	3,600.0	3,611.1	3,610.7	13.0	4.5	-55.29	473.1	-682.9	830.8	813.9	16.98	48.924	
3,700.0	3,700.0	3,700.2	3,699.8	13.4	4.5	-55.27	473.0	-682.4	830.3	813.0	17.36	47.830	
3,800.0	3,800.0	3,799.3	3,799.0	13.7	4.6	-55.27	473.0	-682.3	830.2	812.5	17.75	46.776	
3,900.0	3,900.0	3,900.0	3,899.7	14.1	4.6	-55.28	472.8	-682.3	830.1	812.0	18.14	45.762	
4,000.0	4,000.0	4,015.9	4,015.5	14.4	4.6	-55.27	472.2	-681.3	829.1	810.6	18.53	44.749	
4,100.0	4,100.0	4,121.6	4,121.2	14.8	4.7	-55.23	471.3	-679.0	826.8	807.9	18.91	43.714	
4,200.0	4,200.0	4,233.6	4,233.1	15.1	4.7	-55.18	469.9	-675.7	823.7	804.4	19.30	42.670	
4,300.0	4,300.0	4,345.4	4,344.8	15.5	4.8	-55.11	467.6	-670.5	818.7	799.0	19.70	41.566	
4,400.0	4,400.0	4,436.0	4,435.3	15.8	4.8	-55.06	465.5	-666.3	813.6	793.5	20.10	40.484	
4,500.0	4,500.0	4,505.8	4,505.1	16.2	4.8	-55.10	464.0	-665.1	811.0	790.5	20.49	39.576	
4,600.0	4,600.0	4,601.4	4,600.6	16.5	4.8	-55.20	462.6	-665.6	810.6	789.7	20.89	38.796	
4,700.0	4,700.0	4,703.4	4,702.6	16.9	4.8	-55.31	461.2	-666.2	810.3	789.0	21.30	38.042	

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

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COMPASS 5000.15 Build 91E

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Anticollision Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #202H - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 100-Standard Keeper 104, 8598-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,800.0	4,800.0	4,800.0	4,799.2	17.2	4.8	-55.38	460.1	-666.5	809.9	788.2	21.70	37.317	
4,800.3	4,800.3	4,800.0	4,799.2	17.2	4.8	-55.38	460.1	-666.5	809.9	788.2	21.70	37.315 CC, ES	
4,900.0	4,900.0	4,885.1	4,884.3	17.6	4.9	-55.25	462.1	-666.1	810.9	788.8	22.10	36.694	
5,000.0	5,000.0	4,975.0	4,974.1	17.9	5.0	-54.99	466.3	-665.7	813.1	790.6	22.50	36.146	
5,100.0	5,100.0	5,058.0	5,057.0	18.3	5.0	-54.77	471.1	-666.9	817.6	794.7	22.89	35.726	
5,200.0	5,200.0	5,133.8	5,132.6	18.7	5.1	-54.54	476.3	-668.7	823.7	800.5	23.26	35.409	
5,300.0	5,300.0	5,225.3	5,223.5	19.0	5.2	-54.16	485.5	-672.2	832.6	809.0	23.66	35.191	
5,400.0	5,400.0	5,322.9	5,320.6	19.4	5.2	-53.78	495.2	-676.2	841.7	817.7	24.07	34.971	
5,500.0	5,500.0	5,424.7	5,421.8	19.7	5.3	-53.41	505.1	-680.5	850.9	826.4	24.49	34.747	
5,600.0	5,600.0	5,527.6	5,524.1	20.1	5.4	-98.02	514.5	-684.9	860.1	835.2	24.91	34.528	
5,700.0	5,699.8	5,642.6	5,638.7	20.4	5.5	-97.92	523.7	-689.0	868.5	843.2	25.35	34.264	
5,760.6	5,760.3	5,702.6	5,698.5	20.6	5.6	-97.98	528.2	-690.8	873.4	847.8	25.60	34.117	
5,800.0	5,799.5	5,744.1	5,739.9	20.8	5.6	-98.11	531.3	-692.0	876.5	850.8	25.77	34.020	
5,900.0	5,899.1	5,867.6	5,862.9	21.1	5.7	-98.28	541.7	-691.7	882.6	856.4	26.21	33.674	
6,000.0	5,998.7	5,954.8	5,949.8	21.5	5.8	-98.33	549.6	-690.6	888.3	861.7	26.61	33.386	
6,100.0	6,098.2	6,048.0	6,042.4	21.8	5.9	-98.35	559.4	-690.2	895.6	868.6	27.01	33.152	
6,200.0	6,197.8	6,144.6	6,138.4	22.2	6.0	-98.35	570.0	-690.2	903.4	876.0	27.43	32.937	
6,300.0	6,297.4	6,241.5	6,234.8	22.5	6.1	-98.38	580.6	-690.3	911.4	883.5	27.85	32.730	
6,400.0	6,397.0	6,342.6	6,335.3	22.9	6.2	-98.43	591.2	-690.9	919.4	891.1	28.27	32.522	
6,500.0	6,496.6	6,442.0	6,434.2	23.2	6.3	-98.52	601.0	-691.7	927.2	898.5	28.69	32.317	
6,600.0	6,596.2	6,547.7	6,539.5	23.6	6.4	-98.67	610.7	-692.8	934.9	905.7	29.13	32.097	
6,700.0	6,695.8	6,651.0	6,642.5	23.9	6.5	-98.86	619.1	-694.0	942.0	912.4	29.56	31.870	
6,800.0	6,795.3	6,750.0	6,741.1	24.3	6.6	-99.07	626.7	-695.3	949.0	919.0	29.98	31.651	
6,900.0	6,894.9	6,838.4	6,829.2	24.6	6.7	-99.25	634.1	-697.0	956.9	926.5	30.39	31.484	
7,000.0	6,994.5	6,932.9	6,923.3	25.0	6.8	-99.45	642.1	-699.4	965.4	934.6	30.82	31.330	
7,100.0	7,094.1	7,031.5	7,021.5	25.3	6.9	-99.70	650.0	-702.5	974.1	942.8	31.24	31.175	
7,200.0	7,193.7	7,112.8	7,102.4	25.7	7.0	-99.82	658.2	-705.1	984.0	952.4	31.65	31.096	
7,300.0	7,293.3	7,215.1	7,203.9	26.0	7.1	-99.88	670.3	-708.4	995.0	962.9	32.09	31.010	
9,000.0	8,986.2	9,414.0	9,191.3	32.1	9.3	-129.46	322.8	-749.1	993.0	952.5	40.49	24.525	
9,100.0	9,085.8	9,445.0	9,205.5	32.5	9.4	-131.12	295.2	-749.1	982.2	941.2	40.96	23.977	
9,169.2	9,154.8	9,463.0	9,213.3	32.7	9.4	-132.09	279.0	-749.5	980.0	938.7	41.27	23.746	
9,200.0	9,185.4	9,472.6	9,217.5	32.8	9.4	-132.61	270.4	-749.7	980.4	939.0	41.41	23.674	
9,300.0	9,285.0	9,507.6	9,231.7	33.2	9.5	-134.53	238.4	-750.5	987.7	945.8	41.90	23.573 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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #302H - OWB - AWP													Offset Well Error:	3.0 usft
Survey Program: 100-Standard Keeper 104, 9382-MWD+IFR1+FDIR														
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
9,600.0	9,583.8	19,640.4	10,049.2	34.2	84.5	47.84	257.3	1,041.2	981.2	869.9	111.32	8.815		
9,700.0	9,683.3	19,647.7	10,049.2	34.6	84.6	47.28	264.6	1,041.1	919.6	806.3	113.30	8.117		
9,800.0	9,782.9	19,655.0	10,049.3	35.0	84.6	46.73	271.9	1,041.1	865.1	749.8	115.33	7.501		
9,900.0	9,882.5	19,662.1	10,049.3	35.3	84.7	46.19	279.0	1,041.0	819.2	701.9	117.29	6.984		
10,000.0	9,982.1	19,669.1	10,049.4	35.7	84.7	45.65	286.0	1,040.9	783.4	664.3	119.04	6.581		
10,100.0	10,081.7	19,676.1	10,049.4	36.0	84.8	45.12	293.0	1,040.9	759.0	638.7	120.38	6.305		
10,200.0	10,181.3	19,682.9	10,049.4	36.4	84.9	44.59	299.8	1,040.8	747.3	626.2	121.16	6.168		
10,238.6	10,219.7	19,685.5	10,049.4	36.5	84.9	44.39	302.4	1,040.8	746.3	625.0	121.29	6.153	CC, ES, SF	
10,300.0	10,280.9	19,689.7	10,049.5	36.8	84.9	44.08	306.6	1,040.8	748.8	627.6	121.28	6.174		
10,400.0	10,380.5	19,696.3	10,049.5	37.1	85.0	43.56	313.2	1,040.7	763.5	642.7	120.77	6.322		
10,500.0	10,480.0	19,702.9	10,049.5	37.5	85.0	43.06	319.8	1,040.7	790.6	670.8	119.76	6.601		
10,600.0	10,579.6	19,709.4	10,049.5	37.8	85.1	42.56	326.3	1,040.6	828.9	710.5	118.43	6.999		
10,700.0	10,679.2	19,715.8	10,049.6	38.2	85.1	42.07	332.7	1,040.6	876.9	759.9	116.96	7.497		
10,800.0	10,778.8	19,722.2	10,049.6	38.6	85.2	41.59	339.1	1,040.5	933.2	817.7	115.51	8.079		
10,900.0	10,878.4	19,728.4	10,049.6	38.9	85.3	41.11	345.3	1,040.5	996.3	882.1	114.15	8.727		

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #303H - OWB - AWP												Offset Site Error:	0.0 usft
Survey Program: 100-Standard Keeper 104, 8315-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
8,300.0	8,289.1	18,597.0	9,085.9	29.6	83.7	58.11	178.4	458.7	965.8	872.2	93.61	10.317	
8,400.0	8,388.7	18,602.3	9,085.8	30.0	83.8	56.83	183.7	458.9	869.1	774.7	94.34	9.212	
8,500.0	8,488.3	18,607.5	9,085.7	30.3	83.8	55.56	188.9	459.1	773.2	677.9	95.21	8.121	
8,600.0	8,587.9	18,612.6	9,085.6	30.7	83.8	54.31	194.0	459.3	678.4	582.1	96.30	7.045	
8,700.0	8,687.5	18,617.6	9,085.5	31.0	83.9	53.08	199.0	459.4	585.3	487.6	97.73	5.989	
8,800.0	8,787.1	18,622.6	9,085.4	31.4	83.9	51.86	203.9	459.6	494.9	395.3	99.69	4.965	
8,900.0	8,886.7	18,627.4	9,085.3	31.7	84.0	50.66	208.8	459.7	409.0	306.5	102.49	3.991	
9,000.0	8,986.2	18,632.1	9,085.2	32.1	84.0	49.48	213.5	459.9	331.0	224.4	106.58	3.106	
9,100.0	9,085.8	18,636.8	9,085.1	32.5	84.1	48.31	218.2	460.0	267.9	155.9	111.99	2.392	
9,200.0	9,185.4	18,641.4	9,085.0	32.8	84.1	47.17	222.8	460.2	232.3	115.8	116.50	1.994 Advise and Monitor	
9,239.3	9,224.5	18,643.2	9,085.0	33.0	84.1	46.72	224.5	460.2	228.9	112.0	116.91	1.958 Advise and Monitor, CC, ES, SF	
9,300.0	9,285.0	18,645.9	9,084.9	33.2	84.1	46.04	227.2	460.3	236.8	121.3	115.51	2.050	
9,400.0	9,384.6	18,650.3	9,084.8	33.5	84.2	44.94	231.7	460.4	279.6	169.4	110.26	2.536	
9,500.0	9,484.2	18,654.7	9,084.7	33.9	84.2	43.85	236.0	460.6	346.8	241.3	105.43	3.289	
9,600.0	9,583.8	18,658.9	9,084.6	34.2	84.2	42.78	240.3	460.7	426.9	324.6	102.30	4.174	
9,700.0	9,683.3	18,663.2	9,084.5	34.6	84.3	41.73	244.5	460.8	514.1	413.6	100.45	5.117	
9,800.0	9,782.9	18,667.4	9,084.4	35.0	84.3	40.69	248.7	460.9	605.2	505.7	99.41	6.088	
9,900.0	9,882.5	18,671.5	9,084.3	35.3	84.4	39.66	252.9	461.1	698.7	599.8	98.84	7.068	
10,000.0	9,982.1	18,675.6	9,084.2	35.7	84.4	38.65	257.0	461.2	793.7	695.2	98.57	8.052	
10,100.0	10,081.7	18,679.7	9,084.1	36.0	84.4	37.66	261.0	461.3	889.9	791.4	98.49	9.035	
10,200.0	10,181.3	18,683.7	9,084.0	36.4	84.5	36.69	265.0	461.4	986.7	888.2	98.52	10.015	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-Standard Keeper 104, 9409-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,400.0	9,384.6	19,795.2	10,018.7	33.5	85.5	-138.52	253.2	-301.3	928.8	822.9	105.94	8.768	
9,500.0	9,484.2	19,801.6	10,018.6	33.9	85.5	-137.90	259.6	-301.3	854.1	746.2	107.97	7.911	
9,600.0	9,583.8	19,807.7	10,018.5	34.2	85.6	-137.31	265.6	-301.3	785.0	674.8	110.28	7.119	
9,700.0	9,683.3	19,813.5	10,018.4	34.6	85.6	-136.75	271.4	-301.3	723.2	610.3	112.84	6.409	
9,800.0	9,782.9	19,819.0	10,018.3	35.0	85.7	-136.21	277.0	-301.3	670.5	555.0	115.54	5.804	
9,900.0	9,882.5	19,824.4	10,018.2	35.3	85.7	-135.70	282.3	-301.2	629.4	511.3	118.14	5.328	
10,000.0	9,982.1	19,829.8	10,018.1	35.7	85.8	-135.17	287.8	-301.2	602.3	482.0	120.31	5.006	
10,100.0	10,081.7	19,834.8	10,018.0	36.0	85.8	-134.69	292.7	-301.2	591.0	469.3	121.67	4.857	
10,117.7	10,099.3	19,835.6	10,018.0	36.1	85.8	-134.61	293.6	-301.2	590.7	468.9	121.80	4.850	CC, ES, SF
10,200.0	10,181.3	19,839.3	10,017.9	36.4	85.9	-134.25	297.2	-301.1	596.4	474.4	121.98	4.889	
10,300.0	10,280.9	19,843.4	10,017.8	36.8	85.9	-133.86	301.3	-301.1	618.1	496.8	121.31	5.096	
10,400.0	10,380.5	19,847.1	10,017.7	37.1	85.9	-133.49	305.1	-301.1	654.6	534.7	119.94	5.458	
10,500.0	10,480.0	19,850.5	10,017.6	37.5	86.0	-133.16	308.5	-301.0	703.5	585.2	118.22	5.950	
10,600.0	10,579.6	19,853.7	10,017.5	37.8	86.0	-132.85	311.6	-301.0	762.4	645.9	116.46	6.546	
10,700.0	10,679.2	19,856.6	10,017.4	38.2	86.0	-132.57	314.6	-301.0	829.2	714.3	114.83	7.221	
10,800.0	10,778.8	19,859.4	10,017.3	38.6	86.0	-132.31	317.3	-300.9	902.1	788.7	113.42	7.954	
10,900.0	10,878.4	19,861.9	10,017.2	38.9	86.1	-132.06	319.8	-300.9	979.9	867.6	112.23	8.730	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #305H - OWB - AWP												Offset Well Error:	3.0 usft
Survey Program: 100-Standard Keeper 104, 8955-MWD+IFR1+FDIR													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,900.0	8,886.7	19,236.1	9,471.1	31.7	85.3	-139.09	207.1	-401.8	932.0	826.0	105.94	8.797	
9,000.0	8,986.2	19,241.9	9,471.1	32.1	85.4	-138.58	212.9	-401.9	864.0	755.9	108.08	7.994	
9,100.0	9,085.8	19,247.7	9,471.1	32.5	85.4	-138.07	218.8	-401.9	802.6	692.2	110.43	7.269	
9,200.0	9,185.4	19,253.6	9,471.1	32.8	85.5	-137.57	224.6	-402.0	749.6	636.7	112.89	6.640	
9,300.0	9,285.0	19,259.4	9,471.1	33.2	85.5	-137.06	230.4	-402.0	706.8	591.5	115.32	6.129	
9,400.0	9,384.6	19,265.3	9,471.1	33.5	85.6	-136.55	236.3	-402.1	676.1	558.7	117.46	5.756	
9,500.0	9,484.2	19,271.1	9,471.1	33.9	85.6	-136.04	242.1	-402.1	659.3	540.2	119.03	5.539	
9,563.0	9,546.9	19,275.0	9,471.1	34.1	85.6	-135.70	246.0	-402.2	656.3	536.6	119.63	5.486 CC, ES	
9,600.0	9,583.8	19,277.2	9,471.0	34.2	85.7	-135.50	248.3	-402.2	657.3	537.5	119.82	5.486 SF	
9,700.0	9,683.3	19,284.2	9,471.0	34.6	85.7	-134.89	255.3	-402.3	670.4	550.6	119.76	5.597	
9,800.0	9,782.9	19,291.6	9,471.0	35.0	85.8	-134.26	262.6	-402.3	697.6	578.6	118.98	5.863	
9,900.0	9,882.5	19,299.3	9,471.1	35.3	85.9	-133.59	270.3	-402.4	737.4	619.7	117.72	6.264	
10,000.0	9,982.1	19,307.3	9,471.1	35.7	85.9	-132.88	278.4	-402.4	787.9	671.7	116.23	6.779	
10,100.0	10,081.7	19,315.8	9,471.1	36.0	86.0	-132.15	286.9	-402.5	847.2	732.5	114.72	7.385	
10,200.0	10,181.3	19,324.8	9,471.2	36.4	86.1	-131.37	295.8	-402.5	913.5	800.2	113.31	8.062	
10,300.0	10,280.9	19,334.2	9,471.3	36.8	86.2	-130.55	305.2	-402.6	985.5	873.4	112.08	8.793	

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

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Anticollision Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #701H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11908-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	3.0	3.0	89.62	0.2	30.0	30.0				
100.0	100.0	98.9	98.9	3.0	3.0	89.62	0.2	30.0	30.0	24.0	6.00	4.998	
200.0	200.0	198.9	198.9	3.0	3.0	89.62	0.2	30.0	30.0	24.0	6.04	4.967	
300.0	300.0	298.9	298.9	3.1	3.0	89.62	0.2	30.0	30.0	23.9	6.12	4.902	
400.0	400.0	398.9	398.9	3.2	3.0	89.62	0.2	30.0	30.0	23.8	6.24	4.807	
500.0	500.0	498.9	498.9	3.4	3.1	89.62	0.2	30.0	30.0	23.6	6.40	4.690	
600.0	600.0	598.9	598.9	3.6	3.1	89.62	0.2	30.0	30.0	23.4	6.58	4.557	
700.0	700.0	698.9	698.9	3.8	3.1	89.62	0.2	30.0	30.0	23.2	6.80	4.413	
800.0	800.0	798.9	798.9	4.0	3.2	89.62	0.2	30.0	30.0	23.0	7.04	4.264	
900.0	900.0	898.9	898.9	4.2	3.2	89.62	0.2	30.0	30.0	22.7	7.29	4.113	
1,000.0	1,000.0	998.9	998.9	4.5	3.2	89.62	0.2	30.0	30.0	22.4	7.57	3.964	
1,100.0	1,100.0	1,098.9	1,098.9	4.8	3.3	89.62	0.2	30.0	30.0	22.1	7.86	3.818	
1,200.0	1,200.0	1,198.9	1,198.9	5.1	3.4	89.62	0.2	30.0	30.0	21.8	8.16	3.678	
1,300.0	1,300.0	1,298.9	1,298.9	5.3	3.4	89.62	0.2	30.0	30.0	21.5	8.47	3.542	
1,400.0	1,400.0	1,398.9	1,398.9	5.6	3.5	89.62	0.2	30.0	30.0	21.2	8.79	3.413	
1,500.0	1,500.0	1,498.9	1,498.9	6.0	3.5	89.62	0.2	30.0	30.0	20.9	9.12	3.290	
1,600.0	1,600.0	1,598.9	1,598.9	6.3	3.6	89.62	0.2	30.0	30.0	20.5	9.45	3.174	
1,700.0	1,700.0	1,698.9	1,698.9	6.6	3.7	89.62	0.2	30.0	30.0	20.2	9.79	3.063	
1,800.0	1,800.0	1,798.9	1,798.9	6.9	3.8	89.62	0.2	30.0	30.0	19.9	10.14	2.959	
1,900.0	1,900.0	1,898.9	1,898.9	7.2	3.9	89.62	0.2	30.0	30.0	19.5	10.49	2.860	
2,000.0	2,000.0	1,998.9	1,998.9	7.6	3.9	89.62	0.2	30.0	30.0	19.2	10.85	2.766	
2,100.0	2,100.0	2,098.9	2,098.9	7.9	4.0	89.62	0.2	30.0	30.0	18.8	11.21	2.677	
2,200.0	2,200.0	2,198.9	2,198.9	8.2	4.1	89.62	0.2	30.0	30.0	18.4	11.57	2.593	
2,300.0	2,300.0	2,298.9	2,298.9	8.6	4.2	89.62	0.2	30.0	30.0	18.1	11.94	2.513	
2,400.0	2,400.0	2,398.9	2,398.9	8.9	4.3	89.62	0.2	30.0	30.0	17.7	12.31	2.438	
2,500.0	2,500.0	2,498.9	2,498.9	9.2	4.4	89.62	0.2	30.0	30.0	17.3	12.68	2.366 CC, ES, SF	
2,600.0	2,600.0	2,597.9	2,597.9	9.6	4.5	88.60	0.8	31.6	31.6	18.5	13.05	2.421	
2,700.0	2,700.0	2,696.6	2,696.6	9.9	4.5	86.05	2.5	36.3	36.5	23.1	13.43	2.719	
2,800.0	2,800.0	2,794.9	2,794.4	10.3	4.6	83.06	5.4	44.3	44.8	31.0	13.81	3.245	
2,900.0	2,900.0	2,894.3	2,893.2	10.6	4.6	80.60	8.9	54.0	55.0	40.8	14.23	3.868	
3,000.0	3,000.0	2,993.8	2,992.2	10.9	4.7	78.92	12.5	63.8	65.3	50.7	14.65	4.459	
3,100.0	3,100.0	3,093.2	3,091.1	11.3	4.8	77.69	16.1	73.5	75.7	60.6	15.08	5.019	
3,200.0	3,200.0	3,192.7	3,190.0	11.6	4.8	76.76	19.6	83.3	86.1	70.5	15.51	5.548	
3,300.0	3,300.0	3,292.1	3,288.9	12.0	4.9	76.03	23.2	93.1	96.4	80.5	15.94	6.049	
3,400.0	3,400.0	3,391.6	3,387.8	12.3	5.0	75.44	26.7	102.9	106.8	90.5	16.38	6.524	
3,500.0	3,500.0	3,491.0	3,486.7	12.7	5.0	74.95	30.3	112.6	117.3	100.4	16.81	6.974	
3,600.0	3,600.0	3,590.5	3,585.6	13.0	5.1	74.55	33.8	122.4	127.7	110.4	17.25	7.400	
3,700.0	3,700.0	3,689.9	3,684.5	13.4	5.2	74.21	37.4	132.2	138.1	120.4	17.69	7.805	
3,800.0	3,800.0	3,789.4	3,783.4	13.7	5.3	73.91	40.9	141.9	148.5	130.4	18.14	8.189	
3,900.0	3,900.0	3,888.8	3,882.3	14.1	5.4	73.65	44.5	151.7	159.0	140.4	18.58	8.554	
4,000.0	4,000.0	3,988.3	3,981.2	14.4	5.4	73.43	48.0	161.5	169.4	150.4	19.03	8.902	
4,100.0	4,100.0	4,087.7	4,080.1	14.8	5.5	73.23	51.6	171.2	179.8	160.3	19.48	9.233	
4,200.0	4,200.0	4,187.2	4,179.0	15.1	5.6	73.05	55.2	181.0	190.3	170.3	19.93	9.548	
4,300.0	4,300.0	4,286.6	4,277.9	15.5	5.7	72.89	58.7	190.8	200.7	180.3	20.38	9.849	
4,400.0	4,400.0	4,386.1	4,376.9	15.8	5.8	72.75	62.3	200.5	211.1	190.3	20.83	10.136	
4,500.0	4,500.0	4,485.5	4,475.8	16.2	5.9	72.62	65.8	210.3	221.6	200.3	21.28	10.411	
4,600.0	4,600.0	4,585.0	4,574.7	16.5	6.0	72.50	69.4	220.1	232.0	210.3	21.74	10.673	
4,700.0	4,700.0	4,684.4	4,673.6	16.9	6.1	72.39	72.9	229.8	242.5	220.3	22.20	10.924	
4,800.0	4,800.0	4,783.9	4,772.5	17.2	6.2	72.30	76.5	239.6	252.9	230.3	22.65	11.164	
4,900.0	4,900.0	4,883.4	4,871.4	17.6	6.3	72.20	80.0	249.4	263.4	240.2	23.11	11.395	
5,000.0	5,000.0	4,982.8	4,970.3	17.9	6.4	72.12	83.6	259.2	273.8	250.2	23.57	11.616	
5,100.0	5,100.0	5,082.3	5,069.2	18.3	6.5	72.04	87.2	268.9	284.2	260.2	24.03	11.827	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #701H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11908-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,200.0	5,200.0	5,181.7	5,168.1	18.7	6.6	71.97	90.7	278.7	294.7	270.2	24.49	12.031	
5,300.0	5,300.0	5,281.2	5,267.0	19.0	6.7	71.90	94.3	288.5	305.1	280.2	24.96	12.227	
5,400.0	5,400.0	5,380.6	5,365.9	19.4	6.8	71.84	97.8	298.2	315.6	290.2	25.42	12.415	
5,500.0	5,500.0	5,460.1	5,464.8	19.7	6.9	71.78	101.4	308.0	326.0	300.2	25.88	12.596	
5,600.0	5,600.0	5,579.7	5,563.9	20.1	7.0	26.78	104.9	317.8	334.9	308.6	26.34	12.714	
5,700.0	5,699.8	5,679.5	5,663.1	20.4	7.1	27.07	108.5	327.6	340.7	313.9	26.79	12.718	
5,760.6	5,760.3	5,740.1	5,723.4	20.6	7.2	27.38	110.7	333.5	342.7	315.7	27.06	12.666	
5,800.0	5,799.5	5,779.4	5,762.5	20.8	7.2	27.63	112.1	337.4	343.7	316.5	27.23	12.621	
5,900.0	5,899.1	5,879.3	5,861.8	21.1	7.3	28.24	115.7	347.2	346.1	318.4	27.67	12.507	
6,000.0	5,998.7	5,979.2	5,961.2	21.5	7.4	28.85	119.2	357.0	348.6	320.5	28.11	12.398	
6,100.0	6,098.2	6,079.1	6,060.6	21.8	7.6	29.45	122.8	366.8	351.1	322.5	28.56	12.294	
6,200.0	6,197.8	6,179.0	6,159.9	22.2	7.7	30.04	126.4	376.6	353.6	324.6	29.00	12.194	
6,300.0	6,297.4	6,278.9	6,259.3	22.5	7.8	30.62	129.9	386.5	356.2	326.7	29.44	12.097	
6,400.0	6,397.0	6,378.8	6,358.6	22.9	7.9	31.20	133.5	396.3	358.8	328.9	29.89	12.005	
6,500.0	6,496.6	6,478.7	6,458.0	23.2	8.0	31.77	137.1	406.1	361.4	331.1	30.33	11.916	
6,600.0	6,596.2	6,578.6	6,557.3	23.6	8.1	32.32	140.7	415.9	364.1	333.4	30.78	11.831	
6,700.0	6,695.8	6,678.5	6,656.7	23.9	8.2	32.87	144.2	425.7	366.8	335.6	31.22	11.749	
6,800.0	6,795.3	6,778.4	6,756.0	24.3	8.3	33.41	147.8	435.5	369.6	337.9	31.67	11.670	
6,900.0	6,894.9	6,878.3	6,855.4	24.6	8.5	33.95	151.4	445.3	372.4	340.3	32.12	11.594	
7,000.0	6,994.5	6,978.2	6,954.7	25.0	8.6	34.47	154.9	455.1	375.2	342.6	32.57	11.520	
7,100.0	7,094.1	7,078.1	7,054.1	25.3	8.7	34.99	158.5	465.0	378.0	345.0	33.02	11.450	
7,200.0	7,193.7	7,178.0	7,153.5	25.7	8.8	35.50	162.1	474.8	380.9	347.5	33.47	11.382	
7,300.0	7,293.3	7,277.9	7,252.8	26.0	8.9	36.00	165.7	484.6	383.8	349.9	33.92	11.317	
7,400.0	7,392.9	7,377.8	7,352.2	26.4	9.0	36.50	169.2	494.4	386.8	352.4	34.37	11.254	
7,500.0	7,492.4	7,477.7	7,451.5	26.8	9.2	36.98	172.8	504.2	389.7	354.9	34.82	11.193	
7,600.0	7,592.0	7,577.6	7,550.9	27.1	9.3	37.46	176.4	514.0	392.7	357.4	35.27	11.134	
7,700.0	7,691.6	7,677.5	7,650.2	27.5	9.4	37.94	179.9	523.8	395.7	360.0	35.72	11.078	
7,800.0	7,791.2	7,777.4	7,749.6	27.8	9.5	38.40	183.5	533.7	398.8	362.6	36.18	11.023	
7,900.0	7,890.8	7,877.3	7,848.9	28.2	9.6	38.86	187.1	543.5	401.8	365.2	36.63	10.971	
8,000.0	7,990.4	7,977.2	7,948.3	28.5	9.8	39.31	190.7	553.3	404.9	367.9	37.08	10.920	
8,100.0	8,090.0	8,077.1	8,047.6	28.9	9.9	39.75	194.2	563.1	408.1	370.5	37.54	10.871	
8,200.0	8,189.6	8,177.0	8,147.0	29.2	10.0	40.19	197.8	572.9	411.2	373.2	37.99	10.824	
8,300.0	8,289.1	8,276.9	8,246.4	29.6	10.1	40.62	201.4	582.7	414.4	375.9	38.45	10.778	
8,400.0	8,388.7	8,376.8	8,345.7	30.0	10.2	41.05	204.9	592.5	417.6	378.7	38.90	10.733	
8,500.0	8,488.3	8,476.7	8,445.1	30.3	10.4	41.46	208.5	602.3	420.8	381.4	39.36	10.691	
8,600.0	8,587.9	8,576.6	8,544.4	30.7	10.5	41.88	212.1	612.2	424.0	384.2	39.82	10.649	
8,700.0	8,687.5	8,676.5	8,643.8	31.0	10.6	42.28	215.7	622.0	427.3	387.0	40.27	10.609	
8,800.0	8,787.1	8,776.4	8,743.1	31.4	10.7	42.68	219.2	631.8	430.6	389.8	40.73	10.570	
8,900.0	8,886.7	8,876.3	8,842.5	31.7	10.9	43.07	222.8	641.6	433.9	392.7	41.19	10.532	
9,000.0	8,986.2	8,976.2	8,941.8	32.1	11.0	43.46	226.4	651.4	437.2	395.5	41.65	10.496	
9,100.0	9,085.8	9,076.1	9,041.2	32.5	11.1	43.84	229.9	661.2	440.5	398.4	42.11	10.461	
9,200.0	9,185.4	9,176.0	9,140.5	32.8	11.2	44.22	233.5	671.0	443.9	401.3	42.57	10.426	
9,300.0	9,285.0	9,275.9	9,239.9	33.2	11.4	44.59	237.1	680.8	447.2	404.2	43.03	10.393	
9,400.0	9,384.6	9,375.8	9,339.3	33.5	11.5	44.95	240.7	690.7	450.6	407.1	43.49	10.361	
9,500.0	9,484.2	9,475.7	9,438.6	33.9	11.6	45.31	244.2	700.5	454.1	410.1	43.96	10.330	
9,600.0	9,583.8	9,575.6	9,538.0	34.2	11.7	45.66	247.8	710.3	457.5	413.1	44.42	10.299	
9,700.0	9,683.3	9,675.5	9,637.3	34.6	11.9	46.01	251.4	720.1	460.9	416.1	44.88	10.270	
9,800.0	9,782.9	9,775.4	9,736.7	35.0	12.0	46.35	254.9	729.9	464.4	419.1	45.35	10.241	
9,900.0	9,882.5	9,875.3	9,836.0	35.3	12.1	46.69	258.5	739.7	467.9	422.1	45.81	10.213	
10,000.0	9,982.1	9,975.2	9,935.4	35.7	12.2	47.03	262.1	749.5	471.4	425.1	46.27	10.186	
10,100.0	10,081.7	10,075.1	10,034.7	36.0	12.4	47.35	265.7	759.3	474.9	428.1	46.74	10.160	
10,200.0	10,181.3	10,175.0	10,134.1	36.4	12.5	47.68	269.2	769.2	478.4	431.2	47.21	10.135	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #701H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11908-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
10,300.0	10,280.9	10,274.9	10,233.4	36.8	12.6	48.00	272.8	779.0	482.0	434.3	47.67	10.110	
10,400.0	10,380.5	10,374.8	10,332.8	37.1	12.7	48.31	276.4	788.8	485.5	437.4	48.14	10.086	
10,500.0	10,480.0	10,474.7	10,432.1	37.5	12.9	48.62	279.9	798.6	489.1	440.5	48.61	10.062	
10,600.0	10,579.6	10,574.6	10,531.5	37.8	13.0	48.92	283.5	808.4	492.7	443.6	49.08	10.039	
10,700.0	10,679.2	10,674.5	10,630.9	38.2	13.1	49.22	287.1	818.2	496.3	446.7	49.54	10.017	
10,800.0	10,778.8	10,774.4	10,730.2	38.6	13.3	49.52	290.7	828.0	499.9	449.9	50.01	9.995	
10,900.0	10,878.4	10,874.3	10,829.6	38.9	13.4	49.81	294.2	837.8	503.5	453.0	50.48	9.974	
11,000.0	10,978.0	10,974.2	10,928.9	39.3	13.5	50.10	297.8	847.7	507.2	456.2	50.95	9.953	
11,100.0	11,077.6	11,074.1	11,028.3	39.6	13.6	50.38	301.4	857.5	510.8	459.4	51.43	9.933	
11,200.0	11,177.1	11,174.0	11,127.6	40.0	13.8	50.66	304.9	867.3	514.5	462.6	51.90	9.913	
11,300.0	11,276.7	11,274.0	11,227.0	40.4	13.9	50.94	308.5	877.1	518.1	465.8	52.37	9.894	
11,400.0	11,376.3	11,373.9	11,326.3	40.7	14.0	51.21	312.1	886.9	521.8	469.0	52.84	9.875	
11,500.0	11,475.9	11,473.8	11,425.7	41.1	14.2	51.48	315.7	896.7	525.5	472.2	53.32	9.857	
11,600.0	11,575.5	11,573.7	11,525.0	41.4	14.3	51.74	319.2	906.5	529.2	475.5	53.79	9.839	
11,700.0	11,675.1	11,673.6	11,624.4	41.8	14.4	52.00	322.8	916.3	533.0	478.7	54.27	9.821	
11,800.0	11,774.7	11,773.5	11,723.8	42.2	14.6	52.26	326.4	926.2	536.7	482.0	54.74	9.804	
11,856.3	11,830.7	11,829.7	11,779.7	42.4	14.6	52.40	328.4	931.7	538.8	483.8	54.99	9.798	
11,875.0	11,849.4	11,848.4	11,798.3	42.4	14.6	27.02	329.1	933.5	539.4	484.3	55.07	9.794	
11,900.0	11,874.3	11,873.4	11,823.1	42.5	14.7	-6.81	329.9	936.0	539.6	484.4	55.18	9.780	
11,925.0	11,899.1	11,898.3	11,847.9	42.6	14.7	-27.30	330.8	938.4	539.3	484.1	55.29	9.755	
11,950.0	11,923.8	11,918.0	11,867.5	42.7	14.7	-38.44	331.5	940.4	538.6	483.2	55.37	9.727	
11,975.0	11,948.3	11,934.2	11,883.6	42.8	14.7	-45.06	331.5	942.2	537.7	482.3	55.44	9.700	
12,000.0	11,972.6	11,950.0	11,899.3	42.8	14.7	-49.44	331.0	944.1	536.8	481.2	55.51	9.669	
12,025.0	11,996.5	11,966.8	11,915.8	42.9	14.7	-52.63	330.0	946.4	535.7	480.1	55.59	9.636	
12,050.0	12,020.0	11,983.1	11,931.9	43.0	14.7	-55.09	328.4	948.8	534.5	478.9	55.67	9.601	
12,075.0	12,043.1	12,000.0	11,948.5	43.1	14.7	-57.11	326.3	951.5	533.3	477.5	55.76	9.564	
12,100.0	12,065.6	12,016.0	11,964.0	43.1	14.7	-58.82	323.8	954.2	532.0	476.1	55.85	9.525	
12,125.0	12,087.6	12,032.5	11,980.0	43.2	14.7	-60.34	320.6	957.2	530.7	474.7	55.95	9.485	
12,150.0	12,108.8	12,050.0	11,996.7	43.3	14.7	-61.76	316.7	960.6	529.3	473.2	56.04	9.444	
12,175.0	12,129.4	12,065.8	12,011.6	43.3	14.7	-63.03	312.7	963.8	527.9	471.7	56.14	9.402	
12,200.0	12,149.3	12,082.5	12,027.3	43.4	14.7	-64.26	308.0	967.4	526.5	470.2	56.25	9.360	
12,225.0	12,168.3	12,100.0	12,043.4	43.4	14.7	-65.46	302.5	971.3	525.1	468.7	56.35	9.318	
12,250.0	12,186.4	12,116.4	12,058.2	43.5	14.7	-66.59	296.8	975.2	523.7	467.3	56.46	9.276	
12,275.0	12,203.6	12,133.4	12,073.5	43.5	14.7	-67.72	290.4	979.4	522.4	465.8	56.57	9.235	
12,300.0	12,219.9	12,150.0	12,088.0	43.6	14.8	-68.80	283.6	983.6	521.2	464.5	56.68	9.195	
12,325.0	12,235.1	12,168.0	12,103.5	43.6	14.8	-69.93	275.8	988.4	520.0	463.2	56.79	9.157	
12,350.0	12,249.3	12,185.5	12,118.2	43.7	14.8	-71.03	267.6	993.1	519.0	462.1	56.91	9.120	
12,375.0	12,262.4	12,203.2	12,132.7	43.7	14.8	-72.12	258.8	998.1	518.0	461.0	57.02	9.085	
12,400.0	12,274.4	12,221.0	12,146.9	43.8	14.8	-73.21	249.5	1,003.4	517.3	460.1	57.13	9.054	
12,425.0	12,285.2	12,239.0	12,160.9	43.8	14.8	-74.30	239.5	1,008.8	516.6	459.4	57.25	9.025	
12,450.0	12,294.8	12,257.3	12,174.6	43.8	14.8	-75.38	228.8	1,014.4	516.2	458.8	57.36	8.999	
12,475.0	12,303.2	12,275.0	12,187.5	43.9	14.8	-76.42	218.0	1,020.0	516.0	458.5	57.48	8.977	
12,488.9	12,307.3	12,286.1	12,195.4	43.9	14.8	-77.05	211.0	1,023.6	515.9	458.4	57.54	8.966	
12,500.0	12,310.3	12,294.5	12,201.1	43.9	14.8	-77.53	205.6	1,026.3	516.0	458.4	57.59	8.959	
12,525.0	12,316.2	12,313.5	12,213.9	43.9	14.8	-78.60	193.0	1,032.6	516.2	458.5	57.71	8.945	
12,550.0	12,320.9	12,332.7	12,226.3	43.9	14.9	-79.66	179.7	1,039.1	516.7	458.8	57.82	8.936	
12,575.0	12,324.2	12,352.4	12,238.2	44.0	14.9	-80.72	165.7	1,045.8	517.4	459.5	57.93	8.931	
12,600.0	12,326.3	12,372.4	12,249.7	44.0	14.9	-81.76	150.9	1,052.8	518.4	460.4	58.05	8.932	
12,624.9	12,327.0	12,392.6	12,260.7	44.0	14.9	-82.80	135.5	1,059.9	519.8	461.6	58.16	8.937	
12,700.0	12,327.3	12,459.4	12,291.7	44.1	15.0	-86.24	81.6	1,084.2	526.4	468.0	58.49	9.000	
12,800.0	12,327.7	12,562.2	12,322.5	44.1	15.2	-89.60	-8.6	1,122.2	540.1	481.2	58.91	9.168	
12,900.0	12,328.1	12,675.7	12,331.9	44.2	15.4	-90.55	-113.6	1,163.6	556.0	496.7	59.27	9.380	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #701H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11908-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
13,000.0	12,328.5	12,798.7	12,331.6	44.3	15.8	-90.46	-229.6	1,204.5	571.7	512.0	59.66	9.582	
13,100.0	12,328.9	12,922.6	12,331.3	44.5	16.2	-90.38	-348.1	1,240.7	586.6	526.4	60.13	9.755	
13,200.0	12,329.3	13,047.5	12,330.9	44.6	16.6	-90.30	-469.0	1,271.9	600.6	539.9	60.65	9.902	
13,300.0	12,329.7	13,173.3	12,330.6	44.7	17.1	-90.22	-592.1	1,298.0	613.8	552.5	61.23	10.024	
13,400.0	12,330.1	13,300.0	12,330.3	44.9	17.7	-90.15	-717.0	1,318.7	626.0	564.2	61.85	10.122	
13,462.3	12,330.3	13,379.3	12,330.1	45.0	18.1	-90.11	-795.7	1,328.9	633.2	571.0	62.26	10.171	
13,500.0	12,330.4	13,427.5	12,330.0	45.0	18.3	-90.08	-843.6	1,334.1	637.1	574.6	62.51	10.193	
13,600.0	12,330.8	13,555.9	12,329.6	45.2	18.9	-90.00	-971.6	1,343.8	644.4	581.2	63.19	10.198	
13,700.0	12,331.2	13,685.0	12,329.3	45.4	19.6	-89.93	-1,100.6	1,347.8	647.3	583.4	63.89	10.130	
13,800.0	12,331.6	13,792.6	12,329.0	45.6	20.2	-89.87	-1,208.2	1,347.6	646.8	582.2	64.66	10.004	
13,900.0	12,332.0	13,892.6	12,328.8	45.8	20.7	-89.81	-1,308.2	1,347.3	646.2	580.7	65.48	9.869	
14,000.0	12,332.4	13,992.6	12,328.5	46.0	21.3	-89.75	-1,408.2	1,346.9	645.6	579.3	66.33	9.734	
14,100.0	12,332.8	14,092.6	12,328.3	46.2	21.9	-89.69	-1,508.2	1,346.6	645.0	577.8	67.21	9.597	
14,200.0	12,333.2	14,192.6	12,328.0	46.5	22.5	-89.64	-1,608.2	1,346.2	644.4	576.3	68.12	9.459	
14,300.0	12,333.6	14,292.6	12,327.8	46.8	23.2	-89.58	-1,708.2	1,345.9	643.8	574.7	69.07	9.321	
14,400.0	12,334.0	14,392.6	12,327.5	47.0	23.8	-89.52	-1,808.2	1,345.5	643.2	573.2	70.04	9.184	
14,500.0	12,334.4	14,492.6	12,327.3	47.3	24.5	-89.46	-1,908.2	1,345.2	642.6	571.6	71.03	9.047	
14,600.0	12,334.8	14,592.6	12,327.0	47.6	25.2	-89.41	-2,008.2	1,344.9	642.0	569.9	72.05	8.910	
14,700.0	12,335.2	14,692.6	12,326.8	48.0	25.9	-89.35	-2,108.2	1,344.5	641.4	568.3	73.09	8.775	
14,800.0	12,335.5	14,792.6	12,326.5	48.3	26.6	-89.29	-2,208.2	1,344.2	640.8	566.6	74.16	8.641	
14,900.0	12,335.9	14,892.6	12,326.3	48.7	27.3	-89.23	-2,308.2	1,343.8	640.2	565.0	75.24	8.508	
15,000.0	12,336.3	14,992.6	12,326.0	49.0	28.0	-89.17	-2,408.2	1,343.5	639.6	563.3	76.35	8.377	
15,100.0	12,336.7	15,092.5	12,325.8	49.4	28.7	-89.11	-2,508.2	1,343.1	639.0	561.5	77.48	8.248	
15,200.0	12,337.1	15,192.5	12,325.5	49.8	29.5	-89.06	-2,608.2	1,342.8	638.4	559.8	78.62	8.120	
15,300.0	12,337.5	15,292.5	12,325.3	50.2	30.2	-89.00	-2,708.2	1,342.4	637.8	558.0	79.78	7.994	
15,400.0	12,337.9	15,392.5	12,325.0	50.6	30.9	-88.94	-2,808.2	1,342.1	637.2	556.3	80.96	7.870	
15,500.0	12,338.3	15,492.5	12,324.8	51.0	31.7	-88.88	-2,908.2	1,341.8	636.6	554.5	82.16	7.749	
15,600.0	12,338.7	15,592.5	12,324.5	51.5	32.5	-88.82	-3,008.2	1,341.4	636.0	552.7	83.37	7.629	
15,700.0	12,339.1	15,692.5	12,324.2	51.9	33.2	-88.76	-3,108.1	1,341.1	635.4	550.8	84.60	7.511	
15,800.0	12,339.5	15,792.5	12,324.0	52.4	34.0	-88.70	-3,208.1	1,340.7	634.9	549.0	85.84	7.396	
15,900.0	12,339.9	15,892.5	12,323.7	52.8	34.8	-88.64	-3,308.1	1,340.4	634.3	547.2	87.09	7.282	
16,000.0	12,340.3	15,992.5	12,323.5	53.3	35.6	-88.58	-3,408.1	1,340.0	633.7	545.3	88.36	7.171	
16,100.0	12,340.6	16,092.5	12,323.2	53.8	36.3	-88.52	-3,508.1	1,339.7	633.1	543.4	89.64	7.062	
16,200.0	12,341.0	16,192.5	12,323.0	54.3	37.1	-88.46	-3,608.1	1,339.4	632.5	541.6	90.94	6.955	
16,300.0	12,341.4	16,292.5	12,322.7	54.8	37.9	-88.40	-3,708.1	1,339.0	631.9	539.7	92.25	6.850	
16,400.0	12,341.8	16,392.5	12,322.5	55.3	38.7	-88.34	-3,808.1	1,338.7	631.3	537.8	93.56	6.747	
16,500.0	12,342.2	16,492.5	12,322.2	55.8	39.5	-88.28	-3,908.1	1,338.3	630.7	535.8	94.89	6.647	
16,600.0	12,342.6	16,594.4	12,322.0	56.3	40.3	-88.22	-4,010.0	1,338.0	630.1	533.9	96.22	6.549	
16,699.3	12,343.0	16,699.9	12,321.3	56.9	41.2	-88.11	-4,115.5	1,336.4	628.4	530.8	97.54	6.443	
16,745.9	12,342.8	16,746.6	12,320.9	57.1	41.5	-88.12	-4,162.2	1,335.6	627.5	529.3	98.17	6.392	
16,800.0	12,342.1	16,800.6	12,320.6	57.4	42.0	-88.14	-4,216.2	1,334.7	626.4	527.5	98.90	6.334	
16,900.0	12,340.9	16,900.6	12,319.8	58.0	42.8	-88.18	-4,316.2	1,333.0	624.5	524.2	100.27	6.228	
16,989.1	12,339.8	16,987.2	12,319.2	58.5	43.5	-88.22	-4,402.7	1,331.6	622.8	521.3	101.50	6.136	
17,008.4	12,339.6	17,000.0	12,319.1	58.6	43.6	-88.23	-4,415.6	1,331.5	622.5	520.7	101.79	6.116	
17,066.0	12,338.8	17,050.3	12,318.8	58.9	44.0	-88.25	-4,465.9	1,331.5	622.0	519.4	102.61	6.062	
17,100.0	12,338.4	17,079.9	12,318.6	59.1	44.2	-88.27	-4,495.4	1,332.0	622.2	519.1	103.09	6.035	
17,200.0	12,337.1	17,179.9	12,317.9	59.7	45.0	-88.32	-4,595.4	1,333.6	622.9	518.4	104.49	5.961	
17,300.0	12,335.9	17,279.9	12,317.2	60.3	45.8	-88.37	-4,695.4	1,335.3	623.6	517.7	105.89	5.889	
17,400.0	12,334.6	17,379.9	12,316.4	60.9	46.7	-88.43	-4,795.4	1,337.0	624.3	517.0	107.31	5.818	
17,500.0	12,333.4	17,479.9	12,315.7	61.4	47.5	-88.48	-4,895.4	1,338.6	625.0	516.3	108.73	5.749	
17,600.0	12,332.1	17,579.9	12,315.0	62.1	48.3	-88.53	-4,995.3	1,340.3	625.8	515.6	110.15	5.681	
17,700.0	12,330.8	17,679.9	12,314.3	62.7	49.1	-88.59	-5,095.3	1,342.0	626.5	514.9	111.59	5.614	

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

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Anticollision Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #701H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11908-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
17,800.0	12,329.6	17,779.9	12,313.6	63.3	49.9	-88.64	-5,195.3	1,343.6	627.2	514.2	113.03	5.549	
17,900.0	12,328.3	17,879.9	12,312.9	63.9	50.8	-88.69	-5,295.3	1,345.3	627.9	513.4	114.48	5.485	
18,000.0	12,327.1	17,979.8	12,312.2	64.5	51.6	-88.74	-5,395.2	1,347.0	628.6	512.7	115.94	5.422	
18,100.0	12,325.8	18,079.8	12,311.5	65.2	52.4	-88.80	-5,495.2	1,348.7	629.4	512.0	117.40	5.361	
18,200.0	12,324.5	18,179.8	12,310.8	65.8	53.3	-88.85	-5,595.2	1,350.3	630.1	511.2	118.87	5.301	
18,300.0	12,323.3	18,279.8	12,310.1	66.4	54.1	-88.90	-5,695.2	1,352.0	630.8	510.5	120.34	5.242	
18,400.0	12,322.0	18,379.8	12,309.4	67.1	54.9	-88.95	-5,795.2	1,353.7	631.5	509.7	121.82	5.184	
18,500.0	12,320.8	18,479.8	12,308.7	67.7	55.7	-89.00	-5,895.1	1,355.3	632.2	508.9	123.30	5.128	
18,600.0	12,319.5	18,579.8	12,308.0	68.4	56.6	-89.05	-5,995.1	1,357.0	633.0	508.2	124.79	5.072	
18,700.0	12,318.2	18,679.8	12,307.3	69.0	57.4	-89.11	-6,095.1	1,358.7	633.7	507.4	126.29	5.018	
18,800.0	12,317.0	18,779.8	12,306.6	69.7	58.2	-89.16	-6,195.1	1,360.3	634.4	506.6	127.79	4.965	
18,900.0	12,315.7	18,879.8	12,305.9	70.4	59.1	-89.21	-6,295.1	1,362.0	635.1	505.8	129.29	4.912	
19,000.0	12,314.5	18,979.8	12,305.2	71.0	59.9	-89.26	-6,395.0	1,363.7	635.9	505.1	130.80	4.861	
19,100.0	12,313.2	19,079.8	12,304.5	71.7	60.8	-89.31	-6,495.0	1,365.4	636.6	504.3	132.32	4.811	
19,200.0	12,311.9	19,179.8	12,303.8	72.4	61.6	-89.36	-6,595.0	1,367.0	637.3	503.5	133.83	4.762	
19,300.0	12,310.7	19,279.8	12,303.1	73.1	62.4	-89.41	-6,695.0	1,368.7	638.0	502.7	135.36	4.714	
19,400.0	12,309.4	19,379.8	12,302.4	73.8	63.3	-89.46	-6,795.0	1,370.4	638.8	501.9	136.88	4.667	
19,500.0	12,308.1	19,479.8	12,301.7	74.5	64.1	-89.51	-6,894.9	1,372.0	639.5	501.1	138.41	4.620	
19,600.0	12,306.9	19,579.8	12,301.0	75.2	64.9	-89.56	-6,994.9	1,373.7	640.2	500.3	139.95	4.575	
19,700.0	12,305.6	19,679.8	12,300.3	75.9	65.8	-89.61	-7,094.9	1,375.4	641.0	499.5	141.49	4.530	
19,800.0	12,304.4	19,779.8	12,299.6	76.6	66.6	-89.66	-7,194.9	1,377.0	641.7	498.7	143.03	4.486	
19,900.0	12,303.1	19,879.8	12,298.9	77.3	67.5	-89.71	-7,294.9	1,378.7	642.4	497.8	144.58	4.443	
20,000.0	12,301.8	19,979.8	12,298.1	78.0	68.3	-89.76	-7,394.8	1,380.4	643.1	497.0	146.12	4.401	
20,100.0	12,300.6	20,079.8	12,297.4	78.7	69.2	-89.81	-7,494.8	1,382.1	643.9	496.2	147.68	4.360	
20,200.0	12,299.3	20,179.8	12,296.7	79.4	70.0	-89.86	-7,594.8	1,383.7	644.6	495.4	149.23	4.319	
20,300.0	12,298.1	20,279.8	12,296.0	80.1	70.8	-89.91	-7,694.8	1,385.4	645.3	494.5	150.79	4.280	
20,400.0	12,296.8	20,379.7	12,295.3	80.8	71.7	-89.96	-7,794.8	1,387.1	646.1	493.7	152.36	4.241	
20,500.0	12,295.5	20,479.7	12,294.6	81.6	72.5	-90.01	-7,894.7	1,388.7	646.8	492.9	153.92	4.202	
20,600.0	12,294.3	20,579.7	12,293.9	82.3	73.4	-90.06	-7,994.7	1,390.4	647.5	492.0	155.49	4.164	
20,700.0	12,293.0	20,679.7	12,293.2	83.0	74.2	-90.11	-8,094.7	1,392.1	648.3	491.2	157.06	4.127	
20,800.0	12,291.8	20,779.7	12,292.5	83.7	75.1	-90.16	-8,194.7	1,393.7	649.0	490.4	158.63	4.091	
20,900.0	12,290.5	20,879.7	12,291.8	84.5	75.9	-90.21	-8,294.6	1,395.4	649.7	489.5	160.21	4.055	
21,000.0	12,289.2	20,979.7	12,291.1	85.2	76.8	-90.26	-8,394.6	1,397.1	650.5	488.7	161.79	4.020	
21,100.0	12,288.0	21,079.7	12,290.4	85.9	77.6	-90.31	-8,494.6	1,398.8	651.2	487.8	163.37	3.986	
21,200.0	12,286.7	21,179.7	12,289.7	86.7	78.4	-90.35	-8,594.6	1,400.4	651.9	487.0	164.96	3.952	
21,300.0	12,285.5	21,279.7	12,289.0	87.4	79.3	-90.40	-8,694.6	1,402.1	652.7	486.1	166.54	3.919	
21,400.0	12,284.2	21,379.7	12,288.3	88.2	80.1	-90.45	-8,794.5	1,403.8	653.4	485.3	168.13	3.886	
21,500.0	12,282.9	21,479.7	12,287.6	88.9	81.0	-90.50	-8,894.5	1,405.4	654.1	484.4	169.72	3.854	
21,600.0	12,281.7	21,579.7	12,286.9	89.7	81.8	-90.55	-8,994.5	1,407.1	654.9	483.6	171.32	3.823	
21,700.0	12,280.4	21,679.7	12,286.2	90.4	82.7	-90.60	-9,094.5	1,408.8	655.6	482.7	172.91	3.792	
21,800.0	12,279.1	21,779.7	12,285.5	91.2	83.5	-90.64	-9,194.5	1,410.4	656.4	481.8	174.51	3.761	
21,900.0	12,277.9	21,879.7	12,284.8	91.9	84.4	-90.69	-9,294.4	1,412.1	657.1	481.0	176.11	3.731	
22,000.0	12,276.6	21,979.7	12,284.1	92.7	85.2	-90.74	-9,394.4	1,413.8	657.8	480.1	177.71	3.702	
22,100.0	12,275.4	22,079.7	12,283.4	93.4	86.1	-90.79	-9,494.4	1,415.5	658.6	479.3	179.32	3.673	
22,200.0	12,274.1	22,179.7	12,282.7	94.2	86.9	-90.83	-9,594.4	1,417.1	659.3	478.4	180.92	3.644	
22,287.8	12,273.0	22,267.5	12,282.0	94.9	87.7	-90.88	-9,682.1	1,418.6	660.0	477.6	182.33	3.620	

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

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COMPASS 5000.15 Build 91E

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Anticollision Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11850-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toelface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	3.0	3.0	0.00	45.0	0.0	45.0				
100.0	100.0	99.4	99.4	3.0	3.0	0.00	45.0	0.0	45.0	39.0	6.00	7.496	
200.0	200.0	199.4	199.4	3.0	3.0	0.00	45.0	0.0	45.0	39.0	6.04	7.445	
300.0	300.0	299.4	299.4	3.1	3.0	0.00	45.0	0.0	45.0	38.9	6.13	7.339	
400.0	400.0	399.4	399.4	3.2	3.0	0.00	45.0	0.0	45.0	38.7	6.26	7.184	
500.0	500.0	499.4	499.4	3.4	3.1	0.00	45.0	0.0	45.0	38.6	6.44	6.993	
600.0	600.0	599.4	599.4	3.6	3.1	0.00	45.0	0.0	45.0	38.4	6.64	6.775	
700.0	700.0	699.4	699.4	3.8	3.1	0.00	45.0	0.0	45.0	38.1	6.88	6.540	
800.0	800.0	799.4	799.4	4.0	3.2	0.00	45.0	0.0	45.0	37.9	7.15	6.298	
900.0	900.0	899.4	899.4	4.2	3.2	0.00	45.0	0.0	45.0	37.6	7.43	6.054	
1,000.0	1,000.0	999.4	999.4	4.5	3.2	0.00	45.0	0.0	45.0	37.3	7.74	5.813	
1,100.0	1,100.0	1,099.4	1,099.4	4.8	3.3	0.00	45.0	0.0	45.0	36.9	8.07	5.578	
1,200.0	1,200.0	1,199.4	1,199.4	5.1	3.4	0.00	45.0	0.0	45.0	36.6	8.41	5.353	
1,300.0	1,300.0	1,299.4	1,299.4	5.3	3.4	0.00	45.0	0.0	45.0	36.2	8.76	5.136	
1,400.0	1,400.0	1,399.4	1,399.4	5.6	3.5	0.00	45.0	0.0	45.0	35.9	9.13	4.931	
1,500.0	1,500.0	1,499.4	1,499.4	6.0	3.5	0.00	45.0	0.0	45.0	35.5	9.50	4.736	
1,600.0	1,600.0	1,599.4	1,599.4	6.3	3.6	0.00	45.0	0.0	45.0	35.1	9.89	4.552	
1,700.0	1,700.0	1,699.4	1,699.4	6.6	3.7	0.00	45.0	0.0	45.0	34.7	10.28	4.378	
1,800.0	1,800.0	1,799.4	1,799.4	6.9	3.8	0.00	45.0	0.0	45.0	34.3	10.68	4.215	
1,900.0	1,900.0	1,899.4	1,899.4	7.2	3.9	0.00	45.0	0.0	45.0	33.9	11.08	4.060	
2,000.0	2,000.0	1,999.4	1,999.4	7.6	3.9	0.00	45.0	0.0	45.0	33.5	11.49	3.915	
2,100.0	2,100.0	2,099.4	2,099.4	7.9	4.0	0.00	45.0	0.0	45.0	33.1	11.91	3.778	
2,200.0	2,200.0	2,199.4	2,199.4	8.2	4.1	0.00	45.0	0.0	45.0	32.7	12.33	3.649	
2,300.0	2,300.0	2,299.4	2,299.4	8.6	4.2	0.00	45.0	0.0	45.0	32.2	12.76	3.527	
2,400.0	2,400.0	2,399.4	2,399.4	8.9	4.3	0.00	45.0	0.0	45.0	31.8	13.19	3.412	
2,500.0	2,500.0	2,499.4	2,499.4	9.2	4.4	0.00	45.0	0.0	45.0	31.4	13.62	3.303 CC, ES	
2,600.0	2,600.0	2,598.0	2,598.0	9.6	4.5	1.06	46.4	0.9	46.5	32.4	14.05	3.308	
2,700.0	2,700.0	2,696.4	2,696.3	9.9	4.6	3.90	50.8	3.5	51.0	36.5	14.46	3.526	
2,800.0	2,800.0	2,795.2	2,794.7	10.3	4.7	7.54	57.7	7.6	58.4	43.5	14.87	3.929	
2,900.0	2,900.0	2,894.8	2,894.0	10.6	4.7	10.52	65.2	12.1	66.5	51.2	15.29	4.350	
3,000.0	3,000.0	2,994.5	2,993.2	10.9	4.8	12.85	72.6	16.6	74.7	59.0	15.72	4.756	
3,100.0	3,100.0	3,094.1	3,092.4	11.3	4.9	14.72	80.1	21.0	83.1	66.9	16.14	5.146	
3,200.0	3,200.0	3,193.7	3,191.7	11.6	5.0	16.25	87.5	25.5	91.5	74.9	16.58	5.518	
3,300.0	3,300.0	3,293.3	3,290.9	12.0	5.1	17.52	95.0	30.0	99.9	82.9	17.01	5.874	
3,400.0	3,400.0	3,392.9	3,390.2	12.3	5.2	18.59	102.4	34.4	108.4	91.0	17.45	6.213	
3,500.0	3,500.0	3,492.6	3,489.4	12.7	5.3	19.50	109.8	38.9	117.0	99.1	17.89	6.537	
3,600.0	3,600.0	3,592.2	3,588.6	13.0	5.4	20.29	117.3	43.4	125.5	107.2	18.34	6.845	
3,700.0	3,700.0	3,691.8	3,687.9	13.4	5.5	20.98	124.7	47.8	134.1	115.3	18.78	7.139	
3,800.0	3,800.0	3,791.4	3,787.1	13.7	5.6	21.59	132.2	52.3	142.7	123.5	19.23	7.420	
3,900.0	3,900.0	3,891.0	3,886.4	14.1	5.7	22.13	139.6	56.8	151.3	131.6	19.68	7.687	
4,000.0	4,000.0	3,990.6	3,985.6	14.4	5.8	22.61	147.1	61.2	159.9	139.8	20.13	7.943	
4,100.0	4,100.0	4,090.3	4,084.9	14.8	5.9	23.04	154.5	65.7	168.5	147.9	20.58	8.187	
4,200.0	4,200.0	4,189.9	4,184.1	15.1	6.0	23.43	162.0	70.2	177.2	156.1	21.04	8.421	
4,300.0	4,300.0	4,289.5	4,283.3	15.5	6.1	23.78	169.4	74.6	185.8	164.3	21.50	8.644	
4,400.0	4,400.0	4,389.1	4,382.6	15.8	6.3	24.10	176.8	79.1	194.5	172.5	21.95	8.858	
4,500.0	4,500.0	4,488.7	4,481.8	16.2	6.4	24.39	184.3	83.6	203.1	180.7	22.41	9.063	
4,600.0	4,600.0	4,588.4	4,581.1	16.5	6.5	24.66	191.7	88.0	211.8	188.9	22.87	9.259	
4,700.0	4,700.0	4,688.0	4,680.3	16.9	6.6	24.91	199.2	92.5	220.4	197.1	23.33	9.448	
4,800.0	4,800.0	4,787.6	4,779.5	17.2	6.7	25.14	206.6	97.0	229.1	205.3	23.80	9.629	
4,900.0	4,900.0	4,887.2	4,878.8	17.6	6.8	25.36	214.1	101.4	237.8	213.5	24.26	9.802	
5,000.0	5,000.0	4,986.8	4,978.0	17.9	6.9	25.55	221.5	105.9	246.5	221.7	24.72	9.969	
5,100.0	5,100.0	5,086.5	5,077.3	18.3	7.0	25.74	229.0	110.4	255.1	230.0	25.19	10.130	

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

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Anticollision Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #702H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11850-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,200.0	5,200.0	5,186.1	5,176.5	18.7	7.1	25.91	236.4	114.8	263.8	238.2	25.65	10.285	
5,300.0	5,300.0	5,285.7	5,275.7	19.0	7.3	26.07	243.9	119.3	272.5	246.4	26.12	10.433	
5,400.0	5,400.0	5,385.3	5,375.0	19.4	7.4	26.22	251.3	123.8	281.2	254.6	26.59	10.577	
5,500.0	5,500.0	5,484.9	5,474.2	19.7	7.5	26.37	258.7	128.2	289.9	262.8	27.05	10.715	
5,600.0	5,600.0	5,584.7	5,573.6	20.1	7.6	-18.56	266.2	132.7	296.9	269.4	27.52	10.789	
5,700.0	5,699.8	5,684.6	5,673.1	20.4	7.7	-18.72	273.7	137.2	300.7	272.7	27.99	10.742	
5,760.6	5,760.3	5,745.2	5,733.5	20.6	7.8	-18.94	278.2	139.9	301.3	273.0	28.28	10.656	
5,800.0	5,799.5	5,784.6	5,772.7	20.8	7.8	-19.10	281.1	141.7	301.4	272.9	28.46	10.588	
5,900.0	5,899.1	5,884.6	5,872.3	21.1	7.9	-19.52	288.6	146.2	301.5	272.5	28.93	10.419	
6,000.0	5,998.7	5,984.5	5,971.9	21.5	8.1	-19.94	296.1	150.6	301.6	272.2	29.41	10.255	
6,100.0	6,098.2	6,084.5	6,071.5	21.8	8.2	-20.36	303.6	155.1	301.7	271.8	29.88	10.097	
6,200.0	6,197.8	6,184.5	6,171.1	22.2	8.3	-20.77	311.0	159.6	301.9	271.5	30.36	9.944	
6,300.0	6,297.4	6,284.5	6,270.7	22.5	8.4	-21.19	318.5	164.1	302.0	271.2	30.83	9.796	
6,400.0	6,397.0	6,384.4	6,370.3	22.9	8.5	-21.61	326.0	168.6	302.2	270.9	31.31	9.653	
6,500.0	6,496.6	6,484.4	6,469.9	23.2	8.7	-22.02	333.4	173.1	302.4	270.6	31.78	9.515	
6,600.0	6,596.2	6,584.4	6,569.5	23.6	8.8	-22.44	340.9	177.5	302.6	270.4	32.26	9.381	
6,700.0	6,695.8	6,684.4	6,669.1	23.9	8.9	-22.85	348.4	182.0	302.9	270.1	32.73	9.252	
6,800.0	6,795.3	6,784.3	6,768.7	24.3	9.0	-23.27	355.9	186.5	303.1	269.9	33.21	9.127	
6,900.0	6,894.9	6,884.3	6,868.3	24.6	9.1	-23.68	363.3	191.0	303.4	269.7	33.69	9.006	
7,000.0	6,994.5	6,984.3	6,967.9	25.0	9.3	-24.10	370.8	195.5	303.7	269.5	34.16	8.888	
7,100.0	7,094.1	7,084.3	7,067.5	25.3	9.4	-24.51	378.3	200.0	303.9	269.3	34.64	8.774	
7,200.0	7,193.7	7,184.2	7,167.1	25.7	9.5	-24.92	385.7	204.4	304.3	269.1	35.12	8.664	
7,300.0	7,293.3	7,284.2	7,266.6	26.0	9.6	-25.33	393.2	208.9	304.6	269.0	35.59	8.557	
7,400.0	7,392.9	7,384.2	7,366.2	26.4	9.7	-25.74	400.7	213.4	304.9	268.9	36.07	8.453	
7,500.0	7,492.4	7,484.2	7,465.8	26.8	9.9	-26.15	408.2	217.9	305.3	268.7	36.55	8.353	
7,600.0	7,592.0	7,584.1	7,565.4	27.1	10.0	-26.56	415.6	222.4	305.7	268.6	37.03	8.255	
7,700.0	7,691.6	7,684.1	7,665.0	27.5	10.1	-26.96	423.1	226.9	306.0	268.5	37.50	8.160	
7,800.0	7,791.2	7,787.2	7,767.8	27.8	10.2	-27.39	430.5	231.3	306.2	268.2	38.00	8.057	
7,900.0	7,890.8	7,892.6	7,872.9	28.2	10.4	-27.92	436.6	235.0	304.7	266.2	38.50	7.913	
8,000.0	7,990.4	7,997.9	7,978.1	28.5	10.5	-28.53	441.1	237.6	301.4	262.4	39.00	7.729	
8,100.0	8,090.0	8,103.1	8,083.2	28.9	10.6	-29.26	443.9	239.3	296.4	256.9	39.49	7.507	
8,200.0	8,189.6	8,207.9	8,188.0	29.2	10.8	-30.11	445.0	240.0	289.7	249.8	39.97	7.248	
8,300.0	8,289.1	8,308.4	8,288.5	29.6	10.9	-31.05	445.0	240.0	281.9	241.5	40.44	6.971	
8,400.0	8,388.7	8,408.0	8,388.1	30.0	11.0	-32.03	445.0	240.0	274.2	233.3	40.91	6.702	
8,500.0	8,488.3	8,507.6	8,487.7	30.3	11.1	-33.06	445.0	240.0	266.5	225.1	41.38	6.441	
8,600.0	8,587.9	8,607.2	8,587.3	30.7	11.2	-34.16	445.0	240.0	258.9	217.1	41.84	6.188	
8,700.0	8,687.5	8,706.8	8,686.9	31.0	11.4	-35.32	445.0	240.0	251.4	209.1	42.31	5.944	
8,800.0	8,787.1	8,806.4	8,786.5	31.4	11.5	-36.55	445.0	240.0	244.1	201.3	42.76	5.707	
8,900.0	8,886.7	8,905.9	8,886.1	31.7	11.6	-37.85	445.0	240.0	236.8	193.6	43.22	5.480	
9,000.0	8,986.2	9,005.5	8,985.6	32.1	11.7	-39.24	445.0	240.0	229.7	186.0	43.67	5.260	
9,100.0	9,085.8	9,105.1	9,085.2	32.5	11.8	-40.72	445.0	240.0	222.7	178.6	44.11	5.049	
9,200.0	9,185.4	9,204.7	9,184.8	32.8	12.0	-42.29	445.0	240.0	215.9	171.4	44.55	4.846	
9,300.0	9,285.0	9,304.3	9,284.4	33.2	12.1	-43.96	445.0	240.0	209.3	164.3	44.98	4.652	
9,400.0	9,384.6	9,403.9	9,384.0	33.5	12.2	-45.74	445.0	240.0	202.8	157.4	45.40	4.467	
9,500.0	9,484.2	9,503.5	9,483.6	33.9	12.3	-47.63	445.0	240.0	196.6	150.8	45.81	4.291	
9,600.0	9,583.8	9,603.1	9,583.2	34.2	12.4	-49.65	445.0	240.0	190.6	144.3	46.21	4.124	
9,700.0	9,683.3	9,702.6	9,682.7	34.6	12.6	-51.79	445.0	240.0	184.8	138.2	46.59	3.966	
9,800.0	9,782.9	9,802.2	9,782.3	35.0	12.7	-54.06	445.0	240.0	179.3	132.3	46.95	3.819	
9,900.0	9,882.5	9,901.8	9,881.9	35.3	12.8	-56.48	445.0	240.0	174.1	126.8	47.29	3.681	
10,000.0	9,982.1	10,001.4	9,981.5	35.7	12.9	-59.03	445.0	240.0	169.2	121.6	47.62	3.554	
10,100.0	10,081.7	10,101.0	10,081.1	36.0	13.1	-61.74	445.0	240.0	164.7	116.8	47.91	3.438	
10,200.0	10,181.3	10,200.6	10,180.7	36.4	13.2	-64.58	445.0	240.0	160.6	112.4	48.19	3.333	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #702H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11850-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
10,300.0	10,280.9	10,300.2	10,280.3	36.8	13.3	-67.57	445.0	240.0	156.9	108.5	48.43	3.240	
10,400.0	10,380.5	10,399.7	10,379.9	37.1	13.4	-70.69	445.0	240.0	153.7	105.0	48.65	3.158	
10,500.0	10,480.0	10,499.3	10,479.4	37.5	13.6	-73.94	445.0	240.0	150.9	102.0	48.85	3.089	
10,600.0	10,579.6	10,598.9	10,579.0	37.8	13.7	-77.29	445.0	240.0	148.6	99.6	49.01	3.032	
10,700.0	10,679.2	10,698.5	10,678.6	38.2	13.8	-80.74	445.0	240.0	146.9	97.7	49.16	2.988	
10,800.0	10,778.8	10,798.1	10,778.2	38.6	13.9	-84.25	445.0	240.0	145.7	96.4	49.29	2.956	
10,900.0	10,878.4	10,897.7	10,877.8	38.9	14.1	-87.81	445.0	240.0	145.1	95.6	49.42	2.936	
10,961.3	10,939.4	10,958.7	10,938.8	39.1	14.1	-90.00	445.0	240.0	145.0	95.5	49.49	2.929	
11,000.0	10,978.0	10,997.3	10,977.4	39.3	14.2	-91.38	445.0	240.0	145.0	95.5	49.54	2.927 SF	
11,100.0	11,077.6	11,096.8	11,077.0	39.6	14.3	-94.95	445.0	240.0	145.5	95.8	49.67	2.930	
11,200.0	11,177.1	11,196.4	11,176.5	40.0	14.4	-98.48	445.0	240.0	146.6	96.8	49.81	2.942	
11,300.0	11,276.7	11,296.0	11,276.1	40.4	14.6	-101.94	445.0	240.0	148.2	98.2	49.98	2.965	
11,400.0	11,376.3	11,395.6	11,375.7	40.7	14.7	-105.31	445.0	240.0	150.3	100.2	50.18	2.996	
11,500.0	11,475.9	11,495.2	11,475.3	41.1	14.8	-108.59	445.0	240.0	153.0	102.6	50.41	3.035	
11,600.0	11,575.5	11,594.8	11,574.9	41.4	14.9	-111.74	445.0	240.0	156.1	105.5	50.68	3.081	
11,700.0	11,675.1	11,694.4	11,674.5	41.8	15.1	-114.75	445.0	240.0	159.7	108.7	51.00	3.132	
11,800.0	11,774.7	11,794.0	11,774.1	42.2	15.2	-117.63	445.0	240.0	163.8	112.4	51.35	3.190	
11,856.3	11,830.7	11,850.0	11,830.1	42.4	15.2	-119.19	445.0	240.0	166.2	114.7	51.54	3.225	
11,875.0	11,849.4	11,868.8	11,848.9	42.4	15.2	-145.27	444.7	239.9	167.2	115.6	51.61	3.241	
11,900.0	11,874.3	11,893.6	11,873.7	42.5	15.2	-179.99	443.1	239.5	169.2	117.5	51.69	3.274	
11,925.0	11,899.1	11,918.3	11,898.2	42.6	15.2	-158.72	440.3	238.8	171.9	120.1	51.78	3.320	
11,950.0	11,923.8	11,942.8	11,922.4	42.7	15.2	146.77	436.4	237.8	175.3	123.4	51.86	3.380	
11,975.0	11,948.3	11,967.1	11,946.0	42.8	15.2	139.27	431.3	236.5	179.4	127.4	51.95	3.453	
12,000.0	11,972.6	11,991.1	11,969.1	42.8	15.2	133.97	425.1	234.9	184.2	132.1	52.04	3.539	
12,025.0	11,996.5	12,014.8	11,991.7	42.9	15.3	129.88	417.9	233.1	189.6	137.5	52.13	3.637	
12,050.0	12,020.0	12,038.2	12,013.5	43.0	15.3	126.51	409.7	231.0	195.7	143.5	52.22	3.747	
12,075.0	12,043.1	12,061.4	12,034.7	43.1	15.3	123.60	400.6	228.6	202.4	150.1	52.31	3.869	
12,100.0	12,065.6	12,084.3	12,055.1	43.1	15.3	121.00	390.6	226.1	209.7	157.3	52.41	4.002	
12,125.0	12,087.6	12,106.8	12,074.8	43.2	15.3	118.62	379.9	223.3	217.6	165.1	52.50	4.145	
12,150.0	12,108.8	12,129.1	12,093.7	43.3	15.3	116.40	368.4	220.4	226.1	173.5	52.60	4.298	
12,175.0	12,129.4	12,151.1	12,111.8	43.3	15.3	114.31	356.2	217.3	235.0	182.4	52.69	4.461	
12,200.0	12,149.3	12,172.9	12,129.0	43.4	15.4	112.32	343.4	214.0	244.5	191.7	52.78	4.632	
12,225.0	12,168.3	12,194.4	12,145.5	43.4	15.4	110.41	330.1	210.6	254.4	201.5	52.87	4.812	
12,250.0	12,186.4	12,215.6	12,161.1	43.5	15.4	108.57	316.2	207.0	264.7	211.7	52.95	4.999	
12,275.0	12,203.6	12,236.6	12,175.9	43.5	15.4	106.78	301.8	203.4	275.4	222.4	53.03	5.193	
12,300.0	12,219.9	12,257.3	12,189.9	43.6	15.4	105.05	286.9	199.6	286.4	233.3	53.11	5.393	
12,325.0	12,235.1	12,277.9	12,203.1	43.6	15.4	103.36	271.7	195.7	297.8	244.6	53.18	5.600	
12,350.0	12,249.3	12,298.3	12,215.5	43.7	15.5	101.72	256.0	191.6	309.5	256.2	53.25	5.811	
12,375.0	12,262.4	12,318.5	12,227.1	43.7	15.5	100.11	240.0	187.5	321.4	268.0	53.32	6.027	
12,400.0	12,274.4	12,338.5	12,237.9	43.8	15.5	98.55	223.6	183.4	333.5	280.1	53.38	6.247	
12,425.0	12,285.2	12,358.5	12,248.0	43.8	15.5	97.02	206.9	179.1	345.8	292.4	53.44	6.471	
12,450.0	12,294.8	12,378.3	12,257.2	43.8	15.5	95.53	189.9	174.7	358.3	304.8	53.50	6.697	
12,475.0	12,303.2	12,398.1	12,265.7	43.9	15.5	94.08	172.6	170.3	370.9	317.3	53.55	6.926	
12,500.0	12,310.3	12,417.8	12,273.5	43.9	15.6	92.67	155.0	165.8	383.6	330.0	53.60	7.156	
12,525.0	12,316.2	12,437.5	12,280.5	43.9	15.6	91.30	137.2	161.2	396.3	342.7	53.65	7.387	
12,550.0	12,320.9	12,457.2	12,286.7	43.9	15.6	89.97	119.0	156.6	409.1	355.4	53.70	7.619	
12,575.0	12,324.2	12,477.0	12,292.1	44.0	15.6	88.70	100.7	151.9	422.0	368.2	53.75	7.850	
12,600.0	12,326.3	12,496.8	12,296.8	44.0	15.6	87.47	82.0	147.1	434.8	381.0	53.80	8.081	
12,624.9	12,327.0	12,516.6	12,300.6	44.0	15.6	86.29	63.2	142.3	447.4	393.6	53.85	8.309	
12,700.0	12,327.3	12,578.1	12,307.4	44.1	15.6	87.51	4.0	127.2	485.2	431.2	54.05	8.977	
12,800.0	12,327.7	12,679.4	12,307.9	44.1	15.7	87.81	-94.4	103.1	532.4	477.9	54.46	9.775	
12,900.0	12,328.1	12,792.6	12,307.7	44.2	15.7	87.96	-205.2	80.3	573.1	518.1	55.02	10.417	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #702H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11850-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,000.0	12,328.5	12,911.1	12,307.6	44.3	15.7	88.06	-322.1	61.1	606.9	551.2	55.70	10.895	
13,100.0	12,328.9	13,034.2	12,307.4	44.5	15.8	88.12	-444.3	46.2	633.3	576.8	56.50	11.209	
13,200.0	12,329.3	13,160.8	12,307.3	44.6	15.8	88.13	-570.5	36.5	652.1	594.7	57.40	11.361	
13,300.0	12,329.7	13,289.8	12,307.1	44.7	15.9	88.11	-699.5	32.3	663.0	604.6	58.37	11.359	
13,400.0	12,330.1	13,393.1	12,307.0	44.9	15.9	88.08	-802.8	31.7	667.7	608.6	59.15	11.288	
13,462.3	12,330.3	13,455.4	12,306.9	45.0	16.0	88.05	-865.1	31.4	668.9	609.2	59.64	11.215	
13,500.0	12,330.4	13,493.1	12,306.9	45.0	16.1	88.03	-902.7	31.3	669.2	609.2	59.94	11.164	
13,600.0	12,330.8	13,593.1	12,306.7	45.2	16.3	87.99	-1,002.7	30.8	669.9	609.2	60.77	11.024	
13,700.0	12,331.2	13,693.0	12,306.6	45.4	16.9	87.95	-1,102.7	30.3	670.7	609.1	61.63	10.883	
13,800.0	12,331.6	13,793.0	12,306.5	45.6	17.5	87.91	-1,202.7	29.8	671.5	608.9	62.52	10.740	
13,900.0	12,332.0	13,893.0	12,306.4	45.8	18.2	87.87	-1,302.7	29.3	672.2	608.8	63.44	10.596	
14,000.0	12,332.4	13,993.0	12,306.2	46.0	18.9	87.82	-1,402.7	28.8	673.0	608.6	64.39	10.452	
14,100.0	12,332.8	14,093.0	12,306.1	46.2	19.6	87.78	-1,502.7	28.3	673.8	608.4	65.37	10.308	
14,200.0	12,333.2	14,193.0	12,306.0	46.5	20.4	87.74	-1,602.7	27.8	674.5	608.2	66.37	10.164	
14,300.0	12,333.6	14,293.0	12,305.9	46.8	21.1	87.70	-1,702.7	27.4	675.3	607.9	67.39	10.021	
14,400.0	12,334.0	14,393.0	12,305.7	47.0	21.9	87.66	-1,802.7	26.9	676.1	607.6	68.43	9.879	
14,500.0	12,334.4	14,493.0	12,305.6	47.3	22.6	87.62	-1,902.7	26.4	676.8	607.3	69.50	9.739	
14,600.0	12,334.8	14,593.0	12,305.5	47.6	23.4	87.58	-2,002.7	25.9	677.6	607.0	70.58	9.600	
14,700.0	12,335.2	14,693.0	12,305.4	48.0	24.2	87.54	-2,102.7	25.4	678.4	606.7	71.69	9.463	
14,800.0	12,335.5	14,793.0	12,305.2	48.3	25.0	87.50	-2,202.7	24.9	679.2	606.3	72.81	9.327	
14,900.0	12,335.9	14,893.0	12,305.1	48.7	25.8	87.45	-2,302.7	24.4	679.9	606.0	73.95	9.194	
15,000.0	12,336.3	14,993.0	12,305.0	49.0	26.6	87.41	-2,402.7	23.9	680.7	605.6	75.11	9.062	
15,100.0	12,336.7	15,093.0	12,304.9	49.4	27.4	87.37	-2,502.6	23.5	681.5	605.2	76.29	8.933	
15,200.0	12,337.1	15,193.0	12,304.7	49.8	28.2	87.33	-2,602.6	23.0	682.2	604.8	77.48	8.806	
15,300.0	12,337.5	15,293.0	12,304.6	50.2	29.0	87.29	-2,702.6	22.5	683.0	604.3	78.68	8.681	
15,400.0	12,337.9	15,393.0	12,304.5	50.6	29.8	87.25	-2,802.6	22.0	683.8	603.9	79.90	8.558	
15,500.0	12,338.3	15,493.0	12,304.4	51.0	30.6	87.21	-2,902.6	21.5	684.6	603.4	81.14	8.437	
15,600.0	12,338.7	15,593.0	12,304.3	51.5	31.4	87.17	-3,002.6	21.0	685.3	603.0	82.38	8.319	
15,700.0	12,339.1	15,693.0	12,304.1	51.9	32.2	87.13	-3,102.6	20.5	686.1	602.5	83.64	8.203	
15,800.0	12,339.5	15,793.0	12,304.0	52.4	33.0	87.09	-3,202.6	20.0	686.9	602.0	84.92	8.089	
15,900.0	12,339.9	15,893.0	12,303.9	52.8	33.9	87.05	-3,302.6	19.6	687.7	601.5	86.20	7.978	
16,000.0	12,340.3	15,993.0	12,303.8	53.3	34.7	87.01	-3,402.6	19.1	688.4	600.9	87.50	7.868	
16,100.0	12,340.6	16,092.9	12,303.6	53.8	35.5	86.97	-3,502.6	18.6	689.2	600.4	88.80	7.761	
16,200.0	12,341.0	16,192.9	12,303.5	54.3	36.3	86.93	-3,602.6	18.1	690.0	599.9	90.12	7.656	
16,300.0	12,341.4	16,292.9	12,303.4	54.8	37.2	86.89	-3,702.6	17.6	690.8	599.3	91.45	7.553	
16,400.0	12,341.8	16,392.9	12,303.3	55.3	38.0	86.85	-3,802.6	17.1	691.5	598.7	92.79	7.453	
16,500.0	12,342.2	16,492.9	12,303.1	55.8	38.8	86.81	-3,902.6	16.6	692.3	598.2	94.14	7.354	
16,600.0	12,342.6	16,592.9	12,303.0	56.3	39.6	86.78	-4,002.6	16.2	693.1	597.6	95.50	7.257	
16,699.3	12,343.0	16,692.0	12,302.5	56.9	40.5	86.71	-4,101.7	15.7	693.9	597.0	96.86	7.164	
16,745.9	12,342.8	16,738.7	12,302.3	57.1	40.9	86.70	-4,148.3	15.4	694.2	596.7	97.50	7.121	
16,800.0	12,342.1	16,792.7	12,302.0	57.4	41.3	86.73	-4,202.4	15.2	694.6	596.4	98.25	7.070	
16,900.0	12,340.9	16,892.7	12,301.5	58.0	42.1	86.80	-4,302.4	14.7	695.3	595.7	99.64	6.979	
16,989.1	12,339.8	16,981.9	12,301.0	58.5	42.9	86.85	-4,391.5	14.2	696.0	595.1	100.89	6.898	
17,008.4	12,339.6	17,004.7	12,300.9	58.6	43.1	86.86	-4,414.3	14.2	696.1	594.9	101.20	6.879	
17,100.0	12,338.4	17,108.0	12,300.4	59.1	43.9	86.92	-4,517.6	15.5	695.7	593.1	102.61	6.780	
17,200.0	12,337.1	17,208.0	12,299.9	59.7	44.8	86.98	-4,617.6	17.2	694.9	590.9	104.03	6.680	
17,300.0	12,335.9	17,308.0	12,299.3	60.3	45.6	87.04	-4,717.5	18.9	694.1	588.7	105.46	6.582	
17,400.0	12,334.6	17,408.0	12,298.8	60.9	46.5	87.09	-4,817.5	20.6	693.3	586.4	106.89	6.486	
17,500.0	12,333.4	17,508.0	12,298.3	61.4	47.3	87.15	-4,917.5	22.3	692.5	584.2	108.34	6.392	
17,600.0	12,332.1	17,607.9	12,297.7	62.1	48.1	87.21	-5,017.5	24.0	691.7	581.9	109.78	6.301	
17,700.0	12,330.8	17,707.9	12,297.2	62.7	49.0	87.27	-5,117.5	25.8	690.9	579.7	111.24	6.211	
17,800.0	12,329.6	17,807.9	12,296.7	63.3	49.8	87.32	-5,217.4	27.5	690.1	577.4	112.70	6.123	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #702H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11850-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
17,900.0	12,328.3	17,907.9	12,296.2	63.9	50.7	87.38	-5,317.4	29.2	689.3	575.1	114.17	6.037	
18,000.0	12,327.1	18,007.9	12,295.6	64.5	51.5	87.44	-5,417.4	30.9	688.5	572.9	115.65	5.954	
18,100.0	12,325.8	18,107.9	12,295.1	65.2	52.3	87.50	-5,517.4	32.6	687.7	570.6	117.13	5.872	
18,200.0	12,324.5	18,207.9	12,294.6	65.8	53.2	87.56	-5,617.4	34.3	686.9	568.3	118.61	5.791	
18,300.0	12,323.3	18,307.9	12,294.0	66.4	54.0	87.61	-5,717.3	36.0	686.1	566.0	120.11	5.713	
18,400.0	12,322.0	18,407.9	12,293.5	67.1	54.9	87.67	-5,817.3	37.7	685.3	563.7	121.60	5.636	
18,500.0	12,320.8	18,507.9	12,293.0	67.7	55.7	87.73	-5,917.3	39.4	684.5	561.4	123.11	5.560	
18,600.0	12,319.5	18,607.9	12,292.5	68.4	56.6	87.79	-6,017.3	41.1	683.7	559.1	124.61	5.487	
18,700.0	12,318.2	18,707.9	12,291.9	69.0	57.4	87.85	-6,117.2	42.8	682.9	556.8	126.13	5.415	
18,800.0	12,317.0	18,807.9	12,291.4	69.7	58.3	87.91	-6,217.2	44.5	682.1	554.5	127.64	5.344	
18,900.0	12,315.7	18,907.9	12,290.9	70.4	59.1	87.97	-6,317.2	46.2	681.4	552.2	129.17	5.275	
19,000.0	12,314.5	19,007.9	12,290.3	71.0	60.0	88.03	-6,417.2	47.9	680.6	549.9	130.69	5.207	
19,100.0	12,313.2	19,107.9	12,289.8	71.7	60.8	88.09	-6,517.2	49.6	679.8	547.6	132.22	5.141	
19,200.0	12,311.9	19,207.9	12,289.3	72.4	61.7	88.14	-6,617.1	51.3	679.0	545.2	133.76	5.076	
19,300.0	12,310.7	19,307.9	12,288.8	73.1	62.5	88.20	-6,717.1	53.0	678.2	542.9	135.30	5.013	
19,400.0	12,309.4	19,407.8	12,288.2	73.8	63.4	88.26	-6,817.1	54.7	677.4	540.6	136.84	4.950	
19,500.0	12,308.1	19,507.8	12,287.7	74.5	64.2	88.32	-6,917.1	56.4	676.6	538.2	138.39	4.889	
19,600.0	12,306.9	19,607.8	12,287.2	75.2	65.1	88.38	-7,017.1	58.1	675.8	535.9	139.94	4.829	
19,700.0	12,305.6	19,707.8	12,286.6	75.9	65.9	88.44	-7,117.0	59.8	675.1	533.6	141.49	4.771	
19,800.0	12,304.4	19,807.8	12,286.1	76.6	66.8	88.51	-7,217.0	61.5	674.3	531.2	143.05	4.713	
19,900.0	12,303.1	19,907.8	12,285.6	77.3	67.6	88.57	-7,317.0	63.2	673.5	528.9	144.61	4.657	
20,000.0	12,301.8	20,007.8	12,285.1	78.0	68.5	88.63	-7,417.0	64.9	672.7	526.5	146.18	4.602	
20,100.0	12,300.6	20,107.8	12,284.5	78.7	69.3	88.69	-7,516.9	66.6	671.9	524.2	147.75	4.548	
20,200.0	12,299.3	20,207.8	12,284.0	79.4	70.2	88.75	-7,616.9	68.3	671.1	521.8	149.32	4.495	
20,300.0	12,298.1	20,307.8	12,283.5	80.1	71.0	88.81	-7,716.9	70.0	670.4	519.5	150.89	4.443	
20,400.0	12,296.8	20,407.8	12,282.9	80.8	71.9	88.87	-7,816.9	71.8	669.6	517.1	152.47	4.391	
20,500.0	12,295.5	20,507.8	12,282.4	81.6	72.7	88.93	-7,916.9	73.5	668.8	514.7	154.05	4.341	
20,600.0	12,294.3	20,607.8	12,281.9	82.3	73.6	88.99	-8,016.8	75.2	668.0	512.4	155.63	4.292	
20,700.0	12,293.0	20,707.8	12,281.4	83.0	74.4	89.06	-8,116.8	76.9	667.2	510.0	157.22	4.244	
20,800.0	12,291.8	20,807.8	12,280.8	83.7	75.3	89.12	-8,216.8	78.6	666.5	507.6	158.81	4.197	
20,900.0	12,290.5	20,907.8	12,280.3	84.5	76.1	89.18	-8,316.8	80.3	665.7	505.3	160.40	4.150	
21,000.0	12,289.2	21,007.8	12,279.8	85.2	77.0	89.24	-8,416.8	82.0	664.9	502.9	161.99	4.105	
21,100.0	12,288.0	21,107.7	12,279.2	85.9	77.8	89.30	-8,516.7	83.7	664.1	500.5	163.59	4.060	
21,200.0	12,286.7	21,207.7	12,278.7	86.7	78.7	89.37	-8,616.7	85.4	663.4	498.2	165.19	4.016	
21,300.0	12,285.5	21,307.7	12,278.2	87.4	79.5	89.43	-8,716.7	87.1	662.6	495.8	166.79	3.973	
21,400.0	12,284.2	21,407.7	12,277.7	88.2	80.4	89.49	-8,816.7	88.8	661.8	493.4	168.39	3.930	
21,500.0	12,282.9	21,507.7	12,277.1	88.9	81.2	89.55	-8,916.6	90.5	661.0	491.0	170.00	3.889	
21,600.0	12,281.7	21,607.7	12,276.6	89.7	82.1	89.62	-9,016.6	92.2	660.3	488.7	171.60	3.848	
21,700.0	12,280.4	21,707.7	12,276.1	90.4	83.0	89.68	-9,116.6	93.9	659.5	486.3	173.21	3.807	
21,800.0	12,279.1	21,807.7	12,275.5	91.2	83.8	89.74	-9,216.6	95.6	658.7	483.9	174.83	3.768	
21,900.0	12,277.9	21,907.7	12,275.0	91.9	84.7	89.81	-9,316.6	97.3	658.0	481.5	176.44	3.729	
22,000.0	12,276.6	22,007.7	12,274.5	92.7	85.5	89.87	-9,416.5	99.0	657.2	479.1	178.06	3.691	
22,100.0	12,275.4	22,107.7	12,274.0	93.4	86.4	89.93	-9,516.5	100.7	656.4	476.7	179.67	3.653	
22,200.0	12,274.1	22,207.7	12,273.4	94.2	87.2	90.00	-9,616.5	102.4	655.7	474.4	181.29	3.617	
22,286.3	12,273.0	22,289.4	12,273.0	94.8	87.9	90.05	-9,698.2	103.8	655.0	472.4	182.64	3.586	
22,287.8	12,273.0	22,289.4	12,273.0	94.9	87.9	90.05	-9,698.2	103.8	655.0	472.4	182.64	3.586	

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

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COMPASS 5000.15 Build 91E

ConocoPhillips

Anticollision Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #704H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11814-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.2	0.2	3.0	3.0	-90.38	-0.2	-30.0	30.0				
100.0	100.0	100.2	100.2	3.0	3.0	-90.38	-0.2	-30.0	30.0	24.0	6.00	4.998	
200.0	200.0	200.2	200.2	3.0	3.0	-90.38	-0.2	-30.0	30.0	24.0	6.04	4.967	
300.0	300.0	300.2	300.2	3.1	3.0	-90.38	-0.2	-30.0	30.0	23.9	6.12	4.902	
400.0	400.0	400.2	400.2	3.2	3.0	-90.38	-0.2	-30.0	30.0	23.8	6.24	4.807	
500.0	500.0	500.2	500.2	3.4	3.1	-90.38	-0.2	-30.0	30.0	23.6	6.40	4.690	
600.0	600.0	600.2	600.2	3.6	3.1	-90.38	-0.2	-30.0	30.0	23.4	6.58	4.557	
700.0	700.0	700.2	700.2	3.8	3.1	-90.38	-0.2	-30.0	30.0	23.2	6.80	4.413	
800.0	800.0	800.2	800.2	4.0	3.2	-90.38	-0.2	-30.0	30.0	23.0	7.04	4.264	
900.0	900.0	900.2	900.2	4.2	3.2	-90.38	-0.2	-30.0	30.0	22.7	7.29	4.113	
1,000.0	1,000.0	1,000.2	1,000.2	4.5	3.2	-90.38	-0.2	-30.0	30.0	22.4	7.57	3.964	
1,100.0	1,100.0	1,100.2	1,100.2	4.8	3.3	-90.38	-0.2	-30.0	30.0	22.1	7.86	3.818	
1,200.0	1,200.0	1,200.2	1,200.2	5.1	3.4	-90.38	-0.2	-30.0	30.0	21.8	8.16	3.677	
1,300.0	1,300.0	1,300.2	1,300.2	5.3	3.4	-90.38	-0.2	-30.0	30.0	21.5	8.47	3.542	
1,400.0	1,400.0	1,400.2	1,400.2	5.6	3.5	-90.38	-0.2	-30.0	30.0	21.2	8.79	3.413	
1,500.0	1,500.0	1,500.2	1,500.2	6.0	3.5	-90.38	-0.2	-30.0	30.0	20.9	9.12	3.290	
1,600.0	1,600.0	1,600.2	1,600.2	6.3	3.6	-90.38	-0.2	-30.0	30.0	20.5	9.45	3.174	
1,700.0	1,700.0	1,700.2	1,700.2	6.6	3.7	-90.38	-0.2	-30.0	30.0	20.2	9.79	3.063	
1,800.0	1,800.0	1,800.2	1,800.2	6.9	3.8	-90.38	-0.2	-30.0	30.0	19.9	10.14	2.959	
1,900.0	1,900.0	1,900.2	1,900.2	7.2	3.9	-90.38	-0.2	-30.0	30.0	19.5	10.49	2.859	
2,000.0	2,000.0	2,000.2	2,000.2	7.6	3.9	-90.38	-0.2	-30.0	30.0	19.2	10.85	2.766	
2,100.0	2,100.0	2,100.2	2,100.2	7.9	4.0	-90.38	-0.2	-30.0	30.0	18.8	11.21	2.677	
2,200.0	2,200.0	2,200.2	2,200.2	8.2	4.1	-90.38	-0.2	-30.0	30.0	18.4	11.57	2.593	
2,300.0	2,300.0	2,300.2	2,300.2	8.6	4.2	-90.38	-0.2	-30.0	30.0	18.1	11.94	2.513	
2,400.0	2,400.0	2,400.2	2,400.2	8.9	4.3	-90.38	-0.2	-30.0	30.0	17.7	12.31	2.438	
2,416.6	2,416.6	2,416.8	2,416.8	8.9	4.3	-90.38	-0.2	-30.0	30.0	17.6	12.37	2.426 CC	
2,500.0	2,500.0	2,500.0	2,500.0	9.2	4.4	-90.38	-0.2	-30.0	30.0	17.3	12.68	2.366 ES, SF	
2,600.0	2,600.0	2,599.2	2,599.2	9.6	4.5	-89.26	0.4	-31.6	31.6	18.6	13.05	2.424	
2,700.0	2,700.0	2,697.9	2,697.8	9.9	4.5	-86.51	2.2	-36.4	36.5	23.1	13.42	2.722	
2,800.0	2,800.0	2,796.2	2,795.7	10.3	4.6	-83.28	5.2	-44.3	44.8	31.0	13.81	3.248	
2,900.0	2,900.0	2,895.6	2,894.6	10.6	4.6	-80.64	8.9	-54.0	55.0	40.8	14.23	3.868	
3,000.0	3,000.0	2,995.1	2,993.5	10.9	4.7	-78.83	12.6	-63.7	65.3	50.7	14.65	4.458	
3,100.0	3,100.0	3,094.5	3,092.4	11.3	4.8	-77.51	16.3	-73.5	75.7	60.6	15.08	5.015	
3,200.0	3,200.0	3,194.0	3,191.3	11.6	4.8	-76.51	20.0	-83.2	86.0	70.5	15.52	5.544	
3,300.0	3,300.0	3,293.4	3,290.2	12.0	4.9	-75.73	23.6	-92.9	96.4	80.4	15.95	6.044	
3,400.0	3,400.0	3,392.9	3,389.1	12.3	5.0	-75.09	27.3	-102.6	106.8	90.4	16.38	6.517	
3,500.0	3,500.0	3,492.3	3,488.0	12.7	5.0	-74.57	31.0	-112.3	117.2	100.4	16.82	6.966	
3,600.0	3,600.0	3,591.8	3,586.9	13.0	5.1	-74.14	34.7	-122.1	127.6	110.3	17.26	7.392	
3,700.0	3,700.0	3,691.2	3,685.8	13.4	5.2	-73.77	38.4	-131.8	138.0	120.3	17.70	7.796	
3,800.0	3,800.0	3,790.7	3,784.7	13.7	5.3	-73.45	42.1	-141.5	148.4	130.3	18.15	8.179	
3,900.0	3,900.0	3,890.2	3,883.6	14.1	5.4	-73.17	45.7	-151.2	158.9	140.3	18.59	8.544	
4,000.0	4,000.0	3,989.6	3,982.5	14.4	5.5	-72.93	49.4	-161.0	169.3	150.3	19.04	8.891	
4,100.0	4,100.0	4,089.1	4,081.4	14.8	5.5	-72.72	53.1	-170.7	179.7	160.2	19.49	9.222	
4,200.0	4,200.0	4,188.5	4,180.4	15.1	5.6	-72.53	56.8	-180.4	190.2	170.2	19.94	9.537	
4,300.0	4,300.0	4,288.0	4,279.3	15.5	5.7	-72.36	60.5	-190.1	200.6	180.2	20.39	9.837	
4,400.0	4,400.0	4,387.4	4,378.2	15.8	5.8	-72.20	64.2	-199.8	211.0	190.2	20.84	10.124	
4,500.0	4,500.0	4,486.9	4,477.1	16.2	5.9	-72.06	67.8	-209.6	221.5	200.2	21.30	10.398	
4,600.0	4,600.0	4,486.3	4,476.0	16.5	6.0	-71.94	71.5	-219.3	231.9	210.2	21.76	10.660	
4,700.0	4,700.0	4,685.8	4,674.9	16.9	6.1	-71.82	75.2	-229.0	242.4	220.1	22.21	10.911	
4,800.0	4,800.0	4,785.2	4,773.8	17.2	6.2	-71.71	78.9	-238.7	252.8	230.1	22.67	11.151	
4,900.0	4,900.0	4,884.7	4,872.7	17.6	6.3	-71.62	82.6	-248.4	263.2	240.1	23.13	11.382	
5,000.0	5,000.0	4,984.1	4,971.6	17.9	6.4	-71.53	86.3	-258.2	273.7	250.1	23.59	11.602	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11814-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,100.0	5,083.6	5,070.5	18.3	6.5	-71.44	89.9	-267.9	284.1	260.1	24.05	11.814	
5,200.0	5,200.0	5,183.0	5,169.4	18.7	6.6	-71.36	93.6	-277.6	294.6	270.1	24.51	12.018	
5,300.0	5,300.0	5,282.5	5,268.3	19.0	6.7	-71.29	97.3	-287.3	305.0	280.1	24.98	12.213	
5,400.0	5,400.0	5,381.9	5,367.2	19.4	6.8	-71.22	101.0	-297.1	315.5	290.0	25.44	12.401	
5,500.0	5,500.0	5,481.4	5,466.2	19.7	6.9	-71.16	104.7	-306.8	325.9	300.0	25.90	12.582	
5,600.0	5,600.0	5,580.7	5,565.0	20.1	7.0	-116.17	108.4	-316.5	337.1	310.8	26.36	12.791	
5,700.0	5,699.8	5,679.8	5,663.5	20.4	7.1	-116.65	112.0	-326.2	349.9	323.1	26.79	13.059	
5,760.6	5,760.3	5,739.7	5,723.1	20.6	7.2	-117.14	114.2	-332.0	358.4	331.4	27.05	13.251	
5,800.0	5,799.5	5,778.6	5,761.7	20.8	7.2	-117.60	115.7	-335.8	364.2	337.0	27.21	13.382	
5,900.0	5,899.1	5,877.2	5,859.8	21.1	7.3	-118.72	119.3	-345.5	378.9	351.3	27.64	13.712	
6,000.0	5,998.7	5,975.9	5,957.9	21.5	7.5	-119.75	123.0	-355.1	393.8	365.7	28.06	14.034	
6,100.0	6,098.2	6,074.5	6,056.0	21.8	7.6	-120.70	126.6	-364.7	408.7	380.3	28.48	14.350	
6,200.0	6,197.8	6,173.2	6,154.1	22.2	7.7	-121.59	130.3	-374.4	423.8	394.9	28.91	14.660	
6,300.0	6,297.4	6,271.8	6,252.2	22.5	7.8	-122.42	133.9	-384.0	439.0	409.6	29.34	14.962	
6,400.0	6,397.0	6,370.5	6,350.4	22.9	7.9	-123.19	137.6	-393.7	454.2	424.5	29.77	15.257	
6,500.0	6,496.6	6,469.1	6,448.5	23.2	8.0	-123.91	141.3	-403.3	469.6	439.4	30.21	15.545	
6,600.0	6,596.2	6,567.8	6,546.6	23.6	8.1	-124.59	144.9	-413.0	485.0	454.3	30.64	15.827	
6,700.0	6,695.8	6,666.4	6,644.7	23.9	8.2	-125.22	148.6	-422.6	500.4	469.3	31.08	16.101	
6,800.0	6,795.3	6,765.1	6,742.8	24.3	8.3	-125.82	152.2	-432.2	515.9	484.4	31.52	16.369	
6,900.0	6,894.9	6,863.7	6,840.9	24.6	8.5	-126.38	155.9	-441.9	531.5	499.5	31.96	16.630	
7,000.0	6,994.5	6,962.4	6,939.0	25.0	8.6	-126.91	159.5	-451.5	547.1	514.7	32.40	16.885	
7,100.0	7,094.1	7,061.0	7,037.1	25.3	8.7	-127.41	163.2	-461.2	562.8	529.9	32.84	17.134	
7,200.0	7,193.7	7,159.7	7,135.2	25.7	8.8	-127.88	166.8	-470.8	578.4	545.2	33.29	17.376	
7,300.0	7,293.3	7,258.3	7,233.4	26.0	8.9	-128.33	170.5	-480.5	594.2	560.4	33.74	17.613	
7,400.0	7,392.9	7,357.0	7,331.5	26.4	9.0	-128.75	174.1	-490.1	609.9	575.8	34.18	17.843	
7,500.0	7,492.4	7,455.6	7,429.6	26.8	9.2	-129.16	177.8	-499.7	625.7	591.1	34.63	18.068	
7,600.0	7,592.0	7,554.3	7,527.7	27.1	9.3	-129.54	181.4	-509.4	641.6	606.5	35.08	18.287	
7,700.0	7,691.6	7,652.9	7,625.8	27.5	9.4	-129.91	185.1	-519.0	657.4	621.9	35.53	18.501	
7,800.0	7,791.2	7,751.6	7,723.9	27.8	9.5	-130.26	188.8	-528.7	673.3	637.3	35.99	18.709	
7,900.0	7,890.8	7,850.2	7,822.0	28.2	9.6	-130.59	192.4	-538.3	689.2	652.7	36.44	18.913	
8,000.0	7,990.4	7,948.9	7,920.1	28.5	9.7	-130.91	196.1	-548.0	705.1	668.2	36.89	19.111	
8,100.0	8,090.0	8,047.5	8,018.2	28.9	9.9	-131.21	199.7	-557.6	721.0	683.7	37.35	19.305	
8,200.0	8,189.6	8,146.2	8,116.3	29.2	10.0	-131.50	203.4	-567.2	737.0	699.2	37.81	19.494	
8,300.0	8,289.1	8,244.8	8,214.5	29.6	10.1	-131.78	207.0	-576.9	753.0	714.7	38.26	19.679	
8,400.0	8,388.7	8,343.5	8,312.6	30.0	10.2	-132.04	210.7	-586.5	769.0	730.3	38.72	19.859	
8,500.0	8,488.3	8,444.8	8,413.3	30.3	10.3	-132.31	214.4	-596.4	785.0	745.8	39.19	20.028	
8,600.0	8,587.9	8,558.5	8,526.6	30.7	10.5	-132.62	218.1	-606.1	799.7	760.0	39.71	20.137	
8,700.0	8,687.5	8,672.8	8,640.6	31.0	10.6	-132.98	221.0	-613.7	812.6	772.4	40.23	20.199	
8,800.0	8,787.1	8,787.5	8,755.1	31.4	10.8	-133.38	223.1	-619.2	823.7	783.0	40.74	20.217	
8,900.0	8,886.7	8,902.6	8,870.2	31.7	10.9	-133.82	224.3	-622.6	832.9	791.7	41.25	20.192	
9,000.0	8,986.2	9,018.0	8,985.6	32.1	11.0	-134.31	224.8	-623.8	840.3	798.6	41.75	20.130	
9,100.0	9,085.8	9,118.5	9,086.0	32.5	11.1	-134.75	224.8	-623.8	846.7	804.6	42.13	20.098	
9,200.0	9,185.4	9,218.1	9,185.6	32.8	11.2	-135.19	224.8	-623.8	853.2	810.6	42.51	20.070	
9,300.0	9,285.0	9,317.7	9,285.2	33.2	11.3	-135.61	224.8	-623.8	859.6	816.8	42.89	20.044	
9,400.0	9,384.6	9,417.2	9,384.8	33.5	11.4	-136.03	224.8	-623.8	866.2	822.9	43.27	20.019	
9,500.0	9,484.2	9,516.8	9,484.4	33.9	11.5	-136.45	224.8	-623.8	872.7	829.1	43.65	19.996	
9,600.0	9,583.8	9,616.4	9,584.0	34.2	11.6	-136.85	224.8	-623.8	879.4	835.3	44.03	19.974	
9,700.0	9,683.3	9,716.0	9,683.5	34.6	11.7	-137.25	224.8	-623.8	886.0	841.6	44.41	19.953	
9,800.0	9,782.9	9,815.6	9,783.1	35.0	11.8	-137.65	224.8	-623.8	892.7	847.9	44.78	19.934	
9,900.0	9,882.5	9,915.2	9,882.7	35.3	11.9	-138.04	224.8	-623.8	899.5	854.3	45.16	19.916	
10,000.0	9,982.1	10,014.8	9,982.3	35.7	12.0	-138.42	224.8	-623.8	906.3	860.7	45.54	19.899	
10,100.0	10,081.7	10,114.3	10,081.9	36.0	12.1	-138.80	224.8	-623.8	913.1	867.2	45.92	19.883	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #704H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 11814-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis					Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
10,200.0	10,181.3	10,213.9	10,181.5	36.4	12.2	-139.17	224.8	-623.8	920.0	873.7	46.30	19.868		
10,300.0	10,280.9	10,313.5	10,281.1	36.8	12.3	-139.54	224.8	-623.8	926.9	880.2	46.68	19.854		
10,400.0	10,380.5	10,413.1	10,380.7	37.1	12.4	-139.90	224.8	-623.8	933.8	886.8	47.06	19.841		
10,500.0	10,480.0	10,512.7	10,480.2	37.5	12.6	-140.25	224.8	-623.8	940.8	893.4	47.44	19.829		
10,600.0	10,579.6	10,612.3	10,579.8	37.8	12.7	-140.61	224.8	-623.8	947.8	900.0	47.83	19.818		
10,700.0	10,679.2	10,711.9	10,679.4	38.2	12.8	-140.95	224.8	-623.8	954.9	906.7	48.21	19.807		
10,800.0	10,778.8	10,811.5	10,779.0	38.6	12.9	-141.29	224.8	-623.8	961.9	913.4	48.59	19.798		
10,900.0	10,878.4	10,911.0	10,878.6	38.9	13.0	-141.63	224.8	-623.8	969.1	920.1	48.97	19.788		
11,000.0	10,978.0	11,010.6	10,978.2	39.3	13.1	-141.96	224.8	-623.8	976.2	926.9	49.35	19.780		
11,100.0	11,077.6	11,110.2	11,077.8	39.6	13.2	-142.28	224.8	-623.8	983.4	933.7	49.74	19.772		
11,200.0	11,177.1	11,209.8	11,177.3	40.0	13.3	-142.60	224.8	-623.8	990.6	940.5	50.12	19.765		
11,300.0	11,276.7	11,309.4	11,276.9	40.4	13.4	-142.92	224.8	-623.8	997.9	947.4	50.50	19.758		

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #801H - OWB - PWP1												Offset Well Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 12132-MWD+IFR1+FDIR													
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	1.7	1.7	3.0	3.0	33.57	45.2	30.0	54.2				
100.0	100.0	101.7	101.7	3.0	3.0	33.57	45.2	30.0	54.2	48.2	6.00	9.037	
200.0	200.0	201.7	201.7	3.0	3.0	33.57	45.2	30.0	54.2	48.2	6.04	8.977	
300.0	300.0	301.7	301.7	3.1	3.0	33.57	45.2	30.0	54.2	48.1	6.13	8.852	
400.0	400.0	401.7	401.7	3.2	3.0	33.57	45.2	30.0	54.2	48.0	6.26	8.670	
500.0	500.0	501.7	501.7	3.4	3.1	33.57	45.2	30.0	54.2	47.8	6.42	8.445	
600.0	600.0	601.7	601.7	3.6	3.1	33.57	45.2	30.0	54.2	47.6	6.63	8.189	
700.0	700.0	701.7	701.7	3.8	3.1	33.57	45.2	30.0	54.2	47.4	6.86	7.913	
800.0	800.0	801.7	801.7	4.0	3.2	33.57	45.2	30.0	54.2	47.1	7.11	7.627	
900.0	900.0	901.7	901.7	4.2	3.2	33.57	45.2	30.0	54.2	46.9	7.39	7.339	
1,000.0	1,000.0	1,001.7	1,001.7	4.5	3.2	33.57	45.2	30.0	54.2	46.6	7.69	7.054	
1,100.0	1,100.0	1,101.7	1,101.7	4.8	3.3	33.57	45.2	30.0	54.2	46.2	8.01	6.777	
1,200.0	1,200.0	1,201.7	1,201.7	5.1	3.4	33.57	45.2	30.0	54.2	45.9	8.33	6.509	
1,300.0	1,300.0	1,301.7	1,301.7	5.3	3.4	33.57	45.2	30.0	54.2	45.6	8.68	6.253	
1,400.0	1,400.0	1,401.7	1,401.7	5.6	3.5	33.57	45.2	30.0	54.2	45.2	9.03	6.009	
1,500.0	1,500.0	1,501.7	1,501.7	6.0	3.5	33.57	45.2	30.0	54.2	44.9	9.39	5.778	
1,600.0	1,600.0	1,601.7	1,601.7	6.3	3.6	33.57	45.2	30.0	54.2	44.5	9.76	5.558	
1,700.0	1,700.0	1,701.7	1,701.7	6.6	3.7	33.57	45.2	30.0	54.2	44.1	10.14	5.351	
1,800.0	1,800.0	1,801.7	1,801.7	6.9	3.8	33.57	45.2	30.0	54.2	43.7	10.52	5.155	
1,900.0	1,900.0	1,901.7	1,901.7	7.2	3.9	33.57	45.2	30.0	54.2	43.3	10.91	4.971	
2,000.0	2,000.0	2,001.7	2,001.7	7.6	3.9	33.57	45.2	30.0	54.2	42.9	11.31	4.796	
2,100.0	2,100.0	2,101.7	2,101.7	7.9	4.0	33.57	45.2	30.0	54.2	42.5	11.71	4.632	
2,200.0	2,200.0	2,201.7	2,201.7	8.2	4.1	33.57	45.2	30.0	54.2	42.1	12.12	4.477	
2,300.0	2,300.0	2,301.7	2,301.7	8.6	4.2	33.57	45.2	30.0	54.2	41.7	12.53	4.330	
2,400.0	2,400.0	2,401.7	2,401.7	8.9	4.3	33.57	45.2	30.0	54.2	41.3	12.94	4.192	
2,416.1	2,416.1	2,417.8	2,417.8	8.9	4.3	33.57	45.2	30.0	54.2	41.2	13.01	4.170 CC	
2,500.0	2,500.0	2,501.7	2,501.7	9.2	4.4	33.57	45.2	30.0	54.3	40.9	13.36	4.061 ES	
2,600.0	2,600.0	2,600.0	2,600.0	9.6	4.5	34.61	45.8	31.6	55.7	42.0	13.76	4.050	
2,700.0	2,700.0	2,698.3	2,698.1	9.9	4.5	37.34	47.7	36.4	60.1	46.0	14.12	4.256	
2,800.0	2,800.0	2,796.0	2,795.5	10.3	4.6	41.07	50.8	44.2	67.6	53.2	14.46	4.676	
2,900.0	2,900.0	2,895.2	2,894.1	10.6	4.6	44.74	54.6	54.1	77.3	62.5	14.82	5.215	
3,000.0	3,000.0	2,994.6	2,993.0	10.9	4.7	47.60	58.5	64.1	87.2	72.0	15.19	5.740	
3,100.0	3,100.0	3,094.1	3,091.8	11.3	4.8	49.88	62.4	74.0	97.3	81.7	15.58	6.245	
3,200.0	3,200.0	3,193.5	3,190.7	11.6	4.8	51.72	66.3	84.0	107.5	91.6	15.98	6.730	
3,300.0	3,300.0	3,292.9	3,289.5	12.0	4.9	53.24	70.1	93.9	117.8	101.5	16.38	7.193	
3,400.0	3,400.0	3,392.3	3,388.3	12.3	5.0	54.52	74.0	103.9	128.2	111.4	16.79	7.636	
3,500.0	3,500.0	3,491.7	3,487.2	12.7	5.1	55.60	77.9	113.8	138.7	121.5	17.21	8.057	
3,600.0	3,600.0	3,591.2	3,586.0	13.0	5.1	56.54	81.8	123.7	149.2	131.5	17.63	8.459	
3,700.0	3,700.0	3,690.6	3,684.9	13.4	5.2	57.35	85.7	133.7	159.7	141.6	18.06	8.842	
3,800.0	3,800.0	3,790.0	3,783.7	13.7	5.3	58.06	89.6	143.6	170.2	151.7	18.49	9.207	
3,900.0	3,900.0	3,889.4	3,882.6	14.1	5.4	58.69	93.4	153.6	180.8	161.9	18.92	9.556	
4,000.0	4,000.0	3,988.8	3,981.4	14.4	5.5	59.24	97.3	163.5	191.4	172.0	19.35	9.888	
4,100.0	4,100.0	4,088.3	4,080.3	14.8	5.6	59.74	101.2	173.5	202.0	182.2	19.79	10.205	
4,200.0	4,200.0	4,187.7	4,179.1	15.1	5.6	60.19	105.1	183.4	212.6	192.3	20.23	10.507	
4,300.0	4,300.0	4,287.1	4,278.0	15.5	5.7	60.60	109.0	193.4	223.2	202.5	20.67	10.796	
4,400.0	4,400.0	4,386.5	4,376.8	15.8	5.8	60.97	112.8	203.3	233.8	212.7	21.12	11.073	
4,500.0	4,500.0	4,486.0	4,475.7	16.2	5.9	61.31	116.7	213.2	244.5	222.9	21.57	11.337	
4,600.0	4,600.0	4,585.4	4,574.5	16.5	6.0	61.62	120.6	223.2	255.1	233.1	22.01	11.590	
4,700.0	4,700.0	4,684.8	4,673.4	16.9	6.1	61.90	124.5	233.1	265.8	243.3	22.46	11.833	
4,800.0	4,800.0	4,784.2	4,772.2	17.2	6.2	62.16	128.4	243.1	276.5	253.6	22.91	12.065	
4,900.0	4,900.0	4,883.6	4,871.1	17.6	6.3	62.41	132.2	253.0	287.1	263.8	23.37	12.288	
5,000.0	5,000.0	4,983.1	4,969.9	17.9	6.4	62.63	136.1	263.0	297.8	274.0	23.82	12.502	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #801H - OWB - PWP1												Offset Well Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 12132-MWD+IFR1+FDIR													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,100.0	5,082.5	5,068.7	18.3	6.5	62.84	140.0	272.9	308.5	284.2	24.28	12.707	
5,200.0	5,200.0	5,181.9	5,167.6	18.7	6.6	63.04	143.9	282.9	319.2	294.4	24.73	12.905	
5,300.0	5,300.0	5,281.3	5,266.4	19.0	6.7	63.22	147.8	292.8	329.9	304.7	25.19	13.094	
5,400.0	5,400.0	5,380.8	5,365.3	19.4	6.8	63.39	151.7	302.7	340.6	314.9	25.65	13.277	
5,500.0	5,500.0	5,480.2	5,464.1	19.7	6.9	63.55	155.5	312.7	351.3	325.1	26.11	13.453	
5,600.0	5,600.0	5,579.7	5,563.1	20.1	7.0	18.74	159.4	322.7	360.3	333.7	26.57	13.563	
5,700.0	5,699.8	5,679.5	5,662.3	20.4	7.1	19.11	163.3	332.6	366.1	339.1	27.02	13.551	
5,760.6	5,760.3	5,740.1	5,722.6	20.6	7.2	19.42	165.7	338.7	368.0	340.7	27.29	13.486	
5,800.0	5,799.5	5,779.4	5,761.7	20.8	7.3	19.66	167.2	342.6	368.8	341.4	27.46	13.431	
5,900.0	5,899.1	5,879.3	5,861.0	21.1	7.4	20.24	171.1	352.6	371.0	343.1	27.91	13.295	
6,000.0	5,998.7	5,979.2	5,960.3	21.5	7.5	20.82	175.0	362.6	373.2	344.9	28.35	13.164	
6,100.0	6,098.2	6,079.2	6,059.6	21.8	7.6	21.40	178.9	372.6	375.5	346.7	28.80	13.039	
6,200.0	6,197.8	6,179.1	6,159.0	22.2	7.7	21.96	182.8	382.6	377.8	348.6	29.25	12.918	
6,300.0	6,297.4	6,279.0	6,258.3	22.5	7.8	22.52	186.7	392.6	380.1	350.4	29.69	12.802	
6,400.0	6,397.0	6,378.9	6,357.6	22.9	7.9	23.08	190.6	402.6	382.5	352.4	30.14	12.690	
6,500.0	6,496.6	6,478.8	6,457.0	23.2	8.0	23.62	194.5	412.6	384.9	354.3	30.59	12.582	
6,600.0	6,596.2	6,578.7	6,556.3	23.6	8.1	24.16	198.4	422.6	387.4	356.3	31.04	12.478	
6,700.0	6,695.8	6,678.6	6,655.6	23.9	8.3	24.69	202.3	432.6	389.8	358.3	31.49	12.378	
6,800.0	6,795.3	6,778.5	6,754.9	24.3	8.4	25.22	206.2	442.6	392.3	360.4	31.95	12.282	
6,900.0	6,894.9	6,878.4	6,854.3	24.6	8.5	25.74	210.1	452.5	394.9	362.5	32.40	12.189	
7,000.0	6,994.5	6,978.3	6,953.6	25.0	8.6	26.25	214.0	462.5	397.5	364.6	32.85	12.099	
7,100.0	7,094.1	7,078.2	7,052.9	25.3	8.7	26.76	217.9	472.5	400.1	366.8	33.30	12.013	
7,200.0	7,193.7	7,178.1	7,152.2	25.7	8.8	27.25	221.8	482.5	402.7	368.9	33.76	11.930	
7,300.0	7,293.3	7,278.0	7,251.6	26.0	9.0	27.75	225.7	492.5	405.4	371.2	34.21	11.850	
7,400.0	7,392.9	7,377.9	7,350.9	26.4	9.1	28.23	229.6	502.5	408.1	373.4	34.66	11.772	
7,500.0	7,492.4	7,477.8	7,450.2	26.8	9.2	28.71	233.5	512.5	410.8	375.7	35.12	11.697	
7,600.0	7,592.0	7,577.7	7,549.5	27.1	9.3	29.19	237.4	522.5	413.5	378.0	35.57	11.625	
7,700.0	7,691.6	7,677.6	7,648.9	27.5	9.4	29.65	241.3	532.5	416.3	380.3	36.03	11.555	
7,800.0	7,791.2	7,777.5	7,748.2	27.8	9.6	30.11	245.2	542.5	419.1	382.6	36.49	11.488	
7,900.0	7,890.8	7,877.4	7,847.5	28.2	9.7	30.57	249.1	552.5	422.0	385.0	36.94	11.422	
8,000.0	7,990.4	7,977.3	7,946.9	28.5	9.8	31.02	253.0	562.5	424.8	387.4	37.40	11.359	
8,100.0	8,090.0	8,077.2	8,046.2	28.9	9.9	31.46	256.9	572.5	427.7	389.9	37.86	11.298	
8,200.0	8,189.6	8,177.1	8,145.5	29.2	10.0	31.89	260.8	582.5	430.6	392.3	38.31	11.239	
8,300.0	8,289.1	8,277.0	8,244.8	29.6	10.2	32.33	264.7	592.4	433.6	394.8	38.77	11.182	
8,400.0	8,388.7	8,376.9	8,344.2	30.0	10.3	32.75	268.6	602.4	436.5	397.3	39.23	11.127	
8,500.0	8,488.3	8,476.8	8,443.5	30.3	10.4	33.17	272.5	612.4	439.5	399.8	39.69	11.074	
8,600.0	8,587.9	8,576.8	8,542.8	30.7	10.5	33.58	276.4	622.4	442.5	402.4	40.15	11.022	
8,700.0	8,687.5	8,676.7	8,642.1	31.0	10.7	33.99	280.3	632.4	445.6	404.9	40.61	10.972	
8,800.0	8,787.1	8,776.6	8,741.5	31.4	10.8	34.39	284.2	642.4	448.6	407.5	41.07	10.923	
8,900.0	8,886.7	8,876.5	8,840.8	31.7	10.9	34.79	288.1	652.4	451.7	410.2	41.53	10.876	
9,000.0	8,986.2	8,976.4	8,940.1	32.1	11.0	35.18	292.0	662.4	454.8	412.8	41.99	10.830	
9,100.0	9,085.8	9,076.3	9,039.4	32.5	11.2	35.57	295.9	672.4	457.9	415.4	42.45	10.786	
9,200.0	9,185.4	9,176.2	9,138.8	32.8	11.3	35.95	299.8	682.4	461.0	418.1	42.92	10.743	
9,300.0	9,285.0	9,276.1	9,238.1	33.2	11.4	36.32	303.7	692.4	464.2	420.8	43.38	10.701	
9,400.0	9,384.6	9,376.0	9,337.4	33.5	11.5	36.69	307.6	702.4	467.4	423.5	43.84	10.661	
9,500.0	9,484.2	9,475.9	9,436.7	33.9	11.7	37.06	311.5	712.4	470.6	426.3	44.30	10.621	
9,600.0	9,583.8	9,575.8	9,536.1	34.2	11.8	37.42	315.4	722.4	473.8	429.0	44.77	10.583	
9,700.0	9,683.3	9,675.7	9,635.4	34.6	11.9	37.78	319.3	732.3	477.0	431.8	45.23	10.546	
9,800.0	9,782.9	9,775.6	9,734.7	35.0	12.0	38.13	323.2	742.3	480.3	434.6	45.70	10.510	
9,900.0	9,882.5	9,875.5	9,834.1	35.3	12.2	38.47	327.1	752.3	483.5	437.4	46.16	10.475	
10,000.0	9,982.1	9,975.4	9,933.4	35.7	12.3	38.81	331.0	762.3	486.8	440.2	46.63	10.441	
10,100.0	10,081.7	10,075.3	10,032.7	36.0	12.4	39.15	334.9	772.3	490.1	443.0	47.09	10.408	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #801H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 12132-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.0	10,181.3	10,175.2	10,132.0	36.4	12.5	39.48	338.8	782.3	493.4	445.9	47.56	10.376	
10,300.0	10,280.9	10,275.1	10,231.4	36.8	12.7	39.81	342.7	792.3	496.8	448.8	48.02	10.344	
10,400.0	10,380.5	10,375.0	10,330.7	37.1	12.8	40.14	346.6	802.3	500.1	451.6	48.49	10.314	
10,500.0	10,480.0	10,474.9	10,430.0	37.5	12.9	40.46	350.5	812.3	503.5	454.5	48.96	10.284	
10,600.0	10,579.6	10,574.8	10,529.3	37.8	13.1	40.77	354.4	822.3	506.9	457.5	49.43	10.255	
10,700.0	10,679.2	10,674.7	10,628.7	38.2	13.2	41.08	358.3	832.3	510.3	460.4	49.90	10.227	
10,800.0	10,778.8	10,774.6	10,728.0	38.6	13.3	41.39	362.2	842.3	513.7	463.3	50.37	10.200	
10,900.0	10,878.4	10,874.5	10,827.3	38.9	13.4	41.69	366.1	852.3	517.1	466.3	50.83	10.173	
11,000.0	10,978.0	10,974.5	10,926.6	39.3	13.6	41.99	370.0	862.3	520.6	469.3	51.30	10.147	
11,100.0	11,077.6	11,074.4	11,026.0	39.6	13.7	42.28	373.9	872.2	524.0	472.3	51.78	10.121	
11,200.0	11,177.1	11,174.3	11,125.3	40.0	13.8	42.58	377.8	882.2	527.5	475.3	52.25	10.097	
11,300.0	11,276.7	11,274.2	11,224.6	40.4	14.0	42.86	381.7	892.2	531.0	478.3	52.72	10.072	
11,400.0	11,376.3	11,374.1	11,324.0	40.7	14.1	43.15	385.6	902.2	534.5	481.3	53.19	10.049	
11,500.0	11,475.9	11,474.0	11,423.3	41.1	14.2	43.43	389.5	912.2	538.0	484.3	53.66	10.026	
11,600.0	11,575.5	11,573.9	11,522.6	41.4	14.4	43.70	393.4	922.2	541.5	487.4	54.14	10.003	
11,700.0	11,675.1	11,673.8	11,621.9	41.8	14.5	43.97	397.3	932.2	545.1	490.5	54.61	9.981	
11,800.0	11,774.7	11,773.7	11,721.3	42.2	14.6	44.24	401.2	942.2	548.6	493.5	55.08	9.960	
11,856.3	11,830.7	11,829.9	11,777.2	42.4	14.7	44.39	403.4	947.8	550.6	495.3	55.35	9.948	
11,875.0	11,849.4	11,848.6	11,795.8	42.4	14.7	19.02	404.2	949.7	551.2	495.7	55.44	9.942	
11,900.0	11,874.3	11,873.6	11,820.6	42.5	14.8	-14.80	405.1	952.2	551.6	496.0	55.56	9.928	
11,925.0	11,899.1	11,898.5	11,845.4	42.6	14.8	-35.25	406.1	954.7	551.7	496.0	55.69	9.906	
11,950.0	11,923.8	11,923.3	11,870.0	42.7	14.8	-46.44	407.1	957.2	551.4	495.6	55.82	9.878	
11,975.0	11,948.3	11,947.8	11,894.4	42.8	14.9	-53.26	408.0	959.6	550.8	494.8	55.95	9.844	
12,000.0	11,972.6	11,972.1	11,918.5	42.8	14.9	-57.96	409.0	962.0	549.9	493.8	56.09	9.804	
12,025.0	11,996.5	11,996.0	11,942.3	42.9	14.9	-61.55	409.9	964.4	548.7	492.5	56.23	9.759	
12,050.0	12,020.0	12,019.5	11,965.7	43.0	15.0	-64.51	410.8	966.8	547.4	491.0	56.37	9.710	
12,075.0	12,043.1	12,042.6	11,988.6	43.1	15.0	-67.11	411.7	969.1	545.9	489.4	56.52	9.659	
12,100.0	12,065.6	12,065.1	12,010.9	43.1	15.0	-69.48	412.6	971.3	544.3	487.6	56.66	9.606	
12,125.0	12,087.6	12,087.0	12,032.7	43.2	15.0	-71.69	413.5	973.5	542.7	485.9	56.82	9.553	
12,150.0	12,108.8	12,108.2	12,053.8	43.3	15.1	-73.80	414.3	975.7	541.3	484.3	56.97	9.501	
12,175.0	12,129.4	12,128.7	12,074.3	43.3	15.1	-75.81	415.1	977.7	539.9	482.8	57.12	9.452	
12,200.0	12,149.3	12,153.4	12,098.8	43.4	15.1	-78.02	415.6	980.2	538.8	481.5	57.29	9.406	
12,225.0	12,168.3	12,179.7	12,125.0	43.4	15.1	-80.26	414.7	982.8	537.8	480.3	57.44	9.362	
12,250.0	12,186.4	12,207.2	12,152.2	43.5	15.1	-82.49	412.2	985.6	536.8	479.2	57.60	9.320	
12,275.0	12,203.6	12,235.9	12,180.4	43.5	15.1	-84.73	407.9	988.4	536.0	478.2	57.76	9.279	
12,300.0	12,219.9	12,265.9	12,209.6	43.6	15.1	-86.99	401.6	991.4	535.2	477.3	57.93	9.239	
12,325.0	12,235.1	12,297.5	12,239.9	43.6	15.1	-89.28	393.0	994.4	534.5	476.4	58.10	9.200	
12,350.0	12,249.3	12,330.8	12,271.0	43.7	15.1	-91.61	381.8	997.6	533.8	475.6	58.27	9.161	
12,375.0	12,262.4	12,366.0	12,303.1	43.7	15.1	-93.98	367.6	1,000.9	533.2	474.8	58.45	9.122	
12,400.0	12,274.4	12,403.3	12,335.8	43.8	15.1	-96.41	350.1	1,004.2	532.5	473.9	58.63	9.083	
12,425.0	12,285.2	12,442.8	12,368.8	43.8	15.2	-98.88	328.7	1,007.6	531.8	473.0	58.82	9.041	
12,450.0	12,294.8	12,484.8	12,401.9	43.8	15.2	-101.40	303.1	1,011.0	530.9	471.9	59.00	8.998	
12,475.0	12,303.2	12,529.5	12,434.5	43.9	15.2	-103.95	272.7	1,014.4	529.7	470.6	59.17	8.952	
12,500.0	12,310.3	12,576.8	12,465.8	43.9	15.2	-106.52	237.3	1,017.6	528.3	469.0	59.34	8.903	
12,525.0	12,316.2	12,627.0	12,494.9	43.9	15.3	-109.08	196.7	1,020.6	526.4	466.9	59.48	8.850	
12,550.0	12,320.9	12,679.8	12,520.9	43.9	15.3	-111.60	150.8	1,023.4	524.0	464.4	59.61	8.791	
12,575.0	12,324.2	12,735.1	12,542.5	44.0	15.4	-114.03	100.0	1,025.7	521.0	461.3	59.71	8.725	
12,600.0	12,326.3	12,792.4	12,558.5	44.0	15.4	-116.32	45.1	1,027.4	517.2	457.4	59.80	8.649	
12,624.9	12,327.0	12,850.8	12,568.1	44.0	15.5	-118.41	-12.6	1,028.5	512.7	452.8	59.88	8.562	
12,700.0	12,327.3	12,952.9	12,570.5	44.1	15.6	-120.06	-114.6	1,029.0	494.9	434.8	60.06	8.240	
12,800.0	12,327.7	13,049.8	12,570.4	44.1	15.8	-121.26	-211.5	1,029.3	473.3	413.0	60.29	7.850	
12,900.0	12,328.1	13,147.5	12,570.2	44.2	16.0	-122.39	-309.2	1,029.5	454.8	394.3	60.55	7.511	

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

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COMPASS 5000.15 Build 91E

ConocoPhillips

Anticollision Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #801H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 12132-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
13,000.0	12,328.5	13,245.9	12,570.1	44.3	16.2	-123.41	-407.6	1,029.7	439.5	378.7	60.85	7.224	
13,100.0	12,328.9	13,344.9	12,570.0	44.5	16.6	-124.28	-506.5	1,030.0	427.3	366.1	61.18	6.984	
13,200.0	12,329.3	13,444.3	12,569.8	44.6	16.9	-124.96	-605.9	1,030.2	418.0	356.4	61.55	6.791	
13,300.0	12,329.7	13,544.0	12,569.7	44.7	17.3	-125.42	-705.6	1,030.5	411.6	349.6	61.96	6.643	
13,400.0	12,330.1	13,643.9	12,569.6	44.9	17.8	-125.65	-805.6	1,030.7	408.1	345.7	62.42	6.537	
13,462.3	12,330.3	13,706.2	12,569.5	45.0	18.1	-125.66	-867.9	1,030.8	407.3	344.6	62.73	6.493	
13,500.0	12,330.4	13,743.9	12,569.4	45.0	18.3	-125.64	-905.6	1,030.9	407.2	344.3	62.93	6.470	
13,600.0	12,330.8	13,843.9	12,569.3	45.2	18.8	-125.58	-1,005.6	1,031.2	406.9	343.4	63.49	6.408	
13,700.0	12,331.2	13,943.9	12,569.1	45.4	19.4	-125.52	-1,105.6	1,031.4	406.5	342.5	64.09	6.344	
13,800.0	12,331.6	14,043.9	12,569.0	45.6	20.0	-125.46	-1,205.6	1,031.7	406.2	341.5	64.72	6.276	
13,900.0	12,332.0	14,143.9	12,568.9	45.8	20.6	-125.40	-1,305.5	1,031.9	405.9	340.5	65.39	6.207	
14,000.0	12,332.4	14,243.9	12,568.7	46.0	21.2	-125.35	-1,405.5	1,032.1	405.6	339.5	66.10	6.136	
14,100.0	12,332.8	14,343.9	12,568.6	46.2	21.9	-125.29	-1,505.5	1,032.4	405.2	338.4	66.84	6.063	
14,200.0	12,333.2	14,443.9	12,568.5	46.5	22.5	-125.23	-1,605.5	1,032.6	404.9	337.3	67.61	5.989	
14,300.0	12,333.6	14,543.9	12,568.3	46.8	23.2	-125.17	-1,705.5	1,032.8	404.6	336.2	68.42	5.913	
14,400.0	12,334.0	14,643.9	12,568.2	47.0	23.9	-125.11	-1,805.5	1,033.1	404.3	335.0	69.26	5.837	
14,500.0	12,334.4	14,743.9	12,568.0	47.3	24.6	-125.05	-1,905.5	1,033.3	403.9	333.8	70.12	5.761	
14,600.0	12,334.8	14,843.9	12,567.9	47.6	25.3	-124.99	-2,005.5	1,033.6	403.6	332.6	71.02	5.683	
14,700.0	12,335.2	14,943.9	12,567.8	48.0	26.0	-124.93	-2,105.5	1,033.8	403.3	331.4	71.94	5.606	
14,800.0	12,335.5	15,043.9	12,567.6	48.3	26.8	-124.87	-2,205.5	1,034.0	403.0	330.1	72.89	5.529	
14,900.0	12,335.9	15,143.9	12,567.5	48.7	27.5	-124.81	-2,305.5	1,034.3	402.7	328.8	73.86	5.452	
15,000.0	12,336.3	15,243.9	12,567.3	49.0	28.2	-124.75	-2,405.5	1,034.5	402.3	327.5	74.86	5.375	
15,100.0	12,336.7	15,343.9	12,567.2	49.4	29.0	-124.69	-2,505.5	1,034.8	402.0	326.1	75.87	5.298	
15,200.0	12,337.1	15,443.9	12,567.1	49.8	29.7	-124.63	-2,605.5	1,035.0	401.7	324.8	76.92	5.222	
15,300.0	12,337.5	15,543.9	12,566.9	50.2	30.5	-124.57	-2,705.5	1,035.2	401.4	323.4	77.98	5.147	
15,400.0	12,337.9	15,643.9	12,566.8	50.6	31.3	-124.51	-2,805.5	1,035.5	401.1	322.0	79.06	5.073	
15,500.0	12,338.3	15,743.9	12,566.7	51.0	32.0	-124.44	-2,905.5	1,035.7	400.7	320.6	80.17	4.999	
15,600.0	12,338.7	15,843.9	12,566.5	51.5	32.8	-124.38	-3,005.5	1,036.0	400.4	319.1	81.29	4.926	
15,700.0	12,339.1	15,943.9	12,566.4	51.9	33.6	-124.32	-3,105.5	1,036.2	400.1	317.7	82.43	4.854	
15,800.0	12,339.5	16,043.9	12,566.2	52.4	34.4	-124.26	-3,205.5	1,036.4	399.8	316.2	83.59	4.783	
15,900.0	12,339.9	16,143.9	12,566.1	52.8	35.2	-124.20	-3,305.5	1,036.7	399.5	314.7	84.76	4.713	
16,000.0	12,340.3	16,243.9	12,566.0	53.3	36.0	-124.14	-3,405.5	1,036.9	399.1	313.2	85.95	4.644	
16,100.0	12,340.6	16,343.9	12,565.8	53.8	36.8	-124.08	-3,505.5	1,037.2	398.8	311.7	87.16	4.576	
16,200.0	12,341.0	16,443.9	12,565.7	54.3	37.6	-124.02	-3,605.5	1,037.4	398.5	310.1	88.38	4.509	
16,300.0	12,341.4	16,543.9	12,565.5	54.8	38.4	-123.96	-3,705.5	1,037.6	398.2	308.6	89.62	4.443	
16,400.0	12,341.8	16,643.9	12,565.4	55.3	39.2	-123.89	-3,805.5	1,037.9	397.9	307.0	90.87	4.379	
16,500.0	12,342.2	16,743.9	12,565.3	55.8	40.0	-123.83	-3,905.5	1,038.1	397.6	305.4	92.13	4.315	
16,600.0	12,342.6	16,843.9	12,565.1	56.3	40.8	-123.77	-4,005.5	1,038.4	397.3	303.9	93.40	4.253	
16,699.3	12,343.0	16,943.3	12,565.0	56.9	41.6	-123.71	-4,104.9	1,038.6	396.9	302.3	94.68	4.192	
16,729.6	12,343.0	16,974.5	12,564.8	57.0	41.8	-123.69	-4,136.1	1,038.7	396.9	301.8	95.09	4.174	
16,745.9	12,342.8	16,990.8	12,564.7	57.1	42.0	-123.70	-4,152.5	1,038.7	396.9	301.6	95.30	4.165	
16,800.0	12,342.1	17,044.9	12,564.4	57.4	42.4	-123.74	-4,206.6	1,038.9	397.1	301.1	95.99	4.137	
16,900.0	12,340.9	17,144.9	12,563.7	58.0	43.2	-123.81	-4,306.6	1,039.1	397.4	300.1	97.27	4.085	
16,989.1	12,339.8	17,233.8	12,563.2	58.5	43.9	-123.88	-4,395.4	1,039.3	397.7	299.2	98.43	4.040	
17,008.4	12,339.6	17,251.1	12,563.1	58.6	44.1	-123.90	-4,412.7	1,039.4	397.7	299.1	98.65	4.032	
17,100.0	12,338.4	17,342.6	12,562.5	59.1	44.8	-123.97	-4,504.3	1,040.3	398.1	298.2	99.84	3.987	
17,200.0	12,337.1	17,442.6	12,561.9	59.7	45.6	-124.04	-4,604.3	1,041.2	398.4	297.2	101.16	3.938	
17,300.0	12,335.9	17,542.6	12,561.2	60.3	46.5	-124.12	-4,704.2	1,042.1	398.8	296.3	102.49	3.891	
17,400.0	12,334.6	17,642.6	12,560.6	60.9	47.3	-124.19	-4,804.2	1,043.1	399.1	295.3	103.83	3.844	
17,500.0	12,333.4	17,742.6	12,560.0	61.4	48.1	-124.27	-4,904.2	1,044.0	399.5	294.3	105.17	3.798	
17,600.0	12,332.1	17,842.6	12,559.4	62.1	48.9	-124.34	-5,004.2	1,044.9	399.8	293.3	106.52	3.753	
17,700.0	12,330.8	17,942.6	12,558.7	62.7	49.8	-124.42	-5,104.2	1,045.9	400.2	292.3	107.88	3.709	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #801H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 12132-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
17,800.0	12,329.6	18,042.6	12,558.1	63.3	50.6	-124.50	-5,204.2	1,046.8	400.5	291.3	109.25	3.666	
17,900.0	12,328.3	18,142.6	12,557.5	63.9	51.4	-124.57	-5,304.2	1,047.7	400.9	290.3	110.63	3.624	
18,000.0	12,327.1	18,242.6	12,556.9	64.5	52.2	-124.65	-5,404.2	1,048.7	401.2	289.2	112.01	3.582	
18,100.0	12,325.8	18,342.6	12,556.2	65.2	53.1	-124.72	-5,504.2	1,049.6	401.6	288.2	113.40	3.542	
18,200.0	12,324.5	18,442.6	12,555.6	65.8	53.9	-124.79	-5,604.2	1,050.5	402.0	287.2	114.79	3.502	
18,300.0	12,323.3	18,542.6	12,555.0	66.4	54.7	-124.87	-5,704.2	1,051.5	402.3	286.1	116.20	3.462	
18,400.0	12,322.0	18,642.6	12,554.4	67.1	55.6	-124.94	-5,804.2	1,052.4	402.7	285.1	117.60	3.424	
18,500.0	12,320.8	18,742.6	12,553.7	67.7	56.4	-125.02	-5,904.1	1,053.3	403.0	284.0	119.02	3.386	
18,600.0	12,319.5	18,842.6	12,553.1	68.4	57.2	-125.09	-6,004.1	1,054.3	403.4	283.0	120.44	3.349	
18,700.0	12,318.2	18,942.6	12,552.5	69.0	58.1	-125.17	-6,104.1	1,055.2	403.8	281.9	121.86	3.313	
18,800.0	12,317.0	19,042.6	12,551.8	69.7	58.9	-125.24	-6,204.1	1,056.1	404.1	280.8	123.29	3.278	
18,900.0	12,315.7	19,142.6	12,551.2	70.4	59.7	-125.31	-6,304.1	1,057.1	404.5	279.8	124.73	3.243	
19,000.0	12,314.5	19,242.6	12,550.6	71.0	60.6	-125.39	-6,404.1	1,058.0	404.8	278.7	126.17	3.209	
19,100.0	12,313.2	19,342.6	12,550.0	71.7	61.4	-125.46	-6,504.1	1,058.9	405.2	277.6	127.61	3.175	
19,200.0	12,311.9	19,442.6	12,549.3	72.4	62.3	-125.53	-6,604.1	1,059.9	405.6	276.5	129.06	3.142	
19,300.0	12,310.7	19,542.6	12,548.7	73.1	63.1	-125.61	-6,704.1	1,060.8	405.9	275.4	130.52	3.110	
19,400.0	12,309.4	19,642.6	12,548.1	73.8	63.9	-125.68	-6,804.1	1,061.7	406.3	274.3	131.98	3.079	
19,500.0	12,308.1	19,742.6	12,547.5	74.5	64.8	-125.75	-6,904.1	1,062.7	406.7	273.2	133.44	3.048	
19,600.0	12,306.9	19,842.6	12,546.8	75.2	65.6	-125.83	-7,004.1	1,063.6	407.0	272.1	134.91	3.017	
19,700.0	12,305.6	19,942.6	12,546.2	75.9	66.5	-125.90	-7,104.0	1,064.5	407.4	271.0	136.38	2.987	
19,800.0	12,304.4	20,042.6	12,545.6	76.6	67.3	-125.97	-7,204.0	1,065.5	407.8	269.9	137.85	2.958	
19,900.0	12,303.1	20,142.6	12,545.0	77.3	68.1	-126.04	-7,304.0	1,066.4	408.1	268.8	139.33	2.929	
20,000.0	12,301.8	20,242.6	12,544.3	78.0	69.0	-126.12	-7,404.0	1,067.3	408.5	267.7	140.81	2.901	
20,100.0	12,300.6	20,342.6	12,543.7	78.7	69.8	-126.19	-7,504.0	1,068.3	408.9	266.6	142.29	2.874	
20,200.0	12,299.3	20,442.6	12,543.1	79.4	70.7	-126.26	-7,604.0	1,069.2	409.3	265.5	143.78	2.846	
20,300.0	12,298.1	20,542.6	12,542.4	80.1	71.5	-126.33	-7,704.0	1,070.2	409.6	264.4	145.27	2.820	
20,400.0	12,296.8	20,642.6	12,541.8	80.8	72.4	-126.40	-7,804.0	1,071.1	410.0	263.2	146.77	2.794	
20,500.0	12,295.5	20,742.6	12,541.2	81.6	73.2	-126.48	-7,904.0	1,072.0	410.4	262.1	148.26	2.768	
20,600.0	12,294.3	20,842.6	12,540.6	82.3	74.1	-126.55	-8,004.0	1,073.0	410.7	261.0	149.76	2.743	
20,700.0	12,293.0	20,942.6	12,539.9	83.0	74.9	-126.62	-8,104.0	1,073.9	411.1	259.9	151.27	2.718	
20,800.0	12,291.8	21,042.6	12,539.3	83.7	75.7	-126.69	-8,204.0	1,074.8	411.5	258.7	152.77	2.694	
20,900.0	12,290.5	21,142.6	12,538.7	84.5	76.6	-126.76	-8,303.9	1,075.8	411.9	257.6	154.28	2.670	
21,000.0	12,289.2	21,242.6	12,538.1	85.2	77.4	-126.83	-8,403.9	1,076.7	412.3	256.5	155.79	2.646	
21,100.0	12,288.0	21,342.6	12,537.4	85.9	78.3	-126.90	-8,503.9	1,077.6	412.6	255.3	157.30	2.623	
21,200.0	12,286.7	21,442.6	12,536.8	86.7	79.1	-126.97	-8,603.9	1,078.6	413.0	254.2	158.82	2.600	
21,300.0	12,285.5	21,542.6	12,536.2	87.4	80.0	-127.04	-8,703.9	1,079.5	413.4	253.0	160.34	2.578	
21,400.0	12,284.2	21,642.6	12,535.6	88.2	80.8	-127.11	-8,803.9	1,080.4	413.8	251.9	161.86	2.556	
21,500.0	12,282.9	21,742.6	12,534.9	88.9	81.7	-127.18	-8,903.9	1,081.4	414.1	250.8	163.38	2.535	
21,600.0	12,281.7	21,842.6	12,534.3	89.7	82.5	-127.25	-9,003.9	1,082.3	414.5	249.6	164.90	2.514	
21,700.0	12,280.4	21,942.6	12,533.7	90.4	83.4	-127.32	-9,103.9	1,083.2	414.9	248.5	166.43	2.493	
21,800.0	12,279.1	22,042.6	12,533.1	91.2	84.2	-127.39	-9,203.9	1,084.2	415.3	247.3	167.96	2.473	
21,900.0	12,277.9	22,142.6	12,532.4	91.9	85.1	-127.46	-9,303.9	1,085.1	415.7	246.2	169.49	2.452	
22,000.0	12,276.6	22,242.6	12,531.8	92.7	85.9	-127.53	-9,403.9	1,086.0	416.0	245.0	171.02	2.433	
22,100.0	12,275.4	22,342.6	12,531.2	93.4	86.8	-127.60	-9,503.8	1,087.0	416.4	243.9	172.55	2.413	
22,200.0	12,274.1	22,442.6	12,530.5	94.2	87.6	-127.67	-9,603.8	1,087.9	416.8	242.7	174.09	2.394	
22,287.8	12,273.0	22,529.4	12,530.0	94.9	88.3	-127.73	-9,690.7	1,088.7	417.2	241.7	175.42	2.378 SF	

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

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Anticollision Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #802H - OWB - PWP1												Offset Well Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 12096-MWD+IFR1+FDIR													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	3.0	3.0	-33.87	44.7	-30.0	53.8				
100.0	100.0	99.7	99.7	3.0	3.0	-33.87	44.7	-30.0	53.8	47.8	6.00	8.968	
200.0	200.0	199.7	199.7	3.0	3.0	-33.87	44.7	-30.0	53.8	47.8	6.04	8.909	
300.0	300.0	299.7	299.7	3.1	3.0	-33.87	44.7	-30.0	53.8	47.7	6.13	8.784	
400.0	400.0	399.7	399.7	3.2	3.0	-33.87	44.7	-30.0	53.8	47.6	6.26	8.604	
500.0	500.0	499.7	499.7	3.4	3.1	-33.87	44.7	-30.0	53.8	47.4	6.42	8.381	
600.0	600.0	599.7	599.7	3.6	3.1	-33.87	44.7	-30.0	53.8	47.2	6.62	8.127	
700.0	700.0	699.7	699.7	3.8	3.1	-33.87	44.7	-30.0	53.8	47.0	6.86	7.853	
800.0	800.0	799.7	799.7	4.0	3.2	-33.87	44.7	-30.0	53.8	46.7	7.11	7.570	
900.0	900.0	899.7	899.7	4.2	3.2	-33.87	44.7	-30.0	53.8	46.4	7.39	7.284	
1,000.0	1,000.0	999.7	999.7	4.5	3.2	-33.87	44.7	-30.0	53.8	46.1	7.69	7.002	
1,100.0	1,100.0	1,099.7	1,099.7	4.8	3.3	-33.87	44.7	-30.0	53.8	45.8	8.00	6.727	
1,200.0	1,200.0	1,199.7	1,199.7	5.1	3.4	-33.87	44.7	-30.0	53.8	45.5	8.33	6.461	
1,300.0	1,300.0	1,299.7	1,299.7	5.3	3.4	-33.87	44.7	-30.0	53.8	45.2	8.67	6.207	
1,400.0	1,400.0	1,399.7	1,399.7	5.6	3.5	-33.87	44.7	-30.0	53.8	44.8	9.03	5.965	
1,500.0	1,500.0	1,499.7	1,499.7	6.0	3.5	-33.87	44.7	-30.0	53.8	44.4	9.39	5.735	
1,600.0	1,600.0	1,599.7	1,599.7	6.3	3.6	-33.87	44.7	-30.0	53.8	44.1	9.76	5.517	
1,700.0	1,700.0	1,699.7	1,699.7	6.6	3.7	-33.87	44.7	-30.0	53.8	43.7	10.13	5.312	
1,800.0	1,800.0	1,799.7	1,799.7	6.9	3.8	-33.87	44.7	-30.0	53.8	43.3	10.52	5.118	
1,900.0	1,900.0	1,899.7	1,899.7	7.2	3.9	-33.87	44.7	-30.0	53.8	42.9	10.91	4.934	
2,000.0	2,000.0	1,999.7	1,999.7	7.6	3.9	-33.87	44.7	-30.0	53.8	42.5	11.31	4.762	
2,100.0	2,100.0	2,099.7	2,099.7	7.9	4.0	-33.87	44.7	-30.0	53.8	42.1	11.71	4.598	
2,200.0	2,200.0	2,199.7	2,199.7	8.2	4.1	-33.87	44.7	-30.0	53.8	41.7	12.11	4.444	
2,300.0	2,300.0	2,299.7	2,299.7	8.6	4.2	-33.87	44.7	-30.0	53.8	41.3	12.52	4.299	
2,400.0	2,400.0	2,399.7	2,399.7	8.9	4.3	-33.87	44.7	-30.0	53.8	40.9	12.94	4.162	
2,500.0	2,500.0	2,499.7	2,499.7	9.2	4.4	-33.87	44.7	-30.0	53.8	40.5	13.35	4.032 CC, ES	
2,600.0	2,600.0	2,597.9	2,597.9	9.6	4.5	-33.28	46.3	-30.4	55.4	41.7	13.78	4.024 SF	
2,700.0	2,700.0	2,695.9	2,695.8	9.9	4.6	-31.70	51.2	-31.6	60.3	46.1	14.21	4.243	
2,800.0	2,800.0	2,793.5	2,793.0	10.3	4.7	-29.58	59.3	-33.6	68.5	53.8	14.65	4.676	
2,900.0	2,900.0	2,892.8	2,891.7	10.6	4.8	-27.54	69.3	-36.2	78.6	63.5	15.11	5.203	
3,000.0	3,000.0	2,992.2	2,990.6	10.9	4.9	-25.97	79.4	-38.7	88.8	73.2	15.56	5.705	
3,100.0	3,100.0	3,091.7	3,089.5	11.3	5.0	-24.72	89.5	-41.2	99.1	83.0	16.02	6.183	
3,200.0	3,200.0	3,191.1	3,188.4	11.6	5.1	-23.70	99.6	-43.7	109.3	92.9	16.48	6.636	
3,300.0	3,300.0	3,290.6	3,287.3	12.0	5.2	-22.86	109.7	-46.2	119.7	102.7	16.93	7.067	
3,400.0	3,400.0	3,390.0	3,386.2	12.3	5.3	-22.16	119.8	-48.8	130.0	112.6	17.39	7.476	
3,500.0	3,500.0	3,489.5	3,485.2	12.7	5.4	-21.55	129.8	-51.3	140.4	122.5	17.85	7.865	
3,600.0	3,600.0	3,588.9	3,584.1	13.0	5.5	-21.03	139.9	-53.8	150.7	132.4	18.30	8.235	
3,700.0	3,700.0	3,688.4	3,683.0	13.4	5.6	-20.58	150.0	-56.3	161.1	142.4	18.76	8.588	
3,800.0	3,800.0	3,787.8	3,781.9	13.7	5.7	-20.18	160.1	-58.8	171.5	152.3	19.22	8.923	
3,900.0	3,900.0	3,887.3	3,880.8	14.1	5.8	-19.83	170.2	-61.4	181.9	162.2	19.68	9.243	
4,000.0	4,000.0	3,986.7	3,979.7	14.4	5.9	-19.52	180.3	-63.9	192.3	172.2	20.14	9.549	
4,100.0	4,100.0	4,086.2	4,078.6	14.8	6.0	-19.23	190.4	-66.4	202.7	182.1	20.60	9.840	
4,200.0	4,200.0	4,185.6	4,177.5	15.1	6.1	-18.98	200.4	-68.9	213.1	192.1	21.06	10.119	
4,300.0	4,300.0	4,285.1	4,276.4	15.5	6.2	-18.75	210.5	-71.5	223.5	202.0	21.53	10.385	
4,400.0	4,400.0	4,384.5	4,375.3	15.8	6.3	-18.54	220.6	-74.0	234.0	212.0	21.99	10.640	
4,500.0	4,500.0	4,484.0	4,474.2	16.2	6.4	-18.35	230.7	-76.5	244.4	221.9	22.45	10.884	
4,600.0	4,600.0	4,583.5	4,573.1	16.5	6.6	-18.17	240.8	-79.0	254.8	231.9	22.92	11.118	
4,700.0	4,700.0	4,682.9	4,672.0	16.9	6.7	-18.01	250.9	-81.5	265.2	241.8	23.38	11.343	
4,800.0	4,800.0	4,782.4	4,770.9	17.2	6.8	-17.86	261.0	-84.1	275.7	251.8	23.85	11.558	
4,900.0	4,900.0	4,881.8	4,869.9	17.6	6.9	-17.72	271.0	-86.6	286.1	261.8	24.32	11.765	
5,000.0	5,000.0	4,981.3	4,968.8	17.9	7.0	-17.59	281.1	-89.1	296.5	271.7	24.78	11.964	
5,100.0	5,100.0	5,080.7	5,067.7	18.3	7.1	-17.47	291.2	-91.6	307.0	281.7	25.25	12.156	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #802H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 12096-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toelface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,200.0	5,200.0	5,180.2	5,166.6	18.7	7.2	-17.35	301.3	-94.1	317.4	291.7	25.72	12.340	
5,300.0	5,300.0	5,279.6	5,265.5	19.0	7.4	-17.25	311.4	-96.7	327.8	301.6	26.19	12.517	
5,400.0	5,400.0	5,379.1	5,364.4	19.4	7.5	-17.15	321.5	-99.2	338.3	311.6	26.66	12.688	
5,500.0	5,500.0	5,478.5	5,463.3	19.7	7.6	-17.05	331.5	-101.7	348.7	321.6	27.13	12.853	
5,600.0	5,600.0	5,578.0	5,562.3	20.1	7.7	-62.04	341.6	-104.2	358.3	330.7	27.59	12.985	
5,700.0	5,699.8	5,677.6	5,661.3	20.4	7.8	-62.54	351.7	-106.8	366.3	338.3	28.05	13.060	
5,760.6	5,760.3	5,738.0	5,721.4	20.6	7.9	-63.07	357.9	-108.3	370.5	342.1	28.33	13.079	
5,800.0	5,799.5	5,777.2	5,760.3	20.8	7.9	-63.51	361.8	-109.3	373.0	344.5	28.50	13.085	
5,900.0	5,899.1	5,876.7	5,859.3	21.1	8.1	-64.61	371.9	-111.8	379.4	350.5	28.95	13.106	
6,000.0	5,998.7	5,976.2	5,958.3	21.5	8.2	-65.67	382.0	-114.3	386.0	356.6	29.40	13.130	
6,100.0	6,098.2	6,075.8	6,057.3	21.8	8.3	-66.70	392.1	-116.9	392.8	362.9	29.85	13.158	
6,200.0	6,197.8	6,175.3	6,156.3	22.2	8.4	-67.69	402.2	-119.4	399.6	369.3	30.30	13.190	
6,300.0	6,297.4	6,274.8	6,255.3	22.5	8.5	-68.64	412.3	-121.9	406.6	375.8	30.75	13.224	
6,400.0	6,397.0	6,380.5	6,360.4	22.9	8.7	-69.64	422.4	-124.4	413.1	381.8	31.23	13.227	
6,500.0	6,496.6	6,487.8	6,467.3	23.2	8.8	-70.68	430.7	-126.5	417.9	386.2	31.71	13.177	
6,600.0	6,596.2	6,595.1	6,574.5	23.6	8.9	-71.75	437.1	-128.1	421.0	388.8	32.19	13.078	
6,700.0	6,695.8	6,702.5	6,681.8	23.9	9.0	-72.87	441.6	-129.2	422.4	389.7	32.66	12.934	
6,800.0	6,795.3	6,809.8	6,789.0	24.3	9.2	-74.05	444.1	-129.8	422.1	389.0	33.12	12.747	
6,900.0	6,894.9	6,915.4	6,894.6	24.6	9.3	-75.29	444.7	-130.0	420.3	386.7	33.56	12.524	
7,000.0	6,994.5	7,015.0	6,994.2	25.0	9.4	-76.49	444.7	-130.0	418.0	384.1	33.98	12.303	
7,100.0	7,094.1	7,114.6	7,093.8	25.3	9.6	-77.70	444.7	-130.0	416.0	381.6	34.40	12.095	
7,200.0	7,193.7	7,214.2	7,193.4	25.7	9.7	-78.92	444.7	-130.0	414.2	379.3	34.81	11.898	
7,300.0	7,293.3	7,313.8	7,293.0	26.0	9.8	-80.15	444.7	-130.0	412.5	377.3	35.22	11.713	
7,400.0	7,392.9	7,413.3	7,392.6	26.4	9.9	-81.40	444.7	-130.0	411.0	375.4	35.62	11.539	
7,500.0	7,492.4	7,512.9	7,492.1	26.8	10.0	-82.65	444.7	-130.0	409.8	373.7	36.02	11.376	
7,600.0	7,592.0	7,612.5	7,591.7	27.1	10.2	-83.91	444.7	-130.0	408.7	372.3	36.42	11.223	
7,700.0	7,691.6	7,712.1	7,691.3	27.5	10.3	-85.17	444.7	-130.0	407.8	371.0	36.81	11.080	
7,800.0	7,791.2	7,811.7	7,790.9	27.8	10.4	-86.44	444.7	-130.0	407.2	370.0	37.19	10.947	
7,900.0	7,890.8	7,911.3	7,890.5	28.2	10.5	-87.71	444.7	-130.0	406.7	369.1	37.58	10.823	
8,000.0	7,990.4	8,010.9	7,990.1	28.5	10.7	-88.99	444.7	-130.0	406.4	368.5	37.95	10.709	
8,079.4	8,069.5	8,089.9	8,069.2	28.8	10.8	-90.00	444.7	-130.0	406.4	368.1	38.25	10.624	
8,100.0	8,090.0	8,110.4	8,089.7	28.9	10.8	-90.26	444.7	-130.0	406.4	368.1	38.33	10.603	
8,200.0	8,189.6	8,210.0	8,189.3	29.2	10.9	-91.54	444.7	-130.0	406.5	367.8	38.70	10.505	
8,300.0	8,289.1	8,309.6	8,288.8	29.6	11.0	-92.81	444.7	-130.0	406.9	367.8	39.06	10.416	
8,400.0	8,388.7	8,409.2	8,388.4	30.0	11.2	-94.08	444.7	-130.0	407.4	368.0	39.42	10.334	
8,500.0	8,488.3	8,508.8	8,488.0	30.3	11.3	-95.35	444.7	-130.0	408.2	368.4	39.78	10.260	
8,600.0	8,587.9	8,608.4	8,587.6	30.7	11.4	-96.61	444.7	-130.0	409.1	369.0	40.14	10.193	
8,700.0	8,687.5	8,708.0	8,687.2	31.0	11.5	-97.87	444.7	-130.0	410.3	369.8	40.49	10.133	
8,800.0	8,787.1	8,807.6	8,786.8	31.4	11.7	-99.12	444.7	-130.0	411.6	370.8	40.84	10.080	
8,900.0	8,886.7	8,907.1	8,886.4	31.7	11.8	-100.35	444.7	-130.0	413.2	372.0	41.18	10.033	
9,000.0	8,986.2	9,006.7	8,985.9	32.1	11.9	-101.58	444.7	-130.0	414.9	373.4	41.53	9.991	
9,100.0	9,085.8	9,106.3	9,085.5	32.5	12.0	-102.80	444.7	-130.0	416.8	375.0	41.87	9.956	
9,200.0	9,185.4	9,205.9	9,185.1	32.8	12.2	-104.01	444.7	-130.0	418.9	376.7	42.21	9.926	
9,300.0	9,285.0	9,305.5	9,284.7	33.2	12.3	-105.20	444.7	-130.0	421.2	378.7	42.55	9.901	
9,400.0	9,384.6	9,405.1	9,384.3	33.5	12.4	-106.39	444.7	-130.0	423.7	380.8	42.88	9.881	
9,500.0	9,484.2	9,504.7	9,483.9	33.9	12.5	-107.55	444.7	-130.0	426.4	383.2	43.22	9.865	
9,600.0	9,583.8	9,604.2	9,583.5	34.2	12.7	-108.70	444.7	-130.0	429.2	385.7	43.56	9.854	
9,700.0	9,683.3	9,703.8	9,683.0	34.6	12.8	-109.84	444.7	-130.0	432.2	388.3	43.89	9.847	
9,800.0	9,782.9	9,803.4	9,782.6	35.0	12.9	-110.96	444.7	-130.0	435.4	391.2	44.23	9.844	
9,900.0	9,882.5	9,903.0	9,882.2	35.3	13.1	-112.07	444.7	-130.0	438.8	394.2	44.57	9.844	
10,000.0	9,982.1	10,002.6	9,981.8	35.7	13.2	-113.15	444.7	-130.0	442.3	397.4	44.91	9.848	
10,100.0	10,081.7	10,102.2	10,081.4	36.0	13.3	-114.22	444.7	-130.0	445.9	400.7	45.25	9.856	

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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #802H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 12096-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toelface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.0	10,181.3	10,201.8	10,181.0	36.4	13.4	-115.28	444.7	-130.0	449.7	404.2	45.59	9.866	
10,300.0	10,280.9	10,301.3	10,280.6	36.8	13.6	-116.31	444.7	-130.0	453.7	407.8	45.93	9.879	
10,400.0	10,380.5	10,400.9	10,380.2	37.1	13.7	-117.33	444.7	-130.0	457.8	411.5	46.27	9.894	
10,500.0	10,480.0	10,500.5	10,479.7	37.5	13.8	-118.32	444.7	-130.0	462.1	415.5	46.62	9.912	
10,600.0	10,579.6	10,600.1	10,579.3	37.8	13.9	-119.30	444.7	-130.0	466.5	419.5	46.97	9.932	
10,700.0	10,679.2	10,699.7	10,678.9	38.2	14.1	-120.26	444.7	-130.0	471.0	423.7	47.32	9.954	
10,800.0	10,778.8	10,799.3	10,778.5	38.6	14.2	-121.21	444.7	-130.0	475.6	428.0	47.67	9.978	
10,900.0	10,878.4	10,898.9	10,878.1	38.9	14.3	-122.13	444.7	-130.0	480.4	432.4	48.02	10.004	
11,000.0	10,978.0	10,998.5	10,977.7	39.3	14.5	-123.04	444.7	-130.0	485.3	437.0	48.38	10.031	
11,100.0	11,077.6	11,098.0	11,077.3	39.6	14.6	-123.92	444.7	-130.0	490.4	441.6	48.74	10.060	
11,200.0	11,177.1	11,197.6	11,176.8	40.0	14.7	-124.79	444.7	-130.0	495.5	446.4	49.11	10.090	
11,300.0	11,276.7	11,297.2	11,276.4	40.4	14.8	-125.64	444.7	-130.0	500.8	451.3	49.47	10.122	
11,400.0	11,376.3	11,396.8	11,376.0	40.7	15.0	-126.48	444.7	-130.0	506.1	456.3	49.84	10.154	
11,500.0	11,475.9	11,496.4	11,475.6	41.1	15.1	-127.29	444.7	-130.0	511.6	461.4	50.22	10.188	
11,600.0	11,575.5	11,596.0	11,575.2	41.4	15.2	-128.09	444.7	-130.0	517.2	466.6	50.59	10.222	
11,700.0	11,675.1	11,695.6	11,674.8	41.8	15.3	-128.87	444.7	-130.0	522.8	471.9	50.97	10.257	
11,800.0	11,774.7	11,795.1	11,774.4	42.2	15.5	-129.64	444.7	-130.0	528.6	477.2	51.36	10.293	
11,856.3	11,830.7	11,851.2	11,830.4	42.4	15.5	-130.06	444.7	-130.0	531.9	480.3	51.57	10.313	
11,875.0	11,849.4	11,869.8	11,849.1	42.4	15.6	-155.75	444.7	-130.0	533.1	481.5	51.65	10.323	
11,900.0	11,874.3	11,894.8	11,874.0	42.5	15.6	170.22	444.7	-130.0	535.2	483.4	51.75	10.342	
11,925.0	11,899.1	11,919.6	11,898.8	42.6	15.6	149.81	444.7	-130.0	537.7	485.9	51.85	10.370	
11,950.0	11,923.8	11,944.3	11,923.5	42.7	15.7	138.90	444.7	-130.0	540.8	488.8	51.96	10.407	
11,975.0	11,948.3	11,968.8	11,948.0	42.8	15.7	132.59	444.7	-130.0	544.3	492.2	52.08	10.451	
12,000.0	11,972.6	11,993.1	11,972.3	42.8	15.7	128.61	444.7	-130.0	548.3	496.1	52.20	10.504	
12,025.0	11,996.5	12,017.0	11,996.2	42.9	15.8	125.95	444.7	-130.0	552.8	500.5	52.32	10.566	
12,050.0	12,020.0	12,040.5	12,019.7	43.0	15.8	124.08	444.7	-130.0	557.8	505.4	52.44	10.637	
12,075.0	12,043.1	12,063.6	12,042.8	43.1	15.8	122.72	444.7	-130.0	563.5	510.9	52.57	10.718	
12,100.0	12,065.6	12,086.1	12,065.3	43.1	15.8	121.71	444.7	-130.0	569.7	517.0	52.71	10.808	
12,125.0	12,087.6	12,107.5	12,086.7	43.2	15.8	120.90	444.6	-130.0	576.5	523.6	52.85	10.908	
12,150.0	12,108.8	12,128.6	12,107.7	43.3	15.8	120.17	443.6	-130.2	584.0	531.0	52.98	11.022	
12,175.0	12,129.4	12,149.8	12,128.9	43.3	15.8	119.49	441.8	-130.6	592.1	539.0	53.12	11.146	
12,200.0	12,149.3	12,171.2	12,150.1	43.4	15.8	118.84	439.0	-131.2	600.9	547.6	53.26	11.282	
12,225.0	12,168.3	12,192.9	12,171.4	43.4	15.8	118.20	435.2	-132.0	610.2	556.8	53.39	11.429	
12,250.0	12,186.4	12,214.8	12,192.8	43.5	15.8	117.55	430.4	-133.0	620.1	566.6	53.52	11.586	
12,275.0	12,203.6	12,236.9	12,214.1	43.5	15.8	116.88	424.6	-134.3	630.5	576.9	53.65	11.753	
12,300.0	12,219.9	12,259.3	12,235.4	43.6	15.8	116.18	417.7	-135.7	641.5	587.7	53.78	11.929	
12,325.0	12,235.1	12,282.0	12,256.6	43.6	15.9	115.44	409.8	-137.4	652.9	599.0	53.90	12.114	
12,350.0	12,249.3	12,305.1	12,277.7	43.7	15.9	114.67	400.8	-139.3	664.7	610.7	54.01	12.306	
12,375.0	12,262.4	12,328.4	12,298.6	43.7	15.9	113.85	390.6	-141.5	677.0	622.8	54.13	12.507	
12,400.0	12,274.4	12,352.2	12,319.3	43.8	15.9	113.00	379.2	-143.9	689.6	635.3	54.24	12.714	
12,425.0	12,285.2	12,376.4	12,339.8	43.8	15.9	112.11	366.6	-146.6	702.5	648.2	54.35	12.926	
12,450.0	12,294.8	12,401.1	12,360.0	43.8	15.9	111.19	352.7	-149.5	715.8	661.3	54.46	13.144	
12,475.0	12,303.2	12,426.3	12,379.8	43.9	15.9	110.23	337.5	-152.7	729.3	674.8	54.56	13.367	
12,500.0	12,310.3	12,452.1	12,399.3	43.9	16.0	109.24	320.9	-156.3	743.1	688.4	54.67	13.592	
12,525.0	12,316.2	12,478.7	12,418.3	43.9	16.0	108.23	302.7	-160.1	757.0	702.2	54.77	13.821	
12,550.0	12,320.9	12,506.0	12,436.8	43.9	16.0	107.21	283.0	-164.3	771.1	716.2	54.87	14.051	
12,575.0	12,324.2	12,534.3	12,454.6	44.0	16.0	106.17	261.6	-168.8	785.2	730.3	54.98	14.283	
12,600.0	12,326.3	12,563.5	12,471.7	44.0	16.1	105.13	238.3	-173.8	799.5	744.4	55.08	14.514	
12,624.9	12,327.0	12,593.8	12,487.8	44.0	16.1	104.11	213.2	-179.1	813.7	758.5	55.19	14.744	
12,700.0	12,327.3	12,698.4	12,530.2	44.1	16.2	106.21	120.0	-198.8	854.5	799.0	55.49	15.398	
12,800.0	12,327.7	12,859.4	12,553.0	44.1	16.3	106.04	-35.2	-231.7	900.5	844.7	55.83	16.130	
12,900.0	12,328.1	12,993.2	12,553.0	44.2	16.3	104.86	-166.9	-255.8	938.0	881.8	56.19	16.692	

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

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COMPASS 5000.15 Build 91E

ConocoPhillips

Anticollision Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

HARRIER FEDERAL PROJECT (LEA 2632) - HARRIER FED COM #802H - OWB - PWP1													Offset Site Error:	0.0 usft
Survey Program: 0-Standard Keeper 104, 12096-MWD+IFR1+FDIR													Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
13,000.0	12,328.5	13,133.7	12,553.0	44.3	16.4	103.98	-306.1	-274.4	967.9	911.2	56.74	17.058		
13,100.0	12,328.9	13,279.7	12,553.0	44.5	16.5	103.36	-451.5	-286.6	990.0	932.5	57.47	17.227		

ConocoPhillips

Anticollision Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to *KB=30' @ 3397.1usft (TBD)

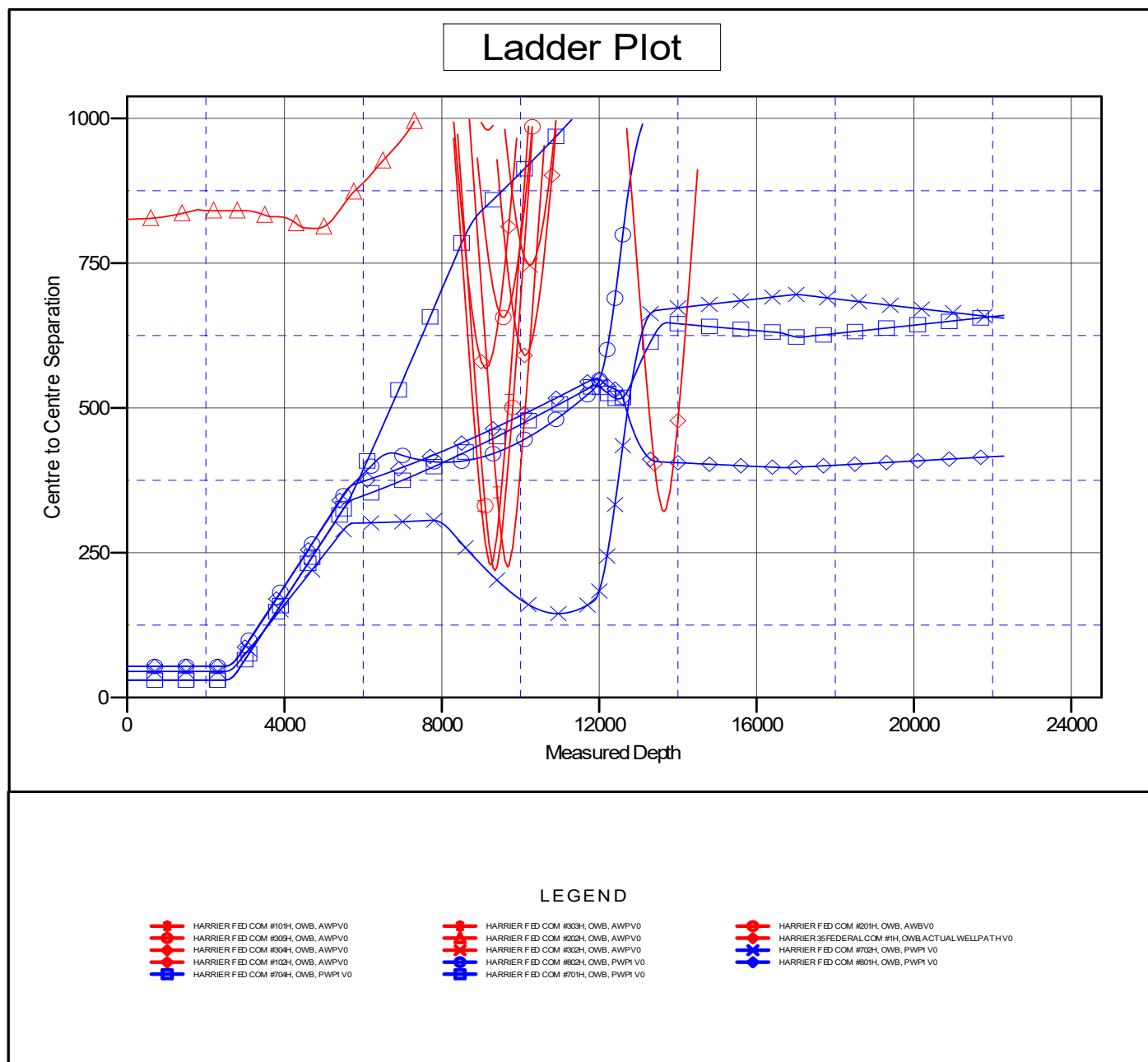
Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: HARRIER FED COM #703H

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

Grid Convergence at Surface is: 0.36°



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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to *KB=30' @ 3397.1usft (TBD)

Offset Depths are relative to Offset Datum

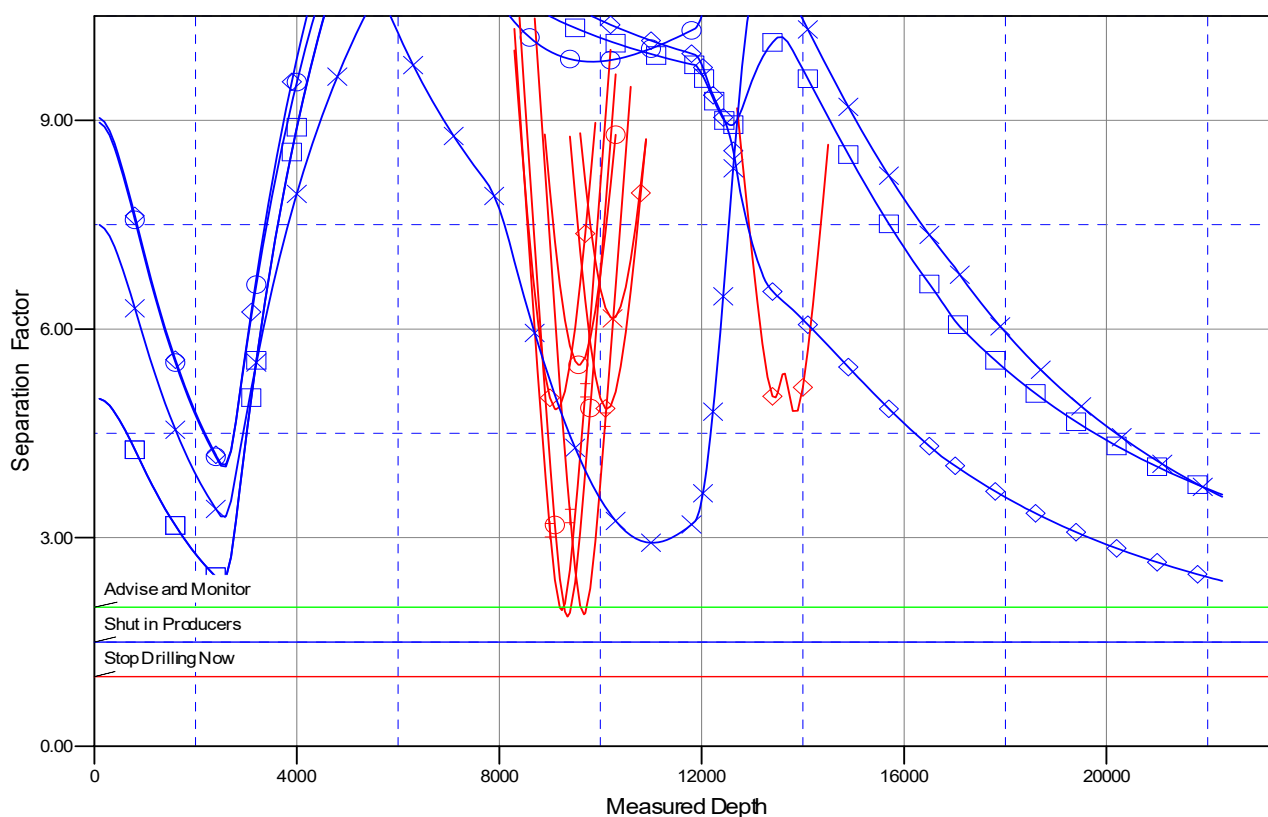
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: HARRIER FED COM #703H

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

Grid Convergence at Surface is: 0.36°

Separation Factor Plot



LEGEND

HARRIER FED COM #101H, OWB, AWPV0
HARRIER FED COM #303H, OWB, AWPV0
HARRIER FED COM #304H, OWB, AWPV0
HARRIER FED COM #102H, OWB, AWPV0
HARRIER FED COM #704H, OWB, PWP1 V0

HARRIER FED COM #303H, OWB, AWPV0
HARRIER FED COM #302H, OWB, AWPV0
HARRIER FED COM #304H, OWB, AWPV0
HARRIER FED COM #302H, OWB, PWP1 V0
HARRIER FED COM #701H, OWB, PWP1 V0

HARRIER FED COM #201H, OWB, AWPV0
HARRIER 36 FEDERAL COM #1H, OWB ACTUAL WELLPATH V0
HARRIER FED COM #702H, OWB, PWP1 V0
HARRIER FED COM #801H, OWB, PWP1 V0

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

DELAWARE BASIN EAST

LEA PROSPECT (NM-E)

HARRIER FEDERAL PROJECT (LEA 2632)

HARRIER FED COM #703H

OWB

Plan: PWP1

Standard Survey Report

04 May, 2021



ConocoPhillips

Survey Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Well:	HARRIER FED COM #703H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	edm

Project	LEA 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	HARRIER FED COM #703H			
Well Position	+N/-S	0.0 usft	Northing:	397,745.60 usft
	+E/-W	0.0 usft	Easting:	711,405.70 usft
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft
			Latitude:	32° 5' 30.045 N
			Longitude:	103° 39' 2.501 W
			Ground Level:	3,367.1 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	5/4/2021	6.59	59.77	47,419.57858895

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	175.52	

Survey Tool Program	Date	5/4/2021			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	22,287.5	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 HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Well:	HARRIER FED COM #703H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	edm

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
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
5,600.0	2.00	45.00	5,600.0	1.2	1.2	-1.1	2.00	2.00	0.00
5,700.0	4.00	45.00	5,699.8	4.9	4.9	-4.5	2.00	2.00	0.00

ConocoPhillips

Survey Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Well:	HARRIER FED COM #703H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	edm

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)	
5,760.6	5.21	45.00	5,760.3	8.4	8.4	-7.7	2.00	2.00	0.00	
Start 6095.6 hold at 5760.6 MD										
5,800.0	5.21	45.00	5,799.5	10.9	10.9	-10.0	0.00	0.00	0.00	
5,900.0	5.21	45.00	5,899.1	17.3	17.3	-15.9	0.00	0.00	0.00	
6,000.0	5.21	45.00	5,998.7	23.8	23.8	-21.8	0.00	0.00	0.00	
6,100.0	5.21	45.00	6,098.2	30.2	30.2	-27.7	0.00	0.00	0.00	
6,200.0	5.21	45.00	6,197.8	36.6	36.6	-33.6	0.00	0.00	0.00	
6,300.0	5.21	45.00	6,297.4	43.0	43.0	-39.5	0.00	0.00	0.00	
6,400.0	5.21	45.00	6,397.0	49.5	49.5	-45.4	0.00	0.00	0.00	
6,500.0	5.21	45.00	6,496.6	55.9	55.9	-51.3	0.00	0.00	0.00	
6,600.0	5.21	45.00	6,596.2	62.3	62.3	-57.3	0.00	0.00	0.00	
6,700.0	5.21	45.00	6,695.8	68.7	68.7	-63.2	0.00	0.00	0.00	
6,800.0	5.21	45.00	6,795.3	75.2	75.2	-69.1	0.00	0.00	0.00	
6,900.0	5.21	45.00	6,894.9	81.6	81.6	-75.0	0.00	0.00	0.00	
7,000.0	5.21	45.00	6,994.5	88.0	88.0	-80.9	0.00	0.00	0.00	
7,100.0	5.21	45.00	7,094.1	94.4	94.4	-86.8	0.00	0.00	0.00	
7,200.0	5.21	45.00	7,193.7	100.9	100.9	-92.7	0.00	0.00	0.00	
7,300.0	5.21	45.00	7,293.3	107.3	107.3	-98.6	0.00	0.00	0.00	
7,400.0	5.21	45.00	7,392.9	113.7	113.7	-104.5	0.00	0.00	0.00	
7,500.0	5.21	45.00	7,492.4	120.1	120.1	-110.4	0.00	0.00	0.00	
7,600.0	5.21	45.00	7,592.0	126.6	126.6	-116.3	0.00	0.00	0.00	
7,700.0	5.21	45.00	7,691.6	133.0	133.0	-122.2	0.00	0.00	0.00	
7,800.0	5.21	45.00	7,791.2	139.4	139.4	-128.1	0.00	0.00	0.00	
7,900.0	5.21	45.00	7,890.8	145.8	145.8	-134.0	0.00	0.00	0.00	
8,000.0	5.21	45.00	7,990.4	152.2	152.2	-139.9	0.00	0.00	0.00	
8,100.0	5.21	45.00	8,090.0	158.7	158.7	-145.8	0.00	0.00	0.00	
8,200.0	5.21	45.00	8,189.6	165.1	165.1	-151.7	0.00	0.00	0.00	
8,300.0	5.21	45.00	8,289.1	171.5	171.5	-157.6	0.00	0.00	0.00	
8,400.0	5.21	45.00	8,388.7	177.9	177.9	-163.5	0.00	0.00	0.00	
8,500.0	5.21	45.00	8,488.3	184.4	184.4	-169.4	0.00	0.00	0.00	
8,600.0	5.21	45.00	8,587.9	190.8	190.8	-175.3	0.00	0.00	0.00	
8,700.0	5.21	45.00	8,687.5	197.2	197.2	-181.2	0.00	0.00	0.00	
8,800.0	5.21	45.00	8,787.1	203.6	203.6	-187.1	0.00	0.00	0.00	
8,900.0	5.21	45.00	8,886.7	210.1	210.1	-193.0	0.00	0.00	0.00	
9,000.0	5.21	45.00	8,986.2	216.5	216.5	-198.9	0.00	0.00	0.00	
9,100.0	5.21	45.00	9,085.8	222.9	222.9	-204.8	0.00	0.00	0.00	
9,200.0	5.21	45.00	9,185.4	229.3	229.3	-210.7	0.00	0.00	0.00	
9,300.0	5.21	45.00	9,285.0	235.8	235.8	-216.6	0.00	0.00	0.00	
9,400.0	5.21	45.00	9,384.6	242.2	242.2	-222.6	0.00	0.00	0.00	
9,500.0	5.21	45.00	9,484.2	248.6	248.6	-228.5	0.00	0.00	0.00	
9,600.0	5.21	45.00	9,583.8	255.0	255.0	-234.4	0.00	0.00	0.00	
9,700.0	5.21	45.00	9,683.3	261.5	261.5	-240.3	0.00	0.00	0.00	
9,800.0	5.21	45.00	9,782.9	267.9	267.9	-246.2	0.00	0.00	0.00	

ConocoPhillips

Survey Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Well:	HARRIER FED COM #703H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	edm

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	5.21	45.00	9,882.5	274.3	274.3	-252.1	0.00	0.00	0.00
10,000.0	5.21	45.00	9,982.1	280.7	280.7	-258.0	0.00	0.00	0.00
10,100.0	5.21	45.00	10,081.7	287.2	287.2	-263.9	0.00	0.00	0.00
10,200.0	5.21	45.00	10,181.3	293.6	293.6	-269.8	0.00	0.00	0.00
10,300.0	5.21	45.00	10,280.9	300.0	300.0	-275.7	0.00	0.00	0.00
10,400.0	5.21	45.00	10,380.5	306.4	306.4	-281.6	0.00	0.00	0.00
10,500.0	5.21	45.00	10,480.0	312.9	312.9	-287.5	0.00	0.00	0.00
10,600.0	5.21	45.00	10,579.6	319.3	319.3	-293.4	0.00	0.00	0.00
10,700.0	5.21	45.00	10,679.2	325.7	325.7	-299.3	0.00	0.00	0.00
10,800.0	5.21	45.00	10,778.8	332.1	332.1	-305.2	0.00	0.00	0.00
10,900.0	5.21	45.00	10,878.4	338.6	338.6	-311.1	0.00	0.00	0.00
11,000.0	5.21	45.00	10,978.0	345.0	345.0	-317.0	0.00	0.00	0.00
11,100.0	5.21	45.00	11,077.6	351.4	351.4	-322.9	0.00	0.00	0.00
11,200.0	5.21	45.00	11,177.1	357.8	357.8	-328.8	0.00	0.00	0.00
11,300.0	5.21	45.00	11,276.7	364.3	364.3	-334.7	0.00	0.00	0.00
11,400.0	5.21	45.00	11,376.3	370.7	370.7	-340.6	0.00	0.00	0.00
11,500.0	5.21	45.00	11,475.9	377.1	377.1	-346.5	0.00	0.00	0.00
11,600.0	5.21	45.00	11,575.5	383.5	383.5	-352.4	0.00	0.00	0.00
11,700.0	5.21	45.00	11,675.1	390.0	390.0	-358.3	0.00	0.00	0.00
11,800.0	5.21	45.00	11,774.7	396.4	396.4	-364.2	0.00	0.00	0.00
11,856.3	5.21	45.00	11,830.7	400.0	400.0	-367.6	0.00	0.00	0.00
Start DLS 12.00 TFO 118.02									
11,900.0	5.38	104.43	11,874.3	400.9	403.4	-368.2	12.00	0.38	135.91
12,000.0	15.48	146.22	11,972.6	388.6	415.4	-355.0	12.00	10.10	41.79
12,100.0	27.16	154.09	12,065.6	356.9	432.8	-322.0	12.00	11.68	7.87
12,200.0	39.02	157.42	12,149.3	307.1	455.0	-270.6	12.00	11.87	3.33
12,300.0	50.94	159.37	12,219.9	241.4	480.8	-203.2	12.00	11.92	1.95
12,400.0	62.89	160.76	12,274.4	162.8	509.3	-122.5	12.00	11.94	1.38
12,500.0	74.84	161.87	12,310.3	74.6	539.1	-32.3	12.00	11.96	1.11
12,600.0	86.80	162.86	12,326.3	-19.3	568.9	63.7	12.00	11.96	0.99
12,624.9	89.78	163.10	12,327.0	-43.1	576.2	87.9	12.00	11.96	0.96
Start DLS 2.00 TFO 90.04									
12,700.0	89.78	164.60	12,327.3	-115.3	597.1	161.5	2.00	0.00	2.00
12,800.0	89.78	166.60	12,327.7	-212.1	622.0	260.0	2.00	0.00	2.00
12,900.0	89.77	168.60	12,328.1	-309.8	643.4	359.0	2.00	0.00	2.00
13,000.0	89.77	170.60	12,328.5	-408.1	661.5	458.5	2.00	0.00	2.00
13,100.0	89.77	172.60	12,328.9	-507.1	676.1	558.3	2.00	0.00	2.00
13,200.0	89.77	174.60	12,329.3	-606.4	687.2	658.2	2.00	0.00	2.00
13,300.0	89.77	176.60	12,329.7	-706.1	694.9	758.2	2.00	0.00	2.00
13,400.0	89.77	178.60	12,330.1	-806.0	699.1	858.1	2.00	0.00	2.00
13,462.3	89.78	179.85	12,330.3	-868.4	699.9	920.3	2.00	0.00	2.00
Start 3237.0 hold at 13462.3 MD									
13,500.0	89.78	179.85	12,330.4	-906.0	700.0	957.9	0.00	0.00	0.00
13,600.0	89.78	179.85	12,330.8	-1,006.0	700.3	1,057.6	0.00	0.00	0.00

ConocoPhillips

Survey Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Well:	HARRIER FED COM #703H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	edm

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)	
13,700.0	89.78	179.85	12,331.2	-1,106.0	700.5	1,157.3	0.00	0.00	0.00	
13,800.0	89.78	179.85	12,331.6	-1,206.0	700.8	1,257.0	0.00	0.00	0.00	
13,900.0	89.78	179.85	12,332.0	-1,306.0	701.1	1,356.7	0.00	0.00	0.00	
14,000.0	89.78	179.85	12,332.4	-1,406.0	701.3	1,456.5	0.00	0.00	0.00	
14,100.0	89.78	179.85	12,332.8	-1,506.0	701.6	1,556.2	0.00	0.00	0.00	
14,200.0	89.78	179.85	12,333.2	-1,606.0	701.8	1,655.9	0.00	0.00	0.00	
14,300.0	89.78	179.85	12,333.6	-1,706.0	702.1	1,755.6	0.00	0.00	0.00	
14,400.0	89.78	179.85	12,334.0	-1,806.0	702.4	1,855.3	0.00	0.00	0.00	
14,500.0	89.78	179.85	12,334.4	-1,906.0	702.6	1,955.0	0.00	0.00	0.00	
14,600.0	89.78	179.85	12,334.8	-2,006.0	702.9	2,054.7	0.00	0.00	0.00	
14,700.0	89.78	179.85	12,335.2	-2,106.0	703.2	2,154.5	0.00	0.00	0.00	
14,800.0	89.78	179.85	12,335.5	-2,206.0	703.4	2,254.2	0.00	0.00	0.00	
14,900.0	89.78	179.85	12,335.9	-2,306.0	703.7	2,353.9	0.00	0.00	0.00	
15,000.0	89.78	179.85	12,336.3	-2,406.0	703.9	2,453.6	0.00	0.00	0.00	
15,100.0	89.78	179.85	12,336.7	-2,506.0	704.2	2,553.3	0.00	0.00	0.00	
15,200.0	89.78	179.85	12,337.1	-2,606.0	704.5	2,653.0	0.00	0.00	0.00	
15,300.0	89.78	179.85	12,337.5	-2,706.0	704.7	2,752.7	0.00	0.00	0.00	
15,400.0	89.78	179.85	12,337.9	-2,806.0	705.0	2,852.5	0.00	0.00	0.00	
15,500.0	89.78	179.85	12,338.3	-2,906.0	705.3	2,952.2	0.00	0.00	0.00	
15,600.0	89.78	179.85	12,338.7	-3,006.0	705.5	3,051.9	0.00	0.00	0.00	
15,700.0	89.78	179.85	12,339.1	-3,106.0	705.8	3,151.6	0.00	0.00	0.00	
15,800.0	89.78	179.85	12,339.5	-3,206.0	706.0	3,251.3	0.00	0.00	0.00	
15,900.0	89.78	179.85	12,339.9	-3,306.0	706.3	3,351.0	0.00	0.00	0.00	
16,000.0	89.78	179.85	12,340.3	-3,406.0	706.6	3,450.7	0.00	0.00	0.00	
16,100.0	89.78	179.85	12,340.6	-3,506.0	706.8	3,550.5	0.00	0.00	0.00	
16,200.0	89.78	179.85	12,341.0	-3,606.0	707.1	3,650.2	0.00	0.00	0.00	
16,300.0	89.78	179.85	12,341.4	-3,706.0	707.4	3,749.9	0.00	0.00	0.00	
16,400.0	89.78	179.85	12,341.8	-3,806.0	707.6	3,849.6	0.00	0.00	0.00	
16,500.0	89.78	179.85	12,342.2	-3,906.0	707.9	3,949.3	0.00	0.00	0.00	
16,600.0	89.78	179.85	12,342.6	-4,006.0	708.1	4,049.0	0.00	0.00	0.00	
16,699.3	89.78	179.85	12,343.0	-4,105.3	708.4	4,148.0	0.00	0.00	0.00	
Start DLS 2.00 TFO -0.09										
16,700.0	89.79	179.85	12,343.0	-4,106.0	708.4	4,148.7	2.00	2.00	0.00	
16,745.9	90.71	179.85	12,342.8	-4,151.9	708.5	4,194.5	2.00	2.00	0.00	
Start 243.2 hold at 16745.9 MD										
16,800.0	90.71	179.85	12,342.1	-4,206.0	708.7	4,248.5	0.00	0.00	0.00	
16,900.0	90.71	179.85	12,340.9	-4,306.0	708.9	4,348.2	0.00	0.00	0.00	
16,989.1	90.71	179.85	12,339.8	-4,395.1	709.2	4,437.0	0.00	0.00	0.00	
Start DLS 2.00 TFO -87.81										
17,000.0	90.72	179.63	12,339.7	-4,406.0	709.2	4,447.9	2.00	0.08	-2.00	
17,008.4	90.72	179.46	12,339.6	-4,414.4	709.3	4,456.3	2.00	0.08	-2.00	
Start 5279.4 hold at 17008.4 MD										
17,100.0	90.72	179.46	12,338.4	-4,506.0	710.1	4,547.6	0.00	0.00	0.00	
17,200.0	90.72	179.46	12,337.1	-4,605.9	711.1	4,647.4	0.00	0.00	0.00	

ConocoPhillips

Survey Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Well:	HARRIER FED COM #703H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	edm

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)	
17,300.0	90.72	179.46	12,335.9	-4,705.9	712.0	4,747.1	0.00	0.00	0.00	
17,400.0	90.72	179.46	12,334.6	-4,805.9	713.0	4,846.9	0.00	0.00	0.00	
17,500.0	90.72	179.46	12,333.4	-4,905.9	713.9	4,946.7	0.00	0.00	0.00	
17,600.0	90.72	179.46	12,332.1	-5,005.9	714.8	5,046.4	0.00	0.00	0.00	
17,700.0	90.72	179.46	12,330.8	-5,105.9	715.8	5,146.2	0.00	0.00	0.00	
17,800.0	90.72	179.46	12,329.6	-5,205.9	716.7	5,245.9	0.00	0.00	0.00	
17,900.0	90.72	179.46	12,328.3	-5,305.9	717.6	5,345.7	0.00	0.00	0.00	
18,000.0	90.72	179.46	12,327.1	-5,405.8	718.6	5,445.4	0.00	0.00	0.00	
18,100.0	90.72	179.46	12,325.8	-5,505.8	719.5	5,545.2	0.00	0.00	0.00	
18,200.0	90.72	179.46	12,324.5	-5,605.8	720.5	5,644.9	0.00	0.00	0.00	
18,300.0	90.72	179.46	12,323.3	-5,705.8	721.4	5,744.7	0.00	0.00	0.00	
18,400.0	90.72	179.46	12,322.0	-5,805.8	722.3	5,844.5	0.00	0.00	0.00	
18,500.0	90.72	179.46	12,320.8	-5,905.8	723.3	5,944.2	0.00	0.00	0.00	
18,600.0	90.72	179.46	12,319.5	-6,005.8	724.2	6,044.0	0.00	0.00	0.00	
18,700.0	90.72	179.46	12,318.2	-6,105.8	725.1	6,143.7	0.00	0.00	0.00	
18,800.0	90.72	179.46	12,317.0	-6,205.7	726.1	6,243.5	0.00	0.00	0.00	
18,900.0	90.72	179.46	12,315.7	-6,305.7	727.0	6,343.2	0.00	0.00	0.00	
19,000.0	90.72	179.46	12,314.5	-6,405.7	728.0	6,443.0	0.00	0.00	0.00	
19,100.0	90.72	179.46	12,313.2	-6,505.7	728.9	6,542.7	0.00	0.00	0.00	
19,200.0	90.72	179.46	12,311.9	-6,605.7	729.8	6,642.5	0.00	0.00	0.00	
19,300.0	90.72	179.46	12,310.7	-6,705.7	730.8	6,742.3	0.00	0.00	0.00	
19,400.0	90.72	179.46	12,309.4	-6,805.7	731.7	6,842.0	0.00	0.00	0.00	
19,500.0	90.72	179.46	12,308.1	-6,905.7	732.7	6,941.8	0.00	0.00	0.00	
19,600.0	90.72	179.46	12,306.9	-7,005.6	733.6	7,041.5	0.00	0.00	0.00	
19,700.0	90.72	179.46	12,305.6	-7,105.6	734.5	7,141.3	0.00	0.00	0.00	
19,800.0	90.72	179.46	12,304.4	-7,205.6	735.5	7,241.0	0.00	0.00	0.00	
19,900.0	90.72	179.46	12,303.1	-7,305.6	736.4	7,340.8	0.00	0.00	0.00	
20,000.0	90.72	179.46	12,301.8	-7,405.6	737.3	7,440.6	0.00	0.00	0.00	
20,100.0	90.72	179.46	12,300.6	-7,505.6	738.3	7,540.3	0.00	0.00	0.00	
20,200.0	90.72	179.46	12,299.3	-7,605.6	739.2	7,640.1	0.00	0.00	0.00	
20,300.0	90.72	179.46	12,298.1	-7,705.6	740.2	7,739.8	0.00	0.00	0.00	
20,400.0	90.72	179.46	12,296.8	-7,805.5	741.1	7,839.6	0.00	0.00	0.00	
20,500.0	90.72	179.46	12,295.5	-7,905.5	742.0	7,939.3	0.00	0.00	0.00	
20,600.0	90.72	179.46	12,294.3	-8,005.5	743.0	8,039.1	0.00	0.00	0.00	
20,700.0	90.72	179.46	12,293.0	-8,105.5	743.9	8,138.8	0.00	0.00	0.00	
20,800.0	90.72	179.46	12,291.8	-8,205.5	744.8	8,238.6	0.00	0.00	0.00	
20,900.0	90.72	179.46	12,290.5	-8,305.5	745.8	8,338.4	0.00	0.00	0.00	
21,000.0	90.72	179.46	12,289.2	-8,405.5	746.7	8,438.1	0.00	0.00	0.00	
21,100.0	90.72	179.46	12,288.0	-8,505.5	747.7	8,537.9	0.00	0.00	0.00	
21,200.0	90.72	179.46	12,286.7	-8,605.4	748.6	8,637.6	0.00	0.00	0.00	
21,300.0	90.72	179.46	12,285.5	-8,705.4	749.5	8,737.4	0.00	0.00	0.00	
21,400.0	90.72	179.46	12,284.2	-8,805.4	750.5	8,837.1	0.00	0.00	0.00	
21,500.0	90.72	179.46	12,282.9	-8,905.4	751.4	8,936.9	0.00	0.00	0.00	
21,600.0	90.72	179.46	12,281.7	-9,005.4	752.3	9,036.6	0.00	0.00	0.00	

ConocoPhillips

Survey Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #703H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3397.1usft (TBD)
Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3397.1usft (TBD)
Well:	HARRIER FED COM #703H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	edm

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)
21,700.0	90.72	179.46	12,280.4	-9,105.4	753.3	9,136.4	0.00	0.00	0.00
21,800.0	90.72	179.46	12,279.1	-9,205.4	754.2	9,236.2	0.00	0.00	0.00
21,900.0	90.72	179.46	12,277.9	-9,305.4	755.2	9,335.9	0.00	0.00	0.00
22,000.0	90.72	179.46	12,276.6	-9,405.3	756.1	9,435.7	0.00	0.00	0.00
22,100.0	90.72	179.46	12,275.4	-9,505.3	757.0	9,535.4	0.00	0.00	0.00
22,200.0	90.72	179.46	12,274.1	-9,605.3	758.0	9,635.2	0.00	0.00	0.00
22,287.8	90.72	179.46	12,273.0	-9,693.1	758.8	9,722.8	0.00	0.00	0.00
TD at 22287.8									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
LTP (HARRIER FED COM #703H) - plan misses target center by 37.8usft at 22200.0usft MD (12274.1 TVD, -9605.3 N, 758.0 E) - Point	0.00	0.01	12,273.0	-9,643.1	758.4	388,102.50	712,164.10	32° 3' 54.570 N	103° 38' 54.397 W
PBHL (HARRIER FED COM #703H) - plan hits target center - Rectangle (sides W100.0 H5,300.0 D20.0)	0.72	359.46	12,273.0	-9,693.1	758.8	388,052.50	712,164.50	32° 3' 54.076 N	103° 38' 54.396 W
FTP (HARRIER FED COM #703H) - plan misses target center by 568.2usft at 12158.8usft MD (12116.2 TVD, 329.6 N, 445.4 E) - Circle (radius 50.0)	0.00	0.00	12,327.0	794.7	694.6	398,540.30	712,100.30	32° 5' 37.866 N	103° 38' 54.369 W
POI#1 (HARRIER FED COM #703H) - plan hits target center - Rectangle (sides W100.0 H286.0 D20.0)	0.71	359.85	12,339.8	-4,395.1	709.2	393,350.51	712,114.86	32° 4' 46.507 N	103° 38' 54.582 W
4900'FFTP (HARRIER FED COM #703H) - plan hits target center - Rectangle (sides W100.0 H4,942.0 D20.0)	-0.22	359.85	12,343.0	-4,105.3	708.4	393,640.32	712,114.10	32° 4' 49.375 N	103° 38' 54.570 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
5500	5500	0	0	Start Build 2.00
5761	5760	8	8	Start 6095.6 hold at 5760.6 MD
11,856	11,831	400	400	Start DLS 12.00 TFO 118.02
12,625	12,327	-43	576	Start DLS 2.00 TFO 90.04
13,462	12,330	-868	700	Start 3237.0 hold at 13462.3 MD
16,699	12,343	-4105	708	Start DLS 2.00 TFO -0.09
16,746	12,343	-4152	709	Start 243.2 hold at 16745.9 MD
16,989	12,340	-4395	709	Start DLS 2.00 TFO -87.81
17,008	12,340	-4414	709	Start 5279.4 hold at 17008.4 MD
22,288	12,273	-9693	759	TD at 22287.8

Checked By: _____ Approved By: _____ Date: _____



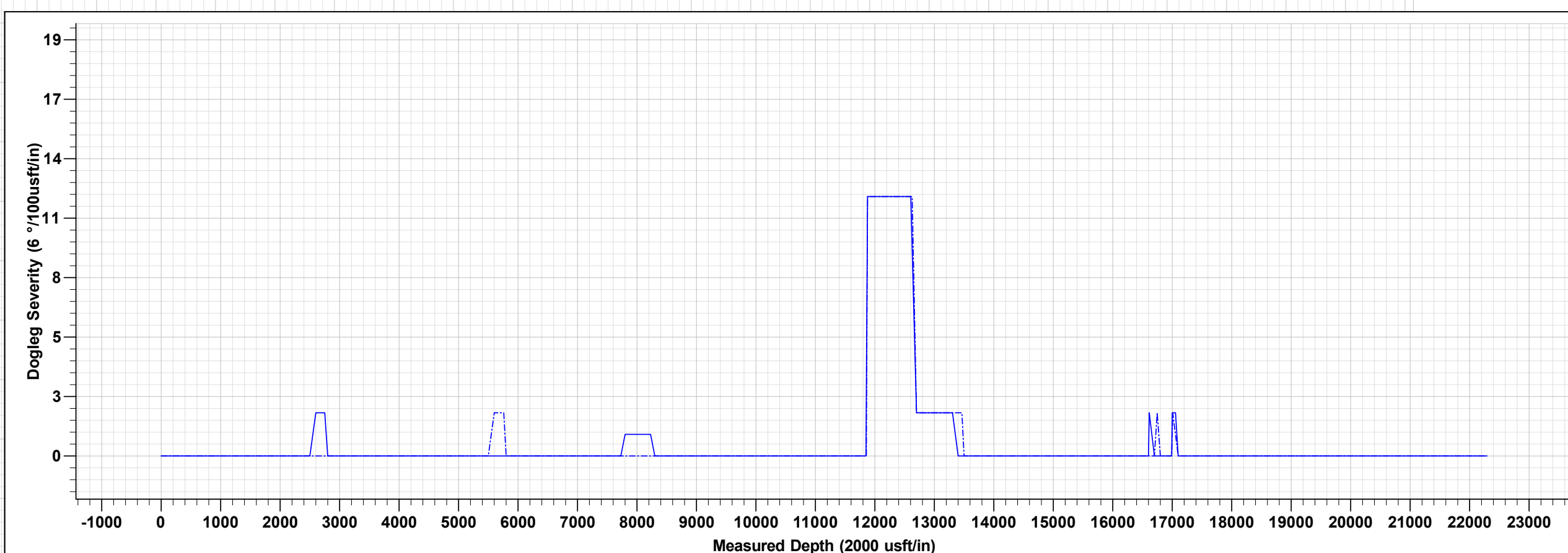
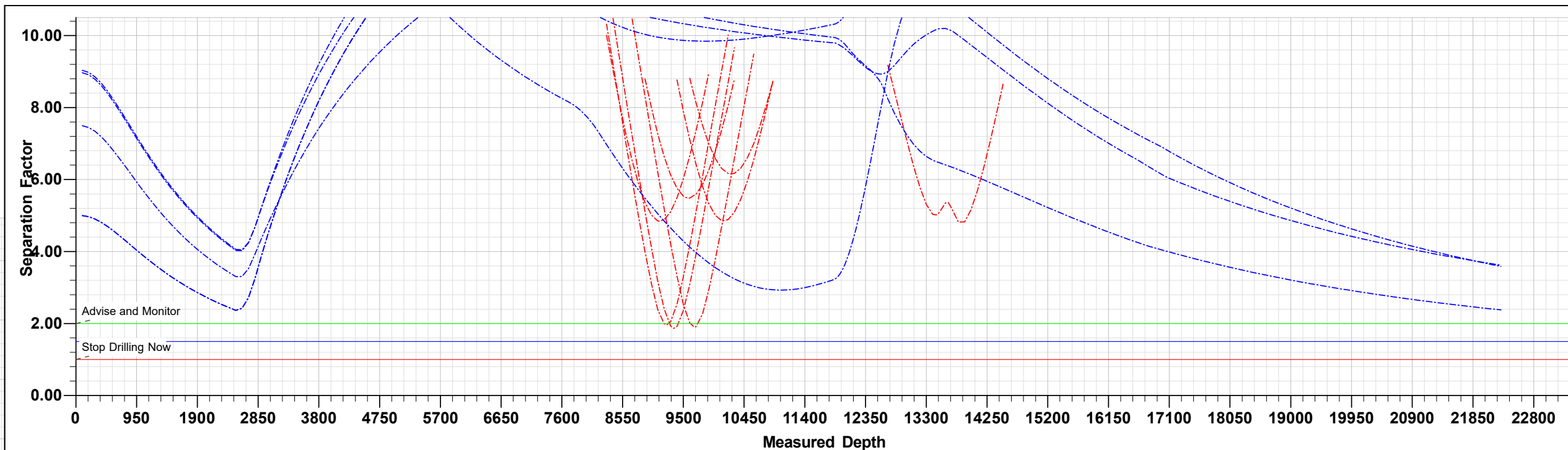
Project: LEA PROSPECT (NM-E)
Site: HARRIER FEDERAL PROJECT (LEA 2632)
Well: HARRIER FED COM #703H
Wellbore: OWB
Design: PWP1
GL: 3367.1
*KB=30' @ 3397.1usft (TBD)

WELL DETAILS: HARRIER FED COM #703H

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	397745.60	711405.70	32° 5' 30.045 N	103° 39' 2.501 W

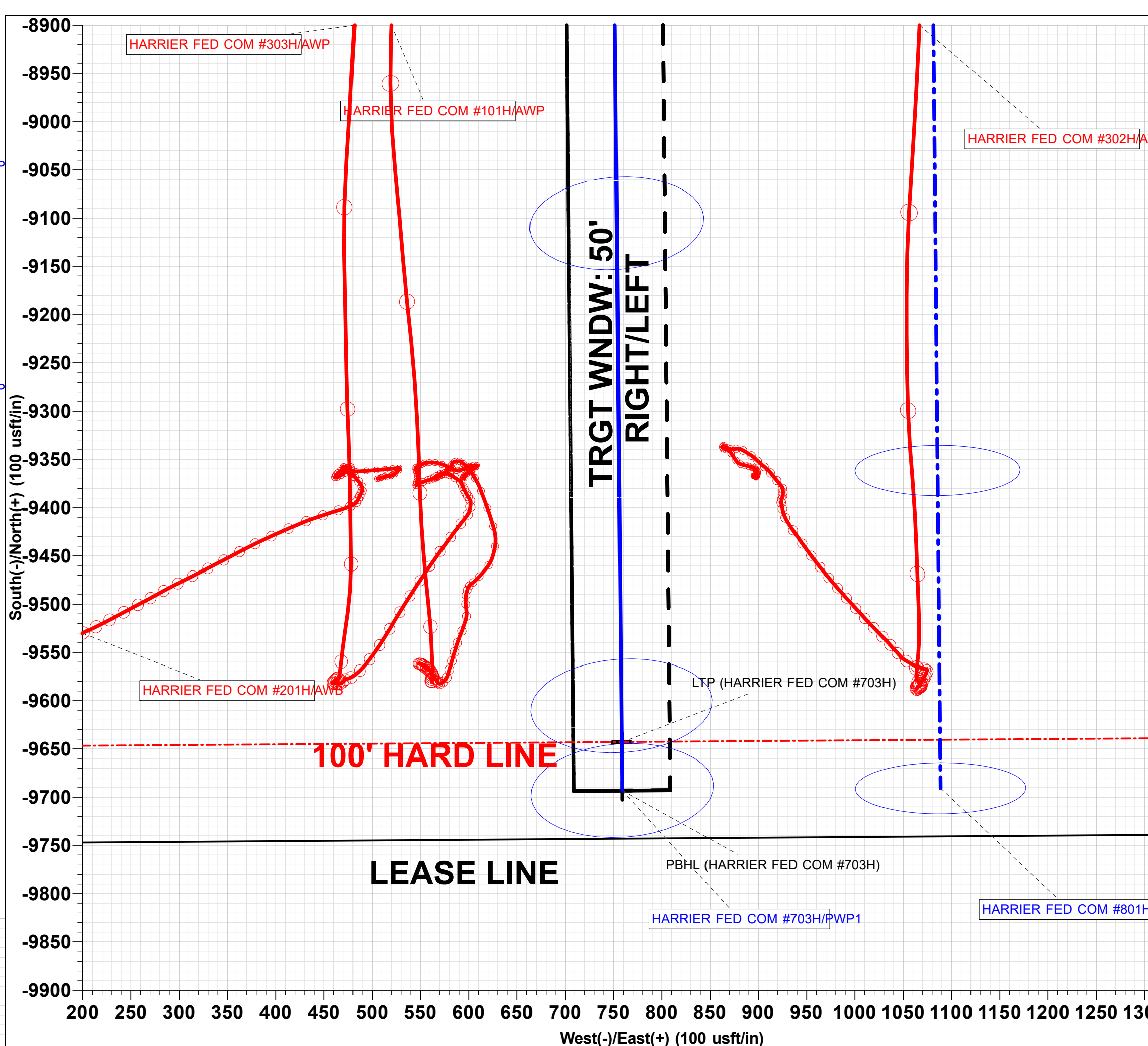
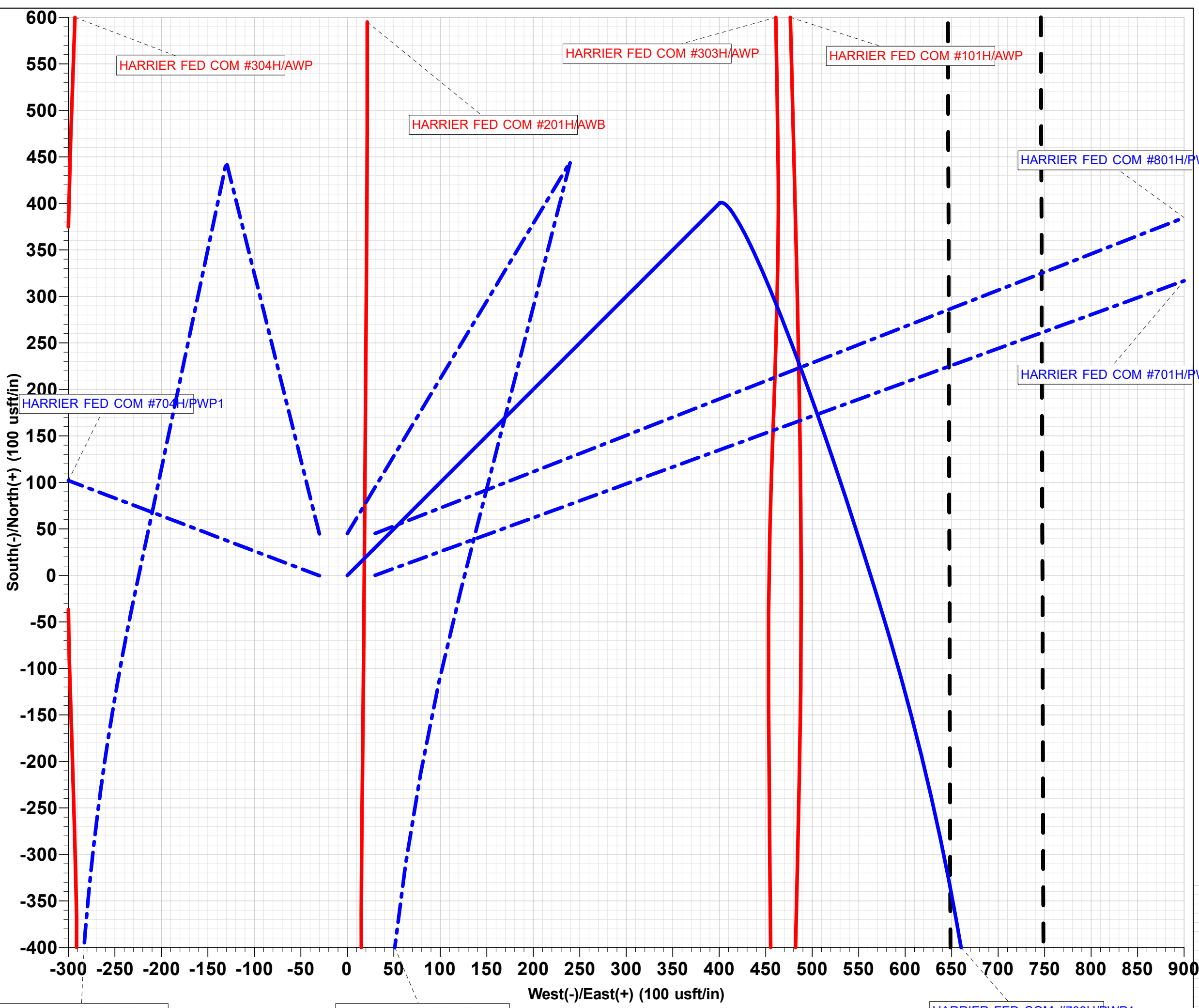
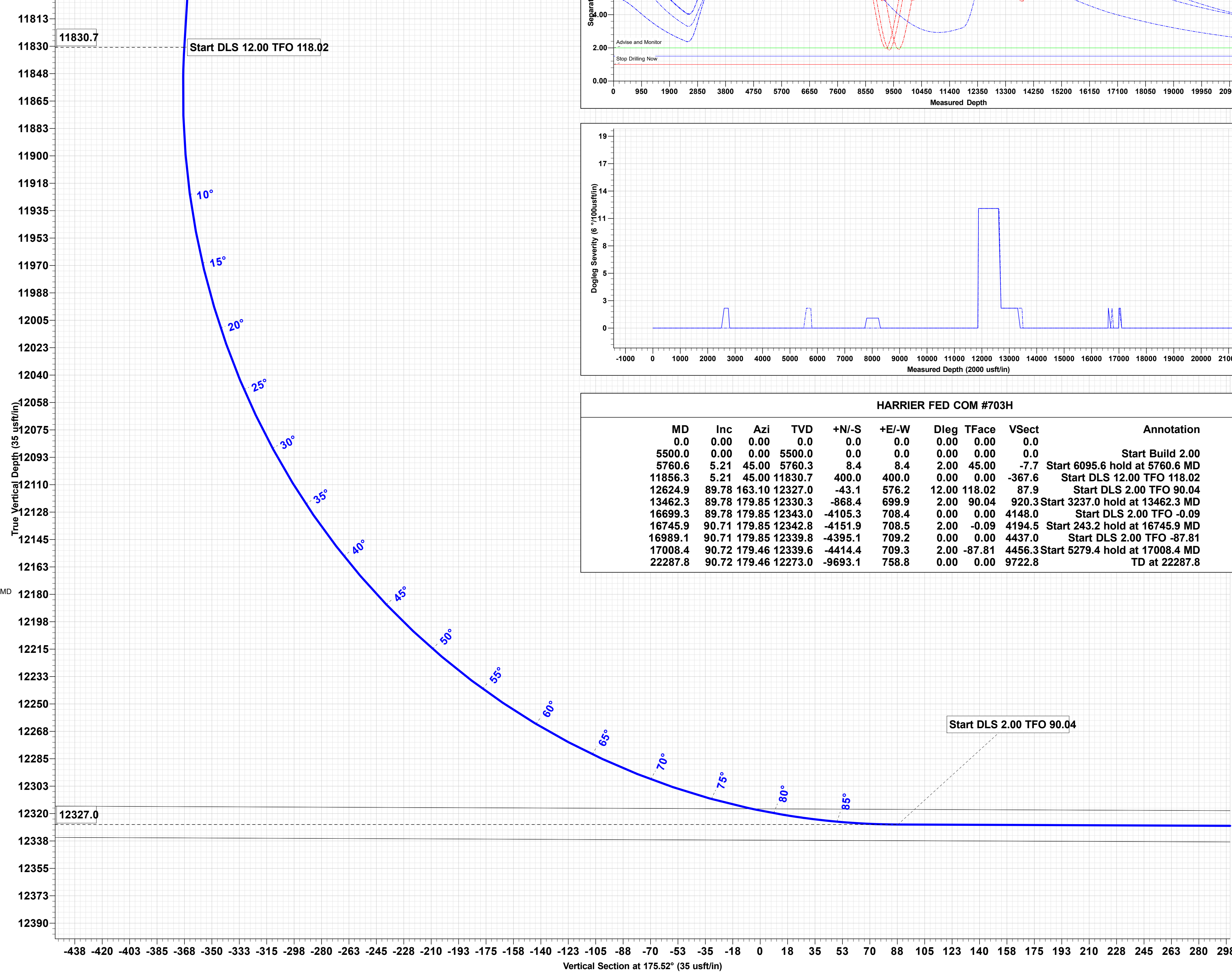
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
LTP (HARRIER FED COM #703H)	12273.0	-9643.1	758.4	388102.50	712164.10	32° 3' 54.570 N	103° 38' 54.397 W
PBHL (HARRIER FED COM #703H)	12273.0	-9693.1	758.8	388052.50	712164.50	32° 3' 54.076 N	103° 38' 54.396 W
FTP (HARRIER FED COM #703H)	12327.0	794.7	694.6	398540.30	712100.30	32° 5' 37.866 N	103° 38' 54.369 W
POI#1 (HARRIER FED COM #703H)	12339.8	-4395.1	709.2	393350.51	712114.87	32° 4' 46.507 N	103° 38' 54.582 W
4900'FTP (HARRIER FED COM #703H)	343.0	-4105.3	708.4	393640.32	712114.10	32° 4' 49.375 N	103° 38' 54.570 W

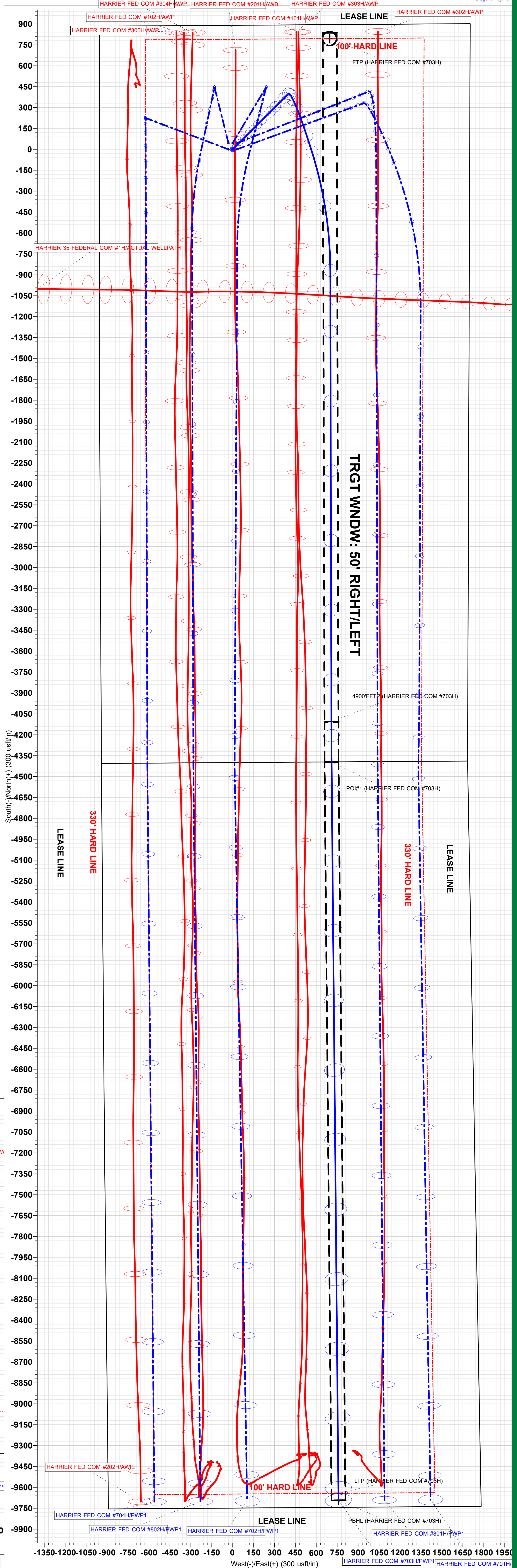


HARRIER FED COM #703H

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	Start Build 2.00
5500.0	0.00	0.00	5500.0	0.0	0.0	0.00	0.00	Start 6095.6 hold at 5760.6 MD
5760.6	5.21	45.00	5760.3	8.4	8.4	2.00	45.00	Start DLS 12.00 TFO 118.02
11856.3	5.21	45.00	11830.7	400.0	400.0	0.00	0.00	Start DLS 2.00 TFO 90.04
12624.9	89.78	163.10	12327.0	-43.1	576.2	12.00	118.02	Start 3237.0 hold at 13462.3 MD
13462.3	89.78	179.85	12330.3	-868.4	699.9	2.00	90.04	Start DLS 2.00 TFO -0.09
16699.3	89.78	179.85	12343.0	-4105.3	708.4	0.00	0.00	Start DLS 2.00 TFO -0.09
16745.9	90.71	179.85	12342.8	-4151.9	708.5	2.00	-0.09	Start DLS 2.00 TFO -87.81
16989.1	90.71	179.85	12339.8	-4395.1	709.2	0.00	0.00	Start DLS 2.00 TFO -87.81
17008.4	90.72	179.46	12339.6	-4414.4	709.3	2.00	-87.81	Start 5279.4 hold at 17008.4 MD
22287.8	90.72	179.46	12273.0	-9693.1	758.8	0.00	0.00	TD at 22287.8



TRGT WNDW: 10'
ABOVE/BELOW



LTP (HARRIER FED COM #703H) PBHL (HARRIER FED COM #703H)

HARRIER FED COM #703HWP1

HARRIER FED COM #704HWP1

HARRIER FED COM #802HWP1

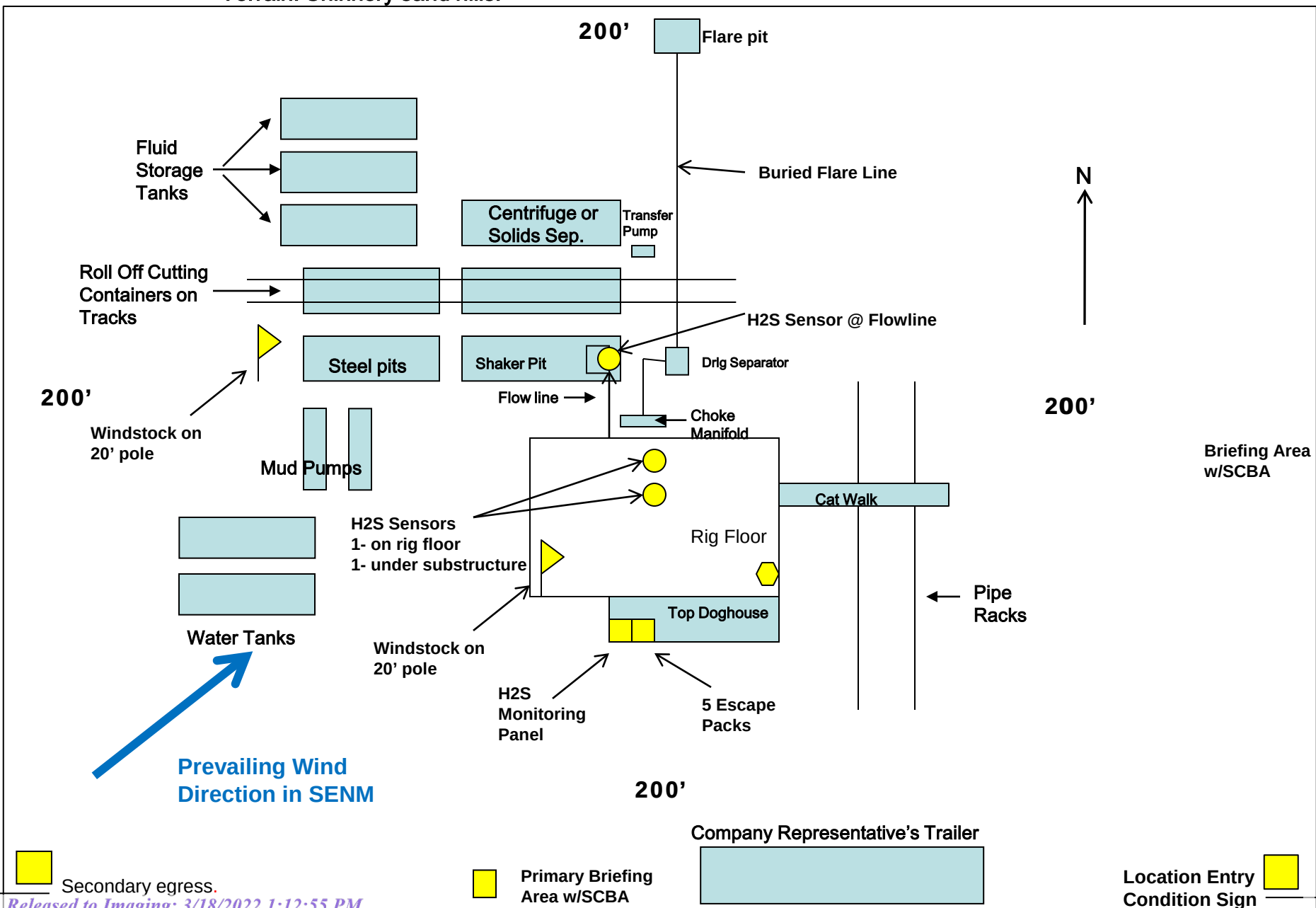
HARRIER FED COM #801HWP1

HARRIER FED COM #703HWP1

HARRIER FED COM #703HWP1

HARRIER FED COM #703HWP1

HARRIER FED COM #703HWP1



COG OPERATING 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 OPERATING 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 OPERATING LLC

1-575-748-6940

EMERGENCY CALL LIST

	<u>OFFICE</u>	<u>MOBILE</u>
COG OPERATING LLC OFFICE	575-748-6940	
SETH WILD	432-683-7443	432-528-3633
WALTER ROYE	575-748-6940	432-934-1886

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

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 89159

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 89159
	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	3/18/2022
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	3/18/2022
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	3/18/2022
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	3/18/2022