

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. 30-025-49888	
3a. Address		3b. Phone No. (include area code)	
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface At proposed prod. zone		10. Field and Pool, or Exploratory [98180] 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)	
Title		Date	
Approved by (Signature)		Name (Printed/Typed)	
Title		Office	
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Conditions of approval, if any, are attached.			
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.			

NGMP Rec 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) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505
Phone: (505) 476-3480 Fax: (505) 476-3462

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025- 49888	Pool Code 98180	Pool Name WC-025 G-09 S253309P; Upper Wolfcamp
Property Code 325390	Property Name HARRIER FEDERAL COM	Well Number 702H
OGRID No. 239137 229137	Operator Name COG OPERATING, LLC	Elevation 3367.1'

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		845	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
N	2	26-S	32-E		50	SOUTH	1650	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=397848.3 N X=752592.0 E LAT.=32.091928' N LONG.=103.651166' W		FTP 100' FNL & 1650' FWL Y=398598.0 N X=753286.5 E LAT.=32.093976' N LONG.=103.648909' W GRID AZ. TO FTP 42°48'40"	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> 6/17/2021 Signature Date Stan Wagner Printed Name E-mail Address																
POINT LEGEND <table border="1"> <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> </table>	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	SECTION 35 SECTION 2	LEASE X-ING LAT.=32.079710' N LONG.=103.648912' W	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. # 21-303 DRAWN BY: AH
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																		

Intent ☒ As Drilled ☐API #
30-025-

Operator Name:	Property Name:	Well Number
COG Operating LLC	Harrier Federal Com	702H

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 C	Section 35	Township 25S	Range 32E	Lot	Feet 100	From N/S North	Feet 1650	From E/W West	County Lea
Latitude 32.093976					Longitude -103.648909				NAD 83

Last Take Point (LTP)

UL N	Section 2	Township 26S	Range 32E	Lot	Feet 100	From N/S South	Feet 1650	From E/W West	County Lea
Latitude 32.065283					Longitude -103.648915				NAD 83

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

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

API #
30-025-

Operator Name:	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						

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

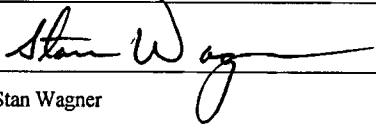
1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(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 702H
SURFACE HOLE FOOTAGE:	845'/N & 955'/W
BOTTOM HOLE FOOTAGE:	50'/S & 1650'/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 702H

1. Geologic Formations

TVD of target	12,308' 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	745	Water	
Top of Salt	1108	Salt	
Base of Salt	4504	Salt	
Lamar	4700	Salt Water	
Bell Canyon	4735	Salt Water	
Cherry Canyon	5727	Oil/Gas	
Brushy Canyon	7293	Oil/Gas	
Bone Spring Lime	8855	Oil/Gas	
1st Bone Spring Sand	9819	Oil/Gas	
2nd Bone Spring Sand	10438	Oil/Gas	
3rd Bone Spring Sand	11602	Oil/Gas	
Wolfcamp A	12225	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	1.40	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	1.82	2.15	2.58	2.50
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

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

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

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

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3. Cementing Program

Casing	# 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 702H

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	

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7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	8005 psi at 12308' 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

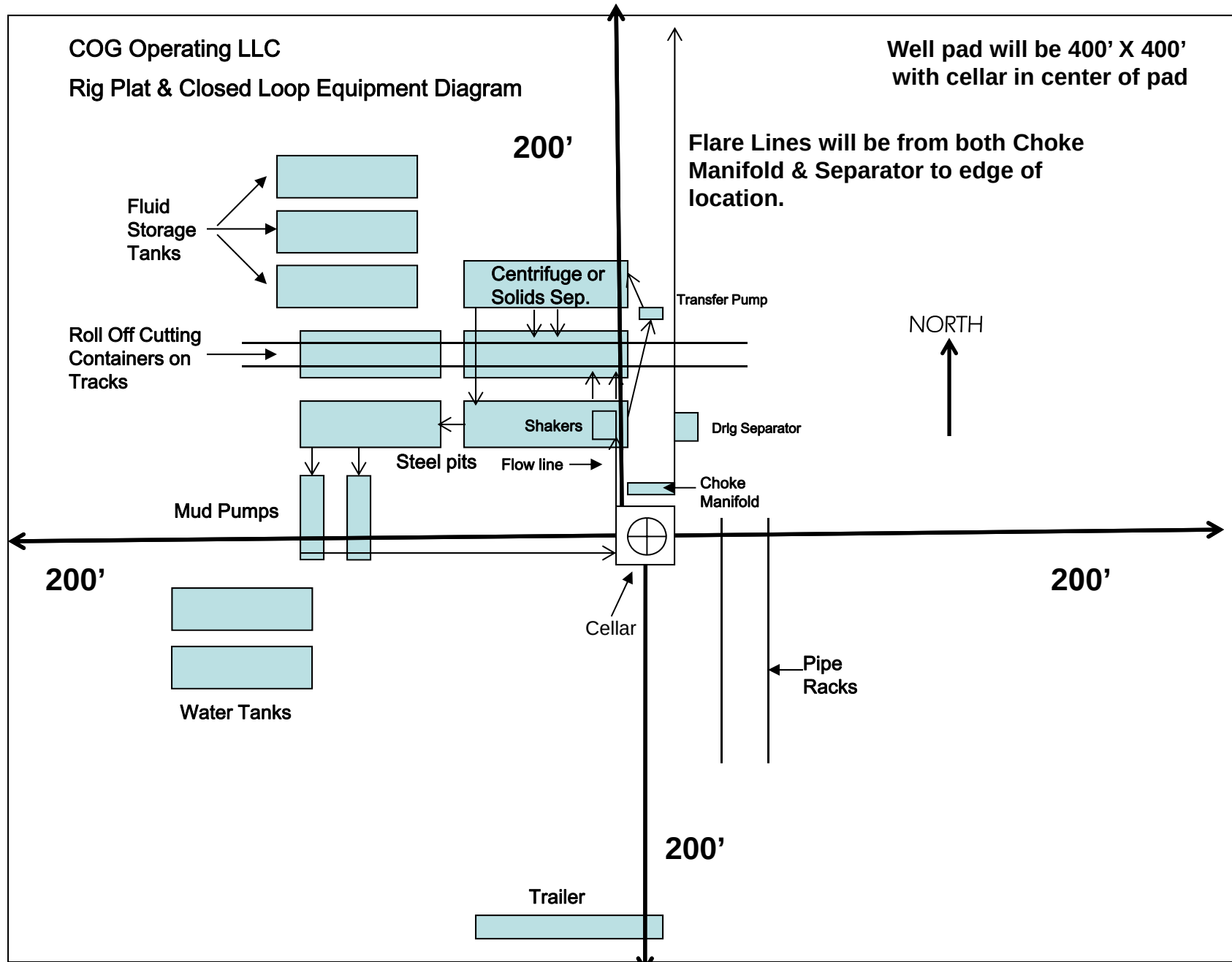


Exhibit 1

"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 #702H

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 letter "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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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	11,850.0	PWP1 (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
11,850.0	22,288.7	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
Offset Well - Wellbore - Design						
HARRIER FEDERAL PROJECT (LEA 2632)						
HARRIER 35 FEDERAL COM #1H - OWB - ACTUAL WE	13,611.7	14,570.0	322.1	259.7	5.159	CC, ES
HARRIER 35 FEDERAL COM #1H - OWB - ACTUAL WE	13,800.0	14,570.0	373.1	295.7	4.822	SF
HARRIER FED COM #101H - OWB - AWP	9,657.5	19,364.2	240.4	145.6	2.536	CC, ES, SF
HARRIER FED COM #102H - OWB - AWP	9,159.3	18,919.1	583.4	488.3	6.135	CC, ES, SF
HARRIER FED COM #201H - OWB - AWB	9,374.2	19,139.1	218.8	124.3	2.315	CC, ES, SF
HARRIER FED COM #202H - OWB - AWP	4,472.9	4,478.8	799.4	790.6	91.352	CC, ES
HARRIER FED COM #202H - OWB - AWP	9,300.0	9,386.3	999.8	982.5	57.986	SF
HARRIER FED COM #302H - OWB - AWP	10,189.5	19,830.0	800.1	705.2	8.429	CC, ES, SF
HARRIER FED COM #303H - OWB - AWP	9,223.2	18,865.9	223.4	129.1	2.369	CC, ES, SF
HARRIER FED COM #304H - OWB - AWP	10,146.9	20,004.4	538.0	442.1	5.610	CC, ES, SF
HARRIER FED COM #305H - OWB - AWP	9,611.7	19,472.6	642.6	546.8	6.707	CC, ES, SF
HARRIER FED COM #701H - OWB - PWP1	2,500.0	2,499.5	53.9	45.7	6.537	CC, ES, SF
HARRIER FED COM #703H - OWB - PWP1	2,500.0	2,500.6	45.0	31.4	3.303	CC, ES
HARRIER FED COM #703H - OWB - PWP1	11,000.0	11,002.4	145.0	95.5	2.927	SF
HARRIER FED COM #704H - OWB - PWP1	2,416.4	2,417.2	54.2	46.1	6.678	CC
HARRIER FED COM #704H - OWB - PWP1	2,500.0	2,500.8	54.2	46.0	6.571	ES
HARRIER FED COM #704H - OWB - PWP1	22,289.4	22,047.1	665.1	490.8	3.815	SF
HARRIER FED COM #801H - OWB - PWP1	2,415.9	2,418.2	30.0	23.2	4.386	CC
HARRIER FED COM #801H - OWB - PWP1	2,500.0	2,502.3	30.0	23.1	4.350	ES, SF
HARRIER FED COM #802H - OWB - PWP1	2,416.6	2,416.9	30.0	23.2	4.386	CC
HARRIER FED COM #802H - OWB - PWP1	2,500.0	2,500.3	30.0	23.1	4.350	ES
HARRIER FED COM #802H - OWB - PWP1	22,289.4	22,528.7	415.5	242.7	2.405	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										
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	12,307.8	14,519.1	11,970.2	15.7	77.5	-29.94	-1,066.5	89.0	962.6	872.5	90.17	10.676					
12,800.0	12,307.7	14,532.3	11,970.0	15.7	77.8	-23.93	-1,066.4	75.9	870.7	780.9	89.83	9.692					
12,900.0	12,307.6	14,545.4	11,969.7	15.7	78.0	-17.84	-1,066.2	62.8	779.8	690.5	89.30	8.733					
13,000.0	12,307.5	14,557.2	11,969.5	15.8	78.3	-12.10	-1,066.1	51.0	690.7	602.3	88.43	7.811					
13,100.0	12,307.3	14,565.5	11,969.3	15.8	78.4	-7.29	-1,066.1	42.7	604.4	517.4	86.99	6.948					

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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-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	
13,200.0	12,307.2	14,570.5	11,969.2	15.8	78.5	-3.58	-1,066.0	37.7	522.7	438.0	84.68	6.172	
13,304.5	12,307.1	14,572.0	11,969.2	15.9	78.6	-0.99	-1,066.0	36.2	445.1	364.4	80.74	5.512	
13,400.0	12,307.0	14,571.6	11,969.2	15.9	78.6	-1.06	-1,066.0	36.6	385.4	310.3	75.12	5.131	
13,500.0	12,306.9	14,571.1	11,969.2	16.1	78.6	-1.13	-1,066.0	37.1	340.9	273.6	67.29	5.066	
13,600.0	12,306.7	14,570.0	11,969.2	16.4	78.5	-1.34	-1,066.0	38.2	322.3	259.9	62.36	5.168	
13,611.7	12,306.7	14,570.0	11,969.2	16.4	78.5	-1.34	-1,066.0	38.2	322.1	259.7	62.43	5.159 CC, ES	
13,700.0	12,306.6	14,570.0	11,969.2	16.9	78.5	-1.34	-1,066.0	38.2	334.0	266.2	67.75	4.929	
13,800.0	12,306.5	14,570.0	11,969.2	17.5	78.5	-1.34	-1,066.0	38.2	373.1	295.7	77.37	4.822 SF	
13,900.0	12,306.4	14,569.7	11,969.2	18.2	78.5	-1.40	-1,066.0	38.5	432.3	347.6	84.67	5.105	
14,000.0	12,306.2	14,569.3	11,969.2	18.9	78.5	-1.46	-1,066.0	38.9	504.5	415.3	89.17	5.658	
14,100.0	12,306.1	14,568.9	11,969.2	19.7	78.5	-1.53	-1,066.0	39.3	584.9	493.1	91.84	6.369	
14,200.0	12,306.0	14,568.5	11,969.2	20.4	78.5	-1.60	-1,066.0	39.6	670.7	577.2	93.46	7.176	
14,300.0	12,305.9	14,568.2	11,969.2	21.2	78.5	-1.66	-1,066.0	40.0	759.9	665.4	94.47	8.044	
14,400.0	12,305.7	14,567.8	11,969.3	21.9	78.5	-1.73	-1,066.0	40.4	851.5	756.4	95.13	8.951	
14,500.0	12,305.6	14,567.4	11,969.3	22.7	78.5	-1.80	-1,066.1	40.8	944.9	849.3	95.58	9.886	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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	8,680.1	19,389.7	9,511.6	11.3	86.5	82.46	431.7	479.7	987.0	891.9	95.05	10.383	
8,800.0	8,780.1	19,386.6	9,511.7	11.5	86.4	83.18	428.7	479.8	890.4	795.0	95.32	9.341	
8,900.0	8,880.1	19,383.7	9,511.8	11.6	86.4	83.88	425.7	479.8	794.6	699.0	95.60	8.312	
9,000.0	8,980.1	19,380.8	9,511.9	11.7	86.4	84.55	422.9	479.9	699.9	604.1	95.88	7.301	
9,100.0	9,080.1	19,378.1	9,511.9	11.8	86.4	85.21	420.1	480.0	607.0	510.9	96.16	6.313	
9,200.0	9,180.1	19,375.4	9,512.0	12.0	86.3	85.84	417.5	480.0	516.7	420.3	96.43	5.359	
9,300.0	9,280.1	19,372.8	9,512.0	12.1	86.3	86.45	414.9	480.1	430.8	334.1	96.66	4.456	
9,400.0	9,380.1	19,370.3	9,512.1	12.2	86.3	87.05	412.4	480.2	352.3	255.5	96.76	3.641	
9,500.0	9,480.1	19,367.9	9,512.2	12.3	86.3	87.63	409.9	480.2	287.4	191.0	96.43	2.980	
9,600.0	9,580.1	19,365.5	9,512.2	12.4	86.3	88.19	407.6	480.3	247.2	151.9	95.32	2.593	
9,657.5	9,637.7	19,364.2	9,512.3	12.5	86.2	88.51	406.3	480.3	240.4	145.6	94.81	2.536 CC, ES, SF	
9,700.0	9,680.1	19,363.2	9,512.3	12.6	86.2	88.74	405.3	480.4	244.1	149.2	94.93	2.572	
9,800.0	9,780.1	19,361.0	9,512.3	12.7	86.2	89.26	403.1	480.4	279.4	183.2	96.21	2.904	
9,900.0	9,880.1	19,358.0	9,512.4	12.8	86.2	89.98	400.1	480.5	341.4	244.2	97.22	3.511	
10,000.0	9,980.1	19,358.0	9,512.4	12.9	86.2	89.98	400.1	480.5	418.4	320.5	97.86	4.275	
10,100.0	10,080.1	19,354.6	9,512.5	13.1	86.2	90.79	396.7	480.6	503.5	405.1	98.31	5.121	
10,200.0	10,180.1	19,352.6	9,512.5	13.2	86.1	91.28	394.6	480.6	593.2	494.5	98.70	6.010	
10,300.0	10,280.1	19,350.5	9,512.6	13.3	86.1	91.76	392.6	480.7	685.8	586.8	99.06	6.923	
10,400.0	10,380.1	19,348.6	9,512.6	13.4	86.1	92.23	390.6	480.7	780.2	680.8	99.41	7.849	
10,500.0	10,480.1	19,346.6	9,512.6	13.6	86.1	92.69	388.7	480.8	875.9	776.2	99.74	8.782	
10,600.0	10,580.1	19,344.7	9,512.7	13.7	86.1	93.15	386.8	480.8	972.4	872.3	100.08	9.717	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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
8,400.0	8,380.1	18,923.2	9,021.2	11.0	86.9	-89.70	403.1	-343.4	957.5	863.0	94.52	10.131	
8,500.0	8,480.1	18,922.7	9,021.2	11.1	86.9	-89.75	402.5	-343.4	880.3	785.5	94.79	9.287	
8,600.0	8,580.1	18,922.1	9,021.2	11.2	86.9	-89.81	402.0	-343.4	808.1	713.1	95.03	8.505	
8,700.0	8,680.1	18,921.6	9,021.2	11.3	86.9	-89.86	401.4	-343.4	742.5	647.3	95.21	7.798	
8,800.0	8,780.1	18,921.0	9,021.2	11.5	86.9	-89.91	400.9	-343.4	685.1	589.8	95.29	7.190	
8,900.0	8,880.1	18,920.5	9,021.2	11.6	86.9	-89.96	400.4	-343.4	638.4	543.1	95.26	6.701	
9,000.0	8,980.1	18,920.0	9,021.2	11.7	86.9	-90.02	399.8	-343.4	604.7	509.6	95.13	6.357	
9,100.0	9,080.1	18,919.4	9,021.2	11.8	86.9	-90.07	399.3	-343.4	586.4	491.3	95.04	6.169	
9,159.3	9,139.4	18,919.1	9,021.2	11.9	86.9	-90.10	399.0	-343.4	583.4	488.3	95.09	6.135	CC, ES, SF
9,200.0	9,180.1	18,918.9	9,021.2	12.0	86.9	-90.12	398.8	-343.4	584.8	489.6	95.19	6.144	
9,300.0	9,280.1	18,918.4	9,021.2	12.1	86.9	-90.17	398.2	-343.4	600.1	504.5	95.60	6.277	
9,400.0	9,380.1	18,917.8	9,021.2	12.2	86.9	-90.23	397.7	-343.4	631.1	534.9	96.15	6.563	
9,500.0	9,480.1	18,917.3	9,021.2	12.3	86.9	-90.28	397.2	-343.4	675.6	578.9	96.69	6.987	
9,600.0	9,580.1	18,916.8	9,021.2	12.4	86.9	-90.33	396.7	-343.4	731.1	634.0	97.15	7.526	
9,700.0	9,680.1	18,916.3	9,021.2	12.6	86.8	-90.38	396.1	-343.4	795.4	697.9	97.54	8.155	
9,800.0	9,780.1	18,915.7	9,021.2	12.7	86.8	-90.43	395.6	-343.4	866.5	768.6	97.89	8.852	
9,900.0	9,880.1	18,915.2	9,021.2	12.8	86.8	-90.48	395.1	-343.4	942.9	844.6	98.22	9.600	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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 #201H - OWB - AWB												Offset Well Error:	3.0 usft
Survey Program: 100-Standard Keeper 104, 8506-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
8,400.0	8,380.1	19,098.7	9,230.3	11.0	85.8	-100.26	360.4	21.1	997.5	904.5	93.00	10.727	
8,500.0	8,480.1	19,102.5	9,230.5	11.1	85.9	-99.30	364.2	21.1	900.3	807.0	93.29	9.650	
8,600.0	8,580.1	19,106.3	9,230.6	11.2	85.9	-98.31	368.0	21.1	803.8	710.2	93.60	8.588	
8,700.0	8,680.1	19,110.3	9,230.8	11.3	85.9	-97.30	372.0	21.1	708.1	614.2	93.90	7.541	
8,800.0	8,780.1	19,114.3	9,231.0	11.5	86.0	-96.26	376.0	21.1	613.9	519.7	94.22	6.516	
8,900.0	8,880.1	19,118.4	9,231.2	11.6	86.0	-95.20	380.1	21.2	521.8	427.2	94.54	5.519	
9,000.0	8,980.1	19,122.6	9,231.3	11.7	86.0	-94.11	384.3	21.2	433.1	338.2	94.86	4.566	
9,100.0	9,080.1	19,126.9	9,231.5	11.8	86.1	-93.00	388.5	21.2	350.5	255.4	95.14	3.685	
9,200.0	9,180.1	19,131.3	9,231.7	12.0	86.1	-91.85	392.9	21.2	279.5	184.3	95.21	2.936	
9,300.0	9,280.1	19,135.7	9,231.9	12.1	86.2	-90.69	397.4	21.2	231.0	136.2	94.73	2.438	
9,374.2	9,354.3	19,139.1	9,232.1	12.2	86.2	-89.80	400.8	21.2	218.8	124.3	94.51	2.315 CC, ES, SF	
9,400.0	9,380.1	19,140.3	9,232.1	12.2	86.2	-89.49	401.9	21.2	220.3	125.6	94.71	2.326	
9,500.0	9,480.1	19,145.0	9,232.4	12.3	86.2	-88.27	406.6	21.3	252.3	156.2	96.09	2.626	
9,600.0	9,580.1	19,149.7	9,232.6	12.4	86.3	-87.02	411.4	21.3	314.2	217.3	96.92	3.242	
9,700.0	9,680.1	19,154.6	9,232.8	12.6	86.3	-85.75	416.3	21.3	392.2	294.8	97.34	4.029	
9,800.0	9,780.1	19,159.6	9,233.1	12.7	86.4	-84.45	421.3	21.3	478.3	380.7	97.65	4.898	
9,900.0	9,880.1	19,164.7	9,233.3	12.8	86.4	-83.13	426.4	21.3	569.0	471.0	97.96	5.808	
10,000.0	9,980.1	19,170.0	9,233.6	12.9	86.4	-81.78	431.6	21.3	662.3	564.0	98.27	6.739	
10,100.0	10,080.1	19,175.3	9,233.8	13.1	86.5	-80.41	436.9	21.4	757.3	658.7	98.60	7.681	
10,200.0	10,180.1	19,180.8	9,234.1	13.2	86.5	-79.02	442.4	21.4	853.4	754.5	98.93	8.626	
10,300.0	10,280.1	19,186.4	9,234.4	13.3	86.6	-77.61	448.0	21.4	950.3	851.0	99.27	9.572	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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 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	1.0	1.0	3.0	3.0	-59.65	405.3	-692.2	802.1				
100.0	100.0	97.5	97.5	3.0	3.0	-59.64	405.6	-692.3	802.4	796.4	6.00	133.719	
200.0	200.0	196.8	196.8	3.0	3.0	-59.58	406.4	-692.3	802.8	796.8	6.01	133.682	
300.0	300.0	294.6	294.6	3.0	3.0	-59.51	407.5	-692.2	803.2	797.2	6.01	133.548	
400.0	400.0	399.7	399.7	3.0	3.0	-59.45	408.3	-691.9	803.4	797.4	6.03	133.276	
488.1	488.1	487.6	487.6	3.1	3.0	-59.40	408.9	-691.5	803.3	797.3	6.04	132.957	
500.0	500.0	499.0	499.0	3.1	3.0	-59.39	409.0	-691.4	803.3	797.3	6.04	132.910	
600.0	600.0	595.4	595.4	3.1	3.1	-59.33	409.9	-691.2	803.6	797.6	6.07	132.471	
700.0	700.0	695.3	695.3	3.1	3.1	-59.29	410.7	-691.4	804.2	798.1	6.10	131.901	
800.0	800.0	792.9	792.8	3.2	3.1	-59.23	411.7	-691.5	804.8	798.7	6.13	131.245	
900.0	900.0	889.1	889.0	3.2	3.2	-59.18	412.9	-692.1	805.9	799.8	6.17	130.519	
1,000.0	1,000.0	990.6	990.6	3.2	3.2	-59.15	413.8	-692.8	807.0	800.8	6.23	129.587	
1,100.0	1,100.0	1,089.6	1,089.5	3.3	3.3	-59.13	414.7	-693.6	808.2	801.9	6.29	128.534	
1,200.0	1,200.0	1,191.1	1,191.1	3.4	3.3	-59.09	415.7	-694.2	809.2	802.9	6.35	127.357	
1,300.0	1,300.0	1,287.4	1,287.3	3.4	3.4	-59.05	416.8	-695.1	810.6	804.2	6.43	126.147	
1,400.0	1,400.0	1,389.3	1,389.2	3.5	3.4	-59.01	418.0	-696.0	811.9	805.4	6.51	124.790	
1,500.0	1,500.0	1,487.0	1,486.9	3.5	3.5	-58.96	419.3	-696.8	813.3	806.7	6.59	123.423	
1,600.0	1,600.0	1,582.7	1,582.6	3.6	3.5	-58.91	420.8	-697.9	815.1	808.4	6.68	122.051	
1,700.0	1,700.0	1,684.5	1,684.4	3.7	3.6	-58.87	422.3	-699.3	817.1	810.3	6.78	120.543	
1,800.0	1,800.0	1,806.9	1,806.8	3.8	3.7	-58.80	423.9	-700.0	818.3	811.4	6.88	118.947	
1,900.0	1,900.0	1,907.9	1,907.7	3.9	3.7	-58.72	424.4	-698.5	817.4	810.5	6.92	118.040	
2,000.0	2,000.0	2,003.8	2,003.6	3.9	3.7	-58.64	425.0	-697.4	816.7	809.7	6.98	117.043	
2,100.0	2,100.0	2,100.0	2,099.8	4.0	3.8	-58.56	425.8	-696.5	816.3	809.3	7.04	115.918	
2,200.0	2,200.0	2,201.0	2,200.8	4.1	3.9	-58.49	426.6	-695.8	816.2	809.1	7.12	114.690	
2,300.0	2,300.0	2,299.8	2,299.6	4.2	3.9	-58.42	427.4	-695.3	816.1	808.9	7.20	113.412	
2,400.0	2,400.0	2,400.0	2,399.8	4.3	4.0	-58.36	428.2	-694.7	816.1	808.8	7.28	112.127	
2,500.0	2,500.0	2,500.9	2,500.7	4.4	4.1	-58.29	428.9	-694.2	816.0	808.6	7.36	110.827	
2,532.1	2,532.1	2,531.7	2,531.5	4.4	4.1	-89.25	429.1	-694.0	816.0	808.6	7.39	110.442	
2,600.0	2,600.0	2,599.1	2,598.9	4.5	4.2	-89.32	429.6	-693.8	816.0	808.6	7.44	109.695	
2,700.0	2,699.8	2,699.3	2,699.1	4.6	4.2	-89.67	429.8	-693.7	816.0	808.5	7.50	108.819	
2,704.0	2,703.9	2,703.2	2,703.0	4.6	4.2	-89.69	429.8	-693.7	816.0	808.5	7.50	108.777	
2,750.0	2,749.7	2,749.7	2,749.5	4.6	4.3	-89.95	429.8	-693.7	816.0	808.4	7.53	108.329	
2,758.0	2,757.6	2,757.3	2,757.1	4.6	4.3	-89.99	429.8	-693.7	816.0	808.4	7.54	108.262	
2,800.0	2,799.5	2,798.2	2,798.0	4.7	4.3	-90.25	429.8	-693.7	816.0	808.4	7.57	107.858	
2,900.0	2,899.1	2,899.3	2,899.1	4.8	4.3	-90.87	429.9	-693.9	816.3	808.6	7.64	106.772	
3,000.0	2,998.7	2,999.2	2,999.0	4.8	4.3	-91.49	429.7	-694.0	816.5	808.8	7.70	106.042	
3,100.0	3,098.4	3,102.8	3,102.6	4.9	4.3	-92.13	429.4	-693.7	816.4	808.7	7.73	105.634	
3,200.0	3,198.0	3,209.7	3,209.5	5.0	4.3	-92.76	429.2	-692.5	815.7	807.9	7.76	105.050	
3,300.0	3,297.6	3,315.0	3,314.7	5.1	4.3	-93.37	428.7	-690.7	814.3	806.5	7.81	104.310	
3,400.0	3,397.2	3,415.3	3,415.0	5.2	4.4	-93.94	428.3	-688.4	812.7	804.8	7.86	103.444	
3,500.0	3,496.8	3,519.2	3,518.9	5.3	4.4	-94.50	428.1	-685.5	810.8	802.9	7.91	102.442	
3,600.0	3,596.4	3,609.4	3,609.1	5.4	4.5	-94.98	428.1	-682.9	808.9	801.0	7.97	101.440	
3,625.9	3,622.2	3,628.3	3,627.9	5.4	4.5	-95.09	428.1	-682.7	808.8	800.8	7.99	101.241	
3,700.0	3,696.1	3,697.0	3,696.7	5.5	4.5	-95.50	428.0	-682.4	809.1	801.1	8.04	100.651	
3,800.0	3,795.7	3,795.3	3,795.0	5.6	4.6	-96.10	428.0	-682.3	809.9	801.8	8.11	99.809	
3,900.0	3,895.3	3,895.3	3,895.0	5.7	4.6	-96.73	427.8	-682.3	810.8	802.6	8.20	98.935	
4,000.0	3,994.9	4,010.9	4,010.6	5.8	4.6	-97.44	427.2	-681.4	811.0	802.7	8.28	97.901	
4,100.0	4,094.5	4,116.2	4,115.9	5.9	4.7	-98.08	426.4	-679.1	809.8	801.4	8.37	96.706	
4,200.0	4,194.2	4,227.4	4,227.0	6.0	4.7	-98.76	425.0	-675.9	808.0	799.5	8.48	95.327	
4,300.0	4,293.8	4,339.2	4,338.7	6.2	4.8	-99.46	422.7	-670.8	804.4	795.8	8.59	93.668	
4,400.0	4,393.4	4,430.5	4,429.8	6.3	4.8	-100.05	420.6	-666.5	800.6	791.9	8.69	92.150	
4,472.9	4,466.0	4,478.8	4,478.1	6.3	4.8	-100.39	419.5	-665.2	799.4	790.6	8.75	91.352 CC, ES	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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 #202H - OWB - AWP												Offset Well Error:	3.0 usft
Survey Program: 100-Standard Keeper 104, 8598-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
4,500.0	4,493.0	4,500.0	4,499.3	6.4	4.8	-100.54	419.1	-665.1	799.5	790.7	8.78	91.096	
4,600.0	4,592.6	4,591.8	4,591.1	6.5	4.8	-101.21	417.8	-665.6	801.1	792.2	8.88	90.241	
4,700.0	4,692.3	4,692.8	4,692.0	6.6	4.8	-101.93	416.3	-666.1	802.9	793.9	8.98	89.381	
4,800.0	4,791.9	4,791.5	4,790.7	6.7	4.8	-102.62	415.2	-666.4	804.6	795.6	9.09	88.498	
4,900.0	4,891.5	4,886.8	4,886.0	6.8	4.9	-103.05	417.2	-666.1	806.9	797.7	9.20	87.705	
5,000.0	4,991.1	4,975.0	4,974.1	6.9	5.0	-103.30	421.3	-665.7	809.9	800.6	9.31	86.990	
5,100.0	5,090.7	5,061.2	5,060.1	7.0	5.0	-103.50	426.3	-667.0	815.1	805.7	9.42	86.511	
5,200.0	5,190.4	5,141.1	5,139.8	7.2	5.1	-103.63	432.0	-669.0	821.7	812.2	9.54	86.120	
5,300.0	5,290.0	5,235.9	5,234.1	7.3	5.2	-103.63	441.6	-672.6	830.5	820.8	9.66	85.967	
5,400.0	5,389.6	5,333.3	5,330.9	7.4	5.3	-103.65	451.2	-676.6	839.3	829.6	9.78	85.825	
5,500.0	5,489.2	5,433.7	5,430.7	7.5	5.3	-103.68	460.9	-680.8	848.3	838.4	9.90	85.684	
5,600.0	5,588.8	5,534.6	5,531.1	7.6	5.4	-103.75	470.1	-685.2	857.2	847.1	10.02	85.517	
5,700.0	5,688.5	5,648.3	5,644.4	7.7	5.5	-103.89	479.2	-689.2	865.0	854.8	10.14	85.286	
5,800.0	5,788.1	5,751.5	5,747.3	7.9	5.6	-104.04	486.9	-692.2	872.0	861.8	10.27	84.909	
5,900.0	5,887.7	5,882.0	5,877.3	8.0	5.7	-104.05	498.0	-691.5	875.8	865.4	10.40	84.197	
6,000.0	5,987.3	5,970.0	5,964.8	8.1	5.8	-104.00	506.2	-690.5	879.6	869.0	10.54	83.483	
6,100.0	6,086.9	6,065.0	6,059.4	8.2	5.9	-103.89	516.3	-690.2	884.5	873.8	10.67	82.857	
6,200.0	6,186.6	6,163.4	6,157.2	8.3	6.0	-103.76	527.1	-690.2	889.8	879.0	10.82	82.272	
6,300.0	6,286.2	6,261.1	6,254.2	8.4	6.1	-103.65	537.7	-690.4	895.3	884.3	10.96	81.699	
6,400.0	6,385.8	6,360.0	6,352.6	8.6	6.2	-103.56	548.0	-691.0	901.0	889.9	11.10	81.144	
6,500.0	6,485.4	6,457.5	6,449.6	8.7	6.3	-103.53	557.5	-691.8	906.8	895.6	11.25	80.598	
6,600.0	6,585.0	6,560.0	6,551.8	8.8	6.4	-103.54	566.7	-692.9	912.5	901.1	11.40	80.058	
6,700.0	6,684.7	6,660.7	6,652.1	8.9	6.5	-103.61	574.8	-694.1	918.1	906.6	11.55	79.505	
6,800.0	6,784.3	6,758.0	6,749.1	9.0	6.6	-103.70	582.3	-695.4	923.7	912.0	11.70	78.949	
6,900.0	6,883.9	6,849.8	6,840.5	9.2	6.7	-103.76	590.1	-697.3	930.2	918.4	11.86	78.446	
7,000.0	6,983.5	6,943.9	6,934.3	9.3	6.8	-103.83	598.1	-699.8	937.3	925.3	12.02	77.989	
7,100.0	7,083.1	7,039.4	7,029.4	9.4	6.9	-103.93	605.6	-702.8	944.7	932.6	12.18	77.558	
7,200.0	7,182.7	7,131.5	7,121.0	9.5	7.0	-103.89	615.4	-705.7	953.0	940.6	12.35	77.152	
7,300.0	7,282.4	7,235.9	7,224.6	9.6	7.1	-103.77	627.6	-709.0	961.5	949.0	12.51	76.838	
7,400.0	7,382.0	7,338.3	7,326.4	9.8	7.2	-103.75	638.1	-712.1	969.5	956.8	12.68	76.471	
7,500.0	7,481.6	7,441.1	7,428.6	9.9	7.3	-103.75	648.0	-715.0	977.1	964.3	12.84	76.076	
7,600.0	7,581.2	7,540.2	7,527.3	10.0	7.4	-103.80	656.8	-717.8	984.6	971.5	13.02	75.648	
7,700.0	7,680.8	7,646.2	7,632.9	10.1	7.5	-103.89	665.4	-720.8	991.7	978.6	13.18	75.242	
7,727.0	7,707.7	7,672.8	7,659.5	10.2	7.6	-103.92	667.4	-721.5	993.6	980.4	13.23	75.118	
7,800.0	7,780.5	7,751.1	7,737.5	10.3	7.7	-104.03	673.3	-723.6	998.5	985.1	13.35	74.807	
8,900.0	8,880.1	9,015.5	8,960.6	11.6	8.8	-78.47	598.8	-734.0	997.3	982.3	15.01	66.442	
9,000.0	8,980.1	9,111.4	9,029.2	11.7	9.0	-82.32	532.2	-740.6	990.7	975.4	15.24	65.022	
9,098.4	9,078.5	9,191.9	9,078.0	11.8	9.1	-86.02	468.5	-745.5	987.9	972.3	15.59	63.378	
9,100.0	9,080.1	9,192.9	9,078.5	11.8	9.1	-86.07	467.7	-745.6	987.9	972.3	15.59	63.352	
9,200.0	9,180.1	9,247.4	9,106.6	12.0	9.1	-88.78	421.0	-748.7	991.7	975.5	16.12	61.508	
9,300.0	9,280.1	9,386.3	9,177.8	12.1	9.3	-95.66	302.0	-749.7	999.8	982.5	17.24	57.986 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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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	9,580.1	19,845.3	10,048.0	12.4	86.3	88.77	417.2	1,040.1	993.7	897.0	96.72	10.274		
9,700.0	9,680.1	19,841.8	10,048.1	12.6	86.2	89.02	413.7	1,040.1	937.9	841.3	96.56	9.713		
9,800.0	9,780.1	19,838.6	10,048.2	12.7	86.2	89.25	410.5	1,040.1	889.8	793.6	96.28	9.242		
9,900.0	9,880.1	19,835.5	10,048.3	12.8	86.2	89.47	407.4	1,040.1	850.8	755.0	95.89	8.874		
10,000.0	9,980.1	19,832.6	10,048.4	12.9	86.1	89.68	404.5	1,040.1	822.2	726.8	95.44	8.615		
10,100.0	10,080.1	19,830.0	10,048.4	13.1	86.1	89.86	401.9	1,040.1	805.1	710.0	95.05	8.470		
10,189.5	10,169.6	19,830.0	10,048.4	13.2	86.1	89.86	401.9	1,040.1	800.1	705.2	94.92	8.429 CC, ES, SF		
10,200.0	10,180.1	19,830.0	10,048.4	13.2	86.1	89.86	401.9	1,040.1	800.1	705.2	94.92	8.430		
10,300.0	10,280.1	19,825.2	10,048.6	13.3	86.1	90.21	397.1	1,040.1	807.7	712.6	95.07	8.496		
10,400.0	10,380.1	19,823.0	10,048.6	13.4	86.1	90.36	394.9	1,040.1	827.3	731.7	95.56	8.657		
10,500.0	10,480.1	19,821.0	10,048.7	13.6	86.0	90.51	392.9	1,040.1	858.2	761.9	96.26	8.915		
10,600.0	10,580.1	19,819.0	10,048.7	13.7	86.0	90.65	390.9	1,040.1	899.2	802.1	97.02	9.267		
10,700.0	10,680.1	19,817.2	10,048.7	13.8	86.0	90.78	389.0	1,040.1	949.0	851.2	97.78	9.705		

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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 #303H - OWB - AWP												Offset Well Error:	3.0 usft
Survey Program: 100-Standard Keeper 104, 8315-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	8,280.1	18,888.7	9,078.0	10.9	86.2	83.63	424.9	463.2	949.5	856.0	93.49	10.155	
8,400.0	8,380.1	18,886.7	9,078.0	11.0	86.2	84.14	422.9	463.2	852.6	758.9	93.77	9.093	
8,500.0	8,480.1	18,884.6	9,078.1	11.1	86.2	84.67	420.8	463.2	756.6	662.6	94.05	8.045	
8,600.0	8,580.1	18,882.4	9,078.1	11.2	86.2	85.23	418.6	463.2	661.8	567.4	94.34	7.015	
8,700.0	8,680.1	18,880.1	9,078.2	11.3	86.1	85.82	416.3	463.3	568.7	474.0	94.64	6.009	
8,800.0	8,780.1	18,877.7	9,078.2	11.5	86.1	86.44	413.9	463.3	478.4	383.4	94.95	5.038	
8,900.0	8,880.1	18,875.1	9,078.3	11.6	86.1	87.09	411.3	463.3	392.8	297.5	95.26	4.123	
9,000.0	8,980.1	18,872.4	9,078.4	11.7	86.1	87.78	408.7	463.3	315.7	220.2	95.47	3.307	
9,100.0	9,080.1	18,869.6	9,078.5	11.8	86.1	88.50	405.8	463.4	255.1	159.8	95.26	2.678	
9,200.0	9,180.1	18,866.6	9,078.6	12.0	86.0	89.26	402.9	463.4	224.6	130.2	94.41	2.379	
9,223.2	9,203.3	18,865.9	9,078.6	12.0	86.0	89.45	402.2	463.4	223.4	129.1	94.30	2.369	CC, ES, SF
9,300.0	9,280.1	18,863.5	9,078.6	12.1	86.0	90.07	399.7	463.4	236.2	141.5	94.75	2.493	
9,400.0	9,380.1	18,860.2	9,078.8	12.2	86.0	90.93	396.4	463.5	284.9	189.2	95.72	2.976	
9,500.0	9,480.1	18,856.6	9,078.9	12.3	85.9	91.83	392.8	463.5	355.6	259.4	96.26	3.694	
9,600.0	9,580.1	18,852.8	9,079.0	12.4	85.9	92.80	389.1	463.5	437.9	341.3	96.61	4.533	
9,700.0	9,680.1	18,849.1	9,079.1	12.6	85.9	93.75	385.3	463.5	526.3	429.4	96.90	5.432	
9,800.0	9,780.1	18,845.6	9,079.2	12.7	85.8	94.65	381.8	463.6	618.3	521.1	97.18	6.362	
9,900.0	9,880.1	18,842.1	9,079.4	12.8	85.8	95.54	378.3	463.6	712.4	614.9	97.47	7.309	
10,000.0	9,980.1	18,838.6	9,079.5	12.9	85.8	96.41	374.9	463.6	807.9	710.1	97.76	8.264	
10,100.0	10,080.1	18,835.2	9,079.6	13.1	85.8	97.28	371.4	463.6	904.4	806.3	98.04	9.224	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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 #304H - OWB - AWP													Offset Well Error:	3.0 usft
Survey Program: 100-Standard Keeper 104, 9409-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	
9,400.0	9,380.1	20,054.3	10,005.0	12.2	87.7	-82.90	466.7	-296.0	918.8	820.8	97.96	9.380		
9,500.0	9,480.1	20,048.8	10,005.3	12.3	87.7	-83.48	461.3	-296.2	840.0	741.9	98.03	8.568		
9,600.0	9,580.1	20,043.0	10,005.7	12.4	87.6	-84.09	455.5	-296.4	766.0	668.0	98.02	7.815		
9,700.0	9,680.1	20,036.9	10,006.1	12.6	87.6	-84.74	449.4	-296.6	698.5	600.6	97.88	7.136		
9,800.0	9,780.1	20,030.4	10,006.6	12.7	87.5	-85.43	443.0	-296.8	639.5	542.0	97.56	6.555		
9,900.0	9,880.1	20,023.5	10,007.1	12.8	87.5	-86.16	436.1	-297.1	591.6	494.6	97.02	6.097		
10,000.0	9,980.1	20,016.2	10,007.6	12.9	87.4	-86.93	428.8	-297.3	557.5	461.2	96.37	5.785		
10,100.0	10,080.1	20,008.3	10,008.3	13.1	87.3	-87.77	420.9	-297.6	540.0	444.1	95.91	5.630		
10,146.9	10,127.0	20,004.4	10,008.6	13.1	87.3	-88.19	417.0	-297.7	538.0	442.1	95.90	5.610	CC, ES, SF	
10,200.0	10,180.1	20,000.0	10,008.9	13.2	87.3	-88.65	412.7	-297.8	540.6	444.5	96.08	5.626		
10,300.0	10,280.1	19,992.1	10,009.5	13.3	87.2	-89.49	404.8	-298.1	559.2	462.3	96.86	5.773		
10,400.0	10,380.1	19,984.5	10,010.1	13.4	87.1	-90.30	397.2	-298.3	594.2	496.3	97.87	6.072		
10,500.0	10,480.1	19,977.2	10,010.6	13.6	87.1	-91.07	389.9	-298.5	642.9	544.1	98.80	6.507		
10,600.0	10,580.1	19,970.2	10,011.1	13.7	87.0	-91.81	382.9	-298.7	702.5	602.9	99.59	7.054		
10,700.0	10,680.1	19,963.5	10,011.6	13.8	86.9	-92.52	376.2	-298.9	770.5	670.2	100.24	7.686		
10,800.0	10,780.1	19,957.0	10,012.0	13.9	86.9	-93.21	369.8	-299.1	844.7	743.9	100.79	8.381		
10,900.0	10,880.1	19,950.8	10,012.4	14.1	86.8	-93.86	363.6	-299.2	923.8	822.6	101.27	9.122		

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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	8,880.1	19,454.6	9,473.5	11.6	87.2	-91.73	380.6	-402.5	958.7	862.6	96.14	9.973	
9,000.0	8,980.1	19,456.8	9,473.6	11.7	87.2	-91.53	382.8	-402.5	887.1	790.8	96.32	9.210	
9,100.0	9,080.1	19,462.0	9,473.7	11.8	87.2	-91.07	388.0	-402.6	821.4	724.9	96.46	8.515	
9,200.0	9,180.1	19,462.0	9,473.7	12.0	87.2	-91.07	388.0	-402.6	763.1	666.7	96.44	7.913	
9,300.0	9,280.1	19,464.3	9,473.8	12.1	87.3	-90.87	390.3	-402.6	714.2	617.9	96.32	7.415	
9,400.0	9,380.1	19,467.1	9,473.8	12.2	87.3	-90.62	393.0	-402.6	676.6	580.5	96.09	7.041	
9,500.0	9,480.1	19,469.7	9,473.9	12.3	87.3	-90.38	395.7	-402.6	652.2	556.4	95.85	6.805	
9,600.0	9,580.1	19,472.3	9,473.9	12.4	87.3	-90.15	398.3	-402.6	642.7	546.9	95.79	6.710	
9,611.7	9,591.9	19,472.6	9,474.0	12.5	87.3	-90.13	398.6	-402.6	642.6	546.8	95.80	6.707	CC, ES, SF
9,700.0	9,680.1	19,474.7	9,474.0	12.6	87.4	-89.93	400.7	-402.6	648.6	552.5	96.07	6.752	
9,800.0	9,780.1	19,477.1	9,474.1	12.7	87.4	-89.72	403.1	-402.6	669.6	572.9	96.64	6.929	
9,900.0	9,880.1	19,479.4	9,474.1	12.8	87.4	-89.52	405.3	-402.6	704.2	606.9	97.32	7.236	
10,000.0	9,980.1	19,481.5	9,474.2	12.9	87.4	-89.33	407.5	-402.6	750.7	652.7	97.99	7.661	
10,100.0	10,080.1	19,483.6	9,474.2	13.1	87.4	-89.14	409.6	-402.6	807.0	708.4	98.59	8.185	
10,200.0	10,180.1	19,485.6	9,474.2	13.2	87.4	-88.97	411.6	-402.6	871.1	772.0	99.13	8.787	
10,300.0	10,280.1	19,487.5	9,474.3	13.3	87.5	-88.79	413.5	-402.6	941.5	841.9	99.61	9.452	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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	146.19	-44.8	30.0	53.9				
100.0	100.0	99.5	99.5	3.0	3.0	146.19	-44.8	30.0	53.9	47.9	6.00	8.985	
200.0	200.0	199.5	199.5	3.0	3.0	146.19	-44.8	30.0	53.9	47.9	6.01	8.974	
300.0	300.0	299.5	299.5	3.0	3.0	146.19	-44.8	30.0	53.9	47.9	6.02	8.949	
400.0	400.0	399.5	399.5	3.0	3.0	146.19	-44.8	30.0	53.9	47.9	6.05	8.912	
500.0	500.0	499.5	499.5	3.1	3.1	146.19	-44.8	30.0	53.9	47.8	6.08	8.861	
600.0	600.0	599.5	599.5	3.1	3.1	146.19	-44.8	30.0	53.9	47.8	6.13	8.799	
700.0	700.0	699.5	699.5	3.1	3.1	146.19	-44.8	30.0	53.9	47.7	6.18	8.726	
800.0	800.0	799.5	799.5	3.2	3.2	146.19	-44.8	30.0	53.9	47.7	6.24	8.643	
900.0	900.0	899.5	899.5	3.2	3.2	146.19	-44.8	30.0	53.9	47.6	6.31	8.550	
1,000.0	1,000.0	999.5	999.5	3.2	3.2	146.19	-44.8	30.0	53.9	47.5	6.38	8.449	
1,100.0	1,100.0	1,099.5	1,099.5	3.3	3.3	146.19	-44.8	30.0	53.9	47.5	6.46	8.341	
1,200.0	1,200.0	1,199.5	1,199.5	3.4	3.4	146.19	-44.8	30.0	53.9	47.4	6.55	8.226	
1,300.0	1,300.0	1,299.5	1,299.5	3.4	3.4	146.19	-44.8	30.0	53.9	47.3	6.65	8.106	
1,400.0	1,400.0	1,399.5	1,399.5	3.5	3.5	146.19	-44.8	30.0	53.9	47.2	6.75	7.982	
1,500.0	1,500.0	1,499.5	1,499.5	3.5	3.5	146.19	-44.8	30.0	53.9	47.1	6.86	7.854	
1,600.0	1,600.0	1,599.5	1,599.5	3.6	3.6	146.19	-44.8	30.0	53.9	46.9	6.98	7.724	
1,700.0	1,700.0	1,699.5	1,699.5	3.7	3.7	146.19	-44.8	30.0	53.9	46.8	7.10	7.592	
1,800.0	1,800.0	1,799.5	1,799.5	3.8	3.8	146.19	-44.8	30.0	53.9	46.7	7.23	7.458	
1,900.0	1,900.0	1,899.5	1,899.5	3.9	3.9	146.19	-44.8	30.0	53.9	46.6	7.36	7.324	
2,000.0	2,000.0	1,999.5	1,999.5	3.9	3.9	146.19	-44.8	30.0	53.9	46.4	7.50	7.190	
2,100.0	2,100.0	2,099.5	2,099.5	4.0	4.0	146.19	-44.8	30.0	53.9	46.3	7.64	7.057	
2,200.0	2,200.0	2,199.5	2,199.5	4.1	4.1	146.19	-44.8	30.0	53.9	46.1	7.79	6.925	
2,300.0	2,300.0	2,299.5	2,299.5	4.2	4.2	146.19	-44.8	30.0	53.9	46.0	7.94	6.794	
2,400.0	2,400.0	2,399.5	2,399.5	4.3	4.3	146.19	-44.8	30.0	53.9	45.8	8.09	6.664	
2,500.0	2,500.0	2,499.5	2,499.5	4.4	4.4	146.19	-44.8	30.0	53.9	45.7	8.25	6.537 CC, ES, SF	
2,600.0	2,600.0	2,599.0	2,599.0	4.5	4.5	115.11	-44.2	31.6	55.1	46.7	8.36	6.587	
2,700.0	2,699.8	2,698.5	2,698.3	4.6	4.5	114.76	-42.4	36.5	58.5	50.1	8.42	6.950	
2,750.0	2,749.7	2,748.2	2,747.9	4.6	4.5	114.51	-41.1	40.1	61.1	52.7	8.45	7.233	
2,800.0	2,799.5	2,797.8	2,797.3	4.7	4.6	113.94	-39.5	44.5	64.1	55.7	8.47	7.573	
2,900.0	2,899.1	2,897.6	2,896.5	4.8	4.6	112.20	-35.9	54.3	70.4	62.0	8.48	8.305	
3,000.0	2,998.7	2,997.4	2,995.7	4.8	4.7	110.74	-32.4	64.1	76.8	68.3	8.50	9.033	
3,100.0	3,098.4	3,097.1	3,095.0	4.9	4.8	109.51	-28.8	73.9	83.2	74.6	8.52	9.754	
3,200.0	3,198.0	3,196.9	3,194.2	5.0	4.8	108.45	-25.2	83.7	89.6	81.0	8.56	10.467	
3,300.0	3,297.6	3,296.7	3,293.4	5.1	4.9	107.54	-21.7	93.5	96.0	87.4	8.60	11.168	
3,400.0	3,397.2	3,396.5	3,392.7	5.2	5.0	106.74	-18.1	103.3	102.5	93.8	8.64	11.857	
3,500.0	3,496.8	3,496.3	3,491.9	5.3	5.0	106.03	-14.5	113.1	109.0	100.3	8.69	12.532	
3,600.0	3,596.4	3,596.0	3,591.1	5.4	5.1	105.41	-11.0	122.9	115.4	106.7	8.75	13.192	
3,700.0	3,696.1	3,695.8	3,690.4	5.5	5.2	104.85	-7.4	132.7	122.0	113.1	8.81	13.837	
3,800.0	3,795.7	3,795.6	3,789.6	5.6	5.3	104.34	-3.8	142.5	128.5	119.6	8.88	14.466	
3,900.0	3,895.3	3,895.4	3,888.8	5.7	5.4	103.89	-0.3	152.3	135.0	126.0	8.95	15.077	
4,000.0	3,994.9	3,995.2	3,988.1	5.8	5.5	103.48	3.3	162.1	141.5	132.5	9.03	15.671	
4,100.0	4,094.5	4,095.0	4,087.3	5.9	5.5	103.10	6.9	171.9	148.1	139.0	9.11	16.248	
4,200.0	4,194.2	4,194.7	4,186.5	6.0	5.6	102.76	10.4	181.7	154.6	145.4	9.20	16.806	
4,300.0	4,293.8	4,294.5	4,285.8	6.2	5.7	102.44	14.0	191.5	161.2	151.9	9.29	17.346	
4,400.0	4,393.4	4,394.3	4,385.0	6.3	5.8	102.15	17.6	201.3	167.7	158.3	9.39	17.869	
4,500.0	4,493.0	4,494.1	4,484.3	6.4	5.9	101.88	21.1	211.1	174.3	164.8	9.49	18.373	
4,600.0	4,592.6	4,593.9	4,583.5	6.5	6.0	101.63	24.7	220.9	180.9	171.3	9.59	18.858	
4,700.0	4,692.3	4,693.6	4,682.7	6.6	6.1	101.40	28.3	230.7	187.4	177.7	9.70	19.326	
4,800.0	4,791.9	4,793.4	4,782.0	6.7	6.2	101.18	31.8	240.6	194.0	184.2	9.81	19.776	
4,900.0	4,891.5	4,893.2	4,881.2	6.8	6.3	100.98	35.4	250.4	200.6	190.6	9.92	20.209	
5,000.0	4,991.1	4,993.0	4,980.4	6.9	6.4	100.79	39.0	260.2	207.1	197.1	10.04	20.624	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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	
5,100.0	5,090.7	5,092.8	5,079.7	7.0	6.5	100.61	42.5	270.0	213.7	203.5	10.17	21.023	
5,200.0	5,190.4	5,192.5	5,178.9	7.2	6.6	100.45	46.1	279.8	220.3	210.0	10.29	21.404	
5,300.0	5,290.0	5,292.3	5,278.1	7.3	6.7	100.29	49.7	289.6	226.9	216.4	10.42	21.770	
5,400.0	5,389.6	5,392.1	5,377.4	7.4	6.8	100.14	53.2	299.4	233.5	222.9	10.55	22.119	
5,500.0	5,489.2	5,491.9	5,476.6	7.5	6.9	100.00	56.8	309.2	240.0	229.3	10.69	22.454	
5,600.0	5,588.8	5,591.7	5,575.8	7.6	7.0	99.87	60.4	319.0	246.6	235.8	10.83	22.773	
5,700.0	5,688.5	5,691.5	5,675.1	7.7	7.1	99.74	63.9	328.8	253.2	242.2	10.97	23.077	
5,800.0	5,788.1	5,791.2	5,774.3	7.9	7.2	99.62	67.5	338.6	259.8	248.7	11.12	23.368	
5,900.0	5,887.7	5,891.0	5,873.5	8.0	7.3	99.51	71.1	348.4	266.4	255.1	11.27	23.645	
6,000.0	5,987.3	5,990.8	5,972.8	8.1	7.5	99.40	74.6	358.2	273.0	261.6	11.42	23.908	
6,100.0	6,086.9	6,090.6	6,072.0	8.2	7.6	99.30	78.2	368.0	279.6	268.0	11.57	24.159	
6,200.0	6,186.6	6,190.4	6,171.2	8.3	7.7	99.20	81.8	377.8	286.2	274.4	11.73	24.397	
6,300.0	6,286.2	6,290.1	6,270.5	8.4	7.8	99.10	85.3	387.6	292.7	280.9	11.89	24.623	
6,400.0	6,385.8	6,389.9	6,369.7	8.6	7.9	99.01	88.9	397.4	299.3	287.3	12.05	24.838	
6,500.0	6,485.4	6,489.7	6,468.9	8.7	8.0	98.93	92.5	407.2	305.9	293.7	12.22	25.042	
6,600.0	6,585.0	6,589.5	6,568.2	8.8	8.1	98.85	96.0	417.0	312.5	300.1	12.38	25.235	
6,700.0	6,684.7	6,689.3	6,667.4	8.9	8.2	98.77	99.6	426.8	319.1	306.6	12.55	25.418	
6,800.0	6,784.3	6,789.1	6,766.7	9.0	8.4	98.69	103.2	436.6	325.7	313.0	12.73	25.591	
6,900.0	6,883.9	6,888.8	6,865.9	9.2	8.5	98.62	106.7	446.4	332.3	319.4	12.90	25.755	
7,000.0	6,983.5	6,988.6	6,965.1	9.3	8.6	98.55	110.3	456.2	338.9	325.8	13.08	25.909	
7,100.0	7,083.1	7,088.4	7,064.4	9.4	8.7	98.48	113.9	466.0	345.5	332.2	13.26	26.055	
7,200.0	7,182.7	7,188.2	7,163.6	9.5	8.8	98.42	117.4	475.8	352.1	338.7	13.44	26.193	
7,300.0	7,282.4	7,288.0	7,262.8	9.6	8.9	98.35	121.0	485.6	358.7	345.1	13.63	26.322	
7,400.0	7,382.0	7,387.7	7,362.1	9.8	9.1	98.29	124.6	495.4	365.3	351.5	13.81	26.444	
7,500.0	7,481.6	7,487.5	7,461.3	9.9	9.2	98.24	128.2	505.2	371.9	357.9	14.00	26.558	
7,600.0	7,581.2	7,587.3	7,560.5	10.0	9.3	98.18	131.7	515.0	378.5	364.3	14.19	26.666	
7,700.0	7,680.8	7,687.1	7,659.8	10.1	9.4	98.13	135.3	524.8	385.1	370.7	14.39	26.767	
7,727.0	7,707.7	7,714.0	7,686.5	10.2	9.4	98.11	136.2	527.4	386.9	372.4	14.44	26.793	
7,800.0	7,780.5	7,786.9	7,759.0	10.3	9.5	98.05	138.9	534.6	391.6	377.0	14.58	26.865	
7,900.0	7,880.3	7,886.6	7,858.2	10.4	9.7	97.76	142.4	544.4	397.9	383.2	14.75	26.971	
8,000.0	7,980.2	7,986.4	7,957.4	10.5	9.8	97.23	146.0	554.2	404.0	389.1	14.91	27.102	
8,100.0	8,080.1	8,086.0	8,056.5	10.6	9.9	96.48	149.5	564.0	410.0	394.9	15.04	27.251	
8,200.0	8,180.1	8,185.6	8,155.5	10.7	10.0	95.50	153.1	573.7	415.8	400.7	15.18	27.400	
8,227.0	8,207.1	8,212.4	8,182.2	10.8	10.0	126.17	154.1	576.4	417.4	402.2	15.21	27.436	
8,300.0	8,280.1	8,285.0	8,254.4	10.9	10.1	125.31	156.7	583.5	421.7	406.4	15.32	27.524	
8,400.0	8,380.1	8,384.5	8,353.3	11.0	10.3	124.17	160.2	593.3	427.8	412.3	15.47	27.644	
8,500.0	8,480.1	8,483.9	8,452.2	11.1	10.4	123.05	163.8	603.0	434.0	418.4	15.63	27.765	
8,600.0	8,580.1	8,583.4	8,551.2	11.2	10.5	121.97	167.3	612.8	440.4	424.6	15.79	27.886	
8,700.0	8,680.1	8,682.8	8,650.1	11.3	10.6	120.92	170.9	622.6	446.9	431.0	15.96	28.006	
8,800.0	8,780.1	8,782.3	8,749.0	11.5	10.7	119.89	174.4	632.4	453.6	437.5	16.13	28.126	
8,900.0	8,880.1	8,881.7	8,847.9	11.6	10.9	118.90	178.0	642.1	460.4	444.1	16.30	28.246	
9,000.0	8,980.1	8,981.2	8,946.8	11.7	11.0	117.94	181.6	651.9	467.4	450.9	16.48	28.365	
9,100.0	9,080.1	9,080.6	9,045.7	11.8	11.1	117.01	185.1	661.7	474.5	457.8	16.66	28.484	
9,200.0	9,180.1	9,180.1	9,144.6	12.0	11.2	116.10	188.7	671.4	481.7	464.8	16.84	28.603	
9,300.0	9,280.1	9,279.5	9,243.5	12.1	11.4	115.22	192.2	681.2	489.0	472.0	17.03	28.721	
9,400.0	9,380.1	9,379.0	9,342.4	12.2	11.5	114.36	195.8	691.0	496.5	479.2	17.21	28.839	
9,500.0	9,480.1	9,478.5	9,441.3	12.3	11.6	113.54	199.3	700.7	504.0	486.6	17.41	28.956	
9,600.0	9,580.1	9,577.9	9,540.2	12.4	11.7	112.73	202.9	710.5	511.6	494.0	17.60	29.073	
9,700.0	9,680.1	9,677.4	9,639.1	12.6	11.9	111.95	206.4	720.3	519.4	501.6	17.79	29.189	
9,800.0	9,780.1	9,776.8	9,738.0	12.7	12.0	111.19	210.0	730.0	527.2	509.2	17.99	29.305	
9,900.0	9,880.1	9,876.3	9,836.9	12.8	12.1	110.46	213.5	739.8	535.2	517.0	18.19	29.420	
10,000.0	9,980.1	9,975.7	9,935.9	12.9	12.2	109.74	217.1	749.6	543.2	524.8	18.39	29.534	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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
10,100.0	10,080.1	10,075.2	10,034.8	13.1	12.4	109.05	220.7	759.3	551.3	532.7	18.59	29.648	
10,200.0	10,180.1	10,174.6	10,133.7	13.2	12.5	108.38	224.2	769.1	559.4	540.6	18.80	29.762	
10,300.0	10,280.1	10,274.1	10,232.6	13.3	12.6	107.72	227.8	778.9	567.7	548.7	19.00	29.875	
10,400.0	10,380.1	10,373.5	10,331.5	13.4	12.7	107.09	231.3	788.7	576.0	556.8	19.21	29.987	
10,500.0	10,480.1	10,473.0	10,430.4	13.6	12.9	106.47	234.9	798.4	584.4	565.0	19.42	30.098	
10,600.0	10,580.1	10,572.4	10,529.3	13.7	13.0	105.87	238.4	808.2	592.9	573.2	19.62	30.209	
10,700.0	10,680.1	10,671.9	10,628.2	13.8	13.1	105.29	242.0	818.0	601.4	581.5	19.83	30.319	
10,800.0	10,780.1	10,771.3	10,727.1	13.9	13.3	104.72	245.5	827.7	609.9	589.9	20.04	30.429	
10,900.0	10,880.1	10,870.8	10,826.0	14.1	13.4	104.17	249.1	837.5	618.6	598.3	20.26	30.538	
11,000.0	10,980.1	10,970.2	10,924.9	14.2	13.5	103.64	252.7	847.3	627.3	606.8	20.47	30.646	
11,100.0	11,080.1	11,069.7	11,023.8	14.3	13.6	103.12	256.2	857.0	636.0	615.3	20.68	30.754	
11,200.0	11,180.1	11,169.1	11,122.7	14.4	13.8	102.61	259.8	866.8	644.8	623.9	20.89	30.860	
11,300.0	11,280.1	11,268.6	11,221.7	14.6	13.9	102.12	263.3	876.6	653.7	632.5	21.11	30.966	
11,400.0	11,380.1	11,368.0	11,320.6	14.7	14.0	101.64	266.9	886.3	662.5	641.2	21.32	31.072	
11,500.0	11,480.1	11,467.5	11,419.5	14.8	14.2	101.17	270.4	896.1	671.5	649.9	21.54	31.176	
11,600.0	11,580.1	11,566.9	11,518.4	14.9	14.3	100.72	274.0	905.9	680.5	658.7	21.75	31.280	
11,700.0	11,680.1	11,666.4	11,617.3	15.1	14.4	100.27	277.5	915.6	689.5	667.5	21.97	31.383	
11,800.0	11,780.1	11,765.9	11,716.2	15.2	14.6	99.84	281.1	925.4	698.5	676.3	22.19	31.485	
11,850.4	11,830.5	11,816.0	11,766.0	15.2	14.6	99.63	282.9	930.3	703.1	680.8	22.36	31.452	
11,875.0	11,855.1	11,840.4	11,790.3	15.2	14.6	-94.60	283.8	932.7	705.4	683.0	22.39	31.512	
11,900.0	11,880.0	11,865.1	11,814.9	15.2	14.7	-94.57	284.7	935.2	707.9	685.4	22.42	31.567	
11,925.0	11,904.8	11,889.5	11,839.2	15.2	14.7	-94.61	285.5	937.6	710.4	687.9	22.47	31.617	
11,950.0	11,929.4	11,908.4	11,858.0	15.2	14.7	-94.63	286.2	939.4	713.1	690.6	22.56	31.609	
11,975.0	11,953.7	11,925.0	11,874.5	15.2	14.7	-94.61	286.5	941.1	716.2	693.6	22.68	31.588	
12,000.0	11,977.7	11,939.1	11,888.5	15.3	14.7	-94.50	286.4	942.8	719.9	697.0	22.83	31.533	
12,025.0	12,001.2	11,950.0	11,899.3	15.3	14.7	-94.27	286.0	944.1	724.0	700.9	23.04	31.418	
12,050.0	12,024.3	11,966.5	11,915.6	15.3	14.7	-94.15	285.0	946.4	728.6	705.4	23.20	31.407	
12,075.0	12,046.9	11,975.0	11,924.0	15.3	14.7	-93.77	284.3	947.6	733.7	710.2	23.49	31.238	
12,100.0	12,068.9	11,993.4	11,942.1	15.3	14.7	-93.66	282.2	950.4	739.3	715.6	23.62	31.296	
12,125.0	12,090.2	12,006.8	11,955.1	15.3	14.7	-93.35	280.3	952.6	745.3	721.5	23.85	31.257	
12,150.0	12,110.8	12,020.0	11,967.9	15.3	14.7	-92.99	278.1	954.9	751.9	727.8	24.07	31.232	
12,175.0	12,130.7	12,033.0	11,980.5	15.4	14.7	-92.60	275.5	957.3	758.9	734.5	24.30	31.226	
12,200.0	12,149.7	12,050.0	11,996.7	15.4	14.7	-92.31	271.7	960.6	766.3	741.9	24.45	31.346	
12,225.0	12,167.8	12,058.7	12,005.0	15.4	14.7	-91.67	269.6	962.3	774.2	749.4	24.75	31.278	
12,250.0	12,185.1	12,075.0	12,020.3	15.4	14.7	-91.29	265.2	965.8	782.5	757.6	24.89	31.435	
12,275.0	12,201.3	12,083.8	12,028.5	15.4	14.7	-90.56	262.6	967.7	791.2	766.0	25.18	31.426	
12,300.0	12,216.5	12,100.0	12,043.4	15.5	14.7	-90.11	257.5	971.3	800.3	775.0	25.30	31.640	
12,325.0	12,230.7	12,108.3	12,050.9	15.5	14.7	-89.26	254.7	973.3	809.8	784.3	25.56	31.679	
12,350.0	12,243.8	12,120.3	12,061.7	15.5	14.7	-88.55	250.4	976.1	819.7	794.0	25.74	31.846	
12,375.0	12,255.7	12,132.1	12,072.3	15.5	14.7	-87.78	245.9	979.0	829.9	804.0	25.90	32.039	
12,400.0	12,266.5	12,143.7	12,082.5	15.5	14.8	-86.98	241.3	982.0	840.5	814.5	26.06	32.258	
12,425.0	12,276.1	12,155.1	12,092.4	15.6	14.8	-86.12	236.5	984.9	851.4	825.2	26.19	32.502	
12,450.0	12,284.5	12,166.3	12,102.0	15.6	14.8	-85.22	231.5	987.9	862.6	836.3	26.32	32.770	
12,475.0	12,291.6	12,175.0	12,109.4	15.6	14.8	-84.16	227.6	990.2	874.0	847.6	26.48	33.010	
12,500.0	12,297.4	12,188.1	12,120.3	15.6	14.8	-83.30	221.3	993.9	885.8	859.2	26.54	33.371	
12,525.0	12,302.0	12,200.0	12,130.1	15.6	14.8	-82.35	215.4	997.2	897.7	871.1	26.62	33.729	
12,550.0	12,305.3	12,209.0	12,137.4	15.6	14.8	-81.22	210.8	999.8	909.9	883.2	26.72	34.048	
12,575.0	12,307.3	12,219.0	12,145.4	15.6	14.8	-80.12	205.5	1,002.8	922.3	895.5	26.80	34.410	
12,601.0	12,308.0	12,229.2	12,153.4	15.7	14.8	-78.94	200.0	1,005.8	935.4	908.5	26.88	34.799	
12,700.0	12,307.8	12,273.2	12,186.3	15.7	14.8	-81.64	174.1	1,019.4	986.8	959.6	27.18	36.306	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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 #703H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-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	0.6	0.6	3.0	3.0	180.00	-45.0	0.0	45.0				
100.0	100.0	100.6	100.6	3.0	3.0	180.00	-45.0	0.0	45.0	39.0	6.00	7.496	
200.0	200.0	200.6	200.6	3.0	3.0	180.00	-45.0	0.0	45.0	39.0	6.04	7.445	
300.0	300.0	300.6	300.6	3.0	3.1	180.00	-45.0	0.0	45.0	38.9	6.13	7.338	
400.0	400.0	400.6	400.6	3.0	3.2	180.00	-45.0	0.0	45.0	38.7	6.26	7.183	
500.0	500.0	500.6	500.6	3.1	3.4	180.00	-45.0	0.0	45.0	38.6	6.44	6.992	
600.0	600.0	600.6	600.6	3.1	3.6	180.00	-45.0	0.0	45.0	38.4	6.64	6.773	
700.0	700.0	700.6	700.6	3.1	3.8	180.00	-45.0	0.0	45.0	38.1	6.88	6.539	
800.0	800.0	800.6	800.6	3.2	4.0	180.00	-45.0	0.0	45.0	37.9	7.15	6.297	
900.0	900.0	900.6	900.6	3.2	4.2	180.00	-45.0	0.0	45.0	37.6	7.43	6.052	
1,000.0	1,000.0	1,000.6	1,000.6	3.2	4.5	180.00	-45.0	0.0	45.0	37.3	7.74	5.812	
1,100.0	1,100.0	1,100.6	1,100.6	3.3	4.8	180.00	-45.0	0.0	45.0	36.9	8.07	5.577	
1,200.0	1,200.0	1,200.6	1,200.6	3.4	5.1	180.00	-45.0	0.0	45.0	36.6	8.41	5.351	
1,300.0	1,300.0	1,300.6	1,300.6	3.4	5.3	180.00	-45.0	0.0	45.0	36.2	8.76	5.135	
1,400.0	1,400.0	1,400.6	1,400.6	3.5	5.7	180.00	-45.0	0.0	45.0	35.9	9.13	4.930	
1,500.0	1,500.0	1,500.6	1,500.6	3.5	6.0	180.00	-45.0	0.0	45.0	35.5	9.50	4.735	
1,600.0	1,600.0	1,600.6	1,600.6	3.6	6.3	180.00	-45.0	0.0	45.0	35.1	9.89	4.551	
1,700.0	1,700.0	1,700.6	1,700.6	3.7	6.6	180.00	-45.0	0.0	45.0	34.7	10.28	4.377	
1,800.0	1,800.0	1,800.6	1,800.6	3.8	6.9	180.00	-45.0	0.0	45.0	34.3	10.68	4.214	
1,900.0	1,900.0	1,900.6	1,900.6	3.9	7.2	180.00	-45.0	0.0	45.0	33.9	11.09	4.059	
2,000.0	2,000.0	2,000.6	2,000.6	3.9	7.6	180.00	-45.0	0.0	45.0	33.5	11.50	3.914	
2,100.0	2,100.0	2,100.6	2,100.6	4.0	7.9	180.00	-45.0	0.0	45.0	33.1	11.91	3.777	
2,200.0	2,200.0	2,200.6	2,200.6	4.1	8.2	180.00	-45.0	0.0	45.0	32.7	12.34	3.648	
2,300.0	2,300.0	2,300.6	2,300.6	4.2	8.6	180.00	-45.0	0.0	45.0	32.2	12.76	3.526	
2,400.0	2,400.0	2,400.6	2,400.6	4.3	8.9	180.00	-45.0	0.0	45.0	31.8	13.19	3.411	
2,500.0	2,500.0	2,500.6	2,500.6	4.4	9.2	180.00	-45.0	0.0	45.0	31.4	13.63	3.303 CC, ES	
2,600.0	2,600.0	2,600.6	2,600.6	4.5	9.6	150.13	-45.0	0.0	46.5	32.4	14.06	3.308	
2,700.0	2,699.8	2,700.4	2,700.4	4.6	9.9	153.01	-45.0	0.0	51.1	36.6	14.48	3.529	
2,750.0	2,749.7	2,750.3	2,750.3	4.6	10.1	154.84	-45.0	0.0	54.6	39.9	14.70	3.718	
2,800.0	2,799.5	2,800.1	2,800.1	4.7	10.3	156.65	-45.0	0.0	58.6	43.7	14.91	3.932	
2,900.0	2,899.1	2,899.7	2,899.7	4.8	10.6	159.62	-45.0	0.0	66.7	51.4	15.33	4.351	
3,000.0	2,998.7	2,999.3	2,999.3	4.8	10.9	161.94	-45.0	0.0	74.9	59.2	15.76	4.756	
3,100.0	3,098.4	3,099.0	3,099.0	4.9	11.3	163.80	-45.0	0.0	83.3	67.1	16.19	5.145	
3,200.0	3,198.0	3,198.6	3,198.6	5.0	11.6	165.32	-45.0	0.0	91.7	75.1	16.62	5.516	
3,300.0	3,297.6	3,298.2	3,298.2	5.1	12.0	166.58	-45.0	0.0	100.1	83.1	17.06	5.871	
3,400.0	3,397.2	3,397.8	3,397.8	5.2	12.3	167.65	-45.0	0.0	108.6	91.1	17.49	6.210	
3,500.0	3,496.8	3,497.4	3,497.4	5.3	12.7	168.56	-45.0	0.0	117.2	99.2	17.94	6.532	
3,600.0	3,596.4	3,597.0	3,597.0	5.4	13.0	169.35	-45.0	0.0	125.7	107.3	18.38	6.840	
3,700.0	3,696.1	3,696.7	3,696.7	5.5	13.4	170.04	-45.0	0.0	134.3	115.5	18.83	7.133	
3,800.0	3,795.7	3,796.3	3,796.3	5.6	13.7	170.64	-45.0	0.0	142.9	123.6	19.28	7.413	
3,900.0	3,895.3	3,895.9	3,895.9	5.7	14.1	171.18	-45.0	0.0	151.5	131.8	19.73	7.680	
4,000.0	3,994.9	3,995.5	3,995.5	5.8	14.4	171.65	-45.0	0.0	160.1	139.9	20.18	7.935	
4,100.0	4,094.5	4,095.1	4,095.1	5.9	14.8	172.08	-45.0	0.0	168.7	148.1	20.63	8.179	
4,200.0	4,194.2	4,194.8	4,194.8	6.0	15.1	172.47	-45.0	0.0	177.4	156.3	21.09	8.412	
4,300.0	4,293.8	4,294.4	4,294.4	6.2	15.5	172.82	-45.0	0.0	186.0	164.5	21.54	8.635	
4,400.0	4,393.4	4,394.0	4,394.0	6.3	15.8	173.14	-45.0	0.0	194.7	172.7	22.00	8.848	
4,500.0	4,493.0	4,493.6	4,493.6	6.4	16.2	173.44	-45.0	0.0	203.3	180.9	22.46	9.053	
4,600.0	4,592.6	4,593.2	4,593.2	6.5	16.5	173.71	-45.0	0.0	212.0	189.1	22.92	9.249	
4,700.0	4,692.3	4,692.9	4,692.9	6.6	16.9	173.95	-45.0	0.0	220.7	197.3	23.38	9.437	
4,800.0	4,791.9	4,792.5	4,792.5	6.7	17.2	174.18	-45.0	0.0	229.3	205.5	23.84	9.618	
4,900.0	4,891.5	4,892.1	4,892.1	6.8	17.6	174.40	-45.0	0.0	238.0	213.7	24.31	9.791	
5,000.0	4,991.1	4,991.7	4,991.7	6.9	17.9	174.59	-45.0	0.0	246.7	221.9	24.77	9.958	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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 #703H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-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	
5,100.0	5,090.7	5,091.3	5,091.3	7.0	18.3	174.78	-45.0	0.0	255.4	230.1	25.24	10.118	
5,200.0	5,190.4	5,191.0	5,191.0	7.2	18.6	174.95	-45.0	0.0	264.0	238.3	25.70	10.272	
5,300.0	5,290.0	5,290.6	5,290.6	7.3	19.0	175.11	-45.0	0.0	272.7	246.5	26.17	10.421	
5,400.0	5,389.6	5,390.2	5,390.2	7.4	19.3	175.26	-45.0	0.0	281.4	254.8	26.64	10.564	
5,500.0	5,489.2	5,489.8	5,489.8	7.5	19.7	175.40	-45.0	0.0	290.1	263.0	27.11	10.702	
5,600.0	5,588.8	5,589.2	5,589.2	7.6	20.1	175.45	-43.8	1.2	297.3	269.7	27.59	10.774	
5,700.0	5,688.5	5,710.1	5,709.9	7.7	20.4	175.23	-39.6	5.4	300.9	272.8	28.07	10.720	
5,800.0	5,788.1	5,815.1	5,814.5	7.9	20.8	174.82	-33.1	11.9	301.4	272.8	28.53	10.561	
5,900.0	5,887.7	5,915.1	5,914.1	8.0	21.2	174.40	-26.7	18.3	301.5	272.5	29.01	10.393	
6,000.0	5,987.3	6,015.1	6,013.7	8.1	21.5	173.98	-20.3	24.7	301.6	272.1	29.48	10.230	
6,100.0	6,086.9	6,115.1	6,113.2	8.2	21.9	173.56	-13.9	31.1	301.7	271.8	29.96	10.073	
6,200.0	6,186.6	6,215.0	6,212.8	8.3	22.2	173.14	-7.4	37.6	301.9	271.5	30.43	9.920	
6,300.0	6,286.2	6,315.0	6,312.4	8.4	22.6	172.73	-1.0	44.0	302.1	271.2	30.91	9.773	
6,400.0	6,385.8	6,415.0	6,411.9	8.6	22.9	172.31	5.4	50.4	302.2	270.9	31.38	9.631	
6,500.0	6,485.4	6,515.0	6,511.5	8.7	23.3	171.89	11.8	56.8	302.4	270.6	31.86	9.494	
6,600.0	6,585.0	6,614.9	6,611.0	8.8	23.6	171.48	18.3	63.3	302.7	270.3	32.33	9.361	
6,700.0	6,684.7	6,714.9	6,710.6	8.9	24.0	171.06	24.7	69.7	302.9	270.1	32.81	9.232	
6,800.0	6,784.3	6,814.9	6,810.2	9.0	24.3	170.65	31.1	76.1	303.1	269.9	33.29	9.107	
6,900.0	6,883.9	6,914.9	6,909.7	9.2	24.7	170.24	37.5	82.5	303.4	269.7	33.76	8.987	
7,000.0	6,983.5	7,014.8	7,009.3	9.3	25.0	169.82	44.0	89.0	303.7	269.5	34.24	8.870	
7,100.0	7,083.1	7,114.8	7,108.8	9.4	25.4	169.41	50.4	95.4	304.0	269.3	34.72	8.756	
7,200.0	7,182.7	7,214.8	7,208.4	9.5	25.7	169.00	56.8	101.8	304.3	269.1	35.19	8.646	
7,300.0	7,282.4	7,314.8	7,308.0	9.6	26.1	168.59	63.2	108.2	304.6	269.0	35.67	8.540	
7,400.0	7,382.0	7,414.7	7,407.5	9.8	26.5	168.18	69.6	114.6	305.0	268.8	36.15	8.437	
7,500.0	7,481.6	7,514.7	7,507.1	9.9	26.8	167.77	76.1	121.1	305.3	268.7	36.63	8.337	
7,600.0	7,581.2	7,614.7	7,606.7	10.0	27.2	167.36	82.5	127.5	305.7	268.6	37.10	8.240	
7,700.0	7,680.8	7,714.7	7,706.2	10.1	27.5	166.96	88.9	133.9	306.1	268.5	37.58	8.145	
7,727.0	7,707.7	7,741.6	7,733.1	10.2	27.6	166.85	90.6	135.6	306.2	268.5	37.71	8.120	
7,800.0	7,780.5	7,814.6	7,805.8	10.3	27.9	166.53	95.3	140.3	306.1	268.0	38.06	8.042	
7,900.0	7,880.3	7,914.6	7,905.3	10.4	28.2	166.02	101.8	146.8	304.4	265.9	38.53	7.899	
8,000.0	7,980.2	8,014.5	8,004.8	10.5	28.6	165.43	108.2	153.2	301.1	262.1	39.01	7.718	
8,100.0	8,080.1	8,114.3	8,104.2	10.6	28.9	164.72	114.6	159.6	296.1	256.6	39.49	7.499	
8,200.0	8,180.1	8,214.0	8,203.5	10.7	29.3	163.89	121.0	166.0	289.5	249.5	39.96	7.245	
8,227.0	8,207.1	8,240.9	8,230.2	10.8	29.4	-165.39	122.7	167.7	287.4	247.3	40.08	7.171	
8,300.0	8,280.1	8,313.6	8,302.7	10.9	29.6	-166.07	127.4	172.4	281.7	241.3	40.43	6.968	
8,400.0	8,380.1	8,413.2	8,401.8	11.0	30.0	-167.05	133.8	178.8	274.0	233.1	40.90	6.699	
8,500.0	8,480.1	8,512.7	8,501.0	11.1	30.4	-168.09	140.2	185.2	266.3	224.9	41.37	6.438	
8,600.0	8,580.1	8,612.3	8,600.2	11.2	30.7	-169.18	146.6	191.6	258.7	216.9	41.83	6.185	
8,700.0	8,680.1	8,711.9	8,699.4	11.3	31.1	-170.35	153.0	198.0	251.3	209.0	42.29	5.941	
8,800.0	8,780.1	8,811.5	8,798.5	11.5	31.4	-171.58	159.4	204.4	243.9	201.1	42.76	5.704	
8,900.0	8,880.1	8,911.1	8,897.7	11.6	31.8	-172.89	165.8	210.8	236.6	193.4	43.21	5.476	
9,000.0	8,980.1	9,010.7	8,996.9	11.7	32.1	-174.28	172.2	217.2	229.5	185.9	43.66	5.257	
9,100.0	9,080.1	9,110.3	9,096.1	11.8	32.5	-175.76	178.6	223.6	222.6	178.4	44.11	5.046	
9,200.0	9,180.1	9,209.9	9,195.2	12.0	32.9	-177.33	185.0	230.0	215.7	171.2	44.55	4.843	
9,300.0	9,280.1	9,309.4	9,294.4	12.1	33.2	-179.00	191.4	236.4	209.1	164.1	44.98	4.649	
9,400.0	9,380.1	9,409.0	9,393.6	12.2	33.6	-179.21	197.8	242.8	202.7	157.3	45.40	4.464	
9,500.0	9,480.1	9,508.6	9,492.8	12.3	33.9	-177.32	204.2	249.2	196.4	150.6	45.81	4.288	
9,600.0	9,580.1	9,608.2	9,591.9	12.4	34.3	-175.30	210.6	255.6	190.4	144.2	46.20	4.121	
9,700.0	9,680.1	9,707.8	9,691.1	12.6	34.6	-173.16	217.0	262.0	184.6	138.1	46.59	3.963	
9,800.0	9,780.1	9,807.4	9,790.3	12.7	35.0	-170.88	223.4	268.4	179.2	132.2	46.95	3.816	
9,900.0	9,880.1	9,907.0	9,889.4	12.8	35.3	-168.46	229.8	274.8	174.0	126.7	47.29	3.678	
10,000.0	9,980.1	10,006.5	9,988.6	12.9	35.7	-165.90	236.2	281.2	169.1	121.5	47.62	3.552	

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

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Anticollision Report



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Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
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Reference Well:	HARRIER FED COM #702H	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 #703H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-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
10,100.0	10,080.1	10,106.1	10,087.8	13.1	36.1	163.19	242.6	287.6	164.6	116.7	47.91	3.436	
10,200.0	10,180.1	10,205.7	10,187.0	13.2	36.4	160.34	249.0	294.0	160.5	112.3	48.19	3.331	
10,300.0	10,280.1	10,305.3	10,286.1	13.3	36.8	157.35	255.4	300.4	156.8	108.4	48.43	3.238	
10,400.0	10,380.1	10,404.9	10,385.3	13.4	37.1	154.23	261.8	306.8	153.6	104.9	48.65	3.157	
10,500.0	10,480.1	10,504.5	10,484.5	13.6	37.5	150.98	268.2	313.2	150.8	102.0	48.85	3.088	
10,600.0	10,580.1	10,604.1	10,583.7	13.7	37.9	147.62	274.6	319.6	148.6	99.6	49.02	3.031	
10,700.0	10,680.1	10,703.6	10,682.8	13.8	38.2	144.17	280.9	325.9	146.9	97.7	49.16	2.987	
10,800.0	10,780.1	10,803.2	10,782.0	13.9	38.6	140.66	287.3	332.3	145.7	96.4	49.30	2.955	
10,900.0	10,880.1	10,902.8	10,881.2	14.1	38.9	137.10	293.7	338.7	145.1	95.6	49.42	2.935	
10,958.7	10,938.8	10,961.3	10,939.4	14.1	39.1	135.00	297.5	342.5	145.0	95.5	49.49	2.929	
11,000.0	10,980.1	11,002.4	10,980.4	14.2	39.3	133.52	300.1	345.1	145.0	95.5	49.54	2.927 SF	
11,100.0	11,080.1	11,102.0	11,079.5	14.3	39.6	129.96	306.5	351.5	145.5	95.9	49.67	2.930	
11,200.0	11,180.1	11,201.6	11,178.7	14.4	40.0	126.43	312.9	357.9	146.6	96.8	49.82	2.943	
11,300.0	11,280.1	11,301.2	11,277.9	14.6	40.4	122.97	319.3	364.3	148.2	98.2	49.99	2.965	
11,400.0	11,380.1	11,400.8	11,377.1	14.7	40.7	119.60	325.7	370.7	150.4	100.2	50.19	2.997	
11,500.0	11,480.1	11,500.3	11,476.2	14.8	41.1	116.33	332.1	377.1	153.1	102.6	50.43	3.036	
11,600.0	11,580.1	11,599.9	11,575.4	14.9	41.4	113.18	338.5	383.5	156.2	105.5	50.70	3.081	
11,700.0	11,680.1	11,699.5	11,674.6	15.1	41.8	110.17	344.9	389.9	159.8	108.8	51.02	3.133	
11,800.0	11,780.1	11,799.1	11,773.8	15.2	42.2	107.29	351.3	396.3	163.9	112.5	51.37	3.190	
11,850.4	11,830.5	11,849.3	11,823.7	15.2	42.3	105.90	354.6	399.6	166.1	114.5	51.58	3.220	
11,875.0	11,855.1	11,871.0	11,845.4	15.2	42.4	-89.01	355.7	401.0	167.3	115.6	51.69	3.237	
11,900.0	11,880.0	11,891.9	11,866.2	15.2	42.5	-89.59	356.0	402.7	169.1	117.3	51.83	3.263	
11,925.0	11,904.8	11,912.8	11,887.0	15.2	42.6	-90.18	355.4	404.6	171.5	119.5	51.99	3.299	
11,950.0	11,929.4	11,933.7	11,907.7	15.2	42.6	-90.77	354.0	406.8	174.6	122.4	52.16	3.346	
11,975.0	11,953.7	11,954.5	11,928.3	15.2	42.7	-91.36	351.6	409.2	178.2	125.8	52.35	3.404	
12,000.0	11,977.7	11,975.0	11,948.3	15.3	42.8	-91.91	348.5	411.9	182.4	129.9	52.56	3.471	
12,025.0	12,001.2	11,995.9	11,968.7	15.3	42.8	-92.45	344.5	414.8	187.3	134.5	52.75	3.550	
12,050.0	12,024.3	12,016.6	11,988.5	15.3	42.9	-92.95	339.7	417.9	192.7	139.8	52.96	3.639	
12,075.0	12,046.9	12,037.1	12,007.9	15.3	43.0	-93.39	334.0	421.3	198.7	145.6	53.17	3.738	
12,100.0	12,068.9	12,057.5	12,027.0	15.3	43.0	-93.77	327.6	424.8	205.3	152.0	53.37	3.847	
12,125.0	12,090.2	12,077.8	12,045.7	15.3	43.1	-94.10	320.5	428.5	212.5	158.9	53.58	3.966	
12,150.0	12,110.8	12,098.1	12,063.9	15.3	43.1	-94.35	312.6	432.5	220.2	166.4	53.78	4.095	
12,175.0	12,130.7	12,118.2	12,081.7	15.4	43.2	-94.53	304.1	436.6	228.4	174.5	53.97	4.232	
12,200.0	12,149.7	12,138.3	12,098.9	15.4	43.2	-94.65	294.8	440.8	237.2	183.0	54.16	4.379	
12,225.0	12,167.8	12,158.2	12,115.7	15.4	43.3	-94.68	284.9	445.2	246.4	192.0	54.34	4.534	
12,250.0	12,185.1	12,178.1	12,131.9	15.4	43.3	-94.65	274.4	449.8	256.0	201.5	54.51	4.697	
12,275.0	12,201.3	12,197.9	12,147.6	15.4	43.4	-94.54	263.3	454.5	266.2	211.5	54.67	4.868	
12,300.0	12,216.5	12,217.7	12,162.8	15.5	43.4	-94.36	251.6	459.3	276.7	221.8	54.83	5.046	
12,325.0	12,230.7	12,237.3	12,177.3	15.5	43.5	-94.12	239.3	464.3	287.6	232.6	54.97	5.232	
12,350.0	12,243.8	12,257.0	12,191.3	15.5	43.5	-93.81	226.5	469.3	298.8	243.7	55.10	5.423	
12,375.0	12,255.7	12,276.6	12,204.7	15.5	43.5	-93.44	213.1	474.5	310.4	255.2	55.23	5.621	
12,400.0	12,266.5	12,296.2	12,217.5	15.5	43.6	-93.02	199.2	479.8	322.3	267.0	55.34	5.824	
12,425.0	12,276.1	12,315.8	12,229.6	15.6	43.6	-92.54	184.8	485.2	334.5	279.0	55.44	6.033	
12,450.0	12,284.5	12,335.5	12,241.2	15.6	43.7	-92.01	169.8	490.7	346.9	291.4	55.54	6.246	
12,475.0	12,291.6	12,355.3	12,252.1	15.6	43.7	-91.45	154.4	496.3	359.6	303.9	55.62	6.464	
12,500.0	12,297.4	12,375.0	12,262.4	15.6	43.7	-90.84	138.5	502.0	372.4	316.7	55.70	6.686	
12,525.0	12,302.0	12,395.1	12,272.1	15.6	43.8	-90.21	121.9	507.9	385.4	329.6	55.77	6.911	
12,550.0	12,305.3	12,415.2	12,281.1	15.6	43.8	-89.55	104.9	513.8	398.6	342.7	55.83	7.139	
12,575.0	12,307.3	12,435.5	12,289.4	15.6	43.8	-88.87	87.4	519.8	411.8	355.9	55.88	7.369	
12,601.0	12,308.0	12,456.9	12,297.2	15.7	43.8	-88.15	68.5	526.2	425.7	369.8	55.93	7.611	
12,700.0	12,307.8	12,545.5	12,320.1	15.7	43.9	-91.58	-12.7	552.7	477.4	421.3	56.11	8.508	
12,800.0	12,307.7	12,646.2	12,327.1	15.7	44.0	-92.26	-108.6	582.3	525.3	469.0	56.32	9.328	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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 #703H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,900.0	12,307.6	12,758.5	12,327.5	15.7	44.1	-92.09	-216.8	612.0	567.1	510.6	56.58	10.024	
13,000.0	12,307.5	12,876.2	12,328.0	15.8	44.2	-91.97	-331.5	638.6	602.0	545.1	56.93	10.575	
13,100.0	12,307.3	12,998.6	12,328.5	15.8	44.3	-91.91	-451.8	661.3	629.6	572.3	57.38	10.973	
13,200.0	12,307.2	13,124.7	12,329.0	15.8	44.5	-91.88	-576.6	679.2	649.6	591.7	57.92	11.215	
13,304.5	12,307.1	13,259.3	12,329.5	15.9	44.7	-91.89	-710.5	692.2	662.2	603.6	58.58	11.304	
13,400.0	12,307.0	13,383.4	12,330.0	15.9	44.8	-91.92	-834.5	698.6	667.6	608.4	59.24	11.269	
13,500.0	12,306.9	13,501.8	12,330.5	16.1	45.0	-91.97	-952.8	700.0	669.2	609.2	60.00	11.153	
13,600.0	12,306.7	13,601.8	12,330.8	16.4	45.2	-92.01	-1,052.8	700.3	670.0	609.1	60.83	11.013	
13,700.0	12,306.6	13,701.8	12,331.2	16.9	45.4	-92.05	-1,152.8	700.5	670.7	609.0	61.69	10.872	
13,800.0	12,306.5	13,801.8	12,331.6	17.5	45.6	-92.09	-1,252.8	700.8	671.5	608.9	62.59	10.729	
13,900.0	12,306.4	13,901.8	12,332.0	18.2	45.8	-92.14	-1,352.8	701.1	672.3	608.8	63.51	10.585	
14,000.0	12,306.2	14,001.8	12,332.4	18.9	46.0	-92.18	-1,452.8	701.3	673.0	608.6	64.46	10.441	
14,100.0	12,306.1	14,101.8	12,332.8	19.7	46.2	-92.22	-1,552.8	701.6	673.8	608.4	65.43	10.297	
14,200.0	12,306.0	14,201.8	12,333.2	20.4	46.5	-92.26	-1,652.8	701.9	674.6	608.1	66.44	10.154	
14,300.0	12,305.9	14,301.8	12,333.6	21.2	46.8	-92.30	-1,752.8	702.1	675.3	607.9	67.46	10.011	
14,400.0	12,305.7	14,401.8	12,334.0	21.9	47.0	-92.34	-1,852.8	702.4	676.1	607.6	68.50	9.870	
14,500.0	12,305.6	14,501.8	12,334.4	22.7	47.3	-92.38	-1,952.8	702.6	676.9	607.3	69.57	9.729	
14,600.0	12,305.5	14,601.8	12,334.8	23.5	47.6	-92.43	-2,052.8	702.9	677.6	607.0	70.66	9.591	
14,700.0	12,305.4	14,701.8	12,335.2	24.2	48.0	-92.47	-2,152.8	703.2	678.4	606.7	71.76	9.454	
14,800.0	12,305.2	14,801.8	12,335.6	25.0	48.3	-92.51	-2,252.8	703.4	679.2	606.3	72.89	9.318	
14,900.0	12,305.1	14,901.8	12,335.9	25.8	48.7	-92.55	-2,352.8	703.7	680.0	605.9	74.03	9.185	
15,000.0	12,305.0	15,001.7	12,336.3	26.6	49.0	-92.59	-2,452.8	703.9	680.7	605.5	75.19	9.054	
15,100.0	12,304.9	15,101.7	12,336.7	27.4	49.4	-92.63	-2,552.8	704.2	681.5	605.1	76.36	8.925	
15,200.0	12,304.7	15,201.7	12,337.1	28.2	49.8	-92.67	-2,652.7	704.5	682.3	604.7	77.55	8.798	
15,300.0	12,304.6	15,301.7	12,337.5	29.0	50.2	-92.71	-2,752.7	704.7	683.1	604.3	78.76	8.673	
15,400.0	12,304.5	15,401.7	12,337.9	29.8	50.6	-92.75	-2,852.7	705.0	683.8	603.8	79.98	8.550	
15,500.0	12,304.4	15,501.7	12,338.3	30.6	51.0	-92.79	-2,952.7	705.3	684.6	603.4	81.21	8.430	
15,600.0	12,304.2	15,601.7	12,338.7	31.5	51.5	-92.83	-3,052.7	705.5	685.4	602.9	82.46	8.312	
15,700.0	12,304.1	15,701.7	12,339.1	32.3	51.9	-92.87	-3,152.7	705.8	686.1	602.4	83.72	8.196	
15,800.0	12,304.0	15,801.7	12,339.5	33.1	52.4	-92.91	-3,252.7	706.0	686.9	601.9	84.99	8.082	
15,900.0	12,303.9	15,901.7	12,339.9	33.9	52.8	-92.95	-3,352.7	706.3	687.7	601.4	86.28	7.971	
16,000.0	12,303.7	16,001.7	12,340.3	34.7	53.3	-92.99	-3,452.7	706.6	688.5	600.9	87.58	7.861	
16,100.0	12,303.6	16,101.7	12,340.7	35.6	53.8	-93.03	-3,552.7	706.8	689.2	600.4	88.89	7.754	
16,200.0	12,303.5	16,201.7	12,341.0	36.4	54.3	-93.07	-3,652.7	707.1	690.0	599.8	90.20	7.650	
16,300.0	12,303.4	16,301.7	12,341.4	37.2	54.8	-93.11	-3,752.7	707.4	690.8	599.3	91.53	7.547	
16,400.0	12,303.2	16,401.7	12,341.8	38.0	55.3	-93.15	-3,852.7	707.6	691.6	598.7	92.87	7.446	
16,500.0	12,303.1	16,501.7	12,342.2	38.9	55.8	-93.19	-3,952.7	707.9	692.4	598.1	94.22	7.348	
16,600.0	12,303.0	16,601.7	12,342.6	39.7	56.3	-93.23	-4,052.7	708.1	693.1	597.5	95.58	7.252	
16,611.3	12,303.0	16,613.0	12,342.7	39.8	56.4	-93.23	-4,064.0	708.2	693.2	597.5	95.74	7.241	
16,700.0	12,302.5	16,701.7	12,343.0	40.5	56.9	-93.29	-4,152.7	708.4	693.9	597.0	96.95	7.158	
16,800.0	12,302.0	16,802.3	12,342.1	41.4	57.4	-93.26	-4,253.3	708.7	694.7	596.3	98.33	7.064	
16,900.0	12,301.5	16,902.3	12,340.9	42.2	58.0	-93.20	-4,353.3	708.9	695.4	595.6	99.73	6.973	
16,990.1	12,301.0	16,991.8	12,339.8	43.0	58.5	-93.14	-4,442.7	709.2	696.0	595.0	100.99	6.892	
17,000.0	12,300.9	16,999.7	12,339.7	43.0	58.5	-93.14	-4,450.7	709.2	696.1	595.0	101.12	6.884	
17,052.9	12,300.7	17,050.6	12,339.0	43.5	58.8	-93.11	-4,501.5	709.7	696.1	594.3	101.86	6.834	
17,100.0	12,300.4	17,097.6	12,338.4	43.9	59.1	-93.08	-4,548.6	710.1	695.8	593.2	102.52	6.786	
17,200.0	12,299.9	17,197.6	12,337.2	44.7	59.7	-93.03	-4,648.6	711.1	695.0	591.0	103.94	6.686	
17,300.0	12,299.4	17,297.6	12,335.9	45.5	60.3	-92.97	-4,748.5	712.0	694.2	588.8	105.37	6.588	
17,400.0	12,298.8	17,397.6	12,334.7	46.4	60.8	-92.91	-4,848.5	712.9	693.4	586.5	106.80	6.492	
17,500.0	12,298.3	17,497.6	12,333.4	47.2	61.4	-92.86	-4,948.5	713.9	692.5	584.3	108.24	6.398	
17,600.0	12,297.8	17,597.6	12,332.1	48.1	62.0	-92.80	-5,048.5	714.8	691.7	582.1	109.69	6.306	
17,700.0	12,297.3	17,697.6	12,330.9	48.9	62.6	-92.74	-5,148.5	715.7	690.9	579.8	111.15	6.216	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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 #703H - OWB - PWP1												Offset Site Error:	0.0 usft
Survey Program: 0-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	12,296.7	17,797.6	12,329.6	49.7	63.3	-92.68	-5,248.4	716.7	690.1	577.5	112.61	6.129	
17,900.0	12,296.2	17,897.6	12,328.3	50.6	63.9	-92.63	-5,348.4	717.6	689.3	575.3	114.08	6.043	
18,000.0	12,295.7	17,997.6	12,327.1	51.4	64.5	-92.57	-5,448.4	718.6	688.6	573.0	115.55	5.959	
18,100.0	12,295.1	18,097.6	12,325.8	52.3	65.1	-92.51	-5,548.4	719.5	687.8	570.7	117.03	5.877	
18,200.0	12,294.6	18,197.6	12,324.6	53.1	65.8	-92.45	-5,648.4	720.4	687.0	568.4	118.52	5.796	
18,300.0	12,294.1	18,297.6	12,323.3	54.0	66.4	-92.39	-5,748.4	721.4	686.2	566.1	120.01	5.717	
18,400.0	12,293.6	18,397.5	12,322.0	54.8	67.1	-92.34	-5,848.3	722.3	685.4	563.9	121.51	5.640	
18,500.0	12,293.0	18,497.5	12,320.8	55.7	67.7	-92.28	-5,948.3	723.2	684.6	561.6	123.01	5.565	
18,600.0	12,292.5	18,597.5	12,319.5	56.5	68.4	-92.22	-6,048.3	724.2	683.8	559.3	124.52	5.491	
18,700.0	12,292.0	18,697.5	12,318.3	57.3	69.0	-92.16	-6,148.3	725.1	683.0	557.0	126.03	5.419	
18,800.0	12,291.4	18,797.5	12,317.0	58.2	69.7	-92.10	-6,248.3	726.1	682.2	554.6	127.55	5.349	
18,900.0	12,290.9	18,897.5	12,315.7	59.0	70.4	-92.04	-6,348.3	727.0	681.4	552.3	129.07	5.279	
19,000.0	12,290.4	18,997.5	12,314.5	59.9	71.0	-91.98	-6,448.2	727.9	680.6	550.0	130.60	5.212	
19,100.0	12,289.9	19,097.5	12,313.2	60.7	71.7	-91.92	-6,548.2	728.9	679.8	547.7	132.13	5.145	
19,200.0	12,289.3	19,197.5	12,312.0	61.6	72.4	-91.86	-6,648.2	729.8	679.0	545.4	133.66	5.080	
19,300.0	12,288.8	19,297.5	12,310.7	62.4	73.1	-91.80	-6,748.2	730.8	678.2	543.0	135.20	5.017	
19,400.0	12,288.3	19,397.5	12,309.4	63.3	73.8	-91.74	-6,848.2	731.7	677.5	540.7	136.74	4.954	
19,500.0	12,287.7	19,497.5	12,308.2	64.1	74.5	-91.68	-6,948.1	732.6	676.7	538.4	138.29	4.893	
19,600.0	12,287.2	19,597.5	12,306.9	65.0	75.1	-91.62	-7,048.1	733.6	675.9	536.0	139.84	4.833	
19,700.0	12,286.7	19,697.5	12,305.7	65.8	75.8	-91.56	-7,148.1	734.5	675.1	533.7	141.40	4.774	
19,800.0	12,286.2	19,797.5	12,304.4	66.7	76.5	-91.50	-7,248.1	735.4	674.3	531.4	142.95	4.717	
19,900.0	12,285.6	19,897.5	12,303.1	67.5	77.3	-91.44	-7,348.1	736.4	673.5	529.0	144.52	4.661	
20,000.0	12,285.1	19,997.5	12,301.9	68.4	78.0	-91.38	-7,448.1	737.3	672.7	526.7	146.08	4.605	
20,100.0	12,284.6	20,097.5	12,300.6	69.2	78.7	-91.32	-7,548.0	738.3	672.0	524.3	147.65	4.551	
20,200.0	12,284.0	20,197.4	12,299.4	70.1	79.4	-91.26	-7,648.0	739.2	671.2	522.0	149.22	4.498	
20,300.0	12,283.5	20,297.4	12,298.1	70.9	80.1	-91.20	-7,748.0	740.1	670.4	519.6	150.79	4.446	
20,400.0	12,283.0	20,397.4	12,296.8	71.8	80.8	-91.14	-7,848.0	741.1	669.6	517.2	152.37	4.395	
20,500.0	12,282.5	20,497.4	12,295.6	72.6	81.5	-91.07	-7,948.0	742.0	668.8	514.9	153.95	4.344	
20,600.0	12,281.9	20,597.4	12,294.3	73.5	82.3	-91.01	-8,047.9	742.9	668.1	512.5	155.53	4.295	
20,700.0	12,281.4	20,697.4	12,293.1	74.4	83.0	-90.95	-8,147.9	743.9	667.3	510.2	157.12	4.247	
20,800.0	12,280.9	20,797.4	12,291.8	75.2	83.7	-90.89	-8,247.9	744.8	666.5	507.8	158.71	4.200	
20,900.0	12,280.3	20,897.4	12,290.5	76.1	84.5	-90.83	-8,347.9	745.8	665.7	505.4	160.30	4.153	
21,000.0	12,279.8	20,997.4	12,289.3	76.9	85.2	-90.77	-8,447.9	746.7	664.9	503.1	161.89	4.107	
21,100.0	12,279.3	21,097.4	12,288.0	77.8	85.9	-90.70	-8,547.9	747.6	664.2	500.7	163.49	4.062	
21,200.0	12,278.8	21,197.4	12,286.7	78.6	86.7	-90.64	-8,647.8	748.6	663.4	498.3	165.09	4.018	
21,300.0	12,278.2	21,297.4	12,285.5	79.5	87.4	-90.58	-8,747.8	749.5	662.6	495.9	166.69	3.975	
21,400.0	12,277.7	21,397.4	12,284.2	80.3	88.2	-90.52	-8,847.8	750.4	661.8	493.6	168.29	3.933	
21,500.0	12,277.2	21,497.4	12,283.0	81.2	88.9	-90.45	-8,947.8	751.4	661.1	491.2	169.90	3.891	
21,600.0	12,276.6	21,597.4	12,281.7	82.0	89.6	-90.39	-9,047.8	752.3	660.3	488.8	171.50	3.850	
21,700.0	12,276.1	21,697.4	12,280.4	82.9	90.4	-90.33	-9,147.7	753.3	659.5	486.4	173.11	3.810	
21,800.0	12,275.6	21,797.4	12,279.2	83.7	91.1	-90.26	-9,247.7	754.2	658.8	484.0	174.72	3.770	
21,900.0	12,275.1	21,897.4	12,277.9	84.6	91.9	-90.20	-9,347.7	755.1	658.0	481.7	176.34	3.731	
22,000.0	12,274.5	21,997.3	12,276.7	85.4	92.7	-90.14	-9,447.7	756.1	657.2	479.3	177.95	3.693	
22,100.0	12,274.0	22,097.3	12,275.4	86.3	93.4	-90.07	-9,547.7	757.0	656.5	476.9	179.57	3.656	
22,200.0	12,273.5	22,197.3	12,274.1	87.2	94.2	-90.01	-9,647.7	758.0	655.7	474.5	181.19	3.619	
22,288.9	12,273.0	22,286.2	12,273.0	87.9	94.8	-89.95	-9,736.5	758.8	655.0	472.4	182.63	3.587	
22,289.4	12,273.0	22,286.8	12,273.0	87.9	94.9	-89.95	-9,737.1	758.8	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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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		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	0.8	0.8	3.0	3.0	-146.43	-45.2	-30.0	54.2				
100.0	100.0	100.8	100.8	3.0	3.0	-146.43	-45.2	-30.0	54.2	48.2	6.00	9.041	
200.0	200.0	200.8	200.8	3.0	3.0	-146.43	-45.2	-30.0	54.2	48.2	6.01	9.029	
300.0	300.0	300.8	300.8	3.0	3.0	-146.43	-45.2	-30.0	54.2	48.2	6.02	9.004	
400.0	400.0	400.8	400.8	3.0	3.0	-146.43	-45.2	-30.0	54.2	48.2	6.05	8.966	
500.0	500.0	500.8	500.8	3.1	3.1	-146.43	-45.2	-30.0	54.2	48.2	6.08	8.915	
600.0	600.0	600.8	600.8	3.1	3.1	-146.43	-45.2	-30.0	54.2	48.1	6.13	8.853	
700.0	700.0	700.8	700.8	3.1	3.1	-146.43	-45.2	-30.0	54.2	48.1	6.18	8.779	
800.0	800.0	800.8	800.8	3.2	3.2	-146.43	-45.2	-30.0	54.2	48.0	6.24	8.695	
900.0	900.0	900.8	900.8	3.2	3.2	-146.43	-45.2	-30.0	54.2	47.9	6.31	8.601	
1,000.0	1,000.0	1,000.8	1,000.8	3.2	3.2	-146.43	-45.2	-30.0	54.2	47.9	6.38	8.499	
1,100.0	1,100.0	1,100.8	1,100.8	3.3	3.3	-146.43	-45.2	-30.0	54.2	47.8	6.47	8.390	
1,200.0	1,200.0	1,200.8	1,200.8	3.4	3.4	-146.43	-45.2	-30.0	54.2	47.7	6.56	8.274	
1,300.0	1,300.0	1,300.8	1,300.8	3.4	3.4	-146.43	-45.2	-30.0	54.2	47.6	6.65	8.153	
1,400.0	1,400.0	1,400.8	1,400.8	3.5	3.5	-146.43	-45.2	-30.0	54.2	47.5	6.76	8.028	
1,500.0	1,500.0	1,500.8	1,500.8	3.5	3.5	-146.43	-45.2	-30.0	54.2	47.4	6.87	7.899	
1,600.0	1,600.0	1,600.8	1,600.8	3.6	3.6	-146.43	-45.2	-30.0	54.2	47.3	6.98	7.767	
1,700.0	1,700.0	1,700.8	1,700.8	3.7	3.7	-146.43	-45.2	-30.0	54.2	47.1	7.11	7.634	
1,800.0	1,800.0	1,800.8	1,800.8	3.8	3.8	-146.43	-45.2	-30.0	54.2	47.0	7.23	7.500	
1,900.0	1,900.0	1,900.8	1,900.8	3.9	3.9	-146.43	-45.2	-30.0	54.2	46.9	7.37	7.365	
2,000.0	2,000.0	2,000.8	2,000.8	3.9	3.9	-146.43	-45.2	-30.0	54.2	46.7	7.50	7.230	
2,100.0	2,100.0	2,100.8	2,100.8	4.0	4.0	-146.43	-45.2	-30.0	54.2	46.6	7.65	7.095	
2,200.0	2,200.0	2,200.8	2,200.8	4.1	4.1	-146.43	-45.2	-30.0	54.2	46.5	7.79	6.962	
2,300.0	2,300.0	2,300.8	2,300.8	4.2	4.2	-146.43	-45.2	-30.0	54.2	46.3	7.94	6.830	
2,400.0	2,400.0	2,400.8	2,400.8	4.3	4.3	-146.43	-45.2	-30.0	54.2	46.2	8.10	6.700	
2,416.4	2,416.4	2,417.2	2,417.2	4.3	4.3	-146.43	-45.2	-30.0	54.2	46.1	8.12	6.678 CC	
2,500.0	2,500.0	2,500.8	2,500.8	4.4	4.4	-146.43	-45.2	-30.0	54.2	46.0	8.26	6.571 ES	
2,600.0	2,600.0	2,600.3	2,600.3	4.5	4.5	-175.73	-44.6	-31.6	56.4	48.1	8.34	6.766	
2,700.0	2,699.8	2,699.4	2,699.2	4.6	4.5	-171.49	-42.7	-36.5	63.1	54.8	8.30	7.601	
2,750.0	2,749.7	2,748.6	2,748.3	4.6	4.5	-168.88	-41.4	-40.1	68.3	60.0	8.26	8.266	
2,800.0	2,799.5	2,797.7	2,797.1	4.7	4.6	-166.14	-39.7	-44.4	74.4	66.2	8.21	9.058	
2,900.0	2,899.1	2,896.6	2,895.5	4.8	4.6	-161.25	-36.1	-54.1	87.4	79.3	8.13	10.750	
3,000.0	2,998.7	2,995.5	2,993.9	4.8	4.7	-157.64	-32.4	-63.8	100.9	92.8	8.10	12.461	
3,100.0	3,098.4	3,094.4	3,092.2	4.9	4.8	-154.89	-28.7	-73.5	114.7	106.6	8.10	14.164	
3,200.0	3,198.0	3,193.3	3,190.6	5.0	4.8	-152.73	-25.1	-83.1	128.7	120.6	8.12	15.841	
3,300.0	3,297.6	3,292.2	3,289.0	5.1	4.9	-150.99	-21.4	-92.8	142.8	134.6	8.17	17.482	
3,400.0	3,397.2	3,391.1	3,387.3	5.2	5.0	-149.57	-17.7	-102.5	157.1	148.8	8.23	19.079	
3,500.0	3,496.8	3,490.0	3,485.7	5.3	5.0	-148.39	-14.1	-112.1	171.4	163.1	8.31	20.628	
3,600.0	3,596.4	3,589.0	3,584.1	5.4	5.1	-147.39	-10.4	-121.8	185.8	177.4	8.40	22.127	
3,700.0	3,696.1	3,687.9	3,682.5	5.5	5.2	-146.53	-6.8	-131.5	200.2	191.7	8.49	23.574	
3,800.0	3,795.7	3,786.8	3,780.8	5.6	5.3	-145.79	-3.1	-141.1	214.7	206.1	8.60	24.969	
3,900.0	3,895.3	3,885.7	3,879.2	5.7	5.4	-145.14	0.6	-150.8	229.2	220.4	8.71	26.310	
4,000.0	3,994.9	3,984.6	3,977.6	5.8	5.5	-144.57	4.2	-160.5	243.7	234.8	8.83	27.599	
4,100.0	4,094.5	4,083.5	4,075.9	5.9	5.5	-144.06	7.9	-170.1	258.2	249.3	8.96	28.835	
4,200.0	4,194.2	4,182.4	4,174.3	6.0	5.6	-143.60	11.6	-179.8	272.8	263.7	9.09	30.021	
4,300.0	4,293.8	4,281.3	4,272.7	6.2	5.7	-143.20	15.2	-189.5	287.4	278.1	9.22	31.157	
4,400.0	4,393.4	4,380.3	4,371.0	6.3	5.8	-142.83	18.9	-199.1	302.0	292.6	9.36	32.244	
4,500.0	4,493.0	4,479.2	4,469.4	6.4	5.9	-142.50	22.6	-208.8	316.6	307.0	9.51	33.283	
4,600.0	4,592.6	4,578.1	4,567.8	6.5	6.0	-142.19	26.2	-218.5	331.2	321.5	9.66	34.278	
4,700.0	4,692.3	4,677.0	4,666.2	6.6	6.1	-141.91	29.9	-228.1	345.8	336.0	9.82	35.227	
4,800.0	4,791.9	4,775.9	4,764.5	6.7	6.2	-141.66	33.5	-237.8	360.4	350.4	9.97	36.135	
4,900.0	4,891.5	4,874.8	4,862.9	6.8	6.3	-141.42	37.2	-247.5	375.0	364.9	10.14	37.001	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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 Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,991.1	4,973.7	4,961.3	6.9	6.4	-141.20	40.9	-257.1	389.7	379.4	10.30	37.829	
5,100.0	5,090.7	5,072.6	5,059.6	7.0	6.5	-141.00	44.5	-266.8	404.3	393.9	10.47	38.618	
5,200.0	5,190.4	5,171.5	5,158.0	7.2	6.6	-140.81	48.2	-276.5	419.0	408.3	10.64	39.372	
5,300.0	5,290.0	5,270.5	5,256.4	7.3	6.7	-140.64	51.9	-286.2	433.6	422.8	10.82	40.091	
5,400.0	5,389.6	5,369.4	5,354.7	7.4	6.8	-140.47	55.5	-295.8	448.3	437.3	10.99	40.777	
5,500.0	5,489.2	5,468.3	5,453.1	7.5	6.9	-140.32	59.2	-305.5	462.9	451.8	11.17	41.432	
5,600.0	5,588.8	5,567.2	5,551.5	7.6	7.0	-140.17	62.9	-315.2	477.6	466.2	11.36	42.056	
5,700.0	5,688.5	5,666.1	5,649.9	7.7	7.1	-140.04	66.5	-324.8	492.3	480.7	11.54	42.652	
5,800.0	5,788.1	5,765.0	5,748.2	7.9	7.2	-139.91	70.2	-334.5	506.9	495.2	11.73	43.220	
5,900.0	5,887.7	5,863.9	5,846.6	8.0	7.3	-139.79	73.8	-344.2	521.6	509.7	11.92	43.763	
6,000.0	5,987.3	5,962.8	5,945.0	8.1	7.4	-139.67	77.5	-353.8	536.3	524.2	12.11	44.280	
6,100.0	6,086.9	6,061.8	6,043.3	8.2	7.5	-139.57	81.2	-363.5	551.0	538.6	12.31	44.774	
6,200.0	6,186.6	6,160.7	6,141.7	8.3	7.7	-139.46	84.8	-373.2	565.6	553.1	12.50	45.245	
6,300.0	6,286.2	6,259.6	6,240.1	8.4	7.8	-139.37	88.5	-382.8	580.3	567.6	12.70	45.694	
6,400.0	6,385.8	6,358.5	6,338.5	8.6	7.9	-139.27	92.2	-392.5	595.0	582.1	12.90	46.123	
6,500.0	6,485.4	6,457.4	6,436.8	8.7	8.0	-139.19	95.8	-402.2	609.7	596.6	13.10	46.533	
6,600.0	6,585.0	6,556.3	6,535.2	8.8	8.1	-139.10	99.5	-411.8	624.4	611.0	13.31	46.924	
6,700.0	6,684.7	6,655.2	6,633.6	8.9	8.2	-139.02	103.1	-421.5	639.0	625.5	13.51	47.297	
6,800.0	6,784.3	6,754.1	6,731.9	9.0	8.3	-138.95	106.8	-431.2	653.7	640.0	13.72	47.653	
6,900.0	6,883.9	6,853.1	6,830.3	9.2	8.4	-138.87	110.5	-440.8	668.4	654.5	13.93	47.993	
7,000.0	6,983.5	6,952.0	6,928.7	9.3	8.6	-138.80	114.1	-450.5	683.1	669.0	14.14	48.318	
7,100.0	7,083.1	7,050.9	7,027.0	9.4	8.7	-138.74	117.8	-460.2	697.8	683.4	14.35	48.628	
7,200.0	7,182.7	7,149.8	7,125.4	9.5	8.8	-138.67	121.5	-469.9	712.5	697.9	14.56	48.923	
7,300.0	7,282.4	7,248.7	7,223.8	9.6	8.9	-138.61	125.1	-479.5	727.2	712.4	14.78	49.206	
7,400.0	7,382.0	7,347.6	7,322.2	9.8	9.0	-138.55	128.8	-489.2	741.8	726.9	14.99	49.476	
7,500.0	7,481.6	7,446.5	7,420.5	9.9	9.1	-138.49	132.5	-498.9	756.5	741.3	15.21	49.734	
7,600.0	7,581.2	7,545.4	7,518.9	10.0	9.3	-138.44	136.1	-508.5	771.2	755.8	15.43	49.980	
7,700.0	7,680.8	7,644.4	7,617.3	10.1	9.4	-138.39	139.8	-518.2	785.9	770.3	15.65	50.215	
7,727.0	7,707.7	7,671.0	7,643.8	10.2	9.4	-138.37	140.8	-520.8	789.9	774.2	15.71	50.276	
7,800.0	7,780.5	7,743.3	7,715.7	10.3	9.5	-138.38	143.4	-527.9	800.3	784.4	15.87	50.421	
7,900.0	7,880.3	7,842.4	7,814.3	10.4	9.6	-138.32	147.1	-537.6	813.4	797.3	16.09	50.556	
8,000.0	7,980.2	7,941.7	7,913.0	10.5	9.7	-138.17	150.8	-547.3	825.2	808.9	16.30	50.630	
8,100.0	8,080.1	8,041.0	8,011.8	10.6	9.9	-137.94	154.5	-557.0	835.7	819.2	16.50	50.643	
8,200.0	8,180.1	8,140.4	8,110.6	10.7	10.0	-137.63	158.2	-566.7	845.0	828.3	16.71	50.586	
8,227.0	8,207.1	8,167.3	8,137.3	10.8	10.0	-106.57	159.2	-569.3	847.3	830.6	16.76	50.571	
8,300.0	8,280.1	8,239.9	8,209.5	10.9	10.1	-106.26	161.8	-576.4	853.4	836.5	16.88	50.557	
8,400.0	8,380.1	8,339.3	8,308.4	11.0	10.2	-105.85	165.5	-586.1	861.8	844.8	17.05	50.539	
8,500.0	8,480.1	8,440.8	8,409.3	11.1	10.3	-105.43	169.3	-596.0	870.2	853.0	17.22	50.530	
8,600.0	8,580.1	8,554.4	8,522.5	11.2	10.5	-105.03	173.0	-605.8	877.7	860.3	17.38	50.507	
8,700.0	8,680.1	8,668.4	8,636.2	11.3	10.6	-104.71	175.9	-613.5	883.5	866.0	17.54	50.379	
8,800.0	8,780.1	8,782.7	8,750.3	11.5	10.7	-104.49	178.0	-619.0	887.8	870.1	17.70	50.155	
8,900.0	8,880.1	8,897.2	8,864.7	11.6	10.9	-104.35	179.3	-622.5	890.4	872.5	17.87	49.835	
9,000.0	8,980.1	9,011.7	8,979.3	11.7	11.0	-104.30	179.8	-623.8	891.4	873.4	18.04	49.412	
9,100.0	9,080.1	9,113.4	9,080.9	11.8	11.1	-104.30	179.8	-623.8	891.4	873.3	18.14	49.131	
9,200.0	9,180.1	9,213.4	9,180.9	12.0	11.2	-104.30	179.8	-623.8	891.4	873.2	18.24	48.867	
9,300.0	9,280.1	9,313.4	9,280.9	12.1	11.3	-104.30	179.8	-623.8	891.4	873.1	18.34	48.604	
9,400.0	9,380.1	9,413.4	9,380.9	12.2	11.4	-104.30	179.8	-623.8	891.4	873.0	18.44	48.342	
9,500.0	9,480.1	9,513.4	9,480.9	12.3	11.5	-104.30	179.8	-623.8	891.4	872.9	18.54	48.081	
9,600.0	9,580.1	9,613.4	9,580.9	12.4	11.6	-104.30	179.8	-623.8	891.4	872.8	18.64	47.821	
9,700.0	9,680.1	9,713.4	9,680.9	12.6	11.7	-104.30	179.8	-623.8	891.4	872.7	18.74	47.562	
9,800.0	9,780.1	9,813.4	9,780.9	12.7	11.8	-104.30	179.8	-623.8	891.4	872.6	18.84	47.305	
9,900.0	9,880.1	9,913.4	9,880.9	12.8	11.9	-104.30	179.8	-623.8	891.4	872.5	18.95	47.049	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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
10,000.0	9,980.1	10,013.4	9,980.9	12.9	12.0	-104.30	179.8	-623.8	891.4	872.4	19.05	46.794	
10,100.0	10,080.1	10,113.4	10,080.9	13.1	12.1	-104.30	179.8	-623.8	891.4	872.3	19.15	46.541	
10,200.0	10,180.1	10,213.4	10,180.9	13.2	12.2	-104.30	179.8	-623.8	891.4	872.2	19.26	46.289	
10,300.0	10,280.1	10,313.4	10,280.9	13.3	12.3	-104.30	179.8	-623.8	891.4	872.1	19.36	46.038	
10,400.0	10,380.1	10,413.4	10,380.9	13.4	12.4	-104.30	179.8	-623.8	891.4	872.0	19.47	45.789	
10,500.0	10,480.1	10,513.4	10,480.9	13.6	12.6	-104.30	179.8	-623.8	891.4	871.9	19.57	45.541	
10,600.0	10,580.1	10,613.4	10,580.9	13.7	12.7	-104.30	179.8	-623.8	891.4	871.7	19.68	45.294	
10,700.0	10,680.1	10,713.4	10,680.9	13.8	12.8	-104.30	179.8	-623.8	891.4	871.6	19.79	45.049	
10,800.0	10,780.1	10,813.4	10,780.9	13.9	12.9	-104.30	179.8	-623.8	891.4	871.5	19.90	44.806	
10,900.0	10,880.1	10,913.4	10,880.9	14.1	13.0	-104.30	179.8	-623.8	891.4	871.4	20.00	44.563	
11,000.0	10,980.1	11,013.4	10,980.9	14.2	13.1	-104.30	179.8	-623.8	891.4	871.3	20.11	44.323	
11,100.0	11,080.1	11,113.4	11,080.9	14.3	13.2	-104.30	179.8	-623.8	891.4	871.2	20.22	44.083	
11,200.0	11,180.1	11,213.4	11,180.9	14.4	13.3	-104.30	179.8	-623.8	891.4	871.1	20.33	43.846	
11,300.0	11,280.1	11,313.4	11,280.9	14.6	13.4	-104.30	179.8	-623.8	891.4	871.0	20.44	43.609	
11,400.0	11,380.1	11,413.4	11,380.9	14.7	13.5	-104.30	179.8	-623.8	891.4	870.9	20.55	43.375	
11,500.0	11,480.1	11,513.4	11,480.9	14.8	13.6	-104.30	179.8	-623.8	891.4	870.8	20.66	43.141	
11,600.0	11,580.1	11,613.4	11,580.9	14.9	13.8	-104.30	179.8	-623.8	891.4	870.7	20.77	42.910	
11,700.0	11,680.1	11,713.4	11,680.9	15.1	13.9	-104.30	179.8	-623.8	891.4	870.5	20.89	42.679	
11,800.0	11,780.1	11,813.4	11,780.9	15.2	14.0	-104.30	179.8	-623.8	891.4	870.4	21.00	42.456	
11,800.0	11,780.1	11,813.4	11,780.9	15.2	14.0	-104.30	179.8	-623.8	891.4	870.4	21.00	42.456	
11,850.4	11,830.5	11,858.5	11,826.0	15.2	14.0	-104.31	179.7	-623.8	891.5	870.4	21.03	42.396	
11,875.0	11,855.1	11,875.0	11,842.5	15.2	14.0	61.33	179.0	-623.8	891.4	870.4	21.04	42.366	
11,900.0	11,880.0	11,892.5	11,860.0	15.2	14.0	61.37	177.6	-623.8	891.0	869.9	21.06	42.303	
11,925.0	11,904.8	11,909.7	11,877.0	15.2	14.0	61.46	175.7	-623.8	890.1	869.0	21.09	42.205	
11,950.0	11,929.4	11,925.0	11,892.2	15.2	14.0	61.61	173.4	-623.8	888.8	867.7	21.13	42.060	
11,975.0	11,953.7	11,943.9	11,910.8	15.2	14.0	61.82	170.0	-623.8	887.2	866.0	21.17	41.913	
12,000.0	11,977.7	11,961.1	11,927.5	15.3	14.0	62.08	166.2	-623.8	885.1	863.9	21.21	41.720	
12,025.0	12,001.2	11,975.0	11,941.0	15.3	14.0	62.39	162.7	-623.8	882.6	861.4	21.29	41.458	
12,050.0	12,024.3	11,995.4	11,960.6	15.3	14.0	62.78	156.9	-623.7	879.8	858.5	21.33	41.251	
12,075.0	12,046.9	12,012.6	11,976.8	15.3	14.0	63.21	151.4	-623.7	876.6	855.2	21.39	40.979	
12,100.0	12,068.9	12,029.8	11,992.9	15.3	14.0	63.70	145.2	-623.7	873.0	851.5	21.46	40.684	
12,125.0	12,090.2	12,050.0	12,011.5	15.3	14.0	64.26	137.3	-623.7	869.0	847.5	21.50	40.419	
12,150.0	12,110.8	12,064.2	12,024.3	15.3	14.0	64.84	131.2	-623.7	864.7	843.1	21.60	40.036	
12,175.0	12,130.7	12,081.5	12,039.7	15.4	14.1	65.50	123.4	-623.6	860.1	838.4	21.67	39.689	
12,200.0	12,149.7	12,100.0	12,055.9	15.4	14.1	66.23	114.3	-623.6	855.1	833.4	21.73	39.350	
12,225.0	12,167.8	12,116.1	12,069.6	15.4	14.1	67.00	105.9	-623.6	849.9	828.1	21.82	38.957	
12,250.0	12,185.1	12,133.5	12,084.1	15.4	14.1	67.83	96.4	-623.6	844.3	822.4	21.89	38.578	
12,275.0	12,201.3	12,150.0	12,097.6	15.4	14.1	68.71	86.8	-623.6	838.5	816.5	21.96	38.176	
12,300.0	12,216.5	12,168.4	12,112.2	15.5	14.1	69.67	75.6	-623.5	832.4	810.4	22.02	37.804	
12,325.0	12,230.7	12,185.9	12,125.7	15.5	14.1	70.67	64.4	-623.5	826.1	804.0	22.08	37.413	
12,350.0	12,243.8	12,203.6	12,138.9	15.5	14.1	71.73	52.7	-623.5	819.6	797.5	22.14	37.022	
12,375.0	12,255.7	12,221.3	12,151.6	15.5	14.2	72.84	40.4	-623.4	812.9	790.7	22.19	36.631	
12,400.0	12,266.5	12,239.1	12,164.0	15.5	14.2	74.01	27.6	-623.4	806.0	783.8	22.24	36.243	
12,425.0	12,276.1	12,257.0	12,175.9	15.6	14.2	75.23	14.3	-623.4	799.0	776.7	22.28	35.858	
12,450.0	12,284.5	12,275.0	12,187.5	15.6	14.2	76.49	0.4	-623.3	791.8	769.5	22.32	35.477	
12,475.0	12,291.6	12,293.1	12,198.5	15.6	14.2	77.81	-13.9	-623.3	784.6	762.2	22.35	35.099	
12,500.0	12,297.4	12,311.4	12,209.1	15.6	14.2	79.17	-28.8	-623.2	777.3	754.9	22.39	34.724	
12,525.0	12,302.0	12,329.8	12,219.2	15.6	14.3	80.57	-44.3	-623.2	770.0	747.6	22.41	34.352	
12,550.0	12,305.3	12,350.0	12,229.5	15.6	14.3	82.05	-61.6	-623.2	762.6	740.2	22.43	33.995	
12,575.0	12,307.3	12,367.2	12,237.8	15.6	14.3	83.48	-76.7	-623.1	755.3	732.9	22.47	33.610	
12,601.0	12,308.0	12,387.0	12,246.5	15.7	14.3	85.04	-94.4	-623.1	747.8	725.3	22.51	33.221	
12,700.0	12,307.8	12,468.5	12,274.8	15.7	14.4	87.26	-170.7	-622.9	722.4	699.6	22.83	31.637	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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	
12,800.0	12,307.7	12,560.0	12,290.5	15.7	14.5	88.52	-260.8	-622.6	701.8	678.4	23.43	29.950		
12,900.0	12,307.6	12,657.2	12,291.8	15.7	14.6	88.61	-357.9	-622.4	685.2	661.0	24.20	28.311		
13,000.0	12,307.5	12,756.4	12,291.6	15.8	14.7	88.57	-457.1	-622.1	672.1	647.1	25.07	26.811		
13,100.0	12,307.3	12,855.9	12,291.3	15.8	14.9	88.54	-556.6	-621.8	662.5	636.5	26.02	25.462		
13,200.0	12,307.2	12,955.7	12,291.0	15.8	15.1	88.52	-656.4	-621.6	656.4	629.3	27.05	24.270		
13,304.5	12,307.1	13,060.2	12,290.8	15.9	15.4	88.50	-760.9	-621.3	653.7	625.5	28.19	23.190		
13,400.0	12,307.0	13,155.7	12,290.5	15.9	15.6	88.49	-856.4	-621.0	653.0	623.7	29.29	22.294		
13,500.0	12,306.9	13,255.7	12,290.3	16.1	16.0	88.47	-956.4	-620.8	652.2	621.7	30.49	21.388		
13,600.0	12,306.7	13,355.7	12,290.0	16.4	16.4	88.46	-1,056.4	-620.5	651.5	619.7	31.75	20.521		
13,700.0	12,306.6	13,455.7	12,289.7	16.9	16.9	88.45	-1,156.4	-620.2	650.7	617.7	33.04	19.694		
13,800.0	12,306.5	13,555.7	12,289.5	17.5	17.4	88.43	-1,256.4	-620.0	650.0	615.6	34.37	18.909		
13,900.0	12,306.4	13,655.7	12,289.2	18.2	18.0	88.42	-1,356.4	-619.7	649.2	613.5	35.74	18.166		
14,000.0	12,306.2	13,755.7	12,289.0	18.9	18.6	88.41	-1,456.4	-619.4	648.5	611.3	37.13	17.464		
14,100.0	12,306.1	13,855.6	12,288.7	19.7	19.2	88.39	-1,556.3	-619.2	647.7	609.2	38.55	16.801		
14,200.0	12,306.0	13,955.6	12,288.5	20.4	19.9	88.38	-1,656.3	-618.9	647.0	607.0	40.00	16.175		
14,300.0	12,305.9	14,055.6	12,288.2	21.2	20.5	88.36	-1,756.3	-618.6	646.2	604.8	41.46	15.585		
14,400.0	12,305.7	14,155.6	12,287.9	21.9	21.2	88.35	-1,856.3	-618.4	645.5	602.5	42.95	15.029		
14,500.0	12,305.6	14,255.6	12,287.7	22.7	21.9	88.34	-1,956.3	-618.1	644.7	600.3	44.45	14.505		
14,600.0	12,305.5	14,355.6	12,287.4	23.5	22.6	88.32	-2,056.3	-617.8	644.0	598.0	45.97	14.010		
14,700.0	12,305.4	14,455.6	12,287.2	24.2	23.4	88.31	-2,156.3	-617.6	643.2	595.7	47.50	13.543		
14,800.0	12,305.2	14,555.6	12,286.9	25.0	24.1	88.29	-2,256.3	-617.3	642.5	593.4	49.04	13.101		
14,900.0	12,305.1	14,655.6	12,286.7	25.8	24.9	88.28	-2,356.3	-617.0	641.7	591.1	50.59	12.684		
15,000.0	12,305.0	14,755.6	12,286.4	26.6	25.6	88.27	-2,456.3	-616.8	641.0	588.8	52.16	12.289		
15,100.0	12,304.9	14,855.6	12,286.1	27.4	26.4	88.25	-2,556.3	-616.5	640.2	586.5	53.73	11.915		
15,200.0	12,304.7	14,955.6	12,285.9	28.2	27.2	88.24	-2,656.3	-616.2	639.5	584.2	55.32	11.561		
15,300.0	12,304.6	15,055.6	12,285.6	29.0	28.0	88.22	-2,756.3	-616.0	638.7	581.8	56.91	11.224		
15,400.0	12,304.5	15,155.6	12,285.4	29.8	28.7	88.21	-2,856.3	-615.7	638.0	579.5	58.51	10.905		
15,500.0	12,304.4	15,255.6	12,285.1	30.6	29.5	88.20	-2,956.3	-615.4	637.2	577.1	60.11	10.601		
15,600.0	12,304.2	15,355.6	12,284.8	31.5	30.3	88.18	-3,056.3	-615.2	636.5	574.8	61.72	10.312		
15,700.0	12,304.1	15,455.6	12,284.6	32.3	31.1	88.17	-3,156.3	-614.9	635.7	572.4	63.34	10.037		
15,800.0	12,304.0	15,555.6	12,284.3	33.1	31.9	88.15	-3,256.3	-614.7	635.0	570.0	64.96	9.775		
15,900.0	12,303.9	15,655.6	12,284.1	33.9	32.7	88.14	-3,356.3	-614.4	634.2	567.7	66.59	9.525		
16,000.0	12,303.7	15,755.6	12,283.8	34.7	33.5	88.13	-3,456.3	-614.1	633.5	565.3	68.22	9.286		
16,100.0	12,303.6	15,855.6	12,283.6	35.6	34.3	88.11	-3,556.3	-613.9	632.8	562.9	69.86	9.058		
16,200.0	12,303.5	15,955.6	12,283.3	36.4	35.1	88.10	-3,656.3	-613.6	632.0	560.5	71.50	8.840		
16,300.0	12,303.4	16,055.6	12,283.0	37.2	36.0	88.08	-3,756.3	-613.3	631.3	558.1	73.14	8.631		
16,400.0	12,303.2	16,155.6	12,282.8	38.0	36.8	88.07	-3,856.3	-613.1	630.5	555.7	74.79	8.431		
16,500.0	12,303.1	16,255.6	12,282.5	38.9	37.6	88.05	-3,956.3	-612.8	629.8	553.3	76.44	8.239		
16,600.0	12,303.0	16,355.6	12,282.3	39.7	38.4	88.04	-4,056.3	-612.5	629.0	550.9	78.09	8.055		
16,611.3	12,303.0	16,366.9	12,282.2	39.8	38.5	88.04	-4,067.6	-612.5	628.9	550.6	78.28	8.035		
16,700.0	12,302.5	16,455.6	12,282.0	40.5	39.2	88.06	-4,156.3	-612.3	628.2	548.5	79.74	7.878		
16,800.0	12,302.0	16,555.5	12,281.7	41.4	40.1	88.07	-4,256.2	-612.0	627.5	546.1	81.40	7.709		
16,900.0	12,301.5	16,655.5	12,281.3	42.2	40.9	88.09	-4,356.2	-611.7	626.7	543.7	83.06	7.546		
16,990.1	12,301.0	16,745.6	12,281.0	43.0	41.6	88.10	-4,446.3	-611.5	626.1	541.5	84.56	7.404		
17,000.0	12,300.9	16,757.6	12,281.0	43.0	41.7	88.10	-4,458.3	-611.5	626.0	541.3	84.73	7.388		
17,031.5	12,300.8	16,791.3	12,280.8	43.3	42.0	88.10	-4,492.0	-611.2	625.8	540.6	85.26	7.340		
17,052.9	12,300.7	16,812.8	12,280.8	43.5	42.2	88.10	-4,513.4	-611.0	625.9	540.3	85.62	7.311		
17,100.0	12,300.4	16,859.8	12,280.6	43.9	42.6	88.11	-4,560.5	-610.5	626.3	539.9	86.40	7.248		
17,200.0	12,299.9	16,959.8	12,280.2	44.7	43.4	88.13	-4,660.5	-609.6	627.0	538.9	88.07	7.120		
17,300.0	12,299.4	17,059.8	12,279.9	45.5	44.2	88.15	-4,760.5	-608.6	627.8	538.0	89.74	6.995		
17,400.0	12,298.8	17,159.8	12,279.5	46.4	45.1	88.16	-4,860.5	-607.7	628.5	537.1	91.41	6.876		
17,500.0	12,298.3	17,259.8	12,279.2	47.2	45.9	88.18	-4,960.5	-606.7	629.3	536.2	93.09	6.760		

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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	
17,600.0	12,297.8	17,359.8	12,278.8	48.1	46.7	88.20	-5,060.5	-605.8	630.0	535.2	94.76	6.648	
17,700.0	12,297.3	17,459.8	12,278.4	48.9	47.6	88.22	-5,160.4	-604.8	630.8	534.3	96.44	6.540	
17,800.0	12,296.7	17,559.8	12,278.1	49.7	48.4	88.23	-5,260.4	-603.9	631.5	533.4	98.12	6.436	
17,900.0	12,296.2	17,659.8	12,277.7	50.6	49.2	88.25	-5,360.4	-602.9	632.2	532.4	99.80	6.335	
18,000.0	12,295.7	17,759.8	12,277.4	51.4	50.1	88.27	-5,460.4	-602.0	633.0	531.5	101.48	6.238	
18,100.0	12,295.1	17,859.8	12,277.0	52.3	50.9	88.29	-5,560.4	-601.0	633.7	530.6	103.16	6.143	
18,200.0	12,294.6	17,959.8	12,276.7	53.1	51.8	88.30	-5,660.4	-600.1	634.5	529.6	104.85	6.052	
18,300.0	12,294.1	18,059.8	12,276.3	54.0	52.6	88.32	-5,760.4	-599.1	635.2	528.7	106.53	5.963	
18,400.0	12,293.6	18,159.8	12,275.9	54.8	53.4	88.34	-5,860.4	-598.1	636.0	527.8	108.22	5.877	
18,500.0	12,293.0	18,259.8	12,275.6	55.7	54.3	88.36	-5,960.4	-597.2	636.7	526.8	109.91	5.793	
18,600.0	12,292.5	18,359.8	12,275.2	56.5	55.1	88.37	-6,060.4	-596.2	637.5	525.9	111.60	5.712	
18,700.0	12,292.0	18,459.8	12,274.9	57.3	56.0	88.39	-6,160.4	-595.3	638.2	524.9	113.29	5.634	
18,800.0	12,291.4	18,559.8	12,274.5	58.2	56.8	88.41	-6,260.4	-594.3	639.0	524.0	114.98	5.557	
18,900.0	12,290.9	18,659.8	12,274.1	59.0	57.7	88.42	-6,360.3	-593.4	639.7	523.1	116.67	5.483	
19,000.0	12,290.4	18,759.8	12,273.8	59.9	58.5	88.44	-6,460.3	-592.4	640.5	522.1	118.36	5.411	
19,100.0	12,289.9	18,859.8	12,273.4	60.7	59.3	88.46	-6,560.3	-591.5	641.2	521.2	120.06	5.341	
19,200.0	12,289.3	18,959.8	12,273.1	61.6	60.2	88.48	-6,660.3	-590.5	642.0	520.2	121.75	5.273	
19,300.0	12,288.8	19,059.8	12,272.7	62.4	61.0	88.49	-6,760.3	-589.6	642.7	519.3	123.45	5.207	
19,400.0	12,288.3	19,159.8	12,272.4	63.3	61.9	88.51	-6,860.3	-588.6	643.5	518.3	125.14	5.142	
19,500.0	12,287.7	19,259.7	12,272.0	64.1	62.7	88.53	-6,960.3	-587.7	644.2	517.4	126.84	5.079	
19,600.0	12,287.2	19,359.7	12,271.6	65.0	63.6	88.54	-7,060.3	-586.7	645.0	516.4	128.54	5.018	
19,700.0	12,286.7	19,459.7	12,271.3	65.8	64.4	88.56	-7,160.3	-585.8	645.7	515.5	130.23	4.958	
19,800.0	12,286.2	19,559.7	12,270.9	66.7	65.3	88.58	-7,260.3	-584.8	646.5	514.5	131.93	4.900	
19,900.0	12,285.6	19,659.7	12,270.6	67.5	66.1	88.59	-7,360.3	-583.9	647.2	513.6	133.63	4.843	
20,000.0	12,285.1	19,759.7	12,270.2	68.4	67.0	88.61	-7,460.3	-582.9	648.0	512.6	135.33	4.788	
20,100.0	12,284.6	19,859.7	12,269.8	69.2	67.8	88.63	-7,560.3	-582.0	648.7	511.7	137.03	4.734	
20,200.0	12,284.0	19,959.7	12,269.5	70.1	68.7	88.64	-7,660.2	-581.0	649.5	510.7	138.73	4.681	
20,300.0	12,283.5	20,059.7	12,269.1	70.9	69.5	88.66	-7,760.2	-580.1	650.2	509.8	140.43	4.630	
20,400.0	12,283.0	20,159.7	12,268.8	71.8	70.4	88.68	-7,860.2	-579.1	651.0	508.8	142.13	4.580	
20,500.0	12,282.5	20,259.7	12,268.4	72.6	71.2	88.69	-7,960.2	-578.2	651.7	507.9	143.84	4.531	
20,600.0	12,281.9	20,359.7	12,268.1	73.5	72.1	88.71	-8,060.2	-577.2	652.5	506.9	145.54	4.483	
20,700.0	12,281.4	20,459.7	12,267.7	74.4	72.9	88.73	-8,160.2	-576.3	653.2	506.0	147.24	4.436	
20,800.0	12,280.9	20,559.7	12,267.3	75.2	73.8	88.74	-8,260.2	-575.3	654.0	505.0	148.95	4.391	
20,900.0	12,280.3	20,659.7	12,267.0	76.1	74.6	88.76	-8,360.2	-574.4	654.7	504.1	150.65	4.346	
21,000.0	12,279.8	20,759.7	12,266.6	76.9	75.5	88.77	-8,460.2	-573.4	655.5	503.1	152.35	4.302	
21,100.0	12,279.3	20,859.7	12,266.3	77.8	76.3	88.79	-8,560.2	-572.5	656.2	502.1	154.06	4.259	
21,200.0	12,278.8	20,959.7	12,265.9	78.6	77.2	88.81	-8,660.2	-571.5	657.0	501.2	155.76	4.218	
21,300.0	12,278.2	21,059.7	12,265.5	79.5	78.0	88.82	-8,760.2	-570.6	657.7	500.2	157.47	4.177	
21,400.0	12,277.7	21,159.7	12,265.2	80.3	78.9	88.84	-8,860.1	-569.6	658.5	499.3	159.18	4.137	
21,500.0	12,277.2	21,259.7	12,264.8	81.2	79.7	88.86	-8,960.1	-568.7	659.2	498.3	160.88	4.097	
21,600.0	12,276.6	21,359.7	12,264.5	82.0	80.6	88.87	-9,060.1	-567.7	660.0	497.4	162.59	4.059	
21,700.0	12,276.1	21,459.7	12,264.1	82.9	81.4	88.89	-9,160.1	-566.8	660.7	496.4	164.29	4.021	
21,800.0	12,275.6	21,559.7	12,263.7	83.7	82.3	88.90	-9,260.1	-565.8	661.5	495.5	166.00	3.985	
21,900.0	12,275.1	21,659.7	12,263.4	84.6	83.1	88.92	-9,360.1	-564.9	662.2	494.5	167.71	3.949	
22,000.0	12,274.5	21,759.7	12,263.0	85.4	84.0	88.93	-9,460.1	-563.9	663.0	493.5	169.42	3.913	
22,100.0	12,274.0	21,859.7	12,262.7	86.3	84.8	88.95	-9,560.1	-563.0	663.7	492.6	171.13	3.878	
22,200.0	12,273.5	21,959.7	12,262.3	87.2	85.7	88.97	-9,660.1	-562.0	664.5	491.6	172.83	3.844	
22,288.9	12,273.0	22,047.1	12,262.0	87.9	86.4	88.98	-9,747.5	-561.2	665.1	490.8	174.34	3.815	
22,289.4	12,273.0	22,047.1	12,262.0	87.9	86.4	88.98	-9,747.5	-561.2	665.1	490.8	174.35	3.815 SF	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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	
0.0	0.0	2.3	2.3	3.0	3.0	89.62	0.2	30.0	30.0				
100.0	100.0	102.3	102.3	3.0	3.0	89.62	0.2	30.0	30.0	24.0	6.00	5.000	
200.0	200.0	202.3	202.3	3.0	3.0	89.62	0.2	30.0	30.0	24.0	6.00	4.998	
300.0	300.0	302.3	302.3	3.0	3.0	89.62	0.2	30.0	30.0	24.0	6.01	4.993	
400.0	400.0	402.3	402.3	3.0	3.0	89.62	0.2	30.0	30.0	24.0	6.02	4.985	
500.0	500.0	502.3	502.3	3.1	3.1	89.62	0.2	30.0	30.0	24.0	6.03	4.975	
600.0	600.0	602.3	602.3	3.1	3.1	89.62	0.2	30.0	30.0	24.0	6.05	4.962	
700.0	700.0	702.3	702.3	3.1	3.1	89.62	0.2	30.0	30.0	23.9	6.07	4.946	
800.0	800.0	802.3	802.3	3.2	3.2	89.62	0.2	30.0	30.0	23.9	6.09	4.928	
900.0	900.0	902.3	902.3	3.2	3.2	89.62	0.2	30.0	30.0	23.9	6.11	4.908	
1,000.0	1,000.0	1,002.3	1,002.3	3.2	3.2	89.62	0.2	30.0	30.0	23.9	6.14	4.886	
1,100.0	1,100.0	1,102.3	1,102.3	3.3	3.3	89.62	0.2	30.0	30.0	23.8	6.17	4.861	
1,200.0	1,200.0	1,202.3	1,202.3	3.4	3.4	89.62	0.2	30.0	30.0	23.8	6.21	4.834	
1,300.0	1,300.0	1,302.3	1,302.3	3.4	3.4	89.62	0.2	30.0	30.0	23.8	6.24	4.805	
1,400.0	1,400.0	1,402.3	1,402.3	3.5	3.5	89.62	0.2	30.0	30.0	23.7	6.28	4.775	
1,500.0	1,500.0	1,502.3	1,502.3	3.5	3.5	89.62	0.2	30.0	30.0	23.7	6.33	4.742	
1,600.0	1,600.0	1,602.3	1,602.3	3.6	3.6	89.62	0.2	30.0	30.0	23.6	6.37	4.708	
1,700.0	1,700.0	1,702.3	1,702.3	3.7	3.7	89.62	0.2	30.0	30.0	23.6	6.42	4.673	
1,800.0	1,800.0	1,802.3	1,802.3	3.8	3.8	89.62	0.2	30.0	30.0	23.5	6.47	4.636	
1,900.0	1,900.0	1,902.3	1,902.3	3.9	3.9	89.62	0.2	30.0	30.0	23.5	6.52	4.598	
2,000.0	2,000.0	2,002.3	2,002.3	3.9	3.9	89.62	0.2	30.0	30.0	23.4	6.58	4.559	
2,100.0	2,100.0	2,102.3	2,102.3	4.0	4.0	89.62	0.2	30.0	30.0	23.4	6.64	4.518	
2,200.0	2,200.0	2,202.3	2,202.3	4.1	4.1	89.62	0.2	30.0	30.0	23.3	6.70	4.477	
2,300.0	2,300.0	2,302.3	2,302.3	4.2	4.2	89.62	0.2	30.0	30.0	23.2	6.76	4.435	
2,400.0	2,400.0	2,402.3	2,402.3	4.3	4.3	89.62	0.2	30.0	30.0	23.2	6.83	4.393	
2,415.9	2,415.9	2,418.2	2,418.2	4.3	4.3	89.62	0.2	30.0	30.0	23.2	6.84	4.386 CC	
2,500.0	2,500.0	2,502.3	2,502.3	4.4	4.4	89.62	0.2	30.0	30.0	23.1	6.90	4.350 ES, SF	
2,600.0	2,600.0	2,601.3	2,601.3	4.5	4.5	60.20	0.9	31.7	30.8	23.8	6.97	4.421	
2,700.0	2,699.8	2,700.0	2,699.8	4.6	4.5	64.47	2.7	36.5	33.2	26.1	7.04	4.707	
2,750.0	2,749.7	2,749.7	2,749.3	4.6	4.6	67.32	4.2	40.1	35.0	27.9	7.09	4.934	
2,800.0	2,799.5	2,799.0	2,798.5	4.7	4.6	69.82	5.9	44.5	37.5	30.4	7.15	5.249	
2,900.0	2,899.1	2,898.7	2,897.6	4.8	4.6	73.05	9.8	54.5	43.7	36.4	7.25	6.023	
3,000.0	2,998.7	2,998.5	2,996.8	4.8	4.7	75.47	13.7	64.5	49.9	42.6	7.35	6.793	
3,100.0	3,098.4	3,098.3	3,096.0	4.9	4.8	77.35	17.5	74.4	56.3	48.8	7.45	7.553	
3,200.0	3,198.0	3,198.1	3,195.2	5.0	4.8	78.85	21.4	84.4	62.7	55.1	7.55	8.302	
3,300.0	3,297.6	3,297.8	3,294.4	5.1	4.9	80.07	25.3	94.4	69.1	61.4	7.65	9.036	
3,400.0	3,397.2	3,397.6	3,393.6	5.2	5.0	81.08	29.2	104.4	75.5	67.8	7.74	9.756	
3,500.0	3,496.8	3,497.4	3,492.8	5.3	5.1	81.93	33.1	114.4	82.0	74.2	7.84	10.459	
3,600.0	3,596.4	3,597.2	3,592.0	5.4	5.1	82.66	37.0	124.3	88.5	80.5	7.94	11.144	
3,700.0	3,696.1	3,697.0	3,691.3	5.5	5.2	83.29	40.9	134.3	95.0	86.9	8.04	11.812	
3,800.0	3,795.7	3,796.8	3,790.5	5.6	5.3	83.83	44.8	144.3	101.5	93.3	8.14	12.461	
3,900.0	3,895.3	3,896.6	3,889.7	5.7	5.4	84.32	48.7	154.3	108.0	99.8	8.25	13.091	
4,000.0	3,994.9	3,996.3	3,988.9	5.8	5.5	84.74	52.6	164.3	114.5	106.2	8.36	13.702	
4,100.0	4,094.5	4,096.1	4,088.1	5.9	5.6	85.12	56.5	174.3	121.0	112.6	8.47	14.294	
4,200.0	4,194.2	4,195.9	4,187.3	6.0	5.6	85.47	60.4	184.2	127.6	119.0	8.58	14.866	
4,300.0	4,293.8	4,295.7	4,286.5	6.2	5.7	85.77	64.3	194.2	134.1	125.4	8.70	15.419	
4,400.0	4,393.4	4,395.5	4,385.7	6.3	5.8	86.05	68.2	204.2	140.6	131.8	8.82	15.953	
4,500.0	4,493.0	4,495.3	4,484.9	6.4	5.9	86.31	72.1	214.2	147.2	138.3	8.94	16.468	
4,600.0	4,592.6	4,595.0	4,584.1	6.5	6.0	86.54	76.0	224.2	153.7	144.7	9.06	16.963	
4,700.0	4,692.3	4,694.8	4,683.3	6.6	6.1	86.76	79.9	234.1	160.3	151.1	9.19	17.441	
4,800.0	4,791.9	4,794.6	4,782.5	6.7	6.2	86.95	83.8	244.1	166.8	157.5	9.32	17.899	
4,900.0	4,891.5	4,894.4	4,881.7	6.8	6.3	87.14	87.7	254.1	173.4	163.9	9.45	18.340	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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
5,000.0	4,991.1	4,994.2	4,980.9	6.9	6.4	87.31	91.6	264.1	179.9	170.3	9.59	18.764	
5,100.0	5,090.7	5,094.0	5,080.1	7.0	6.5	87.46	95.5	274.1	186.5	176.7	9.73	19.170	
5,200.0	5,190.4	5,193.7	5,179.4	7.2	6.6	87.61	99.4	284.0	193.0	183.2	9.87	19.559	
5,300.0	5,290.0	5,293.5	5,278.6	7.3	6.7	87.75	103.2	294.0	199.6	189.6	10.01	19.932	
5,400.0	5,389.6	5,393.3	5,377.8	7.4	6.8	87.88	107.1	304.0	206.1	196.0	10.16	20.289	
5,500.0	5,489.2	5,493.1	5,477.0	7.5	6.9	88.00	111.0	314.0	212.7	202.4	10.31	20.631	
5,600.0	5,588.8	5,592.9	5,576.2	7.6	7.1	88.11	114.9	324.0	219.3	208.8	10.46	20.958	
5,700.0	5,688.5	5,692.7	5,675.4	7.7	7.2	88.22	118.8	333.9	225.8	215.2	10.62	21.270	
5,800.0	5,788.1	5,792.4	5,774.6	7.9	7.3	88.32	122.7	343.9	232.4	221.6	10.77	21.568	
5,900.0	5,887.7	5,892.2	5,873.8	8.0	7.4	88.41	126.6	353.9	238.9	228.0	10.93	21.853	
6,000.0	5,987.3	5,992.0	5,973.0	8.1	7.5	88.50	130.5	363.9	245.5	234.4	11.10	22.125	
6,100.0	6,086.9	6,091.8	6,072.2	8.2	7.6	88.59	134.4	373.9	252.1	240.8	11.26	22.384	
6,200.0	6,186.6	6,191.6	6,171.4	8.3	7.7	88.67	138.3	383.9	258.6	247.2	11.43	22.631	
6,300.0	6,286.2	6,291.4	6,270.6	8.4	7.8	88.74	142.2	393.8	265.2	253.6	11.60	22.866	
6,400.0	6,385.8	6,391.1	6,369.8	8.6	7.9	88.82	146.1	403.8	271.7	260.0	11.77	23.089	
6,500.0	6,485.4	6,490.9	6,469.0	8.7	8.0	88.89	150.0	413.8	278.3	266.4	11.94	23.302	
6,600.0	6,585.0	6,590.7	6,568.3	8.8	8.2	88.95	153.9	423.8	284.9	272.8	12.12	23.505	
6,700.0	6,684.7	6,690.5	6,667.5	8.9	8.3	89.02	157.8	433.8	291.4	279.1	12.30	23.697	
6,800.0	6,784.3	6,790.3	6,766.7	9.0	8.4	89.08	161.7	443.7	298.0	285.5	12.48	23.880	
6,900.0	6,883.9	6,890.1	6,865.9	9.2	8.5	89.14	165.6	453.7	304.6	291.9	12.66	24.053	
7,000.0	6,983.5	6,989.9	6,965.1	9.3	8.6	89.19	169.5	463.7	311.1	298.3	12.85	24.218	
7,100.0	7,083.1	7,089.6	7,064.3	9.4	8.7	89.25	173.4	473.7	317.7	304.7	13.03	24.374	
7,200.0	7,182.7	7,189.4	7,163.5	9.5	8.9	89.30	177.3	483.7	324.3	311.0	13.22	24.522	
7,300.0	7,282.4	7,289.2	7,262.7	9.6	9.0	89.35	181.2	493.6	330.8	317.4	13.41	24.662	
7,400.0	7,382.0	7,389.0	7,361.9	9.8	9.1	89.39	185.1	503.6	337.4	323.8	13.61	24.794	
7,500.0	7,481.6	7,488.8	7,461.1	9.9	9.2	89.44	188.9	513.6	344.0	330.2	13.80	24.919	
7,600.0	7,581.2	7,588.6	7,560.3	10.0	9.3	89.48	192.8	523.6	350.5	336.5	14.00	25.037	
7,700.0	7,680.8	7,688.3	7,659.5	10.1	9.5	89.53	196.7	533.6	357.1	342.9	14.20	25.149	
7,727.0	7,707.7	7,715.3	7,686.3	10.2	9.5	89.54	197.8	536.3	358.9	344.6	14.25	25.178	
7,800.0	7,780.5	7,788.1	7,758.7	10.3	9.6	89.54	200.6	543.5	363.7	349.3	14.40	25.259	
7,900.0	7,880.3	7,887.9	7,857.9	10.4	9.7	89.51	204.5	553.5	370.2	355.7	14.59	25.383	
8,000.0	7,980.2	7,987.6	7,957.1	10.5	9.8	88.83	208.4	563.5	376.9	362.1	14.76	25.536	
8,100.0	8,080.1	8,087.2	8,056.1	10.6	9.9	88.11	212.3	573.5	383.6	368.7	14.92	25.711	
8,200.0	8,180.1	8,186.8	8,155.1	10.7	10.1	87.16	216.2	583.4	390.5	375.4	15.08	25.889	
8,227.0	8,207.1	8,213.6	8,181.7	10.8	10.1	117.84	217.2	586.1	392.4	377.2	15.13	25.935	
8,300.0	8,280.1	8,286.2	8,253.9	10.9	10.2	116.98	220.1	593.4	397.6	382.3	15.26	26.057	
8,400.0	8,380.1	8,385.6	8,352.8	11.0	10.3	115.85	224.0	603.3	404.8	389.4	15.44	26.222	
8,500.0	8,480.1	8,485.0	8,451.6	11.1	10.4	114.76	227.8	613.3	412.2	396.6	15.62	26.386	
8,600.0	8,580.1	8,584.5	8,550.5	11.2	10.5	113.71	231.7	623.2	419.7	403.9	15.81	26.549	
8,700.0	8,680.1	8,683.9	8,649.3	11.3	10.7	112.69	235.6	633.1	427.4	411.4	16.00	26.710	
8,800.0	8,780.1	8,783.3	8,748.2	11.5	10.8	111.71	239.5	643.1	435.2	419.0	16.20	26.871	
8,900.0	8,880.1	8,882.7	8,847.0	11.6	10.9	110.77	243.4	653.0	443.2	426.8	16.39	27.031	
9,000.0	8,980.1	8,982.1	8,945.9	11.7	11.0	109.86	247.2	663.0	451.2	434.6	16.59	27.189	
9,100.0	9,080.1	9,081.6	9,044.7	11.8	11.2	108.98	251.1	672.9	459.4	442.6	16.80	27.346	
9,200.0	9,180.1	9,181.0	9,143.5	12.0	11.3	108.13	255.0	682.9	467.6	450.6	17.00	27.503	
9,300.0	9,280.1	9,280.4	9,242.4	12.1	11.4	107.31	258.9	692.8	476.0	458.8	17.21	27.658	
9,400.0	9,380.1	9,379.8	9,341.2	12.2	11.5	106.52	262.8	702.8	484.4	467.0	17.42	27.812	
9,500.0	9,480.1	9,479.2	9,440.1	12.3	11.7	105.75	266.7	712.7	493.0	475.3	17.63	27.965	
9,600.0	9,580.1	9,578.7	9,538.9	12.4	11.8	105.02	270.5	722.6	501.6	483.8	17.84	28.117	
9,700.0	9,680.1	9,678.1	9,637.8	12.6	11.9	104.30	274.4	732.6	510.3	492.2	18.05	28.268	
9,800.0	9,780.1	9,777.5	9,736.6	12.7	12.0	103.61	278.3	742.5	519.1	500.8	18.27	28.418	
9,900.0	9,880.1	9,876.9	9,835.5	12.8	12.2	102.95	282.2	752.5	527.9	509.5	18.48	28.566	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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	
10,000.0	9,980.1	9,976.4	9,934.3	12.9	12.3	102.30	286.1	762.4	536.9	518.2	18.70	28.714	
10,100.0	10,080.1	10,075.8	10,033.2	13.1	12.4	101.68	289.9	772.4	545.9	526.9	18.91	28.860	
10,200.0	10,180.1	10,175.2	10,132.0	13.2	12.5	101.08	293.8	782.3	554.9	535.8	19.13	29.006	
10,300.0	10,280.1	10,274.6	10,230.9	13.3	12.7	100.49	297.7	792.3	564.0	544.7	19.35	29.150	
10,400.0	10,380.1	10,374.0	10,329.7	13.4	12.8	99.93	301.6	802.2	573.2	553.6	19.57	29.293	
10,500.0	10,480.1	10,473.5	10,428.6	13.6	12.9	99.38	305.5	812.1	582.4	562.6	19.79	29.434	
10,600.0	10,580.1	10,572.9	10,527.4	13.7	13.1	98.85	309.3	822.1	591.7	571.7	20.01	29.575	
10,700.0	10,680.1	10,672.3	10,626.3	13.8	13.2	98.34	313.2	832.0	601.0	580.8	20.23	29.714	
10,800.0	10,780.1	10,771.7	10,725.1	13.9	13.3	97.84	317.1	842.0	610.4	589.9	20.45	29.852	
10,900.0	10,880.1	10,871.2	10,823.9	14.1	13.4	97.36	321.0	851.9	619.8	599.1	20.67	29.989	
11,000.0	10,980.1	10,970.6	10,922.8	14.2	13.6	96.89	324.9	861.9	629.2	608.3	20.89	30.124	
11,100.0	11,080.1	11,070.0	11,021.6	14.3	13.7	96.43	328.8	871.8	638.7	617.6	21.11	30.258	
11,200.0	11,180.1	11,169.4	11,120.5	14.4	13.8	95.99	332.6	881.8	648.2	626.9	21.33	30.391	
11,300.0	11,280.1	11,268.8	11,219.3	14.6	14.0	95.56	336.5	891.7	657.8	636.3	21.55	30.523	
11,400.0	11,380.1	11,368.3	11,318.2	14.7	14.1	95.15	340.4	901.6	667.4	645.7	21.77	30.653	
11,500.0	11,480.1	11,467.7	11,417.0	14.8	14.2	94.74	344.3	911.6	677.1	655.1	22.00	30.783	
11,600.0	11,580.1	11,567.1	11,515.9	14.9	14.4	94.35	348.2	921.5	686.7	664.5	22.22	30.910	
11,700.0	11,680.1	11,666.5	11,614.7	15.1	14.5	93.97	352.0	931.5	696.4	674.0	22.44	31.037	
11,800.0	11,780.1	11,766.0	11,713.6	15.2	14.6	93.60	355.9	941.4	706.2	683.5	22.66	31.162	
11,850.4	11,830.5	11,816.1	11,763.4	15.2	14.7	93.41	357.9	946.4	711.1	688.2	22.87	31.093	
11,875.0	11,855.1	11,840.5	11,787.7	15.2	14.7	-100.78	358.8	948.9	713.6	690.7	22.92	31.138	
11,900.0	11,880.0	11,865.1	11,812.2	15.2	14.7	-100.68	359.8	951.3	716.4	693.4	22.98	31.180	
11,925.0	11,904.8	11,889.6	11,836.5	15.2	14.8	-100.66	360.8	953.8	719.5	696.5	23.05	31.219	
11,950.0	11,929.4	11,913.7	11,860.5	15.2	14.8	-100.69	361.7	956.2	722.8	699.7	23.13	31.256	
11,975.0	11,953.7	11,937.5	11,884.2	15.2	14.8	-100.77	362.6	958.6	726.5	703.3	23.22	31.291	
12,000.0	11,977.7	11,960.9	11,907.4	15.3	14.9	-100.89	363.5	960.9	730.4	707.1	23.32	31.324	
12,025.0	12,001.2	11,983.8	11,930.2	15.3	14.9	-101.04	364.4	963.2	734.7	711.3	23.43	31.357	
12,050.0	12,024.3	12,006.2	11,952.4	15.3	14.9	-101.21	365.3	965.5	739.4	715.8	23.56	31.390	
12,075.0	12,046.9	12,028.0	11,974.1	15.3	15.0	-101.39	366.2	967.6	744.5	720.8	23.69	31.423	
12,100.0	12,068.9	12,049.1	11,995.1	15.3	15.0	-101.56	367.0	969.7	750.0	726.1	23.84	31.459	
12,125.0	12,090.2	12,069.5	12,015.3	15.3	15.0	-101.70	367.8	971.8	756.0	732.0	24.00	31.499	
12,150.0	12,110.8	12,089.1	12,034.8	15.3	15.0	-101.80	368.5	973.7	762.4	738.3	24.17	31.543	
12,175.0	12,130.7	12,107.8	12,053.5	15.4	15.1	-101.86	369.3	975.6	769.5	745.1	24.35	31.595	
12,200.0	12,149.7	12,125.7	12,071.3	15.4	15.1	-101.84	370.0	977.4	777.0	752.5	24.55	31.654	
12,225.0	12,167.8	12,145.8	12,091.2	15.4	15.1	-101.90	370.5	979.4	785.2	760.5	24.72	31.763	
12,250.0	12,185.1	12,167.9	12,113.3	15.4	15.1	-102.01	370.2	981.6	793.8	769.0	24.86	31.931	
12,275.0	12,201.3	12,191.0	12,136.2	15.4	15.1	-102.09	368.8	984.0	802.9	777.9	24.99	32.127	
12,300.0	12,216.5	12,215.1	12,160.0	15.5	15.1	-102.16	366.2	986.4	812.5	787.3	25.12	32.344	
12,325.0	12,230.7	12,240.5	12,185.0	15.5	15.1	-102.23	362.0	988.9	822.4	797.1	25.25	32.575	
12,350.0	12,243.8	12,267.4	12,211.1	15.5	15.1	-102.30	356.3	991.5	832.7	807.3	25.38	32.813	
12,375.0	12,255.7	12,296.1	12,238.6	15.5	15.1	-102.39	348.4	994.3	843.3	817.8	25.52	33.047	
12,400.0	12,266.5	12,327.0	12,267.5	15.5	15.1	-102.51	338.2	997.3	854.2	828.5	25.68	33.263	
12,425.0	12,276.1	12,360.4	12,298.1	15.6	15.1	-102.67	325.0	1,000.4	865.3	839.4	25.87	33.446	
12,450.0	12,284.5	12,397.0	12,330.4	15.6	15.1	-102.90	308.2	1,003.7	876.5	850.4	26.10	33.577	
12,475.0	12,291.6	12,437.5	12,364.5	15.6	15.1	-103.19	286.7	1,007.2	887.8	861.4	26.39	33.635	
12,500.0	12,297.4	12,482.7	12,400.3	15.6	15.2	-103.57	259.4	1,010.8	899.0	872.3	26.76	33.601	
12,525.0	12,302.0	12,533.6	12,437.4	15.6	15.2	-104.01	224.7	1,014.7	910.1	882.9	27.20	33.462	
12,550.0	12,305.3	12,591.5	12,474.7	15.6	15.2	-104.50	180.8	1,018.5	920.9	893.1	27.72	33.218	
12,575.0	12,307.3	12,643.6	12,503.5	15.6	15.3	-104.62	137.5	1,021.5	931.1	902.9	28.20	33.014	
12,601.0	12,308.0	12,718.9	12,536.7	15.7	15.3	-105.02	70.1	1,025.0	940.9	912.1	28.81	32.664	
12,700.0	12,307.8	12,950.9	12,570.5	15.7	15.6	-105.98	-157.6	1,029.0	966.1	936.4	29.71	32.518	
12,800.0	12,307.7	13,048.9	12,570.4	15.7	15.8	-105.56	-255.6	1,029.3	985.4	955.2	30.17	32.658	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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

ConocoPhillips

Anticollision Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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 Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.3	0.3	3.0	3.0	-90.57	-0.3	-30.0	30.0				
100.0	100.0	100.3	100.3	3.0	3.0	-90.57	-0.3	-30.0	30.0	24.0	6.00	5.000	
200.0	200.0	200.3	200.3	3.0	3.0	-90.57	-0.3	-30.0	30.0	24.0	6.00	4.998	
300.0	300.0	300.3	300.3	3.0	3.0	-90.57	-0.3	-30.0	30.0	24.0	6.01	4.993	
400.0	400.0	400.3	400.3	3.0	3.0	-90.57	-0.3	-30.0	30.0	24.0	6.02	4.985	
500.0	500.0	500.3	500.3	3.1	3.1	-90.57	-0.3	-30.0	30.0	24.0	6.03	4.975	
600.0	600.0	600.3	600.3	3.1	3.1	-90.57	-0.3	-30.0	30.0	24.0	6.05	4.962	
700.0	700.0	700.3	700.3	3.1	3.1	-90.57	-0.3	-30.0	30.0	23.9	6.07	4.946	
800.0	800.0	800.3	800.3	3.2	3.2	-90.57	-0.3	-30.0	30.0	23.9	6.09	4.929	
900.0	900.0	900.3	900.3	3.2	3.2	-90.57	-0.3	-30.0	30.0	23.9	6.11	4.908	
1,000.0	1,000.0	1,000.3	1,000.3	3.2	3.2	-90.57	-0.3	-30.0	30.0	23.9	6.14	4.886	
1,100.0	1,100.0	1,100.3	1,100.3	3.3	3.3	-90.57	-0.3	-30.0	30.0	23.8	6.17	4.861	
1,200.0	1,200.0	1,200.3	1,200.3	3.4	3.4	-90.57	-0.3	-30.0	30.0	23.8	6.21	4.834	
1,300.0	1,300.0	1,300.3	1,300.3	3.4	3.4	-90.57	-0.3	-30.0	30.0	23.8	6.24	4.806	
1,400.0	1,400.0	1,400.3	1,400.3	3.5	3.5	-90.57	-0.3	-30.0	30.0	23.7	6.28	4.775	
1,500.0	1,500.0	1,500.3	1,500.3	3.5	3.5	-90.57	-0.3	-30.0	30.0	23.7	6.33	4.743	
1,600.0	1,600.0	1,600.3	1,600.3	3.6	3.6	-90.57	-0.3	-30.0	30.0	23.6	6.37	4.709	
1,700.0	1,700.0	1,700.3	1,700.3	3.7	3.7	-90.57	-0.3	-30.0	30.0	23.6	6.42	4.673	
1,800.0	1,800.0	1,800.3	1,800.3	3.8	3.8	-90.57	-0.3	-30.0	30.0	23.5	6.47	4.636	
1,900.0	1,900.0	1,900.3	1,900.3	3.9	3.9	-90.57	-0.3	-30.0	30.0	23.5	6.52	4.598	
2,000.0	2,000.0	2,000.3	2,000.3	3.9	3.9	-90.57	-0.3	-30.0	30.0	23.4	6.58	4.559	
2,100.0	2,100.0	2,100.3	2,100.3	4.0	4.0	-90.57	-0.3	-30.0	30.0	23.4	6.64	4.519	
2,200.0	2,200.0	2,200.3	2,200.3	4.1	4.1	-90.57	-0.3	-30.0	30.0	23.3	6.70	4.478	
2,300.0	2,300.0	2,300.3	2,300.3	4.2	4.2	-90.57	-0.3	-30.0	30.0	23.2	6.76	4.436	
2,400.0	2,400.0	2,400.3	2,400.3	4.3	4.3	-90.57	-0.3	-30.0	30.0	23.2	6.83	4.393	
2,416.6	2,416.6	2,416.9	2,416.9	4.3	4.3	-90.57	-0.3	-30.0	30.0	23.2	6.84	4.386 CC	
2,500.0	2,500.0	2,500.3	2,500.3	4.4	4.4	-90.57	-0.3	-30.0	30.0	23.1	6.90	4.350 ES	
2,600.0	2,600.0	2,600.0	2,600.0	4.5	4.5	-121.12	1.4	-30.4	31.3	24.4	6.97	4.496	
2,700.0	2,699.8	2,699.7	2,699.5	4.6	4.6	-120.09	6.4	-31.7	35.3	28.2	7.04	5.013	
2,750.0	2,749.7	2,749.4	2,749.1	4.6	4.6	-119.45	10.2	-32.6	38.3	31.2	7.08	5.406	
2,800.0	2,799.5	2,799.1	2,798.6	4.7	4.7	-118.34	14.8	-33.8	41.7	34.6	7.12	5.858	
2,900.0	2,899.1	2,898.8	2,897.7	4.8	4.8	-115.57	24.9	-36.3	48.9	41.7	7.21	6.779	
3,000.0	2,998.7	2,998.5	2,996.9	4.8	4.9	-113.51	35.1	-38.8	56.1	48.8	7.31	7.680	
3,100.0	3,098.4	3,098.2	3,096.1	4.9	5.0	-111.93	45.2	-41.4	63.5	56.0	7.41	8.559	
3,200.0	3,198.0	3,198.0	3,195.2	5.0	5.1	-110.68	55.3	-43.9	70.8	63.3	7.52	9.415	
3,300.0	3,297.6	3,297.7	3,294.4	5.1	5.2	-109.66	65.4	-46.4	78.2	70.6	7.63	10.246	
3,400.0	3,397.2	3,397.4	3,393.6	5.2	5.3	-108.82	75.5	-49.0	85.6	77.9	7.75	11.052	
3,500.0	3,496.8	3,497.1	3,492.8	5.3	5.4	-108.11	85.6	-51.5	93.0	85.2	7.86	11.833	
3,600.0	3,596.4	3,596.8	3,591.9	5.4	5.5	-107.51	95.7	-54.0	100.5	92.5	7.98	12.589	
3,700.0	3,696.1	3,696.6	3,691.1	5.5	5.6	-106.99	105.8	-56.5	107.9	99.8	8.10	13.320	
3,800.0	3,795.7	3,796.3	3,790.3	5.6	5.7	-106.54	116.0	-59.1	115.4	107.2	8.23	14.026	
3,900.0	3,895.3	3,896.0	3,889.4	5.7	5.8	-106.14	126.1	-61.6	122.8	114.5	8.35	14.708	
4,000.0	3,994.9	3,995.7	3,988.6	5.8	5.9	-105.79	136.2	-64.1	130.3	121.8	8.48	15.365	
4,100.0	4,094.5	4,095.4	4,087.8	5.9	6.0	-105.47	146.3	-66.6	137.8	129.2	8.61	15.999	
4,200.0	4,194.2	4,195.1	4,187.0	6.0	6.1	-105.19	156.4	-69.2	145.3	136.5	8.75	16.609	
4,300.0	4,293.8	4,294.9	4,286.1	6.2	6.2	-104.94	166.5	-71.7	152.7	143.8	8.88	17.197	
4,400.0	4,393.4	4,394.6	4,385.3	6.3	6.3	-104.70	176.6	-74.2	160.2	151.2	9.02	17.762	
4,500.0	4,493.0	4,494.3	4,484.5	6.4	6.5	-104.49	186.7	-76.8	167.7	158.5	9.16	18.306	
4,600.0	4,592.6	4,594.0	4,583.6	6.5	6.6	-104.30	196.9	-79.3	175.2	165.9	9.30	18.828	
4,700.0	4,692.3	4,693.7	4,682.8	6.6	6.7	-104.13	207.0	-81.8	182.7	173.2	9.45	19.330	
4,800.0	4,791.9	4,793.5	4,782.0	6.7	6.8	-103.96	217.1	-84.3	190.1	180.5	9.60	19.811	
4,900.0	4,891.5	4,893.2	4,881.2	6.8	6.9	-103.81	227.2	-86.9	197.6	187.9	9.75	20.274	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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 Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.0	4,991.1	4,992.9	4,980.3	6.9	7.0	-103.68	237.3	-89.4	205.1	195.2	9.90	20.717	
5,100.0	5,090.7	5,092.6	5,079.5	7.0	7.1	-103.55	247.4	-91.9	212.6	202.6	10.06	21.143	
5,200.0	5,190.4	5,192.3	5,178.7	7.2	7.3	-103.43	257.5	-94.5	220.1	209.9	10.21	21.550	
5,300.0	5,290.0	5,292.0	5,277.8	7.3	7.4	-103.31	267.6	-97.0	227.6	217.2	10.37	21.941	
5,400.0	5,389.6	5,391.8	5,377.0	7.4	7.5	-103.21	277.7	-99.5	235.1	224.6	10.54	22.315	
5,500.0	5,489.2	5,491.5	5,476.2	7.5	7.6	-103.11	287.9	-102.0	242.6	231.9	10.70	22.674	
5,600.0	5,588.8	5,591.2	5,575.4	7.6	7.7	-103.02	298.0	-104.6	250.1	239.2	10.87	23.017	
5,700.0	5,688.5	5,690.9	5,674.5	7.7	7.8	-102.93	308.1	-107.1	257.6	246.5	11.03	23.345	
5,800.0	5,788.1	5,790.6	5,773.7	7.9	8.0	-102.85	318.2	-109.6	265.1	253.9	11.20	23.659	
5,900.0	5,887.7	5,890.4	5,872.9	8.0	8.1	-102.77	328.3	-112.2	272.6	261.2	11.38	23.959	
6,000.0	5,987.3	5,990.1	5,972.0	8.1	8.2	-102.69	338.4	-114.7	280.1	268.5	11.55	24.247	
6,100.0	6,086.9	6,089.8	6,071.2	8.2	8.3	-102.62	348.5	-117.2	287.6	275.8	11.73	24.521	
6,200.0	6,186.6	6,189.5	6,170.4	8.3	8.4	-102.56	358.6	-119.7	295.1	283.2	11.91	24.783	
6,300.0	6,286.2	6,289.2	6,269.6	8.4	8.5	-102.49	368.8	-122.3	302.6	290.5	12.09	25.034	
6,400.0	6,385.8	6,391.8	6,371.6	8.6	8.7	-102.56	378.4	-124.7	309.6	297.4	12.26	25.259	
6,500.0	6,485.4	6,494.5	6,474.1	8.7	8.8	-102.91	386.2	-126.6	315.7	303.3	12.42	25.430	
6,600.0	6,585.0	6,597.3	6,576.7	8.8	8.9	-103.53	392.2	-128.1	320.9	308.4	12.56	25.560	
6,700.0	6,684.7	6,700.1	6,679.4	8.9	9.0	-104.40	396.5	-129.2	325.3	312.6	12.68	25.651	
6,800.0	6,784.3	6,802.8	6,782.0	9.0	9.2	-105.53	399.0	-129.8	328.8	316.0	12.80	25.691	
6,900.0	6,883.9	6,905.0	6,884.2	9.2	9.3	-106.90	399.7	-130.0	331.5	318.6	12.90	25.696	
7,000.0	6,983.5	7,004.6	6,983.8	9.3	9.4	-108.33	399.7	-130.0	334.2	321.2	13.01	25.695	
7,100.0	7,083.1	7,104.2	7,083.4	9.4	9.5	-109.73	399.7	-130.0	337.0	323.9	13.12	25.695	
7,200.0	7,182.7	7,203.8	7,183.0	9.5	9.7	-111.11	399.7	-130.0	340.1	326.9	13.24	25.693	
7,300.0	7,282.4	7,303.5	7,282.7	9.6	9.8	-112.46	399.7	-130.0	343.3	330.0	13.36	25.690	
7,400.0	7,382.0	7,403.1	7,382.3	9.8	9.9	-113.79	399.7	-130.0	346.8	333.3	13.50	25.685	
7,500.0	7,481.6	7,502.7	7,481.9	9.9	10.0	-115.09	399.7	-130.0	350.4	336.7	13.65	25.678	
7,600.0	7,581.2	7,602.3	7,581.5	10.0	10.2	-116.36	399.7	-130.0	354.2	340.4	13.80	25.670	
7,700.0	7,680.8	7,701.9	7,681.1	10.1	10.3	-117.61	399.7	-130.0	358.2	344.2	13.96	25.659	
7,727.0	7,707.7	7,728.8	7,708.0	10.2	10.3	-117.94	399.7	-130.0	359.3	345.3	14.00	25.656	
7,800.0	7,780.5	7,801.6	7,780.8	10.3	10.4	-118.79	399.7	-130.0	362.1	347.9	14.12	25.635	
7,900.0	7,880.3	7,901.4	7,880.6	10.4	10.5	-119.72	399.7	-130.0	365.3	351.0	14.29	25.568	
8,000.0	7,980.2	8,001.3	7,980.5	10.5	10.7	-120.39	399.7	-130.0	367.7	353.3	14.44	25.468	
8,100.0	8,080.1	8,101.2	8,080.4	10.6	10.8	-120.82	399.7	-130.0	369.3	354.7	14.58	25.332	
8,200.0	8,180.1	8,201.2	8,180.4	10.7	10.9	-121.00	399.7	-130.0	370.0	355.3	14.71	25.146	
8,227.0	8,207.1	8,228.2	8,207.4	10.8	10.9	-90.05	399.7	-130.0	370.0	355.3	14.75	25.093	
8,300.0	8,280.1	8,301.2	8,280.4	10.9	11.0	-90.05	399.7	-130.0	370.0	355.2	14.82	24.959	
8,400.0	8,380.1	8,401.2	8,380.4	11.0	11.2	-90.05	399.7	-130.0	370.0	355.1	14.93	24.778	
8,500.0	8,480.1	8,501.2	8,480.4	11.1	11.3	-90.05	399.7	-130.0	370.0	355.0	15.04	24.598	
8,600.0	8,580.1	8,601.2	8,580.4	11.2	11.4	-90.05	399.7	-130.0	370.0	354.8	15.15	24.420	
8,700.0	8,680.1	8,701.2	8,680.4	11.3	11.5	-90.05	399.7	-130.0	370.0	354.7	15.26	24.244	
8,800.0	8,780.1	8,801.2	8,780.4	11.5	11.7	-90.05	399.7	-130.0	370.0	354.6	15.37	24.070	
8,900.0	8,880.1	8,901.2	8,880.4	11.6	11.8	-90.05	399.7	-130.0	370.0	354.5	15.48	23.897	
9,000.0	8,980.1	9,001.2	8,980.4	11.7	11.9	-90.05	399.7	-130.0	370.0	354.4	15.59	23.727	
9,100.0	9,080.1	9,101.2	9,080.4	11.8	12.0	-90.05	399.7	-130.0	370.0	354.3	15.71	23.558	
9,200.0	9,180.1	9,201.2	9,180.4	12.0	12.2	-90.05	399.7	-130.0	370.0	354.2	15.82	23.390	
9,300.0	9,280.1	9,301.2	9,280.4	12.1	12.3	-90.05	399.7	-130.0	370.0	354.1	15.93	23.225	
9,400.0	9,380.1	9,401.2	9,380.4	12.2	12.4	-90.05	399.7	-130.0	370.0	354.0	16.04	23.061	
9,500.0	9,480.1	9,501.2	9,480.4	12.3	12.5	-90.05	399.7	-130.0	370.0	353.8	16.16	22.899	
9,600.0	9,580.1	9,601.2	9,580.4	12.4	12.7	-90.05	399.7	-130.0	370.0	353.7	16.27	22.739	
9,700.0	9,680.1	9,701.2	9,680.4	12.6	12.8	-90.05	399.7	-130.0	370.0	353.6	16.39	22.580	
9,800.0	9,780.1	9,801.2	9,780.4	12.7	12.9	-90.05	399.7	-130.0	370.0	353.5	16.50	22.423	
9,900.0	9,880.1	9,901.2	9,880.4	12.8	13.1	-90.05	399.7	-130.0	370.0	353.4	16.62	22.268	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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 Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
10,000.0	9,980.1	10,001.2	9,980.4	12.9	13.2	-90.05	399.7	-130.0	370.0	353.3	16.73	22.114	
10,100.0	10,080.1	10,101.2	10,080.4	13.1	13.3	-90.05	399.7	-130.0	370.0	353.2	16.85	21.962	
10,200.0	10,180.1	10,201.2	10,180.4	13.2	13.4	-90.05	399.7	-130.0	370.0	353.0	16.96	21.811	
10,300.0	10,280.1	10,301.2	10,280.4	13.3	13.6	-90.05	399.7	-130.0	370.0	352.9	17.08	21.662	
10,400.0	10,380.1	10,401.2	10,380.4	13.4	13.7	-90.05	399.7	-130.0	370.0	352.8	17.20	21.515	
10,500.0	10,480.1	10,501.2	10,480.4	13.6	13.8	-90.05	399.7	-130.0	370.0	352.7	17.31	21.369	
10,600.0	10,580.1	10,601.2	10,580.4	13.7	13.9	-90.05	399.7	-130.0	370.0	352.6	17.43	21.225	
10,700.0	10,680.1	10,701.2	10,680.4	13.8	14.1	-90.05	399.7	-130.0	370.0	352.5	17.55	21.083	
10,800.0	10,780.1	10,801.2	10,780.4	13.9	14.2	-90.05	399.7	-130.0	370.0	352.3	17.67	20.942	
10,900.0	10,880.1	10,901.2	10,880.4	14.1	14.3	-90.05	399.7	-130.0	370.0	352.2	17.79	20.802	
11,000.0	10,980.1	11,001.2	10,980.4	14.2	14.5	-90.05	399.7	-130.0	370.0	352.1	17.91	20.664	
11,100.0	11,080.1	11,101.2	11,080.4	14.3	14.6	-90.05	399.7	-130.0	370.0	352.0	18.02	20.528	
11,200.0	11,180.1	11,201.2	11,180.4	14.4	14.7	-90.05	399.7	-130.0	370.0	351.9	18.14	20.393	
11,300.0	11,280.1	11,301.2	11,280.4	14.6	14.8	-90.05	399.7	-130.0	370.0	351.7	18.26	20.259	
11,400.0	11,380.1	11,401.2	11,380.4	14.7	15.0	-90.05	399.7	-130.0	370.0	351.6	18.38	20.127	
11,500.0	11,480.1	11,501.2	11,480.4	14.8	15.1	-90.05	399.7	-130.0	370.0	351.5	18.50	19.996	
11,600.0	11,580.1	11,601.2	11,580.4	14.9	15.2	-90.05	399.7	-130.0	370.0	351.4	18.62	19.867	
11,700.0	11,680.1	11,701.2	11,680.4	15.1	15.4	-90.05	399.7	-130.0	370.0	351.3	18.75	19.739	
11,800.0	11,780.1	11,801.2	11,780.4	15.2	15.5	-90.05	399.7	-130.0	370.0	351.1	18.87	19.612	
11,850.4	11,830.5	11,851.6	11,830.8	15.2	15.5	-90.05	399.7	-130.0	370.0	351.1	18.91	19.562	
11,875.0	11,855.1	11,876.2	11,855.4	15.2	15.6	75.72	399.7	-130.0	369.8	350.9	18.93	19.539	
11,900.0	11,880.0	11,901.1	11,880.3	15.2	15.6	76.06	399.7	-130.0	369.4	350.4	18.94	19.505	
11,925.0	11,904.8	11,925.9	11,905.1	15.2	15.6	76.64	399.7	-130.0	368.6	349.7	18.94	19.460	
11,950.0	11,929.4	11,950.5	11,929.7	15.2	15.7	77.44	399.7	-130.0	367.6	348.6	18.95	19.401	
11,975.0	11,953.7	11,974.8	11,954.0	15.2	15.7	78.45	399.7	-130.0	366.3	347.4	18.95	19.330	
12,000.0	11,977.7	11,998.8	11,978.0	15.3	15.7	79.66	399.7	-130.0	364.9	346.0	18.96	19.242	
12,025.0	12,001.2	12,022.3	12,001.5	15.3	15.8	81.05	399.7	-130.0	363.4	344.5	18.99	19.143	
12,050.0	12,024.3	12,045.4	12,024.6	15.3	15.8	82.61	399.7	-130.0	362.0	342.9	19.03	19.025	
12,075.0	12,046.9	12,068.0	12,047.2	15.3	15.8	84.30	399.7	-130.0	360.6	341.5	19.10	18.884	
12,100.0	12,068.9	12,090.0	12,069.2	15.3	15.8	86.10	399.7	-130.0	359.5	340.3	19.20	18.719	
12,125.0	12,090.2	12,111.3	12,090.5	15.3	15.8	87.93	399.5	-130.0	358.7	339.4	19.35	18.536	
12,150.0	12,110.8	12,132.9	12,112.1	15.3	15.8	89.77	398.3	-130.3	358.3	338.8	19.54	18.341	
12,158.7	12,117.8	12,140.6	12,119.7	15.3	15.8	90.42	397.7	-130.4	358.3	338.7	19.61	18.270	
12,175.0	12,130.7	12,155.1	12,134.1	15.4	15.8	91.63	396.2	-130.7	358.4	338.6	19.76	18.135	
12,200.0	12,149.7	12,177.8	12,156.6	15.4	15.8	93.49	392.9	-131.4	358.9	338.9	20.03	17.918	
12,225.0	12,167.8	12,201.1	12,179.5	15.4	15.8	95.36	388.5	-132.4	359.9	339.6	20.35	17.688	
12,250.0	12,185.1	12,225.2	12,202.9	15.4	15.8	97.24	382.8	-133.6	361.3	340.6	20.72	17.443	
12,275.0	12,201.3	12,250.1	12,226.6	15.4	15.8	99.11	375.7	-135.1	363.3	342.1	21.15	17.178	
12,300.0	12,216.5	12,275.8	12,250.8	15.5	15.9	100.99	367.1	-136.9	365.6	344.0	21.65	16.889	
12,325.0	12,230.7	12,302.4	12,275.3	15.5	15.9	102.87	356.8	-139.1	368.4	346.2	22.23	16.570	
12,350.0	12,243.8	12,330.1	12,300.1	15.5	15.9	104.74	344.8	-141.6	371.6	348.7	22.91	16.221	
12,375.0	12,255.7	12,359.0	12,325.1	15.5	15.9	106.62	330.8	-144.6	375.1	351.4	23.68	15.840	
12,400.0	12,266.5	12,389.1	12,350.3	15.5	15.9	108.49	314.6	-148.0	379.0	354.4	24.56	15.429	
12,425.0	12,276.1	12,420.7	12,375.5	15.6	15.9	110.35	296.0	-152.0	383.1	357.6	25.55	14.995	
12,450.0	12,284.5	12,453.8	12,400.5	15.6	16.0	112.20	274.8	-156.5	387.5	360.9	26.64	14.545	
12,475.0	12,291.6	12,488.5	12,425.1	15.6	16.0	114.04	250.7	-161.6	392.0	364.2	27.83	14.087	
12,500.0	12,297.4	12,525.2	12,449.0	15.6	16.0	115.85	223.6	-167.3	396.5	367.4	29.09	13.632	
12,525.0	12,302.0	12,563.7	12,471.8	15.6	16.1	117.63	193.2	-173.8	401.0	370.6	30.40	13.192	
12,550.0	12,305.3	12,604.4	12,493.0	15.6	16.1	119.35	159.3	-181.0	405.4	373.7	31.73	12.776	
12,575.0	12,307.3	12,647.2	12,512.1	15.6	16.1	121.00	121.8	-188.9	409.6	376.5	33.04	12.396	
12,601.0	12,308.0	12,694.0	12,528.9	15.7	16.2	122.61	79.1	-198.0	413.5	379.2	34.32	12.047	
12,700.0	12,307.8	12,871.4	12,553.0	15.7	16.3	125.80	-92.0	-234.1	418.6	381.9	36.73	11.398	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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 Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
12,800.0	12,307.7	12,984.8	12,553.0	15.7	16.3	125.96	-203.5	-254.5	417.2	379.9	37.33	11.177	
12,900.0	12,307.6	13,098.1	12,553.0	15.7	16.4	126.16	-315.7	-270.4	415.4	377.4	38.04	10.922	
13,000.0	12,307.5	13,211.2	12,553.0	15.8	16.4	126.40	-428.2	-281.8	413.3	374.5	38.85	10.638	
13,100.0	12,307.3	13,324.2	12,553.0	15.8	16.5	126.68	-541.0	-288.8	410.8	371.1	39.76	10.332	
13,200.0	12,307.2	13,437.1	12,553.0	15.8	16.6	127.01	-653.8	-291.3	408.0	367.2	40.75	10.011	
13,304.5	12,307.1	13,543.3	12,553.0	15.9	16.7	127.23	-760.0	-291.1	405.9	364.3	41.65	9.746	
13,400.0	12,307.0	13,638.8	12,553.0	15.9	16.8	127.30	-855.5	-290.8	405.5	363.0	42.43	9.556	
13,500.0	12,306.9	13,738.8	12,553.0	16.1	16.9	127.38	-955.5	-290.6	404.9	361.6	43.28	9.355	
13,600.0	12,306.7	13,838.8	12,553.0	16.4	17.2	127.46	-1,055.5	-290.3	404.4	360.2	44.19	9.152	
13,700.0	12,306.6	13,938.8	12,553.0	16.9	17.5	127.54	-1,155.5	-290.0	403.9	358.8	45.13	8.949	
13,800.0	12,306.5	14,038.7	12,553.0	17.5	17.9	127.61	-1,255.5	-289.8	403.4	357.3	46.12	8.746	
13,900.0	12,306.4	14,138.7	12,553.0	18.2	18.5	127.69	-1,355.5	-289.5	402.9	355.7	47.15	8.545	
14,000.0	12,306.2	14,238.7	12,553.0	18.9	19.1	127.77	-1,455.5	-289.3	402.4	354.2	48.21	8.347	
14,100.0	12,306.1	14,338.7	12,553.0	19.7	19.8	127.85	-1,555.5	-289.0	401.8	352.5	49.30	8.151	
14,200.0	12,306.0	14,438.7	12,553.0	20.4	20.5	127.93	-1,655.5	-288.7	401.3	350.9	50.42	7.959	
14,300.0	12,305.9	14,538.7	12,553.0	21.2	21.2	128.01	-1,755.5	-288.5	400.8	349.2	51.58	7.772	
14,400.0	12,305.7	14,638.7	12,553.0	21.9	21.9	128.09	-1,855.5	-288.2	400.3	347.6	52.75	7.588	
14,500.0	12,305.6	14,738.7	12,553.0	22.7	22.7	128.17	-1,955.5	-288.0	399.8	345.8	53.96	7.409	
14,600.0	12,305.5	14,838.7	12,553.0	23.5	23.4	128.25	-2,055.5	-287.7	399.3	344.1	55.19	7.235	
14,700.0	12,305.4	14,938.7	12,553.0	24.2	24.2	128.33	-2,155.5	-287.4	398.8	342.3	56.44	7.066	
14,800.0	12,305.2	15,038.7	12,553.0	25.0	25.0	128.41	-2,255.5	-287.2	398.3	340.6	57.71	6.902	
14,900.0	12,305.1	15,138.7	12,553.0	25.8	25.8	128.49	-2,355.5	-286.9	397.8	338.8	59.00	6.742	
15,000.0	12,305.0	15,238.7	12,553.0	26.6	26.6	128.57	-2,455.5	-286.7	397.3	337.0	60.30	6.588	
15,100.0	12,304.9	15,338.7	12,553.0	27.4	27.4	128.66	-2,555.5	-286.4	396.8	335.1	61.63	6.438	
15,200.0	12,304.7	15,438.7	12,553.0	28.2	28.2	128.74	-2,655.5	-286.2	396.2	333.3	62.96	6.293	
15,300.0	12,304.6	15,538.7	12,553.0	29.0	29.0	128.82	-2,755.5	-285.9	395.7	331.4	64.32	6.153	
15,400.0	12,304.5	15,638.7	12,553.0	29.8	29.8	128.90	-2,855.5	-285.6	395.2	329.6	65.68	6.017	
15,500.0	12,304.4	15,738.7	12,553.0	30.6	30.6	128.98	-2,955.4	-285.4	394.7	327.7	67.06	5.886	
15,600.0	12,304.2	15,838.7	12,553.0	31.5	31.4	129.07	-3,055.4	-285.1	394.2	325.8	68.46	5.759	
15,700.0	12,304.1	15,938.7	12,553.0	32.3	32.2	129.15	-3,155.4	-284.9	393.7	323.9	69.86	5.636	
15,800.0	12,304.0	16,038.7	12,553.0	33.1	33.1	129.23	-3,255.4	-284.6	393.2	322.0	71.27	5.517	
15,900.0	12,303.9	16,138.7	12,553.0	33.9	33.9	129.31	-3,355.4	-284.3	392.7	320.0	72.69	5.403	
16,000.0	12,303.7	16,238.7	12,553.0	34.7	34.7	129.40	-3,455.4	-284.1	392.2	318.1	74.13	5.291	
16,100.0	12,303.6	16,338.7	12,553.0	35.6	35.5	129.48	-3,555.4	-283.8	391.7	316.2	75.57	5.184	
16,200.0	12,303.5	16,438.7	12,553.0	36.4	36.4	129.56	-3,655.4	-283.6	391.2	314.2	77.02	5.080	
16,300.0	12,303.4	16,538.7	12,553.0	37.2	37.2	129.65	-3,755.4	-283.3	390.8	312.3	78.47	4.979	
16,400.0	12,303.2	16,638.7	12,553.0	38.0	38.0	129.73	-3,855.4	-283.0	390.3	310.3	79.94	4.882	
16,500.0	12,303.1	16,738.7	12,553.0	38.9	38.8	129.82	-3,955.4	-282.8	389.8	308.4	81.41	4.788	
16,600.0	12,303.0	16,838.7	12,553.0	39.7	39.7	129.90	-4,055.4	-282.5	389.3	306.4	82.88	4.697	
16,611.3	12,303.0	16,850.0	12,553.0	39.8	39.8	129.91	-4,066.7	-282.5	389.2	306.2	83.05	4.687	
16,700.0	12,302.5	16,938.7	12,553.0	40.5	40.5	130.03	-4,155.4	-282.3	389.0	304.6	84.37	4.611	
16,800.0	12,302.0	17,040.2	12,552.4	41.4	41.4	130.10	-4,256.9	-282.0	388.4	302.5	85.89	4.523	
16,900.0	12,301.5	17,140.2	12,551.8	42.2	42.2	130.16	-4,356.9	-281.7	387.8	300.4	87.38	4.438	
16,990.1	12,301.0	17,230.3	12,551.3	43.0	43.0	130.22	-4,447.1	-281.5	387.2	298.5	88.72	4.364	
17,000.0	12,300.9	17,241.4	12,551.2	43.0	43.0	130.22	-4,458.1	-281.4	387.2	298.3	88.89	4.355	
17,033.4	12,300.8	17,275.6	12,551.0	43.3	43.3	130.23	-4,492.3	-281.1	387.0	297.6	89.41	4.329	
17,052.9	12,300.7	17,295.2	12,550.9	43.5	43.5	130.22	-4,511.9	-280.9	387.1	297.4	89.70	4.315	
17,100.0	12,300.4	17,342.2	12,550.6	43.9	43.9	130.18	-4,559.0	-280.5	387.3	296.9	90.40	4.285	
17,200.0	12,299.9	17,442.2	12,550.0	44.7	44.7	130.10	-4,658.9	-279.5	387.8	296.0	91.89	4.221	
17,300.0	12,299.4	17,542.2	12,549.4	45.5	45.6	130.02	-4,758.9	-278.6	388.4	295.0	93.39	4.159	
17,400.0	12,298.8	17,642.2	12,548.8	46.4	46.4	129.94	-4,858.9	-277.6	388.9	294.0	94.89	4.098	
17,500.0	12,298.3	17,742.2	12,548.2	47.2	47.2	129.86	-4,958.9	-276.7	389.4	293.0	96.40	4.040	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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 Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
17,600.0	12,297.8	17,842.2	12,547.6	48.1	48.1	129.78	-5,058.9	-275.7	389.9	292.0	97.91	3.983	
17,700.0	12,297.3	17,942.2	12,547.0	48.9	48.9	129.70	-5,158.9	-274.8	390.5	291.0	99.44	3.927	
17,800.0	12,296.7	18,042.2	12,546.3	49.7	49.8	129.62	-5,258.9	-273.8	391.0	290.0	100.96	3.873	
17,900.0	12,296.2	18,142.2	12,545.7	50.6	50.6	129.54	-5,358.9	-272.9	391.5	289.0	102.49	3.820	
18,000.0	12,295.7	18,242.2	12,545.1	51.4	51.5	129.46	-5,458.9	-271.9	392.1	288.0	104.03	3.769	
18,100.0	12,295.1	18,342.2	12,544.5	52.3	52.3	129.38	-5,558.9	-271.0	392.6	287.0	105.57	3.719	
18,200.0	12,294.6	18,442.2	12,543.9	53.1	53.2	129.30	-5,658.9	-270.0	393.1	286.0	107.12	3.670	
18,300.0	12,294.1	18,542.2	12,543.3	54.0	54.0	129.22	-5,758.8	-269.1	393.7	285.0	108.67	3.623	
18,400.0	12,293.6	18,642.2	12,542.7	54.8	54.8	129.14	-5,858.8	-268.1	394.2	284.0	110.22	3.576	
18,500.0	12,293.0	18,742.2	12,542.1	55.7	55.7	129.07	-5,958.8	-267.2	394.7	282.9	111.78	3.531	
18,600.0	12,292.5	18,842.2	12,541.5	56.5	56.5	128.99	-6,058.8	-266.2	395.3	281.9	113.34	3.487	
18,700.0	12,292.0	18,942.2	12,540.9	57.3	57.4	128.91	-6,158.8	-265.3	395.8	280.9	114.90	3.445	
18,800.0	12,291.4	19,042.2	12,540.3	58.2	58.2	128.83	-6,258.8	-264.3	396.3	279.9	116.47	3.403	
18,900.0	12,290.9	19,142.2	12,539.6	59.0	59.1	128.75	-6,358.8	-263.4	396.9	278.8	118.05	3.362	
19,000.0	12,290.4	19,242.2	12,539.0	59.9	59.9	128.68	-6,458.8	-262.4	397.4	277.8	119.62	3.322	
19,100.0	12,289.9	19,342.2	12,538.4	60.7	60.8	128.60	-6,558.8	-261.5	397.9	276.7	121.20	3.283	
19,200.0	12,289.3	19,442.2	12,537.8	61.6	61.6	128.52	-6,658.8	-260.5	398.5	275.7	122.78	3.245	
19,300.0	12,288.8	19,542.2	12,537.2	62.4	62.5	128.45	-6,758.8	-259.6	399.0	274.6	124.37	3.208	
19,400.0	12,288.3	19,642.2	12,536.6	63.3	63.3	128.37	-6,858.7	-258.6	399.6	273.6	125.95	3.172	
19,500.0	12,287.7	19,742.2	12,536.0	64.1	64.2	128.29	-6,958.7	-257.7	400.1	272.5	127.55	3.137	
19,600.0	12,287.2	19,842.2	12,535.4	65.0	65.0	128.22	-7,058.7	-256.7	400.6	271.5	129.14	3.102	
19,700.0	12,286.7	19,942.2	12,534.8	65.8	65.9	128.14	-7,158.7	-255.8	401.2	270.4	130.73	3.069	
19,800.0	12,286.2	20,042.1	12,534.2	66.7	66.7	128.07	-7,258.7	-254.8	401.7	269.4	132.33	3.036	
19,900.0	12,285.6	20,142.1	12,533.5	67.5	67.6	127.99	-7,358.7	-253.9	402.3	268.3	133.93	3.003	
20,000.0	12,285.1	20,242.1	12,532.9	68.4	68.4	127.92	-7,458.7	-252.9	402.8	267.3	135.54	2.972	
20,100.0	12,284.6	20,342.1	12,532.3	69.2	69.3	127.84	-7,558.7	-252.0	403.4	266.2	137.14	2.941	
20,200.0	12,284.0	20,442.1	12,531.7	70.1	70.1	127.77	-7,658.7	-251.0	403.9	265.1	138.75	2.911	
20,300.0	12,283.5	20,542.1	12,531.1	70.9	71.0	127.69	-7,758.7	-250.1	404.4	264.1	140.36	2.881	
20,400.0	12,283.0	20,642.1	12,530.5	71.8	71.8	127.62	-7,858.6	-249.1	405.0	263.0	141.97	2.853	
20,500.0	12,282.5	20,742.1	12,529.9	72.6	72.7	127.55	-7,958.6	-248.2	405.5	262.0	143.59	2.824	
20,600.0	12,281.9	20,842.1	12,529.3	73.5	73.5	127.47	-8,058.6	-247.2	406.1	260.9	145.20	2.797	
20,700.0	12,281.4	20,942.1	12,528.7	74.4	74.4	127.40	-8,158.6	-246.3	406.6	259.8	146.82	2.770	
20,800.0	12,280.9	21,042.1	12,528.1	75.2	75.2	127.32	-8,258.6	-245.3	407.2	258.7	148.44	2.743	
20,900.0	12,280.3	21,142.1	12,527.5	76.1	76.1	127.25	-8,358.6	-244.4	407.7	257.7	150.06	2.717	
21,000.0	12,279.8	21,242.1	12,526.8	76.9	77.0	127.18	-8,458.6	-243.4	408.3	256.6	151.68	2.692	
21,100.0	12,279.3	21,342.1	12,526.2	77.8	77.8	127.11	-8,558.6	-242.5	408.8	255.5	153.31	2.667	
21,200.0	12,278.8	21,442.1	12,525.6	78.6	78.7	127.03	-8,658.6	-241.5	409.4	254.5	154.94	2.642	
21,300.0	12,278.2	21,542.1	12,525.0	79.5	79.5	126.96	-8,758.6	-240.6	409.9	253.4	156.56	2.618	
21,400.0	12,277.7	21,642.1	12,524.4	80.3	80.4	126.89	-8,858.6	-239.6	410.5	252.3	158.19	2.595	
21,500.0	12,277.2	21,742.1	12,523.8	81.2	81.2	126.82	-8,958.5	-238.7	411.1	251.2	159.82	2.572	
21,600.0	12,276.6	21,842.1	12,523.2	82.0	82.1	126.74	-9,058.5	-237.7	411.6	250.1	161.46	2.549	
21,700.0	12,276.1	21,942.1	12,522.6	82.9	82.9	126.67	-9,158.5	-236.8	412.2	249.1	163.09	2.527	
21,800.0	12,275.6	22,042.1	12,522.0	83.7	83.8	126.60	-9,258.5	-235.8	412.7	248.0	164.73	2.505	
21,900.0	12,275.1	22,142.1	12,521.4	84.6	84.6	126.53	-9,358.5	-234.9	413.3	246.9	166.36	2.484	
22,000.0	12,274.5	22,242.1	12,520.7	85.4	85.5	126.46	-9,458.5	-233.9	413.8	245.8	168.00	2.463	
22,100.0	12,274.0	22,342.1	12,520.1	86.3	86.3	126.39	-9,558.5	-233.0	414.4	244.7	169.64	2.443	
22,200.0	12,273.5	22,442.1	12,519.5	87.2	87.2	126.32	-9,658.5	-232.0	414.9	243.7	171.28	2.423	
22,288.9	12,273.0	22,528.7	12,519.0	87.9	87.9	126.26	-9,745.1	-231.2	415.5	242.7	172.70	2.406	
22,289.4	12,273.0	22,528.7	12,519.0	87.9	87.9	126.26	-9,745.1	-231.2	415.5	242.7	172.73	2.405 SF	

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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' @ 3396.5usft (TBD)

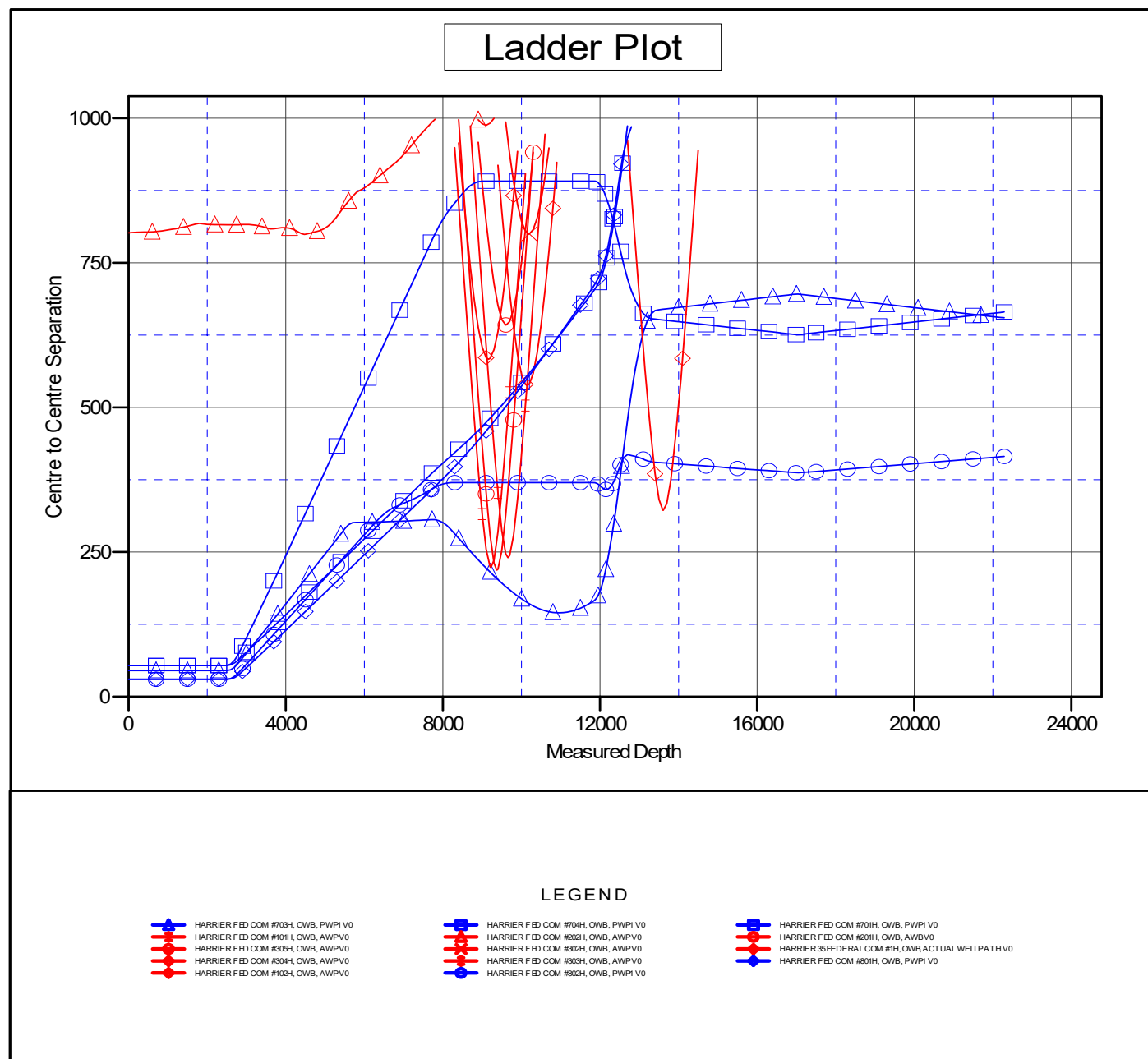
Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: HARRIER FED COM #702H

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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Reference Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	HARRIER FED COM #702H	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' @ 3396.5usft (TBD)

Offset Depths are relative to Offset Datum

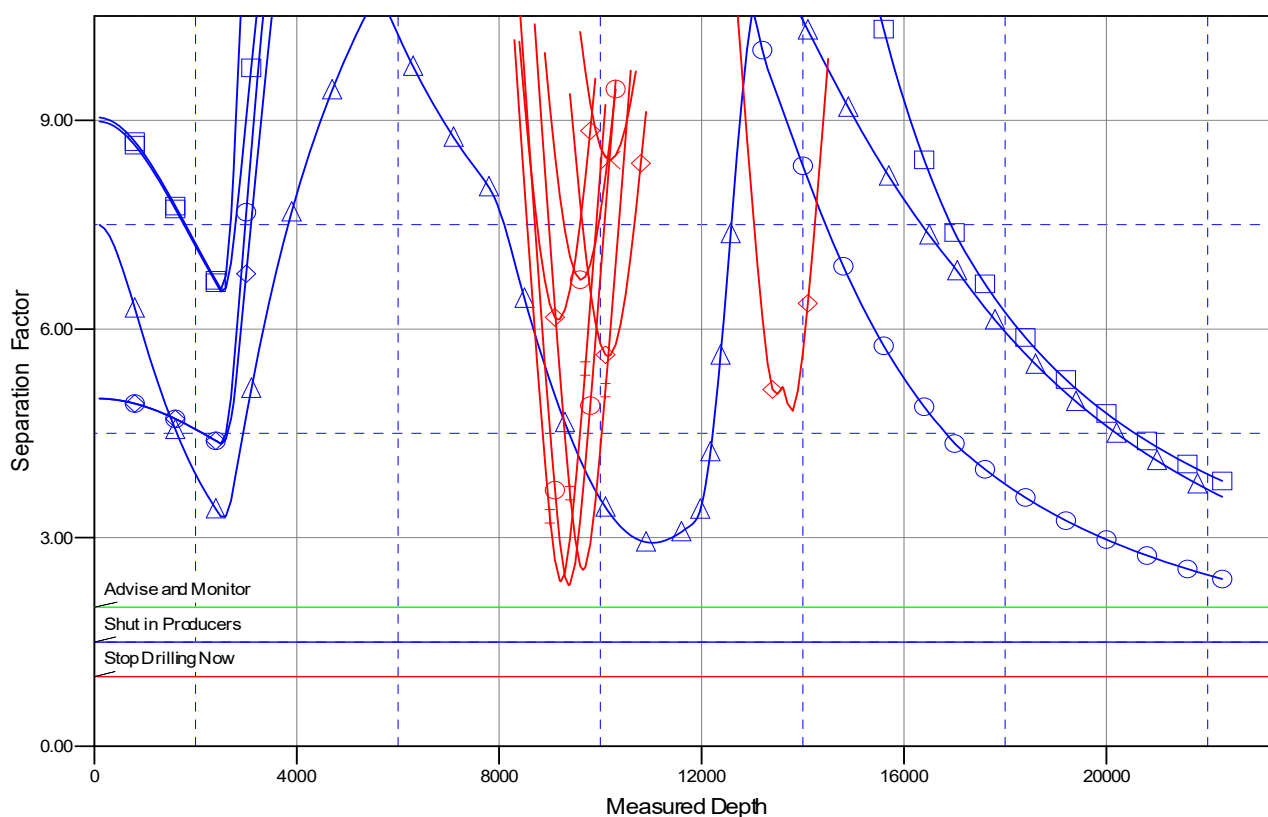
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: HARRIER FED COM #702H

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 #703H, OWB, PWP1 V0
 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 #202H, OWB, AWPV0
 HARRIER FED COM #302H, OWB, AWPV0
 HARRIER FED COM #303H, OWB, AWPV0
 HARRIER FED COM #802H, OWB, PWP1 V0

HARRIER FED COM #701H, OWB, PWP1 V0
 HARRIER FED COM #201H, OWB, AWPV0
 HARRIER 35 FEDERAL COM #1H, OWB ACTUAL WELLPATH 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 #702H

OWB

Plan: PWP1

Standard Survey Report

04 May, 2021



ConocoPhillips

Survey Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Well:	HARRIER FED COM #702H	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 #702H				
Well Position	+N/-S	0.0 usft	Northing:	397,790.60 usft	Latitude: 32° 5' 30.491 N
	+E/-W	0.0 usft	Easting:	711,405.70 usft	Longitude: 103° 39' 2.498 W
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft	Ground Level: 3,366.5 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	5/4/2021	6.59	59.77	47,419.65641093

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	179.39	

Survey Tool Program	Date	5/4/2021			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,850.0	PWP1 (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
11,850.0	22,288.7	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 #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Well:	HARRIER FED COM #702H	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
Start Build 2.00									
2,600.0	2.00	30.96	2,600.0	1.5	0.9	-1.5	2.00	2.00	0.00
2,700.0	4.00	30.96	2,699.8	6.0	3.6	-5.9	2.00	2.00	0.00
2,750.0	5.00	30.96	2,749.7	9.3	5.6	-9.3	2.00	2.00	0.00
Start 4977.0 hold at 2750.0 MD									
2,800.0	5.00	30.96	2,799.5	13.1	7.9	-13.0	0.00	0.00	0.00
2,900.0	5.00	30.96	2,899.1	20.6	12.3	-20.4	0.00	0.00	0.00
3,000.0	5.00	30.96	2,998.7	28.0	16.8	-27.9	0.00	0.00	0.00
3,100.0	5.00	30.96	3,098.4	35.5	21.3	-35.3	0.00	0.00	0.00
3,200.0	5.00	30.96	3,198.0	43.0	25.8	-42.7	0.00	0.00	0.00
3,300.0	5.00	30.96	3,297.6	50.5	30.3	-50.1	0.00	0.00	0.00
3,400.0	5.00	30.96	3,397.2	57.9	34.8	-57.6	0.00	0.00	0.00
3,500.0	5.00	30.96	3,496.8	65.4	39.2	-65.0	0.00	0.00	0.00
3,600.0	5.00	30.96	3,596.4	72.9	43.7	-72.4	0.00	0.00	0.00
3,700.0	5.00	30.96	3,696.1	80.3	48.2	-79.8	0.00	0.00	0.00
3,800.0	5.00	30.96	3,795.7	87.8	52.7	-87.3	0.00	0.00	0.00
3,900.0	5.00	30.96	3,895.3	95.3	57.2	-94.7	0.00	0.00	0.00
4,000.0	5.00	30.96	3,994.9	102.8	61.7	-102.1	0.00	0.00	0.00
4,100.0	5.00	30.96	4,094.5	110.2	66.1	-109.5	0.00	0.00	0.00
4,200.0	5.00	30.96	4,194.2	117.7	70.6	-117.0	0.00	0.00	0.00
4,300.0	5.00	30.96	4,293.8	125.2	75.1	-124.4	0.00	0.00	0.00
4,400.0	5.00	30.96	4,393.4	132.7	79.6	-131.8	0.00	0.00	0.00
4,500.0	5.00	30.96	4,493.0	140.1	84.1	-139.2	0.00	0.00	0.00
4,600.0	5.00	30.96	4,592.6	147.6	88.6	-146.7	0.00	0.00	0.00
4,700.0	5.00	30.96	4,692.3	155.1	93.0	-154.1	0.00	0.00	0.00
4,800.0	5.00	30.96	4,791.9	162.6	97.5	-161.5	0.00	0.00	0.00
4,900.0	5.00	30.96	4,891.5	170.0	102.0	-168.9	0.00	0.00	0.00
5,000.0	5.00	30.96	4,991.1	177.5	106.5	-176.4	0.00	0.00	0.00
5,100.0	5.00	30.96	5,090.7	185.0	111.0	-183.8	0.00	0.00	0.00
5,200.0	5.00	30.96	5,190.4	192.4	115.5	-191.2	0.00	0.00	0.00
5,300.0	5.00	30.96	5,290.0	199.9	120.0	-198.6	0.00	0.00	0.00
5,400.0	5.00	30.96	5,389.6	207.4	124.4	-206.1	0.00	0.00	0.00

ConocoPhillips

Survey Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Well:	HARRIER FED COM #702H	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)
5,500.0	5.00	30.96	5,489.2	214.9	128.9	-213.5	0.00	0.00	0.00
5,600.0	5.00	30.96	5,588.8	222.3	133.4	-220.9	0.00	0.00	0.00
5,700.0	5.00	30.96	5,688.5	229.8	137.9	-228.3	0.00	0.00	0.00
5,800.0	5.00	30.96	5,788.1	237.3	142.4	-235.8	0.00	0.00	0.00
5,900.0	5.00	30.96	5,887.7	244.8	146.9	-243.2	0.00	0.00	0.00
6,000.0	5.00	30.96	5,987.3	252.2	151.3	-250.6	0.00	0.00	0.00
6,100.0	5.00	30.96	6,086.9	259.7	155.8	-258.0	0.00	0.00	0.00
6,200.0	5.00	30.96	6,186.6	267.2	160.3	-265.5	0.00	0.00	0.00
6,300.0	5.00	30.96	6,286.2	274.7	164.8	-272.9	0.00	0.00	0.00
6,400.0	5.00	30.96	6,385.8	282.1	169.3	-280.3	0.00	0.00	0.00
6,500.0	5.00	30.96	6,485.4	289.6	173.8	-287.7	0.00	0.00	0.00
6,600.0	5.00	30.96	6,585.0	297.1	178.2	-295.2	0.00	0.00	0.00
6,700.0	5.00	30.96	6,684.7	304.6	182.7	-302.6	0.00	0.00	0.00
6,800.0	5.00	30.96	6,784.3	312.0	187.2	-310.0	0.00	0.00	0.00
6,900.0	5.00	30.96	6,883.9	319.5	191.7	-317.4	0.00	0.00	0.00
7,000.0	5.00	30.96	6,983.5	327.0	196.2	-324.9	0.00	0.00	0.00
7,100.0	5.00	30.96	7,083.1	334.4	200.7	-332.3	0.00	0.00	0.00
7,200.0	5.00	30.96	7,182.7	341.9	205.2	-339.7	0.00	0.00	0.00
7,300.0	5.00	30.96	7,282.4	349.4	209.6	-347.1	0.00	0.00	0.00
7,400.0	5.00	30.96	7,382.0	356.9	214.1	-354.6	0.00	0.00	0.00
7,500.0	5.00	30.96	7,481.6	364.3	218.6	-362.0	0.00	0.00	0.00
7,600.0	5.00	30.96	7,581.2	371.8	223.1	-369.4	0.00	0.00	0.00
7,700.0	5.00	30.96	7,680.8	379.3	227.6	-376.8	0.00	0.00	0.00
7,727.0	5.00	30.96	7,707.7	381.3	228.8	-378.8	0.00	0.00	0.00
Start Drop -1.00									
7,800.0	4.27	30.96	7,780.5	386.4	231.8	-383.9	1.00	-1.00	0.00
7,900.0	3.27	30.96	7,880.3	392.0	235.2	-389.5	1.00	-1.00	0.00
8,000.0	2.27	30.96	7,980.2	396.1	237.7	-393.6	1.00	-1.00	0.00
8,100.0	1.27	30.96	8,080.1	398.8	239.3	-396.2	1.00	-1.00	0.00
8,200.0	0.27	30.96	8,180.1	399.9	240.0	-397.4	1.00	-1.00	0.00
8,227.0	0.00	0.00	8,207.1	400.0	240.0	-397.4	1.00	-1.00	0.00
Start 3623.4 hold at 8227.0 MD									
8,300.0	0.00	0.00	8,280.1	400.0	240.0	-397.4	0.00	0.00	0.00
8,400.0	0.00	0.00	8,380.1	400.0	240.0	-397.4	0.00	0.00	0.00
8,500.0	0.00	0.00	8,480.1	400.0	240.0	-397.4	0.00	0.00	0.00
8,600.0	0.00	0.00	8,580.1	400.0	240.0	-397.4	0.00	0.00	0.00
8,700.0	0.00	0.00	8,680.1	400.0	240.0	-397.4	0.00	0.00	0.00
8,800.0	0.00	0.00	8,780.1	400.0	240.0	-397.4	0.00	0.00	0.00
8,900.0	0.00	0.00	8,880.1	400.0	240.0	-397.4	0.00	0.00	0.00
9,000.0	0.00	0.00	8,980.1	400.0	240.0	-397.4	0.00	0.00	0.00
9,100.0	0.00	0.00	9,080.1	400.0	240.0	-397.4	0.00	0.00	0.00
9,200.0	0.00	0.00	9,180.1	400.0	240.0	-397.4	0.00	0.00	0.00
9,300.0	0.00	0.00	9,280.1	400.0	240.0	-397.4	0.00	0.00	0.00
9,400.0	0.00	0.00	9,380.1	400.0	240.0	-397.4	0.00	0.00	0.00

ConocoPhillips

Survey Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Well:	HARRIER FED COM #702H	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)
9,500.0	0.00	0.00	9,480.1	400.0	240.0	-397.4	0.00	0.00	0.00
9,600.0	0.00	0.00	9,580.1	400.0	240.0	-397.4	0.00	0.00	0.00
9,700.0	0.00	0.00	9,680.1	400.0	240.0	-397.4	0.00	0.00	0.00
9,800.0	0.00	0.00	9,780.1	400.0	240.0	-397.4	0.00	0.00	0.00
9,900.0	0.00	0.00	9,880.1	400.0	240.0	-397.4	0.00	0.00	0.00
10,000.0	0.00	0.00	9,980.1	400.0	240.0	-397.4	0.00	0.00	0.00
10,100.0	0.00	0.00	10,080.1	400.0	240.0	-397.4	0.00	0.00	0.00
10,200.0	0.00	0.00	10,180.1	400.0	240.0	-397.4	0.00	0.00	0.00
10,300.0	0.00	0.00	10,280.1	400.0	240.0	-397.4	0.00	0.00	0.00
10,400.0	0.00	0.00	10,380.1	400.0	240.0	-397.4	0.00	0.00	0.00
10,500.0	0.00	0.00	10,480.1	400.0	240.0	-397.4	0.00	0.00	0.00
10,600.0	0.00	0.00	10,580.1	400.0	240.0	-397.4	0.00	0.00	0.00
10,700.0	0.00	0.00	10,680.1	400.0	240.0	-397.4	0.00	0.00	0.00
10,800.0	0.00	0.00	10,780.1	400.0	240.0	-397.4	0.00	0.00	0.00
10,900.0	0.00	0.00	10,880.1	400.0	240.0	-397.4	0.00	0.00	0.00
11,000.0	0.00	0.00	10,980.1	400.0	240.0	-397.4	0.00	0.00	0.00
11,100.0	0.00	0.00	11,080.1	400.0	240.0	-397.4	0.00	0.00	0.00
11,200.0	0.00	0.00	11,180.1	400.0	240.0	-397.4	0.00	0.00	0.00
11,300.0	0.00	0.00	11,280.1	400.0	240.0	-397.4	0.00	0.00	0.00
11,400.0	0.00	0.00	11,380.1	400.0	240.0	-397.4	0.00	0.00	0.00
11,500.0	0.00	0.00	11,480.1	400.0	240.0	-397.4	0.00	0.00	0.00
11,600.0	0.00	0.00	11,580.1	400.0	240.0	-397.4	0.00	0.00	0.00
11,700.0	0.00	0.00	11,680.1	400.0	240.0	-397.4	0.00	0.00	0.00
11,800.0	0.00	0.00	11,780.1	400.0	240.0	-397.4	0.00	0.00	0.00
11,850.4	0.00	0.00	11,830.5	400.0	240.0	-397.4	0.00	0.00	0.00
Start Build 12.00									
11,900.0	5.95	194.35	11,880.0	397.5	239.4	-394.9	12.00	12.00	0.00
12,000.0	17.95	194.35	11,977.7	377.5	234.2	-375.0	12.00	12.00	0.00
12,100.0	29.95	194.35	12,068.9	338.2	224.2	-335.8	12.00	12.00	0.00
12,200.0	41.95	194.35	12,149.7	281.4	209.7	-279.2	12.00	12.00	0.00
12,300.0	53.95	194.35	12,216.5	209.6	191.3	-207.6	12.00	12.00	0.00
12,400.0	65.95	194.35	12,266.5	125.9	169.9	-124.1	12.00	12.00	0.00
12,500.0	77.95	194.35	12,297.4	34.0	146.4	-32.4	12.00	12.00	0.00
12,600.0	89.95	194.35	12,308.0	-62.2	121.8	63.5	12.00	12.00	0.00
12,601.0	90.07	194.35	12,308.0	-63.1	121.5	64.4	12.00	12.00	0.00
Start DLS 2.00 TFO -89.99									
12,700.0	90.07	192.37	12,307.8	-159.5	98.6	160.5	2.00	0.00	-2.00
12,800.0	90.07	190.37	12,307.7	-257.5	78.9	258.3	2.00	0.00	-2.00
12,900.0	90.07	188.37	12,307.6	-356.2	62.6	356.8	2.00	0.00	-2.00
13,000.0	90.07	186.37	12,307.5	-455.3	49.8	455.8	2.00	0.00	-2.00
13,100.0	90.07	184.37	12,307.3	-554.9	40.5	555.3	2.00	0.00	-2.00
13,200.0	90.07	182.37	12,307.2	-654.7	34.6	655.0	2.00	0.00	-2.00
13,300.0	90.07	180.37	12,307.1	-754.7	32.2	755.0	2.00	0.00	-2.00
13,304.5	90.07	180.28	12,307.1	-759.2	32.2	759.5	2.00	0.00	-2.00

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Survey Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Well:	HARRIER FED COM #702H	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)
Start 3295.5 hold at 13304.5 MD									
13,400.0	90.07	180.28	12,307.0	-854.7	31.7	855.0	0.00	0.00	0.00
13,500.0	90.07	180.28	12,306.9	-954.7	31.2	955.0	0.00	0.00	0.00
13,600.0	90.07	180.28	12,306.7	-1,054.7	30.7	1,054.9	0.00	0.00	0.00
13,700.0	90.07	180.28	12,306.6	-1,154.7	30.2	1,154.9	0.00	0.00	0.00
13,800.0	90.07	180.28	12,306.5	-1,254.7	29.8	1,254.9	0.00	0.00	0.00
13,900.0	90.07	180.28	12,306.4	-1,354.7	29.3	1,354.9	0.00	0.00	0.00
14,000.0	90.07	180.28	12,306.2	-1,454.7	28.8	1,454.9	0.00	0.00	0.00
14,100.0	90.07	180.28	12,306.1	-1,554.7	28.3	1,554.9	0.00	0.00	0.00
14,200.0	90.07	180.28	12,306.0	-1,654.7	27.8	1,654.9	0.00	0.00	0.00
14,300.0	90.07	180.28	12,305.9	-1,754.7	27.3	1,754.9	0.00	0.00	0.00
14,400.0	90.07	180.28	12,305.7	-1,854.7	26.8	1,854.8	0.00	0.00	0.00
14,500.0	90.07	180.28	12,305.6	-1,954.7	26.3	1,954.8	0.00	0.00	0.00
14,600.0	90.07	180.28	12,305.5	-2,054.7	25.9	2,054.8	0.00	0.00	0.00
14,700.0	90.07	180.28	12,305.4	-2,154.7	25.4	2,154.8	0.00	0.00	0.00
14,800.0	90.07	180.28	12,305.2	-2,254.7	24.9	2,254.8	0.00	0.00	0.00
14,900.0	90.07	180.28	12,305.1	-2,354.7	24.4	2,354.8	0.00	0.00	0.00
15,000.0	90.07	180.28	12,305.0	-2,454.7	23.9	2,454.8	0.00	0.00	0.00
15,100.0	90.07	180.28	12,304.9	-2,554.7	23.4	2,554.8	0.00	0.00	0.00
15,200.0	90.07	180.28	12,304.7	-2,654.7	22.9	2,654.8	0.00	0.00	0.00
15,300.0	90.07	180.28	12,304.6	-2,754.7	22.5	2,754.7	0.00	0.00	0.00
15,400.0	90.07	180.28	12,304.5	-2,854.7	22.0	2,854.7	0.00	0.00	0.00
15,500.0	90.07	180.28	12,304.4	-2,954.7	21.5	2,954.7	0.00	0.00	0.00
15,600.0	90.07	180.28	12,304.2	-3,054.7	21.0	3,054.7	0.00	0.00	0.00
15,700.0	90.07	180.28	12,304.1	-3,154.7	20.5	3,154.7	0.00	0.00	0.00
15,800.0	90.07	180.28	12,304.0	-3,254.6	20.0	3,254.7	0.00	0.00	0.00
15,900.0	90.07	180.28	12,303.9	-3,354.6	19.5	3,354.7	0.00	0.00	0.00
16,000.0	90.07	180.28	12,303.7	-3,454.6	19.0	3,454.7	0.00	0.00	0.00
16,100.0	90.07	180.28	12,303.6	-3,554.6	18.6	3,554.6	0.00	0.00	0.00
16,200.0	90.07	180.28	12,303.5	-3,654.6	18.1	3,654.6	0.00	0.00	0.00
16,300.0	90.07	180.28	12,303.4	-3,754.6	17.6	3,754.6	0.00	0.00	0.00
16,400.0	90.07	180.28	12,303.2	-3,854.6	17.1	3,854.6	0.00	0.00	0.00
16,500.0	90.07	180.28	12,303.1	-3,954.6	16.6	3,954.6	0.00	0.00	0.00
16,600.0	90.07	180.28	12,303.0	-4,054.6	16.1	4,054.6	0.00	0.00	0.00
Start DLS 2.00 TFO 0.31									
16,611.3	90.30	180.28	12,303.0	-4,065.9	16.1	4,065.9	2.00	2.00	0.01
Start 378.8 hold at 16611.3 MD									
16,700.0	90.30	180.28	12,302.5	-4,154.6	15.6	4,154.6	0.00	0.00	0.00
16,800.0	90.30	180.28	12,302.0	-4,254.6	15.1	4,254.6	0.00	0.00	0.00
16,900.0	90.30	180.28	12,301.5	-4,354.6	14.7	4,354.5	0.00	0.00	0.00
16,990.1	90.30	180.28	12,301.0	-4,444.7	14.2	4,444.6	0.00	0.00	0.00
Start DLS 2.00 TFO -89.73									
17,000.0	90.30	180.08	12,300.9	-4,454.6	14.2	4,454.5	2.00	0.01	-2.00
17,052.9	90.30	179.02	12,300.7	-4,507.6	14.6	4,507.5	2.00	0.01	-2.00

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Survey Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Well:	HARRIER FED COM #702H	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)
Start 5236.0 hold at 17052.9 MD									
17,100.0	90.30	179.02	12,300.4	-4,554.6	15.4	4,554.5	0.00	0.00	0.00
17,200.0	90.30	179.02	12,299.9	-4,654.6	17.1	4,654.5	0.00	0.00	0.00
17,300.0	90.30	179.02	12,299.4	-4,754.6	18.8	4,754.5	0.00	0.00	0.00
17,400.0	90.30	179.02	12,298.8	-4,854.6	20.5	4,854.5	0.00	0.00	0.00
17,500.0	90.30	179.02	12,298.3	-4,954.6	22.2	4,954.5	0.00	0.00	0.00
17,600.0	90.30	179.02	12,297.8	-5,054.5	23.9	5,054.5	0.00	0.00	0.00
17,700.0	90.30	179.02	12,297.3	-5,154.5	25.6	5,154.5	0.00	0.00	0.00
17,800.0	90.30	179.02	12,296.7	-5,254.5	27.3	5,254.5	0.00	0.00	0.00
17,900.0	90.30	179.02	12,296.2	-5,354.5	29.0	5,354.5	0.00	0.00	0.00
18,000.0	90.30	179.02	12,295.7	-5,454.5	30.7	5,454.5	0.00	0.00	0.00
18,100.0	90.30	179.02	12,295.1	-5,554.5	32.4	5,554.5	0.00	0.00	0.00
18,200.0	90.30	179.02	12,294.6	-5,654.4	34.1	5,654.5	0.00	0.00	0.00
18,300.0	90.30	179.02	12,294.1	-5,754.4	35.8	5,754.5	0.00	0.00	0.00
18,400.0	90.30	179.02	12,293.6	-5,854.4	37.5	5,854.5	0.00	0.00	0.00
18,500.0	90.30	179.02	12,293.0	-5,954.4	39.2	5,954.5	0.00	0.00	0.00
18,600.0	90.30	179.02	12,292.5	-6,054.4	40.9	6,054.5	0.00	0.00	0.00
18,700.0	90.30	179.02	12,292.0	-6,154.4	42.7	6,154.5	0.00	0.00	0.00
18,800.0	90.30	179.02	12,291.4	-6,254.3	44.4	6,254.5	0.00	0.00	0.00
18,900.0	90.30	179.02	12,290.9	-6,354.3	46.1	6,354.5	0.00	0.00	0.00
19,000.0	90.30	179.02	12,290.4	-6,454.3	47.8	6,454.5	0.00	0.00	0.00
19,100.0	90.30	179.02	12,289.9	-6,554.3	49.5	6,554.5	0.00	0.00	0.00
19,200.0	90.30	179.02	12,289.3	-6,654.3	51.2	6,654.5	0.00	0.00	0.00
19,300.0	90.30	179.02	12,288.8	-6,754.3	52.9	6,754.4	0.00	0.00	0.00
19,400.0	90.30	179.02	12,288.3	-6,854.3	54.6	6,854.4	0.00	0.00	0.00
19,500.0	90.30	179.02	12,287.7	-6,954.2	56.3	6,954.4	0.00	0.00	0.00
19,600.0	90.30	179.02	12,287.2	-7,054.2	58.0	7,054.4	0.00	0.00	0.00
19,700.0	90.30	179.02	12,286.7	-7,154.2	59.7	7,154.4	0.00	0.00	0.00
19,800.0	90.30	179.02	12,286.2	-7,254.2	61.4	7,254.4	0.00	0.00	0.00
19,900.0	90.30	179.02	12,285.6	-7,354.2	63.1	7,354.4	0.00	0.00	0.00
20,000.0	90.30	179.02	12,285.1	-7,454.2	64.8	7,454.4	0.00	0.00	0.00
20,100.0	90.30	179.02	12,284.6	-7,554.1	66.5	7,554.4	0.00	0.00	0.00
20,200.0	90.30	179.02	12,284.0	-7,654.1	68.2	7,654.4	0.00	0.00	0.00
20,300.0	90.30	179.02	12,283.5	-7,754.1	69.9	7,754.4	0.00	0.00	0.00
20,400.0	90.30	179.02	12,283.0	-7,854.1	71.6	7,854.4	0.00	0.00	0.00
20,500.0	90.30	179.02	12,282.5	-7,954.1	73.3	7,954.4	0.00	0.00	0.00
20,600.0	90.30	179.02	12,281.9	-8,054.1	75.0	8,054.4	0.00	0.00	0.00
20,700.0	90.30	179.02	12,281.4	-8,154.0	76.7	8,154.4	0.00	0.00	0.00
20,800.0	90.30	179.02	12,280.9	-8,254.0	78.4	8,254.4	0.00	0.00	0.00
20,900.0	90.30	179.02	12,280.3	-8,354.0	80.1	8,354.4	0.00	0.00	0.00
21,000.0	90.30	179.02	12,279.8	-8,454.0	81.8	8,454.4	0.00	0.00	0.00
21,100.0	90.30	179.02	12,279.3	-8,554.0	83.5	8,554.4	0.00	0.00	0.00
21,200.0	90.30	179.02	12,278.8	-8,654.0	85.2	8,654.4	0.00	0.00	0.00

ConocoPhillips

Survey Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Well:	HARRIER FED COM #702H	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)
21,300.0	90.30	179.02	12,278.2	-8,754.0	87.0	8,754.4	0.00	0.00	0.00
21,400.0	90.30	179.02	12,277.7	-8,853.9	88.7	8,854.4	0.00	0.00	0.00
21,500.0	90.30	179.02	12,277.2	-8,953.9	90.4	8,954.4	0.00	0.00	0.00
21,600.0	90.30	179.02	12,276.6	-9,053.9	92.1	9,054.4	0.00	0.00	0.00
21,700.0	90.30	179.02	12,276.1	-9,153.9	93.8	9,154.4	0.00	0.00	0.00
21,800.0	90.30	179.02	12,275.6	-9,253.9	95.5	9,254.4	0.00	0.00	0.00
21,900.0	90.30	179.02	12,275.1	-9,353.9	97.2	9,354.4	0.00	0.00	0.00
22,000.0	90.30	179.02	12,274.5	-9,453.8	98.9	9,454.4	0.00	0.00	0.00
22,100.0	90.30	179.02	12,274.0	-9,553.8	100.6	9,554.4	0.00	0.00	0.00
22,200.0	90.30	179.02	12,273.5	-9,653.8	102.3	9,654.3	0.00	0.00	0.00
22,288.9	90.30	179.02	12,273.0	-9,742.7	103.8	9,743.3	0.00	0.00	0.00
TD at 22288.9									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL (HARRIER FED - plan hits target center - Rectangle (sides W100.0 H5,300.0 D20.0)	0.30	359.02	12,273.0	-9,742.7	103.8	388,047.90	711,509.50	32° 3' 54.071 N	103° 39' 2.008 W
LTP (HARRIER FED () - plan misses target center by 38.9usft at 22200.0usft MD (12273.5 TVD, -9653.8 N, 102.3 E) - Point	0.00	0.01	12,273.0	-9,692.7	103.5	388,097.90	711,509.20	32° 3' 54.566 N	103° 39' 2.008 W
PO1#1 (HARRIER FE - plan hits target center - Rectangle (sides W100.0 H390.0 D20.0)	0.30	0.28	12,301.0	-4,444.7	14.2	393,345.86	711,419.91	32° 4' 46.505 N	103° 39' 2.660 W
4800'FFTP (HARRIEF - plan hits target center - Rectangle (sides W100.0 H4,846.0 D20.0)	0.07	0.28	12,303.0	-4,054.6	16.1	393,735.96	711,421.81	32° 4' 50.365 N	103° 39' 2.609 W
FTP (HARRIER FED () - plan misses target center by 506.9usft at 12100.0usft MD (12068.9 TVD, 338.2 N, 224.2 E) - Circle (radius 50.0)	0.00	0.00	12,308.0	745.3	39.6	398,535.90	711,445.30	32° 5' 37.863 N	103° 39' 1.983 W

ConocoPhillips

Survey Report



Company:	DELAWARE BASIN EAST	Local Co-ordinate Reference:	Well HARRIER FED COM #702H
Project:	LEA PROSPECT (NM-E)	TVD Reference:	*KB=30' @ 3396.5usft (TBD)
Site:	HARRIER FEDERAL PROJECT (LEA 2632)	MD Reference:	*KB=30' @ 3396.5usft (TBD)
Well:	HARRIER FED COM #702H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	edm

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2500	2500	0	0	Start Build 2.00
2750	2750	9	6	Start 4977.0 hold at 2750.0 MD
7727	7708	381	229	Start Drop -1.00
8227	8207	400	240	Start 3623.4 hold at 8227.0 MD
11,850	11,830	400	240	Start Build 12.00
12,601	12,308	-63	122	Start DLS 2.00 TFO -89.99
13,305	12,307	-759	32	Start 3295.5 hold at 13304.5 MD
16,600	12,303	-4055	16	Start DLS 2.00 TFO 0.31
16,611	12,303	-4066	16	Start 378.8 hold at 16611.3 MD
16,990	12,301	-4445	14	Start DLS 2.00 TFO -89.73
17,053	12,301	-4508	15	Start 5236.0 hold at 17052.9 MD
22,289	12,273	-9743	104	TD at 22288.9

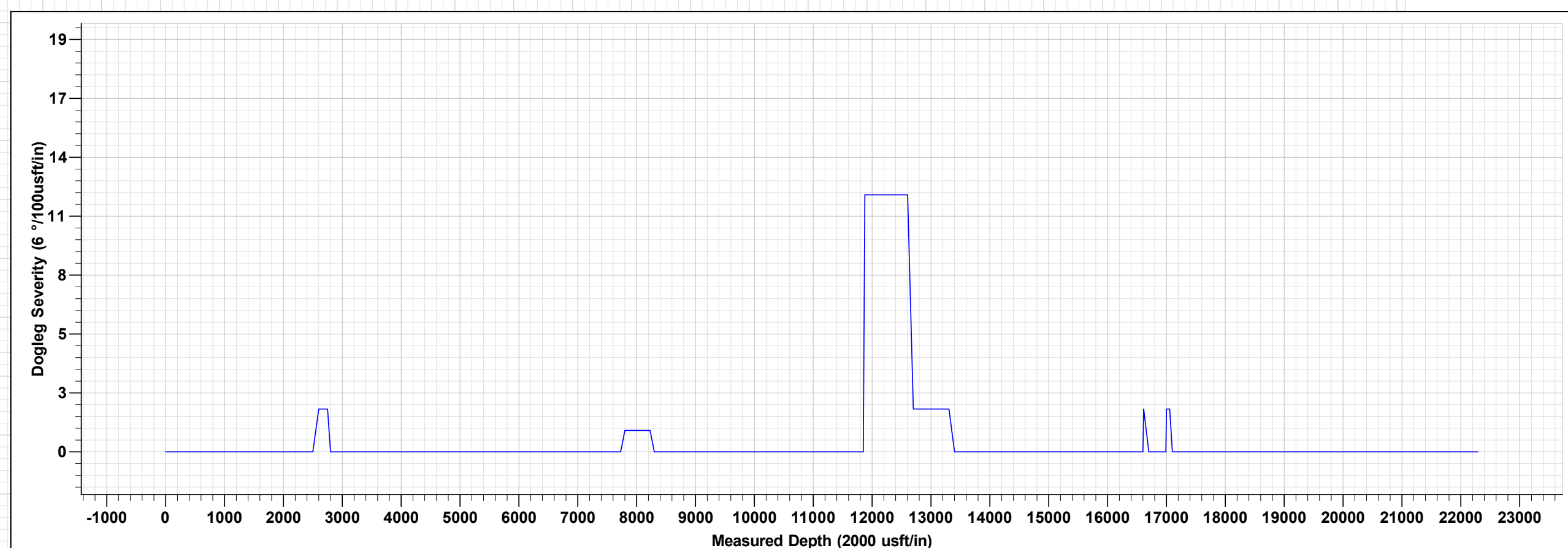
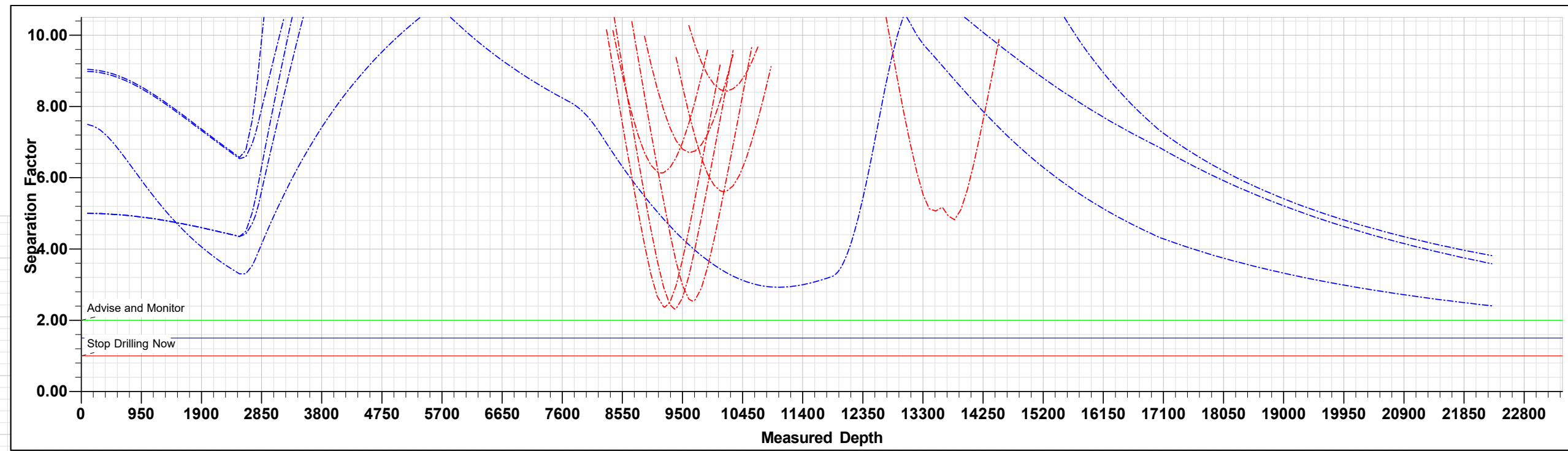
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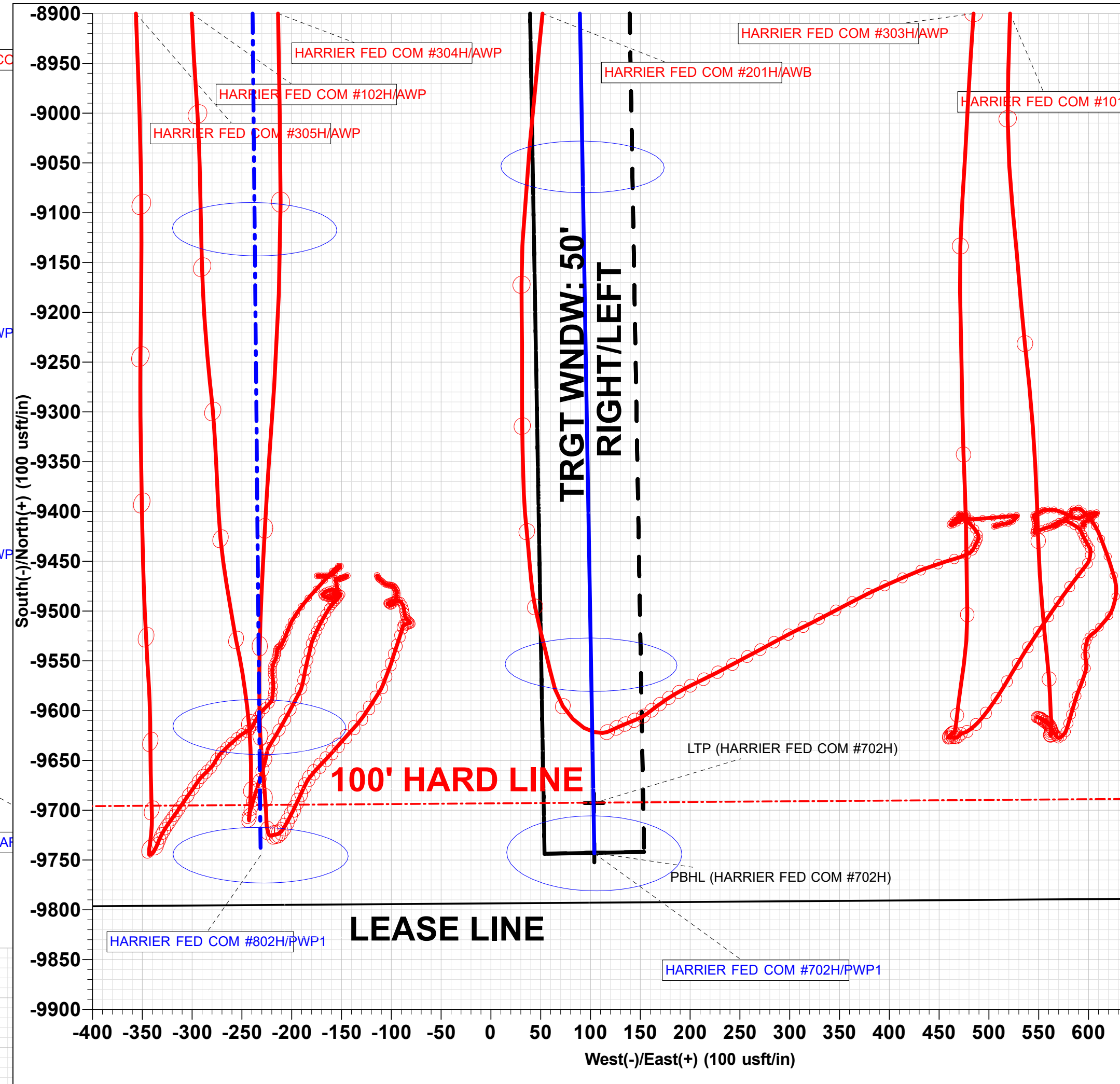
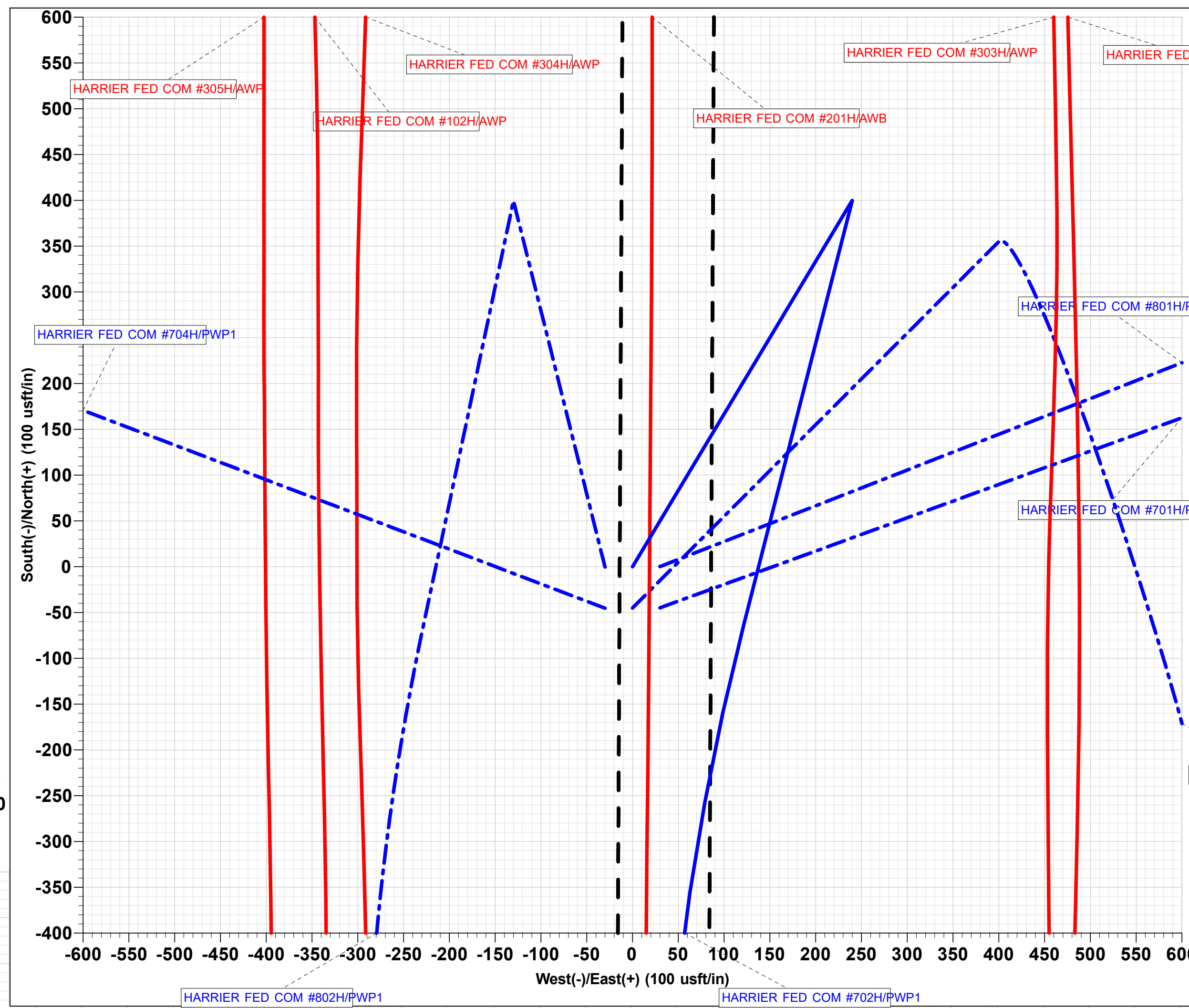
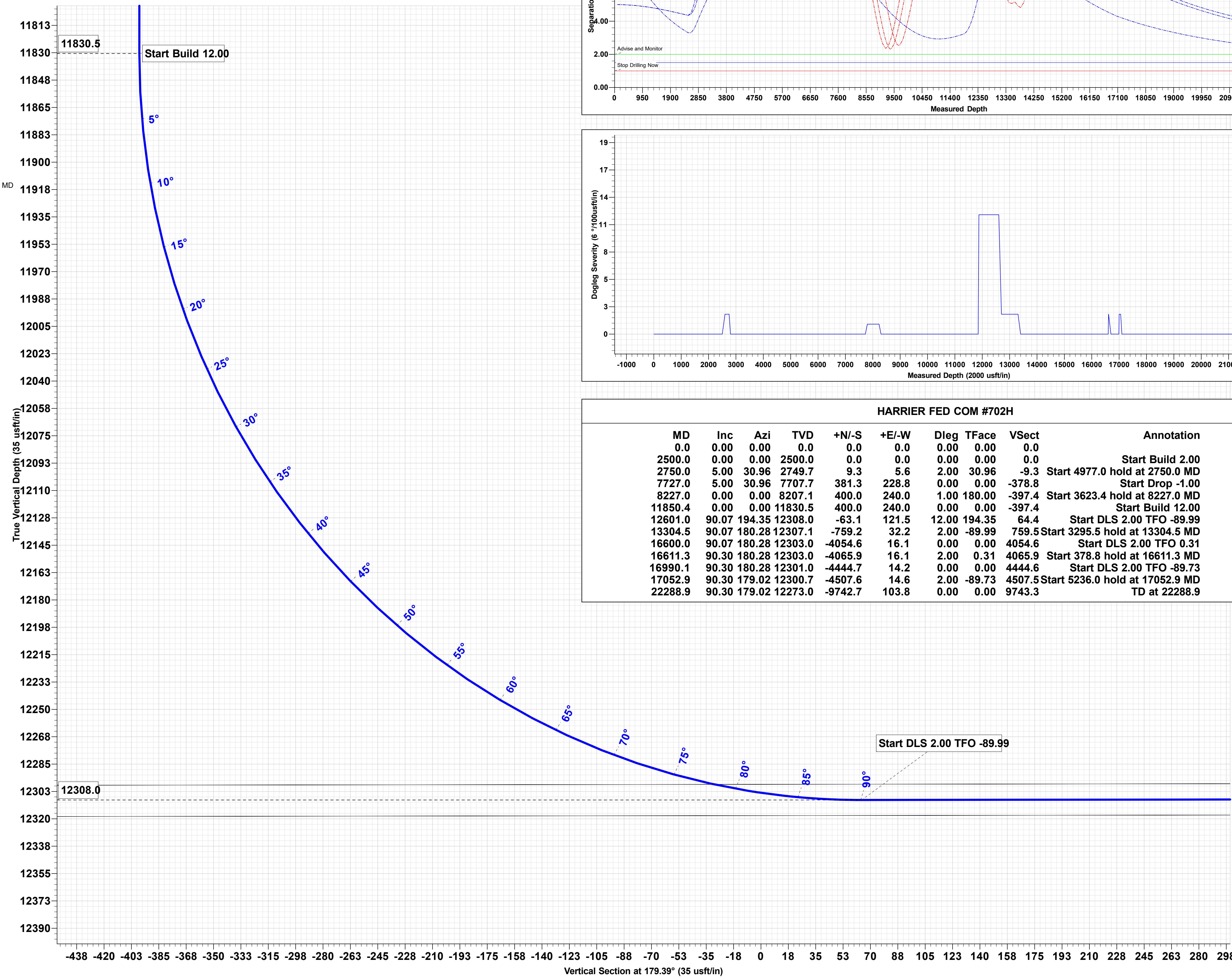
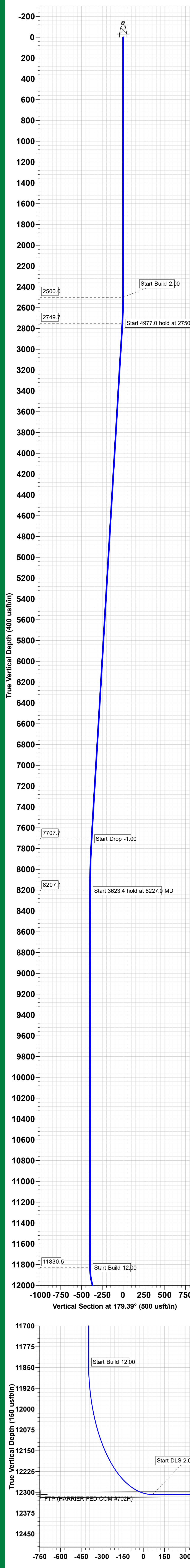
Project: LEA PROSPECT (NM-E)
Site: HARRIER FEDERAL PROJECT (LEA 2632)
Well: HARRIER FED COM #702H
Wellbore: OWB
Design: PWP1
GL: 3366.5
*KB=30' @ 3396.5usft (TBD)

WELL DETAILS: HARRIER FED COM #702H					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	397790.60	711405.70	32° 5' 30.491 N	103° 39' 2.498 W

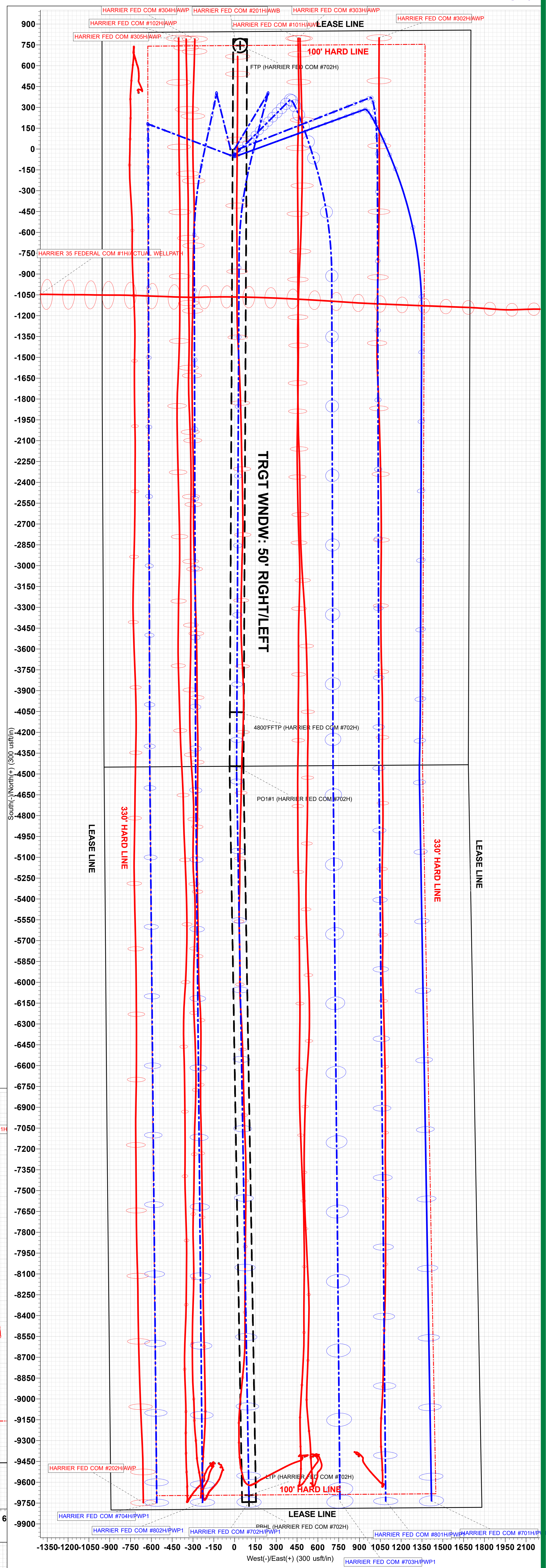
DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude
LTP (HARRIER FED COM #702H)	12273.0	-9692.7	103.5	388097.90	711509.20	32° 3' 54.566 N
PBHL (HARRIER FED COM #702H)	12273.0	-9742.7	103.8	388047.90	711509.50	32° 3' 54.071 N
PO1#1 (HARRIER FED COM #702H)	12301.0	-4444.7	14.2	383345.87	711419.91	32° 4' 46.505 N
4800FFTP (HARRIER FED COM #702H)	12303.0	-4054.6	16.1	383735.96	711421.82	32° 4' 50.365 N
FTP (HARRIER FED COM #702H)	12308.0	745.3	39.6	398535.90	711445.30	32° 5' 37.863 N



HARRIER FED COM #702H									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2500.0	0.00	0.00	2500.0	0.0	0.0	0.00	0.00	0.0	Start Build 2.00
2750.0	5.00	30.96	2749.7	6.3	5.6	2.00	30.96	-9.3	Start 4977.0 hold at 2750.0 MD
7727.0	5.00	30.96	7707.7	381.3	228.8	0.00	0.00	-378.8	Start Drop -1.00
8227.0	0.00	0.00	8207.1	400.0	240.0	1.00	180.00	-397.4	Start 3623.4 hold at 8227.0 MD
11850.4	0.00	0.00	11830.5	400.0	240.0	0.00	0.00	-397.4	Start Build 12.00
12601.0	90.07	194.35	12308.0	-63.1	121.5	12.00	194.35	64.4	Start DLS 2.00 TFO -89.99
13304.5	90.07	180.28	12307.1	-759.2	32.2	2.00	-89.99	759.5	Start 3295.5 hold at 13304.5 MD
16600.0	90.07	180.28	12303.0	-4054.6	16.1	0.00	0.00	4054.6	Start DLS 2.00 TFO 0.31
16611.3	90.30	180.28	12303.0	-4065.9	16.1	2.00	0.31	4065.9	Start 378.8 hold at 16611.3 MD
16990.1	90.30	180.28	12301.0	-4444.7	14.2	0.00	0.00	4444.6	Start DLS 2.00 TFO -89.73
17052.9	90.30	179.02	12300.7	-4507.6	14.6	2.00	-89.73	4507.5	Start 5236.0 hold at 17052.9 MD
22288.9	90.30	179.02	12273.0	-9742.7	103.8	0.00	0.00	9743.3	TD at 22288.9

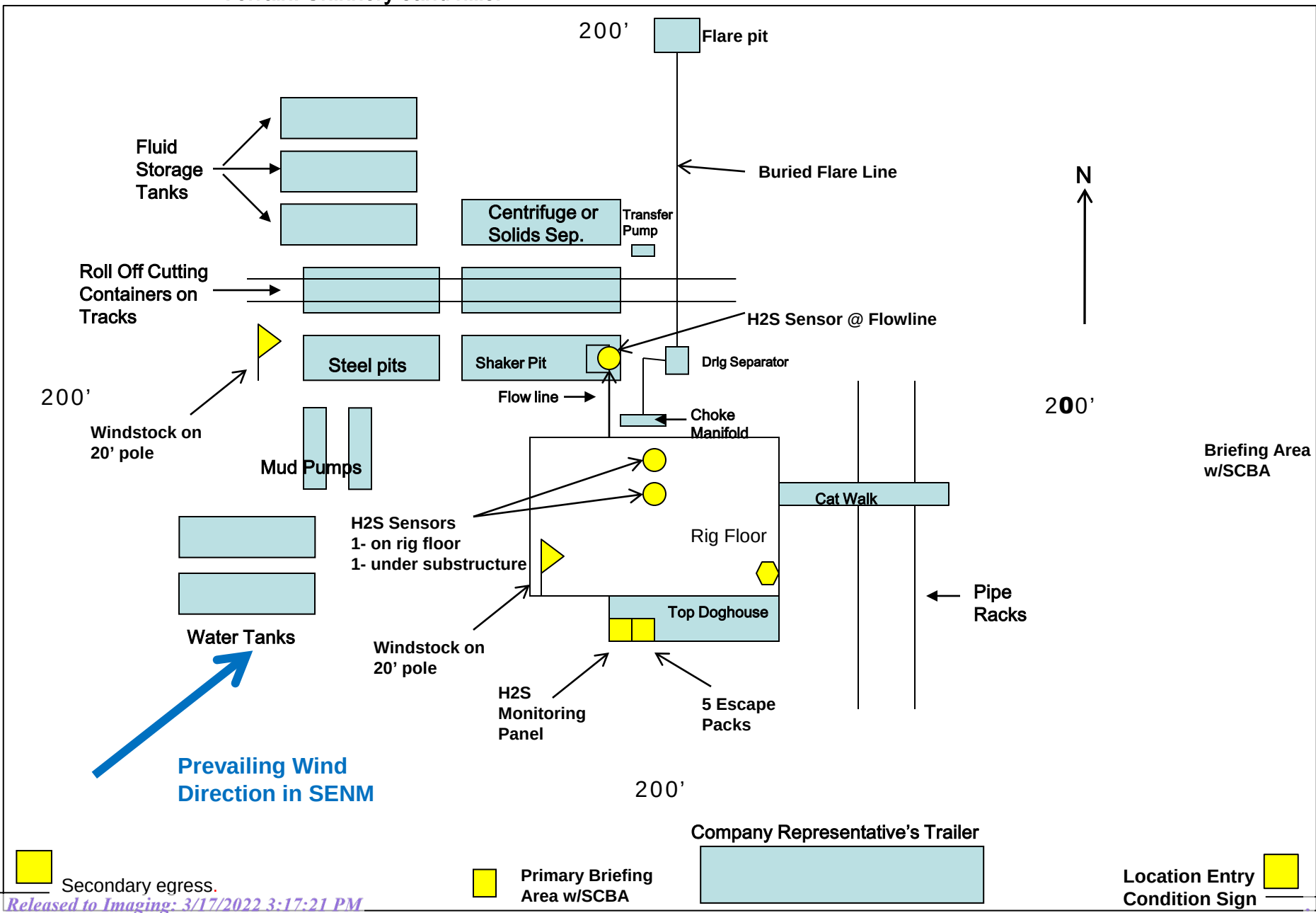


TRGT WNDW: 10'
ABOVE/BELOW



COC Operating LLC
H₂S Equipment Schematic
Terrain: Shinnery sand hills.

Well pad will be 400' x 400'
with cellar in center of pad



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 89157

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 89157
	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	3/17/2022
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	3/17/2022
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	3/17/2022
pkautz	Cement is required to circulate on both surface and intermediate1 strings of casing	3/17/2022