

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

Form C-101
August 1, 2011

Permit 285676

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701		2. OGRID Number 229137
		3. API Number 30-015-47349
4. Property Code 328970	5. Property Name Boo Radley Com	6. Well No. 703H

7. Surface Location

UL - Lot O	Section 16	Township 26S	Range 28E	Lot Idn O	Feet From 200	N/S Line S	Feet From 1550	E/W Line E	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot G	Section 33	Township 26S	Range 28E	Lot Idn 3	Feet From 200	N/S Line S	Feet From 2090	E/W Line E	County Eddy
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9. Pool Information

PURPLE SAGE;WOLFCAMP (GAS)	98220
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Additional Well Information

11. Work Type New Well	12. Well Type OIL	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 2995
16. Multiple N	17. Proposed Depth 22025	18. Formation Wolfcamp	19. Contractor	20. Spud Date 1/1/2021
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

☒ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	14.375	10.375	45.5	610	510	0
Int1	9.875	7.625	29.7	8730	1050	0
Prod	6.375	5.5	23	22025	1750	8230

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	5000	5000	Cameron

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC ☒ and/or 19.15.14.9 (B) NMAC ☒ if applicable.	OIL CONSERVATION DIVISION
Signature:	
Printed Name: Electronically filed by Diane Kuykendall	Approved By: Scott Cox
Title: Production Accounting Director	Title: Petroleum Engineer Supervisor
Email Address: dkuykendall@concho.com	Approved Date: 9/25/2020 Expiration Date: 9/25/2022
Date: 8/18/2020 Phone: 432-685-4372	Conditions of Approval Attached

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

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-	Pool Code 98220	Pool Name Purple Sage; Wolfcamp (Gas)
Property Code	Property Name BOO RADLEY COM	Well Number 703H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 2995.0'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	16	26-S	28-E		200	SOUTH	1550	EAST	EDDY

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
3	33	26-S	28-E		200	SOUTH	2090	EAST	EDDY
Dedicated Acres 1547.27	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

NAD 83 NME
SURFACE LOCATION
Y=376827.9 N
X=617241.2 E
LAT.=32.035743° N
LONG.=104.088379° W

POINT LEGEND	
1	Y=376622.7 N X=618799.6 E
2	Y=373976.1 N X=618810.7 E
3	Y=371328.9 N X=618821.8 E
4	Y=368688.3 N X=618819.8 E
5	Y=366046.7 N X=618824.5 E
6	Y=363825.7 N X=618829.5 E
7	Y=363813.8 N X=615965.2 E
8	Y=366042.7 N X=615960.0 E
9	Y=371335.2 N X=618078.1 E
10	Y=376631.8 N X=616063.7 E

NAD 83 NME
PROPOSED BOTTOM
HOLE LOCATION
Y=364015.3 N
X=616739.1 E
LAT.=32.000525° N
LONG.=104.090092° W

SECTION 16
SECTION 21
SECTION 28
SECTION 33

LOT 1 10.00 Ac
LOT 2 27.32 Ac
LOT 3 27.26 Ac
LOT 4 27.26 Ac
LOT 5 25.23 Ac
LOT 6 42.39 Ac

GRID AZ. - 179°51'57"
HORZ. DIST. - 12604.4'

LEASE X-ING
LAT.=32.024285° N
LONG.=104.090094° W

LEASE X-ING
LAT.=32.016986° N
LONG.=104.090094° W

LEASE X-ING
LAT.=32.006101° N
LONG.=104.090093° W

LIP
330' FSL & 2090' FEL
Y=364145.3 N
X=616738.8 E
LAT.=32.000882° N
LONG.=104.090092° W

200'

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.

Stan Wagner 8/18/20
Signature Date

Stan Wagner
Printed Name

E-mail Address

SURVEYOR CERTIFICATION

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

JULY 17, 2020
Date of Survey

Signature & Seal of Professional Surveyor

Chad Harcrow 7/27/20
Certificate No. CHAD HARCROW 17777
W.O. # 20-957 DRAWN BY: AH

Intent ☒ As Drilled ☐

API # 30-015		
Operator Name: COG Operating LLC	Property Name: Boo Radley Com	Well Number 703H

Kick Off Point (KOP)

UL O	Section 16	Township 26S	Range 28E	Lot	Feet	From N/S	Feet	From E/W	County Eddy
Latitude					Longitude				NAD 83

First Take Point (FTP)

UL B	Section 21	Township 26S	Range 28E	Lot	Feet 10	From N/S North	Feet 2090	From E/W East	County Eddy
Latitude 32.035174					Longitude -104.090096				NAD 83

Last Take Point (LTP)

UL	Section 33	Township 26S	Range 28E	Lot 3	Feet 330	From N/S South	Feet 2090	From E/W East	County Eddy
Latitude 32.000889					Longitude -104.087253				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 # 30-015-		
Operator Name: COG Operating LLC	Property Name: Boo Radley Com	Well Number 704H

KZ 06/29/2018

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GAS CAPTURE PLAN

Date: 9/25/2020

☒ Original

Operator & OGRID No.: [229137] COG OPERATING LLC

☐ Amended - Reason for
Amendment: _____

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomple to new zone, re-frac) activity.

Note: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Boo Radley Com #703H	30-015-47349	O-16-26S-28E	0200S 1550E	5700	None	Plant Located in Sec 35 Blk 57 T2 Cullberson County Texas

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to ETC FIELD SERVICES LLC and will be connected to ETC FIELD SERVICES LLC Low Pressure gathering system located in Eddy County, New Mexico. It will require 0' of pipeline to connect the facility to Low Pressure gathering system. COG OPERATING LLC provides (periodically) to ETC FIELD SERVICES LLC a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, COG OPERATING LLC and ETC FIELD SERVICES LLC have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at ETC FIELD SERVICES LLC Processing Plant located in Sec. 16, Twn. 26S, Rng. 28E, Eddy County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on ETC FIELD SERVICES LLC system at that time. Based on current information, it is COG OPERATING LLC's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
 - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
 - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
 - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

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Form APD Comments

Permit 285676

PERMIT COMMENTS

Operator Name and Address: COG OPERATING LLC [229137] 600 W Illinois Ave Midland, TX 79701		API Number: 30-015-47349
		Well: Boo Radley Com #703H
Created By	Comment	Comment Date

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Form APD Conditions

Permit 285676

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: COG OPERATING LLC [229137] 600 W Illinois Ave Midland, TX 79701	API Number: 30-015-47349
	Well: Boo Radley Com #703H

OCD Reviewer	Condition
ksimmons	Will require a directional survey with the C-104
ksimmons	Cement is required to circulate on both surface and intermediate1 strings of casing
ksimmons	Will require a administrative order for non-standard location prior to placing the well on production.
kpickford	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
kpickford	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud 2)- Drilling Sundries Form C-103 (Casing and Cement test are to be submitted within 10 days 3)- Completion Reports & Logs are to be submitted within 45 days
kpickford	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud
kpickford	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.

Boo Radley Com 703H

Casing and Cement

<u>String</u>	<u>Hole Size</u>	<u>Csg OD</u>	<u>PPE</u>	<u>Depth</u>	<u>Sx Cement</u>	<u>TOC</u>
Surface	14 3/4"	10 3/4"	45.5#	610'	510	0'
Intermediate	9-7/8"	7-5/8"	29.7#	8,730'	1,050	0'
Production	6-3/4"	5-1/2"	23#	22,025'	1,750	8,230'

Well Plan

Drill 14-3/4" hole to ~610' w/ fresh water. Run 10-3/4" 45.5# J-55 BTC casing to TD and cement to surface in one stage.

Drill 9-7/8" hole to ~8,730' with cut brine emulsion. Run 7-5/8 29.7# L-80 BTC to TD and cement to surface in one stage.

Drill 6-3/4" vertical hole, curve & lateral to 22,025' with OBM. Run 5-1/2" 23# P110 Talon HTQ casing from TD to surface and cement to 8,230' in one stage.

Well Control

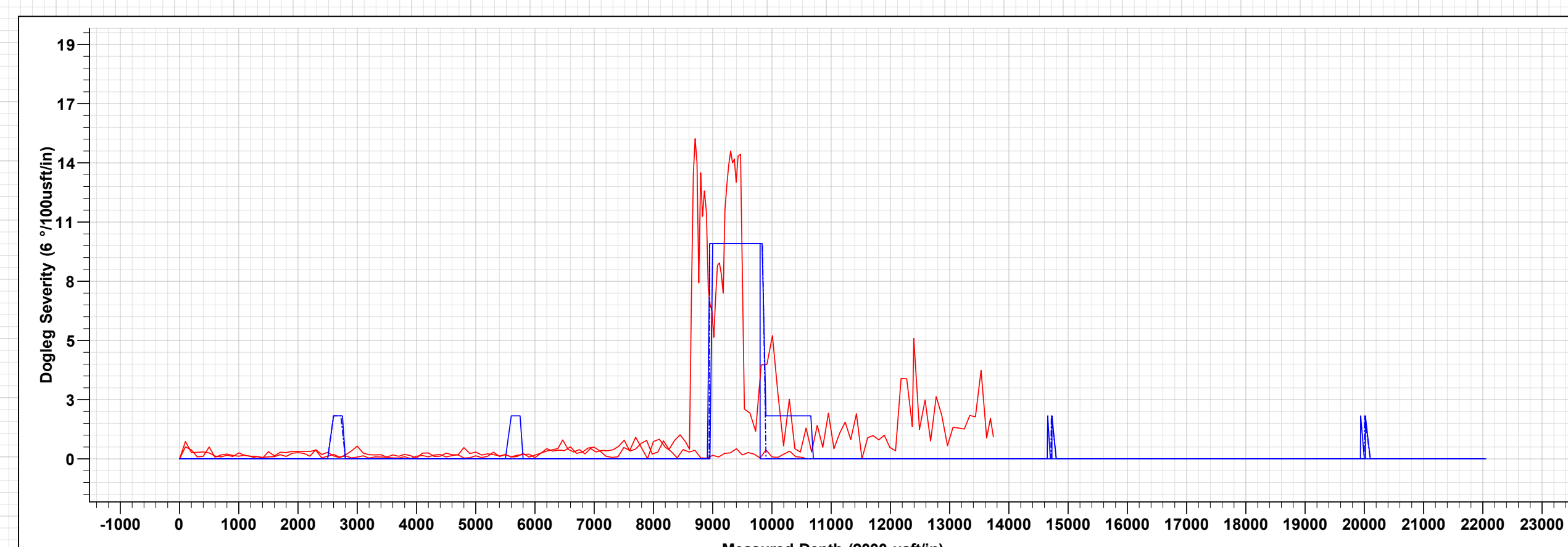
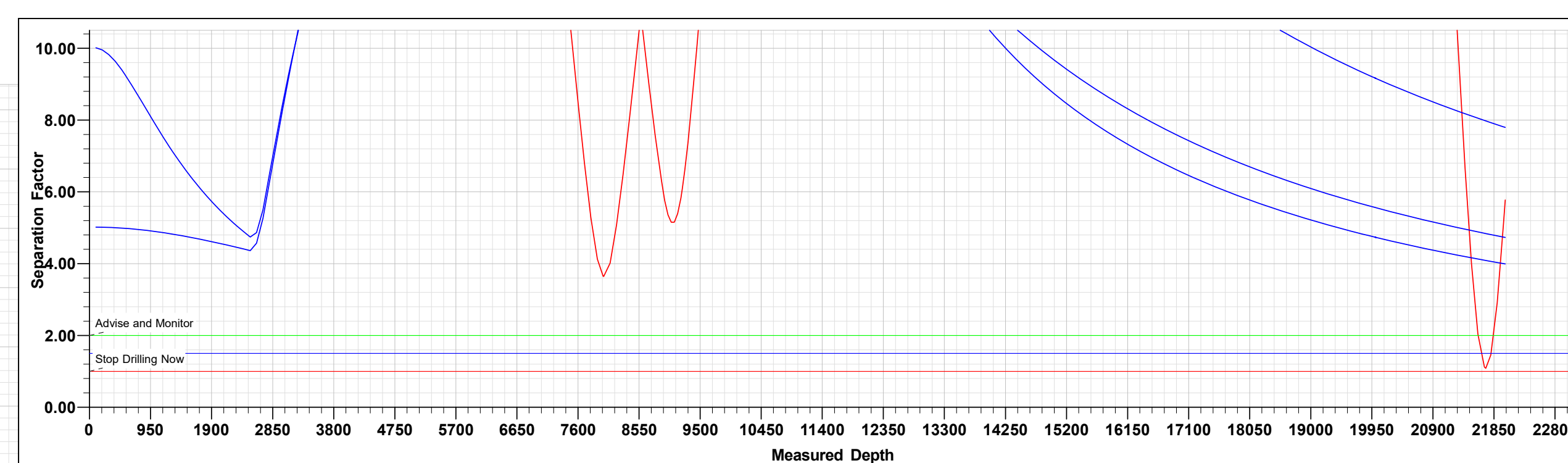
<u>Type</u>	<u>Working Pressure</u>	<u>Test Pressure</u>	<u>Manufacture</u>
Double Ram	5000 psi	5000 psi	Cameron



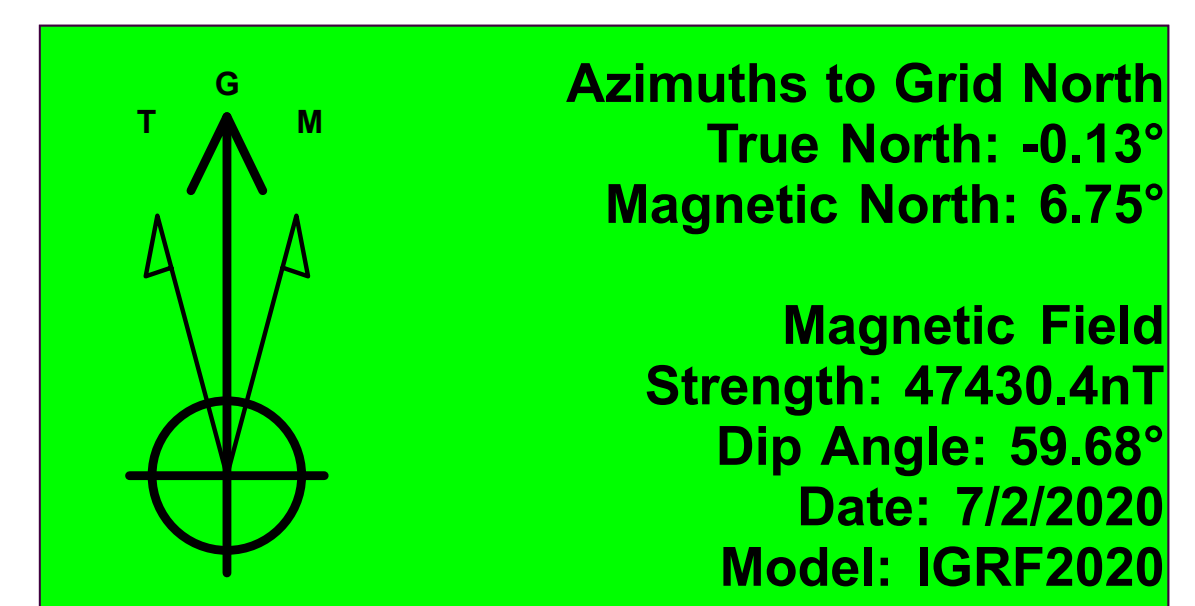
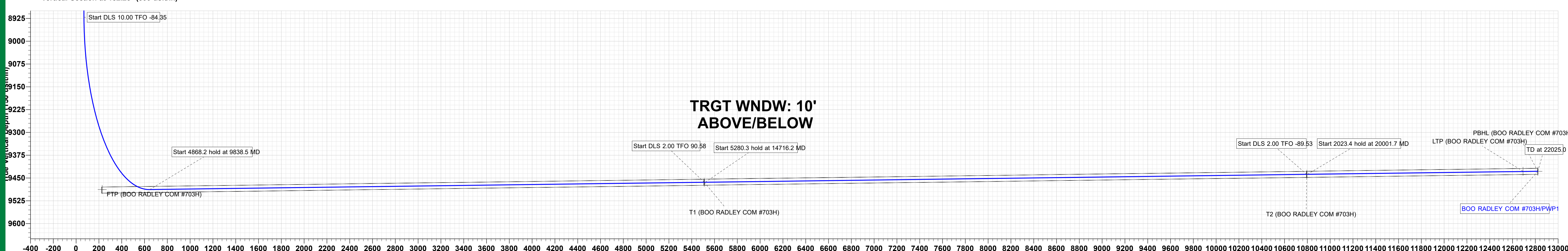
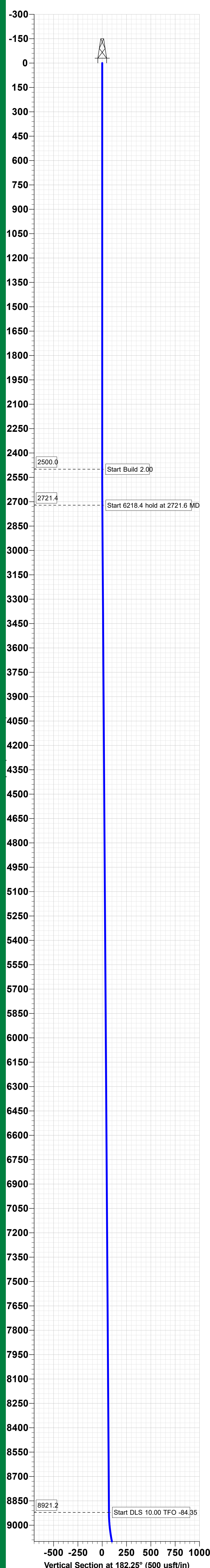
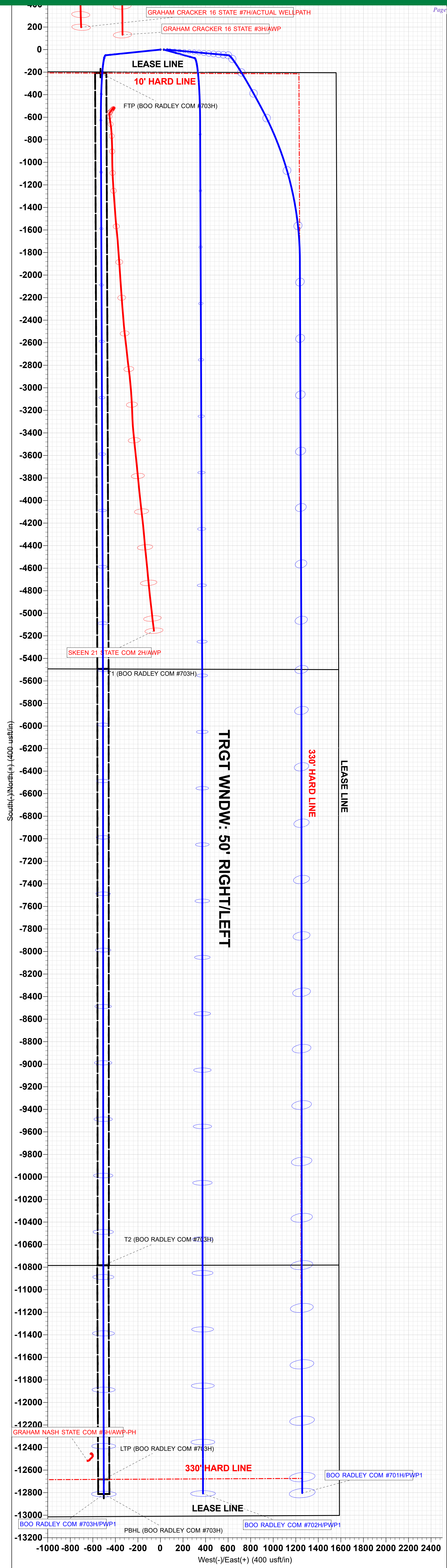
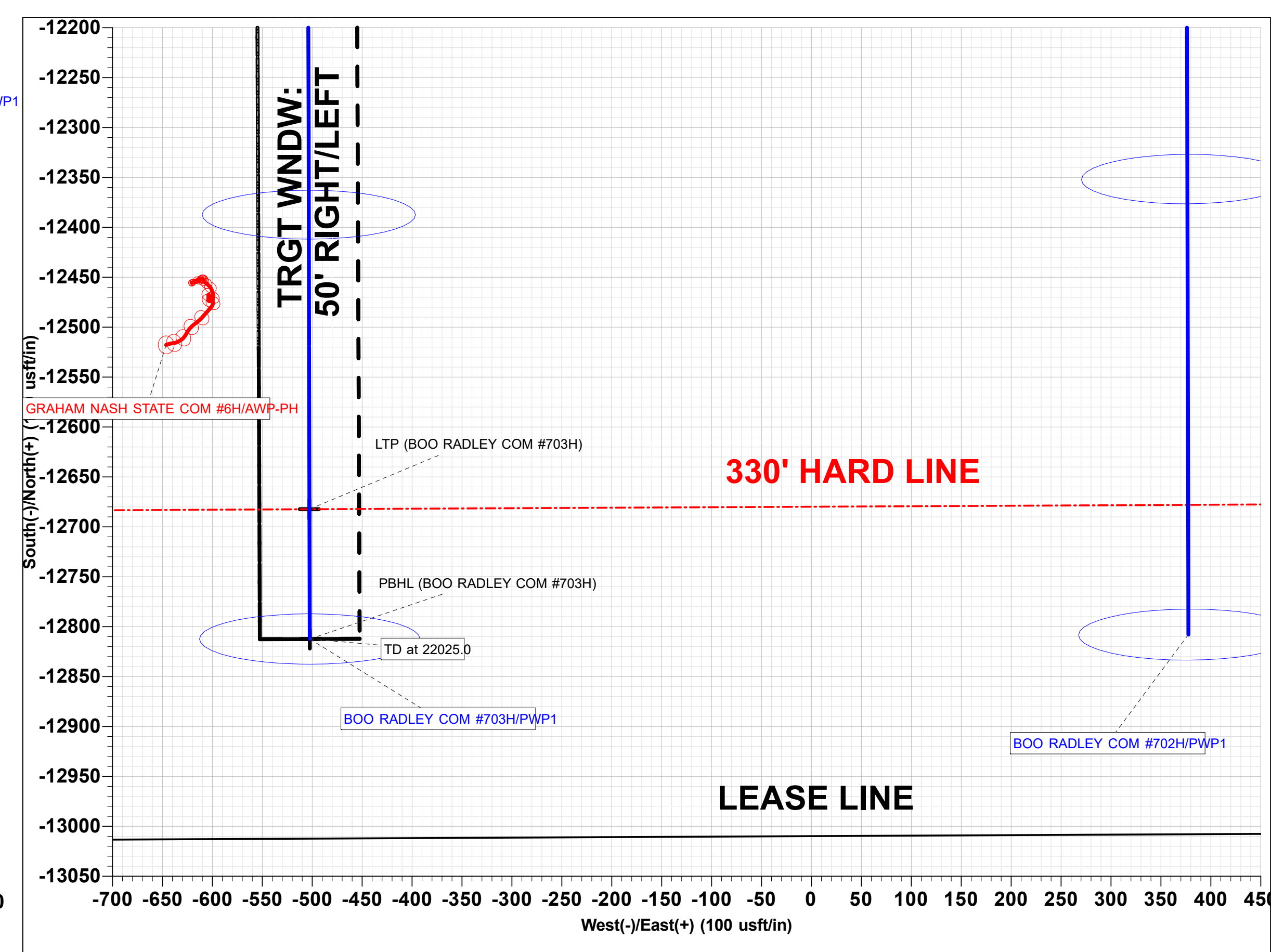
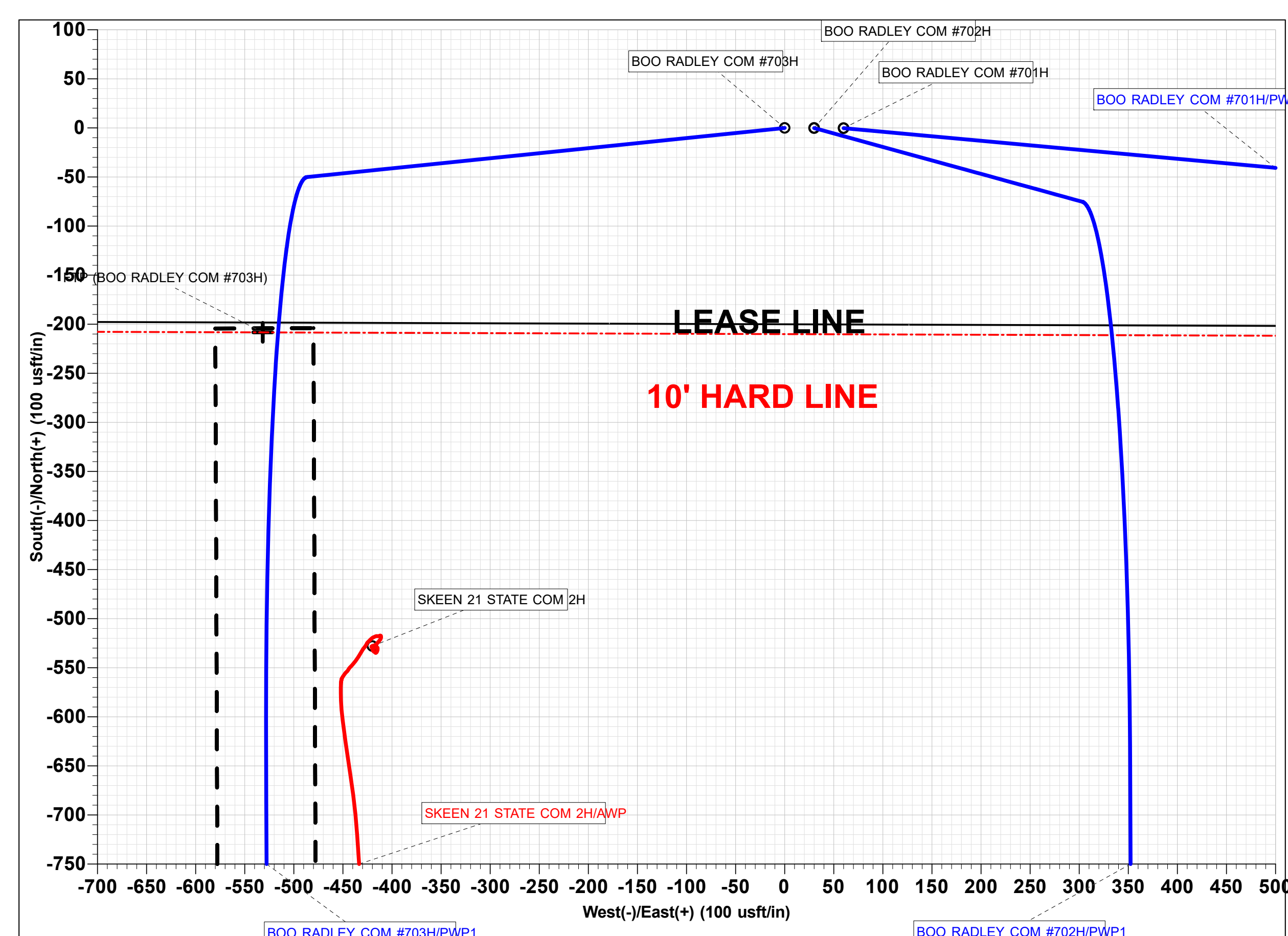
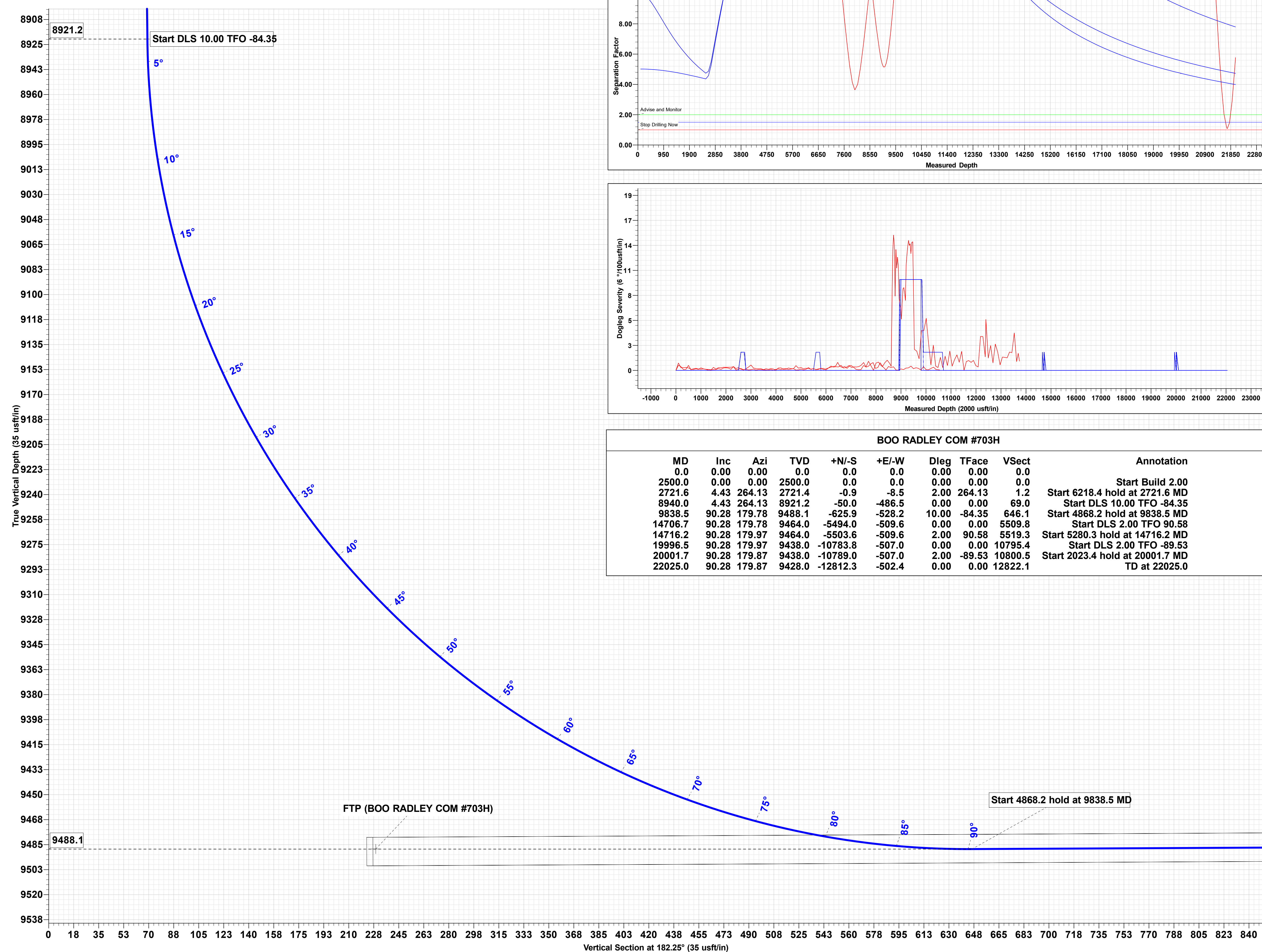
Project: ATLAS PROSPECT (NM-E)
Site: BOO RADLEY COM PROJECT
Well: BOO RADLEY COM #703H
Wellbore: OWB
Design: PWP1
GL: 2995.0
KB=30' @ 3025.0usft (TBD)

WELL DETAILS: BOO RADLEY COM #703H					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	376770.60	576056.40	32° 2' 8.230 N	104° 5' 16.409 W

DESIGN TARGET DETAILS						
Name	+N/S	+E/W	Northng	Eastng	Latitude	Longitude
LTP (BOO RADLEY COM #703H) 9428.0	-12682.3	-502.7	364088.0	575553.70	32° 0' 2.729 N	104° 5' 22.581 W
PBHL (BOO RADLEY COM #703H) 9428.0	-12812.3	-502.4	363958.30	575554.00	32° 0' 1.443 N	104° 5' 22.581 W
T2 (BOO RADLEY COM #703H) 9438.0	-10783.3	-507.0	365986.70	575549.39	32° 0' 21.518 N	104° 5' 22.581 W
T3 (BOO RADLEY COM #703H) 9464.0	-5494.0	-509.6	371276.58	575546.79	32° 1' 13.869 N	104° 5' 22.473 W
FT1 (BOO RADLEY COM #703H) 9488.0	-208.2	-531.6	376562.40	575524.80	32° 2' 6.181 N	104° 5' 22.590 W



BOO RADLEY COM #703H									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2500.0	0.00	0.00	2500.0	0.0	0.0	0.00	0.00	0.0	Start Build 2.00
2721.6	4.43	264.13	2721.4	-0.9	-8.5	2.00	264.13	1.2	Start 6218.4 hold at 2721.6 MD
8940.0	4.43	264.13	8921.2	-0.00	-486.5	0.00	0.00	69.0	Start DLS 100m TFO= 84.35
9835.5	90.28	179.78	9488.1	-525.9	-528.2	1.00	-84.35	646.1	Start 4858.2 hold at 9835.6 MD
14706.7	90.28	179.78	9464.0	-564.0	-508.6	2.00	0.00	559.8	Start DLS 2.00 TFO 90.58
14716.2	90.28	179.97	9464.0	-5503.6	-509.6	2.00	98.58	5519.3	Start 5280.3 hold at 14716.2 MD
19996.5	90.28	179.97	9438.0	-10783.8	-507.0	0.00	0.00	10795.4	Start DLS 2.0 TFO= 89.53
20007.7	90.28	179.97	9438.0	-10769.0	-507.0	2.00	-89.53	10959.5	Start 2023.4 hold at 20007.7 MD
20205.0	90.28	179.87	94218.0	-12131.3	-507.0	0.00	-0.00	12822.3	TD at 20205.0 MD



DELAWARE BASIN WEST

**ATLAS PROSPECT (NM-E)
BOO RADLEY COM PROJECT
BOO RADLEY COM #703H**

OWB

Plan: PWP1

Standard Survey Report

18 August, 2020

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Well:	BOO RADLEY COM #703H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	edm

Project	ATLAS 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	BOO RADLEY COM #703H				
Well Position	+N/-S	0.0 usft	Northing:	376,770.60 usft	Latitude: 32° 2' 8.230 N
	+E/-W	0.0 usft	Easting:	576,056.40 usft	Longitude: 104° 5' 16.409 W
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft	Ground Level: 2,995.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	7/2/2020	6.88	59.68	47,430.37616067

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	182.25	

Survey Tool Program	Date	8/14/2020			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	8,940.0	PWP1 (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
8,940.0	22,025.0	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	

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Well:	BOO RADLEY COM #703H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	edm

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
2,600.0	2.00	264.13	2,600.0	-0.2	-1.7	0.2	2.00	2.00	0.00
2,700.0	4.00	264.13	2,699.8	-0.7	-6.9	1.0	2.00	2.00	0.00
2,721.6	4.43	264.13	2,721.4	-0.9	-8.5	1.2	2.00	2.00	0.00
Start 6218.4 hold at 2721.6 MD									
2,800.0	4.43	264.13	2,799.5	-1.5	-14.5	2.1	0.00	0.00	0.00
2,900.0	4.43	264.13	2,899.2	-2.3	-22.2	3.2	0.00	0.00	0.00
3,000.0	4.43	264.13	2,998.9	-3.1	-29.9	4.2	0.00	0.00	0.00
3,100.0	4.43	264.13	3,098.6	-3.9	-37.6	5.3	0.00	0.00	0.00
3,200.0	4.43	264.13	3,198.3	-4.7	-45.3	6.4	0.00	0.00	0.00
3,300.0	4.43	264.13	3,298.0	-5.4	-53.0	7.5	0.00	0.00	0.00
3,400.0	4.43	264.13	3,397.8	-6.2	-60.7	8.6	0.00	0.00	0.00
3,500.0	4.43	264.13	3,497.5	-7.0	-68.4	9.7	0.00	0.00	0.00
3,600.0	4.43	264.13	3,597.2	-7.8	-76.0	10.8	0.00	0.00	0.00
3,700.0	4.43	264.13	3,696.9	-8.6	-83.7	11.9	0.00	0.00	0.00
3,800.0	4.43	264.13	3,796.6	-9.4	-91.4	13.0	0.00	0.00	0.00
3,900.0	4.43	264.13	3,896.3	-10.2	-99.1	14.1	0.00	0.00	0.00
4,000.0	4.43	264.13	3,996.0	-11.0	-106.8	15.2	0.00	0.00	0.00
4,100.0	4.43	264.13	4,095.7	-11.8	-114.5	16.2	0.00	0.00	0.00
4,200.0	4.43	264.13	4,195.4	-12.6	-122.2	17.3	0.00	0.00	0.00
4,300.0	4.43	264.13	4,295.1	-13.3	-129.8	18.4	0.00	0.00	0.00
4,400.0	4.43	264.13	4,394.8	-14.1	-137.5	19.5	0.00	0.00	0.00
4,500.0	4.43	264.13	4,494.5	-14.9	-145.2	20.6	0.00	0.00	0.00
4,600.0	4.43	264.13	4,594.2	-15.7	-152.9	21.7	0.00	0.00	0.00
4,700.0	4.43	264.13	4,693.9	-16.5	-160.6	22.8	0.00	0.00	0.00
4,800.0	4.43	264.13	4,793.6	-17.3	-168.3	23.9	0.00	0.00	0.00
4,900.0	4.43	264.13	4,893.3	-18.1	-176.0	25.0	0.00	0.00	0.00
5,000.0	4.43	264.13	4,993.0	-18.9	-183.7	26.1	0.00	0.00	0.00
5,100.0	4.43	264.13	5,092.7	-19.7	-191.3	27.1	0.00	0.00	0.00
5,200.0	4.43	264.13	5,192.4	-20.5	-199.0	28.2	0.00	0.00	0.00
5,300.0	4.43	264.13	5,292.1	-21.2	-206.7	29.3	0.00	0.00	0.00
5,400.0	4.43	264.13	5,391.8	-22.0	-214.4	30.4	0.00	0.00	0.00

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Well:	BOO RADLEY COM #703H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	edm

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,500.0	4.43	264.13	5,491.5	-22.8	-222.1	31.5	0.00	0.00	0.00
5,600.0	4.43	264.13	5,591.2	-23.6	-229.8	32.6	0.00	0.00	0.00
5,700.0	4.43	264.13	5,690.9	-24.4	-237.5	33.7	0.00	0.00	0.00
5,800.0	4.43	264.13	5,790.6	-25.2	-245.1	34.8	0.00	0.00	0.00
5,900.0	4.43	264.13	5,890.3	-26.0	-252.8	35.9	0.00	0.00	0.00
6,000.0	4.43	264.13	5,990.0	-26.8	-260.5	37.0	0.00	0.00	0.00
6,100.0	4.43	264.13	6,089.7	-27.6	-268.2	38.1	0.00	0.00	0.00
6,200.0	4.43	264.13	6,189.4	-28.4	-275.9	39.1	0.00	0.00	0.00
6,300.0	4.43	264.13	6,289.1	-29.1	-283.6	40.2	0.00	0.00	0.00
6,400.0	4.43	264.13	6,388.8	-29.9	-291.3	41.3	0.00	0.00	0.00
6,500.0	4.43	264.13	6,488.5	-30.7	-298.9	42.4	0.00	0.00	0.00
6,600.0	4.43	264.13	6,588.2	-31.5	-306.6	43.5	0.00	0.00	0.00
6,700.0	4.43	264.13	6,687.9	-32.3	-314.3	44.6	0.00	0.00	0.00
6,800.0	4.43	264.13	6,787.6	-33.1	-322.0	45.7	0.00	0.00	0.00
6,900.0	4.43	264.13	6,887.3	-33.9	-329.7	46.8	0.00	0.00	0.00
7,000.0	4.43	264.13	6,987.0	-34.7	-337.4	47.9	0.00	0.00	0.00
7,100.0	4.43	264.13	7,086.7	-35.5	-345.1	49.0	0.00	0.00	0.00
7,200.0	4.43	264.13	7,186.4	-36.3	-352.8	50.0	0.00	0.00	0.00
7,300.0	4.43	264.13	7,286.1	-37.0	-360.4	51.1	0.00	0.00	0.00
7,400.0	4.43	264.13	7,385.8	-37.8	-368.1	52.2	0.00	0.00	0.00
7,500.0	4.43	264.13	7,485.5	-38.6	-375.8	53.3	0.00	0.00	0.00
7,600.0	4.43	264.13	7,585.2	-39.4	-383.5	54.4	0.00	0.00	0.00
7,700.0	4.43	264.13	7,684.9	-40.2	-391.2	55.5	0.00	0.00	0.00
7,800.0	4.43	264.13	7,784.6	-41.0	-398.9	56.6	0.00	0.00	0.00
7,900.0	4.43	264.13	7,884.3	-41.8	-406.6	57.7	0.00	0.00	0.00
8,000.0	4.43	264.13	7,984.0	-42.6	-414.2	58.8	0.00	0.00	0.00
8,100.0	4.43	264.13	8,083.7	-43.4	-421.9	59.9	0.00	0.00	0.00
8,200.0	4.43	264.13	8,183.4	-44.2	-429.6	61.0	0.00	0.00	0.00
8,300.0	4.43	264.13	8,283.1	-44.9	-437.3	62.0	0.00	0.00	0.00
8,400.0	4.43	264.13	8,382.8	-45.7	-445.0	63.1	0.00	0.00	0.00
8,500.0	4.43	264.13	8,482.5	-46.5	-452.7	64.2	0.00	0.00	0.00
8,600.0	4.43	264.13	8,582.2	-47.3	-460.4	65.3	0.00	0.00	0.00
8,700.0	4.43	264.13	8,681.9	-48.1	-468.1	66.4	0.00	0.00	0.00
8,800.0	4.43	264.13	8,781.6	-48.9	-475.7	67.5	0.00	0.00	0.00
8,900.0	4.43	264.13	8,881.3	-49.7	-483.4	68.6	0.00	0.00	0.00
8,940.0	4.43	264.13	8,921.2	-50.0	-486.5	69.0	0.00	0.00	0.00
Start DLS 10.00 TFO -84.35									
9,000.0	7.80	214.08	8,980.9	-53.6	-491.1	72.8	10.00	5.61	-83.43
9,100.0	17.00	194.41	9,078.5	-73.4	-498.5	92.9	10.00	9.20	-19.67
9,200.0	26.78	188.59	9,171.2	-110.0	-505.6	129.7	10.00	9.77	-5.82
9,300.0	36.67	185.75	9,256.1	-162.1	-511.9	182.0	10.00	9.89	-2.85
9,400.0	46.60	183.99	9,330.8	-228.2	-517.5	248.3	10.00	9.93	-1.76
9,500.0	56.55	182.72	9,392.9	-306.3	-522.0	326.5	10.00	9.95	-1.26
9,600.0	66.51	181.72	9,440.5	-394.0	-525.4	414.3	10.00	9.96	-1.00

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Well:	BOO RADLEY COM #703H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	edm

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,700.0	76.48	180.87	9,472.2	-488.7	-527.5	509.0	10.00	9.97	-0.86
9,800.0	86.45	180.08	9,487.0	-587.5	-528.3	607.7	10.00	9.97	-0.79
9,838.5	90.28	179.78	9,488.1	-625.9	-528.2	646.1	10.00	9.97	-0.77
Start 4868.2 hold at 9838.5 MD									
9,900.0	90.28	179.78	9,487.8	-687.4	-528.0	707.6	0.00	0.00	0.00
10,000.0	90.28	179.78	9,487.3	-787.4	-527.6	807.5	0.00	0.00	0.00
10,100.0	90.28	179.78	9,486.8	-887.4	-527.2	907.4	0.00	0.00	0.00
10,200.0	90.28	179.78	9,486.3	-987.4	-526.9	1,007.3	0.00	0.00	0.00
10,300.0	90.28	179.78	9,485.8	-1,087.4	-526.5	1,107.2	0.00	0.00	0.00
10,400.0	90.28	179.78	9,485.3	-1,187.4	-526.1	1,207.1	0.00	0.00	0.00
10,500.0	90.28	179.78	9,484.8	-1,287.4	-525.7	1,307.0	0.00	0.00	0.00
10,600.0	90.28	179.78	9,484.3	-1,387.4	-525.3	1,407.0	0.00	0.00	0.00
10,700.0	90.28	179.78	9,483.8	-1,487.4	-524.9	1,506.9	0.00	0.00	0.00
10,800.0	90.28	179.78	9,483.3	-1,587.4	-524.6	1,606.8	0.00	0.00	0.00
10,900.0	90.28	179.78	9,482.8	-1,687.4	-524.2	1,706.7	0.00	0.00	0.00
11,000.0	90.28	179.78	9,482.3	-1,787.4	-523.8	1,806.6	0.00	0.00	0.00
11,100.0	90.28	179.78	9,481.8	-1,887.4	-523.4	1,906.5	0.00	0.00	0.00
11,200.0	90.28	179.78	9,481.4	-1,987.4	-523.0	2,006.4	0.00	0.00	0.00
11,300.0	90.28	179.78	9,480.9	-2,087.4	-522.6	2,106.3	0.00	0.00	0.00
11,400.0	90.28	179.78	9,480.4	-2,187.4	-522.3	2,206.2	0.00	0.00	0.00
11,500.0	90.28	179.78	9,479.9	-2,287.4	-521.9	2,306.1	0.00	0.00	0.00
11,600.0	90.28	179.78	9,479.4	-2,387.4	-521.5	2,406.0	0.00	0.00	0.00
11,700.0	90.28	179.78	9,478.9	-2,487.4	-521.1	2,505.9	0.00	0.00	0.00
11,800.0	90.28	179.78	9,478.4	-2,587.4	-520.7	2,605.8	0.00	0.00	0.00
11,900.0	90.28	179.78	9,477.9	-2,687.4	-520.3	2,705.7	0.00	0.00	0.00
12,000.0	90.28	179.78	9,477.4	-2,787.4	-520.0	2,805.6	0.00	0.00	0.00
12,100.0	90.28	179.78	9,476.9	-2,887.4	-519.6	2,905.5	0.00	0.00	0.00
12,200.0	90.28	179.78	9,476.4	-2,987.4	-519.2	3,005.5	0.00	0.00	0.00
12,300.0	90.28	179.78	9,475.9	-3,087.4	-518.8	3,105.4	0.00	0.00	0.00
12,400.0	90.28	179.78	9,475.4	-3,187.4	-518.4	3,205.3	0.00	0.00	0.00
12,500.0	90.28	179.78	9,474.9	-3,287.4	-518.1	3,305.2	0.00	0.00	0.00
12,600.0	90.28	179.78	9,474.4	-3,387.4	-517.7	3,405.1	0.00	0.00	0.00
12,700.0	90.28	179.78	9,473.9	-3,487.4	-517.3	3,505.0	0.00	0.00	0.00
12,800.0	90.28	179.78	9,473.4	-3,587.4	-516.9	3,604.9	0.00	0.00	0.00
12,900.0	90.28	179.78	9,472.9	-3,687.4	-516.5	3,704.8	0.00	0.00	0.00
13,000.0	90.28	179.78	9,472.4	-3,787.4	-516.1	3,804.7	0.00	0.00	0.00
13,100.0	90.28	179.78	9,472.0	-3,887.4	-515.8	3,904.6	0.00	0.00	0.00
13,200.0	90.28	179.78	9,471.5	-3,987.4	-515.4	4,004.5	0.00	0.00	0.00
13,300.0	90.28	179.78	9,471.0	-4,087.4	-515.0	4,104.4	0.00	0.00	0.00
13,400.0	90.28	179.78	9,470.5	-4,187.4	-514.6	4,204.3	0.00	0.00	0.00
13,500.0	90.28	179.78	9,470.0	-4,287.4	-514.2	4,304.2	0.00	0.00	0.00
13,600.0	90.28	179.78	9,469.5	-4,387.4	-513.8	4,404.1	0.00	0.00	0.00
13,700.0	90.28	179.78	9,469.0	-4,487.4	-513.5	4,504.0	0.00	0.00	0.00

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Well:	BOO RADLEY COM #703H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	edm

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,800.0	90.28	179.78	9,468.5	-4,587.4	-513.1	4,604.0	0.00	0.00	0.00
13,900.0	90.28	179.78	9,468.0	-4,687.4	-512.7	4,703.9	0.00	0.00	0.00
14,000.0	90.28	179.78	9,467.5	-4,787.4	-512.3	4,803.8	0.00	0.00	0.00
14,100.0	90.28	179.78	9,467.0	-4,887.4	-511.9	4,903.7	0.00	0.00	0.00
14,200.0	90.28	179.78	9,466.5	-4,987.4	-511.5	5,003.6	0.00	0.00	0.00
14,300.0	90.28	179.78	9,466.0	-5,087.4	-511.2	5,103.5	0.00	0.00	0.00
14,400.0	90.28	179.78	9,465.5	-5,187.4	-510.8	5,203.4	0.00	0.00	0.00
14,500.0	90.28	179.78	9,465.0	-5,287.4	-510.4	5,303.3	0.00	0.00	0.00
14,600.0	90.28	179.78	9,464.5	-5,387.4	-510.0	5,403.2	0.00	0.00	0.00
14,700.0	90.28	179.78	9,464.0	-5,487.4	-509.6	5,503.1	0.00	0.00	0.00
14,706.7	90.28	179.78	9,464.0	-5,494.0	-509.6	5,509.8	0.00	0.00	0.00
Start DLS 2.00 TFO 90.58									
14,716.2	90.28	179.97	9,464.0	-5,503.6	-509.6	5,519.3	2.00	-0.02	2.00
Start 5280.3 hold at 14716.2 MD									
14,800.0	90.28	179.97	9,463.5	-5,587.4	-509.5	5,603.0	0.00	0.00	0.00
14,900.0	90.28	179.97	9,463.0	-5,687.4	-509.5	5,702.9	0.00	0.00	0.00
15,000.0	90.28	179.97	9,462.6	-5,787.4	-509.4	5,802.9	0.00	0.00	0.00
15,100.0	90.28	179.97	9,462.1	-5,887.3	-509.4	5,902.8	0.00	0.00	0.00
15,200.0	90.28	179.97	9,461.6	-5,987.3	-509.4	6,002.7	0.00	0.00	0.00
15,300.0	90.28	179.97	9,461.1	-6,087.3	-509.3	6,102.6	0.00	0.00	0.00
15,400.0	90.28	179.97	9,460.6	-6,187.3	-509.3	6,202.5	0.00	0.00	0.00
15,500.0	90.28	179.97	9,460.1	-6,287.3	-509.2	6,302.5	0.00	0.00	0.00
15,600.0	90.28	179.97	9,459.6	-6,387.3	-509.2	6,402.4	0.00	0.00	0.00
15,700.0	90.28	179.97	9,459.1	-6,487.3	-509.1	6,502.3	0.00	0.00	0.00
15,800.0	90.28	179.97	9,458.6	-6,587.3	-509.1	6,602.2	0.00	0.00	0.00
15,900.0	90.28	179.97	9,458.1	-6,687.3	-509.0	6,702.1	0.00	0.00	0.00
16,000.0	90.28	179.97	9,457.6	-6,787.3	-509.0	6,802.1	0.00	0.00	0.00
16,100.0	90.28	179.97	9,457.2	-6,887.3	-508.9	6,902.0	0.00	0.00	0.00
16,200.0	90.28	179.97	9,456.7	-6,987.3	-508.9	7,001.9	0.00	0.00	0.00
16,300.0	90.28	179.97	9,456.2	-7,087.3	-508.8	7,101.8	0.00	0.00	0.00
16,400.0	90.28	179.97	9,455.7	-7,187.3	-508.8	7,201.7	0.00	0.00	0.00
16,500.0	90.28	179.97	9,455.2	-7,287.3	-508.7	7,301.7	0.00	0.00	0.00
16,600.0	90.28	179.97	9,454.7	-7,387.3	-508.7	7,401.6	0.00	0.00	0.00
16,700.0	90.28	179.97	9,454.2	-7,487.3	-508.6	7,501.5	0.00	0.00	0.00
16,800.0	90.28	179.97	9,453.7	-7,587.3	-508.6	7,601.4	0.00	0.00	0.00
16,900.0	90.28	179.97	9,453.2	-7,687.3	-508.5	7,701.3	0.00	0.00	0.00
17,000.0	90.28	179.97	9,452.7	-7,787.3	-508.5	7,801.3	0.00	0.00	0.00
17,100.0	90.28	179.97	9,452.2	-7,887.3	-508.4	7,901.2	0.00	0.00	0.00
17,200.0	90.28	179.97	9,451.7	-7,987.3	-508.4	8,001.1	0.00	0.00	0.00
17,300.0	90.28	179.97	9,451.3	-8,087.3	-508.3	8,101.0	0.00	0.00	0.00
17,400.0	90.28	179.97	9,450.8	-8,187.3	-508.3	8,201.0	0.00	0.00	0.00
17,500.0	90.28	179.97	9,450.3	-8,287.3	-508.2	8,300.9	0.00	0.00	0.00
17,600.0	90.28	179.97	9,449.8	-8,387.3	-508.2	8,400.8	0.00	0.00	0.00
17,700.0	90.28	179.97	9,449.3	-8,487.3	-508.1	8,500.7	0.00	0.00	0.00

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Well:	BOO RADLEY COM #703H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	edm

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,800.0	90.28	179.97	9,448.8	-8,587.3	-508.1	8,600.6	0.00	0.00	0.00
17,900.0	90.28	179.97	9,448.3	-8,687.3	-508.0	8,700.6	0.00	0.00	0.00
18,000.0	90.28	179.97	9,447.8	-8,787.3	-508.0	8,800.5	0.00	0.00	0.00
18,100.0	90.28	179.97	9,447.3	-8,887.3	-507.9	8,900.4	0.00	0.00	0.00
18,200.0	90.28	179.97	9,446.8	-8,987.3	-507.9	9,000.3	0.00	0.00	0.00
18,300.0	90.28	179.97	9,446.3	-9,087.3	-507.8	9,100.2	0.00	0.00	0.00
18,400.0	90.28	179.97	9,445.8	-9,187.3	-507.8	9,200.2	0.00	0.00	0.00
18,500.0	90.28	179.97	9,445.4	-9,287.3	-507.7	9,300.1	0.00	0.00	0.00
18,600.0	90.28	179.97	9,444.9	-9,387.3	-507.7	9,400.0	0.00	0.00	0.00
18,700.0	90.28	179.97	9,444.4	-9,487.3	-507.6	9,499.9	0.00	0.00	0.00
18,800.0	90.28	179.97	9,443.9	-9,587.3	-507.6	9,599.8	0.00	0.00	0.00
18,900.0	90.28	179.97	9,443.4	-9,687.3	-507.5	9,699.8	0.00	0.00	0.00
19,000.0	90.28	179.97	9,442.9	-9,787.3	-507.5	9,799.7	0.00	0.00	0.00
19,100.0	90.28	179.97	9,442.4	-9,887.3	-507.5	9,899.6	0.00	0.00	0.00
19,200.0	90.28	179.97	9,441.9	-9,987.3	-507.4	9,999.5	0.00	0.00	0.00
19,300.0	90.28	179.97	9,441.4	-10,087.3	-507.4	10,099.4	0.00	0.00	0.00
19,400.0	90.28	179.97	9,440.9	-10,187.3	-507.3	10,199.4	0.00	0.00	0.00
19,500.0	90.28	179.97	9,440.4	-10,287.3	-507.3	10,299.3	0.00	0.00	0.00
19,600.0	90.28	179.97	9,439.9	-10,387.3	-507.2	10,399.2	0.00	0.00	0.00
19,700.0	90.28	179.97	9,439.5	-10,487.3	-507.2	10,499.1	0.00	0.00	0.00
19,800.0	90.28	179.97	9,439.0	-10,587.3	-507.1	10,599.0	0.00	0.00	0.00
19,900.0	90.28	179.97	9,438.5	-10,687.3	-507.1	10,699.0	0.00	0.00	0.00
19,996.5	90.28	179.97	9,438.0	-10,783.8	-507.0	10,795.4	0.00	0.00	0.00
Start DLS 2.00 TFO -89.53									
20,000.0	90.28	179.90	9,438.0	-10,787.3	-507.0	10,798.9	2.00	0.02	-2.00
20,001.7	90.28	179.87	9,438.0	-10,789.0	-507.0	10,800.5	2.00	0.02	-2.00
Start 2023.4 hold at 20001.7 MD									
20,100.0	90.28	179.87	9,437.5	-10,887.3	-506.8	10,898.8	0.00	0.00	0.00
20,200.0	90.28	179.87	9,437.0	-10,987.3	-506.6	10,998.7	0.00	0.00	0.00
20,300.0	90.28	179.87	9,436.5	-11,087.3	-506.3	11,098.6	0.00	0.00	0.00
20,400.0	90.28	179.87	9,436.0	-11,187.3	-506.1	11,198.5	0.00	0.00	0.00
20,500.0	90.28	179.87	9,435.5	-11,287.3	-505.9	11,298.4	0.00	0.00	0.00
20,600.0	90.28	179.87	9,435.0	-11,387.3	-505.6	11,398.3	0.00	0.00	0.00
20,700.0	90.28	179.87	9,434.5	-11,487.3	-505.4	11,498.3	0.00	0.00	0.00
20,800.0	90.28	179.87	9,434.0	-11,587.3	-505.2	11,598.2	0.00	0.00	0.00
20,900.0	90.28	179.87	9,433.5	-11,687.3	-505.0	11,698.1	0.00	0.00	0.00
21,000.0	90.28	179.87	9,433.1	-11,787.3	-504.7	11,798.0	0.00	0.00	0.00
21,100.0	90.28	179.87	9,432.6	-11,887.3	-504.5	11,897.9	0.00	0.00	0.00
21,200.0	90.28	179.87	9,432.1	-11,987.3	-504.3	11,997.8	0.00	0.00	0.00
21,300.0	90.28	179.87	9,431.6	-12,087.3	-504.1	12,097.7	0.00	0.00	0.00
21,400.0	90.28	179.87	9,431.1	-12,187.3	-503.8	12,197.7	0.00	0.00	0.00
21,500.0	90.28	179.87	9,430.6	-12,287.3	-503.6	12,297.6	0.00	0.00	0.00
21,600.0	90.28	179.87	9,430.1	-12,387.3	-503.4	12,397.5	0.00	0.00	0.00
21,700.0	90.28	179.87	9,429.6	-12,487.3	-503.1	12,497.4	0.00	0.00	0.00

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Well:	BOO RADLEY COM #703H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP1	Database:	edm

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
21,800.0	90.28	179.87	9,429.1	-12,587.3	-502.9	12,597.3	0.00	0.00	0.00
21,900.0	90.28	179.87	9,428.6	-12,687.3	-502.7	12,697.2	0.00	0.00	0.00
22,000.0	90.28	179.87	9,428.1	-12,787.3	-502.5	12,797.1	0.00	0.00	0.00
22,025.0	90.28	179.87	9,428.0	-12,812.3	-502.4	12,822.1	0.00	0.00	0.00
TD at 22025.0									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL (BOO RADLEY - plan hits target center - Rectangle (sides W100.0 H2,030.0 D20.0)	0.28	359.78	9,428.0	-12,812.3	-502.4	363,958.30	575,554.00	32° 0' 1.443 N	104° 5' 22.581 W
LTP (BOO RADLEY C - plan misses target center by 0.6usft at 21895.0usft MD (9428.6 TVD, -12682.3 N, -502.7 E) - Point	0.00	0.01	9,428.0	-12,682.3	-502.7	364,088.30	575,553.70	32° 0' 2.729 N	104° 5' 22.581 W
T2 (BOO RADLEY CC - plan hits target center - Rectangle (sides W100.0 H5,291.0 D20.0)	0.28	359.97	9,438.0	-10,783.8	-507.0	365,986.77	575,549.39	32° 0' 21.518 N	104° 5' 22.581 W
T1 (BOO RADLEY CC - plan hits target center - Rectangle (sides W100.0 H5,290.0 D20.0)	0.28	359.78	9,464.0	-5,494.0	-509.6	371,276.58	575,546.79	32° 1' 13.869 N	104° 5' 22.473 W
FTP (BOO RADLEY C - plan misses target center by 134.7usft at 9482.8usft MD (9383.2 TVD, -292.1 N, -521.3 E) - Point	0.00	0.01	9,488.0	-208.2	-531.6	376,562.40	575,524.80	32° 2' 6.181 N	104° 5' 22.590 W

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
2722	2721	-1	-9	Start 6218.4 hold at 2721.6 MD
8940	8921	-50	-486	Start DLS 10.00 TFO -84.35
9838	9488	-626	-528	Start 4868.2 hold at 9838.5 MD
14,707	9464	-5494	-510	Start DLS 2.00 TFO 90.58
14,716	9464	-5504	-510	Start 5280.3 hold at 14716.2 MD
19,997	9438	-10,784	-507	Start DLS 2.00 TFO -89.53
20,002	9438	-10,789	-507	Start 2023.4 hold at 20001.7 MD
22,025	9428	-12,812	-502	TD at 22025.0

Checked By: _____ Approved By: _____ Date: _____

DELAWARE BASIN WEST

**ATLAS PROSPECT (NM-E)
BOO RADLEY COM PROJECT
BOO RADLEY COM #703H**

**OWB
PWP1**

Anticollision Report

14 August, 2020

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Reference Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	BOO RADLEY COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

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

Survey Tool Program		Date	8/14/2020		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	8,940.0	PWP1 (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
8,940.0	22,025.0	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						
BOO RADLEY COM PROJECT						
BOO RADLEY COM #701H - OWB - PWP1	2,500.0	2,494.9	60.1	47.4	4.744	CC, ES, SF
BOO RADLEY COM #702H - OWB - PWP1	2,500.0	2,499.7	30.1	23.2	4.365	CC, ES
BOO RADLEY COM #702H - OWB - PWP1	22,025.0	21,956.3	880.4	660.0	3.993	SF
SKEEN 21 STATE COM 2H - OWB - AWP	6,224.4	6,212.2	557.4	529.9	20.235	CC
SKEEN 21 STATE COM 2H - OWB - AWP	6,300.0	6,286.9	557.5	529.8	20.136	ES, SF
HONEY GRAHAM STATE PROJECT (ATLAS 2628)						
GRAHAM CRACKER 16 STATE #3H - OWB - AWP	7,990.8	12,520.0	190.7	138.5	3.653	CC, ES
GRAHAM CRACKER 16 STATE #3H - OWB - AWP	8,000.0	12,520.0	190.9	138.5	3.644	SF
GRAHAM CRACKER 16 STATE #7H - OWB - ACTUAL \	9,095.2	13,737.0	345.0	278.1	5.157	CC, ES, SF
GRAHAM NASH STATE COM #6H - LAT01 - AWP-LAT1						Out of range
GRAHAM NASH STATE COM #6H - OWB-PILOT HOLE	21,722.0	9,447.6	125.1	9.8	1.085	Shut in Produces, CC, ES

Offset Design BOO RADLEY COM PROJECT - BOO RADLEY COM #701H - OWB - PWP1												Offset Site Error:		3.0 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		
0.0	0.0	0.0	0.0	3.0	3.0	90.19	-0.2	60.1	60.3					
100.0	100.0	94.9	94.9	3.0	3.0	90.19	-0.2	60.1	60.1	54.1	6.00	10.012		
200.0	200.0	194.9	194.9	3.0	3.0	90.19	-0.2	60.1	60.1	54.1	6.04	9.953		
300.0	300.0	294.9	294.9	3.0	3.1	90.19	-0.2	60.1	60.1	54.0	6.12	9.824		
400.0	400.0	394.9	394.9	3.0	3.2	90.19	-0.2	60.1	60.1	53.9	6.24	9.637		
500.0	500.0	494.9	494.9	3.1	3.4	90.19	-0.2	60.1	60.1	53.7	6.39	9.403		
600.0	600.0	594.9	594.9	3.1	3.6	90.19	-0.2	60.1	60.1	53.5	6.58	9.137		
700.0	700.0	694.9	694.9	3.1	3.8	90.19	-0.2	60.1	60.1	53.3	6.79	8.849		
800.0	800.0	794.9	794.9	3.2	4.0	90.19	-0.2	60.1	60.1	53.1	7.03	8.550		
900.0	900.0	894.9	894.9	3.2	4.2	90.19	-0.2	60.1	60.1	52.8	7.29	8.249		
1,000.0	1,000.0	994.9	994.9	3.2	4.5	90.19	-0.2	60.1	60.1	52.5	7.56	7.950		
1,100.0	1,100.0	1,094.9	1,094.9	3.3	4.8	90.19	-0.2	60.1	60.1	52.3	7.85	7.658		
1,200.0	1,200.0	1,194.9	1,194.9	3.4	5.0	90.19	-0.2	60.1	60.1	52.0	8.15	7.375		
1,300.0	1,300.0	1,294.9	1,294.9	3.4	5.3	90.19	-0.2	60.1	60.1	51.6	8.46	7.104		
1,400.0	1,400.0	1,394.9	1,394.9	3.5	5.6	90.19	-0.2	60.1	60.1	51.3	8.78	6.845		

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Reference Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	BOO RADLEY COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design BOO RADLEY COM PROJECT - BOO RADLEY COM #701H - OWB - PWP1													Offset Site Error:	3.0 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		
1,500.0	1,500.0	1,494.9	1,494.9	3.5	5.9	90.19	-0.2	60.1	60.1	51.0	9.11	6.598		
1,600.0	1,600.0	1,594.9	1,594.9	3.6	6.3	90.19	-0.2	60.1	60.1	50.7	9.44	6.364		
1,700.0	1,700.0	1,694.9	1,694.9	3.7	6.6	90.19	-0.2	60.1	60.1	50.3	9.78	6.143		
1,800.0	1,800.0	1,794.9	1,794.9	3.8	6.9	90.19	-0.2	60.1	60.1	50.0	10.13	5.933		
1,900.0	1,900.0	1,894.9	1,894.9	3.9	7.2	90.19	-0.2	60.1	60.1	49.6	10.48	5.734		
2,000.0	2,000.0	1,994.9	1,994.9	3.9	7.5	90.19	-0.2	60.1	60.1	49.3	10.84	5.546		
2,100.0	2,100.0	2,094.9	2,094.9	4.0	7.9	90.19	-0.2	60.1	60.1	48.9	11.20	5.368		
2,200.0	2,200.0	2,194.9	2,194.9	4.1	8.2	90.19	-0.2	60.1	60.1	48.5	11.56	5.199		
2,300.0	2,300.0	2,294.9	2,294.9	4.2	8.5	90.19	-0.2	60.1	60.1	48.2	11.93	5.039		
2,400.0	2,400.0	2,394.9	2,394.9	4.3	8.9	90.19	-0.2	60.1	60.1	47.8	12.30	4.888		
2,500.0	2,500.0	2,494.9	2,494.9	4.4	9.2	90.19	-0.2	60.1	60.1	47.4	12.67	4.744	CC, ES, SF	
2,600.0	2,600.0	2,592.9	2,592.8	4.5	9.5	-173.98	-0.3	61.6	63.4	50.3	13.02	4.866		
2,700.0	2,699.8	2,690.0	2,689.9	4.5	9.9	-174.04	-0.8	66.4	73.5	60.1	13.36	5.499		
2,721.6	2,721.4	2,710.8	2,710.7	4.5	9.9	-174.06	-0.9	67.8	76.5	63.1	13.43	5.698		
2,800.0	2,799.5	2,787.2	2,786.8	4.5	10.2	-174.08	-1.5	74.2	89.0	75.3	13.71	6.496		
2,900.0	2,899.2	2,885.9	2,885.1	4.5	10.5	-174.08	-2.3	82.7	105.3	91.2	14.08	7.479		
3,000.0	2,998.9	2,984.6	2,983.4	4.6	10.8	-174.09	-3.0	91.2	121.5	107.1	14.46	8.407		
3,100.0	3,098.6	3,083.2	3,081.7	4.6	11.2	-174.09	-3.8	99.7	137.8	122.9	14.84	9.285		
3,200.0	3,198.3	3,181.9	3,180.0	4.7	11.5	-174.09	-4.6	108.2	154.0	138.8	15.23	10.115		
3,300.0	3,298.0	3,280.6	3,278.3	4.7	11.8	-174.09	-5.4	116.7	170.3	154.7	15.62	10.900		
3,400.0	3,397.8	3,379.3	3,376.6	4.7	12.2	-174.10	-6.2	125.2	186.5	170.5	16.02	11.643		
3,500.0	3,497.5	3,477.9	3,474.9	4.8	12.5	-174.10	-6.9	133.7	202.8	186.4	16.42	12.347		
3,600.0	3,597.2	3,576.6	3,573.2	4.9	12.8	-174.10	-7.7	142.2	219.0	202.2	16.83	13.013		
3,700.0	3,696.9	3,675.3	3,671.5	4.9	13.2	-174.10	-8.5	150.7	235.3	218.0	17.24	13.645		
3,800.0	3,796.6	3,773.9	3,769.8	5.0	13.5	-174.10	-9.3	159.2	251.5	233.9	17.66	14.244		
3,900.0	3,896.3	3,872.6	3,868.1	5.0	13.8	-174.10	-10.1	167.7	267.8	249.7	18.08	14.812		
4,000.0	3,996.0	3,971.3	3,966.4	5.1	14.2	-174.10	-10.8	176.2	284.0	265.5	18.50	15.352		
4,100.0	4,095.7	4,070.0	4,064.7	5.2	14.5	-174.10	-11.6	184.7	300.3	281.3	18.93	15.865		
4,200.0	4,195.4	4,168.6	4,163.0	5.2	14.9	-174.10	-12.4	193.2	316.5	297.2	19.35	16.353		
4,300.0	4,295.1	4,267.3	4,261.3	5.3	15.2	-174.10	-13.2	201.7	332.8	313.0	19.79	16.818		
4,400.0	4,394.8	4,366.0	4,359.6	5.4	15.6	-174.10	-14.0	210.2	349.0	328.8	20.22	17.260		
4,500.0	4,494.5	4,464.6	4,457.9	5.5	15.9	-174.10	-14.7	218.7	365.3	344.6	20.66	17.682		
4,600.0	4,594.2	4,563.3	4,556.2	5.5	16.2	-174.10	-15.5	227.2	381.5	360.4	21.10	18.084		
4,700.0	4,693.9	4,662.0	4,654.5	5.6	16.6	-174.10	-16.3	235.7	397.7	376.2	21.54	18.468		
4,800.0	4,793.6	4,760.7	4,752.8	5.7	16.9	-174.10	-17.1	244.2	414.0	392.0	21.98	18.834		
4,900.0	4,893.3	4,859.3	4,851.1	5.8	17.3	-174.10	-17.9	252.7	430.2	407.8	22.43	19.185		
5,000.0	4,993.0	4,958.0	4,949.4	5.9	17.6	-174.10	-18.6	261.2	446.5	423.6	22.87	19.520		
5,100.0	5,092.7	5,056.7	5,047.7	6.0	18.0	-174.10	-19.4	269.7	462.7	439.4	23.32	19.840		
5,200.0	5,192.4	5,155.3	5,146.0	6.1	18.3	-174.10	-20.2	278.2	479.0	455.2	23.77	20.147		
5,300.0	5,292.1	5,254.0	5,244.3	6.2	18.7	-174.11	-21.0	286.7	495.2	471.0	24.23	20.442		
5,400.0	5,391.8	5,352.7	5,342.6	6.3	19.0	-174.11	-21.8	295.2	511.5	486.8	24.68	20.724		
5,500.0	5,491.5	5,451.4	5,440.9	6.3	19.4	-174.11	-22.5	303.7	527.7	502.6	25.14	20.995		
5,600.0	5,591.2	5,550.0	5,539.2	6.4	19.7	-174.11	-23.3	312.2	544.0	518.4	25.59	21.255		
5,700.0	5,690.9	5,648.7	5,637.5	6.5	20.1	-174.11	-24.1	320.7	560.2	534.2	26.05	21.504		
5,800.0	5,790.6	5,747.4	5,735.8	6.6	20.4	-174.11	-24.9	329.2	576.5	550.0	26.51	21.745		
5,900.0	5,890.3	5,846.0	5,834.1	6.7	20.8	-174.11	-25.7	337.7	592.7	565.7	26.97	21.975		
6,000.0	5,990.0	5,944.7	5,932.4	6.8	21.1	-174.11	-26.4	346.2	609.0	581.5	27.43	22.198		
6,100.0	6,089.7	6,043.4	6,030.7	6.9	21.5	-174.11	-27.2	354.7	625.2	597.3	27.90	22.412		
6,200.0	6,189.4	6,142.1	6,129.0	7.0	21.8	-174.11	-28.0	363.2	641.5	613.1	28.36	22.618		
6,300.0	6,289.1	6,240.7	6,227.3	7.1	22.2	-174.11	-28.8	371.7	657.7	628.9	28.83	22.817		
6,400.0	6,388.8	6,339.4	6,325.6	7.2	22.5	-174.11	-29.6	380.2	674.0	644.7	29.29	23.008		
6,500.0	6,488.5	6,438.1	6,423.9	7.4	22.9	-174.11	-30.3	388.7	690.2	660.4	29.76	23.193		

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Reference Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	BOO RADLEY COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design BOO RADLEY COM PROJECT - BOO RADLEY COM #701H - OWB - PWP1													Offset Site Error:	3.0 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		
6,600.0	6,588.2	6,536.7	6,522.2	7.5	23.2	-174.11	-31.1	397.2	706.4	676.2	30.23	23.372		
6,700.0	6,687.9	6,635.4	6,620.5	7.6	23.6	-174.11	-31.9	405.7	722.7	692.0	30.70	23.544		
6,800.0	6,787.6	6,734.1	6,718.8	7.7	24.0	-174.11	-32.7	414.2	738.9	707.8	31.16	23.711		
6,900.0	6,887.3	6,832.8	6,817.1	7.8	24.3	-174.11	-33.5	422.7	755.2	723.6	31.63	23.872		
7,000.0	6,987.0	6,931.4	6,915.4	7.9	24.7	-174.11	-34.2	431.2	771.4	739.3	32.11	24.028		
7,100.0	7,086.7	7,030.1	7,013.7	8.0	25.0	-174.11	-35.0	439.7	787.7	755.1	32.58	24.179		
7,200.0	7,186.4	7,128.8	7,112.0	8.1	25.4	-174.11	-35.8	448.2	803.9	770.9	33.05	24.325		
7,300.0	7,286.1	7,227.4	7,210.3	8.2	25.7	-174.11	-36.6	456.7	820.2	786.7	33.52	24.466		
7,400.0	7,385.8	7,326.1	7,308.6	8.3	26.1	-174.11	-37.4	465.2	836.4	802.4	34.00	24.603		
7,500.0	7,485.5	7,424.8	7,406.9	8.4	26.4	-174.11	-38.1	473.7	852.7	818.2	34.47	24.736		
7,600.0	7,585.2	7,523.5	7,505.2	8.6	26.8	-174.11	-38.9	482.2	868.9	834.0	34.95	24.864		
7,700.0	7,684.9	7,622.1	7,603.5	8.7	27.1	-174.11	-39.7	490.7	885.2	849.8	35.42	24.989		
7,800.0	7,784.6	7,720.8	7,701.8	8.8	27.5	-174.11	-40.5	499.2	901.4	865.5	35.90	25.110		
7,900.0	7,884.3	7,819.5	7,800.1	8.9	27.8	-174.11	-41.3	507.7	917.7	881.3	36.38	25.228		
8,000.0	7,984.0	7,918.1	7,898.4	9.0	28.2	-174.11	-42.0	516.2	933.9	897.1	36.85	25.342		
8,100.0	8,083.7	8,016.8	7,996.7	9.1	28.6	-174.11	-42.8	524.7	950.2	912.8	37.33	25.453		
8,200.0	8,183.4	8,115.5	8,095.0	9.2	28.9	-174.11	-43.6	533.2	966.4	928.6	37.81	25.561		
8,300.0	8,283.1	8,214.1	8,193.3	9.3	29.3	-174.11	-44.4	541.7	982.7	944.4	38.29	25.665		
8,400.0	8,382.8	8,312.8	8,291.6	9.5	29.6	-174.11	-45.2	550.2	998.9	960.1	38.77	25.767		

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Reference Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	BOO RADLEY COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design BOO RADLEY COM PROJECT - BOO RADLEY COM #702H - OWB - PWP1												Offset Site Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 8904-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	0.0	0.0	3.0	3.0	90.19	-0.1	30.1	30.1				
100.0	100.0	99.7	99.7	3.0	3.0	90.19	-0.1	30.1	30.1	24.1	6.00	5.017	
200.0	200.0	199.7	199.7	3.0	3.0	90.19	-0.1	30.1	30.1	24.1	6.00	5.014	
300.0	300.0	299.7	299.7	3.0	3.0	90.19	-0.1	30.1	30.1	24.1	6.01	5.009	
400.0	400.0	399.7	399.7	3.0	3.0	90.19	-0.1	30.1	30.1	24.1	6.02	5.002	
500.0	500.0	499.7	499.7	3.1	3.1	90.19	-0.1	30.1	30.1	24.1	6.03	4.991	
600.0	600.0	599.7	599.7	3.1	3.1	90.19	-0.1	30.1	30.1	24.1	6.05	4.978	
700.0	700.0	699.7	699.7	3.1	3.1	90.19	-0.1	30.1	30.1	24.0	6.07	4.963	
800.0	800.0	799.7	799.7	3.2	3.2	90.19	-0.1	30.1	30.1	24.0	6.09	4.945	
900.0	900.0	899.7	899.7	3.2	3.2	90.19	-0.1	30.1	30.1	24.0	6.11	4.925	
1,000.0	1,000.0	999.7	999.7	3.2	3.2	90.19	-0.1	30.1	30.1	24.0	6.14	4.902	
1,100.0	1,100.0	1,099.7	1,099.7	3.3	3.3	90.19	-0.1	30.1	30.1	23.9	6.17	4.877	
1,200.0	1,200.0	1,199.7	1,199.7	3.4	3.4	90.19	-0.1	30.1	30.1	23.9	6.21	4.850	
1,300.0	1,300.0	1,299.7	1,299.7	3.4	3.4	90.19	-0.1	30.1	30.1	23.9	6.24	4.822	
1,400.0	1,400.0	1,399.7	1,399.7	3.5	3.5	90.19	-0.1	30.1	30.1	23.8	6.28	4.791	
1,500.0	1,500.0	1,499.7	1,499.7	3.5	3.5	90.19	-0.1	30.1	30.1	23.8	6.33	4.758	
1,600.0	1,600.0	1,599.7	1,599.7	3.6	3.6	90.19	-0.1	30.1	30.1	23.7	6.37	4.724	
1,700.0	1,700.0	1,699.7	1,699.7	3.7	3.7	90.19	-0.1	30.1	30.1	23.7	6.42	4.689	
1,800.0	1,800.0	1,799.7	1,799.7	3.8	3.8	90.19	-0.1	30.1	30.1	23.6	6.47	4.652	
1,900.0	1,900.0	1,899.7	1,899.7	3.9	3.9	90.19	-0.1	30.1	30.1	23.6	6.52	4.614	
2,000.0	2,000.0	1,999.7	1,999.7	3.9	3.9	90.19	-0.1	30.1	30.1	23.5	6.58	4.574	
2,100.0	2,100.0	2,099.7	2,099.7	4.0	4.0	90.19	-0.1	30.1	30.1	23.5	6.64	4.534	
2,200.0	2,200.0	2,199.7	2,199.7	4.1	4.1	90.19	-0.1	30.1	30.1	23.4	6.70	4.493	
2,300.0	2,300.0	2,299.7	2,299.7	4.2	4.2	90.19	-0.1	30.1	30.1	23.3	6.76	4.451	
2,400.0	2,400.0	2,399.7	2,399.7	4.3	4.3	90.19	-0.1	30.1	30.1	23.3	6.83	4.408	
2,500.0	2,500.0	2,499.7	2,499.7	4.4	4.4	90.19	-0.1	30.1	30.1	23.2	6.90	4.365 CC, ES	
2,600.0	2,600.0	2,599.7	2,599.7	4.5	4.5	-174.27	-0.1	30.1	31.8	24.9	6.97	4.570	
2,700.0	2,699.8	2,699.5	2,699.5	4.5	4.6	-175.07	-0.1	30.1	37.0	30.0	7.04	5.262	
2,721.6	2,721.4	2,721.1	2,721.1	4.5	4.6	-175.27	-0.1	30.1	38.6	31.6	7.06	5.474	
2,800.0	2,799.5	2,799.2	2,799.2	4.5	4.7	-175.91	-0.1	30.1	44.7	37.6	7.12	6.276	
2,900.0	2,899.2	2,898.9	2,898.9	4.5	4.8	-176.51	-0.1	30.1	52.4	45.2	7.20	7.276	
3,000.0	2,998.9	2,998.6	2,998.6	4.6	4.9	-176.96	-0.1	30.1	60.1	52.8	7.29	8.249	
3,100.0	3,098.6	3,098.3	3,098.3	4.6	5.0	-177.31	-0.1	30.1	67.8	60.4	7.38	9.194	
3,200.0	3,198.3	3,198.0	3,198.0	4.7	5.1	-177.58	-0.1	30.1	75.5	68.1	7.47	10.111	
3,300.0	3,298.0	3,297.7	3,297.7	4.7	5.2	-177.81	-0.1	30.1	83.3	75.7	7.57	10.999	
3,400.0	3,397.8	3,397.5	3,397.5	4.7	5.3	-177.99	-0.1	30.1	91.0	83.3	7.67	11.859	
3,500.0	3,497.5	3,497.2	3,497.2	4.8	5.4	-178.15	-0.1	30.1	98.7	90.9	7.78	12.689	
3,600.0	3,597.2	3,596.9	3,596.9	4.9	5.5	-178.28	-0.1	30.1	106.4	98.5	7.89	13.490	
3,700.0	3,696.9	3,696.6	3,696.6	4.9	5.7	-178.40	-0.1	30.1	114.1	106.1	8.00	14.263	
3,800.0	3,796.6	3,796.3	3,796.3	5.0	5.8	-178.50	-0.1	30.1	121.9	113.7	8.12	15.007	
3,900.0	3,896.3	3,896.0	3,896.0	5.0	5.9	-178.59	-0.1	30.1	129.6	121.4	8.24	15.724	
4,000.0	3,996.0	3,995.7	3,995.7	5.1	6.0	-178.67	-0.1	30.1	137.3	129.0	8.37	16.414	
4,100.0	4,095.7	4,095.4	4,095.4	5.2	6.1	-178.74	-0.1	30.1	145.0	136.5	8.49	17.078	
4,200.0	4,195.4	4,195.1	4,195.1	5.2	6.2	-178.80	-0.1	30.1	152.8	144.1	8.62	17.715	
4,300.0	4,295.1	4,294.8	4,294.8	5.3	6.3	-178.86	-0.1	30.1	160.5	151.7	8.76	18.329	
4,400.0	4,394.8	4,394.5	4,394.5	5.4	6.4	-178.91	-0.1	30.1	168.2	159.3	8.89	18.918	
4,500.0	4,494.5	4,494.2	4,494.2	5.5	6.6	-178.96	-0.1	30.1	175.9	166.9	9.03	19.484	
4,600.0	4,594.2	4,593.9	4,593.9	5.5	6.7	-179.01	-0.1	30.1	183.7	174.5	9.17	20.027	
4,700.0	4,693.9	4,693.6	4,693.6	5.6	6.8	-179.05	-0.1	30.1	191.4	182.1	9.31	20.550	
4,800.0	4,793.6	4,793.3	4,793.3	5.7	6.9	-179.08	-0.1	30.1	199.1	189.7	9.46	21.051	
4,900.0	4,893.3	4,893.0	4,893.0	5.8	7.0	-179.12	-0.1	30.1	206.8	197.2	9.61	21.533	
5,000.0	4,993.0	4,992.7	4,992.7	5.9	7.2	-179.15	-0.1	30.1	214.6	204.8	9.76	21.996	

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Reference Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	BOO RADLEY COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design BOO RADLEY COM PROJECT - BOO RADLEY COM #702H - OWB - PWP1												Offset Site Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 8904-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	5,092.7	5,092.4	5,092.4	6.0	7.3	-179.18	-0.1	30.1	222.3	212.4	9.91	22.440	
5,200.0	5,192.4	5,192.1	5,192.1	6.1	7.4	-179.21	-0.1	30.1	230.0	220.0	10.06	22.867	
5,300.0	5,292.1	5,291.8	5,291.8	6.2	7.5	-179.23	-0.1	30.1	237.8	227.5	10.21	23.278	
5,400.0	5,391.8	5,391.5	5,391.5	6.3	7.6	-179.26	-0.1	30.1	245.5	235.1	10.37	23.673	
5,500.0	5,491.5	5,491.2	5,491.2	6.3	7.8	-179.28	-0.1	30.1	253.2	242.7	10.53	24.052	
5,600.0	5,591.2	5,583.7	5,583.7	6.4	7.8	-179.20	-0.4	31.3	262.2	251.5	10.70	24.503	
5,700.0	5,690.9	5,675.0	5,674.9	6.5	7.8	-178.92	-1.5	35.3	274.1	263.2	10.89	25.162	
5,800.0	5,790.6	5,767.2	5,766.8	6.6	7.9	-178.46	-3.4	42.0	289.0	277.9	11.10	26.036	
5,900.0	5,890.3	5,865.9	5,865.2	6.7	7.9	-177.95	-5.6	50.2	304.8	293.5	11.28	27.015	
6,000.0	5,990.0	5,964.6	5,963.5	6.8	7.9	-177.50	-7.9	58.4	320.6	309.1	11.47	27.961	
6,100.0	6,089.7	6,063.3	6,061.9	6.9	7.9	-177.08	-10.1	66.6	336.4	324.8	11.65	28.875	
6,200.0	6,189.4	6,162.0	6,160.2	7.0	7.9	-176.71	-12.4	74.8	352.3	340.4	11.84	29.757	
6,300.0	6,289.1	6,260.8	6,258.5	7.1	8.0	-176.36	-14.6	83.0	368.2	356.1	12.03	30.610	
6,400.0	6,388.8	6,359.5	6,356.9	7.2	8.0	-176.05	-16.9	91.2	384.0	371.8	12.22	31.432	
6,500.0	6,488.5	6,458.2	6,455.2	7.4	8.0	-175.76	-19.2	99.4	399.9	387.5	12.41	32.226	
6,600.0	6,588.2	6,556.9	6,553.6	7.5	8.1	-175.49	-21.4	107.7	415.8	403.2	12.60	32.993	
6,700.0	6,687.9	6,655.6	6,651.9	7.6	8.1	-175.24	-23.7	115.9	431.7	418.9	12.80	33.732	
6,800.0	6,787.6	6,754.3	6,750.3	7.7	8.1	-175.01	-25.9	124.1	447.7	434.7	13.00	34.445	
6,900.0	6,887.3	6,853.0	6,848.6	7.8	8.2	-174.79	-28.2	132.3	463.6	450.4	13.19	35.133	
7,000.0	6,987.0	6,951.7	6,946.9	7.9	8.2	-174.59	-30.4	140.5	479.5	466.1	13.40	35.797	
7,100.0	7,086.7	7,050.4	7,045.3	8.0	8.3	-174.40	-32.7	148.7	495.4	481.8	13.60	36.438	
7,200.0	7,186.4	7,149.1	7,143.6	8.1	8.3	-174.23	-34.9	156.9	511.4	497.6	13.80	37.055	
7,300.0	7,286.1	7,247.9	7,242.0	8.2	8.3	-174.06	-37.2	165.1	527.3	513.3	14.01	37.651	
7,400.0	7,385.8	7,346.6	7,340.3	8.3	8.4	-173.91	-39.4	173.3	543.3	529.1	14.21	38.226	
7,500.0	7,485.5	7,445.3	7,438.6	8.4	8.4	-173.76	-41.7	181.5	559.2	544.8	14.42	38.781	
7,600.0	7,585.2	7,544.0	7,537.0	8.6	8.5	-173.62	-43.9	189.7	575.2	560.6	14.63	39.316	
7,700.0	7,684.9	7,642.7	7,635.3	8.7	8.6	-173.49	-46.2	197.9	591.1	576.3	14.84	39.833	
7,800.0	7,784.6	7,741.4	7,733.7	8.8	8.6	-173.36	-48.4	206.1	607.1	592.0	15.05	40.332	
7,900.0	7,884.3	7,840.1	7,832.0	8.9	8.7	-173.25	-50.7	214.3	623.1	607.8	15.27	40.813	
8,000.0	7,984.0	7,938.8	7,930.4	9.0	8.7	-173.13	-52.9	222.5	639.0	623.5	15.48	41.277	
8,100.0	8,083.7	8,037.5	8,028.7	9.1	8.8	-173.03	-55.2	230.7	655.0	639.3	15.70	41.726	
8,200.0	8,183.4	8,136.2	8,127.0	9.2	8.9	-172.93	-57.5	238.9	671.0	655.1	15.92	42.159	
8,300.0	8,283.1	8,234.9	8,225.4	9.3	8.9	-172.83	-59.7	247.1	686.9	670.8	16.13	42.577	
8,400.0	8,382.8	8,333.7	8,323.7	9.5	9.0	-172.74	-62.0	255.3	702.9	686.6	16.35	42.981	
8,500.0	8,482.5	8,432.4	8,422.1	9.6	9.1	-172.65	-64.2	263.5	718.9	702.3	16.58	43.372	
8,600.0	8,582.2	8,531.1	8,520.4	9.7	9.1	-172.56	-66.5	271.7	734.9	718.1	16.80	43.749	
8,700.0	8,681.9	8,629.8	8,618.8	9.8	9.2	-172.48	-68.7	279.9	750.8	733.8	17.02	44.114	
8,800.0	8,781.6	8,728.5	8,717.1	9.9	9.3	-172.40	-71.0	288.1	766.8	749.6	17.25	44.466	
8,900.0	8,881.3	8,827.2	8,815.4	10.1	9.3	-172.33	-73.2	296.3	782.8	765.3	17.46	44.829	
8,940.0	8,921.2	8,866.7	8,854.8	10.1	9.4	-172.30	-74.1	299.6	789.2	771.6	17.57	44.919	
8,950.0	8,931.2	8,876.6	8,864.6	10.1	9.4	-159.79	-74.4	300.4	790.8	773.2	17.58	44.994	
9,000.0	8,980.9	8,925.2	8,913.0	10.1	9.4	-121.69	-75.7	304.4	798.7	781.1	17.60	45.370	
9,050.0	9,030.1	8,972.5	8,959.9	10.1	9.4	-107.87	-80.0	308.3	806.5	788.8	17.63	45.734	
9,100.0	9,078.5	9,020.0	9,006.6	10.1	9.4	-101.35	-88.3	312.3	814.1	796.4	17.67	46.071	
9,150.0	9,125.6	9,067.9	9,052.7	10.1	9.4	-97.53	-100.5	316.2	821.6	803.9	17.72	46.376	
9,200.0	9,171.2	9,116.1	9,098.0	10.2	9.5	-94.99	-116.6	320.0	828.8	811.0	17.77	46.638	
9,250.0	9,214.8	9,164.7	9,142.0	10.2	9.5	-93.17	-136.7	323.8	835.8	817.9	17.84	46.850	
9,300.0	9,256.1	9,213.7	9,184.6	10.2	9.5	-91.78	-160.7	327.4	842.4	824.4	17.92	46.998	
9,350.0	9,294.9	9,263.1	9,225.3	10.3	9.6	-90.71	-188.5	330.9	848.6	830.6	18.03	47.070	
9,400.0	9,330.8	9,312.9	9,263.7	10.3	9.6	-89.85	-219.9	334.2	854.4	836.2	18.16	47.055	
9,450.0	9,363.5	9,363.2	9,299.6	10.4	9.7	-89.18	-254.9	337.4	859.7	841.4	18.31	46.940	
9,500.0	9,392.9	9,413.9	9,332.6	10.5	9.8	-88.65	-293.4	340.3	864.5	845.9	18.50	46.716	

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Reference Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	BOO RADLEY COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design BOO RADLEY COM PROJECT - BOO RADLEY COM #702H - OWB - PWP1												Offset Site Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 8904-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	
9,550.0	9,418.6	9,465.1	9,362.3	10.6	9.9	-88.24	-334.9	342.9	868.7	849.9	18.73	46.378	
9,600.0	9,440.5	9,516.7	9,388.5	10.7	10.0	-87.95	-379.4	345.3	872.3	853.3	18.99	45.925	
9,650.0	9,458.4	9,568.8	9,410.6	10.8	10.0	-87.75	-426.4	347.3	875.3	856.0	19.30	45.361	
9,700.0	9,472.2	9,621.3	9,428.6	11.0	10.1	-87.65	-475.7	349.0	877.7	858.0	19.64	44.696	
9,750.0	9,481.7	9,674.2	9,442.1	11.2	10.2	-87.64	-526.8	350.4	879.4	859.4	20.01	43.944	
9,800.0	9,487.0	9,727.4	9,450.9	11.3	10.4	-87.71	-579.3	351.3	880.4	860.0	20.42	43.122	
9,838.5	9,488.1	9,768.6	9,454.3	11.5	10.4	-87.82	-620.4	351.8	880.7	859.9	20.74	42.455	
9,900.0	9,487.8	9,832.2	9,454.8	11.7	10.6	-87.87	-684.0	352.1	880.7	859.4	21.30	41.351	
10,000.0	9,487.3	9,932.2	9,454.3	12.1	10.9	-87.88	-784.0	352.5	880.7	858.4	22.27	39.554	
10,100.0	9,486.8	10,032.2	9,453.9	12.6	11.3	-87.88	-883.9	352.9	880.7	857.4	23.32	37.765	
10,200.0	9,486.3	10,132.2	9,453.4	13.1	11.8	-87.88	-983.9	353.2	880.7	856.2	24.45	36.020	
10,300.0	9,485.8	10,232.2	9,453.0	13.6	12.3	-87.88	-1,083.9	353.6	880.7	855.0	25.65	34.341	
10,400.0	9,485.3	10,332.2	9,452.5	14.2	12.9	-87.89	-1,183.9	354.0	880.7	853.8	26.90	32.743	
10,500.0	9,484.8	10,432.2	9,452.1	14.8	13.6	-87.89	-1,283.9	354.4	880.7	852.5	28.20	31.232	
10,600.0	9,484.3	10,532.2	9,451.6	15.5	14.2	-87.89	-1,383.9	354.8	880.7	851.1	29.54	29.812	
10,700.0	9,483.8	10,632.2	9,451.2	16.1	14.9	-87.90	-1,483.9	355.1	880.7	849.8	30.92	28.481	
10,800.0	9,483.3	10,732.2	9,450.7	16.8	15.6	-87.90	-1,583.9	355.5	880.7	848.3	32.33	27.236	
10,900.0	9,482.8	10,832.2	9,450.3	17.5	16.4	-87.90	-1,683.9	355.9	880.7	846.9	33.78	26.074	
11,000.0	9,482.3	10,932.2	9,449.8	18.2	17.1	-87.90	-1,783.9	356.3	880.7	845.4	35.24	24.990	
11,100.0	9,481.8	11,032.2	9,449.4	18.9	17.9	-87.91	-1,883.9	356.7	880.7	843.9	36.73	23.978	
11,200.0	9,481.4	11,132.2	9,448.9	19.7	18.6	-87.91	-1,983.9	357.0	880.7	842.4	38.24	23.033	
11,300.0	9,480.9	11,232.2	9,448.5	20.4	19.4	-87.91	-2,083.9	357.4	880.7	840.9	39.76	22.150	
11,400.0	9,480.4	11,332.2	9,448.0	21.2	20.2	-87.92	-2,183.9	357.8	880.7	839.4	41.30	21.324	
11,500.0	9,479.9	11,432.2	9,447.6	21.9	21.0	-87.92	-2,283.9	358.2	880.6	837.8	42.85	20.551	
11,600.0	9,479.4	11,532.2	9,447.1	22.7	21.8	-87.92	-2,383.9	358.6	880.6	836.2	44.42	19.827	
11,700.0	9,478.9	11,632.2	9,446.7	23.5	22.6	-87.92	-2,483.9	358.9	880.6	834.6	45.99	19.148	
11,800.0	9,478.4	11,732.2	9,446.2	24.3	23.4	-87.93	-2,583.9	359.3	880.6	833.1	47.58	18.509	
11,900.0	9,477.9	11,832.2	9,445.8	25.0	24.2	-87.93	-2,683.9	359.7	880.6	831.5	49.17	17.909	
12,000.0	9,477.4	11,932.2	9,445.3	25.8	25.0	-87.93	-2,783.9	360.1	880.6	829.9	50.78	17.344	
12,100.0	9,476.9	12,032.2	9,444.9	26.6	25.8	-87.94	-2,883.9	360.5	880.6	828.2	52.39	16.810	
12,200.0	9,476.4	12,132.2	9,444.4	27.4	26.6	-87.94	-2,983.9	360.8	880.6	826.6	54.00	16.307	
12,300.0	9,475.9	12,232.2	9,444.0	28.2	27.4	-87.94	-3,083.9	361.2	880.6	825.0	55.63	15.831	
12,400.0	9,475.4	12,332.2	9,443.5	29.0	28.2	-87.94	-3,183.9	361.6	880.6	823.4	57.25	15.381	
12,500.0	9,474.9	12,432.2	9,443.1	29.8	29.1	-87.95	-3,283.9	362.0	880.6	821.7	58.89	14.954	
12,600.0	9,474.4	12,532.2	9,442.6	30.7	29.9	-87.95	-3,383.9	362.4	880.6	820.1	60.53	14.549	
12,700.0	9,473.9	12,632.2	9,442.2	31.5	30.7	-87.95	-3,483.9	362.7	880.6	818.4	62.17	14.165	
12,800.0	9,473.4	12,732.2	9,441.7	32.3	31.5	-87.96	-3,583.9	363.1	880.6	816.8	63.82	13.799	
12,900.0	9,472.9	12,832.2	9,441.3	33.1	32.4	-87.96	-3,683.9	363.5	880.6	815.1	65.47	13.451	
13,000.0	9,472.4	12,932.2	9,440.8	33.9	33.2	-87.96	-3,783.9	363.9	880.6	813.5	67.12	13.120	
13,100.0	9,472.0	13,032.2	9,440.4	34.7	34.0	-87.96	-3,883.9	364.3	880.6	811.8	68.78	12.804	
13,200.0	9,471.5	13,132.2	9,439.9	35.6	34.9	-87.97	-3,983.9	364.7	880.6	810.2	70.44	12.502	
13,300.0	9,471.0	13,232.2	9,439.5	36.4	35.7	-87.97	-4,083.9	365.0	880.6	808.5	72.10	12.213	
13,400.0	9,470.5	13,332.2	9,439.0	37.2	36.6	-87.97	-4,183.9	365.4	880.6	806.8	73.77	11.938	
13,500.0	9,470.0	13,432.2	9,438.6	38.0	37.4	-87.98	-4,283.9	365.8	880.6	805.1	75.43	11.674	
13,600.0	9,469.5	13,532.2	9,438.1	38.9	38.2	-87.98	-4,383.9	366.2	880.6	803.5	77.10	11.421	
13,700.0	9,469.0	13,632.2	9,437.7	39.7	39.1	-87.98	-4,483.9	366.6	880.6	801.8	78.78	11.178	
13,800.0	9,468.5	13,732.2	9,437.2	40.5	39.9	-87.98	-4,583.9	366.9	880.6	800.1	80.45	10.946	
13,900.0	9,468.0	13,832.2	9,436.8	41.4	40.8	-87.99	-4,683.9	367.3	880.6	798.4	82.13	10.722	
14,000.0	9,467.5	13,932.2	9,436.3	42.2	41.6	-87.99	-4,783.9	367.7	880.6	796.8	83.80	10.507	
14,100.0	9,467.0	14,032.2	9,435.9	43.0	42.4	-87.99	-4,883.9	368.1	880.6	795.1	85.48	10.301	
14,200.0	9,466.5	14,132.2	9,435.4	43.9	43.3	-88.00	-4,983.9	368.5	880.6	793.4	87.16	10.102	
14,300.0	9,466.0	14,232.2	9,435.0	44.7	44.1	-88.00	-5,083.9	368.8	880.5	791.7	88.85	9.911	

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Concho Resources LLC

Anticollision Report

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Reference Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	BOO RADLEY COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design BOO RADLEY COM PROJECT - BOO RADLEY COM #702H - OWB - PWP1												Offset Site Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 8904-MWD+IFR1+FDIR												Offset Well Error:	3.0 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toelface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,400.0	9,465.5	14,332.2	9,434.5	45.6	45.0	-88.00	-5,183.9	369.2	880.5	790.0	90.53	9.727	
14,500.0	9,465.0	14,432.2	9,434.1	46.4	45.8	-88.00	-5,283.9	369.6	880.5	788.3	92.21	9.549	
14,600.0	9,464.5	14,532.2	9,433.6	47.2	46.7	-88.01	-5,383.9	370.0	880.5	786.6	93.90	9.377	
14,706.7	9,464.0	14,638.9	9,433.1	48.1	47.6	-88.01	-5,490.5	370.4	880.5	784.8	95.70	9.201	
14,706.8	9,464.0	14,639.0	9,433.1	48.1	47.6	-88.01	-5,490.6	370.4	880.5	784.8	95.70	9.201	
14,716.2	9,464.0	14,650.2	9,433.1	48.2	47.7	-88.01	-5,501.9	370.4	880.5	784.7	95.88	9.184	
14,800.0	9,463.5	14,735.2	9,432.7	48.9	48.4	-88.01	-5,586.8	370.5	880.5	783.2	97.30	9.050	
14,900.0	9,463.0	14,835.2	9,432.2	49.8	49.2	-88.01	-5,686.8	370.5	880.5	781.6	98.99	8.896	
15,000.0	9,462.6	14,935.2	9,431.8	50.6	50.1	-88.02	-5,786.8	370.6	880.5	779.9	100.68	8.746	
15,100.0	9,462.1	15,035.2	9,431.3	51.4	50.9	-88.02	-5,886.8	370.6	880.5	778.2	102.37	8.602	
15,200.0	9,461.6	15,135.2	9,430.9	52.3	51.8	-88.02	-5,986.8	370.7	880.5	776.5	104.06	8.462	
15,300.0	9,461.1	15,235.2	9,430.4	53.1	52.6	-88.02	-6,086.8	370.7	880.5	774.8	105.75	8.326	
15,400.0	9,460.6	15,335.2	9,430.0	54.0	53.5	-88.03	-6,186.8	370.8	880.5	773.1	107.45	8.195	
15,500.0	9,460.1	15,435.2	9,429.5	54.8	54.3	-88.03	-6,286.8	370.8	880.5	771.4	109.14	8.068	
15,600.0	9,459.6	15,535.2	9,429.1	55.7	55.2	-88.03	-6,386.8	370.9	880.5	769.7	110.84	7.945	
15,700.0	9,459.1	15,635.2	9,428.6	56.5	56.0	-88.03	-6,486.8	370.9	880.5	768.0	112.53	7.825	
15,800.0	9,458.6	15,735.2	9,428.2	57.4	56.9	-88.04	-6,586.8	371.0	880.5	766.3	114.23	7.709	
15,900.0	9,458.1	15,835.2	9,427.7	58.2	57.7	-88.04	-6,686.8	371.0	880.5	764.6	115.92	7.596	
16,000.0	9,457.6	15,935.2	9,427.3	59.1	58.6	-88.04	-6,786.8	371.0	880.5	762.9	117.62	7.486	
16,100.0	9,457.2	16,035.2	9,426.8	59.9	59.4	-88.05	-6,886.8	371.1	880.5	761.2	119.32	7.379	
16,200.0	9,456.7	16,135.2	9,426.4	60.7	60.3	-88.05	-6,986.8	371.1	880.5	759.5	121.02	7.276	
16,300.0	9,456.2	16,235.2	9,425.9	61.6	61.1	-88.05	-7,086.8	371.2	880.5	757.8	122.72	7.175	
16,400.0	9,455.7	16,335.2	9,425.5	62.4	62.0	-88.05	-7,186.8	371.2	880.5	756.1	124.42	7.077	
16,500.0	9,455.2	16,435.2	9,425.0	63.3	62.8	-88.06	-7,286.8	371.3	880.5	754.4	126.12	6.982	
16,600.0	9,454.7	16,535.2	9,424.6	64.1	63.7	-88.06	-7,386.8	371.3	880.5	752.7	127.82	6.889	
16,700.0	9,454.2	16,635.2	9,424.1	65.0	64.5	-88.06	-7,486.8	371.4	880.5	751.0	129.52	6.798	
16,800.0	9,453.7	16,735.2	9,423.6	65.8	65.4	-88.06	-7,586.8	371.4	880.5	749.3	131.22	6.710	
16,900.0	9,453.2	16,835.2	9,423.2	66.7	66.2	-88.07	-7,686.8	371.5	880.5	747.6	132.93	6.624	
17,000.0	9,452.7	16,935.2	9,422.7	67.5	67.1	-88.07	-7,786.8	371.5	880.5	745.9	134.63	6.540	
17,100.0	9,452.2	17,035.2	9,422.3	68.4	68.0	-88.07	-7,886.8	371.6	880.5	744.2	136.33	6.459	
17,200.0	9,451.7	17,135.2	9,421.8	69.2	68.8	-88.07	-7,986.8	371.6	880.5	742.5	138.04	6.379	
17,300.0	9,451.3	17,235.2	9,421.4	70.1	69.7	-88.08	-8,086.8	371.7	880.5	740.8	139.74	6.301	
17,400.0	9,450.8	17,335.2	9,420.9	70.9	70.5	-88.08	-8,186.8	371.7	880.5	739.1	141.44	6.225	
17,500.0	9,450.3	17,435.2	9,420.5	71.8	71.4	-88.08	-8,286.8	371.8	880.5	737.4	143.15	6.151	
17,600.0	9,449.8	17,535.2	9,420.0	72.6	72.2	-88.08	-8,386.8	371.8	880.5	735.6	144.85	6.079	
17,700.0	9,449.3	17,635.2	9,419.6	73.5	73.1	-88.09	-8,486.8	371.9	880.5	733.9	146.56	6.008	
17,800.0	9,448.8	17,735.2	9,419.1	74.3	73.9	-88.09	-8,586.8	371.9	880.5	732.2	148.26	5.939	
17,900.0	9,448.3	17,835.2	9,418.7	75.2	74.8	-88.09	-8,686.8	372.0	880.5	730.5	149.97	5.871	
18,000.0	9,447.8	17,935.2	9,418.2	76.0	75.6	-88.09	-8,786.8	372.0	880.5	728.8	151.68	5.805	
18,100.0	9,447.3	18,035.2	9,417.8	76.9	76.5	-88.10	-8,886.8	372.1	880.5	727.1	153.38	5.741	
18,200.0	9,446.8	18,135.2	9,417.3	77.8	77.3	-88.10	-8,986.8	372.1	880.5	725.4	155.09	5.677	
18,300.0	9,446.3	18,235.2	9,416.9	78.6	78.2	-88.10	-9,086.8	372.2	880.5	723.7	156.80	5.616	
18,400.0	9,445.8	18,335.2	9,416.4	79.5	79.1	-88.10	-9,186.8	372.2	880.5	722.0	158.50	5.555	
18,500.0	9,445.4	18,435.2	9,416.0	80.3	79.9	-88.11	-9,286.8	372.3	880.5	720.3	160.21	5.496	
18,600.0	9,444.9	18,535.2	9,415.5	81.2	80.8	-88.11	-9,386.7	372.3	880.5	718.6	161.92	5.438	
18,700.0	9,444.4	18,635.2	9,415.1	82.0	81.6	-88.11	-9,486.7	372.4	880.5	716.9	163.63	5.381	
18,800.0	9,443.9	18,735.2	9,414.6	82.9	82.5	-88.11	-9,586.7	372.4	880.5	715.1	165.33	5.325	
18,900.0	9,443.4	18,835.2	9,414.2	83.7	83.3	-88.12	-9,686.7	372.5	880.5	713.4	167.04	5.271	
19,000.0	9,442.9	18,935.2	9,413.7	84.6	84.2	-88.12	-9,786.7	372.5	880.5	711.7	168.75	5.218	
19,100.0	9,442.4	19,035.2	9,413.3	85.4	85.0	-88.12	-9,886.7	372.6	880.5	710.0	170.46	5.165	
19,200.0	9,441.9	19,135.2	9,412.8	86.3	85.9	-88.12	-9,986.7	372.6	880.5	708.3	172.17	5.114	
19,300.0	9,441.4	19,235.2	9,412.3	87.1	86.8	-88.13	-10,086.7	372.6	880.5	706.6	173.88	5.064	

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Reference Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	BOO RADLEY COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design BOO RADLEY COM PROJECT - BOO RADLEY COM #702H - OWB - PWP1												Offset Site Error:	3.0 usft
Survey Program: 0-Standard Keeper 104, 8904-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
19,400.0	9,440.9	19,335.2	9,411.9	88.0	87.6	-88.13	-10,186.7	372.7	880.5	704.9	175.59	5.014	
19,500.0	9,440.4	19,435.2	9,411.4	88.8	88.5	-88.13	-10,286.7	372.7	880.5	703.2	177.30	4.966	
19,600.0	9,439.9	19,535.2	9,411.0	89.7	89.3	-88.13	-10,386.7	372.8	880.5	701.5	179.00	4.919	
19,700.0	9,439.5	19,635.2	9,410.5	90.5	90.2	-88.14	-10,486.7	372.8	880.5	699.8	180.71	4.872	
19,800.0	9,439.0	19,735.2	9,410.1	91.4	91.0	-88.14	-10,586.7	372.9	880.5	698.0	182.42	4.826	
19,900.0	9,438.5	19,835.2	9,409.6	92.3	91.9	-88.14	-10,686.7	372.9	880.5	696.3	184.13	4.782	
19,996.5	9,438.0	19,931.5	9,409.2	93.1	92.7	-88.14	-10,783.1	373.0	880.5	694.7	185.78	4.739	
20,001.7	9,438.0	19,935.6	9,409.2	93.1	92.7	-88.15	-10,787.2	373.0	880.5	694.6	185.86	4.737	
20,016.5	9,437.9	19,950.1	9,409.1	93.3	92.9	-88.15	-10,801.7	373.0	880.5	694.3	186.11	4.731	
20,036.1	9,437.8	19,969.6	9,409.0	93.4	93.0	-88.15	-10,821.2	373.1	880.5	694.0	186.45	4.722	
20,100.0	9,437.5	20,033.6	9,408.7	94.0	93.6	-88.15	-10,885.2	373.2	880.5	692.9	187.54	4.695	
20,200.0	9,437.0	20,133.6	9,408.3	94.8	94.4	-88.15	-10,985.2	373.4	880.5	691.2	189.25	4.652	
20,300.0	9,436.5	20,233.6	9,407.8	95.7	95.3	-88.15	-11,085.1	373.7	880.5	689.5	190.96	4.611	
20,400.0	9,436.0	20,333.6	9,407.4	96.5	96.2	-88.16	-11,185.1	373.9	880.5	687.8	192.67	4.570	
20,500.0	9,435.5	20,433.6	9,406.9	97.4	97.0	-88.16	-11,285.1	374.1	880.5	686.1	194.39	4.529	
20,600.0	9,435.0	20,533.6	9,406.5	98.2	97.9	-88.16	-11,385.1	374.4	880.5	684.4	196.10	4.490	
20,700.0	9,434.5	20,633.6	9,406.0	99.1	98.7	-88.16	-11,485.1	374.6	880.5	682.6	197.81	4.451	
20,800.0	9,434.0	20,733.6	9,405.6	99.9	99.6	-88.17	-11,585.1	374.8	880.5	680.9	199.52	4.413	
20,900.0	9,433.5	20,833.6	9,405.1	100.8	100.4	-88.17	-11,685.1	375.0	880.5	679.2	201.23	4.375	
21,000.0	9,433.1	20,933.6	9,404.6	101.7	101.3	-88.17	-11,785.1	375.3	880.5	677.5	202.94	4.338	
21,100.0	9,432.6	21,033.6	9,404.2	102.5	102.1	-88.17	-11,885.1	375.5	880.5	675.8	204.66	4.302	
21,200.0	9,432.1	21,133.6	9,403.7	103.4	103.0	-88.18	-11,985.1	375.7	880.5	674.1	206.37	4.266	
21,300.0	9,431.6	21,233.6	9,403.3	104.2	103.9	-88.18	-12,085.1	376.0	880.4	672.4	208.08	4.231	
21,400.0	9,431.1	21,333.6	9,402.8	105.1	104.7	-88.18	-12,185.1	376.2	880.4	670.7	209.79	4.197	
21,500.0	9,430.6	21,433.6	9,402.4	105.9	105.6	-88.18	-12,285.1	376.4	880.4	668.9	211.51	4.163	
21,600.0	9,430.1	21,533.6	9,401.9	106.8	106.4	-88.19	-12,385.1	376.6	880.4	667.2	213.22	4.129	
21,700.0	9,429.6	21,633.6	9,401.5	107.6	107.3	-88.19	-12,485.1	376.9	880.4	665.5	214.93	4.096	
21,800.0	9,429.1	21,733.6	9,401.0	108.5	108.1	-88.19	-12,585.1	377.1	880.4	663.8	216.64	4.064	
21,900.0	9,428.6	21,833.6	9,400.6	109.4	109.0	-88.19	-12,685.1	377.3	880.4	662.1	218.36	4.032	
22,000.0	9,428.1	21,933.6	9,400.1	110.2	109.9	-88.20	-12,785.1	377.5	880.4	660.4	220.07	4.001	
22,022.2	9,428.0	21,955.7	9,400.0	110.4	110.1	-88.20	-12,807.3	377.6	880.4	660.0	220.45	3.994	
22,025.0	9,428.0	21,956.3	9,400.0	110.4	110.1	-88.20	-12,807.9	377.6	880.4	660.0	220.48	3.993 SF	

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Reference Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	BOO RADLEY COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design BOO RADLEY COM PROJECT - SKEEN 21 STATE COM 2H - OWB - AWP												Offset Site Error:	3.0 usft
Survey Program: 100-GYRO-NS, 6260-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	
0.0	0.0	15.5	15.5	3.0	3.0	-141.49	-527.9	-420.0	674.6				
100.0	100.0	117.9	117.9	3.0	3.0	-141.52	-527.9	-419.5	674.3	668.3	6.01	112.250	
200.0	200.0	215.6	215.6	3.0	3.2	-141.56	-527.9	-419.0	674.0	667.9	6.06	111.169	
212.3	212.3	227.3	227.3	3.0	3.2	-141.56	-527.9	-419.0	674.0	667.9	6.08	110.915	
300.0	300.0	311.6	311.6	3.0	3.3	-141.60	-528.4	-418.8	674.3	668.1	6.20	108.722	
400.0	400.0	414.8	414.7	3.0	3.5	-141.68	-529.2	-418.2	674.5	668.1	6.41	105.221	
500.0	500.0	516.9	516.9	3.1	3.7	-141.75	-529.6	-417.5	674.4	667.8	6.60	102.129	
600.0	600.0	618.0	618.0	3.1	4.0	-141.82	-529.8	-416.7	674.0	667.2	6.81	99.029	
700.0	700.0	719.8	719.8	3.1	4.2	-141.89	-529.8	-415.6	673.4	666.4	7.03	95.778	
800.0	800.0	818.9	818.8	3.2	4.5	-141.92	-529.5	-414.9	672.7	665.4	7.28	92.466	
874.4	874.4	889.5	889.4	3.2	4.6	-141.93	-529.4	-414.7	672.5	665.0	7.46	90.115	
900.0	900.0	913.9	913.9	3.2	4.7	-141.93	-529.5	-414.7	672.5	665.0	7.54	89.191	
1,000.0	1,000.0	1,010.3	1,010.2	3.2	4.9	-141.97	-530.1	-414.6	673.0	665.1	7.88	85.371	
1,100.0	1,100.0	1,107.1	1,107.1	3.3	5.2	-142.03	-531.2	-414.6	673.9	665.7	8.23	81.843	
1,200.0	1,200.0	1,207.5	1,207.4	3.4	5.4	-142.08	-532.5	-414.9	675.1	666.5	8.60	78.512	
1,300.0	1,300.0	1,308.4	1,308.4	3.4	5.7	-142.11	-533.5	-415.2	676.1	667.2	8.96	75.427	
1,400.0	1,400.0	1,407.6	1,407.6	3.5	6.0	-142.11	-534.4	-415.9	677.2	667.9	9.31	72.723	
1,500.0	1,500.0	1,512.1	1,512.0	3.5	6.3	-142.08	-534.9	-416.6	678.0	668.3	9.67	70.118	
1,600.0	1,600.0	1,616.9	1,616.9	3.6	6.6	-142.03	-534.4	-417.1	677.9	667.9	10.03	67.581	
1,649.1	1,649.1	1,664.1	1,664.1	3.7	6.8	-141.99	-534.1	-417.5	677.9	667.7	10.21	66.388	
1,700.0	1,700.0	1,713.8	1,713.7	3.7	6.9	-141.93	-533.7	-418.0	677.9	667.5	10.40	65.192	
1,800.0	1,800.0	1,816.4	1,816.3	3.8	7.3	-141.81	-532.9	-419.2	678.0	667.2	10.78	62.869	
1,900.0	1,900.0	1,923.5	1,923.4	3.9	7.6	-141.68	-531.2	-419.8	677.1	665.9	11.21	60.422	
2,000.0	2,000.0	2,020.1	2,020.0	3.9	8.0	-141.53	-529.4	-420.6	676.1	664.5	11.60	58.301	
2,100.0	2,100.0	2,121.7	2,121.6	4.0	8.3	-141.45	-528.2	-420.9	675.4	663.4	12.00	56.298	
2,200.0	2,200.0	2,229.2	2,229.0	4.1	8.6	-141.54	-527.5	-418.9	673.7	661.3	12.41	54.281	
2,300.0	2,300.0	2,329.4	2,329.3	4.2	9.0	-141.65	-526.6	-416.7	671.6	658.8	12.79	52.501	
2,400.0	2,400.0	2,428.6	2,428.4	4.3	9.4	-141.66	-525.1	-415.2	669.5	656.3	13.19	50.767	
2,500.0	2,500.0	2,525.4	2,525.1	4.4	9.7	-141.68	-523.8	-414.0	667.8	654.2	13.58	49.159	
2,600.0	2,600.0	2,624.2	2,624.0	4.5	10.0	-45.96	-522.9	-413.1	665.2	651.3	13.95	47.695	
2,700.0	2,699.8	2,726.3	2,726.1	4.5	10.3	-46.36	-521.4	-412.2	659.9	645.6	14.29	46.184	
2,721.6	2,721.4	2,746.8	2,746.6	4.5	10.4	-46.47	-521.1	-412.0	658.5	644.1	14.36	45.859	
2,800.0	2,799.5	2,822.1	2,821.9	4.5	10.7	-46.84	-520.3	-411.4	653.3	638.7	14.62	44.692	
2,900.0	2,899.2	2,921.1	2,920.9	4.5	11.0	-47.29	-519.2	-411.2	646.9	632.0	14.97	43.230	
3,000.0	2,998.9	3,019.7	3,019.4	4.6	11.3	-47.73	-518.0	-411.1	640.7	625.4	15.32	41.823	
3,100.0	3,098.6	3,114.2	3,114.0	4.6	11.6	-48.18	-517.4	-411.3	635.1	619.4	15.66	40.564	
3,200.0	3,198.3	3,212.3	3,212.0	4.7	11.9	-48.65	-517.2	-411.7	630.1	614.1	16.00	39.390	
3,300.0	3,298.0	3,313.1	3,312.9	4.7	12.3	-49.15	-517.1	-412.0	625.0	608.7	16.35	38.231	
3,400.0	3,397.8	3,408.0	3,407.7	4.7	12.6	-49.67	-517.4	-412.3	620.5	603.8	16.68	37.209	
3,500.0	3,497.5	3,512.3	3,512.1	4.8	13.0	-50.23	-517.7	-412.6	615.8	598.8	17.04	36.140	
3,600.0	3,597.2	3,608.7	3,608.4	4.9	13.3	-50.71	-517.7	-413.3	611.3	593.9	17.38	35.163	
3,700.0	3,696.9	3,709.9	3,709.6	4.9	13.7	-51.23	-517.8	-414.0	606.9	589.2	17.74	34.203	
3,800.0	3,796.6	3,810.2	3,809.9	5.0	14.0	-51.77	-517.8	-414.5	602.4	584.3	18.11	33.272	
3,900.0	3,896.3	3,908.0	3,907.7	5.0	14.4	-52.26	-517.7	-415.5	598.0	579.6	18.46	32.394	
4,000.0	3,996.0	4,003.5	4,003.2	5.1	14.7	-52.72	-517.9	-416.8	594.3	575.5	18.81	31.594	
4,100.0	4,095.7	4,104.3	4,104.0	5.2	15.0	-53.24	-518.5	-418.2	590.8	571.7	19.18	30.802	
4,200.0	4,195.4	4,204.3	4,204.0	5.2	15.4	-53.78	-519.1	-419.3	587.3	567.8	19.56	30.035	
4,300.0	4,295.1	4,301.0	4,300.6	5.3	15.7	-54.32	-520.0	-420.4	584.1	564.2	19.92	29.325	
4,400.0	4,394.8	4,402.2	4,401.9	5.4	16.1	-54.89	-521.0	-421.7	581.1	560.8	20.31	28.619	
4,500.0	4,494.5	4,500.0	4,499.7	5.5	16.4	-55.46	-522.2	-422.9	578.3	557.7	20.68	27.963	
4,600.0	4,594.2	4,599.2	4,598.8	5.5	16.8	-56.03	-523.5	-424.2	575.8	554.7	21.07	27.334	
4,700.0	4,693.9	4,694.3	4,693.9	5.6	17.1	-56.60	-525.2	-425.5	573.7	552.3	21.44	26.764	

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Reference Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	BOO RADLEY COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design BOO RADLEY COM PROJECT - SKEEN 21 STATE COM 2H - OWB - AWP													Offset Site Error: 3.0 usft	
Survey Program: 100-GYRO-NS, 6260-MWD													Offset Well Error: 3.0 usft	
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)	(usft)	(usft)	(usft)			
4,800.0	4,793.6	4,793.7	4,793.2	5.7	17.4	-57.23	-527.5	-426.9	572.2	550.3	21.83	26.209		
4,900.0	4,893.3	4,895.6	4,895.1	5.8	17.8	-57.85	-529.6	-428.4	570.5	548.3	22.23	25.659		
5,000.0	4,993.0	4,996.1	4,995.6	5.9	18.1	-58.48	-531.4	-429.7	568.7	546.0	22.63	25.123		
5,100.0	5,092.7	5,093.6	5,093.1	6.0	18.5	-59.11	-533.4	-430.9	567.0	544.0	23.03	24.625		
5,200.0	5,192.4	5,193.0	5,192.4	6.1	18.8	-59.74	-535.6	-432.3	565.7	542.3	23.43	24.149		
5,300.0	5,292.1	5,290.3	5,289.7	6.2	19.2	-60.37	-538.0	-433.7	564.7	540.9	23.82	23.707		
5,400.0	5,391.8	5,388.7	5,388.1	6.3	19.5	-60.99	-540.7	-435.4	564.1	539.9	24.22	23.293		
5,500.0	5,491.5	5,490.6	5,489.9	6.3	19.9	-61.62	-543.4	-437.4	563.6	538.9	24.63	22.879		
5,600.0	5,591.2	5,590.6	5,589.9	6.4	20.2	-62.22	-545.7	-439.3	562.8	537.8	25.04	22.478		
5,700.0	5,690.9	5,692.2	5,691.4	6.5	20.6	-62.83	-547.9	-441.3	562.0	536.6	25.45	22.080		
5,800.0	5,790.6	5,794.4	5,793.5	6.6	20.9	-63.45	-549.9	-443.0	560.9	535.0	25.87	21.680		
5,900.0	5,890.3	5,892.3	5,891.5	6.7	21.3	-64.08	-551.8	-444.4	559.7	533.5	26.28	21.303		
6,000.0	5,990.0	5,992.2	5,991.3	6.8	21.6	-64.72	-553.8	-445.9	558.9	532.2	26.69	20.941		
6,100.0	6,089.7	6,092.8	6,091.9	6.9	22.0	-65.33	-555.7	-447.7	558.0	530.9	27.10	20.586		
6,200.0	6,189.4	6,188.2	6,187.2	7.0	22.3	-65.94	-557.9	-449.3	557.4	530.0	27.49	20.278		
6,224.4	6,213.7	6,212.2	6,211.2	7.1	22.3	-66.09	-558.5	-449.7	557.4	529.9	27.55	20.235 CC		
6,300.0	6,289.1	6,286.9	6,285.9	7.1	22.4	-66.58	-560.6	-450.9	557.5	529.8	27.69	20.136 ES, SF		
6,400.0	6,388.8	6,347.9	6,346.8	7.2	22.4	-67.05	-564.2	-451.8	560.8	533.1	27.73	20.225		
6,500.0	6,488.5	6,401.3	6,399.6	7.4	22.4	-67.63	-572.0	-452.1	572.1	544.3	27.75	20.616		
6,600.0	6,588.2	6,451.0	6,447.9	7.5	22.4	-68.31	-583.4	-452.0	591.5	563.7	27.73	21.329		
6,700.0	6,687.9	6,504.4	6,498.8	7.6	22.5	-69.22	-599.7	-450.7	618.2	590.5	27.71	22.310		
6,800.0	6,787.6	6,546.0	6,537.2	7.7	22.5	-70.06	-615.6	-448.7	652.5	624.9	27.62	23.621		
6,900.0	6,887.3	6,595.1	6,581.0	7.8	22.5	-71.11	-637.5	-445.7	693.5	666.0	27.58	25.148		
7,000.0	6,987.0	6,642.0	6,621.1	7.9	22.5	-72.17	-661.5	-442.0	740.9	713.3	27.54	26.904		
7,100.0	7,086.7	6,674.0	6,647.3	8.0	22.6	-72.88	-679.7	-439.5	794.0	766.6	27.41	28.967		
7,200.0	7,186.4	6,706.0	6,672.4	8.1	22.6	-73.54	-699.4	-437.3	852.5	825.2	27.31	31.215		
7,300.0	7,286.1	6,738.0	6,696.4	8.2	22.7	-74.15	-720.5	-435.5	915.6	888.4	27.24	33.611		
7,400.0	7,385.8	6,757.3	6,710.3	8.3	22.7	-74.50	-733.9	-434.5	982.7	955.6	27.10	36.257		

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Reference Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	BOO RADLEY COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design		HONEY GRAHAM STATE PROJECT (ATLAS 2628) - GRAHAM CRACKER 16 STATE #3H - OWB - AW										Offset Site Error:		0.0 usft	
Survey Program: 100-GYRO-NS, 7447-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			
7,100.0	7,086.7	12,520.0	8,030.5	8.5	82.8	119.94	131.6	-336.0	911.0	860.2	50.77	17.942			
7,200.0	7,186.4	12,520.0	8,030.5	8.6	82.8	119.94	131.6	-336.0	813.5	762.5	50.91	15.978			
7,300.0	7,286.1	12,520.0	8,030.5	8.7	82.8	119.94	131.6	-336.0	716.6	665.6	51.03	14.043			
7,400.0	7,385.8	12,520.0	8,030.5	8.9	82.8	119.94	131.6	-336.0	620.8	569.7	51.13	12.143			
7,500.0	7,485.5	12,520.0	8,030.5	9.0	82.8	119.94	131.6	-336.0	526.5	475.4	51.18	10.288			
7,600.0	7,585.2	12,520.0	8,030.5	9.1	82.8	119.94	131.6	-336.0	434.8	383.7	51.19	8.495			
7,700.0	7,684.9	12,520.0	8,030.5	9.2	82.8	119.94	131.6	-336.0	347.7	296.6	51.14	6.800			
7,800.0	7,784.6	12,520.0	8,030.5	9.3	82.8	119.94	131.6	-336.0	269.8	218.7	51.07	5.282			
7,900.0	7,884.3	12,520.0	8,030.5	9.4	82.8	119.94	131.6	-336.0	211.2	160.0	51.20	4.126			
7,990.8	7,974.8	12,520.0	8,030.5	9.5	82.8	119.94	131.6	-336.0	190.7	138.5	52.20	3.653 CC, ES			
8,000.0	7,984.0	12,520.0	8,030.5	9.5	82.8	119.94	131.6	-336.0	190.9	138.5	52.40	3.644 SF			
8,100.0	8,083.7	12,520.0	8,030.5	9.6	82.8	119.94	131.6	-336.0	219.8	165.1	54.71	4.017			
8,200.0	8,183.4	12,520.0	8,030.5	9.7	82.8	119.94	131.6	-336.0	283.1	227.3	55.78	5.076			
8,300.0	8,283.1	12,520.0	8,030.5	9.8	82.8	119.94	131.6	-336.0	363.3	307.2	56.06	6.480			
8,400.0	8,382.8	12,520.0	8,030.5	9.9	82.8	119.94	131.6	-336.0	451.5	395.3	56.17	8.037			
8,500.0	8,482.5	12,520.0	8,030.5	10.0	82.8	119.94	131.6	-336.0	543.8	487.5	56.27	9.663			
8,600.0	8,582.2	12,520.0	8,030.5	10.2	82.8	119.94	131.6	-336.0	638.4	582.0	56.40	11.319			
8,700.0	8,681.9	12,520.0	8,030.5	10.3	82.8	119.94	131.6	-336.0	734.4	677.9	56.55	12.987			
8,800.0	8,781.6	12,520.0	8,030.5	10.4	82.8	119.94	131.6	-336.0	831.4	774.7	56.73	14.656			
8,900.0	8,881.3	12,520.0	8,030.5	10.5	82.8	119.94	131.6	-336.0	929.0	872.1	56.92	16.320			
8,940.0	8,921.2	12,520.0	8,030.5	10.5	82.8	119.94	131.6	-336.0	968.2	911.0	57.20	16.928			
8,950.0	8,931.2	12,520.0	8,030.5	10.5	82.8	134.52	131.6	-336.0	978.0	920.8	57.22	17.093			

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Reference Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	BOO RADLEY COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design HONEY GRAHAM STATE PROJECT (ATLAS 2628) - GRAHAM CRACKER 16 STATE #7H - OWB - AC													Offset Site Error:	0.0 usft
Survey Program: 100-GYRO-NS, 6467-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		
8,300.0	8,283.1	13,737.0	9,185.8	9.8	82.9	57.20	198.2	-703.6	925.8	867.2	58.57	15.806		
8,400.0	8,382.8	13,737.0	9,185.8	9.9	82.9	57.20	198.2	-703.6	832.7	773.3	59.35	14.031		
8,500.0	8,482.5	13,737.0	9,185.8	10.0	82.9	57.20	198.2	-703.6	741.3	681.1	60.27	12.301		
8,600.0	8,582.2	13,737.0	9,185.8	10.2	82.9	57.20	198.2	-703.6	652.6	591.2	61.38	10.631		
8,700.0	8,681.9	13,737.0	9,185.8	10.3	82.9	57.20	198.2	-703.6	567.6	504.8	62.76	9.044		
8,800.0	8,781.6	13,737.0	9,185.8	10.4	82.9	57.20	198.2	-703.6	488.2	423.8	64.43	7.578		
8,900.0	8,881.3	13,737.0	9,185.8	10.5	82.9	57.20	198.2	-703.6	417.9	351.6	66.33	6.300		
8,940.0	8,921.2	13,737.0	9,185.8	10.5	82.9	57.20	198.2	-703.6	393.4	326.1	67.23	5.851		
8,950.0	8,931.2	13,737.0	9,185.8	10.5	82.9	69.97	198.2	-703.6	387.7	320.3	67.40	5.752		
9,000.0	8,980.9	13,737.0	9,185.8	10.5	82.9	109.08	198.2	-703.6	364.1	296.1	67.92	5.360		
9,050.0	9,030.1	13,737.0	9,185.8	10.5	82.9	123.25	198.2	-703.6	349.4	281.7	67.75	5.157		
9,095.2	9,073.8	13,737.0	9,185.8	10.6	82.9	129.09	198.2	-703.6	345.0	278.1	66.91	5.157 CC, ES, SF		
9,100.0	9,078.5	13,737.0	9,185.8	10.6	82.9	129.51	198.2	-703.6	345.1	278.3	66.78	5.167		
9,150.0	9,125.6	13,737.0	9,185.8	10.6	82.9	132.47	198.2	-703.6	351.5	286.3	65.15	5.395		
9,200.0	9,171.2	13,737.0	9,185.8	10.6	82.9	133.52	198.2	-703.6	368.0	304.8	63.15	5.827		
9,250.0	9,214.8	13,737.0	9,185.8	10.6	82.9	133.15	198.2	-703.6	393.2	332.1	61.08	6.438		
9,300.0	9,256.1	13,737.0	9,185.8	10.7	82.9	131.45	198.2	-703.6	425.4	366.3	59.11	7.197		
9,350.0	9,294.9	13,737.0	9,185.8	10.7	82.9	128.29	198.2	-703.6	463.0	405.6	57.35	8.072		
9,400.0	9,330.8	13,737.0	9,185.8	10.8	82.9	123.35	198.2	-703.6	504.4	448.6	55.81	9.038		
9,450.0	9,363.5	13,737.0	9,185.8	10.8	82.9	116.09	198.2	-703.6	548.6	494.1	54.47	10.072		
9,500.0	9,392.9	13,737.0	9,185.8	10.9	82.9	105.91	198.2	-703.6	594.6	541.3	53.29	11.158		
9,550.0	9,418.6	13,737.0	9,185.8	11.0	82.9	92.52	198.2	-703.6	641.7	589.5	52.24	12.285		
9,600.0	9,440.5	13,737.0	9,185.8	11.1	82.9	76.89	198.2	-703.6	689.4	638.1	51.28	13.444		
9,650.0	9,458.4	13,737.0	9,185.8	11.3	82.9	61.36	198.2	-703.6	737.2	686.8	50.40	14.628		
9,700.0	9,472.2	13,737.0	9,185.8	11.4	82.9	48.13	198.2	-703.6	784.8	735.3	49.57	15.832		
9,750.0	9,481.7	13,737.0	9,185.8	11.5	82.9	37.91	198.2	-703.6	831.9	783.1	48.78	17.053		
9,800.0	9,487.0	13,737.0	9,185.8	11.7	82.9	30.29	198.2	-703.6	878.2	830.2	48.03	18.285		
9,838.5	9,488.1	13,737.0	9,185.8	11.8	82.9	25.79	198.2	-703.6	913.2	865.8	47.47	19.239		
9,900.0	9,487.8	13,737.0	9,185.8	12.1	82.9	25.79	198.2	-703.6	969.0	922.4	46.65	20.773		

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

Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
Project:	ATLAS PROSPECT (NM-E)	TVD Reference:	KB=30' @ 3025.0usft (TBD)
Reference Site:	BOO RADLEY COM PROJECT	MD Reference:	KB=30' @ 3025.0usft (TBD)
Site Error:	3.0 usft	North Reference:	Grid
Reference Well:	BOO RADLEY COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-VES GyroFlex												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
20,800.0	9,434.0	9,433.9	9,432.7	100.0	8.3	82.80	-12,509.3	-627.9	930.4	895.8	34.52	26.948	
20,900.0	9,433.5	9,435.5	9,434.2	100.8	8.3	83.48	-12,509.3	-627.9	831.4	795.9	35.50	23.419	
21,000.0	9,433.1	9,437.0	9,435.7	101.7	8.3	84.17	-12,509.4	-628.0	732.7	695.9	36.80	19.912	
21,100.0	9,432.6	9,438.5	9,437.2	102.6	8.3	84.85	-12,509.4	-628.0	634.4	595.8	38.59	16.441	
21,200.0	9,432.1	9,439.9	9,438.7	103.4	8.3	85.53	-12,509.4	-628.0	536.7	495.6	41.19	13.032	
21,300.0	9,431.6	9,441.4	9,440.2	104.3	8.3	86.21	-12,509.4	-628.0	440.1	394.9	45.19	9.740	
21,400.0	9,431.1	9,442.9	9,441.7	105.1	8.3	86.89	-12,509.5	-628.0	345.4	293.6	51.79	6.670	
21,500.0	9,430.6	9,444.4	9,443.2	106.0	8.3	87.56	-12,509.5	-628.1	254.8	191.2	63.57	4.008	
21,600.0	9,430.1	9,445.9	9,444.6	106.8	8.3	88.23	-12,509.5	-628.1	174.7	89.2	85.51	2.043	
21,700.0	9,429.6	9,447.3	9,446.1	107.7	8.3	88.91	-12,509.6	-628.1	127.0	13.6	113.38	1.120	Shut in Produces
21,722.0	9,429.5	9,447.6	9,446.4	107.9	8.3	89.05	-12,509.6	-628.1	125.1	9.8	115.29	1.085	Shut in Produces, CC, ES, SF
21,800.0	9,429.1	9,448.8	9,447.6	108.5	8.3	89.57	-12,509.6	-628.1	147.4	46.2	101.20	1.456	Shut in Produces
21,900.0	9,428.6	9,450.2	9,449.0	109.4	8.3	90.24	-12,509.6	-628.2	217.5	142.8	74.68	2.912	
22,000.0	9,428.1	9,451.7	9,450.5	110.3	8.3	90.90	-12,509.6	-628.2	304.8	245.5	59.33	5.137	
22,025.0	9,428.0	9,452.0	9,450.8	110.5	8.3	91.07	-12,509.6	-628.2	327.8	271.0	56.76	5.775	

Concho Resources LLC

Anticollision Report

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Reference Well:	BOO RADLEY COM #703H	Survey Calculation Method:	Minimum Curvature
Well Error:	3.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OWB	Database:	edm
Reference Design:	PWP1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB=30' @ 3025.0usft (TBD)

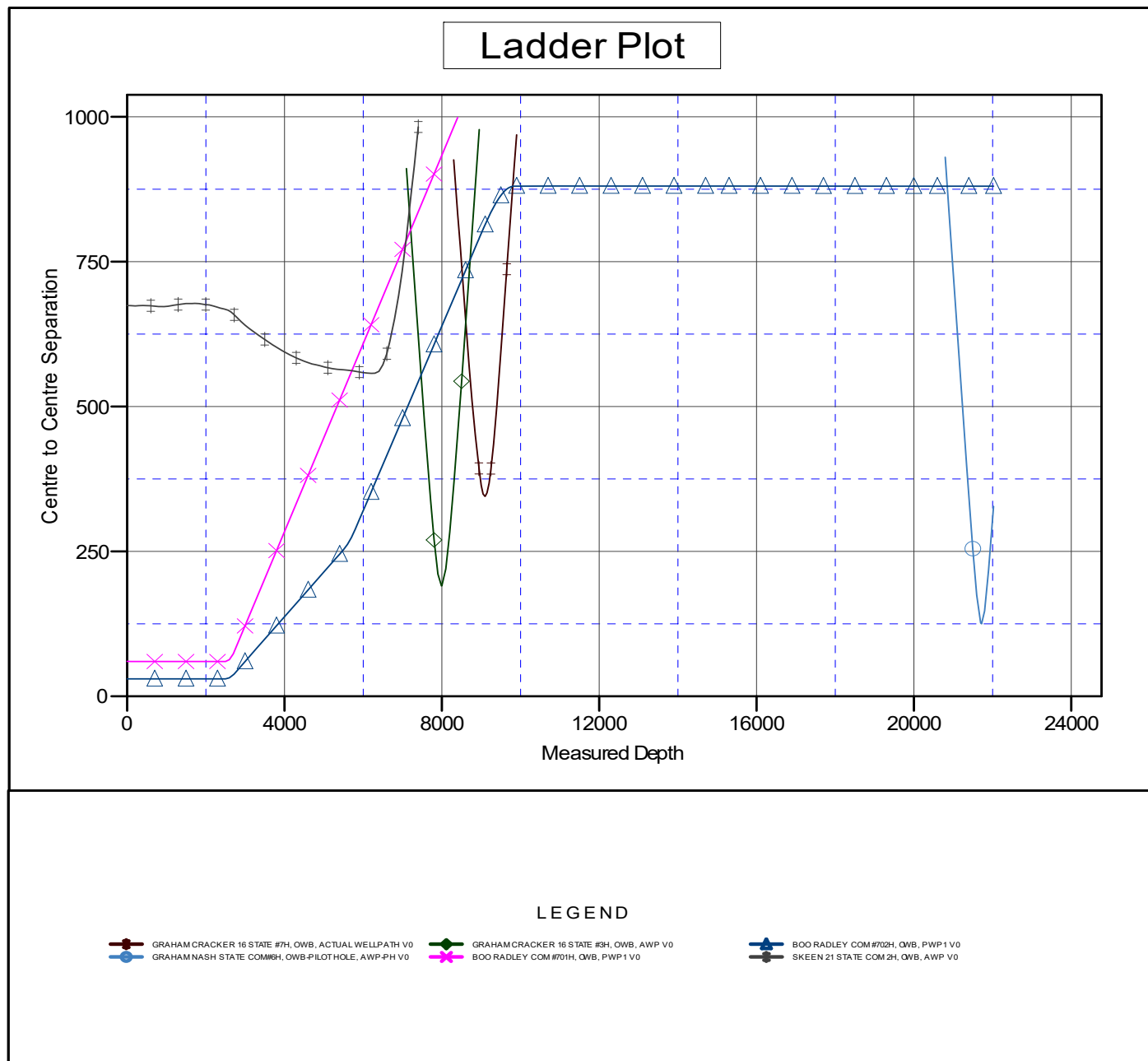
Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: BOO RADLEY COM #703H

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

Grid Convergence at Surface is: 0.13°



Concho Resources LLC

Anticollision Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BOO RADLEY COM #703H
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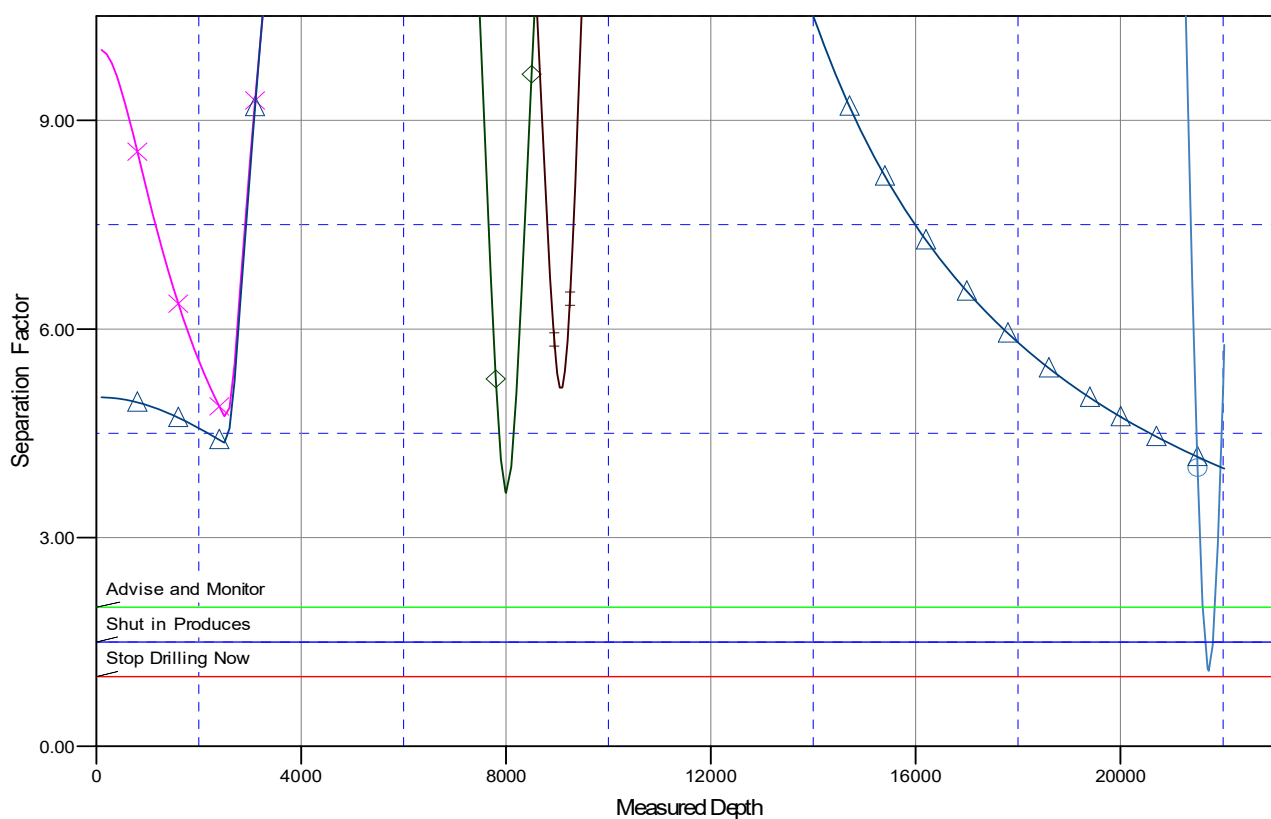
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: BOO RADLEY COM #703H

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

Grid Convergence at Surface is: 0.13°

Separation Factor Plot



LEGEND

GRAHAM CRACKER 16 STATE #7H, OWB, ACTUAL WELLPATH V0	GRAHAM CRACKER 16 STATE #3H, OWB, AWP V0	BOO RADLEY COM #703H, OWB, PWP1 V0
BOO RADLEY COM #703H, OWB, PWP1 V0	SKEEN 21 STATE COM #3H, OWB, AWP V0	

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

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

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

