

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 278684

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 30-015-47131
4. Property Code 316035	5. Property Name BIGFOOT STATE COM	6. Well No. 602H

7. Surface Location

UL - Lot I	Section 19	Township 19S	Range 28E	Lot Idn	Feet From 1325	N/S Line S	Feet From 250	E/W Line E	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot I	Section 21	Township 19S	Range 28E	Lot Idn I	Feet From 1650	N/S Line S	Feet From 50	E/W Line E	County Eddy
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9. Pool Information

WINCHESTER; BONE SPRING, WEST	97569
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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 3505
16. Multiple N	17. Proposed Depth 18736	18. Formation 3rd Bone Spring Sand	19. Contractor	20. Spud Date 2/1/2021
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	17.5	13.375	54.5	250	200	0
Int1	12.25	9.625	40	3350	850	0
Prod	8.75	5.5	17	18736	3000	2800

Casing/Cement Program: Additional Comments

Drill 17-1/2" hole to 250' with Saturated Brine. Run 13-3/8" 54.5# J55 STC casing to TD and cement to surface in one stage to cover the Salt. Drill 12-1/4" hole to ~3,350' with Cut Brine. Run 9-5/8" 40# J-55 casing to TD and cement to surface in one stage. Drill 8-3/4" vertical hole, curve & lateral to 18,736' with Cut Brine. Run 5-1/2" 17# P110 BTC casing to TD and cement to 2,800' in one stage.

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Annular	3000	3000	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.

Signature:

Printed Name: Electronically filed by Diane Kuykendall

Title: Production Accounting Director

Email Address: dkuykendall@concho.com

Date: 6/1/2020

Phone: 432-685-4372

OIL CONSERVATION DIVISION

Approved By: Raymond Podany

Title: Geologist

Approved Date: 6/2/2020

Expiration Date: 6/2/2022

Conditions of Approval Attached

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

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

☐ AMENDED REPORT

1 API Number 30-015-	2 Pool Code 97569	3 Pool Name Winchester; Bone Spring, West
4 Property Code 316035	5 Property Name BIGFOOT STATE COM	6 Well Number 602H
7 OGRID No. 229137	8 Operator Name COG OPERATING LLC	9 Elevation 3505'

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	19	19-S	28-E		1325'	SOUTH	250'	EAST	EDDY

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	21	19-S	28-E		1650'	SOUTH	50'	EAST	EDDY

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

16

N(83):601382.22'
E(83):580382.84'

N(83):601406.13'
E(83):580388.92'

N(83):601430.34'
E(83):580595.57'

N(83):601458.74'
E(83):581900.50'

N(83):601487.49'
E(83):590787.58'

19

20

21

N(83):598752.41'
E(83):580375.71'

N(83):598801.44'
E(83):585587.65'

N(83):5986216.30'
E(83):590787.16'

N(83):598120.35'
E(83):580388.61'

N(83):598144.20'
E(83):580293.87'

N(83):598170.19'
E(83):585579.70'

N(83):598183.40'
E(83):588185.13'

N(83):598216.30'
E(83):590790.33'

SHL

FTP

BHL

LTP

BIGFOOT ST COM 602H FTP TO LTP = 10,215.72'

250'

1325'

100'

1650'

50'

100'

1650'

SURFACE HOLE LOCATION (SHL)
NEW MEXICO EAST - NAD 83
X=580122.19 LAT.= 32.64234666° N
Y=597439.63 LONG.= 104.20733031° W
1325' FSL, 250' FEL - SECTION 19

LAST TAKE POINT (LTP)
NEW MEXICO EAST - NAD 83
X=590688.34 LAT.= 32.64347803° N
Y=597865.47 LONG.= 104.17300117° W
1650' FSL, 100' FEL - SECTION 21

FIRST TAKE POINT (FTP)
NEW MEXICO EAST - NAD 83
X=580473.06 LAT.= 32.64325740° N
Y=597771.38 LONG.= 104.20618911° W
1650' FSL, 100' FWL - SECTION 20

BOTTOM HOLE LOCATION (BHL)
NEW MEXICO EAST - NAD 83
X=590738.34 LAT.= 32.64347903° N
Y=597865.90 LONG.= 104.17283873° W
1650' FSL, 50' FEL - SECTION 21

Date of Survey _____

Signature and Seal of Professional Surveyor _____

Certificate Number _____

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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
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Santa Fe, NM 87505

GAS CAPTURE PLAN

Date: 6/2/2020

☒ 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
BIGFOOT STATE COM #602H	30-015-47131	I-19-19S-28E	1325S 0250E	2352	None	

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 DCP OPERATING COMPANY, LP and will be connected to DCP OPERATING COMPANY, LP 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 DCP OPERATING COMPANY, LP 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 DCP OPERATING COMPANY, LP have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at DCP OPERATING COMPANY, LP Processing Plant located in Sec. 07, Twn. 19S, 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 DCP OPERATING COMPANY, LP 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 278684

PERMIT COMMENTS

Operator Name and Address: COG OPERATING LLC [229137] 600 W Illinois Ave Midland, TX 79701		API Number: 30-015-47131
		Well: BIGFOOT STATE COM #602H
Created By	Comment	Comment Date
rodrom	H2S concentrations of wells in this area from surface to TD are low enough that a contingency plan is not required.	6/1/2020

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Form APD Conditions

Permit 278684

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: COG OPERATING LLC [229137] 600 W Illinois Ave Midland, TX 79701		API Number: 30-015-47131
		Well: BIGFOOT STATE COM #602H

OCD Reviewer	Condition
rpodany	Surface Casing drilling must use fresh water or air drill.
rpodany	Will require a directional survey with the C-104
rpodany	Cement is required to circulate on both surface and intermediate1 strings of casing

Intent ☐ As Drilled ☐

API #		
Operator Name:	Property Name:	Well Number

Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
Latitude					Longitude				NAD

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

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

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

DELAWARE BASIN WEST

EDDY COUNTY, NM

ZEUS

BIGFOOT ST COM 602H

OWB

Plan: PWP2

Standard Survey Report

12 May, 2020

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BIGFOOT ST COM 602H
Project:	EDDY COUNTY, NM	TVD Reference:	KB=29' @ 3536.0usft (TBD)
Site:	ZEUS	MD Reference:	KB=29' @ 3536.0usft (TBD)
Well:	BIGFOOT ST COM 602H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP2	Database:	edm

Project	EDDY COUNTY, NM		
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	BIGFOOT ST COM 602H				
Well Position	+N/-S	0.0 usft	Northing:	597,377.78 usft	Latitude: 32° 38' 32.028 N
	+E/-W	0.0 usft	Easting:	538,942.34 usft	Longitude: 104° 12' 24.556 W
Position Uncertainty		3.0 usft	Wellhead Elevation:	usft	Ground Level: 3,505.0 usft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	5/12/2020	7.00	60.22	47,787.65926964

Design	PWP2				
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	87.70	

Survey Tool Program	Date	5/12/2020			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	7,780.2	PWP2 (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
7,780.2	18,736.4	PWP2 (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 BIGFOOT ST COM 602H
Project:	EDDY COUNTY, NM	TVD Reference:	KB=29' @ 3536.0usft (TBD)
Site:	ZEUS	MD Reference:	KB=29' @ 3536.0usft (TBD)
Well:	BIGFOOT ST COM 602H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP2	Database:	edm

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 2.00									
5,600.0	2.00	0.00	5,600.0	1.7	0.0	0.1	2.00	2.00	0.00

Concho Resources LLC

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Well:	BIGFOOT ST COM 602H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP2	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)
5,700.0	4.00	0.00	5,699.8	7.0	0.0	0.3	2.00	2.00	0.00
5,750.0	5.00	0.00	5,749.7	10.9	0.0	0.4	2.00	2.00	0.00
Start 2030.2 hold at 5750.0 MD									
5,800.0	5.00	0.00	5,799.5	15.3	0.0	0.6	0.00	0.00	0.00
5,900.0	5.00	0.00	5,899.1	24.0	0.0	1.0	0.00	0.00	0.00
6,000.0	5.00	0.00	5,998.7	32.7	0.0	1.3	0.00	0.00	0.00
6,100.0	5.00	0.00	6,098.4	41.4	0.0	1.7	0.00	0.00	0.00
6,200.0	5.00	0.00	6,198.0	50.1	0.0	2.0	0.00	0.00	0.00
6,300.0	5.00	0.00	6,297.6	58.8	0.0	2.4	0.00	0.00	0.00
6,400.0	5.00	0.00	6,397.2	67.6	0.0	2.7	0.00	0.00	0.00
6,500.0	5.00	0.00	6,496.8	76.3	0.0	3.1	0.00	0.00	0.00
6,600.0	5.00	0.00	6,596.4	85.0	0.0	3.4	0.00	0.00	0.00
6,700.0	5.00	0.00	6,696.1	93.7	0.0	3.8	0.00	0.00	0.00
6,800.0	5.00	0.00	6,795.7	102.4	0.0	4.1	0.00	0.00	0.00
6,900.0	5.00	0.00	6,895.3	111.1	0.0	4.5	0.00	0.00	0.00
7,000.0	5.00	0.00	6,994.9	119.8	0.0	4.8	0.00	0.00	0.00
7,100.0	5.00	0.00	7,094.5	128.6	0.0	5.2	0.00	0.00	0.00
7,200.0	5.00	0.00	7,194.2	137.3	0.0	5.5	0.00	0.00	0.00
7,300.0	5.00	0.00	7,293.8	146.0	0.0	5.9	0.00	0.00	0.00
7,400.0	5.00	0.00	7,393.4	154.7	0.0	6.2	0.00	0.00	0.00
7,500.0	5.00	0.00	7,493.0	163.4	0.0	6.6	0.00	0.00	0.00
7,600.0	5.00	0.00	7,592.6	172.1	0.0	6.9	0.00	0.00	0.00
7,700.0	5.00	0.00	7,692.3	180.9	0.0	7.3	0.00	0.00	0.00
7,780.2	5.00	0.00	7,772.2	187.8	0.0	7.5	0.00	0.00	0.00
Start DLS 10.00 TFO 82.36									
7,800.0	5.61	20.44	7,791.9	189.6	0.3	7.9	10.00	3.11	103.47
7,900.0	13.56	61.27	7,890.5	199.9	12.4	20.4	10.00	7.95	40.82
8,000.0	23.15	70.63	7,985.3	212.1	41.3	49.7	10.00	9.59	9.36
8,100.0	32.98	74.65	8,073.5	225.8	86.2	95.1	10.00	9.82	4.02
8,200.0	42.87	76.97	8,152.2	240.7	145.7	155.2	10.00	9.90	2.32
8,300.0	52.81	78.56	8,219.3	256.3	218.1	228.2	10.00	9.93	1.59
8,400.0	62.75	79.77	8,272.5	272.2	301.1	311.7	10.00	9.95	1.21
8,500.0	72.71	80.78	8,310.4	287.8	392.2	403.4	10.00	9.96	1.01
8,600.0	82.67	81.69	8,331.7	302.6	488.6	500.3	10.00	9.96	0.91
8,652.9	87.94	82.15	8,336.0	310.0	540.8	552.8	10.00	9.96	0.87
Start DLS 2.00 TFO 90.11									
8,700.0	87.94	83.09	8,337.7	316.1	587.5	599.7	2.00	0.00	2.00
8,800.0	87.94	85.09	8,341.3	326.3	686.9	699.4	2.00	0.00	2.00
8,900.0	87.94	87.10	8,344.9	333.2	786.6	799.3	2.00	0.00	2.00
9,000.0	87.94	89.10	8,348.5	336.5	886.4	899.2	2.00	0.00	2.00
9,018.8	87.94	89.47	8,349.2	336.7	905.2	918.0	2.00	0.01	2.00
Start 9717.7 hold at 9018.8 MD									
9,100.0	87.94	89.47	8,352.1	337.5	986.4	999.1	0.00	0.00	0.00
9,200.0	87.94	89.47	8,355.7	338.4	1,086.3	1,099.0	0.00	0.00	0.00

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BIGFOOT ST COM 602H
Project:	EDDY COUNTY, NM	TVD Reference:	KB=29' @ 3536.0usft (TBD)
Site:	ZEUS	MD Reference:	KB=29' @ 3536.0usft (TBD)
Well:	BIGFOOT ST COM 602H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP2	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)
9,300.0	87.94	89.47	8,359.3	339.3	1,186.2	1,198.9	0.00	0.00	0.00
9,400.0	87.94	89.47	8,362.8	340.2	1,286.2	1,298.8	0.00	0.00	0.00
9,500.0	87.94	89.47	8,366.4	341.1	1,386.1	1,398.7	0.00	0.00	0.00
9,600.0	87.94	89.47	8,370.0	342.1	1,486.0	1,498.5	0.00	0.00	0.00
9,700.0	87.94	89.47	8,373.6	343.0	1,585.9	1,598.4	0.00	0.00	0.00
9,800.0	87.94	89.47	8,377.2	343.9	1,685.9	1,698.3	0.00	0.00	0.00
9,900.0	87.94	89.47	8,380.8	344.8	1,785.8	1,798.2	0.00	0.00	0.00
10,000.0	87.94	89.47	8,384.4	345.7	1,885.7	1,898.1	0.00	0.00	0.00
10,100.0	87.94	89.47	8,388.0	346.7	1,985.7	1,998.0	0.00	0.00	0.00
10,200.0	87.94	89.47	8,391.6	347.6	2,085.6	2,097.9	0.00	0.00	0.00
10,300.0	87.94	89.47	8,395.2	348.5	2,185.5	2,197.8	0.00	0.00	0.00
10,400.0	87.94	89.47	8,398.7	349.4	2,285.5	2,297.6	0.00	0.00	0.00
10,500.0	87.94	89.47	8,402.3	350.3	2,385.4	2,397.5	0.00	0.00	0.00
10,600.0	87.94	89.47	8,405.9	351.3	2,485.3	2,497.4	0.00	0.00	0.00
10,700.0	87.94	89.47	8,409.5	352.2	2,585.3	2,597.3	0.00	0.00	0.00
10,800.0	87.94	89.47	8,413.1	353.1	2,685.2	2,697.2	0.00	0.00	0.00
10,900.0	87.94	89.47	8,416.7	354.0	2,785.1	2,797.1	0.00	0.00	0.00
11,000.0	87.94	89.47	8,420.3	354.9	2,885.1	2,897.0	0.00	0.00	0.00
11,100.0	87.94	89.47	8,423.9	355.9	2,985.0	2,996.9	0.00	0.00	0.00
11,200.0	87.94	89.47	8,427.5	356.8	3,084.9	3,096.7	0.00	0.00	0.00
11,300.0	87.94	89.47	8,431.1	357.7	3,184.8	3,196.6	0.00	0.00	0.00
11,400.0	87.94	89.47	8,434.6	358.6	3,284.8	3,296.5	0.00	0.00	0.00
11,500.0	87.94	89.47	8,438.2	359.6	3,384.7	3,396.4	0.00	0.00	0.00
11,600.0	87.94	89.47	8,441.8	360.5	3,484.6	3,496.3	0.00	0.00	0.00
11,700.0	87.94	89.47	8,445.4	361.4	3,584.6	3,596.2	0.00	0.00	0.00
11,800.0	87.94	89.47	8,449.0	362.3	3,684.5	3,696.1	0.00	0.00	0.00
11,900.0	87.94	89.47	8,452.6	363.2	3,784.4	3,796.0	0.00	0.00	0.00
12,000.0	87.94	89.47	8,456.2	364.2	3,884.4	3,895.8	0.00	0.00	0.00
12,100.0	87.94	89.47	8,459.8	365.1	3,984.3	3,995.7	0.00	0.00	0.00
12,200.0	87.94	89.47	8,463.4	366.0	4,084.2	4,095.6	0.00	0.00	0.00
12,300.0	87.94	89.47	8,467.0	366.9	4,184.2	4,195.5	0.00	0.00	0.00
12,400.0	87.94	89.47	8,470.5	367.8	4,284.1	4,295.4	0.00	0.00	0.00
12,500.0	87.94	89.47	8,474.1	368.8	4,384.0	4,395.3	0.00	0.00	0.00
12,600.0	87.94	89.47	8,477.7	369.7	4,484.0	4,495.2	0.00	0.00	0.00
12,700.0	87.94	89.47	8,481.3	370.6	4,583.9	4,595.1	0.00	0.00	0.00
12,800.0	87.94	89.47	8,484.9	371.5	4,683.8	4,695.0	0.00	0.00	0.00
12,900.0	87.94	89.47	8,488.5	372.4	4,783.8	4,794.8	0.00	0.00	0.00
13,000.0	87.94	89.47	8,492.1	373.4	4,883.7	4,894.7	0.00	0.00	0.00
13,100.0	87.94	89.47	8,495.7	374.3	4,983.6	4,994.6	0.00	0.00	0.00
13,200.0	87.94	89.47	8,499.3	375.2	5,083.5	5,094.5	0.00	0.00	0.00
13,300.0	87.94	89.47	8,502.8	376.1	5,183.5	5,194.4	0.00	0.00	0.00
13,400.0	87.94	89.47	8,506.4	377.0	5,283.4	5,294.3	0.00	0.00	0.00
13,500.0	87.94	89.47	8,510.0	378.0	5,383.3	5,394.2	0.00	0.00	0.00

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BIGFOOT ST COM 602H
Project:	EDDY COUNTY, NM	TVD Reference:	KB=29' @ 3536.0usft (TBD)
Site:	ZEUS	MD Reference:	KB=29' @ 3536.0usft (TBD)
Well:	BIGFOOT ST COM 602H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP2	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)	
13,600.0	87.94	89.47	8,513.6	378.9	5,483.3	5,494.1	0.00	0.00	0.00	
13,700.0	87.94	89.47	8,517.2	379.8	5,583.2	5,593.9	0.00	0.00	0.00	
13,800.0	87.94	89.47	8,520.8	380.7	5,683.1	5,693.8	0.00	0.00	0.00	
13,900.0	87.94	89.47	8,524.4	381.6	5,783.1	5,793.7	0.00	0.00	0.00	
14,000.0	87.94	89.47	8,528.0	382.6	5,883.0	5,893.6	0.00	0.00	0.00	
14,100.0	87.94	89.47	8,531.6	383.5	5,982.9	5,993.5	0.00	0.00	0.00	
14,200.0	87.94	89.47	8,535.2	384.4	6,082.9	6,093.4	0.00	0.00	0.00	
14,300.0	87.94	89.47	8,538.7	385.3	6,182.8	6,193.3	0.00	0.00	0.00	
14,400.0	87.94	89.47	8,542.3	386.3	6,282.7	6,293.2	0.00	0.00	0.00	
14,500.0	87.94	89.47	8,545.9	387.2	6,382.7	6,393.0	0.00	0.00	0.00	
14,600.0	87.94	89.47	8,549.5	388.1	6,482.6	6,492.9	0.00	0.00	0.00	
14,700.0	87.94	89.47	8,553.1	389.0	6,582.5	6,592.8	0.00	0.00	0.00	
14,800.0	87.94	89.47	8,556.7	389.9	6,682.4	6,692.7	0.00	0.00	0.00	
14,900.0	87.94	89.47	8,560.3	390.9	6,782.4	6,792.6	0.00	0.00	0.00	
15,000.0	87.94	89.47	8,563.9	391.8	6,882.3	6,892.5	0.00	0.00	0.00	
15,100.0	87.94	89.47	8,567.5	392.7	6,982.2	6,992.4	0.00	0.00	0.00	
15,200.0	87.94	89.47	8,571.1	393.6	7,082.2	7,092.3	0.00	0.00	0.00	
15,300.0	87.94	89.47	8,574.6	394.5	7,182.1	7,192.1	0.00	0.00	0.00	
15,400.0	87.94	89.47	8,578.2	395.5	7,282.0	7,292.0	0.00	0.00	0.00	
15,500.0	87.94	89.47	8,581.8	396.4	7,382.0	7,391.9	0.00	0.00	0.00	
15,600.0	87.94	89.47	8,585.4	397.3	7,481.9	7,491.8	0.00	0.00	0.00	
15,700.0	87.94	89.47	8,589.0	398.2	7,581.8	7,591.7	0.00	0.00	0.00	
15,800.0	87.94	89.47	8,592.6	399.1	7,681.8	7,691.6	0.00	0.00	0.00	
15,900.0	87.94	89.47	8,596.2	400.1	7,781.7	7,791.5	0.00	0.00	0.00	
16,000.0	87.94	89.47	8,599.8	401.0	7,881.6	7,891.4	0.00	0.00	0.00	
16,100.0	87.94	89.47	8,603.4	401.9	7,981.6	7,991.3	0.00	0.00	0.00	
16,200.0	87.94	89.47	8,606.9	402.8	8,081.5	8,091.1	0.00	0.00	0.00	
16,300.0	87.94	89.47	8,610.5	403.7	8,181.4	8,191.0	0.00	0.00	0.00	
16,400.0	87.94	89.47	8,614.1	404.7	8,281.3	8,290.9	0.00	0.00	0.00	
16,500.0	87.94	89.47	8,617.7	405.6	8,381.3	8,390.8	0.00	0.00	0.00	
16,600.0	87.94	89.47	8,621.3	406.5	8,481.2	8,490.7	0.00	0.00	0.00	
16,700.0	87.94	89.47	8,624.9	407.4	8,581.1	8,590.6	0.00	0.00	0.00	
16,800.0	87.94	89.47	8,628.5	408.4	8,681.1	8,690.5	0.00	0.00	0.00	
16,900.0	87.94	89.47	8,632.1	409.3	8,781.0	8,790.4	0.00	0.00	0.00	
17,000.0	87.94	89.47	8,635.7	410.2	8,880.9	8,890.2	0.00	0.00	0.00	
17,100.0	87.94	89.47	8,639.3	411.1	8,980.9	8,990.1	0.00	0.00	0.00	
17,200.0	87.94	89.47	8,642.8	412.0	9,080.8	9,090.0	0.00	0.00	0.00	
17,300.0	87.94	89.47	8,646.4	413.0	9,180.7	9,189.9	0.00	0.00	0.00	
17,400.0	87.94	89.47	8,650.0	413.9	9,280.7	9,289.8	0.00	0.00	0.00	
17,500.0	87.94	89.47	8,653.6	414.8	9,380.6	9,389.7	0.00	0.00	0.00	
17,600.0	87.94	89.47	8,657.2	415.7	9,480.5	9,489.6	0.00	0.00	0.00	
17,700.0	87.94	89.47	8,660.8	416.6	9,580.5	9,589.5	0.00	0.00	0.00	
17,800.0	87.94	89.47	8,664.4	417.6	9,680.4	9,689.3	0.00	0.00	0.00	
17,900.0	87.94	89.47	8,668.0	418.5	9,780.3	9,789.2	0.00	0.00	0.00	

Concho Resources LLC

Survey Report

Company:	DELAWARE BASIN WEST	Local Co-ordinate Reference:	Well BIGFOOT ST COM 602H
Project:	EDDY COUNTY, NM	TVD Reference:	KB=29' @ 3536.0usft (TBD)
Site:	ZEUS	MD Reference:	KB=29' @ 3536.0usft (TBD)
Well:	BIGFOOT ST COM 602H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	PWP2	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)
18,000.0	87.94	89.47	8,671.6	419.4	9,880.2	9,889.1	0.00	0.00	0.00
18,100.0	87.94	89.47	8,675.2	420.3	9,980.2	9,989.0	0.00	0.00	0.00
18,200.0	87.94	89.47	8,678.7	421.2	10,080.1	10,088.9	0.00	0.00	0.00
18,300.0	87.94	89.47	8,682.3	422.2	10,180.0	10,188.8	0.00	0.00	0.00
18,400.0	87.94	89.47	8,685.9	423.1	10,280.0	10,288.7	0.00	0.00	0.00
18,500.0	87.94	89.47	8,689.5	424.0	10,379.9	10,388.6	0.00	0.00	0.00
18,600.0	87.94	89.47	8,693.1	424.9	10,479.8	10,488.4	0.00	0.00	0.00
18,700.0	87.94	89.47	8,696.7	425.8	10,579.8	10,588.3	0.00	0.00	0.00
18,736.4	87.94	89.47	8,698.0	426.2	10,616.2	10,624.7	0.00	0.00	0.00
TD at 18736.4									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP (BIGFOOT ST C) - hit/miss target - Shape	0.00	0.00	8,336.0	331.7	350.9	597,709.52	539,293.22	32° 38' 35.307 N	104° 12' 20.447 W
- plan misses target center by 61.1usft at 8478.9usft MD (8303.7 TVD, 284.5 N, 372.4 E)									
- Circle (radius 50.0)									
LTP (BIGFOOT ST C) - hit/miss target - Shape	0.00	0.00	8,698.0	425.7	10,566.2	597,803.53	549,508.50	32° 38' 36.100 N	104° 10' 20.974 W
- plan misses target center by 1.8usft at 18686.4usft MD (8696.2 TVD, 425.7 N, 10566.2 E)									
- Point									
PBHL (BIGFOOT ST C) - hit/miss target - Shape	-2.05	269.47	8,698.0	426.2	10,616.2	597,803.96	549,558.50	32° 38' 36.104 N	104° 10' 20.389 W
- plan hits target center									
- Rectangle (sides W100.0 H10,216.0 D20.0)									

Plan Annotations

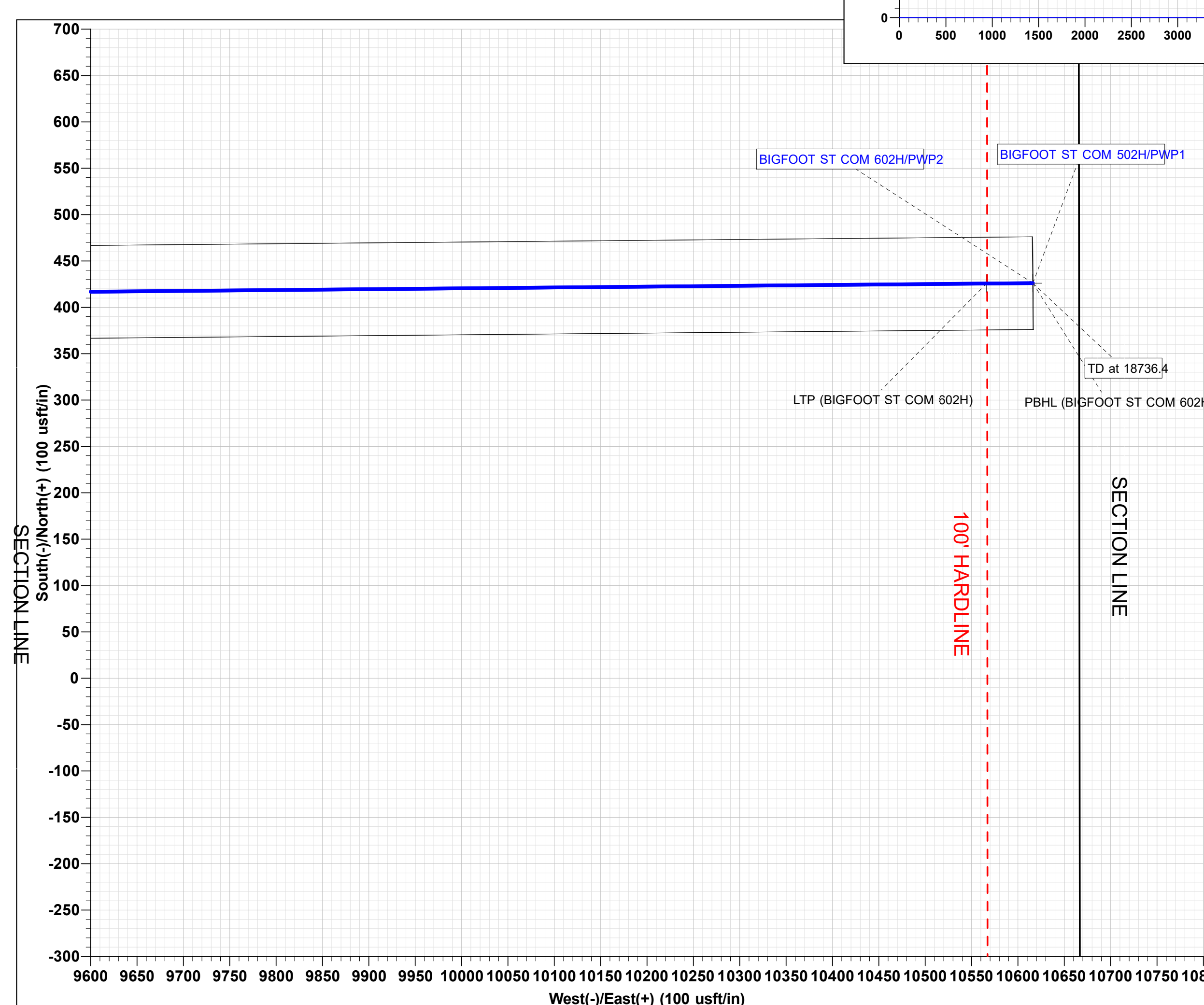
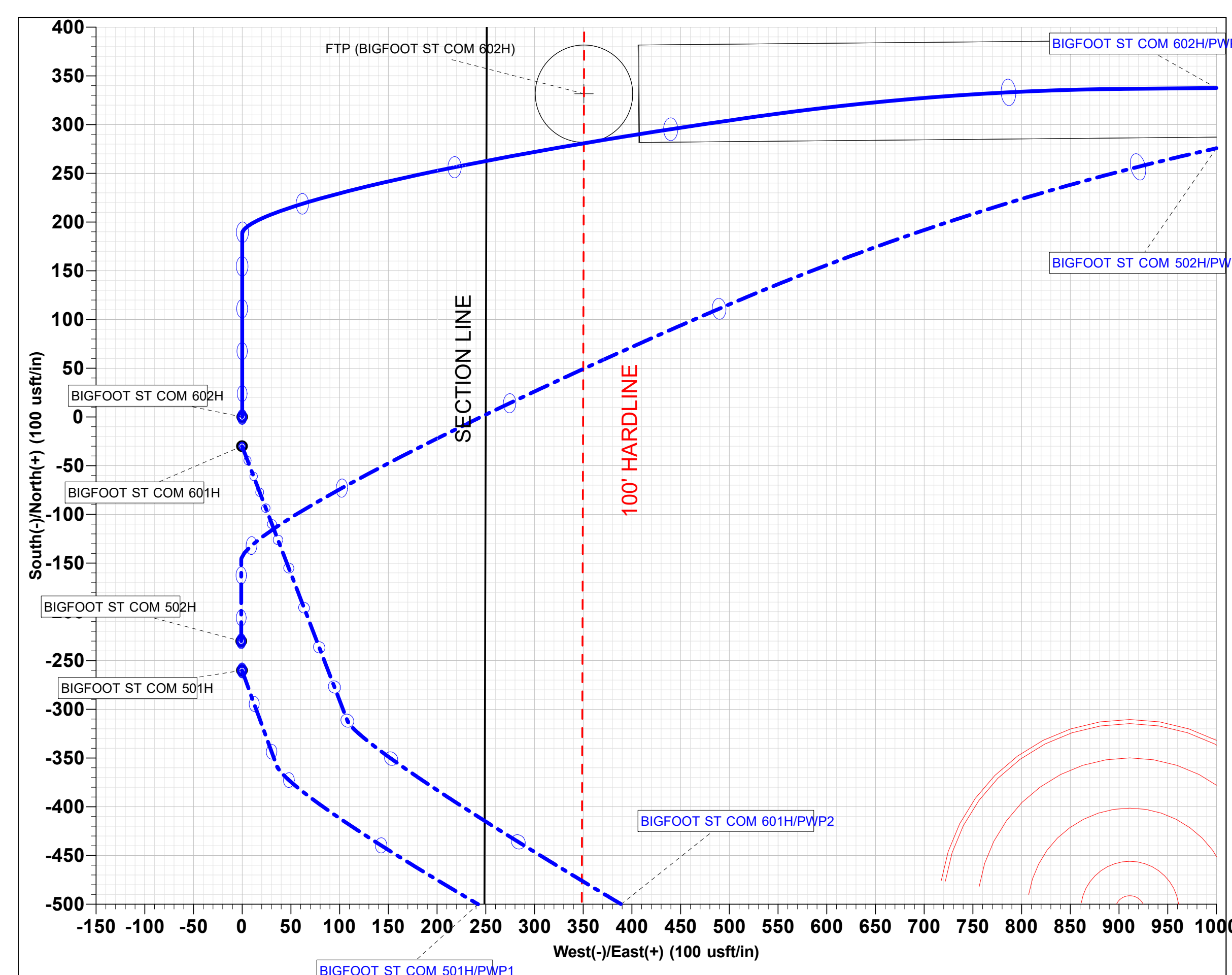
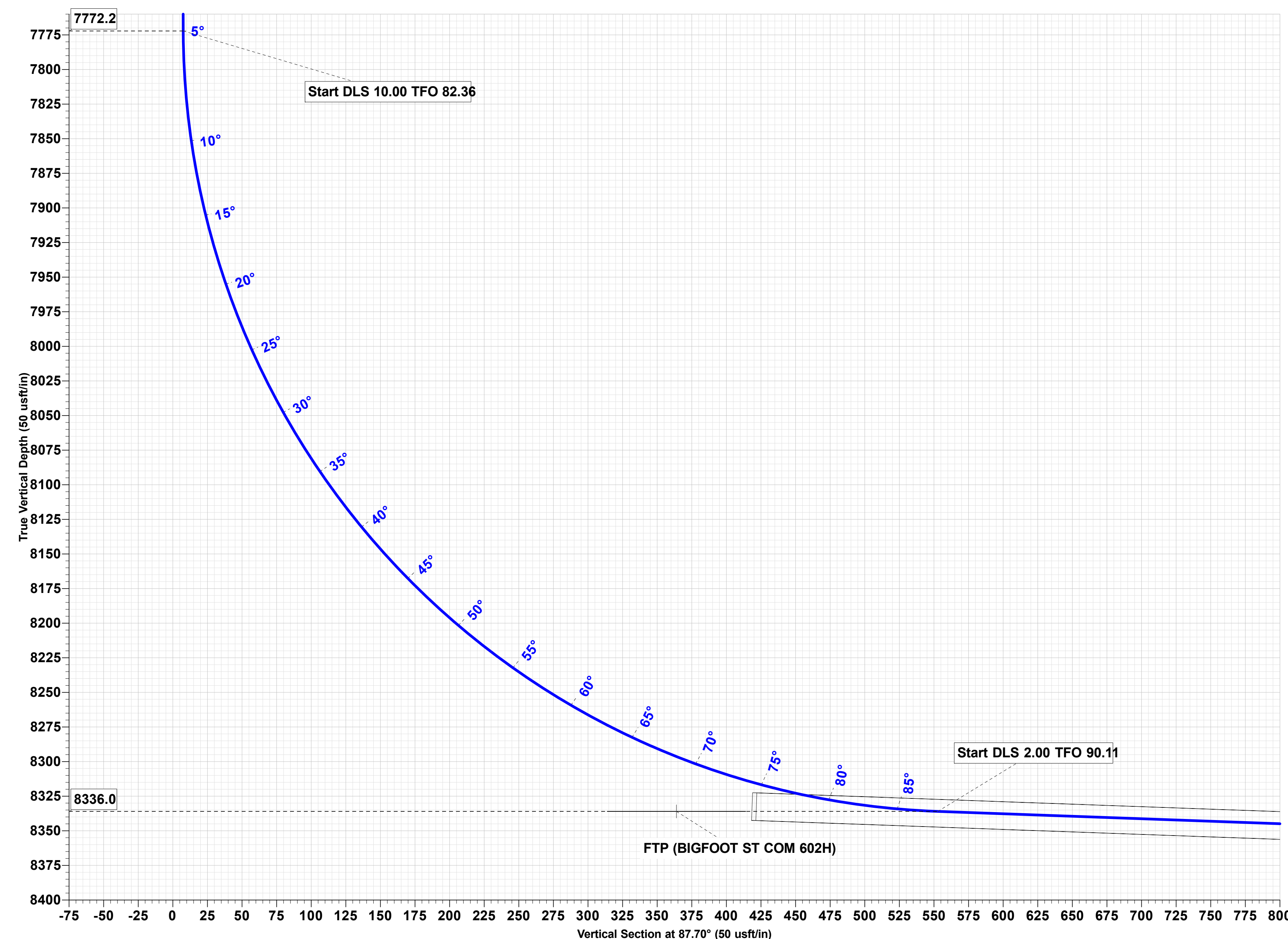
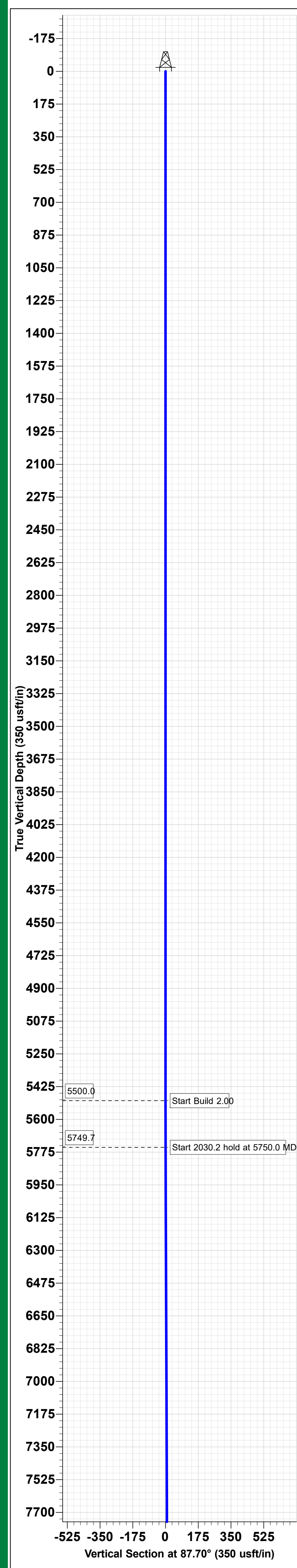
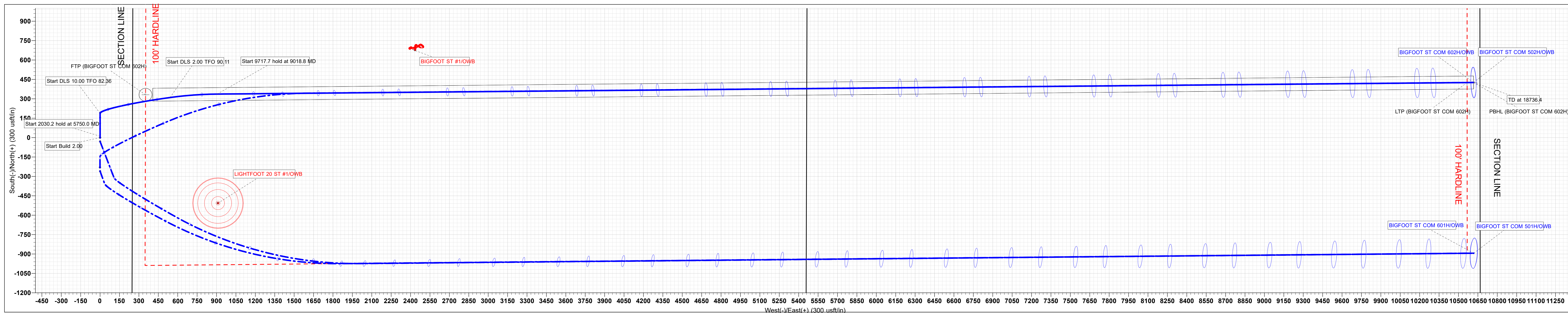
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
5500	5500	0	0	Start Build 2.00
5750	5750	11	0	Start 2030.2 hold at 5750.0 MD
7780	7772	188	0	Start DLS 10.00 TFO 82.36
8653	8336	310	541	Start DLS 2.00 TFO 90.11
9019	8349	337	905	Start 9717.7 hold at 9018.8 MD
18,736	8698	426	10,616	TD at 18736.4

Checked By: _____ Approved By: _____ Date: _____

Project: EDDY COUNTY, NM
Site: ZEUS
Well: BIGFOOT ST COM 602H
Wellbore: OWB
Design: PWP2
GL: 3505.0
KB=29' @ 3536.0usft (TBD)

WELL DETAILS: BIGFOOT ST COM 602H

Northing 597377.78 Easting 538942.34 Latitude 32° 38' 32.028 N Longitude 104° 12' 24.556 W



BIGFOOT ST COM 602H										
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		
5500.0	0.00	0.00	5500.0	0.0	0.0	0.00	0.00	0.0	Start Build 2.00	
5750.0	5.00	0.00	5749.7	10.9	0.0	2.00	0.00	0.4	Start 2030.2 hold at 5750.0 MD	
7780.2	5.00	0.00	7772.2	187.8	0.0	0.00	0.00	7.5	Start DLS 10.00 TFO 82.36	
8652.9	87.94	82.15	8336.0	310.0	540.8	10.00	82.36	552.8	Start DLS 2.00 TFO 90.11	
9018.8	87.94	89.47	8349.2	336.7	905.2	2.00	90.11	918.0	Start 9717.7 hold at 9018.8 MD	
18736.4	87.94	89.47	8698.0	426.2	10616.2	0.00	0.00	10624.7	TD at 18736.4	

DESIGN TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	
FTP (BIGFOOT ST COM 602H)	8336.0	331.7	350.9	597709.52	539293.22	
LTP (BIGFOOT ST COM 602H)	8698.0	425.7	10566.2	597803.53	549508.50	
PBHL (BIGFOOT ST COM 602H)	8698.0	426.2	10616.2	597803.96	549558.50	

