

Well Name: LONESOME DOVE FED COM	Well Location: T26S / R35E / SEC 17 / TR I / 32.042326 / -103.3845103	County or Parish/State: LEA / NM
Well Number: 514H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM110841	Unit or CA Name:	Unit or CA Number:
US Well Number: 3002549523	Well Status: Drilling Well	Operator: TITUS OIL AND GAS PRODUCTION LLC

Notice of Intent

Sundry ID: 2646079

Type of Submission: Notice of Intent	Type of Action: Other
Date Sundry Submitted: 11/29/2021	Time Sundry Submitted: 03:42
Date proposed operation will begin: 11/29/2021	

Procedure Description: BHL change from 10' FNL & 530' FEL to 10' FNL & 660' FEL; Depth Change from 13,027' TVD and 21,854' MD to 12,968' TVD and 21,159' MD; Change to Multibowl Wellhead; Adjustments to Casing and Cement to account for plan changes; Updated Choke Hose certs to match rig. Attachments: - Revised C-102 - Revised APD Drilling Plan - Revised Directional Plan - Revised Directional AC Report - Multibowl Wellhead Schematic

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

- AFS\_\_\_Multi\_Bowl\_Schematic\_20211129154148.pdf
- Choke\_Hose\_SN\_74818\_20211129154126.pdf
- LONESOME\_DOVE\_FED\_COM\_514H\_C102\_REV\_1\_SIGNED\_20211129154125.pdf
- Lonesome\_Dove\_Fed\_Com\_514H\_\_\_APD\_Drlg\_Temp\_20211129154125.pdf
- Lonesome\_Dove\_Fed\_Com\_514H\_\_\_Plan\_3\_11\_18\_21\_AC\_Report\_20211129154125.pdf
- Lonesome\_Dove\_Fed\_Com\_514H\_\_\_Plan\_3\_11\_18\_21\_20211129154125.pdf

<b>Well Name:</b> LONESOME DOVE FED COM	<b>Well Location:</b> T26S / R35E / SEC 17 / TR 1 / 32.042326 / -103.3845103	<b>County or Parish/State:</b> LEA / NM
<b>Well Number:</b> 514H	<b>Type of Well:</b> OIL WELL	<b>Allottee or Tribe Name:</b>
<b>Lease Number:</b> NMNM110841	<b>Unit or CA Name:</b>	<b>Unit or CA Number:</b>
<b>US Well Number:</b> 3002549523	<b>Well Status:</b> Drilling Well	<b>Operator:</b> TITUS OIL AND GAS PRODUCTION LLC

Conditions of Approval

Additional Reviews

Lonesome\_Dove\_Fed\_Com\_514H\_\_COA\_20220118102024.pdf

Operator Certification

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a submission of Form 3160-5 or a Sundry Notice.

<b>Operator Electronic Signature:</b> RYAN DELONG	<b>Signed on:</b> NOV 29, 2021 03:42 PM
<b>Name:</b> TITUS OIL AND GAS PRODUCTION LLC	
<b>Title:</b> Regulatory Manager	
<b>Street Address:</b> 420 Throckmorton Street, Suite 1150	
<b>City:</b> Fort Worth	<b>State:</b> TX
<b>Phone:</b> (817) 852-6370	
<b>Email address:</b> rdelong@titusoil.com	

Field Representative

<b>Representative Name:</b>		
<b>Street Address:</b>		
<b>City:</b>	<b>State:</b>	<b>Zip:</b>
<b>Phone:</b>		
<b>Email address:</b>		

BLM Point of Contact

<b>BLM POC Name:</b> CHRISTOPHER WALLS	<b>BLM POC Title:</b> Petroleum Engineer
<b>BLM POC Phone:</b> 5752342234	<b>BLM POC Email Address:</b> cwalls@blm.gov
<b>Disposition:</b> Approved	<b>Disposition Date:</b> 01/18/2022
<b>Signature:</b> Chris Walls	

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 Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV

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

## State of New Mexico

## Energy, Minerals &amp; Natural Resources Department

## OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

<b>1 API Number</b> 30-025-49523	<b>2 Pool Code</b> 96776	<b>3 Pool Name</b> JABALINA; WOLFCAMP, SOUTHWEST
<b>4 Property Code</b> 329881	<b>5 Property Name</b> LONESOME DOVE FED COM	<b>6 Well Number</b> 514H
<b>7 OGRID No.</b> 373986	<b>8 Operator Name</b> TITUS OIL & GAS PRODUCTION LLC	<b>9 Elevation</b> 3204'

<sup>10</sup> Surface Location

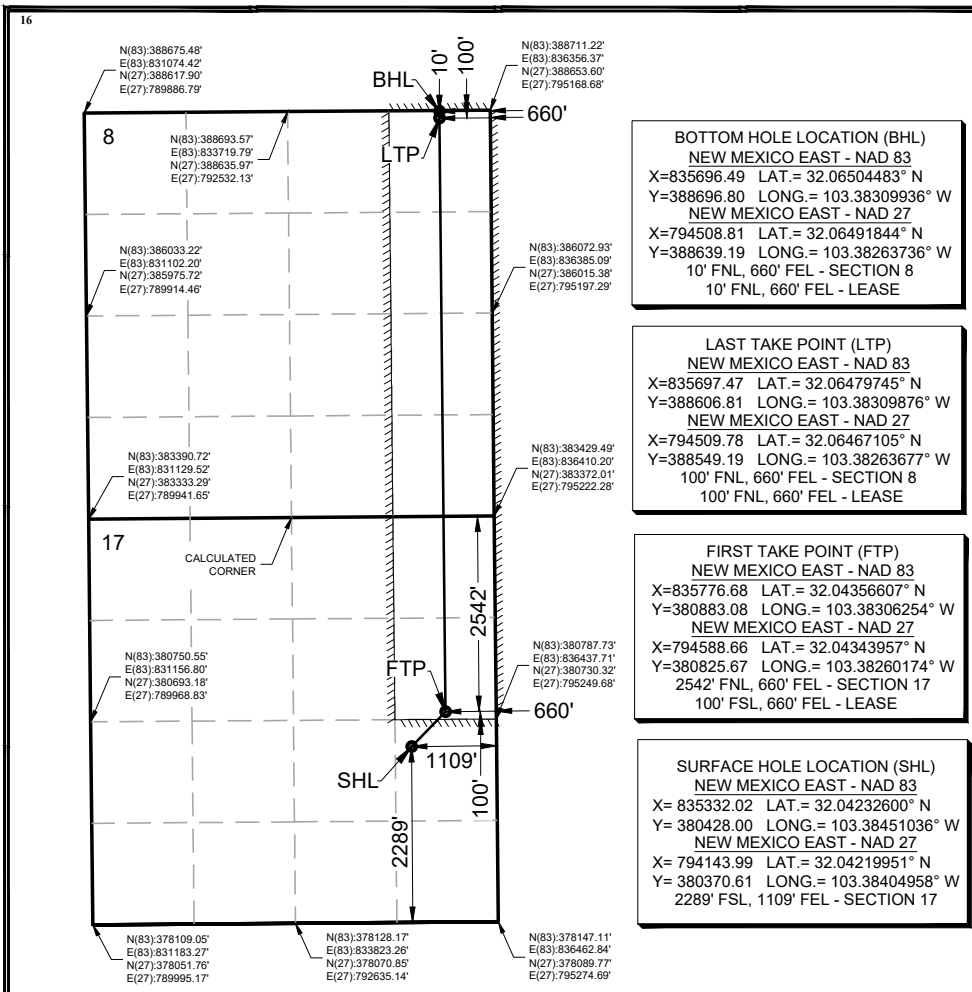
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	17	26-S	35-E		2289'	SOUTH	1109'	EAST	LEA

<sup>11</sup> 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
A	8	26-S	35-E		10'	NORTH	660'	EAST	LEA

<b>12 Dedicated Acres</b> 240	<b>13 Joint or Infill</b> Y	<b>14 Consolidation Code</b>	<b>15 Order No.</b>
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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.



## 17 OPERATOR CERTIFICATION

I hereby certify that the information contained 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature: *Ryan DeLong* Date: 11/29/2021

Ryan DeLong - Regulatory Manager

Printed Name

rdelong@titusoil.com

E-mail Address

## 18 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.

Date of Survey: *10/12/2021*  
Signature and Seal of Professional Surveyor:

*MARK J. MURRAY*  
12177  
REGISTERED PROFESSIONAL SURVEYOR  
Certificate Number

# Titus Oil & Gas Production, LLC - Lonesome Dove Fed Com 514H

## 1. Geologic Formations

TVD of target	12,968' EOL	Pilot hole depth	NA
MD at TD:	21,159'	Deepest expected fresh water:	400'

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Quaternary Fill	Surface	Water	
Rustler	1091	Water	
Top of Salt	1587	Salt	
Base of Salt	5063	Salt	
Lamar	5390	Salt Water	
Delaware	5422	Salt Water	
Bone Spring Lime	9306	Oil/Gas	
1st Bone Spring	10526	Oil/Gas	
2nd Bone Spring	11045	Oil/Gas	
3rd Bone Spring	12179	Oil/Gas	
Wolfcamp	12546	Oil/Gas	
Wolfcamp X Sand	12560	Oil/Gas	
Wolfcamp Y Sand	12621	Oil/Gas	
Wolfcamp A	12661	Oil/Gas	
Wolfcamp B	12964	Target Oil/Gas	

## 2. Casing Program

Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Body
	From	To							
13.5"	0	1120	10.75"	45.5	J55	BTC	4.08	0.80	14.03
9.875"	0	12200	7.625"	29.7	HCL80	BTC	1.16	1.03	2.00
6.75"	0	12000	5.5"	20	P110	BTC	1.82	1.90	3.12
6.75"	12000	21,159	5"	18	P110	BTC	1.82	1.90	3.12
BLM Minimum Safety Factor							1.125	1	1.6 Dry 1.8 Wet

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

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

## Titus Oil &amp; Gas Production, LLC - Lonesome Dove Fed Com 514H

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

## Titus Oil &amp; Gas Production, LLC - Lonesome Dove Fed Com 514H

## 3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H <sub>2</sub> O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surf.	250	13.5	1.75	9	12	Lead: Class C + 4% Gel + 1% CaCl <sub>2</sub>
	250	14.8	1.34	6.34	8	Tail: Class C + 2% CaCl <sub>2</sub>
Int	900	10.3	3.6	22.95	16	TXI Lightweight Blend
	250	15.0	1.27	5.72	8	Tail: Class H
Prod	350	11.9	2.5	19	72	Lead: 50:50:10 H Blend
	950	14.2	1.3	6.2	19	Tail: 50:50:2 Class H Blend

**Contingency remediation cement plan for intermediate casing if cmt is not circulated to surface:**1<sup>st</sup> Stage - Bradenhead Stage Notes

Operator will pump 1000+ sx of Class C and allow cement to fall into place. Operator will not put any fluid on top of the cement after the fall. This will leave annuls filled with air to TOC. We will WOC +/- 2 hrs ( or when surface samples are firm enough) to ensure cement is set up. TOC will be above the Lamar allowing for the fill up stage.

2<sup>nd</sup> Stage - Fill Up Stage Notes

After WOC to allow the Bradenhead Stage to set up, operator will proceed with the Fill Up Stage. Since there is only air in the annulus ( no fluid will be placed in annulus after bradenhead stage), we will pump cement with opposite valve set to allow air to displace out. Fill up cement will be mixed and pumped until returns are taken to surface to complete the fill up. This will confirm a solid column of cement in the annulus all the way to surface completing the top out job. Operator will WOC after cement returns have been taken to surface.

Casing String	TOC	% Excess
Surface	0'	50%
1 <sup>st</sup> Intermediate	0'	50%
Production	11,700'	35% OH in Lateral (KOP to EOL)

## Titus Oil &amp; Gas Production, LLC - Lonesome Dove Fed Com 514H

## 4. Pressure Control Equipment

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.
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BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	x	Tested to:
9-7/8"	13-5/8"	3M	Annular	x	3000 psi
			Blind Ram		3M
			Pipe Ram		
			Double Ram		
			Other*		
6-3/4"	13-5/8"	10M	Annular	x	50% testing pressure
			Blind Ram	x	5M
			VBR Ram	x	
			VBR Ram	x	
			Other*		

See attached 5M Annular Variance Well Control plan for Titus Oil & Gas Production, LLC.

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

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

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

## Titus Oil &amp; Gas Production, LLC - Lonesome Dove Fed Com 514H

## 5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	Surf. Shoe	FW Gel	8.6 - 8.8	28-34	N/C
Surf csg	9-5/8" Int shoe	Nova N-Gauge	8.4 - 9	28-34	N/C
7-5/8" Int shoe	Lateral TD	OBM	10.8 - 11.8	35-45	<20

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

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring
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## 6. Logging and Testing Procedures

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

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



**Titus Oil & Gas Production, LLC - Lonesome Dove Fed Com 514H****7. Drilling Conditions**

Condition	Specify what type and where?
BH Pressure at deepest TVD	7960 psi at 12968' TVD
Abnormal Temperature	NO 185 Deg. F.

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

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

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

N H<sub>2</sub>S is present

Y H<sub>2</sub>S Plan attached

**8. Other Facets of Operation**

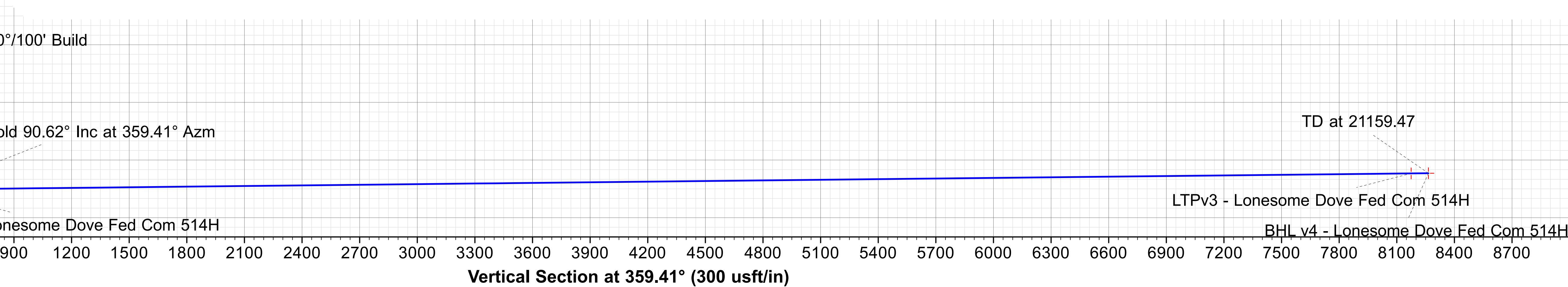
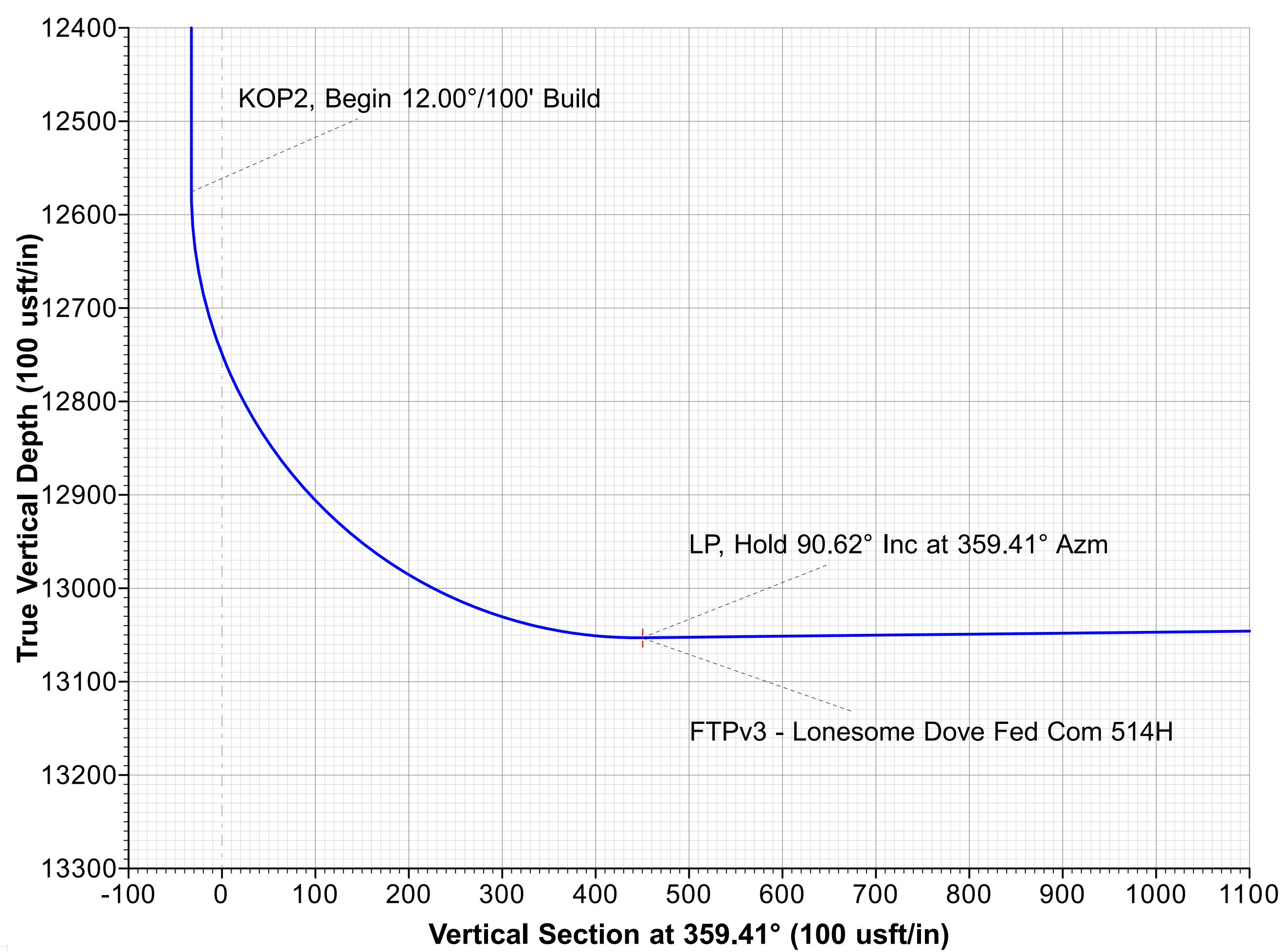
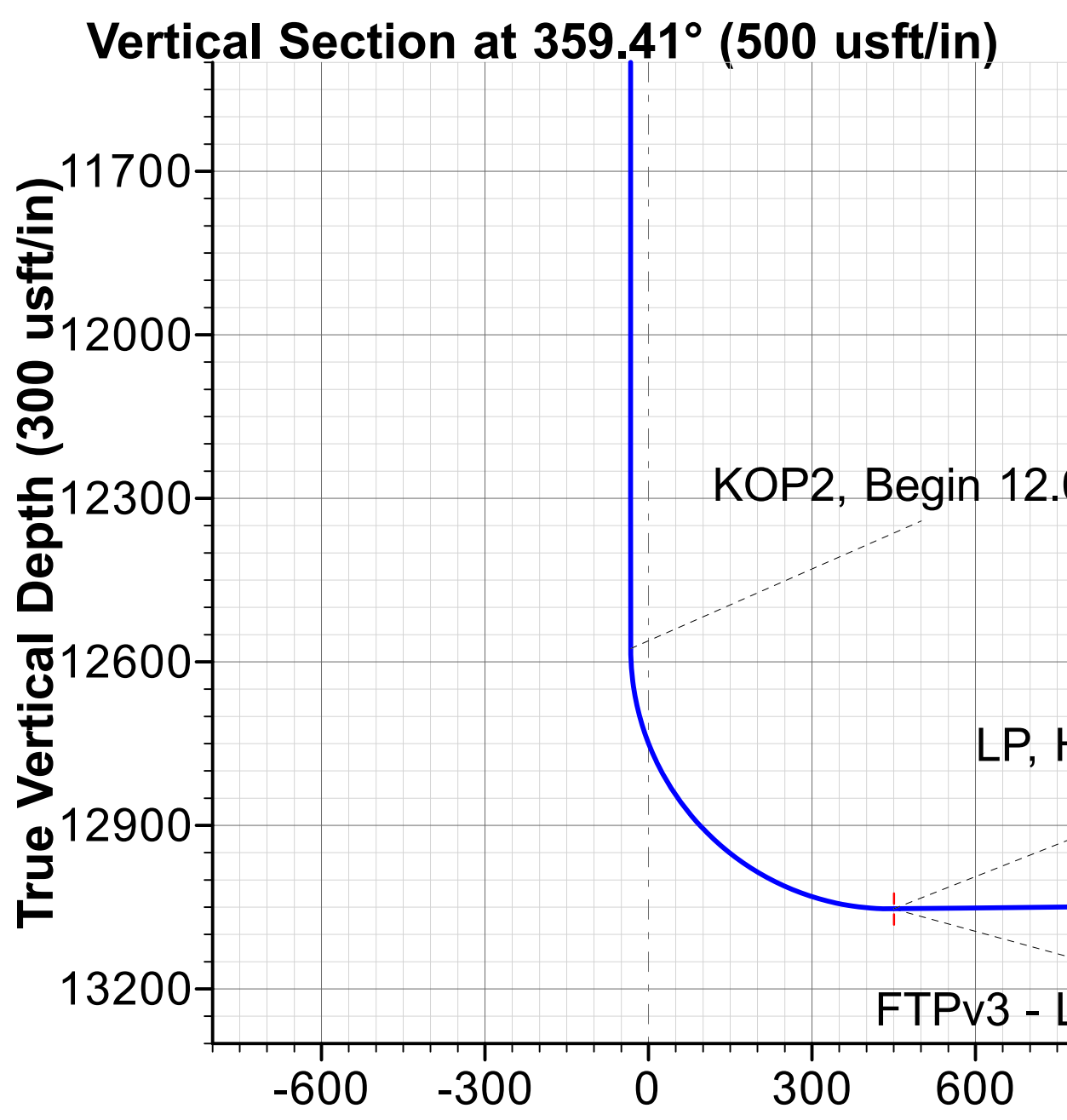
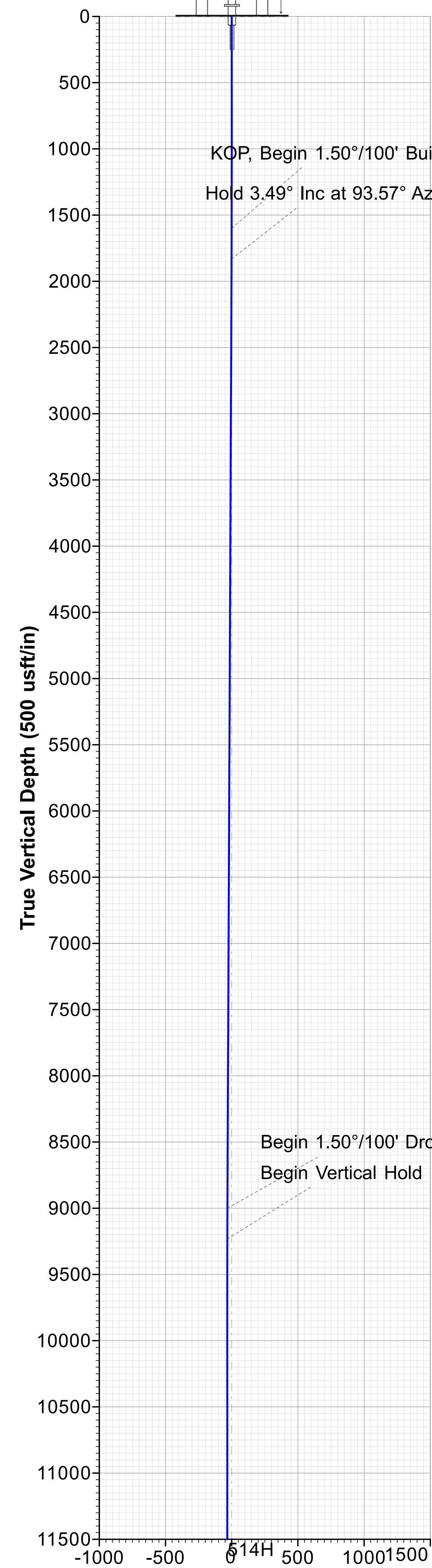
Y	Is it a walking operation?
N	Is casing pre-set?

x	H <sub>2</sub> S Plan.
x	BOP & Choke Schematics.
x	Directional Plan
x	Multibowl Schematic



RKB @ 3230.50usft (Est. RKB)

Ground Level: 3204.00

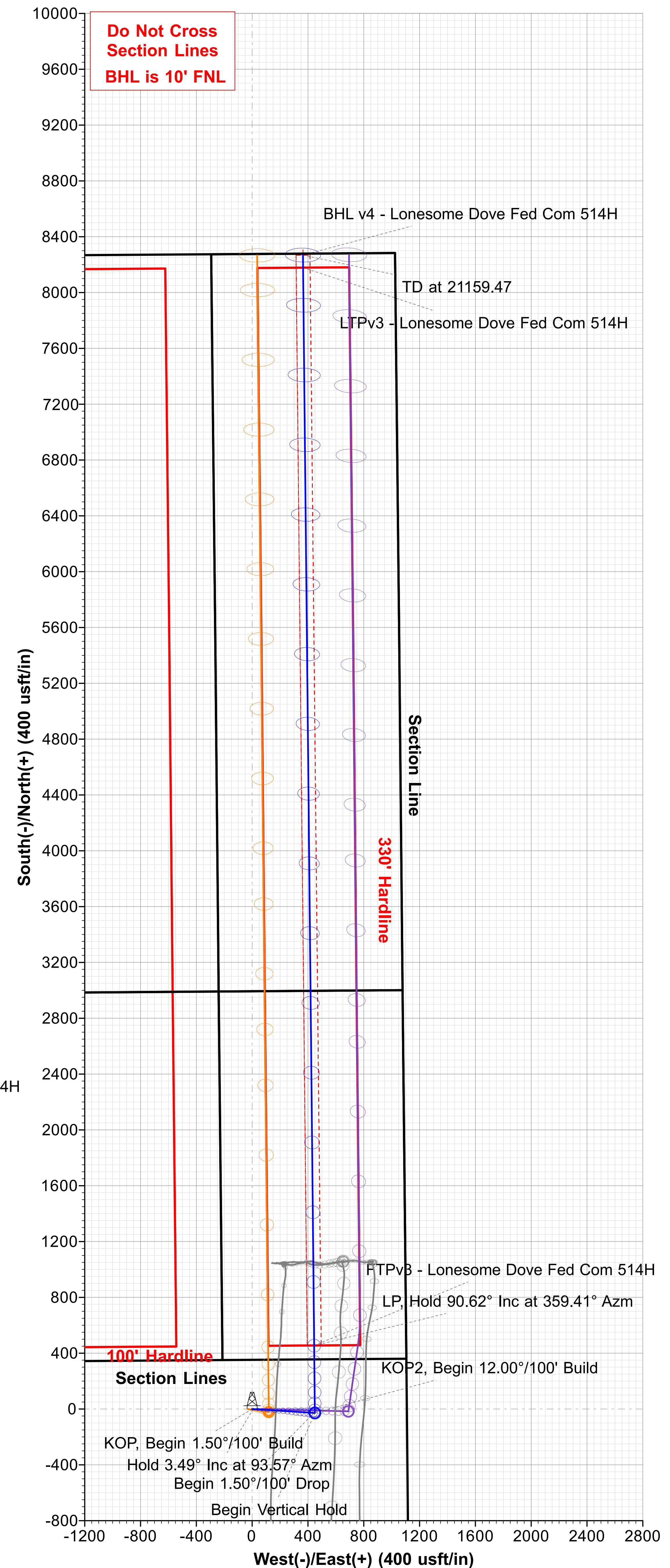
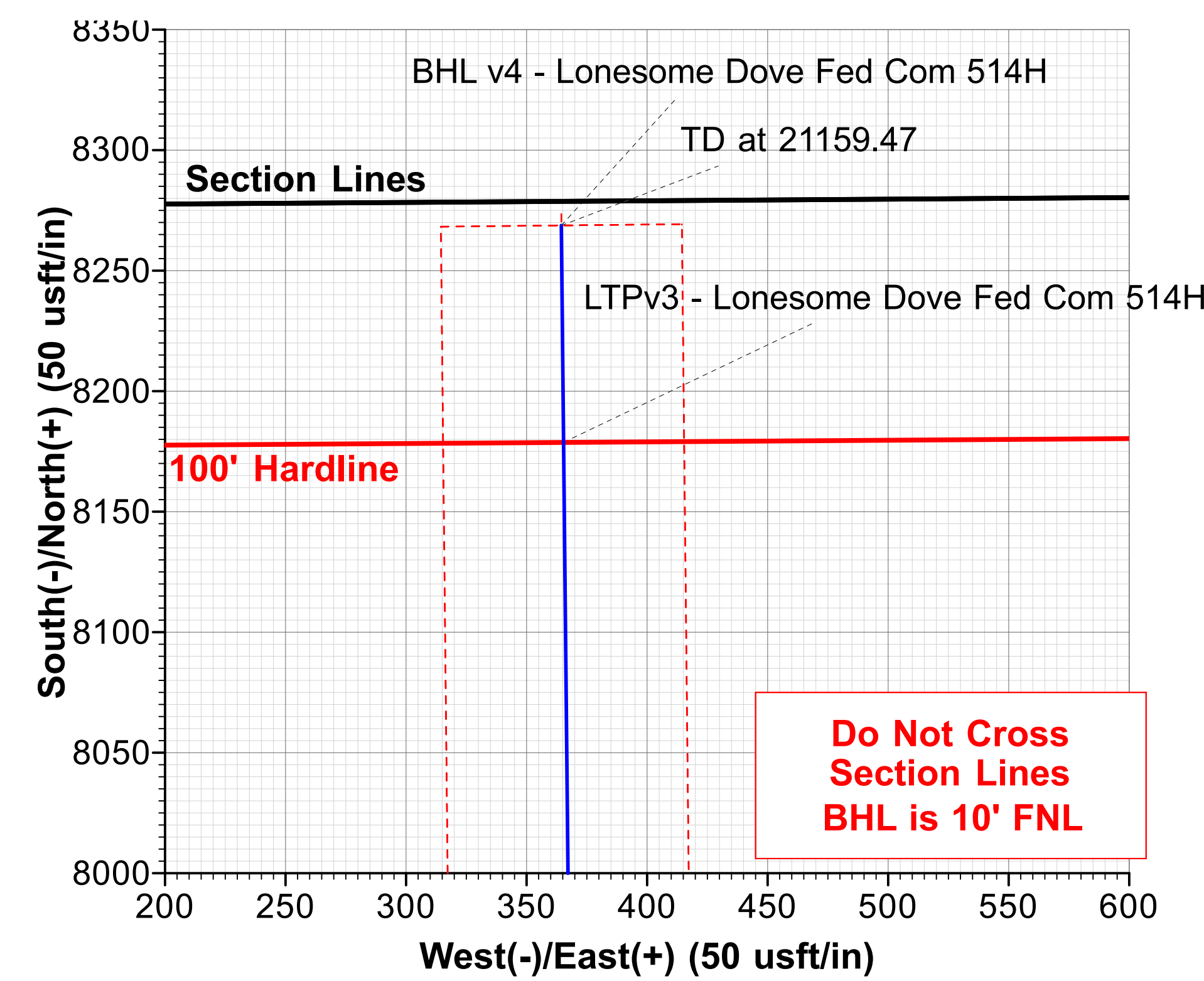
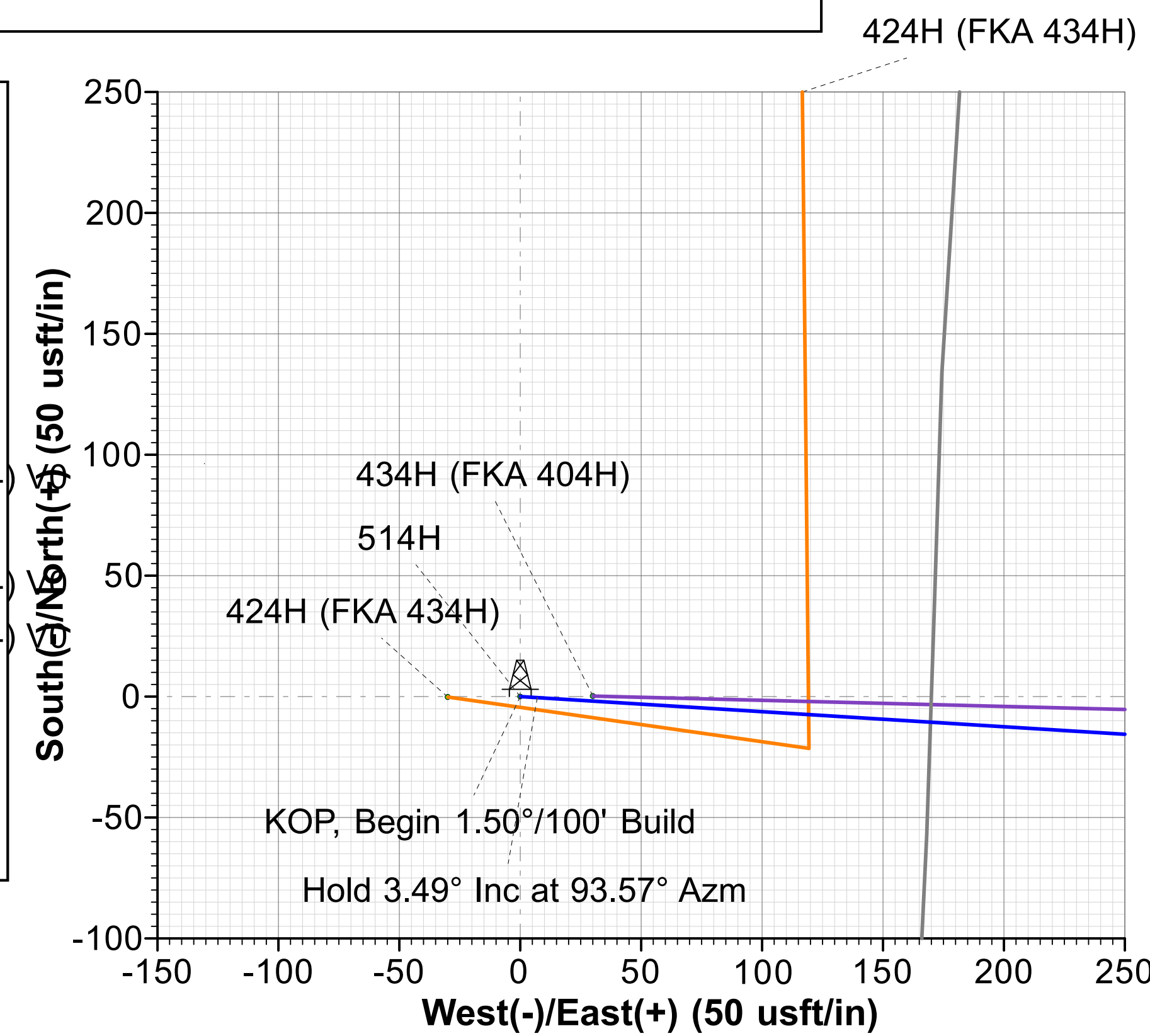


WELL DETAILS									
	+N/-S	+E/-W	Northing	Ground Level:	3204.00	Latitude	Longitude		
	0.00	0.00	380428.00	Easting	835332.02	32° 2' 32.373600 N	103° 23' 4.237296 W		
DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
BHL v4 - Lonesome Dove Fed Com 514H	12968.50	8268.80	364.47	388696.80	835696.49	32° 3' 54.161360 N	103° 22' 59.157675 W		
LTPv3 - Lonesome Dove Fed Com 514H	12969.55	8178.81	365.45	388606.81	835697.47	32° 3' 53.270828 N	103° 22' 59.155495 W		
FTPv3 - Lonesome Dove Fed Com 514H	13053.50	455.08	444.66	380883.08	835776.68	32° 2' 36.837889 N	103° 22' 59.025144 W		
SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	YSec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	0.00
3	1832.40	3.49	93.57	1832.26	-0.44	7.05	1.50	93.57	-0.51
4	9013.35	3.49	93.57	8999.92	-27.60	442.85	0.00	0.00	-32.16
5	9245.75	0.00	0.00	9232.18	-28.04	449.91	1.50	180.00	-32.67
6	12589.20	0.00	0.00	12575.63	-28.04	449.91	0.00	0.00	-32.67
7	13344.37	90.62	359.41	13053.07	454.57	444.94	12.00	359.41	449.96
8	21159.47	90.62	359.41	12968.50	8268.80	364.47	0.00	0.00	8264.61
									BHL v4 - Lonesome Dove Fed Com 514H
									TD at 21159.47

Map System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone Name: New Mexico Eastern Zone  
  
Local Origin: Well 514H, Grid North  
  
Latitude: 32° 2' 32.373600 N  
Longitude: 103° 23' 4.237296 W  
  
Grid East: 835332.02  
Grid North: 380428.00  
Scale Factor: 1.000  
  
Geomagnetic Model: MVHD  
Sample Date: 30-Nov-21  
Magnetic Declination: 6.30°  
Dip Angle from Horizontal: 59.61°  
Magnetic Field Strength: 47410.47708879nT  
  
To convert a Magnetic Direction to a Grid Direction, Add 5.80°  
To convert a Magnetic Direction to a True Direction, Add 6.30° East  
To convert a True Direction to a Grid Direction, Subtract 0.50°

### LEGEND

- 424H (FKA 434H), OH, Plan 3 11-18-21 V0
- Cattleman Fed Com 404H, OH / 67732, Surveys (H&P 474)
- 434H (FKA 404H), OH, Plan 3 11-18-21 V0
- Cattleman Fed Com 434H, OH / 67733, Surveys (H&P 474)
- Cattleman Fed Com 514H, OH / 67734, Surveys (H&P 474)
- Plan 3 11-18-21







## **Titus Oil & Gas Production, LLC**

**Lea County, NM - (NAD83 NME)**

**Lonesome Dove Fed Com**

**514H**

**OH**

**Plan: Plan 3 11-18-21**

## **Standard Planning Report**

**18 November, 2021**





## Planning Report



<b>Database:</b>	USA Compass	<b>Local Co-ordinate Reference:</b>	Well 514H
<b>Company:</b>	Titus Oil & Gas Production, LLC	<b>TVD Reference:</b>	RKB @ 3230.50usft (Est. RKB)
<b>Project:</b>	Lea County, NM - (NAD83 NME)	<b>MD Reference:</b>	RKB @ 3230.50usft (Est. RKB)
<b>Site:</b>	Lonesome Dove Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	514H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 3 11-18-21		

<b>Project</b>	Lea County, NM - (NAD83 NME)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

Site		Lonesome Dove Fed Com			
Site Position: From:	Map	Northing:	379,941.34 usft	Latitude:	32° 2' 27.746664 N
		Easting:	833,154.89 usft	Longitude:	103° 23' 29.578524 W
		Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "

Well	514H					
Well Position	+N/-S	486.66 usft	Northing:	380,428.00 usft	Latitude:	32° 2' 32.373600 N
	+E/-W	2,177.13 usft	Easting:	835,332.02 usft	Longitude:	103° 23' 4.237296 W
Position Uncertainty		1.00 usft	Wellhead Elevation:		Ground Level:	3,204.00 usft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	MVHD	11/30/2021	6.30	59.61	47,410.47708878

<b>Design</b>	Plan 3 11-18-21			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	359.41

<b>Plan Survey Tool Program</b>	<b>Date</b>	11/18/2021		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.00	21,159.47	Plan 3 11-18-21 (OH)	MWD+HDGM
				OWSG Rev.2 MWD + HDGM

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,832.40	3.49	93.57	1,832.26	-0.44	7.05	1.50	1.50	0.00	93.57	
9,013.35	3.49	93.57	8,999.92	-27.60	442.85	0.00	0.00	0.00	0.00	
9,245.75	0.00	0.00	9,232.18	-28.04	449.91	1.50	-1.50	0.00	180.00	
12,589.20	0.00	0.00	12,575.63	-28.04	449.91	0.00	0.00	0.00	0.00	
13,344.37	90.62	359.41	13,053.07	454.57	444.94	12.00	12.00	0.00	359.41	
21,159.47	90.62	359.41	12,968.50	8,268.80	364.47	0.00	0.00	0.00	0.00	BHL v4 - Lonesome C



## Planning Report



<b>Database:</b>	USA Compass	<b>Local Co-ordinate Reference:</b>	Well 514H
<b>Company:</b>	Titus Oil & Gas Production, LLC	<b>TVD Reference:</b>	RKB @ 3230.50usft (Est. RKB)
<b>Project:</b>	Lea County, NM - (NAD83 NME)	<b>MD Reference:</b>	RKB @ 3230.50usft (Est. RKB)
<b>Site:</b>	Lonesome Dove Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	514H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 3 11-18-21		

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>KOP, Begin 1.50°/100' Build</b>									
1,700.00	1.50	93.57	1,699.99	-0.08	1.31	-0.09	1.50	1.50	0.00
1,800.00	3.00	93.57	1,799.91	-0.33	5.22	-0.38	1.50	1.50	0.00
1,832.40	3.49	93.57	1,832.26	-0.44	7.05	-0.51	1.50	1.50	0.00
<b>Hold 3.49° Inc at 93.57° Azm</b>									
1,900.00	3.49	93.57	1,899.73	-0.70	11.16	-0.81	0.00	0.00	0.00
2,000.00	3.49	93.57	1,999.55	-1.07	17.23	-1.25	0.00	0.00	0.00
2,100.00	3.49	93.57	2,099.36	-1.45	23.29	-1.69	0.00	0.00	0.00
2,200.00	3.49	93.57	2,199.18	-1.83	29.36	-2.13	0.00	0.00	0.00
2,300.00	3.49	93.57	2,298.99	-2.21	35.43	-2.57	0.00	0.00	0.00
2,400.00	3.49	93.57	2,398.81	-2.59	41.50	-3.01	0.00	0.00	0.00
2,500.00	3.49	93.57	2,498.62	-2.96	47.57	-3.45	0.00	0.00	0.00
2,600.00	3.49	93.57	2,598.44	-3.34	53.64	-3.89	0.00	0.00	0.00
2,700.00	3.49	93.57	2,698.25	-3.72	59.71	-4.34	0.00	0.00	0.00
2,800.00	3.49	93.57	2,798.07	-4.10	65.78	-4.78	0.00	0.00	0.00
2,900.00	3.49	93.57	2,897.88	-4.48	71.84	-5.22	0.00	0.00	0.00
3,000.00	3.49	93.57	2,997.70	-4.86	77.91	-5.66	0.00	0.00	0.00
3,100.00	3.49	93.57	3,097.51	-5.23	83.98	-6.10	0.00	0.00	0.00
3,200.00	3.49	93.57	3,197.33	-5.61	90.05	-6.54	0.00	0.00	0.00
3,300.00	3.49	93.57	3,297.14	-5.99	96.12	-6.98	0.00	0.00	0.00
3,400.00	3.49	93.57	3,396.96	-6.37	102.19	-7.42	0.00	0.00	0.00
3,500.00	3.49	93.57	3,496.77	-6.75	108.26	-7.86	0.00	0.00	0.00
3,600.00	3.49	93.57	3,596.59	-7.12	114.33	-8.30	0.00	0.00	0.00
3,700.00	3.49	93.57	3,696.40	-7.50	120.40	-8.74	0.00	0.00	0.00
3,800.00	3.49	93.57	3,796.22	-7.88	126.46	-9.18	0.00	0.00	0.00
3,900.00	3.49	93.57	3,896.03	-8.26	132.53	-9.62	0.00	0.00	0.00
4,000.00	3.49	93.57	3,995.85	-8.64	138.60	-10.06	0.00	0.00	0.00
4,100.00	3.49	93.57	4,095.66	-9.02	144.67	-10.50	0.00	0.00	0.00
4,200.00	3.49	93.57	4,195.48	-9.39	150.74	-10.95	0.00	0.00	0.00
4,300.00	3.49	93.57	4,295.29	-9.77	156.81	-11.39	0.00	0.00	0.00
4,400.00	3.49	93.57	4,395.11	-10.15	162.88	-11.83	0.00	0.00	0.00
4,500.00	3.49	93.57	4,494.92	-10.53	168.95	-12.27	0.00	0.00	0.00
4,600.00	3.49	93.57	4,594.74	-10.91	175.01	-12.71	0.00	0.00	0.00
4,700.00	3.49	93.57	4,694.55	-11.28	181.08	-13.15	0.00	0.00	0.00
4,800.00	3.49	93.57	4,794.37	-11.66	187.15	-13.59	0.00	0.00	0.00
4,900.00	3.49	93.57	4,894.18	-12.04	193.22	-14.03	0.00	0.00	0.00
5,000.00	3.49	93.57	4,994.00	-12.42	199.29	-14.47	0.00	0.00	0.00
5,100.00	3.49	93.57	5,093.81	-12.80	205.36	-14.91	0.00	0.00	0.00
5,200.00	3.49	93.57	5,193.63	-13.18	211.43	-15.35	0.00	0.00	0.00
5,300.00	3.49	93.57	5,293.44	-13.55	217.50	-15.79	0.00	0.00	0.00
5,400.00	3.49	93.57	5,393.26	-13.93	223.57	-16.23	0.00	0.00	0.00
5,500.00	3.49	93.57	5,493.07	-14.31	229.63	-16.67	0.00	0.00	0.00
5,600.00	3.49	93.57	5,592.89	-14.69	235.70	-17.11	0.00	0.00	0.00
5,700.00	3.49	93.57	5,692.70	-15.07	241.77	-17.56	0.00	0.00	0.00
5,800.00	3.49	93.57	5,792.52	-15.44	247.84	-18.00	0.00	0.00	0.00
5,900.00	3.49	93.57	5,892.33	-15.82	253.91	-18.44	0.00	0.00	0.00
6,000.00	3.49	93.57	5,992.15	-16.20	259.98	-18.88	0.00	0.00	0.00
6,100.00	3.49	93.57	6,091.96	-16.58	266.05	-19.32	0.00	0.00	0.00
6,200.00	3.49	93.57	6,191.78	-16.96	272.12	-19.76	0.00	0.00	0.00
6,300.00	3.49	93.57	6,291.59	-17.34	278.18	-20.20	0.00	0.00	0.00
6,400.00	3.49	93.57	6,391.40	-17.71	284.25	-20.64	0.00	0.00	0.00



## Planning Report



<b>Database:</b>	USA Compass	<b>Local Co-ordinate Reference:</b>	Well 514H
<b>Company:</b>	Titus Oil & Gas Production, LLC	<b>TVD Reference:</b>	RKB @ 3230.50usft (Est. RKB)
<b>Project:</b>	Lea County, NM - (NAD83 NME)	<b>MD Reference:</b>	RKB @ 3230.50usft (Est. RKB)
<b>Site:</b>	Lonesome Dove Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	514H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 3 11-18-21		

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)
6,500.00	3.49	93.57	6,491.22	-18.09	290.32	-21.08	0.00	0.00	0.00
6,600.00	3.49	93.57	6,591.03	-18.47	296.39	-21.52	0.00	0.00	0.00
6,700.00	3.49	93.57	6,690.85	-18.85	302.46	-21.96	0.00	0.00	0.00
6,800.00	3.49	93.57	6,790.66	-19.23	308.53	-22.40	0.00	0.00	0.00
6,900.00	3.49	93.57	6,890.48	-19.60	314.60	-22.84	0.00	0.00	0.00
7,000.00	3.49	93.57	6,990.29	-19.98	320.67	-23.28	0.00	0.00	0.00
7,100.00	3.49	93.57	7,090.11	-20.36	326.73	-23.72	0.00	0.00	0.00
7,200.00	3.49	93.57	7,189.92	-20.74	332.80	-24.16	0.00	0.00	0.00
7,300.00	3.49	93.57	7,289.74	-21.12	338.87	-24.61	0.00	0.00	0.00
7,400.00	3.49	93.57	7,389.55	-21.50	344.94	-25.05	0.00	0.00	0.00
7,500.00	3.49	93.57	7,489.37	-21.87	351.01	-25.49	0.00	0.00	0.00
7,600.00	3.49	93.57	7,589.18	-22.25	357.08	-25.93	0.00	0.00	0.00
7,700.00	3.49	93.57	7,689.00	-22.63	363.15	-26.37	0.00	0.00	0.00
7,800.00	3.49	93.57	7,788.81	-23.01	369.22	-26.81	0.00	0.00	0.00
7,900.00	3.49	93.57	7,888.63	-23.39	375.29	-27.25	0.00	0.00	0.00
8,000.00	3.49	93.57	7,988.44	-23.76	381.35	-27.69	0.00	0.00	0.00
8,100.00	3.49	93.57	8,088.26	-24.14	387.42	-28.13	0.00	0.00	0.00
8,200.00	3.49	93.57	8,188.07	-24.52	393.49	-28.57	0.00	0.00	0.00
8,300.00	3.49	93.57	8,287.89	-24.90	399.56	-29.01	0.00	0.00	0.00
8,400.00	3.49	93.57	8,387.70	-25.28	405.63	-29.45	0.00	0.00	0.00
8,500.00	3.49	93.57	8,487.52	-25.66	411.70	-29.89	0.00	0.00	0.00
8,600.00	3.49	93.57	8,587.33	-26.03	417.77	-30.33	0.00	0.00	0.00
8,700.00	3.49	93.57	8,687.15	-26.41	423.84	-30.77	0.00	0.00	0.00
8,800.00	3.49	93.57	8,786.96	-26.79	429.90	-31.22	0.00	0.00	0.00
8,900.00	3.49	93.57	8,886.78	-27.17	435.97	-31.66	0.00	0.00	0.00
9,000.00	3.49	93.57	8,986.59	-27.55	442.04	-32.10	0.00	0.00	0.00
9,013.35	3.49	93.57	8,999.92	-27.60	442.85	-32.16	0.00	0.00	0.00
<b>Begin 1.50°/100' Drop</b>									
9,100.00	2.19	93.57	9,086.46	-27.86	447.13	-32.47	1.50	-1.50	0.00
9,200.00	0.69	93.57	9,186.43	-28.02	449.63	-32.65	1.50	-1.50	0.00
9,245.75	0.00	0.00	9,232.18	-28.04	449.91	-32.67	1.50	-1.50	0.00
<b>Begin Vertical Hold</b>									
12,589.20	0.00	0.00	12,575.63	-28.04	449.91	-32.67	0.00	0.00	0.00
<b>KOP2, Begin 12.00°/100' Build</b>									
12,600.00	1.30	359.41	12,586.43	-27.91	449.91	-32.55	12.00	12.00	0.00
12,700.00	13.30	359.41	12,685.43	-15.24	449.78	-19.87	12.00	12.00	0.00
12,800.00	25.30	359.41	12,779.64	17.74	449.44	13.11	12.00	12.00	0.00
12,900.00	37.30	359.41	12,864.94	69.59	448.90	64.96	12.00	12.00	0.00
13,000.00	49.30	359.41	12,937.59	138.04	448.20	133.42	12.00	12.00	0.00
13,100.00	61.30	359.41	12,994.42	220.09	447.35	215.48	12.00	12.00	0.00
13,200.00	73.30	359.41	13,032.95	312.17	446.40	307.56	12.00	12.00	0.00
13,300.00	85.30	359.41	13,051.49	410.25	445.39	405.64	12.00	12.00	0.00
13,344.37	90.62	359.41	13,053.07	454.57	444.94	449.96	12.00	12.00	0.00
<b>LP, Hold 90.62° Inc at 359.41° Azm</b>									
13,400.00	90.62	359.41	13,052.46	510.19	444.36	505.59	0.00	0.00	0.00
13,500.00	90.62	359.41	13,051.38	610.18	443.33	605.58	0.00	0.00	0.00
13,600.00	90.62	359.41	13,050.30	710.17	442.30	705.58	0.00	0.00	0.00
13,700.00	90.62	359.41	13,049.22	810.16	441.28	805.57	0.00	0.00	0.00
13,800.00	90.62	359.41	13,048.14	910.15	440.25	905.57	0.00	0.00	0.00
13,900.00	90.62	359.41	13,047.05	1,010.14	439.22	1,005.56	0.00	0.00	0.00
14,000.00	90.62	359.41	13,045.97	1,110.13	438.19	1,105.56	0.00	0.00	0.00
14,100.00	90.62	359.41	13,044.89	1,210.12	437.16	1,205.55	0.00	0.00	0.00
14,200.00	90.62	359.41	13,043.81	1,310.10	436.13	1,305.54	0.00	0.00	0.00



## Planning Report



<b>Database:</b>	USA Compass	<b>Local Co-ordinate Reference:</b>	Well 514H
<b>Company:</b>	Titus Oil & Gas Production, LLC	<b>TVD Reference:</b>	RKB @ 3230.50usft (Est. RKB)
<b>Project:</b>	Lea County, NM - (NAD83 NME)	<b>MD Reference:</b>	RKB @ 3230.50usft (Est. RKB)
<b>Site:</b>	Lonesome Dove Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	514H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 3 11-18-21		

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)	
14,300.00	90.62	359.41	13,042.73	1,410.09	435.10	1,405.54	0.00	0.00	0.00	
14,400.00	90.62	359.41	13,041.64	1,510.08	434.07	1,505.53	0.00	0.00	0.00	
14,500.00	90.62	359.41	13,040.56	1,610.07	433.04	1,605.53	0.00	0.00	0.00	
14,600.00	90.62	359.41	13,039.48	1,710.06	432.01	1,705.52	0.00	0.00	0.00	
14,700.00	90.62	359.41	13,038.40	1,810.05	430.98	1,805.51	0.00	0.00	0.00	
14,800.00	90.62	359.41	13,037.32	1,910.04	429.95	1,905.51	0.00	0.00	0.00	
14,900.00	90.62	359.41	13,036.23	2,010.03	428.92	2,005.50	0.00	0.00	0.00	
15,000.00	90.62	359.41	13,035.15	2,110.01	427.89	2,105.50	0.00	0.00	0.00	
15,100.00	90.62	359.41	13,034.07	2,210.00	426.86	2,205.49	0.00	0.00	0.00	
15,200.00	90.62	359.41	13,032.99	2,309.99	425.83	2,305.49	0.00	0.00	0.00	
15,300.00	90.62	359.41	13,031.90	2,409.98	424.80	2,405.48	0.00	0.00	0.00	
15,400.00	90.62	359.41	13,030.82	2,509.97	423.77	2,505.47	0.00	0.00	0.00	
15,500.00	90.62	359.41	13,029.74	2,609.96	422.74	2,605.47	0.00	0.00	0.00	
15,600.00	90.62	359.41	13,028.66	2,709.95	421.71	2,705.46	0.00	0.00	0.00	
15,700.00	90.62	359.41	13,027.58	2,809.94	420.68	2,805.46	0.00	0.00	0.00	
15,800.00	90.62	359.41	13,026.49	2,909.93	419.65	2,905.45	0.00	0.00	0.00	
15,900.00	90.62	359.41	13,025.41	3,009.91	418.62	3,005.44	0.00	0.00	0.00	
16,000.00	90.62	359.41	13,024.33	3,109.90	417.59	3,105.44	0.00	0.00	0.00	
16,100.00	90.62	359.41	13,023.25	3,209.89	416.56	3,205.43	0.00	0.00	0.00	
16,200.00	90.62	359.41	13,022.17	3,309.88	415.53	3,305.43	0.00	0.00	0.00	
16,300.00	90.62	359.41	13,021.08	3,409.87	414.50	3,405.42	0.00	0.00	0.00	
16,400.00	90.62	359.41	13,020.00	3,509.86	413.47	3,505.41	0.00	0.00	0.00	
16,500.00	90.62	359.41	13,018.92	3,609.85	412.44	3,605.41	0.00	0.00	0.00	
16,600.00	90.62	359.41	13,017.84	3,709.84	411.41	3,705.40	0.00	0.00	0.00	
16,700.00	90.62	359.41	13,016.76	3,809.83	410.39	3,805.40	0.00	0.00	0.00	
16,800.00	90.62	359.41	13,015.67	3,909.81	409.36	3,905.39	0.00	0.00	0.00	
16,900.00	90.62	359.41	13,014.59	4,009.80	408.33	4,005.39	0.00	0.00	0.00	
17,000.00	90.62	359.41	13,013.51	4,109.79	407.30	4,105.38	0.00	0.00	0.00	
17,100.00	90.62	359.41	13,012.43	4,209.78	406.27	4,205.37	0.00	0.00	0.00	
17,200.00	90.62	359.41	13,011.35	4,309.77	405.24	4,305.37	0.00	0.00	0.00	
17,300.00	90.62	359.41	13,010.26	4,409.76	404.21	4,405.36	0.00	0.00	0.00	
17,400.00	90.62	359.41	13,009.18	4,509.75	403.18	4,505.36	0.00	0.00	0.00	
17,500.00	90.62	359.41	13,008.10	4,609.74	402.15	4,605.35	0.00	0.00	0.00	
17,600.00	90.62	359.41	13,007.02	4,709.72	401.12	4,705.34	0.00	0.00	0.00	
17,700.00	90.62	359.41	13,005.93	4,809.71	400.09	4,805.34	0.00	0.00	0.00	
17,800.00	90.62	359.41	13,004.85	4,909.70	399.06	4,905.33	0.00	0.00	0.00	
17,900.00	90.62	359.41	13,003.77	5,009.69	398.03	5,005.33	0.00	0.00	0.00	
18,000.00	90.62	359.41	13,002.69	5,109.68	397.00	5,105.32	0.00	0.00	0.00	
18,100.00	90.62	359.41	13,001.61	5,209.67	395.97	5,205.32	0.00	0.00	0.00	
18,200.00	90.62	359.41	13,000.52	5,309.66	394.94	5,305.31	0.00	0.00	0.00	
18,300.00	90.62	359.41	12,999.44	5,409.65	393.91	5,405.30	0.00	0.00	0.00	
18,400.00	90.62	359.41	12,998.36	5,509.64	392.88	5,505.30	0.00	0.00	0.00	
18,500.00	90.62	359.41	12,997.28	5,609.62	391.85	5,605.29	0.00	0.00	0.00	
18,600.00	90.62	359.41	12,996.20	5,709.61	390.82	5,705.29	0.00	0.00	0.00	
18,700.00	90.62	359.41	12,995.11	5,809.60	389.79	5,805.28	0.00	0.00	0.00	
18,800.00	90.62	359.41	12,994.03	5,909.59	388.76	5,905.27	0.00	0.00	0.00	
18,900.00	90.62	359.41	12,992.95	6,009.58	387.73	6,005.27	0.00	0.00	0.00	
19,000.00	90.62	359.41	12,991.87	6,109.57	386.70	6,105.26	0.00	0.00	0.00	
19,100.00	90.62	359.41	12,990.79	6,209.56	385.67	6,205.26	0.00	0.00	0.00	
19,200.00	90.62	359.41	12,989.70	6,309.55	384.64	6,305.25	0.00	0.00	0.00	
19,300.00	90.62	359.41	12,988.62	6,409.54	383.61	6,405.25	0.00	0.00	0.00	
19,400.00	90.62	359.41	12,987.54	6,509.52	382.58	6,505.24	0.00	0.00	0.00	
19,500.00	90.62	359.41	12,986.46	6,609.51	381.55	6,605.23	0.00	0.00	0.00	
19,600.00	90.62	359.41	12,985.38	6,709.50	380.53	6,705.23	0.00	0.00	0.00	



## Planning Report



<b>Database:</b>	USA Compass	<b>Local Co-ordinate Reference:</b>	Well 514H
<b>Company:</b>	Titus Oil & Gas Production, LLC	<b>TVD Reference:</b>	RKB @ 3230.50usft (Est. RKB)
<b>Project:</b>	Lea County, NM - (NAD83 NME)	<b>MD Reference:</b>	RKB @ 3230.50usft (Est. RKB)
<b>Site:</b>	Lonesome Dove Fed Com	<b>North Reference:</b>	Grid
<b>Well:</b>	514H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan 3 11-18-21		

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)	
19,700.00	90.62	359.41	12,984.29	6,809.49	379.50	6,805.22	0.00	0.00	0.00	
19,800.00	90.62	359.41	12,983.21	6,909.48	378.47	6,905.22	0.00	0.00	0.00	
19,900.00	90.62	359.41	12,982.13	7,009.47	377.44	7,005.21	0.00	0.00	0.00	
20,000.00	90.62	359.41	12,981.05	7,109.46	376.41	7,105.20	0.00	0.00	0.00	
20,100.00	90.62	359.41	12,979.96	7,209.45	375.38	7,205.20	0.00	0.00	0.00	
20,200.00	90.62	359.41	12,978.88	7,309.43	374.35	7,305.19	0.00	0.00	0.00	
20,300.00	90.62	359.41	12,977.80	7,409.42	373.32	7,405.19	0.00	0.00	0.00	
20,400.00	90.62	359.41	12,976.72	7,509.41	372.29	7,505.18	0.00	0.00	0.00	
20,500.00	90.62	359.41	12,975.64	7,609.40	371.26	7,605.17	0.00	0.00	0.00	
20,600.00	90.62	359.41	12,974.55	7,709.39	370.23	7,705.17	0.00	0.00	0.00	
20,700.00	90.62	359.41	12,973.47	7,809.38	369.20	7,805.16	0.00	0.00	0.00	
20,800.00	90.62	359.41	12,972.39	7,909.37	368.17	7,905.16	0.00	0.00	0.00	
20,900.00	90.62	359.41	12,971.31	8,009.36	367.14	8,005.15	0.00	0.00	0.00	
21,000.00	90.62	359.41	12,970.23	8,109.35	366.11	8,105.15	0.00	0.00	0.00	
21,100.00	90.62	359.41	12,969.14	8,209.33	365.08	8,205.14	0.00	0.00	0.00	
21,159.47	90.62	359.41	12,968.50	8,268.80	364.47	8,264.61	0.00	0.00	0.00	
TD at 21159.47										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
BHL v4 - Lonesome Dove - hit/miss target - Shape	0.00	359.41	12,968.50	8,268.80	364.47	388,696.80	835,696.49	32° 3' 54.161360 N	103° 22' 59.157676 W	
- Rectangle (sides W100.00 H7,814.13 D0.00)										
LTPv3 - Lonesome Dove - plan misses target center by 0.09usft at 21069.47usft MD (12969.47 TVD, 8178.81 N, 365.39 E) - Point	0.00	0.00	12,969.55	8,178.81	365.45	388,606.81	835,697.47	32° 3' 53.270828 N	103° 22' 59.155496 W	
FTPv3 - Lonesome Dove - plan misses target center by 0.52usft at 13344.88usft MD (13053.06 TVD, 455.07 N, 444.93 E) - Point	0.00	0.00	13,053.50	455.08	444.66	380,883.08	835,776.68	32° 2' 36.837889 N	103° 22' 59.025144 W	

Casing Points						Casing Diameter (")	Hole Diameter (")
Measured Depth (usft)	Vertical Depth (usft)	Name					
21,159.47	12,968.50	20" Casing				20	24

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment	
1,600.00	1,600.00	0.00	0.00	KOP, Begin 1.50°/100' Build	
1,832.40	1,832.26	-0.44	7.05	Hold 3.49° Inc at 93.57° Azm	
9,013.35	8,999.92	-27.60	442.85	Begin 1.50°/100' Drop	
9,245.75	9,232.18	-28.04	449.91	Begin Vertical Hold	
12,589.20	12,575.63	-28.04	449.91	KOP2, Begin 12.00°/100' Build	
13,344.37	13,053.07	454.57	444.94	LP, Hold 90.62° Inc at 359.41° Azm	
21,159.47	12,968.50	8,268.80	364.47	TD at 21159.47	



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

CONDITIONS

Action 73619

CONDITIONS

Operator: Titus Oil & Gas Production, LLC 420 Throckmorton St, Ste 1150 Fort Worth, TX 76012	OGRID: 373986
	Action Number: 73619
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
pkautz	None	1/21/2022