

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 295266

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

1. Operator Name and Address LONGFELLOW ENERGY, LP 8115 Preston Road Dallas, TX 75225		2. OGRID Number 372210
		3. API Number 30-015-48183
4. Property Code 330647	5. Property Name ELVIS STATE COM 29A	6. Well No. 002H

7. Surface Location

UL - Lot D	Section 28	Township 17S	Range 28E	Lot Idn	Feet From 815	N/S Line N	Feet From 560	E/W Line W	County Eddy
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8. Proposed Bottom Hole Location

UL - Lot D	Section 29	Township 17S	Range 28E	Lot Idn D	Feet From 577	N/S Line N	Feet From 100	E/W Line W	County Eddy
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9. Pool Information

ARTESIA; GLORIETA-YESO (O)	96830
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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 3607
16. Multiple N	17. Proposed Depth 9357	18. Formation Glorieta	19. Contractor	20. Spud Date 7/1/2021
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	12.25	9.625	36	1250	635	0
Prod	8.75	7	32	3300	975	1050
Prod	8.75	5.5	20	9357	975	1050

Casing/Cement Program: Additional Comments

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22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer
Double Ram	3000	3000	TBD
Blind	3000	3000	TBD

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 Ryan Culpepper	Approved By: Kurt Simmons	
Title:	Title: Petroleum Specialist - A	
Email Address: ryan.culpepper@longfellowenergy.com	Approved Date: 4/22/2021	Expiration Date: 4/22/2023
Date: 4/20/2021	Phone: 972-590-9933	Conditions of Approval Attached

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State of New Mexico
Energy, Minerals & 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

¹ API Number 30-015-	² Pool Code 96830	³ Pool Name ARTESIA; GLORIETA-YESO (O)
⁴ Property Code	⁵ Property Name ELVIS STATE COM 29A	⁶ Well Number 002H
⁷ OGRID No. 372210	⁸ Operator Name LONGFELLOW ENERGY, LP	⁹ Elevation 3607.3

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	28	17 S	28 E		815	NORTH	560	WEST	EDDY

¹¹ 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
D	29	17 S	28 E		577	NORTH	100	WEST	EDDY

¹² Dedicated Acres 160.00	¹³ Joint or Infill	¹⁴ Consolidation Code C	¹⁵ Order No.
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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. <i>Brian Wood</i> 4-20-21 Signature _____ Date _____ BRIAN WOOD Printed Name _____ brian@permitswest.com E-mail Address _____ 505 466-8120		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. MARCH 19, 2021 Date of Survey _____ Signature and Seal of Professional Surveyor: <i>William F. Jaramillo</i> Certificate Number: 12797 PROFESSIONAL SURVEYOR NO. 8723A	
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Energy, Minerals and Natural Resources
Oil Conservation Division
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Santa Fe, NM 87505

GAS CAPTURE PLAN

Date: 4/22/2021

☒ Original

Operator & OGRID No.: [372210] LONGFELLOW ENERGY, LP

☐ 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
ELVIS STATE COM 29A #002H	30-015-48183	D-28-17S-28E	0815N 0560W	100	Flared	

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 ENTERPRISE FIELD SERVICES L.L.C. and will be connected to ENTERPRISE FIELD SERVICES L.L.C. High/Low Pressure gathering system located in Eddy County, New Mexico. It will require 300' of pipeline to connect the facility to High/Low Pressure gathering system. LONGFELLOW ENERGY, LP provides (periodically) to ENTERPRISE FIELD SERVICES L.L.C. a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, LONGFELLOW ENERGY, LP and ENTERPRISE FIELD SERVICES L.L.C. have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at ENTERPRISE FIELD SERVICES L.L.C. Processing Plant located in Sec. 28, Twn. 17S, 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 ENTERPRISE FIELD SERVICES L.L.C. system at that time. Based on current information, it is LONGFELLOW ENERGY, LP'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 Conditions

Permit 295266

PERMIT CONDITIONS OF APPROVAL

Operator Name and Address: LONGFELLOW ENERGY, LP [372210] 8115 Preston Road Dallas, TX 75225	API Number: 30-015-48183
	Well: ELVIS STATE COM 29A #002H

OCD Reviewer	Condition
ksimmons	Notify OCD 24 hours prior to casing & cement
ksimmons	Will require a File As Drilled C-102 and a Directional Survey with the C-104
ksimmons	The Operator is to notify NMOCD by sundry (Form C-103) within ten (10) days of the well being spud
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	Cement is required to circulate on both surface and intermediate1 strings of casing
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



Company: Longfellow Energy
Project: Eddy Co., NM (Nad-83)
Site: ELVIS STATE COM 29A
Well: 002H
Wellbore: Wellbore #1
Rig: AKITA 524
Design: Plan #1 / 13:41, April 05 2021



DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PLAN 002H KOP: 3378.21' MD	3370.61	209.97	-40.32	658710.07	586113.01	32.810738	-104.187594
PLAT 002H FTP: 565' FNL & 100' FEL	3973.00	233.01	-656.73	658733.11	585496.60	32.810804	-104.189600
PLAT 002H LTP/ BHL: 577' FNL & 100' FWL	3929.00	233.11	-5688.24	658733.21	580465.09	32.810822	-104.205977
PLAT 002H SHL: 815' FNL & 560' FWL	0.00	0.00	0.00	658500.10	586153.33	32.810161	-104.187463

WELL DETAILS: 002H

RKB = 16' @ 3623.30usft (AKITA 524)
3607.30

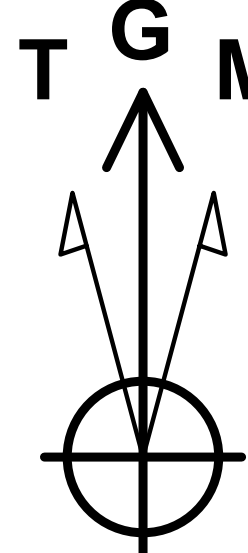
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	658500.10	586153.33	32.810161	-104.187463

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSect
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00
3	506.05	4.12	349.13	505.87	7.27	-1.40	2.00	1.40
4	3378.21	4.12	349.13	3370.61	209.97	-40.32	0.00	40.32
5	3971.28	60.00	270.00	3859.05	233.00	-327.22	10.00	327.22
6	4071.28	60.00	270.00	3909.05	233.00	-413.83	0.00	413.83
7	4325.45	90.50	270.00	3973.00	233.01	-656.73	12.00	656.73
8	9357.15	90.50	270.00	3929.00	233.11	-5688.24	0.00	5688.24

CORRECTION REFERENCE DATA:

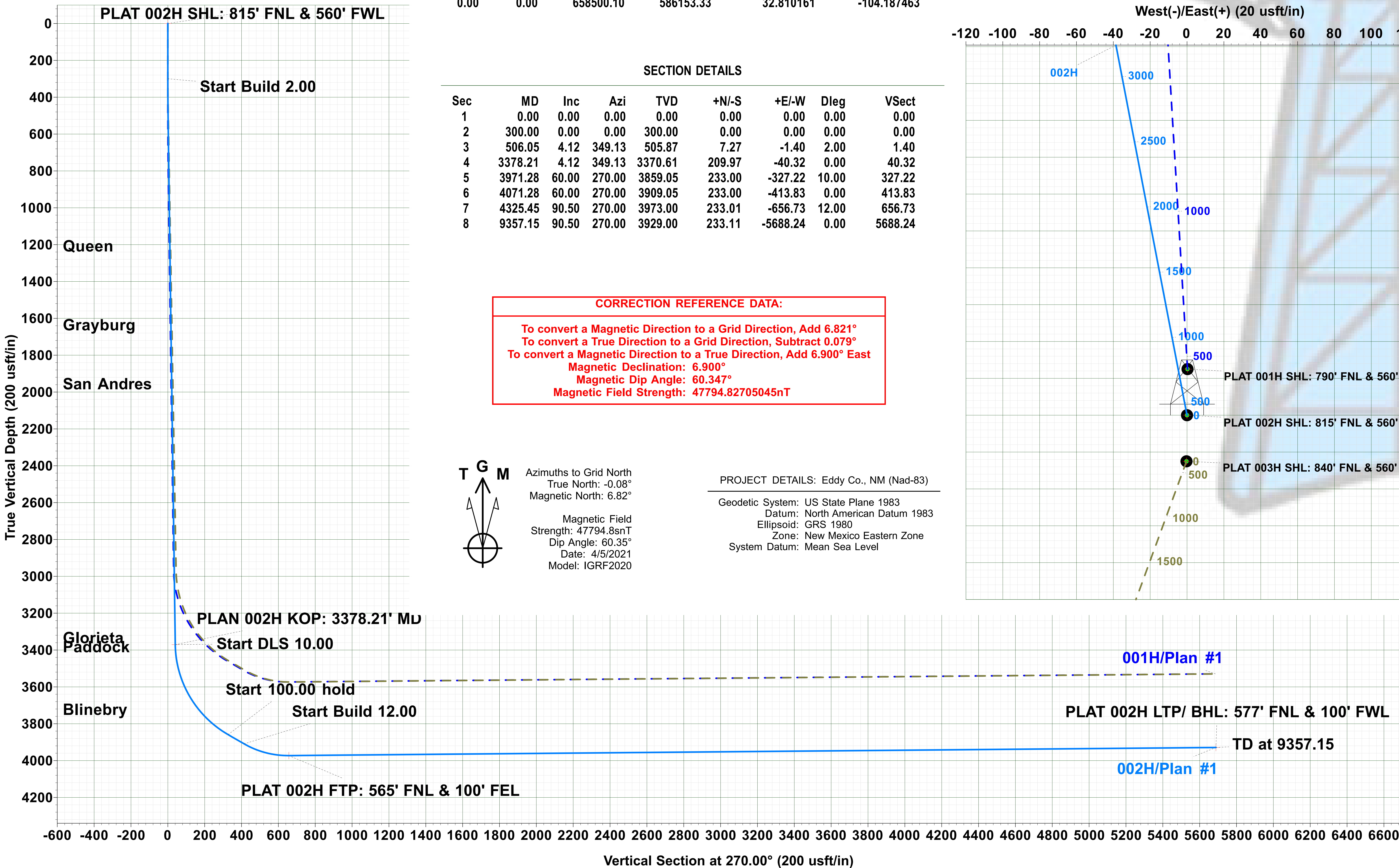
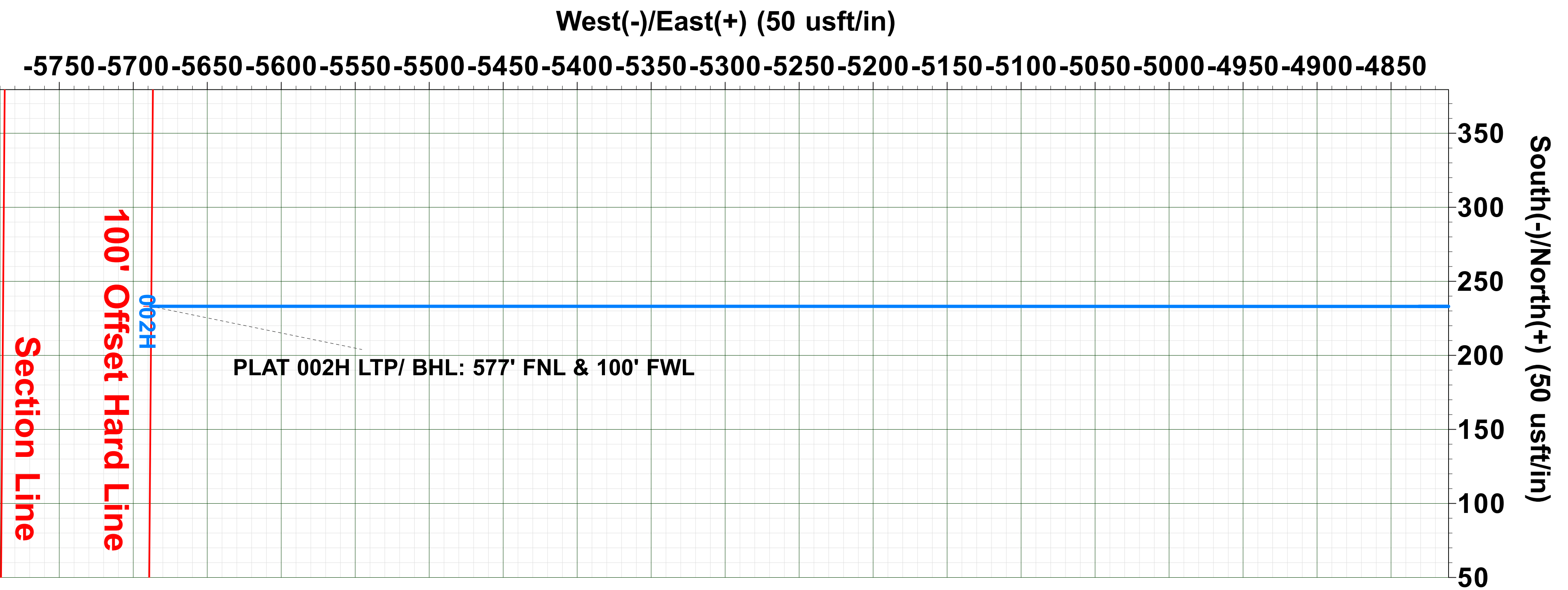
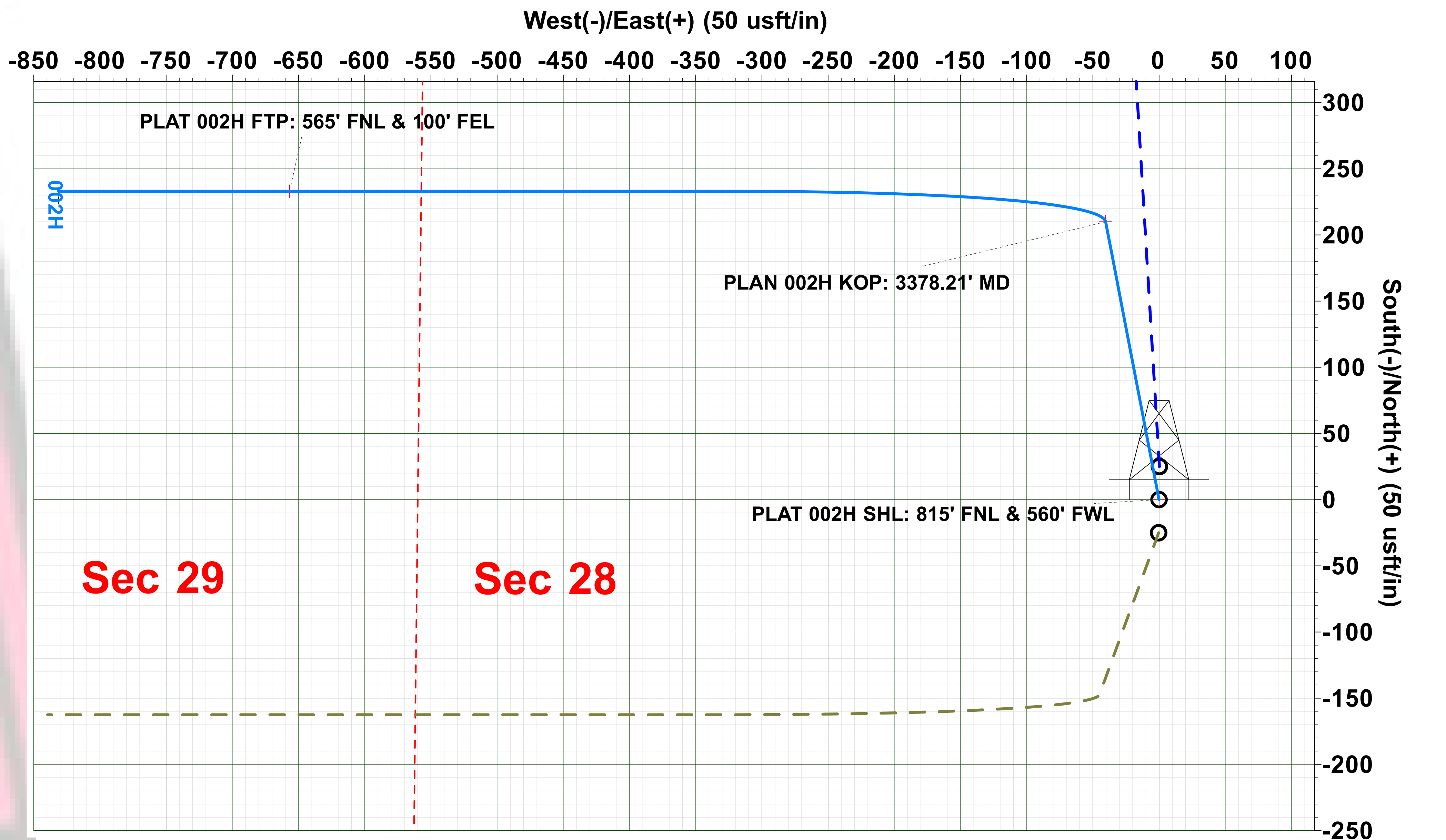
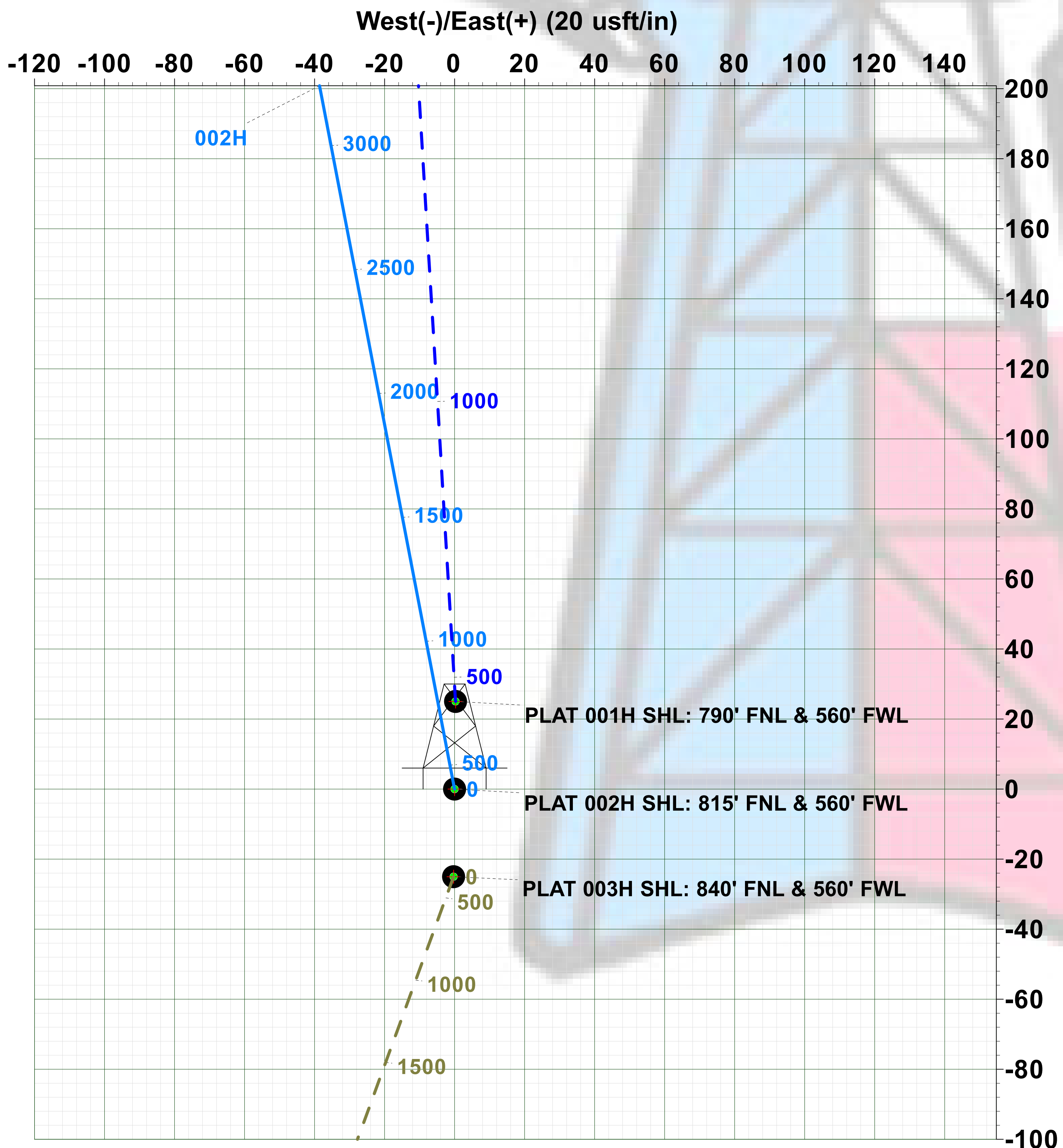
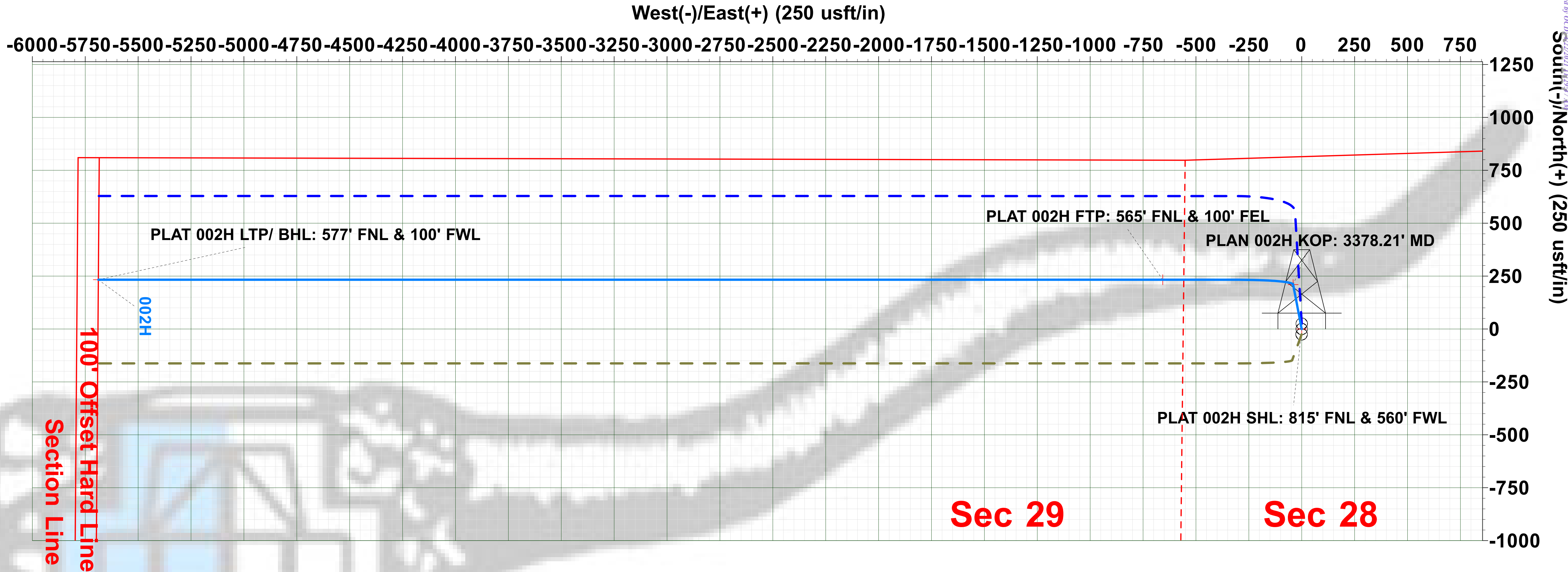
To convert a Magnetic Direction to a Grid Direction, Add 6.821°
To convert a True Direction to a Grid Direction, Subtract 0.079°
To convert a Magnetic Direction to a True Direction, Add 6.900° East
Magnetic Declination: 6.900°
Magnetic Dip Angle: 60.347°
Magnetic Field Strength: 47794.82705045nT



Azimuths to Grid North
True North: -0.08°
Magnetic North: 6.82°

Magnetic Field
Strength: 47794.8snT
Dip Angle: 60.35°
Date: 4/5/2021
Model: IGRF2020

PROJECT DETAILS: Eddy Co., NM (Nad-83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level



Disclaimer:
All Plan Details, boundary
lines and offset well
location/ survey data is
provided by customer and
subject to customer
approval.

Plan: Plan #1 (002H/Wellbore #1) AKITA 524

Created By: Matthew May Date: 13:41, April 05 2021



Planning Report



Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well 002H
Company:	Longfellow Energy	TVD Reference:	RKB = 16' @ 3623.30usft (AKITA 524)
Project:	Eddy Co., NM (Nad-83)	MD Reference:	RKB = 16' @ 3623.30usft (AKITA 524)
Site:	ELVIS STATE COM 29A	North Reference:	Grid
Well:	002H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Project	Eddy Co., NM (Nad-83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		ELVIS STATE COM 29A			
Site Position:		Northing:	658,525.13 usft	Latitude:	32.810230
From:	Map	Easting:	586,153.61 usft	Longitude:	-104.187463
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.079

Well	002H					
Well Position	+N/-S	-25.03 usft	Northing:	658,500.10 usft	Latitude:	32.810161
	+E/-W	-0.28 usft	Easting:	586,153.33 usft	Longitude:	-104.187464
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,607.30 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	4/5/2021	6.900	60.347	47,794.82705045

Design	Plan #1				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	270.00	

Plan Survey Tool Program	Date	4/5/2021			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	9,356.98	Plan #1 (Wellbore #1)	MWD+IGRF	
				OWSG MWD + IGRF or WM	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.000	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.000	
506.05	4.12	349.13	505.87	7.27	-1.40	2.00	2.00	0.00	349.131	
3,378.21	4.12	349.13	3,370.61	209.97	-40.32	0.00	0.00	0.00	0.000	
3,971.28	60.00	270.00	3,859.05	233.00	-327.22	10.00	9.42	-13.34	-81.510	
4,071.28	60.00	270.00	3,909.05	233.00	-413.83	0.00	0.00	0.00	0.000	
4,325.45	90.50	270.00	3,973.00	233.01	-656.73	12.00	12.00	0.00	0.000	PLAT 002H FTP: 56
9,357.15	90.50	270.00	3,929.00	233.11	-5,688.24	0.00	0.00	0.00	0.000	PLAT 002H LTP/ B1



Planning Report



Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well 002H
Company:	Longfellow Energy	TVD Reference:	RKB = 16' @ 3623.30usft (AKITA 524)
Project:	Eddy Co., NM (Nad-83)	MD Reference:	RKB = 16' @ 3623.30usft (AKITA 524)
Site:	ELVIS STATE COM 29A	North Reference:	Grid
Well:	002H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PLAT 002H SHL: 815' FNL & 560' FWL									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	349.13	399.98	1.71	-0.33	0.33	2.00	2.00	0.00
506.05	4.12	349.13	505.87	7.27	-1.40	1.40	2.00	2.00	0.00
600.00	4.12	349.13	599.58	13.90	-2.67	2.67	0.00	0.00	0.00
700.00	4.12	349.13	699.32	20.96	-4.02	4.02	0.00	0.00	0.00
800.00	4.12	349.13	799.06	28.02	-5.38	5.38	0.00	0.00	0.00
900.00	4.12	349.13	898.80	35.08	-6.73	6.73	0.00	0.00	0.00
1,000.00	4.12	349.13	998.55	42.13	-8.09	8.09	0.00	0.00	0.00
1,100.00	4.12	349.13	1,098.29	49.19	-9.44	9.44	0.00	0.00	0.00
1,200.00	4.12	349.13	1,198.03	56.25	-10.80	10.80	0.00	0.00	0.00
1,300.00	4.12	349.13	1,297.77	63.31	-12.15	12.15	0.00	0.00	0.00
1,400.00	4.12	349.13	1,397.51	70.36	-13.51	13.51	0.00	0.00	0.00
1,500.00	4.12	349.13	1,497.25	77.42	-14.87	14.87	0.00	0.00	0.00
1,600.00	4.12	349.13	1,596.99	84.48	-16.22	16.22	0.00	0.00	0.00
1,700.00	4.12	349.13	1,696.74	91.54	-17.58	17.58	0.00	0.00	0.00
1,800.00	4.12	349.13	1,796.48	98.59	-18.93	18.93	0.00	0.00	0.00
1,900.00	4.12	349.13	1,896.22	105.65	-20.29	20.29	0.00	0.00	0.00
2,000.00	4.12	349.13	1,995.96	112.71	-21.64	21.64	0.00	0.00	0.00
2,100.00	4.12	349.13	2,095.70	119.77	-23.00	23.00	0.00	0.00	0.00
2,200.00	4.12	349.13	2,195.44	126.82	-24.35	24.35	0.00	0.00	0.00
2,300.00	4.12	349.13	2,295.18	133.88	-25.71	25.71	0.00	0.00	0.00
2,400.00	4.12	349.13	2,394.93	140.94	-27.06	27.06	0.00	0.00	0.00
2,500.00	4.12	349.13	2,494.67	147.99	-28.42	28.42	0.00	0.00	0.00
2,600.00	4.12	349.13	2,594.41	155.05	-29.77	29.77	0.00	0.00	0.00
2,700.00	4.12	349.13	2,694.15	162.11	-31.13	31.13	0.00	0.00	0.00
2,800.00	4.12	349.13	2,793.89	169.17	-32.48	32.48	0.00	0.00	0.00
2,900.00	4.12	349.13	2,893.63	176.22	-33.84	33.84	0.00	0.00	0.00
3,000.00	4.12	349.13	2,993.37	183.28	-35.19	35.19	0.00	0.00	0.00
3,100.00	4.12	349.13	3,093.12	190.34	-36.55	36.55	0.00	0.00	0.00
3,200.00	4.12	349.13	3,192.86	197.40	-37.90	37.90	0.00	0.00	0.00
3,300.00	4.12	349.13	3,292.60	204.45	-39.26	39.26	0.00	0.00	0.00
3,378.21	4.12	349.13	3,370.61	209.97	-40.32	40.32	0.00	0.00	0.00
PLAN 002H KOP: 3378.21' MD									
3,400.00	4.94	323.22	3,392.33	211.49	-41.02	41.02	10.00	3.74	-118.91
3,450.00	8.78	295.10	3,441.98	214.84	-45.77	45.77	10.00	7.70	-56.24
3,500.00	13.41	285.03	3,491.03	217.96	-54.84	54.84	10.00	9.25	-20.14
3,550.00	18.23	280.13	3,539.13	220.85	-68.15	68.15	10.00	9.65	-9.79
3,600.00	23.13	277.25	3,585.89	223.46	-85.60	85.60	10.00	9.79	-5.78
3,650.00	28.06	275.32	3,630.97	225.79	-107.07	107.07	10.00	9.86	-3.84
3,700.00	33.01	273.94	3,674.02	227.82	-132.38	132.38	10.00	9.90	-2.77
3,750.00	37.97	272.88	3,714.72	229.53	-161.35	161.35	10.00	9.92	-2.12
3,800.00	42.94	272.03	3,752.75	230.91	-193.76	193.76	10.00	9.94	-1.69
3,850.00	47.92	271.33	3,787.83	231.95	-229.35	229.35	10.00	9.95	-1.40
3,900.00	52.90	270.73	3,819.68	232.64	-267.86	267.86	10.00	9.96	-1.20
3,950.00	57.88	270.21	3,848.07	232.97	-309.00	309.00	10.00	9.96	-1.05
3,971.28	60.00	270.00	3,859.05	233.00	-327.22	327.22	10.00	9.97	-0.97
4,000.00	60.00	270.00	3,873.41	233.00	-352.10	352.10	0.00	0.00	0.00
4,071.28	60.00	270.00	3,909.05	233.00	-413.83	413.83	0.00	0.00	0.00
4,075.00	60.45	270.00	3,910.90	233.00	-417.06	417.06	12.00	12.00	0.00



Planning Report



Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well 002H
Company:	Longfellow Energy	TVD Reference:	RKB = 16' @ 3623.30usft (AKITA 524)
Project:	Eddy Co., NM (Nad-83)	MD Reference:	RKB = 16' @ 3623.30usft (AKITA 524)
Site:	ELVIS STATE COM 29A	North Reference:	Grid
Well:	002H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,100.00	63.45	270.00	3,922.66	233.00	-439.12	439.12	12.00	12.00	0.00
4,125.00	66.45	270.00	3,933.24	233.00	-461.76	461.76	12.00	12.00	0.00
4,150.00	69.45	270.00	3,942.63	233.00	-484.93	484.93	12.00	12.00	0.00
4,175.00	72.45	270.00	3,950.79	233.00	-508.56	508.56	12.00	12.00	0.00
4,200.00	75.45	270.00	3,957.70	233.00	-532.58	532.58	12.00	12.00	0.00
4,225.00	78.45	270.00	3,963.34	233.00	-556.93	556.93	12.00	12.00	0.00
4,250.00	81.45	270.00	3,967.71	233.01	-581.55	581.55	12.00	12.00	0.00
4,275.00	84.45	270.00	3,970.78	233.01	-606.36	606.36	12.00	12.00	0.00
4,300.00	87.45	270.00	3,972.54	233.01	-631.29	631.29	12.00	12.00	0.00
4,325.45	90.50	270.00	3,973.00	233.01	-656.73	656.73	12.00	12.00	0.00
PLAT 002H FTP: 565' FNL & 100' FEL									
4,400.00	90.50	270.00	3,972.35	233.01	-731.28	731.28	0.00	0.00	0.00
4,500.00	90.50	270.00	3,971.47	233.01	-831.28	831.28	0.00	0.00	0.00
4,600.00	90.50	270.00	3,970.60	233.01	-931.27	931.27	0.00	0.00	0.00
4,700.00	90.50	270.00	3,969.72	233.01	-1,031.27	1,031.27	0.00	0.00	0.00
4,800.00	90.50	270.00	3,968.85	233.02	-1,131.26	1,131.26	0.00	0.00	0.00
4,900.00	90.50	270.00	3,967.98	233.02	-1,231.26	1,231.26	0.00	0.00	0.00
5,000.00	90.50	270.00	3,967.10	233.02	-1,331.26	1,331.26	0.00	0.00	0.00
5,100.00	90.50	270.00	3,966.23	233.02	-1,431.25	1,431.25	0.00	0.00	0.00
5,200.00	90.50	270.00	3,965.35	233.02	-1,531.25	1,531.25	0.00	0.00	0.00
5,300.00	90.50	270.00	3,964.48	233.03	-1,631.25	1,631.25	0.00	0.00	0.00
5,400.00	90.50	270.00	3,963.60	233.03	-1,731.24	1,731.24	0.00	0.00	0.00
5,500.00	90.50	270.00	3,962.73	233.03	-1,831.24	1,831.24	0.00	0.00	0.00
5,600.00	90.50	270.00	3,961.85	233.03	-1,931.23	1,931.23	0.00	0.00	0.00
5,700.00	90.50	270.00	3,960.98	233.03	-2,031.23	2,031.23	0.00	0.00	0.00
5,800.00	90.50	270.00	3,960.11	233.04	-2,131.23	2,131.23	0.00	0.00	0.00
5,900.00	90.50	270.00	3,959.23	233.04	-2,231.22	2,231.22	0.00	0.00	0.00
6,000.00	90.50	270.00	3,958.36	233.04	-2,331.22	2,331.22	0.00	0.00	0.00
6,100.00	90.50	270.00	3,957.48	233.04	-2,431.21	2,431.21	0.00	0.00	0.00
6,200.00	90.50	270.00	3,956.61	233.05	-2,531.21	2,531.21	0.00	0.00	0.00
6,300.00	90.50	270.00	3,955.73	233.05	-2,631.21	2,631.21	0.00	0.00	0.00
6,400.00	90.50	270.00	3,954.86	233.05	-2,731.20	2,731.20	0.00	0.00	0.00
6,500.00	90.50	270.00	3,953.98	233.05	-2,831.20	2,831.20	0.00	0.00	0.00
6,600.00	90.50	270.00	3,953.11	233.05	-2,931.20	2,931.20	0.00	0.00	0.00
6,700.00	90.50	270.00	3,952.24	233.06	-3,031.19	3,031.19	0.00	0.00	0.00
6,800.00	90.50	270.00	3,951.36	233.06	-3,131.19	3,131.19	0.00	0.00	0.00
6,900.00	90.50	270.00	3,950.49	233.06	-3,231.18	3,231.18	0.00	0.00	0.00
7,000.00	90.50	270.00	3,949.61	233.06	-3,331.18	3,331.18	0.00	0.00	0.00
7,100.00	90.50	270.00	3,948.74	233.06	-3,431.18	3,431.18	0.00	0.00	0.00
7,200.00	90.50	270.00	3,947.86	233.07	-3,531.17	3,531.17	0.00	0.00	0.00
7,300.00	90.50	270.00	3,946.99	233.07	-3,631.17	3,631.17	0.00	0.00	0.00
7,400.00	90.50	270.00	3,946.11	233.07	-3,731.17	3,731.17	0.00	0.00	0.00
7,500.00	90.50	270.00	3,945.24	233.07	-3,831.16	3,831.16	0.00	0.00	0.00
7,600.00	90.50	270.00	3,944.37	233.07	-3,931.16	3,931.16	0.00	0.00	0.00
7,700.00	90.50	270.00	3,943.49	233.08	-4,031.15	4,031.15	0.00	0.00	0.00
7,800.00	90.50	270.00	3,942.62	233.08	-4,131.15	4,131.15	0.00	0.00	0.00
7,900.00	90.50	270.00	3,941.74	233.08	-4,231.15	4,231.15	0.00	0.00	0.00
8,000.00	90.50	270.00	3,940.87	233.08	-4,331.14	4,331.14	0.00	0.00	0.00
8,100.00	90.50	270.00	3,939.99	233.08	-4,431.14	4,431.14	0.00	0.00	0.00
8,200.00	90.50	270.00	3,939.12	233.09	-4,531.13	4,531.13	0.00	0.00	0.00
8,300.00	90.50	270.00	3,938.24	233.09	-4,631.13	4,631.13	0.00	0.00	0.00
8,400.00	90.50	270.00	3,937.37	233.09	-4,731.13	4,731.13	0.00	0.00	0.00
8,500.00	90.50	270.00	3,936.50	233.09	-4,831.12	4,831.12	0.00	0.00	0.00
8,600.00	90.50	270.00	3,935.62	233.09	-4,931.12	4,931.12	0.00	0.00	0.00



Planning Report



Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well 002H
Company:	Longfellow Energy	TVD Reference:	RKB = 16' @ 3623.30usft (AKITA 524)
Project:	Eddy Co., NM (Nad-83)	MD Reference:	RKB = 16' @ 3623.30usft (AKITA 524)
Site:	ELVIS STATE COM 29A	North Reference:	Grid
Well:	002H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
8,700.00	90.50	270.00	3,934.75	233.10	-5,031.12	5,031.12	0.00	0.00	0.00	
8,800.00	90.50	270.00	3,933.87	233.10	-5,131.11	5,131.11	0.00	0.00	0.00	
8,900.00	90.50	270.00	3,933.00	233.10	-5,231.11	5,231.11	0.00	0.00	0.00	
9,000.00	90.50	270.00	3,932.12	233.10	-5,331.10	5,331.10	0.00	0.00	0.00	
9,100.00	90.50	270.00	3,931.25	233.10	-5,431.10	5,431.10	0.00	0.00	0.00	
9,200.00	90.50	270.00	3,930.37	233.11	-5,531.10	5,531.10	0.00	0.00	0.00	
9,300.00	90.50	270.00	3,929.50	233.11	-5,631.09	5,631.09	0.00	0.00	0.00	
9,357.15	90.50	270.00	3,929.00	233.11	-5,688.24	5,688.24	0.00	0.00	0.00	
PLAT 002H LTP/ BHL: 577' FNL & 100' FWL										

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	
PLAT 002H SHL: 815' - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	658,500.10	586,153.33	32.810161	-104.187464	
PLAN 002H KOP: 337 - plan hits target center - Point	0.00	0.00	3,370.61	209.97	-40.32	658,710.08	586,113.02	32.810738	-104.187594	
PLAT 002H LTP/ BHL - plan hits target center - Point	0.00	0.00	3,929.00	233.11	-5,688.24	658,733.21	580,465.09	32.810822	-104.205977	
PLAT 002H FTP: 565' - plan hits target center - Point	0.00	0.00	3,973.00	233.01	-656.73	658,733.11	585,496.60	32.810804	-104.189600	

Formations							
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)		
1,179.92	1,178.00	Queen					
1,609.03	1,606.00	Grayburg					
1,929.86	1,926.00	San Andres					
3,311.43	3,304.00	Glorieta					
3,360.56	3,353.00	Paddock					
3,722.93	3,693.00	Blaine					