

Well Name: PRINCE FEDERAL 19B	Well Location: T17S / R28E / SEC 24 / SENE /	County or Parish/State:
Well Number: 002H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM14847	Unit or CA Name:	Unit or CA Number:
US Well Number: 3001548308	Well Status: Approved Application for Permit to Drill	Operator: LONGFELLOW ENERGY LP

Notice of Intent

Sundry ID: 2693070

Type of Submission: Notice of Intent	Type of Action: Other
Date Sundry Submitted: 09/16/2022	Time Sundry Submitted: 04:49
Date proposed operation will begin: 09/26/2022	

Procedure Description: Due to rig layout requirements, SHL has moved 157' NNW from 2344' FNL & 1303' FEL to 2188' FNL & 1323' FEL. FTP has moved from 2290' FNL & 100' FWL, Section 19, T-17S, R29E to 1739' FNL, 100' FWL, Section 19, T-17S, R29E. BHL has moved from 2278' FNL & 20' FEL, Section 19, T-17S, R29E to 1727' FNL, 20' FEL, Section 19, T-17S, R29E. TVD was 4600' and will now be 4666'. MD was 9774' and will now be 9830'. Casing, cement, and mud programs will adjust respectively. See directional plan, well bore diagram and C102 plat attached for more detailed information.

Surface Disturbance

Is any additional surface disturbance proposed?: No

NOI Attachments

Procedure Description

- Prince19B_2H_Well_Bore_Diagram_20220916164747.pdf
- Prince19B_2H_Directional_Plan_20220916164733.pdf
- Prince19B_2H_C102_20220916164733.pdf
- Drill_Plan_v2_20220916164718.pdf

Well Name: PRINCE FEDERAL 19B	Well Location: T17S / R28E / SEC 24 / SENE /	County or Parish/State:
Well Number: 002H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM14847	Unit or CA Name:	Unit or CA Number:
US Well Number: 3001548308	Well Status: Approved Application for Permit to Drill	Operator: LONGFELLOW ENERGY LP

Conditions of Approval

Additional

Pipe_Body_and_API_Connections_Performance_Data_9.6250_36.0000_0.3520__J55_20220921145320.pdf

BK_HT_5500_20ppf_HCL80_6300_Data_Sheet_R1_20220921145319.pdf

BK_HT_7000_32ppf_HCL80_7875_Data_Sheet_R1_20220921145319.pdf

Pipe_Body_and_API_Connections_Performance_Data_13.3750_54.5000_0.3800__J55_20220921145319.pdf

24_17_28_G_Sundry_ID_2693070_Prince_Federal_19B_02H_Eddy_NM014847_LONGFELLOW_ENERGY_LP_13_22_d_9_19_2022_LV_20220921145309.pdf

Prince_Federal_19B_2H_Sundry_ID_2693070_20220921145309.pdf

Operator

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

Operator Electronic Signature: BRIAN WOOD	Signed on: SEP 16, 2022 04:48 PM
Name: LONGFELLOW ENERGY LP	
Title: President	
Street Address: 37 VERANO LOOP	
City: SANTA FE	State: NM
Phone: (505) 466-8120	
Email address: AFMSS@PERMITSWEST.COM	

Field

Representative Name:		
Street Address:		
City:	State:	Zip:
Phone:		
Email address:		

BLM Point of Contact

BLM POC Name: CHRISTOPHER WALLS	BLM POC Title: Petroleum Engineer
BLM POC Phone: 5752342234	BLM POC Email Address: cwalls@blm.gov
Disposition: Approved	Disposition Date: 09/27/2022
Signature: 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 & 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 30-015-48308	² Pool Code 96210	³ Pool Name EMPIRE; GLORIETA-YESO
⁴ Property Code 330799	⁵ Property Name PRINCE FEDERAL 19B	⁶ Well Number 002H
⁷ OGRID No. 372210	⁸ Operator Name LONGFELLOW ENERGY, LP	⁹ Elevation 3696.2

¹⁰ Surface Location

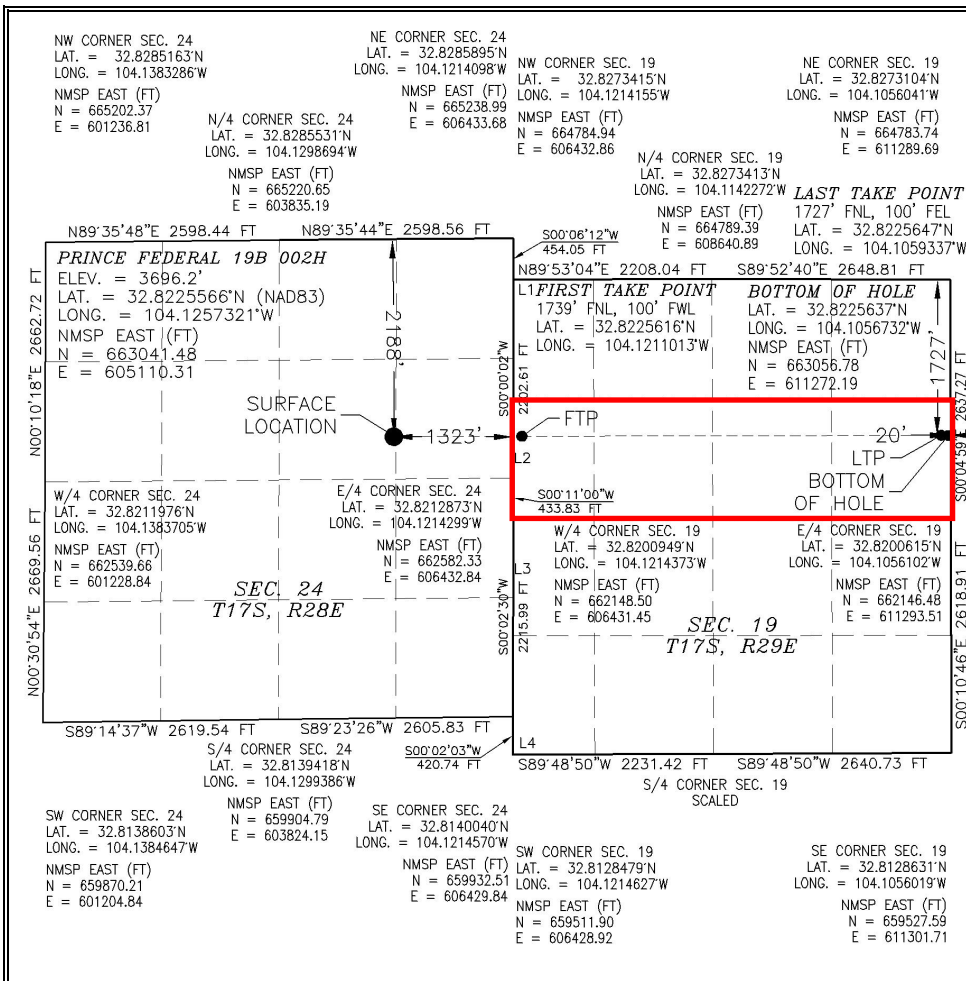
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	24	17 S	28 E		2188	NORTH	1323	EAST	EDDY

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
H	19	17 S	29 E		1727	NORTH	20	EAST	EDDY

¹² Dedicated Acres 157.85	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
--	-------------------------------	----------------------------------	-------------------------

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

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: **Cory Walk** Date: **9/15/2022**
Printed Name: **Cory Walk**
E-mail Address: **cory@permitswest.com**

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.

AUGUST 2, 2022

Date of Survey

Signature and Seal of Professional Surveyor: **ALIMON F. JARAMILLO**
Certificate Number: **12797**
Surveyor No. **8436B**

Longfellow Energy, LP
 Prince Federal 19B 002H
 SHL 2344' FNL & 1303' FEL 24-17S-28E
 BHL 2278' FNL & 20' FEL 19-17S-29E
 Eddy County, NM

DRILL PLAN PAGE 1

"fee/fee/Fed"

"pad Prince 19B"

Drilling Program

1. ESTIMATED TOPS

Formation/Lithology	TVD	MD	Contents
Quaternary caliche	000'	000'	water
Salt top	475'	475'	N/A
Salt base	650'	651'	N/A
Yates dolomite	760'	765'	hydrocarbons
Queen sandstone	1608'	1620'	hydrocarbons
San Andres dolomite	2307'	2329'	hydrocarbons
Glorieta dolomite	3739'	3779'	hydrocarbons
Yeso Paddock dolomite	3772'	3813'	hydrocarbons
Yeso Blinebry dolomite	4216'	4321'	hydrocarbons
(KOP	3713'	3753'	hydrocarbons)
TD	4666'	9830'	hydrocarbons

2. NOTABLE ZONES

Yeso Blinebry is the goal. Closest water well (RA 12307 POD 1) is 1.52 miles northwest. Depth to water is 58' in this 140' deep water well.

3. PRESSURE CONTROL

A 3000-psi BOP stack (rated to 5000') consisting of annular preventer and double (blind and pipe) ram will be used below surface casing to TD. BOP/BOPE will be tested by an independent service company to 250-psi low and 3000-psi high per Onshore Order 2 requirements. The system may be upgraded to a higher pressure, but still tested as described above. If the system is upgraded, then all the installed components will be functional and tested.

Longfellow Energy, LP
 Prince Federal 19B 002H
 SHL 2344' FNL & 1303' FEL 24-17S-28E
 BHL 2278' FNL & 20' FEL 19-17S-29E
 Eddy County, NM

DRILL PLAN PAGE 2

"fee/fee/Fed"

"pad Prince 19B"

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 BOPE will include a speed head, Kelly cock and floor safety valve (inside BOP), and choke lines and choke manifold. BOP and choke diagrams are attached.

Variance is requested to use a flex-hose. Test certificate for a typical hose is attached, Certificate for the hose in use will be available on the rig before drilling starts.

4. CASING & CEMENT

All casing will be API and new.

Hole O. D.	Set MD	Set TVD	Casing O. D.	Weight (lb/ft)	Grade	Joint	Collapse	Burst	Tension
17.5"	0' - 350'	0' - 350'	Surface 13.375"	54.5	J-55	LTC	1.125	1.125	1.8
12.25"	0' - 1250'	0' - 1250'	Inter. 9.625"	36	J-55	LTC	1.125	1.125	1.8
8.75"	0' - 4950'	0' - 4546'	Prod. 1 7"	32	L-80	BTC	1.125	1.125	1.8
8.75"	4150' - 9774'	4038' - 4600'	Prod. 2 5.5"	20	L-80	BTC	1.125	1.125	1.8

Name	Type	Top MD	Sacks	Yield	Cu. Ft	Weight	Excess	Cement
Surface	Tail	0	485	1.34	650	14.8	100%	C
1st Intermediate	Lead	0	395	1.83	723	13.5	200%	C
	Tail	0	165	1.37	226	14.8	100%	C
Production	Lead	1050	410	3.4	1394	12.8	50%	35/65 Poz/Class C
	Tail	1050	1030	1.22	1257	14.8	9%	C

Longfellow Energy, LP
Prince Federal 19B 002H
SHL 2344' FNL & 1303' FEL 24-17S-28E
BHL 2278' FNL & 20' FEL 19-17S-29E
Eddy County, NM

DRILL PLAN PAGE 3

"fee/fee/Fed"

"pad Prince 19B"

5. MUD PROGRAM

An electronic/mechanical mud monitor with a minimum pit volume totalizer, stroke counter, and flow sensor will be used. All necessary mud products (LCM) will be on site to handle any abnormal hole condition that may be encountered while drilling this well. A closed loop system will be used.

Type	Interval (MD)	lb/gal	Viscosity	Fluid Loss	pH
fresh water/gel	0' - 350'	8.4 - 9.0	28-40	NC	7.0 - 8.0
fresh water/gel	350' - 1250'	8.4 - 9.2	28-30	NC	9.0 - 10.5
Fresh/cut brine/gel	1250' - 9830'	8.8 - 9.2	28-30	NC	9.0 - 10.5

6. CORES, TESTS, & LOGS

No core or drill stem test is planned.

A mud logger will be used from GL to TD. Samples will be collected every 10' in the lateral pay zone.

No electric logs are planned at this time.

7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈ 1991 psi. Expected bottom hole temperature is $\approx 110^{\circ}$ F. A H₂S drilling operation plan is attached.

8. OTHER INFORMATION

Anticipated spud date is upon approval. It is expected it will take ≈ 2 months to drill and complete the well.



Longfellow Energy

Eddy Co., NM (Nad-83)
PRINCE FEDERAL 19B
002H

Wellbore #1

Plan: PLAN #1

Standard Planning Report

23 August, 2022





Company: Longfellow Energy
Project: Eddy Co., NM (Nad-83)
Site: PRINCE FEDERAL 19B
Well: 002H
Wellbore: Wellbore #1
Rig: AKITA 524
Design: PLAN #1 / 12:51, August 23 2022



DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PRINCE #2: BHL	4666.00	15.30	6161.88	663056.78	611272.19	32.822564	-104.105673
PRINCE #2: FTP	4566.00	4.66	1422.54	663046.14	606532.85	32.822562	-104.121101
PRINCE #2: LTP	4664.31	15.47	6081.87	663056.95	611192.18	32.822565	-104.105934
PRINCE #2: SHL	0.00	0.00	0.00	663041.48	605110.31	32.822557	-104.125732

WELL DETAILS: 002H

RKB = 17' @ 3713.20usft (AKITA 524)						
3696.20						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	663041.48	605110.31	32.822557	-104.125732	

SECTION DETAILS

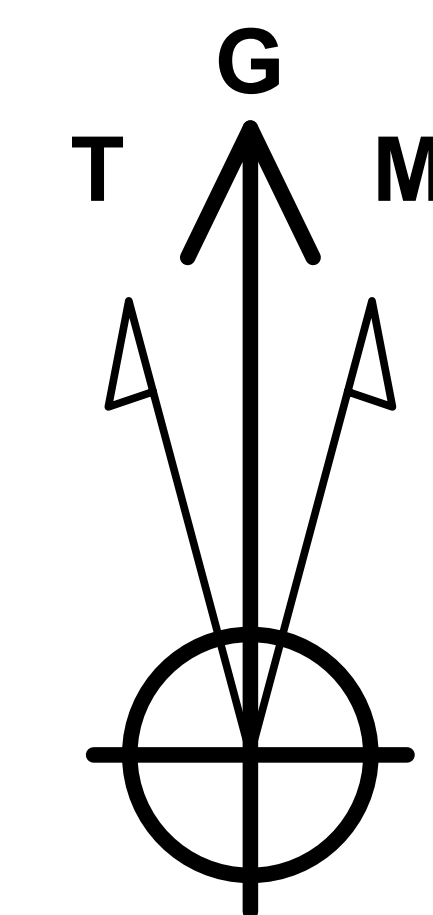
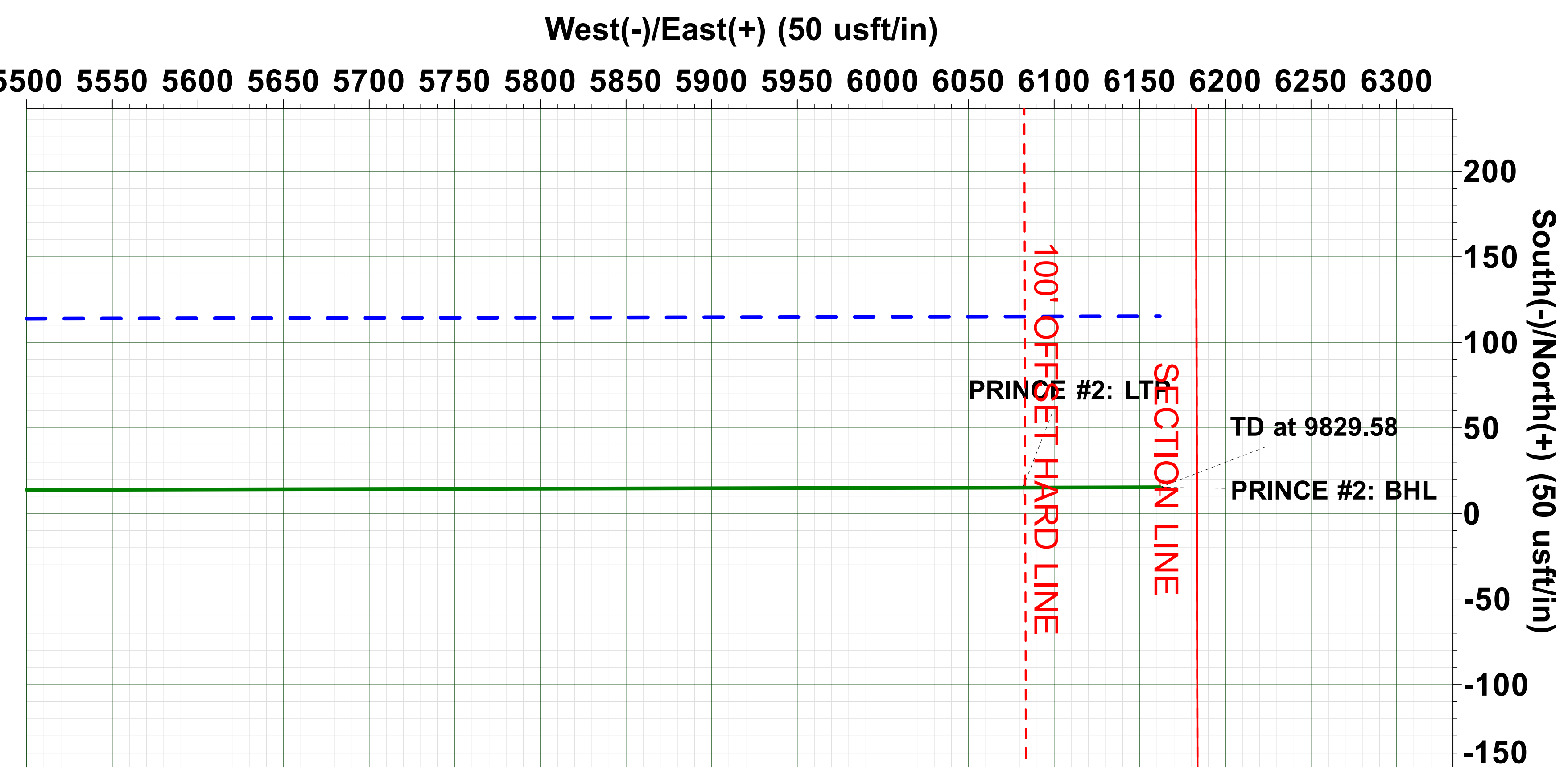
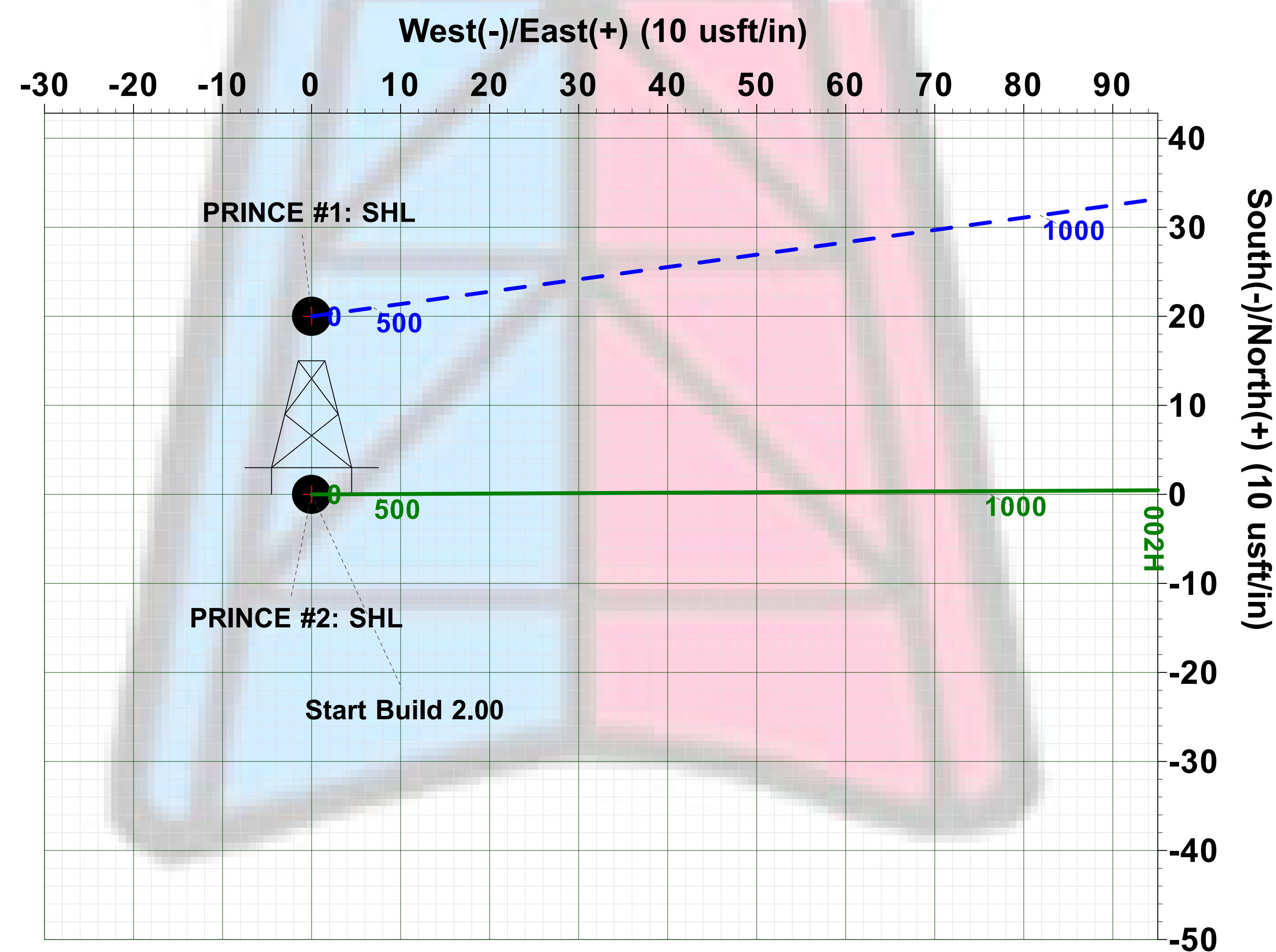
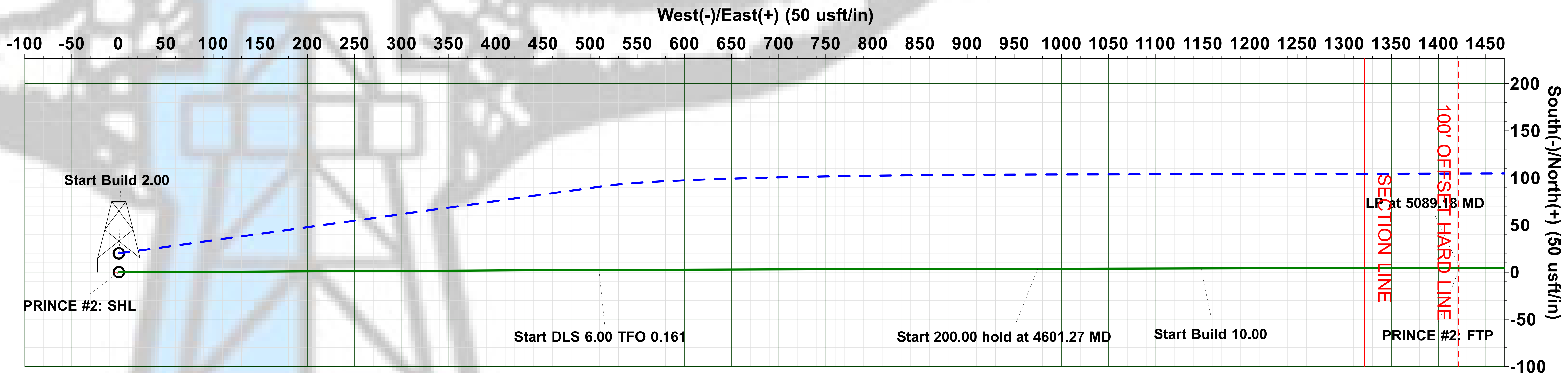
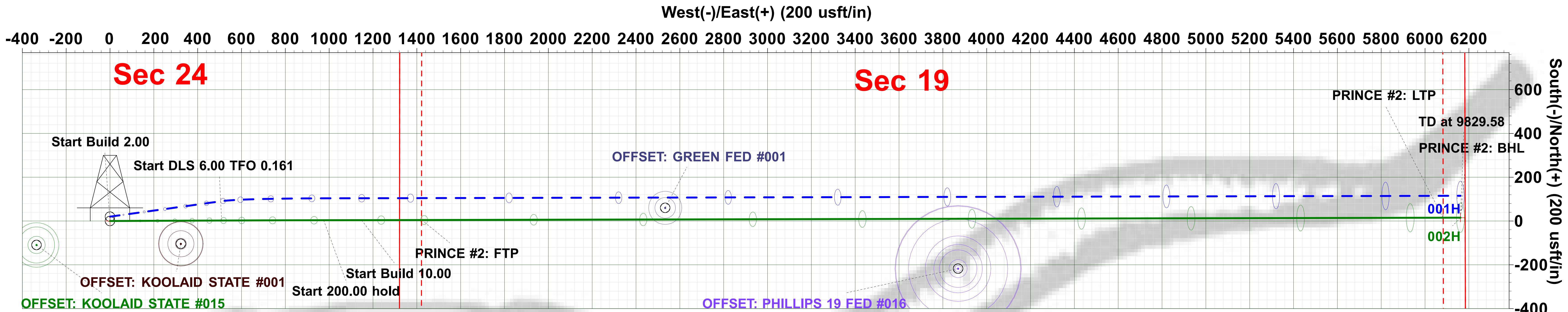
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	
3	754.33	9.09	89.73	752.42	0.17	35.95	2.00	35.95	
4	3752.71	9.09	89.73	3713.18	2.43	509.47	0.00	509.47	
5	4601.27	60.00	89.87	4389.37	3.65	974.95	6.00	974.95	
6	4801.27	60.00	89.87	4489.37	4.04	1148.15	0.00	1148.16	
7	5089.18	88.79	89.87	4566.00	4.66	1422.54	10.00	1422.55	PRINCE #2: FTP
8	9749.56	88.79	89.87	4664.31	15.12	6081.87	0.00	6081.89	PRINCE #2: LTP
9	9829.58	88.79	89.87	4666.00	15.30	6161.88	0.00	6161.90	PRINCE #2: BHL

FORMATION TOP DETAILS

TVDPath	Formation
1608.00	QUEEN
2007.00	GRAYBURG
2307.00	SAN ANDRES
3739.00	GLORIETA
3772.00	PADDOCK
4216.00	BLINBERRY

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



Azimuths to Grid North
True North: -0.11°
Magnetic North: 6.60°

Magnetic Field
Strength: 47665.7snT
Dip Angle: 60.32°
Date: 8/17/2022
Model: IGRF2020

CORRECTION REFERENCE DATA:

To convert a Magnetic Direction to a Grid Direction, Add 6.601°
To convert a True Direction to a Grid Direction, Subtract 0.113°
Magnetic Declination: 6.713°
Magnetic Dip Angle: 60.322°
Magnetic Field Strength: 47665.69631729nT

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: 12:51, August 23 2022

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
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Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code	³ Pool Name
⁴ Property Code	⁵ Property Name PRINCE FEDERAL 19B	⁶ Well Number 002H
⁷ OGRID No. 372210	⁸ Operator Name LONGFELLOW ENERGY, LP	⁹ Elevation 3696.2

¹⁰ Surface Location

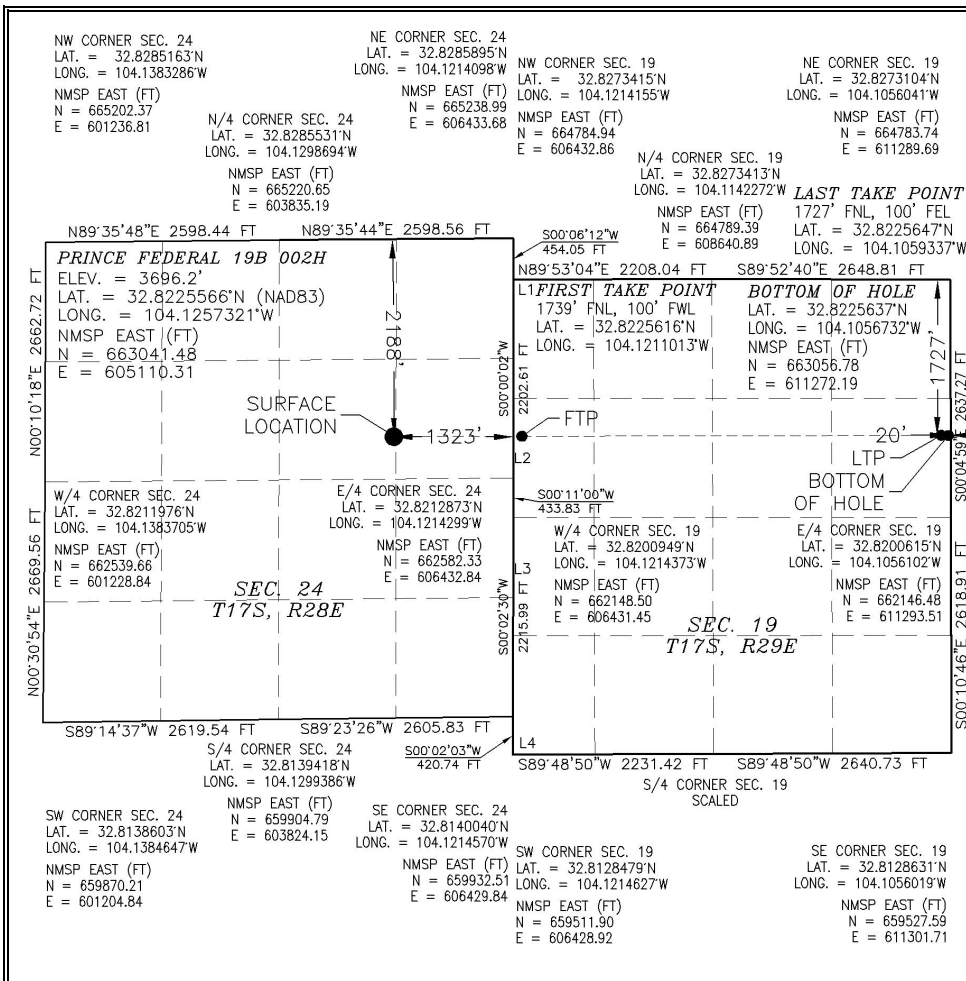
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	24	17 S	28 E		2188	NORTH	1323	EAST	EDDY

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
H	19	17 S	29 E		1727	NORTH	20	EAST	EDDY

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

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

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 _____ Date _____

Printed Name _____

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.

AUGUST 2, 2022

Date of Survey

Signature and Seal of Professional Surveyor: _____

Certificate Number: 12797

Surveyor No. 8436B



Planning Report



Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well 002H
Company:	Longfellow Energy	TVD Reference:	RKB = 17' @ 3713.20usft (AKITA 524)
Project:	Eddy Co., NM (Nad-83)	MD Reference:	RKB = 17' @ 3713.20usft (AKITA 524)
Site:	PRINCE FEDERAL 19B	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		PRINCE FEDERAL 19B			
Site Position:		Northing:	663,061.48 usft	Latitude:	32.822612
From:	Map	Easting:	605,110.33 usft	Longitude:	-104.125732
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.113

Well	002H					
Well Position	+N/-S	-20.00 usft	Northing:	663,041.48 usft	Latitude:	32.822557
	+E/-W	-0.02 usft	Easting:	605,110.31 usft	Longitude:	-104.125732
Position Uncertainty		0.00 usft	Wellhead Elevation:		Ground Level:	3,696.20 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/17/2022	6.713	60.322	47,665.69631728

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	89.87

Plan Survey Tool Program	Date	8/23/2022			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	9,829.58	PLAN #1 (Wellbore #1)	MWD+IFR1+SAG+FDIR	
				OWSG MWD + IFR1 + Sag	

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	
754.33	9.09	89.73	752.42	0.17	35.95	2.00	2.00	0.00	89.727	
3,752.71	9.09	89.73	3,713.18	2.43	509.47	0.00	0.00	0.00	0.000	
4,601.27	60.00	89.87	4,389.37	3.65	974.95	6.00	6.00	0.02	0.161	
4,801.27	60.00	89.87	4,489.37	4.04	1,148.15	0.00	0.00	0.00	0.000	
5,089.18	88.79	89.87	4,566.00	4.66	1,422.54	10.00	10.00	0.00	0.000	PRINCE #2: FTP
9,749.56	88.79	89.87	4,664.31	15.12	6,081.87	0.00	0.00	0.00	0.000	PRINCE #2: LTP
9,829.58	88.79	89.87	4,666.00	15.30	6,161.88	0.00	0.00	0.00	0.000	PRINCE #2: BHL



Planning Report



Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well 002H
Company:	Longfellow Energy	TVD Reference:	RKB = 17' @ 3713.20usft (AKITA 524)
Project:	Eddy Co., NM (Nad-83)	MD Reference:	RKB = 17' @ 3713.20usft (AKITA 524)
Site:	PRINCE FEDERAL 19B	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
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	89.73	399.98	0.01	1.75	1.75	2.00	2.00	0.00
500.00	4.00	89.73	499.84	0.03	6.98	6.98	2.00	2.00	0.00
600.00	6.00	89.73	599.45	0.07	15.69	15.69	2.00	2.00	0.00
700.00	8.00	89.73	698.70	0.13	27.88	27.88	2.00	2.00	0.00
754.33	9.09	89.73	752.42	0.17	35.95	35.95	2.00	2.00	0.00
800.00	9.09	89.73	797.52	0.21	43.16	43.16	0.00	0.00	0.00
900.00	9.09	89.73	896.27	0.28	58.96	58.96	0.00	0.00	0.00
1,000.00	9.09	89.73	995.01	0.36	74.75	74.75	0.00	0.00	0.00
1,100.00	9.09	89.73	1,093.76	0.43	90.54	90.54	0.00	0.00	0.00
1,200.00	9.09	89.73	1,192.51	0.51	106.33	106.33	0.00	0.00	0.00
1,300.00	9.09	89.73	1,291.25	0.58	122.13	122.13	0.00	0.00	0.00
1,400.00	9.09	89.73	1,390.00	0.66	137.92	137.92	0.00	0.00	0.00
1,500.00	9.09	89.73	1,488.74	0.73	153.71	153.71	0.00	0.00	0.00
1,600.00	9.09	89.73	1,587.49	0.81	169.50	169.50	0.00	0.00	0.00
1,620.78	9.09	89.73	1,608.00	0.82	172.78	172.78	0.00	0.00	0.00
QUEEN									
1,700.00	9.09	89.73	1,686.23	0.88	185.29	185.30	0.00	0.00	0.00
1,800.00	9.09	89.73	1,784.98	0.96	201.09	201.09	0.00	0.00	0.00
1,900.00	9.09	89.73	1,883.72	1.03	216.88	216.88	0.00	0.00	0.00
2,000.00	9.09	89.73	1,982.47	1.11	232.67	232.67	0.00	0.00	0.00
2,024.85	9.09	89.73	2,007.00	1.13	236.60	236.60	0.00	0.00	0.00
GRAYBURG									
2,100.00	9.09	89.73	2,081.21	1.18	248.46	248.47	0.00	0.00	0.00
2,200.00	9.09	89.73	2,179.96	1.26	264.26	264.26	0.00	0.00	0.00
2,300.00	9.09	89.73	2,278.70	1.33	280.05	280.05	0.00	0.00	0.00
2,328.66	9.09	89.73	2,307.00	1.36	284.58	284.58	0.00	0.00	0.00
SAN ANDRES									
2,400.00	9.09	89.73	2,377.45	1.41	295.84	295.84	0.00	0.00	0.00
2,500.00	9.09	89.73	2,476.19	1.48	311.63	311.64	0.00	0.00	0.00
2,600.00	9.09	89.73	2,574.94	1.56	327.43	327.43	0.00	0.00	0.00
2,700.00	9.09	89.73	2,673.68	1.63	343.22	343.22	0.00	0.00	0.00
2,800.00	9.09	89.73	2,772.43	1.71	359.01	359.01	0.00	0.00	0.00
2,900.00	9.09	89.73	2,871.17	1.78	374.80	374.81	0.00	0.00	0.00
3,000.00	9.09	89.73	2,969.92	1.86	390.60	390.60	0.00	0.00	0.00
3,100.00	9.09	89.73	3,068.66	1.94	406.39	406.39	0.00	0.00	0.00
3,200.00	9.09	89.73	3,167.41	2.01	422.18	422.18	0.00	0.00	0.00
3,300.00	9.09	89.73	3,266.15	2.09	437.97	437.98	0.00	0.00	0.00
3,400.00	9.09	89.73	3,364.90	2.16	453.77	453.77	0.00	0.00	0.00
3,500.00	9.09	89.73	3,463.64	2.24	469.56	469.56	0.00	0.00	0.00
3,600.00	9.09	89.73	3,562.39	2.31	485.35	485.35	0.00	0.00	0.00
3,700.00	9.09	89.73	3,661.13	2.39	501.14	501.15	0.00	0.00	0.00
3,752.71	9.09	89.73	3,713.18	2.43	509.47	509.47	0.00	0.00	0.00
3,778.92	10.66	89.75	3,739.00	2.45	513.96	513.96	6.00	6.00	0.09
GLORIETA									
3,800.00	11.92	89.77	3,759.67	2.46	518.09	518.09	6.00	6.00	0.07
3,812.62	12.68	89.77	3,772.00	2.47	520.78	520.78	6.00	6.00	0.06
PADDOCK									
3,850.00	14.92	89.79	3,808.30	2.51	529.69	529.70	6.00	6.00	0.05
3,900.00	17.92	89.81	3,856.26	2.56	543.83	543.83	6.00	6.00	0.03



Planning Report



Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well 002H
Company:	Longfellow Energy	TVD Reference:	RKB = 17' @ 3713.20usft (AKITA 524)
Project:	Eddy Co., NM (Nad-83)	MD Reference:	RKB = 17' @ 3713.20usft (AKITA 524)
Site:	PRINCE FEDERAL 19B	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)
3,950.00	20.92	89.82	3,903.41	2.61	560.46	560.46	6.00	6.00	0.02
4,000.00	23.92	89.83	3,949.62	2.67	579.53	579.53	6.00	6.00	0.02
4,050.00	26.92	89.84	3,994.77	2.73	600.99	600.99	6.00	6.00	0.01
4,100.00	29.92	89.84	4,038.74	2.80	624.79	624.79	6.00	6.00	0.01
4,150.00	32.92	89.85	4,081.40	2.87	650.85	650.86	6.00	6.00	0.01
4,200.00	35.92	89.85	4,122.64	2.95	679.11	679.12	6.00	6.00	0.01
4,250.00	38.92	89.85	4,162.34	3.02	709.50	709.50	6.00	6.00	0.01
4,300.00	41.92	89.86	4,200.40	3.10	741.91	741.92	6.00	6.00	0.01
4,321.18	43.19	89.86	4,216.00	3.14	756.24	756.24	6.00	6.00	0.01
BLINBERRY									
4,350.00	44.92	89.86	4,236.71	3.19	776.28	776.28	6.00	6.00	0.01
4,400.00	47.92	89.86	4,271.18	3.28	812.50	812.50	6.00	6.00	0.01
4,450.00	50.92	89.87	4,303.69	3.37	850.47	850.48	6.00	6.00	0.00
4,500.00	53.92	89.87	4,334.18	3.46	890.09	890.10	6.00	6.00	0.00
4,550.00	56.92	89.87	4,362.55	3.55	931.26	931.26	6.00	6.00	0.00
4,601.27	60.00	89.87	4,389.37	3.65	974.95	974.95	6.00	6.00	0.00
4,700.00	60.00	89.87	4,438.73	3.84	1,060.45	1,060.46	0.00	0.00	0.00
4,801.27	60.00	89.87	4,489.37	4.04	1,148.15	1,148.16	0.00	0.00	0.00
4,850.00	64.87	89.87	4,511.91	4.14	1,191.34	1,191.35	10.00	10.00	0.00
4,900.00	69.87	89.87	4,531.14	4.24	1,237.48	1,237.48	10.00	10.00	0.00
4,950.00	74.87	89.87	4,546.28	4.35	1,285.11	1,285.12	10.00	10.00	0.00
5,000.00	79.87	89.87	4,557.20	4.46	1,333.89	1,333.90	10.00	10.00	0.00
5,050.00	84.87	89.87	4,563.84	4.57	1,383.43	1,383.44	10.00	10.00	0.00
5,089.18	88.79	89.87	4,566.00	4.66	1,422.54	1,422.55	10.00	10.00	0.00
5,100.00	88.79	89.87	4,566.23	4.68	1,433.36	1,433.37	0.00	0.00	0.00
5,200.00	88.79	89.87	4,568.34	4.91	1,533.34	1,533.35	0.00	0.00	0.00
5,300.00	88.79	89.87	4,570.45	5.13	1,633.32	1,633.32	0.00	0.00	0.00
5,400.00	88.79	89.87	4,572.56	5.36	1,733.29	1,733.30	0.00	0.00	0.00
5,500.00	88.79	89.87	4,574.67	5.58	1,833.27	1,833.28	0.00	0.00	0.00
5,600.00	88.79	89.87	4,576.78	5.80	1,933.25	1,933.26	0.00	0.00	0.00
5,700.00	88.79	89.87	4,578.89	6.03	2,033.23	2,033.23	0.00	0.00	0.00
5,800.00	88.79	89.87	4,581.00	6.25	2,133.20	2,133.21	0.00	0.00	0.00
5,900.00	88.79	89.87	4,583.10	6.48	2,233.18	2,233.19	0.00	0.00	0.00
6,000.00	88.79	89.87	4,585.21	6.70	2,333.16	2,333.17	0.00	0.00	0.00
6,100.00	88.79	89.87	4,587.32	6.93	2,433.14	2,433.15	0.00	0.00	0.00
6,200.00	88.79	89.87	4,589.43	7.15	2,533.11	2,533.12	0.00	0.00	0.00
6,300.00	88.79	89.87	4,591.54	7.38	2,633.09	2,633.10	0.00	0.00	0.00
6,400.00	88.79	89.87	4,593.65	7.60	2,733.07	2,733.08	0.00	0.00	0.00
6,500.00	88.79	89.87	4,595.76	7.82	2,833.05	2,833.06	0.00	0.00	0.00
6,600.00	88.79	89.87	4,597.87	8.05	2,933.02	2,933.03	0.00	0.00	0.00
6,700.00	88.79	89.87	4,599.98	8.27	3,033.00	3,033.01	0.00	0.00	0.00
6,800.00	88.79	89.87	4,602.09	8.50	3,132.98	3,132.99	0.00	0.00	0.00
6,900.00	88.79	89.87	4,604.20	8.72	3,232.96	3,232.97	0.00	0.00	0.00
7,000.00	88.79	89.87	4,606.31	8.95	3,332.93	3,332.94	0.00	0.00	0.00
7,100.00	88.79	89.87	4,608.42	9.17	3,432.91	3,432.92	0.00	0.00	0.00
7,200.00	88.79	89.87	4,610.53	9.40	3,532.89	3,532.90	0.00	0.00	0.00
7,300.00	88.79	89.87	4,612.64	9.62	3,632.87	3,632.88	0.00	0.00	0.00
7,400.00	88.79	89.87	4,614.75	9.85	3,732.84	3,732.86	0.00	0.00	0.00
7,500.00	88.79	89.87	4,616.86	10.07	3,832.82	3,832.83	0.00	0.00	0.00
7,600.00	88.79	89.87	4,618.97	10.29	3,932.80	3,932.81	0.00	0.00	0.00
7,700.00	88.79	89.87	4,621.08	10.52	4,032.78	4,032.79	0.00	0.00	0.00
7,800.00	88.79	89.87	4,623.19	10.74	4,132.75	4,132.77	0.00	0.00	0.00
7,900.00	88.79	89.87	4,625.30	10.97	4,232.73	4,232.74	0.00	0.00	0.00



Planning Report



Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well 002H
Company:	Longfellow Energy	TVD Reference:	RKB = 17' @ 3713.20usft (AKITA 524)
Project:	Eddy Co., NM (Nad-83)	MD Reference:	RKB = 17' @ 3713.20usft (AKITA 524)
Site:	PRINCE FEDERAL 19B	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)	
8,000.00	88.79	89.87	4,627.40	11.19	4,332.71	4,332.72	0.00	0.00	0.00	
8,100.00	88.79	89.87	4,629.51	11.42	4,432.69	4,432.70	0.00	0.00	0.00	
8,200.00	88.79	89.87	4,631.62	11.64	4,532.66	4,532.68	0.00	0.00	0.00	
8,300.00	88.79	89.87	4,633.73	11.87	4,632.64	4,632.66	0.00	0.00	0.00	
8,400.00	88.79	89.87	4,635.84	12.09	4,732.62	4,732.63	0.00	0.00	0.00	
8,500.00	88.79	89.87	4,637.95	12.31	4,832.60	4,832.61	0.00	0.00	0.00	
8,600.00	88.79	89.87	4,640.06	12.54	4,932.57	4,932.59	0.00	0.00	0.00	
8,700.00	88.79	89.87	4,642.17	12.76	5,032.55	5,032.57	0.00	0.00	0.00	
8,800.00	88.79	89.87	4,644.28	12.99	5,132.53	5,132.54	0.00	0.00	0.00	
8,900.00	88.79	89.87	4,646.39	13.21	5,232.51	5,232.52	0.00	0.00	0.00	
9,000.00	88.79	89.87	4,648.50	13.44	5,332.48	5,332.50	0.00	0.00	0.00	
9,100.00	88.79	89.87	4,650.61	13.66	5,432.46	5,432.48	0.00	0.00	0.00	
9,200.00	88.79	89.87	4,652.72	13.89	5,532.44	5,532.46	0.00	0.00	0.00	
9,300.00	88.79	89.87	4,654.83	14.11	5,632.42	5,632.43	0.00	0.00	0.00	
9,400.00	88.79	89.87	4,656.94	14.34	5,732.39	5,732.41	0.00	0.00	0.00	
9,500.00	88.79	89.87	4,659.05	14.56	5,832.37	5,832.39	0.00	0.00	0.00	
9,600.00	88.79	89.87	4,661.16	14.78	5,932.35	5,932.37	0.00	0.00	0.00	
9,700.00	88.79	89.87	4,663.27	15.01	6,032.33	6,032.34	0.00	0.00	0.00	
9,749.56	88.79	89.87	4,664.31	15.12	6,081.87	6,081.89	0.00	0.00	0.00	
9,800.00	88.79	89.87	4,665.38	15.23	6,132.30	6,132.32	0.00	0.00	0.00	
9,829.58	88.79	89.87	4,666.00	15.30	6,161.88	6,161.90	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
PRINCE #2: SHL - hit/miss target - Shape - Point	0.00	0.00	0.00	0.00	0.00	663,041.48	605,110.31	32.822557	-104.125732	
PRINCE #2: FTP - plan hits target center - Point	0.00	0.00	4,566.00	4.66	1,422.54	663,046.14	606,532.86	32.822562	-104.121102	
PRINCE #2: LTP - plan misses target center by 0.35usft at 9749.56usft MD (4664.31 TVD, 15.12 N, 6081.87 E) - Point	0.00	0.00	4,664.31	15.47	6,081.87	663,056.96	611,192.18	32.822565	-104.105934	
PRINCE #2: BHL - plan hits target center - Point	0.00	0.00	4,666.00	15.30	6,161.88	663,056.78	611,272.19	32.822564	-104.105674	



Planning Report



Database:	WBDS_SQL_2	Local Co-ordinate Reference:	Well 002H
Company:	Longfellow Energy	TVD Reference:	RKB = 17' @ 3713.20usft (AKITA 524)
Project:	Eddy Co., NM (Nad-83)	MD Reference:	RKB = 17' @ 3713.20usft (AKITA 524)
Site:	PRINCE FEDERAL 19B	North Reference:	Grid
Well:	002H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN #1		

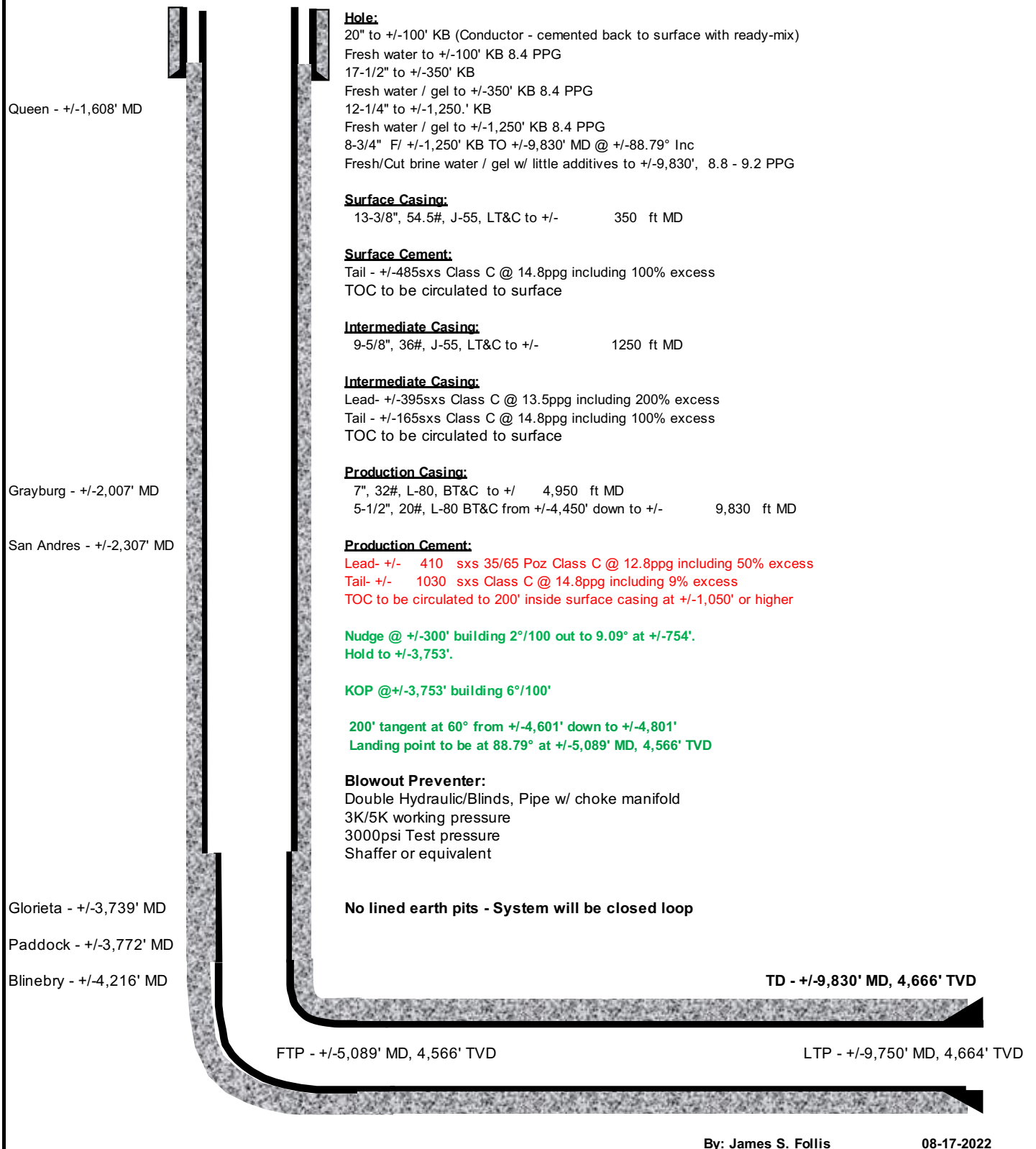
Formations						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
	1,620.78	1,608.00	QUEEN		0.000	
	2,024.85	2,007.00	GRAYBURG		0.000	
	2,328.66	2,307.00	SAN ANDRES		0.000	
	3,778.92	3,739.00	GLORIETA		0.000	
	3,812.62	3,772.00	PADDOCK		0.000	
	4,321.18	4,216.00	BLINBERRY		0.000	



LEASE: Prince Federal 19B
FIELD: Empire; Glorieta-Yeso
STATE: New Mexico
SL: Sec-24-T17S-R28E, 2188' FNL & 1323' FEL

WELL #: 002H
COUNTY: Eddy
API#:
KB: 3,713.8ft (17ft)

PROPOSED HORIZONTAL WELLBORE



District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 146417

CONDITIONS

Operator: LONGFELLOW ENERGY, LP 8115 Preston Road Dallas, TX 75225	OGRID: 372210
	Action Number: 146417
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
kpickford	Adhere to previous NMOCD Conditions of Approval	9/28/2022