

Well Name: OZZY FEDERAL COM 18D	Well Location: T17S / R28E / SEC 13 / SESE / 32.8292541 / -104.1235236	County or Parish/State: EDDY / NM
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: 3001548328	Operator: LONGFELLOW ENERGY LP	

Notice of Intent

Sundry ID: 2778217

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 03/06/2024	Time Sundry Submitted: 03:13
Date proposed operation will begin: 07/15/2024	

Procedure Description: Will change from 1-mile lateral to 2-mile lateral. Request to change SHL from 245' FSL & 650' FEL, Section 13-17S-28E to 240' FSL & 610' FEL, Section 13-17S-28E. Request to change BHL from 830' FSL and 20' FEL, Section 18-17S-29E to 489' FSL & 20' FEL, Section 17-17S-29E. TVD will change from 4070' to 4280', but is still in the Glorieta-Yeso. MD will change from 9131' to 14501'. Pad has not yet been built. No change in pad footprint. Revised drilling documents attached.

NOI Attachments

Procedure Description

Ozzy_18D_2H_Revised_Drilling_Docs_20240306150703.pdf

Well Name: OZZY FEDERAL COM 18D	Well Location: T17S / R28E / SEC 13 / SESE / 32.8292541 / -104.1235236	County or Parish/State: EDDY / NM
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: 3001548328	Operator: LONGFELLOW ENERGY LP	

Conditions of Approval

Additional

13_17_28_P_Sundry_ID_2778217_Ozzy_Federal_Com_18D_002H_Eddy_NM14847_LONGFELLOW_ENERGY_LP_13_22g_2_27_2024_LV_20240923084142.pdf

Ozzy_Federal_Com_18D_002H_Dr_COA_20240923084142.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: MAR 06, 2024 03:09 PM
Name: LONGFELLOW ENERGY LP	
Title: Permitting Agent	
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: 09/23/2024
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: (505) 748-1283 Fax: (505) 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 30-015-48328	² Pool Code 96210	³ Pool Name EMPIRE; GLORIETA-YESO
⁴ Property Code 330812	⁵ Property Name OZZY FEDERAL COM 18D	⁶ Well Number 002H
⁷ OGRID No. 372210	⁸ Operator Name LONGFELLOW ENERGY, LP	⁹ Elevation 3697.6

¹⁰ Surface Location

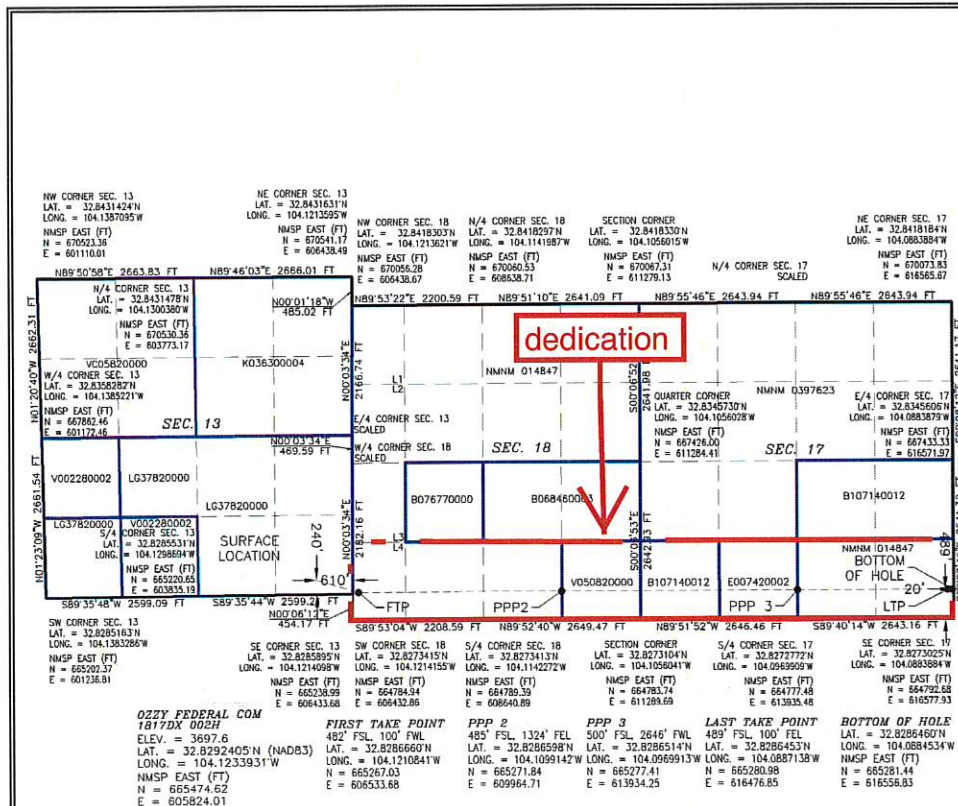
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	13	17 S	28 E		240	SOUTH	610	EAST	EDDY

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
P	17	17 S	29 E		489	SOUTH	20	EAST	EDDY

¹² Dedicated Acres 307.04	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.

Signature: *Brian Wood* Date: **3-6-24**

Printed Name: **BRIAN WOOD**

E-mail Address: **brian@permitswest.com**

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.

NOVEMBER 27, 2023

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number: **12797**

WILLIAM F. JARAMILLO

PROFESSIONAL SURVEYOR

NO. 8394A

Intent ☒ YES As Drilled ☐

API # 30-015-48328		
Operator Name: LONGFELLOW ENERGY, LP	Property Name: OZZY FEDERAL COM 18D	Well Number 002H

Kick Off Point (KOP)

UL P	Section 13	Township 17S	Range 28E	Lot	Feet 240	From N/S SOUTH	Feet 610	From E/W EAST	County EDDY
Latitude 32.8292405					Longitude 104.1233931			NAD 83	

First Take Point (FTP)

UL P	Section 18	Township 17S	Range 29E	Lot 4	Feet 482	From N/S SOUTH	Feet 100	From E/W WEST	County EDDY
Latitude 32.8286660					Longitude 104.1210841			NAD 83	

Last Take Point (LTP)

UL P	Section 17	Township 17S	Range 29E	Lot	Feet 489	From N/S SOUTH	Feet 100	From E/W EAST	County EDDY
Latitude 32.8286453					Longitude 104.0887138			NAD 83	

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

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

API #		
Operator Name:	Property Name:	Well Number

KZ 06/29/2018

Longfellow Energy, LP
 Ozzy Federal Com 18D 002H
 SHL 240' FSL & 610' FEL 13-17S-28E
 BHL 489' FSL & 20' FEL 17-17S-29E
 Eddy County, NM

DRILL PLAN PAGE 1

"fee/fee/Fed"

"pad Ozzy 18D"

Changing from 1-mile lateral to 2-mile lateral. SHL was at 245' FSL & 650' FEL 13-17s-28e. SHL has now moved 40' ESE to 240' FSL & 610' FEL 13-17s-28e. BHL was at 830' FSL and 20' FEL 18-17s-29e. BHL has now moved >1-mile East to 489' FSL & 20' FEL 17-17s-29e. TVD changed from 4070' to 4280' but is still in the Yeso. MD changed from 9131' to 14501'. Casing, cement, and mud changed. Pad has not been built. No change in pad footprint.

Drilling Program

1. ESTIMATED TOPS

Formation/Lithology	TVD	MD	Contents
Quaternary caliche	000'	000'	water
Rustler anhydrite	275'	275'	N/A
Salt top	425'	425'	N/A
Salt base	650'	651'	N/A
Yates dolomite	838'	840'	hydrocarbons
Seven Rivers gypsum	1114'	1117'	N/A
Queen sandstone	1633'	1640'	hydrocarbons
Grayburg dolomite	2041'	2050'	hydrocarbons
San Andres dolomite	2347'	2358'	hydrocarbons
(KOP	2978'	2992'	hydrocarbons)
Glorieta dolomite	3751'	3849'	hydrocarbons
Yeso Paddock dolomite	3785'	3900'	hydrocarbons
TD	4280'	14501'	hydrocarbons

2. NOTABLE ZONES

Yeso Paddock is the goal. Closest water well (RA 12307 POD 1) is 1.24 miles northwest. Water bearing strata were found at 80' in this 140' deep water well.

Longfellow Energy, LP
 Ozzy Federal Com 18D 002H
 SHL 240' FSL & 610' FEL 13-17S-28E
 BHL 489' FSL & 20' FEL 17-17S-29E
 Eddy County, NM

DRILL PLAN PAGE 2

"fee/fee/Fed"

"pad Ozzy 18D"

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.

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 to the APD, 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' - 360'	0' - 360'	Surface 13.375"	54.5	J-55	LTC	1.125	1.125	1.8
12.25"	0' - 1300'	0' - 1295'	Inter. 9.625"	36	J-55	LTC	1.125	1.125	1.8
8.75"	0' - 4424'	0' - 4042'	Prod. 1 7"	32	L-80	BTC	1.125	1.125	1.8
	4424' - 14501'	4042' - 4280'	Prod. 2 5.5"	20	L-80	BTC	1.125	1.125	1.8

Longfellow Energy, LP
 Ozzy Federal Com 18D 002H
 SHL 240' FSL & 610' FEL 13-17S-28E
 BHL 489' FSL & 20' FEL 17-17S-29E
 Eddy County, NM

DRILL PLAN PAGE 3

"fee/fee/Fed"

"pad Ozzy 18D"

Casing Name	Type	Sacks	Yield	Cu. Ft.	Weight	Blend
Surface	Lead	260	1.72	447	13.5	Class C
	Tail	125	1.33	166	14.8	Class C
TOC = GL		>100% Excess			Minimum 1 per joint starting with shoe	
Intermediate	Lead	375	2.16	810	12.2	25/75 Poz C
	Tail	170	1.33	226	14.8	Class C
TOC = GL		>100% excess			As needed	
Production	Lead	350	2.16	756	12.2	25/75 Poz C
	Tail	1730	1.33	2300	14.8	Class C
TOC = $\leq$ 1095'		50% Excess			As needed	

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' - 360'	8.4 - 9.0	28 - 40	NC	7.0 - 8.0
Salt saturated	360' - 1300'	8.8 - 9.2	28 - 30	NC	9.0 - 10.5
cut brine	1300' - 14501'	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.

Longfellow Energy, LP
Ozzy Federal Com 18D 002H
SHL 240' FSL & 610' FEL 13-17S-28E
BHL 489' FSL & 20' FEL 17-17S-29E
Eddy County, NM

DRILL PLAN PAGE 4

"fee/fee/Fed"

"pad Ozzy 18D"

7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈ 1860 psi. Expected bottom hole temperature is $\approx 105^{\circ}$ F. A H2S drilling operation plan was attached to the APD.

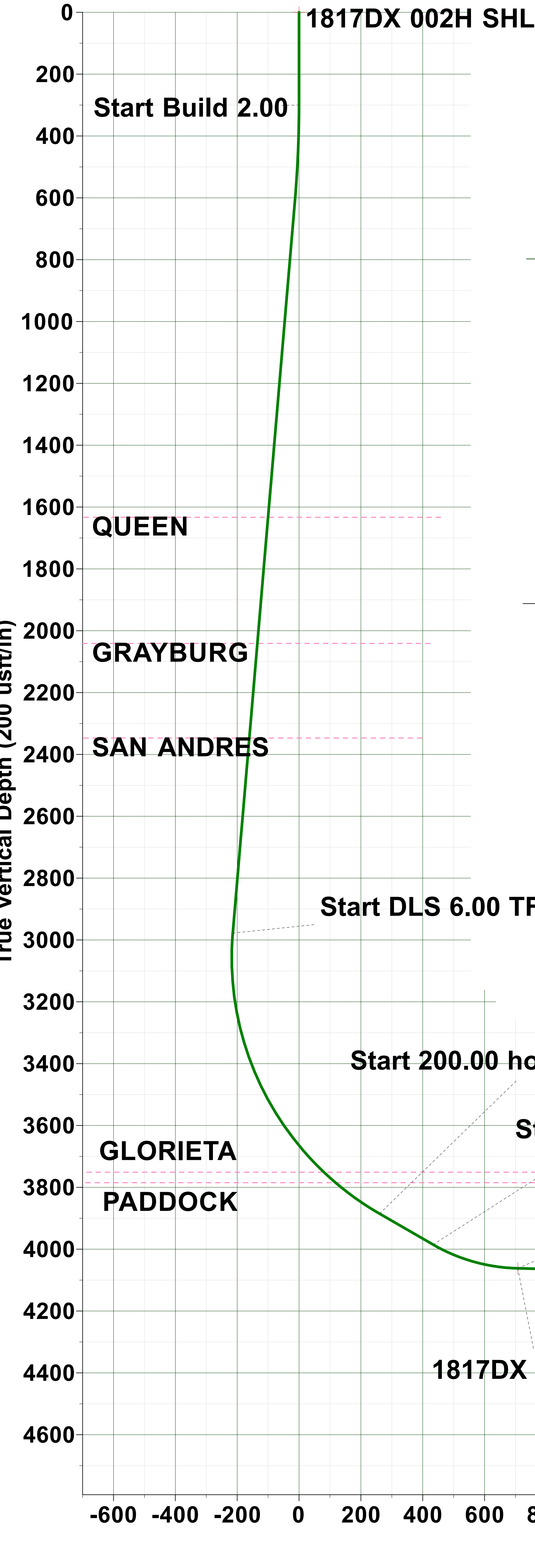
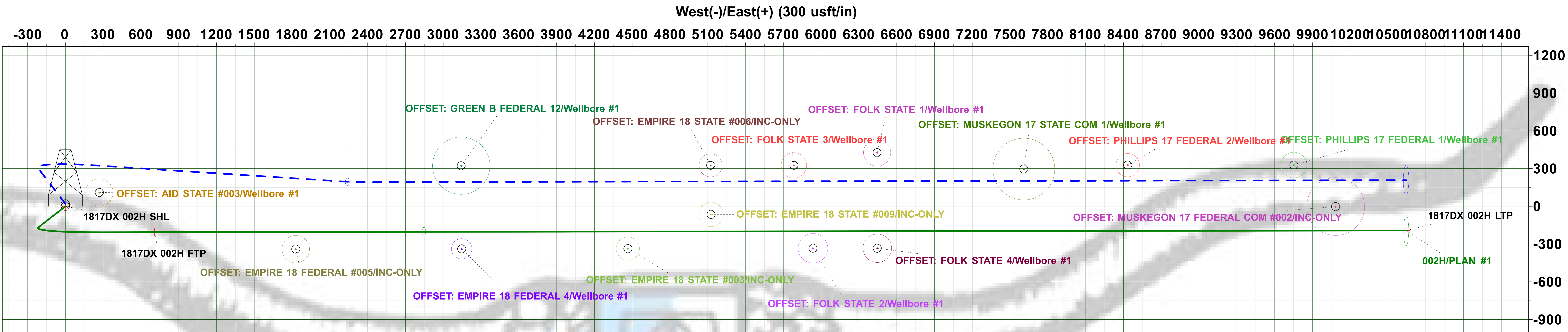
8. OTHER INFORMATION

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



Company: Longfellow Energy
Project: Eddy Co., NM (Nad-83)
Site: OZZY FEDERAL COM
Well: 002H
Wellbore: OH
Rig: TBD
Design: PLAN #1 / 11:01, November 06 2023

18D



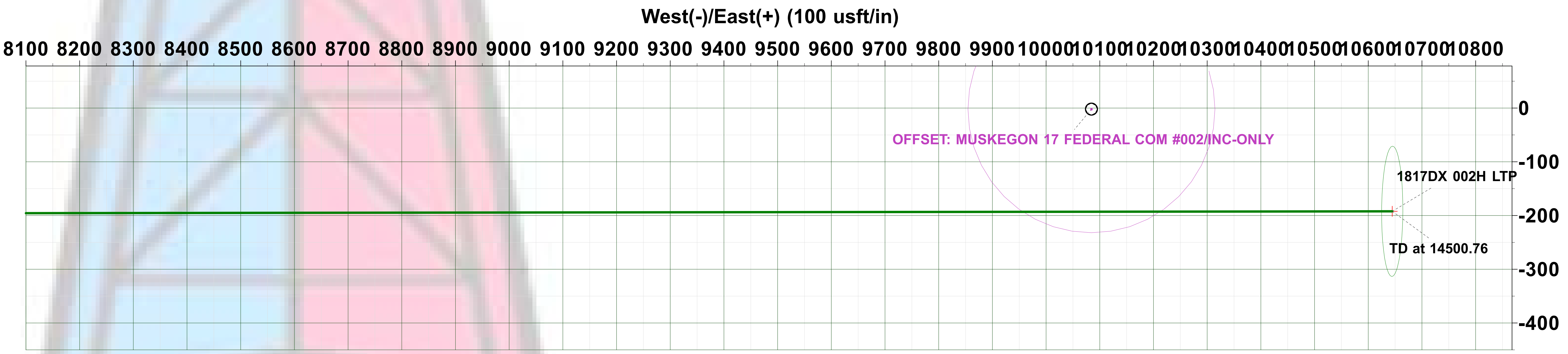
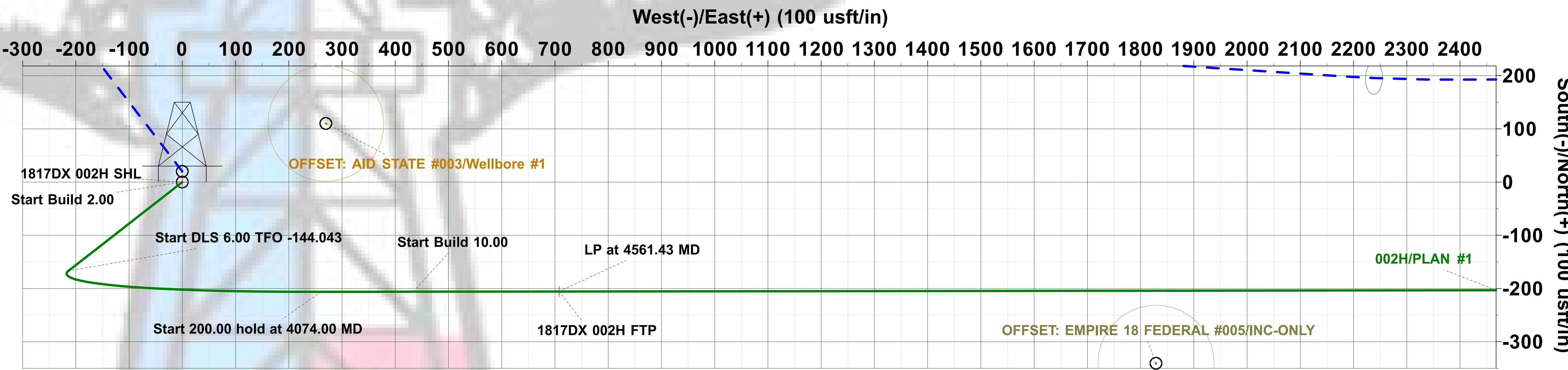
WELL DETAILS: 002H					
RKB = 20.3' @ 3723.30usft (TBD)					
3703.00					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	665472.63	605826.81	32.829235	-104.123384

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	606.90	6.14	232.04	606.31	-10.10	-12.95	2.00	-12.96	
4	2992.17	6.14	232.04	2977.91	-166.98	-214.03	0.00	-214.27	
5	4074.00	60.00	89.92	3885.38	-206.21	260.70	6.00	260.42	
6	4274.00	60.00	89.92	3985.38	-205.97	433.91	0.00	433.62	
7	4561.43	88.74	89.92	4062.00	-205.60	707.82	10.00	707.53	1817DX 002H FTP
8	14500.76	88.74	89.92	4280.00	-192.13	10644.75	0.00	10644.47	1817DX 002H LTP

DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
1817DX 002H SHL	0.00	0.00	0.00	665472.63	605826.81	32.829235	-104.123384	
1817DX 002H FTP	4062.00	-205.60	707.82	665267.03	606534.63	32.828666	-104.121081	
1817DX 002H LTP	4280.00	-192.13	10644.75	665280.51	616471.56	32.828644	-104.088731	

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

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1633.00	1639.51	QUEEN
2041.00	2049.86	GRAYBURG
2347.00	2357.62	SAN ANDRES
3751.00	3848.82	GLORIETA
3785.00	3899.68	PADDOCK



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





Planning Report



Database:	WBDS_SQL_3	Local Co-ordinate Reference:	Well 002H
Company:	Longfellow Energy	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Project:	Eddy Co., NM (Nad-83)	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site:	OZZY FEDERAL COM 1817DX	North Reference:	Grid
Well:	002H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
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	OZZY FEDERAL COM 1817DX				
Site Position:		Northing:	665,492.65 usft	Latitude:	32.829290
From:	Lat/Long	Easting:	605,826.77 usft	Longitude:	-104.123384
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in		

Well	002H					
Well Position	+N-S	0.00 usft	Northing:	665,472.64 usft	Latitude:	32.829235
	+E-W	0.00 usft	Easting:	605,826.81 usft	Longitude:	-104.123384
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	3,703.00 usft
Grid Convergence:	0.114 °					

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	89.92

Plan Survey Tool Program	Date	11/06/23			
Depth From	Depth To	Survey (Wellbore)	Tool Name	Remarks	
(usft)	(usft)				
1	0.00	14,500.76	PLAN #1 (OH)	MWD+IFR1+SAG+FDIR	
				OWSG MWD + IFR1 + Sag	

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100ft)	(°/100ft)	(°/100ft)		
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	
606.90	6.14	232.04	606.31	-10.10	-12.95	2.00	2.00	0.00	232.041	
2,992.17	6.14	232.04	2,977.91	-166.98	-214.03	0.00	0.00	0.00	0.000	
4,074.00	60.00	89.92	3,885.38	-206.21	260.70	6.00	4.98	-13.14	-144.043	
4,274.00	60.00	89.92	3,985.38	-205.97	433.91	0.00	0.00	0.00	0.000	
4,561.43	88.74	89.92	4,062.00	-205.60	707.82	10.00	10.00	0.00	0.000	1817DX 002H FTP
14,500.76	88.74	89.92	4,280.00	-192.13	10,644.75	0.00	0.00	0.00	0.000	1817DX 002H LTP



Planning Report



Database:	WBDS_SQL_3	Local Co-ordinate Reference:	Well 002H
Company:	Longfellow Energy	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Project:	Eddy Co., NM (Nad-83)	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site:	OZZY FEDERAL COM 1817DX	North Reference:	Grid
Well:	002H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
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
1817DX 002H SHL									
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	232.04	399.98	-1.07	-1.38	-1.38	2.00	2.00	0.00
500.00	4.00	232.04	499.84	-4.29	-5.50	-5.51	2.00	2.00	0.00
606.90	6.14	232.04	606.31	-10.10	-12.95	-12.96	2.00	2.00	0.00
700.00	6.14	232.04	698.88	-16.22	-20.80	-20.82	0.00	0.00	0.00
800.00	6.14	232.04	798.31	-22.80	-29.23	-29.26	0.00	0.00	0.00
900.00	6.14	232.04	897.73	-29.38	-37.66	-37.70	0.00	0.00	0.00
1,000.00	6.14	232.04	997.16	-35.96	-46.09	-46.14	0.00	0.00	0.00
1,100.00	6.14	232.04	1,096.59	-42.53	-54.52	-54.58	0.00	0.00	0.00
1,200.00	6.14	232.04	1,196.01	-49.11	-62.95	-63.02	0.00	0.00	0.00
1,300.00	6.14	232.04	1,295.44	-55.69	-71.38	-71.46	0.00	0.00	0.00
1,400.00	6.14	232.04	1,394.87	-62.26	-79.81	-79.90	0.00	0.00	0.00
1,500.00	6.14	232.04	1,494.29	-68.84	-88.24	-88.34	0.00	0.00	0.00
1,600.00	6.14	232.04	1,593.72	-75.42	-96.67	-96.77	0.00	0.00	0.00
1,639.51	6.14	232.04	1,633.00	-78.01	-100.00	-100.11	0.00	0.00	0.00
QUEEN									
1,700.00	6.14	232.04	1,693.15	-81.99	-105.10	-105.21	0.00	0.00	0.00
1,800.00	6.14	232.04	1,792.57	-88.57	-113.53	-113.65	0.00	0.00	0.00
1,900.00	6.14	232.04	1,892.00	-95.15	-121.96	-122.09	0.00	0.00	0.00
2,000.00	6.14	232.04	1,991.43	-101.72	-130.39	-130.53	0.00	0.00	0.00
2,049.86	6.14	232.04	2,041.00	-105.00	-134.59	-134.74	0.00	0.00	0.00
GRAYBURG									
2,100.00	6.14	232.04	2,090.85	-108.30	-138.82	-138.97	0.00	0.00	0.00
2,200.00	6.14	232.04	2,190.28	-114.88	-147.25	-147.41	0.00	0.00	0.00
2,300.00	6.14	232.04	2,289.71	-121.45	-155.68	-155.85	0.00	0.00	0.00
2,357.62	6.14	232.04	2,347.00	-125.24	-160.54	-160.71	0.00	0.00	0.00
SAN ANDRES									
2,400.00	6.14	232.04	2,389.13	-128.03	-164.11	-164.29	0.00	0.00	0.00
2,500.00	6.14	232.04	2,488.56	-134.61	-172.54	-172.73	0.00	0.00	0.00
2,600.00	6.14	232.04	2,587.99	-141.18	-180.97	-181.17	0.00	0.00	0.00
2,700.00	6.14	232.04	2,687.41	-147.76	-189.40	-189.61	0.00	0.00	0.00
2,800.00	6.14	232.04	2,786.84	-154.34	-197.83	-198.05	0.00	0.00	0.00
2,900.00	6.14	232.04	2,886.27	-160.92	-206.26	-206.49	0.00	0.00	0.00
2,992.17	6.14	232.04	2,977.91	-166.98	-214.03	-214.27	0.00	0.00	0.00
3,000.00	5.76	229.29	2,985.70	-167.49	-214.66	-214.89	6.00	-4.77	-35.09
3,050.00	3.90	200.55	3,035.52	-170.72	-217.16	-217.40	6.00	-3.73	-57.48
3,100.00	3.90	155.27	3,085.42	-173.86	-217.05	-217.29	6.00	-0.01	-90.56
3,150.00	5.76	126.45	3,135.25	-176.89	-214.32	-214.57	6.00	3.72	-57.64
3,200.00	8.31	113.35	3,184.87	-179.82	-208.99	-209.24	6.00	5.11	-26.20
3,250.00	11.09	106.56	3,234.15	-182.62	-201.06	-201.31	6.00	5.56	-13.58
3,300.00	13.96	102.50	3,282.96	-185.30	-190.56	-190.82	6.00	5.74	-8.12
3,350.00	16.87	99.81	3,331.16	-187.84	-177.52	-177.78	6.00	5.83	-5.38
3,400.00	19.81	97.90	3,378.61	-190.24	-161.97	-162.24	6.00	5.88	-3.83
3,450.00	22.77	96.46	3,425.19	-192.49	-143.96	-144.23	6.00	5.91	-2.87
3,500.00	25.73	95.34	3,470.78	-194.59	-123.54	-123.81	6.00	5.93	-2.24
3,550.00	28.70	94.44	3,515.24	-196.53	-100.76	-101.03	6.00	5.94	-1.81
3,600.00	31.68	93.69	3,558.45	-198.31	-75.68	-75.96	6.00	5.95	-1.49
3,650.00	34.66	93.06	3,600.30	-199.91	-48.38	-48.65	6.00	5.96	-1.26
3,700.00	37.64	92.52	3,640.67	-201.34	-18.92	-19.20	6.00	5.97	-1.08
3,750.00	40.63	92.05	3,679.45	-202.59	12.61	12.33	6.00	5.97	-0.95



Planning Report



Database:	WBDS_SQL_3	Local Co-ordinate Reference:	Well 002H
Company:	Longfellow Energy	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Project:	Eddy Co., NM (Nad-83)	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site:	OZZY FEDERAL COM 1817DX	North Reference:	Grid
Well:	002H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
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)
3,800.00	43.61	91.63	3,716.53	-203.67	46.12	45.84	6.00	5.97	-0.84
3,848.82	46.53	91.26	3,751.00	-204.53	80.67	80.38	6.00	5.98	-0.75
GLORIETA									
3,850.00	46.60	91.25	3,751.81	-204.55	81.53	81.24	6.00	5.98	-0.71
3,899.68	49.57	90.91	3,785.00	-205.25	118.49	118.21	6.00	5.98	-0.68
PADDOCK									
3,900.00	49.59	90.91	3,785.20	-205.25	118.73	118.45	6.00	5.98	-0.65
3,950.00	52.58	90.60	3,816.61	-205.76	157.63	157.34	6.00	5.98	-0.62
4,000.00	55.57	90.31	3,845.94	-206.08	198.11	197.83	6.00	5.98	-0.57
4,050.00	58.56	90.04	3,873.12	-206.21	240.08	239.79	6.00	5.98	-0.54
4,074.00	60.00	89.92	3,885.38	-206.21	260.70	260.42	6.00	5.98	-0.51
4,100.00	60.00	89.92	3,898.38	-206.17	283.22	282.94	0.00	0.00	0.00
4,200.00	60.00	89.92	3,948.38	-206.06	369.83	369.54	0.00	0.00	0.00
4,274.00	60.00	89.92	3,985.38	-205.97	433.91	433.62	0.00	0.00	0.00
4,300.00	62.60	89.92	3,997.86	-205.94	456.72	456.43	10.00	10.00	0.00
4,350.00	67.60	89.92	4,018.91	-205.88	502.05	501.77	10.00	10.00	0.00
4,400.00	72.60	89.92	4,035.92	-205.81	549.05	548.77	10.00	10.00	0.00
4,450.00	77.60	89.92	4,048.77	-205.75	597.36	597.07	10.00	10.00	0.00
4,500.00	82.60	89.92	4,057.37	-205.68	646.60	646.31	10.00	10.00	0.00
4,550.00	87.60	89.92	4,061.64	-205.61	696.40	696.11	10.00	10.00	0.00
4,561.43	88.74	89.92	4,062.00	-205.60	707.82	707.53	10.00	10.00	0.00
1817DX 002H FTP									
4,600.00	88.74	89.92	4,062.85	-205.55	746.38	746.10	0.00	0.00	0.00
4,700.00	88.74	89.92	4,065.04	-205.41	846.36	846.07	0.00	0.00	0.00
4,800.00	88.74	89.92	4,067.23	-205.28	946.33	946.05	0.00	0.00	0.00
4,900.00	88.74	89.92	4,069.43	-205.14	1,046.31	1,046.02	0.00	0.00	0.00
5,000.00	88.74	89.92	4,071.62	-205.00	1,146.29	1,146.00	0.00	0.00	0.00
5,100.00	88.74	89.92	4,073.81	-204.87	1,246.26	1,245.98	0.00	0.00	0.00
5,200.00	88.74	89.92	4,076.01	-204.73	1,346.24	1,345.95	0.00	0.00	0.00
5,300.00	88.74	89.92	4,078.20	-204.60	1,446.21	1,445.93	0.00	0.00	0.00
5,400.00	88.74	89.92	4,080.39	-204.46	1,546.19	1,545.90	0.00	0.00	0.00
5,500.00	88.74	89.92	4,082.59	-204.33	1,646.17	1,645.88	0.00	0.00	0.00
5,600.00	88.74	89.92	4,084.78	-204.19	1,746.14	1,745.85	0.00	0.00	0.00
5,700.00	88.74	89.92	4,086.97	-204.06	1,846.12	1,845.83	0.00	0.00	0.00
5,800.00	88.74	89.92	4,089.17	-203.92	1,946.09	1,945.81	0.00	0.00	0.00
5,900.00	88.74	89.92	4,091.36	-203.78	2,046.07	2,045.78	0.00	0.00	0.00
6,000.00	88.74	89.92	4,093.55	-203.65	2,146.05	2,145.76	0.00	0.00	0.00
6,100.00	88.74	89.92	4,095.75	-203.51	2,246.02	2,245.73	0.00	0.00	0.00
6,200.00	88.74	89.92	4,097.94	-203.38	2,346.00	2,345.71	0.00	0.00	0.00
6,300.00	88.74	89.92	4,100.13	-203.24	2,445.97	2,445.69	0.00	0.00	0.00
6,400.00	88.74	89.92	4,102.33	-203.11	2,545.95	2,545.66	0.00	0.00	0.00
6,500.00	88.74	89.92	4,104.52	-202.97	2,645.92	2,645.64	0.00	0.00	0.00
6,600.00	88.74	89.92	4,106.71	-202.84	2,745.90	2,745.61	0.00	0.00	0.00
6,700.00	88.74	89.92	4,108.91	-202.70	2,845.88	2,845.59	0.00	0.00	0.00
6,800.00	88.74	89.92	4,111.10	-202.56	2,945.85	2,945.57	0.00	0.00	0.00
6,900.00	88.74	89.92	4,113.29	-202.43	3,045.83	3,045.54	0.00	0.00	0.00
7,000.00	88.74	89.92	4,115.49	-202.29	3,145.80	3,145.52	0.00	0.00	0.00
7,100.00	88.74	89.92	4,117.68	-202.16	3,245.78	3,245.49	0.00	0.00	0.00
7,200.00	88.74	89.92	4,119.87	-202.02	3,345.76	3,345.47	0.00	0.00	0.00
7,300.00	88.74	89.92	4,122.07	-201.89	3,445.73	3,445.45	0.00	0.00	0.00
7,400.00	88.74	89.92	4,124.26	-201.75	3,545.71	3,545.42	0.00	0.00	0.00
7,500.00	88.74	89.92	4,126.45	-201.62	3,645.68	3,645.40	0.00	0.00	0.00
7,600.00	88.74	89.92	4,128.65	-201.48	3,745.66	3,745.37	0.00	0.00	0.00



Planning Report



Database:	WBDS_SQL_3	Local Co-ordinate Reference:	Well 002H
Company:	Longfellow Energy	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Project:	Eddy Co., NM (Nad-83)	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site:	OZZY FEDERAL COM 1817DX	North Reference:	Grid
Well:	002H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
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)
7,700.00	88.74	89.92	4,130.84	-201.34	3,845.63	3,845.35	0.00	0.00	0.00
7,800.00	88.74	89.92	4,133.03	-201.21	3,945.61	3,945.33	0.00	0.00	0.00
7,900.00	88.74	89.92	4,135.23	-201.07	4,045.59	4,045.30	0.00	0.00	0.00
8,000.00	88.74	89.92	4,137.42	-200.94	4,145.56	4,145.28	0.00	0.00	0.00
8,100.00	88.74	89.92	4,139.61	-200.80	4,245.54	4,245.25	0.00	0.00	0.00
8,200.00	88.74	89.92	4,141.81	-200.67	4,345.51	4,345.23	0.00	0.00	0.00
8,300.00	88.74	89.92	4,144.00	-200.53	4,445.49	4,445.21	0.00	0.00	0.00
8,400.00	88.74	89.92	4,146.19	-200.40	4,545.47	4,545.18	0.00	0.00	0.00
8,500.00	88.74	89.92	4,148.39	-200.26	4,645.44	4,645.16	0.00	0.00	0.00
8,600.00	88.74	89.92	4,150.58	-200.12	4,745.42	4,745.13	0.00	0.00	0.00
8,700.00	88.74	89.92	4,152.77	-199.99	4,845.39	4,845.11	0.00	0.00	0.00
8,800.00	88.74	89.92	4,154.97	-199.85	4,945.37	4,945.09	0.00	0.00	0.00
8,900.00	88.74	89.92	4,157.16	-199.72	5,045.34	5,045.06	0.00	0.00	0.00
9,000.00	88.74	89.92	4,159.35	-199.58	5,145.32	5,145.04	0.00	0.00	0.00
9,100.00	88.74	89.92	4,161.54	-199.45	5,245.30	5,245.01	0.00	0.00	0.00
9,200.00	88.74	89.92	4,163.74	-199.31	5,345.27	5,344.99	0.00	0.00	0.00
9,300.00	88.74	89.92	4,165.93	-199.18	5,445.25	5,444.96	0.00	0.00	0.00
9,400.00	88.74	89.92	4,168.12	-199.04	5,545.22	5,544.94	0.00	0.00	0.00
9,500.00	88.74	89.92	4,170.32	-198.90	5,645.20	5,644.92	0.00	0.00	0.00
9,600.00	88.74	89.92	4,172.51	-198.77	5,745.18	5,744.89	0.00	0.00	0.00
9,700.00	88.74	89.92	4,174.70	-198.63	5,845.15	5,844.87	0.00	0.00	0.00
9,800.00	88.74	89.92	4,176.90	-198.50	5,945.13	5,944.84	0.00	0.00	0.00
9,900.00	88.74	89.92	4,179.09	-198.36	6,045.10	6,044.82	0.00	0.00	0.00
10,000.00	88.74	89.92	4,181.28	-198.23	6,145.08	6,144.80	0.00	0.00	0.00
10,100.00	88.74	89.92	4,183.48	-198.09	6,245.06	6,244.77	0.00	0.00	0.00
10,200.00	88.74	89.92	4,185.67	-197.96	6,345.03	6,344.75	0.00	0.00	0.00
10,300.00	88.74	89.92	4,187.86	-197.82	6,445.01	6,444.72	0.00	0.00	0.00
10,400.00	88.74	89.92	4,190.06	-197.68	6,544.98	6,544.70	0.00	0.00	0.00
10,500.00	88.74	89.92	4,192.25	-197.55	6,644.96	6,644.68	0.00	0.00	0.00
10,600.00	88.74	89.92	4,194.44	-197.41	6,744.93	6,744.65	0.00	0.00	0.00
10,700.00	88.74	89.92	4,196.64	-197.28	6,844.91	6,844.63	0.00	0.00	0.00
10,800.00	88.74	89.92	4,198.83	-197.14	6,944.89	6,944.60	0.00	0.00	0.00
10,900.00	88.74	89.92	4,201.02	-197.01	7,044.86	7,044.58	0.00	0.00	0.00
11,000.00	88.74	89.92	4,203.22	-196.87	7,144.84	7,144.56	0.00	0.00	0.00
11,100.00	88.74	89.92	4,205.41	-196.74	7,244.81	7,244.53	0.00	0.00	0.00
11,200.00	88.74	89.92	4,207.60	-196.60	7,344.79	7,344.51	0.00	0.00	0.00
11,300.00	88.74	89.92	4,209.80	-196.46	7,444.77	7,444.48	0.00	0.00	0.00
11,400.00	88.74	89.92	4,211.99	-196.33	7,544.74	7,544.46	0.00	0.00	0.00
11,500.00	88.74	89.92	4,214.18	-196.19	7,644.72	7,644.44	0.00	0.00	0.00
11,600.00	88.74	89.92	4,216.38	-196.06	7,744.69	7,744.41	0.00	0.00	0.00
11,700.00	88.74	89.92	4,218.57	-195.92	7,844.67	7,844.39	0.00	0.00	0.00
11,800.00	88.74	89.92	4,220.76	-195.79	7,944.64	7,944.36	0.00	0.00	0.00
11,900.00	88.74	89.92	4,222.96	-195.65	8,044.62	8,044.34	0.00	0.00	0.00
12,000.00	88.74	89.92	4,225.15	-195.52	8,144.60	8,144.32	0.00	0.00	0.00
12,100.00	88.74	89.92	4,227.34	-195.38	8,244.57	8,244.29	0.00	0.00	0.00
12,200.00	88.74	89.92	4,229.54	-195.24	8,344.55	8,344.27	0.00	0.00	0.00
12,300.00	88.74	89.92	4,231.73	-195.11	8,444.52	8,444.24	0.00	0.00	0.00
12,400.00	88.74	89.92	4,233.92	-194.97	8,544.50	8,544.22	0.00	0.00	0.00
12,500.00	88.74	89.92	4,236.12	-194.84	8,644.48	8,644.20	0.00	0.00	0.00
12,600.00	88.74	89.92	4,238.31	-194.70	8,744.45	8,744.17	0.00	0.00	0.00
12,700.00	88.74	89.92	4,240.50	-194.57	8,844.43	8,844.15	0.00	0.00	0.00
12,800.00	88.74	89.92	4,242.70	-194.43	8,944.40	8,944.12	0.00	0.00	0.00
12,900.00	88.74	89.92	4,244.89	-194.30	9,044.38	9,044.10	0.00	0.00	0.00
13,000.00	88.74	89.92	4,247.08	-194.16	9,144.35	9,144.07	0.00	0.00	0.00



Planning Report



Database:	WBDS_SQL_3	Local Co-ordinate Reference:	Well 002H
Company:	Longfellow Energy	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Project:	Eddy Co., NM (Nad-83)	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site:	OZZY FEDERAL COM 1817DX	North Reference:	Grid
Well:	002H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
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)	
13,100.00	88.74	89.92	4,249.28	-194.02	9,244.33	9,244.05	0.00	0.00	0.00	
13,200.00	88.74	89.92	4,251.47	-193.89	9,344.31	9,344.03	0.00	0.00	0.00	
13,300.00	88.74	89.92	4,253.66	-193.75	9,444.28	9,444.00	0.00	0.00	0.00	
13,400.00	88.74	89.92	4,255.86	-193.62	9,544.26	9,543.98	0.00	0.00	0.00	
13,500.00	88.74	89.92	4,258.05	-193.48	9,644.23	9,643.95	0.00	0.00	0.00	
13,600.00	88.74	89.92	4,260.24	-193.35	9,744.21	9,743.93	0.00	0.00	0.00	
13,700.00	88.74	89.92	4,262.44	-193.21	9,844.19	9,843.91	0.00	0.00	0.00	
13,800.00	88.74	89.92	4,264.63	-193.08	9,944.16	9,943.88	0.00	0.00	0.00	
13,900.00	88.74	89.92	4,266.82	-192.94	10,044.14	10,043.86	0.00	0.00	0.00	
14,000.00	88.74	89.92	4,269.02	-192.80	10,144.11	10,143.83	0.00	0.00	0.00	
14,100.00	88.74	89.92	4,271.21	-192.67	10,244.09	10,243.81	0.00	0.00	0.00	
14,200.00	88.74	89.92	4,273.40	-192.53	10,344.07	10,343.79	0.00	0.00	0.00	
14,300.00	88.74	89.92	4,275.60	-192.40	10,444.04	10,443.76	0.00	0.00	0.00	
14,400.00	88.74	89.92	4,277.79	-192.26	10,544.02	10,543.74	0.00	0.00	0.00	
14,500.76	88.74	89.92	4,280.00	-192.13	10,644.75	10,644.47	0.00	0.00	0.00	
1817DX 002H LTP										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
1817DX 002H SHL - hit/miss target - Shape - Point	0.00	0.00	0.00	0.00	0.00	665,472.64	605,826.81	32.829235	-104.123384	
1817DX 002H FTP - plan hits target center - Point	0.00	0.00	4,062.00	-205.60	707.82	665,267.04	606,534.63	32.828666	-104.121081	
1817DX 002H LTP - plan hits target center - Point	0.00	0.00	4,280.00	-192.13	10,644.75	665,280.51	616,471.56	32.828644	-104.088731	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,639.51	1,633.00	QUEEN		0.000		
2,049.86	2,041.00	GRAYBURG		0.000		
2,357.62	2,347.00	SAN ANDRES		0.000		
3,848.82	3,751.00	GLORIETA		0.000		
3,899.68	3,785.00	PADDOCK		0.000		



Longfellow Energy

Eddy Co., NM (Nad-83)

OZZY FEDERAL COM ' 18D

002H

OH

PLAN #1

Anticollision Report

06 November, 2023





Anticollision Report



Company:	Longfellow Energy	Local Co-ordinate Reference:	Well 002H
Project:	Eddy Co., NM (Nad-83)	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Reference Site:	OZZY FEDERAL COM 1817DX	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	002H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_3
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Reference	PLAN #1
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD Interval 50.00usft
Depth Range:	Unlimited
Results Limited by:	Maximum centre distance of 500.00usft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Pedal Curve
Casing Method:	Not applied

Survey Tool Program		Date	11/06/23		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	14,500.76	PLAN #1 (OH)	MWD+IFR1+SAG+FDIR	OWSG MWD + IFR1 + Sag + FDIR Correction	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
OZZY FEDERAL COM 1817DX						
001H - OH - PLAN #1	300.00	300.00	20.01	18.00	9.979	CC, ES
001H - OH - PLAN #1	400.00	399.39	22.46	19.75	8.293	SF
OFFSET: AID STATE #003 - Wellbore #1 - Wellbore #1	300.00	269.70	291.36	287.78	81.450	CC
OFFSET: AID STATE #003 - Wellbore #1 - Wellbore #1	4,084.80	3,861.12	316.40	228.76	3.610	ES
OFFSET: AID STATE #003 - Wellbore #1 - Wellbore #1	4,100.00	3,868.49	316.65	228.77	3.603	SF
OFFSET: EMPIRE 18 FEDERAL #005 - Wellbore #1 - IN	5,682.77	4,037.47	135.44	19.32	1.166	Level 3, CC, ES, SF
OFFSET: EMPIRE 18 FEDERAL 4 - Wellbore #1 - Wellb	7,000.00	4,051.02	135.24	20.58	1.179	Level 3, CC
OFFSET: EMPIRE 18 FEDERAL 4 - Wellbore #1 - Wellb	7,002.25	4,051.06	135.26	20.56	1.179	Level 3, ES, SF
OFFSET: EMPIRE 18 STATE #003 - Wellbore #1 - INC-C	8,319.85	4,070.69	135.87	-1.24	0.991	Level 3, CC, ES, SF
OFFSET: EMPIRE 18 STATE #006 - Wellbore #1 - INC-C						Out of range
OFFSET: EMPIRE 18 STATE #009 - Wellbore #1 - INC-C	8,980.70	4,077.29	135.62	-4.34	0.969	Level 3, CC, ES, SF
OFFSET: FOLK STATE 1 - Wellbore #1 - Wellbore #1						Out of range
OFFSET: FOLK STATE 2 - Wellbore #1 - Wellbore #1	9,789.61	4,081.49	134.33	-21.51	0.862	Level 3, CC, ES, SF
OFFSET: FOLK STATE 3 - Wellbore #1 - Wellbore #1						Out of range
OFFSET: FOLK STATE 4 - Wellbore #1 - Wellbore #1	10,300.00	4,088.39	135.68	-29.82	0.820	Level 3, CC
OFFSET: FOLK STATE 4 - Wellbore #1 - Wellbore #1	10,302.25	4,088.44	135.68	-29.85	0.820	Level 3, ES, SF
OFFSET: GREEN B FEDERAL 12 - Wellbore #1 - Wellb						Out of range
OFFSET: MUSKEGON 17 FEDERAL COM #002 - Wellb	13,940.69	4,147.15	191.03	-7.19	0.964	Level 3, CC, ES, SF
OFFSET: MUSKEGON 17 STATE COM 1 - Wellbore #1	11,465.15	4,107.33	492.76	326.23	2.959	CC, ES, SF
OFFSET: PHILLIPS 17 FEDERAL 1 - Wellbore #1 - Well						Out of range
OFFSET: PHILLIPS 17 FEDERAL 2 - Wellbore #1 - Well						Out of range

Offset Design: OZZY FEDERAL COM 1817DX - 001H - OH - PLAN #1												
Survey Program: 0-MWD+IFR1+SAG+FDIR												
Rule Assigned: Distance Between Centres, Ellipses, Minimum Separation, Separation Factor												
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor
0.00	0.00	0.00	0.00	0.00	0.00	-0.114	20.01	-0.04	20.01			
50.00	50.00	50.00	50.00	0.11	0.14	-0.114	20.01	-0.04	20.01	19.76	0.25	80.259
100.00	100.00	100.00	100.00	0.29	0.29	-0.114	20.01	-0.04	20.01	19.44	0.57	35.019
150.00	150.00	150.00	150.00	0.46	0.46	-0.114	20.01	-0.04	20.01	19.08	0.93	21.519
200.00	200.00	200.00	200.00	0.64	0.64	-0.114	20.01	-0.04	20.01	18.72	1.29	15.532
250.00	250.00	250.00	250.00	0.82	0.82	-0.114	20.01	-0.04	20.01	18.36	1.65	12.151

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



Anticollision Report



Company:	Longfellow Energy	Local Co-ordinate Reference:	Well 002H
Project:	Eddy Co., NM (Nad-83)	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Reference Site:	OZZY FEDERAL COM 1817DX	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	002H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_3
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design: OZZY FEDERAL COM 1817DX - 001H - OH - PLAN #1

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Survey Program:		Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
300.00	300.00	300.00	300.00	1.00	1.00	1.00	-0.114		20.01	-0.04	20.01	18.00	2.01	9.979	CC, ES
350.00	350.00	349.72	349.71	1.18	1.18	1.18	128.061		20.35	-0.30	20.62	18.27	2.36	8.751	
400.00	399.98	399.39	399.37	1.35	1.36	1.35	128.635		21.38	-1.09	22.46	19.75	2.71	8.293	SF
450.00	449.93	448.97	448.90	1.52	1.54	1.52	129.403		23.08	-2.39	25.53	22.47	3.06	8.344	
500.00	499.84	498.41	498.25	1.69	1.72	1.69	130.204		25.46	-4.22	29.83	26.42	3.41	8.747	
550.00	549.68	547.68	547.37	1.87	1.89	1.87	130.935		28.50	-6.55	35.35	31.58	3.76	9.392	
600.00	599.45	596.72	596.19	2.05	2.07	2.05	131.553		32.20	-9.37	42.09	37.97	4.12	10.226	
650.00	649.17	645.66	644.82	2.22	2.25	2.22	131.891		36.53	-12.69	49.81	45.34	4.47	11.152	
700.00	698.88	695.03	693.85	2.40	2.43	2.40	131.980		41.11	-16.20	57.74	52.92	4.82	11.982	
750.00	748.59	744.39	742.88	2.57	2.60	2.57	132.047		45.69	-19.71	65.67	60.50	5.17	12.700	
800.00	798.31	793.76	791.91	2.75	2.78	2.75	132.099		50.27	-23.22	73.60	68.08	5.52	13.327	
850.00	848.02	843.13	840.94	2.94	2.95	2.94	132.142		54.86	-26.73	81.53	75.66	5.88	13.875	
900.00	897.73	892.49	889.97	3.12	3.13	3.12	132.177		59.44	-30.23	89.46	83.23	6.23	14.360	
950.00	947.45	941.86	938.99	3.30	3.31	3.30	132.206		64.02	-33.74	97.39	90.81	6.58	14.791	
1,000.00	997.16	991.23	988.02	3.48	3.49	3.48	132.231		68.60	-37.25	105.32	98.39	6.94	15.178	
1,050.00	1,046.87	1,040.59	1,037.05	3.66	3.67	3.66	132.252		73.18	-40.76	113.25	105.96	7.30	15.525	
1,100.00	1,096.59	1,089.96	1,086.08	3.84	3.85	3.84	132.271		77.76	-44.27	121.19	113.53	7.65	15.840	
1,150.00	1,146.30	1,139.33	1,135.11	4.03	4.03	4.03	132.287		82.34	-47.77	129.12	121.11	8.01	16.126	
1,200.00	1,196.01	1,188.70	1,184.14	4.21	4.21	4.21	132.301		86.92	-51.28	137.05	128.68	8.36	16.387	
1,250.00	1,245.73	1,238.06	1,233.17	4.39	4.39	4.39	132.314		91.50	-54.79	144.98	136.26	8.72	16.626	
1,300.00	1,295.44	1,287.43	1,282.20	4.57	4.57	4.57	132.326		96.08	-58.30	152.91	143.83	9.08	16.847	
1,350.00	1,345.15	1,336.80	1,331.22	4.76	4.74	4.76	132.336		100.67	-61.81	160.84	151.41	9.43	17.049	
1,400.00	1,394.87	1,386.16	1,380.25	4.94	4.92	4.94	132.346		105.25	-65.32	168.77	158.98	9.79	17.238	
1,450.00	1,444.58	1,435.53	1,429.28	5.12	5.10	5.12	132.354		109.83	-68.82	176.70	166.55	10.15	17.412	
1,500.00	1,494.29	1,484.90	1,478.31	5.31	5.28	5.31	132.362		114.41	-72.33	184.63	174.13	10.51	17.575	
1,550.00	1,544.01	1,534.27	1,527.34	5.49	5.46	5.49	132.369		118.99	-75.84	192.56	181.70	10.86	17.726	
1,600.00	1,593.72	1,583.63	1,576.37	5.67	5.64	5.67	132.376		123.57	-79.35	200.49	189.27	11.22	17.868	
1,650.00	1,643.43	1,633.00	1,625.40	5.86	5.82	5.86	132.382		128.15	-82.86	208.42	196.84	11.58	18.001	
1,700.00	1,693.15	1,682.37	1,674.42	6.04	6.00	6.04	132.387		132.73	-86.37	216.35	204.42	11.94	18.125	
1,750.00	1,742.86	1,731.73	1,723.45	6.23	6.18	6.23	132.393		137.31	-89.87	224.28	211.99	12.29	18.243	
1,800.00	1,792.57	1,781.10	1,772.48	6.41	6.36	6.41	132.398		141.90	-93.38	232.22	219.56	12.65	18.353	
1,850.00	1,842.29	1,830.47	1,821.51	6.59	6.54	6.59	132.402		146.48	-96.89	240.15	227.14	13.01	18.458	
1,900.00	1,892.00	1,879.83	1,870.54	6.78	6.72	6.78	132.406		151.06	-100.40	248.08	234.71	13.37	18.556	
1,950.00	1,941.71	1,929.20	1,919.57	6.96	6.90	6.96	132.410		155.64	-103.91	256.01	242.28	13.73	18.650	
2,000.00	1,991.43	1,978.57	1,968.60	7.14	7.08	7.14	132.414		160.22	-107.41	263.94	249.85	14.09	18.738	
2,050.00	2,041.14	2,027.94	2,017.63	7.33	7.26	7.33	132.418		164.80	-110.92	271.87	257.42	14.44	18.823	
2,100.00	2,090.85	2,077.30	2,066.65	7.51	7.44	7.51	132.421		169.38	-114.43	279.80	265.00	14.80	18.903	
2,150.00	2,140.57	2,126.67	2,115.68	7.70	7.62	7.70	132.424		173.96	-117.94	287.73	272.57	15.16	18.979	
2,200.00	2,190.28	2,176.04	2,164.71	7.88	7.80	7.88	132.427		178.54	-121.45	295.66	280.14	15.52	19.051	
2,250.00	2,239.99	2,225.40	2,213.74	8.06	7.98	8.06	132.430		183.12	-124.96	303.59	287.71	15.88	19.121	
2,300.00	2,289.71	2,274.77	2,262.77	8.25	8.16	8.25	132.433		187.71	-128.46	311.52	295.29	16.24	19.187	
2,350.00	2,339.42	2,324.14	2,311.80	8.43	8.34	8.43	132.435		192.29	-131.97	319.45	302.86	16.59	19.250	
2,400.00	2,389.13	2,373.50	2,360.83	8.62	8.52	8.62	132.438		196.87	-135.48	327.38	310.43	16.95	19.311	
2,450.00	2,438.85	2,422.87	2,409.85	8.80	8.70	8.80	132.440		201.45	-138.99	335.31	318.00	17.31	19.369	
2,500.00	2,488.56	2,472.24	2,458.88	8.98	8.88	8.98	132.442		206.03	-142.50	343.24	325.57	17.67	19.424	
2,550.00	2,538.27	2,521.61	2,507.91	9.17	9.06	9.17	132.444		210.61	-146.01	351.18	333.15	18.03	19.478	
2,600.00	2,587.99	2,570.97	2,556.94	9.35	9.24	9.35	132.446		215.19	-149.51	359.11	340.72	18.39	19.529	
2,650.00	2,637.70	2,620.34	2,605.97	9.54	9.42	9.54	132.448		219.77	-153.02	367.04	348.29	18.75	19.578	
2,700.00	2,687.41	2,669.71	2,655.00	9.72	9.60	9.72	132.450		224.35	-156.53	374.97	355.86	19.11	19.626	
2,750.00	2,737.13	2,719.07	2,704.03	9.91	9.78	9.91	132.452		228.93	-160.04	382.90	363.43	19.46	19.671	
2,800.00	2,786.84	2,768.44	2,753.06	10.09	9.96	10.09	132.454		233.52	-163.55	390.83	371.01	19.82	19.715	
2,850.00	2,836.55	2,817.81	2,802.08	10.27	10.14	10.27	132.455		238.10	-167.05	398.76	378.58	20.18	19.758	

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



Anticollision Report



Company:	Longfellow Energy	Local Co-ordinate Reference:	Well 002H
Project:	Eddy Co., NM (Nad-83)	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Reference Site:	OZZY FEDERAL COM 1817DX	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	002H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_3
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design: OZZY FEDERAL COM 1817DX - 001H - OH - PLAN #1

Survey Program: Reference		0-MWD+IFR1+SAG+FDIR								Rule Assigned: Distance				Offset Well Error: 0.00 usft	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
2,900.00	2,886.27	2,867.17	2,851.11	10.46	10.32	132.457	242.68	-170.56	406.69	386.15	20.54	19.799			
2,950.00	2,935.98	2,916.54	2,900.14	10.64	10.50	132.458	247.26	-174.07	414.62	393.72	20.90	19.838			
3,000.00	2,985.70	2,965.91	2,949.17	10.83	10.68	135.262	251.84	-177.58	422.55	401.29	21.26	19.876			
3,050.00	3,035.52	3,015.27	2,998.20	11.01	10.86	164.146	256.42	-181.09	430.28	408.67	21.62	19.906			
3,100.00	3,085.42	3,064.53	3,047.11	11.18	11.04	-150.780	260.99	-184.59	437.74	415.77	21.96	19.929			
3,150.00	3,135.25	3,113.54	3,095.79	11.35	11.22	-122.494	265.54	-188.07	444.96	422.66	22.31	19.948			
3,200.00	3,184.87	3,162.17	3,144.09	11.51	11.40	-110.222	270.05	-191.53	452.05	429.41	22.64	19.965			
3,250.00	3,234.15	3,210.29	3,191.88	11.66	11.57	-104.529	274.52	-194.95	459.13	436.15	22.97	19.986			
3,300.00	3,282.96	3,257.77	3,239.03	11.82	11.75	-101.794	278.92	-198.32	466.36	443.06	23.30	20.017			
3,350.00	3,331.16	3,304.47	3,285.41	11.97	11.92	-100.622	283.26	-201.64	473.92	450.31	23.62	20.067			
3,400.00	3,378.61	3,350.27	3,330.90	12.11	12.09	-100.378	287.51	-204.89	482.04	458.10	23.93	20.142			
3,450.00	3,425.19	3,395.05	3,375.37	12.26	12.25	-100.719	291.66	-208.08	490.92	466.68	24.24	20.253			

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



Anticollision Report



Company:	Longfellow Energy	Local Co-ordinate Reference:	Well 002H
Project:	Eddy Co., NM (Nad-83)	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Reference Site:	OZZY FEDERAL COM 1817DX	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	002H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_3
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design: OZZY FEDERAL COM 1817DX - OFFSET: AID STATE #003 - Wellbore #1 - Wellbore #1													Offset Site Error: 0.00 usft
Survey Program: 260-INC-ONLY													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Distance Between Centres (usft)		Minimum Separation (usft)	Separation Factor	Warning
							+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	0.00	30.30	0.00	0.00	67.778	110.19	269.72	292.93				
50.00	50.00	19.70	50.00	0.11	0.18	67.778	110.19	269.72	291.36	291.07	0.29	1,009.101	
100.00	100.00	69.70	100.00	0.29	0.64	67.778	110.19	269.72	291.36	290.43	0.93	313.268	
150.00	150.00	119.70	150.00	0.46	1.11	67.778	110.19	269.72	291.36	289.79	1.57	185.415	
200.00	200.00	169.70	200.00	0.64	1.57	67.778	110.19	269.72	291.36	289.15	2.21	131.674	
250.00	250.00	219.70	250.00	0.82	2.03	67.778	110.19	269.72	291.36	288.51	2.85	102.086	
300.00	300.00	269.70	300.00	1.00	2.57	67.778	110.19	269.72	291.36	287.78	3.58	81.450 CC	
350.00	350.00	319.70	350.00	1.18	3.46	-164.284	110.19	269.72	291.78	287.15	4.63	62.972	
400.00	399.98	369.68	399.98	1.35	4.34	-164.346	110.19	269.72	293.04	287.35	5.69	51.504	
450.00	449.93	419.63	449.93	1.52	5.22	-164.449	110.19	269.72	295.14	288.40	6.74	43.761	
500.00	499.84	469.54	499.84	1.69	6.10	-164.591	110.19	269.72	298.08	290.28	7.80	38.223	
550.00	549.68	519.41	549.70	1.87	6.99	-164.863	110.73	269.72	302.08	293.22	8.86	34.113	
600.00	599.45	569.29	599.58	2.05	7.87	-165.068	110.70	269.72	306.69	296.78	9.91	30.942	
650.00	649.17	619.12	649.41	2.22	8.75	-165.305	110.62	269.72	311.83	300.86	10.97	28.432	
700.00	698.88	668.95	699.24	2.40	9.63	-165.531	110.50	269.72	316.96	304.93	12.02	26.361	
750.00	748.59	718.79	749.08	2.57	10.51	-165.742	110.34	269.72	322.07	308.99	13.08	24.623	
800.00	798.31	768.02	798.31	2.75	11.37	-165.946	110.19	269.72	327.19	313.08	14.12	23.175	
850.00	848.02	817.73	848.02	2.94	12.23	-166.170	110.19	269.72	332.39	317.23	15.15	21.938	
900.00	897.73	867.44	897.73	3.12	13.09	-166.387	110.19	269.72	337.58	321.40	16.18	20.859	
950.00	947.45	917.16	947.45	3.30	13.94	-166.597	110.19	269.72	342.78	325.56	17.22	19.909	
1,000.00	997.16	966.87	997.16	3.48	14.80	-166.801	110.19	269.72	347.98	329.73	18.25	19.066	
1,050.00	1,046.87	1,016.58	1,046.87	3.66	15.66	-166.999	110.19	269.72	353.19	333.91	19.29	18.314	
1,100.00	1,096.59	1,066.30	1,096.59	3.84	16.51	-167.191	110.19	269.72	358.41	338.09	20.32	17.638	
1,150.00	1,146.30	1,116.01	1,146.30	4.03	17.37	-167.378	110.19	269.72	363.62	342.27	21.35	17.028	
1,200.00	1,196.01	1,165.72	1,196.01	4.21	18.23	-167.559	110.19	269.72	368.84	346.45	22.39	16.475	
1,250.00	1,245.73	1,215.44	1,245.73	4.39	19.09	-167.736	110.19	269.72	374.07	350.64	23.42	15.970	
1,300.00	1,295.44	1,265.15	1,295.44	4.57	19.95	-167.907	110.19	269.72	379.29	354.82	24.47	15.501	
1,350.00	1,345.15	1,314.86	1,345.15	4.76	20.83	-168.074	110.19	269.72	384.52	359.00	25.53	15.063	
1,400.00	1,394.87	1,364.58	1,394.87	4.94	21.71	-168.236	110.19	269.72	389.76	363.17	26.58	14.661	
1,450.00	1,444.58	1,414.29	1,444.58	5.12	22.59	-168.394	110.19	269.72	394.99	367.35	27.64	14.289	
1,500.00	1,494.29	1,464.00	1,494.29	5.31	23.47	-168.548	110.19	269.72	400.23	371.53	28.70	13.945	
1,550.00	1,544.01	1,513.72	1,544.01	5.49	24.35	-168.698	110.19	269.72	405.48	375.72	29.76	13.625	
1,600.00	1,593.72	1,563.43	1,593.72	5.67	25.23	-168.844	110.19	269.72	410.72	379.90	30.82	13.328	
1,650.00	1,643.43	1,613.14	1,643.43	5.86	26.11	-168.987	110.19	269.72	415.97	384.09	31.88	13.050	
1,700.00	1,693.15	1,662.86	1,693.15	6.04	26.99	-169.126	110.19	269.72	421.22	388.28	32.93	12.790	
1,750.00	1,742.86	1,712.57	1,742.86	6.23	27.87	-169.261	110.19	269.72	426.47	392.48	33.99	12.546	
1,800.00	1,792.57	1,762.29	1,792.57	6.41	28.78	-169.393	110.19	269.72	431.72	396.65	35.07	12.309	
1,850.00	1,842.29	1,812.00	1,842.29	6.59	29.71	-169.522	110.19	269.72	436.98	400.79	36.19	12.075	
1,900.00	1,892.00	1,861.72	1,892.00	6.78	30.65	-169.648	110.19	269.72	442.24	404.94	37.30	11.856	
1,950.00	1,941.71	1,911.43	1,941.71	6.96	31.58	-169.771	110.19	269.72	447.50	409.09	38.42	11.649	
2,000.00	1,991.43	1,961.14	1,991.43	7.14	32.52	-169.891	110.19	269.72	452.77	413.24	39.53	11.454	
2,050.00	2,041.14	2,010.98	2,041.26	7.33	33.45	-170.066	110.71	269.72	458.27	417.63	40.65	11.275	
2,100.00	2,090.85	2,060.89	2,091.17	7.51	34.39	-170.175	110.66	269.72	463.52	421.75	41.76	11.098	
2,150.00	2,140.57	2,110.82	2,141.10	7.70	35.33	-170.277	110.56	269.72	468.74	425.86	42.88	10.931	
2,200.00	2,190.28	2,160.75	2,191.03	7.88	36.27	-170.371	110.42	269.72	473.94	429.94	44.00	10.771	
2,250.00	2,239.99	2,210.68	2,240.96	8.06	37.21	-170.459	110.23	269.72	479.13	434.01	45.12	10.619	
2,300.00	2,289.71	2,259.47	2,289.71	8.25	38.18	-170.557	110.19	269.72	484.38	438.12	46.26	10.470	
2,350.00	2,339.42	2,309.18	2,339.42	8.43	39.17	-170.660	110.19	269.72	489.66	442.22	47.44	10.322	
2,400.00	2,389.13	2,358.89	2,389.13	8.62	40.17	-170.760	110.19	269.72	494.93	446.32	48.61	10.181	
3,500.00	3,470.78	3,441.25	3,471.28	12.39	63.47	-46.266	111.73	269.72	498.48	422.82	75.66	6.588	
3,550.00	3,515.24	3,486.50	3,516.52	12.53	64.53	-47.997	111.59	269.72	481.87	405.00	76.86	6.269	
3,600.00	3,558.45	3,530.49	3,560.51	12.66	65.56	-50.273	111.36	269.72	463.89	385.86	78.03	5.945	

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



Anticollision Report



Company:	Longfellow Energy	Local Co-ordinate Reference:	Well 002H
Project:	Eddy Co., NM (Nad-83)	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Reference Site:	OZZY FEDERAL COM 1817DX	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	002H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_3
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design: OZZY FEDERAL COM 1817DX - OFFSET: AID STATE #003 - Wellbore #1 - Wellbore #1

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Survey Program:		Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
3,650.00	3,600.30	3,573.10	3,603.11	12.79	66.55	-53.085			111.03	269.72	444.83	365.66	79.17	5.619	
3,700.00	3,640.67	3,614.21	3,644.22	12.92	67.51	-56.422			110.61	269.72	425.02	344.74	80.28	5.294	
3,750.00	3,679.45	3,649.56	3,679.45	13.06	68.34	-59.898			110.19	269.72	404.90	323.65	81.25	4.983	
3,800.00	3,716.53	3,686.64	3,716.53	13.20	69.23	-64.108			110.19	269.72	385.36	303.07	82.29	4.683	
3,850.00	3,751.81	3,721.92	3,751.81	13.36	70.07	-68.660			110.19	269.72	366.71	283.40	83.31	4.402	
3,900.00	3,785.20	3,755.31	3,785.20	13.52	70.87	-73.421			110.19	269.72	349.72	265.42	84.30	4.149	
3,950.00	3,816.61	3,786.72	3,816.61	13.70	71.63	-78.226			110.19	269.72	335.25	249.99	85.25	3.932	
4,000.00	3,845.94	3,816.05	3,845.94	13.89	72.33	-82.888			110.19	269.72	324.28	238.10	86.18	3.763	
4,050.00	3,873.12	3,843.23	3,873.12	14.09	72.98	-87.226			110.19	269.72	317.79	230.73	87.06	3.650	
4,084.80	3,891.01	3,861.12	3,891.01	14.23	73.41	-89.998			110.19	269.72	316.40	228.76	87.64	3.610 ES	
4,100.00	3,898.38	3,868.49	3,898.38	14.30	73.58	-91.184			110.19	269.72	316.65	228.77	87.88	3.603 SF	
4,150.00	3,923.38	3,893.49	3,923.38	14.53	74.18	-95.091			110.19	269.72	321.37	232.69	88.68	3.624	
4,200.00	3,948.38	3,918.50	3,948.36	14.76	74.78	-98.901			111.95	269.72	333.39	243.96	89.43	3.728	
4,250.00	3,973.38	3,943.90	3,973.76	15.01	75.39	-102.722			111.94	269.72	348.78	258.62	90.16	3.868	
4,300.00	3,997.86	3,968.77	3,998.64	15.27	75.99	-105.221			111.89	269.72	368.76	277.92	90.84	4.060	
4,350.00	4,018.91	3,990.16	4,020.02	15.54	76.50	-105.701			111.82	269.72	393.59	302.20	91.39	4.307	
4,400.00	4,035.92	4,007.45	4,037.30	15.82	76.91	-104.921			111.76	269.72	422.94	331.12	91.82	4.606	
4,450.00	4,048.77	4,020.50	4,050.36	16.10	77.23	-102.730			111.70	269.72	456.20	364.08	92.12	4.952	
4,500.00	4,057.37	4,029.24	4,059.09	16.38	77.43	-98.974			111.65	269.72	492.69	400.39	92.30	5.338	

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



Anticollision Report



Company:	Longfellow Energy	Local Co-ordinate Reference:	Well 002H
Project:	Eddy Co., NM (Nad-83)	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Reference Site:	OZZY FEDERAL COM 1817DX	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	002H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_3
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design: OZZY FEDERAL COM 1817DX - OFFSET: EMPIRE 18 FEDERAL #005 - Wellbore #1 - INC-ONLY

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Survey Program:		215-INC-ONLY					Rule Assigned:				Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance		Minimum Separation		Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,250.00	4,077.10	4,028.04	4,076.43	21.71	90.37	85.709	-339.47	1,829.08	453.36	348.35	105.01	4.317	
5,300.00	4,078.20	4,029.13	4,077.52	22.13	90.40	86.168	-339.47	1,829.08	405.93	300.64	105.29	3.855	
5,350.00	4,079.30	4,030.22	4,078.61	22.57	90.42	86.627	-339.48	1,829.08	359.19	253.51	105.68	3.399	
5,400.00	4,080.39	4,031.31	4,079.70	23.00	90.44	87.087	-339.49	1,829.08	313.46	207.22	106.25	2.950	
5,450.00	4,081.49	4,032.40	4,080.79	23.44	90.47	87.547	-339.49	1,829.08	269.25	162.17	107.08	2.515	
5,500.00	4,082.59	4,033.49	4,081.88	23.89	90.49	88.008	-339.50	1,829.08	227.44	119.11	108.33	2.100	
5,550.00	4,083.68	4,034.58	4,082.97	24.34	90.51	88.468	-339.50	1,829.08	189.63	79.45	110.18	1.721	
5,600.00	4,084.78	4,035.67	4,084.06	24.79	90.53	88.929	-339.51	1,829.08	158.71	46.03	112.68	1.409 Level 3	
5,650.00	4,085.88	4,036.76	4,085.15	25.26	90.56	89.390	-339.51	1,829.08	139.35	24.14	115.21	1.210 Level 3	
5,682.77	4,086.59	4,037.47	4,085.87	25.56	90.57	89.692	-339.52	1,829.08	135.44	19.32	116.13	1.166 Level 3, CC, ES, SF	
5,700.00	4,086.97	4,037.85	4,086.24	25.72	90.58	89.851	-339.52	1,829.08	136.53	20.32	116.21	1.175 Level 3	
5,750.00	4,088.07	4,038.94	4,087.33	26.19	90.60	90.312	-339.53	1,829.08	151.21	36.12	115.09	1.314 Level 3	
5,800.00	4,089.17	4,040.03	4,088.42	26.66	90.63	90.772	-339.53	1,829.08	179.12	66.03	113.08	1.584	
5,850.00	4,090.26	4,041.12	4,089.51	27.13	90.65	91.233	-339.54	1,829.08	215.17	103.91	111.26	1.934	
5,900.00	4,091.36	4,042.21	4,090.60	27.61	90.67	91.694	-339.54	1,829.08	255.96	146.07	109.89	2.329	
5,950.00	4,092.46	4,043.30	4,091.69	28.09	90.70	92.154	-339.55	1,829.08	299.55	190.64	108.90	2.751	
6,000.00	4,093.55	4,044.39	4,092.78	28.58	90.72	92.614	-339.56	1,829.08	344.87	236.67	108.20	3.187	
6,050.00	4,094.65	4,045.48	4,093.87	29.07	90.74	93.073	-339.56	1,829.08	391.34	283.65	107.69	3.634	
6,100.00	4,095.75	4,046.57	4,094.96	29.56	90.77	93.532	-339.57	1,829.08	438.58	331.26	107.31	4.087	
6,150.00	4,096.84	4,047.66	4,096.05	30.05	90.79	93.991	-339.58	1,829.08	486.37	379.33	107.03	4.544	

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

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COMPASS 5000.17 Build



Anticollision Report



Company:	Longfellow Energy	Local Co-ordinate Reference:	Well 002H
Project:	Eddy Co., NM (Nad-83)	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Reference Site:	OZZY FEDERAL COM 1817DX	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	002H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_3
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design: OZZY FEDERAL COM 1817DX - OFFSET: EMPIRE 18 FEDERAL 4 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.00 usft	
Survey Program: 243-INC-ONLY				Reference Offset		Semi Major Axis		Offset Wellbore Centre		Rule Assigned: Distance				Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
6,550.00	4,105.62	4,041.17	4,105.20	34.07	75.76	85.650	-337.51	3,146.13	469.91	377.64	92.27	5.093			
6,600.00	4,106.71	4,042.26	4,106.29	34.58	75.78	86.111	-337.51	3,146.13	422.28	329.36	92.93	4.544			
6,650.00	4,107.81	4,043.36	4,107.39	35.09	75.80	86.572	-337.51	3,146.13	375.27	281.45	93.82	4.000			
6,700.00	4,108.91	4,044.45	4,108.48	35.61	75.83	87.034	-337.52	3,146.13	329.14	234.10	95.04	3.463			
6,750.00	4,110.00	4,045.55	4,109.58	36.12	75.85	87.497	-337.52	3,146.13	284.31	187.56	96.74	2.939			
6,800.00	4,111.10	4,046.64	4,110.67	36.64	75.87	87.959	-337.52	3,146.13	241.51	142.35	99.16	2.436			
6,850.00	4,112.20	4,047.73	4,111.76	37.16	75.89	88.422	-337.53	3,146.13	202.04	99.50	102.55	1.970			
6,900.00	4,113.29	4,048.83	4,112.86	37.68	75.91	88.886	-337.53	3,146.13	168.27	61.24	107.03	1.572			
6,950.00	4,114.39	4,049.92	4,113.95	38.20	75.93	89.349	-337.53	3,146.13	144.23	32.35	111.88	1.289	Level 3		
7,000.00	4,115.49	4,051.02	4,115.05	38.72	75.95	89.812	-337.54	3,146.13	135.24	20.58	114.67	1.179	Level 3, CC		
7,002.25	4,115.53	4,051.06	4,115.09	38.74	75.96	89.833	-337.54	3,146.13	135.26	20.56	114.70	1.179	Level 3, ES, SF		
7,050.00	4,116.58	4,052.11	4,116.14	39.25	75.98	90.275	-337.54	3,146.13	144.14	30.80	113.34	1.272	Level 3		
7,100.00	4,117.68	4,053.20	4,117.23	39.77	76.00	90.739	-337.54	3,146.13	168.10	58.62	109.48	1.535			
7,150.00	4,118.78	4,054.30	4,118.33	40.29	76.02	91.202	-337.55	3,146.13	201.84	96.33	105.51	1.913			
7,200.00	4,119.87	4,055.39	4,119.42	40.82	76.04	91.665	-337.55	3,146.13	241.28	138.94	102.35	2.358			
7,250.00	4,120.97	4,056.49	4,120.51	41.35	76.06	92.127	-337.55	3,146.13	284.06	184.06	100.00	2.841			
7,300.00	4,122.07	4,057.58	4,121.61	41.88	76.08	92.590	-337.56	3,146.13	328.88	230.60	98.28	3.346			
7,350.00	4,123.16	4,058.67	4,122.70	42.41	76.10	93.052	-337.56	3,146.13	375.01	278.00	97.01	3.866			
7,400.00	4,124.26	4,059.77	4,123.80	42.94	76.13	93.513	-337.57	3,146.13	422.02	325.96	96.07	4.393			
7,450.00	4,125.36	4,060.86	4,124.89	43.47	76.15	93.975	-337.57	3,146.13	469.65	374.31	95.34	4.926			

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



Anticollision Report



Company:	Longfellow Energy	Local Co-ordinate Reference:	Well 002H
Project:	Eddy Co., NM (Nad-83)	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Reference Site:	OZZY FEDERAL COM 1817DX	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	002H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_3
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design: OZZY FEDERAL COM 1817DX - OFFSET: EMPIRE 18 STATE #003 - Wellbore #1 - INC-ONLY

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Survey Program:		Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)			
7,850.00	4,134.13	4,060.39	4,134.13	47.74	84.10	47.74	84.10	85.664	-336.38	4,465.52	489.00	385.87	103.13	4.742	
7,900.00	4,135.23	4,061.48	4,135.23	48.28	84.12	48.28	84.12	86.124	-336.38	4,465.52	441.20	337.02	104.18	4.235	
7,950.00	4,136.32	4,062.58	4,136.32	48.82	84.15	48.82	84.15	86.584	-336.38	4,465.52	393.94	288.40	105.54	3.733	
8,000.00	4,137.42	4,063.68	4,137.42	49.35	84.17	49.35	84.17	87.045	-336.38	4,465.52	347.45	240.11	107.34	3.237	
8,050.00	4,138.52	4,064.77	4,138.52	49.89	84.19	49.89	84.19	87.506	-336.38	4,465.52	302.07	192.30	109.78	2.752	
8,100.00	4,139.61	4,065.87	4,139.61	50.43	84.21	50.43	84.21	87.968	-336.38	4,465.52	258.41	145.30	113.11	2.285	
8,150.00	4,140.71	4,066.97	4,140.71	50.97	84.23	50.97	84.23	88.430	-336.38	4,465.52	217.48	99.82	117.66	1.848	
8,200.00	4,141.81	4,068.06	4,141.81	51.51	84.25	51.51	84.25	88.892	-336.38	4,465.52	181.16	57.45	123.71	1.464 Level 3	
8,250.00	4,142.90	4,069.16	4,142.90	52.06	84.27	52.06	84.27	89.354	-336.38	4,465.52	152.77	22.00	130.77	1.168 Level 3	
8,300.00	4,144.00	4,070.26	4,144.00	52.60	84.30	52.60	84.30	89.816	-336.38	4,465.52	137.32	1.03	136.28	1.008 Level 3	
8,319.85	4,144.43	4,070.69	4,144.43	52.81	84.30	52.81	84.30	90.000	-336.38	4,465.52	135.87	-1.24	137.11	0.991 Level 3, CC, ES, SF	
8,350.00	4,145.10	4,071.35	4,145.10	53.14	84.32	53.14	84.32	90.279	-336.38	4,465.52	139.18	2.74	136.44	1.020 Level 3	
8,400.00	4,146.19	4,072.45	4,146.19	53.68	84.34	53.68	84.34	90.741	-336.38	4,465.52	157.74	26.20	131.54	1.199 Level 3	
8,450.00	4,147.29	4,073.55	4,147.29	54.22	84.36	54.22	84.36	91.203	-336.38	4,465.52	188.12	62.79	125.34	1.501	
8,500.00	4,148.39	4,074.64	4,148.39	54.77	84.38	54.77	84.38	91.665	-336.38	4,465.52	225.61	105.60	120.01	1.880	
8,550.00	4,149.48	4,075.74	4,149.48	55.31	84.40	55.31	84.40	92.127	-336.38	4,465.52	267.21	151.28	115.94	2.305	
8,600.00	4,150.58	4,076.84	4,150.58	55.85	84.43	55.85	84.43	92.589	-336.38	4,465.52	311.30	198.39	112.90	2.757	
8,650.00	4,151.68	4,077.93	4,151.68	56.40	84.45	56.40	84.45	93.050	-336.38	4,465.52	356.94	246.30	110.64	3.226	
8,700.00	4,152.77	4,079.03	4,152.77	56.94	84.47	56.94	84.47	93.511	-336.38	4,465.52	403.61	294.68	108.93	3.705	
8,750.00	4,153.87	4,080.12	4,153.87	57.49	84.49	57.49	84.49	93.971	-336.38	4,465.52	451.00	343.38	107.62	4.191	
8,800.00	4,154.97	4,081.22	4,154.97	58.03	84.51	58.03	84.51	94.431	-336.38	4,465.52	498.89	392.29	106.59	4.680	

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



Anticollision Report



Company:	Longfellow Energy	Local Co-ordinate Reference:	Well 002H
Project:	Eddy Co., NM (Nad-83)	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Reference Site:	OZZY FEDERAL COM 1817DX	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	002H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_3
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design: OZZY FEDERAL COM 1817DX - OFFSET: EMPIRE 18 STATE #009 - Wellbore #1 - INC-ONLY

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Survey Program:		Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
8,500.00	4,148.39	4,066.72	4,148.68	54.77	79.76	-85.680			-63.96	5,125.82	499.34	398.30	101.04	4.942	
8,550.00	4,149.48	4,067.81	4,149.78	55.31	79.78	-86.142			-63.97	5,125.82	451.44	349.14	102.29	4.413	
8,600.00	4,150.58	4,068.91	4,150.88	55.85	79.80	-86.604			-63.97	5,125.82	404.04	300.15	103.89	3.889	
8,650.00	4,151.68	4,070.01	4,151.98	56.40	79.82	-87.067			-63.97	5,125.82	357.34	251.38	105.96	3.372	
8,700.00	4,152.77	4,071.11	4,153.08	56.94	79.84	-87.530			-63.97	5,125.82	311.67	202.97	108.70	2.867	
8,750.00	4,153.87	4,072.21	4,154.18	57.49	79.86	-87.994			-63.98	5,125.82	267.55	155.18	112.37	2.381	
8,800.00	4,154.97	4,073.31	4,155.28	58.03	79.88	-88.458			-63.98	5,125.82	225.89	108.56	117.32	1.925	
8,850.00	4,156.06	4,074.41	4,156.38	58.58	79.90	-88.922			-63.98	5,125.82	188.32	64.45	123.86	1.520	
8,900.00	4,157.16	4,075.51	4,157.47	59.13	79.92	-89.386			-63.98	5,125.82	157.80	26.11	131.68	1.198 Level 3	
8,950.00	4,158.25	4,076.61	4,158.57	59.67	79.94	-89.851			-63.99	5,125.82	139.05	0.66	138.39	1.005 Level 3	
8,980.70	4,158.93	4,077.29	4,159.25	60.01	79.96	-90.136			-63.99	5,125.82	135.62	-4.34	139.96	0.969 Level 3, CC, ES, SF	
9,000.00	4,159.35	4,077.71	4,159.67	60.22	79.96	-90.315			-63.99	5,125.82	136.99	-2.53	139.52	0.982 Level 3	
9,050.00	4,160.45	4,078.81	4,160.77	60.77	79.99	-90.780			-63.99	5,125.82	152.30	18.06	134.24	1.135 Level 3	
9,100.00	4,161.54	4,079.91	4,161.87	61.31	80.01	-91.244			-63.99	5,125.82	180.62	53.89	126.72	1.425 Level 3	
9,150.00	4,162.64	4,081.01	4,162.97	61.86	80.03	-91.708			-64.00	5,125.82	216.90	96.86	120.04	1.807	
9,200.00	4,163.74	4,082.11	4,164.07	62.41	80.05	-92.172			-64.00	5,125.82	257.81	142.92	114.89	2.244	
9,250.00	4,164.83	4,083.21	4,165.17	62.96	80.07	-92.636			-64.00	5,125.82	301.48	190.41	111.07	2.714	
9,300.00	4,165.93	4,084.31	4,166.27	63.51	80.09	-93.099			-64.01	5,125.82	346.85	238.63	108.22	3.205	
9,350.00	4,167.03	4,085.41	4,167.37	64.06	80.11	-93.562			-64.01	5,125.82	393.34	287.26	106.09	3.708	
9,400.00	4,168.12	4,086.51	4,168.47	64.60	80.13	-94.024			-64.01	5,125.82	440.60	336.15	104.46	4.218	
9,450.00	4,169.22	4,087.61	4,169.57	65.15	80.15	-94.486			-64.01	5,125.82	488.41	385.21	103.19	4.733	

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



Anticollision Report



Company:	Longfellow Energy	Local Co-ordinate Reference:	Well 002H
Project:	Eddy Co., NM (Nad-83)	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Reference Site:	OZZY FEDERAL COM 1817DX	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	002H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_3
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design: OZZY FEDERAL COM 1817DX - OFFSET: FOLK STATE 2 - Wellbore #1 - Wellbore #1

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Survey Program:		Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Reference	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,350.00	4,167.03	4,071.88	4,166.62	64.06	86.77	64.06	86.77	85.722	-332.81	5,934.93	459.58	349.37	110.21	4.170	
9,400.00	4,168.12	4,072.97	4,167.72	64.60	86.79	64.60	86.79	86.187	-332.81	5,934.93	412.03	300.03	112.00	3.679	
9,450.00	4,169.22	4,074.07	4,168.81	65.15	86.81	65.15	86.81	86.651	-332.82	5,934.93	365.14	250.82	114.32	3.194	
9,500.00	4,170.32	4,075.16	4,169.90	65.70	86.83	65.70	86.83	87.116	-332.82	5,934.93	319.19	201.80	117.38	2.719	
9,550.00	4,171.41	4,076.25	4,171.00	66.25	86.85	66.25	86.85	87.581	-332.83	5,934.93	274.65	153.16	121.49	2.261	
9,600.00	4,172.51	4,077.35	4,172.09	66.80	86.87	66.80	86.87	88.047	-332.83	5,934.93	232.34	105.29	127.05	1.829	
9,650.00	4,173.61	4,078.44	4,173.18	67.35	86.90	67.35	86.90	88.513	-332.83	5,934.93	193.72	59.24	134.48	1.440	Level 3
9,700.00	4,174.70	4,079.53	4,174.28	67.90	86.92	67.90	86.92	88.979	-332.84	5,934.93	161.47	17.76	143.70	1.124	Level 3
9,750.00	4,175.80	4,080.63	4,175.37	68.45	86.94	68.45	86.94	89.445	-332.84	5,934.93	140.05	-12.50	152.55	0.918	Level 3
9,789.61	4,176.67	4,081.49	4,176.24	68.89	86.96	68.89	86.96	89.814	-332.84	5,934.93	134.33	-21.51	155.84	0.862	Level 3, CC, ES, SF
9,800.00	4,176.90	4,081.72	4,176.46	69.00	86.96	69.00	86.96	89.911	-332.84	5,934.93	134.73	-21.09	155.82	0.865	Level 3
9,850.00	4,177.99	4,082.81	4,177.56	69.56	86.98	69.56	86.98	90.378	-332.85	5,934.93	147.27	-3.77	151.04	0.975	Level 3
9,900.00	4,179.09	4,083.91	4,178.65	70.11	87.00	70.11	87.00	90.844	-332.85	5,934.93	173.85	31.30	142.55	1.220	Level 3
9,950.00	4,180.19	4,085.00	4,179.74	70.66	87.03	70.66	87.03	91.310	-332.85	5,934.93	209.18	74.63	134.55	1.555	
10,000.00	4,181.28	4,086.09	4,180.84	71.21	87.05	71.21	87.05	91.775	-332.86	5,934.93	249.57	121.32	128.25	1.946	
10,050.00	4,182.38	4,087.19	4,181.93	71.76	87.07	71.76	87.07	92.241	-332.86	5,934.93	292.94	169.42	123.52	2.372	
10,100.00	4,183.48	4,088.28	4,183.02	72.31	87.09	72.31	87.09	92.706	-332.86	5,934.93	338.14	218.16	119.98	2.818	
10,150.00	4,184.57	4,089.37	4,184.12	72.87	87.11	72.87	87.11	93.171	-332.87	5,934.93	384.53	267.23	117.30	3.278	
10,200.00	4,185.67	4,090.47	4,185.21	73.42	87.13	73.42	87.13	93.635	-332.87	5,934.93	431.72	316.49	115.23	3.747	
10,250.00	4,186.77	4,091.56	4,186.30	73.97	87.16	73.97	87.16	94.099	-332.88	5,934.93	479.48	365.86	113.62	4.220	

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



Anticollision Report



Company:	Longfellow Energy	Local Co-ordinate Reference:	Well 002H
Project:	Eddy Co., NM (Nad-83)	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Reference Site:	OZZY FEDERAL COM 1817DX	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	002H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_3
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design: OZZY FEDERAL COM 1817DX - OFFSET: FOLK STATE 4 - Wellbore #1 - Wellbore #1

Offset Site Error: 0.00 usft

Offset Well Error: 0.00 usft

Survey Program:		Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned:		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
9,850.00	4,177.99	4,078.52	4,177.99	69.56	90.76	85.834			-333.49	6,445.82	470.51	355.07	115.44	4.076	
9,900.00	4,179.09	4,079.62	4,179.09	70.11	90.79	86.295			-333.49	6,445.82	422.89	305.54	117.35	3.604	
9,950.00	4,180.19	4,080.72	4,180.19	70.66	90.81	86.757			-333.49	6,445.82	375.89	256.08	119.81	3.137	
10,000.00	4,181.28	4,081.81	4,181.28	71.21	90.83	87.218			-333.49	6,445.82	329.76	206.75	123.01	2.681	
10,050.00	4,182.38	4,082.91	4,182.38	71.76	90.86	87.680			-333.49	6,445.82	284.94	157.67	127.27	2.239	
10,100.00	4,183.48	4,084.01	4,183.48	72.31	90.88	88.143			-333.49	6,445.82	242.16	109.17	132.99	1.821	
10,150.00	4,184.57	4,085.10	4,184.57	72.87	90.91	88.605			-333.49	6,445.82	202.70	62.07	140.63	1.441 Level 3	
10,200.00	4,185.67	4,086.20	4,185.67	73.42	90.93	89.068			-333.49	6,445.82	168.91	18.63	150.27	1.124 Level 3	
10,250.00	4,186.77	4,087.30	4,186.77	73.97	90.96	89.531			-333.49	6,445.82	144.81	-15.43	160.24	0.904 Level 3	
10,300.00	4,187.86	4,088.39	4,187.86	74.52	90.98	89.994			-333.49	6,445.82	135.68	-29.82	165.50	0.820 Level 3, CC	
10,302.25	4,187.91	4,088.44	4,187.91	74.55	90.98	90.015			-333.49	6,445.82	135.68	-29.85	165.53	0.820 Level 3, ES, SF	
10,350.00	4,188.96	4,089.49	4,188.96	75.08	91.00	90.457			-333.49	6,445.82	144.37	-17.64	162.01	0.891 Level 3	
10,400.00	4,190.06	4,090.59	4,190.06	75.63	91.03	90.920			-333.49	6,445.82	168.16	14.94	153.21	1.098 Level 3	
10,450.00	4,191.15	4,091.68	4,191.15	76.18	91.05	91.383			-333.49	6,445.82	201.76	57.56	144.20	1.399 Level 3	
10,500.00	4,192.25	4,092.78	4,192.25	76.74	91.08	91.846			-333.49	6,445.82	241.11	104.23	136.89	1.761	
10,550.00	4,193.35	4,093.88	4,193.35	77.29	91.10	92.308			-333.49	6,445.82	283.83	152.49	131.34	2.161	
10,600.00	4,194.44	4,094.97	4,194.44	77.84	91.12	92.770			-333.49	6,445.82	328.61	201.44	127.17	2.584	
10,650.00	4,195.54	4,096.07	4,195.54	78.40	91.15	93.232			-333.49	6,445.82	374.71	250.69	124.01	3.021	
10,700.00	4,196.64	4,097.17	4,196.64	78.95	91.17	93.693			-333.49	6,445.82	421.69	300.11	121.58	3.468	
10,750.00	4,197.73	4,098.26	4,197.73	79.50	91.20	94.154			-333.49	6,445.82	469.30	349.61	119.69	3.921	

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



Anticollision Report



Company:	Longfellow Energy	Local Co-ordinate Reference:	Well 002H
Project:	Eddy Co., NM (Nad-83)	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Reference Site:	OZZY FEDERAL COM 1817DX	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	002H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_3
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design: OZZY FEDERAL COM 1817DX - OFFSET: MUSKEGON 17 FEDERAL COM #002 - Wellbore #1 - INC-ONLY

Offset Site Error: 0.00 usft

Survey Program: 634-INC-ONLY

Offset Well Error: 0.00 usft

Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: Distance		Minimum Separation (usft)	Separation Factor	Warning
				Reference	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
13,500.00	4,258.05	4,137.46	4,258.35	110.12	83.02	-87.193	-1.84	10,084.55	480.22	349.48	130.73	3.673	
13,550.00	4,259.15	4,138.56	4,259.45	110.68	83.04	-87.522	-1.84	10,084.55	434.81	299.65	135.16	3.217	
13,600.00	4,260.24	4,139.66	4,260.54	111.24	83.05	-87.851	-1.84	10,084.55	390.52	249.99	140.53	2.779	
13,650.00	4,261.34	4,140.76	4,261.64	111.80	83.07	-88.180	-1.85	10,084.55	347.78	200.70	147.09	2.365	
13,700.00	4,262.44	4,141.86	4,262.74	112.35	83.09	-88.509	-1.85	10,084.55	307.24	152.16	155.08	1.981	
13,750.00	4,263.53	4,142.96	4,263.84	112.91	83.11	-88.838	-1.85	10,084.55	269.89	105.22	164.67	1.639	
13,800.00	4,264.63	4,144.05	4,264.94	113.47	83.13	-89.167	-1.85	10,084.55	237.23	61.60	175.63	1.351	Level 3
13,850.00	4,265.73	4,145.15	4,266.04	114.03	83.15	-89.497	-1.85	10,084.55	211.46	24.66	186.80	1.132	Level 3
13,900.00	4,266.82	4,146.25	4,267.14	114.59	83.16	-89.826	-1.85	10,084.55	195.31	-0.15	195.46	0.999	Level 3
13,940.69	4,267.72	4,147.15	4,268.03	115.04	83.18	-90.094	-1.86	10,084.55	191.03	-7.19	198.22	0.964	Level 3, CC, ES, SF
13,950.00	4,267.92	4,147.35	4,268.23	115.15	83.18	-90.155	-1.86	10,084.55	191.26	-6.90	198.16	0.965	Level 3
14,000.00	4,269.02	4,148.45	4,269.33	115.71	83.20	-90.485	-1.86	10,084.55	200.02	6.39	193.63	1.033	Level 3
14,050.00	4,270.11	4,149.55	4,270.43	116.27	83.22	-90.814	-1.86	10,084.55	220.08	35.85	184.22	1.195	Level 3
14,100.00	4,271.21	4,150.65	4,271.53	116.83	83.24	-91.143	-1.86	10,084.55	248.71	75.37	173.35	1.435	Level 3
14,150.00	4,272.31	4,151.74	4,272.63	117.38	83.25	-91.472	-1.86	10,084.55	283.34	120.19	163.15	1.737	
14,200.00	4,273.40	4,152.84	4,273.73	117.94	83.27	-91.802	-1.87	10,084.55	322.03	167.64	154.39	2.086	
14,250.00	4,274.50	4,153.94	4,274.82	118.50	83.29	-92.131	-1.87	10,084.55	363.48	216.34	147.14	2.470	
14,300.00	4,275.60	4,155.04	4,275.92	119.06	83.31	-92.459	-1.87	10,084.55	406.86	265.66	141.19	2.882	
14,350.00	4,276.69	4,156.14	4,277.02	119.62	83.33	-92.788	-1.87	10,084.55	451.60	315.28	136.32	3.313	
14,400.00	4,277.79	4,157.24	4,278.12	120.18	83.35	-93.117	-1.87	10,084.55	497.35	365.04	132.31	3.759	

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



Anticollision Report



Company:	Longfellow Energy	Local Co-ordinate Reference:	Well 002H
Project:	Eddy Co., NM (Nad-83)	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Reference Site:	OZZY FEDERAL COM 1817DX	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	002H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_3
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Offset Design: OZZY FEDERAL COM 1817DX - OFFSET: MUSKEGON 17 STATE COM 1 - Wellbore #1 - Wellbore #1

Offset Site Error: 0.00 usft

Survey Program: 223-INC-ONLY

Offset Well Error: 0.00 usft

Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Rule Assigned: Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
11,400.00	4,211.99	4,105.88	4,214.94	86.72	79.07	-90.177	296.52	7,609.16	497.05	331.89	165.15	3.010	
11,450.00	4,213.09	4,106.99	4,216.05	87.27	79.09	-90.306	296.51	7,609.16	492.99	326.66	166.34	2.964	
11,465.15	4,213.42	4,107.33	4,216.39	87.44	79.10	-90.345	296.51	7,609.16	492.76	326.23	166.53	2.959	CC, ES, SF
11,500.00	4,214.18	4,108.10	4,217.16	87.83	79.11	-90.435	296.50	7,609.16	493.99	327.32	166.67	2.964	

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



Anticollision Report



Company:	Longfellow Energy	Local Co-ordinate Reference:	Well 002H
Project:	Eddy Co., NM (Nad-83)	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Reference Site:	OZZY FEDERAL COM 1817DX	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	002H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_3
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Reference Depths are relative to RKB = 20.3' @ 3723.30usft (TBD)

Coordinates are relative to: 002H

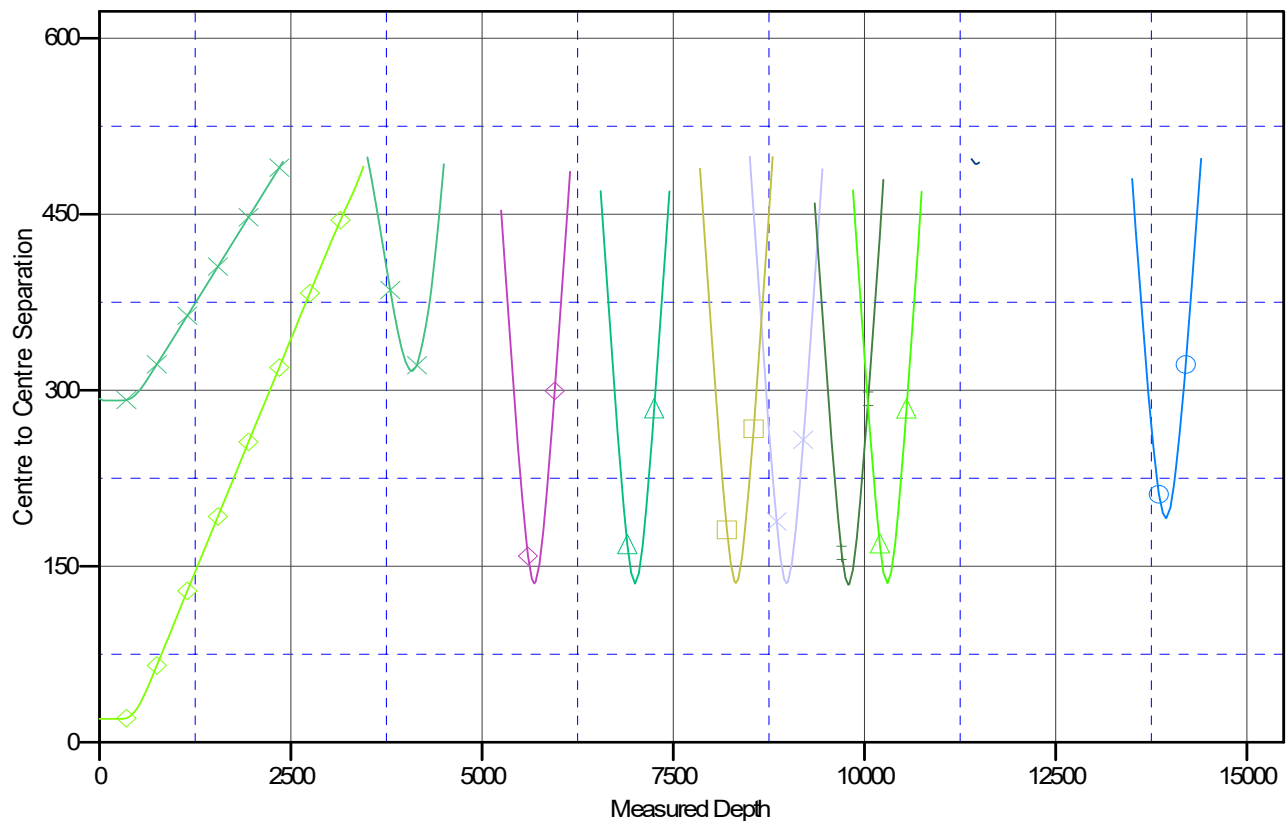
Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Central Meridian is -104.333334

Grid Convergence at Surface is: 0.114°

Ladder Plot



LEGEND

- OFFSET: MUSEGON 17 FEDERAL COM#002, Wellbore #1, INC-ONLY V0
- OFFSET: EMPRE 18 FEDERAL #005, Wellbore #1, INC-ONLY V0
- OFFSET: EMPRE 18 STATE #009, Wellbore #1, INC-ONLY V0
- OFFSET: AID STATE #003, Wellbore #1, Wellbore #1 V0
- OFFSET: EMPRE 18 FEDERAL 4, Wellbore #1, Wellbore #1 V0
- OFFSET: MUSEGON 17 STATE COM 1, Wellbore #1, Wellbore #1 V0
- OFFSET: FOLK STATE 2, Wellbore #1, Wellbore #1 V0
- OFFSET: EMPRE 18 STATE #003, Wellbore #1, INC-ONLY V0
- OFFSET: FOLK STATE 4, Wellbore #1, Wellbore #1 V0
- 001H, OH, PLAN #1 V0

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



Anticollision Report



Company:	Longfellow Energy	Local Co-ordinate Reference:	Well 002H
Project:	Eddy Co., NM (Nad-83)	TVD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Reference Site:	OZZY FEDERAL COM 1817DX	MD Reference:	RKB = 20.3' @ 3723.30usft (TBD)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	002H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	WBDS_SQL_3
Reference Design:	PLAN #1	Offset TVD Reference:	Reference Datum

Reference Depths are relative to RKB = 20.3' @ 3723.30usft (TBD)

Coordinates are relative to: 002H

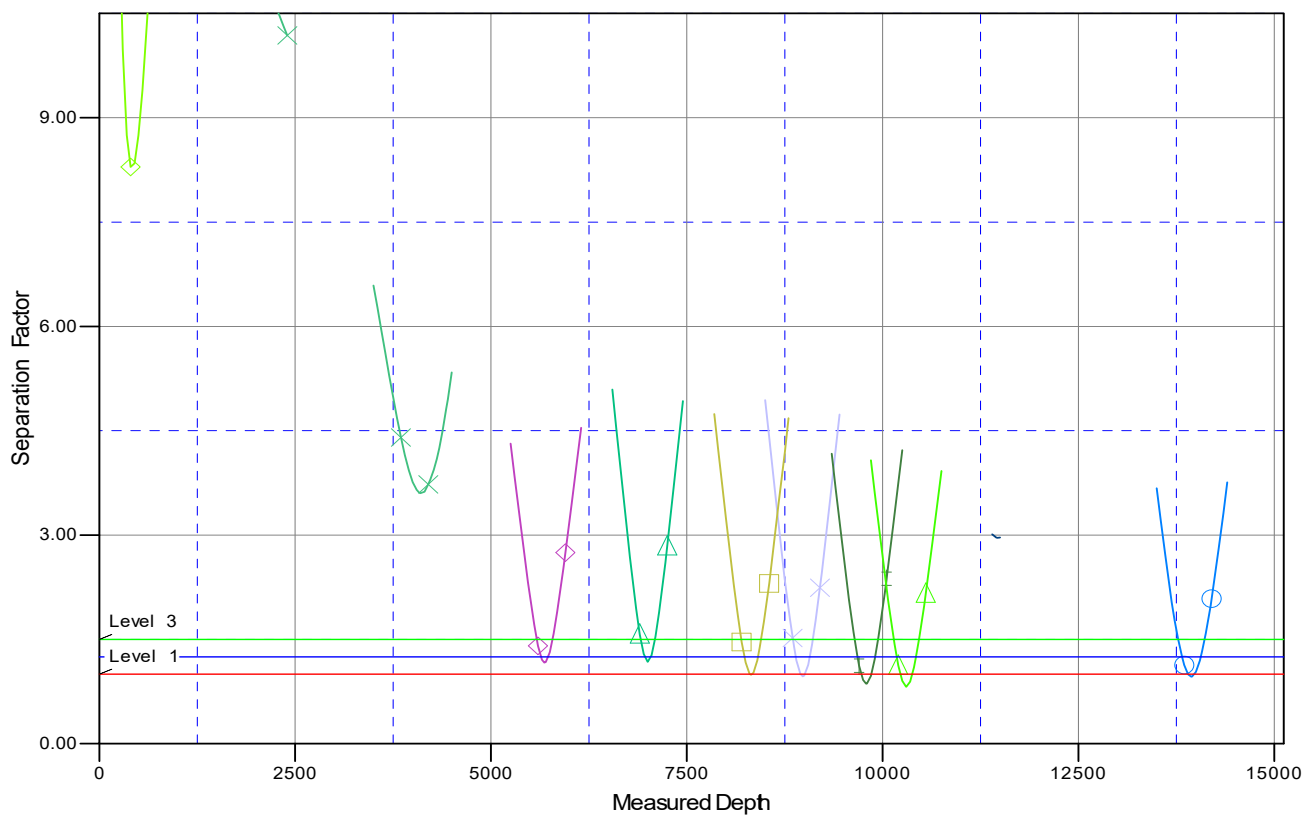
Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Central Meridian is -104.333334

Grid Convergence at Surface is: 0.114°

Separation Factor Plot



LEGEND

- OFFSET: MUSEGON 17 FEDERAL COM#002, Wellbore #1, INC-ONLY V0
- OFFSET: EMPRE 18 FEDERAL #005, Wellbore #1, INC-ONLY V0
- OFFSET: EMPRE 18 STATE #009, Wellbore #1, INC-ONLY V0
- OFFSET: AID STATE #003, Wellbore #1, Wellbore #1 V0
- OFFSET: EMPRE 18 FEDERAL 4, Wellbore #1, Wellbore #1 V0
- OFFSET: MUSEGON 17 STATE COM 1, Wellbore #1, Wellbore #1 V0
- OFFSET: FOLK STATE 2, Wellbore #1, Wellbore #1 V0
- OFFSET: EMPRE 18 STATE #003, Wellbore #1, INC-ONLY V0
- OFFSET: FOLK STATE 4, Wellbore #1, Wellbore #1 V0
- 001H, OH, PLAN #1 V0

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

Operator: Longfellow Energy

Well Name: Ozzy Federal Com 1817DX 002H

String Section:	Details:	Depth MD	Depth TVD	Casing length ft	Wt	Grade	MIY	Col	Pipe Str	Jt Str	Drill Fluid	Buoyancy Factor
Surface Casing	13 3/8", 54.5#, J-55, LT&C	360	360	360	54.5	J-55	2740	1130	853000	909000	9	0.863
Intermediate Casing	9-5/8", 36#, J-55, LT&C	1300	1295	1300	36	J-55	3950	2570	630000	714000	9.2	0.860
Production 1 Casing	7", 32#, L-80, BT&C	4424	4041	4424	32	L-80	9050	8600	745000	791000	9.2	0.860
Production 2 Casing	5-1/2", 20#, L-80 BT&C	14590	4280	10166	20	L-80	9190	8830	466000	503000	9.2	0.860

Collapse Design (Safety) Factors - BLM Criteria

Collapse Design (Safety) Factor: SFc

SFc = Pc / (MW x .052 x Ls)

Where

- * Pc is the rated pipe collapse pressure in pounds per square inch (psi)
- * MW is the mud weight in pounds per gallon (ppg)
- * Ls is the TVD depth of the string in feet (ft)

The Minimum Acceptable Collapse Design (Safety) Factor SFc = 1.125

Surface Casing	SFc =	1130	/	168	=	6.71
Intermediate Casing	SFc =	2570	/	620	=	4.15
Production 1 Casing	SFc =	8600	/	1933	=	4.45
Production 2 Casing	SFc =	8830	/	2048	=	4.31

Pipe Strength Design (Safety) Factors - BLM Criteria

Pipe Strength Design (Safety) Factor: SFtp

SFtp = Fp / Wt

Where

- * Fp is the rated pipe Body Strength in pounds (lbs)
- * Wt is the weight of the casing string in pounds (lbs)

The Minimum Acceptable Pipe Strength Design (Safety) Factor SFtp = 1.6 dry or 1.8 buoyant

Surface Casing	Sfi Dry =	853000	/	19620	=	43.48
	Sfi Buoyant =	853000	/	16924	=	50.40
Intermediate Casing	Sfi Dry =	630000	/	46800	=	13.46
	Sfi Buoyant =	630000	/	40227	=	15.66
Production 1 Casing	Sfi Dry =	745000	/	141568	=	5.26
	Sfi Buoyant =	745000	/	121684	=	6.12
Production 2 Casing *	Sfi Dry =	466000	/	291800	=	1.60
	Sfi Buoyant =	466000	/	250814	=	1.86

* Production 2 Casing design for vertical load while running in the hole prior to horizontal section

Burst Design (Safety) Factors - BLM Criteria

Burst Design (Safety) Factor: SFb

SFb = Pi / BHP

Where

- * Pi is the rated pipe burst (Minimum Internal Yield) pressure in pounds per square inch (psi)
- * BHP is bottom hole pressure in pounds per square inch (psi)

The Minimum Acceptable Burst Design (Safety) Factor SFb = 1.0

Surface Casing	SFb =	2740	/	168	=	16.26
Intermediate Casing	SFb =	3950	/	620	=	6.38
Production 1 Casing	SFb =	9050	/	1933	=	4.68
Production 2 Casing	SFb =	9190	/	2048	=	4.49

Joint Strength Design (Safety) Factors - BLM Criteria

Joint Strength Design (Safety) Factor: SFtj

SFtj = Fj / Wt

Where

- * Fj is the rated pipe Joint Strength in pounds (lbs)
- * Wt is the weight of the casing string in pounds (lbs)

The Minimum Acceptable Joint Strength Design (Safety) Factor SFtj = 1.6 dry or 1.8 buoyant

Surface Casing	Sfi Dry =	909000	/	19620	=	46.33
	Sfi Buoyant =	909000	/	16924	=	53.71
Intermediate Casing	Sfi Dry =	714000	/	46800	=	15.26
	Sfi Buoyant =	714000	/	40227	=	17.75
Production 1 Casing	Sfi Dry =	791000	/	129312	=	6.12
	Sfi Buoyant =	791000	/	111149	=	7.12
Production 2 Casing *	Sfi Dry =	503000	/	291800	=	1.72
	Sfi Buoyant =	503000	/	250814	=	2.01

* Production 2 Casing design for vertical load while running in the hole prior to horizontal section

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 386720

CONDITIONS

Operator: LONGFELLOW ENERGY, LP 8115 Preston Road Dallas, TX 75225	OGRID: 372210
	Action Number: 386720
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	If cement is not circulated to surface during cementing operations, a Cement Bond Log (CBL) is required.	11/1/2024
ward.rikala	All original COA's still apply.	11/1/2024