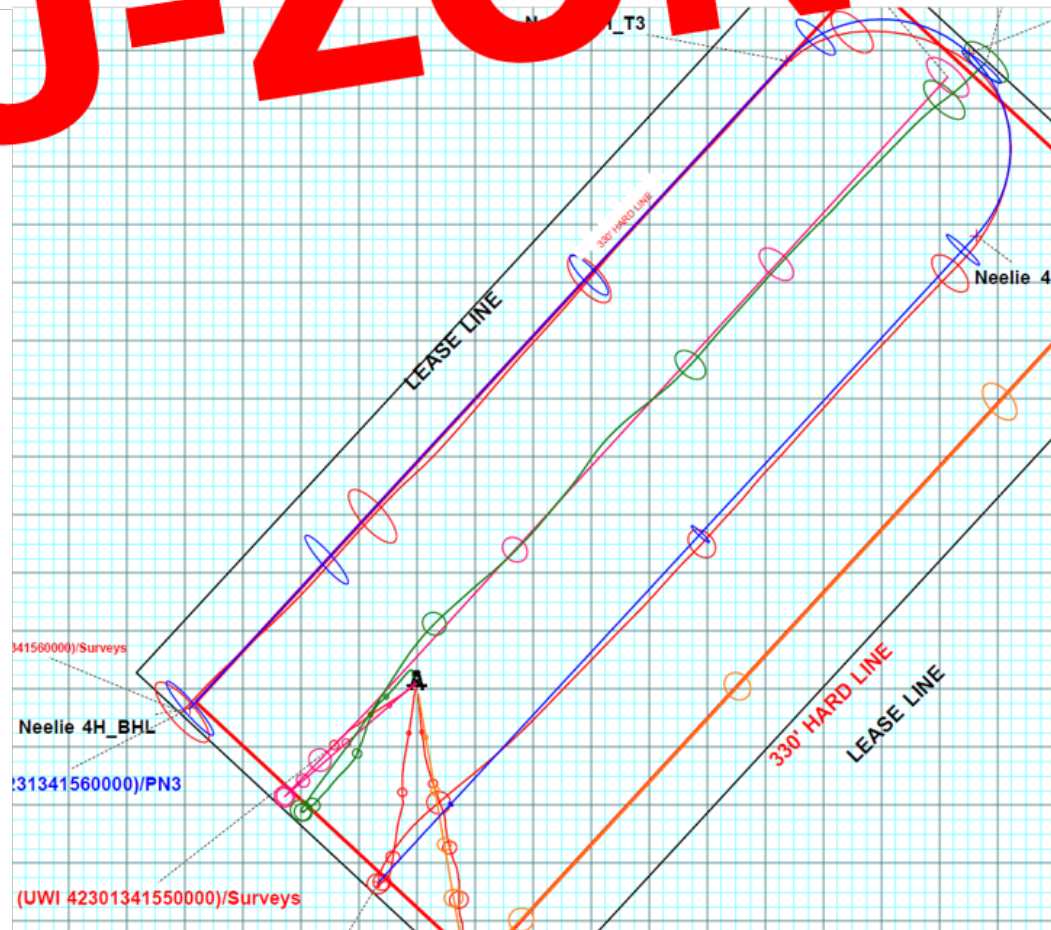
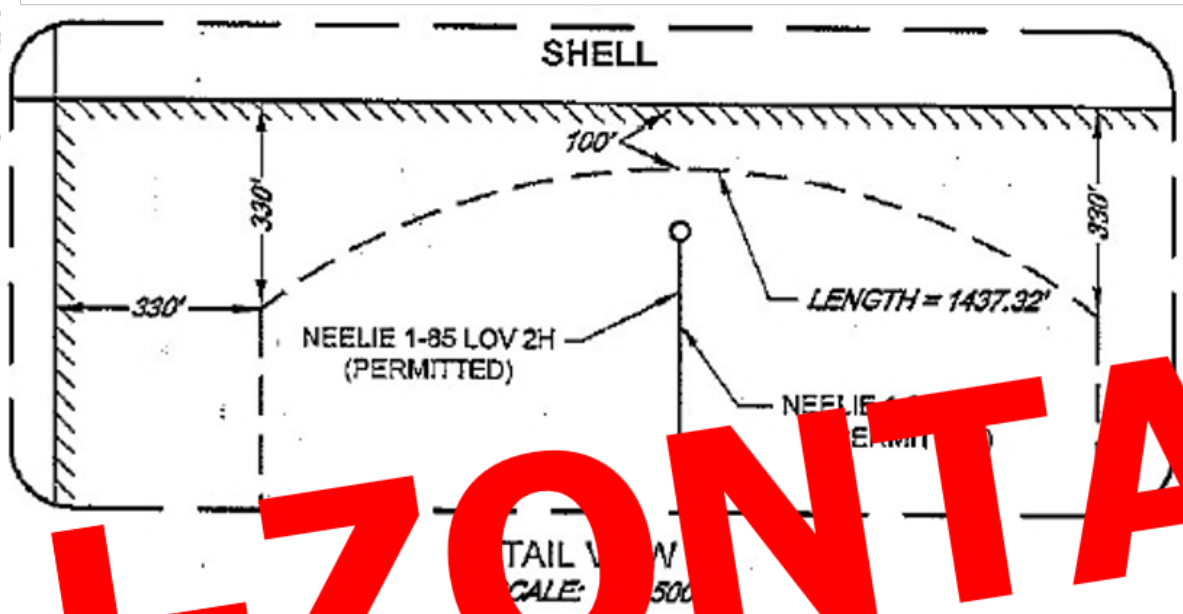
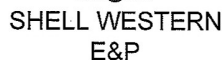
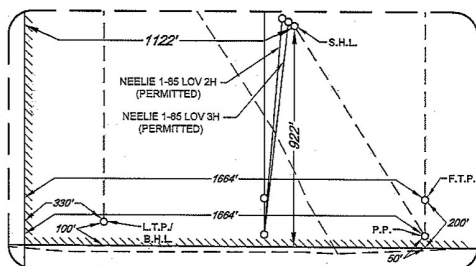
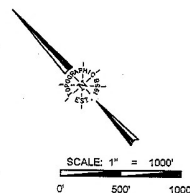


THE U-ZONTAL

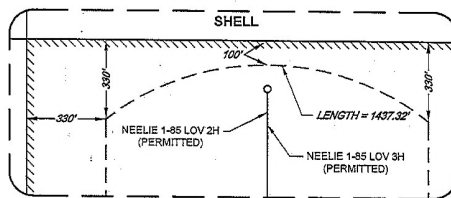




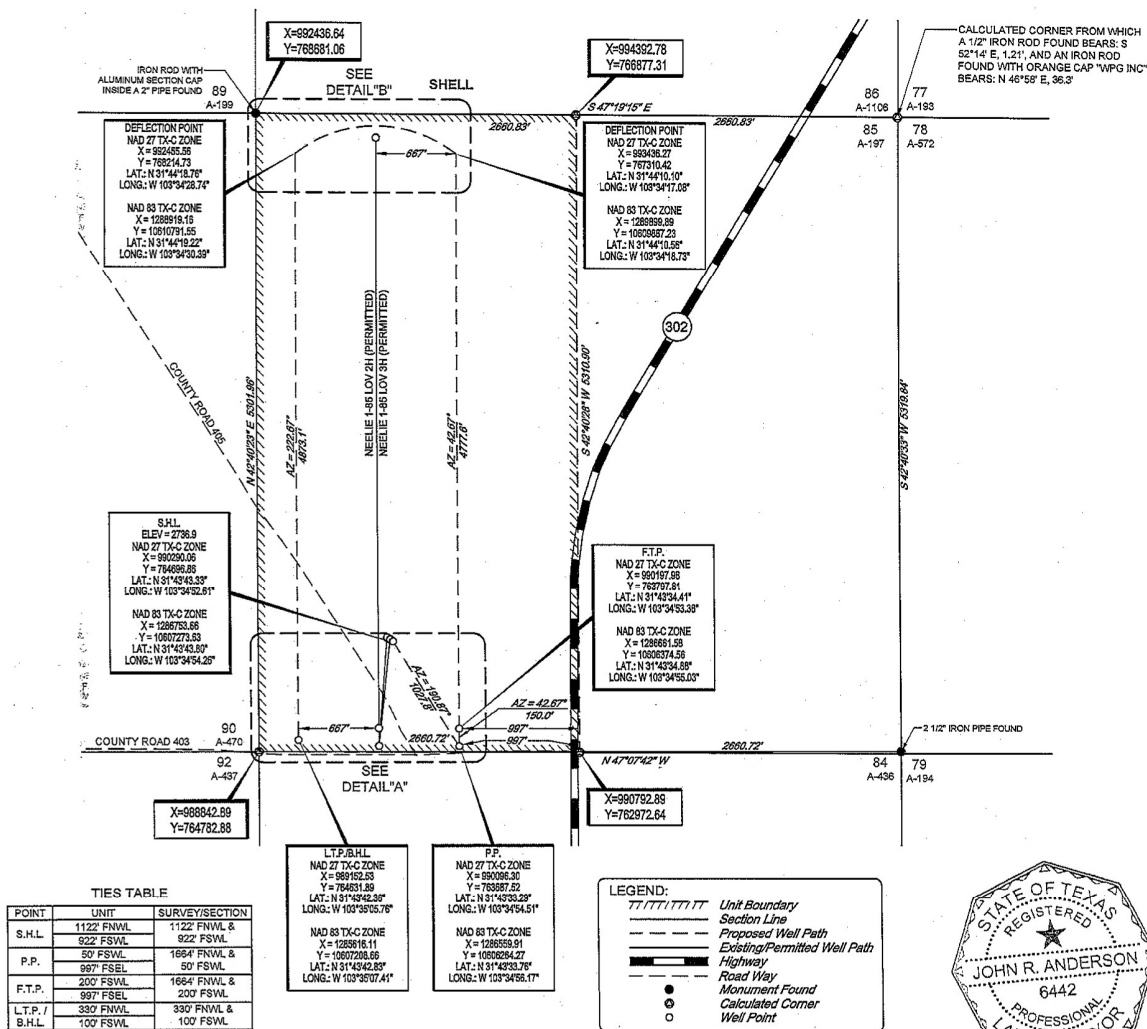
WELL LOCATION  
LEASE NAME & WELL NO.:  
NEELIE 1-85 LOV 4H  
UNIT/LEASE ACREAGE:  
324.13 ACRES (MEASURED)  
NEAREST TOWN IN COUNTY:  
±1.8 MILES NORTHEAST OF MENTONE, TEXAS  
DESCRIPTION:  
SECTION 85, BLOCK 1, W. & N. W. RR. CO. SURVEY  
LOVING COUNTY, TEXAS



DETAIL VIEW "A"  
SCALE: 1" = 500'



DETAIL VIEW "B"  
SCALE: 1" = 500'



John R. Anderson 2/25/19  
John R. Anderson, R.P.L.S. No. 6442



**TOPOGRAPHIC**  
LOYALTY INNOVATION LEGACY

1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140  
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554  
TEXAS FIRM REGISTRATION NO. 10042604  
WWW.TOPOGRAPHIC.COM

POINT	UNIT	SURVEY/SECTION
S.H.L	1122' FSWL	1122' FSWL &
	922' FSWL	922' FSWL
P.P.	50' FSWL	1664' FSWL &
	997' FSEL	50' FSWL
F.T.P.	200' FSWL	1664' FSWL &
	997' FSEL	200' FSWL
L.T.P. / B.H.L	330' FSWL	330' FSWL &
	100' FSWL	100' FSWL

REVISION:	
INT	DATE
A.C.L.	09/27/2018
A.C.L.	02/22/2019

NOTES:

- NOTES:
1. ORIGINAL DOCUMENT SIZE: 11" X 17"
2. ALL BEARINGS, DISTANCES, COORDINATE VECTORS CONTAINED HEREIN ARE GRID BASED UPON THE NAD 83 DATUM. THE COORDINATE SYSTEM IS THE NAD 83 STATE PLANE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927, UNLESS OTHERWISE NOTED.
3. THIS LOCATION AND UNLITABLE BOUNDARY HAS BEEN CAREFULLY SURVEYED ON THE GROUND AND THE SURVEYOR HAS REVIEWED ALL AVAILABLE RECORDS AND ENTITIES SHOWN ON THE FACE OF THE TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED BY SHELBY COUNTY. THIS LOCATION AND UNLITABLE BOUNDARY HAS BEEN CAREFULLY SURVEYED ON THE GROUND AND THE SURVEYOR HAS REVIEWED ALL AVAILABLE RECORDS AND ENTITIES SHOWN ON THE FACE OF THE RAILROAD COMMISSION OF TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH F.P.S.L.'S MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS LOCATION AND UNLITABLE BOUNDARY HAS BEEN CAREFULLY SURVEYED ON THE GROUND AND THE SURVEYOR HAS REVIEWED ALL AVAILABLE RECORDS AND ENTITIES SHOWN ON THE FACE OF THE PLAT IS TRAN-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.
4. ALL ELEVATION VALUES CONTAINED HEREIN ARE ORTHOMETRIC ONLY, BASED UPON THE NORTH AMERICAN DATUM 1927.
5. ALL MINERAL OWNERSHIP DATA SHOWN HEREIN IS BASED ON INFORMATION PROVIDED BY SHELBY COUNTY.

NOTES CONTD.

- NOTES CONT'D:  
6. THE PRELIMINARY LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND DURING THE DATE OF MARCH 15, 2018.  
7. S.H.L. = SURFACE HOLE LOCATION  
8. P.P. = POINT OF PENETRATION  
9. F.T.P. = FIRST TAKE POINT  
10. L.T.P. = LAST TAKE POINT  
11. B.H.L. = BOTTOM HOLE LOCATION

DATE:	05/18/2018
FILE:	LO_PW_1_05_PSA_NEEDLE_1_05_LOV_4H_REV2
DRAWN BY:	E.T./O.M./A.C.L.
SHEET:	1 OF 1



# **Shell**

Loving Co., TX

Neelie 1-85 LOV

4H (UWI 4231341560000)

OH

Design: Surveys

## **Completion Report**

01 May, 2019





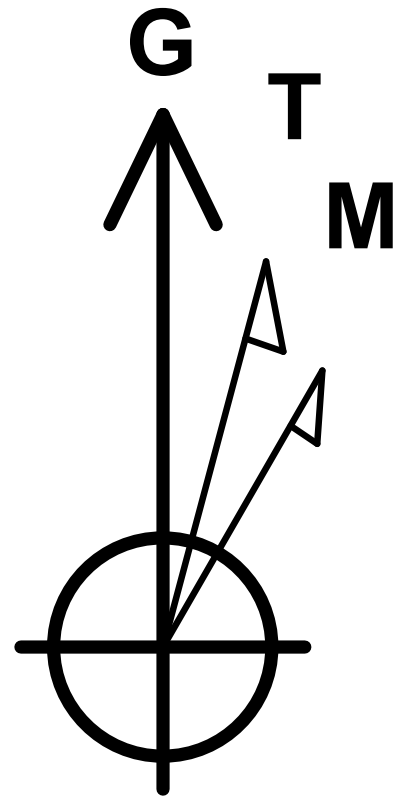


WELL DETAILS: 4H (UWI 4231341560000)

Ground Elevation: 2737.00  
RKB Elevation: KB = 29' @ 2766.00ft (Ensign 773)  
Rig Name: Ensign 773  
Wellbore: OH  
Plan: PN3

Northing 764696.860      Easting 990290.060      Latitude 31° 43' 43.334637 N      Longitude 103° 34' 52.613738 W

Project: Loving Co., TX  
Site: Neelie 1-85 LOV  
Well: 4H (UWI 4231341560000)  
Wellbore: OH  
Plan: PN3 (4H (UWI 4231341560000)/OH)



Azimuths to Grid North  
True North: 1.67°  
Magnetic North: 8.52°

Magnetic Field  
Strength: 47399.7nT  
Dip Angle: 59.37°  
Date: 4/10/2019  
Model: HDGM\_FILE

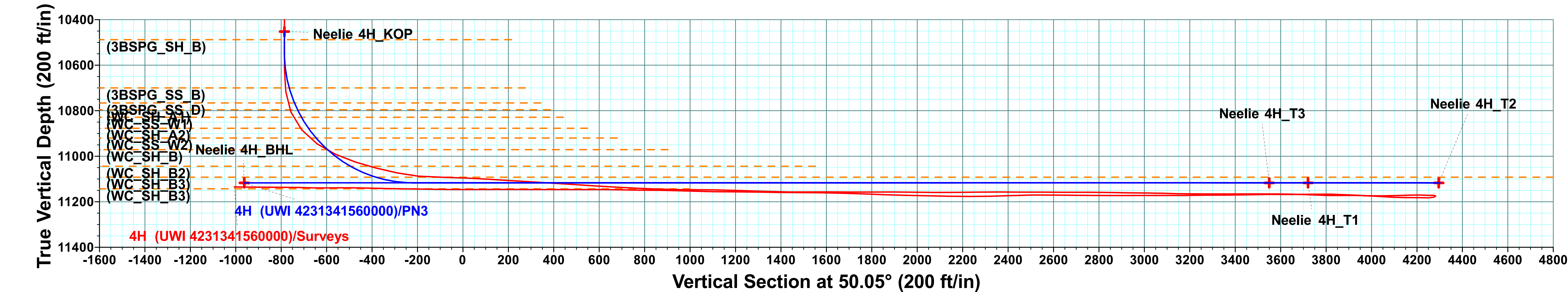
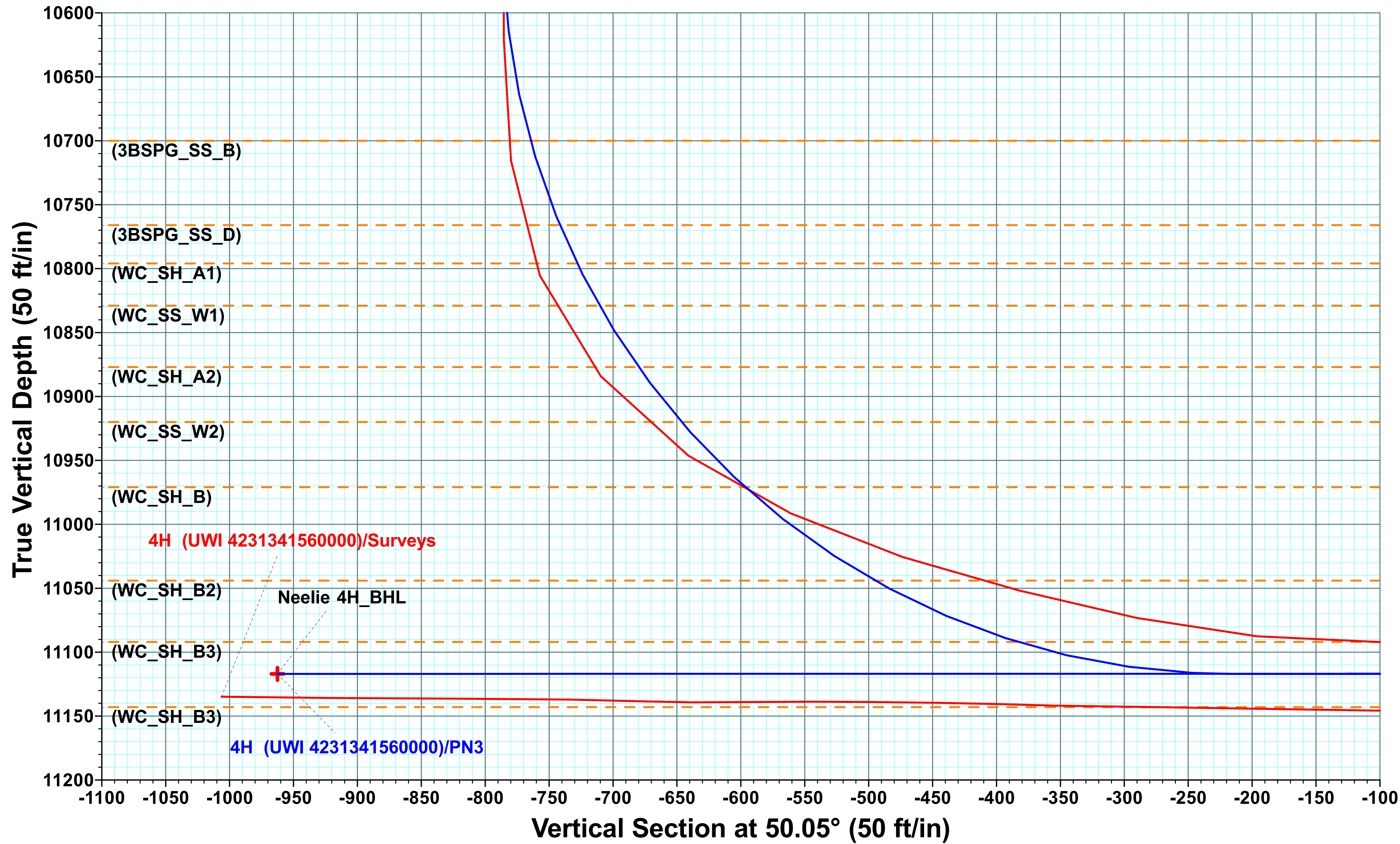


SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
10538.00	0.18	247.87	10452.49	-993.80	-192.39	0.00	0.00	-785.62
10627.92	0.18	247.87	10542.41	-993.91	-192.65	0.00	0.00	-785.89
10800.01	17.04	42.50	10712.00	-975.27	-175.73	10.00	154.88	-760.96
11099.99	47.05	42.68	10963.38	-859.49	-69.16	10.00	0.26	-604.92
11399.99	77.05	42.73	11102.41	-666.99	108.53	10.00	0.10	-345.09
11529.60	90.00	42.75	11117.00	-572.62	195.74	10.00	0.08	-217.63
15500.00	90.00	42.75	11117.00	2342.94	2890.85	0.00	0.00	3720.59
16546.98	90.00	312.64	11117.00	3284.53	2852.92	8.61	-90.00	4296.12
17593.32	90.00	222.70	11117.00	3246.23	1911.51	8.59	-90.00	3549.84
22143.32	90.00	222.64	11117.00	-99.25	-1172.37	0.00	-90.00	-962.48

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting
Neelie 4H_BHL	11117.00	-99.25	-1172.37	764597.610	989117.692
Neelie 4H_KOP	10452.49	-993.80	-192.39	763703.063	990097.674
Neelie 4H_T1	11117.00	2342.94	2890.85	767039.795	993180.904
Neelie 4H_T2	11117.00	3284.53	2852.92	767981.383	993142.974
Neelie 4H_T3	11117.00	3246.23	1911.51	767943.084	992201.566

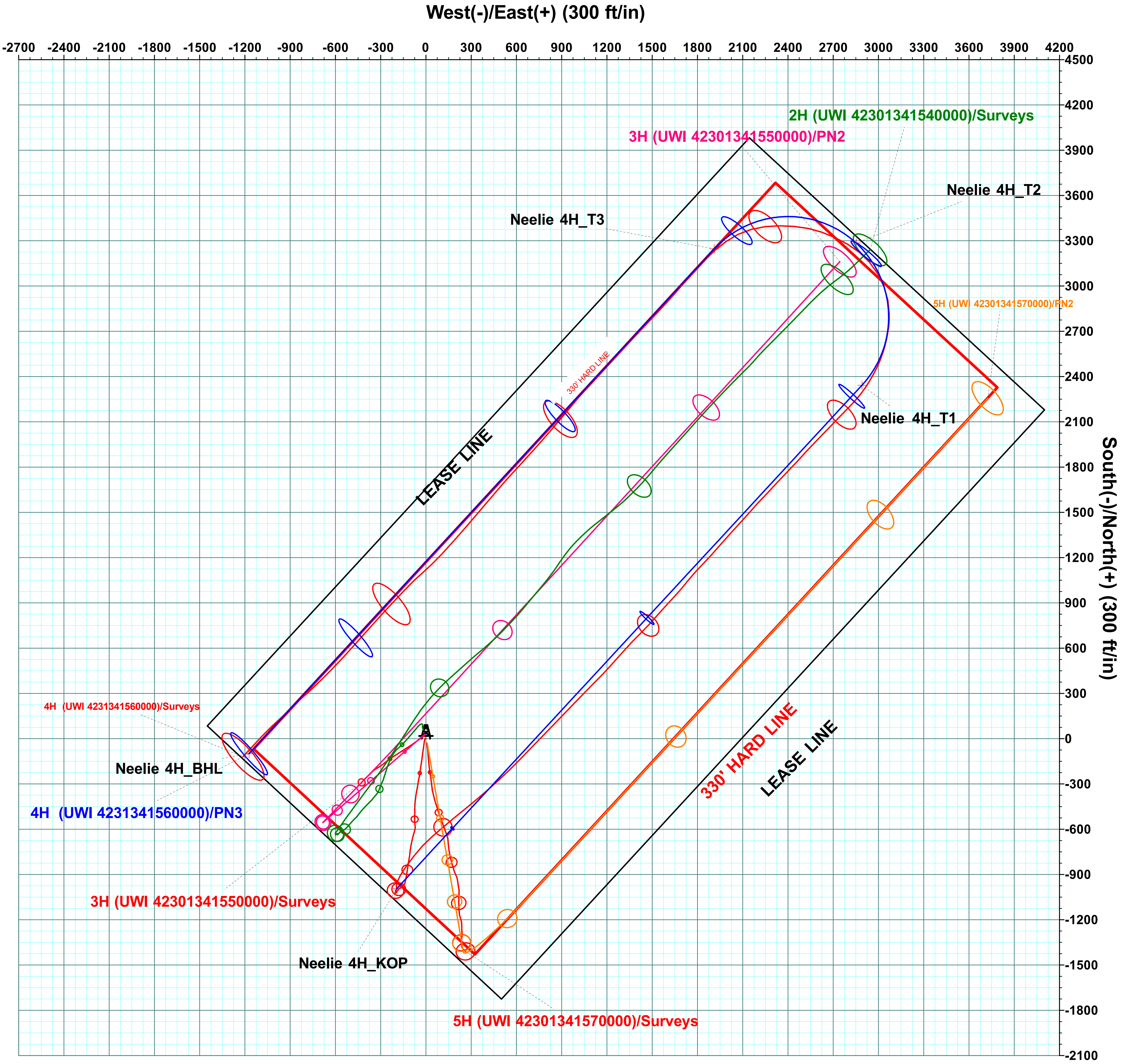
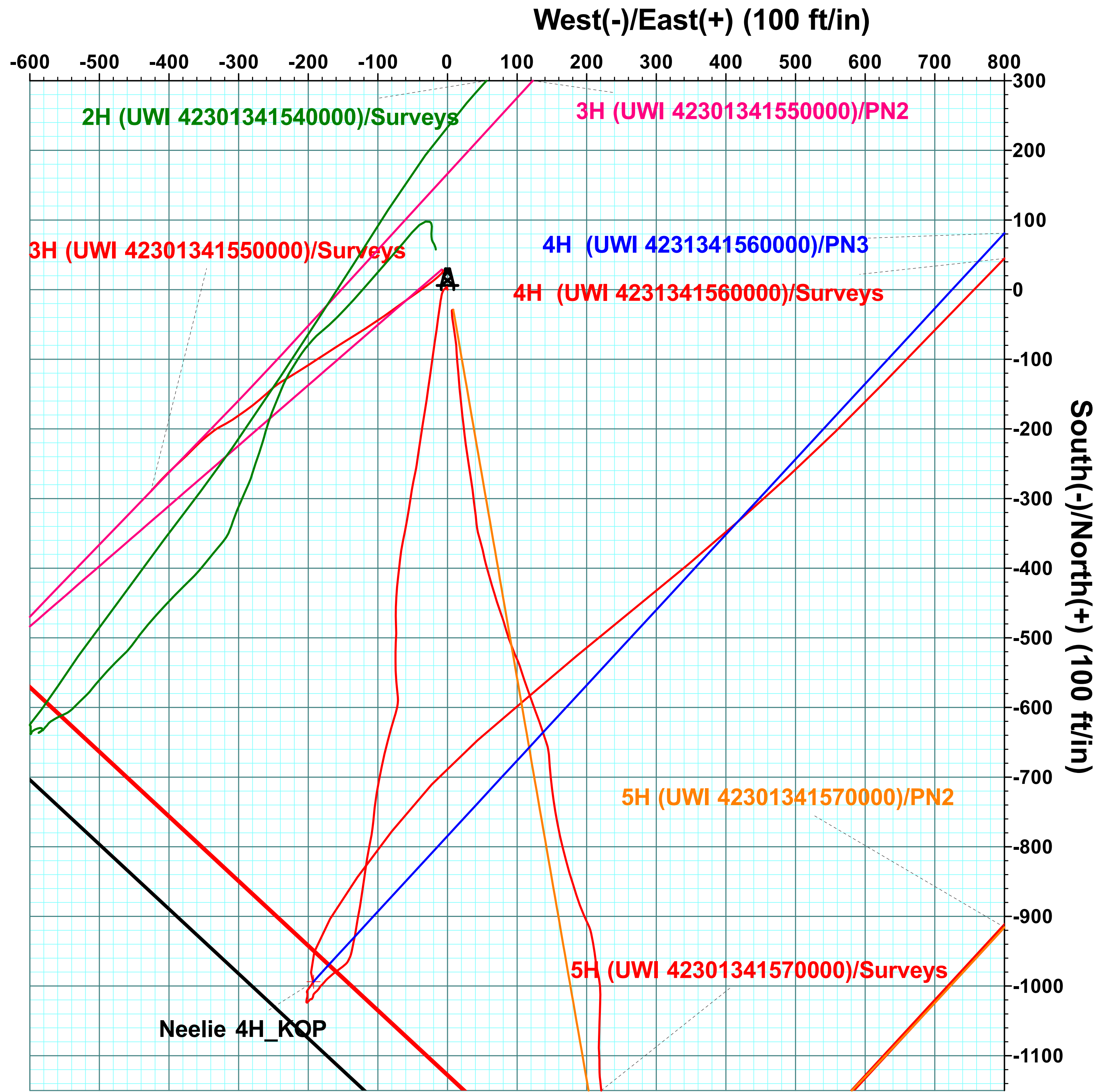


Target

Neelie 4H\_T2  
Neelie 4H\_T3  
Neelie 4H\_BHL

PROJECT DETAILS: Loving Co., TX  
Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1866  
Zone: Texas Central 4203

System Datum: Mean Sea Level  
Local North: Grid  
Site: Neelie 1-85 LOV



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
10488.00	10573.51	(3BSPG_SH_B)
10700.00	10787.50	(3BSPG_SS_B)
10766.00	10857.47	(3BSPG_SS_D)
10796.00	10890.43	(WC_SH_A1)
10829.00	10927.79	(WC_SS_W1)
10877.00	10984.84	(WC_SH_A2)
10920.00	11039.63	(WC_SS_W2)
10971.00	11111.30	(WC_SH_B)
11044.00	11237.17	(WC_SH_B2)
11092.00	11359.68	(WC_SH_B3)





Nabors  
Completion Report



<b>Company:</b>	Shell	<b>Local Co-ordinate Reference:</b>	Well 4H (UWI 4231341560000)
<b>Project:</b>	Loving Co., TX	<b>TVD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Site:</b>	Neelie 1-85 LOV	<b>MD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Well:</b>	4H (UWI 4231341560000)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	RyanUSA_ODBC_32-Bit

Project		Loving Co., TX	
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Texas Central 4203		

Site		Neelie 1-85 LOV								
Site Position:		Northing:		764,754.480	usft	Latitude:	31° 43' 43.899799 N			
From:	Map	Easting:		990,273.310	usft	Longitude:	103° 34' 52.827072 W			
Position Uncertainty:		0.00	ft	Slot Radius:		13-3/16	"	Grid Convergence:	-1.67	°

Well		4H (UWI 4231341560000)				
Well Position	+N/-S	0.00 ft	Northing:	764,696.860 usft	Latitude:	31° 43' 43.334637 N
	+E/-W	0.00 ft	Easting:	990,290.060 usft	Longitude:	103° 34' 52.613738 W
Position Uncertainty	0.00 ft		Wellhead Elevation:	ft	Ground Level:	2,737.00 ft

Wellbore		OH			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM_FILE	4/10/2019	6.85	59.37	47,399.70000000

Design		Surveys			
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)		+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00		0.00	0.00	264.37

Survey Program		Date	5/1/2019		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
195.00	22,135.00	Survey #1 - NDS MWD (OH)	MWD+HRGM	OWSG MWD + HRGM	



# Nabors Completion Report



<b>Company:</b>	Shell	<b>Local Co-ordinate Reference:</b>	Well 4H (UWI 4231341560000)
<b>Project:</b>	Loving Co., TX	<b>TVD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Site:</b>	Neelie 1-85 LOV	<b>MD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Well:</b>	4H (UWI 4231341560000)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	RyanUSA_ODBC_32-Bit

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
195.00	0.73	346.31	194.99	0.17	1.21	-0.29	1.24	346.31	0.37	
257.00	0.75	350.44	256.99	0.26	1.99	-0.45	2.04	347.13	0.09	
350.00	0.95	352.10	349.98	0.33	3.35	-0.66	3.42	348.84	0.22	
444.00	0.84	226.15	443.97	0.90	3.65	-1.27	3.86	340.87	1.70	
541.00	4.12	226.57	540.87	4.21	0.76	-4.31	4.38	280.00	3.38	
636.00	5.23	193.78	635.57	8.35	-5.79	-7.82	9.73	233.47	2.99	
731.00	7.35	189.44	729.99	11.37	-15.99	-9.85	18.78	211.63	2.29	
810.00	8.43	187.56	808.24	14.00	-26.72	-11.44	29.06	203.18	1.41	
909.00	9.49	187.79	906.03	17.55	-42.00	-13.50	44.12	197.82	1.07	
1,003.00	9.79	187.78	998.71	21.21	-57.59	-15.63	59.68	195.19	0.32	
1,098.00	10.23	188.71	1,092.26	25.17	-73.94	-18.00	76.10	193.69	0.49	
1,193.00	10.31	187.91	1,185.74	29.25	-90.69	-20.45	92.97	192.71	0.17	
1,288.00	10.24	188.02	1,279.21	33.23	-107.48	-22.80	109.87	191.98	0.08	
1,383.00	10.33	188.03	1,372.69	37.23	-124.27	-25.17	126.80	191.45	0.09	
1,478.00	10.49	188.09	1,466.12	41.29	-141.27	-27.57	143.93	191.04	0.17	
1,573.00	10.38	188.10	1,559.55	45.38	-158.30	-30.00	161.12	190.73	0.12	
1,667.00	10.65	189.18	1,651.97	49.61	-175.26	-32.58	178.26	190.53	0.36	
1,762.00	10.76	188.99	1,745.32	54.09	-192.69	-35.36	195.91	190.40	0.12	
1,857.00	10.76	188.60	1,838.65	58.51	-210.21	-38.07	213.63	190.27	0.08	
1,952.00	10.59	188.96	1,932.01	62.88	-227.61	-40.76	231.23	190.15	0.19	
2,047.00	10.52	187.39	2,025.40	67.04	-244.83	-43.23	248.62	190.01	0.31	
2,142.00	12.37	192.19	2,118.51	72.10	-263.38	-46.50	267.45	190.01	2.19	
2,331.00	9.81	187.68	2,303.97	82.01	-299.13	-52.93	303.78	190.03	1.43	
2,426.00	9.77	190.01	2,397.58	86.04	-315.09	-55.41	319.92	189.97	0.42	
2,521.00	9.66	189.75	2,491.22	90.33	-330.88	-58.16	335.95	189.97	0.12	
2,616.00	9.35	190.96	2,584.92	94.65	-346.31	-60.98	351.64	189.99	0.39	



**Nabors**  
Completion Report



<b>Company:</b>	Shell	<b>Local Co-ordinate Reference:</b>	Well 4H (UWI 4231341560000)
<b>Project:</b>	Loving Co., TX	<b>TVD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Site:</b>	Neelie 1-85 LOV	<b>MD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Well:</b>	4H (UWI 4231341560000)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	RyanUSA_ODBC_32-Bit

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
2,710.00	8.78	191.02	2,677.74	98.88	-360.85	-63.80	366.45	190.03	0.61	
2,805.00	8.18	189.49	2,771.70	102.72	-374.63	-66.30	380.46	190.04	0.67	
2,900.00	7.79	185.55	2,865.78	105.73	-387.71	-68.04	393.63	189.95	0.71	
2,995.00	7.26	187.23	2,959.97	108.32	-400.07	-69.42	406.05	189.84	0.60	
3,090.00	8.44	186.46	3,054.07	111.11	-412.95	-70.96	419.01	189.75	1.25	
3,185.00	8.84	185.32	3,148.00	113.96	-427.15	-72.42	433.24	189.62	0.46	
3,279.00	8.71	182.95	3,240.90	116.39	-441.45	-73.45	447.52	189.45	0.41	
3,374.00	8.39	182.24	3,334.84	118.41	-455.56	-74.09	461.54	189.24	0.35	
3,469.00	7.73	179.25	3,428.90	119.90	-468.87	-74.28	474.72	189.00	0.82	
3,564.00	7.05	176.63	3,523.11	120.68	-481.08	-73.85	486.72	188.73	0.80	
3,659.00	8.16	181.54	3,617.28	121.75	-493.64	-73.69	499.11	188.49	1.35	
3,754.00	8.24	183.26	3,711.30	123.64	-507.18	-74.26	512.59	188.33	0.27	
3,849.00	7.86	179.47	3,805.37	125.27	-520.47	-74.59	525.79	188.16	0.69	
3,943.00	8.20	180.50	3,898.45	126.56	-533.60	-74.59	538.79	187.96	0.39	
4,039.00	8.11	178.70	3,993.48	127.80	-547.22	-74.49	552.26	187.75	0.28	
4,134.00	8.28	174.52	4,087.51	128.32	-560.72	-73.69	565.55	187.49	0.65	
4,176.00	8.19	173.81	4,129.07	128.30	-566.71	-73.08	571.40	187.35	0.32	
4,305.00	8.31	174.92	4,256.74	128.30	-585.13	-71.26	589.45	186.94	0.15	
4,400.00	8.63	192.23	4,350.72	130.55	-598.94	-72.16	603.27	186.87	2.69	
4,495.00	10.61	196.95	4,444.38	136.10	-614.27	-76.22	618.98	187.07	2.24	
4,589.00	10.97	195.93	4,536.72	142.71	-631.15	-81.20	636.35	187.33	0.43	
4,684.00	11.02	194.52	4,629.97	149.15	-648.63	-85.96	654.30	187.55	0.29	
4,779.00	11.40	193.27	4,723.16	155.32	-666.56	-90.39	672.66	187.72	0.47	
4,874.00	11.59	191.28	4,816.26	161.14	-685.05	-94.41	691.53	187.85	0.46	
4,969.00	12.16	191.42	4,909.22	166.85	-704.22	-98.26	711.04	187.94	0.60	
5,064.00	12.08	188.93	5,002.11	172.28	-723.85	-101.78	730.97	188.00	0.56	
5,159.00	12.46	186.73	5,094.94	176.97	-743.85	-104.53	751.15	188.00	0.63	



**Nabors**  
Completion Report



<b>Company:</b>	Shell	<b>Local Co-ordinate Reference:</b>	Well 4H (UWI 4231341560000)
<b>Project:</b>	Loving Co., TX	<b>TVD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Site:</b>	Neelie 1-85 LOV	<b>MD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Well:</b>	4H (UWI 4231341560000)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	RyanUSA_ODBC_32-Bit

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
5,254.00	12.50	185.23	5,187.69	181.10	-764.26	-106.67	771.67	187.95	0.34	
5,348.00	11.05	190.18	5,279.71	185.47	-783.26	-109.19	790.83	187.94	1.88	
5,443.00	10.05	191.12	5,373.11	190.34	-800.36	-112.39	808.21	187.99	1.07	
5,538.00	10.36	189.50	5,466.60	194.96	-816.91	-115.40	825.02	188.04	0.44	
5,633.00	10.44	187.71	5,560.04	199.17	-833.87	-117.97	842.17	188.05	0.35	
5,728.00	10.74	188.95	5,653.42	203.39	-851.14	-120.50	859.63	188.06	0.40	
5,823.00	11.23	188.01	5,746.68	207.80	-869.05	-123.16	877.73	188.07	0.55	
5,918.00	10.22	189.73	5,840.02	212.21	-886.51	-125.88	895.41	188.08	1.12	
6,013.00	9.42	190.62	5,933.63	216.62	-902.46	-128.73	911.60	188.12	0.86	
6,107.00	9.53	188.06	6,026.35	220.61	-917.73	-131.24	927.06	188.14	0.46	
6,202.00	6.88	193.29	6,120.37	224.32	-931.05	-133.65	940.60	188.17	2.90	
6,297.00	5.90	190.75	6,214.78	227.54	-941.39	-135.87	951.14	188.21	1.07	
6,392.00	5.32	191.36	6,309.32	230.20	-950.50	-137.65	960.42	188.24	0.61	
6,486.00	4.18	202.96	6,403.00	233.12	-957.93	-139.85	968.08	188.31	1.58	
6,581.00	3.62	206.71	6,497.78	236.38	-963.80	-142.55	974.28	188.41	0.65	
6,676.00	3.43	228.64	6,592.60	240.29	-968.35	-146.03	979.30	188.58	1.42	
6,771.00	3.76	232.97	6,687.42	245.25	-972.11	-150.65	983.71	188.81	0.45	
6,866.00	3.90	231.43	6,782.21	250.62	-976.00	-155.66	988.33	189.06	0.18	
6,960.00	2.15	236.47	6,876.07	254.87	-978.97	-159.63	991.90	189.26	1.88	
7,055.00	1.75	231.00	6,971.02	257.65	-980.86	-162.24	994.19	189.39	0.46	
7,150.00	1.90	231.29	7,065.97	260.18	-982.76	-164.60	996.45	189.51	0.16	
7,245.00	2.01	229.09	7,160.91	262.86	-984.84	-167.09	998.91	189.63	0.14	
7,340.00	1.95	227.46	7,255.86	265.51	-987.02	-169.54	1,001.48	189.75	0.09	
7,435.00	2.09	230.05	7,350.80	268.24	-989.23	-172.05	1,004.08	189.87	0.18	
7,530.00	2.54	219.86	7,445.72	271.17	-991.95	-174.73	1,007.23	189.99	0.64	
7,625.00	2.27	221.65	7,540.64	274.05	-994.98	-177.33	1,010.65	190.11	0.29	
7,720.00	2.19	224.09	7,635.56	276.82	-997.69	-179.84	1,013.77	190.22	0.13	





**Nabors**  
Completion Report



<b>Company:</b>	Shell	<b>Local Co-ordinate Reference:</b>	Well 4H (UWI 4231341560000)
<b>Project:</b>	Loving Co., TX	<b>TVD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Site:</b>	Neelie 1-85 LOV	<b>MD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Well:</b>	4H (UWI 4231341560000)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	RyanUSA_ODBC_32-Bit

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
7,815.00	1.28	231.05	7,730.52	279.09	-999.66	-181.93	1,016.08	190.31	0.98	
7,910.00	1.39	206.97	7,825.49	280.60	-1,001.35	-183.28	1,017.99	190.37	0.60	
8,005.00	0.82	211.39	7,920.48	281.63	-1,002.96	-184.16	1,019.72	190.40	0.61	
8,099.00	1.85	216.53	8,014.45	283.05	-1,004.75	-185.41	1,021.71	190.46	1.10	
8,194.00	1.74	227.61	8,109.40	285.24	-1,006.96	-187.39	1,024.24	190.54	0.38	
8,289.00	2.02	229.82	8,204.35	287.77	-1,009.01	-189.73	1,026.69	190.65	0.30	
8,384.00	1.93	215.74	8,299.30	290.21	-1,011.39	-191.95	1,029.44	190.75	0.52	
8,479.00	1.35	176.60	8,394.26	291.31	-1,013.80	-192.81	1,031.98	190.77	1.29	
8,574.00	1.93	205.28	8,489.22	292.17	-1,016.37	-193.43	1,034.61	190.78	1.04	
8,669.00	1.43	226.48	8,584.18	293.93	-1,018.63	-194.97	1,037.12	190.84	0.83	
8,763.00	0.51	346.59	8,678.17	294.91	-1,019.03	-195.92	1,037.69	190.88	1.85	
8,858.00	1.04	246.08	8,773.17	295.79	-1,018.97	-196.81	1,037.80	190.93	1.30	
8,953.00	3.02	219.38	8,868.10	298.38	-1,021.25	-199.18	1,040.50	191.04	2.26	
9,048.00	1.25	233.22	8,963.03	301.03	-1,023.81	-201.60	1,043.47	191.14	1.93	
9,143.00	1.48	350.71	9,058.02	302.00	-1,023.22	-202.63	1,043.09	191.20	2.46	
9,238.00	2.62	10.93	9,152.96	301.46	-1,019.87	-202.42	1,039.77	191.23	1.40	
9,332.00	3.15	13.75	9,246.84	299.99	-1,015.26	-201.39	1,035.04	191.22	0.58	
9,427.00	2.30	348.44	9,341.73	299.32	-1,010.85	-201.16	1,030.67	191.25	1.53	
9,522.00	0.85	329.13	9,436.70	299.82	-1,008.38	-201.90	1,028.39	191.32	1.60	
9,617.00	1.69	35.64	9,531.68	299.19	-1,006.64	-201.45	1,026.60	191.32	1.64	
9,712.00	1.84	35.94	9,626.63	297.26	-1,004.26	-199.73	1,023.93	191.25	0.16	
9,807.00	1.71	33.64	9,721.59	295.35	-1,001.85	-198.05	1,021.24	191.18	0.16	
9,902.00	1.23	37.52	9,816.55	293.76	-999.86	-196.65	1,019.01	191.13	0.52	
9,997.00	1.36	38.50	9,911.53	292.27	-998.17	-195.32	1,017.10	191.07	0.14	
10,092.00	0.93	29.90	10,006.51	291.04	-996.62	-194.24	1,015.37	191.03	0.49	
10,187.00	0.75	21.81	10,101.50	290.31	-995.37	-193.62	1,014.03	191.01	0.23	
10,281.00	0.49	43.17	10,195.50	289.72	-994.51	-193.12	1,013.09	190.99	0.37	



**Nabors**  
Completion Report



<b>Company:</b>	Shell	<b>Local Co-ordinate Reference:</b>	Well 4H (UWI 4231341560000)
<b>Project:</b>	Loving Co., TX	<b>TVD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Site:</b>	Neelie 1-85 LOV	<b>MD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Well:</b>	4H (UWI 4231341560000)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	RyanUSA_ODBC_32-Bit

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
10,376.00	0.32	50.98	10,290.49	289.19	-994.04	-192.64	1,012.54	190.97	0.19	
10,471.00	0.13	50.00	10,385.49	288.88	-993.81	-192.35	1,012.25	190.95	0.20	
10,538.00	0.18	247.87	10,452.49	288.92	-993.80	-192.39	1,012.25	190.96	0.46	
Neelie 4H_KOP										
10,613.00	0.09	260.23	10,527.49	289.09	-993.85	-192.55	1,012.33	190.96	0.13	
10,629.24	0.43	324.59	10,543.73	289.13	-993.81	-192.60	1,012.30	190.97	2.45	
PP - 4H										
10,707.00	2.33	334.19	10,621.47	289.82	-992.15	-193.46	1,010.83	191.03	2.45	
10,802.00	12.13	350.75	10,715.60	291.12	-980.53	-195.91	999.91	191.30	10.44	
10,897.00	25.53	17.87	10,805.46	283.55	-951.01	-191.20	970.04	191.37	16.50	
10,992.00	42.11	30.40	10,884.21	256.43	-903.66	-168.62	919.26	190.57	18.85	
11,087.00	56.05	35.48	10,946.30	211.55	-843.79	-129.42	853.66	188.72	15.21	
11,150.18	62.99	37.37	10,978.33	175.08	-800.02	-97.09	805.89	186.92	11.29	
FTP - 4H										
11,181.00	66.39	38.20	10,991.50	155.93	-778.01	-80.02	782.11	185.87	11.29	
11,276.00	71.64	42.48	11,025.53	92.16	-710.48	-22.60	710.84	181.82	6.94	
11,371.00	76.38	49.44	11,051.72	20.63	-647.11	43.03	648.54	176.20	8.63	
11,466.00	77.40	49.66	11,073.27	-55.32	-587.08	113.44	597.94	169.06	1.10	
11,561.00	85.17	49.86	11,087.65	-132.55	-526.47	185.07	558.05	160.63	8.18	
11,675.00	89.51	51.35	11,092.94	-227.19	-454.21	273.05	529.97	148.99	4.02	
11,770.00	87.24	49.99	11,095.63	-306.18	-394.04	346.50	524.71	138.67	2.79	
11,865.00	86.49	48.73	11,100.83	-383.87	-332.26	418.47	534.34	128.45	1.54	
11,960.00	86.49	47.19	11,106.64	-460.18	-268.76	488.89	557.90	118.80	1.62	
12,054.00	86.57	45.76	11,112.33	-534.22	-204.15	556.92	593.16	110.13	1.52	
12,149.00	86.46	44.01	11,118.11	-607.40	-136.96	623.84	638.70	102.38	1.84	
12,244.00	86.14	44.01	11,124.24	-679.64	-68.78	689.71	693.13	95.69	0.34	
12,338.00	86.55	44.27	11,130.23	-751.25	-1.46	755.03	755.04	90.11	0.52	



**Nabors**  
Completion Report



<b>Company:</b>	Shell	<b>Local Co-ordinate Reference:</b>	Well 4H (UWI 4231341560000)
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<b>Site:</b>	Neelie 1-85 LOV	<b>MD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Well:</b>	4H (UWI 4231341560000)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	RyanUSA_ODBC_32-Bit

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
12,433.00	86.69	44.06	11,135.83	-823.68	66.57	821.11	823.80	85.37	0.27	
12,528.00	87.47	43.99	11,140.67	-895.99	134.79	887.04	897.23	81.36	0.82	
12,623.00	87.87	43.77	11,144.54	-968.17	203.21	952.84	974.27	77.96	0.48	
12,717.00	89.40	44.29	11,146.77	-1,039.80	270.77	1,018.15	1,053.54	75.11	1.72	
12,812.00	89.89	44.72	11,147.36	-1,112.71	338.52	1,084.74	1,136.34	72.67	0.69	
12,906.00	88.33	44.25	11,148.82	-1,184.83	405.57	1,150.60	1,219.99	70.58	1.73	
13,001.00	88.45	42.13	11,151.49	-1,256.30	474.81	1,215.59	1,305.03	68.66	2.23	
13,096.00	88.27	42.11	11,154.21	-1,326.59	545.24	1,279.28	1,390.63	66.92	0.19	
13,190.00	88.62	42.09	11,156.76	-1,396.12	614.96	1,342.28	1,476.44	65.39	0.37	
13,285.00	90.92	45.51	11,157.14	-1,468.26	683.51	1,408.02	1,565.15	64.11	4.34	
13,379.00	89.40	42.83	11,156.88	-1,540.05	750.93	1,473.51	1,653.82	63.00	3.28	
13,474.00	89.74	41.35	11,157.59	-1,610.33	821.42	1,537.18	1,742.89	61.88	1.60	
13,568.00	90.55	42.98	11,157.36	-1,679.95	891.09	1,600.28	1,831.65	60.89	1.94	
13,662.00	89.86	41.98	11,157.02	-1,749.92	960.42	1,663.76	1,921.07	60.00	1.29	
13,757.00	88.91	38.83	11,158.04	-1,818.29	1,032.75	1,725.32	2,010.80	59.10	3.46	
13,852.00	89.83	42.15	11,159.08	-1,886.75	1,104.98	1,786.99	2,101.03	58.27	3.63	
13,947.00	90.40	43.79	11,158.89	-1,958.00	1,174.49	1,851.75	2,192.80	57.61	1.83	
14,041.00	91.09	41.57	11,157.67	-2,028.18	1,243.58	1,915.46	2,283.74	57.01	2.47	
14,136.00	89.57	41.57	11,157.12	-2,097.88	1,314.65	1,978.49	2,375.45	56.40	1.60	
14,231.00	89.74	41.95	11,157.70	-2,167.80	1,385.52	2,041.76	2,467.48	55.84	0.44	
14,326.00	89.91	42.81	11,157.99	-2,238.40	1,455.69	2,105.79	2,559.96	55.34	0.92	
14,420.00	89.68	40.86	11,158.32	-2,307.66	1,525.72	2,168.49	2,651.45	54.87	2.09	
14,515.00	90.14	44.31	11,158.47	-2,378.49	1,595.66	2,232.76	2,744.33	54.45	3.66	
14,610.00	89.05	42.38	11,159.14	-2,450.15	1,664.74	2,297.96	2,837.60	54.08	2.33	
14,705.00	89.14	43.48	11,160.64	-2,521.35	1,734.29	2,362.66	2,930.86	53.72	1.16	
14,799.00	89.43	44.08	11,161.82	-2,592.73	1,802.15	2,427.69	3,023.48	53.41	0.71	
14,894.00	88.22	41.96	11,163.77	-2,664.02	1,871.59	2,492.49	3,116.94	53.10	2.57	





**Nabors**  
Completion Report



<b>Company:</b>	Shell	<b>Local Co-ordinate Reference:</b>	Well 4H (UWI 4231341560000)
<b>Project:</b>	Loving Co., TX	<b>TVD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Site:</b>	Neelie 1-85 LOV	<b>MD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Well:</b>	4H (UWI 4231341560000)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	RyanUSA_ODBC_32-Bit

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
14,990.00	89.71	44.00	11,165.50	-2,736.02	1,941.80	2,557.92	3,211.47	52.80	2.63	
15,085.00	89.94	44.03	11,165.79	-2,808.41	2,010.12	2,623.93	3,305.39	52.55	0.24	
15,181.00	89.86	43.90	11,165.96	-2,881.51	2,079.22	2,690.58	3,400.34	52.30	0.16	
15,276.00	90.29	44.16	11,165.83	-2,953.92	2,147.52	2,756.60	3,494.38	52.08	0.53	
15,371.00	89.51	43.58	11,166.00	-3,026.16	2,216.01	2,822.44	3,588.43	51.86	1.02	
15,466.00	88.45	38.01	11,167.69	-3,094.94	2,287.89	2,884.47	3,681.66	51.58	5.97	
15,513.13	87.92	34.54	11,169.19	-3,126.40	2,325.85	2,912.34	3,727.10	51.39	7.44	
Neelie 4H_T1										
15,561.00	87.38	31.02	11,171.15	-3,156.11	2,366.06	2,938.23	3,772.46	51.16	7.44	
15,656.00	91.09	26.78	11,172.42	-3,209.93	2,449.19	2,984.12	3,860.51	50.62	5.93	
15,751.00	88.71	19.75	11,172.59	-3,255.80	2,536.40	3,021.62	3,945.06	49.99	7.81	
15,845.00	87.04	13.59	11,176.08	-3,291.42	2,626.34	3,048.55	4,023.85	49.25	6.79	
15,936.00	87.99	7.86	11,180.02	-3,317.01	2,715.63	3,065.46	4,095.33	48.46	6.38	
15,939.55	88.06	7.53	11,180.15	-3,317.83	2,719.15	3,065.94	4,098.02	48.43	9.39	
BHL - 4H										
16,031.00	89.91	359.15	11,181.77	-3,332.07	2,810.34	3,071.26	4,163.01	47.54	9.39	
16,125.00	89.60	350.11	11,182.17	-3,332.49	2,903.83	3,062.48	4,220.31	46.52	9.62	
16,220.00	89.66	338.84	11,182.79	-3,316.19	2,995.22	3,037.09	4,265.59	45.40	11.86	
16,315.00	93.83	329.68	11,179.89	-3,283.59	3,080.64	2,995.91	4,297.19	44.20	10.59	
16,409.00	92.93	319.52	11,174.33	-3,237.05	3,157.03	2,941.62	4,315.09	42.98	10.83	
16,504.00	89.94	308.79	11,171.95	-3,175.82	3,223.08	2,873.59	4,318.07	41.72	11.72	
16,556.05	90.15	304.15	11,171.91	-3,137.21	3,254.01	2,831.74	4,313.62	41.03	8.91	
Neelie 4H_T2										
16,599.00	90.32	300.33	11,171.73	-3,103.32	3,276.92	2,795.43	4,307.27	40.47	8.91	
16,694.00	91.44	295.73	11,170.27	-3,024.27	3,321.54	2,711.60	4,287.83	39.23	4.98	
16,789.00	87.67	288.71	11,171.01	-2,940.35	3,357.44	2,623.73	4,261.03	38.01	8.39	
16,884.00	90.03	281.29	11,172.92	-2,851.52	3,382.00	2,532.06	4,224.84	36.82	8.19	



**Nabors**  
Completion Report



<b>Company:</b>	Shell	<b>Local Co-ordinate Reference:</b>	Well 4H (UWI 4231341560000)
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<b>Site:</b>	Neelie 1-85 LOV	<b>MD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Well:</b>	4H (UWI 4231341560000)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	RyanUSA_ODBC_32-Bit

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
16,978.00	88.62	274.88	11,174.03	-2,760.26	3,395.22	2,439.05	4,180.48	35.69	6.98	
17,073.00	91.78	269.98	11,173.69	-2,666.24	3,399.24	2,344.18	4,129.17	34.59	6.14	
17,168.00	92.56	263.34	11,170.09	-2,571.44	3,393.72	2,249.46	4,071.53	33.54	7.03	
17,263.00	91.35	254.59	11,166.85	-2,477.01	3,375.56	2,156.36	4,005.53	32.57	9.29	
17,358.00	88.28	243.53	11,167.15	-2,385.53	3,341.66	2,067.79	3,929.69	31.75	12.08	
17,447.00	90.63	235.02	11,168.00	-2,305.02	3,296.24	1,991.36	3,851.06	31.14	9.92	
17,540.80	89.61	228.31	11,167.80	-2,226.14	3,238.09	1,917.83	3,763.41	30.64	7.24	
Neelie 4H_T3										
17,542.00	89.60	228.22	11,167.81	-2,225.17	3,237.29	1,916.93	3,762.27	30.63	7.24	
17,637.00	88.31	223.89	11,169.54	-2,150.67	3,171.39	1,848.56	3,670.82	30.24	4.76	
17,732.00	90.20	222.28	11,170.78	-2,079.29	3,102.02	1,783.68	3,578.27	29.90	2.61	
17,827.00	89.40	221.61	11,171.11	-2,009.17	3,031.36	1,720.18	3,485.42	29.57	1.10	
17,921.00	89.14	220.33	11,172.31	-1,940.88	2,960.40	1,658.55	3,393.34	29.26	1.39	
18,016.00	90.83	223.21	11,172.33	-1,870.97	2,889.55	1,595.28	3,300.67	28.90	3.51	
18,111.00	89.00	222.86	11,172.48	-1,799.64	2,820.12	1,530.45	3,208.63	28.49	1.96	
18,206.00	90.60	223.89	11,172.81	-1,727.94	2,751.07	1,465.21	3,116.92	28.04	2.00	
18,301.00	90.00	223.30	11,172.31	-1,656.00	2,682.27	1,399.70	3,025.51	27.56	0.89	
18,396.00	90.66	223.09	11,171.76	-1,584.50	2,613.01	1,334.68	2,934.14	27.06	0.73	
18,491.00	90.66	223.09	11,170.67	-1,513.12	2,543.64	1,269.78	2,842.96	26.53	0.00	
18,586.00	89.71	222.55	11,170.36	-1,442.02	2,473.96	1,205.21	2,751.91	25.97	1.15	
18,680.00	87.44	223.16	11,172.70	-1,371.67	2,405.07	1,141.30	2,662.13	25.39	2.50	
18,776.00	88.62	222.17	11,176.00	-1,300.04	2,334.53	1,076.29	2,570.68	24.75	1.60	
18,871.00	90.23	220.27	11,176.95	-1,230.75	2,263.08	1,013.69	2,479.74	24.13	2.62	
18,966.00	91.12	219.92	11,175.83	-1,162.73	2,190.41	952.51	2,388.55	23.50	1.01	
19,061.00	91.18	220.04	11,173.93	-1,094.86	2,117.63	891.49	2,297.63	22.83	0.14	
19,156.00	91.29	220.72	11,171.88	-1,026.53	2,045.28	829.95	2,207.26	22.09	0.72	
19,250.00	92.10	221.39	11,169.10	-958.17	1,974.43	768.24	2,118.62	21.26	1.12	



**Nabors**  
Completion Report



<b>Company:</b>	Shell	<b>Local Co-ordinate Reference:</b>	Well 4H (UWI 4231341560000)
<b>Project:</b>	Loving Co., TX	<b>TVD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Site:</b>	Neelie 1-85 LOV	<b>MD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Well:</b>	4H (UWI 4231341560000)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	RyanUSA_ODBC_32-Bit

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
19,345.00	92.24	222.09	11,165.50	-888.33	1,903.59	705.04	2,029.96	20.32	0.75	
19,440.00	91.35	222.42	11,162.53	-817.90	1,833.31	641.19	1,942.21	19.28	1.00	
19,535.00	91.01	222.54	11,160.57	-747.19	1,763.26	577.05	1,855.29	18.12	0.38	
19,630.00	90.06	221.42	11,159.68	-677.04	1,692.65	513.51	1,768.83	16.88	1.55	
19,724.00	90.60	220.25	11,159.14	-608.89	1,621.53	452.05	1,683.36	15.58	1.37	
19,819.00	91.44	220.79	11,157.45	-540.40	1,549.33	390.34	1,597.74	14.14	1.05	
19,914.00	89.83	220.09	11,156.40	-471.99	1,477.03	328.72	1,513.17	12.55	1.85	
20,009.00	90.75	220.98	11,155.92	-403.47	1,404.83	266.98	1,429.98	10.76	1.35	
20,104.00	92.07	221.57	11,153.58	-334.12	1,333.46	204.34	1,349.02	8.71	1.52	
20,198.00	91.41	221.99	11,150.72	-264.95	1,263.39	141.74	1,271.32	6.40	0.83	
20,247.00	90.37	222.34	11,149.96	-228.66	1,227.08	108.85	1,231.90	5.07	2.24	
20,342.00	90.78	226.20	11,149.01	-156.01	1,159.07	42.55	1,159.85	2.10	4.09	
20,437.00	91.21	228.83	11,147.36	-80.02	1,094.92	-27.49	1,095.27	358.56	2.80	
20,485.00	90.55	227.00	11,146.62	-41.42	1,062.76	-63.11	1,064.63	356.60	4.05	
20,532.00	89.57	224.41	11,146.57	-4.73	1,029.94	-96.75	1,034.47	354.63	5.89	
20,577.00	89.91	224.27	11,146.78	29.73	997.75	-128.20	1,005.96	352.68	0.82	
20,627.00	90.14	224.06	11,146.76	67.92	961.89	-163.03	975.61	350.38	0.62	
20,722.00	90.09	222.79	11,146.56	139.67	892.89	-228.34	921.63	345.66	1.34	
20,816.00	90.14	222.31	11,146.38	209.72	823.64	-291.90	873.84	340.49	0.51	
20,911.00	90.09	222.02	11,146.19	280.09	753.23	-355.67	832.98	334.72	0.31	
21,006.00	90.06	221.77	11,146.06	350.15	682.51	-419.11	800.92	328.45	0.27	
21,101.00	89.74	222.09	11,146.23	420.26	611.84	-482.59	779.25	321.74	0.48	
21,196.00	90.32	222.16	11,146.18	490.58	541.38	-546.31	769.12	314.74	0.61	
21,291.00	91.44	224.89	11,144.72	562.43	472.51	-611.72	772.96	307.68	3.11	
21,385.00	90.37	224.41	11,143.23	634.72	405.65	-677.77	789.89	300.90	1.25	
21,480.00	91.35	227.05	11,141.81	708.91	339.35	-745.78	819.36	294.47	2.96	
21,526.00	91.70	228.34	11,140.58	745.79	308.40	-779.79	838.56	291.58	2.90	





<b>Company:</b>	Shell	<b>Local Co-ordinate Reference:</b>	Well 4H (UWI 4231341560000)
<b>Project:</b>	Loving Co., TX	<b>TVD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Site:</b>	Neelie 1-85 LOV	<b>MD Reference:</b>	KB = 29' @ 2766.00ft (Ensign 773)
<b>Well:</b>	4H (UWI 4231341560000)	<b>North Reference:</b>	Grid
<b>Wellbore:</b>	OH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	Surveys	<b>Database:</b>	RyanUSA_ODBC_32-Bit

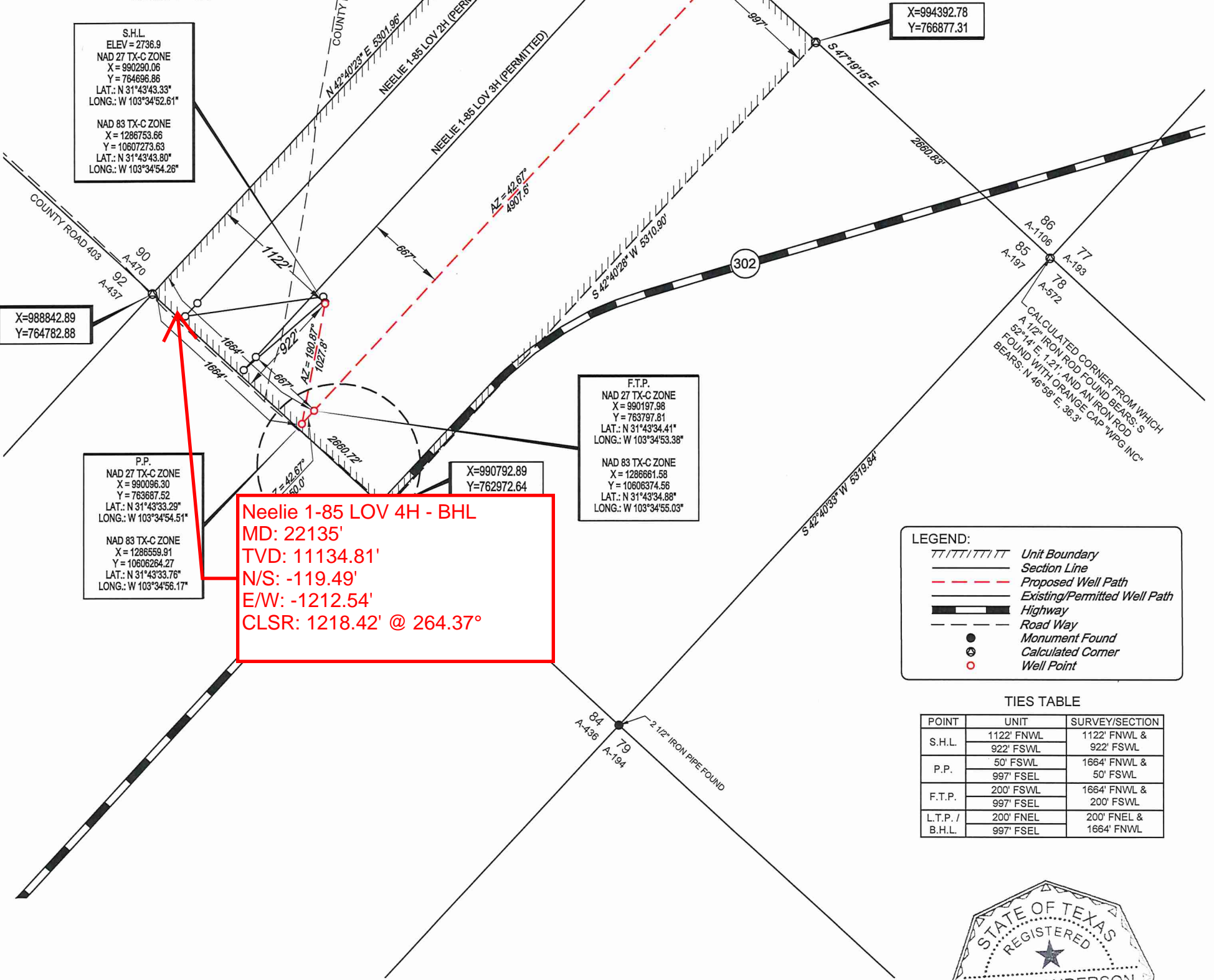
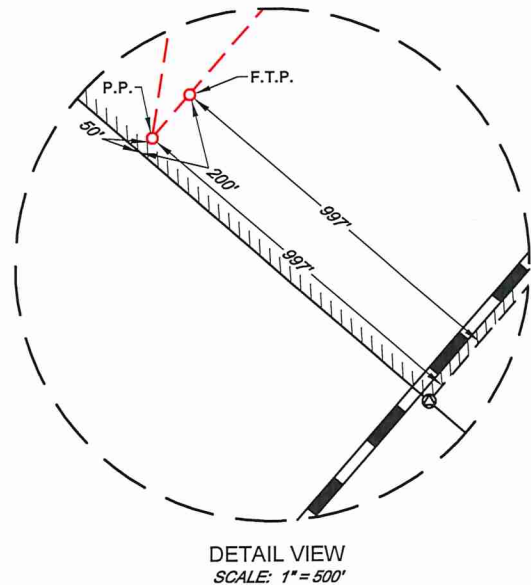
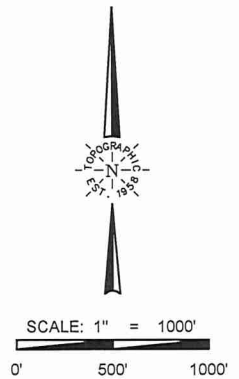
Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
21,575.00	90.60	227.27	11,139.60	785.13	275.50	-816.08	861.33	288.65	3.13	
21,625.00	90.81	227.70	11,138.98	825.12	241.71	-852.93	886.52	285.82	0.96	
21,670.00	89.91	226.37	11,138.70	860.90	211.04	-885.86	910.65	283.40	3.57	
21,714.00	89.22	225.12	11,139.04	895.27	180.34	-917.38	934.93	281.12	3.24	
21,765.00	90.40	226.29	11,139.20	935.09	144.72	-953.88	964.79	278.63	3.26	
21,810.00	91.76	227.68	11,138.36	970.83	114.03	-986.77	993.34	276.59	4.32	
21,860.00	91.18	226.76	11,137.07	1,010.67	80.08	-1,023.46	1,026.59	274.47	2.17	
21,955.00	89.74	222.99	11,136.31	1,083.96	12.78	-1,090.47	1,090.55	270.67	4.25	
22,050.00	90.81	222.89	11,135.85	1,155.18	-56.77	-1,155.19	1,156.58	267.19	1.13	
22,093.15	90.68	222.34	11,135.29	1,187.37	-88.52	-1,184.40	1,187.70	265.73	1.32	
Neelie 4H_BHL										
22,099.00	90.66	222.26	11,135.23	1,191.71	-92.85	-1,188.33	1,191.96	265.53	1.32	
22,135.00	90.66	222.26	11,134.81	1,218.42	-119.49	-1,212.54	1,218.42	264.37	0.00	
PTB										

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
22,135.00	11,134.81	-119.49	-1,212.54	PTB

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------



WELL LOCATION  
LEASE NAME & WELL NO.:  
**NEELIE 1-85 LOV 4H**  
UNIT/LEASE ACREAGE:  
324.13 ACRES (MEASURED)  
NEAREST TOWN IN COUNTY:  
±1.8 MILES NORTHEAST OF MENTONE, TEXAS  
DESCRIPTION:  
SECTION 85, BLOCK 1, W. & N. W. RR. CO. SURVEY  
LOVING COUNTY, TEXAS



LEGEND:

TTTTTTTT	Unit Boundary
---	Section Line
---	Proposed Well Path
---	Existing/Permitted Well Path
---	Highway
---	Road Way
●	Monument Found
○	Calculated Corner
○	Well Point

TIES TABLE

POINT	UNIT	SURVEY/SECTION
S.H.L.	1122' FNWL	1122' FNWL & 922' FSWL
	922' FSWL	
P.P.	50' FSWL	1664' FNWL & 50' FSWL
	997' FSEL	
F.T.P.	200' FSWL	1664' FNWL & 200' FSWL
	997' FSEL	
L.T.P. / B.H.L.	200' FNEL	200' FNEL & 1664' FNWL
	997' FSEL	



1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140  
TELEPHONE: (817) 744-7512 • FAX: (817) 744-7554  
TEXAS FIRM REGISTRATION NO. 10042504  
WWW.TOPOGRAPHIC.COM



*John R. Anderson* 9/27/18  
John R. Anderson, R.P.L.S. No. 6442

REVISION:	DATE	
	INT	DATE
PMJ-1-85-P3A NEELIE 1-85 LOV 4H	A.C.L.	09/27/2018
DATE: 05/18/2018		
FILE: LO_PMJ_1_85_P3A_NEELIE_1_85_LOV_4H_REV1		
DRAWN BY: E.T.O.M./A.C.L.		
SHEET: 1 OF 1		

NOTES:

1. ORIGINAL DOCUMENT SIZE: 11" X 17"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927, UNLESS OTHERWISE NOTED.
3. THIS LOCATION AND/OR UNIT/LEASE BOUNDARY HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED BY SHELL WESTERN E&P. THIS PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE RAILROAD COMMISSION OF TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.
4. ALL ELEVATION VALUES CONTAINED HEREON ARE ORTHOMETRIC ONLY, BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), U.S. SURVEY FEET.
5. ALL MINERAL OWNERSHIP DATA SHOWN HEREIN IS BASED ON INFORMATION PROVIDED BY SHELL WESTERN E&P OR ITS SUBSIDIARIES & AFFILIATES.

NOTES CONT'D:

6. THE PRELIMINARY LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND DURING THE DATE OF MARCH 15, 2018.
7. S.H.L. = SURFACE HOLE LOCATION
8. P.P. = POINT OF PENETRATION
9. F.T.P. = FIRST TAKE POINT
10. L.T.P. = LAST TAKE POINT
11. B.H.L. = BOTTOM HOLE LOCATION



RAILROAD COMMISSION OF TEXAS

Form G-1

1701 N. Congress  
P.O. Box 12967  
Austin, Texas 78701-2967

Status: Submitted  
Date: 10/15/2019  
Tracking No.: 223762

GAS WELL BACK PRESSURE TEST, COMPLETION OR RECOMPLETION REPORT, AND LOG

OPERATOR INFORMATION

Operator Name: SHELL WESTERN E&P Operator No.: 774719  
Operator Address: PO BOX 576 HOUSTON, TX 77001-0000

WELL INFORMATION

API No.: 42-301-34156 County: LOVING  
Well No.: 4H RRC District No.: 08  
Lease Name: NEELIE 1-85 LOV Field Name: PHANTOM (WOLFCAMP)  
RRC Gas ID No.: Field No.: 71052900  
Location: Section: 85, Block: 1, Survey: W&NW RR CO, Abstract: 197  
  
Latitude: 31 Longitude: -103  
This well is located 1.8 miles in a NE  
direction from MENTONE,  
which is the nearest town in the county.

FILING INFORMATION

Purpose of filing: Initial Potential  
Type of completion: New Well  
Well Type: Producing Completion or Recompletion Date: 06/25/2019  
  
Type of Permit Date Permit No.  
Permit to Drill, Plug Back, or Deepen 03/07/2019 845319  
Rule 37 Exception  
Fluid Injection Permit  
O&G Waste Disposal Permit  
Other:

COMPLETION INFORMATION

Spud date: 02/11/2019 Date of first production after rig released: 06/25/2019  
Date plug back, deepening, recompletion, or drilling operation commenced: 02/11/2019 Date plug back, deepening, recompletion, or drilling operation ended: 05/18/2019  
Number of producing wells on this lease in this field (reservoir) including this well: 4 Distance to nearest well in lease & reservoir (ft.): 610.0  
Total number of acres in lease: 324.13 Elevation (ft.): 2737 GL  
Total depth TVD (ft.): 11134 Total depth MD (ft.): 22135  
Plug back depth TVD (ft.): Plug back depth MD (ft.):  
Was directional survey made other than inclination (Form W-12)? Yes Rotation time within surface casing (hours): 65.0  
Is Cementing Affidavit (Form W-15) attached? Yes  
Recompletion or reclass? No Multiple completion? No  
Type(s) of electric or other log(s) run: Gamma Ray (MWD)  
Electric Log Other Description:  
Location of well, relative to nearest lease boundaries Off Lease: No  
of lease on which this well is located: 1122.0 Feet from the NW Line and  
922.0 Feet from the SW Line of the  
NEELIE 1-85 LOV Lease.

FORMER FIELD (WITH RESERVOIR) & GAS ID OR OIL LEASE NO.

Field & Reservoir	Gas ID or Oil Lease No.	Well No.	Prior Service Type
-------------------	-------------------------	----------	--------------------



G1: N/A  
PACKET: N/A

FOR NEW DRILL OR RE-ENTRY, SURFACE CASING DEPTH DETERMINED BY:		
GAU Groundwater Protection Determination	Depth (ft.): 750.0	Date: 10/04/2018
SWR 13 Exception	Depth (ft.): 4205.0	

GAS MEASUREMENT DATA										
Date of test: 07/11/2019					Gas measurement method(s):					
Gas production during test (MCF): 5521					Orifice Meter, Flange Taps					
Was the well preflowed for 48 hours? Yes										
Run No.	Line size	Orif. or Choke Size (in.)	24 hr. Coeff. Orif. Or Choke (in.)	Static Pm or Choke (in.)	Diff (hw)	Flow Temp (°F)	Temp. (Ftf)	Gravity (Fg)	Compress (Fpv)	Volume (MCF/day)
1	3.826	2	26462.87	355.0	18.0	143.0	0.9286	0.9133	1.026	1840.0

FIELD DATA AND PRESSURE CALCULATIONS				
Gravity (dry gas): 0.719		Gravity (liquid hydrocarbons) (Deg. API): 45.8		
Gas-Liquid Hydro Ratio (CF/Bbl): 4001		Gravity (mixture): Gmix= 1.277		
Avg. shut in temp. (°F): 168.0		Bottom hole temp. and depth: 262.0 °F@ 11020.0 FT		
Run No.	Time of Run (Min.)	Choke Size (in.)	Wellhead Pressure (PSIA)	Wellhead Flow Temp (°F )
SHUT-IN	1440	SHUT IN	3015	74.0
1	4320	26/64	2534	157.0

CASING RECORD										
Row	Type of Casing	Casing Size (in.)	Hole Size (in.)	Setting Depth (ft.)	Multi - Stage Tool Depth (ft.)	Multi - Stage Shoe Cement Class	Cement Amount (sacks)	Slurry Volume (cu. ft.)	Top of Cement (ft.)	TOC Determined By
1	Surface	9 5/8	12 1/4	4244	931	CLASS C	2642	4749.0	0	Circulated to Surface
2	Intermediate	7 5/8	8 3/4	10584		CLASS C & H	334	1000.0	3244	Calculation
3	Tapered Production	5 1/2	6 3/4	10568		CLASS H	1762	2183.0	9084	Calculation
4	Tapered Production	4 1/2	6 3/4	22118		CLASS H	1762	2183.0	9084	Calculation

LINER RECORD									
Row	Liner Size (in.)	Hole Size (in.)	Liner Top (ft.)	Liner Bottom (ft.)	Cement Class	Cement Amount (sacks)	Slurry Volume (cu. ft.)	Top of Cement (ft.)	TOC Determined By
N/A									

TUBING RECORD			
Row	Size (in.)	Depth Size (ft.)	Packer Depth (ft.)/Type
1	2 7/8	10537	10565 / HALIBURTON VERSASET V.2

PRODUCING/INJECTION/DISPOSAL INTERVAL			
Row	Open hole?	From (ft.)	To (ft.)
1	No	L1 11020	21976

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC.			
Was hydraulic fracturing treatment performed?		Yes	
Is well equipped with a downhole actuation sleeve?		Yes	
If yes, actuation pressure (PSIG):		9122.0	
Production casing test pressure (PSIG) prior to hydraulic fracturing treatment:		9500	
Actual maximum pressure (PSIG) during hydraulic fracturing:		9387	
Has the hydraulic fracturing fluid disclosure been reported to FracFocus disclosure registry (SWR29)?		Yes	
Row	Type of Operation	Amount and Kind of Material Used	Depth Interval (ft.)
1	Fracture	WELL DATA SUBMITTED TO FRACFOCUS	11020.0 21976.0

FORMATION RECORD					
Formations	Encountered	Depth TVD (ft.)	Depth MD (ft.)	Is formation isolated?	Remarks
RED BLUFF	No			No	FORMATION IS NOT GEOLOGICALLY PRESENT
BELL CANYON	Yes	4320.0	4367.0	Yes	
BRUSHY CANYON	Yes	6468.0	6551.0	Yes	
DELAWARE	Yes	4300.0	4347.0	Yes	
CHERRY CANYON	Yes	5327.0	5396.0	Yes	
BONE SPRINGS	Yes	7938.0	8023.0	Yes	
WOLFCAMP	Yes	10791.0	10881.0	Yes	
PENNSYLVANIAN	No			No	BELOW WELLBORE
STRAWN	No			No	BELOW WELLBORE
ATOKA - HIGH PRESSURE	No			No	BELOW WELLBORE
MORROW	No			No	BELOW WELLBORE
DEVONIAN	No			No	BELOW WELLBORE
FUSSELMAN	No			No	BELOW WELLBORE
ELLENBURGER	No			No	BELOW WELLBORE
Do the producing interval of this well produce H2S with a concentration in excess of 100 ppm (SWR 36)?					No
Is the completion being downhole commingled (SWR 10)?					No

REMARKS
KOP @ 10,672'. DEPTHS PROVIDED ARE REFERENCED AT KB @ 27.5'. THE NEELIE 1-85 LOV 1H WELL IS DRILLED AND COMPLETED IN THE SANDBAR (BONE SPRING) FIELD.

RRC REMARKS	
<b>PUBLIC COMMENTS:</b>  [RRC Staff 2020-01-15 12:46:27.088] EDL=10950 feet, max acres=704, PHANTOM (WOLFCAMP) oil or gas well;  take points: 11020-21976 feet	
<b>CASING RECORD :</b>  DV TOOL SET, BUT NOT OPENED, AS APPROVED IN SWR 13 EXCEPTION. ROW 4 SETTING DEPTH SHOWS THE CROSSOVER POINT FROM 5 1/2" TO 4 1/2" ON THE TAPERED PRODUCTION STRING.	
<b>TUBING RECORD:</b>	
<b>PRODUCING/INJECTION/DISPOSAL INTERVAL :</b>	
<b>ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC. :</b>	
<b>GAS MEASUREMENT DATE REMARK:</b>	

OPERATOR'S CERTIFICATION	
<b>Printed Name:</b> Michael Boutwell	<b>Title:</b> Regulatory Specialist
<b>Telephone No.:</b> (832) 337-0258	<b>Date Certified:</b> 10/15/2019