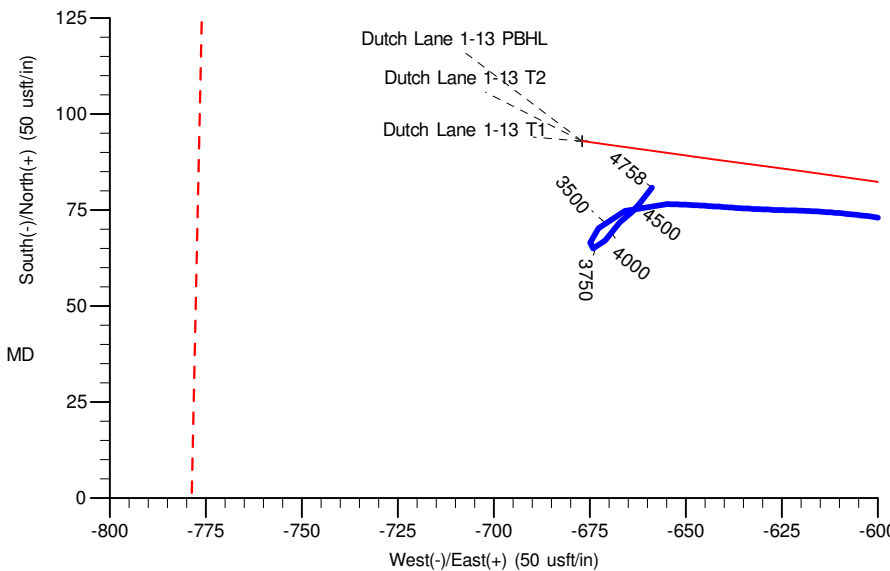
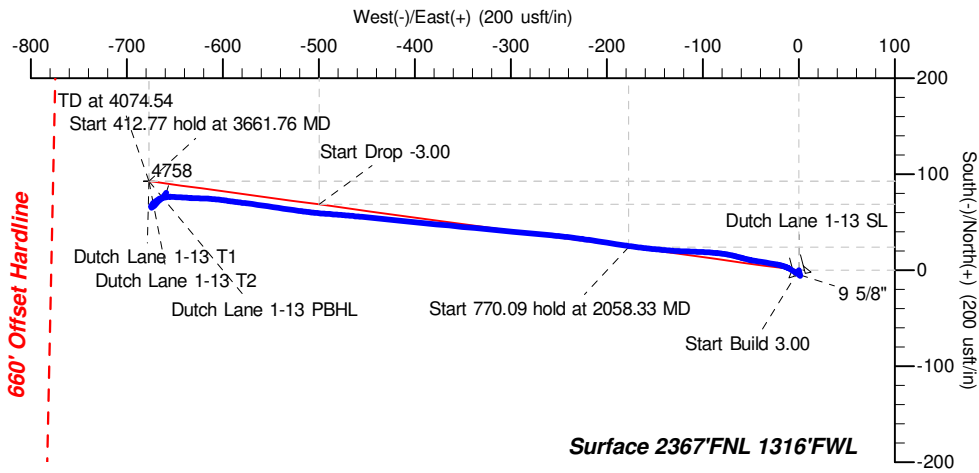
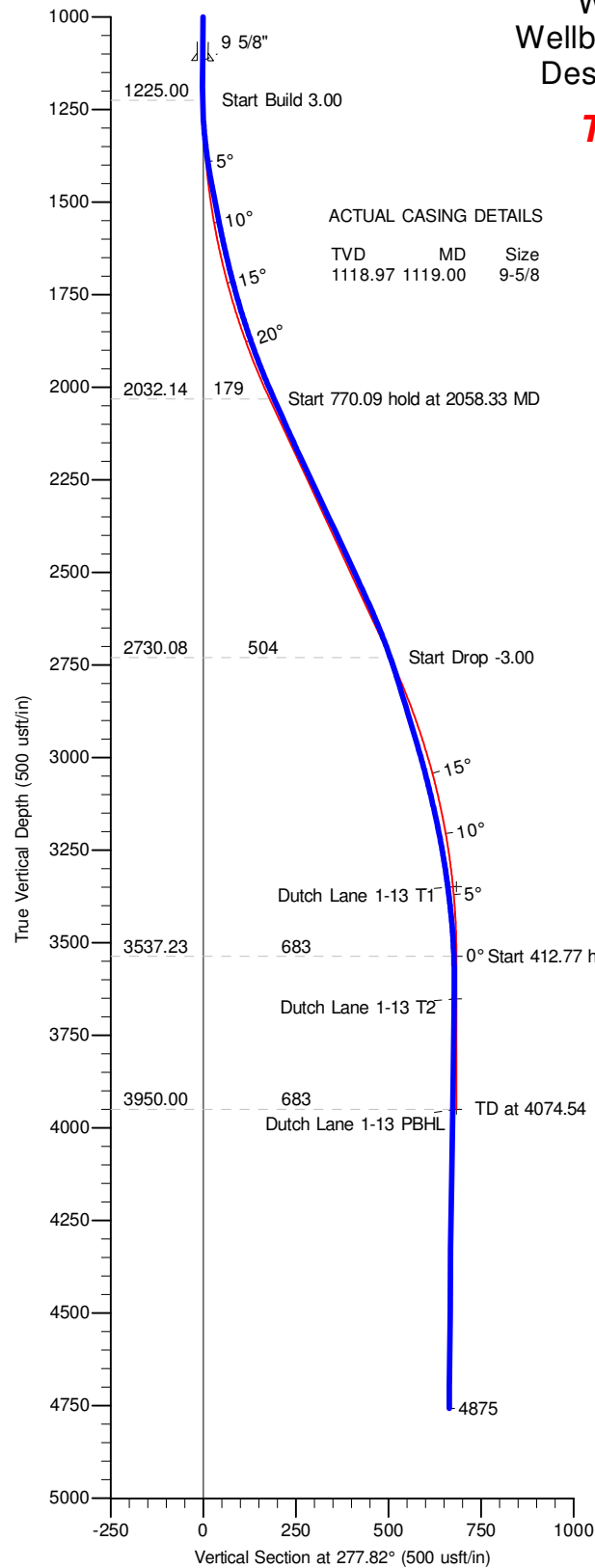


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TIGHT HOLE



Azimuths to Grid North
 True North: 0.79°
 Magnetic North: 14.12°

Magnetic Field
 Strength: 52186.7snT
 Dip Angle: 67.33°
 Date: 12/26/2021
 Model: IGRF2020

US State Plane 1927 (Exact solution)
 Idaho West 1103
 44° 1' 59.304 N
 116° 53' 12.932 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Dutch Lane 1-13 SL	0.00	0.00	0.00	864496.00	201003.00	44° 1' 59.304 N	116° 53' 12.932 W
Dutch Lane 1-13 T1	3349.00	93.00	-676.98	864589.00	200326.00	44° 2' 0.130 N	116° 53' 22.215 W
Dutch Lane 1-13 T2	3652.00	93.00	-676.98	864589.00	200326.00	44° 2' 0.130 N	116° 53' 22.215 W
Dutch Lane 1-13 PBHL	3950.00	93.00	-676.98	864589.00	200326.00	44° 2' 0.130 N	116° 53' 22.215 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1225.00	0.00	0.00	1225.00	0.00	0.00	0.00	0.00	0.00	
3	2058.33	25.00	277.82	2032.14	24.35	-177.27	3.00	277.82	178.94	
4	2828.43	25.00	277.82	2730.08	68.64	-499.70	0.00	0.00	504.39	
5	3661.76	0.00	0.00	3537.23	93.00	-676.98	3.00	180.00	683.33	
6	4074.54	0.00	0.00	3950.00	93.00	-676.98	0.00	0.00	683.33	Dutch Lane 1-13 PBHL

Titan Directional Drilling

Survey Report

Company: Snake River Oil and Gas	Local Co-ordinate Reference: Well #1-13
Project: Payette County, ID W'27	TVD Reference: GL+KB @ 2179.00usft (Paul Graham 4)
Site: Dutch Lane 1-13	MD Reference: GL+KB @ 2179.00usft (Paul Graham 4)
Well: #1-13	North Reference: Grid
Wellbore: #1-13 OH	Survey Calculation Method: Minimum Curvature
Design: #1-13 OH	Database: EDM 5k-14

Project Payette County, ID W'27		
Map System: US State Plane 1927 (Exact solution)	System Datum: Mean Sea Level	
Geo Datum: NAD 1927 (NADCON CONUS)		
Map Zone: Idaho West 1103	Using geodetic scale factor	

Site Dutch Lane 1-13			
Site Position:	Northing: 864,496.00 usft	Latitude: 44° 1' 59.304 N	
From: Map	Easting: 201,003.00 usft	Longitude: 116° 53' 12.932 W	
Position Uncertainty: 0.00 usft	Slot Radius: 13-3/16 "	Grid Convergence: -0.79 °	

Well #1-13			
Well Position +N/-S	0.00 usft	Northing: 864,496.00 usft	Latitude: 44° 1' 59.304 N
+E/-W	0.00 usft	Easting: 201,003.00 usft	Longitude: 116° 53' 12.932 W
Position Uncertainty	0.00 usft	Wellhead Elevation: usft	Ground Level: 2,165.00 usft

Wellbore #1-13 OH					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	12/26/21	13.33	67.33	52,186.65314595

Design #1-13 OH				
Audit Notes:				
Version: 1.0	Phase: ACTUAL	Tie On Depth: 0.00		
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	277.82

Survey Program		Date 01/03/22		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
500.00	1,115.00	Survey #1 (#1-13 OH)	INC-ONLY	Inclination Only Surveys
1,189.00	4,818.00	Survey #2 (#1-13 OH)	MWD	MWD - Standard
4,875.00	4,875.00	Projection (#1-13 OH)	ZERO-ERROR	Zero Error

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
968.00	0.75	165.10	967.99	-2.96	0.79	-1.18	0.16	0.16	0.00	
1,115.00	0.75	165.10	1,114.97	-4.82	1.28	-1.93	0.00	0.00	0.00	
1,189.00	0.70	165.10	1,188.97	-5.72	1.52	-2.29	0.07	-0.07	0.00	
1,283.00	4.50	315.10	1,282.88	-3.67	-0.93	0.43	5.44	4.04	159.57	
1,378.00	8.40	295.40	1,377.27	1.95	-9.84	10.01	4.66	4.11	-20.74	
1,471.00	11.20	280.30	1,468.92	6.48	-24.87	25.52	4.06	3.01	-16.24	
1,568.00	11.20	278.30	1,564.08	9.53	-43.46	44.35	0.40	0.00	-2.06	

Titan Directional Drilling

Survey Report

Company:	Snake River Oil and Gas	Local Co-ordinate Reference:	Well #1-13
Project:	Payette County, ID W'27	TVD Reference:	GL+KB @ 2179.00usft (Paul Graham 4)
Site:	Dutch Lane 1-13	MD Reference:	GL+KB @ 2179.00usft (Paul Graham 4)
Well:	#1-13	North Reference:	Grid
Wellbore:	#1-13 OH	Survey Calculation Method:	Minimum Curvature
Design:	#1-13 OH	Database:	EDM 5k-14

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
1,660.00	13.50	286.20	1,653.95	13.81	-62.61	63.91	3.10	2.50	8.59	
1,754.00	15.60	275.30	1,744.94	18.04	-85.74	87.40	3.66	2.23	-11.60	
1,848.00	18.20	271.50	1,834.88	19.60	-113.01	114.62	3.00	2.77	-4.04	
1,943.00	20.80	275.20	1,924.43	21.51	-144.64	146.22	3.03	2.74	3.89	
2,038.00	23.80	278.50	2,012.31	25.88	-180.41	182.25	3.42	3.16	3.47	
2,133.00	24.10	278.70	2,099.13	31.64	-218.54	220.81	0.33	0.32	0.21	
2,227.00	25.10	275.50	2,184.61	36.46	-257.36	259.92	1.77	1.06	-3.40	
2,323.00	25.20	275.50	2,271.50	40.37	-297.97	300.69	0.10	0.10	0.00	
2,416.00	25.20	275.30	2,355.65	44.10	-337.39	340.25	0.09	0.00	-0.22	
2,511.00	25.00	275.70	2,441.68	47.96	-377.50	380.52	0.28	-0.21	0.42	
2,605.00	24.90	275.70	2,526.91	51.90	-416.96	420.14	0.11	-0.11	0.00	
2,699.00	23.50	275.70	2,612.65	55.72	-455.30	458.65	1.49	-1.49	0.00	
2,793.00	20.40	274.10	2,699.82	58.76	-490.30	493.73	3.36	-3.30	-1.70	
2,888.00	17.10	278.30	2,789.77	61.96	-520.64	524.23	3.75	-3.47	4.42	
2,982.00	16.70	278.70	2,879.71	65.99	-547.67	551.56	0.44	-0.43	0.43	
3,077.00	16.60	277.10	2,970.73	69.74	-574.63	578.77	0.49	-0.11	-1.68	
3,171.00	14.20	278.00	3,061.35	73.00	-599.37	603.73	2.57	-2.55	0.96	
3,267.00	12.50	271.50	3,154.76	74.91	-621.42	625.84	2.36	-1.77	-6.77	
3,362.00	10.10	274.30	3,247.91	75.81	-640.01	644.37	2.59	-2.53	2.95	
3,457.00	7.70	271.60	3,341.76	76.61	-654.68	659.01	2.56	-2.53	-2.84	
3,552.00	6.30	247.40	3,436.07	74.78	-665.86	669.84	3.40	-1.47	-25.47	
3,646.00	4.00	220.10	3,529.70	70.29	-672.73	676.04	3.51	-2.45	-29.04	
3,741.00	1.50	180.40	3,624.59	66.51	-674.88	677.65	3.16	-2.63	-41.79	
3,833.00	1.00	109.20	3,716.57	65.04	-674.13	676.71	1.64	-0.54	-77.39	
4,023.00	1.80	30.10	3,906.53	67.08	-671.06	673.95	0.99	0.42	-41.63	
4,244.00	1.40	51.20	4,127.44	71.78	-667.22	670.78	0.32	-0.18	9.55	
4,441.00	1.10	47.40	4,324.39	74.56	-663.95	667.92	0.16	-0.15	-1.93	
4,622.00	0.80	34.70	4,505.37	76.78	-661.95	666.24	0.20	-0.17	-7.02	
4,818.00	1.40	38.40	4,701.33	79.78	-659.69	664.41	0.31	0.31	1.89	
4,875.00	1.40	38.40	4,758.31	80.87	-658.82	663.70	0.00	0.00	0.00	