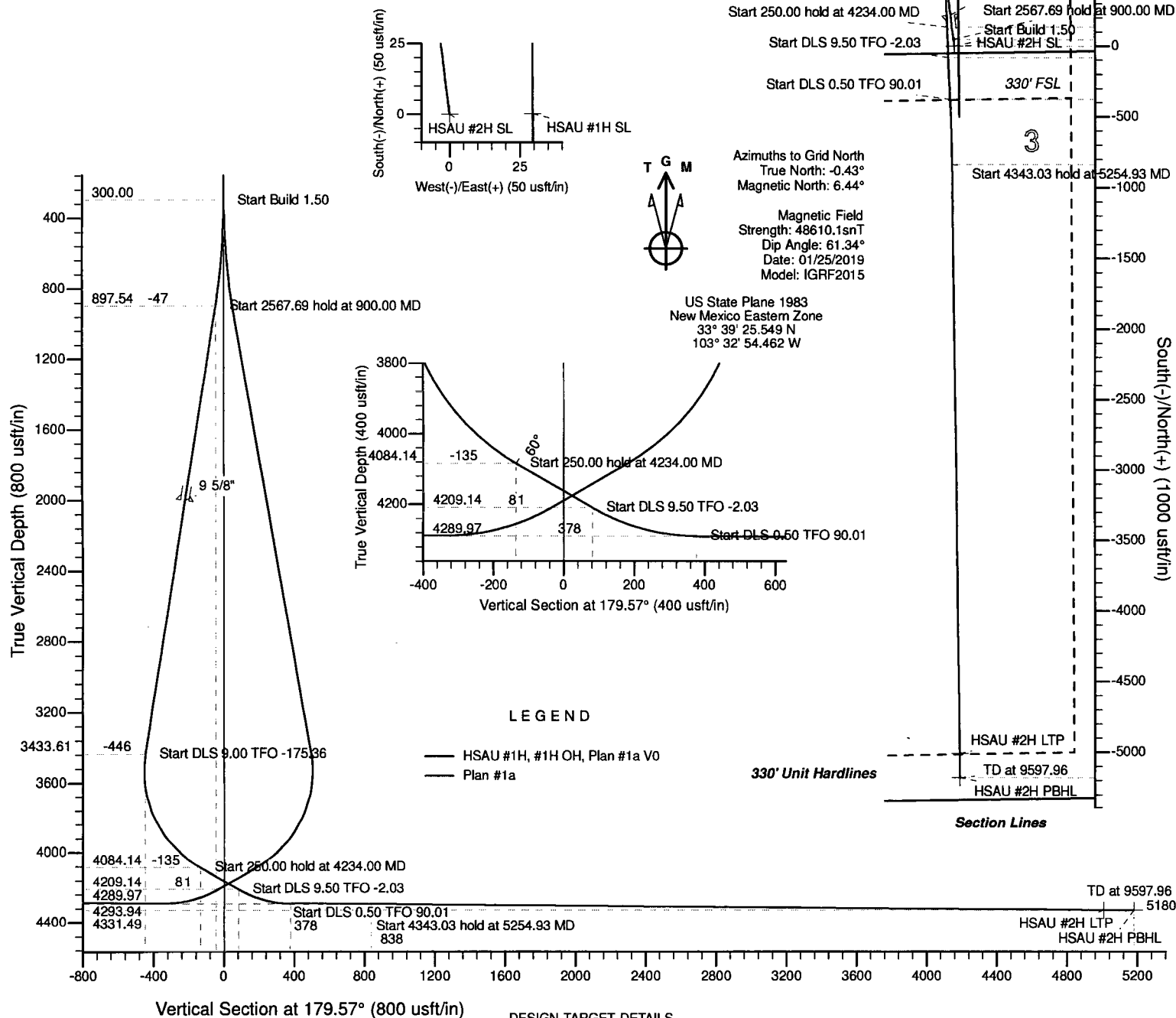




TITAN
Directional Drilling

TVD	MD	Name
2000.00	2016.21	9 5/8"



Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
HSAU #2H SL	0.00	0.00	0.00	967524.70	780164.20	33° 39' 25.549 N	103° 32' 54.462 W	Point
HSAU #2H LTP	4330.00	-5008.43	37.30	962516.40	780201.55	33° 38' 36.000 N	103° 32' 54.471 W	Point
HSAU #2H PBHL	4331.49	-5180.23	38.70	962344.60	780202.90	33° 38' 34.300 N	103° 32' 54.469 W	Point

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	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	0.00	
3	900.00	9.00	353.00	897.54	46.68	-5.73	1.50	353.00	-46.72	
4	3467.69	9.00	353.00	3433.61	445.36	-54.68	0.00	0.00	-445.75	
5	4234.00	60.00	178.00	4084.14	134.79	-49.80	9.00	-175.36	-135.16	
6	4484.00	60.00	178.00	4209.14	-81.58	-42.25	0.00	0.00	81.27	
7	4794.74	89.50	177.00	4289.97	-377.79	-29.13	9.50	-2.03	377.56	
8	5254.93	89.50	179.30	4293.94	-837.69	-14.28	0.50	90.01	837.56	
9	9597.96	89.50	179.30	4331.49	-5180.23	38.70	0.00	0.00	5180.38	

Titan Directional Drilling

Survey Report

Company:	Ridgeway Arizona Oil Corp.	Local Co-ordinate Reference:	Well HSAU #2H
Project:	Permian NM E'83	TVD Reference:	GL+KB @ 4390.00usft (planning)
Site:	Haley SAU 1-2 Pad	MD Reference:	GL+KB @ 4390.00usft (planning)
Well:	HSAU #2H	North Reference:	Grid
Wellbore:	#2H OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1a	Database:	EDM 5k-14

Project	Permian NM E'83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site	Haley SAU 1-2 Pad, Centered on Haley SAU #1H		
Site Position:		Northing:	967,524.90 usft
From:	Map	Easting:	780,193.70 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	33° 39' 25.549 N
		Longitude:	103° 32' 54.113 W
		Grid Convergence:	0.44 °

Well	HSAU #2H		
Well Position	+N/-S	0.00 usft	Northing: 967,524.70 usft
	+E/-W	0.00 usft	Easting: 780,164.20 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	33° 39' 25.549 N
		Longitude:	103° 32' 54.462 W
		Ground Level:	4,374.00 usft

Wellbore	#2H OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	01/25/19	6.87	61.34	48,610.11444906

Design	Plan #1a			
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	179.57

Planned 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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	1.50	353.00	399.99	1.30	-0.16	-1.30	1.50	1.50	0.00
500.00	3.00	353.00	499.91	5.20	-0.64	-5.20	1.50	1.50	0.00
600.00	4.50	353.00	599.69	11.69	-1.44	-11.70	1.50	1.50	0.00
700.00	6.00	353.00	699.27	20.77	-2.55	-20.79	1.50	1.50	0.00
800.00	7.50	353.00	798.57	32.43	-3.98	-32.46	1.50	1.50	0.00
900.00	9.00	353.00	897.54	46.68	-5.73	-46.72	1.50	1.50	0.00
1,000.00	9.00	353.00	996.30	62.20	-7.64	-62.26	0.00	0.00	0.00
1,100.00	9.00	353.00	1,095.07	77.73	-9.54	-77.80	0.00	0.00	0.00
1,200.00	9.00	353.00	1,193.84	93.26	-11.45	-93.34	0.00	0.00	0.00
1,300.00	9.00	353.00	1,292.61	108.78	-13.36	-108.88	0.00	0.00	0.00
1,400.00	9.00	353.00	1,391.38	124.31	-15.26	-124.42	0.00	0.00	0.00
1,500.00	9.00	353.00	1,490.15	139.84	-17.17	-139.96	0.00	0.00	0.00
1,600.00	9.00	353.00	1,588.92	155.36	-19.08	-155.50	0.00	0.00	0.00

Titan Directional Drilling

Survey Report

Company:	Ridgeway Arizona Oil Corp.	Local Co-ordinate Reference:	Well HSAU #2H
Project:	Permian NM E'83	TVD Reference:	GL+KB @ 4390.00usft (planning)
Site:	Haley SAU 1-2 Pad	MD Reference:	GL+KB @ 4390.00usft (planning)
Well:	HSAU #2H	North Reference:	Grid
Wellbore:	#2H OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1a	Database:	EDM 5k-14

Planned 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)
1,700.00	9.00	353.00	1,687.69	170.89	-20.98	-171.04	0.00	0.00	0.00
1,800.00	9.00	353.00	1,786.46	186.42	-22.89	-186.58	0.00	0.00	0.00
1,900.00	9.00	353.00	1,885.22	201.94	-24.80	-202.12	0.00	0.00	0.00
2,000.00	9.00	353.00	1,983.99	217.47	-26.70	-217.66	0.00	0.00	0.00
2,016.21	9.00	353.00	2,000.00	219.99	-27.01	-220.18	0.00	0.00	0.00
9 5/8"									
2,100.00	9.00	353.00	2,082.76	233.00	-28.61	-233.21	0.00	0.00	0.00
2,200.00	9.00	353.00	2,181.53	248.53	-30.52	-248.75	0.00	0.00	0.00
2,300.00	9.00	353.00	2,280.30	264.05	-32.42	-264.29	0.00	0.00	0.00
2,400.00	9.00	353.00	2,379.07	279.58	-34.33	-279.83	0.00	0.00	0.00
2,500.00	9.00	353.00	2,477.84	295.11	-36.23	-295.37	0.00	0.00	0.00
2,600.00	9.00	353.00	2,576.61	310.63	-38.14	-310.91	0.00	0.00	0.00
2,700.00	9.00	353.00	2,675.37	326.16	-40.05	-326.45	0.00	0.00	0.00
2,800.00	9.00	353.00	2,774.14	341.69	-41.95	-341.99	0.00	0.00	0.00
2,900.00	9.00	353.00	2,872.91	357.21	-43.86	-357.53	0.00	0.00	0.00
3,000.00	9.00	353.00	2,971.68	372.74	-45.77	-373.07	0.00	0.00	0.00
3,100.00	9.00	353.00	3,070.45	388.27	-47.67	-388.61	0.00	0.00	0.00
3,200.00	9.00	353.00	3,169.22	403.79	-49.58	-404.15	0.00	0.00	0.00
3,300.00	9.00	353.00	3,267.99	419.32	-51.49	-419.69	0.00	0.00	0.00
3,400.00	9.00	353.00	3,366.76	434.85	-53.39	-435.23	0.00	0.00	0.00
3,467.69	9.00	353.00	3,433.61	445.36	-54.68	-445.75	0.00	0.00	0.00
3,500.00	6.11	350.79	3,465.64	449.56	-55.27	-449.96	9.00	-8.96	-6.84
3,550.00	1.72	332.71	3,515.51	452.86	-56.04	-453.26	9.00	-8.77	-36.17
3,600.00	3.03	191.43	3,565.49	452.23	-56.64	-452.64	9.00	2.61	-282.55
3,650.00	7.47	183.12	3,615.27	447.69	-57.08	-448.10	9.00	8.89	-16.63
3,700.00	11.96	181.01	3,664.54	439.26	-57.35	-439.67	9.00	8.97	-4.22
3,750.00	16.45	180.04	3,713.00	426.99	-57.45	-427.41	9.00	8.99	-1.94
3,800.00	20.95	179.48	3,760.35	410.97	-57.37	-411.38	9.00	8.99	-1.12
3,850.00	25.45	179.11	3,806.29	391.28	-57.12	-391.69	9.00	9.00	-0.74
3,900.00	29.95	178.84	3,850.55	368.05	-56.70	-368.46	9.00	9.00	-0.53
3,950.00	34.44	178.64	3,892.85	341.42	-56.11	-341.83	9.00	9.00	-0.40
4,000.00	38.94	178.48	3,932.94	311.56	-55.35	-311.97	9.00	9.00	-0.32
4,050.00	43.44	178.35	3,970.55	278.65	-54.44	-279.05	9.00	9.00	-0.26
4,100.00	47.94	178.24	4,005.47	242.90	-53.37	-243.29	9.00	9.00	-0.22
4,150.00	52.44	178.14	4,037.47	204.52	-52.16	-204.90	9.00	9.00	-0.19
4,200.00	56.94	178.05	4,066.36	163.75	-50.80	-164.12	9.00	9.00	-0.17
4,234.00	60.00	178.00	4,084.14	134.79	-49.80	-135.16	9.00	9.00	-0.16
4,300.00	60.00	178.00	4,117.14	77.67	-47.81	-78.02	0.00	0.00	0.00
4,400.00	60.00	178.00	4,167.14	-8.88	-44.79	8.55	0.00	0.00	0.00
4,484.00	60.00	178.00	4,209.14	-81.58	-42.25	81.27	0.00	0.00	0.00
4,500.00	61.52	177.94	4,216.96	-95.54	-41.75	95.22	9.50	9.49	-0.38
4,550.00	66.27	177.76	4,238.95	-140.39	-40.07	140.09	9.50	9.49	-0.36
4,600.00	71.01	177.59	4,257.16	-186.90	-38.18	186.61	9.50	9.49	-0.34
4,650.00	75.76	177.43	4,271.45	-234.76	-36.09	234.48	9.50	9.50	-0.32

Titan Directional Drilling

Survey Report

Company:	Ridgeway Arizona Oil Corp.	Local Co-ordinate Reference:	Well HSAU #2H
Project:	Permian NM E'83	TVD Reference:	GL+KB @ 4390.00usft (planning)
Site:	Haley SAU 1-2 Pad	MD Reference:	GL+KB @ 4390.00usft (planning)
Well:	HSAU #2H	North Reference:	Grid
Wellbore:	#2H OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1a	Database:	EDM 5k-14

Planned 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)
4,700.00	80.51	177.28	4,281.73	-283.62	-33.84	283.36	9.50	9.50	-0.30
4,750.00	85.26	177.13	4,287.92	-333.16	-31.42	332.92	9.50	9.50	-0.30
4,794.74	89.50	177.00	4,289.97	-377.79	-29.13	377.56	9.50	9.50	-0.29
4,800.00	89.50	177.03	4,290.01	-383.04	-28.85	382.82	0.50	0.00	0.50
4,900.00	89.50	177.53	4,290.88	-482.92	-24.10	482.73	0.50	0.00	0.50
5,000.00	89.50	178.03	4,291.74	-582.84	-20.22	582.68	0.50	0.00	0.50
5,100.00	89.50	178.53	4,292.61	-682.80	-17.22	682.65	0.50	0.00	0.50
5,200.00	89.50	179.03	4,293.47	-782.77	-15.08	782.63	0.50	0.00	0.50
5,254.93	89.50	179.30	4,293.95	-837.69	-14.28	837.56	0.50	0.00	0.50
5,300.00	89.50	179.30	4,294.33	-882.76	-13.73	882.63	0.00	0.00	0.00
5,400.00	89.50	179.30	4,295.20	-982.74	-12.51	982.62	0.00	0.00	0.00
5,500.00	89.50	179.30	4,296.06	-1,082.73	-11.29	1,082.62	0.00	0.00	0.00
5,600.00	89.50	179.30	4,296.93	-1,182.72	-10.07	1,182.61	0.00	0.00	0.00
5,700.00	89.50	179.30	4,297.79	-1,282.71	-8.85	1,282.61	0.00	0.00	0.00
5,800.00	89.50	179.30	4,298.66	-1,382.70	-7.63	1,382.60	0.00	0.00	0.00
5,900.00	89.50	179.30	4,299.52	-1,482.69	-6.41	1,482.60	0.00	0.00	0.00
6,000.00	89.50	179.30	4,300.39	-1,582.68	-5.19	1,582.59	0.00	0.00	0.00
6,100.00	89.50	179.30	4,301.25	-1,682.67	-3.97	1,682.59	0.00	0.00	0.00
6,200.00	89.50	179.30	4,302.11	-1,782.65	-2.75	1,782.58	0.00	0.00	0.00
6,300.00	89.50	179.30	4,302.98	-1,882.64	-1.53	1,882.58	0.00	0.00	0.00
6,400.00	89.50	179.30	4,303.84	-1,982.63	-0.31	1,982.58	0.00	0.00	0.00
6,500.00	89.50	179.30	4,304.71	-2,082.62	0.91	2,082.57	0.00	0.00	0.00
6,600.00	89.50	179.30	4,305.57	-2,182.61	2.13	2,182.57	0.00	0.00	0.00
6,700.00	89.50	179.30	4,306.44	-2,282.60	3.35	2,282.56	0.00	0.00	0.00
6,800.00	89.50	179.30	4,307.30	-2,382.59	4.57	2,382.56	0.00	0.00	0.00
6,900.00	89.50	179.30	4,308.16	-2,482.58	5.79	2,482.55	0.00	0.00	0.00
7,000.00	89.50	179.30	4,309.03	-2,582.57	7.01	2,582.55	0.00	0.00	0.00
7,100.00	89.50	179.30	4,309.89	-2,682.55	8.23	2,682.54	0.00	0.00	0.00
7,200.00	89.50	179.30	4,310.76	-2,782.54	9.45	2,782.54	0.00	0.00	0.00
7,300.00	89.50	179.30	4,311.62	-2,882.53	10.67	2,882.53	0.00	0.00	0.00
7,400.00	89.50	179.30	4,312.49	-2,982.52	11.89	2,982.53	0.00	0.00	0.00
7,500.00	89.50	179.30	4,313.35	-3,082.51	13.11	3,082.52	0.00	0.00	0.00
7,600.00	89.50	179.30	4,314.22	-3,182.50	14.33	3,182.52	0.00	0.00	0.00
7,700.00	89.50	179.30	4,315.08	-3,282.49	15.55	3,282.51	0.00	0.00	0.00
7,800.00	89.50	179.30	4,315.94	-3,382.48	16.77	3,382.51	0.00	0.00	0.00
7,900.00	89.50	179.30	4,316.81	-3,482.46	17.99	3,482.50	0.00	0.00	0.00
8,000.00	89.50	179.30	4,317.67	-3,582.45	19.21	3,582.50	0.00	0.00	0.00
8,100.00	89.50	179.30	4,318.54	-3,682.44	20.43	3,682.49	0.00	0.00	0.00
8,200.00	89.50	179.30	4,319.40	-3,782.43	21.65	3,782.49	0.00	0.00	0.00
8,300.00	89.50	179.30	4,320.27	-3,882.42	22.87	3,882.48	0.00	0.00	0.00
8,400.00	89.50	179.30	4,321.13	-3,982.41	24.09	3,982.48	0.00	0.00	0.00
8,500.00	89.50	179.30	4,321.99	-4,082.40	25.31	4,082.47	0.00	0.00	0.00
8,600.00	89.50	179.30	4,322.86	-4,182.39	26.53	4,182.47	0.00	0.00	0.00

Titan Directional Drilling

Survey Report

Company:	Ridgeway Arizona Oil Corp.	Local Co-ordinate Reference:	Well HSAU #2H
Project:	Permian NM E'83	TVD Reference:	GL+KB @ 4390.00usft (planning)
Site:	Haley SAU 1-2 Pad	MD Reference:	GL+KB @ 4390.00usft (planning)
Well:	HSAU #2H	North Reference:	Grid
Wellbore:	#2H OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1a	Database:	EDM 5k-14

Planned 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)
8,700.00	89.50	179.30	4,323.72	-4,282.38	27.75	4,282.46	0.00	0.00	0.00
8,800.00	89.50	179.30	4,324.59	-4,382.36	28.97	4,382.46	0.00	0.00	0.00
8,900.00	89.50	179.30	4,325.45	-4,482.35	30.19	4,482.45	0.00	0.00	0.00
9,000.00	89.50	179.30	4,326.32	-4,582.34	31.41	4,582.45	0.00	0.00	0.00
9,100.00	89.50	179.30	4,327.18	-4,682.33	32.63	4,682.44	0.00	0.00	0.00
9,200.00	89.50	179.30	4,328.05	-4,782.32	33.85	4,782.44	0.00	0.00	0.00
9,300.00	89.50	179.30	4,328.91	-4,882.31	35.07	4,882.43	0.00	0.00	0.00
9,400.00	89.50	179.30	4,329.77	-4,982.30	36.29	4,982.43	0.00	0.00	0.00
9,500.00	89.50	179.30	4,330.64	-5,082.29	37.51	5,082.42	0.00	0.00	0.00
9,597.96	89.50	179.30	4,331.49	-5,180.23	38.70	5,180.38	0.00	0.00	0.00

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
2,016.21	2,000.00	9 5/8"	9-5/8	13-1/2