

Titan Directional Drilling

Survey Report

HCBBS OCD

JUN 5 2019

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Company: Ridgeway Arizona Oil Corp.

Project: Permian NM E'83

Site: JC SAU 1-2 Pad

Well: Jennifer Chaveroo SAU #1H

Wellbore: #1H OH

Design: #1H OH

Local Co-ordinate Reference:

TVD Reference:

MD Reference:

North Reference:

Survey Calculation Method:

Database:

Well Jennifer Chaveroo SAU #1H

GL+KB @ 4339.00usft (Norton #6)

GL+KB @ 4339.00usft (Norton #6)

Grid

Minimum Curvature

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	JC SAU 1-2 Pad, Centered on JC SAU #1H		
Site Position:		Northing:	972,915.10 usft
From:	Map	Easting:	786,911.90 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	33° 40' 18.361 N
		Longitude:	103° 31' 34.139 W
		Grid Convergence:	0.45 °

Well	Jennifer Chaveroo SAU #1H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	33° 40' 18.361 N
		Longitude:	103° 31' 34.139 W
		Ground Level:	4,323.00 usft

Wellbore	#1H OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2015	12/15/18	6.88
			Dip Angle
			(°)
			61.36
			Field Strength
			(nT)
			48,633.94971249

Design	#1H OH		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			0.89

Survey Program	Date	01/16/19		
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
146.00	4,929.00	Survey #1 (#1H OH)	MWD	MWD - Standard
4,978.00	9,441.00	Survey #2 (#1H OH)	MWD	MWD - Standard
9,508.00	9,508.00	Projection (#1H OH)	ZERO-ERROR	Zero Error

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JCSAU #1H SL									
146.00	0.90	74.80	145.99	0.30	1.11	0.32	0.62	0.62	0.00
238.00	0.80	87.10	237.98	0.52	2.45	0.56	0.23	-0.11	13.37
331.00	1.40	140.40	330.97	-0.32	3.82	-0.26	1.21	0.65	57.31
423.00	2.50	156.90	422.91	-3.03	5.32	-2.95	1.33	1.20	17.93
515.00	3.80	170.40	514.77	-7.88	6.62	-7.78	1.62	1.41	14.67
607.00	5.30	173.90	606.48	-15.11	7.58	-15.00	1.66	1.63	3.80
700.00	7.30	176.40	698.92	-25.28	8.40	-25.15	2.17	2.15	2.69

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Company:	Ridgeway Arizona Oil Corp.	Local Co-ordinate Reference:	Well Jennifer Chaveroo SAU #1H
Project:	Permian NM E'83	TVD Reference:	GL+KB @ 4339.00usft (Norton #6)
Site:	JC SAU 1-2 Pad	MD Reference:	GL+KB @ 4339.00usft (Norton #6)
Well:	Jennifer Chaveroo SAU #1H	North Reference:	Grid
Wellbore:	#1H OH	Survey Calculation Method:	Minimum Curvature
Design:	#1H 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)
792.00	8.80	175.40	790.01	-38.13	9.34	-37.98	1.64	1.63	-1.09
884.00	10.50	176.20	880.70	-53.51	10.46	-53.34	1.85	1.85	0.87
975.00	12.00	174.30	969.95	-71.20	11.95	-71.01	1.70	1.65	-2.09
1,067.00	11.60	177.50	1,060.01	-89.96	13.30	-89.74	0.83	-0.43	3.48
1,160.00	10.80	177.50	1,151.24	-108.00	14.09	-107.77	0.86	-0.86	0.00
1,252.00	10.50	178.20	1,241.65	-124.99	14.73	-124.75	0.36	-0.33	0.76
1,344.00	10.50	178.00	1,332.11	-141.75	15.28	-141.50	0.04	0.00	-0.22
1,436.00	10.50	175.20	1,422.57	-158.48	16.28	-158.21	0.55	0.00	-3.04
1,531.00	10.80	171.80	1,515.94	-175.92	18.27	-175.61	0.73	0.32	-3.58
1,625.00	9.80	174.10	1,608.42	-192.59	20.35	-192.25	1.15	-1.06	2.45
1,721.00	9.20	177.10	1,703.10	-208.38	21.58	-208.02	0.81	-0.63	3.13
1,815.00	9.70	178.20	1,795.83	-223.80	22.21	-223.43	0.57	0.53	1.17
1,909.00	10.50	179.00	1,888.37	-240.28	22.60	-239.90	0.86	0.85	0.85
2,000.00	11.70	179.20	1,977.67	-257.80	22.88	-257.41	1.32	1.32	0.22
2,051.00	12.11	178.97	2,027.57	-268.32	23.05	-267.93	0.80	0.80	-0.46
9 5/8"									
2,113.00	12.60	178.70	2,088.13	-281.58	23.32	-281.18	0.80	0.80	-0.43
2,205.00	10.00	178.00	2,178.34	-299.60	23.82	-299.19	2.83	-2.83	-0.76
2,298.00	9.90	177.80	2,269.94	-315.66	24.41	-315.24	0.11	-0.11	-0.22
2,390.00	8.70	174.30	2,360.73	-330.48	25.41	-330.05	1.44	-1.30	-3.80
2,481.00	7.60	173.60	2,450.81	-343.31	26.76	-342.86	1.21	-1.21	-0.77
2,573.00	9.10	174.70	2,541.84	-356.60	28.11	-356.12	1.64	1.63	1.20
2,666.00	9.70	176.60	2,633.59	-371.75	29.26	-371.25	0.73	0.65	2.04
2,758.00	9.10	179.40	2,724.35	-386.76	29.79	-386.25	0.82	-0.65	3.04
2,850.00	8.60	175.00	2,815.26	-400.89	30.47	-400.37	0.91	-0.54	-4.78
2,942.00	10.40	176.20	2,905.99	-416.03	31.62	-415.49	1.97	1.96	1.30
3,037.00	9.80	171.30	2,999.52	-432.57	33.41	-432.00	1.10	-0.63	-5.16
3,133.00	9.70	173.80	3,094.13	-448.69	35.52	-448.09	0.45	-0.10	2.60
3,226.00	9.50	170.80	3,185.83	-464.06	37.59	-463.42	0.58	-0.22	-3.23
3,321.00	9.40	171.80	3,279.54	-479.47	39.95	-478.80	0.20	-0.11	1.05
3,384.00	9.30	168.50	3,341.71	-489.55	41.70	-488.85	0.87	-0.16	-5.24
3,416.00	8.20	169.40	3,373.33	-494.33	42.63	-493.61	3.46	-3.44	2.81
3,446.00	5.90	169.20	3,403.10	-497.95	43.32	-497.22	7.67	-7.67	-0.67
3,477.00	3.50	167.80	3,434.00	-500.44	43.82	-499.70	7.75	-7.74	-4.52
3,509.00	0.90	166.70	3,465.97	-501.64	44.08	-500.89	8.13	-8.13	-3.44
3,541.00	1.80	347.40	3,497.97	-501.39	44.03	-500.65	8.44	2.81	-560.31
3,573.00	3.60	351.00	3,529.93	-499.91	43.76	-499.17	5.65	5.63	11.25
3,603.00	5.70	358.50	3,559.83	-497.49	43.57	-496.75	7.27	7.00	25.00
3,635.00	8.20	2.90	3,591.59	-493.62	43.65	-492.88	7.98	7.81	13.75
3,667.00	10.60	2.00	3,623.16	-488.40	43.87	-487.66	7.51	7.50	-2.81
3,699.00	13.00	0.80	3,654.48	-481.86	44.02	-481.12	7.54	7.50	-3.75
3,729.00	15.30	359.90	3,683.57	-474.53	44.06	-473.79	7.70	7.67	-3.00
3,760.00	17.70	358.70	3,713.29	-465.72	43.95	-464.99	7.82	7.74	-3.87

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Survey Report

Company:	Ridgeway Arizona Oil Corp.	Local Co-ordinate Reference:	Well Jennifer Chaveroo SAU #1H
Project:	Permian NM E'83	TVD Reference:	GL+KB @ 4339.00usft (Norton #6)
Site:	JC SAU 1-2 Pad	MD Reference:	GL+KB @ 4339.00usft (Norton #6)
Well:	Jennifer Chaveroo SAU #1H	North Reference:	Grid
Wellbore:	#1H OH	Survey Calculation Method:	Minimum Curvature
Design:	#1H 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)
3,792.00	20.20	357.10	3,743.56	-455.34	43.56	-454.61	7.98	7.81	-5.00
3,824.00	22.90	356.20	3,773.32	-443.61	42.86	-442.89	8.50	8.44	-2.81
3,855.00	25.60	356.10	3,801.58	-430.91	42.01	-430.20	8.71	8.71	-0.32
3,888.00	28.80	356.20	3,830.92	-415.86	41.00	-415.17	9.70	9.70	0.30
3,920.00	31.90	356.60	3,858.54	-399.72	39.98	-399.05	9.71	9.69	1.25
3,952.00	34.90	357.50	3,885.25	-382.13	39.08	-381.48	9.50	9.38	2.81
3,984.00	37.80	358.30	3,911.02	-363.18	38.39	-362.54	9.18	9.06	2.50
4,015.00	40.50	358.90	3,935.06	-343.62	37.92	-342.99	8.79	8.71	1.94
4,047.00	43.00	359.40	3,958.93	-322.31	37.60	-321.69	7.88	7.81	1.56
4,078.00	46.00	0.30	3,981.04	-300.59	37.55	-299.97	9.89	9.68	2.90
4,111.00	49.20	0.80	4,003.29	-276.22	37.79	-275.60	9.76	9.70	1.52
4,142.00	52.20	1.00	4,022.92	-252.24	38.17	-251.62	9.69	9.68	0.65
4,173.00	54.20	1.00	4,041.49	-227.42	38.60	-226.80	6.45	6.45	0.00
4,205.00	57.30	1.00	4,059.50	-200.98	39.06	-200.35	9.69	9.69	0.00
4,220.00	58.10	1.09	4,067.51	-188.30	39.29	-187.67	5.34	5.31	0.63
5 1/2" *									
4,228.00	58.52	1.14	4,071.71	-181.50	39.43	-180.86	5.34	5.31	0.62
Tangent Start									
4,237.00	59.00	1.20	4,076.38	-173.80	39.58	-173.17	5.34	5.31	0.62
4,268.00	59.60	1.30	4,092.21	-147.15	40.16	-146.51	1.96	1.94	0.32
4,300.00	60.20	1.20	4,108.26	-119.47	40.77	-118.83	1.89	1.88	-0.31
4,331.00	60.50	1.20	4,123.59	-92.54	41.33	-91.89	0.97	0.97	0.00
4,362.00	60.60	1.50	4,138.83	-65.55	41.97	-64.89	0.90	0.32	0.97
4,394.00	61.10	1.50	4,154.42	-37.62	42.70	-36.95	1.56	1.56	0.00
4,395.00	61.10	1.49	4,154.90	-36.74	42.72	-36.07	0.91	0.32	-0.97
S25 re-entry - JCSAU #1H S25 Re-entry									
4,425.00	61.20	1.20	4,169.38	-10.47	43.34	-9.80	0.91	0.32	-0.97
4,450.00	61.68	1.12	4,181.33	11.48	43.78	12.16	1.96	1.94	-0.32
7" *									
4,456.00	61.80	1.10	4,184.17	16.77	43.89	17.45	1.96	1.94	-0.32
4,488.00	63.20	1.00	4,198.95	45.15	44.41	45.83	4.38	4.38	-0.31
4,490.00	63.35	1.01	4,199.85	46.93	44.44	47.62	7.44	7.42	0.66
Tangent End									
4,519.00	65.50	1.20	4,212.36	73.08	44.94	73.77	7.44	7.42	0.64
4,550.00	68.10	1.50	4,224.58	101.57	45.61	102.26	8.43	8.39	0.97
4,582.00	71.30	1.90	4,235.68	131.56	46.51	132.27	10.07	10.00	1.25
4,613.00	74.00	2.00	4,244.92	161.13	47.51	161.85	8.72	8.71	0.32
4,644.00	76.30	1.90	4,252.86	191.08	48.53	191.81	7.43	7.42	-0.32
4,676.00	79.20	1.70	4,259.65	222.33	49.51	223.07	9.08	9.06	-0.63
4,708.00	81.80	1.50	4,264.93	253.88	50.40	254.63	8.15	8.13	-0.63
4,739.00	84.20	1.20	4,268.71	284.63	51.12	285.39	7.80	7.74	-0.97
4,771.00	86.20	0.80	4,271.39	316.51	51.68	317.28	6.37	6.25	-1.25
4,802.00	88.40	0.80	4,272.85	347.48	52.11	348.24	7.10	7.10	0.00
4,834.00	89.70	0.80	4,273.38	379.47	52.56	380.24	4.06	4.06	0.00
4,929.00	91.50	0.80	4,272.39	474.45	53.88	475.23	1.89	1.89	0.00

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Survey Report

Company: Ridgeway Arizona Oil Corp.
Project: Permian NM E'83
Site: JC SAU 1-2 Pad
Well: Jennifer Chaveroo SAU #1H
Wellbore: #1H OH
Design: #1H OH

Local Co-ordinate Reference: Well Jennifer Chaveroo SAU #1H
TVD Reference: GL+KB @ 4339.00usft (Norton #6)
MD Reference: GL+KB @ 4339.00usft (Norton #8)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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)
4,978.00	91.40	0.20	4,271.15	523.43	54.31	524.21	1.24	-0.20	-1.22
5,061.00	90.90	0.50	4,269.48	606.41	54.82	607.19	0.70	-0.60	0.36
5,156.00	90.40	0.70	4,268.40	701.40	55.81	702.18	0.57	-0.53	0.21
5,252.00	89.50	0.40	4,268.49	797.40	56.73	798.18	0.99	-0.94	-0.31
5,347.00	89.80	0.30	4,269.07	892.39	57.31	893.17	0.33	0.32	-0.11
5,442.00	90.50	0.40	4,268.82	987.39	57.89	988.17	0.74	0.74	0.11
5,537.00	90.20	1.30	4,268.24	1,082.38	59.30	1,083.17	1.00	-0.32	0.95
5,633.00	90.00	1.70	4,268.07	1,178.34	61.82	1,179.16	0.47	-0.21	0.42
5,728.00	90.70	1.70	4,267.49	1,273.30	64.63	1,274.15	0.74	0.74	0.00
5,824.00	90.90	1.10	4,266.15	1,369.26	66.98	1,370.13	0.66	0.21	-0.63
5,918.00	90.70	1.00	4,264.84	1,463.23	68.70	1,464.12	0.24	-0.21	-0.11
6,013.00	91.60	1.60	4,262.93	1,558.19	70.86	1,559.10	1.14	0.95	0.63
6,107.00	91.50	1.90	4,260.39	1,652.11	73.73	1,653.06	0.34	-0.11	0.32
6,202.00	90.20	1.40	4,258.98	1,747.06	76.46	1,748.03	1.47	-1.37	-0.53
6,294.00	90.80	1.80	4,258.18	1,839.02	79.03	1,840.02	0.78	0.65	0.43
6,387.00	90.70	1.80	4,256.96	1,931.97	81.95	1,933.00	0.11	-0.11	0.00
6,479.00	89.40	1.10	4,256.88	2,023.93	84.28	2,025.00	1.60	-1.41	-0.76
6,571.00	89.70	1.30	4,257.60	2,115.91	86.20	2,116.99	0.39	0.33	0.22
6,664.00	91.30	1.70	4,256.79	2,208.87	88.64	2,209.98	1.77	1.72	0.43
6,756.00	90.90	0.80	4,255.02	2,300.83	90.65	2,301.96	1.07	-0.43	-0.98
6,848.00	89.90	0.50	4,254.38	2,392.82	91.69	2,393.96	1.13	-1.09	-0.33
6,941.00	90.20	0.70	4,254.30	2,485.82	92.66	2,486.96	0.39	0.32	0.22
7,033.00	91.50	1.40	4,252.93	2,577.79	94.35	2,578.94	1.60	1.41	0.76
7,124.00	91.80	2.20	4,250.31	2,668.71	97.21	2,669.89	0.94	0.33	0.88
7,216.00	91.70	1.70	4,247.50	2,760.61	100.33	2,761.83	0.55	-0.11	-0.54
7,309.00	90.90	1.30	4,245.39	2,853.55	102.77	2,854.80	0.96	-0.86	-0.43
7,401.00	90.20	0.50	4,244.51	2,945.54	104.21	2,946.80	1.16	-0.76	-0.87
7,493.00	91.70	1.30	4,242.99	3,037.51	105.66	3,038.78	1.85	1.63	0.87
7,586.00	89.70	2.10	4,241.85	3,130.45	108.42	3,131.76	2.32	-2.15	0.86
7,681.00	88.80	1.20	4,243.09	3,225.40	111.15	3,226.74	1.34	-0.95	-0.95
7,776.00	89.10	0.20	4,244.83	3,320.38	112.31	3,321.72	1.10	0.32	-1.05
7,872.00	89.20	359.00	4,246.26	3,416.37	111.64	3,417.69	1.25	0.10	-1.25
7,968.00	89.80	359.30	4,247.10	3,512.35	110.22	3,513.64	0.70	0.63	0.31
8,063.00	90.60	359.90	4,246.76	3,607.35	109.55	3,608.61	1.05	0.84	0.63
8,159.00	91.20	0.80	4,245.26	3,703.33	110.14	3,704.59	1.13	0.63	0.94
8,255.00	91.40	1.60	4,243.08	3,799.29	112.15	3,800.57	0.86	0.21	0.83
8,350.00	90.50	359.50	4,241.50	3,894.26	113.06	3,895.55	2.40	-0.95	-2.21
8,446.00	90.40	359.30	4,240.75	3,990.25	112.06	3,991.51	0.23	-0.10	-0.21
8,538.00	91.50	0.10	4,239.22	4,082.24	111.58	4,083.48	1.48	1.20	0.87
8,633.00	90.20	358.70	4,237.81	4,177.22	110.58	4,178.43	2.01	-1.37	-1.47
8,729.00	89.50	357.80	4,238.07	4,273.17	107.65	4,274.33	1.19	-0.73	-0.94
8,825.00	90.00	358.20	4,238.48	4,369.11	104.30	4,370.20	0.67	0.52	0.42
8,921.00	89.80	358.00	4,238.65	4,465.06	101.12	4,466.09	0.29	-0.21	-0.21

Titan Directional Drilling

Survey Report

Company: Ridgeway Arizona Oil Corp.
Project: Permian NM E'83
Site: JC SAU 1-2 Pad
Well: Jennifer Chaveroo SAU #1H
Wellbore: #1H OH
Design: #1H OH

Local Co-ordinate Reference: Well Jennifer Chaveroo SAU #1H
TVD Reference: GL+KB @ 4339.00usft (Norton #6)
MD Reference: GL+KB @ 4339.00usft (Norton #6)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
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)
9,014.00	89.60	357.60	4,239.14	4,557.99	97.55	4,558.95	0.48	-0.22	-0.43
9,108.00	90.50	358.60	4,239.06	4,651.93	94.43	4,652.84	1.43	0.96	1.06
9,204.00	90.90	359.00	4,237.88	4,747.91	92.42	4,748.77	0.59	0.42	0.42
9,300.00	91.30	359.40	4,236.04	4,843.88	91.08	4,844.71	0.59	0.42	0.42
9,388.80	91.68	0.44	4,233.73	4,932.65	90.95	4,933.47	1.24	0.43	1.17
330° Exit - JCSAU #1H 330°Exit									
9,394.00	91.70	0.50	4,233.58	4,937.84	91.00	4,938.66	1.25	0.43	1.17
9,441.00	91.80	1.00	4,232.15	4,984.82	91.61	4,985.64	1.08	0.21	1.06
9,498.00	91.80	1.00	4,230.36	5,041.78	92.61	5,042.61	0.00	0.00	0.00
5 1/2"									
9,508.00	91.80	1.00	4,230.04	5,051.77	92.78	5,052.61	0.00	0.00	0.00
JCSAU #1H BHL									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
JCSAU #1H SL - actual wellpath hits target center - Point	0.00	0.00	0.00	0.00	0.00	972,915.10	786,911.90	33° 40' 18.361 N	103° 31' 34.139 W
JCSAU #1H S25 Re-ent - actual wellpath hits target center - Point	0.00	0.00	4,154.90	-36.74	42.72	972,878.36	786,954.62	33° 40' 17.995 N	103° 31' 33.637 W
JCSAU #1H BHL - actual wellpath hits target center - Point	0.00	0.00	4,230.04	5,051.77	92.78	977,966.77	787,004.68	33° 41' 8.329 N	103° 31' 32.574 W
JCSAU #1H 330°Exit - actual wellpath misses target center by 0.01usft at 9388.80usft MD (4233.73 TVD, 4932.65 N, 90.95 E) - Point	0.00	0.00	4,233.73	4,932.65	90.95	977,847.64	787,002.85	33° 41' 7.151 N	103° 31' 32.607 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
2,051.00	2,027.57	9 5/8"	9-5/8	13-1/2
4,220.00	4,067.51	5 1/2" *	5-1/2	8-3/4
4,450.00	4,181.33	7" *	7	8-3/4
9,498.00	4,230.36	5 1/2"	5-1/2	6-1/2

Titan Directional Drilling

Survey Report

Company: Ridgeway Arizona Oil Corp.
Project: Permian NM E'83
Site: JC SAU 1-2 Pad
Well: Jennifer Chaveroo SAU #1H
Wellbore: #1H OH
Design: #1H OH

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Database:

Well Jennifer Chaveroo SAU #1H
GL+KB @ 4339.00usft (Norton #6)
GL+KB @ 4339.00usft (Norton #6)
Grid
Minimum Curvature
EDM 5k-14

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,228.00	4,071.71	-181.50	39.43	Tangent Start
4,395.00	4,154.90	-36.74	42.72	S25 re-entry
4,490.00	4,199.85	46.93	44.44	Tangent End
9,388.80	4,233.73	4,932.65	90.95	330' Exit



Pacific Energy
DEVELOPMENT

Ridgeway Arizona Oil Corp.

Project: Permian NM E'83

County: Roosevelt

Site: JC SAU 1-2 Pad

Well: Jennifer Chaveroo SAU #1H

Wellbore: #1H OH (251 H)
Design: #1H OH



TITAN
Directional Drilling

CASING DETAILS

TVD	MD	Name
2027.57	2051.00	9 5/8"
4067.51	4220.00	5 1/2"
4181.33	4450.00	7"
4230.36	9498.00	5 1/2"

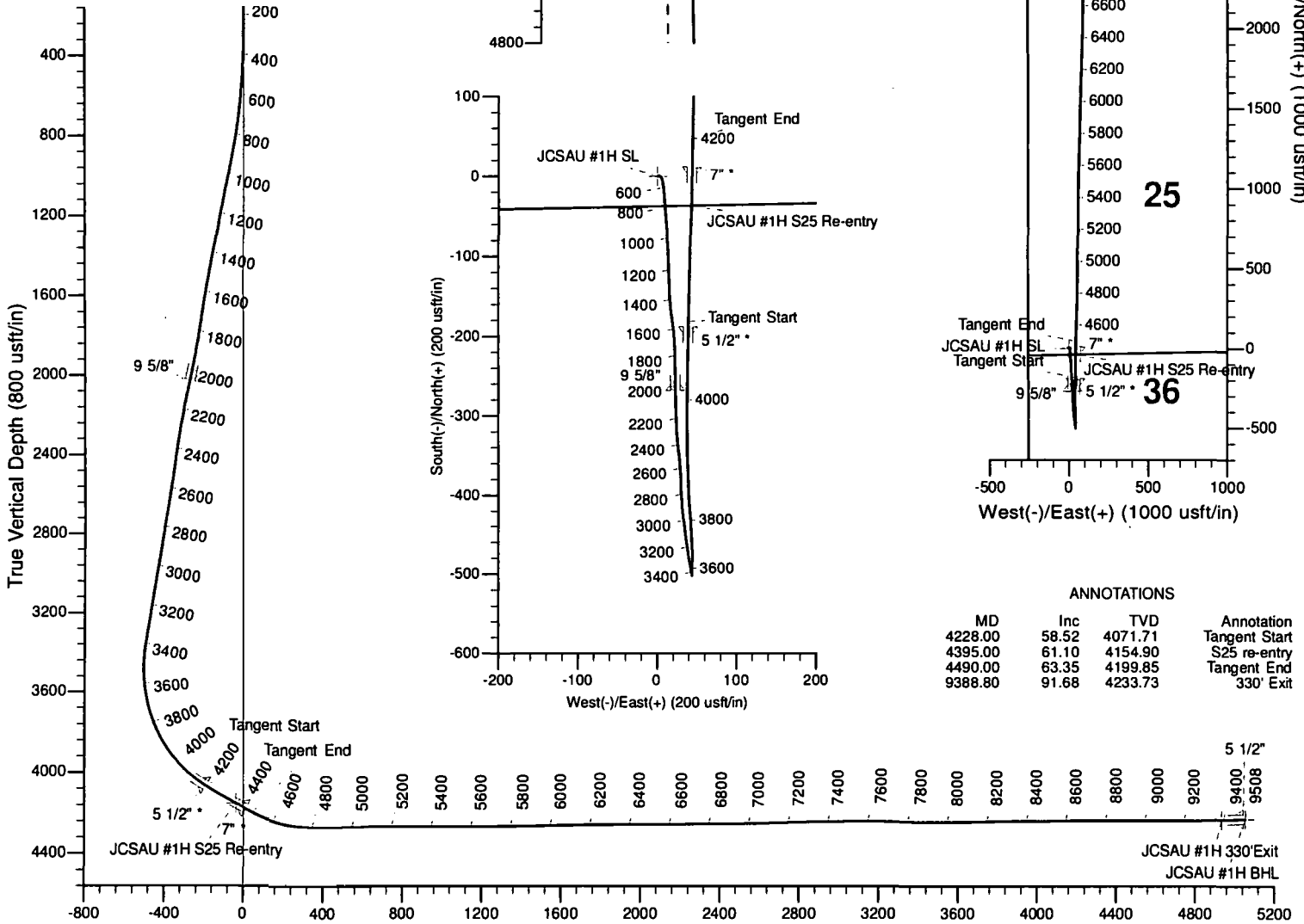
* Joint bottom / Crossover top



Azimuths to Grid North
True North: -0.45°
Magnetic North: 6.43°

Magnetic Field
Strength: 48633.9snT
Dip Angle: 61.36°
Date: 12/15/2018
Model: IGRF2015

US State Plane 1983
New Mexico Eastern Zone
33° 40' 18.361 N
103° 31' 34.139 W



ANNOTATIONS

MD	Inc	TVD	Annotation
4228.00	58.52	4071.71	Tangent Start
4395.00	61.10	4154.90	S25 re-entry
4490.00	63.35	4199.85	Tangent End
9388.80	91.68	4233.73	330' Exit

Vertical Section at 0.89° (800 usft/in)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
JCSAU #1H SL	0.00	0.00	0.00	972915.10	786911.90	33° 40' 18.361 N	103° 31' 34.139 W
JCSAU #1H S25 Re-entry	4154.90	-36.74	42.72	972878.36	786954.62	33° 40' 17.995 N	103° 31' 33.637 W
JCSAU #1H BHL	4230.04	5051.77	92.78	977966.76	787004.68	33° 41' 8.329 N	103° 31' 32.574 W
JCSAU #1H 330' Exit	4233.73	4932.65	90.95	977847.64	787002.85	33° 41' 7.151 N	103° 31' 32.607 W