

Submit 1 Copy To Appropriate District Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised July 18, 2013

OIL CONSERVATION DIVISION
1220 South St. F
Santa Fe, NM 87505

HOBBS OGD
FEB 03 2020

RECEIVED

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-041-20986
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐		5. Indicate Type of Lease STATE ☒ FEE ☐
2. Name of Operator Ridgeway Arizona Oil Corp		6. State Oil & Gas Lease No.
3. Address of Operator 575 N Dairy Ashford Rd, EC II, Suite 210, Houston, TX 77079		7. Lease Name or Unit Agreement Name Haley Chaveroo San Andres Unit
4. Well Location Unit Letter <u>N</u> : <u>1100</u> feet from the <u>S</u> line and <u>1477</u> feet from the <u>W</u> line Section <u>34</u> Township <u>07S</u> Range <u>33E</u> NMPM County <u>ROOSEVELT</u>		8. Well Number <u>301 H</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 4401' Surface		9. OGRID Number 164557
		10. Pool name or Wildcat Chaveroo; San Andres (12049)

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
CLOSED-LOOP SYSTEM ☐			
OTHER: ☐		OTHER: <u>Directional Survey</u> ☒	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Attached is the final directional survey for the subject well.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE William Boyd TITLE Land & Regulatory Manager DATE 1/30/2020

Type or print name William Boyd E-mail address: wboyd@pedevco.com PHONE: (713) 574-7912
For State Use Only

Petroleum Engineer

APPROVED BY: [Signature] TITLE Petroleum Engineer DATE 02/08/2020
Conditions of Approval (if any):

Titan Directional Drilling

Survey Report

Company: Ridgeway Arizona Oil Corp.	Local Co-ordinate Reference: Well Haley Chaveroo SAU #301H
Project: Permian NM E'83	TVD Reference: GL+KB @ 4417.00usft (Norton 8)
Site: HC SAU 301-303 Pad	MD Reference: GL+KB @ 4417.00usft (Norton 8)
Well: Haley Chaveroo SAU #301H	North Reference: Grid
Wellbore: #301H OH	Survey Calculation Method: Minimum Curvature
Design: #301H OH	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 HC SAU 301-303 Pad, Centered on est. 301 FTP 100'FNL 350'FWL			
Site Position:	Northing: 967,312.46 usft	Latitude: 33° 39' 23.732 N	
From: Map	Easting: 776,371.47 usft	Longitude: 103° 33' 39.349 W	
Position Uncertainty: 0.00 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.43 °	

Well Haley Chaveroo SAU #301H			
Well Position	+N/-S 0.00 usft	Northing: 968,530.20 usft	Latitude: 33° 39' 35.696 N
	+E/-W 0.00 usft	Easting: 777,493.30 usft	Longitude: 103° 33' 25.969 W
Position Uncertainty 0.00 usft		Wellhead Elevation: usft	Ground Level: 4,401.00 usft

Wellbore #301H OH					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	07/31/19	6.82	61.33	48,556.69823331

Design #301H 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	179.84

Survey Program		Date 08/13/19
From (usft)	To (usft)	Survey (Wellbore)
141.00	9,988.00	Survey #1 (#301H OH)
10,052.00	10,052.00	Projection (#301H OH)
		Tool Name
		MWD
		ZERO-ERROR
		Description
		MWD - Standard
		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	
HCSAU 301H SL										
141.00	0.20	137.70	141.00	-0.18	0.17	0.18	0.14	0.14	0.00	
234.00	0.40	142.30	234.00	-0.56	0.47	0.56	0.22	0.22	4.95	
325.00	1.10	220.70	324.99	-1.47	0.10	1.47	1.20	0.77	86.15	
416.00	2.60	230.90	415.94	-3.44	-2.07	3.43	1.68	1.65	11.21	
506.00	4.40	239.30	505.77	-6.49	-6.63	6.47	2.07	2.00	9.33	
597.00	6.60	243.30	596.35	-10.62	-14.30	10.58	2.45	2.42	4.40	
688.00	8.20	242.80	686.59	-15.94	-24.75	15.86	1.76	1.76	-0.55	
780.00	9.80	244.00	777.45	-22.37	-37.62	22.26	1.75	1.74	1.30	

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Project:	Permian NM E'83	TVD Reference:	GL+KB @ 4417.00usft (Norton 6)
Site:	HC SAU 301-303 Pad	MD Reference:	GL+KB @ 4417.00usft (Norton 6)
Well:	Haley Chaveroo SAU #301H	North Reference:	Grid
Wellbore:	#301H OH	Survey Calculation Method:	Minimum Curvature
Design:	#301H 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)
872.00	11.50	246.20	867.86	-29.50	-53.05	29.35	1.90	1.85	2.39
964.00	13.90	247.00	957.61	-37.52	-71.61	37.32	2.62	2.61	0.87
1,055.00	14.50	249.70	1,045.83	-45.74	-92.36	45.48	0.98	0.66	2.97
1,147.00	14.50	247.00	1,134.90	-54.24	-113.77	53.91	0.73	0.00	-2.93
1,239.00	15.00	246.90	1,223.86	-63.41	-135.32	63.02	0.54	0.54	-0.11
1,331.00	15.20	249.10	1,312.69	-72.39	-157.54	71.93	0.66	0.22	2.39
1,423.00	16.20	249.10	1,401.25	-81.27	-180.79	80.75	1.09	1.09	0.00
1,517.00	15.80	249.00	1,491.61	-90.53	-204.99	89.94	0.43	-0.43	-0.11
1,612.00	15.00	249.70	1,583.20	-99.43	-228.60	98.77	0.86	-0.84	0.74
1,707.00	14.80	248.10	1,675.01	-108.22	-251.38	107.50	0.48	-0.21	-1.68
1,802.00	14.40	246.50	1,766.94	-117.46	-273.48	116.67	0.60	-0.42	-1.68
1,896.00	15.70	249.80	1,857.72	-126.51	-296.13	125.66	1.66	1.38	3.51
1,991.00	17.30	251.10	1,948.80	-135.52	-321.56	134.60	1.73	1.68	1.37
2,086.00	17.90	249.50	2,039.35	-145.21	-348.60	144.21	0.81	0.63	-1.68
2,179.00	17.90	249.00	2,127.85	-155.34	-375.33	154.26	0.17	0.00	-0.54
2,257.00	17.90	249.70	2,202.08	-163.79	-397.76	162.65	0.28	0.00	0.90
2,307.00	17.28	248.45	2,249.74	-169.19	-411.88	168.01	1.45	-1.24	-2.49
9 5/8"									
2,379.00	16.40	246.50	2,318.65	-177.17	-431.14	175.93	1.45	-1.22	-2.71
2,470.00	14.50	247.70	2,406.36	-186.61	-453.47	185.31	2.12	-2.09	1.32
2,562.00	13.70	248.30	2,495.59	-195.01	-474.25	193.65	0.88	-0.87	0.65
2,653.00	13.80	248.30	2,583.98	-203.01	-494.34	201.59	0.11	0.11	0.00
2,745.00	14.20	247.20	2,673.25	-211.44	-514.94	209.96	0.52	0.43	-1.20
2,837.00	13.40	252.70	2,762.59	-218.98	-535.52	217.45	1.67	-0.87	5.98
2,931.00	13.10	251.10	2,854.09	-225.67	-556.00	224.08	0.50	-0.32	-1.70
3,026.00	13.40	249.50	2,946.56	-233.02	-576.50	231.36	0.50	0.32	-1.68
3,120.00	13.40	248.30	3,038.00	-240.86	-596.82	239.14	0.30	0.00	-1.28
3,213.00	13.30	246.70	3,128.49	-249.07	-616.66	247.30	0.41	-0.11	-1.72
3,308.00	13.40	251.60	3,220.93	-256.87	-637.14	255.04	1.20	0.11	5.16
3,402.00	13.40	250.40	3,312.37	-263.96	-657.74	262.07	0.30	0.00	-1.28
3,497.00	13.50	249.70	3,404.76	-271.50	-678.51	269.55	0.20	0.11	-0.74
3,591.00	13.50	249.70	3,496.17	-279.12	-699.09	277.11	0.00	0.00	0.00
3,685.00	14.00	249.10	3,587.47	-286.98	-720.00	284.91	0.55	0.53	-0.64
3,715.00	16.20	248.10	3,616.43	-289.83	-727.27	287.75	7.38	7.33	-3.33
3,746.00	18.70	246.90	3,646.00	-293.40	-735.86	291.28	8.15	8.06	-3.87
3,778.00	21.60	245.30	3,676.04	-297.87	-745.93	295.73	9.22	9.06	-5.00
3,810.00	23.90	241.90	3,705.55	-303.39	-757.00	301.21	8.28	7.19	-10.63
3,841.00	25.80	238.40	3,733.68	-309.88	-768.29	307.68	7.75	6.13	-11.29
3,873.00	27.80	234.40	3,762.25	-317.88	-780.29	315.64	8.41	6.25	-12.50
3,904.00	30.00	230.20	3,789.39	-327.05	-792.12	324.77	9.65	7.10	-13.55
3,935.00	32.00	227.20	3,815.96	-337.59	-804.11	335.28	8.15	6.45	-9.68
3,967.00	34.00	223.80	3,842.80	-349.81	-816.52	347.47	8.52	6.25	-10.63
3,998.00	36.40	220.70	3,868.13	-363.04	-828.52	360.66	9.65	7.74	-10.00

Titan Directional Drilling

Survey Report

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Well:	Haley Chaveroo SAU #301H	North Reference:	Grid
Wellbore:	#301H OH	Survey Calculation Method:	Minimum Curvature
Design:	#301H 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)
4,030.00	38.90	217.70	3,893.47	-378.19	-840.86	375.78	9.68	7.81	-9.38
4,061.00	41.10	214.70	3,917.21	-394.28	-852.62	391.83	9.44	7.10	-9.68
4,092.00	43.60	212.20	3,940.12	-411.70	-864.12	409.22	9.72	8.06	-8.06
4,124.00	46.20	209.60	3,962.79	-431.09	-875.70	428.57	9.94	8.13	-8.13
4,154.00	48.10	207.70	3,983.19	-450.39	-886.24	447.84	7.85	6.33	-6.33
4,185.00	50.10	205.90	4,003.49	-471.30	-896.80	468.73	7.80	6.45	-5.81
4,217.00	52.40	204.80	4,023.52	-493.85	-907.48	491.25	7.67	7.19	-3.44
4,248.00	54.30	204.10	4,042.02	-516.49	-917.77	513.86	6.39	6.13	-2.26
4,274.00	56.23	203.68	4,056.84	-536.03	-926.42	533.37	7.54	7.42	-1.62
5 1/2" *									
4,279.00	56.60	203.60	4,059.60	-539.85	-928.09	537.18	7.54	7.42	-1.58
4,310.00	58.40	203.40	4,076.26	-563.82	-938.52	561.13	5.83	5.81	-0.65
Tangent Start									
4,341.00	58.70	203.40	4,092.43	-588.09	-949.02	585.37	0.97	0.97	0.00
4,373.00	59.20	203.40	4,108.94	-613.25	-959.91	610.50	1.56	1.56	0.00
4,404.00	59.50	203.40	4,124.74	-637.73	-970.50	634.94	0.97	0.97	0.00
4,435.00	60.10	203.50	4,140.34	-662.31	-981.16	659.49	1.96	1.94	0.32
4,467.00	60.50	203.40	4,156.19	-687.81	-992.22	684.96	1.28	1.25	-0.31
4,499.00	61.00	203.40	4,171.83	-713.43	-1,003.31	710.55	1.56	1.56	0.00
4,529.00	61.40	203.40	4,186.28	-737.56	-1,013.75	734.65	1.33	1.33	0.00
4,561.00	62.00	202.90	4,201.45	-763.47	-1,024.83	760.52	2.33	1.88	-1.56
4,566.00	62.27	202.66	4,203.79	-767.54	-1,026.54	764.59	6.76	5.31	-4.72
Tangent End									
4,581.00	63.07	201.96	4,210.67	-779.87	-1,031.60	776.90	6.76	5.33	-4.68
7" *									
4,591.00	63.60	201.50	4,215.16	-788.17	-1,034.91	785.20	6.76	5.35	-4.62
4,622.00	65.20	200.10	4,228.56	-814.30	-1,044.83	811.30	6.57	5.16	-4.52
4,653.00	67.00	198.20	4,241.12	-841.07	-1,054.13	838.05	8.07	5.81	-6.13
4,684.00	68.70	196.60	4,252.81	-868.47	-1,062.71	865.42	7.27	5.48	-5.16
4,716.00	70.00	195.00	4,264.09	-897.28	-1,070.86	894.21	6.20	4.06	-5.00
4,747.00	71.30	193.40	4,274.36	-925.64	-1,078.03	922.54	6.43	4.19	-5.16
4,779.00	72.70	191.70	4,284.25	-955.34	-1,084.64	952.23	6.68	4.38	-5.31
4,810.00	73.60	189.70	4,293.24	-984.49	-1,090.15	981.36	6.82	2.90	-6.45
4,842.00	74.90	188.00	4,301.92	-1,014.92	-1,094.89	1,011.78	6.53	4.06	-5.31
4,873.00	76.20	186.70	4,309.66	-1,044.69	-1,098.73	1,041.54	5.84	4.19	-4.19
4,903.00	78.10	185.70	4,316.33	-1,073.77	-1,101.88	1,070.60	7.12	6.33	-3.33
4,934.00	80.50	184.30	4,322.09	-1,104.11	-1,104.54	1,100.94	8.92	7.74	-4.52
4,948.00	81.46	183.77	4,324.28	-1,117.91	-1,105.51	1,114.73	7.81	6.87	-3.76
S3 Entry - HCSAU 301H S3 Entry									
4,966.00	82.70	183.10	4,326.76	-1,135.70	-1,106.58	1,132.52	7.81	6.88	-3.74
4,998.00	84.60	182.00	4,330.30	-1,167.47	-1,107.99	1,164.29	6.85	5.94	-3.44
5,028.00	86.60	180.80	4,332.60	-1,197.37	-1,108.72	1,194.19	7.77	6.67	-4.00
5,060.00	87.90	180.20	4,334.14	-1,229.33	-1,109.00	1,226.15	4.47	4.06	-1.88
5,091.00	88.50	180.20	4,335.11	-1,260.32	-1,109.11	1,257.13	1.94	1.94	0.00

Titan Directional Drilling

Survey Report

Company:	Ridgeway Arizona Oil Corp.	Local Co-ordinate Reference:	Well Haley Chaveroo SAU #301H
Project:	Permian NM E'83	TVD Reference:	GL+KB @ 4417.00usft (Norton 6)
Site:	HC SAU 301-303 Pad	MD Reference:	GL+KB @ 4417.00usft (Norton 6)
Well:	Haley Chaveroo SAU #301H	North Reference:	Grid
Wellbore:	#301H OH	Survey Calculation Method:	Minimum Curvature
Design:	#301H 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)	
5,132.00	88.60	179.70	4,336.15	-1,301.30	-1,109.08	1,298.12	1.24	0.24	-1.22	
5,226.00	90.40	180.40	4,336.97	-1,395.30	-1,109.16	1,392.11	2.05	1.91	0.74	
5,320.00	89.90	179.90	4,336.72	-1,489.29	-1,109.40	1,486.11	0.75	-0.53	-0.53	
5,415.00	90.30	180.40	4,336.56	-1,584.29	-1,109.65	1,581.10	0.67	0.42	0.53	
5,508.00	90.20	180.20	4,336.15	-1,677.29	-1,110.14	1,674.10	0.24	-0.11	-0.22	
5,602.00	88.90	179.50	4,336.89	-1,771.29	-1,109.89	1,768.09	1.57	-1.38	-0.74	
5,697.00	90.10	179.40	4,337.72	-1,866.28	-1,108.98	1,863.09	1.27	1.26	-0.11	
5,792.00	90.00	180.80	4,337.64	-1,961.27	-1,109.15	1,958.08	1.48	-0.11	1.47	
5,886.00	89.60	179.20	4,337.96	-2,055.27	-1,109.15	2,052.08	1.75	-0.43	-1.70	
5,980.00	89.90	178.80	4,338.37	-2,149.25	-1,107.51	2,146.07	0.53	0.32	-0.43	
6,075.00	89.90	179.70	4,338.54	-2,244.24	-1,106.26	2,241.06	0.95	0.00	0.95	
6,170.00	90.70	180.40	4,338.04	-2,339.24	-1,106.35	2,336.06	1.12	0.84	0.74	
6,264.00	90.00	180.10	4,337.47	-2,433.24	-1,106.76	2,430.05	0.81	-0.74	-0.32	
6,358.00	88.40	179.50	4,338.78	-2,527.23	-1,106.43	2,524.04	1.82	-1.70	-0.64	
6,452.00	88.80	179.70	4,341.08	-2,621.20	-1,105.77	2,618.01	0.48	0.43	0.21	
6,547.00	90.90	179.50	4,341.33	-2,716.19	-1,105.11	2,713.01	2.22	2.21	-0.21	
6,640.00	90.10	179.00	4,340.51	-2,809.17	-1,103.89	2,806.00	1.01	-0.86	-0.54	
6,731.00	89.90	179.20	4,340.51	-2,900.16	-1,102.46	2,896.99	0.31	-0.22	0.22	
6,822.00	89.90	179.40	4,340.67	-2,991.16	-1,101.35	2,987.98	0.22	0.00	0.22	
6,913.00	88.50	179.50	4,341.94	-3,082.14	-1,100.48	3,078.97	1.54	-1.54	0.11	
7,004.00	88.60	179.50	4,344.25	-3,173.11	-1,099.68	3,169.94	0.11	0.11	0.00	
7,095.00	90.00	179.00	4,345.36	-3,264.09	-1,098.49	3,260.93	1.63	1.54	-0.55	
7,185.00	89.90	179.70	4,345.44	-3,354.08	-1,097.47	3,350.92	0.79	-0.11	0.78	
7,277.00	90.00	180.10	4,345.52	-3,446.08	-1,097.31	3,442.92	0.45	0.11	0.43	
7,368.00	89.70	180.20	4,345.76	-3,537.08	-1,097.55	3,533.92	0.35	-0.33	0.11	
7,460.00	89.40	179.50	4,346.48	-3,629.08	-1,097.31	3,625.92	0.83	-0.33	-0.76	
7,552.00	89.50	179.20	4,347.36	-3,721.07	-1,096.26	3,717.91	0.34	0.11	-0.33	
7,643.00	90.00	177.20	4,347.76	-3,812.02	-1,093.41	3,808.87	2.27	0.55	-2.20	
7,736.00	90.60	177.80	4,347.27	-3,904.93	-1,089.35	3,901.79	0.91	0.65	0.65	
7,827.00	91.00	179.70	4,346.00	-3,995.89	-1,087.36	3,992.76	2.13	0.44	2.09	
7,919.00	89.90	180.90	4,345.28	-4,087.89	-1,087.85	4,084.75	1.77	-1.20	1.30	
8,011.00	89.70	181.10	4,345.60	-4,179.87	-1,089.45	4,176.73	0.31	-0.22	0.22	
8,105.00	89.50	180.90	4,346.26	-4,273.85	-1,091.09	4,270.71	0.30	-0.21	-0.21	
8,199.00	90.00	181.10	4,346.67	-4,367.84	-1,092.73	4,364.69	0.57	0.53	0.21	
8,292.00	90.00	180.80	4,346.67	-4,460.83	-1,094.27	4,457.67	0.32	0.00	-0.32	
8,386.00	88.20	181.60	4,348.14	-4,554.79	-1,096.24	4,551.63	2.10	-1.91	0.85	
8,480.00	89.60	182.50	4,349.95	-4,648.71	-1,099.60	4,645.53	1.77	1.49	0.96	
8,573.00	89.20	181.50	4,350.92	-4,741.65	-1,102.85	4,738.46	1.16	-0.43	-1.08	
8,667.00	89.30	179.90	4,352.15	-4,835.63	-1,104.00	4,832.44	1.71	0.11	-1.70	
8,762.00	89.30	180.20	4,353.31	-4,930.62	-1,104.08	4,927.43	0.32	0.00	0.32	
8,855.00	89.50	178.30	4,354.29	-5,023.60	-1,102.86	5,020.42	2.05	0.22	-2.04	
8,950.00	89.70	178.00	4,354.95	-5,118.55	-1,099.80	5,115.37	0.38	0.21	-0.32	
9,044.00	89.50	178.50	4,355.61	-5,212.50	-1,096.93	5,209.34	0.57	-0.21	0.53	
9,138.00	90.50	178.80	4,355.61	-5,306.48	-1,094.71	5,303.31	1.11	1.06	0.32	

Titan Directional Drilling

Survey Report

Company:	Ridgeway Arizona Oil Corp.	Local Co-ordinate Reference:	Well Haley Chaveroo SAU #301H
Project:	Permian NM E'83	TVD Reference:	GL+KB @ 4417.00usft (Norton 6)
Site:	HC SAU 301-303 Pad	MD Reference:	GL+KB @ 4417.00usft (Norton 6)
Well:	Haley Chaveroo SAU #301H	North Reference:	Grid
Wellbore:	#301H OH	Survey Calculation Method:	Minimum Curvature
Design:	#301H 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)	
9,233.00	91.00	179.40	4,354.36	-5,401.46	-1,093.22	5,398.30	0.82	0.53	0.63	
9,326.00	90.00	180.10	4,353.55	-5,494.45	-1,092.81	5,491.29	1.31	-1.08	0.75	
9,421.00	89.40	180.20	4,354.05	-5,589.45	-1,093.06	5,586.29	0.64	-0.63	0.11	
9,516.00	90.10	180.20	4,354.46	-5,684.45	-1,093.39	5,681.29	0.74	0.74	0.00	
9,611.00	89.80	180.10	4,354.55	-5,779.45	-1,093.64	5,776.28	0.33	-0.32	-0.11	
9,705.00	89.20	180.10	4,355.37	-5,873.44	-1,093.81	5,870.28	0.64	-0.64	0.00	
9,800.00	90.70	181.80	4,355.45	-5,968.42	-1,095.38	5,965.25	2.39	1.58	1.79	
9,893.00	89.90	181.50	4,354.96	-6,061.38	-1,098.06	6,058.21	0.92	-0.86	-0.32	
9,916.00	89.92	181.40	4,355.00	-6,084.37	-1,098.64	6,081.20	0.43	0.11	-0.42	
330' Exit - HCSAU 301H 330'Exit										
9,988.00	90.00	181.10	4,355.04	-6,156.36	-1,100.22	6,153.17	0.43	0.11	-0.42	
10,042.00	90.00	181.10	4,355.04	-6,210.35	-1,101.25	6,207.16	0.00	0.00	0.00	
5 1/2"										
10,052.00	90.00	181.10	4,355.04	-6,220.35	-1,101.44	6,217.16	0.00	0.00	0.00	
HCSAU 301H BHL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude		Longitude
HCSAU 301H SL	0.00	0.00	0.00	0.00	0.00	968,530.20	777,493.30	33° 39' 35.696 N		103° 33' 25.969 W
- hit/miss target										
- Shape										
- actual wellpath hits target center										
- Point										
HCSAU 301H S3 Entry	0.00	0.00	4,324.28	-1,117.91	-1,105.51	967,412.33	776,387.82	33° 39' 24.719 N		103° 33' 39.146 W
- actual wellpath hits target center										
- Point										
HCSAU 301H 330'Exit	0.00	0.00	4,355.00	-6,084.37	-1,098.64	962,445.99	776,394.68	33° 38' 35.587 N		103° 33' 39.504 W
- actual wellpath hits target center										
- Point										
HCSAU 301H BHL	0.00	0.00	4,355.04	-6,220.35	-1,101.44	962,310.02	776,391.88	33° 38' 34.242 N		103° 33' 39.549 W
- actual wellpath hits target center										
- Point										

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name		Casing Diameter (")	Hole Diameter (")	
2,307.00	2,249.74	9 5/8"		9-5/8	13-1/2	
4,274.00	4,056.84	5 1/2" *		5-1/2	8-3/4	
4,581.00	4,210.67	7" *		7	8-3/4	
10,042.00	4,355.04	5 1/2"		5-1/2	8-3/4	

Titan Directional Drilling

Survey Report

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Project:	Permian NM E'83	TVD Reference:	GL+KB @ 4417.00usft (Norton 6)
Site:	HC SAU 301-303 Pad	MD Reference:	GL+KB @ 4417.00usft (Norton 6)
Well:	Haley Chaveroo SAU #301H	North Reference:	Grid
Wellbore:	#301H OH	Survey Calculation Method:	Minimum Curvature
Design:	#301H OH	Database:	EDM 5k-14

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
4,310.00	4,076.26	-563.82	-938.52	Tangent Start
4,566.00	4,203.79	-767.54	-1,026.54	Tangent End
4,948.00	4,324.28	-1,117.91	-1,105.51	S3 Entry
9,916.00	4,355.00	-6,084.37	-1,098.64	330' Exit