



PHOENIX
TECHNOLOGY SERVICES

June 8, 2018

Oil Conservation Division
State of New Mexico
811 S. First St.
Artesia, New Mexico 88210

RECEIVED

JUN 18 2018

DISTRICT II-ARTESIA O.C.D.

Dear District 2 - Artesia

DISTRICT II-ARTESIA O.C.D.

JUN 18 2018

Re: Devon Energy
Harroun Trust Fed Com 31 No. 1
Eddy Co., NM
API #30-015-26954
Job No. 62914

RECEIVED

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. (P-5 No. 606018). Other information required by your office is as follows:

Name & Title of Surveyor	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Noe Garza	1	0	11,800	6/1/18	6/1/18	Gyro

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Brittany Carley

Brittany Carley
Operations Administrator

SURVEY CERTIFICATION FORM

3610 Elkins Road Midland, TX 79705 t:432-684-0057 f: 432-686-7964



Company: Devon

Job #: 62914

Well Name: Harroun Trust Fed Com 31 No. 1

County/State: Eddy Co., New Mexico

Survey Instrument Type: North Seek Rate Gyro

API # 30-015-26954

TIE-IN DATA

Measure Depth (ft)	Vertical Depth (ft)	Inclination (°)	Azimuth (°)	N-S Coordinates	E-W Coordinates	Data Source
0	0	0	0	0	0	Surface

First Survey

Date	Depth (ft)	Inclination (°)	Azimuth (°)
2018-06-01	0	0	0

Last Survey

Date	Depth (ft)	Inclination (°)	Azimuth (°)
2018-06-01	11800	1.7	309.52

Projected TD Survey

Date	Depth (ft)	Inclination (°)	Azimuth (°)
0	0	0	0

Grid Correction
-0.16

Gyro Operator: Phoenix Technology Services USA Ltd.

Gyro Supervisor: Angel Guebara

To the best of my knowledge I certify this survey data to be correct and true

Date:

06-01-18

Print Name: Noe Garza

Signature:

A handwritten signature in black ink, appearing to read 'Noe Garza', written over a horizontal line.



Company: Devon
 Well: Harroun Trust Fed Com 31 No. 1
 Location: Eddy Co., New Mexico
 Rig: Renegade Mast

Job Number: 62914
 Grid Corr.: -0.16
 Lat: 32.26
 Long: -104.03

Date: 06/01/18
 Calculation Method: Minimum Curvature
 Proposed Azimuth:
 RKB - MSL in feet: Ground
 Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
Enter Tie-In Survey on Line 10					FIELD COPY, NON-DEFINITIVE								
TIE IN	0			0	0	0	0	0					
Gyro	100.00	0.53	262.39	100	100.00	-0.06	0.06 S	0.46 W	0.46	262.39	0.53	0.53	262.39
	125.00	0.42	257.14	25	125.00	-0.10	0.10 S	0.66 W	0.67	261.67	0.47	-0.44	-21.00
	150.00	0.33	246.12	25	150.00	-0.15	0.15 S	0.82 W	0.83	259.84	0.46	-0.36	-44.08
	175.00	0.49	191.73	25	175.00	-0.28	0.28 S	0.91 W	0.95	252.79	1.60	0.64	-217.56
	200.00	0.48	262.85	25	200.00	-0.40	0.40 S	1.03 W	1.10	248.89	2.26	-0.04	284.48
	225.00	0.46	264.40	25	225.00	-0.42	0.42 S	1.23 W	1.30	251.18	0.09	-0.08	6.20
	250.00	0.57	263.14	25	249.99	-0.45	0.45 S	1.46 W	1.52	253.01	0.44	0.44	-5.04
	275.00	0.61	267.22	25	274.99	-0.47	0.47 S	1.71 W	1.78	254.77	0.23	0.16	16.32
	300.00	0.64	247.74	25	299.99	-0.53	0.53 S	1.98 W	2.05	255.09	0.85	0.12	-77.92
	325.00	0.68	273.72	25	324.99	-0.57	0.57 S	2.25 W	2.32	255.82	1.20	0.16	103.92
	350.00	0.67	285.35	25	349.99	-0.52	0.52 S	2.54 W	2.60	258.42	0.55	-0.04	46.52
	375.00	0.77	275.14	25	374.99	-0.47	0.47 S	2.85 W	2.89	260.69	0.65	0.40	-40.84
	400.00	0.89	277.75	25	399.98	-0.43	0.43 S	3.21 W	3.24	262.44	0.50	0.48	10.44
	425.00	0.97	283.86	25	424.98	-0.35	0.35 S	3.61 W	3.63	264.47	0.51	0.32	24.44
	450.00	1.05	279.93	25	449.98	-0.26	0.26 S	4.04 W	4.05	266.33	0.42	0.32	-15.72
	475.00	1.09	288.35	25	474.97	-0.14	0.14 S	4.49 W	4.49	268.15	0.65	0.16	33.68
	500.00	1.25	287.35	25	499.97	0.01	0.01 N	4.98 W	4.98	270.13	0.65	0.64	-4.00
	525.00	1.39	291.73	25	524.96	0.21	0.21 N	5.52 W	5.52	272.13	0.69	0.56	17.52
	550.00	1.59	293.53	25	549.95	0.46	0.46 N	6.12 W	6.14	274.26	0.82	0.80	7.20
	575.00	1.87	297.76	25	574.94	0.78	0.78 N	6.80 W	6.84	276.58	1.23	1.12	16.92
	600.00	1.93	302.51	25	599.93	1.20	1.20 N	7.51 W	7.61	279.08	0.67	0.24	19.00
	625.00	2.04	303.72	25	624.91	1.67	1.67 N	8.24 W	8.41	281.48	0.47	0.44	4.84
	650.00	2.10	302.94	25	649.89	2.17	2.17 N	8.99 W	9.25	283.57	0.27	0.24	-3.12
	675.00	2.04	302.40	25	674.88	2.66	2.66 N	9.75 W	10.11	285.24	0.25	-0.24	-2.16
	700.00	2.10	301.88	25	699.86	3.14	3.14 N	10.52 W	10.98	286.61	0.25	0.24	-2.08
	725.00	2.04	303.19	25	724.85	3.62	3.62 N	11.28 W	11.85	287.81	0.31	-0.24	5.24
	750.00	2.04	302.78	25	749.83	4.11	4.11 N	12.03 W	12.71	288.86	0.06	0.00	-1.64



Calculation Method:	Minimum Curvature
Proposed Azimuth:	
RKB - MSL in feet:	<u>Ground</u>
Tie Into:	<u>Surface</u>

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	775.00	2.07	303.50	25	774.81	4.60	4.60 N	12.78 W	13.58	289.79	0.16	0.12	2.88
	800.00	2.10	301.35	25	799.80	5.09	5.09 N	13.54 W	14.47	290.58	0.34	0.12	-8.60
	825.00	2.01	305.71	25	824.78	5.58	5.58 N	14.29 W	15.34	291.33	0.72	-0.36	17.44
	850.00	2.10	305.26	25	849.77	6.10	6.10 N	15.02 W	16.21	292.10	0.37	0.36	-1.80
	875.00	2.08	307.25	25	874.75	6.64	6.64 N	15.76 W	17.10	292.85	0.30	-0.08	7.96
	900.00	2.06	307.31	25	899.73	7.19	7.19 N	16.47 W	17.97	293.57	0.08	-0.08	0.24
	925.00	2.12	308.45	25	924.72	7.75	7.75 N	17.19 W	18.86	294.25	0.29	0.24	4.56
	950.00	2.17	309.83	25	949.70	8.34	8.34 N	17.92 W	19.76	294.95	0.29	0.20	5.52
	975.00	2.13	310.85	25	974.68	8.94	8.94 N	18.63 W	20.67	295.64	0.22	-0.16	4.08
	1000.00	2.16	310.25	25	999.66	9.55	9.55 N	19.35 W	21.58	296.28	0.15	0.12	-2.40
	1025.00	2.04	311.30	25	1024.65	10.15	10.15 N	20.04 W	22.46	296.86	0.50	-0.48	4.20
	1050.00	2.07	313.99	25	1049.63	10.76	10.76 N	20.70 W	23.33	297.46	0.40	0.12	10.76
	1075.00	1.93	318.24	25	1074.61	11.38	11.38 N	21.30 W	24.16	298.12	0.82	-0.56	17.00
	1100.00	1.93	324.18	25	1099.60	12.04	12.04 N	21.83 W	24.93	298.88	0.80	0.00	23.76
	1125.00	1.86	328.05	25	1124.59	12.73	12.73 N	22.29 W	25.67	299.72	0.58	-0.28	15.48
	1150.00	1.75	333.75	25	1149.57	13.41	13.41 N	22.68 W	26.34	300.60	0.84	-0.44	22.80
	1175.00	1.74	339.32	25	1174.56	14.11	14.11 N	22.98 W	26.96	301.55	0.68	-0.04	22.28
	1200.00	1.74	344.61	25	1199.55	14.83	14.83 N	23.21 W	27.55	302.57	0.64	0.00	21.16
	1225.00	1.68	351.26	25	1224.54	15.56	15.56 N	23.37 W	28.08	303.66	0.83	-0.24	26.60
	1250.00	1.77	356.83	25	1249.53	16.31	16.31 N	23.45 W	28.56	304.82	0.76	0.36	22.28
	1275.00	1.84	359.77	25	1274.52	17.09	17.09 N	23.47 W	29.03	306.07	0.46	0.28	11.76
	1300.00	1.86	1.46	25	1299.50	17.90	17.90 N	23.46 W	29.51	307.34	0.23	0.08	-1433.24
	1325.00	1.92	4.50	25	1324.49	18.72	18.72 N	23.42 W	29.98	308.64	0.47	0.24	12.16
	1350.00	1.87	4.16	25	1349.48	19.55	19.55 N	23.35 W	30.46	309.93	0.20	-0.20	-1.36
	1375.00	1.93	4.26	25	1374.46	20.37	20.37 N	23.29 W	30.95	311.18	0.24	0.24	0.40
	1400.00	1.98	4.62	25	1399.45	21.22	21.22 N	23.23 W	31.46	312.42	0.21	0.20	1.44
	1425.00	1.99	7.60	25	1424.43	22.09	22.09 N	23.14 W	31.98	313.67	0.41	0.04	11.92
	1450.00	2.02	6.97	25	1449.42	22.95	22.95 N	23.02 W	32.51	314.91	0.15	0.12	-2.52
	1475.00	2.00	5.15	25	1474.40	23.82	23.82 N	22.93 W	33.07	316.09	0.27	-0.08	-7.28
	1500.00	2.08	6.92	25	1499.39	24.71	24.71 N	22.84 W	33.65	317.25	0.41	0.32	7.08



Company: Devon
 Well: Harroun Trust Fed Com 31 No. 1
 Location: Eddy Co., New Mexico
 Rig: Renegade Mast

Job Number: 62914
 Grid Corr.: -0.16
 Lat: 32.26
 Long: -104.03

Calculation Method: Minimum Curvature
 Proposed Azimuth:
 RKB - MSL in feet: Ground
 Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	1525.00	2.05	6.71	25	1524.37	25.60	25.60 N	22.73 W	34.24	318.40	0.12	-0.12	-0.84
	1550.00	2.03	6.86	25	1549.35	26.49	26.49 N	22.63 W	34.84	319.50	0.08	-0.08	0.60
	1575.00	2.02	8.21	25	1574.34	27.36	27.36 N	22.51 W	35.43	320.56	0.19	-0.04	5.40
	1600.00	2.00	6.92	25	1599.32	28.23	28.23 N	22.40 W	36.04	321.58	0.20	-0.08	-5.16
	1625.00	1.98	7.51	25	1624.31	29.09	29.09 N	22.29 W	36.65	322.55	0.11	-0.08	2.36
	1650.00	1.97	6.99	25	1649.29	29.95	29.95 N	22.18 W	37.27	323.48	0.08	-0.04	-2.08
	1675.00	1.97	4.15	25	1674.28	30.80	30.80 N	22.09 W	37.91	324.35	0.39	0.00	-11.36
	1700.00	1.90	3.93	25	1699.26	31.65	31.65 N	22.03 W	38.56	325.15	0.28	-0.28	-0.88
	1725.00	1.87	4.00	25	1724.25	32.47	32.47 N	21.98 W	39.21	325.90	0.12	-0.12	0.28
	1750.00	1.78	1.79	25	1749.24	33.26	33.26 N	21.94 W	39.84	326.59	0.46	-0.36	-8.84
	1775.00	1.80	3.17	25	1774.23	34.04	34.04 N	21.90 W	40.48	327.24	0.19	0.08	5.52
	1800.00	1.68	3.48	25	1799.21	34.80	34.80 N	21.86 W	41.10	327.86	0.48	-0.48	1.24
	1825.00	1.78	358.33	25	1824.20	35.55	35.55 N	21.85 W	41.73	328.43	0.74	0.40	1419.40
	1850.00	1.74	355.13	25	1849.19	36.32	36.32 N	21.89 W	42.41	328.92	0.42	-0.16	-12.80
	1875.00	1.74	356.12	25	1874.18	37.08	37.08 N	21.95 W	43.09	329.37	0.12	0.00	3.96
	1900.00	1.88	358.88	25	1899.17	37.86	37.86 N	21.98 W	43.78	329.86	0.66	0.56	11.04
	1925.00	1.71	356.59	25	1924.15	38.65	38.65 N	22.01 W	44.48	330.33	0.74	-0.68	-9.16
	1950.00	1.69	356.99	25	1949.14	39.39	39.39 N	22.06 W	45.14	330.75	0.09	-0.08	1.60
	1975.00	1.53	357.77	25	1974.13	40.09	40.09 N	22.09 W	45.77	331.15	0.65	-0.64	3.12
	2000.00	1.25	9.84	25	1999.13	40.69	40.69 N	22.05 W	46.28	331.54	1.61	-1.12	-1391.72
	2025.00	0.97	17.75	25	2024.12	41.16	41.16 N	21.94 W	46.65	331.94	1.27	-1.12	31.64
	2050.00	0.84	51.02	25	2049.12	41.48	41.48 N	21.74 W	46.83	332.34	2.13	-0.52	133.08
	2075.00	0.75	64.91	25	2074.12	41.66	41.66 N	21.45 W	46.86	332.76	0.85	-0.36	55.56
	2100.00	0.76	70.37	25	2099.11	41.79	41.79 N	21.14 W	46.83	333.16	0.29	0.04	21.84
	2125.00	0.87	79.00	25	2124.11	41.88	41.88 N	20.80 W	46.76	333.59	0.66	0.44	34.52
	2150.00	1.00	82.40	25	2149.11	41.95	41.95 N	20.40 W	46.64	334.07	0.57	0.52	13.60
	2175.00	1.21	86.18	25	2174.10	41.99	41.99 N	19.92 W	46.48	334.63	0.89	0.84	15.12
	2200.00	1.28	84.42	25	2199.10	42.04	42.04 N	19.38 W	46.29	335.25	0.32	0.28	-7.04
	2225.00	1.34	86.14	25	2224.09	42.08	42.08 N	18.81 W	46.09	335.92	0.29	0.24	6.88
	2250.00	1.30	90.76	25	2249.08	42.10	42.10 N	18.23 W	45.88	336.59	0.45	-0.16	18.48



PHOENIX

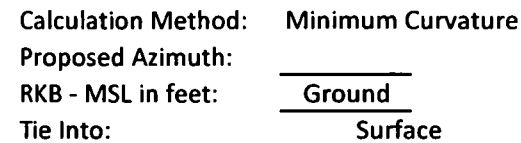
TECHNOLOGY SERVICES

Company: Devon
 Well: Harroun Trust Fed Com 31 No. 1
 Location: Eddy Co., New Mexico
 Rig: Renegade Mast

Job Number: 62914
 Grid Corr.: -0.16
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Calculation Method: Minimum Curvature
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Survey Tool Type	Survey Depth (ft)	Inclina- tion (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	2275.00	1.36	97.45	25	2274.08	42.06	42.06 N	17.65 W	45.61	337.23	0.67	0.24	26.76
	2300.00	1.32	97.91	25	2299.07	41.98	41.98 N	17.07 W	45.32	337.87	0.17	-0.16	1.84
	2325.00	1.44	96.35	25	2324.06	41.90	41.90 N	16.48 W	45.03	338.54	0.50	0.48	-6.24
	2350.00	1.50	103.82	25	2349.06	41.79	41.79 N	15.85 W	44.69	339.24	0.80	0.24	29.88
	2375.00	1.64	114.16	25	2374.05	41.57	41.57 N	15.20 W	44.26	339.91	1.26	0.56	41.36
	2400.00	1.81	122.86	25	2399.04	41.21	41.21 N	14.54 W	43.70	340.56	1.25	0.68	34.80
	2425.00	2.07	129.81	25	2424.02	40.70	40.70 N	13.87 W	43.00	341.19	1.40	1.04	27.80
	2450.00	2.17	127.67	25	2449.00	40.12	40.12 N	13.14 W	42.22	341.86	0.51	0.40	-8.56
	2475.00	2.22	129.35	25	2473.99	39.53	39.53 N	12.39 W	41.43	342.59	0.33	0.20	6.72
	2500.00	2.08	124.89	25	2498.97	38.96	38.96 N	11.65 W	40.67	343.36	0.87	-0.56	-17.84
	2525.00	2.05	126.84	25	2523.95	38.43	38.43 N	10.92 W	39.96	344.14	0.31	-0.12	7.80
	2550.00	1.84	129.88	25	2548.94	37.91	37.91 N	10.25 W	39.27	344.87	0.94	-0.84	12.16
	2575.00	1.70	135.13	25	2573.93	37.39	37.39 N	9.68 W	38.62	345.48	0.86	-0.56	21.00
	2600.00	1.64	142.24	25	2598.91	36.84	36.84 N	9.20 W	37.97	345.98	0.86	-0.24	28.44
	2625.00	1.66	143.10	25	2623.90	36.27	36.27 N	8.77 W	37.31	346.41	0.13	0.08	3.44
	2650.00	1.71	144.23	25	2648.89	35.68	35.68 N	8.33 W	36.64	346.86	0.24	0.20	4.52
	2675.00	1.81	141.34	25	2673.88	35.07	35.07 N	7.87 W	35.94	347.36	0.53	0.40	-11.56
	2700.00	1.45	138.48	25	2698.87	34.52	34.52 N	7.41 W	35.31	347.89	1.48	-1.44	-11.44
	2725.00	1.30	135.69	25	2723.86	34.08	34.08 N	7.00 W	34.79	348.39	0.66	-0.60	-11.16
	2750.00	1.04	131.38	25	2748.86	33.73	33.73 N	6.63 W	34.38	348.88	1.10	-1.04	-17.24
	2775.00	0.94	138.26	25	2773.86	33.43	33.43 N	6.33 W	34.02	349.28	0.62	-0.40	27.52
	2800.00	0.94	147.46	25	2798.85	33.10	33.10 N	6.08 W	33.65	349.59	0.60	0.00	36.80
	2825.00	1.14	150.78	25	2823.85	32.71	32.71 N	5.85 W	33.23	349.86	0.84	0.80	13.28
	2850.00	1.22	150.10	25	2848.84	32.26	32.26 N	5.59 W	32.74	350.16	0.32	0.32	-2.72
	2875.00	1.27	150.51	25	2873.84	31.79	31.79 N	5.32 W	32.23	350.49	0.20	0.20	1.64
	2900.00	1.31	145.69	25	2898.83	31.31	31.31 N	5.03 W	31.72	350.88	0.46	0.16	-19.28
	2925.00	1.35	137.75	25	2923.82	30.86	30.86 N	4.67 W	31.21	351.40	0.75	0.16	-31.76
	2950.00	1.21	136.56	25	2948.82	30.45	30.45 N	4.29 W	30.75	351.98	0.57	-0.56	-4.76
	2975.00	1.05	131.40	25	2973.81	30.11	30.11 N	3.93 W	30.36	352.55	0.76	-0.64	-20.64
	3000.00	0.96	142.56	25	2998.81	29.79	29.79 N	3.64 W	30.01	353.04	0.86	-0.36	44.64



Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	3025.00	0.89	151.74	25	3023.81	29.45	29.45 N	3.42 W	29.65	353.38	0.65	-0.28	36.72
	3050.00	0.88	157.95	25	3048.80	29.10	29.10 N	3.25 W	29.28	353.62	0.39	-0.04	24.84
	3075.00	1.04	156.23	25	3073.80	28.72	28.72 N	3.09 W	28.88	353.86	0.65	0.64	-6.88
	3100.00	1.14	154.15	25	3098.79	28.29	28.29 N	2.89 W	28.43	354.17	0.43	0.40	-8.32
	3125.00	1.20	149.09	25	3123.79	27.84	27.84 N	2.65 W	27.96	354.57	0.48	0.24	-20.24
	3150.00	1.23	148.73	25	3148.78	27.38	27.38 N	2.37 W	27.49	355.05	0.12	0.12	-1.44
	3175.00	1.16	140.72	25	3173.78	26.96	26.96 N	2.07 W	27.04	355.60	0.72	-0.28	-32.04
	3200.00	1.05	136.32	25	3198.77	26.60	26.60 N	1.75 W	26.66	356.23	0.56	-0.44	-17.60
	3225.00	0.92	133.90	25	3223.77	26.29	26.29 N	1.45 W	26.33	356.84	0.55	-0.52	-9.68
	3250.00	0.89	134.85	25	3248.77	26.02	26.02 N	1.17 W	26.04	357.43	0.13	-0.12	3.80
	3275.00	0.82	142.56	25	3273.76	25.74	25.74 N	0.92 W	25.75	357.95	0.54	-0.28	30.84
	3300.00	0.78	148.15	25	3298.76	25.45	25.45 N	0.72 W	25.46	358.37	0.35	-0.16	22.36
	3325.00	0.88	150.17	25	3323.76	25.14	25.14 N	0.54 W	25.15	358.77	0.42	0.40	8.08
	3350.00	0.89	148.93	25	3348.76	24.81	24.81 N	0.34 W	24.81	359.21	0.09	0.04	-4.96
	3375.00	0.91	150.85	25	3373.75	24.47	24.47 N	0.15 W	24.47	359.66	0.14	0.08	7.68
	3400.00	0.90	155.88	25	3398.75	24.11	24.11 N	0.03 E	24.11	0.07	0.32	-0.04	20.12
	3425.00	1.01	158.64	25	3423.75	23.73	23.73 N	0.19 E	23.73	0.46	0.48	0.44	11.04
	3450.00	1.10	159.96	25	3448.74	23.30	23.30 N	0.35 E	23.30	0.87	0.37	0.36	5.28
	3475.00	1.06	158.63	25	3473.74	22.86	22.86 N	0.52 E	22.86	1.30	0.19	-0.16	-5.32
	3500.00	1.24	158.41	25	3498.73	22.39	22.39 N	0.70 E	22.40	1.80	0.72	0.72	-0.88
	3525.00	1.17	162.24	25	3523.73	21.90	21.90 N	0.88 E	21.91	2.30	0.43	-0.28	15.32
	3550.00	1.13	158.74	25	3548.72	21.42	21.42 N	1.05 E	21.45	2.80	0.32	-0.16	-14.00
	3575.00	1.03	156.57	25	3573.72	20.99	20.99 N	1.23 E	21.02	3.35	0.43	-0.40	-8.68
	3600.00	1.05	162.32	25	3598.71	20.56	20.56 N	1.39 E	20.61	3.86	0.42	0.08	23.00
	3625.00	1.08	157.26	25	3623.71	20.13	20.13 N	1.55 E	20.19	4.39	0.39	0.12	-20.24
	3650.00	1.12	157.34	25	3648.70	19.69	19.69 N	1.73 E	19.76	5.03	0.16	0.16	0.32
	3675.00	0.83	152.96	25	3673.70	19.30	19.30 N	1.91 E	19.39	5.65	1.20	-1.16	-17.52
	3700.00	0.97	163.04	25	3698.70	18.94	18.94 N	2.05 E	19.05	6.19	0.84	0.56	40.32
	3725.00	0.99	159.24	25	3723.69	18.53	18.53 N	2.19 E	18.66	6.74	0.27	0.08	-15.20
	3750.00	0.86	150.90	25	3748.69	18.17	18.17 N	2.36 E	18.32	7.40	0.75	-0.52	-33.36



Company: Devon
 Well: Harroun Trust Fed Com 31 No. 1
 Location: Eddy Co., New Mexico
 Rig: Renegade Mast

Job Number: 62914
 Grid Corr.: -0.16
 Lat: 32.26
 Long: -104.03

Calculation Method: Minimum Curvature
 Proposed Azimuth:
 RKB - MSL in feet: Ground
 Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	3775.00	0.80	162.41	25	3773.69	17.83	17.83 N	2.50 E	18.01	7.99	0.71	-0.24	46.04
	3800.00	0.81	170.34	25	3798.69	17.49	17.49 N	2.58 E	17.68	8.40	0.45	0.04	31.72
	3825.00	0.72	168.38	25	3823.68	17.17	17.17 N	2.65 E	17.37	8.76	0.37	-0.36	-7.84
	3850.00	0.68	174.80	25	3848.68	16.86	16.86 N	2.69 E	17.08	9.07	0.35	-0.16	25.68
	3875.00	0.62	178.63	25	3873.68	16.58	16.58 N	2.71 E	16.80	9.27	0.30	-0.24	15.32
	3900.00	0.67	179.15	25	3898.68	16.30	16.30 N	2.71 E	16.52	9.45	0.20	0.20	2.08
	3925.00	0.58	198.17	25	3923.68	16.03	16.03 N	2.68 E	16.26	9.47	0.90	-0.36	76.08
	3950.00	0.56	196.31	25	3948.68	15.80	15.80 N	2.60 E	16.01	9.35	0.11	-0.08	-7.44
	3975.00	0.58	201.10	25	3973.67	15.56	15.56 N	2.52 E	15.76	9.21	0.21	0.08	19.16
	4000.00	0.58	186.12	25	3998.67	15.32	15.32 N	2.46 E	15.51	9.14	0.60	0.00	-59.92
	4025.00	0.50	186.21	25	4023.67	15.08	15.08 N	2.44 E	15.28	9.18	0.32	-0.32	0.36
	4050.00	0.49	157.70	25	4048.67	14.88	14.88 N	2.47 E	15.08	9.41	0.98	-0.04	-114.04
	4075.00	0.38	189.72	25	4073.67	14.70	14.70 N	2.49 E	14.91	9.63	1.05	-0.44	128.08
	4100.00	0.37	207.98	25	4098.67	14.54	14.54 N	2.44 E	14.75	9.53	0.48	-0.04	73.04
	4125.00	0.25	195.65	25	4123.67	14.42	14.42 N	2.39 E	14.61	9.41	0.55	-0.48	-49.32
	4150.00	0.33	192.37	25	4148.67	14.30	14.30 N	2.36 E	14.49	9.37	0.33	0.32	-13.12
	4175.00	0.21	220.61	25	4173.67	14.19	14.19 N	2.31 E	14.38	9.26	0.70	-0.48	112.96
	4200.00	0.23	254.67	25	4198.67	14.14	14.14 N	2.24 E	14.32	8.98	0.52	0.08	136.24
	4225.00	0.30	234.18	25	4223.67	14.09	14.09 N	2.13 E	14.25	8.61	0.47	0.28	-81.96
	4250.00	0.14	296.70	25	4248.67	14.07	14.07 N	2.05 E	14.22	8.30	1.06	-0.64	250.08
	4275.00	0.14	254.81	25	4273.67	14.07	14.07 N	2.00 E	14.21	8.08	0.40	0.00	-167.56
	4300.00	0.07	264.56	25	4298.67	14.06	14.06 N	1.95 E	14.20	7.90	0.29	-0.28	39.00
	4325.00	0.13	40.90	25	4323.67	14.08	14.08 N	1.96 E	14.22	7.90	0.75	0.24	-894.64
	4350.00	0.09	124.60	25	4348.67	14.09	14.09 N	1.99 E	14.23	8.04	0.60	-0.16	334.80
	4375.00	0.16	109.38	25	4373.67	14.07	14.07 N	2.04 E	14.22	8.25	0.31	0.28	-60.88
	4400.00	0.15	48.18	25	4398.67	14.08	14.08 N	2.10 E	14.24	8.47	0.63	-0.04	-244.80
	4425.00	0.18	4.42	25	4423.67	14.14	14.14 N	2.12 E	14.30	8.54	0.50	0.12	-175.04
	4450.00	0.19	9.50	25	4448.67	14.22	14.22 N	2.13 E	14.38	8.53	0.08	0.04	20.32
	4475.00	0.13	280.10	25	4473.67	14.27	14.27 N	2.11 E	14.42	8.42	0.92	-0.24	1082.40
	4500.00	0.18	79.11	25	4498.67	14.28	14.28 N	2.12 E	14.44	8.46	1.22	0.20	-803.96



Company: Devon
Well: Harroun Trust Fed Com 31 No. 1
Location: Eddy Co., New Mexico
Rig: Renegade Mast

Job Number: 62914
Grid Corr.: -0.16
Lat: 32.26
Long: -104.03

Calculation Method: Minimum Curvature
Proposed Azimuth:
RKB - MSL in feet: Ground
Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	4525.00	0.28	16.00	25	4523.67	14.35	14.35 N	2.18 E	14.51	8.64	1.02	0.40	-252.44
	4550.00	0.27	343.44	25	4548.67	14.46	14.46 N	2.18 E	14.62	8.57	0.62	-0.04	1309.76
	4575.00	0.25	245.38	25	4573.67	14.49	14.49 N	2.11 E	14.65	8.29	1.57	-0.08	-392.24
	4600.00	0.21	59.07	25	4598.67	14.50	14.50 N	2.10 E	14.65	8.25	1.84	-0.16	-745.24
	4625.00	0.17	91.27	25	4623.67	14.52	14.52 N	2.18 E	14.68	8.53	0.45	-0.16	128.80
	4650.00	0.28	0.28	25	4648.67	14.58	14.58 N	2.22 E	14.75	8.64	1.32	0.44	-363.96
	4675.00	0.30	41.57	25	4673.67	14.69	14.69 N	2.26 E	14.86	8.75	0.82	0.08	165.16
	4700.00	0.37	347.47	25	4698.67	14.82	14.82 N	2.29 E	14.99	8.77	1.24	0.28	1223.60
	4725.00	0.33	289.29	25	4723.66	14.92	14.92 N	2.20 E	15.08	8.39	1.37	-0.16	-232.72
	4750.00	0.35	16.42	25	4748.66	15.02	15.02 N	2.15 E	15.17	8.16	1.88	0.08	-1091.48
	4775.00	0.34	5.70	25	4773.66	15.16	15.16 N	2.18 E	15.32	8.19	0.26	-0.04	-42.88
	4800.00	0.37	345.16	25	4798.66	15.31	15.31 N	2.17 E	15.47	8.06	0.52	0.12	1357.84
	4825.00	0.56	335.85	25	4823.66	15.50	15.50 N	2.10 E	15.65	7.71	0.82	0.76	-37.24
	4850.00	0.53	328.68	25	4848.66	15.71	15.71 N	1.99 E	15.84	7.21	0.30	-0.12	-28.68
	4875.00	0.67	324.44	25	4873.66	15.93	15.93 N	1.84 E	16.04	6.60	0.59	0.56	-16.96
	4900.00	0.65	324.94	25	4898.66	16.17	16.17 N	1.68 E	16.25	5.92	0.08	-0.08	2.00
	4925.00	0.61	317.09	25	4923.66	16.38	16.38 N	1.50 E	16.45	5.25	0.38	-0.16	-31.40
	4950.00	0.72	316.63	25	4948.66	16.59	16.59 N	1.31 E	16.64	4.50	0.44	0.44	-1.84
	4975.00	0.75	319.62	25	4973.65	16.83	16.83 N	1.09 E	16.87	3.71	0.19	0.12	11.96
	5000.00	0.77	315.38	25	4998.65	17.08	17.08 N	0.87 E	17.10	2.91	0.24	0.08	-16.96
	5025.00	0.81	305.93	25	5023.65	17.30	17.30 N	0.61 E	17.31	2.01	0.54	0.16	-37.80
	5050.00	0.88	308.91	25	5048.65	17.52	17.52 N	0.31 E	17.53	1.03	0.33	0.28	11.92
	5075.00	0.81	313.66	25	5073.64	17.77	17.77 N	0.04 E	17.77	0.12	0.40	-0.28	19.00
	5100.00	0.84	308.47	25	5098.64	18.00	18.00 N	0.23 W	18.00	359.26	0.32	0.12	-20.76
	5125.00	0.87	312.96	25	5123.64	18.24	18.24 N	0.52 W	18.25	358.38	0.29	0.12	17.96
	5150.00	0.79	320.78	25	5148.64	18.51	18.51 N	0.76 W	18.52	357.64	0.55	-0.32	31.28
	5175.00	0.83	315.78	25	5173.63	18.77	18.77 N	1.00 W	18.80	356.95	0.32	0.16	-20.00
	5200.00	0.86	315.46	25	5198.63	19.03	19.03 N	1.26 W	19.08	356.22	0.12	0.12	-1.28
	5225.00	0.76	312.24	25	5223.63	19.28	19.28 N	1.51 W	19.34	355.52	0.44	-0.40	-12.88
	5250.00	0.74	320.63	25	5248.63	19.52	19.52 N	1.74 W	19.59	354.92	0.45	-0.08	33.56



Calculation Method:	Minimum Curvature
Proposed Azimuth:	
RKB - MSL in feet:	<u>Ground</u>
Tie Into:	<u>Surface</u>

Survey Tool Type	Survey Depth (ft)	Inclina- tion (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	5275.00	0.80	317.04	25	5273.62	19.77	19.77 N	1.96 W	19.87	354.34	0.31	0.24	-14.36
	5300.00	0.84	311.21	25	5298.62	20.02	20.02 N	2.21 W	20.14	353.69	0.37	0.16	-23.32
	5325.00	0.86	306.61	25	5323.62	20.25	20.25 N	2.50 W	20.40	352.95	0.28	0.08	-18.40
	5350.00	0.79	313.22	25	5348.62	20.48	20.48 N	2.78 W	20.67	352.27	0.47	-0.28	26.44
	5375.00	0.78	311.87	25	5373.61	20.71	20.71 N	3.03 W	20.93	351.67	0.08	-0.04	-5.40
	5400.00	0.82	303.02	25	5398.61	20.92	20.92 N	3.31 W	21.18	351.01	0.52	0.16	-35.40
	5425.00	0.88	301.96	25	5423.61	21.12	21.12 N	3.62 W	21.43	350.27	0.25	0.24	-4.24
	5450.00	0.84	307.95	25	5448.60	21.34	21.34 N	3.93 W	21.69	349.57	0.39	-0.16	23.96
	5475.00	0.73	311.83	25	5473.60	21.55	21.55 N	4.19 W	21.96	348.99	0.49	-0.44	15.52
	5500.00	0.79	315.83	25	5498.60	21.78	21.78 N	4.43 W	22.23	348.50	0.32	0.24	16.00
	5525.00	0.62	312.43	25	5523.60	22.00	22.00 N	4.65 W	22.49	348.06	0.70	-0.68	-13.60
	5550.00	0.63	314.82	25	5548.60	22.19	22.19 N	4.85 W	22.71	347.67	0.11	0.04	9.56
	5575.00	0.69	316.25	25	5573.60	22.39	22.39 N	5.05 W	22.96	347.29	0.25	0.24	5.72
	5600.00	0.68	207.57	25	5598.59	22.37	22.37 N	5.22 W	22.97	346.86	4.45	-0.04	-434.72
	5625.00	0.68	301.70	25	5623.59	22.32	22.32 N	5.42 W	22.96	346.36	3.98	0.00	376.52
	5650.00	0.71	300.38	25	5648.59	22.47	22.47 N	5.68 W	23.18	345.82	0.14	0.12	-5.28
	5675.00	0.53	301.56	25	5673.59	22.61	22.61 N	5.91 W	23.37	345.35	0.72	-0.72	4.72
	5700.00	0.53	277.78	25	5698.59	22.69	22.69 N	6.12 W	23.50	344.90	0.87	0.00	-95.12
	5725.00	0.52	276.62	25	5723.59	22.72	22.72 N	6.35 W	23.59	344.38	0.06	-0.04	-4.64
	5750.00	0.34	250.99	25	5748.59	22.71	22.71 N	6.53 W	23.63	343.95	1.04	-0.72	-102.52
	5775.00	0.37	288.52	25	5773.59	22.71	22.71 N	6.68 W	23.67	343.61	0.92	0.12	150.12
	5800.00	0.35	262.69	25	5798.59	22.72	22.72 N	6.83 W	23.73	343.27	0.65	-0.08	-103.32
	5825.00	0.37	79.96	25	5823.59	22.73	22.73 N	6.83 W	23.73	343.28	2.88	0.08	-730.92
	5850.00	0.30	317.18	25	5848.59	22.79	22.79 N	6.79 W	23.78	343.40	2.36	-0.28	948.88
	5875.00	0.17	8.59	25	5873.59	22.87	22.87 N	6.83 W	23.87	343.37	0.94	-0.52	-1234.36
	5900.00	0.18	274.28	25	5898.59	22.91	22.91 N	6.86 W	23.92	343.32	1.03	0.04	1062.76
	5925.00	0.19	165.76	25	5923.59	22.88	22.88 N	6.89 W	23.89	343.23	1.20	0.04	-434.08
	5950.00	0.29	265.73	25	5948.59	22.83	22.83 N	6.95 W	23.86	343.08	1.49	0.40	399.88
	5975.00	0.08	215.09	25	5973.58	22.81	22.81 N	7.02 W	23.87	342.90	0.99	-0.84	-202.56
	6000.00	0.12	329.89	25	5998.58	22.82	22.82 N	7.04 W	23.88	342.85	0.68	0.16	459.20

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	6025.00	0.14	174.99	25	6023.58	22.81	22.81 N	7.05 W	23.88	342.82	1.02	0.08	-619.60
	6050.00	0.04	96.57	25	6048.58	22.78	22.78 N	7.04 W	23.85	342.82	0.55	-0.40	-313.68
	6075.00	0.16	348.05	25	6073.58	22.81	22.81 N	7.04 W	23.88	342.85	0.71	0.48	1005.92
	6100.00	0.13	91.42	25	6098.58	22.85	22.85 N	7.02 W	23.90	342.92	0.91	-0.12	-1026.52
	6125.00	0.12	64.74	25	6123.58	22.86	22.86 N	6.97 W	23.90	343.05	0.23	-0.04	-106.72
	6150.00	0.18	224.46	25	6148.58	22.84	22.84 N	6.97 W	23.88	343.03	1.18	0.24	638.88
	6175.00	0.13	286.79	25	6173.58	22.82	22.82 N	7.03 W	23.88	342.89	0.66	-0.20	249.32
	6200.00	0.12	298.46	25	6198.58	22.84	22.84 N	7.08 W	23.91	342.79	0.11	-0.04	46.68
	6225.00	0.10	92.72	25	6223.58	22.85	22.85 N	7.08 W	23.92	342.79	0.86	-0.08	-822.96
	6250.00	0.11	155.58	25	6248.58	22.83	22.83 N	7.05 W	23.89	342.85	0.44	0.04	251.44
	6275.00	0.19	339.27	25	6273.58	22.85	22.85 N	7.05 W	23.91	342.85	1.20	0.32	734.76
	6300.00	0.08	226.98	25	6298.58	22.87	22.87 N	7.08 W	23.94	342.81	0.93	-0.44	-449.16
	6325.00	0.16	110.42	25	6323.58	22.85	22.85 N	7.06 W	23.92	342.84	0.83	0.32	-466.24
	6350.00	0.14	164.79	25	6348.58	22.81	22.81 N	7.02 W	23.86	342.90	0.55	-0.08	217.48
	6375.00	0.12	114.15	25	6373.58	22.77	22.77 N	6.99 W	23.82	342.94	0.45	-0.08	-202.56
	6400.00	0.10	98.16	25	6398.58	22.76	22.76 N	6.94 W	23.79	343.04	0.15	-0.08	-63.96
	6425.00	0.19	7.98	25	6423.58	22.79	22.79 N	6.91 W	23.82	343.13	0.86	0.36	-360.72
	6450.00	0.39	221.15	25	6448.58	22.77	22.77 N	6.96 W	23.81	343.00	2.24	0.80	852.68
	6475.00	0.41	262.45	25	6473.58	22.69	22.69 N	7.11 W	23.78	342.61	1.13	0.08	165.20
	6500.00	0.46	262.61	25	6498.58	22.67	22.67 N	7.30 W	23.81	342.16	0.20	0.20	0.64
	6525.00	0.49	254.07	25	6523.58	22.63	22.63 N	7.50 W	23.84	341.67	0.31	0.12	-34.16
	6550.00	0.46	265.37	25	6548.58	22.59	22.59 N	7.70 W	23.87	341.18	0.39	-0.12	45.20
	6575.00	0.47	257.93	25	6573.58	22.56	22.56 N	7.90 W	23.90	340.70	0.24	0.04	-29.76
	6600.00	0.40	268.73	25	6598.58	22.54	22.54 N	8.09 W	23.94	340.26	0.43	-0.28	43.20
	6625.00	0.37	270.26	25	6623.58	22.54	22.54 N	8.26 W	24.00	339.88	0.13	-0.12	6.12
	6650.00	0.34	254.71	25	6648.58	22.52	22.52 N	8.41 W	24.04	339.52	0.40	-0.12	-62.20
	6675.00	0.48	289.00	25	6673.58	22.53	22.53 N	8.58 W	24.11	339.15	1.11	0.56	137.16
	6700.00	0.44	190.47	25	6698.58	22.47	22.47 N	8.70 W	24.09	338.84	2.79	-0.16	-394.12



Calculation Method:	Minimum Curvature
Proposed Azimuth:	
RKB - MSL in feet:	<u>Ground</u>
Tie Into:	<u>Surface</u>

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	6775.00	0.74	308.28	25	6773.57	22.81	22.81 N	9.04 W	24.54	338.38	0.57	0.24	42.00
	6800.00	0.81	314.38	25	6798.57	23.04	23.04 N	9.30 W	24.84	338.03	0.43	0.28	24.40
	6825.00	0.90	313.58	25	6823.57	23.30	23.30 N	9.56 W	25.18	337.68	0.36	0.36	-3.20
	6850.00	0.94	313.78	25	6848.57	23.57	23.57 N	9.85 W	25.55	337.32	0.16	0.16	0.80
	6875.00	1.09	290.67	25	6873.56	23.80	23.80 N	10.22 W	25.90	336.75	1.73	0.60	-92.44
	6900.00	1.19	294.32	25	6898.56	23.99	23.99 N	10.68 W	26.26	336.00	0.49	0.40	14.60
	6925.00	1.22	289.99	25	6923.55	24.19	24.19 N	11.17 W	26.64	335.21	0.38	0.12	-17.32
	6950.00	1.29	284.27	25	6948.55	24.35	24.35 N	11.69 W	27.01	334.35	0.57	0.28	-22.88
	6975.00	1.36	289.44	25	6973.54	24.52	24.52 N	12.25 W	27.41	333.46	0.55	0.28	20.68
	7000.00	1.40	290.59	25	6998.53	24.72	24.72 N	12.81 W	27.85	332.61	0.19	0.16	4.60
	7025.00	1.65	289.72	25	7023.52	24.95	24.95 N	13.44 W	28.34	331.70	1.00	1.00	-3.48
	7050.00	1.66	293.55	25	7048.51	25.22	25.22 N	14.11 W	28.90	330.78	0.44	0.04	15.32
	7075.00	1.74	294.59	25	7073.50	25.52	25.52 N	14.78 W	29.49	329.92	0.34	0.32	4.16
	7100.00	1.70	298.84	25	7098.49	25.86	25.86 N	15.45 W	30.12	329.14	0.53	-0.16	17.00
	7125.00	1.77	298.90	25	7123.48	26.22	26.22 N	16.12 W	30.78	328.43	0.28	0.28	0.24
	7150.00	1.94	299.81	25	7148.47	26.62	26.62 N	16.82 W	31.49	327.71	0.69	0.68	3.64
	7175.00	1.84	297.73	25	7173.45	27.02	27.02 N	17.54 W	32.21	327.00	0.49	-0.40	-8.32
	7200.00	1.82	294.34	25	7198.44	27.37	27.37 N	18.26 W	32.90	326.29	0.44	-0.08	-13.56
	7225.00	1.55	285.69	25	7223.43	27.62	27.62 N	18.95 W	33.50	325.55	1.48	-1.08	-34.60
	7250.00	1.31	273.53	25	7248.42	27.73	27.73 N	19.56 W	33.94	324.81	1.54	-0.96	-48.64
	7275.00	1.31	262.04	25	7273.41	27.71	27.71 N	20.13 W	34.25	324.01	1.05	0.00	-45.96
	7300.00	1.24	255.09	25	7298.41	27.60	27.60 N	20.67 W	34.48	323.17	0.68	-0.28	-27.80
	7325.00	1.21	247.73	25	7323.40	27.43	27.43 N	21.18 W	34.66	322.33	0.64	-0.12	-29.44
	7350.00	1.11	227.57	25	7348.40	27.17	27.17 N	21.60 W	34.71	321.51	1.67	-0.40	-80.64
	7375.00	1.05	213.47	25	7373.39	26.81	26.81 N	21.91 W	34.62	320.75	1.09	-0.24	-56.40
	7400.00	1.24	197.45	25	7398.39	26.36	26.36 N	22.11 W	34.41	320.01	1.48	0.76	-64.08
	7425.00	1.17	195.60	25	7423.38	25.86	25.86 N	22.26 W	34.12	319.28	0.32	-0.28	-7.40
	7450.00	1.31	181.37	25	7448.38	25.33	25.33 N	22.34 W	33.77	318.59	1.35	0.56	-56.92



Company: Devon
 Well: Harroun Trust Fed Com 31 No. 1
 Location: Eddy Co., New Mexico
 Rig: Renegade Mast

Job Number: 62914
 Grid Corr.: -0.16
 Lat: 32.26
 Long: -104.03

Calculation Method: Minimum Curvature
 Proposed Azimuth:
 RKB - MSL in feet: Ground
 Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	7525.00	1.10	191.15	25	7523.36	23.85	23.85 N	22.50 W	32.79	316.67	0.69	-0.52	-22.44
	7550.00	1.06	196.50	25	7548.36	23.39	23.39 N	22.61 W	32.53	315.98	0.43	-0.16	21.40
	7575.00	1.16	188.95	25	7573.35	22.92	22.92 N	22.72 W	32.27	315.26	0.71	0.40	-30.20
	7600.00	1.08	176.50	25	7598.35	22.44	22.44 N	22.74 W	31.95	314.62	1.02	-0.32	-49.80
	7625.00	1.04	177.88	25	7623.34	21.98	21.98 N	22.72 W	31.61	314.05	0.19	-0.16	5.52
	7650.00	0.86	174.02	25	7648.34	21.56	21.56 N	22.69 W	31.30	313.54	0.76	-0.72	-15.44
	7675.00	1.13	188.33	25	7673.34	21.13	21.13 N	22.71 W	31.02	312.94	1.46	1.08	57.24
	7700.00	1.03	171.47	25	7698.33	20.67	20.67 N	22.71 W	30.70	312.30	1.33	-0.40	-67.44
	7725.00	0.79	157.75	25	7723.33	20.28	20.28 N	22.61 W	30.37	311.90	1.29	-0.96	-54.88
	7750.00	0.76	184.47	25	7748.33	19.96	19.96 N	22.56 W	30.12	311.50	1.44	-0.12	106.88
	7775.00	0.69	173.08	25	7773.32	19.64	19.64 N	22.55 W	29.91	311.06	0.64	-0.28	-45.56
	7800.00	0.59	168.09	25	7798.32	19.37	19.37 N	22.51 W	29.69	310.71	0.46	-0.40	-19.96
	7825.00	0.46	148.75	25	7823.32	19.16	19.16 N	22.43 W	29.50	310.50	0.87	-0.52	-77.36
	7850.00	0.55	59.31	25	7848.32	19.13	19.13 N	22.27 W	29.36	310.66	2.85	0.36	-357.76
	7875.00	1.25	37.18	25	7873.32	19.41	19.41 N	22.01 W	29.34	311.42	3.08	2.80	-88.52
	7900.00	1.58	39.43	25	7898.31	19.89	19.89 N	21.62 W	29.38	312.62	1.34	1.32	9.00
	7925.00	2.27	35.52	25	7923.30	20.56	20.56 N	21.11 W	29.47	314.24	2.81	2.76	-15.64
	7950.00	2.31	40.03	25	7948.28	21.35	21.35 N	20.50 W	29.60	316.16	0.74	0.16	18.04
	7975.00	2.38	41.54	25	7973.25	22.13	22.13 N	19.83 W	29.72	318.13	0.37	0.28	6.04
	8000.00	2.52	28.03	25	7998.23	23.00	23.00 N	19.23 W	29.98	320.10	2.37	0.56	-54.04
	8025.00	2.55	32.00	25	8023.21	23.96	23.96 N	18.68 W	30.38	322.06	0.71	0.12	15.88
	8050.00	1.93	32.73	25	8048.19	24.78	24.78 N	18.16 W	30.72	323.77	2.48	-2.48	2.92
	8075.00	1.78	14.09	25	8073.18	25.51	25.51 N	17.84 W	31.13	325.05	2.47	-0.60	-74.56
	8100.00	1.75	17.50	25	8098.16	26.25	26.25 N	17.63 W	31.62	326.13	0.44	-0.12	13.64
	8125.00	1.90	3.27	25	8123.15	27.03	27.03 N	17.49 W	32.20	327.10	1.90	0.60	-56.92
	8150.00	1.83	355.64	25	8148.14	27.84	27.84 N	17.49 W	32.88	327.86	1.03	-0.28	1409.48
	8175.00	1.87	3.93	25	8173.12	28.65	28.65 N	17.50 W	33.57	328.59	1.08	0.16	-1406.84
	8200.00	1.77	356.32	25	8198.11	29.44	29.44 N	17.49 W	34.25	329.28	1.05	-0.40	1409.56
	8225.00	2.00	358.94	25	8223.10	30.26	30.26 N	17.53 W	34.97	329.92	0.98	0.92	10.48
	8250.00	1.99	349.15	25	8248.08	31.13	31.13 N	17.62 W	35.76	330.49	1.36	-0.04	-39.16



Calculation Method:	Minimum Curvature
Proposed Azimuth:	
RKB - MSL in feet:	<u>Ground</u>
Tie Into:	<u>Surface</u>

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	8275.00	1.74	348.52	25	8273.07	31.92	31.92 N	17.77 W	36.54	330.89	1.00	-1.00	-2.52
	8300.00	1.80	342.88	25	8298.06	32.67	32.67 N	17.96 W	37.28	331.20	0.74	0.24	-22.56
	8325.00	1.52	336.46	25	8323.05	33.35	33.35 N	18.21 W	38.00	331.36	1.34	-1.12	-25.68
	8350.00	1.60	334.39	25	8348.04	33.97	33.97 N	18.50 W	38.68	331.43	0.39	0.32	-8.28
	8375.00	1.19	324.93	25	8373.03	34.50	34.50 N	18.80 W	39.28	331.42	1.88	-1.64	-37.84
	8400.00	1.41	333.84	25	8398.02	34.98	34.98 N	19.08 W	39.85	331.39	1.19	0.88	35.64
	8425.00	1.40	330.09	25	8423.02	35.53	35.53 N	19.37 W	40.46	331.40	0.37	-0.04	-15.00
	8450.00	1.31	332.90	25	8448.01	36.04	36.04 N	19.65 W	41.05	331.40	0.45	-0.36	11.24
	8475.00	1.29	332.66	25	8473.00	36.55	36.55 N	19.91 W	41.62	331.42	0.08	-0.08	-0.96
	8500.00	1.32	334.83	25	8498.00	37.06	37.06 N	20.16 W	42.19	331.45	0.23	0.12	8.68
	8525.00	1.31	332.71	25	8522.99	37.57	37.57 N	20.42 W	42.76	331.48	0.20	-0.04	-8.48
	8550.00	1.32	326.99	25	8547.98	38.07	38.07 N	20.70 W	43.33	331.46	0.53	0.04	-22.88
	8575.00	1.25	327.09	25	8572.98	38.54	38.54 N	21.01 W	43.89	331.41	0.28	-0.28	0.40
	8600.00	1.14	327.83	25	8597.97	38.98	38.98 N	21.29 W	44.41	331.36	0.44	-0.44	2.96
	8625.00	1.17	318.46	25	8622.97	39.38	39.38 N	21.59 W	44.91	331.27	0.76	0.12	-37.48
	8650.00	1.06	321.55	25	8647.96	39.75	39.75 N	21.90 W	45.39	331.15	0.50	-0.44	12.36
	8675.00	1.13	319.52	25	8672.96	40.12	40.12 N	22.21 W	45.86	331.04	0.32	0.28	-8.12
	8700.00	1.19	310.54	25	8697.95	40.48	40.48 N	22.56 W	46.34	330.86	0.76	0.24	-35.92
	8725.00	0.87	293.08	25	8722.95	40.72	40.72 N	22.94 W	46.74	330.61	1.78	-1.28	-69.84
	8750.00	0.59	290.01	25	8747.95	40.84	40.84 N	23.23 W	46.99	330.37	1.13	-1.12	-12.28
	8775.00	0.35	272.62	25	8772.95	40.89	40.89 N	23.43 W	47.12	330.19	1.11	-0.96	-69.56
	8800.00	0.27	230.52	25	8797.95	40.85	40.85 N	23.55 W	47.16	330.04	0.94	-0.32	-168.40
	8825.00	0.22	247.86	25	8822.95	40.80	40.80 N	23.64 W	47.15	329.91	0.36	-0.20	69.36
	8850.00	0.40	224.11	25	8847.95	40.72	40.72 N	23.75 W	47.14	329.75	0.87	0.72	-95.00
	8875.00	0.47	237.61	25	8872.94	40.60	40.60 N	23.89 W	47.11	329.52	0.49	0.28	54.00
	8900.00	0.57	231.97	25	8897.94	40.47	40.47 N	24.08 W	47.09	329.25	0.45	0.40	-22.56
	8925.00	0.67	211.99	25	8922.94	40.27	40.27 N	24.25 W	47.01	328.94	0.95	0.40	-79.92
	8950.00	0.85	216.58	25	8947.94	39.99	39.99 N	24.44 W	46.87	328.57	0.76	0.72	18.36
	8975.00	0.77	206.86	25	8972.94	39.70	39.70 N	24.63 W	46.71	328.18	0.63	-0.32	-38.88
	9000.00	0.84	204.87	25	8997.93	39.38	39.38 N	24.78 W	46.53	327.82	0.30	0.28	-7.96



Company: Devon
 Well: Harroun Trust Fed Com 31 No. 1
 Location: Eddy Co., New Mexico
 Rig: Renegade Mast

Job Number: 62914
 Grid Corr.: -0.16
 Lat: 32.26
 Long: -104.03

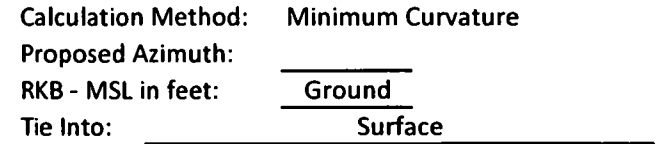
Calculation Method: Minimum Curvature
 Proposed Azimuth: Ground
 RKB - MSL in feet: Surface
 Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
	9025.00	0.85	204.15	25	9022.93	39.04	39.04 N	24.93 W	46.33	327.44	0.06	0.04	-2.88
	9050.00	0.81	207.81	25	9047.93	38.72	38.72 N	25.09 W	46.14	327.05	0.27	-0.16	14.64
	9075.00	0.71	202.61	25	9072.93	38.42	38.42 N	25.23 W	45.97	326.70	0.49	-0.40	-20.80
	9100.00	0.86	201.43	25	9097.92	38.10	38.10 N	25.36 W	45.77	326.35	0.60	0.60	-4.72
	9125.00	1.26	214.79	25	9122.92	37.70	37.70 N	25.59 W	45.56	325.84	1.87	1.60	53.44
	9150.00	1.33	217.11	25	9147.91	37.24	37.24 N	25.92 W	45.38	325.16	0.35	0.28	9.28
	9175.00	1.48	216.98	25	9172.91	36.75	36.75 N	26.29 W	45.19	324.43	0.60	0.60	-0.52
	9200.00	1.49	219.53	25	9197.90	36.25	36.25 N	26.69 W	45.01	323.63	0.27	0.04	10.20
	9225.00	1.62	214.42	25	9222.89	35.70	35.70 N	27.10 W	44.82	322.80	0.76	0.52	-20.44
	9250.00	1.55	213.70	25	9247.88	35.13	35.13 N	27.48 W	44.60	321.96	0.29	-0.28	-2.88
	9275.00	1.59	213.79	25	9272.87	34.56	34.56 N	27.86 W	44.39	321.12	0.16	0.16	0.36
	9300.00	1.61	212.09	25	9297.86	33.98	33.98 N	28.24 W	44.18	320.26	0.21	0.08	-6.80
	9325.00	1.61	214.48	25	9322.85	33.39	33.39 N	28.63 W	43.98	319.39	0.27	0.00	9.56
	9350.00	1.62	215.93	25	9347.84	32.81	32.81 N	29.04 W	43.81	318.50	0.17	0.04	5.80
	9375.00	1.59	216.36	25	9372.83	32.25	32.25 N	29.45 W	43.67	317.60	0.13	-0.12	1.72
	9400.00	1.61	197.82	25	9397.82	31.63	31.63 N	29.76 W	43.43	316.75	2.06	0.08	-74.16
	9425.00	1.54	206.85	25	9422.81	31.00	31.00 N	30.02 W	43.15	315.92	1.03	-0.28	36.12
	9450.00	1.56	208.87	25	9447.80	30.40	30.40 N	30.34 W	42.95	315.06	0.23	0.08	8.08
	9475.00	1.48	209.92	25	9472.79	29.82	29.82 N	30.66 W	42.77	314.21	0.34	-0.32	4.20
	9500.00	1.41	214.70	25	9497.79	29.29	29.29 N	31.00 W	42.65	313.38	0.56	-0.28	19.12
	9525.00	1.44	222.81	25	9522.78	28.81	28.81 N	31.39 W	42.60	312.55	0.81	0.12	32.44
	9550.00	1.47	223.65	25	9547.77	28.35	28.35 N	31.82 W	42.62	311.69	0.15	0.12	3.36
	9575.00	1.58	216.42	25	9572.76	27.84	27.84 N	32.25 W	42.60	310.80	0.89	0.44	-28.92
	9600.00	1.44	212.01	25	9597.75	27.29	27.29 N	32.62 W	42.53	309.92	0.73	-0.56	-17.64
	9625.00	1.38	219.31	25	9622.74	26.79	26.79 N	32.98 W	42.49	309.09	0.76	-0.24	29.20
	9650.00	1.42	216.12	25	9647.74	26.31	26.31 N	33.35 W	42.48	308.27	0.35	0.16	-12.76
	9675.00	1.38	217.85	25	9672.73	25.82	25.82 N	33.72 W	42.47	307.45	0.23	-0.16	6.92
	9700.00	1.28	218.49	25	9697.72	25.37	25.37 N	34.07 W	42.48	306.66	0.40	-0.40	2.56
	9725.00	1.28	216.10	25	9722.72	24.92	24.92 N	34.41 W	42.49	305.91	0.21	0.00	-9.56
	9750.00	1.38	215.43	25	9747.71	24.45	24.45 N	34.75 W	42.49	305.13	0.40	0.40	-2.68



Calculation Method:	Minimum Curvature
Proposed Azimuth:	
RKB - MSL in feet:	<u>Ground</u>
Tie Into:	Surface

Survey Tool Type	Survey Depth (ft)	Inclina- tion (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	9775.00	1.42	218.95	25	9772.70	23.96	23.96 N	35.12 W	42.52	304.31	0.38	0.16	14.08
	9800.00	1.45	222.40	25	9797.69	23.49	23.49 N	35.53 W	42.59	303.47	0.37	0.12	13.80
	9825.00	1.28	225.23	25	9822.69	23.06	23.06 N	35.94 W	42.70	302.68	0.73	-0.68	11.32
	9850.00	1.35	222.51	25	9847.68	22.65	22.65 N	36.34 W	42.82	301.93	0.38	0.28	-10.88
	9875.00	1.17	213.11	25	9872.68	22.22	22.22 N	36.68 W	42.88	301.20	1.09	-0.72	-37.60
	9900.00	1.20	210.56	25	9897.67	21.78	21.78 N	36.95 W	42.89	300.51	0.24	0.12	-10.20
	9925.00	1.28	207.17	25	9922.66	21.30	21.30 N	37.21 W	42.88	299.79	0.43	0.32	-13.56
	9950.00	1.26	208.86	25	9947.66	20.81	20.81 N	37.47 W	42.86	299.05	0.17	-0.08	6.76
	9975.00	1.26	212.23	25	9972.65	20.34	20.34 N	37.75 W	42.88	298.32	0.30	0.00	13.48
	10000.00	1.19	206.71	25	9997.65	19.88	19.88 N	38.01 W	42.90	297.60	0.55	-0.28	-22.08
	10025.00	1.30	213.17	25	10022.64	19.41	19.41 N	38.28 W	42.92	296.88	0.71	0.44	25.84
	10050.00	1.45	215.84	25	10047.63	18.91	18.91 N	38.62 W	43.01	296.09	0.65	0.60	10.68
	10075.00	1.51	206.94	25	10072.62	18.36	18.36 N	38.96 W	43.07	295.24	0.95	0.24	-35.60
	10100.00	1.62	201.36	25	10097.62	17.74	17.74 N	39.24 W	43.06	294.33	0.75	0.44	-22.32
	10125.00	1.38	219.07	25	10122.61	17.18	17.18 N	39.56 W	43.12	293.47	2.08	-0.96	70.84
	10150.00	1.13	211.69	25	10147.60	16.73	16.73 N	39.87 W	43.24	292.77	1.19	-1.00	-29.52
	10175.00	1.12	214.56	25	10172.60	16.32	16.32 N	40.14 W	43.33	292.13	0.23	-0.04	11.48
	10200.00	1.09	208.57	25	10197.59	15.91	15.91 N	40.40 W	43.42	291.50	0.48	-0.12	-23.96
	10225.00	1.07	213.21	25	10222.59	15.51	15.51 N	40.64 W	43.50	290.89	0.36	-0.08	18.56
	10250.00	1.10	215.28	25	10247.58	15.12	15.12 N	40.90 W	43.61	290.28	0.20	0.12	8.28
	10275.00	0.66	190.04	25	10272.58	14.78	14.78 N	41.07 W	43.65	289.79	2.31	-1.76	-100.96
	10300.00	0.74	183.10	25	10297.58	14.48	14.48 N	41.10 W	43.58	289.40	0.47	0.32	-27.76
	10325.00	0.83	168.71	25	10322.58	14.14	14.14 N	41.07 W	43.44	288.99	0.86	0.36	-57.56
	10350.00	0.65	160.34	25	10347.57	13.83	13.83 N	40.99 W	43.26	288.64	0.84	-0.72	-33.48
	10375.00	0.74	168.72	25	10372.57	13.53	13.53 N	40.91 W	43.09	288.31	0.54	0.36	33.52
	10400.00	0.69	155.27	25	10397.57	13.24	13.24 N	40.82 W	42.91	287.97	0.70	-0.20	-53.80
	10425.00	0.46	185.49	25	10422.57	13.00	13.00 N	40.76 W	42.79	287.69	1.49	-0.92	120.88
	10450.00	0.64	217.03	25	10447.57	12.79	12.79 N	40.86 W	42.81	287.38	1.38	0.72	126.16
	10475.00	0.29	149.50	25	10472.57	12.63	12.63 N	40.91 W	42.81	287.15	2.37	-1.40	-270.12
	10500.00	0.39	74.47	25	10497.57	12.59	12.59 N	40.80 W	42.69	287.16	1.69	0.40	-300.12



Survey Tool Type	Survey Depth (ft)	Inclina- tion (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	10525.00	0.38	46.47	25	10522.57	12.67	12.67 N	40.65 W	42.58	287.32	0.75	-0.04	-112.00
	10550.00	0.59	212.66	25	10547.56	12.62	12.62 N	40.66 W	42.58	287.25	3.85	0.84	664.76
	10575.00	0.82	3.20	25	10572.56	12.69	12.69 N	40.72 W	42.65	287.31	5.46	0.92	-837.84
	10600.00	0.85	5.32	25	10597.56	13.06	13.06 N	40.69 W	42.74	287.79	0.17	0.12	8.48
	10625.00	1.18	6.56	25	10622.56	13.50	13.50 N	40.65 W	42.83	288.37	1.32	1.32	4.96
	10650.00	0.94	358.03	25	10647.55	13.96	13.96 N	40.63 W	42.96	288.96	1.15	-0.96	1405.88
	10675.00	1.29	1.29	25	10672.55	14.44	14.44 N	40.63 W	43.12	289.57	1.42	1.40	-1426.96
	10700.00	1.02	8.71	25	10697.54	14.94	14.94 N	40.59 W	43.25	290.21	1.23	-1.08	29.68
	10725.00	0.98	359.32	25	10722.54	15.38	15.38 N	40.56 W	43.37	290.77	0.67	-0.16	1402.44
	10750.00	1.16	7.02	25	10747.54	15.84	15.84 N	40.53 W	43.51	291.35	0.92	0.72	-1409.20
	10775.00	0.94	5.26	25	10772.53	16.30	16.30 N	40.48 W	43.64	291.93	0.89	-0.88	-7.04
	10800.00	1.00	358.37	25	10797.53	16.72	16.72 N	40.46 W	43.78	292.45	0.52	0.24	1412.44
	10825.00	0.82	23.20	25	10822.52	17.10	17.10 N	40.40 W	43.87	292.95	1.72	-0.72	-1340.68
	10850.00	0.99	4.85	25	10847.52	17.48	17.48 N	40.31 W	43.94	293.45	1.34	0.68	-73.40
	10875.00	0.65	3.70	25	10872.52	17.84	17.84 N	40.28 W	44.06	293.89	1.36	-1.36	-4.60
	10900.00	0.82	355.91	25	10897.52	18.16	18.16 N	40.29 W	44.19	294.26	0.79	0.68	1408.84
	10925.00	0.67	350.92	25	10922.51	18.48	18.48 N	40.32 W	44.36	294.62	0.65	-0.60	-19.96
	10950.00	0.75	304.70	25	10947.51	18.72	18.72 N	40.48 W	44.60	294.82	2.25	0.32	-184.88
	10975.00	0.70	297.44	25	10972.51	18.88	18.88 N	40.75 W	44.91	294.86	0.42	-0.20	-29.04
	11000.00	1.17	280.67	25	10997.51	19.00	19.00 N	41.14 W	45.31	294.79	2.16	1.88	-67.08
	11025.00	1.37	285.94	25	11022.50	19.13	19.13 N	41.68 W	45.86	294.66	0.93	0.80	21.08
	11050.00	1.31	276.75	25	11047.49	19.25	19.25 N	42.25 W	46.42	294.49	0.89	-0.24	-36.76
	11075.00	1.35	294.05	25	11072.49	19.40	19.40 N	42.80 W	46.99	294.38	1.61	0.16	69.20
	11100.00	1.37	297.98	25	11097.48	19.66	19.66 N	43.33 W	47.58	294.40	0.38	0.08	15.72
	11125.00	1.29	306.35	25	11122.47	19.97	19.97 N	43.82 W	48.16	294.50	0.84	-0.32	33.48
	11150.00	1.27	301.84	25	11147.47	20.28	20.28 N	44.29 W	48.71	294.60	0.41	-0.08	-18.04
	11175.00	1.50	301.83	25	11172.46	20.60	20.60 N	44.80 W	49.31	294.69	0.92	0.92	-0.04
	11200.00	1.50	304.48	25	11197.45	20.96	20.96 N	45.35 W	49.95	294.80	0.28	0.00	10.60
	11225.00	1.47	302.30	25	11222.44	21.31	21.31 N	45.89 W	50.60	294.91	0.26	-0.12	-8.72
	11250.00	1.51	297.28	25	11247.43	21.64	21.64 N	46.45 W	51.24	294.97	0.55	0.16	-20.08



PHOENIX

TECHNOLOGY SERVICES

Company: Devon
 Well: Harroun Trust Fed Com 31 No. 1
 Location: Eddy Co., New Mexico
 Rig: Renegade Mast

Job Number: 62914
 Grid Corr.: -0.16
 Lat: 32.26
 Long: -104.03

Calculation Method: Minimum Curvature
 Proposed Azimuth:
 RKB - MSL in feet: Ground
 Tie Into: Surface

Survey Tool Type	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Angle (deg)			
	11275.00	1.51	304.87	25	11272.43	21.97	21.97 N	47.01 W	51.90	295.05	0.80	0.00	30.36
	11300.00	1.45	307.51	25	11297.42	22.36	22.36 N	47.54 W	52.53	295.19	0.36	-0.24	10.56
	11325.00	1.50	310.10	25	11322.41	22.76	22.76 N	48.04 W	53.15	295.35	0.33	0.20	10.36
	11350.00	1.75	304.39	25	11347.40	23.19	23.19 N	48.60 W	53.85	295.50	1.19	1.00	-22.84
	11375.00	1.43	314.45	25	11372.39	23.62	23.62 N	49.14 W	54.52	295.67	1.69	-1.28	40.24
	11400.00	1.69	302.23	25	11397.38	24.03	24.03 N	49.67 W	55.18	295.82	1.68	1.04	-48.88
	11425.00	1.61	300.56	25	11422.37	24.41	24.41 N	50.29 W	55.90	295.89	0.37	-0.32	-6.68
	11450.00	1.49	301.55	25	11447.36	24.76	24.76 N	50.87 W	56.57	295.95	0.49	-0.48	3.96
	11475.00	1.80	304.08	25	11472.35	25.15	25.15 N	51.47 W	57.28	296.04	1.27	1.24	10.12
	11500.00	1.47	295.93	25	11497.34	25.51	25.51 N	52.08 W	57.99	296.09	1.61	-1.32	-32.60
	11525.00	1.63	304.44	25	11522.33	25.85	25.85 N	52.66 W	58.67	296.14	1.12	0.64	34.04
	11550.00	1.47	297.52	25	11547.32	26.20	26.20 N	53.24 W	59.34	296.20	0.98	-0.64	-27.68
	11575.00	1.71	291.85	25	11572.31	26.49	26.49 N	53.87 W	60.03	296.18	1.15	0.96	-22.68
	11600.00	1.64	301.43	25	11597.30	26.81	26.81 N	54.52 W	60.76	296.18	1.15	-0.28	38.32
	11625.00	1.67	304.32	25	11622.29	27.20	27.20 N	55.13 W	61.48	296.26	0.35	0.12	11.56
	11650.00	1.65	299.07	25	11647.28	27.58	27.58 N	55.75 W	62.20	296.33	0.61	-0.08	-21.00
	11675.00	1.89	304.62	25	11672.27	27.99	27.99 N	56.40 W	62.96	296.40	1.18	0.96	22.20
	11700.00	1.72	302.38	25	11697.26	28.43	28.43 N	57.06 W	63.75	296.48	0.74	-0.68	-8.96
	11725.00	1.46	320.12	25	11722.25	28.87	28.87 N	57.58 W	64.41	296.63	2.21	-1.04	70.96
	11750.00	1.59	311.59	25	11747.24	29.35	29.35 N	58.04 W	65.04	296.82	1.04	0.52	-34.12
	11775.00	1.81	313.96	25	11772.23	29.85	29.85 N	58.58 W	65.75	297.00	0.92	0.88	9.48
	11800.00	1.70	309.52	25	11797.22	30.36	30.36 N	59.15 W	66.49	297.17	0.70	-0.44	-17.76

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

RECEIVED

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

JUN 18 2018

DISTRICT I

P.O. Box 1980, Hobbs, NM 88240

DISTRICT II

P.O. Drawer 80, Artesia, NM 88210

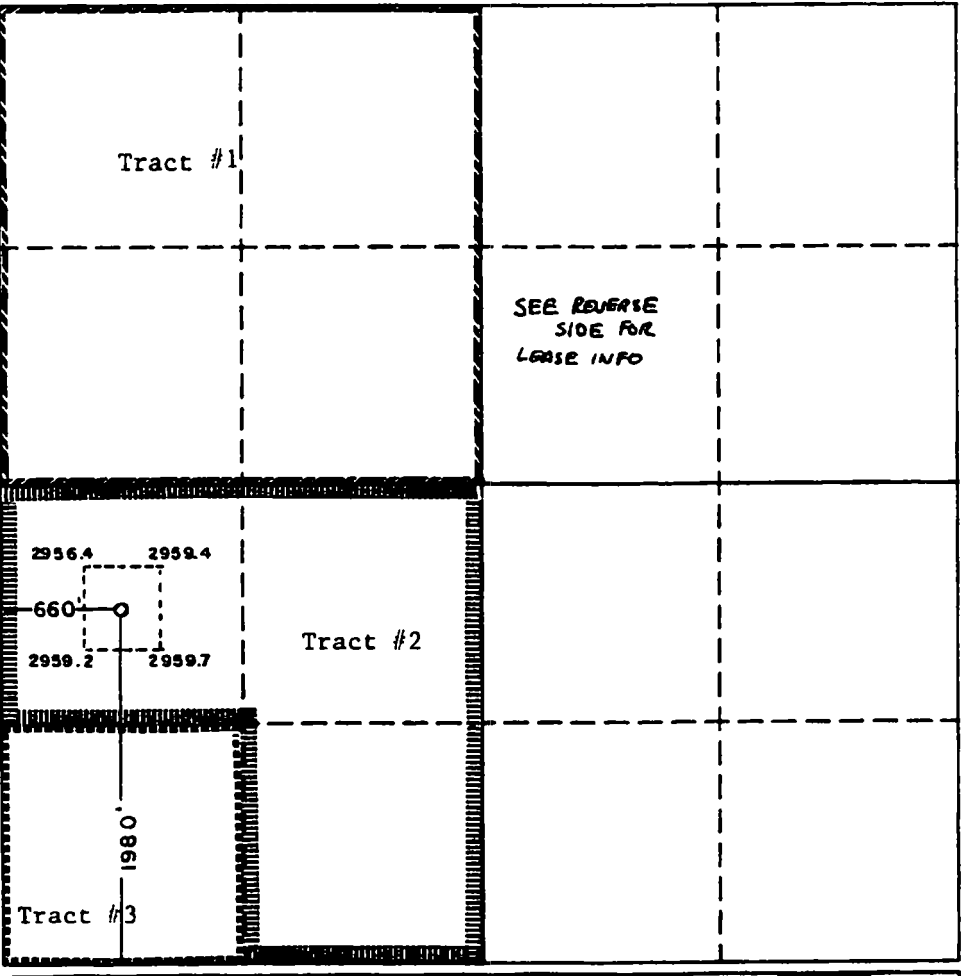
DISTRICT III

1000 Rio Grande Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

DISTRICT II-ARTESIA O.C.D.

All Distances must be from the outer boundaries of the section

Operator Santa Fe Energy Operating Partners LP		Lease Harroun Trust Fed. Com. 31		Well No. 1
Unit Letter L	Section 31	Township 23 South	Range 29 East NMPM	County Eddy
Actual Footage Location of Well: 660 feet from the West line and 1980 feet from the South line				
Ground Level Elev. 2962.4	Producing Formation Atoka	Pool South Culebra Bluff (Atoka)	Dedicated Acreage 317.28 Acres	
1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below. 2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty). 3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force-pooling, etc.? ☐ Yes ☒ No If answer is "yes" type of consolidation Will be consolidated by communitization If answer is "no" list of owners and tract descriptions which have actually been consolidated. (Use reverse side of this form necessary.) No allowable will be assigned to the well unit all interests have been consolidated (by communitization, unitization, forced-pooling, otherwise) or until a non-standard unit, eliminating such interest, has been approved by the Division.				
			OPERATOR CERTIFICATION I hereby certify the information contained herein is true and complete to the best of my knowledge and belief. Signature <i>Darrell Roberts</i> Printed Name Darrell Roberts Position Sr. Drilling Engineer Company Santa Fe Energy Operating Partners, L.P. Date February 13, 1992 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual survey made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief. Date Surveyed February 6, 1992 Signature & Seal of Professional Surveyor <i>Donald J. Taylor</i> Professional Surveyor No. 12345 Exp. 12/31/95 W.O. 92-11-0151	