



30.015-45029

Company: APACHE CORPORATION
 Lease/Well: CEDAR CREEK FEDERAL CA/#954H
 API: 30-015-45029
 Rig Name: H&P 482
 State/County: NEW MEXICO/EDDY
 VS-Azi: 267.99 Degrees
 Latitude: 32.85347, Longitude: -103.88162
 Grid North = True North -0.25 degs (NAD 27)
 Grid Correction Applied = -0.25 degs



FIELD COPY ONLY (NOT DEFINITIVE)

Depth Reference : RKB = 26 FEET

DRILLOG HA GYRO SURVEY CALCULATIONS

Error Model: VESSI_GYROFLEX.IPM

Filename: eline gyro-de_01.ut

Minimum Curvature Method

Report Date/Time: 7/2/2018 / 01:39

VES Survey International

Midland, TX

432-563-5444

Christopher Hair

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.59	203.90	100.00	-0.47	-0.21	0.23	0.52	203.90	0.59
200.00	0.75	208.07	199.99	-1.53	-0.73	0.78	1.69	205.52	0.17
300.00	0.89	220.40	299.98	-2.70	-1.54	1.63	3.10	209.73	0.22
400.00	1.16	241.51	399.97	-3.77	-2.93	3.06	4.78	217.89	0.46
500.00	1.13	234.51	499.95	-4.83	-4.63	4.80	6.69	223.81	0.14
600.00	1.21	233.28	599.92	-6.03	-6.28	6.49	8.71	226.16	0.08
700.00	1.00	212.17	699.91	-7.40	-7.59	7.85	10.60	225.73	0.46
800.00	0.40	198.71	799.90	-8.47	-8.17	8.46	11.76	223.97	0.61
900.00	0.41	221.15	899.90	-9.07	-8.52	8.83	12.44	223.20	0.16
1000.00	0.46	207.39	999.89	-9.70	-8.94	9.28	13.19	222.67	0.11
1100.00	0.46	181.72	1099.89	-10.46	-9.14	9.50	13.89	221.15	0.20
1200.00	0.39	77.38	1199.89	-10.78	-8.82	9.19	13.93	219.29	0.67
1300.00	0.85	24.61	1299.88	-10.03	-8.18	8.53	12.95	219.20	0.69
1400.00	0.81	63.63	1399.87	-9.05	-7.24	7.55	11.59	218.68	0.56
1500.00	1.12	48.49	1499.86	-8.09	-5.88	6.16	10.00	216.02	0.40
1600.00	1.12	50.19	1599.84	-6.81	-4.40	4.63	8.11	212.83	0.03
1700.00	1.23	70.61	1699.82	-5.83	-2.63	2.83	6.39	204.29	0.43
1800.00	1.19	60.63	1799.80	-4.96	-0.72	0.89	5.02	188.21	0.21
1900.00	1.17	53.08	1899.78	-3.84	1.00	-0.87	3.97	165.37	0.16
2000.00	1.02	51.00	1999.76	-2.67	2.51	-2.42	3.66	136.76	0.16
2100.00	1.03	9.57	2099.74	-1.23	3.35	-3.31	3.57	110.09	0.72
2200.00	1.08	354.18	2199.73	0.60	3.40	-3.42	3.46	80.07	0.29
2300.00	1.04	344.46	2299.71	2.40	3.07	-3.15	3.90	51.89	0.18
2400.00	1.30	349.38	2399.69	4.39	2.61	-2.77	5.11	30.79	0.28
2500.00	1.21	347.98	2499.66	6.53	2.19	-2.42	6.89	18.52	0.09
2600.00	1.29	337.28	2599.64	8.60	1.53	-1.83	8.74	10.10	0.25
2700.00	1.41	342.85	2699.61	10.82	0.73	-1.11	10.85	3.87	0.18
2800.00	1.48	338.57	2799.58	13.20	-0.10	-0.36	13.20	359.55	0.13
2900.00	1.92	307.65	2899.54	15.43	-1.91	1.36	15.55	352.96	1.00
3000.00	1.79	292.76	2999.49	17.06	-4.67	4.07	17.69	344.68	0.50
3100.00	1.65	261.89	3099.44	17.46	-7.54	6.92	19.02	336.65	0.92
3200.00	1.40	238.56	3199.41	16.62	-10.01	9.42	19.40	328.95	0.66