



NM OIL CONSERVATION

ARTESIA DISTRICT

NOV 01 2017

RECEIVED

May 23, 2017

Concho Resources, Inc.
One Concho Center
600 W. Illinois Avenue
Midland, Texas 79701

Attn: Kanicia Castillo

RE: Burch Keely Unit No. 946H

30-015-44100

Please find enclosed a copy of the survey from 0' to 995' ran on the above referenced well.

Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 23rd day of May, A.D., 2017, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas



Company: COG OPERATING
Lease/Well: BURCH KEELY UNIT No./946H



Rig Name: SILVER OAK 3
State/County: NEW MEXICO/EDDY
VS-Azi: 0.00 Degrees
Latitude: 32.82595, Longitude: -104.03797
Grid North = True North -0.16 degs (NAD 27)
Grid Correction Applied = -0.16 degs



Depth Reference : RKB= 14 FEET

DRILLOG HA GYRO SURVEY CALCULATIONS
Filename: e-line gyro-de_01.ut
Minimum Curvature Method
Report Date/Time: 5/23/2017 / 13:01

VES Survey International
Midland, Texas
432-563-5444

Surveyor: Robert Williams
Burch Keely Unit 946H / API 30-015-44100

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ARTESIA DISTRICT

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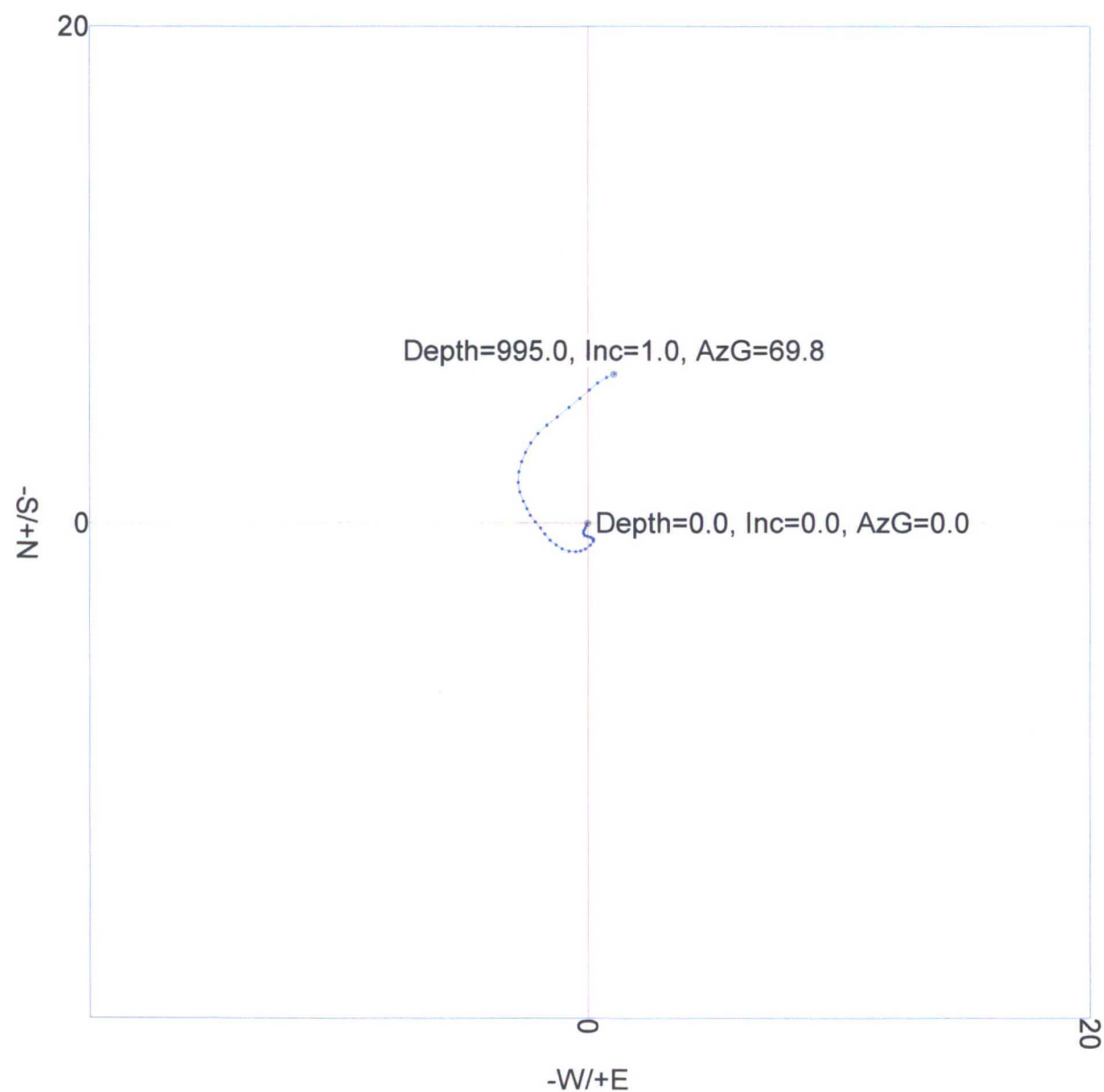
RECEIVED

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	****
25.00	0.13	237.74	25.00	-0.02	-0.02	-0.02	0.03	237.74	0.52
50.00	0.29	192.18	50.00	-0.09	-0.06	-0.09	0.11	213.49	0.89
75.00	0.29	209.73	75.00	-0.21	-0.11	-0.21	0.24	206.79	0.36
100.00	0.26	212.11	100.00	-0.31	-0.17	-0.31	0.35	208.16	0.12
125.00	0.29	166.22	125.00	-0.42	-0.18	-0.42	0.46	203.43	0.86
150.00	0.20	128.52	150.00	-0.51	-0.13	-0.51	0.53	194.75	0.71
175.00	0.37	96.15	175.00	-0.54	-0.02	-0.54	0.54	182.19	0.90
200.00	0.19	122.29	200.00	-0.57	0.09	-0.57	0.58	170.74	0.85
225.00	0.25	119.22	225.00	-0.62	0.18	-0.62	0.65	164.16	0.26
250.00	0.09	154.71	250.00	-0.67	0.23	-0.67	0.71	160.73	0.74
275.00	0.27	210.30	275.00	-0.74	0.21	-0.74	0.77	163.97	0.94
300.00	0.62	222.08	300.00	-0.89	0.09	-0.89	0.90	174.16	1.43
325.00	0.57	239.79	325.00	-1.05	-0.11	-1.05	1.06	185.76	0.76
350.00	0.37	255.82	349.99	-1.14	-0.29	-1.14	1.17	194.39	0.93
375.00	0.57	266.65	374.99	-1.16	-0.49	-1.16	1.26	202.99	0.85
400.00	0.66	281.76	399.99	-1.14	-0.76	-1.14	1.37	213.60	0.75

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
425.00	0.70	297.57	424.99	-1.04	-1.03	-1.04	1.47	224.83	0.77
450.00	0.62	308.38	449.99	-0.89	-1.28	-0.89	1.55	235.21	0.60
475.00	0.76	311.16	474.99	-0.69	-1.51	-0.69	1.66	245.24	0.57
500.00	0.74	327.22	499.99	-0.45	-1.72	-0.45	1.77	255.29	0.84
525.00	0.67	321.32	524.98	-0.20	-1.89	-0.20	1.91	263.90	0.40
550.00	0.81	318.89	549.98	0.04	-2.10	0.04	2.10	271.20	0.59
575.00	0.71	328.15	574.98	0.31	-2.30	0.31	2.32	277.66	0.62
600.00	0.67	336.41	599.98	0.58	-2.44	0.58	2.51	283.29	0.43
625.00	0.89	333.83	624.97	0.89	-2.59	0.89	2.73	288.90	0.88
650.00	0.89	344.95	649.97	1.25	-2.72	1.25	2.99	294.62	0.69
675.00	0.94	356.23	674.97	1.64	-2.78	1.64	3.23	300.47	0.74
700.00	1.02	9.50	699.97	2.06	-2.76	2.06	3.45	306.75	0.96
725.00	0.97	20.57	724.96	2.48	-2.65	2.48	3.63	313.09	0.80
750.00	0.88	25.93	749.96	2.85	-2.49	2.85	3.79	318.82	0.49
775.00	1.09	32.07	774.95	3.22	-2.28	3.22	3.95	324.70	0.93
800.00	1.12	42.27	799.95	3.61	-1.99	3.61	4.12	331.07	0.79
825.00	1.11	50.87	824.95	3.94	-1.64	3.94	4.27	337.39	0.67
850.00	1.33	51.12	849.94	4.27	-1.23	4.27	4.45	343.98	0.87
875.00	1.44	51.74	874.93	4.65	-0.76	4.65	4.71	350.77	0.44
900.00	1.22	47.77	899.93	5.02	-0.31	5.02	5.03	356.44	0.94
925.00	1.07	48.03	924.92	5.36	0.06	5.36	5.36	0.62	0.62
950.00	0.91	52.19	949.92	5.63	0.39	5.63	5.65	3.94	0.67
975.00	1.00	63.36	974.91	5.85	0.74	5.85	5.90	7.21	0.82
995.00	0.98	69.84	994.91	5.99	1.06	5.99	6.08	10.01	0.56



VES Survey International
Midland, Texas
432-563-5444
Surveyor: Robert Williams
Burch Keely Unit 946H / API 30-015-44100



V.E.S. Survey Date: 5/17/2017



I Robert Williams certify that I am employed by VES Survey International. That I did on the day(s) of 05/17/17 through 05/17/17 conduct or supervise the taking of a Rate Gyro survey from a depth of 0.00 feet to a depth of 995.00 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Vaughn Energy Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of COG Operating for the Burch Keely Unit Well # #946H API # 30-015-44100 in Eddy County / Parish New Mexico; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by VES Survey International.

A handwritten signature in blue ink, appearing to read "Robert Williams", is written over a horizontal line.

Robert Williams
Service Technician
VES Survey International