



NM OIL CONSERVATION
ARTESIA DISTRICT

AUG 11 2017

RECEIVED

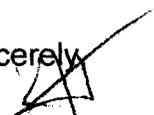
March 29, 2017

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

Attn: Kanicia Castillo

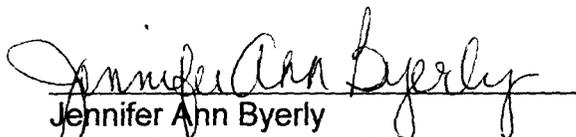
RE: **Burch Keely Unit No. 966H** - 30-015-44067

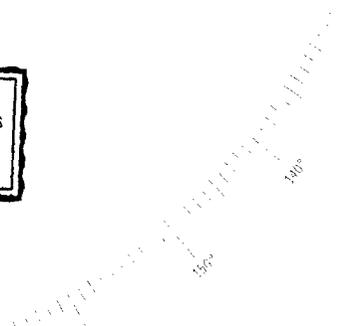
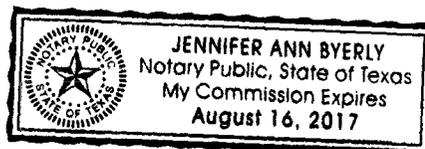
Please find enclosed a copy of the survey from 0' to 1058' ran on the above referenced well.

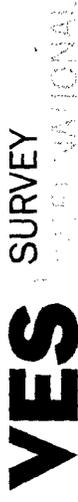
Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 29th day of March, A.D., 2017, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas





Company: COG OPERATING
 Lease/Well: BURCH KEELY UNIT No./966H
 Rig Name: SILVER OAK 3
 State/County: NEW MEXICO/EDDY
 VS-Azi: 0.00 Degrees
 Latitude: 32.81816, Longitude: -104.01871
 Grid North = True North -0.17 degs (NAD 83)
 Grid Correction Applied = -0.17 degs

Depth Reference : RKB = 18 FEET

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: e-line gyro-de_01.ut
 Minimum Curvature Method
 Report Date/Time: 3/29/2017 / 09:39

VES Survey International
 Midland, TX
 (432)-563-5444

Surveyor: Christopher Hair

Burch Keely Unit No. 966H / API 30-015-44067

NM OIL CONSERVATION
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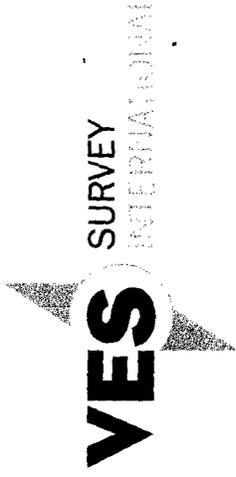
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
25.00	0.16	74.25	25.00	0.01	0.03	0.01	0.03	74.25	0.63
50.00	0.07	185.39	50.00	0.00	0.06	0.00	0.06	87.85	0.78
75.00	0.16	237.37	75.00	-0.03	0.03	-0.03	0.05	134.54	0.52
100.00	0.08	46.77	100.00	-0.04	0.02	-0.04	0.04	157.38	0.96
125.00	0.21	32.24	125.00	0.01	0.05	0.01	0.06	77.76	0.54
150.00	0.16	64.30	150.00	0.07	0.11	0.07	0.13	59.10	0.45
175.00	0.23	45.63	175.00	0.12	0.18	0.12	0.21	56.78	0.38
200.00	0.17	44.08	200.00	0.18	0.24	0.18	0.30	53.34	0.26
225.00	0.38	353.81	225.00	0.29	0.26	0.29	0.39	41.80	1.21
250.00	0.79	338.63	250.00	0.53	0.19	0.53	0.56	19.34	1.74
275.00	1.32	334.26	274.99	0.95	0.00	0.95	0.95	359.95	2.14
300.00	1.38	322.79	299.99	1.45	-0.31	1.45	1.48	348.01	1.11
325.00	1.54	326.50	324.98	1.97	-0.68	1.97	2.09	341.07	0.75
350.00	1.42	324.93	349.97	2.51	-1.04	2.51	2.71	337.46	0.53
375.00	1.37	320.98	374.96	2.99	-1.41	2.99	3.31	334.83	0.42
400.00	1.30	324.63	399.96	3.46	-1.76	3.46	3.88	333.02	0.44

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	1.29	326.33	424.95	3.92	-2.08	3.92	4.44	332.07	0.17
450.00	1.31	325.41	449.94	4.39	-2.40	4.39	5.00	331.36	0.13
475.00	1.32	329.99	474.94	4.88	-2.70	4.88	5.58	330.99	0.42
500.00	1.37	331.82	499.93	5.39	-2.99	5.39	6.16	330.98	0.26
525.00	1.34	330.26	524.92	5.91	-3.28	5.91	6.76	330.99	0.18
550.00	1.33	335.41	549.92	6.43	-3.54	6.43	7.34	331.13	0.48
575.00	1.21	341.16	574.91	6.94	-3.75	6.94	7.89	331.62	0.72
600.00	1.28	343.29	599.90	7.46	-3.91	7.46	8.42	332.30	0.35
625.00	1.27	348.22	624.90	8.00	-4.05	8.00	8.96	333.13	0.44
650.00	1.34	346.87	649.89	8.55	-4.17	8.55	9.52	333.98	0.32
675.00	1.38	355.01	674.88	9.14	-4.27	9.14	10.08	334.97	0.78
700.00	1.43	349.84	699.88	9.74	-4.35	9.74	10.67	335.95	0.55
725.00	1.43	352.14	724.87	10.36	-4.45	10.36	11.27	336.77	0.23
750.00	1.31	356.37	749.86	10.95	-4.51	10.95	11.85	337.64	0.63
775.00	1.29	1.78	774.86	11.52	-4.52	11.52	12.38	338.60	0.50
800.00	1.33	6.27	799.85	12.09	-4.48	12.09	12.89	339.69	0.45
825.00	1.28	6.55	824.84	12.66	-4.41	12.66	13.41	340.79	0.20
850.00	1.29	15.91	849.84	13.21	-4.30	13.21	13.89	341.96	0.84
875.00	1.30	17.46	874.83	13.75	-4.14	13.75	14.36	343.25	0.15
900.00	1.28	24.08	899.82	14.28	-3.94	14.28	14.81	344.57	0.60
925.00	1.26	29.39	924.82	14.77	-3.69	14.77	15.23	345.97	0.48
950.00	1.24	28.21	949.81	15.25	-3.43	15.25	15.63	347.33	0.15
975.00	1.24	26.16	974.80	15.73	-3.18	15.73	16.05	348.57	0.18
1000.00	1.08	26.93	999.80	16.19	-2.96	16.19	16.45	349.65	0.67
1025.00	0.99	28.21	1024.80	16.59	-2.75	16.59	16.81	350.60	0.35
1050.00	0.97	28.66	1049.79	16.96	-2.54	16.96	17.15	351.48	0.09
1058.00	0.96	25.05	1057.79	17.08	-2.48	17.08	17.26	351.73	0.78



VES Survey International
Midland, TX
(432)-563-5444

Surveyor: Christopher Hair
Burch Keely Unit No. 966H / API 30-015-44067



20

Depth=1058.0, Inc=1.0, AzG=25.1

-S/+N

Depth=0.0, Inc=0.0, AzG=0.0

20

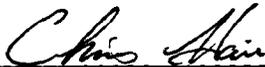
0

-W/+E

V.E.S Survey Date: 3/21/2017

VES SURVEY

I Christopher Hair certify that I am employed by VES Survey International. That I did on the day(s) of 03/21/17 through 03/21/17 conduct or supervise the taking of a Rate Gyro survey from a depth of 0.00 feet to a depth of 1,058.00 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 # 966H API # 30-015-44067 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.



Christopher Hair
Service Technician
VES Survey International