

April 27, 2016

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

HOBBS OCD
DEC 05 2016
RECEIVED

Attn: Kanicia Castillo

RE: **Vast State No 005H**

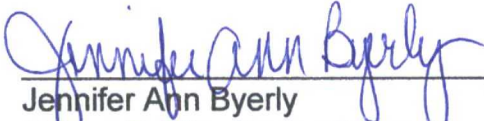
Please find enclosed a copy of the survey from 0' to 4810' ran on the above referenced well.

Sincerely,

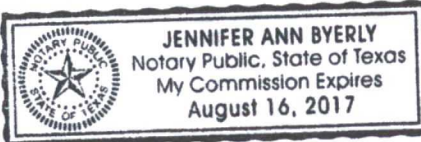
Keith Havelka
Operations

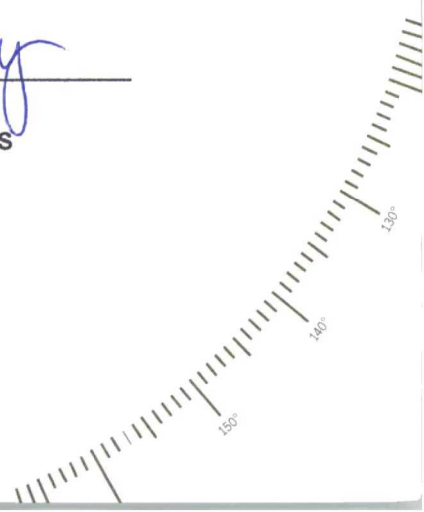
STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 27th day of April, A.D., 2016, by Keith Havelka.



Jennifer Ann Byerly
Notary Public, State of Texas


JENNIFER ANN BYERLY
Notary Public, State of Texas
My Commission Expires
August 16, 2017





Company: Concho
 Lease/Well: Vast State No/005H

Rig Name: Scan Freedom
 State/County: New Mexico/Lea
 VS-Azi: 0.00 Degrees

Latitude: 32.03671, Longitude: -103.59071
 Grid North = True North -0.39 degs (NAD 27)
 Grid Correction Applied = -0.39 degs



Depth Reference : RKB = 26 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut
 Minimum Curvature Method
 Report Date/Time: 4/27/2016 / 14:51

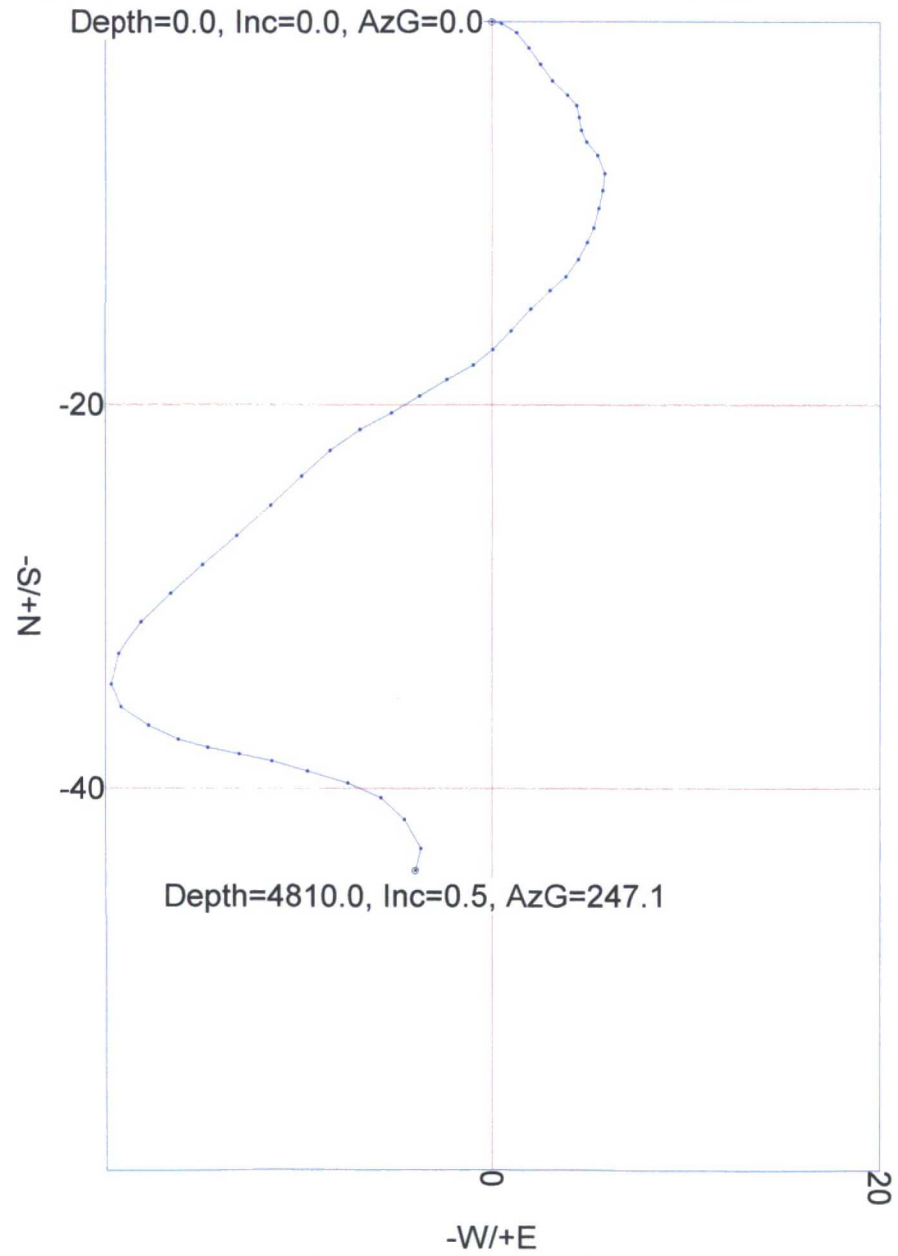
VES Survey International
 Midland, TX
 432-563-5444
 Surveyor: Andrew Askew
 Vast State No 005H / API 30-025-42946

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	0.54	101.50	100.00	-0.09	0.47	-0.09	0.48	101.50	0.54
200.00	0.58	137.99	199.99	-0.56	1.27	-0.56	1.39	113.94	0.35
300.00	0.60	145.52	299.99	-1.36	1.90	-1.36	2.34	125.71	0.08
400.00	0.58	144.80	399.98	-2.21	2.49	-2.21	3.32	131.62	0.02
500.00	0.64	143.77	499.98	-3.07	3.11	-3.07	4.37	134.67	0.06
600.00	0.61	123.41	599.97	-3.81	3.88	-3.81	5.44	134.50	0.22
700.00	0.28	173.49	699.97	-4.35	4.35	-4.35	6.16	134.99	0.48
800.00	0.44	165.40	799.97	-4.97	4.48	-4.97	6.69	137.99	0.17
900.00	0.34	178.30	899.96	-5.65	4.59	-5.65	7.28	140.93	0.13
1000.00	0.47	139.62	999.96	-6.27	4.86	-6.27	7.93	142.18	0.30
1100.00	0.57	141.09	1099.96	-6.97	5.44	-6.97	8.84	142.00	0.10
1200.00	0.66	175.42	1199.95	-7.92	5.80	-7.92	9.82	143.79	0.37
1300.00	0.39	204.05	1299.95	-8.81	5.71	-8.81	10.49	147.06	0.36
1400.00	0.70	186.58	1399.94	-9.73	5.49	-9.73	11.17	150.55	0.35
1500.00	0.52	205.30	1499.94	-10.75	5.23	-10.75	11.96	154.05	0.27
1600.00	0.43	202.56	1599.93	-11.51	4.89	-11.51	12.51	156.97	0.09

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
1700.00	0.72	210.37	1699.93	-12.40	4.43	-12.40	13.17	160.34	0.30
1800.00	0.55	222.08	1799.92	-13.29	3.79	-13.29	13.82	164.07	0.22
1900.00	0.71	234.16	1899.92	-14.01	2.97	-14.01	14.32	168.03	0.21
2000.00	0.89	217.84	1999.91	-14.99	1.99	-14.99	15.12	172.44	0.28
2100.00	0.86	225.77	2099.90	-16.12	0.98	-16.12	16.15	176.52	0.12
2200.00	0.71	220.91	2199.89	-17.11	0.04	-17.11	17.11	179.87	0.16
2300.00	0.79	240.17	2299.88	-17.92	-0.96	-17.92	17.94	183.08	0.26
2400.00	0.98	241.76	2399.87	-18.67	-2.31	-18.67	18.81	187.07	0.19
2500.00	0.92	234.75	2499.85	-19.53	-3.72	-19.53	19.88	190.79	0.13
2600.00	1.04	242.64	2599.84	-20.41	-5.18	-20.41	21.06	194.25	0.18
2700.00	1.08	240.30	2699.82	-21.29	-6.80	-21.29	22.35	197.72	0.06
2800.00	1.09	229.29	2799.80	-22.38	-8.34	-22.38	23.88	200.44	0.21
2900.00	1.19	226.91	2899.78	-23.71	-9.82	-23.71	25.67	202.50	0.11
3000.00	1.34	225.82	2999.76	-25.24	-11.42	-25.24	27.70	204.35	0.15
3100.00	1.38	229.69	3099.73	-26.83	-13.17	-26.83	29.88	206.15	0.10
3200.00	1.28	228.08	3199.70	-28.35	-14.92	-28.35	32.04	207.76	0.10
3300.00	1.26	226.92	3299.68	-29.85	-16.56	-29.85	34.13	209.02	0.04
3400.00	1.21	224.94	3399.66	-31.35	-18.10	-31.35	36.20	210.01	0.07
3500.00	1.13	204.64	3499.64	-32.99	-19.26	-32.99	38.20	210.28	0.42
3600.00	0.79	182.13	3599.62	-34.58	-19.70	-34.58	39.79	209.67	0.50
3700.00	0.88	130.11	3699.61	-35.76	-19.14	-35.76	40.56	208.15	0.74
3800.00	1.08	119.69	3799.60	-36.72	-17.73	-36.72	40.77	205.77	0.27
3900.00	0.88	110.35	3899.58	-37.45	-16.19	-37.45	40.80	203.37	0.25
4000.00	0.94	100.49	3999.57	-37.87	-14.66	-37.87	40.61	201.16	0.17
4100.00	0.96	103.12	4099.56	-38.21	-13.04	-38.21	40.37	198.84	0.05
4200.00	1.01	101.29	4199.54	-38.57	-11.36	-38.57	40.21	196.41	0.06
4300.00	1.18	109.53	4299.52	-39.09	-9.52	-39.09	40.23	193.69	0.23
4400.00	1.32	104.39	4399.50	-39.72	-7.43	-39.72	40.41	190.60	0.17
4500.00	0.86	129.80	4499.48	-40.49	-5.74	-40.49	40.89	188.07	0.65
4600.00	1.07	135.51	4599.47	-41.63	-4.51	-41.63	41.88	186.18	0.22
4700.00	1.00	167.35	4699.45	-43.15	-3.67	-43.15	43.31	184.86	0.57
4810.00	0.54	247.15	4809.45	-44.29	-3.93	-44.29	44.46	185.07	0.96



VES Survey International
Midland, TX
432-563-5444
Surveyor: Andrew Askew
Vast State No 005H / API 30-025-42946



V.E.S. Survey Date: 4/15/2016



I Andy Askew certify that I am employed by VES Survey International. That I did on the day(s) of 04/15/16 through 04/15/16 conduct or supervise the taking of a Rate Gyro survey from a depth of 0.00 feet to a depth of 4,810.00 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 Concho for the Vast State Well # 5H API # 30-025-42946 in Lea 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 "A. Askew", is written over a horizontal line.

Andy Askew
Service Technician
VES Survey International