VES SURVEY INTERNATIONAL

October 29, 2015

HOBBS OCD
MAY 06 2016
RECEIVED

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

Attn: Kanicia Castillo

RE: **Macho Nacho State Com No 009H**

Please find enclosed a copy of the survey from 0' to 8850' ran on the above referenced well.

Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
§
COUNTY OF NUECES §

This instrument was acknowledged before me on the 29 day of October A.D., 2015, 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

VES Survey International
P.O. Box 261021, Corpus Christi, Texas 78426
T (361) 767-0602 F (361) 767-0612
www.vessurvey.com

COG Production LLC

Lea County, NM
Macho Nacho State
#9H

OH

Survey: MWD #1

Survey Report - Geographic

02 November, 2015

Company:	COG Production LLC	**Local Co-ordinate Reference:**	Well #9H
Project:	Lea County, NM	**TVD Reference:**	WELL @ 3599.2usft (Original Well Elev)
Site:	Macho Nacho State	**MD Reference:**	WELL @ 3599.2usft (Original Well Elev)
Well:	#9H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Project Lea County, NM

Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site Macho Nacho State

Site Position:		**Northing:**	446,603.70 usft	**Latitude:**	32° 13' 32.594 N
From:	Map	**Easting:**	725,838.70 usft	**Longitude:**	103° 36' 10.882 W
Position Uncertainty:	3.0 usft	**Slot Radius:**	12-1/4 "	**Grid Convergence:**	0.39 °

Well #9H

Well Position	**+N/-S**	0.0 usft	**Northing:**	446,444.80 usft	**Latitude:**	32° 13' 31.236 N
	+E/-W	0.0 usft	**Easting:**	722,640.20 usft	**Longitude:**	103° 36' 48.127 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,571.2 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/15/2015	7.13	60.08	48,228

Design OH

Audit Notes:

Version:	1.0	**Phase:**	ACTUAL	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	352.39

Survey Program **Date** 11/2/2015

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	8,850.0	GYRO (OH)	NS-GYRO-MS	North sensing gyrocompassing m/s
8,964.0	14,362.0	MWD #1 (OH)	MWD	MWD - Standard

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
8,850.0	8.23	250.79	8,812.2	-175.8	-481.2	446,269.04	722,159.04	32° 13' 29.528 N	103° 36' 53.742 W
8,964.0	8.10	253.30	8,925.0	-180.7	-496.6	446,264.05	722,143.64	32° 13' 29.480 N	103° 36' 53.922 W
9,008.0	7.80	256.00	8,968.6	-182.4	-502.4	446,262.44	722,137.77	32° 13' 29.464 N	103° 36' 53.990 W
9,040.0	7.90	277.50	9,000.3	-182.6	-506.7	446,262.20	722,133.49	32° 13' 29.462 N	103° 36' 54.040 W
9,071.0	10.80	305.20	9,030.9	-180.6	-511.2	446,264.15	722,129.00	32° 13' 29.482 N	103° 36' 54.092 W
9,102.0	14.50	319.00	9,061.2	-176.0	-516.1	446,268.76	722,124.08	32° 13' 29.528 N	103° 36' 54.149 W
9,134.0	17.90	322.90	9,091.9	-169.1	-521.7	446,275.71	722,118.48	32° 13' 29.597 N	103° 36' 54.214 W
9,165.0	18.90	329.70	9,121.3	-161.0	-527.1	446,283.84	722,113.07	32° 13' 29.678 N	103° 36' 54.276 W
9,196.0	19.00	338.60	9,150.6	-151.9	-531.5	446,292.88	722,108.70	32° 13' 29.767 N	103° 36' 54.326 W
9,227.0	20.70	349.60	9,179.8	-141.8	-534.3	446,302.97	722,105.86	32° 13' 29.868 N	103° 36' 54.358 W
9,274.0	26.60	355.30	9,222.8	-123.2	-536.7	446,321.65	722,103.50	32° 13' 30.053 N	103° 36' 54.384 W

Company:	COG Production LLC	**Local Co-ordinate Reference:**	Well #9H
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Well:	#9H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,321.0	33.20	357.80	9,263.6	-99.8	-538.1	446,345.02	722,102.14	32° 13' 30.284 N	103° 36' 54.398 W
9,368.0	41.00	358.50	9,301.0	-71.5	-539.0	446,373.33	722,101.24	32° 13' 30.564 N	103° 36' 54.407 W
9,416.0	46.00	358.70	9,335.8	-38.4	-539.8	446,406.35	722,100.44	32° 13' 30.891 N	103° 36' 54.413 W
9,463.0	51.50	358.10	9,366.8	-3.1	-540.8	446,441.66	722,099.45	32° 13' 31.240 N	103° 36' 54.422 W
9,510.0	56.20	358.30	9,394.5	34.8	-541.9	446,479.58	722,098.26	32° 13' 31.616 N	103° 36' 54.433 W
9,557.0	60.80	358.60	9,419.1	74.8	-543.0	446,519.63	722,097.17	32° 13' 32.012 N	103° 36' 54.443 W
9,604.0	64.60	356.50	9,440.6	116.5	-544.8	446,561.35	722,095.38	32° 13' 32.425 N	103° 36' 54.460 W
9,651.0	68.60	353.10	9,459.3	159.5	-548.7	446,604.29	722,091.45	32° 13' 32.850 N	103° 36' 54.503 W
9,698.0	74.30	353.10	9,474.2	203.7	-554.1	446,648.50	722,086.10	32° 13' 33.288 N	103° 36' 54.562 W
9,745.0	79.10	353.90	9,485.1	249.1	-559.3	446,693.94	722,080.93	32° 13' 33.738 N	103° 36' 54.618 W
9,792.0	81.90	355.50	9,492.8	295.3	-563.5	446,740.09	722,076.65	32° 13' 34.195 N	103° 36' 54.664 W
9,821.0	83.00	357.60	9,496.6	324.0	-565.3	446,768.78	722,074.92	32° 13' 34.479 N	103° 36' 54.682 W
9,855.0	85.80	358.80	9,499.9	357.8	-566.3	446,802.60	722,073.86	32° 13' 34.814 N	103° 36' 54.692 W
9,886.0	87.00	359.50	9,501.9	388.7	-566.8	446,833.53	722,073.40	32° 13' 35.120 N	103° 36' 54.695 W
9,980.0	87.60	358.30	9,506.3	482.6	-568.6	446,927.41	722,071.59	32° 13' 36.049 N	103° 36' 54.709 W
10,074.0	87.80	357.60	9,510.1	576.5	-572.0	447,021.27	722,068.23	32° 13' 36.978 N	103° 36' 54.741 W
10,168.0	88.80	357.00	9,512.9	670.3	-576.4	447,115.12	722,063.81	32° 13' 37.907 N	103° 36' 54.785 W
10,262.0	89.20	356.30	9,514.5	764.1	-581.9	447,208.95	722,058.32	32° 13' 38.836 N	103° 36' 54.841 W
10,357.0	87.50	358.00	9,517.3	859.0	-586.6	447,303.79	722,053.59	32° 13' 39.775 N	103° 36' 54.889 W
10,451.0	87.00	359.90	9,521.8	952.9	-588.3	447,397.66	722,051.87	32° 13' 40.704 N	103° 36' 54.902 W
10,545.0	86.90	358.00	9,526.8	1,046.7	-590.0	447,491.50	722,050.15	32° 13' 41.632 N	103° 36' 54.914 W
10,639.0	87.50	0.80	9,531.4	1,140.6	-591.0	447,585.38	722,049.17	32° 13' 42.561 N	103° 36' 54.919 W
10,733.0	90.50	1.70	9,533.0	1,234.5	-589.0	447,679.33	722,051.22	32° 13' 43.491 N	103° 36' 54.887 W
10,827.0	91.50	2.40	9,531.4	1,328.5	-585.6	447,773.25	722,054.58	32° 13' 44.420 N	103° 36' 54.841 W
10,922.0	91.80	1.70	9,528.6	1,423.4	-582.2	447,868.15	722,057.98	32° 13' 45.359 N	103° 36' 54.794 W
11,016.0	93.60	1.10	9,524.2	1,517.2	-579.9	447,962.01	722,060.27	32° 13' 46.288 N	103° 36' 54.760 W
11,110.0	92.30	359.90	9,519.4	1,611.1	-579.1	448,055.88	722,061.09	32° 13' 47.217 N	103° 36' 54.743 W
11,203.0	91.50	359.20	9,516.3	1,704.0	-579.8	448,148.83	722,060.36	32° 13' 48.136 N	103° 36' 54.744 W
11,298.0	91.00	358.50	9,514.2	1,799.0	-581.7	448,243.78	722,058.46	32° 13' 49.076 N	103° 36' 54.759 W
11,392.0	89.10	358.80	9,514.1	1,893.0	-584.0	448,337.75	722,056.24	32° 13' 50.006 N	103° 36' 54.778 W
11,486.0	89.30	358.30	9,515.4	1,986.9	-586.3	448,431.71	722,053.86	32° 13' 50.936 N	103° 36' 54.798 W
11,580.0	90.00	358.00	9,516.0	2,080.9	-589.4	448,525.66	722,050.83	32° 13' 51.866 N	103° 36' 54.826 W
11,674.0	89.30	358.60	9,516.6	2,174.8	-592.2	448,619.62	722,048.04	32° 13' 52.796 N	103° 36' 54.851 W
11,769.0	90.00	357.50	9,517.2	2,269.8	-595.4	448,714.56	722,044.81	32° 13' 53.736 N	103° 36' 54.881 W
11,863.0	91.70	356.70	9,515.8	2,363.6	-600.1	448,808.42	722,040.05	32° 13' 54.665 N	103° 36' 54.930 W
11,941.4	91.28	357.20	9,513.7	2,441.8	-604.3	448,886.64	722,035.89	32° 13' 55.439 N	103° 36' 54.972 W
Target 1(MN#9H)									
11,957.0	91.20	357.30	9,513.4	2,457.5	-605.1	448,902.27	722,035.14	32° 13' 55.594 N	103° 36' 54.979 W
12,051.0	88.90	358.40	9,513.3	2,551.4	-608.6	448,996.19	722,031.61	32° 13' 56.523 N	103° 36' 55.013 W
12,145.0	88.90	358.20	9,515.1	2,645.3	-611.4	449,090.13	722,028.82	32° 13' 57.453 N	103° 36' 55.038 W
12,239.0	90.10	358.10	9,515.9	2,739.3	-614.4	449,184.08	722,025.79	32° 13' 58.383 N	103° 36' 55.066 W
12,333.0	88.50	357.80	9,517.1	2,833.2	-617.8	449,278.01	722,022.42	32° 13' 59.313 N	103° 36' 55.098 W
12,427.0	89.10	356.80	9,519.0	2,927.1	-622.2	449,371.88	722,018.00	32° 14' 0.242 N	103° 36' 55.142 W
12,521.0	89.30	356.80	9,520.4	3,020.9	-627.4	449,465.73	722,012.75	32° 14' 1.171 N	103° 36' 55.196 W
12,615.0	89.90	355.90	9,521.0	3,114.7	-633.4	449,559.53	722,006.77	32° 14' 2.100 N	103° 36' 55.259 W
12,709.0	90.70	355.00	9,520.5	3,208.4	-640.9	449,653.23	721,999.31	32° 14' 3.027 N	103° 36' 55.338 W
12,803.0	88.50	355.70	9,521.2	3,302.1	-648.5	449,746.91	721,991.69	32° 14' 3.955 N	103° 36' 55.420 W
12,898.0	88.00	355.00	9,524.1	3,396.8	-656.2	449,841.56	721,983.99	32° 14' 4.892 N	103° 36' 55.502 W
12,992.0	88.50	356.50	9,527.0	3,490.5	-663.2	449,935.25	721,977.03	32° 14' 5.820 N	103° 36' 55.576 W
13,086.0	88.20	1.00	9,529.7	3,584.4	-665.2	450,029.17	721,974.98	32° 14' 6.749 N	103° 36' 55.592 W
13,180.0	88.30	2.00	9,532.5	3,678.3	-662.8	450,123.09	721,977.44	32° 14' 7.678 N	103° 36' 55.556 W
13,274.0	88.90	2.70	9,534.8	3,772.2	-658.9	450,216.98	721,981.29	32° 14' 8.607 N	103° 36' 55.504 W
13,368.0	88.70	3.00	9,536.8	3,866.0	-654.2	450,310.84	721,985.97	32° 14' 9.536 N	103° 36' 55.442 W
13,462.0	90.10	3.30	9,537.8	3,959.9	-649.1	450,404.69	721,991.13	32° 14' 10.464 N	103° 36' 55.375 W
13,556.0	90.80	2.80	9,537.0	4,053.8	-644.1	450,498.56	721,996.13	32° 14' 11.393 N	103° 36' 55.309 W

Company:	COG Production LLC	**Local Co-ordinate Reference:**	Well #9H
Project:	Lea County, NM	**TVD Reference:**	WELL @ 3599.2usft (Original Well Elev)
Site:	Macho Nacho State	**MD Reference:**	WELL @ 3599.2usft (Original Well Elev)
Well:	#9H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	OH	**Database:**	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
13,650.0	91.50	2.40	9,535.2	4,147.6	-639.8	450,592.44	722,000.40	32° 14' 12.321 N	103° 36' 55.252 W
13,744.0	91.70	2.60	9,532.5	4,241.5	-635.7	450,686.31	722,004.49	32° 14' 13.250 N	103° 36' 55.197 W
13,839.0	89.90	0.90	9,531.2	4,336.5	-632.8	450,781.25	722,007.39	32° 14' 14.189 N	103° 36' 55.156 W
13,933.0	89.80	0.90	9,531.5	4,430.4	-631.3	450,875.24	722,008.87	32° 14' 15.119 N	103° 36' 55.132 W
14,027.0	89.40	1.20	9,532.1	4,524.4	-629.6	450,969.22	722,010.59	32° 14' 16.049 N	103° 36' 55.104 W
14,121.0	89.70	1.00	9,532.8	4,618.4	-627.8	451,063.20	722,012.40	32° 14' 16.979 N	103° 36' 55.076 W
14,215.0	89.00	1.00	9,533.9	4,712.4	-626.2	451,157.18	722,014.04	32° 14' 17.909 N	103° 36' 55.050 W
14,312.0	91.10	1.10	9,533.8	4,809.4	-624.4	451,254.16	722,015.82	32° 14' 18.868 N	103° 36' 55.021 W
14,358.6	91.10	1.10	9,532.9	4,856.0	-623.5	451,300.77	722,016.71	32° 14' 19.330 N	103° 36' 55.007 W
PBHL(MNS#9H)									
14,362.0	91.10	1.10	9,532.9	4,859.3	-623.4	451,304.14	722,016.78	32° 14' 19.363 N	103° 36' 55.006 W

Checked By: _____ Approved By: _____ Date: _____

Company: Concho

Lease/Well: Macho Nacho State Com No/009H

Rig Name: Independence 205

State/County: New Mexico/Lea

VS-Azi: 352.39 Degrees

Latitude: 32.22534, Longitude: -103.61337

Grid North = True North -0.38 degs

Depth Reference : RKB = 26 feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro.ut

Minimum Curvature Method

Report Date/Time: 10/29/2015 / 12:54

VES Survey International

Midland, Texas

432-563-5444

Surveyor: Adam Askew

Macho Nacho State Com No 009H / API 30-025-42518

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	0.12	129.04	100.00	-0.06	0.08	-0.07	0.10	129.04	0.12
200.00	0.15	351.63	200.00	0.00	0.14	-0.01	0.14	88.55	0.25
300.00	0.09	156.15	300.00	0.07	0.15	0.05	0.16	66.15	0.24
400.00	0.31	71.31	400.00	0.09	0.44	0.03	0.45	79.06	0.32
500.00	0.15	99.76	500.00	0.15	0.83	0.04	0.84	79.65	0.20
600.00	0.29	54.22	600.00	0.28	1.16	0.12	1.19	76.57	0.21
700.00	0.11	41.03	700.00	0.50	1.43	0.30	1.51	70.77	0.18
800.00	0.19	136.31	800.00	0.45	1.60	0.24	1.67	74.21	0.23
900.00	0.09	120.62	900.00	0.30	1.79	0.06	1.81	80.61	0.10
1000.00	0.24	109.86	1000.00	0.18	2.05	-0.09	2.06	84.90	0.15
1100.00	0.34	143.45	1099.99	-0.13	2.43	-0.45	2.43	93.05	0.20
1200.00	0.08	112.93	1199.99	-0.40	2.67	-0.75	2.70	98.48	0.28
1300.00	0.09	13.79	1299.99	-0.35	2.76	-0.71	2.78	97.29	0.13
1400.00	0.16	155.37	1399.99	-0.41	2.83	-0.78	2.86	98.18	0.24
1500.00	0.06	74.40	1499.99	-0.52	2.95	-0.91	2.99	100.04	0.16
1600.00	0.06	320.26	1599.99	-0.47	2.97	-0.86	3.00	98.95	0.10
1700.00	0.19	222.95	1699.99	-0.55	2.82	-0.92	2.87	101.06	0.21
1800.00	0.37	183.67	1799.99	-1.00	2.68	-1.34	2.86	110.36	0.25

VES Survey Date: 10/26/2015

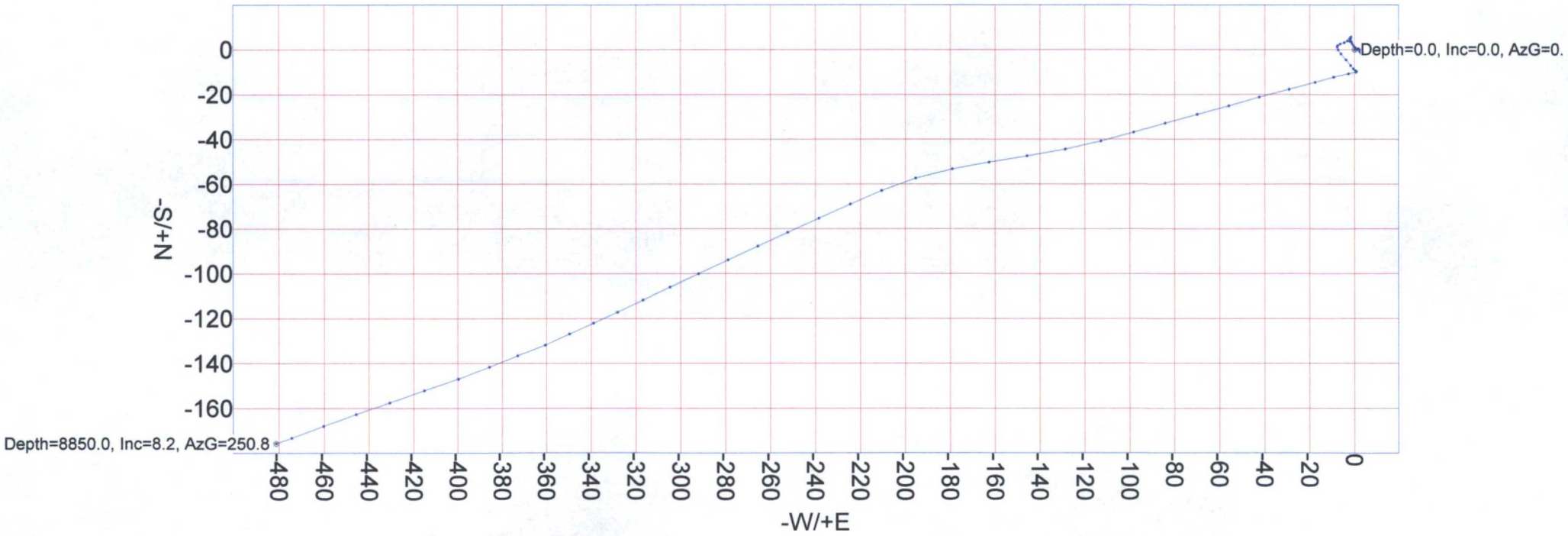
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	0.30	150.61	1899.99	-1.54	2.79	-1.90	3.19	118.94	0.20
2000.00	0.09	316.23	1999.99	-1.71	2.86	-2.07	3.33	120.86	0.39
2100.00	0.13	21.15	2099.99	-1.54	2.84	-1.90	3.23	118.43	0.13
2200.00	0.32	326.28	2199.99	-1.20	2.73	-1.55	2.98	113.69	0.27
2300.00	0.68	305.09	2299.99	-0.62	2.09	-0.90	2.18	106.64	0.40
2400.00	0.86	313.57	2399.98	0.24	1.06	0.10	1.08	77.33	0.21
2500.00	0.43	307.92	2499.97	0.99	0.21	0.95	1.01	12.14	0.44
2600.00	0.70	317.12	2599.96	1.67	-0.50	1.72	1.75	343.25	0.29
2700.00	0.64	335.58	2699.96	2.63	-1.15	2.76	2.87	336.34	0.22
2800.00	0.39	343.59	2799.95	3.47	-1.48	3.63	3.77	336.88	0.26
2900.00	0.23	255.15	2899.95	3.74	-1.77	3.94	4.14	334.66	0.45
3000.00	0.11	262.78	2999.95	3.68	-2.06	3.92	4.22	330.70	0.12
3100.00	0.06	143.06	3099.95	3.62	-2.13	3.87	4.20	329.58	0.15
3200.00	0.13	356.88	3199.95	3.70	-2.10	3.94	4.25	330.37	0.19
3300.00	0.12	97.22	3299.95	3.80	-2.01	4.03	4.29	332.14	0.19
3400.00	0.42	349.64	3399.95	4.14	-1.97	4.37	4.59	334.56	0.47
3500.00	0.60	17.46	3499.95	5.00	-1.88	5.21	5.34	339.43	0.31
3600.00	0.15	356.03	3599.94	5.64	-1.73	5.82	5.90	342.96	0.46
3700.00	0.10	146.73	3699.94	5.70	-1.69	5.88	5.95	343.48	0.24
3800.00	0.33	233.82	3799.94	5.47	-1.88	5.67	5.78	341.04	0.34
3900.00	0.60	214.95	3899.94	4.86	-2.41	5.14	5.43	333.62	0.31
4000.00	0.83	222.87	3999.93	3.90	-3.21	4.29	5.05	320.57	0.25
4100.00	1.06	258.06	4099.92	3.18	-4.61	3.76	5.60	304.59	0.61
4200.00	1.13	242.82	4199.90	2.53	-6.40	3.36	6.88	291.60	0.30
4300.00	0.42	236.65	4299.89	1.88	-7.59	2.87	7.82	283.90	0.71
4400.00	0.65	166.05	4399.89	1.12	-7.76	2.14	7.84	278.23	0.65
4500.00	0.84	155.61	4499.88	-0.09	-7.32	0.88	7.32	269.26	0.23
4600.00	1.71	140.62	4599.85	-1.91	-6.07	-1.09	6.37	252.52	0.92
4700.00	2.30	139.32	4699.79	-4.58	-3.82	-4.04	5.97	219.83	0.59
4800.00	1.32	144.46	4799.74	-7.04	-1.84	-6.73	7.28	194.68	0.98
4900.00	0.90	138.00	4899.72	-8.57	-0.65	-8.40	8.59	184.32	0.44
5000.00	0.44	120.75	4999.72	-9.35	0.21	-9.29	9.35	178.71	0.50
5100.00	0.37	127.78	5099.71	-9.74	0.80	-9.76	9.77	175.33	0.09
5200.00	0.49	259.28	5199.71	-10.02	0.63	-10.01	10.03	176.40	0.78
5300.00	3.51	257.65	5299.64	-10.75	-2.78	-10.29	11.10	194.50	3.02
5400.00	4.10	256.26	5399.42	-12.25	-9.25	-10.92	15.35	217.04	0.60
5500.00	5.84	252.87	5499.04	-14.60	-17.59	-12.14	22.86	230.30	1.76
5600.00	7.90	256.48	5598.32	-17.71	-29.14	-13.69	34.10	238.71	2.11
5700.00	7.98	253.54	5697.36	-21.28	-42.48	-15.47	47.51	243.39	0.41

VES Survey Date: 10/26/2015

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
5800.00	8.21	254.47	5796.36	-25.16	-56.01	-17.52	61.40	245.81	0.26
5900.00	8.42	255.48	5895.31	-28.90	-69.97	-19.38	75.70	247.56	0.26
6000.00	8.66	253.53	5994.20	-32.87	-84.28	-21.42	90.46	248.69	0.38
6100.00	8.24	254.40	6093.12	-36.93	-98.40	-23.58	105.10	249.43	0.45
6200.00	8.96	255.69	6191.99	-40.78	-112.85	-25.48	119.99	250.13	0.75
6300.00	9.85	258.43	6290.65	-44.42	-128.77	-26.98	136.22	250.97	0.99
6400.00	10.10	261.16	6389.14	-47.49	-145.81	-27.76	153.35	251.96	0.53
6500.00	9.66	260.60	6487.65	-50.20	-162.75	-28.21	170.31	252.86	0.45
6600.00	9.57	258.21	6586.25	-53.27	-179.16	-29.08	186.91	253.44	0.41
6700.00	9.78	253.15	6684.83	-57.43	-195.43	-31.05	203.69	253.62	0.88
6800.00	8.78	246.77	6783.52	-62.91	-210.58	-34.47	219.77	253.37	1.43
6900.00	8.71	246.12	6882.36	-68.99	-224.52	-38.65	234.87	252.92	0.13
7000.00	8.95	245.52	6981.17	-75.27	-238.52	-43.02	250.11	252.48	0.26
7100.00	8.58	245.26	7080.01	-81.62	-252.37	-47.48	265.24	252.08	0.37
7200.00	8.31	245.29	7178.92	-87.76	-265.71	-51.80	279.83	251.72	0.27
7300.00	8.43	244.83	7277.85	-93.90	-278.92	-56.14	294.30	251.39	0.14
7400.00	8.28	245.38	7376.79	-100.02	-292.10	-60.45	308.74	251.10	0.17
7500.00	7.82	243.67	7475.81	-106.03	-304.74	-64.74	322.66	250.81	0.52
7600.00	7.62	245.69	7574.90	-111.78	-316.87	-68.83	336.01	250.57	0.34
7700.00	6.80	243.90	7674.11	-117.11	-328.23	-72.61	348.50	250.36	0.84
7800.00	6.73	247.53	7773.41	-121.96	-338.97	-76.00	360.24	250.21	0.43
7900.00	6.70	243.61	7872.73	-126.79	-349.61	-79.38	371.90	250.07	0.46
8000.00	7.13	247.83	7972.00	-131.73	-360.58	-82.81	383.89	249.93	0.66
8100.00	8.06	249.78	8071.12	-136.49	-372.91	-85.90	397.10	249.90	0.97
8200.00	8.01	246.91	8170.14	-141.65	-385.90	-89.30	411.08	249.84	0.40
8300.00	9.12	251.29	8269.03	-146.92	-399.82	-92.68	425.96	249.82	1.29
8400.00	9.68	251.93	8367.68	-152.07	-415.32	-95.73	442.28	249.89	0.56
8500.00	9.18	249.16	8466.33	-157.52	-430.76	-99.08	458.66	249.91	0.67
8600.00	9.12	252.53	8565.06	-162.73	-445.78	-102.27	474.55	249.95	0.54
8700.00	8.71	247.92	8663.85	-167.96	-460.35	-105.51	490.03	249.96	0.82
8800.00	8.52	250.42	8762.73	-173.29	-474.34	-108.94	505.00	249.93	0.42
8850.00	8.23	250.79	8812.19	-175.70	-481.21	-110.43	512.29	249.94	0.60

VES Survey Date: 10/26/2015

VES Survey International
Midland, Texas
432-563-5444
Surveyor: Adam Askew
Macho Nacho State Com No 009H / API 30-025-42518



VES Survey Date: 10/26/2015

VES SURVEY INTERNATIONAL

I Adam Askew certify that I am employed by Vaughn Energy Services. That I did on the day(s) of 10/27/15 through 10/27/15 conduct or supervise the taking of a HA Gyro survey from a depth of 0 feet to a depth of 8850 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 Macho Nacho State Com No Well # 00 9H API # 30-025-42518 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 Vaughn Energy Services

Adam Askew
Service Technician
Vaughn Energy Services