



December 18, 2014

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

15-40276

Attn: Kanicia Castillo

RE: Burch Keely Unit #626

Please find enclosed a copy of the survey from 0.00' to 965.00' ran on the above referenced well.

If I can be of any further service, please do not hesitate to call me at 800-606-4976.

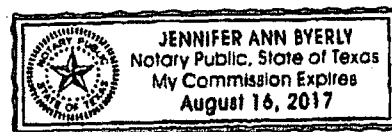
Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 18 day of December A.D., 2014, by Keith Havelka.

Jennifer Ann Byerly
Notary Public, State of Texas





Company: Concho
Lease/Well: Burch Keely Unit #626

Location: Sec24 T17S R29E

Rig Name: Basic 38

State/County: New Mexico/Eddy

Latitude: 32.82, Longitude: -104.02

GRID North is 0.17 Degrees East of True North

VS-Azi: 0.00 Degrees



Depth Reference : RKB = 13 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut

Minimum Curvature Method

Report Date/Time: 12/18/2014 / 10:39

VES Survey International

West Texas

(432) 563-5444

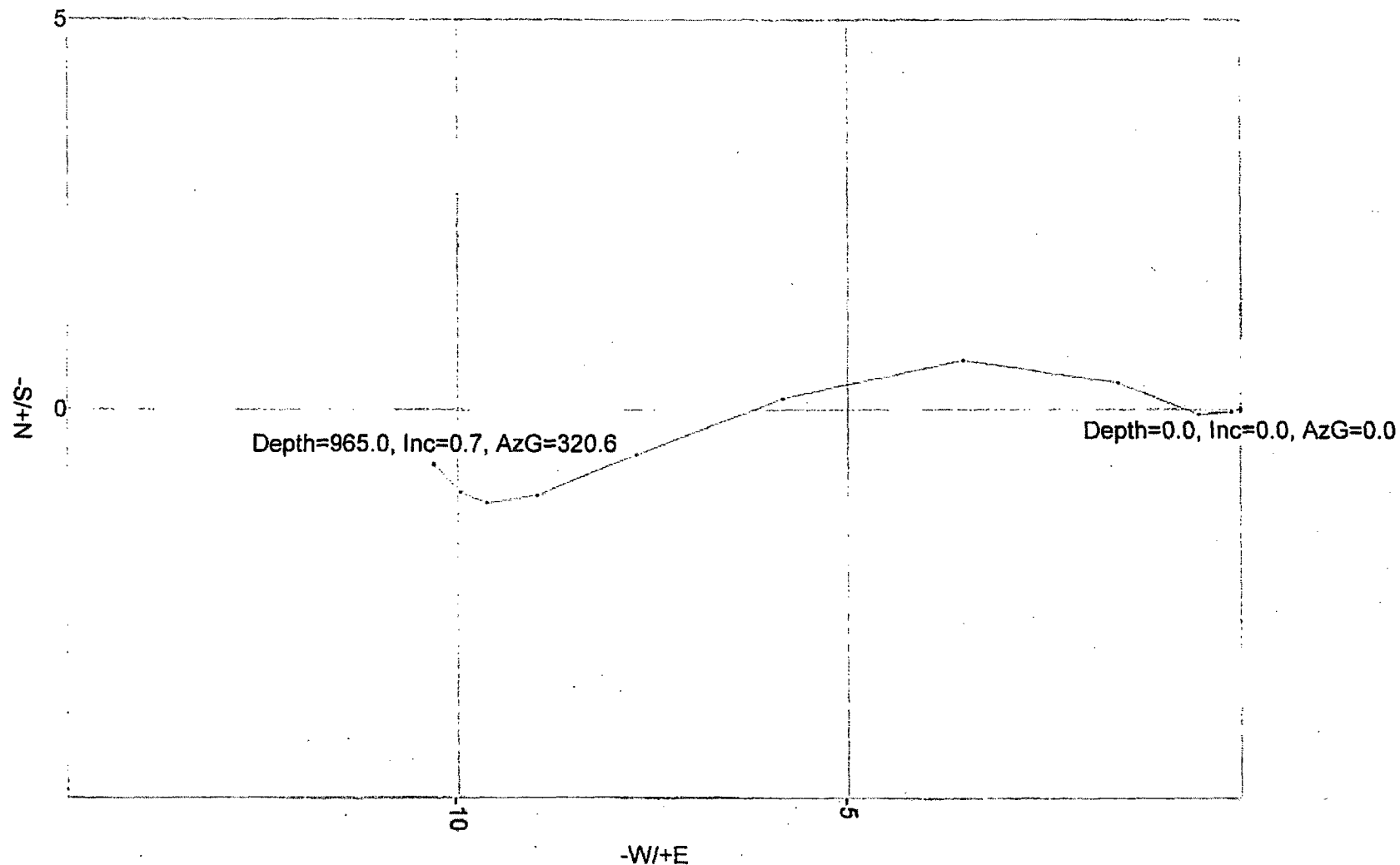
Surveyor: Noe Garza

Burch Keely Unit #626 / API 30-015-40276

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	0.14	253.68	100.00	-0.03	-0.11	-0.03	0.12	253.68	0.14
200.00	0.34	270.43	200.00	-0.07	-0.53	-0.07	0.53	263.00	0.22
300.00	0.95	298.91	299.99	0.34	-1.56	0.34	1.59	282.28	0.67
400.00	1.44	264.94	399.97	0.63	-3.53	0.63	3.59	280.12	0.84
500.00	1.29	250.30	499.94	0.14	-5.84	0.14	5.84	271.39	0.38
600.00	1.02	247.11	599.92	-0.58	-7.71	-0.58	7.73	265.69	0.28
700.00	0.55	248.38	699.91	-1.10	-8.97	-1.10	9.04	262.99	0.47
800.00	0.25	290.14	799.91	-1.20	-8.62	-1.20	9.70	262.67	0.40
900.00	0.17	295.92	899.91	-1.06	-9.96	-1.06	10.02	263.91	0.08
965.00	0.70	320.60	964.91	-0.71	-10.30	-0.71	10.32	266.03	0.84



VES Survey International
West Texas
(432) 563-5444
Surveyor: Noe Garza
Burch Keely Unit #626 / API 30-015-40276



OPERATOR COG Operating
WELL/LEASE Burch Keely Unit #626
COUNTY Eddy Co., NM

STATE OF NEW MEXICO
DEVIATION REPORT

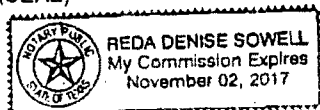
141	0.75
522	1.25
987	0.20
1113	0.20
1050	0.20
1177	0.10
1240	1.00
1303	2.20
1555	4.80
1619	4.80
1682	6.90
1745	8.90
1809	8.90
1872	9.20
2506	10.00
2663	9.50
2758	9.20
2822	9.00
2885	9.40
3012	9.30
3455	10.00
3518	9.40
3581	9.40
3645	9.60
3708	9.00
3771	8.80
4340	8.60
4403	8.90
4466	9.30
4529	9.50
4625	9.10
4688	9.00

SIGNED BY: *Ron Scandolari*
RON SCANDOLARI, VP-CONTRACT DRILLING

STATE OF TEXAS
COUNTY OF MIDLAND

ON THIS 15 DAY OF December, 2014, BEFORE ME, R SOWELL, A NOTARY
PUBLIC, PERSONALLY APPEARED RON SCANDOLARI, WHO ACKNOWLEDGED AND EXECUTED
THIS DOCUMENT. WITNESS MY HAND AND OFFICIAL SEAL.

(SEAL)



Reda Denise Sowell
NOTARY PUBLIC



COG Operating LLC

Eddy County, NM (NAD27 NME)

Burch Keely Unit

#626

WB1 / Job #1412399

Design: Surveys (Basic 38)

Standard Survey Report

06 December, 2014



PHOENIX
TECHNOLOGY SERVICES



Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #626
Project:	Eddy County, NM (NAD27, NME)	TVD Reference:	KB @ 3633.00usft (Basic 38)
Site:	Burch Keely Unit	MD Reference:	KB @ 3633.00usft (Basic 38)
Well:	#626	North Reference:	Grid
Wellbore:	WB1 / Job #1412399	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Basic 38)	Database:	Compass 5000 GCR

Project:	Eddy County, NM (NAD27, NME)		
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:		Burch Keely Unit			
Site Position:		Northing:	666,591.10 usft	Latitude:	32° 49' 55.74916 N
From:	Map	Easting:	596,305.50 usft	Longitude:	104° 1' 11.28420 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.17 °

Well:	#626					
Well Position	+N-S	0.00 usft	Northing:	662,833.40 usft	Latitude:	32° 49' 18.57299 N
	+E-W	0.00 usft	Easting:	596,056.40 usft	Longitude:	104° 1' 14.33394 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	3,621.00 usft

Wellbore						WB1 / Job #1412399					
Magnetics		Model Name		Sample Date		Declination (μ)		Dip Angle (μ)		Field Strength (nT)	
		IGRP2010_14		12/2/2014		7.41		60.58		48,578	

Design:	Surveys (Basic 38)				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction	
	(usft)	(usft)	(usft)	(°)	
	0.00	0.00	0.00	163.58	

Survey Program		Date	12/8/2014	
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
100.00	965.00	VEV Gyro Survey (WB1 / Job #1412399)	VES-ISCWSA-GYRO-3	Biaxial Semi-Cont. Gyro
965.00	4,792.00	Phoenix MWD Survey (WB1 / Job #14123)	PHX+MWD+IGRF	PHX+MWD+IGRF v3: standard declination

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.14	253.68	100.00	-0.03	-0.12	0.00	0.14	0.14	0.00
200.00	0.34	270.43	200.00	-0.07	-0.53	-0.09	0.21	0.20	16.75
300.00	0.95	298.91	299.99	0.34	-1.55	-0.76	0.67	0.61	28.48
400.00	1.44	264.94	399.97	0.63	-3.53	-1.60	0.84	0.49	-33.97
500.00	1.29	250.30	499.94	0.14	-5.84	-1.78	0.38	-0.15	-14.64
600.00	1.02	247.11	599.92	-0.59	-7.72	-1.62	0.28	-0.27	-3.19
700.00	0.55	248.38	699.91	-1.11	-8.99	-1.47	0.47	-0.47	1.27
800.00	0.25	290.14	799.91	-1.21	-9.64	-1.56	0.40	-0.30	41.76
900.00	0.17	295.92	899.91	-1.07	-9.98	-1.79	0.08	-0.08	5.78



Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #626
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3633.00usft (Basic 38)
Site:	Burch Keely Unit	MD Reference:	KB @ 3633.00usft (Basic 38)
Well:	#626	North Reference:	Grid
Wellbore:	WV81 / Job #1412399	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Basic 38)	Database:	Compass 5000 GCR

Survey	Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
	965.00	0.70	320.60	964.91	-0.73	-10.32	-2.22	0.85	0.82	37.97
Tie-on to VES Gyro Survey	1,050.00	0.20	178.40	1,049.91	-0.47	-10.64	-2.56	1.02	-0.59	-167.29
First Phoenix MWD Survey	1,113.00	0.20	349.20	1,112.91	-0.47	-10.66	-2.56	0.63	0.00	271.11
	1,177.00	0.10	54.90	1,176.91	-0.33	-10.63	-2.69	0.29	-0.16	102.66
	1,240.00	1.00	192.20	1,239.90	-0.84	-10.71	-2.22	1.71	1.43	217.94
	1,303.00	2.20	186.80	1,302.88	-2.58	-10.97	-0.63	1.92	1.90	-8.57
	1,366.00	3.20	175.20	1,365.81	-5.53	-10.96	2.21	1.80	1.59	-18.41
	1,429.00	2.60	178.80	1,428.73	-8.71	-10.78	5.31	0.99	-0.95	5.71
	1,492.00	3.10	176.10	1,491.65	-11.84	-10.64	8.35	0.82	0.79	-4.29
	1,555.00	4.80	167.60	1,554.50	-16.11	-9.96	12.64	2.85	2.70	-13.49
	1,619.00	4.80	170.40	1,618.27	-21.37	-8.93	17.97	0.37	0.00	4.38
	1,682.00	6.90	166.90	1,680.94	-27.65	-7.64	24.37	3.38	3.33	-5.56
	1,745.00	8.90	164.90	1,743.34	-36.05	-5.51	33.02	3.20	3.17	-3.17
	1,809.00	8.90	164.30	1,806.57	-45.59	-2.88	42.92	0.15	0.00	-0.94
	1,872.00	8.80	181.10	1,868.82	-54.84	0.00	52.61	0.80	-0.16	-5.08
	1,936.00	9.20	160.00	1,932.03	-64.28	3.33	62.60	0.68	0.63	-1.72
	1,999.00	9.20	160.40	1,994.22	-73.76	6.75	72.66	0.10	0.00	0.63
	2,062.00	8.80	160.70	2,056.45	-83.05	10.03	82.50	0.64	-0.63	0.48
	2,125.00	9.00	161.30	2,118.69	-92.27	13.20	92.24	0.35	0.32	0.95
	2,189.00	9.10	161.10	2,181.89	-101.80	16.45	102.29	0.16	0.16	-0.31
	2,252.00	9.60	161.10	2,244.05	-111.48	19.76	112.52	0.79	0.79	0.00
	2,315.00	9.30	161.90	2,306.20	-121.29	23.04	122.86	0.52	-0.48	1.27
	2,378.00	9.40	162.50	2,368.36	-131.03	26.17	133.09	0.22	0.16	0.95
	2,442.00	9.80	163.10	2,431.46	-141.23	29.33	143.76	0.64	0.63	0.94
	2,505.00	10.10	163.40	2,493.52	-151.65	32.46	154.65	0.48	0.48	0.48
	2,569.00	10.00	162.50	2,556.54	-162.33	35.74	165.81	0.29	-0.16	-1.41
	2,632.00	9.50	160.40	2,618.63	-172.45	39.13	176.47	0.97	-0.79	-3.33
	2,695.00	9.60	160.40	2,680.75	-182.29	42.63	186.91	0.16	0.16	0.00
	2,758.00	9.20	160.00	2,742.91	-191.97	46.12	197.18	0.64	-0.63	-0.63
	2,822.00	9.00	161.40	2,806.10	-201.53	49.47	207.29	0.47	-0.31	2.19
	2,885.00	9.40	161.10	2,868.29	-211.06	52.70	217.35	0.64	0.63	-0.48
	2,949.00	9.20	163.10	2,931.45	-220.90	55.88	227.69	0.59	-0.31	3.13
	3,012.00	9.30	166.20	2,993.63	-230.67	58.56	237.81	0.81	0.16	4.92
	3,075.00	9.10	164.70	3,055.82	-240.42	61.09	247.88	0.50	-0.32	-2.38
	3,138.00	9.00	164.80	3,118.04	-249.98	63.70	257.79	0.16	-0.16	0.16
	3,202.00	8.80	162.60	3,181.27	-259.48	66.47	267.69	0.62	-0.31	-3.44
	3,265.00	8.80	161.60	3,243.52	-268.65	69.44	277.32	0.24	0.00	-1.59
	3,328.00	9.10	161.60	3,305.76	-277.95	72.53	287.12	0.48	0.48	0.00
	3,391.00	9.50	162.40	3,367.93	-287.63	75.67	297.29	0.67	0.63	1.27
	3,445.00	10.00	162.00	3,421.15	-296.34	78.47	306.43	0.93	0.93	-0.74
	3,518.00	9.40	162.80	3,493.10	-308.06	82.19	318.73	0.84	-0.82	1.10



Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #626
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3633.00usft (Basic 38)
Site:	Burch Keely Unit	MD Reference:	KB @ 3633.00usft (Basic 38)
Well:	#626	North Reference:	Grid
Wellbore:	WB1 / Job #1412399	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Basic 38)	Database:	Compass 5000 GCR

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,581.00	9.40	162.70	3,555.26	-317.89	85.24	329.02	0.03	0.00	-0.16
3,645.00	9.60	163.80	3,618.38	-328.00	88.29	339.58	0.42	0.31	1.72
3,708.00	9.00	163.50	3,680.55	-337.77	91.15	349.76	0.96	-0.95	-0.48
3,771.00	8.80	162.20	3,742.79	-347.09	94.02	359.51	0.45	-0.32	-2.06
3,834.00	9.10	163.80	3,805.03	-356.46	96.89	369.31	0.62	0.48	2.54
3,897.00	9.40	164.70	3,867.21	-366.21	99.64	379.43	0.53	0.48	1.43
3,961.00	9.80	164.60	3,930.31	-376.50	102.46	390.11	0.63	0.63	-0.16
4,024.00	9.30	163.90	3,992.44	-386.56	105.30	400.56	0.81	-0.79	-1.11
4,087.00	9.10	161.80	4,054.63	-396.18	108.25	410.63	0.62	-0.32	-3.33
4,150.00	9.30	160.40	4,116.82	-405.71	111.53	420.69	0.48	0.32	-2.22
4,214.00	9.40	161.60	4,179.97	-415.54	114.91	431.08	0.34	0.16	1.88
4,277.00	8.80	161.60	4,242.17	-424.99	118.06	441.03	0.95	-0.95	0.00
4,340.00	8.60	161.10	4,304.45	-434.02	121.10	450.56	0.34	-0.32	-0.79
4,403.00	8.90	161.90	4,366.72	-443.11	124.14	460.13	0.51	0.48	1.27
4,466.00	9.30	162.60	4,428.92	-452.60	127.18	470.09	0.66	0.63	1.11
4,529.00	9.50	160.40	4,491.08	-462.36	130.45	480.38	0.65	0.32	-3.49
4,593.00	9.10	160.60	4,554.24	-472.11	133.90	490.70	0.63	-0.63	0.31
4,656.00	9.00	161.40	4,616.45	-481.48	137.13	500.60	0.26	-0.16	1.27
4,717.00	9.20	162.20	4,676.68	-490.64	140.14	510.24	0.39	0.33	1.31
4,742.00	9.20	162.10	4,701.36	-494.45	141.36	514.24	0.06	0.00	-0.40
Last Phoenix MWD Survey									
4,792.00	9.20	162.10	4,750.72	-502.05	143.82	522.23	0.00	0.00	0.00
Projection to TD									

Measured Depth (usft)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Comment
965.00	964.91	-0.73	-10.32	Tie-on to VES Gyro Survey
1,050.00	1,049.91	-0.47	-10.64	First Phoenix MWD Survey
4,742.00	4,701.36	-494.45	141.36	Last Phoenix MWD Survey
4,792.00	4,750.72	-502.05	143.82	Projection to TD

Checked By: _____ Approved By: _____ Date: _____