

October 2, 2014

15-40885

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

Attn: Kanicia Castillo

RE: Burch Keely Unit No. 900

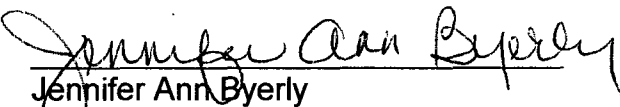
Please find enclosed a copy of the survey from 0.00' to 913.00' ran on the above referenced well.

Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 2 day of October
A.D., 2014, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas





Company: COG Operating, LLC (Concho)
Lease/Well: Burch Keely Unit/No. 900
Location: Unit 1 Sec 23 T17S R29E
Rig Name: Basic 38
State/County: New Mexico/Eddy
Latitude: 32.02, Longitude: -104.04
GRID North is 0.16 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : RKB = 13 Feet

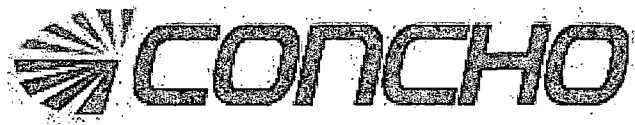
DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut
Minimum Curvature Method
Report Date/Time: 10/2/2014 / 11:41

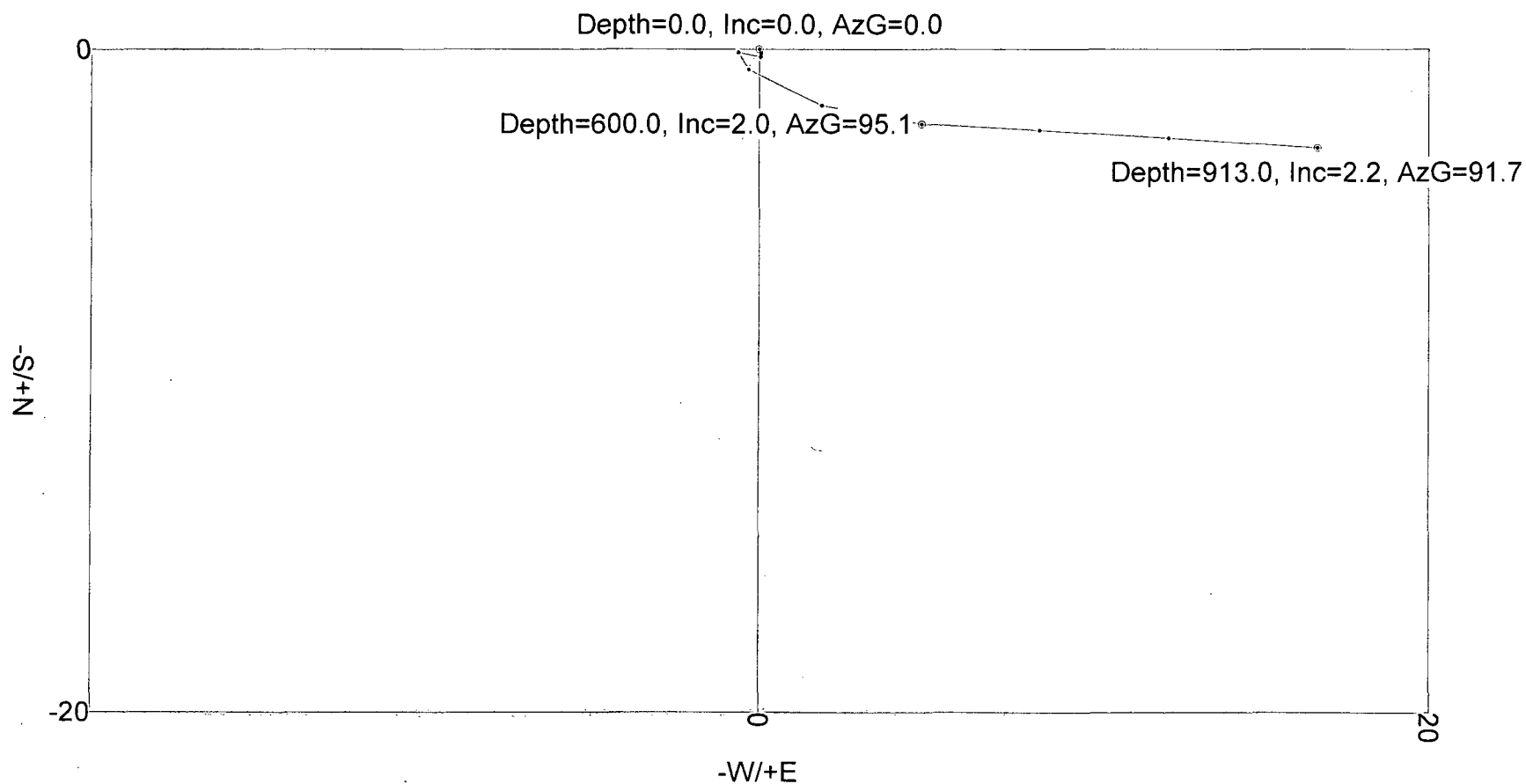
Vaughn Energy Services
West Texas
(432) 563-5444

Surveyor: Noe Garza
Burch Keely Unit No. 900H / API 30-015-40885

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	0.15	156.06	100.00	-0.12	0.05	-0.12	0.13	156.06	0.15
200.00	0.08	270.96	200.00	-0.24	0.04	-0.24	0.24	170.18	0.20
300.00	0.72	283.42	300.00	-0.09	-0.63	-0.09	0.64	261.63	0.65
400.00	1.31	125.76	399.99	-0.61	-0.32	-0.61	0.69	207.50	1.99
500.00	1.52	107.94	499.96	-1.69	1.86	-1.69	2.51	132.15	0.48
600.00	1.97	95.10	599.91	-2.25	4.84	-2.25	5.33	114.93	0.60
700.00	2.09	91.32	699.85	-2.44	8.37	-2.44	8.72	106.27	0.18
800.00	2.33	95.64	799.78	-2.68	12.22	-2.68	12.51	102.39	0.29
913.00	2.18	91.67	912.69	-2.97	16.66	-2.97	16.92	100.12	0.19



Vaughn Energy Services
West Texas
(432) 563-5444
Surveyor: Noe Garza
Burch Keely Unit No. 900H / API 30-015-40885





COG Operating LLC

Eddy County, NM (NAD27 NME)

Burch Keely Unit

#900

WB1 / Job #1411733

Design: Surveys (Basic 38)

Standard Survey Report

23 September, 2014

NM OIL CONSERVATION
ARTESIA DISTRICT

NOV 17 2014

RECEIVED





Phoenix Technology Services
Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well: #900
Project:	Eddy County, NM (NAD27/NME)	TVD Reference:	KB @ 3603.00usft (Basic 38)
Site:	Burch Keely Unit	MD Reference:	KB @ 3603.00usft (Basic 38)
Well:	#900	North Reference:	Grid
Wellbore:	WB1 / Job #1411733	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Basic 38)	Database:	GCR/DB

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
From:	Map	Easting:	596,305.50 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 49' 55.74916 N
		Longitude:	104° 1' 11.28420 W
		Grid Convergence:	0.17 °

Well:	#900		
Well Position	+N-S	0.00 usft	Northing:
	+E-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 49' 8.80635 N
		Longitude:	104° 2' 12.11176 W
		Ground Level:	3,591.00 usft

Wellbore:	WB1 / Job #1411733		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010_14	09/09/14	7.45
			Dip Angle
			60.58
			Field Strength
			48,598

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
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			22.48

Survey Program	Date 09/23/14		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.00	913.00	VES Gyro Survey (WB1 / Job #1411733)	VES-ISCWSA-GYRO-3
1,096.00	4,815.00	Phoenix MWD Survey (WB1 / Job #1411733)	PHX+MWD+IGRF
			Description
			Biaxial Semi-Cont. Gyro
			PHX+MWD+IGRF v3: standard declination

Survey										
Measured	Inclination	Azimuth	Vertical	+N-S	+E-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate	
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.15	156.06	100.00	-0.12	0.05	-0.09	0.15	0.15	0.00	
200.00	0.08	270.96	200.00	-0.24	0.04	-0.21	0.20	-0.07	114.90	
300.00	0.72	283.42	300.00	-0.09	-0.64	-0.33	0.64	0.64	12.46	
400.00	1.31	125.76	399.99	-0.61	-0.33	-0.69	1.99	0.59	-157.66	
500.00	1.52	107.94	499.96	-1.69	1.86	-0.85	0.48	0.21	-17.82	
600.00	1.97	95.10	599.91	-2.25	4.84	-0.23	0.59	0.45	-12.84	
700.00	2.09	91.32	699.85	-2.45	8.37	0.94	0.18	0.12	-3.78	
800.00	2.33	95.64	799.78	-2.69	12.22	2.19	0.29	0.24	4.32	
913.00	2.18	91.67	912.69	-2.98	16.65	3.62	0.19	-0.13	-3.51	



Phoenix Technology Services
Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #900
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3603.00usft (Basic 38)
Site:	Burch Keely Unit	MD Reference:	KB @ 3603.00usft (Basic 38)
Well:	#900	North Reference:	Grid
Wellbore:	WB1 // Job #1411733	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Basic 38)	Database:	GCR DB

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)
Tie-on to VES Gyro Survey									
1,096.00	1.98	99.40	1,095.57	-3.59	23.25	5.57	0.19	-0.11	4.22
First Phoenix MWD Survey									
1,128.00	1.98	92.81	1,127.55	-3.71	24.35	5.88	0.71	0.00	-20.59
1,160.00	2.02	77.25	1,159.53	-3.61	25.45	6.39	1.70	0.13	-48.63
1,255.00	2.51	34.89	1,254.46	-1.54	28.27	9.39	1.79	0.52	-44.59
1,350.00	3.65	25.13	1,349.32	2.91	30.75	14.44	1.32	1.20	-10.27
1,445.00	4.66	18.72	1,444.07	9.30	33.27	21.31	1.17	1.06	-6.75
1,539.00	5.19	19.07	1,537.73	16.93	35.88	29.37	0.56	0.56	0.37
1,634.00	4.88	18.10	1,632.36	24.84	38.54	37.69	0.34	-0.33	-1.02
1,727.00	5.01	15.73	1,725.01	32.50	40.87	45.66	0.26	0.14	-2.55
1,823.00	4.48	13.09	1,820.68	40.19	42.86	53.52	0.60	-0.55	-2.75
1,919.00	4.75	11.68	1,916.37	47.74	44.51	61.13	0.31	0.28	-1.47
2,015.00	5.01	9.84	2,012.03	55.76	46.03	69.12	0.32	0.27	-1.92
2,110.00	5.05	9.84	2,106.66	63.96	47.46	77.25	0.04	0.04	0.00
2,205.00	5.27	12.12	2,201.27	72.35	49.09	85.62	0.32	0.23	2.40
2,301.00	5.76	15.90	2,296.83	81.29	51.33	94.74	0.64	0.51	3.94
2,397.00	5.67	17.66	2,392.35	90.45	54.09	104.25	0.21	-0.09	1.83
2,490.00	5.63	20.12	2,484.90	99.11	57.05	113.39	0.26	-0.04	2.65
2,583.00	5.71	18.01	2,577.45	107.79	60.05	122.56	0.24	0.09	-2.27
2,678.00	5.45	18.45	2,672.00	116.56	62.94	131.77	0.28	-0.27	0.46
2,773.00	5.32	18.01	2,766.58	125.03	65.73	140.66	0.14	-0.14	-0.46
2,868.00	5.36	15.64	2,861.16	133.49	68.29	149.46	0.24	0.04	-2.49
2,962.00	5.63	21.53	2,954.73	142.01	71.16	158.43	0.66	0.29	6.27
3,057.00	5.67	22.14	3,049.27	150.69	74.64	167.78	0.08	0.04	0.64
3,153.00	5.76	23.46	3,144.79	159.50	78.35	177.34	0.17	0.09	1.38
3,248.00	5.71	24.52	3,239.32	168.18	82.21	186.83	0.12	-0.05	1.12
3,343.00	5.45	22.41	3,333.87	176.65	85.89	196.06	0.35	-0.27	-2.22
3,438.00	5.23	21.62	3,428.46	184.84	89.20	204.91	0.24	-0.23	-0.83
3,533.00	5.10	23.55	3,523.07	192.74	92.49	213.46	0.23	-0.14	2.03
3,628.00	5.19	23.55	3,617.69	200.55	95.89	221.97	0.09	0.09	0.00
3,723.00	5.32	17.57	3,712.29	208.69	98.94	230.66	0.59	0.14	-6.29
3,817.00	5.45	17.40	3,805.87	217.10	101.59	239.45	0.14	0.14	-0.18
3,912.00	5.45	18.89	3,900.45	225.67	104.40	248.44	0.15	0.00	1.57
4,007.00	5.54	21.44	3,995.01	234.21	107.53	257.53	0.27	0.09	2.68
4,102.00	5.19	22.06	4,089.59	242.46	110.82	266.41	0.37	-0.37	0.65
4,197.00	5.36	21.00	4,184.19	250.59	114.03	275.14	0.21	0.18	-1.12
4,292.00	5.49	19.24	4,278.76	259.02	117.12	284.12	0.22	0.14	-1.85
4,387.00	5.41	14.23	4,373.34	267.65	119.71	293.09	0.51	-0.08	-5.27
4,482.00	5.49	15.73	4,467.91	276.37	122.05	302.03	0.17	0.08	1.58
4,577.00	5.54	15.55	4,562.47	285.16	124.51	311.10	0.06	0.05	-0.19
4,671.00	5.49	14.32	4,656.03	293.89	126.84	320.05	0.14	-0.05	-1.31
4,766.00	5.32	15.46	4,750.61	302.53	129.13	328.92	0.21	-0.18	1.20



Phoenix Technology Services
Survey Report



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Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3603.00usft (Basic 38)
Site:	Burch Keely Unit	MD Reference:	KB @ 3603.00usft (Basic 38)
Well:	#900	North Reference:	Grid
Wellbore:	WB1 / Job #1411733	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Basic 38)	Database:	GCR DB

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)
Last Phoenix MWD Survey									
4,815.00	5.32	15.46	4,799.40	306.91	130.35	333.43	0.00	0.00	0.00
Projection to TD									

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/S (usft)	+E/W (usft)	
913.00	912.69	-2.98	16.65	Tie-on to VES Gyro Survey
1,096.00	1,095.57	-3.59	23.25	First Phoenix MWD Survey
4,766.00	4,750.61	302.53	129.13	Last Phoenix MWD Survey
4,815.00	4,799.40	306.91	130.35	Projection to TD

Checked By: _____ Approved By: _____ Date: _____