



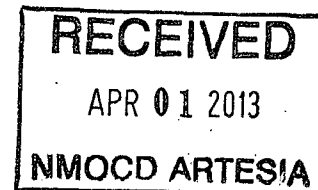
PHOENIX
TECHNOLOGY SERVICES

March 28, 2013

Oil Conservation Division
State of New Mexico
811 S. First St.
Artesia, New Mexico 88210

Dear District 2 - Artesia

Re: Concho Resources Inc.
Patton 5 Fee #1H
Eddy Co., NM
API #30-015-39814
Job No. 1310304



Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. (P-5 No. 664171). Other information required by your office is as follows:

Name & Title of Surveyor	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Robert Dillon	1H	2,306	7,232	03/16/2013	03/23/2013	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Kelly Jo Walter

Kelly Jo Walter
Operations Administrator

Certified mail receipt number: 7011 1570 0001 4364 9551

PHOENIX TECHNOLOGY SERVICES SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER 1310304

OPERATOR COG Operating

WELL NAME Patton 5 Fee # 1H

COUNTY & STATE

Eddy County, NM

API WELL NUMBER 30-015-39814

PROPOSED DIRECTION 89.64

TIE-IN DATA						
MEASURED DEPTH	VERTICAL DEPTH	INCLIN	AZIMUTH	N-S COORD	E-W COORD	DATA SOURCE
2,230 ft	2,228.92 ft	1.55	175.22	-60.59	5.07	Gyro (VES)

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
16-Mar-13	2,306 ft	1.5	185.1

SURVEY INSTRUMENT TYPE
PHOENIX MWD

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
23-Mar-13	7,232 ft	87.7	90.4

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED TD SURVEY DATE	PROJECTED TD SURVEY DEPTH	INCLIN	AZIMUTH
23-Mar-13	7,294 ft	87.7	90.4

Robert Dillon

PRINT YOUR NAME ABOVE

Robert Dillon

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	7.84
DECLINATION OR GRID	Grid

3-24-2013

TODAY'S DATE

MWD SUPERVISOR 1

Bob Dillon

DIRECTIONAL DRILLER 1

Andrew Hodgkins

MWD SUPERVISOR 2

Eric Burchinal

DIRECTIONAL DRILLER 2

Nathan Hodgkins

1805 Brittmore Road

Houston, Texas 77043

(713)3370609 (Voice), (713)337-0599 (Fax)



COG Operating LLC

Eddy County, New Mexico (NAD 27 NME)

Patton 5 Fee

#1H

Wellbore #1 / Job #1310304

Survey: Phoenix MWD Survey

Standard Survey Report

24 March, 2013



**PHOENIX
TECHNOLOGY SERVICES**



Phoenix Technology Services
Survey Report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well #1H
Project:	Eddy County, New Mexico (NAD 27 NME)	TVD Reference:	RF @ 3394.00usft (JW 4)
Site:	Patton 5 Fee	MD Reference:	RF @ 3394.00usft (JW 4)
Well:	#1H	North Reference:	Grid
Wellbore:	Wellbore #1 / Job #1310304	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (JW 4)	Database:	GCR DB v5000

Project:	Eddy County, New Mexico (NAD 27 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:	Patton 5 Fee		
Site Position:		Northing:	613,610.70 usft
From:	Map	Easting:	475,920.20 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 41' 12.805817 N
		Longitude:	104° 24' 41.761820 W
		Grid Convergence:	-0.04 °

Well:	#1H		
Well Position	+N-S	0.00 usft	Northing:
	+E-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 41' 44.586409 N
		Longitude:	104° 24' 40.545592 W
		Ground Level:	3,381.00 usft

Wellbore:	Wellbore #1 / Job #1310304		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010_14	03/16/13	7.79
			Dip Angle
			(°)
			60.44
			Field Strength
			(nT)
			48,632

Design:	Surveys (JW 4)		
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
			(°)
			89.64

Survey Program	Date 03/24/13		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
100.00	2,230.00	VES Gyro (Wellbore #1 / Job #1310304)	VES-ISCWSA-GYRO-3
2,306.00	7,294.00	Phoenix MWD Survey (Wellbore #1 / Job #	MWD
			Description
			Biaxial Semi-Cont. Gyro
			MWD - Standard

Survey	Measured Depth	Inclination	Azimuth	Vertical Depth	+N-S	+E-W	Vertical Section	Dogleg Rate	Build Rate	Turn Rate
	(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
	2,230.00	1.55	175.22	2,228.92	-60.61	5.07	4.69	0.00	0.00	0.00
	Tie-on to VES Gyro									
	2,306.00	1.50	185.10	2,304.89	-62.62	5.07	4.67	0.35	-0.07	13.00
	Phoenix First MWD Survey									
	2,400.00	3.40	85.50	2,398.83	-63.63	7.74	7.34	4.19	2.02	-105.96
	2,431.00	6.30	74.60	2,429.72	-63.11	10.29	9.90	9.77	9.35	-35.16
	2,462.00	9.40	70.00	2,460.42	-61.79	14.31	13.93	10.20	10.00	-14.84
	2,493.00	12.00	68.70	2,490.88	-59.75	19.70	19.32	8.42	8.39	-4.19
	2,524.00	15.60	68.50	2,520.98	-57.05	26.58	26.22	11.61	11.61	-0.65



Phoenix Technology Services

Survey Report



Company:	COG Operating, LLC	Local Co-ordinate Reference:	Well #1H
Project:	Eddy County, New Mexico, (NAD 27, NME)	TVD Reference:	RF @ 3394.00usft (JW 4)
Site:	Patton 5 Fee	MD Reference:	RF @ 3394.00usft (JW 4)
Well:	#1H	North Reference:	Grid
Wellbore:	Wellbore #1 - Job #1310304	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (JW 4)	Database:	GCR DB v5000

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)
2,555.00	19.30	68.00	2,550.55	-53.61	35.21	34.87	11.95	11.94	-1.61
2,587.00	22.90	68.10	2,580.40	-49.30	45.89	45.58	11.25	11.25	0.31
2,618.00	26.20	70.00	2,608.59	-44.71	57.92	57.64	10.94	10.65	6.13
2,649.00	29.90	72.20	2,635.95	-40.00	71.72	71.46	12.39	11.94	7.10
2,681.00	33.00	74.70	2,663.25	-35.27	87.72	87.50	10.51	9.69	7.81
2,712.00	36.60	76.20	2,688.70	-30.83	104.84	104.65	11.94	11.61	4.84
2,743.00	39.80	77.70	2,713.06	-26.51	123.52	123.35	10.75	10.32	4.84
2,774.00	43.40	79.40	2,736.24	-22.44	143.69	143.54	12.17	11.61	5.48
2,805.00	46.60	80.80	2,758.15	-18.68	165.28	165.16	10.80	10.32	4.52
2,836.00	49.60	82.50	2,778.85	-15.34	188.11	188.01	10.50	9.68	5.48
2,867.00	52.80	84.40	2,798.28	-12.59	212.10	212.02	11.37	10.32	6.13
2,899.00	55.60	86.60	2,817.00	-10.56	237.97	237.90	10.37	8.75	6.88
2,930.00	58.50	88.40	2,833.86	-9.43	263.96	263.89	10.55	9.35	5.81
2,961.00	61.50	89.50	2,849.36	-8.95	290.80	290.73	10.15	9.68	3.55
2,992.00	64.00	90.30	2,863.55	-8.90	318.35	318.29	8.38	8.06	2.58
3,023.00	67.80	90.20	2,876.20	-9.02	346.65	346.58	12.26	12.26	-0.32
3,055.00	69.80	89.80	2,887.78	-9.02	376.48	376.41	6.36	6.25	-1.25
3,086.00	73.10	89.10	2,897.64	-8.74	405.86	405.80	10.86	10.65	-2.26
3,117.00	75.40	88.90	2,906.05	-8.22	435.69	435.63	7.45	7.42	-0.65
3,148.00	78.90	88.20	2,912.94	-7.45	465.90	465.84	11.50	11.29	-2.26
3,180.00	82.30	87.30	2,918.17	-6.21	497.44	497.39	10.98	10.63	-2.81
3,211.00	85.10	87.20	2,921.57	-4.73	528.22	528.18	9.04	9.03	-0.32
3,242.00	87.60	87.40	2,923.54	-3.28	559.12	559.08	8.09	8.06	0.65
3,335.00	91.50	87.80	2,924.27	0.62	652.01	652.00	4.22	4.19	0.43
3,429.00	90.10	88.60	2,922.96	3.57	745.95	745.96	1.72	-1.49	0.85
3,523.00	88.10	90.10	2,924.44	4.64	839.93	839.94	2.66	-2.13	1.60
3,616.00	88.10	90.30	2,927.52	4.31	932.88	932.89	0.21	0.00	0.22
3,710.00	88.10	90.40	2,930.64	3.74	1,026.82	1,026.83	0.11	0.00	0.11
3,803.00	87.80	89.70	2,933.97	3.66	1,119.76	1,119.76	0.82	-0.32	-0.75
3,897.00	87.20	88.90	2,938.07	4.80	1,213.67	1,213.67	1.06	-0.64	-0.85
3,990.00	88.70	89.50	2,941.39	6.10	1,306.59	1,306.61	1.74	1.61	0.65
4,084.00	88.60	88.80	2,943.61	7.49	1,400.56	1,400.58	0.75	-0.11	-0.74
4,177.00	87.90	90.60	2,946.45	7.98	1,493.51	1,493.53	2.08	-0.75	1.94
4,270.00	87.90	89.90	2,949.86	7.58	1,586.44	1,586.46	0.75	0.00	-0.75
4,364.00	87.80	89.50	2,953.38	8.07	1,680.38	1,680.39	0.44	-0.11	-0.43
4,457.00	87.50	89.20	2,957.20	9.12	1,773.29	1,773.31	0.46	-0.32	-0.32
4,551.00	88.50	90.60	2,960.48	9.29	1,867.23	1,867.25	1.83	1.06	1.49
4,644.00	88.00	90.40	2,963.32	8.47	1,960.18	1,960.20	0.58	-0.54	-0.22
4,738.00	87.40	90.10	2,967.09	8.06	2,054.11	2,054.12	0.71	-0.64	-0.32
4,833.00	88.70	91.20	2,970.32	6.99	2,149.04	2,149.04	1.79	1.37	1.16
4,926.00	87.90	91.50	2,973.08	4.80	2,241.98	2,241.96	0.92	-0.86	0.32
5,020.00	88.90	91.90	2,975.70	2.01	2,335.90	2,335.86	1.15	1.06	0.43
5,114.00	88.00	89.30	2,978.25	1.03	2,429.85	2,429.81	2.93	-0.96	-2.77



Phoenix Technology Services
Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #1H
Project:	Eddy County, New Mexico (NAD 27 NME)	TVD Reference:	RF @ 3394.00usft (JW 4)
Site:	Patton 5 Fee	MD Reference:	RF @ 3394.00usft (JW 4)
Well:	#1H	North Reference:	Grid
Wellbore:	Wellbore #1 / Job #1310304	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (JW 4)	Database:	GCR DB v5000

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)
5,207.00	86.90	88.90	2,982.39	2.48	2,522.74	2,522.71	1.26	-1.18	-0.43
5,301.00	88.20	88.10	2,986.40	4.94	2,616.62	2,616.60	1.62	1.38	-0.85
5,394.00	89.30	87.70	2,988.43	8.35	2,709.53	2,709.53	1.26	1.18	-0.43
5,488.00	87.90	86.90	2,990.73	12.78	2,803.40	2,803.42	1.72	-1.49	-0.85
5,581.00	87.60	87.30	2,994.38	17.48	2,896.21	2,896.26	0.54	-0.32	0.43
5,675.00	88.30	87.40	2,997.74	21.82	2,990.05	2,990.13	0.75	0.74	0.11
5,769.00	88.70	88.50	3,000.20	25.18	3,083.95	3,084.05	1.24	0.43	1.17
5,862.00	90.20	89.20	3,001.10	27.05	3,176.93	3,177.03	1.78	1.61	0.75
5,956.00	89.10	89.30	3,001.67	28.28	3,270.92	3,271.03	1.18	-1.17	0.11
6,050.00	89.20	90.10	3,003.06	28.77	3,364.90	3,365.02	0.86	0.11	0.85
6,144.00	89.00	89.80	3,004.54	28.85	3,458.89	3,459.00	0.38	-0.21	-0.32
6,238.00	88.80	89.80	3,006.35	29.18	3,552.87	3,552.99	0.21	-0.21	0.00
6,331.00	88.80	89.70	3,008.29	29.59	3,645.85	3,645.97	0.11	0.00	-0.11
6,425.00	88.40	89.80	3,010.59	30.00	3,739.82	3,739.94	0.44	-0.43	0.11
6,518.00	88.00	89.90	3,013.51	30.24	3,832.78	3,832.89	0.44	-0.43	0.11
6,612.00	89.60	90.40	3,015.48	29.99	3,926.75	3,926.86	1.78	1.70	0.53
6,706.00	89.30	90.80	3,016.38	29.01	4,020.74	4,020.85	0.53	-0.32	0.43
6,801.00	88.90	91.00	3,017.87	27.52	4,115.72	4,115.81	0.47	-0.42	0.21
6,893.00	88.60	91.30	3,019.88	25.67	4,207.68	4,207.76	0.46	-0.33	0.33
6,986.00	88.00	91.50	3,022.64	23.40	4,300.61	4,300.67	0.68	-0.65	0.22
7,080.00	88.60	90.20	3,025.43	22.01	4,394.56	4,394.61	1.52	0.64	-1.38
7,174.00	87.80	90.20	3,028.38	21.68	4,488.51	4,488.55	0.85	-0.85	0.00
7,232.00	87.70	90.40	3,030.66	21.38	4,546.46	4,546.51	0.39	-0.17	0.34
Last Phoenix MWD Survey									
7,294.00	87.70	90.40	3,033.15	20.94	4,608.41	4,608.45	0.00	0.00	0.00
Projection to TD									

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,230.00	2,228.92	-60.61	5.07	Tie-on to VES Gyro
2,306.00	2,304.89	-62.62	5.07	Phoenix First MWD Survey
7,232.00	3,030.66	21.38	4,546.46	Last Phoenix MWD Survey
7,294.00	3,033.15	20.94	4,608.41	Projection to TD

Checked By: _____ Approved By: _____ Date: _____