



PHOENIX
TECHNOLOGY SERVICES

June 4, 2015

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

NM OIL CONSERVATION
ARTESIA DISTRICT

FEB 17 2016

Dear District 2 - Artesia

RECEIVED

Re: Concho Resources Inc.
Stonewall 9 Fee #6H
Eddy County, NM
API #30-015-42952
Job No. 1513532

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	
Lee Conoly	6H	2,547	7,674	05/14/15	05/19/15	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,

Alva Dunigan

Alva Dunigan
Operations Administrator

Certified mail receipt number: 7011 1570 0001 4635 0601

Phoenix Technology Services SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER 1513532

ENERGY COMPANY Concho

WELL NAME Stonewall 9 Fee #6H

COUNTY & STATE

Eddy County, New Mexico

API WELL NUMBER 30-015-42952

PROPOSED DIRECTION 358.42

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
2,472. ft	2,471.65 ft	0.76	313.05	-.01 ft	-31.24 ft	Gyro

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
14-May-15	2,547.00 ft	3.20	355.00

SURVEY INSTRUMENT TYPE
Phoenix MWD

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
19-May-15	7,674.00 ft	91.60	358.50

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
19-May-15	7,734.00 ft	91.60	358.50

Lee Conoly

PRINT YOUR NAME ABOVE

Lee Conoly

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	DECLINATION
7.66	
DECLINATION OR GRID	DECLINATION

5/19/2015

TODAY'S DATE

MWD SUPERVISOR 1

Lee Conoly

DIRECTIONAL DRILLER 1

Michael Crall

MWD SUPERVISOR 2

William K. Gutierrez

DIRECTIONAL DRILLER 2

James Thames

12329 Cutten Rd., Houston, Texas 777066

(713)337-0600 (Voice), (713)337-0599 (Fax)



COG Operating LLC

Eddy County, NM (NAD27 NME)

Stonewall 9 Fee

#6H

WB1 / Job #1513532

Survey: Phoenix MWD Surveys

Standard Survey Report

20 May, 2015

NM OIL CONSERVATION

ARTESIA DISTRICT

FEB 17 2016

RECEIVED





Phoenix Technology Services
Survey Report



Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County, NM (NAD27 NME)	TVD Reference:	KB @ 3372.00usft (Silver Oak 3)
Site:	Stonewall 9 Fee	MD Reference:	KB @ 3372.00usft (Silver Oak 3)
Well:	#6H	North Reference:	Grid
Wellbore:	WB1 / Job #1513532	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 3)	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	Stonewall 9 Fee		
Site Position:		Northing:	611,835.50 usft
From:	Map	Easting:	482,702.00 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 40' 55.28160 N
		Longitude:	104° 23' 22.39586 W
		Grid Convergence:	-0.03 °

Well	#6H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 40' 5.31615 N
		Longitude:	104° 23' 13.98945 W
		Ground Level:	3,354.00 usft

Wellbore	WB1 / Job #1513532				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	5/6/2015	7.63	60.55	48,415

Design	Surveys (Silver Oak 3)			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	358.42

Survey Program	Date 5/20/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.00	2,472.00	VES Gyro Survey (WB1 / Job #1513532)	NS-GYRO-MS	North sensing gyrocompassing m/s
2,547.00	7,734.00	Phoenix MWD Surveys (WB1 / Job #1513)	PHX+MWD+HDGM	PHX+MWD+HDGM

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)
2,472.00	0.76	313.05	2,471.65	-0.01	-31.24	0.85	0.00	0.00	0.00
Tie-on to VES Gyro Survey									
2,547.00	3.20	355.00	2,546.60	2.42	-31.79	3.29	3.58	3.25	55.93
First Phoenix MWD Survey									
2,579.00	6.00	0.00	2,578.50	4.98	-31.86	5.85	8.83	8.75	15.63
2,610.00	8.40	3.60	2,609.25	8.86	-31.72	9.73	7.87	7.74	11.61
2,641.00	10.90	1.20	2,639.81	14.05	-31.52	14.91	8.17	8.06	-7.74
2,673.00	13.10	358.70	2,671.11	20.70	-31.54	21.56	7.06	6.88	-7.81
2,704.00	15.20	358.30	2,701.17	28.28	-31.74	29.14	6.78	6.77	-1.29



Phoenix Technology Services

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Site:	Stonewall 9 Fee	MD Reference:	KB @ 3372.00usft (Silver Oak 3)
Well:	#6H	North Reference:	Grid
Wellbore:	WB1 / Job #1513532	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 3)	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)
2,736.00	17.90	358.30	2,731.84	37.39	-32.01	38.25	8.44	8.44	0.00
2,767.00	21.10	357.80	2,761.06	47.73	-32.36	48.60	10.34	10.32	-1.61
2,798.00	23.90	357.00	2,789.69	59.58	-32.91	60.46	9.09	9.03	-2.58
2,830.00	26.50	358.00	2,818.64	73.19	-33.49	74.08	8.23	8.13	3.13
2,861.00	29.60	359.80	2,846.00	87.76	-33.76	88.66	10.37	10.00	5.81
2,893.00	32.90	0.40	2,873.35	104.36	-33.73	105.25	10.36	10.31	1.88
2,924.00	36.50	359.80	2,898.84	122.00	-33.70	122.88	11.66	11.61	-1.94
2,956.00	39.70	359.50	2,924.02	141.74	-33.83	142.62	10.02	10.00	-0.94
2,987.00	42.20	359.80	2,947.43	162.06	-33.95	162.93	8.09	8.06	0.97
3,019.00	45.00	0.40	2,970.60	184.12	-33.91	184.99	8.84	8.75	1.88
3,051.00	47.70	1.20	2,992.68	207.27	-33.58	208.12	8.63	8.44	2.50
3,082.00	50.70	1.90	3,012.94	230.73	-32.94	231.55	9.83	9.68	2.26
3,113.00	53.90	1.70	3,031.89	255.24	-32.17	256.03	10.34	10.32	-0.65
3,145.00	57.50	1.60	3,049.92	281.66	-31.41	282.42	11.25	11.25	-0.31
3,177.00	60.70	1.10	3,066.35	309.11	-30.77	309.84	10.09	10.00	-1.56
3,208.00	63.80	359.90	3,080.79	336.54	-30.53	337.25	10.57	10.00	-3.87
3,240.00	67.00	359.50	3,094.11	365.63	-30.69	366.34	10.06	10.00	-1.25
3,271.00	70.90	358.20	3,105.24	394.55	-31.27	395.26	13.18	12.58	-4.19
3,303.00	74.60	357.30	3,114.73	425.08	-32.47	425.81	11.87	11.56	-2.81
3,335.00	78.60	357.50	3,122.14	456.17	-33.88	456.93	12.51	12.50	0.63
3,366.00	81.70	357.90	3,127.44	486.68	-35.11	487.47	10.08	10.00	1.29
3,398.00	84.70	357.90	3,131.23	518.43	-36.27	519.24	9.38	9.38	0.00
3,449.00	89.70	357.30	3,133.72	569.31	-38.41	570.15	9.87	9.80	-1.18
3,512.00	89.80	358.50	3,134.00	632.27	-40.71	633.15	1.91	0.16	1.90
3,606.00	90.10	359.30	3,134.08	726.25	-42.52	727.15	0.91	0.32	0.85
3,701.00	89.50	359.00	3,134.41	821.24	-43.93	822.14	0.71	-0.63	-0.32
3,795.00	91.80	359.70	3,133.35	915.22	-44.99	916.11	2.56	2.45	0.74
3,890.00	90.40	359.00	3,131.52	1,010.19	-46.07	1,011.08	1.65	-1.47	-0.74
3,985.00	90.50	358.90	3,130.78	1,105.17	-47.81	1,106.07	0.15	0.11	-0.11
4,081.00	90.70	358.60	3,129.77	1,201.15	-49.91	1,202.07	0.38	0.21	-0.31
4,175.00	90.80	358.40	3,128.54	1,295.11	-52.37	1,296.06	0.24	0.11	-0.21
4,269.00	90.80	358.40	3,127.23	1,389.06	-54.99	1,390.05	0.00	0.00	0.00
4,365.00	90.80	358.60	3,125.89	1,485.02	-57.50	1,486.04	0.21	0.00	0.21
4,460.00	90.90	358.60	3,124.48	1,579.98	-59.83	1,581.03	0.11	0.11	0.00
4,554.00	91.00	358.80	3,122.92	1,673.94	-61.96	1,675.01	0.24	0.11	0.21
4,648.00	91.20	358.70	3,121.11	1,767.90	-64.01	1,768.99	0.24	0.21	-0.11
4,743.00	91.40	358.90	3,118.96	1,862.86	-66.00	1,863.97	0.30	0.21	0.21
4,836.00	91.70	358.80	3,116.44	1,955.80	-67.86	1,956.93	0.34	0.32	-0.11
4,931.00	90.90	358.90	3,114.29	2,050.76	-69.77	2,051.90	0.85	-0.84	0.11
5,025.00	91.00	358.70	3,112.73	2,144.73	-71.74	2,145.89	0.24	0.11	-0.21
5,120.00	91.00	358.60	3,111.07	2,239.68	-73.98	2,240.87	0.11	0.00	-0.11
5,214.00	90.90	358.80	3,109.51	2,333.65	-76.11	2,334.86	0.24	-0.11	0.21
5,308.00	90.90	358.80	3,108.04	2,427.62	-78.08	2,428.85	0.00	0.00	0.00



Phoenix Technology Services

Survey Report



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Well:	#6H	North Reference:	Grid
Wellbore:	WB1 / Job #1513532	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Silver Oak 3)	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)
5,403.00	91.30	359.00	3,106.21	2,522.58	-79.90	2,523.82	0.47	0.42	0.21
5,498.00	91.60	358.80	3,103.81	2,617.53	-81.72	2,618.79	0.38	0.32	-0.21
5,592.00	90.50	358.90	3,102.09	2,711.50	-83.61	2,712.77	1.18	-1.17	0.11
5,687.00	90.90	358.50	3,100.93	2,806.46	-85.76	2,807.76	0.60	0.42	-0.42
5,782.00	91.30	358.30	3,099.10	2,901.41	-88.42	2,902.74	0.47	0.42	-0.21
5,876.00	91.50	358.20	3,096.81	2,995.34	-91.29	2,996.72	0.24	0.21	-0.11
5,971.00	91.80	357.80	3,094.07	3,090.24	-94.60	3,091.67	0.53	0.32	-0.42
6,066.00	91.00	357.70	3,091.75	3,185.14	-98.33	3,186.64	0.85	-0.84	-0.11
6,160.00	90.80	358.90	3,090.27	3,279.08	-101.12	3,280.62	1.29	-0.21	1.28
6,254.00	90.00	358.50	3,089.62	3,373.06	-103.25	3,374.62	0.95	-0.85	-0.43
6,348.00	90.40	358.50	3,089.29	3,467.02	-105.71	3,468.62	0.43	0.43	0.00
6,443.00	90.60	358.40	3,088.46	3,561.98	-108.28	3,563.61	0.24	0.21	-0.11
6,537.00	90.70	358.10	3,087.39	3,655.93	-111.15	3,657.61	0.34	0.11	-0.32
6,632.00	91.10	358.90	3,085.90	3,750.89	-113.64	3,752.60	0.94	0.42	0.84
6,727.00	91.40	358.50	3,083.83	3,845.84	-115.79	3,847.57	0.53	0.32	-0.42
6,822.00	91.90	359.00	3,081.09	3,940.78	-117.86	3,942.53	0.74	0.53	0.53
6,917.00	91.10	359.70	3,078.61	4,035.74	-118.94	4,037.48	1.12	-0.84	0.74
7,007.00	91.40	359.30	3,076.64	4,125.71	-119.73	4,127.45	0.56	0.33	-0.44
7,102.00	90.10	359.30	3,075.40	4,220.70	-120.89	4,222.42	1.37	-1.37	0.00
7,196.00	90.40	358.30	3,074.99	4,314.67	-122.85	4,316.42	1.11	0.32	-1.06
7,291.00	90.60	358.50	3,074.16	4,409.63	-125.51	4,411.42	0.30	0.21	0.21
7,385.00	90.10	358.40	3,073.59	4,503.60	-128.05	4,505.41	0.54	-0.53	-0.11
7,480.00	89.70	358.60	3,073.75	4,598.56	-130.54	4,600.41	0.47	-0.42	0.21
7,575.00	90.20	358.10	3,073.83	4,693.52	-133.27	4,695.41	0.74	0.53	-0.53
7,674.00	91.60	358.50	3,072.28	4,792.46	-136.21	4,794.40	1.47	1.41	0.40
Last Phoenix MWD Survey									
7,734.00	91.60	358.50	3,070.60	4,852.42	-137.78	4,854.37	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)	
2,472.00	2,471.65	-0.01	-31.24	Tie-on to VES Gyro Survey
2,547.00	2,546.60	2.42	-31.79	First Phoenix MWD Survey
7,674.00	3,072.28	4,792.46	-136.21	Last Phoenix MWD Survey
7,734.00	3,070.60	4,852.42	-137.78	Projection to TD

Checked By: _____ Approved By: _____ Date: _____

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
Property Code	Property Name STONEWALL 9 FEE	Well Number 6H
OGRID No.	Operator Name COG OPERATING, LLC	Elevation 3354'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	9	19-S	26-E		150	SOUTH	2310	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	9	19-S	26-E		330	NORTH	2298	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	BOTTOM HOLE LOCATION NAD 27 NME Y= 611659.5 N X= 483303.6 E LAT.=32.681540° N LONG.=104.387599° W	BOTTOM HOLE LOCATION NAD 83 NME Y= 611721.2 N X= 524482.5 E LAT.=32.681654° N LONG.=104.388116° W	OPERATOR CERTIFICATION I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature _____ Date _____ Printed Name _____ E-mail Address _____
	CORNER COORDINATES TABLE NAD 27 NME A - Y= 611983.0 N, X= 482312.6 E B - Y= 611991.5 N, X= 483626.0 E C - Y= 606636.2 N, X= 483755.8 E D - Y= 606635.0 N, X= 482433.5 E E - Y= 611974.5 N, X= 480999.1 E F - Y= 612008.6 N, X= 486253.0 E G - Y= 606638.7 N, X= 486400.3 E H - Y= 606633.7 N, X= 481111.2 E		
	CORNER COORDINATES TABLE NAD 83 NME A - Y= 612044.7 N, X= 523491.4 E B - Y= 612053.2 N, X= 524804.9 E C - Y= 606697.4 N, X= 524934.7 E D - Y= 606696.5 N, X= 523612.4 E E - Y= 612036.1 N, X= 522177.9 E F - Y= 612070.3 N, X= 527431.9 E G - Y= 606700.3 N, X= 527579.3 E H - Y= 606695.2 N, X= 522290.1 E		
	GEODETTIC COORDINATES NAD 27 NME SURFACE LOCATION Y= 606785.9 N X= 483417.9 E LAT.=32.668143° N LONG.=104.387219° W	GEODETTIC COORDINATES NAD 83 NME SURFACE LOCATION Y= 606847.4 N X= 524596.8 E LAT.=32.668257° N LONG.=104.387736° W	
SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. SEPTEMBER 10, 2014 Date of Survey _____ Signature & Seal of Professional Surveyor _____ REGISTERED PROFESSIONAL SURVEYOR 3239 Certificate Number Gary G. Eidson 12641 Ronald J. Eidson 3239 LSL REL W.O.: 14.11.0922 JWSC W.O.: 15.13.0164			