

Concho

Eddy County, New Mexico (Nad27)
Grave Digger State Com #7H

OH

Plan #1 - 01-07-13

Surface: 240' FNL, 991' FEL, Sec 2, T20S, R25E, Unit A (Lot 1)

PP: 330' FNL, 991' FEL, Sec 2, T20S, R25E, Unit A (Lot 1)

BHL: 330' FSL, 993' FEL, Sec 2, T20S, R25E, Unit P

Standard Planning Report

07 January, 2013

30-015-40956



PHOENIX
TECHNOLOGY SERVICES



Phoenix
Planning Report



Database:	GCR DB	Local Co-ordinate Reference:	Well #7H
Company:	Concho	TVD Reference:	RF @ 3462.00usft (UDI #40)
Project:	Eddy County, New Mexico (Nad27)	MD Reference:	RF @ 3462.00usft (UDI #40)
Site:	Grave Digger State Com	North Reference:	Grid
Well:	#7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 01-07-13		

Project:	Eddy County, New Mexico (Nad27)		
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:	Grave Digger State Com		
Site Position:	Map	Northings:	585,277.40 usft
From:		Easting:	464,199.50 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 36' 32.3219 N
		Longitude:	104° 26' 58.5446 W
		Grid Convergence:	-0.06 °

Well:	#7H		
Well Position	+N/-S	0.00 usft	Northings:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level:
			3,448.00 usft

Wellbore:	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010_14	01/07/13	7.83
			Dip Angle
			(°)
			60.35
			Field Strength
			(nT)
			48,593

Design:	Plan #1 - 01-07-13		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			180.17

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(usft)	(°)	(°)	(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	
2,539.46	0.00	0.00	2,539.46	0.00	0.00	0.00	0.00	0.00	0.00	
3,362.19	90.50	180.17	3,060.31	-525.41	-1.52	11.00	11.00	0.00	180.17	
7,546.35	90.50	180.17	3,023.80	-4,709.40	-13.60	0.00	0.00	0.00	0.00	PBHL-Grave Digger #



Database:	GCRIDB:	Local Co-ordinate Reference:	Well #7H
Company:	Concho	TVD Reference:	RF @ 3462.00usft (UDI #40)
Project:	Eddy County, New Mexico (Nad27)	MD Reference:	RF @ 3462.00usft (UDI #40)
Site:	Grave Digger State Corn	North Reference:	Grid
Well:	#7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 01-07-13		

Planned 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
2,539.46	0.00	0.00	2,539.46	0.00	0.00	0.00	0.00	0.00	0.00
KOP Start Build 11.00									
2,600.00	6.66	180.17	2,599.86	-3.51	-0.01	3.51	11.00	11.00	0.00
2,700.00	17.66	180.17	2,697.47	-24.54	-0.07	24.54	11.00	11.00	0.00
2,800.00	28.66	180.17	2,789.27	-63.81	-0.18	63.81	11.00	11.00	0.00
2,850.25	34.19	180.17	2,832.14	-90.00	-0.26	90.00	11.00	11.00	0.00
PP-Grave Digger #7H									
2,900.00	39.66	180.17	2,871.89	-119.88	-0.35	119.88	11.00	11.00	0.00
3,000.00	50.66	180.17	2,942.30	-190.67	-0.55	190.67	11.00	11.00	0.00
3,100.00	61.66	180.17	2,997.90	-273.60	-0.79	273.61	11.00	11.00	0.00
3,200.00	72.66	180.17	3,036.66	-365.62	-1.06	365.62	11.00	11.00	0.00
3,300.00	83.66	180.17	3,057.15	-463.34	-1.34	463.34	11.00	11.00	0.00
3,362.19	90.50	180.17	3,060.31	-525.41	-1.52	525.42	11.00	11.00	0.00
EOC Start 4184.16 hold at 3362.19 MD									
3,400.00	90.50	180.17	3,059.98	-563.22	-1.63	563.23	0.00	0.00	0.00
3,500.00	90.50	180.17	3,059.11	-663.22	-1.92	663.22	0.00	0.00	0.00
3,600.00	90.50	180.17	3,058.24	-763.21	-2.20	763.22	0.00	0.00	0.00
3,700.00	90.50	180.17	3,057.37	-863.21	-2.49	863.21	0.00	0.00	0.00
3,800.00	90.50	180.17	3,056.49	-963.21	-2.78	963.21	0.00	0.00	0.00
3,900.00	90.50	180.17	3,055.62	-1,063.20	-3.07	1,063.21	0.00	0.00	0.00
4,000.00	90.50	180.17	3,054.75	-1,163.20	-3.36	1,163.20	0.00	0.00	0.00
4,100.00	90.50	180.17	3,053.87	-1,263.19	-3.65	1,263.20	0.00	0.00	0.00
4,200.00	90.50	180.17	3,053.00	-1,363.19	-3.94	1,363.19	0.00	0.00	0.00
4,300.00	90.50	180.17	3,052.13	-1,463.18	-4.23	1,463.19	0.00	0.00	0.00
4,400.00	90.50	180.17	3,051.26	-1,563.18	-4.51	1,563.19	0.00	0.00	0.00
4,500.00	90.50	180.17	3,050.38	-1,663.18	-4.80	1,663.18	0.00	0.00	0.00
4,600.00	90.50	180.17	3,049.51	-1,763.17	-5.09	1,763.18	0.00	0.00	0.00
4,700.00	90.50	180.17	3,048.64	-1,863.17	-5.38	1,863.18	0.00	0.00	0.00
4,800.00	90.50	180.17	3,047.77	-1,963.16	-5.67	1,963.17	0.00	0.00	0.00
4,900.00	90.50	180.17	3,046.89	-2,063.16	-5.96	2,063.17	0.00	0.00	0.00
5,000.00	90.50	180.17	3,046.02	-2,163.16	-6.25	2,163.16	0.00	0.00	0.00
5,100.00	90.50	180.17	3,045.15	-2,263.15	-6.54	2,263.16	0.00	0.00	0.00
5,200.00	90.50	180.17	3,044.28	-2,363.15	-6.82	2,363.16	0.00	0.00	0.00
5,300.00	90.50	180.17	3,043.40	-2,463.14	-7.11	2,463.15	0.00	0.00	0.00
5,400.00	90.50	180.17	3,042.53	-2,563.14	-7.40	2,563.15	0.00	0.00	0.00
5,500.00	90.50	180.17	3,041.66	-2,663.13	-7.69	2,663.15	0.00	0.00	0.00
5,600.00	90.50	180.17	3,040.78	-2,763.13	-7.98	2,763.14	0.00	0.00	0.00
5,700.00	90.50	180.17	3,039.91	-2,863.13	-8.27	2,863.14	0.00	0.00	0.00
5,800.00	90.50	180.17	3,039.04	-2,963.12	-8.56	2,963.13	0.00	0.00	0.00
5,900.00	90.50	180.17	3,038.17	-3,063.12	-8.85	3,063.13	0.00	0.00	0.00
6,000.00	90.50	180.17	3,037.29	-3,163.11	-9.13	3,163.13	0.00	0.00	0.00
6,100.00	90.50	180.17	3,036.42	-3,263.11	-9.42	3,263.12	0.00	0.00	0.00
6,200.00	90.50	180.17	3,035.55	-3,363.10	-9.71	3,363.12	0.00	0.00	0.00
6,300.00	90.50	180.17	3,034.68	-3,463.10	-10.00	3,463.11	0.00	0.00	0.00
6,400.00	90.50	180.17	3,033.80	-3,563.10	-10.29	3,563.11	0.00	0.00	0.00
6,500.00	90.50	180.17	3,032.93	-3,663.09	-10.58	3,663.11	0.00	0.00	0.00
6,600.00	90.50	180.17	3,032.06	-3,763.09	-10.87	3,763.10	0.00	0.00	0.00
6,700.00	90.50	180.17	3,031.19	-3,863.08	-11.16	3,863.10	0.00	0.00	0.00
6,800.00	90.50	180.17	3,030.31	-3,963.08	-11.44	3,963.10	0.00	0.00	0.00
6,900.00	90.50	180.17	3,029.44	-4,063.07	-11.73	4,063.09	0.00	0.00	0.00
7,000.00	90.50	180.17	3,028.57	-4,163.07	-12.02	4,163.09	0.00	0.00	0.00
7,100.00	90.50	180.17	3,027.70	-4,263.07	-12.31	4,263.08	0.00	0.00	0.00



Database:	GCR-DB	Local Co-ordinate Reference:	Well #7H
Company:	Concho	TVD Reference:	RF @ 3462.00usft (UDI: #40)
Project:	Eddy County, New Mexico (Nad27)	MD Reference:	RF @ 3462.00usft (UDI: #40)
Site:	Grave Digger State Com	North Reference:	Grid
Well:	#7H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 01-07-13		

Planned 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)
7,200.00	90.50	180.17	3,026.82	-4,363.06	-12.60	4,363.08	0.00	0.00	0.00
7,300.00	90.50	180.17	3,025.95	-4,463.06	-12.89	4,463.08	0.00	0.00	0.00
7,400.00	90.50	180.17	3,025.08	-4,563.05	-13.18	4,563.07	0.00	0.00	0.00
7,500.00	90.50	180.17	3,024.20	-4,663.05	-13.47	4,663.07	0.00	0.00	0.00
7,546.35	90.50	180.17	3,023.80	-4,709.40	-13.60	4,709.42	0.00	0.00	0.00
TD at 7546.35 - PBHL-Grave Digger #7H									

Design Targets									
Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	
Shape									Latitude Longitude
PP-Grave Digger #7H	- plan hits target center	0.00	0.00	2,832.13	-90.00	-0.26	585,187.40	464,199.24	32° 36' 31.4313 N 104° 26' 58.5465 W
	- Point								
PBHL-Grave Digger #7H	- plan hits target center	0.00	360.00	3,023.80	-4,709.40	-13.60	580,568.00	464,185.90	32° 35' 45.7187 N 104° 26' 58.6434 W
	- Point								

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,539.46	2,539.46	0.00	0.00	KOP Start Build 11.00
3,362.19	3,060.31	-525.41	-1.52	EOC Start 4184.16 hold at 3362.19 MD
7,546.35	3,023.80	-4,709.40	-13.60	TD at 7546.35



Concho

Project: Eddy County, New Mexico (Nad27)

Site: Grave Digger State Com

Well: #7H

Wellbore: OH

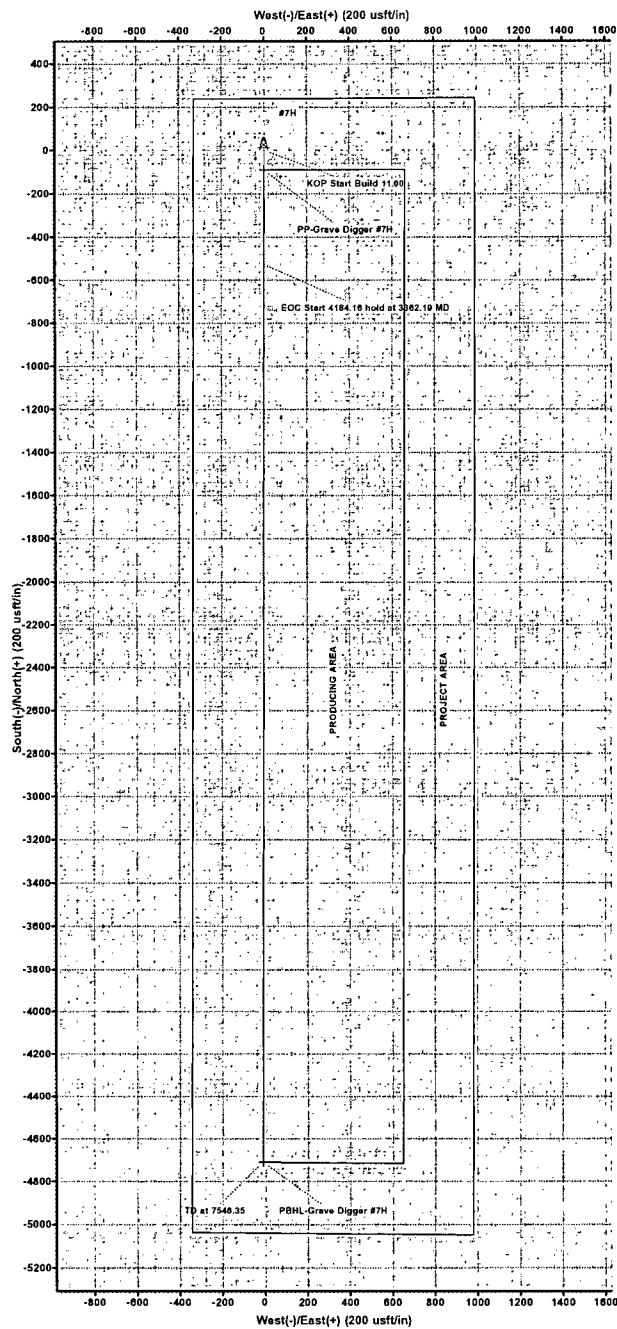
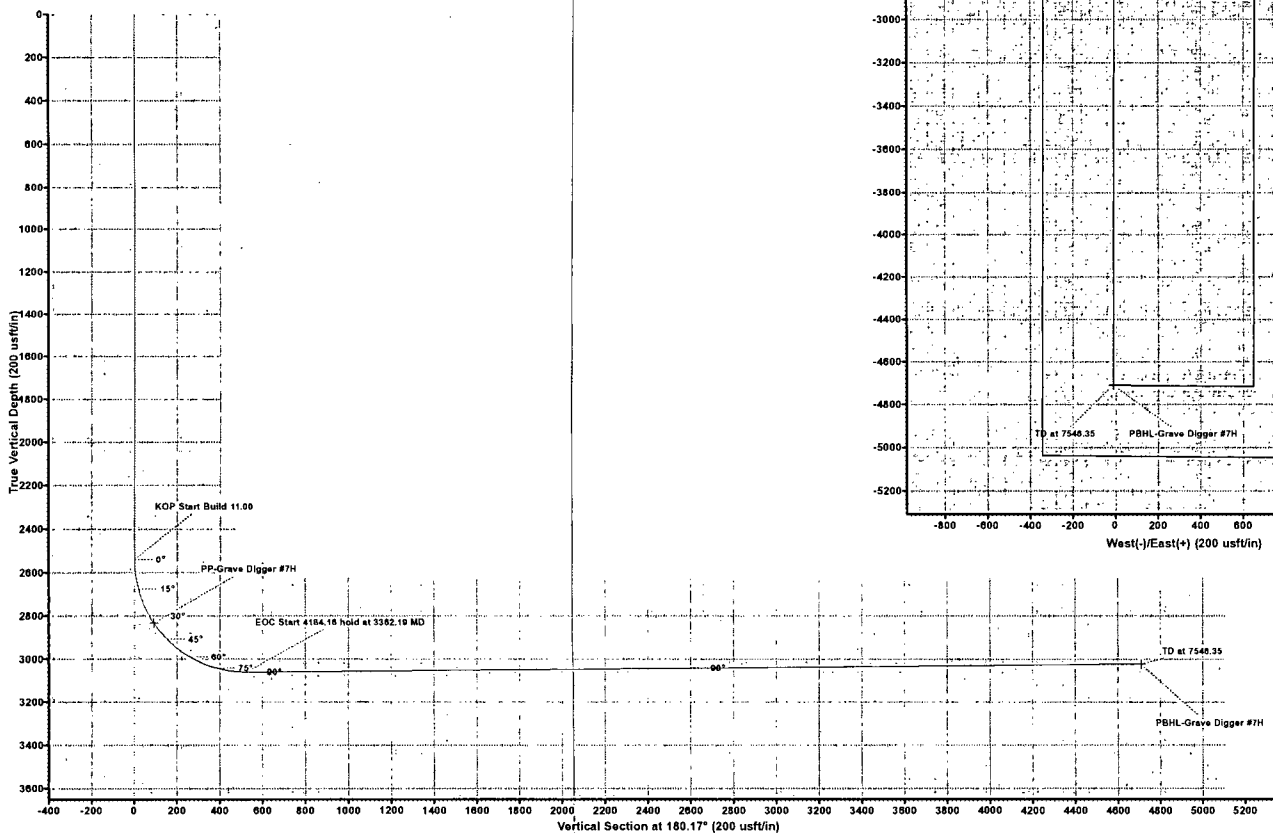
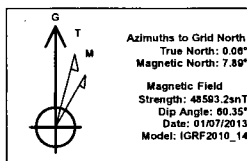
Plan: Plan #1 - 01-07-13



SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2539.46	0.00	0.00	2539.46	0.00	0.00	0.00	0.00	0.00	
3362.19	90.50	180.17	3060.31	-525.41	-1.52	11.00	180.17	525.42	
7546.35	90.50	180.17	3023.80	-4709.40	-13.00	0.00	0.00	4709.42	PBHL-Grave Digger #7H

WELL DETAILS: #7H			
Ground Level:	3448.00		
Northing	Easting	Latitude	Longitude
585277.40	464199.50	2° 36' 32.3219 N	104° 26' 58.5446 W

ANNOTATIONS			
TVD	MD	Annotation	
2539.46	2539.46	KOP Start Build 11.00	
3060.31	3362.19	EOC Start 4184.16 hold at 3362.19 MD	
3023.80	7546.35	TD at 7546.35	



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 30-015-	Pool Code 97565	Pool Name N. Seven Rivers; Glorieta-Yeso
Property Code 308178	Property Name GRAVE DIGGER STATE COM	Well Number 7H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3448'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
1	2	20-S	25-E		240	NORTH	991	EAST	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
P	2	20-S	25-E		330	SOUTH	993	EAST	EDDY

Dedicated Acres 160.06	Joint or Infill	Consolidation Code	Order No.
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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

Estimated Completed Interval: 380 FNL 991 FEL GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=585277.4 N X=464199.5 E LAT.=32.608978° N LONG.=104.449596° W BOTTOM HOLE LOCATION Y=580568.0 N X=464185.9 E CORNER COORDINATES TABLE A - Y=585516.2 N, X=463869.6 E B - Y=585520.6 N, X=465190.8 E C - Y=580241.0 N, X=463855.1 E D - Y=580229.0 N, X=465177.7 E	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 1-10-13 Date Kelly J. Holly Printed Name kholly@concho.com E-mail Address 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. DECEMBER 13, 2012 Date of Survey Signature & Seal of Professional Surveyor: Certificate Number: Gary G. Eidson 12641 Ronald J. Eidson 3239 AF JWSC W.O.: 12.11.1970
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