

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.***HOBBS OCD****SUBMIT IN TRIPLICATE - Other instructions on page 2**

NOV 28 2018

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		8. Well Name and No. FEZ FEDERAL COM 601H
2. Name of Operator COG OPERATING LLC		9. API Well No. 30-025-45274-00-X1
3a. Address ONE CONCHO CENTER 600 W ILLINOIS AVENUE MIDLAND, TX 79701-4287		10. Field and Pool or Exploratory Area WC025G09S243532M-WOLFBONE
3b. Phone No. (include area code) Ph: 575-748-6945		11. County or Parish, State LEA COUNTY, NM
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 9 T25S R35E SESW 280FSL 1750FWL 32.138405 N Lat, 103.375366 W Lon		

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

COG Operating LLC, respectfully requests approval for the following changes to the originally approved APD.

BHL
From: 200' FNL & 1950' FWL Section 4. T25S. R35E.
To: 200' FNL & 2230' FWL Section 4. T25S. R35E

TD has increased to 22,165? MD.

C102 Attached.
AC Report Attached.
Directional Plan Attached.

Artsbad Field Office
OCD Hobbs

14. I hereby certify that the foregoing is true and correct. Electronic Submission #442371 verified by the BLM Well Information System For COG OPERATING LLC, sent to the Hobbs Committed to AFMSS for processing by MUSTAFA HAQUE on 11/02/2018 (19MH0007SE)	
Name (Printed/Typed) MAYTE X REYES	Title REGULATORY ANALYST
Signature (Electronic Submission)	Date 11/01/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By MUSTAFA HAQUE	Title PETROLEUM ENGINEER	Date 11/08/2018
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office Hobbs

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

DISTRICT I
1625 N. FERNCH DR., BOBBS, NM 86240
Phone: (505) 823-4181 Fax: (505) 823-0722

DISTRICT II
811 S. FIRST ST., ARTESIA, NM 86210
Phone: (505) 748-1253 Fax: (505) 748-0722

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410
Phone: (505) 334-8178 Fax: (505) 334-8170

DISTRICT IV
1220 S. ST. FRANCIS DR., SANTA FE, NM 87506
Phone: (505) 476-3480 Fax: (505) 476-3482

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 30-025-45274	Pool Code 98098	Pool Name Wildcat; Wolfbone
Property Code 322742	Property Name FEZ FEDERAL COM	Well Number 601H
OGRIID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3243.9'

Surface Location

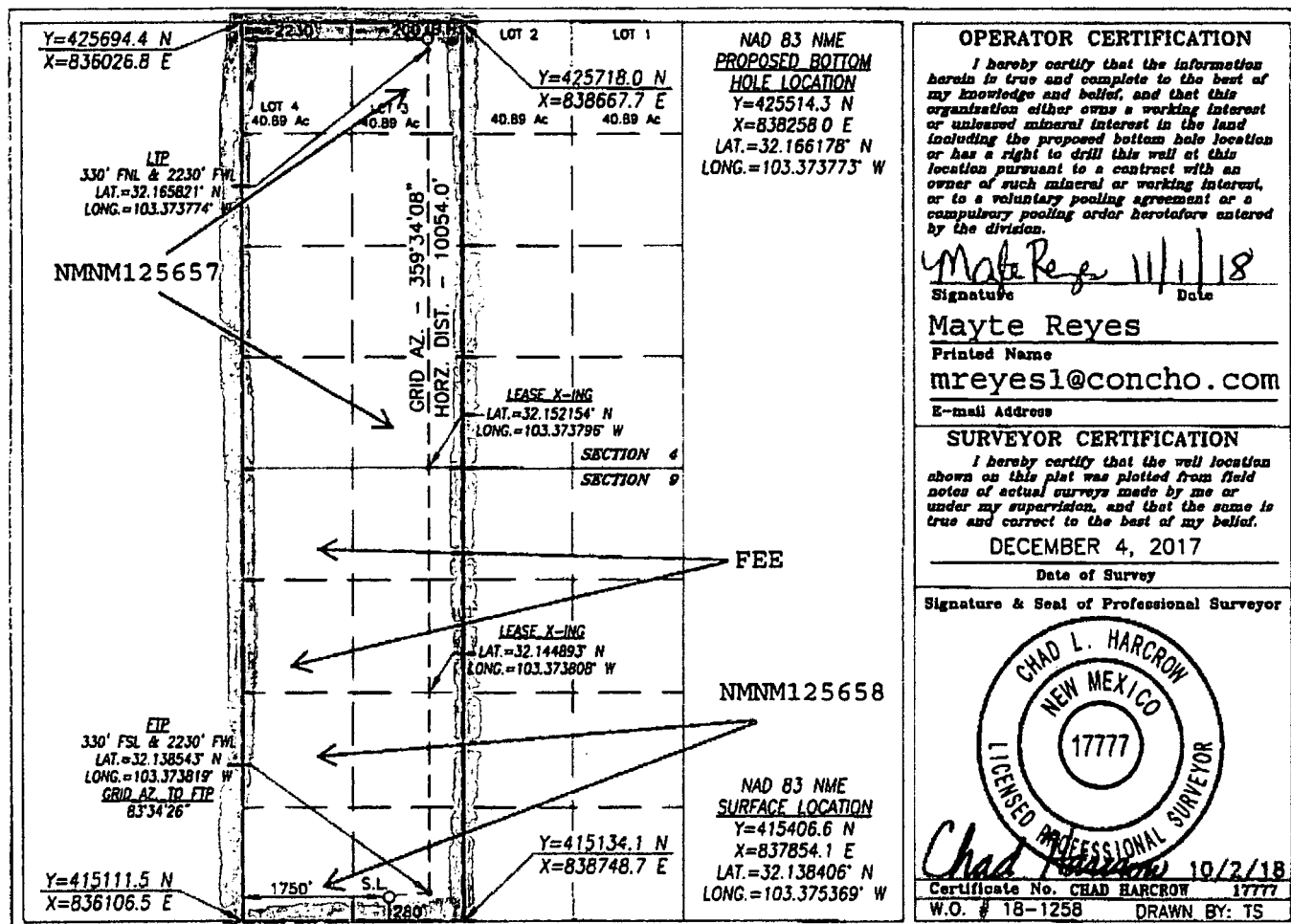
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	9	25-S	35-E		280	SOUTH	1750	WEST	LEA

Bottom Hole Location If Different From Surface

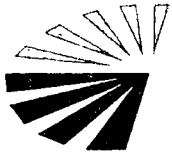
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
3	4	25-S	35-E		200	NORTH	2230	WEST	LEA

Dedicated Acres 639.8	Joint or Infill 41.72	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



As per LR2000 Lot 3: 39.89 Lot 4: 39.91



C O N C H O

Concho Resources

Lea County, NM

Fez Federal Com

Fez Federal Com 601H

Wellbore #1

plan1

Anticollision Report

23 October, 2018



Company:	Concho Resources	Local Co-ordinate Reference:	Well Fez Federal Com 601H
Project:	Lea County, NM	TVD Reference:	GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
Reference Site:	Fez Federal Com	MD Reference:	GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Fez Federal Com 601H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM 5000.14 Single User Db
Reference Design:	plan1	Offset TVD Reference:	Reference Datum

Reference	plan1
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	Stations
Depth Range:	0.00 to 22,164.44usft
Results Limited by:	Maximum center-center distance of 2,000.00 us
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Pedal Curve
Casing Method:	Not applied

Survey Tool Program	Date 10/23/18			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	22,164.44	plan1 (Wellbore #1)	MWD+IFR1+SAG+MS	OWSG MWD + IFR1 + Sag + Multi-Station Corre

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Fez Federal Com						
Fez Federal Com 602H - Wellbore #1 - plan1	2,500.00	2,500.40	60.00	42.53	3.434	CC, ES
Fez Federal Com 602H - Wellbore #1 - plan1	22,164.44	22,321.64	422.26	255.53	2.533	SF
Fez Federal Com 701H - Wellbore #1 - plan1	2,500.00	2,500.30	30.00	12.53	1.717	CC
Fez Federal Com 701H - Wellbore #1 - plan1	22,164.44	22,161.42	85.00	-90.42	0.485	Level 1, ES, SF

Offset Design Fez Federal Com - Fez Federal Com 602H - Wellbore #1 - plan1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+MS													Offset Well Error: 0.00 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.40	0.00	0.00	0.00	-90.67	-0.70	-60.00	60.00				
100.00	100.00	100.40	100.00	0.13	0.13	-90.67	-0.70	-60.00	60.00	59.74	0.27	224.985	
200.00	200.00	200.40	200.00	0.49	0.49	-90.67	-0.70	-60.00	60.00	59.02	0.98	61.002	
300.00	300.00	300.40	300.00	0.85	0.85	-90.67	-0.70	-60.00	60.00	58.30	1.70	35.284	
400.00	400.00	400.40	400.00	1.21	1.21	-90.67	-0.70	-60.00	60.00	57.59	2.42	24.820	
500.00	500.00	500.40	500.00	1.57	1.57	-90.67	-0.70	-60.00	60.00	56.87	3.13	19.143	
600.00	600.00	600.40	600.00	1.92	1.93	-90.67	-0.70	-60.00	60.00	56.15	3.85	15.580	
700.00	700.00	700.40	700.00	2.28	2.28	-90.67	-0.70	-60.00	60.00	55.44	4.57	13.135	
800.00	800.00	800.40	800.00	2.64	2.64	-90.67	-0.70	-60.00	60.00	54.72	5.29	11.353	
900.00	900.00	900.40	900.00	3.00	3.00	-90.67	-0.70	-60.00	60.00	54.00	6.00	9.997	
1,000.00	1,000.00	1,000.40	1,000.00	3.36	3.36	-90.67	-0.70	-60.00	60.00	53.28	6.72	8.930	
1,100.00	1,100.00	1,100.40	1,100.00	3.72	3.72	-90.67	-0.70	-60.00	60.00	52.57	7.44	8.069	
1,200.00	1,200.00	1,200.40	1,200.00	4.08	4.08	-90.67	-0.70	-60.00	60.00	51.85	8.15	7.360	
1,300.00	1,300.00	1,300.40	1,300.00	4.43	4.44	-90.67	-0.70	-60.00	60.00	51.13	8.87	6.765	
1,400.00	1,400.00	1,400.40	1,400.00	4.79	4.79	-90.67	-0.70	-60.00	60.00	50.42	9.59	6.259	
1,500.00	1,500.00	1,500.40	1,500.00	5.15	5.15	-90.67	-0.70	-60.00	60.00	49.70	10.30	5.823	
1,600.00	1,600.00	1,600.40	1,600.00	5.51	5.51	-90.67	-0.70	-60.00	60.00	48.98	11.02	5.445	
1,700.00	1,700.00	1,700.40	1,700.00	5.87	5.87	-90.67	-0.70	-60.00	60.00	48.27	11.74	5.112	
1,800.00	1,800.00	1,800.40	1,800.00	6.23	6.23	-90.67	-0.70	-60.00	60.00	47.55	12.45	4.818	
1,900.00	1,900.00	1,900.40	1,900.00	6.59	6.59	-90.67	-0.70	-60.00	60.00	46.83	13.17	4.556	
2,000.00	2,000.00	2,000.40	2,000.00	6.94	6.95	-90.67	-0.70	-60.00	60.00	46.12	13.89	4.320	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company: Concho Resources
Project: Lea County, NM
Reference Site: Fez Federal Com
Site Error: 0.00 usft
Reference Well: Fez Federal Com 601H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft
(Independence 205)
MD Reference: GL 3243.9' + 26' KB @ 3269.90usft
(Independence 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Single User Db
Offset TVD Reference: Reference Datum

Offset Design Fez Federal Com - Fez Federal Com 602H - Wellbore #1 - plan1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+MS													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
2,100.00	2,100.00	2,100.40	2,100.00	7.30	7.30	-90.67	-0.70	-60.00	60.00	45.40	14.61	4.108	
2,200.00	2,200.00	2,200.40	2,200.00	7.66	7.66	-90.67	-0.70	-60.00	60.00	44.68	15.32	3.916	
2,300.00	2,300.00	2,300.40	2,300.00	8.02	8.02	-90.67	-0.70	-60.00	60.00	43.96	16.04	3.741	
2,400.00	2,400.00	2,400.40	2,400.00	8.38	8.38	-90.67	-0.70	-60.00	60.00	43.25	16.76	3.581	
2,500.00	2,500.00	2,500.40	2,500.00	8.74	8.74	-90.67	-0.70	-60.00	60.00	42.53	17.47	3.434	CC, ES
2,600.00	2,599.98	2,600.42	2,599.98	9.09	9.10	179.35	-0.70	-60.00	61.75	43.57	18.18	3.396	
2,700.00	2,699.84	2,700.56	2,699.84	9.43	9.45	179.40	-0.70	-60.00	66.98	48.10	18.88	3.547	
2,750.00	2,749.68	2,749.28	2,749.68	9.60	9.63	179.43	-0.70	-60.00	70.90	51.68	19.23	3.688	
2,800.00	2,799.49	2,800.91	2,799.49	9.77	9.81	179.47	-0.70	-60.00	75.26	55.68	19.58	3.843	
2,900.00	2,899.11	2,901.29	2,899.11	10.12	10.17	179.52	-0.70	-60.00	83.98	63.69	20.28	4.140	
3,000.00	2,998.73	3,001.67	2,998.73	10.46	10.53	179.57	-0.70	-60.00	92.69	71.71	20.99	4.417	
3,100.00	3,098.35	3,102.05	3,098.35	10.81	10.89	179.60	-0.70	-60.00	101.41	79.72	21.69	4.675	
3,200.00	3,197.97	3,202.43	3,197.97	11.16	11.25	179.63	-0.70	-60.00	110.12	87.73	22.39	4.918	
3,300.00	3,297.59	3,302.81	3,297.59	11.51	11.61	179.66	-0.70	-60.00	118.84	95.74	23.10	5.145	
3,400.00	3,397.21	3,403.19	3,397.21	11.86	11.97	179.68	-0.70	-60.00	127.55	103.75	23.81	5.358	
3,500.00	3,496.83	3,503.57	3,496.83	12.21	12.33	179.70	-0.70	-60.00	136.27	111.76	24.51	5.559	
3,600.00	3,596.45	3,603.95	3,596.45	12.56	12.69	179.72	-0.70	-60.00	144.99	119.77	25.22	5.749	
3,700.00	3,696.07	3,704.33	3,696.07	12.92	13.05	179.74	-0.70	-60.00	153.70	127.77	25.93	5.928	
3,800.00	3,795.69	3,804.71	3,795.69	13.27	13.41	179.75	-0.70	-60.00	162.42	135.78	26.64	6.098	
3,900.00	3,895.31	3,905.09	3,895.31	13.62	13.77	179.76	-0.70	-60.00	171.13	143.79	27.34	6.258	
4,000.00	3,994.93	3,994.53	3,994.93	13.98	14.09	179.78	-0.70	-60.00	179.85	151.83	28.01	6.420	
4,100.00	4,094.55	4,100.74	4,101.12	14.33	14.47	179.79	-0.70	-58.23	186.91	158.17	28.73	6.505	
4,200.00	4,194.17	4,207.73	4,207.95	14.69	14.83	179.79	-0.70	-52.47	190.25	160.84	29.41	6.468	
4,300.00	4,293.78	4,310.54	4,310.39	15.04	15.18	179.79	-0.70	-43.82	190.54	160.45	30.09	6.332	
4,400.00	4,393.40	4,410.54	4,410.01	15.40	15.53	179.79	-0.70	-35.11	190.54	159.76	30.78	6.190	
4,500.00	4,493.02	4,510.54	4,509.63	15.75	15.87	179.79	-0.70	-26.39	190.54	159.06	31.48	6.053	
4,600.00	4,592.64	4,610.54	4,609.25	16.11	16.22	179.79	-0.70	-17.68	190.54	158.37	32.17	5.922	
4,700.00	4,692.26	4,710.54	4,708.87	16.47	16.57	179.79	-0.70	-8.96	190.54	157.67	32.87	5.797	
4,800.00	4,791.88	4,810.54	4,808.49	16.82	16.91	179.79	-0.70	-0.24	190.54	156.97	33.57	5.676	
4,900.00	4,891.50	4,910.54	4,908.11	17.18	17.26	179.79	-0.70	8.47	190.54	156.27	34.27	5.560	
5,000.00	4,991.12	5,010.54	5,007.73	17.54	17.61	179.79	-0.70	17.19	190.54	155.57	34.97	5.449	
5,100.00	5,090.74	5,110.54	5,107.35	17.90	17.96	179.79	-0.70	25.90	190.54	154.87	35.67	5.342	
5,200.00	5,190.36	5,210.54	5,206.97	18.25	18.31	179.79	-0.70	34.62	190.54	154.17	36.37	5.239	
5,300.00	5,289.98	5,310.54	5,306.59	18.61	18.66	179.79	-0.70	43.33	190.54	153.47	37.07	5.140	
5,400.00	5,389.60	5,410.54	5,406.21	18.97	19.01	179.79	-0.70	52.05	190.54	152.77	37.77	5.045	
5,500.00	5,489.22	5,510.54	5,505.83	19.33	19.36	179.79	-0.70	60.76	190.54	152.07	38.47	4.952	
5,600.00	5,588.84	5,610.54	5,605.44	19.69	19.71	179.79	-0.70	69.48	190.54	151.36	39.18	4.863	
5,700.00	5,688.46	5,710.54	5,705.06	20.05	20.06	179.79	-0.70	78.20	190.54	150.66	39.88	4.778	
5,700.23	5,688.69	5,710.77	5,705.29	20.05	20.06	179.79	-0.70	78.22	190.54	150.66	39.88	4.777	
5,800.00	5,788.08	5,808.53	5,802.69	20.41	20.41	179.79	-0.70	86.58	190.71	150.12	40.60	4.698	
5,900.00	5,887.70	5,902.21	5,896.20	20.76	20.74	179.79	-0.70	92.23	193.40	152.10	41.31	4.682	
6,000.00	5,987.32	5,995.64	5,989.59	21.12	21.07	179.80	-0.70	94.81	199.36	157.38	41.98	4.749	
6,100.00	6,086.94	6,107.02	6,086.94	21.48	21.46	179.81	-0.70	95.00	207.87	165.16	42.72	4.866	
6,200.00	6,186.55	6,207.40	6,186.55	21.84	21.82	179.81	-0.70	95.00	216.59	173.16	43.43	4.987	
6,300.00	6,286.17	6,307.78	6,286.17	22.20	22.18	179.82	-0.70	95.00	225.31	181.16	44.14	5.104	
6,400.00	6,385.79	6,408.16	6,385.79	22.56	22.53	179.83	-0.70	95.00	234.02	189.16	44.86	5.217	
6,500.00	6,485.41	6,508.54	6,485.41	22.92	22.89	179.83	-0.70	95.00	242.74	197.17	45.57	5.327	
6,600.00	6,585.03	6,608.92	6,585.03	23.28	23.25	179.84	-0.70	95.00	251.45	205.17	46.28	5.433	
6,700.00	6,684.65	6,709.30	6,684.65	23.64	23.61	179.85	-0.70	95.00	260.17	213.17	47.00	5.536	
6,800.00	6,784.27	6,809.68	6,784.27	24.00	23.97	179.85	-0.70	95.00	268.88	221.17	47.71	5.636	
6,900.00	6,883.89	6,889.94	6,883.89	24.36	24.25	179.85	-0.70	95.00	277.60	229.25	48.35	5.741	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company: Concho Resources
Project: Lea County, NM
Reference Site: Fez Federal Com
Site Error: 0.00 usft
Reference Well: Fez Federal Com 601H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft
(Independence 205)
MD Reference: GL 3243.9' + 26' KB @ 3269.90usft
(Independence 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Single User Db
Offset TVD Reference: Reference Datum

Offset Design Fez Federal Com - Fez Federal Com 602H - Wellbore #1 - plan1														Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+MS														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Tooface (")	Distance		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset										
7,000.00	6,983.51	6,989.56	6,983.51	24.72	24.61	179.86	-0.70	95.00	286.31	237.25	49.06	5.835			
7,100.00	7,083.13	7,089.18	7,083.13	25.08	24.96	179.86	-0.70	95.00	295.03	245.25	49.78	5.927			
7,200.00	7,182.75	7,188.80	7,182.75	25.44	25.32	179.87	-0.70	95.00	303.75	253.26	50.49	6.016			
7,300.00	7,282.37	7,288.42	7,282.37	25.80	25.67	179.87	-0.70	95.00	312.46	261.26	51.20	6.103			
7,400.00	7,381.99	7,388.04	7,381.99	26.16	26.03	179.87	-0.70	95.00	321.18	269.27	51.91	6.187			
7,500.00	7,481.61	7,487.66	7,481.61	26.53	26.39	179.88	-0.70	95.00	329.89	277.27	52.62	6.269			
7,600.00	7,581.23	7,587.28	7,581.23	26.89	26.74	179.88	-0.70	95.00	338.61	285.27	53.33	6.349			
7,700.00	7,680.85	7,686.90	7,680.85	27.25	27.10	179.88	-0.70	95.00	347.32	293.28	54.05	6.426			
7,800.00	7,780.47	7,786.52	7,780.47	27.61	27.45	179.89	-0.70	95.00	356.04	301.28	54.76	6.502			
7,900.00	7,880.09	7,886.14	7,880.09	27.97	27.81	179.89	-0.70	95.00	364.75	309.28	55.47	6.576			
8,007.22	7,986.90	8,007.05	7,986.90	28.36	28.24	179.89	-0.70	95.00	374.10	317.81	56.29	6.647			
8,100.00	8,079.44	8,085.49	8,079.44	28.69	28.52	179.89	-0.70	95.00	380.69	323.79	56.90	6.691			
8,200.00	8,179.36	8,185.41	8,179.36	29.05	28.88	179.90	-0.70	95.00	384.43	326.82	57.61	6.673			
8,257.21	8,236.57	8,242.62	8,236.57	29.25	29.08	-90.10	-0.70	95.00	385.00	326.99	58.02	6.636			
8,300.00	8,279.36	8,285.41	8,279.36	29.40	29.23	-90.10	-0.70	95.00	385.00	326.68	58.32	6.602			
8,400.00	8,379.36	8,385.41	8,379.36	29.75	29.59	-90.10	-0.70	95.00	385.00	325.98	59.02	6.523			
8,500.00	8,479.36	8,485.41	8,479.36	30.09	29.95	-90.10	-0.70	95.00	385.00	325.27	59.73	6.446			
8,600.00	8,579.36	8,585.41	8,579.36	30.44	30.31	-90.10	-0.70	95.00	385.00	324.57	60.44	6.370			
8,700.00	8,679.36	8,685.41	8,679.36	30.79	30.66	-90.10	-0.70	95.00	385.00	323.86	61.14	6.297			
8,800.00	8,779.36	8,785.41	8,779.36	31.14	31.02	-90.10	-0.70	95.00	385.00	323.15	61.85	6.225			
8,900.00	8,879.36	8,885.41	8,879.36	31.49	31.38	-90.10	-0.70	95.00	385.00	322.45	62.56	6.155			
9,000.00	8,979.36	8,985.41	8,979.36	31.84	31.74	-90.10	-0.70	95.00	385.00	321.74	63.26	6.086			
9,100.00	9,079.36	9,085.41	9,079.36	32.19	32.09	-90.10	-0.70	95.00	385.00	321.03	63.97	6.018			
9,200.00	9,179.36	9,185.41	9,179.36	32.54	32.45	-90.10	-0.70	95.00	385.00	320.32	64.68	5.953			
9,300.00	9,279.36	9,285.41	9,279.36	32.89	32.81	-90.10	-0.70	95.00	385.00	319.61	65.39	5.888			
9,400.00	9,379.36	9,385.41	9,379.36	33.24	33.17	-90.11	-0.70	95.00	385.00	318.91	66.09	5.825			
9,500.00	9,479.36	9,485.41	9,479.36	33.59	33.52	-90.11	-0.70	95.00	385.00	318.20	66.80	5.763			
9,600.00	9,579.36	9,585.41	9,579.36	33.94	33.88	-90.11	-0.70	95.00	385.00	317.49	67.51	5.703			
9,700.00	9,679.36	9,685.41	9,679.36	34.29	34.24	-90.11	-0.70	95.00	385.00	316.78	68.22	5.644			
9,800.00	9,779.36	9,785.41	9,779.36	34.64	34.60	-90.11	-0.70	95.00	385.00	316.07	68.93	5.586			
9,900.00	9,879.36	9,885.41	9,879.36	34.99	34.95	-90.11	-0.70	95.00	385.00	315.36	69.64	5.529			
10,000.00	9,979.36	9,985.41	9,979.36	35.34	35.31	-90.11	-0.70	95.00	385.00	314.65	70.35	5.473			
10,100.00	10,079.36	10,085.41	10,079.36	35.70	35.67	-90.11	-0.70	95.00	385.00	313.95	71.06	5.418			
10,200.00	10,179.36	10,185.41	10,179.36	36.05	36.03	-90.11	-0.70	95.00	385.00	313.24	71.76	5.365			
10,300.00	10,279.36	10,285.41	10,279.36	36.40	36.38	-90.11	-0.70	95.00	385.00	312.53	72.47	5.312			
10,400.00	10,379.36	10,385.41	10,379.36	36.75	36.74	-90.11	-0.70	95.00	385.00	311.82	73.18	5.261			
10,500.00	10,479.36	10,485.41	10,479.36	37.10	37.10	-90.11	-0.70	95.00	385.00	311.11	73.89	5.210			
10,600.00	10,579.36	10,585.41	10,579.36	37.46	37.46	-90.11	-0.70	95.00	385.00	310.40	74.60	5.161			
10,700.00	10,679.36	10,685.41	10,679.36	37.81	37.82	-90.11	-0.70	95.00	385.00	309.69	75.31	5.112			
10,800.00	10,779.36	10,785.41	10,779.36	38.16	38.17	-90.11	-0.70	95.00	385.00	308.98	76.02	5.064			
10,900.00	10,879.36	10,885.41	10,879.36	38.51	38.53	-90.11	-0.70	95.00	385.00	308.27	76.73	5.017			
11,000.00	10,979.36	10,985.41	10,979.36	38.86	38.89	-90.11	-0.70	95.00	385.00	307.56	77.45	4.971			
11,100.00	11,079.36	11,085.41	11,079.36	39.22	39.25	-90.11	-0.70	95.00	385.00	306.84	78.16	4.926			
11,200.00	11,179.36	11,185.41	11,179.36	39.57	39.60	-90.11	-0.70	95.00	385.00	306.13	78.87	4.882			
11,300.00	11,279.36	11,285.41	11,279.36	39.92	39.96	-90.11	-0.70	95.00	385.00	305.42	79.58	4.838			
11,400.00	11,379.36	11,385.41	11,379.36	40.28	40.32	-90.11	-0.70	95.00	385.00	304.71	80.29	4.795			
11,500.00	11,479.36	11,485.41	11,479.36	40.63	40.68	-90.11	-0.70	95.00	385.00	304.00	81.00	4.753			
11,600.00	11,579.36	11,585.41	11,579.36	40.98	41.04	-90.11	-0.70	95.00	385.00	303.29	81.71	4.712			
11,700.00	11,679.36	11,685.41	11,679.36	41.34	41.39	-90.11	-0.70	95.00	385.00	302.58	82.42	4.671			
11,729.69	11,709.05	11,715.10	11,709.05	41.44	41.50	-90.11	-0.70	95.00	385.00	302.37	82.63	4.659			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company: Concho Resources
Project: Lea County, NM
Reference Site: Fez Federal Com
Site Error: 0.00 usft
Reference Well: Fez Federal Com 601H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
MD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Single User Db
Offset TVD Reference: Reference Datum

Offset Design Fez Federal Com - Fez Federal Com 602H - Wellbore #1 - plan1													Offset Site Error:	0.00' usft
Survey Program: 0-MWD+IFR1+SAG+MS													Offset Well Error:	0.00' usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi-Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
11,750.00	11,729.36	11,735.41	11,729.36	41.51	41.57	-89.73	-0.70	95.00	385.00	302.22	82.78	4.651		
11,779.53	11,758.82	11,764.87	11,758.82	41.62	41.68	-90.00	-0.70	95.00	384.99	302.01	82.99	4.639		
11,800.00	11,779.18	11,785.23	11,779.18	41.69	41.75	-90.32	-0.70	95.00	385.00	301.87	83.13	4.631		
11,850.00	11,828.48	11,834.53	11,828.48	41.86	41.93	-91.52	-0.70	95.00	385.14	301.65	83.48	4.613		
11,900.00	11,876.86	11,882.91	11,876.86	42.03	42.10	-93.26	-0.70	95.00	385.68	301.85	83.83	4.601		
11,950.00	11,923.97	11,933.02	11,926.93	42.19	42.28	-95.38	1.03	94.99	386.87	302.68	84.19	4.595		
12,000.00	11,969.44	11,984.83	11,978.33	42.34	42.46	-97.50	7.38	94.94	388.64	304.09	84.55	4.597		
12,050.00	12,012.93	12,038.23	12,030.48	42.48	42.65	-99.57	18.75	94.85	390.94	306.06	84.88	4.606		
12,100.00	12,054.11	12,093.32	12,082.94	42.61	42.83	-101.59	35.52	94.73	393.71	308.54	85.17	4.623		
12,150.00	12,092.66	12,150.21	12,135.16	42.72	43.01	-103.54	58.04	94.56	396.87	311.49	85.38	4.648		
12,200.00	12,128.30	12,208.99	12,186.48	42.82	43.17	-105.38	86.62	94.35	400.31	314.82	85.48	4.683		
12,250.00	12,160.74	12,269.69	12,236.14	42.91	43.33	-107.12	121.49	94.08	403.91	318.44	85.47	4.726		
12,300.00	12,189.74	12,332.35	12,283.22	42.98	43.47	-108.71	162.79	93.78	407.53	322.21	85.32	4.776		
12,350.00	12,215.09	12,396.93	12,326.73	43.04	43.61	-110.15	210.46	93.42	411.04	325.98	85.06	4.833		
12,400.00	12,236.58	12,463.33	12,365.59	43.11	43.75	-111.40	264.26	93.02	414.28	329.58	84.70	4.891		
12,450.00	12,254.06	12,531.40	12,398.69	43.18	43.88	-112.45	323.69	92.57	417.12	332.82	84.30	4.948		
12,500.00	12,267.39	12,600.89	12,424.97	43.24	43.99	-113.27	387.97	92.09	419.42	335.50	83.93	4.998		
12,550.00	12,276.47	12,671.50	12,443.50	43.29	44.07	-113.85	456.06	91.58	421.09	337.46	83.63	5.035		
12,600.00	12,281.24	12,742.85	12,453.59	43.34	44.13	-114.18	526.64	91.05	422.04	338.55	83.49	5.055		
12,631.49	12,282.00	12,787.98	12,455.41	43.36	44.16	-114.25	571.72	90.71	422.25	338.76	83.48	5.058		
12,700.00	12,281.79	12,857.19	12,455.19	43.40	44.20	-114.25	640.93	90.19	422.25	338.67	83.57	5.052		
12,800.00	12,281.47	12,957.19	12,454.88	43.48	44.27	-114.25	740.93	89.44	422.25	338.53	83.72	5.043		
12,900.00	12,281.16	13,057.19	12,454.56	43.58	44.35	-114.25	840.92	88.69	422.25	338.35	83.89	5.033		
13,000.00	12,280.84	13,157.19	12,454.25	43.69	44.44	-114.25	940.92	87.95	422.25	338.15	84.09	5.021		
13,100.00	12,280.53	13,257.19	12,453.94	43.81	44.55	-114.25	1,040.92	87.20	422.25	337.93	84.31	5.008		
13,200.00	12,280.21	13,357.19	12,453.62	43.94	44.67	-114.25	1,140.91	86.45	422.25	337.69	84.56	4.993		
13,300.00	12,279.90	13,457.19	12,453.31	44.08	44.80	-114.25	1,240.91	85.70	422.25	337.42	84.83	4.978		
13,400.00	12,279.58	13,557.19	12,452.99	44.24	44.94	-114.25	1,340.91	84.95	422.25	337.12	85.12	4.960		
13,500.00	12,279.27	13,657.19	12,452.68	44.41	45.10	-114.25	1,440.90	84.20	422.25	336.81	85.44	4.942		
13,600.00	12,278.95	13,757.19	12,452.36	44.59	45.27	-114.25	1,540.90	83.45	422.25	336.47	85.78	4.922		
13,700.00	12,278.64	13,857.19	12,452.05	44.79	45.45	-114.25	1,640.90	82.70	422.25	336.11	86.14	4.902		
13,800.00	12,278.32	13,957.19	12,451.73	45.00	45.64	-114.25	1,740.89	81.95	422.25	335.72	86.53	4.880		
13,900.00	12,278.01	14,057.19	12,451.42	45.21	45.85	-114.25	1,840.89	81.20	422.25	335.31	86.93	4.857		
14,000.00	12,277.70	14,157.19	12,451.10	45.45	46.07	-114.25	1,940.89	80.45	422.25	334.88	87.36	4.833		
14,100.00	12,277.38	14,257.19	12,450.79	45.69	46.29	-114.25	2,040.88	79.71	422.25	334.43	87.82	4.808		
14,200.00	12,277.07	14,357.19	12,450.47	45.94	46.53	-114.25	2,140.88	78.96	422.25	333.96	88.29	4.783		
14,300.00	12,276.75	14,457.19	12,450.16	46.20	46.78	-114.25	2,240.88	78.21	422.25	333.47	88.78	4.756		
14,400.00	12,276.44	14,557.19	12,449.84	46.48	47.05	-114.25	2,340.88	77.46	422.25	332.95	89.29	4.729		
14,500.00	12,276.12	14,657.19	12,449.53	46.77	47.32	-114.25	2,440.87	76.71	422.25	332.42	89.83	4.701		
14,600.00	12,275.81	14,757.19	12,449.21	47.06	47.60	-114.25	2,540.87	75.96	422.25	331.87	90.38	4.672		
14,700.00	12,275.49	14,857.19	12,448.90	47.37	47.90	-114.25	2,640.87	75.21	422.25	331.29	90.96	4.642		
14,800.00	12,275.18	14,957.19	12,448.58	47.69	48.20	-114.25	2,740.86	74.46	422.25	330.70	91.55	4.612		
14,900.00	12,274.86	15,057.19	12,448.27	48.02	48.52	-114.25	2,840.86	73.71	422.25	330.09	92.16	4.582		
15,000.00	12,274.55	15,157.19	12,447.95	48.35	48.84	-114.25	2,940.86	72.96	422.25	329.46	92.79	4.551		
15,100.00	12,274.23	15,257.19	12,447.64	48.70	49.17	-114.25	3,040.85	72.21	422.25	328.81	93.44	4.519		
15,200.00	12,273.92	15,357.19	12,447.32	49.06	49.52	-114.25	3,140.85	71.46	422.25	328.15	94.10	4.487		
15,300.00	12,273.60	15,457.19	12,447.01	49.42	49.87	-114.25	3,240.85	70.72	422.25	327.46	94.79	4.455		
15,400.00	12,273.29	15,557.19	12,446.69	49.80	50.23	-114.25	3,340.84	69.97	422.25	326.76	95.49	4.422		
15,500.00	12,272.97	15,657.19	12,446.38	50.18	50.61	-114.25	3,440.84	69.22	422.25	326.05	96.20	4.389		
15,600.00	12,272.66	15,757.19	12,446.06	50.57	50.99	-114.25	3,540.84	68.47	422.25	325.31	96.94	4.356		
15,700.00	12,272.35	15,857.19	12,445.75	50.97	51.37	-114.25	3,640.83	67.72	422.25	324.57	97.68	4.323		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company: Concho Resources
Project: Lea County, NM
Reference Site: Fez Federal Com
Site Error: 0.00 usft
Reference Well: Fez Federal Com 601H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
MD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Single User Db
Offset TVD Reference: Reference Datum

Offset Design Fez Federal Com - Fez Federal Com 602H - Wellbore #1 - plan1												Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+MS												Offset Well Error:	0.00 usft
Reference													
Offset				Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,800.00	12,272.03	15,957.19	12,445.43	51.38	51.77	-114.25	3,740.83	66.97	422.25	323.80	98.45	4.289	
15,900.00	12,271.72	16,057.19	12,445.12	51.80	52.18	-114.25	3,840.83	66.22	422.25	323.02	99.23	4.255	
16,000.00	12,271.40	16,157.19	12,444.80	52.22	52.59	-114.25	3,940.82	65.47	422.25	322.23	100.02	4.222	
16,100.00	12,271.09	16,257.19	12,444.49	52.66	53.01	-114.25	4,040.82	64.72	422.25	321.42	100.83	4.188	
16,200.00	12,270.77	16,357.19	12,444.18	53.09	53.44	-114.25	4,140.82	63.97	422.25	320.60	101.65	4.154	
16,300.00	12,270.46	16,457.19	12,443.86	53.54	53.87	-114.25	4,240.81	63.22	422.25	319.76	102.49	4.120	
16,400.00	12,270.14	16,557.19	12,443.55	54.00	54.32	-114.25	4,340.81	62.48	422.25	318.91	103.34	4.086	
16,500.00	12,269.83	16,657.19	12,443.23	54.46	54.77	-114.25	4,440.81	61.73	422.25	318.05	104.20	4.052	
16,600.00	12,269.51	16,757.19	12,442.92	54.92	55.22	-114.25	4,540.80	60.98	422.25	317.18	105.08	4.019	
16,700.00	12,269.20	16,857.19	12,442.60	55.40	55.69	-114.25	4,640.80	60.23	422.25	316.29	105.96	3.985	
16,800.00	12,268.88	16,957.19	12,442.29	55.88	56.16	-114.25	4,740.80	59.48	422.25	315.39	106.86	3.951	
16,900.00	12,268.57	17,057.19	12,441.97	56.37	56.63	-114.25	4,840.79	58.73	422.25	314.48	107.77	3.918	
17,000.00	12,268.25	17,157.19	12,441.66	56.86	57.12	-114.25	4,940.79	57.98	422.25	313.55	108.70	3.885	
17,100.00	12,267.94	17,257.19	12,441.34	57.36	57.61	-114.25	5,040.79	57.23	422.25	312.62	109.63	3.852	
17,200.00	12,267.62	17,357.19	12,441.03	57.86	58.10	-114.25	5,140.78	56.48	422.25	311.68	110.58	3.819	
17,300.00	12,267.31	17,457.19	12,440.71	58.37	58.60	-114.25	5,240.78	55.73	422.25	310.72	111.53	3.786	
17,400.00	12,266.99	17,557.19	12,440.40	58.89	59.11	-114.25	5,340.78	54.98	422.25	309.75	112.50	3.753	
17,500.00	12,266.68	17,657.19	12,440.08	59.41	59.62	-114.25	5,440.77	54.23	422.25	308.78	113.48	3.721	
17,600.00	12,266.37	17,757.19	12,439.77	59.94	60.14	-114.25	5,540.77	53.49	422.25	307.79	114.46	3.689	
17,700.00	12,266.05	17,857.19	12,439.45	60.47	60.66	-114.25	5,640.77	52.74	422.25	306.79	115.46	3.657	
17,800.00	12,265.74	17,957.19	12,439.14	61.01	61.19	-114.25	5,740.76	51.99	422.25	305.79	116.46	3.626	
17,900.00	12,265.42	18,057.19	12,438.82	61.55	61.72	-114.25	5,840.76	51.24	422.25	304.78	117.48	3.594	
18,000.00	12,265.11	18,157.19	12,438.51	62.09	62.26	-114.25	5,940.76	50.49	422.25	303.75	118.50	3.563	
18,100.00	12,264.79	18,257.19	12,438.19	62.64	62.80	-114.25	6,040.75	49.74	422.25	302.72	119.53	3.532	
18,200.00	12,264.48	18,357.19	12,437.88	63.20	63.34	-114.25	6,140.75	48.99	422.25	301.68	120.57	3.502	
18,300.00	12,264.16	18,457.19	12,437.56	63.76	63.89	-114.25	6,240.75	48.24	422.25	300.63	121.62	3.472	
18,400.00	12,263.85	18,557.19	12,437.25	64.32	64.45	-114.25	6,340.74	47.49	422.25	299.57	122.68	3.442	
18,500.00	12,263.53	18,657.19	12,436.93	64.89	65.01	-114.25	6,440.74	46.74	422.25	298.51	123.74	3.412	
18,600.00	12,263.22	18,757.19	12,436.62	65.46	65.57	-114.25	6,540.74	45.99	422.25	297.44	124.82	3.383	
18,700.00	12,262.90	18,857.19	12,436.30	66.03	66.14	-114.25	6,640.73	45.25	422.25	296.36	125.90	3.354	
18,800.00	12,262.59	18,957.19	12,435.99	66.61	66.71	-114.25	6,740.73	44.50	422.25	295.27	126.98	3.325	
18,900.00	12,262.27	19,057.19	12,435.67	67.20	67.29	-114.25	6,840.73	43.75	422.26	294.18	128.08	3.297	
19,000.00	12,261.96	19,157.19	12,435.36	67.78	67.87	-114.25	6,940.72	43.00	422.26	293.08	129.18	3.269	
19,100.00	12,261.64	19,257.19	12,435.04	68.37	68.45	-114.25	7,040.72	42.25	422.26	291.97	130.29	3.241	
19,200.00	12,261.33	19,357.19	12,434.73	68.97	69.04	-114.25	7,140.72	41.50	422.26	290.86	131.40	3.214	
19,300.00	12,261.02	19,457.19	12,434.42	69.56	69.63	-114.25	7,240.71	40.75	422.26	289.74	132.52	3.186	
19,400.00	12,260.70	19,557.19	12,434.10	70.16	70.22	-114.25	7,340.71	40.00	422.26	288.61	133.65	3.160	
19,500.00	12,260.39	19,657.19	12,433.79	70.77	70.81	-114.25	7,440.71	39.25	422.26	287.48	134.78	3.133	
19,600.00	12,260.07	19,757.19	12,433.47	71.37	71.41	-114.25	7,540.70	38.50	422.26	286.34	135.92	3.107	
19,700.00	12,259.76	19,857.19	12,433.16	71.98	72.02	-114.25	7,640.70	37.75	422.26	285.19	137.06	3.081	
19,800.00	12,259.44	19,957.19	12,432.84	72.59	72.62	-114.25	7,740.70	37.00	422.26	284.05	138.21	3.055	
19,900.00	12,259.13	20,057.19	12,432.53	73.21	73.23	-114.25	7,840.69	36.26	422.26	282.89	139.37	3.030	
20,000.00	12,258.81	20,157.19	12,432.21	73.83	73.84	-114.25	7,940.69	35.51	422.26	281.73	140.53	3.005	
20,100.00	12,258.50	20,257.19	12,431.90	74.45	74.46	-114.25	8,040.69	34.76	422.26	280.56	141.69	2.980	
20,200.00	12,258.18	20,357.19	12,431.58	75.07	75.07	-114.25	8,140.68	34.01	422.26	279.39	142.86	2.956	
20,300.00	12,257.87	20,457.19	12,431.27	75.70	75.69	-114.25	8,240.68	33.26	422.26	278.22	144.04	2.932	
20,400.00	12,257.55	20,557.19	12,430.95	76.32	76.32	-114.25	8,340.68	32.51	422.26	277.04	145.22	2.908	
20,500.00	12,257.24	20,657.19	12,430.64	76.95	76.94	-114.25	8,440.67	31.76	422.26	275.85	146.41	2.884	
20,600.00	12,256.92	20,757.19	12,430.32	77.59	77.57	-114.25	8,540.67	31.01	422.26	274.66	147.60	2.861	
20,700.00	12,256.61	20,857.19	12,430.01	78.22	78.20	-114.25	8,640.67	30.26	422.26	273.47	148.79	2.838	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Microsoft
Anticollision Report



Company: Concho Resources
Project: Lea County, NM
Reference Site: Fez Federal Com
Site Error: 0.00 usft
Reference Well: Fez Federal Com 601H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft
(Independence 205)
MD Reference: GL 3243.9' + 26' KB @ 3269.90usft
(Independence 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Single User Db
Offset TVD Reference: Reference Datum

Offset Design Fez Federal Com - Fez Federal Com 602H - Wellbore #1 - plan1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+MS													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
20,800.00	12,256.29	20,957.19	12,429.69	78.86	78.83	-114.25	8,740.66	29.51	422.26	272.27	149.99	2.815	
20,900.00	12,255.98	21,057.19	12,429.38	79.50	79.46	-114.25	8,840.66	28.76	422.26	271.07	151.19	2.793	
21,000.00	12,255.67	21,157.19	12,429.06	80.14	80.10	-114.25	8,940.66	28.02	422.26	269.86	152.40	2.771	
21,100.00	12,255.35	21,257.19	12,428.75	80.79	80.74	-114.25	9,040.65	27.27	422.26	268.65	153.61	2.749	
21,200.00	12,255.04	21,357.19	12,428.43	81.43	81.38	-114.25	9,140.65	26.52	422.26	267.43	154.83	2.727	
21,300.00	12,254.72	21,457.19	12,428.12	82.08	82.02	-114.25	9,240.65	25.77	422.26	266.21	156.04	2.706	
21,400.00	12,254.41	21,557.19	12,427.80	82.73	82.67	-114.25	9,340.64	25.02	422.26	264.99	157.27	2.685	
21,500.00	12,254.09	21,657.19	12,427.49	83.38	83.32	-114.25	9,440.64	24.27	422.26	263.76	158.49	2.664	
21,600.00	12,253.78	21,757.19	12,427.17	84.04	83.97	-114.25	9,540.64	23.52	422.26	262.53	159.72	2.644	
21,700.00	12,253.46	21,857.19	12,426.86	84.69	84.62	-114.25	9,640.63	22.77	422.26	261.30	160.96	2.623	
21,800.00	12,253.15	21,957.19	12,426.54	85.35	85.27	-114.25	9,740.63	22.02	422.26	260.06	162.20	2.603	
21,900.00	12,252.83	22,057.19	12,426.23	86.01	85.92	-114.25	9,840.63	21.27	422.26	258.82	163.44	2.584	
22,000.00	12,252.52	22,157.19	12,425.91	86.67	86.58	-114.25	9,940.62	20.52	422.26	257.58	164.68	2.564	
22,100.00	12,252.20	22,257.19	12,425.60	87.33	87.24	-114.25	10,040.62	19.77	422.26	256.33	165.93	2.545	
22,164.44	12,252.00	22,321.64	12,425.40	87.76	87.66	-114.25	10,105.06	19.29	422.26	255.53	166.73	2.533 SF	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company: Concho Resources
Project: Lea County, NM
Reference Site: Fez Federal Com
Site Error: 0.00 usft
Reference Well: Fez Federal Com 601H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
MD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Single User Db
Offset TVD Reference: Reference Datum

Offset Design Fez Federal Com - Fez Federal Com 701H - Wellbore #1 - plan1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+MS													Offset Well Error: 0.00 usft
Reference	Offset		Semi Major Axis		Distance		Minimum Separation		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.30	0.00	0.00	0.00	-90.00	0.00	-30.00	30.00				
100.00	100.00	100.30	100.00	0.13	0.13	-90.00	0.00	-30.00	30.00	29.73	0.27	112.636	
200.00	200.00	200.30	200.00	0.49	0.49	-90.00	0.00	-30.00	30.00	29.02	0.98	30.510	
300.00	300.00	300.30	300.00	0.85	0.85	-90.00	0.00	-30.00	30.00	28.30	1.70	17.645	
400.00	400.00	400.30	400.00	1.21	1.21	-90.00	0.00	-30.00	30.00	27.58	2.42	12.411	
500.00	500.00	500.30	500.00	1.57	1.57	-90.00	0.00	-30.00	30.00	26.87	3.13	9.572	
600.00	600.00	600.30	600.00	1.92	1.93	-90.00	0.00	-30.00	30.00	26.15	3.85	7.790	
700.00	700.00	700.30	700.00	2.28	2.28	-90.00	0.00	-30.00	30.00	25.43	4.57	6.567	
800.00	800.00	800.30	800.00	2.64	2.64	-90.00	0.00	-30.00	30.00	24.72	5.28	5.677	
900.00	900.00	900.30	900.00	3.00	3.00	-90.00	0.00	-30.00	30.00	24.00	6.00	4.998	
1,000.00	1,000.00	1,000.30	1,000.00	3.36	3.36	-90.00	0.00	-30.00	30.00	23.28	6.72	4.465	
1,100.00	1,100.00	1,100.30	1,100.00	3.72	3.72	-90.00	0.00	-30.00	30.00	22.56	7.44	4.035	
1,200.00	1,200.00	1,200.30	1,200.00	4.08	4.08	-90.00	0.00	-30.00	30.00	21.85	8.15	3.680	
1,300.00	1,300.00	1,300.30	1,300.00	4.43	4.44	-90.00	0.00	-30.00	30.00	21.13	8.87	3.382	
1,400.00	1,400.00	1,400.30	1,400.00	4.79	4.79	-90.00	0.00	-30.00	30.00	20.41	9.59	3.129	
1,500.00	1,500.00	1,500.30	1,500.00	5.15	5.15	-90.00	0.00	-30.00	30.00	19.70	10.30	2.912	
1,600.00	1,600.00	1,600.30	1,600.00	5.51	5.51	-90.00	0.00	-30.00	30.00	18.98	11.02	2.722	
1,700.00	1,700.00	1,700.30	1,700.00	5.87	5.87	-90.00	0.00	-30.00	30.00	18.26	11.74	2.556	
1,800.00	1,800.00	1,800.30	1,800.00	6.23	6.23	-90.00	0.00	-30.00	30.00	17.55	12.45	2.409	
1,900.00	1,900.00	1,900.30	1,900.00	6.59	6.59	-90.00	0.00	-30.00	30.00	16.83	13.17	2.278	
2,000.00	2,000.00	2,000.30	2,000.00	6.94	6.94	-90.00	0.00	-30.00	30.00	16.11	13.89	2.160	
2,100.00	2,100.00	2,100.30	2,100.00	7.30	7.30	-90.00	0.00	-30.00	30.00	15.39	14.61	2.054	
2,200.00	2,200.00	2,200.30	2,200.00	7.66	7.66	-90.00	0.00	-30.00	30.00	14.68	15.32	1.958	
2,300.00	2,300.00	2,300.30	2,300.00	8.02	8.02	-90.00	0.00	-30.00	30.00	13.96	16.04	1.870	
2,400.00	2,400.00	2,400.30	2,400.00	8.38	8.38	-90.00	0.00	-30.00	30.00	13.24	16.76	1.790	
2,500.00	2,500.00	2,500.30	2,500.00	8.74	8.74	-90.00	0.00	-30.00	30.00	12.53	17.47	1.717 CC	
2,600.00	2,599.98	2,600.32	2,599.98	9.09	9.10	180.00	0.00	-30.00	31.75	13.56	18.18	1.746	
2,700.00	2,699.84	2,700.46	2,699.84	9.43	9.45	180.00	0.00	-30.00	36.98	18.10	18.88	1.958	
2,750.00	2,749.68	2,749.38	2,749.68	9.60	9.63	180.00	0.00	-30.00	40.90	21.67	19.23	2.127	
2,800.00	2,799.49	2,800.81	2,799.49	9.77	9.81	180.00	0.00	-30.00	45.26	25.68	19.58	2.311	
2,900.00	2,899.11	2,901.19	2,899.11	10.12	10.17	180.00	0.00	-30.00	53.97	33.69	20.28	2.661	
3,000.00	2,998.73	2,998.43	2,998.73	10.46	10.52	180.00	0.00	-30.00	62.69	41.72	20.97	2.989	
3,100.00	3,098.35	3,100.52	3,100.80	10.81	10.88	180.00	0.00	-28.24	69.69	48.02	21.67	3.216	
3,200.00	3,197.97	3,203.02	3,203.15	11.16	11.23	180.00	0.00	-22.81	73.11	50.79	22.33	3.274	
3,300.00	3,297.59	3,304.22	3,304.00	11.51	11.58	180.00	0.00	-14.37	73.49	50.49	23.00	3.195	
3,384.68	3,381.94	3,388.89	3,388.35	11.81	11.87	180.00	0.00	-8.99	73.49	49.91	23.58	3.116	
3,400.00	3,397.21	3,404.22	3,403.61	11.86	11.92	180.00	0.00	-5.66	73.49	49.80	23.69	3.102	
3,500.00	3,496.83	3,504.22	3,503.23	12.21	12.27	180.00	0.00	3.06	73.49	49.11	24.38	3.015	
3,600.00	3,596.45	3,604.22	3,602.85	12.56	12.62	180.00	0.00	11.77	73.49	48.42	25.07	2.931	
3,628.87	3,625.21	3,633.09	3,631.61	12.67	12.72	180.00	0.00	14.29	73.49	48.22	25.27	2.908	
3,700.00	3,696.07	3,704.22	3,702.47	12.92	12.96	180.00	0.00	20.49	73.49	47.72	25.77	2.852	
3,728.87	3,724.83	3,733.09	3,731.23	13.02	13.07	180.00	0.00	23.01	73.49	47.52	25.97	2.830	
3,800.00	3,795.69	3,804.22	3,802.09	13.27	13.31	180.00	0.00	29.20	73.49	47.03	26.46	2.777	
3,858.00	3,853.47	3,862.22	3,859.88	13.48	13.52	180.00	0.00	34.26	73.49	46.63	26.86	2.736	
3,900.00	3,895.31	3,904.22	3,901.71	13.62	13.66	180.00	0.00	37.92	73.49	46.33	27.16	2.706	
4,000.00	3,994.93	4,004.22	4,001.33	13.98	14.01	180.00	0.00	46.64	73.49	45.64	27.85	2.638	
4,005.15	4,000.06	4,009.37	4,006.46	14.00	14.03	180.00	0.00	47.08	73.49	45.60	27.89	2.635	
4,100.00	4,094.55	4,104.22	4,100.95	14.33	14.36	180.00	0.00	55.35	73.49	44.94	28.55	2.574	
4,134.46	4,128.87	4,138.68	4,135.28	14.45	14.48	180.00	0.00	58.35	73.49	44.70	28.79	2.552	
4,200.00	4,194.17	4,204.22	4,200.57	14.69	14.71	180.00	0.00	64.07	73.49	44.24	29.25	2.512	
4,222.22	4,216.30	4,226.44	4,222.70	14.77	14.79	180.00	0.00	66.00	73.49	44.08	29.41	2.499	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company: Concho Resources
Project: Lea County, NM
Reference Site: Fez Federal Com
Site Error: 0.00 usft
Reference Well: Fez Federal Com 601H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft
(Independence 205)
MD Reference: GL 3243.9' + 26' KB @ 3269.90usft
(Independence 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Single User Db
Offset TVD Reference: Reference Datum

Offset Design Fez Federal Com - Fez Federal Com 701H - Wellbore #1 - plan1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+MS													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Reference		Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor	
4,300.00	4,293.78	4,304.22	4,300.19	15.04	15.07	180.00	0.00	72.78	73.49	43.54	29.95	2.453	
4,400.00	4,393.40	4,404.22	4,399.81	15.40	15.42	180.00	0.00	81.50	73.49	42.83	30.66	2.397	
4,462.16	4,455.32	4,466.38	4,461.73	15.62	15.64	180.00	0.00	86.92	73.49	42.40	31.09	2.364	
4,500.00	4,493.02	4,504.22	4,499.43	15.75	15.77	180.00	0.00	90.21	73.49	42.13	31.36	2.344	
4,525.79	4,518.72	4,530.01	4,525.12	15.85	15.86	180.00	0.00	92.46	73.49	41.95	31.54	2.330	
4,600.00	4,592.64	4,604.22	4,599.05	16.11	16.13	180.00	0.00	98.93	73.49	41.43	32.06	2.292	
4,700.00	4,682.26	4,704.22	4,698.67	16.47	16.48	180.00	0.00	107.64	73.49	40.73	32.76	2.243	
4,701.13	4,693.39	4,705.35	4,699.80	16.47	16.48	180.00	0.00	107.74	73.49	40.72	32.77	2.242	
4,800.00	4,791.88	4,804.22	4,798.29	16.82	16.83	180.00	0.00	116.36	73.49	40.02	33.47	2.196	
4,801.13	4,793.01	4,805.35	4,799.42	16.83	16.84	180.00	0.00	116.46	73.49	40.01	33.48	2.195	
4,900.00	4,891.50	4,904.22	4,897.91	17.18	17.19	180.00	0.00	125.08	73.49	39.32	34.17	2.150	
4,909.58	4,901.04	4,913.79	4,907.45	17.22	17.22	180.00	0.00	125.91	73.49	39.25	34.24	2.146	
5,000.00	4,991.12	5,004.22	4,997.53	17.54	17.54	180.00	0.00	133.79	73.49	38.61	34.88	2.107	
5,100.00	5,090.74	5,104.22	5,097.15	17.90	17.90	180.00	0.00	142.51	73.49	37.90	35.58	2.065	
5,200.00	5,190.36	5,204.22	5,196.77	18.25	18.25	180.00	0.00	151.22	73.49	37.20	36.29	2.025	
5,225.79	5,216.05	5,230.01	5,222.46	18.35	18.35	180.00	0.00	153.47	73.49	37.02	36.47	2.015	
5,300.00	5,289.98	5,304.22	5,296.38	18.61	18.61	180.00	0.00	159.94	73.49	36.49	37.00	1.986	
5,400.00	5,389.60	5,404.22	5,396.00	18.97	18.97	180.00	0.00	168.65	73.49	35.78	37.71	1.949	
5,411.79	5,401.34	5,416.01	5,407.75	19.01	19.01	180.00	0.00	169.68	73.49	35.70	37.79	1.945	
5,500.00	5,489.22	5,504.22	5,495.62	19.33	19.32	180.00	0.00	177.37	73.49	35.08	38.41	1.913	
5,600.00	5,588.84	5,604.22	5,595.24	19.69	19.68	180.00	0.00	186.09	73.49	34.37	39.12	1.878	
5,607.41	5,596.22	5,611.63	5,602.62	19.71	19.71	180.00	0.00	186.73	73.49	34.32	39.17	1.876	
5,700.00	5,688.46	5,704.22	5,694.86	20.05	20.04	180.00	0.00	194.80	73.49	33.66	39.83	1.845	
5,800.00	5,788.08	5,804.22	5,794.48	20.41	20.39	180.00	0.00	203.52	73.49	32.95	40.54	1.813	
5,822.79	5,810.78	5,827.01	5,817.18	20.49	20.47	180.00	0.00	205.50	73.49	32.79	40.70	1.806	
5,900.00	5,887.70	5,904.22	5,894.10	20.76	20.75	180.00	0.00	212.23	73.49	32.24	41.25	1.782	
5,938.13	5,925.68	5,942.35	5,932.09	20.90	20.89	180.00	0.00	215.56	73.49	31.97	41.52	1.770	
6,000.00	5,987.32	6,004.22	5,993.72	21.12	21.11	180.00	0.00	220.95	73.49	31.53	41.96	1.751	
6,100.00	6,086.94	6,104.22	6,093.34	21.48	21.47	180.00	0.00	229.66	73.49	30.82	42.67	1.722	
6,110.14	6,097.04	6,114.36	6,103.44	21.52	21.50	180.00	0.00	230.55	73.49	30.75	42.74	1.719	
6,200.00	6,186.55	6,204.22	6,192.96	21.84	21.82	180.00	0.00	238.38	73.49	30.11	43.38	1.694	
6,209.28	6,195.80	6,213.49	6,202.20	21.88	21.86	180.00	0.00	239.19	73.49	30.04	43.45	1.692	
6,300.00	6,286.17	6,304.22	6,292.58	22.20	22.18	180.00	0.00	247.09	73.49	29.40	44.09	1.667	
6,309.28	6,295.41	6,313.49	6,301.82	22.24	22.21	180.00	0.00	247.90	73.49	29.33	44.16	1.664	
6,400.00	6,385.79	6,404.22	6,392.20	22.56	22.54	180.00	0.00	255.81	73.49	28.69	44.80	1.640	
6,500.00	6,485.41	6,504.22	6,491.82	22.92	22.90	180.00	0.00	264.53	73.49	27.98	45.51	1.615	
6,504.89	6,490.28	6,509.11	6,496.69	22.94	22.92	180.00	0.00	264.95	73.49	27.94	45.55	1.613	
6,600.00	6,585.03	6,604.22	6,591.44	23.28	23.26	180.00	0.00	273.24	73.49	27.27	46.22	1.590	
6,638.21	6,623.09	6,642.43	6,629.50	23.42	23.39	180.00	0.00	276.57	73.49	26.99	46.50	1.581	
6,700.00	6,684.65	6,704.22	6,691.06	23.64	23.61	180.00	0.00	281.96	73.49	26.55	46.94	1.566	
6,721.13	6,705.70	6,725.35	6,712.11	23.72	23.69	180.00	0.00	283.80	73.49	26.40	47.09	1.561	
6,800.00	6,784.27	6,804.22	6,790.68	24.00	23.97	180.00	0.00	290.67	73.49	25.84	47.65	1.542	
6,827.74	6,811.90	6,831.96	6,818.31	24.10	24.07	180.00	0.00	293.09	73.49	25.65	47.84	1.536	
6,900.00	6,883.89	6,904.22	6,890.30	24.36	24.33	180.00	0.00	299.39	73.49	25.13	48.36	1.520	
7,000.00	6,983.51	7,004.22	6,989.92	24.72	24.69	180.00	0.00	308.10	73.49	24.42	49.07	1.498 Level 3	
7,016.21	6,999.66	7,020.43	7,006.06	24.78	24.75	180.00	0.00	309.52	73.49	24.30	49.19	1.494 Level 3	
7,100.00	7,083.13	7,104.22	7,089.53	25.08	25.05	180.00	0.00	316.82	73.49	23.71	49.78	1.476 Level 3	
7,200.00	7,182.75	7,204.22	7,189.15	25.44	25.41	180.00	0.00	325.53	73.49	22.99	50.50	1.455 Level 3	
7,203.45	7,186.19	7,207.67	7,192.60	25.46	25.42	180.00	0.00	325.84	73.49	22.97	50.52	1.455 Level 3	
7,300.00	7,282.37	7,304.22	7,288.77	25.80	25.77	180.00	0.00	334.25	73.49	22.28	51.21	1.435 Level 3	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company: Concho Resources
Project: Lea County, NM
Reference Site: Fez Federal Com
Site Error: 0.00 usft
Reference Well: Fez Federal Com 601H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
MD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Single User Db
Offset TVD Reference: Reference Datum

Offset Design Fez Federal Com - Fez Federal Com 701H - Wellbore #1 - plan1													Offset Site Error: 0.00 usft	
Survey Program: 0-MWD+IFR1+SAG+MS													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset-Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
7,400.00	7,381.99	7,404.22	7,388.39	26.16	26.13	180.00	0.00	342.97	73.49	21.57	51.92	1.415	Level 3	
7,438.21	7,420.05	7,442.43	7,426.46	26.30	26.27	180.00	0.00	346.30	73.49	21.30	52.19	1.408	Level 3	
7,500.00	7,481.61	7,504.22	7,488.01	26.53	26.49	180.00	0.00	351.68	73.49	20.85	52.64	1.396	Level 3	
7,600.00	7,581.23	7,604.22	7,587.63	26.89	26.85	180.00	0.00	360.40	73.49	20.14	53.35	1.378	Level 3	
7,616.21	7,597.37	7,620.43	7,603.78	26.94	26.91	180.00	0.00	361.81	73.49	20.03	53.46	1.375	Level 3	
7,700.00	7,680.85	7,704.22	7,687.25	27.25	27.21	180.00	0.00	369.11	73.49	19.43	54.06	1.359	Level 3	
7,727.74	7,708.48	7,731.96	7,714.88	27.35	27.31	180.00	0.00	371.53	73.49	19.23	54.26	1.354	Level 3	
7,800.00	7,780.47	7,804.22	7,786.87	27.61	27.57	180.00	0.00	377.83	73.49	18.71	54.78	1.342	Level 3	
7,833.67	7,814.01	7,837.89	7,820.42	27.73	27.69	180.00	0.00	380.76	73.49	18.47	55.02	1.336	Level 3	
7,900.00	7,880.09	7,903.52	7,885.80	27.97	27.92	180.00	0.00	386.35	73.62	18.12	55.50	1.327	Level 3	
8,007.22	7,986.90	8,007.97	7,990.06	28.36	28.30	180.00	0.00	392.56	76.60	20.34	56.26	1.361	Level 3	
8,100.00	8,079.44	8,098.17	8,080.23	28.69	28.62	180.00	0.00	394.86	80.83	23.95	56.88	1.421	Level 3	
8,200.00	8,179.36	8,202.70	8,179.36	29.05	28.99	-180.00	0.00	395.00	84.43	26.85	57.58	1.466	Level 3	
8,257.21	8,236.57	8,254.51	8,236.57	29.25	29.17	-90.00	0.00	395.00	85.00	27.04	57.96	1.466	Level 3	
8,265.67	8,245.04	8,262.97	8,245.04	29.28	29.20	-90.00	0.00	395.00	85.00	26.98	58.02	1.465	Level 3	
8,300.00	8,279.36	8,302.70	8,279.36	29.40	29.34	-90.00	0.00	395.00	85.00	26.72	58.28	1.458	Level 3	
8,400.00	8,379.36	8,402.70	8,379.36	29.75	29.69	-90.00	0.00	395.00	85.00	26.02	58.98	1.441	Level 3	
8,500.00	8,479.36	8,502.70	8,479.36	30.09	30.04	-90.00	0.00	395.00	85.00	25.32	59.68	1.424	Level 3	
8,600.00	8,579.36	8,602.70	8,579.36	30.44	30.39	-90.00	0.00	395.00	85.00	24.62	60.38	1.408	Level 3	
8,700.00	8,679.36	8,702.70	8,679.36	30.79	30.74	-90.00	0.00	395.00	85.00	23.92	61.08	1.392	Level 3	
8,800.00	8,779.36	8,802.70	8,779.36	31.14	31.09	-90.00	0.00	395.00	85.00	23.22	61.78	1.376	Level 3	
8,900.00	8,879.36	8,902.70	8,879.36	31.49	31.44	-90.00	0.00	395.00	85.00	22.52	62.48	1.360	Level 3	
9,000.00	8,979.36	9,002.70	8,979.36	31.84	31.79	-90.00	0.00	395.00	85.00	21.82	63.18	1.345	Level 3	
9,100.00	9,079.36	9,102.70	9,079.36	32.19	32.14	-90.00	0.00	395.00	85.00	21.12	63.88	1.331	Level 3	
9,200.00	9,179.36	9,202.70	9,179.36	32.54	32.50	-90.00	0.00	395.00	85.00	20.42	64.58	1.316	Level 3	
9,300.00	9,279.36	9,302.70	9,279.36	32.89	32.85	-90.00	0.00	395.00	85.00	19.71	65.29	1.302	Level 3	
9,400.00	9,379.36	9,402.70	9,379.36	33.24	33.20	-90.00	0.00	395.00	85.00	19.01	65.99	1.288	Level 3	
9,500.00	9,479.36	9,502.70	9,479.36	33.59	33.55	-90.00	0.00	395.00	85.00	18.31	66.69	1.274	Level 3	
9,600.00	9,579.36	9,602.70	9,579.36	33.94	33.90	-90.00	0.00	395.00	85.00	17.60	67.40	1.261	Level 3	
9,700.00	9,679.36	9,702.70	9,679.36	34.29	34.26	-90.00	0.00	395.00	85.00	16.90	68.10	1.248	Level 2	
9,800.00	9,779.36	9,802.70	9,779.36	34.64	34.61	-90.00	0.00	395.00	85.00	16.20	68.80	1.235	Level 2	
9,900.00	9,879.36	9,902.70	9,879.36	34.99	34.96	-90.01	0.00	395.00	85.00	15.49	69.51	1.223	Level 2	
10,000.00	9,979.36	10,002.70	9,979.36	35.34	35.31	-90.01	0.00	395.00	85.00	14.79	70.21	1.211	Level 2	
10,100.00	10,079.36	10,102.70	10,079.36	35.70	35.67	-90.01	0.00	395.00	85.00	14.08	70.92	1.199	Level 2	
10,200.00	10,179.36	10,202.70	10,179.36	36.05	36.02	-90.01	0.00	395.00	85.00	13.38	71.62	1.187	Level 2	
10,300.00	10,279.36	10,302.70	10,279.36	36.40	36.37	-90.01	0.00	395.00	85.00	12.67	72.33	1.175	Level 2	
10,400.00	10,379.36	10,402.70	10,379.36	36.75	36.73	-90.01	0.00	395.00	85.00	11.97	73.03	1.164	Level 2	
10,500.00	10,479.36	10,502.70	10,479.36	37.10	37.08	-90.01	0.00	395.00	85.00	11.26	73.74	1.153	Level 2	
10,600.00	10,579.36	10,602.70	10,579.36	37.46	37.43	-90.01	0.00	395.00	85.00	10.56	74.44	1.142	Level 2	
10,700.00	10,679.36	10,702.70	10,679.36	37.81	37.79	-90.01	0.00	395.00	85.00	9.85	75.15	1.131	Level 2	
10,800.00	10,779.36	10,802.70	10,779.36	38.16	38.14	-90.01	0.00	395.00	85.00	9.14	75.86	1.121	Level 2	
10,900.00	10,879.36	10,902.70	10,879.36	38.51	38.49	-90.01	0.00	395.00	85.00	8.44	76.56	1.110	Level 2	
11,000.00	10,979.36	11,002.70	10,979.36	38.86	38.85	-90.01	0.00	395.00	85.00	7.73	77.27	1.100	Level 2	
11,100.00	11,079.36	11,102.70	11,079.36	39.22	39.20	-90.01	0.00	395.00	85.00	7.02	77.98	1.090	Level 2	
11,200.00	11,179.36	11,202.70	11,179.36	39.57	39.56	-90.01	0.00	395.00	85.00	6.32	78.68	1.080	Level 2	
11,300.00	11,279.36	11,302.70	11,279.36	39.92	39.91	-90.01	0.00	395.00	85.00	5.61	79.39	1.071	Level 2	
11,400.00	11,379.36	11,402.70	11,379.36	40.28	40.26	-90.01	0.00	395.00	85.00	4.90	80.10	1.061	Level 2	
11,500.00	11,479.36	11,502.70	11,479.36	40.63	40.62	-90.01	0.00	395.00	85.00	4.20	80.80	1.052	Level 2	
11,600.00	11,579.36	11,602.70	11,579.36	40.98	40.97	-90.01	0.00	395.00	85.00	3.49	81.51	1.043	Level 2	
11,700.00	11,679.36	11,702.70	11,679.36	41.34	41.33	-90.01	0.00	395.00	85.00	2.78	82.22	1.034	Level 2	
11,729.69	11,709.05	11,726.99	11,709.05	41.44	41.41	-90.01	0.00	395.00	85.00	2.59	82.41	1.031	Level 2	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company: Concho Resources
Project: Lea County, NM
Reference Site: Fez Federal Com
Site Error: 0.00 usft
Reference Well: Fez Federal Com 601H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
MD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Single User Db
Offset TVD Reference: Reference Datum

Offset Design Fez Federal Com - Fez Federal Com 701H - Wellbore #1 - plan1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+MS													Offset Well Error:	0.00usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)				Between Centres (usft)	Between Ellipses (usft)	
11,750.00	11,729.36	11,747.28	11,729.34	41.51	41.48	-89.59	0.35	395.00	85.00	2.45	82.55	1.030	Level 2	
11,800.00	11,779.18	11,797.23	11,779.11	41.69	41.66	-89.61	4.26	394.97	85.00	2.10	82.90	1.025	Level 2	
11,850.00	11,828.48	11,847.18	11,828.37	41.86	41.83	-89.63	12.50	394.91	85.00	1.75	83.25	1.021	Level 2	
11,900.00	11,876.86	11,897.13	11,876.72	42.03	42.00	-89.66	24.99	394.81	85.00	1.41	83.59	1.017	Level 2	
11,950.00	11,923.97	11,947.09	11,923.80	42.19	42.16	-89.69	41.65	394.69	85.00	1.08	83.92	1.013	Level 2	
12,000.00	11,969.44	11,997.05	11,969.26	42.34	42.32	-89.72	62.34	394.53	85.00	0.77	84.23	1.009	Level 2	
12,050.00	12,012.93	12,047.02	12,012.74	42.48	42.46	-89.75	86.92	394.35	85.00	0.46	84.54	1.005	Level 2	
12,100.00	12,054.11	12,096.99	12,053.92	42.61	42.58	-89.79	115.19	394.14	85.00	0.17	84.83	1.002	Level 2	
12,150.00	12,092.66	12,146.96	12,092.49	42.72	42.70	-89.83	146.95	393.90	85.00	-0.10	85.10	0.999	Level 1	
12,200.00	12,128.30	12,196.94	12,128.15	42.82	42.80	-89.86	181.94	393.64	85.00	-0.36	85.36	0.996	Level 1	
12,250.00	12,160.74	12,246.93	12,160.62	42.91	42.88	-89.90	219.92	393.35	85.00	-0.60	85.60	0.993	Level 1	
12,300.00	12,189.74	12,296.92	12,189.67	42.98	42.96	-89.94	260.58	393.05	85.00	-0.82	85.82	0.990	Level 1	
12,343.27	12,211.90	12,340.18	12,211.87	43.03	43.02	-89.98	297.71	392.77	85.00	-0.99	85.99	0.988	Level 1	
12,350.00	12,215.09	12,346.91	12,215.06	43.04	43.03	-89.98	303.63	392.73	85.00	-1.02	86.02	0.988	Level 1	
12,400.00	12,236.58	12,396.91	12,236.61	43.11	43.10	-90.02	348.73	392.39	85.00	-1.20	86.19	0.986	Level 1	
12,450.00	12,254.06	12,446.92	12,254.15	43.18	43.18	-90.06	395.54	392.04	85.00	-1.35	86.35	0.984	Level 1	
12,500.00	12,267.39	12,496.93	12,267.54	43.24	43.24	-90.10	443.71	391.68	85.00	-1.48	86.48	0.983	Level 1	
12,550.00	12,276.47	12,546.94	12,276.68	43.29	43.29	-90.14	492.86	391.31	85.00	-1.59	86.59	0.982	Level 1	
12,600.00	12,281.24	12,596.97	12,281.51	43.34	43.34	-90.18	542.63	390.94	85.00	-1.68	86.68	0.981	Level 1	
12,631.49	12,282.00	12,628.47	12,282.31	43.36	43.36	-90.21	574.13	390.70	85.00	-1.72	86.72	0.980	Level 1	
12,700.00	12,281.79	12,703.02	12,282.09	43.40	43.41	-90.21	642.63	390.19	85.00	-1.82	86.82	0.979	Level 1	
12,800.00	12,281.47	12,803.02	12,281.78	43.48	43.48	-90.21	742.63	389.44	85.00	-1.97	86.97	0.977	Level 1	
12,900.00	12,281.16	12,903.02	12,281.46	43.58	43.58	-90.21	842.63	388.69	85.00	-2.16	87.15	0.975	Level 1	
13,000.00	12,280.84	13,003.02	12,281.15	43.69	43.68	-90.21	942.62	387.94	85.00	-2.36	87.36	0.973	Level 1	
13,100.00	12,280.53	13,103.02	12,280.83	43.81	43.80	-90.21	1,042.62	387.19	85.00	-2.60	87.60	0.970	Level 1	
13,200.00	12,280.21	13,203.02	12,280.52	43.94	43.93	-90.21	1,142.62	386.44	85.00	-2.86	87.86	0.967	Level 1	
13,300.00	12,279.90	13,303.02	12,280.20	44.08	44.08	-90.21	1,242.61	385.69	85.00	-3.15	88.15	0.964	Level 1	
13,400.00	12,279.58	13,403.02	12,279.89	44.24	44.23	-90.21	1,342.61	384.94	85.00	-3.46	88.46	0.961	Level 1	
13,500.00	12,279.27	13,503.02	12,279.57	44.41	44.40	-90.21	1,442.61	384.19	85.00	-3.80	88.80	0.957	Level 1	
13,600.00	12,278.95	13,603.02	12,279.26	44.59	44.58	-90.20	1,542.60	383.45	85.00	-4.16	89.16	0.953	Level 1	
13,700.00	12,278.64	13,703.02	12,278.94	44.79	44.78	-90.20	1,642.60	382.70	85.00	-4.55	89.54	0.949	Level 1	
13,800.00	12,278.32	13,803.02	12,278.63	45.00	44.98	-90.20	1,742.60	381.95	85.00	-4.96	89.96	0.945	Level 1	
13,900.00	12,278.01	13,903.02	12,278.31	45.21	45.20	-90.20	1,842.59	381.20	85.00	-5.39	90.39	0.940	Level 1	
14,000.00	12,277.70	14,003.02	12,278.00	45.45	45.43	-90.20	1,942.59	380.45	85.00	-5.85	90.85	0.936	Level 1	
14,100.00	12,277.38	14,103.02	12,277.68	45.69	45.67	-90.20	2,042.59	379.70	85.00	-6.33	91.33	0.931	Level 1	
14,200.00	12,277.07	14,203.02	12,277.37	45.94	45.92	-90.20	2,142.58	378.95	85.00	-6.84	91.84	0.926	Level 1	
14,300.00	12,276.75	14,303.02	12,277.06	46.20	46.19	-90.20	2,242.58	378.20	85.00	-7.36	92.36	0.920	Level 1	
14,400.00	12,276.44	14,403.02	12,276.74	46.48	46.46	-90.20	2,342.58	377.45	85.00	-7.91	92.91	0.915	Level 1	
14,500.00	12,276.12	14,503.02	12,276.43	46.77	46.75	-90.20	2,442.57	376.70	85.00	-8.48	93.48	0.909	Level 1	
14,600.00	12,275.81	14,603.02	12,276.11	47.06	47.04	-90.20	2,542.57	375.96	85.00	-9.08	94.08	0.904	Level 1	
14,700.00	12,275.49	14,703.02	12,275.80	47.37	47.35	-90.20	2,642.57	375.21	85.00	-9.69	94.69	0.898	Level 1	
14,800.00	12,275.18	14,803.02	12,275.48	47.69	47.67	-90.20	2,742.56	374.46	85.00	-10.32	95.32	0.892	Level 1	
14,900.00	12,274.86	14,903.02	12,275.17	48.02	47.99	-90.20	2,842.56	373.71	85.00	-10.98	95.98	0.886	Level 1	
15,000.00	12,274.55	15,003.02	12,274.85	48.35	48.33	-90.20	2,942.56	372.96	85.00	-11.65	96.65	0.879	Level 1	
15,100.00	12,274.23	15,103.02	12,274.54	48.70	48.68	-90.20	3,042.55	372.21	85.00	-12.35	97.35	0.873	Level 1	
15,200.00	12,273.92	15,203.02	12,274.22	49.06	49.03	-90.20	3,142.55	371.46	85.00	-13.06	98.06	0.867	Level 1	
15,300.00	12,273.60	15,303.02	12,273.91	49.42	49.40	-90.20	3,242.55	370.71	85.00	-13.79	98.79	0.860	Level 1	
15,400.00	12,273.29	15,403.02	12,273.59	49.80	49.77	-90.20	3,342.54	369.96	85.00	-14.54	99.54	0.854	Level 1	
15,500.00	12,272.97	15,503.02	12,273.28	50.18	50.16	-90.20	3,442.54	369.22	85.00	-15.30	100.30	0.847	Level 1	
15,600.00	12,272.66	15,603.02	12,272.96	50.57	50.55	-90.20	3,542.54	368.47	85.00	-16.09	101.09	0.841	Level 1	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company: Concho Resources
Project: Lea County, NM
Reference Site: Fez Federal Com
Site Error: 0.00 usft
Reference Well: Fez Federal Com 601H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
MD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.14 Single User Db
Offset TVD Reference: Reference Datum

Offset Design: Fez Federal Com - Fez Federal Com 701H - Wellbore #1 - plan1													Offset Site Error: 0.00 usft
Survey Program: 0-MWD+IFR1+SAG+MS													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,700.00	12,272.35	15,703.02	12,272.65	50.97	50.95	-90.20	3,642.53	367.72	85.00	-16.89	101.89	0.834	Level 1
15,800.00	12,272.03	15,803.02	12,272.33	51.38	51.35	-90.20	3,742.53	366.97	85.00	-17.70	102.70	0.828	Level 1
15,900.00	12,271.72	15,903.02	12,272.02	51.80	51.77	-90.20	3,842.53	366.22	85.00	-18.54	103.54	0.821	Level 1
16,000.00	12,271.40	16,003.02	12,271.70	52.22	52.20	-90.20	3,942.52	365.47	85.00	-19.39	104.39	0.814	Level 1
16,100.00	12,271.09	16,103.02	12,271.39	52.66	52.63	-90.20	4,042.52	364.72	85.00	-20.25	105.25	0.808	Level 1
16,200.00	12,270.77	16,203.02	12,271.07	53.09	53.07	-90.20	4,142.52	363.97	85.00	-21.13	106.13	0.801	Level 1
16,300.00	12,270.46	16,303.02	12,270.76	53.54	53.51	-90.20	4,242.51	363.22	85.00	-22.02	107.02	0.794	Level 1
16,400.00	12,270.14	16,403.02	12,270.44	54.00	53.97	-90.20	4,342.51	362.47	85.00	-22.93	107.93	0.788	Level 1
16,500.00	12,269.83	16,503.02	12,270.13	54.46	54.43	-90.20	4,442.51	361.73	85.00	-23.85	108.85	0.781	Level 1
16,600.00	12,269.51	16,603.02	12,269.82	54.92	54.89	-90.20	4,542.51	360.98	85.00	-24.79	109.79	0.774	Level 1
16,700.00	12,269.20	16,703.02	12,269.50	55.40	55.37	-90.20	4,642.50	360.23	85.00	-25.73	110.74	0.768	Level 1
16,800.00	12,268.88	16,803.02	12,269.19	55.88	55.85	-90.20	4,742.50	359.48	85.00	-26.70	111.70	0.761	Level 1
16,900.00	12,268.57	16,903.02	12,268.87	56.37	56.33	-90.20	4,842.50	358.73	85.00	-27.67	112.67	0.754	Level 1
17,000.00	12,268.25	17,003.02	12,268.56	56.86	56.83	-90.20	4,942.49	357.98	85.00	-28.66	113.66	0.748	Level 1
17,100.00	12,267.94	17,103.02	12,268.24	57.36	57.33	-90.20	5,042.49	357.23	85.00	-29.65	114.65	0.741	Level 1
17,200.00	12,267.62	17,203.02	12,267.93	57.86	57.83	-90.20	5,142.49	356.48	85.00	-30.66	115.66	0.735	Level 1
17,300.00	12,267.31	17,303.02	12,267.61	58.37	58.34	-90.20	5,242.48	355.73	85.00	-31.68	116.68	0.728	Level 1
17,400.00	12,266.99	17,403.02	12,267.30	58.89	58.86	-90.20	5,342.48	354.98	85.00	-32.71	117.72	0.722	Level 1
17,500.00	12,266.68	17,503.02	12,266.98	59.41	59.38	-90.20	5,442.48	354.24	85.00	-33.76	118.76	0.716	Level 1
17,600.00	12,266.37	17,603.02	12,266.67	59.94	59.90	-90.20	5,542.47	353.49	85.00	-34.81	119.81	0.709	Level 1
17,700.00	12,266.05	17,703.02	12,266.35	60.47	60.43	-90.20	5,642.47	352.74	85.00	-35.87	120.87	0.703	Level 1
17,800.00	12,265.74	17,803.02	12,266.04	61.01	60.97	-90.20	5,742.47	351.99	85.00	-36.95	121.95	0.697	Level 1
17,900.00	12,265.42	17,903.02	12,265.72	61.55	61.51	-90.20	5,842.46	351.24	85.00	-38.03	123.03	0.691	Level 1
18,000.00	12,265.11	18,003.02	12,265.41	62.09	62.06	-90.20	5,942.46	350.49	85.00	-39.12	124.12	0.685	Level 1
18,100.00	12,264.79	18,103.02	12,265.09	62.64	62.61	-90.20	6,042.46	349.74	85.00	-40.22	125.22	0.679	Level 1
18,200.00	12,264.48	18,203.02	12,264.78	63.20	63.16	-90.20	6,142.45	348.99	85.00	-41.33	126.33	0.673	Level 1
18,300.00	12,264.16	18,303.02	12,264.46	63.76	63.72	-90.20	6,242.45	348.24	85.00	-42.45	127.45	0.667	Level 1
18,400.00	12,263.85	18,403.02	12,264.15	64.32	64.28	-90.20	6,342.45	347.49	85.00	-43.58	128.58	0.661	Level 1
18,500.00	12,263.53	18,503.02	12,263.83	64.89	64.85	-90.20	6,442.44	346.75	85.00	-44.71	129.71	0.655	Level 1
18,600.00	12,263.22	18,603.02	12,263.52	65.46	65.42	-90.20	6,542.44	346.00	85.00	-45.85	130.85	0.650	Level 1
18,700.00	12,262.90	18,703.02	12,263.21	66.03	66.00	-90.20	6,642.44	345.25	85.00	-47.00	132.01	0.644	Level 1
18,800.00	12,262.59	18,803.02	12,262.89	66.61	66.58	-90.20	6,742.43	344.50	85.00	-48.16	133.16	0.638	Level 1
18,900.00	12,262.27	18,903.02	12,262.58	67.20	67.16	-90.20	6,842.43	343.75	85.00	-49.33	134.33	0.633	Level 1
19,000.00	12,261.96	19,003.02	12,262.26	67.78	67.75	-90.20	6,942.43	343.00	85.00	-50.50	135.50	0.627	Level 1
19,100.00	12,261.64	19,103.02	12,261.95	68.37	68.33	-90.20	7,042.42	342.25	85.00	-51.68	136.68	0.622	Level 1
19,200.00	12,261.33	19,203.02	12,261.63	68.97	68.93	-90.20	7,142.42	341.50	85.00	-52.87	137.87	0.617	Level 1
19,300.00	12,261.02	19,303.02	12,261.32	69.56	69.52	-90.20	7,242.42	340.75	85.00	-54.06	139.06	0.611	Level 1
19,400.00	12,260.70	19,403.02	12,261.00	70.16	70.12	-90.20	7,342.41	340.00	85.00	-55.26	140.26	0.606	Level 1
19,500.00	12,260.39	19,503.02	12,260.69	70.77	70.73	-90.20	7,442.41	339.26	85.00	-56.47	141.47	0.601	Level 1
19,600.00	12,260.07	19,603.02	12,260.37	71.37	71.33	-90.20	7,542.41	338.51	85.00	-57.68	142.68	0.596	Level 1
19,700.00	12,259.76	19,703.02	12,260.06	71.98	71.94	-90.20	7,642.40	337.76	85.00	-58.90	143.90	0.591	Level 1
19,800.00	12,259.44	19,803.02	12,259.74	72.59	72.55	-90.20	7,742.40	337.01	85.00	-60.12	145.12	0.586	Level 1
19,900.00	12,259.13	19,903.02	12,259.43	73.21	73.17	-90.20	7,842.40	336.26	85.00	-61.35	146.35	0.581	Level 1
20,000.00	12,258.81	20,003.02	12,259.11	73.83	73.79	-90.20	7,942.39	335.51	85.00	-62.59	147.59	0.576	Level 1
20,100.00	12,258.50	20,103.02	12,258.80	74.45	74.41	-90.20	8,042.39	334.76	85.00	-63.83	148.83	0.571	Level 1
20,200.00	12,258.18	20,203.02	12,258.48	75.07	75.03	-90.20	8,142.39	334.01	85.00	-65.07	150.08	0.566	Level 1
20,300.00	12,257.87	20,303.02	12,258.17	75.70	75.66	-90.20	8,242.38	333.26	85.00	-66.33	151.33	0.562	Level 1
20,400.00	12,257.55	20,403.02	12,257.85	76.32	76.28	-90.20	8,342.38	332.51	85.00	-67.58	152.58	0.557	Level 1
20,500.00	12,257.24	20,503.02	12,257.54	76.95	76.91	-90.20	8,442.38	331.77	85.00	-68.84	153.85	0.553	Level 1
20,600.00	12,256.92	20,603.02	12,257.22	77.59	77.55	-90.20	8,542.37	331.02	85.00	-70.11	155.11	0.548	Level 1
20,700.00	12,256.61	20,703.02	12,256.91	78.22	78.18	-90.20	8,642.37	330.27	85.00	-71.38	156.38	0.544	Level 1

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company: Concho Resources
Project: Lea County, NM
Reference Site: Fez Federal Com
Site Error: 0.00 usft
Reference Well: Fez Federal Com 601H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
MD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Single User Db
Offset TVD Reference: Reference Datum

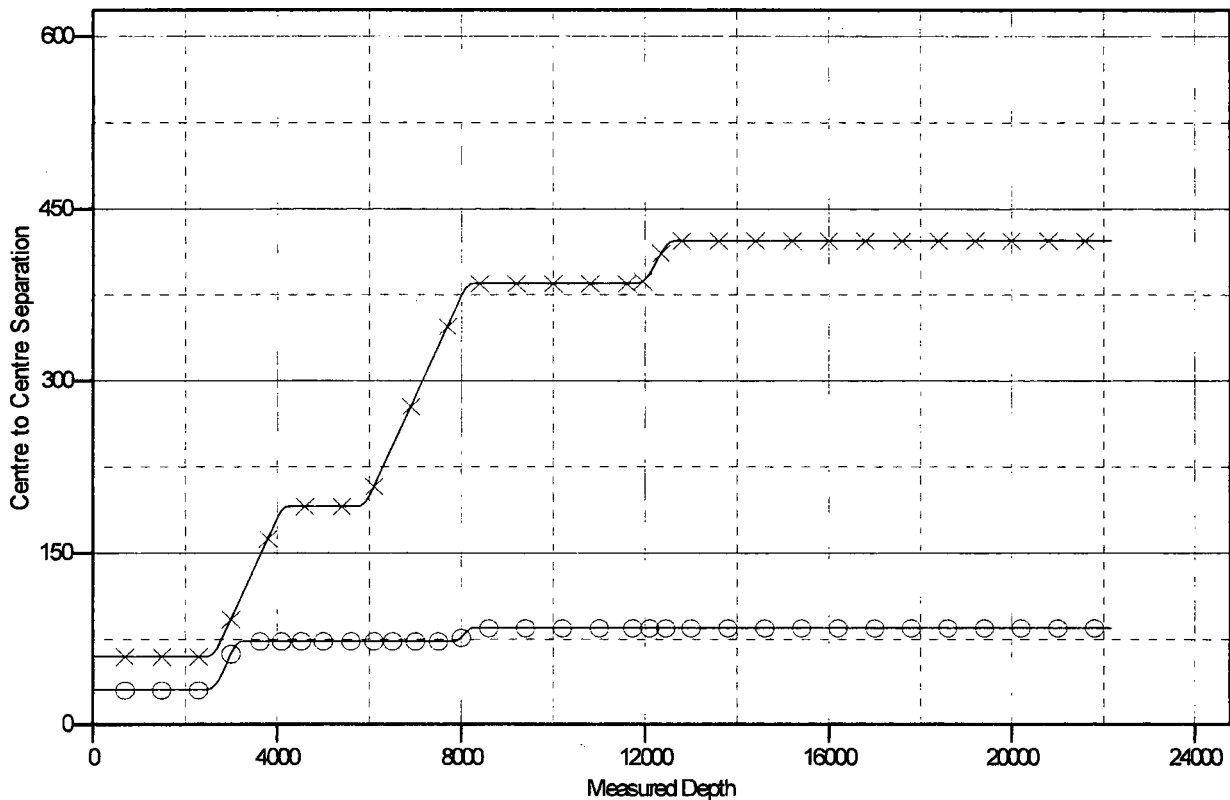
Offset Design: Fez Federal Com - Fez Federal Com 701H - Wellbore #1 - plan1													Offset Site Error:	0.00 usft
Survey Program: 0-MWD+IFR1+SAG+MS													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
20,800.00	12,256.29	20,803.02	12,256.59	78.86	78.82	-90.20	8,742.37	329.52	85.00	-72.65	157.66	0.539	Level 1	
20,900.00	12,255.98	20,903.02	12,256.28	79.50	79.46	-90.20	8,842.36	328.77	85.00	-73.93	158.94	0.535	Level 1	
21,000.00	12,255.67	21,003.02	12,255.97	80.14	80.10	-90.20	8,942.36	328.02	85.00	-75.22	160.22	0.531	Level 1	
21,100.00	12,255.35	21,103.02	12,255.65	80.79	80.74	-90.20	9,042.36	327.27	85.00	-76.51	161.51	0.526	Level 1	
21,200.00	12,255.04	21,203.02	12,255.34	81.43	81.39	-90.20	9,142.35	326.52	85.00	-77.80	162.80	0.522	Level 1	
21,300.00	12,254.72	21,303.02	12,255.02	82.08	82.04	-90.20	9,242.35	325.77	85.00	-79.10	164.10	0.518	Level 1	
21,400.00	12,254.41	21,403.02	12,254.71	82.73	82.69	-90.20	9,342.35	325.03	85.00	-80.40	165.40	0.514	Level 1	
21,500.00	12,254.09	21,503.02	12,254.39	83.38	83.34	-90.20	9,442.34	324.28	85.00	-81.70	166.70	0.510	Level 1	
21,600.00	12,253.78	21,603.02	12,254.08	84.04	83.99	-90.20	9,542.34	323.53	85.00	-83.01	168.01	0.506	Level 1	
21,700.00	12,253.46	21,703.02	12,253.76	84.69	84.65	-90.20	9,642.34	322.78	85.00	-84.32	169.32	0.502	Level 1	
21,800.00	12,253.15	21,803.02	12,253.45	85.35	85.31	-90.20	9,742.33	322.03	85.00	-85.64	170.64	0.498	Level 1	
21,900.00	12,252.83	21,903.02	12,253.13	86.01	85.97	-90.20	9,842.33	321.28	85.00	-86.95	171.96	0.494	Level 1	
22,000.00	12,252.52	22,003.02	12,252.82	86.67	86.63	-90.20	9,942.33	320.53	85.00	-88.28	173.28	0.491	Level 1	
22,100.00	12,252.20	22,096.98	12,252.50	87.33	87.25	-90.20	10,042.32	319.78	85.00	-89.56	174.57	0.487	Level 1	
22,164.44	12,252.00	22,161.42	12,252.30	87.76	87.68	-90.20	10,106.76	319.30	85.00	-90.42	175.42	0.485	Level 1, ES, SF	

Company: Concho Resources
 Project: Lea County, NM
 Reference Site: Fez Federal Com
 Site Error: 0.00 usft
 Reference Well: Fez Federal Com 601H
 Well Error: 0.00 usft
 Reference Wellbore: Wellbore #1
 Reference Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
 TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
 MD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.14 Single User Db
 Offset TVD Reference: Reference Datum

Reference Depths are relative to GL 3243.9' + 26' KB @ 3269.90usft (Coordinates are relative to: Fez Federal Com 601H)
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 20' 0.000 W
 Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
 Grid Convergence at Surface is: 0.51°

Ladder Plot



LEGEND

○ Fez Federal Com 701H, Wellbore #1, plan1 VO ✕ Fez Federal Com 602H, Wellbore #1, plan1 VO

Company: Concho Resources
Project: Lea County, NM
Reference Site: Fez Federal Com
Site Error: 0.00 usft
Reference Well: Fez Federal Com 601H
Well Error: 0.00 usft
Reference Wellbore: Wellbore #1
Reference Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
MD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.14 Single User Db
Offset TVD Reference: Reference Datum

Reference Depths are relative to GL 3243.9' + 26' KB @ 3269.90usft (Coordinates are relative to: Fez Federal Com 601H)

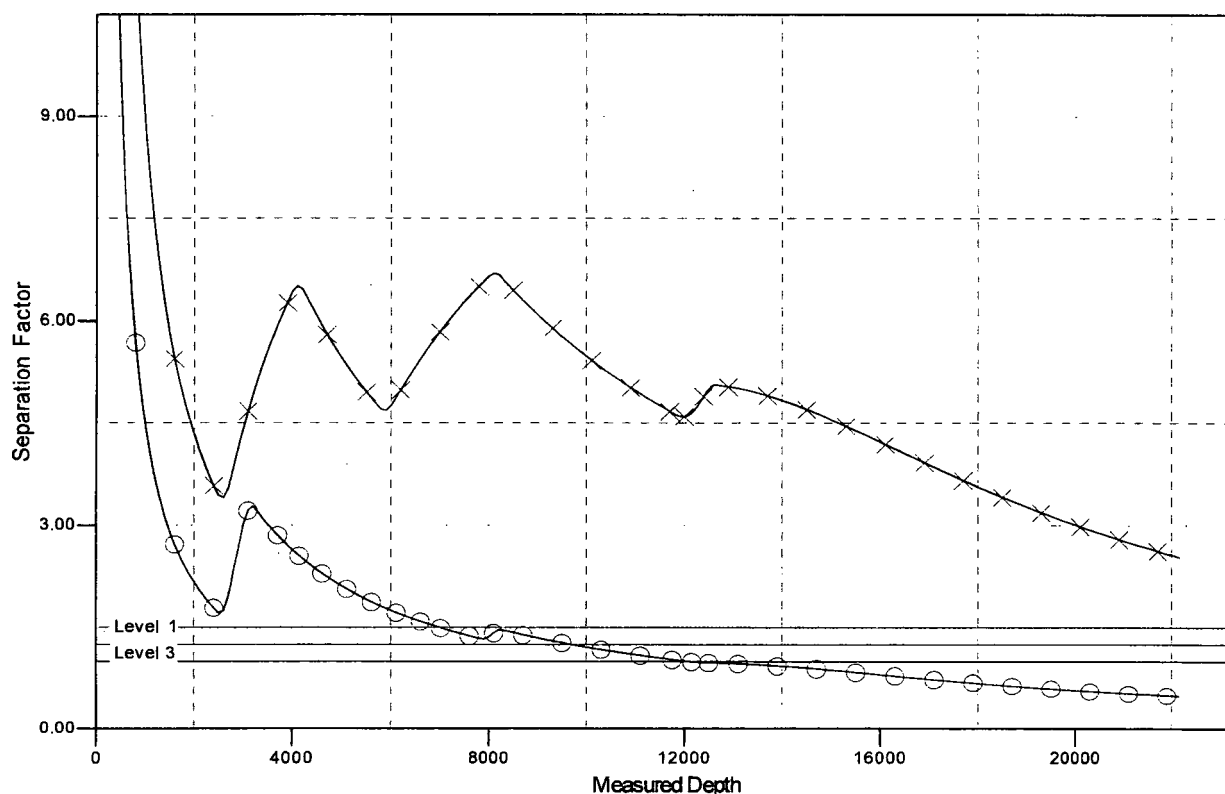
Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30

Grid Convergence at Surface is: 0.51°

Separation Factor Plot



LEGEND

 Fez Federal Com 701H, Wellbore #1, p. Jan1 V0
  Fez Federal Com 602H, Wellbore #1, p. Jan1 V0



Concho Resources

**Lea County, NM
Fez Federal Com
Fez Federal Com 601H**

Wellbore #1

Plan: plan1

Standard Planning Report

23 October, 2018





Project: Lea County, NM
Site: Fez Federal Com
Well: Fez Federal Com 601H
Depth Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
SHL Northing: 415348.30
SHL Easting: 796667.50
Rig: Independence 205
Plan: plan1



SECTION DETAILS

MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSecl	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
2750.00	5.00	90.00	2749.68	0.00	10.90	2.00	90.00	-0.08	Start 5257.22 hold at 2750.00 MD
8007.22	5.00	90.00	7988.90	0.00	469.10	0.00	0.00	-3.52	Start Drop -2.00
8257.21	0.00	0.00	8235.57	0.00	480.00	2.00	180.00	-3.60	Start 3472.48 hold at 8257.21 MD
11729.69	0.00	0.00	11709.05	0.02	480.00	0.00	0.00	-3.59	Start DLS 10.00 TFO -0.43
12631.49	90.18	359.57	12282.00	574.76	475.70	10.00	-0.43	571.18	Start 9532.95 hold at 12631.49 MD
22164.44	90.18	359.57	12252.00	10107.40	404.30	0.00	0.00	10104.08	TD @ 22164.44' MD

FORMATION TOP DETAILS

No formation data is available

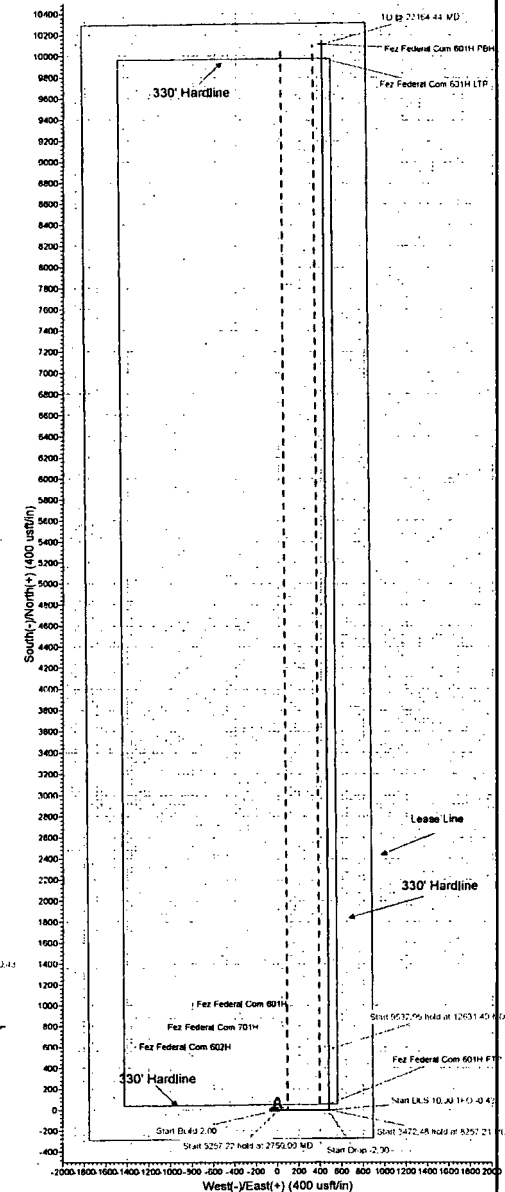
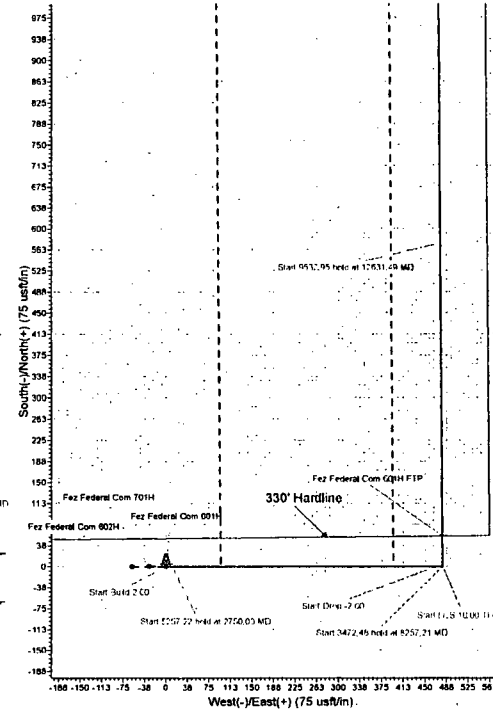
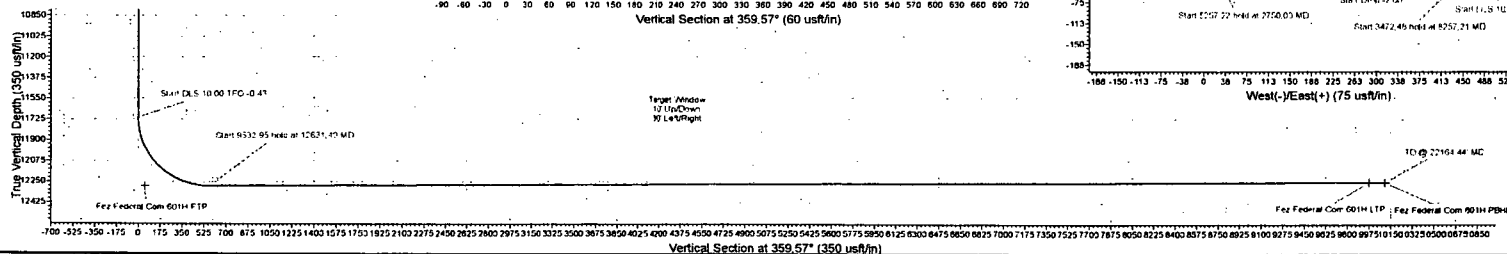
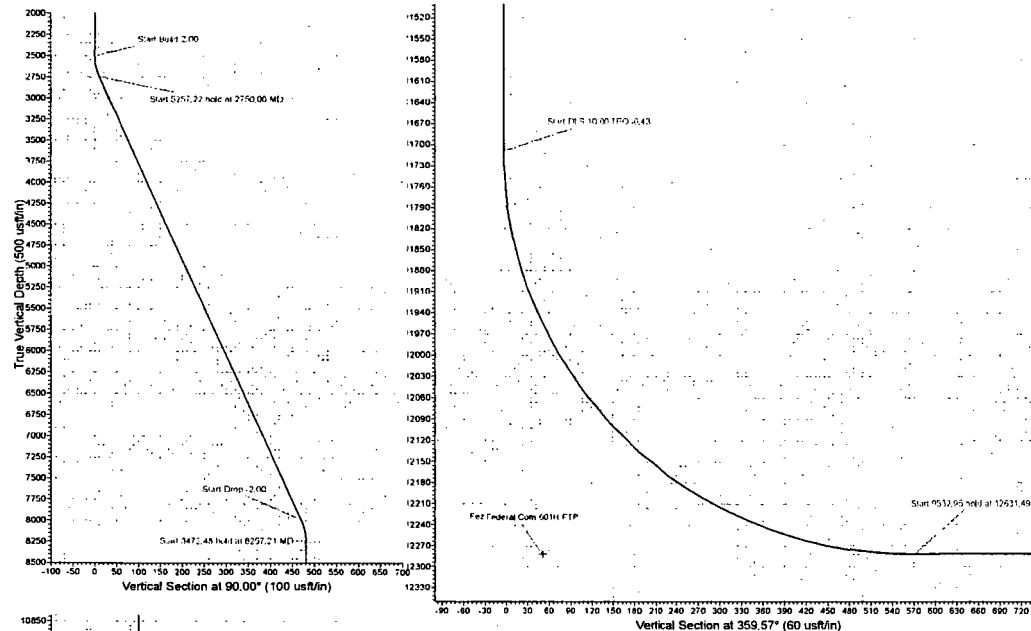
DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting
Fez Federal Com 601H FTP	12282.00	53.99	479.47	415402.29	797146.97
Fez Federal Com 601H LTP	12252.00	9977.51	405.21	425325.81	797072.71
Fez Federal Com 601H PBHL	12252.00	10107.40	404.30	425455.70	797071.80



Azimuths to Grid North
True North: -0.51°
Magnetic North: 6.16°

Magnetic Field
Strength: 47833.15nT
Dip Angle: 59.80°
Date: 10/23/2018
Model: HDGM



Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Fez Federal Com 601H
Company:	Concho Resources	TVD Reference:	GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
Project:	Lea County, NM	MD Reference:	GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
Site:	Fez Federal Com	North Reference:	Grid
Well:	Fez Federal Com 601H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	plan1		

Project	Lea County, NM		
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:	Fez Federal Com				
Site Position:		Northing:	415,348.30 usft	Latitude:	32° 8' 17.809 N
From:	Map	Easting:	796,667.50 usft	Longitude:	103° 22' 29.652 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.51 °

Well:	Fez Federal Com 601H					
Well Position	+N/-S	0.00 usft	Northing:	415,348.30 usft	Latitude:	32° 8' 17.809 N
	+E/-W	0.00 usft	Easting:	796,667.50 usft	Longitude:	103° 22' 29.652 W
Position Uncertainty	0.00 usft		Wellhead Elevation:		Ground Level:	3,243.90 usft

Wellbore	Wellbore #1					
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)	
	HDGM	10/23/18	6.67	59.80	47,833.10000000	

Design	plan1				
Audit Notes:					
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	359.57	

Plan Survey Tool Program	Date	10/23/18			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	22,164.44 plan1 (Wellbore #1)	MWD+IFR1+SAG+MS		
			OWSG MWD + IFR1 + Sag		

Database: EDM 5000.14 Single User Db
Company: Concho Resources
Project: Lea County, NM
Site: Fez Federal Com
Well: Fez Federal Com 601H
Wellbore: Wellbore #1
Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft
 (Independence 205)
MD Reference: GL 3243.9' + 26' KB @ 3269.90usft
 (Independence 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,750.00	5.00	90.00	2,749.68	0.00	10.90	2.00	2.00	0.00	90.00	
8,007.22	5.00	90.00	7,986.90	0.00	469.10	0.00	0.00	0.00	0.00	
8,257.21	0.00	0.00	8,236.57	0.00	480.00	2.00	-2.00	0.00	180.00	
11,729.69	0.00	0.00	11,709.05	0.02	480.00	0.00	0.00	0.00	0.00	
12,631.49	90.18	359.57	12,282.00	574.76	475.70	10.00	10.00	-0.05	-0.43	
22,164.44	90.18	359.57	12,252.00	10,107.40	404.30	0.00	0.00	0.00	0.00	

Database: EDM 5000.14 Single User Db
Company: Concho Resources

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)

Project: Lea County, NM

MD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)

Site: Fez Federal Com

North Reference: Grid

Well: Fez Federal Com 601H

Survey Calculation Method: Minimum Curvature

Wellbore: Wellbore #1

Design: plan1

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
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
2,600.00	2.00	90.00	2,599.98	0.00	1.75	-0.01	2.00	2.00	0.00
2,700.00	4.00	90.00	2,699.84	0.00	6.98	-0.05	2.00	2.00	0.00
2,750.00	5.00	90.00	2,749.68	0.00	10.90	-0.08	2.00	2.00	0.00
Start 5257.22 hold at 2750.00 MD									
2,800.00	5.00	90.00	2,799.49	0.00	15.26	-0.11	0.00	0.00	0.00
2,900.00	5.00	90.00	2,899.11	0.00	23.97	-0.18	0.00	0.00	0.00
3,000.00	5.00	90.00	2,998.73	0.00	32.69	-0.25	0.00	0.00	0.00
3,100.00	5.00	90.00	3,098.35	0.00	41.41	-0.31	0.00	0.00	0.00
3,200.00	5.00	90.00	3,197.97	0.00	50.12	-0.38	0.00	0.00	0.00
3,300.00	5.00	90.00	3,297.59	0.00	58.84	-0.44	0.00	0.00	0.00
3,400.00	5.00	90.00	3,397.21	0.00	67.55	-0.51	0.00	0.00	0.00
3,500.00	5.00	90.00	3,496.83	0.00	76.27	-0.57	0.00	0.00	0.00
3,600.00	5.00	90.00	3,596.45	0.00	84.98	-0.64	0.00	0.00	0.00
3,700.00	5.00	90.00	3,696.07	0.00	93.70	-0.70	0.00	0.00	0.00
3,800.00	5.00	90.00	3,795.69	0.00	102.41	-0.77	0.00	0.00	0.00
3,900.00	5.00	90.00	3,895.31	0.00	111.13	-0.83	0.00	0.00	0.00
4,000.00	5.00	90.00	3,994.93	0.00	119.85	-0.90	0.00	0.00	0.00
4,100.00	5.00	90.00	4,094.55	0.00	128.56	-0.96	0.00	0.00	0.00
4,200.00	5.00	90.00	4,194.17	0.00	137.28	-1.03	0.00	0.00	0.00
4,300.00	5.00	90.00	4,293.78	0.00	145.99	-1.10	0.00	0.00	0.00
4,400.00	5.00	90.00	4,393.40	0.00	154.71	-1.16	0.00	0.00	0.00
4,500.00	5.00	90.00	4,493.02	0.00	163.42	-1.23	0.00	0.00	0.00
4,600.00	5.00	90.00	4,592.64	0.00	172.14	-1.29	0.00	0.00	0.00
4,700.00	5.00	90.00	4,692.26	0.00	180.86	-1.36	0.00	0.00	0.00
4,800.00	5.00	90.00	4,791.88	0.00	189.57	-1.42	0.00	0.00	0.00

Database: EDM 5000.14 Single User Db
Company: Concho Resources

Project: Lea County, NM

Site: Fez Federal Com
Well: Fez Federal Com 601H
Wellbore: Wellbore #1
Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft
 (Independence 205)
MD Reference: GL 3243.9' + 26' KB @ 3269.90usft
 (Independence 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
4,900.00	5.00	90.00	4,891.50	0.00	198.29	-1.49	0.00	0.00	0.00
5,000.00	5.00	90.00	4,991.12	0.00	207.00	-1.55	0.00	0.00	0.00
5,100.00	5.00	90.00	5,090.74	0.00	215.72	-1.62	0.00	0.00	0.00
5,200.00	5.00	90.00	5,190.36	0.00	224.43	-1.68	0.00	0.00	0.00
5,300.00	5.00	90.00	5,289.98	0.00	233.15	-1.75	0.00	0.00	0.00
5,400.00	5.00	90.00	5,389.60	0.00	241.86	-1.82	0.00	0.00	0.00
5,500.00	5.00	90.00	5,489.22	0.00	250.58	-1.88	0.00	0.00	0.00
5,600.00	5.00	90.00	5,588.84	0.00	259.30	-1.95	0.00	0.00	0.00
5,700.00	5.00	90.00	5,688.46	0.00	268.01	-2.01	0.00	0.00	0.00
5,800.00	5.00	90.00	5,788.08	0.00	276.73	-2.08	0.00	0.00	0.00
5,900.00	5.00	90.00	5,887.70	0.00	285.44	-2.14	0.00	0.00	0.00
6,000.00	5.00	90.00	5,987.32	0.00	294.16	-2.21	0.00	0.00	0.00
6,100.00	5.00	90.00	6,086.94	0.00	302.87	-2.27	0.00	0.00	0.00
6,200.00	5.00	90.00	6,186.55	0.00	311.59	-2.34	0.00	0.00	0.00
6,300.00	5.00	90.00	6,286.17	0.00	320.30	-2.40	0.00	0.00	0.00
6,400.00	5.00	90.00	6,385.79	0.00	329.02	-2.47	0.00	0.00	0.00
6,500.00	5.00	90.00	6,485.41	0.00	337.74	-2.53	0.00	0.00	0.00
6,600.00	5.00	90.00	6,585.03	0.00	346.45	-2.60	0.00	0.00	0.00
6,700.00	5.00	90.00	6,684.65	0.00	355.17	-2.67	0.00	0.00	0.00
6,800.00	5.00	90.00	6,784.27	0.00	363.88	-2.73	0.00	0.00	0.00
6,900.00	5.00	90.00	6,883.89	0.00	372.60	-2.80	0.00	0.00	0.00
7,000.00	5.00	90.00	6,983.51	0.00	381.31	-2.86	0.00	0.00	0.00
7,100.00	5.00	90.00	7,083.13	0.00	390.03	-2.93	0.00	0.00	0.00
7,200.00	5.00	90.00	7,182.75	0.00	398.74	-2.99	0.00	0.00	0.00
7,300.00	5.00	90.00	7,282.37	0.00	407.46	-3.06	0.00	0.00	0.00
7,400.00	5.00	90.00	7,381.99	0.00	416.18	-3.12	0.00	0.00	0.00
7,500.00	5.00	90.00	7,481.61	0.00	424.89	-3.19	0.00	0.00	0.00
7,600.00	5.00	90.00	7,581.23	0.00	433.61	-3.25	0.00	0.00	0.00
7,700.00	5.00	90.00	7,680.85	0.00	442.32	-3.32	0.00	0.00	0.00
7,800.00	5.00	90.00	7,780.47	0.00	451.04	-3.38	0.00	0.00	0.00
7,900.00	5.00	90.00	7,880.09	0.00	459.75	-3.45	0.00	0.00	0.00
8,000.00	5.00	90.00	7,979.71	0.00	468.47	-3.52	0.00	0.00	0.00
8,007.22	5.00	90.00	7,986.90	0.00	469.10	-3.52	0.00	0.00	0.00
Start Drop -2.00									
8,100.00	3.14	90.00	8,079.44	0.00	475.69	-3.57	2.00	-2.00	0.00
8,200.00	1.14	90.00	8,179.36	0.00	479.43	-3.60	2.00	-2.00	0.00
8,257.21	0.00	0.00	8,236.57	0.00	480.00	-3.60	2.00	-2.00	-157.32
Start 3472.48 hold at 8257.21 MD									
8,300.00	0.00	0.00	8,279.36	0.00	480.00	-3.60	0.00	0.00	0.00
8,400.00	0.00	0.00	8,379.36	0.00	480.00	-3.60	0.00	0.00	0.00
8,500.00	0.00	0.00	8,479.36	0.00	480.00	-3.60	0.00	0.00	0.00
8,600.00	0.00	0.00	8,579.36	0.00	480.00	-3.60	0.00	0.00	0.00
8,700.00	0.00	0.00	8,679.36	0.00	480.00	-3.60	0.00	0.00	0.00
8,800.00	0.00	0.00	8,779.36	0.00	480.00	-3.60	0.00	0.00	0.00
8,900.00	0.00	0.00	8,879.36	0.00	480.00	-3.60	0.00	0.00	0.00
9,000.00	0.00	0.00	8,979.36	0.00	480.00	-3.60	0.00	0.00	0.00
9,100.00	0.00	0.00	9,079.36	0.00	480.00	-3.60	0.00	0.00	0.00
9,200.00	0.00	0.00	9,179.36	0.00	480.00	-3.60	0.00	0.00	0.00
9,300.00	0.00	0.00	9,279.36	0.01	480.00	-3.60	0.00	0.00	0.00
9,400.00	0.00	0.00	9,379.36	0.01	480.00	-3.60	0.00	0.00	0.00
9,500.00	0.00	0.00	9,479.36	0.01	480.00	-3.60	0.00	0.00	0.00
9,600.00	0.00	0.00	9,579.36	0.01	480.00	-3.60	0.00	0.00	0.00

Database: EDM 5000.14 Single User Db
Company: Concho Resources

Project: Lea County, NM

Site: Fez Federal Com
Well: Fez Federal Com 601H
Wellbore: Wellbore #1
Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft
 (Independence 205)
MD Reference: GL 3243.9' + 26' KB @ 3269.90usft
 (Independence 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
9,700.00	0.00	0.00	9,679.36	0.01	480.00	-3.60	0.00	0.00	0.00
9,800.00	0.00	0.00	9,779.36	0.01	480.00	-3.59	0.00	0.00	0.00
9,900.00	0.00	0.00	9,879.36	0.01	480.00	-3.59	0.00	0.00	0.00
10,000.00	0.00	0.00	9,979.36	0.01	480.00	-3.59	0.00	0.00	0.00
10,100.00	0.00	0.00	10,079.36	0.01	480.00	-3.59	0.00	0.00	0.00
10,200.00	0.00	0.00	10,179.36	0.01	480.00	-3.59	0.00	0.00	0.00
10,300.00	0.00	0.00	10,279.36	0.01	480.00	-3.59	0.00	0.00	0.00
10,400.00	0.00	0.00	10,379.36	0.01	480.00	-3.59	0.00	0.00	0.00
10,500.00	0.00	0.00	10,479.36	0.01	480.00	-3.59	0.00	0.00	0.00
10,600.00	0.00	0.00	10,579.36	0.01	480.00	-3.59	0.00	0.00	0.00
10,700.00	0.00	0.00	10,679.36	0.01	480.00	-3.59	0.00	0.00	0.00
10,800.00	0.00	0.00	10,779.36	0.01	480.00	-3.59	0.00	0.00	0.00
10,900.00	0.00	0.00	10,879.36	0.01	480.00	-3.59	0.00	0.00	0.00
11,000.00	0.00	0.00	10,979.36	0.01	480.00	-3.59	0.00	0.00	0.00
11,100.00	0.00	0.00	11,079.36	0.01	480.00	-3.59	0.00	0.00	0.00
11,200.00	0.00	0.00	11,179.36	0.01	480.00	-3.59	0.00	0.00	0.00
11,300.00	0.00	0.00	11,279.36	0.01	480.00	-3.59	0.00	0.00	0.00
11,400.00	0.00	0.00	11,379.36	0.02	480.00	-3.59	0.00	0.00	0.00
11,500.00	0.00	0.00	11,479.36	0.02	480.00	-3.59	0.00	0.00	0.00
11,600.00	0.00	0.00	11,579.36	0.02	480.00	-3.59	0.00	0.00	0.00
11,700.00	0.00	0.00	11,679.36	0.02	480.00	-3.59	0.00	0.00	0.00
11,729.69	0.00	0.00	11,709.05	0.02	480.00	-3.59	0.00	0.00	0.00
Start DLS 10.00 TFO -0.43									
11,800.00	7.03	359.57	11,779.18	4.33	479.97	0.72	10.00	10.00	-0.61
11,900.00	17.03	359.57	11,876.86	25.14	479.81	21.54	10.00	10.00	0.00
12,000.00	27.03	359.57	11,969.44	62.61	479.53	59.01	10.00	10.00	0.00
12,100.00	37.03	359.57	12,054.11	115.58	479.13	111.98	10.00	10.00	0.00
12,200.00	47.03	359.57	12,128.30	182.44	478.63	178.85	10.00	10.00	0.00
Fez Federal Com 601H FTP									
12,300.00	57.03	359.57	12,189.74	261.17	478.04	257.58	10.00	10.00	0.00
12,400.00	67.03	359.57	12,236.58	349.38	477.38	345.79	10.00	10.00	0.00
12,500.00	77.03	359.57	12,267.39	444.38	476.67	440.79	10.00	10.00	0.00
12,600.00	87.03	359.57	12,281.24	543.29	475.93	539.70	10.00	10.00	0.00
12,631.49	90.18	359.57	12,282.00	574.76	475.70	571.18	10.00	10.00	0.00
Start 9532.95 hold at 12631.49 MD									
12,700.00	90.18	359.57	12,281.79	643.27	475.18	639.69	0.00	0.00	0.00
12,800.00	90.18	359.57	12,281.47	743.27	474.43	739.68	0.00	0.00	0.00
12,900.00	90.18	359.57	12,281.16	843.26	473.68	839.68	0.00	0.00	0.00
13,000.00	90.18	359.57	12,280.84	943.26	472.94	939.68	0.00	0.00	0.00
13,100.00	90.18	359.57	12,280.53	1,043.26	472.19	1,039.68	0.00	0.00	0.00
13,200.00	90.18	359.57	12,280.21	1,143.25	471.44	1,139.68	0.00	0.00	0.00
13,300.00	90.18	359.57	12,279.90	1,243.25	470.69	1,239.68	0.00	0.00	0.00
13,400.00	90.18	359.57	12,279.58	1,343.25	469.94	1,339.68	0.00	0.00	0.00
13,500.00	90.18	359.57	12,279.27	1,443.24	469.19	1,439.68	0.00	0.00	0.00
13,600.00	90.18	359.57	12,278.95	1,543.24	468.44	1,539.68	0.00	0.00	0.00
13,700.00	90.18	359.57	12,278.64	1,643.24	467.69	1,639.68	0.00	0.00	0.00
13,800.00	90.18	359.57	12,278.32	1,743.23	466.94	1,739.68	0.00	0.00	0.00
13,900.00	90.18	359.57	12,278.01	1,843.23	466.20	1,839.68	0.00	0.00	0.00
14,000.00	90.18	359.57	12,277.70	1,943.23	465.45	1,939.68	0.00	0.00	0.00
14,100.00	90.18	359.57	12,277.38	2,043.22	464.70	2,039.68	0.00	0.00	0.00
14,200.00	90.18	359.57	12,277.07	2,143.22	463.95	2,139.68	0.00	0.00	0.00
14,300.00	90.18	359.57	12,276.75	2,243.22	463.20	2,239.68	0.00	0.00	0.00

Database: EDM 5000.14 Single User Db
Company: Concho Resources

Project: Lea County, NM

Site: Fez Federal Com
Well: Fez Federal Com 601H
Wellbore: Wellbore #1
Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft
 (Independence 205)
MD Reference: GL 3243.9' + 26' KB @ 3269.90usft
 (Independence 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
14,400.00	90.18	359.57	12,276.44	2,343.21	462.45	2,339.68	0.00	0.00	0.00
14,500.00	90.18	359.57	12,276.12	2,443.21	461.70	2,439.68	0.00	0.00	0.00
14,600.00	90.18	359.57	12,275.81	2,543.21	460.95	2,539.68	0.00	0.00	0.00
14,700.00	90.18	359.57	12,275.49	2,643.20	460.20	2,639.68	0.00	0.00	0.00
14,800.00	90.18	359.57	12,275.18	2,743.20	459.45	2,739.67	0.00	0.00	0.00
14,900.00	90.18	359.57	12,274.86	2,843.20	458.71	2,839.67	0.00	0.00	0.00
15,000.00	90.18	359.57	12,274.55	2,943.19	457.96	2,939.67	0.00	0.00	0.00
15,100.00	90.18	359.57	12,274.23	3,043.19	457.21	3,039.67	0.00	0.00	0.00
15,200.00	90.18	359.57	12,273.92	3,143.19	456.46	3,139.67	0.00	0.00	0.00
15,300.00	90.18	359.57	12,273.60	3,243.18	455.71	3,239.67	0.00	0.00	0.00
15,400.00	90.18	359.57	12,273.29	3,343.18	454.96	3,339.67	0.00	0.00	0.00
15,500.00	90.18	359.57	12,272.97	3,443.18	454.21	3,439.67	0.00	0.00	0.00
15,600.00	90.18	359.57	12,272.66	3,543.17	453.46	3,539.67	0.00	0.00	0.00
15,700.00	90.18	359.57	12,272.35	3,643.17	452.71	3,639.67	0.00	0.00	0.00
15,800.00	90.18	359.57	12,272.03	3,743.17	451.97	3,739.67	0.00	0.00	0.00
15,900.00	90.18	359.57	12,271.72	3,843.16	451.22	3,839.67	0.00	0.00	0.00
16,000.00	90.18	359.57	12,271.40	3,943.16	450.47	3,939.67	0.00	0.00	0.00
16,100.00	90.18	359.57	12,271.09	4,043.16	449.72	4,039.67	0.00	0.00	0.00
16,200.00	90.18	359.57	12,270.77	4,143.15	448.97	4,139.67	0.00	0.00	0.00
16,300.00	90.18	359.57	12,270.46	4,243.15	448.22	4,239.67	0.00	0.00	0.00
16,400.00	90.18	359.57	12,270.14	4,343.15	447.47	4,339.67	0.00	0.00	0.00
16,500.00	90.18	359.57	12,269.83	4,443.14	446.72	4,439.67	0.00	0.00	0.00
16,600.00	90.18	359.57	12,269.51	4,543.14	445.97	4,539.67	0.00	0.00	0.00
16,700.00	90.18	359.57	12,269.20	4,643.14	445.23	4,639.67	0.00	0.00	0.00
16,800.00	90.18	359.57	12,268.88	4,743.13	444.48	4,739.66	0.00	0.00	0.00
16,900.00	90.18	359.57	12,268.57	4,843.13	443.73	4,839.66	0.00	0.00	0.00
17,000.00	90.18	359.57	12,268.25	4,943.13	442.98	4,939.66	0.00	0.00	0.00
17,100.00	90.18	359.57	12,267.94	5,043.12	442.23	5,039.66	0.00	0.00	0.00
17,200.00	90.18	359.57	12,267.62	5,143.12	441.48	5,139.66	0.00	0.00	0.00
17,300.00	90.18	359.57	12,267.31	5,243.12	440.73	5,239.66	0.00	0.00	0.00
17,400.00	90.18	359.57	12,266.99	5,343.11	439.98	5,339.66	0.00	0.00	0.00
17,500.00	90.18	359.57	12,266.68	5,443.11	439.23	5,439.66	0.00	0.00	0.00
17,600.00	90.18	359.57	12,266.37	5,543.11	438.48	5,539.66	0.00	0.00	0.00
17,700.00	90.18	359.57	12,266.05	5,643.10	437.74	5,639.66	0.00	0.00	0.00
17,800.00	90.18	359.57	12,265.74	5,743.10	436.99	5,739.66	0.00	0.00	0.00
17,900.00	90.18	359.57	12,265.42	5,843.10	436.24	5,839.66	0.00	0.00	0.00
18,000.00	90.18	359.57	12,265.11	5,943.09	435.49	5,939.66	0.00	0.00	0.00
18,100.00	90.18	359.57	12,264.79	6,043.09	434.74	6,039.66	0.00	0.00	0.00
18,200.00	90.18	359.57	12,264.48	6,143.09	433.99	6,139.66	0.00	0.00	0.00
18,300.00	90.18	359.57	12,264.16	6,243.08	433.24	6,239.66	0.00	0.00	0.00
18,400.00	90.18	359.57	12,263.85	6,343.08	432.49	6,339.66	0.00	0.00	0.00
18,500.00	90.18	359.57	12,263.53	6,443.08	431.74	6,439.66	0.00	0.00	0.00
18,600.00	90.18	359.57	12,263.22	6,543.07	431.00	6,539.66	0.00	0.00	0.00
18,700.00	90.18	359.57	12,262.90	6,643.07	430.25	6,639.66	0.00	0.00	0.00
18,800.00	90.18	359.57	12,262.59	6,743.07	429.50	6,739.65	0.00	0.00	0.00
18,900.00	90.18	359.57	12,262.27	6,843.06	428.75	6,839.65	0.00	0.00	0.00
19,000.00	90.18	359.57	12,261.96	6,943.06	428.00	6,939.65	0.00	0.00	0.00
19,100.00	90.18	359.57	12,261.64	7,043.06	427.25	7,039.65	0.00	0.00	0.00
19,200.00	90.18	359.57	12,261.33	7,143.06	426.50	7,139.65	0.00	0.00	0.00
19,300.00	90.18	359.57	12,261.02	7,243.05	425.75	7,239.65	0.00	0.00	0.00
19,400.00	90.18	359.57	12,260.70	7,343.05	425.00	7,339.65	0.00	0.00	0.00
19,500.00	90.18	359.57	12,260.39	7,443.05	424.25	7,439.65	0.00	0.00	0.00

Database: EDM 5000.14 Single User Db
Company: Concho Resources
Project: Lea County, NM
Site: Fez Federal Com
Well: Fez Federal Com 601H
Wellbore: Wellbore #1
Design: plan1

Local Co-ordinate Reference: Well Fez Federal Com 601H
TVD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
MD Reference: GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
19,600.00	90.18	359.57	12,260.07	7,543.04	423.51	7,539.65	0.00	0.00	0.00
19,700.00	90.18	359.57	12,259.76	7,643.04	422.76	7,639.65	0.00	0.00	0.00
19,800.00	90.18	359.57	12,259.44	7,743.04	422.01	7,739.65	0.00	0.00	0.00
19,900.00	90.18	359.57	12,259.13	7,843.03	421.26	7,839.65	0.00	0.00	0.00
20,000.00	90.18	359.57	12,258.81	7,943.03	420.51	7,939.65	0.00	0.00	0.00
20,100.00	90.18	359.57	12,258.50	8,043.03	419.76	8,039.65	0.00	0.00	0.00
20,200.00	90.18	359.57	12,258.18	8,143.02	419.01	8,139.65	0.00	0.00	0.00
20,300.00	90.18	359.57	12,257.87	8,243.02	418.26	8,239.65	0.00	0.00	0.00
20,400.00	90.18	359.57	12,257.55	8,343.02	417.51	8,339.65	0.00	0.00	0.00
20,500.00	90.18	359.57	12,257.24	8,443.01	416.77	8,439.65	0.00	0.00	0.00
20,600.00	90.18	359.57	12,256.92	8,543.01	416.02	8,539.65	0.00	0.00	0.00
20,700.00	90.18	359.57	12,256.61	8,643.01	415.27	8,639.65	0.00	0.00	0.00
20,800.00	90.18	359.57	12,256.29	8,743.00	414.52	8,739.65	0.00	0.00	0.00
20,900.00	90.18	359.57	12,255.98	8,843.00	413.77	8,839.64	0.00	0.00	0.00
21,000.00	90.18	359.57	12,255.67	8,943.00	413.02	8,939.64	0.00	0.00	0.00
21,100.00	90.18	359.57	12,255.35	9,042.99	412.27	9,039.64	0.00	0.00	0.00
21,200.00	90.18	359.57	12,255.04	9,142.99	411.52	9,139.64	0.00	0.00	0.00
21,300.00	90.18	359.57	12,254.72	9,242.99	410.77	9,239.64	0.00	0.00	0.00
21,400.00	90.18	359.57	12,254.41	9,342.98	410.03	9,339.64	0.00	0.00	0.00
21,500.00	90.18	359.57	12,254.09	9,442.98	409.28	9,439.64	0.00	0.00	0.00
21,600.00	90.18	359.57	12,253.78	9,542.98	408.53	9,539.64	0.00	0.00	0.00
21,700.00	90.18	359.57	12,253.46	9,642.97	407.78	9,639.64	0.00	0.00	0.00
21,800.00	90.18	359.57	12,253.15	9,742.97	407.03	9,739.64	0.00	0.00	0.00
21,900.00	90.18	359.57	12,252.83	9,842.97	406.28	9,839.64	0.00	0.00	0.00
22,000.00	90.18	359.57	12,252.52	9,942.96	405.53	9,939.64	0.00	0.00	0.00
22,034.55	90.18	359.57	12,252.41	9,977.51	405.27	9,974.19	0.00	0.00	0.00
Fez Federal Com 601H LTP									
22,100.00	90.18	359.57	12,252.20	10,042.96	404.78	10,039.64	0.00	0.00	0.00
22,164.44	90.18	359.57	12,252.00	10,107.40	404.30	10,104.08	0.00	0.00	0.00
TD @ 22164.44' MD - Fez Federal Com 601H PBHL									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Fez Federal Com 601	0.00	0.00	12,252.00	9,977.51	405.21	425,325.81	797,072.71	32° 9' 56.502 N	103° 22' 23.905 W
- plan misses target center by 0.41usft at 22034.55usft MD (12252.41 TVD, 9977.51 N, 405.27 E)									
- Point									
Fez Federal Com 601	0.00	0.00	12,252.00	10,107.40	404.30	425,455.70	797,071.80	32° 9' 57.787 N	103° 22' 23.902 W
- plan hits target center									
- Point									
Fez Federal Com 601	0.00	0.00	12,282.00	53.99	479.47	415,402.29	797,146.96	32° 8' 18.301 N	103° 22' 24.071 W
- plan misses target center by 200.32usft at 12200.00usft MD (12128.30 TVD, 182.44 N, 478.63 E)									
- Point									

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Fez Federal Com 601H
Company:	Concho Resources	TVD Reference:	GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
Project:	Lea County, NM	MD Reference:	GL 3243.9' + 26' KB @ 3269.90usft (Independence 205)
Site:	Fez Federal Com	North Reference:	Grid
Well:	Fez Federal Com 601H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	plan1		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,500.00	2,500.00	0.00	0.00	Start Build 2.00
2,750.00	2,749.68	0.00	10.90	Start 5257.22 hold at 2750.00 MD
8,007.22	7,986.90	0.00	469.10	Start Drop -2.00
8,257.21	8,236.57	0.00	480.00	Start 3472.48 hold at 8257.21 MD
11,729.69	11,709.05	0.02	480.00	Start DLS 10.00 TFO -0.43
12,631.49	12,282.00	574.76	475.70	Start 9532.95 hold at 12631.49 MD
22,164.44	12,252.00	10,107.40	404.30	TD @ 22164.44' MD