

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.*5. Lease Serial No.
NMNM128368

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.
LITTLE BEAR FEDERAL COM 1H9. API Well No.
30-025-45098-00-X110. Field and Pool or Exploratory Area
WILDCAT BONE SPRING11. County or Parish, State
LEA COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
COG OPERATING LLCContact: MAYTE X REYES JAN 16 2019
E-Mail: mreyes1@concho.com

3a. Address

ONE CONCHO CENTER 600 W ILLINOIS AVENUE
MIDLAND, TX 79701-4287

3b. Phone No. (include area code)

Ph: 575-748-6944

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 34 T20S R34E SWSW 387FSL 690FWL
32.523392 N Lat, 103.554398 W Lon

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

TYPE OF SUBMISSION

☒ Notice of Intent☐ Subsequent Report☐ Final Abandonment Notice☐ Acidize☐ Alter Casing☐ Casing Repair☐ Change Plans☐ Convert to Injection☐ Deepen☐ Hydraulic Fracturing☐ New Construction☐ Plug and Abandon☐ Plug Back☐ Production (Start/Resume)☐ Reclamation☐ Recomplete☐ Temporarily Abandon☐ Water Disposal☐ Water Shut-Off☐ Well Integrity☒ Other
Change to Original A
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 plugging back and re-drilling the curve to the originally approved APD.

Moving up 30' TVD, BHL will remain the same. There will be no changes to the casing program or cement. Zota Stevens, Petroleum Engineer with the BLM Carlsbad, provided verbal approval Sunday at 17:15 CST to proceed with the plug back operations.

AC Report Attached.
Directional Plan Attached.

All previous COAs still apply.

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #443634 verified by the BLM Well Information System

For COG OPERATING LLC, sent to the Hobbs

Committed to AFMSS for processing by PRISCILLA PEREZ on 11/13/2018 (19PP0397SE)

Name (Printed/Typed) MAYTE X REYES

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 11/12/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ZOTA STEVENS

Title PETROLEUM ENGINEER

Date 12/19/2018

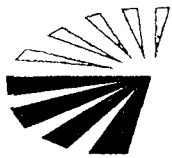
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

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 *****K2*



C O N C H O

Concho Resources

Lea County, NM

Little Bear Federal Com

Little Bear Fed Com 1H

ST01

ST01 Plan1

Anticollision Report

11 November, 2018



Company:	Concho Resources	Local Co-ordinate Reference:	Well Little Bear Fed Com 1H
Project:	Lea County, NM	TVD Reference:	GL 3791' + 26' KB @ 3817.00usft (Independence 205)
Reference Site:	Little Bear Federal Com	MD Reference:	GL 3791' + 26' KB @ 3817.00usft (Independence 205)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Little Bear Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ST01	Database:	EDM 5000.14 Single User Db
Reference Design:	ST01 Plan1	Offset TVD Reference:	Reference Datum

Reference	ST01 Plan1
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	Stations
Depth Range:	10,834.00 to 16,064.96usft
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	11/11/18
From (usft)	To (usft)	Survey (Wellbore)
100.00	10,128.18	SDI Keeper (OH)
10,215.00	10,834.00	Scout OH MWD (OH)
10,834.00	16,064.96	ST01 Plan1 (ST01)
Tool Name	Description	
Standard Keeper 104	Standard Wireline Keeper ver 1.0.4	
MWD+HRGM	OWSG MWD + HRGM	
MWD+HRGM	OWSG MWD + HRGM	

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						
Little Bear Federal Com						
Little Bear Fed Com 1H - OH - Surveys	11,150.00	11,150.04	34.96	30.48	7.808	CC, ES, SF
Little Bear Fed Com 6H - Wellbore #1 - plan1	11,013.02	11,016.85	308.77	262.64	6.694	CC
Little Bear Fed Com 6H - Wellbore #1 - plan1	11,025.00	11,028.41	308.79	262.62	6.688	ES
Little Bear Fed Com 6H - Wellbore #1 - plan1	16,059.37	16,375.54	435.90	328.83	4.071	SF

Offset Design Little Bear Federal Com - Little Bear Fed Com 1H - OH - Surveys														Offset Site Error:	0.00 usft
Survey Program: 100-Standard Keeper 104, 10215-MWD+HRGM														Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Reference	Offset	Highside Toolface	Offset Wellbore Centre	Offset Wellbore Centre	Distance		Minimum Separation	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)	(usft)				
10,834.00	10,822.94	10,834.00	10,822.94	0.00	0.00	0.00	-199.85	-47.30	0.00	0.00	0.00	N/A			
10,841.20	10,830.14	10,841.20	10,830.14	0.00	0.01	-66.61	-200.02	-47.38	0.00	-0.02	0.02	0.000 Level 1			
10,900.00	10,888.93	10,900.00	10,888.93	0.04	0.08	174.09	-199.87	-48.19	0.00	-0.18	0.18	0.003 Level 1			
10,925.00	10,913.89	10,925.00	10,913.90	0.04	0.10	-161.43	-198.97	-48.62	0.39	0.11	0.28	1.396 Level 3			
10,950.00	10,938.75	10,950.00	10,938.86	0.05	0.13	-171.36	-197.49	-48.95	1.45	0.99	0.45	3.197			
10,975.00	10,963.46	10,975.00	10,963.76	0.06	0.17	-179.33	-195.30	-48.98	3.06	2.35	0.72	4.258			
11,000.00	10,987.95	10,999.96	10,988.58	0.06	0.20	177.04	-192.63	-48.83	5.46	4.21	1.25	4.364			
11,025.00	11,012.14	11,024.91	11,013.32	0.07	0.23	175.08	-189.44	-48.51	8.60	7.15	1.45	5.928			
11,050.00	11,036.00	11,049.75	11,037.88	0.10	0.26	173.06	-185.80	-47.84	12.55	10.72	1.82	6.880			
11,075.00	11,059.44	11,074.59	11,062.36	0.12	0.30	171.23	-181.69	-46.82	17.31	15.08	2.23	7.768			
11,100.00	11,082.42	11,099.50	11,086.80	0.15	0.33	170.20	-177.00	-45.67	22.73	19.88	2.85	7.976			
11,125.00	11,104.86	11,124.59	11,111.25	0.17	0.38	169.52	-171.57	-44.37	28.69	25.02	3.66	7.830			
11,150.00	11,126.73	11,150.04	11,135.83	0.20	0.42	168.88	-165.12	-42.87	34.96	30.48	4.48	7.808 CC, ES, SF			
11,175.00	11,147.95	11,176.26	11,160.78	0.23	0.46	168.22	-157.28	-41.11	41.31	36.05	5.27	7.844			
11,200.00	11,168.48	11,203.09	11,185.79	0.26	0.51	167.52	-147.78	-39.12	47.50	41.47	6.04	7.867			
11,225.00	11,188.26	11,230.51	11,210.68	0.30	0.57	166.81	-136.50	-36.93	53.42	46.64	6.77	7.887			
11,250.00	11,207.24	11,258.60	11,235.36	0.33	0.63	166.16	-123.30	-34.63	58.97	51.51	7.46	7.903			
11,275.00	11,225.37	11,287.36	11,259.62	0.39	0.69	165.58	-108.05	-32.26	64.05	55.96	8.09	7.920			
11,300.00	11,242.61	11,316.59	11,283.10	0.47	0.76	165.01	-90.81	-29.82	68.62	60.00	8.62	7.963			

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: Little Bear Federal Com
Site Error: 0.00 usft
Reference Well: Little Bear Fed Com 1H
Well Error: 0.00 usft
Reference Wellbore: ST01
Reference Design: ST01 Plan1

Local Co-ordinate Reference: Well Little Bear Fed Com 1H
TVD Reference: GL 3791' + 26' KB @ 3817.00usft
 (Independence 205)
MD Reference: GL 3791' + 26' KB @ 3817.00usft
 (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 Little Bear Federal Com - Little Bear Fed Com 1H - OH - Surveys													Offset Site Error:	0.00 usft
Survey Program: 100-Standard Keeper 104, 10215-MWD+HRGM													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		
11,325.00	11,258.92	11,346.40	11,305.76	0.56	0.85	164.76	-71.58	-27.70	72.62	63.57	9.05	8.021		
11,350.00	11,274.24	11,376.42	11,327.34	0.65	0.98	165.35	-50.74	-26.66	76.08	66.69	9.39	8.101		
11,375.00	11,288.55	11,408.00	11,348.40	0.76	1.16	166.85	-27.22	-26.91	78.79	69.19	9.60	8.208		
11,400.00	11,301.80	11,440.49	11,367.89	0.88	1.46	169.21	-1.31	-28.56	80.49	70.90	9.59	8.394		
11,425.00	11,313.96	11,473.02	11,384.90	1.02	1.88	172.03	26.29	-31.11	81.15	71.82	9.33	8.699		
11,450.00	11,325.00	11,504.92	11,399.03	1.16	1.89	174.85	54.76	-33.77	80.93	72.05	8.88	9.117		
11,471.92	11,333.74	11,532.93	11,409.30	1.30	1.96	177.33	80.71	-36.05	80.06	71.82	8.23	9.723		
11,475.00	11,334.89	11,522.00	11,405.54	1.32	1.93	176.35	70.49	-35.17	80.95	71.08	9.87	8.203		
11,500.00	11,343.61	11,522.00	11,405.54	1.49	1.93	176.25	70.49	-35.17	88.22	77.24	10.98	8.033		
11,525.00	11,351.13	11,522.00	11,405.54	1.67	1.93	176.07	70.49	-35.17	102.28	91.73	10.55	9.692		
11,534.17	11,353.59	11,522.00	11,405.54	1.74	1.93	175.97	70.49	-35.17	108.65	98.44	10.21	10.641		
11,550.00	11,357.44	11,522.00	11,405.54	1.86	1.93	176.38	70.49	-35.17	120.75	111.19	9.56	12.632		
11,575.00	11,362.55	11,522.00	11,405.54	2.07	1.93	177.22	70.49	-35.17	141.89	133.36	8.53	16.643		
11,600.00	11,366.44	11,522.00	11,405.54	2.30	1.93	178.39	70.49	-35.17	164.62	157.00	7.62	21.592		
11,625.00	11,369.10	11,522.00	11,405.54	2.60	1.93	-179.87	70.49	-35.17	188.32	181.41	6.91	27.247		
11,650.00	11,370.53	11,522.00	11,405.54	2.85	1.93	-177.05	70.49	-35.17	212.62	206.24	6.39	33.299		
11,675.00	11,370.72	11,522.00	11,405.54	3.09	1.93	-171.78	70.49	-35.17	237.28	231.25	6.03	39.334		
11,680.19	11,370.60	11,522.00	11,405.54	3.14	1.93	-170.08	70.49	-35.17	242.43	236.46	5.97	40.584		
11,700.00	11,370.06	11,522.00	11,405.54	3.32	1.93	-170.08	70.49	-35.17	262.11	256.31	5.80	45.163		
11,800.00	11,367.30	11,522.00	11,405.54	4.31	1.93	-170.08	70.49	-35.17	361.68	356.49	5.19	69.682		
11,900.00	11,364.55	11,522.00	11,405.54	5.41	1.93	-170.08	70.49	-35.17	461.43	456.62	4.81	95.967		
12,000.00	11,361.80	11,522.00	11,405.54	6.57	1.93	-170.08	70.49	-35.17	561.27	556.72	4.55	123.410		
12,100.00	11,359.05	11,522.00	11,405.54	7.79	1.93	-170.08	70.49	-35.17	661.16	656.80	4.36	151.643		
12,200.00	11,356.30	11,522.00	11,405.54	9.05	1.93	-170.08	70.49	-35.17	761.08	756.86	4.22	180.438		
12,300.00	11,353.55	11,522.00	11,405.54	10.33	1.93	-170.08	70.49	-35.17	861.01	856.91	4.11	209.659		
12,400.00	11,350.80	11,522.00	11,405.54	11.64	1.93	-170.08	70.49	-35.17	960.96	956.95	4.02	239.236		
12,500.00	11,348.05	11,522.00	11,405.54	12.97	1.93	-170.08	70.49	-35.17	1,060.92	1,056.98	3.94	269.146		
12,600.00	11,345.30	11,522.00	11,405.54	14.31	1.93	-170.08	70.49	-35.17	1,160.89	1,157.01	3.88	299.402		
12,700.00	11,342.55	11,522.00	11,405.54	15.67	1.93	-170.08	70.49	-35.17	1,260.86	1,257.04	3.82	330.045		
12,800.00	11,339.80	11,522.00	11,405.54	17.03	1.93	-170.08	70.49	-35.17	1,360.84	1,357.07	3.77	361.134		
12,900.00	11,337.05	11,522.00	11,405.54	18.41	1.93	-170.08	70.49	-35.17	1,460.82	1,457.09	3.72	392.614		
13,000.00	11,334.30	11,522.00	11,405.54	19.79	1.93	-170.08	70.49	-35.17	1,560.80	1,557.12	3.67	424.940		
13,100.00	11,331.55	11,522.00	11,405.54	21.18	1.93	-170.08	70.49	-35.17	1,660.78	1,657.16	3.62	458.278		
13,200.00	11,328.80	11,522.00	11,405.54	22.57	1.93	-170.08	70.49	-35.17	1,760.77	1,757.19	3.57	492.756		
13,300.00	11,326.05	11,522.00	11,405.54	23.97	1.93	-170.08	70.49	-35.17	1,860.75	1,857.23	3.52	528.592		
13,400.00	11,323.30	11,522.00	11,405.54	25.37	1.93	-170.08	70.49	-35.17	1,960.74	1,957.28	3.46	566.050		

Company:	Concho Resources	Local Co-ordinate Reference:	Well Little Bear Fed Com 1H
Project:	Lea County, NM	TVD Reference:	GL 3791' + 26' KB @ 3817.00usft (Independence 205)
Reference Site:	Little Bear Federal Com	MD Reference:	GL 3791' + 26' KB @ 3817.00usft (Independence 205)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Little Bear Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ST01	Database:	EDM 5000.14 Single User Db
Reference Design:	ST01 Plan1	Offset TVD Reference:	Reference Datum

Offset Design: Little Bear Federal Com - Little Bear Fed Com 6H - 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		Offset Wellbore Centre		Between		Minimum		Separation	
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside		+N-S	+E-W	Centres	Ellipses	Separation		Factor	Warning
Depth	Depth	Depth	Depth			Tooface		(usft)	(usft)	(usft)	(usft)	(usft)			
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(")									
10,834.00	10,822.94	10,839.21	10,822.94	7.64	38.01	69.85		-187.30	-358.00	310.95	265.51	45.44		6.843	
10,900.00	10,888.93	10,905.19	10,888.93	7.67	38.24	-55.99		-187.30	-358.00	310.06	264.35	45.72		6.782	
10,925.00	10,913.89	10,930.15	10,913.89	7.68	38.33	-78.21		-187.30	-358.00	309.65	263.84	45.81		6.760	
10,950.00	10,938.75	10,955.02	10,938.75	7.68	38.42	-83.84		-187.30	-358.00	309.28	263.38	45.90		6.739	
10,975.00	10,963.46	10,979.73	10,963.46	7.69	38.50	-86.81		-187.30	-358.00	308.98	262.99	45.99		6.719	
11,000.00	10,987.95	11,004.21	10,987.95	7.70	38.59	-88.99		-187.30	-358.00	308.79	262.72	46.08		6.701	
11,013.02	11,000.58	11,016.85	11,000.58	7.70	38.64	-90.00		-187.30	-358.00	308.77	262.64	46.13		6.694 CC	
11,025.00	11,012.14	11,028.41	11,012.14	7.71	38.68	-90.90		-187.30	-358.00	308.79	262.62	46.17		6.688 ES	
11,050.00	11,036.00	11,052.26	11,036.00	7.72	38.76	-92.74		-187.30	-358.00	309.05	262.78	46.27		6.680	
11,075.00	11,059.44	11,075.71	11,059.44	7.74	38.84	-94.57		-187.30	-358.00	309.64	263.28	46.36		6.679	
11,100.00	11,082.42	11,101.32	11,082.42	7.76	38.93	-96.42		-187.30	-358.00	310.67	264.20	46.47		6.685	
11,125.00	11,104.86	11,121.13	11,104.86	7.79	39.00	-98.28		-187.30	-358.00	312.24	265.67	46.56		6.706	
11,150.00	11,126.73	11,142.99	11,126.73	7.81	39.08	-100.14		-187.30	-358.00	314.45	267.78	46.67		6.738	
11,175.00	11,147.95	11,164.22	11,147.95	7.85	39.16	-101.97		-187.30	-358.00	317.42	270.64	46.78		6.785	
11,200.00	11,168.48	11,184.74	11,168.48	7.88	39.23	-103.73		-187.30	-358.00	321.25	274.35	46.89		6.850	
11,225.00	11,188.26	11,204.52	11,188.26	7.92	39.30	-105.41		-187.30	-358.00	326.02	279.01	47.01		6.935	
11,250.00	11,207.24	11,224.89	11,208.62	7.97	39.37	-107.12		-187.26	-358.00	331.83	284.69	47.14		7.039	
11,275.00	11,225.37	11,249.97	11,233.68	8.02	39.46	-109.23		-186.29	-358.01	338.49	291.20	47.29		7.158	
11,300.00	11,242.61	11,276.34	11,259.93	8.08	39.55	-111.31		-183.86	-358.03	345.85	298.39	47.45		7.288	
11,325.00	11,258.92	11,304.18	11,287.46	8.16	39.65	-113.36		-179.72	-358.07	353.83	306.18	47.65		7.426	
11,350.00	11,274.24	11,333.71	11,316.34	8.25	39.75	-115.40		-173.58	-358.12	362.34	314.46	47.88		7.567	
11,375.00	11,288.55	11,365.21	11,346.66	8.35	39.85	-117.42		-165.08	-358.20	371.28	323.12	48.16		7.709	
11,400.00	11,301.80	11,398.96	11,378.46	8.47	39.96	-119.43		-153.78	-358.30	380.54	332.06	48.49		7.848	
11,425.00	11,313.96	11,435.32	11,411.72	8.60	40.07	-121.43		-139.12	-358.44	390.00	341.14	48.86		7.982	
11,450.00	11,325.00	11,474.67	11,446.35	8.74	40.18	-123.40		-120.46	-358.61	399.50	350.24	49.26		8.110	
11,475.00	11,334.89	11,517.42	11,482.09	8.90	40.29	-125.33		-97.02	-358.82	408.90	359.22	49.68		8.231	
11,500.00	11,343.61	11,564.01	11,518.48	9.06	40.40	-127.17		-67.97	-359.08	418.01	367.92	50.09		8.345	
11,525.00	11,351.13	11,614.81	11,554.73	9.24	40.51	-128.89		-32.41	-359.41	426.63	376.16	50.46		8.454	
11,534.17	11,353.59	11,634.55	11,567.76	9.31	40.54	-129.48		-17.58	-359.54	429.62	379.04	50.59		8.492	
11,550.00	11,357.44	11,670.11	11,589.65	9.43	40.60	-130.26		10.43	-359.80	434.49	383.71	50.78		8.556	
11,575.00	11,362.55	11,730.01	11,621.61	9.63	40.69	-131.36		61.05	-360.26	441.20	390.17	51.03		8.646	
11,600.00	11,366.44	11,794.23	11,648.55	9.85	40.77	-132.25		119.29	-360.78	446.51	395.29	51.22		8.718	
11,625.00	11,369.10	11,862.03	11,668.24	10.07	40.84	-132.87		184.11	-361.37	450.20	398.82	51.38		8.762	
11,650.00	11,370.53	11,650.00	11,677.49	10.29	40.75	-133.08		240.72	-361.89	452.11	400.71	51.40		8.796	
11,675.00	11,370.72	11,991.24	11,679.69	10.53	40.92	-133.12		312.41	-362.54	452.26	400.50	51.75		8.738	
11,680.19	11,370.60	12,003.57	11,679.52	10.58	40.92	-133.12		317.59	-362.59	452.22	400.44	51.78		8.734	
11,700.00	11,370.06	12,016.24	11,678.86	10.77	40.93	-133.11		337.39	-362.77	452.15	400.29	51.86		8.719	
11,800.00	11,367.30	12,116.23	11,675.56	11.82	40.99	-133.05		437.33	-363.67	451.77	399.44	52.33		8.633	
11,900.00	11,364.55	12,216.23	11,672.25	12.94	41.07	-133.00		537.27	-364.58	451.38	398.51	52.88		8.536	
12,000.00	11,361.80	12,316.23	11,668.95	14.12	41.16	-132.95		637.21	-365.49	451.01	397.50	53.50		8.430	
12,100.00	11,359.05	12,416.23	11,665.64	15.35	41.27	-132.90		737.15	-366.40	450.63	396.43	54.19		8.315	
12,200.00	11,356.30	12,516.23	11,662.34	16.61	41.39	-132.85		837.09	-367.30	450.25	395.30	54.95		8.194	
12,300.00	11,353.55	12,616.23	11,659.03	17.90	41.52	-132.80		937.03	-368.21	449.87	394.11	55.76		8.068	
12,400.00	11,350.80	12,716.22	11,655.73	19.21	41.67	-132.75		1,036.97	-369.12	449.49	392.86	56.63		7.937	
12,500.00	11,348.05	12,816.22	11,652.42	20.54	41.83	-132.69		1,136.91	-370.03	449.11	391.56	57.55		7.803	
12,600.00	11,345.30	12,916.22	11,649.12	21.88	42.01	-132.64		1,236.85	-370.93	448.73	390.21	58.52		7.668	
12,700.00	11,342.55	13,016.22	11,645.81	23.24	42.20	-132.59		1,336.79	-371.84	448.36	388.82	59.53		7.531	
12,800.00	11,339.80	13,116.22	11,642.51	24.61	42.40	-132.54		1,436.73	-372.75	447.98	387.39	60.59		7.394	
12,900.00	11,337.05	13,216.22	11,639.20	25.98	42.62	-132.49		1,536.67	-373.66	447.60	385.93	61.68		7.257	
13,000.00	11,334.30	13,316.22	11,635.90	27.37	42.85	-132.43		1,636.61	-374.56	447.23	384.42	62.80		7.121	
13,100.00	11,331.55	13,416.21	11,632.59	28.75	43.09	-132.38		1,736.55	-375.47	446.85	382.89	63.96		6.986	

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: Little Bear Federal Com
Site Error: 0.00 usft
Reference Well: Little Bear Fed Com 1H
Well Error: 0.00 usft
Reference Wellbore: ST01
Reference Design: ST01 Plan1

Local Co-ordinate Reference: Well Little Bear Fed Com 1H
TVD Reference: GL 3791' + 26' KB @ 3817.00usft
(Independence 205)
MD Reference: GL 3791' + 26' KB @ 3817.00usft
(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 Little Bear Federal Com - Little Bear Fed Com 6H - 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		
13,200.00	11,328.80	13,516.21	11,629.29	30.15	43.34	-132.33	1,836.49	-376.38	446.48	381.33	65.15	6.853		
13,300.00	11,326.05	13,616.21	11,625.98	31.55	43.60	-132.28	1,936.43	-377.29	446.10	379.74	66.37	6.722		
13,400.00	11,323.30	13,716.21	11,622.68	32.95	43.88	-132.22	2,036.37	-378.19	445.73	378.12	67.61	6.593		
13,500.00	11,320.55	13,816.21	11,619.37	34.36	44.17	-132.17	2,136.31	-379.10	445.35	376.47	68.88	6.466		
13,600.00	11,317.80	13,916.21	11,616.07	35.76	44.47	-132.12	2,236.25	-380.01	444.98	374.81	70.17	6.341		
13,700.00	11,315.05	14,016.20	11,612.76	37.18	44.78	-132.07	2,336.19	-380.92	444.60	373.12	71.49	6.219		
13,800.00	11,312.30	14,116.20	11,609.46	38.59	45.10	-132.01	2,436.13	-381.82	444.23	371.41	72.82	6.100		
13,900.00	11,309.55	14,216.20	11,606.15	40.01	45.43	-131.96	2,536.06	-382.73	443.86	369.68	74.18	5.983		
14,000.00	11,306.80	14,316.20	11,602.85	41.43	45.78	-131.91	2,636.00	-383.64	443.49	367.93	75.56	5.870		
14,100.00	11,304.04	14,416.20	11,599.54	42.85	46.13	-131.85	2,735.94	-384.55	443.11	366.16	76.95	5.758		
14,200.00	11,301.29	14,516.20	11,596.24	44.27	46.49	-131.80	2,835.88	-385.46	442.74	364.38	78.36	5.650		
14,300.00	11,298.54	14,616.20	11,592.93	45.69	46.87	-131.75	2,935.82	-386.36	442.37	362.58	79.79	5.544		
14,400.00	11,295.79	14,716.19	11,589.63	47.12	47.25	-131.69	3,035.76	-387.27	442.00	360.76	81.24	5.441		
14,500.00	11,293.04	14,816.19	11,586.32	48.54	47.64	-131.64	3,135.70	-388.18	441.63	358.93	82.70	5.340		
14,600.00	11,290.29	14,916.19	11,583.02	49.97	48.04	-131.59	3,235.64	-389.09	441.26	357.09	84.17	5.242		
14,700.00	11,287.54	15,016.19	11,579.71	51.40	48.45	-131.53	3,335.58	-389.99	440.89	355.23	85.66	5.147		
14,800.00	11,284.79	15,116.19	11,576.41	52.83	48.87	-131.48	3,435.52	-390.90	440.52	353.36	87.17	5.054		
14,900.00	11,282.04	15,216.19	11,573.10	54.26	49.30	-131.42	3,535.46	-391.81	440.15	351.47	88.68	4.963		
15,000.00	11,279.29	15,316.18	11,569.80	55.69	49.73	-131.37	3,635.40	-392.72	439.78	349.57	90.21	4.875		
15,100.00	11,276.54	15,416.18	11,566.49	57.12	50.18	-131.32	3,735.34	-393.62	439.41	347.66	91.75	4.789		
15,200.00	11,273.79	15,516.18	11,563.19	58.55	50.63	-131.26	3,835.28	-394.53	439.05	345.74	93.30	4.706		
15,300.00	11,271.04	15,616.18	11,559.88	59.99	51.08	-131.21	3,935.22	-395.44	438.68	343.81	94.87	4.624		
15,400.00	11,268.29	15,716.18	11,556.58	61.42	51.55	-131.15	4,035.16	-396.35	438.31	341.87	96.44	4.545		
15,500.00	11,265.54	15,816.18	11,553.27	62.85	52.02	-131.10	4,135.10	-397.25	437.95	339.92	98.03	4.468		
15,600.00	11,262.79	15,916.18	11,549.97	64.29	52.50	-131.04	4,235.04	-398.16	437.58	337.96	99.62	4.392		
15,700.00	11,260.04	16,016.17	11,546.66	65.72	52.99	-130.99	4,334.98	-399.07	437.21	335.99	101.23	4.319		
15,800.00	11,257.29	16,116.17	11,543.36	67.16	53.48	-130.94	4,434.92	-399.98	436.85	334.01	102.84	4.248		
15,900.00	11,254.54	16,216.17	11,540.05	68.60	53.98	-130.88	4,534.86	-400.88	436.48	332.02	104.47	4.178		
16,000.00	11,251.79	16,316.17	11,536.75	70.03	54.49	-130.83	4,634.80	-401.79	436.12	330.02	106.10	4.110		
16,059.37	11,250.15	16,375.54	11,534.79	70.88	54.79	-130.79	4,694.13	-402.33	435.90	328.83	107.07	4.071 SF		
16,064.96	11,250.00	16,372.10	11,534.90	70.96	54.78	-130.79	4,690.70	-402.30	435.98	328.96	107.02	4.074		

Company: Concho Resources
Project: Lea County, NM
Reference Site: Little Bear Federal Com
Site Error: 0.00 usft
Reference Well: Little Bear Fed Com 1H
Well Error: 0.00 usft
Reference Wellbore: ST01
Reference Design: ST01 Plan1

Local Co-ordinate Reference: Well Little Bear Fed Com 1H
TVD Reference: GL 3791' + 26' KB @ 3817.00usft (Independence 205)
MD Reference: GL 3791' + 26' KB @ 3817.00usft (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 3791' + 26' KB @ 3817.00usft (IndCoordinates are relative to: Little Bear Fed Com 1H)

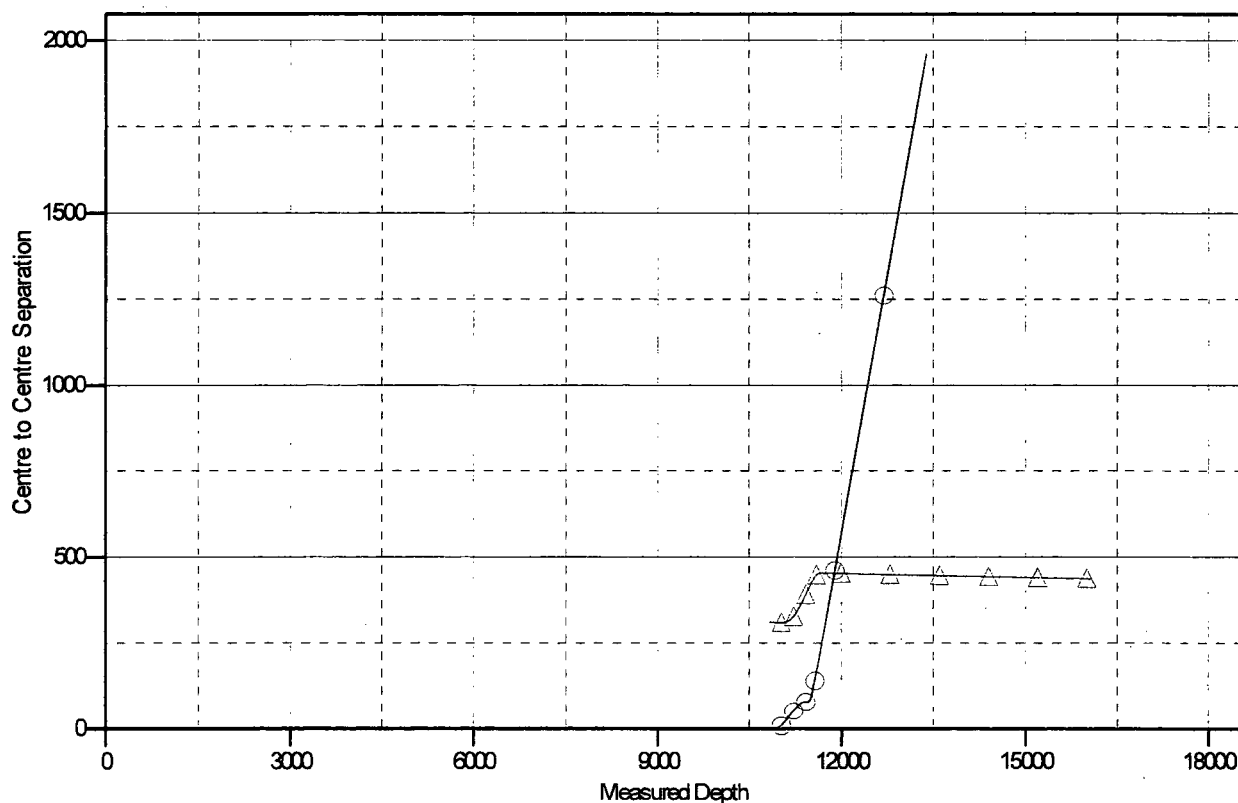
Offset Depths are relative to Offset Datum

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: 0.42°

Ladder Plot



LEGEND

● Little Bear Fed Com 1H, OH, Surveys V0

▲ Little Bear Fed Com GH, Wellbore #1, plan1 V0

Company:	Concho Resources	Local Co-ordinate Reference:	Well Little Bear Fed Com 1H
Project:	Lea County, NM	TVD Reference:	GL 3791' + 26' KB @ 3817.00usft (Independence 205)
Reference Site:	Little Bear Federal Com	MD Reference:	GL 3791' + 26' KB @ 3817.00usft (Independence 205)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Little Bear Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ST01	Database:	EDM 5000.14 Single User Db
Reference Design:	ST01 Plan1	Offset TVD Reference:	Reference Datum

Reference Depths are relative to GL 3791' + 26' KB @ 3817.00usft (IndCoordinates are relative to: Little Bear Fed Com 1H

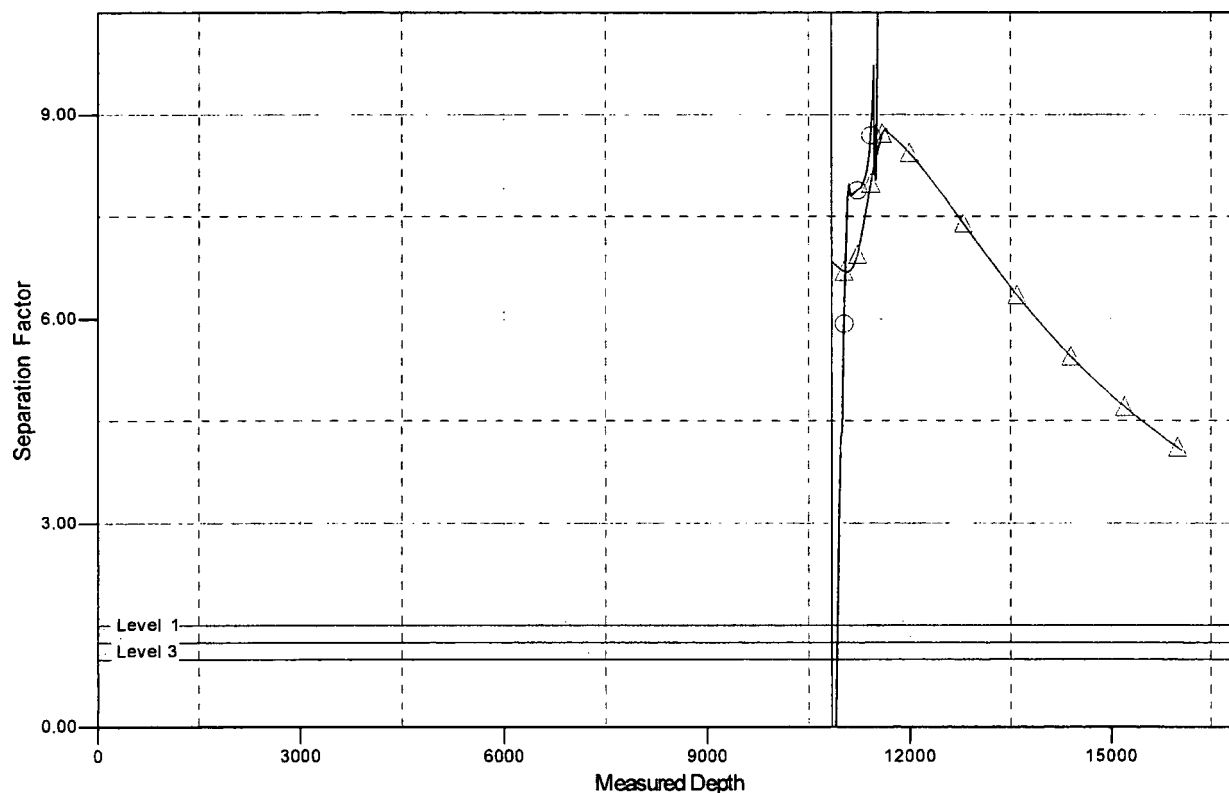
Offset Depths are relative to Offset Datum

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

Central Meridian is 104° 20' 0.000 W

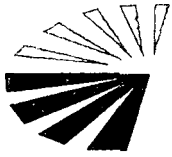
Grid Convergence at Surface is: 0.42°

Separation Factor Plot



LEGEND

 Little Bear Fed Com 1H, OH, Surveys VO
  Little Bear Fed Com 6H, Wellbore #1, plan1 VO



CONCHO

Concho Resources

Lea County, NM

Little Bear Federal Com

Little Bear Fed Com 1H

ST01

Plan: ST01 Plan1

Standard Planning Report

11 November, 2018



Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Little Bear Fed Com 1H
Company:	Concho Resources	TVD Reference:	GL 3791' + 26' KB @ 3817.00usft (Independence 205)
Project:	Lea County, NM	MD Reference:	GL 3791' + 26' KB @ 3817.00usft (Independence 205)
Site:	Little Bear Federal Com	North Reference:	Grid
Well:	Little Bear Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST01		
Design:	ST01 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		Little Bear Federal Com			
Site Position:		Northing:	554,956.30 usft	Latitude:	32° 31' 23.769 N
From:	Map	Easting:	740,237.10 usft	Longitude:	103° 33' 14.087 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.42 °

Well	Little Bear Fed Com 1H					
Well Position	+N/-S	0.00 usft	Northing:	554,956.30 usft	Latitude:	32° 31' 23.769 N
	+E/-W	0.00 usft	Easting:	740,237.10 usft	Longitude:	103° 33' 14.087 W
Position Uncertainty	0.00 usft	Wellhead Elevation:		Ground Level:		3,791.00 usft

Wellbore	ST01				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	11/11/18	6.70	60.43	48,188.00000000

Design	ST01 Plan1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	10,834.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	359.48

Plan-Survey Tool Program			Date	11/11/18	
Depth From	Depth To				
(usft)	(usft)	Survey (Wellbore)	Tool Name	Remarks	
1	10,834.00	16,064.96	ST01 Plan1 (ST01)	MWD+HRGM	
				OWSG MWD + HRGM	

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
10,834.00	1.65	202.47	10,822.94	-199.85	-47.30	0.00	0.00	0.00	0.00	
10,900.00	1.75	328.30	10,888.93	-199.87	-48.19	4.59	0.15	190.65	152.04	
11,534.17	75.00	3.00	11,353.59	165.92	-35.45	11.60	11.55	5.47	34.98	
11,680.19	91.58	359.48	11,370.60	310.38	-32.40	11.60	11.35	-2.41	-12.17	
16,064.96	91.58	359.48	11,250.00	4,693.30	-72.30	0.00	0.00	0.00	0.00	

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Little Bear Fed Com 1H
Company:	Concho Resources	TVD Reference:	GL 3791' + 26' KB @ 3817.00usft (Independence 205)
Project:	Lea County, NM	MD Reference:	GL 3791' + 26' KB @ 3817.00usft (Independence 205)
Site:	Little Bear Federal Com	North Reference:	Grid
Well:	Little Bear Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST01		
Design:	ST01 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)
10,834.00	1.65	202.47	10,822.94	-199.85	-47.30	-199.41	0.00	0.00	0.00
Tie-In @ 10834.00' MD									
10,900.00	1.75	328.30	10,888.93	-199.87	-48.19	-199.42	4.59	0.15	190.65
Start DLS 11.60 TFO 34.98									
11,000.00	13.07	358.94	10,987.95	-187.22	-49.21	-186.77	11.60	11.32	30.64
11,100.00	24.65	1.08	11,082.42	-154.95	-49.02	-154.50	11.60	11.58	2.14
11,200.00	36.25	1.90	11,168.48	-104.38	-47.64	-103.94	11.60	11.59	0.82
11,300.00	47.84	2.36	11,242.61	-37.57	-45.13	-37.16	11.60	11.60	0.46
11,360.24	54.83	2.56	11,280.23	9.40	-43.10	9.79	11.60	11.60	0.33
Little Bear Fed Com 1H ST01 p1 FTP									
11,400.00	59.44	2.68	11,301.80	42.75	-41.58	43.12	11.60	11.60	0.29
11,500.00	71.04	2.92	11,343.61	133.29	-37.14	133.62	11.60	11.60	0.25
11,534.17	75.00	3.00	11,353.59	165.92	-35.45	166.23	11.60	11.60	0.22
Start DLS 11.60 TFO -12.17									
11,600.00	82.47	1.38	11,366.44	230.38	-33.00	230.67	11.60	11.35	-2.46
11,680.19	91.58	359.48	11,370.60	310.38	-32.40	310.66	11.60	11.36	-2.37
Start 4384.76 hold at 11680.19 MD									
11,700.00	91.58	359.48	11,370.06	330.18	-32.58	330.46	0.00	0.00	0.00
11,800.00	91.58	359.48	11,367.30	430.14	-33.49	430.42	0.00	0.00	0.00
11,900.00	91.58	359.48	11,364.55	530.09	-34.40	530.38	0.00	0.00	0.00
12,000.00	91.58	359.48	11,361.80	630.05	-35.31	630.35	0.00	0.00	0.00
12,100.00	91.58	359.48	11,359.05	730.01	-36.22	730.31	0.00	0.00	0.00
12,200.00	91.58	359.48	11,356.30	829.97	-37.13	830.27	0.00	0.00	0.00
12,300.00	91.58	359.48	11,353.55	929.93	-38.04	930.23	0.00	0.00	0.00
12,400.00	91.58	359.48	11,350.80	1,029.88	-38.95	1,030.19	0.00	0.00	0.00
12,500.00	91.58	359.48	11,348.05	1,129.84	-39.86	1,130.16	0.00	0.00	0.00
12,600.00	91.58	359.48	11,345.30	1,229.80	-40.77	1,230.12	0.00	0.00	0.00
12,700.00	91.58	359.48	11,342.55	1,329.76	-41.68	1,330.08	0.00	0.00	0.00
12,800.00	91.58	359.48	11,339.80	1,429.72	-42.59	1,430.04	0.00	0.00	0.00
12,900.00	91.58	359.48	11,337.05	1,529.67	-43.50	1,530.01	0.00	0.00	0.00
13,000.00	91.58	359.48	11,334.30	1,629.63	-44.41	1,629.97	0.00	0.00	0.00
13,100.00	91.58	359.48	11,331.55	1,729.59	-45.32	1,729.93	0.00	0.00	0.00
13,200.00	91.58	359.48	11,328.80	1,829.55	-46.23	1,829.89	0.00	0.00	0.00
13,300.00	91.58	359.48	11,326.05	1,929.51	-47.14	1,929.85	0.00	0.00	0.00
13,400.00	91.58	359.48	11,323.30	2,029.46	-48.05	2,029.82	0.00	0.00	0.00
13,500.00	91.58	359.48	11,320.55	2,129.42	-48.96	2,129.78	0.00	0.00	0.00
13,600.00	91.58	359.48	11,317.80	2,229.38	-49.87	2,229.74	0.00	0.00	0.00
13,700.00	91.58	359.48	11,315.05	2,329.34	-50.78	2,329.70	0.00	0.00	0.00
13,800.00	91.58	359.48	11,312.30	2,429.30	-51.69	2,429.67	0.00	0.00	0.00
13,900.00	91.58	359.48	11,309.55	2,529.25	-52.60	2,529.63	0.00	0.00	0.00
14,000.00	91.58	359.48	11,306.80	2,629.21	-53.51	2,629.59	0.00	0.00	0.00
14,100.00	91.58	359.48	11,304.04	2,729.17	-54.42	2,729.55	0.00	0.00	0.00
14,200.00	91.58	359.48	11,301.29	2,829.13	-55.33	2,829.51	0.00	0.00	0.00
14,300.00	91.58	359.48	11,298.54	2,929.09	-56.24	2,929.48	0.00	0.00	0.00
14,400.00	91.58	359.48	11,295.79	3,029.04	-57.15	3,029.44	0.00	0.00	0.00
14,500.00	91.58	359.48	11,293.04	3,129.00	-58.06	3,129.40	0.00	0.00	0.00
14,600.00	91.58	359.48	11,290.29	3,228.96	-58.97	3,229.36	0.00	0.00	0.00
14,700.00	91.58	359.48	11,287.54	3,328.92	-59.88	3,329.32	0.00	0.00	0.00
14,800.00	91.58	359.48	11,284.79	3,428.88	-60.79	3,429.29	0.00	0.00	0.00
14,900.00	91.58	359.48	11,282.04	3,528.83	-61.70	3,529.25	0.00	0.00	0.00
15,000.00	91.58	359.48	11,279.29	3,628.79	-62.61	3,629.21	0.00	0.00	0.00

Database:	EDM 5000.14 Single User Db	Local Co-ordinate Reference:	Well Little Bear Fed Com 1H
Company:	Concho Resources	TVD Reference:	GL 3791' + 26' KB @ 3817.00usft (Independence 205)
Project:	Lea County, NM	MD Reference:	GL 3791' + 26' KB @ 3817.00usft (Independence 205)
Site:	Little Bear Federal Com	North Reference:	Grid
Well:	Little Bear Fed Com 1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	ST01		
Design:	ST01 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)
15,100.00	91.58	359.48	11,276.54	3,728.75	-63.52	3,729.17	0.00	0.00	0.00
15,200.00	91.58	359.48	11,273.79	3,828.71	-64.43	3,829.14	0.00	0.00	0.00
15,300.00	91.58	359.48	11,271.04	3,928.67	-65.34	3,929.10	0.00	0.00	0.00
15,400.00	91.58	359.48	11,268.29	4,028.62	-66.25	4,029.06	0.00	0.00	0.00
15,500.00	91.58	359.48	11,265.54	4,128.58	-67.16	4,129.02	0.00	0.00	0.00
15,600.00	91.58	359.48	11,262.79	4,228.54	-68.07	4,228.98	0.00	0.00	0.00
15,700.00	91.58	359.48	11,260.04	4,328.50	-68.98	4,328.95	0.00	0.00	0.00
15,800.00	91.58	359.48	11,257.29	4,428.46	-69.89	4,428.91	0.00	0.00	0.00
15,900.00	91.58	359.48	11,254.54	4,528.41	-70.80	4,528.87	0.00	0.00	0.00
15,934.90	91.58	359.48	11,253.58	4,563.30	-71.12	4,563.76	0.00	0.00	0.00
Little Bear Fed Com 1H ST01 p1 LTP									
16,000.00	91.58	359.48	11,251.79	4,628.37	-71.71	4,628.83	0.00	0.00	0.00
16,064.96	91.58	359.48	11,250.00	4,693.30	-72.30	4,693.76	0.00	0.00	0.00
TD ST01 @ 16064.95' MD - Little Bear Fed Com 1H ST01 p1 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									
Little Bear Fed Com 1	0.00	0.00	11,250.00	4,693.30	-72.30	559,649.60	740,164.80	32° 32' 10.214 N	103° 33' 14.530 W
- plan hits target center									
- Point									
Little Bear Fed Com 1	0.00	0.00	11,250.00	4,563.20	-71.28	559,519.51	740,165.82	32° 32' 8.927 N	103° 33' 14.530 W
- plan misses target center by 3.58usft at 15934.90usft MD (11253.58 TVD, 4563.30 N, -71.12 E)									
- Point									
Little Bear Fed Com 1	0.00	0.00	11,370.00	-57.38	-29.47	554,898.92	740,207.63	32° 31' 23.203 N	103° 33' 14.436 W
- plan misses target center by 112.71usft at 11360.24usft MD (11280.23 TVD, 9.40 N, -43.10 E)									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,834.00	10,822.94	-199.85	-47.30	Tie-In @ 10834.00' MD
10,900.00	10,888.93	-199.87	-48.19	Start DLS 11.60 TFO 34.98
11,534.17	11,353.59	165.92	-35.45	Start DLS 11.60 TFO -12.17
11,680.19	11,370.60	310.38	-32.40	Start 4384.76 hold at 11680.19 MD
16,064.96	11,250.00	4,693.30	-72.30	TD ST01 @ 16064.95' MD



CONCHO

Project: Lea County, NM
 Site: Little Bear Federal Com
 Well: Little Bear Fed Com 1H
 Depth Reference: GL 3791' + 26' KB @ 3817.00usft (Independence 205)
 SHL Northing: 554956.30
 SHL Easting: 740237.10
 Rig: Independence 205
 Plan: ST01 Plan1



SECTION DETAILS

MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	Vsect	Annotation
10834.00	1.65	202.47	10822.94	-199.85	-47.30	0.00	0.00	-199.41	Tie-In @ 10834.00' MD
10900.00	1.75	328.30	10888.93	-199.87	-48.19	4.59	152.04	-199.42	Start DLS 11.60 TFO 34.98
11534.17	75.00	3.00	11353.59	165.92	-35.45	11.60	34.98	165.23	Start DLS 11.60 TFO -12.17
11680.19	91.58	359.48	11370.60	310.38	-32.40	11.60	-12.17	310.86	Start 4384.76 hold at 11680.19 MD
16064.95	91.58	359.48	11250.00	4693.30	-72.30	0.00	0.00	4693.76	TD ST01 @ 16064.95' MD

FORMATION TOP DETAILS

No formation data is available

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting
Little Bear Fed Com 1H ST01 p1 LTP	11250.00	4563.20	-71.28	559519.50	740165.82
Little Bear Fed Com 1H ST01 p1 PBHL	11250.00	4693.30	-72.30	559649.60	740164.80
Little Bear Fed Com 1H ST01 p1 FTP	11370.00	-57.38	-29.47	554898.92	740207.63



Azimuths to Grid North
 True North: -0.42°
 Magnetic North: 6.28°
 Magnetic Field
 Strength: 48188.0nT
 Dip Angle: 60.43°
 Date: 11/11/2018
 Model: HDGM

