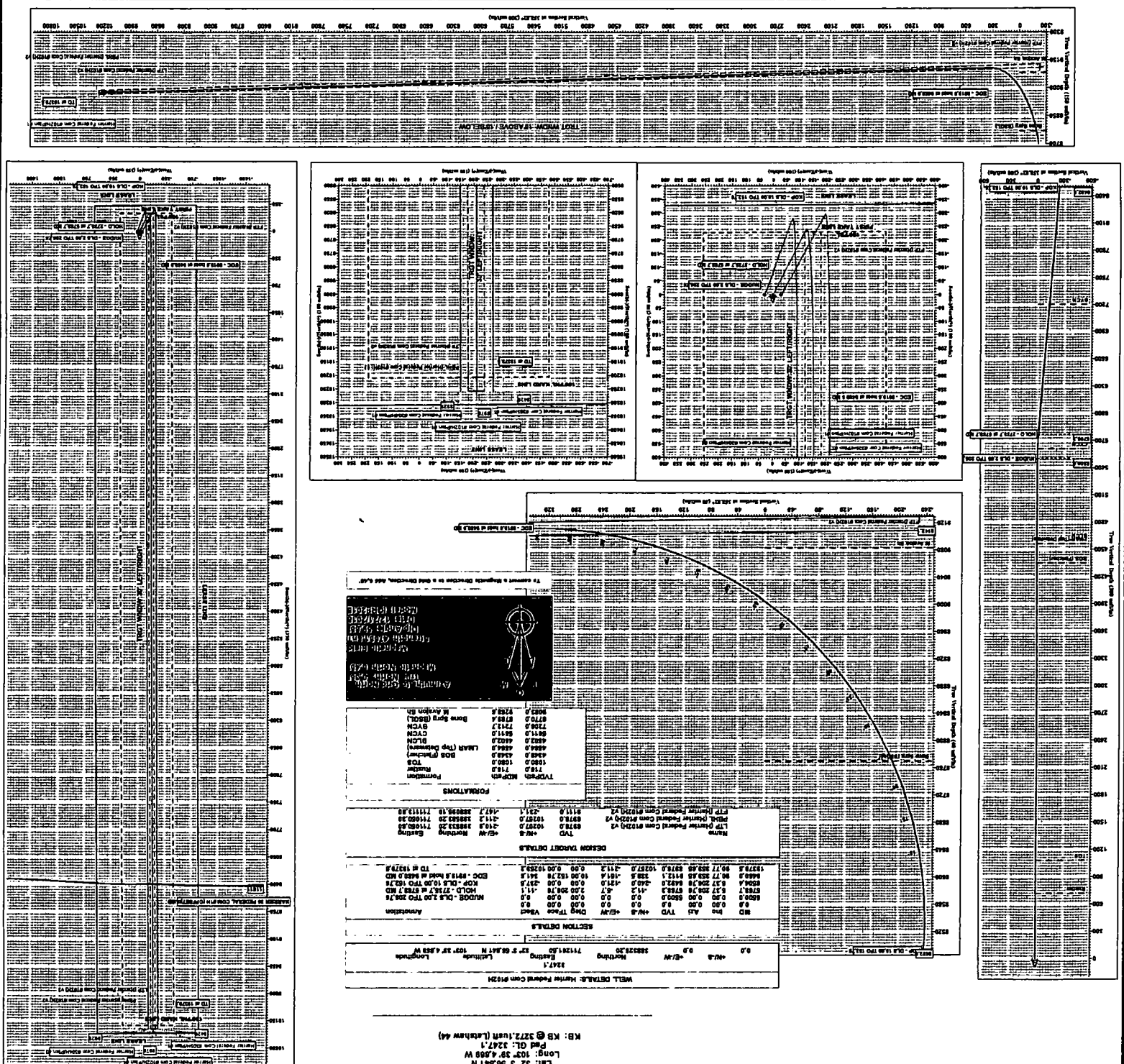


Project: Las Alamos, NM (NAD 83)
 Well: W-1000 (NAD 83)
 Section: Plan 81
 Date: 10/27/2011
 Drawn: J. Smith
 Checked: J. Smith
 Approved: J. Smith
 Scale: 1" = 1000'
 Units: Feet
 Datum: NAD 83
 Zone: 10N
 Easting: 1000000
 Northing: 1000000
 UTM: 10N
 UTM: 10N
 UTM: 10N





C O N C H O

Concho Resources, Inc.

Lea County, NM (NAD 27 NME)

(Harrier Federal) Sec-2_T-26-S_R-32-E

Harrier Federal Com #102H

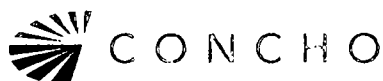
OWB

Plan: Plan #1

Standard Planning Report

22 August, 2019

INTREPID



Database: EDM 5000.15 Single User Db
Company: Concho Resources, Inc.
Project: Lea County, NM (NAD 27 NME)
Site: (Harrier Federal) Sec-2_T-26-S_R-32-E
Well: Harrier Federal Com #102H
Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference: Well Harrier Federal Com #102H
TVD Reference: KB @ 3272.1usft (Latshaw 44)
MD Reference: KB @ 3272.1usft (Latshaw 44)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Lea County, NM (NAD 27 NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site (Harrier Federal) Sec-2_T-26-S_R-32-E

Site Position:	Map	Northing:	388,326.40 usft	Latitude:	32° 3' 56.841 N
From:		Easting:	711,291.50 usft	Longitude:	103° 39' 4.521 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.36 °

Well Harrier Federal Com #102H

Well Position	+N-S	-0.2 usft	Northing:	388,326.20 usft	Latitude:	32° 3' 56.841 N
	+E-W	-30.0 usft	Easting:	711,261.50 usft	Longitude:	103° 39' 4.869 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	3,247.1 usft

Wellbore OWB

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	12/21/18	6.82	59.88	47,681.84348083

Design Plan #1

Audit Notes:

Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
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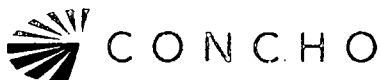
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)
	0.0	0.0	0.0	358.82

Plan Survey Tool Program Date 08/22/19

Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	8,466.5 Plan #1 (OWB)	Standard Keeper 104	
			Standard Wireline Keeper v	
2	8,466.5	19,379.5 Plan #1 (OWB)	MWD+IFR1+MS	
			MWD + IFR1 + Multi-Station	

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,768.7	5.37	206.76	5,768.3	-11.2	-5.7	2.00	2.00	-57.04	206.76	
8,504.4	5.37	206.76	8,492.0	-240.0	-121.0	0.00	0.00	0.00	0.00	
9,460.0	90.77	359.65	9,112.1	338.5	-151.4	10.00	8.94	16.00	152.76	
19,379.5	90.77	359.65	8,978.0	10,257.0	-211.2	0.00	0.00	0.00	0.00	PBHL (Harrier Fede



Intrepid
Planning Report

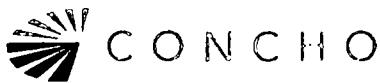


Database: EDM 5000.15 Single User Db
Company: Concho Resources, Inc.
Project: Lea County, NM (NAD 27 NME)
Site: (Harrier Federal) Sec-2_T-26-S_R-32-E
Well: Harrier Federal Com #102H
Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference: Well Harrier Federal Com #102H
TVD Reference: KB @ 3272.1usft (Latshaw 44)
MD Reference: KB @ 3272.1usft (Latshaw 44)
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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
716.0	0.00	0.00	716.0	0.0	0.0	0.0	0.00	0.00	0.00
Rustler									
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,080.0	0.00	0.00	1,080.0	0.0	0.0	0.0	0.00	0.00	0.00
TOS									
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,348.0	0.00	0.00	4,348.0	0.0	0.0	0.0	0.00	0.00	0.00
BOS (Fletcher)									
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,564.0	0.00	0.00	4,564.0	0.0	0.0	0.0	0.00	0.00	0.00
LMAR (Top Delaware)									



Intrepid
Planning Report



Database: EDM 5000.15 Single User Db
Company: Concho Resources, Inc.
Project: Lea County, NM (NAD 27 NME)
Site: (Harrier Federal) Sec-2_T-26-S_R-32-E
Well: Harrier Federal Com #102H
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North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

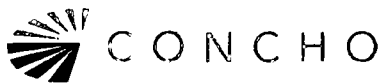
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,602.0	0.00	0.00	4,602.0	0.0	0.0	0.0	0.00	0.00	0.00
BLCN									
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
NUDGE - DLS 2.00 TFO 206.76									
5,600.0	2.00	206.76	5,600.0	-1.6	-0.8	-1.5	2.00	2.00	0.00
5,611.0	2.22	206.76	5,611.0	-1.9	-1.0	-1.9	2.00	2.00	0.00
CYCN									
5,700.0	4.00	206.76	5,699.8	-6.2	-3.1	-6.2	2.00	2.00	0.00
5,768.7	5.37	206.76	5,768.3	-11.2	-5.7	-11.1	2.00	2.00	0.00
HOLD - 2735.7 at 5768.7 MD									
5,800.0	5.37	206.76	5,799.5	-13.9	-7.0	-13.7	0.00	0.00	0.00
5,900.0	5.37	206.76	5,899.0	-22.2	-11.2	-22.0	0.00	0.00	0.00
6,000.0	5.37	206.76	5,998.6	-30.6	-15.4	-30.3	0.00	0.00	0.00
6,100.0	5.37	206.76	6,098.2	-38.9	-19.6	-38.5	0.00	0.00	0.00
6,200.0	5.37	206.76	6,197.7	-47.3	-23.9	-46.8	0.00	0.00	0.00
6,300.0	5.37	206.76	6,297.3	-55.7	-28.1	-55.1	0.00	0.00	0.00
6,400.0	5.37	206.76	6,396.8	-64.0	-32.3	-63.4	0.00	0.00	0.00
6,500.0	5.37	206.76	6,496.4	-72.4	-36.5	-71.6	0.00	0.00	0.00
6,600.0	5.37	206.76	6,596.0	-80.8	-40.7	-79.9	0.00	0.00	0.00
6,700.0	5.37	206.76	6,695.5	-89.1	-44.9	-88.2	0.00	0.00	0.00
6,800.0	5.37	206.76	6,795.1	-97.5	-49.1	-96.4	0.00	0.00	0.00
6,900.0	5.37	206.76	6,894.6	-105.8	-53.4	-104.7	0.00	0.00	0.00
7,000.0	5.37	206.76	6,994.2	-114.2	-57.6	-113.0	0.00	0.00	0.00
7,100.0	5.37	206.76	7,093.8	-122.6	-61.8	-121.3	0.00	0.00	0.00
7,200.0	5.37	206.76	7,193.3	-130.9	-66.0	-129.5	0.00	0.00	0.00
7,212.7	5.37	206.76	7,206.0	-132.0	-66.5	-130.6	0.00	0.00	0.00
BYCN									
7,300.0	5.37	206.76	7,292.9	-139.3	-70.2	-137.8	0.00	0.00	0.00
7,400.0	5.37	206.76	7,392.4	-147.7	-74.4	-146.1	0.00	0.00	0.00
7,500.0	5.37	206.76	7,492.0	-156.0	-78.7	-154.4	0.00	0.00	0.00
7,600.0	5.37	206.76	7,591.6	-164.4	-82.9	-162.6	0.00	0.00	0.00
7,700.0	5.37	206.76	7,691.1	-172.7	-87.1	-170.9	0.00	0.00	0.00
7,800.0	5.37	206.76	7,790.7	-181.1	-91.3	-179.2	0.00	0.00	0.00
7,900.0	5.37	206.76	7,890.2	-189.5	-95.5	-187.5	0.00	0.00	0.00
8,000.0	5.37	206.76	7,989.8	-197.8	-99.7	-195.7	0.00	0.00	0.00
8,100.0	5.37	206.76	8,089.4	-206.2	-104.0	-204.0	0.00	0.00	0.00
8,200.0	5.37	206.76	8,188.9	-214.5	-108.2	-212.3	0.00	0.00	0.00
8,300.0	5.37	206.76	8,288.5	-222.9	-112.4	-220.5	0.00	0.00	0.00
8,400.0	5.37	206.76	8,388.0	-231.3	-116.6	-228.8	0.00	0.00	0.00
8,504.4	5.37	206.76	8,492.0	-240.0	-121.0	-237.5	0.00	0.00	0.00
KOP - DLS 10.00 TFO 152.76									
8,550.0	2.47	264.46	8,537.5	-242.0	-122.9	-239.4	10.00	-6.38	126.58
8,600.0	5.37	332.48	8,587.4	-240.0	-125.1	-237.4	10.00	5.81	136.04
8,650.0	10.08	345.66	8,636.9	-233.7	-127.3	-231.0	10.00	9.42	26.36

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 MD Reference: KB @ 3272.1usft (Latshaw 44)
 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)
8,700.0	14.98	350.39	8,685.7	-223.1	-129.4	-220.4	10.00	9.79	9.48
8,750.0	19.92	352.82	8,733.4	-208.3	-131.6	-205.5	10.00	9.90	4.86
8,789.4	23.84	354.05	8,770.0	-193.7	-133.2	-190.9	10.00	9.93	3.11
Bone Sprg (BSGL)									
8,800.0	24.89	354.32	8,779.6	-189.3	-133.7	-186.5	10.00	9.95	2.52
8,850.0	29.87	355.34	8,824.0	-166.4	-135.7	-163.6	10.00	9.96	2.04
8,900.0	34.85	356.09	8,866.2	-139.8	-137.7	-136.9	10.00	9.97	1.50
8,950.0	39.84	356.67	8,906.0	-109.5	-139.6	-106.6	10.00	9.97	1.17
9,000.0	44.83	357.15	8,942.9	-75.9	-141.4	-72.9	10.00	9.98	0.95
9,050.0	49.82	357.55	8,976.8	-39.2	-143.1	-36.2	10.00	9.98	0.79
9,100.0	54.82	357.89	9,007.3	0.4	-144.7	3.3	10.00	9.99	0.69
9,150.0	59.81	358.19	9,034.3	42.4	-146.1	45.4	10.00	9.99	0.61
9,200.0	64.80	358.46	9,057.6	86.6	-147.4	89.7	10.00	9.99	0.55
9,250.0	69.80	358.72	9,076.9	132.7	-148.6	135.8	10.00	9.99	0.50
9,268.6	71.66	358.81	9,083.0	150.3	-148.9	153.4	10.00	9.99	0.48
M Avalon Sh									
9,300.0	74.79	358.95	9,092.1	180.3	-149.5	183.4	10.00	9.99	0.47
9,350.0	79.79	359.18	9,103.1	229.1	-150.3	232.1	10.00	9.99	0.45
9,400.0	84.78	359.40	9,109.8	278.6	-150.9	281.7	10.00	9.99	0.44
9,450.0	89.78	359.61	9,112.1	328.6	-151.4	331.6	10.00	9.99	0.43
9,460.0	90.77	359.65	9,112.1	338.5	-151.4	341.6	10.00	9.99	0.43
EOC - 9919.6 hold at 9460.0 MD									
9,500.0	90.77	359.65	9,111.5	378.6	-151.7	381.6	0.00	0.00	0.00
9,600.0	90.77	359.65	9,110.2	478.5	-152.3	481.6	0.00	0.00	0.00
9,700.0	90.77	359.65	9,108.8	578.5	-152.9	581.6	0.00	0.00	0.00
9,800.0	90.77	359.65	9,107.5	678.5	-153.5	681.5	0.00	0.00	0.00
9,900.0	90.77	359.65	9,106.1	778.5	-154.1	781.5	0.00	0.00	0.00
10,000.0	90.77	359.65	9,104.8	878.5	-154.7	881.5	0.00	0.00	0.00
10,100.0	90.77	359.65	9,103.4	978.5	-155.3	981.5	0.00	0.00	0.00
10,200.0	90.77	359.65	9,102.1	1,078.5	-155.9	1,081.5	0.00	0.00	0.00
10,300.0	90.77	359.65	9,100.7	1,178.5	-156.5	1,181.4	0.00	0.00	0.00
10,400.0	90.77	359.65	9,099.4	1,278.5	-157.1	1,281.4	0.00	0.00	0.00
10,500.0	90.77	359.65	9,098.0	1,378.4	-157.7	1,381.4	0.00	0.00	0.00
10,600.0	90.77	359.65	9,096.7	1,478.4	-158.3	1,481.4	0.00	0.00	0.00
10,700.0	90.77	359.65	9,095.3	1,578.4	-158.9	1,581.4	0.00	0.00	0.00
10,800.0	90.77	359.65	9,094.0	1,678.4	-159.5	1,681.3	0.00	0.00	0.00
10,900.0	90.77	359.65	9,092.6	1,778.4	-160.1	1,781.3	0.00	0.00	0.00
11,000.0	90.77	359.65	9,091.3	1,878.4	-160.7	1,881.3	0.00	0.00	0.00
11,100.0	90.77	359.65	9,089.9	1,978.4	-161.3	1,981.3	0.00	0.00	0.00
11,200.0	90.77	359.65	9,088.6	2,078.4	-161.9	2,081.3	0.00	0.00	0.00
11,300.0	90.77	359.65	9,087.2	2,178.4	-162.5	2,181.2	0.00	0.00	0.00
11,400.0	90.77	359.65	9,085.9	2,278.3	-163.1	2,281.2	0.00	0.00	0.00
11,500.0	90.77	359.65	9,084.5	2,378.3	-163.7	2,381.2	0.00	0.00	0.00
11,600.0	90.77	359.65	9,083.2	2,478.3	-164.3	2,481.2	0.00	0.00	0.00
11,700.0	90.77	359.65	9,081.8	2,578.3	-164.9	2,581.2	0.00	0.00	0.00
11,800.0	90.77	359.65	9,080.5	2,678.3	-165.5	2,681.1	0.00	0.00	0.00
11,900.0	90.77	359.65	9,079.1	2,778.3	-166.1	2,781.1	0.00	0.00	0.00
12,000.0	90.77	359.65	9,077.8	2,878.3	-166.7	2,881.1	0.00	0.00	0.00
12,100.0	90.77	359.65	9,076.4	2,978.3	-167.3	2,981.1	0.00	0.00	0.00
12,200.0	90.77	359.65	9,075.0	3,078.3	-167.9	3,081.1	0.00	0.00	0.00
12,300.0	90.77	359.65	9,073.7	3,178.2	-168.5	3,181.0	0.00	0.00	0.00
12,400.0	90.77	359.65	9,072.3	3,278.2	-169.1	3,281.0	0.00	0.00	0.00
12,500.0	90.77	359.65	9,071.0	3,378.2	-169.7	3,381.0	0.00	0.00	0.00



Intrepid
Planning Report



Database: EDM 5000.15 Single User Db
Company: Concho Resources, Inc.
Project: Lea County, NM (NAD 27 NME)
Site: (Harrier Federal) Sec-2_T-26-S_R-32-E
Well: Harrier Federal Com #102H
Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference: Well Harrier Federal Com #102H
TVD Reference: KB @ 3272.1usft (Latshaw 44)
MD Reference: KB @ 3272.1usft (Latshaw 44)
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)
12,600.0	90.77	359.65	9,069.6	3,478.2	-170.3	3,481.0	0.00	0.00	0.00
12,700.0	90.77	359.65	9,068.3	3,578.2	-170.9	3,581.0	0.00	0.00	0.00
12,800.0	90.77	359.65	9,066.9	3,678.2	-171.6	3,680.9	0.00	0.00	0.00
12,900.0	90.77	359.65	9,065.6	3,778.2	-172.2	3,780.9	0.00	0.00	0.00
13,000.0	90.77	359.65	9,064.2	3,878.2	-172.8	3,880.9	0.00	0.00	0.00
13,100.0	90.77	359.65	9,062.9	3,978.2	-173.4	3,980.9	0.00	0.00	0.00
13,200.0	90.77	359.65	9,061.5	4,078.1	-174.0	4,080.9	0.00	0.00	0.00
13,300.0	90.77	359.65	9,060.2	4,178.1	-174.6	4,180.8	0.00	0.00	0.00
13,400.0	90.77	359.65	9,058.8	4,278.1	-175.2	4,280.8	0.00	0.00	0.00
13,500.0	90.77	359.65	9,057.5	4,378.1	-175.8	4,380.8	0.00	0.00	0.00
13,600.0	90.77	359.65	9,056.1	4,478.1	-176.4	4,480.8	0.00	0.00	0.00
13,700.0	90.77	359.65	9,054.8	4,578.1	-177.0	4,580.8	0.00	0.00	0.00
13,800.0	90.77	359.65	9,053.4	4,678.1	-177.6	4,680.7	0.00	0.00	0.00
13,900.0	90.77	359.65	9,052.1	4,778.1	-178.2	4,780.7	0.00	0.00	0.00
14,000.0	90.77	359.65	9,050.7	4,878.1	-178.8	4,880.7	0.00	0.00	0.00
14,100.0	90.77	359.65	9,049.4	4,978.0	-179.4	4,980.7	0.00	0.00	0.00
14,200.0	90.77	359.65	9,048.0	5,078.0	-180.0	5,080.7	0.00	0.00	0.00
14,300.0	90.77	359.65	9,046.7	5,178.0	-180.6	5,180.6	0.00	0.00	0.00
14,400.0	90.77	359.65	9,045.3	5,278.0	-181.2	5,280.6	0.00	0.00	0.00
14,500.0	90.77	359.65	9,044.0	5,378.0	-181.8	5,380.6	0.00	0.00	0.00
14,600.0	90.77	359.65	9,042.6	5,478.0	-182.4	5,480.6	0.00	0.00	0.00
14,700.0	90.77	359.65	9,041.3	5,578.0	-183.0	5,580.6	0.00	0.00	0.00
14,800.0	90.77	359.65	9,039.9	5,678.0	-183.6	5,680.5	0.00	0.00	0.00
14,900.0	90.77	359.65	9,038.6	5,778.0	-184.2	5,780.5	0.00	0.00	0.00
15,000.0	90.77	359.65	9,037.2	5,877.9	-184.8	5,880.5	0.00	0.00	0.00
15,100.0	90.77	359.65	9,035.8	5,977.9	-185.4	5,980.5	0.00	0.00	0.00
15,200.0	90.77	359.65	9,034.5	6,077.9	-186.0	6,080.5	0.00	0.00	0.00
15,300.0	90.77	359.65	9,033.1	6,177.9	-186.6	6,180.4	0.00	0.00	0.00
15,400.0	90.77	359.65	9,031.8	6,277.9	-187.2	6,280.4	0.00	0.00	0.00
15,500.0	90.77	359.65	9,030.4	6,377.9	-187.8	6,380.4	0.00	0.00	0.00
15,600.0	90.77	359.65	9,029.1	6,477.9	-188.4	6,480.4	0.00	0.00	0.00
15,700.0	90.77	359.65	9,027.7	6,577.9	-189.0	6,580.4	0.00	0.00	0.00
15,800.0	90.77	359.65	9,026.4	6,677.9	-189.6	6,680.4	0.00	0.00	0.00
15,900.0	90.77	359.65	9,025.0	6,777.9	-190.2	6,780.3	0.00	0.00	0.00
16,000.0	90.77	359.65	9,023.7	6,877.8	-190.8	6,880.3	0.00	0.00	0.00
16,100.0	90.77	359.65	9,022.3	6,977.8	-191.4	6,980.3	0.00	0.00	0.00
16,200.0	90.77	359.65	9,021.0	7,077.8	-192.0	7,080.3	0.00	0.00	0.00
16,300.0	90.77	359.65	9,019.6	7,177.8	-192.6	7,180.3	0.00	0.00	0.00
16,400.0	90.77	359.65	9,018.3	7,277.8	-193.2	7,280.2	0.00	0.00	0.00
16,500.0	90.77	359.65	9,016.9	7,377.8	-193.8	7,380.2	0.00	0.00	0.00
16,600.0	90.77	359.65	9,015.6	7,477.8	-194.5	7,480.2	0.00	0.00	0.00
16,700.0	90.77	359.65	9,014.2	7,577.8	-195.1	7,580.2	0.00	0.00	0.00
16,800.0	90.77	359.65	9,012.9	7,677.8	-195.7	7,680.2	0.00	0.00	0.00
16,900.0	90.77	359.65	9,011.5	7,777.7	-196.3	7,780.1	0.00	0.00	0.00
17,000.0	90.77	359.65	9,010.2	7,877.7	-196.9	7,880.1	0.00	0.00	0.00
17,100.0	90.77	359.65	9,008.8	7,977.7	-197.5	7,980.1	0.00	0.00	0.00
17,200.0	90.77	359.65	9,007.5	8,077.7	-198.1	8,080.1	0.00	0.00	0.00
17,300.0	90.77	359.65	9,006.1	8,177.7	-198.7	8,180.1	0.00	0.00	0.00
17,400.0	90.77	359.65	9,004.8	8,277.7	-199.3	8,280.0	0.00	0.00	0.00
17,500.0	90.77	359.65	9,003.4	8,377.7	-199.9	8,380.0	0.00	0.00	0.00
17,600.0	90.77	359.65	9,002.1	8,477.7	-200.5	8,480.0	0.00	0.00	0.00
17,700.0	90.77	359.65	9,000.7	8,577.7	-201.1	8,580.0	0.00	0.00	0.00
17,800.0	90.77	359.65	8,999.4	8,677.6	-201.7	8,680.0	0.00	0.00	0.00
17,900.0	90.77	359.65	8,998.0	8,777.6	-202.3	8,779.9	0.00	0.00	0.00

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Wellbore: OWB
Design: Plan #1

Local Co-ordinate Reference: Well Harrier Federal Com #102H
TVD Reference: KB @ 3272.1usft (Latshaw 44)
MD Reference: KB @ 3272.1usft (Latshaw 44)
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)
18,000.0	90.77	359.65	8,996.6	8,877.6	-202.9	8,879.9	0.00	0.00	0.00
18,100.0	90.77	359.65	8,995.3	8,977.6	-203.5	8,979.9	0.00	0.00	0.00
18,200.0	90.77	359.65	8,993.9	9,077.6	-204.1	9,079.9	0.00	0.00	0.00
18,300.0	90.77	359.65	8,992.6	9,177.6	-204.7	9,179.9	0.00	0.00	0.00
18,400.0	90.77	359.65	8,991.2	9,277.6	-205.3	9,279.8	0.00	0.00	0.00
18,500.0	90.77	359.65	8,989.9	9,377.6	-205.9	9,379.8	0.00	0.00	0.00
18,600.0	90.77	359.65	8,988.5	9,477.6	-206.5	9,479.8	0.00	0.00	0.00
18,700.0	90.77	359.65	8,987.2	9,577.5	-207.1	9,579.8	0.00	0.00	0.00
18,800.0	90.77	359.65	8,985.8	9,677.5	-207.7	9,679.8	0.00	0.00	0.00
18,900.0	90.77	359.65	8,984.5	9,777.5	-208.3	9,779.7	0.00	0.00	0.00
19,000.0	90.77	359.65	8,983.1	9,877.5	-208.9	9,879.7	0.00	0.00	0.00
19,100.0	90.77	359.65	8,981.8	9,977.5	-209.5	9,979.7	0.00	0.00	0.00
19,200.0	90.77	359.65	8,980.4	10,077.5	-210.1	10,079.7	0.00	0.00	0.00
19,300.0	90.77	359.65	8,979.1	10,177.5	-210.7	10,179.7	0.00	0.00	0.00
19,379.5	90.77	359.65	8,978.0	10,257.0	-211.2	10,259.2	0.00	0.00	0.00
TD at 19379.5									

Design Targets
Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL (Harrier Federal) - plan hits target center - Rectangle (sides W60.0 H10,490.0 D20.0)	-0.77	359.65	8,978.0	10,257.0	-211.2	398,583.20	711,050.30	32° 5' 38.356 N	103° 39' 6.571 W
LTP (Harrier Federal) - plan misses target center by 29.5usft at 19300.0usft MD (8979.1 TVD, 10177.5 N, -210.7 E) - Point	0.00	0.00	8,978.0	10,207.0	-210.9	398,533.20	711,050.60	32° 5' 37.861 N	103° 39' 6.571 W
FTP (Harrier Federal) - plan misses target center by 228.9usft at 9000.1usft MD (8943.0 TVD, -75.8 N, -141.4 E) - Point	0.00	0.00	9,111.0	-231.1	-147.7	388,095.10	711,113.80	32° 3' 54.563 N	103° 39' 6.603 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
716.0	716.0	Rustler			
1,080.0	1,080.0	TOS			
4,348.0	4,348.0	BOS (Fletcher)			
4,564.0	4,564.0	LMAR (Top Delaware)			
4,602.0	4,602.0	BLCN			
5,611.0	5,611.0	CYCN			
7,212.7	7,206.0	BYCN			
8,789.4	8,770.0	Bone Sprg (BSGL)			
9,268.6	9,083.0	M Avalon Sh			

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MD Reference: KB @ 3272.1usft (Latshaw 44)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,500.0	5,500.0	0.0	0.0	NUDGE - DLS 2.00 TFO 206.76
5,768.7	5,768.3	-11.2	-5.7	HOLD - 2735.7 at 5768.7 MD
8,504.4	8,492.0	-240.0	-121.0	KOP - DLS 10.00 TFO 152.76
9,460.0	9,112.1	338.5	-151.4	EOC - 9919.6 hold at 9460.0 MD
19,379.5	8,978.0	10,257.0	-211.2	TD at 19379.5