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Concho Resources, Inc.

Eddy County (NAD27 NME)

(Littlefield 33 Fed Com) Sec-33_T-26-S_R-29-E

Littlefield 33 Fed Com #707H

API# 30-015-45164

OWB

Design: AWB

Standard Survey Report

26 December, 2018

Company:	Concho Resources, Inc.	Local Co-ordinate Reference:	Well: Littlefield 33 Fed Com #707H
Project:	Eddy County (NAD27 NME)	TVD Reference:	KB @ 2888.4usft (Latshaw 44)
Site:	(Littlefield 33 Fed Com) Sec-33_T-26-S-R-29-E	MD Reference:	KB @ 2888.4usft (Latshaw 44)
Well:	Littlefield 33 Fed Com #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Project: Eddy County (NAD27 NME)			
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site (Littlefield 33 Fed Com) Sec-33-T-26-S-R-29-E					
Site Position:		Northing:	364,187.99 usft	Latitude:	32° 0' 2.883 N
From:	Map	Easting:	606,535.56 usft	Longitude:	103° 59' 22.784 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.18 °

Well	Littlefield 33 Fed Com #707H					
Well Position	+N/-S	0.0 usft	Northing:	364,137.90 usft	Latitude:	32° 0' 2.440 N
	+E/-W	0.0 usft	Easting:	604,850.40 usft	Longitude:	103° 59' 42.356 W
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	2,863.4 usft	

Wellbore:	OWB
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	09/06/18	7.00	59.77	47,639.24157758

Design:	AWB				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	1.57	

Survey Program		Date: 12/26/18		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	9,276.0	SDI Gyro (OWB)	Standard Keeper 104	Standard Wireline Keeper ver 1.0.4
9,348.0	17,175.0	Intrepid MWD Crv/Lat (OWB)	MWD+IFR1+MS	MWD + IFR1 + Multi-Station Correction

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	0.11	58.45	100.0	0.1	0.1	0.1	0.11	0.11	0.00
	125.0	0.83	71.31	125.0	0.1	0.3	0.1	2.89	2.88	51.44
	150.0	1.44	68.41	150.0	0.3	0.7	0.3	2.45	2.44	-11.60
	175.0	1.55	72.85	175.0	0.5	1.4	0.5	0.64	0.44	17.76
	200.0	1.64	72.55	200.0	0.7	2.0	0.8	0.36	0.36	-1.20
	225.0	1.69	72.63	225.0	0.9	2.7	1.0	0.20	0.20	0.32
	250.0	1.57	71.36	250.0	1.2	3.4	1.2	0.50	-0.48	-5.08
	275.0	1.20	91.00	274.9	1.3	4.0	1.4	2.39	-1.48	78.56
	300.0	1.01	115.30	299.9	1.2	4.4	1.3	2.00	-0.76	97.20

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Project:	Eddy County (NAD27 NME)	TVD Reference:	KB @ 2888.4usft (Latshaw 44)
Site:	(Littlefield 33 Fed Com) Sec-33 T-26-S R-29-E	MD Reference:	KB @ 2888.4usft (Latshaw 44)
Well:	Littlefield 33 Fed Com #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM:5000.15 Single User Db

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)
325.0	0.97	129.86	324.9	0.9	4.8	1.1	1.02	-0.16	58.24
350.0	0.99	155.72	349.9	0.6	5.0	0.7	1.76	0.08	103.44
375.0	1.08	169.15	374.9	0.2	5.2	0.3	1.03	0.36	53.72
400.0	1.09	174.74	399.9	-0.3	5.2	-0.2	0.43	0.04	22.36
425.0	1.07	189.91	424.9	-0.8	5.2	-0.6	1.14	-0.08	60.68
450.0	1.26	200.17	449.9	-1.3	5.1	-1.1	1.13	0.76	41.04
475.0	1.25	206.71	474.9	-1.8	4.9	-1.6	0.57	-0.04	26.16
500.0	1.30	213.96	499.9	-2.2	4.6	-2.1	0.68	0.20	29.00
525.0	1.37	215.65	524.9	-2.7	4.3	-2.6	0.32	0.28	6.76
550.0	1.39	217.90	549.9	-3.2	3.9	-3.1	0.23	0.08	9.00
575.0	1.42	217.42	574.9	-3.7	3.5	-3.6	0.13	0.12	-1.92
600.0	1.47	217.97	599.9	-4.2	3.1	-4.1	0.21	0.20	2.20
625.0	1.43	220.23	624.9	-4.7	2.7	-4.6	0.28	-0.16	9.04
650.0	1.41	221.32	649.9	-5.1	2.3	-5.1	0.13	-0.08	4.36
675.0	1.52	220.55	674.9	-5.6	1.9	-5.6	0.45	0.44	-3.08
700.0	1.60	221.31	699.8	-6.1	1.5	-6.1	0.33	0.32	3.04
725.0	1.68	221.10	724.8	-6.7	1.0	-6.6	0.32	0.32	-0.84
750.0	1.98	212.72	749.8	-7.3	0.5	-7.3	1.61	1.20	-33.52
775.0	2.72	201.79	774.8	-8.2	0.1	-8.2	3.45	2.96	-43.72
800.0	3.04	194.45	799.8	-9.4	-0.3	-9.4	1.95	1.28	-29.36
825.0	3.34	190.87	824.7	-10.8	-0.6	-10.8	1.44	1.20	-14.32
850.0	3.66	187.17	849.7	-12.3	-0.9	-12.3	1.57	1.28	-14.80
875.0	3.64	187.33	874.6	-13.9	-1.1	-13.9	0.09	-0.08	0.64
900.0	3.70	186.30	899.6	-15.5	-1.2	-15.5	0.36	0.24	-4.12
925.0	3.51	182.10	924.5	-17.0	-1.4	-17.0	1.30	-0.76	-16.80
950.0	2.88	167.45	949.5	-18.4	-1.3	-18.4	4.11	-2.52	-58.60
975.0	2.71	163.92	974.5	-19.6	-1.0	-19.6	0.97	-0.68	-14.12
1,000.0	2.51	159.38	999.4	-20.7	-0.6	-20.7	1.15	-0.80	-18.16
1,025.0	2.30	138.27	1,024.4	-21.5	-0.1	-21.5	3.62	-0.84	-84.44
1,050.0	2.53	117.48	1,049.4	-22.2	0.8	-22.1	3.60	0.92	-83.16
1,075.0	2.65	112.52	1,074.4	-22.6	1.8	-22.6	1.02	0.48	-19.84
1,100.0	2.73	103.98	1,099.3	-23.0	2.9	-22.9	1.63	0.32	-34.16
1,125.0	2.84	102.48	1,124.3	-23.3	4.1	-23.2	0.53	0.44	-6.00
1,150.0	2.95	99.90	1,149.3	-23.5	5.3	-23.4	0.68	0.44	-10.32
1,175.0	3.14	98.07	1,174.2	-23.7	6.6	-23.6	0.85	0.76	-7.32
1,200.0	3.13	96.95	1,199.2	-23.9	8.0	-23.7	0.25	-0.04	-4.48
1,225.0	3.24	97.89	1,224.2	-24.1	9.4	-23.8	0.49	0.44	3.76
1,250.0	3.27	96.62	1,249.1	-24.3	10.8	-24.0	0.31	0.12	-5.08
1,275.0	3.29	97.54	1,274.1	-24.5	12.2	-24.1	0.23	0.08	3.68
1,300.0	3.29	97.46	1,299.0	-24.6	13.6	-24.3	0.02	0.00	-0.32
1,325.0	3.35	97.74	1,324.0	-24.8	15.0	-24.4	0.25	0.24	1.12
1,350.0	3.43	96.85	1,349.0	-25.0	16.5	-24.6	0.38	0.32	-3.56
1,375.0	3.51	94.76	1,373.9	-25.2	18.0	-24.7	0.60	0.32	-8.36

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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)	
1,400.0	3.59	95.54	1,398.9	-25.3	19.6	-24.8	0.37	0.32	3.12	
1,425.0	3.45	96.84	1,423.8	-25.5	21.1	-24.9	0.64	-0.56	5.20	
1,450.0	3.55	95.79	1,448.8	-25.6	22.6	-25.0	0.48	0.40	-4.20	
1,475.0	3.38	98.51	1,473.7	-25.8	24.1	-25.2	0.95	-0.68	10.88	
1,500.0	2.85	112.92	1,498.7	-26.2	25.4	-25.5	3.77	-2.12	57.64	
1,525.0	2.23	130.95	1,523.7	-26.7	26.3	-26.0	4.02	-2.48	72.12	
1,550.0	2.08	131.55	1,548.6	-27.4	27.0	-26.6	0.61	-0.60	2.40	
1,575.0	1.99	130.34	1,573.6	-27.9	27.7	-27.2	0.40	-0.36	-4.84	
1,600.0	1.90	123.49	1,598.6	-28.5	28.4	-27.7	1.00	-0.36	-27.40	
1,625.0	1.89	122.16	1,623.6	-28.9	29.1	-28.1	0.18	-0.04	-5.32	
1,650.0	1.90	120.57	1,648.6	-29.3	29.8	-28.5	0.21	0.04	-6.36	
1,675.0	1.83	121.67	1,673.6	-29.8	30.5	-28.9	0.31	-0.28	4.40	
1,700.0	1.86	121.38	1,698.6	-30.2	31.2	-29.3	0.13	0.12	-1.16	
1,725.0	1.62	119.80	1,723.6	-30.6	31.8	-29.7	0.98	-0.96	-6.32	
1,750.0	1.50	122.07	1,748.5	-30.9	32.4	-30.0	0.54	-0.48	9.08	
1,775.0	1.29	115.85	1,773.5	-31.2	32.9	-30.3	1.03	-0.84	-24.88	
1,800.0	1.21	116.02	1,798.5	-31.4	33.4	-30.5	0.32	-0.32	0.68	
1,825.0	1.20	112.74	1,823.5	-31.7	33.9	-30.7	0.28	-0.04	-13.12	
1,850.0	1.10	109.99	1,848.5	-31.8	34.4	-30.9	0.46	-0.40	-11.00	
1,875.0	1.12	112.29	1,873.5	-32.0	34.8	-31.1	0.20	0.08	9.20	
1,900.0	1.12	107.20	1,898.5	-32.2	35.3	-31.2	0.40	0.00	-20.36	
1,925.0	1.19	109.98	1,923.5	-32.3	35.8	-31.4	0.36	0.28	11.12	
1,950.0	1.18	105.95	1,948.5	-32.5	36.3	-31.5	0.34	-0.04	-16.12	
1,975.0	1.18	105.32	1,973.5	-32.6	36.8	-31.6	0.05	0.00	-2.52	
2,000.0	1.26	104.05	1,998.5	-32.8	37.3	-31.8	0.34	0.32	-5.08	
2,025.0	1.71	98.21	2,023.5	-32.9	37.9	-31.9	1.90	1.80	-23.36	
2,050.0	2.10	96.25	2,048.5	-33.0	38.7	-31.9	1.58	1.56	-7.84	
2,075.0	2.29	97.94	2,073.4	-33.1	39.7	-32.0	0.80	0.76	6.76	
2,100.0	2.67	97.63	2,098.4	-33.3	40.8	-32.1	1.52	1.52	-1.24	
2,125.0	3.00	99.87	2,123.4	-33.5	42.0	-32.3	1.39	1.32	8.96	
2,150.0	3.19	100.02	2,148.4	-33.7	43.3	-32.5	0.76	0.76	0.60	
2,175.0	3.23	99.58	2,173.3	-33.9	44.7	-32.7	0.19	0.16	-1.76	
2,200.0	3.46	101.34	2,198.3	-34.2	46.1	-32.9	1.01	0.92	7.04	
2,225.0	3.59	102.67	2,223.2	-34.5	47.6	-33.2	0.61	0.52	5.32	
2,250.0	3.56	105.55	2,248.2	-34.9	49.1	-33.5	0.73	-0.12	11.52	
2,275.0	3.43	127.71	2,273.1	-35.6	50.5	-34.2	5.39	-0.52	88.64	
2,300.0	3.48	130.26	2,298.1	-36.5	51.6	-35.1	0.65	0.20	10.20	
2,325.0	3.58	129.87	2,323.0	-37.5	52.8	-36.0	0.41	0.40	-1.56	
2,350.0	3.57	131.12	2,348.0	-38.5	54.0	-37.0	0.31	-0.04	5.00	
2,375.0	3.56	130.85	2,372.9	-39.5	55.2	-38.0	0.08	-0.04	-1.08	
2,400.0	3.66	130.99	2,397.9	-40.6	56.4	-39.0	0.40	0.40	0.56	
2,425.0	3.54	129.96	2,422.8	-41.6	57.6	-40.0	0.55	-0.48	-4.12	
2,450.0	3.42	126.65	2,447.8	-42.5	58.8	-40.9	0.94	-0.48	-13.24	

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Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
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Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,475.0	3.39	124.95	2,472.8	-43.4	60.0	-41.7	0.42	-0.12	-6.80
2,500.0	3.32	123.95	2,497.7	-44.2	61.2	-42.5	0.36	-0.28	-4.00
2,525.0	3.26	124.26	2,522.7	-45.0	62.3	-43.3	0.25	-0.24	1.24
2,550.0	3.17	122.81	2,547.6	-45.8	63.5	-44.0	0.49	-0.36	-5.80
2,575.0	3.14	121.03	2,572.6	-46.5	64.7	-44.7	0.41	-0.12	-7.12
2,600.0	3.14	120.29	2,597.6	-47.2	65.9	-45.4	0.16	0.00	-2.96
2,625.0	2.91	120.40	2,622.5	-47.9	67.0	-46.0	0.92	-0.92	0.44
2,650.0	2.75	119.67	2,647.5	-48.5	68.1	-46.6	0.66	-0.64	-2.92
2,675.0	2.62	120.51	2,672.5	-49.1	69.1	-47.2	0.54	-0.52	3.36
2,700.0	2.52	119.02	2,697.4	-49.7	70.1	-47.7	0.48	-0.40	-5.96
2,725.0	2.52	118.05	2,722.4	-50.2	71.0	-48.2	0.17	0.00	-3.88
2,750.0	2.35	118.75	2,747.4	-50.7	72.0	-48.7	0.69	-0.68	2.80
2,775.0	2.26	117.86	2,772.4	-51.2	72.8	-49.2	0.39	-0.36	-3.56
2,800.0	2.27	117.10	2,797.4	-51.6	73.7	-49.6	0.13	0.04	-3.04
2,825.0	2.29	118.60	2,822.3	-52.1	74.6	-50.0	0.25	0.08	6.00
2,850.0	2.30	116.67	2,847.3	-52.5	75.5	-50.5	0.31	0.04	-7.72
2,875.0	2.34	118.76	2,872.3	-53.0	76.4	-50.9	0.37	0.16	8.36
2,900.0	2.26	118.24	2,897.3	-53.5	77.3	-51.4	0.33	-0.32	-2.08
2,925.0	2.44	123.13	2,922.3	-54.0	78.1	-51.9	1.08	0.72	19.56
2,950.0	2.88	133.52	2,947.2	-54.7	79.0	-52.6	2.60	1.76	41.56
2,975.0	4.36	150.80	2,972.2	-56.0	80.0	-53.8	7.29	5.92	69.12
3,000.0	4.61	154.00	2,997.1	-57.7	80.9	-55.5	1.41	1.00	12.80
3,025.0	4.65	153.83	3,022.0	-59.5	81.8	-57.3	0.17	0.16	-0.68
3,050.0	4.70	154.87	3,046.9	-61.4	82.6	-59.1	0.39	0.20	4.16
3,075.0	4.76	155.32	3,071.8	-63.3	83.5	-60.9	0.28	0.24	1.80
3,100.0	4.51	157.66	3,096.8	-65.1	84.3	-62.8	1.25	-1.00	9.36
3,125.0	3.51	171.16	3,121.7	-66.8	84.8	-64.4	5.47	-4.00	54.00
3,150.0	2.88	185.13	3,146.7	-68.2	84.9	-65.8	3.99	-2.52	55.88
3,175.0	2.99	196.41	3,171.6	-69.4	84.6	-67.1	2.35	0.44	45.12
3,200.0	2.77	201.87	3,196.6	-70.6	84.2	-68.3	1.41	-0.88	21.84
3,225.0	2.67	201.18	3,221.6	-71.7	83.8	-69.4	0.42	-0.40	-2.76
3,250.0	2.47	202.72	3,246.5	-72.7	83.4	-70.4	0.85	-0.80	6.16
3,275.0	2.37	204.10	3,271.5	-73.7	82.9	-71.4	0.46	-0.40	5.52
3,300.0	2.36	203.27	3,296.5	-74.6	82.5	-72.4	0.14	-0.04	-3.32
3,325.0	2.35	204.99	3,321.5	-75.6	82.1	-73.3	0.29	-0.04	6.88
3,350.0	2.30	204.68	3,346.5	-76.5	81.7	-74.2	0.21	-0.20	-1.24
3,375.0	2.31	204.09	3,371.4	-77.4	81.3	-75.2	0.10	0.04	-2.36
3,400.0	2.29	205.05	3,396.4	-78.3	80.8	-76.1	0.17	-0.08	3.84
3,425.0	2.29	202.95	3,421.4	-79.2	80.4	-77.0	0.34	0.00	-8.40
3,450.0	2.31	203.70	3,446.4	-80.2	80.0	-78.0	0.14	0.08	3.00
3,475.0	2.10	201.16	3,471.4	-81.1	79.7	-78.8	0.93	-0.84	-10.16
3,500.0	1.79	176.79	3,496.3	-81.9	79.5	-79.7	3.50	-1.24	-97.48
3,525.0	1.74	159.40	3,521.3	-82.6	79.7	-80.4	2.14	-0.20	-69.56
3,550.0	1.83	149.93	3,546.3	-83.3	80.0	-81.1	1.23	0.36	-37.88

Company:	Concho Resources, Inc.	Local Co-ordinate Reference:	Well: Littlefield 33 Fed Com #707H
Project:	Eddy County (NAD27 NME)	TVD Reference:	KB @ 2888.4usft (Latshaw 44)
Site:	(Littlefield 33 Fed Com) Sec:33 T:26-S:R:29-E	MD Reference:	KB @ 2888.4usft (Latshaw 44)
Well:	Littlefield 33 Fed Com #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM:5000.15 Single User Db

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)
3,575.0	1.87	147.76	3,571.3	-84.0	80.4	-81.8	0.32	0.16	-8.68
3,600.0	1.78	147.35	3,596.3	-84.7	80.9	-82.4	0.36	-0.36	-1.64
3,625.0	1.82	148.78	3,621.3	-85.3	81.3	-83.1	0.24	0.16	5.72
3,650.0	1.80	148.14	3,646.3	-86.0	81.7	-83.8	0.11	-0.08	-2.56
3,675.0	1.70	152.41	3,671.3	-86.7	82.1	-84.4	0.66	-0.40	17.08
3,700.0	1.73	153.84	3,696.3	-87.4	82.4	-85.1	0.21	0.12	5.72
3,725.0	1.67	153.41	3,721.2	-88.0	82.7	-85.7	0.25	-0.24	-1.72
3,750.0	1.66	154.01	3,746.2	-88.7	83.1	-86.4	0.08	-0.04	2.40
3,775.0	1.64	153.86	3,771.2	-89.3	83.4	-87.0	0.08	-0.08	-0.60
3,800.0	1.61	153.79	3,796.2	-89.9	83.7	-87.6	0.12	-0.12	-0.28
3,825.0	1.67	157.29	3,821.2	-90.6	84.0	-88.3	0.47	0.24	14.00
3,850.0	1.70	158.49	3,846.2	-91.3	84.3	-88.9	0.19	0.12	4.80
3,875.0	1.60	158.61	3,871.2	-92.0	84.5	-89.6	0.40	-0.40	0.48
3,900.0	1.59	157.90	3,896.2	-92.6	84.8	-90.2	0.09	-0.04	-2.84
3,925.0	1.54	160.18	3,921.2	-93.2	85.0	-90.9	0.32	-0.20	9.12
3,950.0	1.55	160.07	3,946.2	-93.9	85.3	-91.5	0.04	0.04	-0.44
3,975.0	1.43	157.96	3,971.1	-94.5	85.5	-92.1	0.53	-0.48	-8.44
4,000.0	1.45	160.57	3,996.1	-95.1	85.7	-92.7	0.27	0.08	10.44
4,025.0	1.40	160.33	4,021.1	-95.6	85.9	-93.3	0.20	-0.20	-0.96
4,050.0	1.39	165.38	4,046.1	-96.2	86.1	-93.8	0.49	-0.04	20.20
4,075.0	1.25	165.64	4,071.1	-96.8	86.2	-94.4	0.56	-0.56	1.04
4,100.0	1.21	170.60	4,096.1	-97.3	86.4	-94.9	0.45	-0.16	19.84
4,125.0	1.03	175.41	4,121.1	-97.8	86.4	-95.4	0.81	-0.72	19.24
4,150.0	0.98	180.78	4,146.1	-98.2	86.4	-95.8	0.43	-0.20	21.48
4,175.0	0.99	181.31	4,171.1	-98.7	86.4	-96.3	0.05	0.04	2.12
4,200.0	0.92	183.67	4,196.1	-99.1	86.4	-96.7	0.32	-0.28	9.44
4,225.0	1.00	183.97	4,221.1	-99.5	86.4	-97.1	0.32	0.32	1.20
4,250.0	0.99	180.74	4,246.1	-99.9	86.4	-97.5	0.23	-0.04	-12.92
4,275.0	0.98	181.70	4,271.1	-100.4	86.4	-98.0	0.08	-0.04	3.84
4,300.0	0.98	183.59	4,296.1	-100.8	86.3	-98.4	0.13	0.00	7.56
4,325.0	0.94	188.00	4,321.1	-101.2	86.3	-98.8	0.34	-0.16	17.64
4,350.0	0.97	188.29	4,346.1	-101.6	86.2	-99.2	0.12	0.12	1.16
4,375.0	1.01	187.48	4,371.1	-102.0	86.2	-99.7	0.17	0.16	-3.24
4,400.0	1.00	186.41	4,396.1	-102.5	86.1	-100.1	0.09	-0.04	-4.28
4,425.0	1.09	180.91	4,421.1	-102.9	86.1	-100.5	0.54	0.36	-22.00
4,450.0	1.83	170.56	4,446.1	-103.6	86.2	-101.2	3.13	2.96	-41.40
4,475.0	2.24	168.90	4,471.0	-104.4	86.3	-102.0	1.66	1.64	-6.64
4,500.0	2.28	166.50	4,496.0	-105.4	86.5	-103.0	0.41	0.16	-9.60
4,525.0	2.41	166.94	4,521.0	-106.4	86.8	-104.0	0.52	0.52	1.76
4,550.0	2.30	168.54	4,546.0	-107.4	87.0	-105.0	0.51	-0.44	6.40
4,575.0	2.32	166.87	4,571.0	-108.4	87.2	-106.0	0.28	0.08	-6.68
4,600.0	2.41	168.20	4,595.9	-109.4	87.4	-107.0	0.42	0.36	5.32
4,625.0	2.36	168.87	4,620.9	-110.4	87.6	-108.0	0.23	-0.20	2.68

Company:	Concho Resources, Inc.	Local Co-ordinate Reference:	Well Littlefield 33 Fed Com #707H
Project:	Eddy County (NAD27 NME)	TVD Reference:	KB @ 2888.4usft (Latshaw 44)
Site:	(Littlefield 33 Fed Com) Sec-33: T-26:S: R-29-E	MD Reference:	KB @ 2888.4usft (Latshaw 44)
Well:	Littlefield 33 Fed Com #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

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)	
4,650.0	2.35	168.92	4,645.9	-111.4	87.8	-109.0	0.04	-0.04	0.20	
4,675.0	2.29	168.53	4,670.9	-112.4	88.0	-110.0	0.25	-0.24	-1.56	
4,700.0	2.28	166.36	4,695.8	-113.4	88.2	-110.9	0.35	-0.04	-8.68	
4,725.0	1.86	147.90	4,720.8	-114.2	88.6	-111.8	3.13	-1.68	-73.84	
4,750.0	1.69	111.03	4,745.8	-114.7	89.1	-112.2	4.54	-0.68	-147.48	
4,775.0	1.72	102.04	4,770.8	-114.9	89.8	-112.4	1.08	0.12	-35.96	
4,800.0	1.72	100.16	4,795.8	-115.0	90.6	-112.5	0.23	0.00	-7.52	
4,825.0	1.69	100.68	4,820.8	-115.2	91.3	-112.6	0.14	-0.12	2.08	
4,850.0	1.69	102.38	4,845.8	-115.3	92.0	-112.8	0.20	0.00	6.80	
4,875.0	1.67	101.96	4,870.8	-115.5	92.7	-112.9	0.09	-0.08	-1.68	
4,900.0	1.53	105.22	4,895.8	-115.6	93.4	-113.0	0.67	-0.56	13.04	
4,925.0	1.30	135.03	4,920.7	-115.9	93.9	-113.3	3.04	-0.92	119.24	
4,950.0	1.42	146.10	4,945.7	-116.4	94.3	-113.8	1.15	0.48	44.28	
4,975.0	1.39	148.96	4,970.7	-116.9	94.6	-114.3	0.31	-0.12	11.44	
5,000.0	1.46	148.74	4,995.7	-117.4	95.0	-114.8	0.28	0.28	-0.88	
5,025.0	1.46	148.65	5,020.7	-118.0	95.3	-115.3	0.01	0.00	-0.36	
5,050.0	1.39	150.41	5,045.7	-118.5	95.6	-115.9	0.33	-0.28	7.04	
5,075.0	1.48	147.41	5,070.7	-119.1	95.9	-116.4	0.47	0.36	-12.00	
5,100.0	1.51	150.60	5,095.7	-119.6	96.3	-116.9	0.35	0.12	12.76	
5,125.0	1.45	148.74	5,120.7	-120.2	96.6	-117.5	0.31	-0.24	-7.44	
5,150.0	1.45	149.14	5,145.7	-120.7	96.9	-118.0	0.04	0.00	1.60	
5,175.0	1.37	150.92	5,170.7	-121.2	97.2	-118.5	0.36	-0.32	7.12	
5,200.0	1.40	153.46	5,195.7	-121.8	97.5	-119.1	0.27	0.12	10.16	
5,225.0	1.42	151.13	5,220.7	-122.3	97.8	-119.6	0.24	0.08	-9.32	
5,250.0	1.30	153.82	5,245.6	-122.9	98.1	-120.1	0.54	-0.48	10.76	
5,275.0	1.42	154.30	5,270.6	-123.4	98.3	-120.7	0.48	0.48	1.92	
5,300.0	1.45	154.31	5,295.6	-123.9	98.6	-121.2	0.12	0.12	0.04	
5,325.0	1.32	151.52	5,320.6	-124.5	98.9	-121.7	0.59	-0.52	-11.16	
5,350.0	1.34	151.81	5,345.6	-125.0	99.2	-122.2	0.08	0.08	1.16	
5,375.0	1.22	153.57	5,370.6	-125.5	99.4	-122.7	0.51	-0.48	7.04	
5,400.0	1.23	150.61	5,395.6	-126.0	99.7	-123.2	0.26	0.04	-11.84	
5,425.0	1.19	149.75	5,420.6	-126.4	99.9	-123.6	0.18	-0.16	-3.44	
5,450.0	1.24	149.88	5,445.6	-126.9	100.2	-124.1	0.20	0.20	0.52	
5,475.0	1.24	149.97	5,470.6	-127.4	100.5	-124.6	0.01	0.00	0.36	
5,500.0	1.26	151.95	5,495.6	-127.8	100.7	-125.0	0.19	0.08	7.92	
5,525.0	1.23	151.24	5,520.6	-128.3	101.0	-125.5	0.13	-0.12	-2.84	
5,550.0	1.25	150.37	5,545.6	-128.8	101.2	-126.0	0.11	0.08	-3.48	
5,575.0	1.29	152.69	5,570.6	-129.3	101.5	-126.4	0.26	0.16	9.28	
5,600.0	1.25	149.74	5,595.6	-129.7	101.8	-126.9	0.31	-0.16	-11.80	
5,625.0	1.26	151.30	5,620.6	-130.2	102.0	-127.4	0.14	0.04	6.24	
5,650.0	1.31	149.68	5,645.5	-130.7	102.3	-127.9	0.25	0.20	-6.48	
5,675.0	1.36	148.81	5,670.5	-131.2	102.6	-128.4	0.22	0.20	-3.48	
5,700.0	1.34	145.56	5,695.5	-131.7	102.9	-128.8	0.32	-0.08	-13.00	

Company:	Concho Resources, Inc.	Local Co-ordinate Reference:	Well Littlefield 33 Fed Com #707H
Project:	Eddy County (NAD27 NME)	TVD Reference:	KB @ 2888.4usft (Latshaw 44)
Site:	(Littlefield 33 Fed Com) Sec 33 T-26 S R-29 E	MD Reference:	KB @ 2888.4usft (Latshaw 44)
Well:	Littlefield 33 Fed Com #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,725.0	1.39	148.66	5,720.5	-132.2	103.3	-129.3	0.36	0.20	12.40
5,750.0	1.40	151.58	5,745.5	-132.7	103.6	-129.9	0.29	0.04	11.68
5,775.0	1.44	154.04	5,770.5	-133.3	103.9	-130.4	0.29	0.16	9.84
5,800.0	1.53	153.28	5,795.5	-133.9	104.1	-131.0	0.37	0.36	-3.04
5,825.0	1.60	156.98	5,820.5	-134.5	104.4	-131.6	0.49	0.28	14.80
5,850.0	1.61	158.73	5,845.5	-135.1	104.7	-132.2	0.20	0.04	7.00
5,875.0	1.71	160.25	5,870.5	-135.8	104.9	-132.9	0.44	0.40	6.08
5,900.0	1.73	161.43	5,895.5	-136.5	105.2	-133.6	0.16	0.08	4.72
5,925.0	1.77	160.37	5,920.5	-137.2	105.4	-134.3	0.21	0.16	-4.24
5,950.0	1.74	161.98	5,945.4	-138.0	105.7	-135.0	0.23	-0.12	6.44
5,975.0	1.76	161.19	5,970.4	-138.7	105.9	-135.7	0.13	0.08	-3.16
6,000.0	1.77	162.24	5,995.4	-139.4	106.2	-136.5	0.14	0.04	4.20
6,025.0	1.76	162.82	6,020.4	-140.2	106.4	-137.2	0.08	-0.04	2.32
6,050.0	1.82	162.29	6,045.4	-140.9	106.6	-137.9	0.25	0.24	-2.12
6,075.0	1.83	164.15	6,070.4	-141.7	106.9	-138.7	0.24	0.04	7.44
6,100.0	1.78	167.71	6,095.4	-142.4	107.1	-139.5	0.49	-0.20	14.24
6,125.0	1.78	167.75	6,120.4	-143.2	107.2	-140.2	0.00	0.00	0.16
6,150.0	1.87	169.93	6,145.3	-144.0	107.4	-141.0	0.45	0.36	8.72
6,175.0	1.85	168.44	6,170.3	-144.8	107.5	-141.8	0.21	-0.08	-5.96
6,200.0	1.81	169.87	6,195.3	-145.6	107.7	-142.6	0.24	-0.16	5.72
6,225.0	1.82	170.02	6,220.3	-146.3	107.8	-143.3	0.04	0.04	0.60
6,250.0	1.87	169.45	6,245.3	-147.1	108.0	-144.1	0.21	0.20	-2.28
6,275.0	1.90	170.13	6,270.3	-147.9	108.1	-144.9	0.15	0.12	2.72
6,300.0	1.95	171.28	6,295.3	-148.8	108.2	-145.7	0.25	0.20	4.60
6,325.0	1.70	167.49	6,320.3	-149.5	108.4	-146.5	1.11	-1.00	-15.16
6,350.0	1.29	133.37	6,345.2	-150.1	108.7	-147.1	3.84	-1.64	-136.48
6,375.0	1.33	113.65	6,370.2	-150.4	109.1	-147.4	1.80	0.16	-78.88
6,400.0	1.26	112.36	6,395.2	-150.6	109.7	-147.6	0.30	-0.28	-5.16
6,425.0	1.33	110.49	6,420.2	-150.8	110.2	-147.8	0.33	0.28	-7.48
6,450.0	1.25	111.87	6,445.2	-151.0	110.7	-148.0	0.34	-0.32	5.52
6,475.0	1.06	113.05	6,470.2	-151.2	111.2	-148.1	0.77	-0.76	4.72
6,500.0	1.00	110.65	6,495.2	-151.4	111.6	-148.3	0.30	-0.24	-9.60
6,525.0	0.94	108.26	6,520.2	-151.5	112.0	-148.4	0.29	-0.24	-9.56
6,550.0	1.03	108.91	6,545.2	-151.7	112.4	-148.5	0.36	0.36	2.60
6,575.0	0.96	117.94	6,570.2	-151.8	112.8	-148.7	0.69	-0.28	36.12
6,600.0	0.93	114.79	6,595.2	-152.0	113.2	-148.9	0.24	-0.12	-12.60
6,625.0	0.90	114.24	6,620.2	-152.2	113.5	-149.0	0.13	-0.12	-2.20
6,650.0	0.82	113.28	6,645.2	-152.3	113.9	-149.2	0.33	-0.32	-3.84
6,675.0	0.72	119.57	6,670.2	-152.5	114.2	-149.3	0.52	-0.40	25.16
6,700.0	0.62	123.53	6,695.2	-152.6	114.4	-149.5	0.44	-0.40	15.84
6,725.0	0.58	134.94	6,720.2	-152.8	114.6	-149.6	0.50	-0.16	45.64
6,750.0	0.57	145.95	6,745.2	-153.0	114.8	-149.8	0.44	-0.04	44.04
6,775.0	0.63	168.30	6,770.2	-153.2	114.9	-150.0	0.96	0.24	89.40
6,800.0	0.59	180.45	6,795.2	-153.5	114.9	-150.3	0.54	-0.16	48.60

Company:	Concho Resources, Inc.	Local Co-ordinate Reference:	Well Littlefield 33 Fed Com #707H
Project:	Eddy County (NAD27 NME)	TVD Reference:	KB @ 2888.4usft (Latshaw 44)
Site:	(Littlefield 33 Fed Com) Sec-33 T-26-S R-29-E	MD Reference:	KB @ 2888.4usft (Latshaw 44)
Well:	Littlefield 33 Fed Com #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

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)
6,825.0	0.62	189.47	6,820.2	-153.8	114.9	-150.6	0.40	0.12	36.08
6,850.0	0.63	184.45	6,845.2	-154.0	114.9	-150.8	0.22	0.04	-20.08
6,875.0	0.65	189.97	6,870.2	-154.3	114.8	-151.1	0.26	0.08	22.08
6,900.0	0.69	186.76	6,895.2	-154.6	114.8	-151.4	0.22	0.16	-12.84
6,925.0	0.65	185.77	6,920.2	-154.9	114.7	-151.7	0.17	-0.16	-3.96
6,950.0	0.69	189.94	6,945.2	-155.2	114.7	-152.0	0.25	0.16	16.68
6,975.0	0.69	191.00	6,970.2	-155.5	114.6	-152.3	0.05	0.00	4.24
7,000.0	0.71	194.25	6,995.2	-155.8	114.6	-152.6	0.18	0.08	13.00
7,025.0	0.87	203.66	7,020.2	-156.1	114.5	-152.9	0.82	0.64	37.64
7,050.0	0.91	208.80	7,045.2	-156.4	114.3	-153.3	0.36	0.16	20.56
7,075.0	0.97	214.83	7,070.2	-156.8	114.1	-153.6	0.46	0.24	24.12
7,100.0	1.02	222.16	7,095.2	-157.1	113.8	-154.0	0.55	0.20	29.32
7,125.0	1.17	234.46	7,120.1	-157.4	113.5	-154.3	1.11	0.60	49.20
7,150.0	1.42	245.14	7,145.1	-157.7	113.0	-154.6	1.39	1.00	42.72
7,175.0	1.45	247.05	7,170.1	-158.0	112.4	-154.8	0.23	0.12	7.64
7,200.0	1.45	247.22	7,195.1	-158.2	111.8	-155.1	0.02	0.00	0.68
7,225.0	1.44	249.62	7,220.1	-158.5	111.2	-155.4	0.25	-0.04	9.60
7,250.0	1.44	245.28	7,245.1	-158.7	110.6	-155.6	0.44	0.00	-17.36
7,275.0	1.32	246.38	7,270.1	-158.9	110.1	-155.9	0.49	-0.48	4.40
7,300.0	0.79	255.81	7,295.1	-159.1	109.7	-156.0	2.22	-2.12	37.72
7,325.0	0.58	285.39	7,320.1	-159.1	109.4	-156.1	1.62	-0.84	118.32
7,350.0	0.65	314.38	7,345.1	-159.0	109.1	-155.9	1.26	0.28	115.96
7,375.0	0.75	318.75	7,370.1	-158.8	108.9	-155.7	0.45	0.40	17.48
7,400.0	0.78	319.35	7,395.1	-158.5	108.7	-155.5	0.12	0.12	2.40
7,425.0	0.79	319.00	7,420.1	-158.2	108.5	-155.2	0.04	0.04	-1.40
7,450.0	0.79	316.06	7,445.1	-158.0	108.3	-155.0	0.16	0.00	-11.76
7,475.0	0.81	319.60	7,470.1	-157.7	108.0	-154.7	0.21	0.08	14.16
7,500.0	0.87	318.86	7,495.1	-157.5	107.8	-154.5	0.24	0.24	-2.96
7,525.0	0.83	320.18	7,520.1	-157.2	107.5	-154.2	0.18	-0.16	5.28
7,550.0	0.83	317.48	7,545.1	-156.9	107.3	-153.9	0.16	0.00	-10.80
7,575.0	0.79	314.08	7,570.1	-156.6	107.1	-153.7	0.25	-0.16	-13.60
7,600.0	0.85	314.39	7,595.1	-156.4	106.8	-153.4	0.24	0.24	1.24
7,625.0	0.73	311.36	7,620.1	-156.2	106.6	-153.2	0.51	-0.48	-12.12
7,650.0	0.73	316.39	7,645.1	-155.9	106.3	-153.0	0.26	0.00	20.12
7,675.0	0.64	305.88	7,670.1	-155.7	106.1	-152.8	0.62	-0.36	-42.04
7,700.0	0.63	308.87	7,695.1	-155.6	105.9	-152.6	0.14	-0.04	11.96
7,725.0	0.38	298.64	7,720.1	-155.5	105.7	-152.5	1.06	-1.00	-40.92
7,750.0	0.42	308.11	7,745.1	-155.4	105.6	-152.4	0.31	0.16	37.88
7,775.0	0.32	280.62	7,770.1	-155.3	105.4	-152.3	0.80	-0.40	-109.96
7,800.0	0.30	265.80	7,795.1	-155.3	105.3	-152.3	0.33	-0.08	-59.28
7,825.0	0.38	259.25	7,820.1	-155.3	105.1	-152.4	0.36	0.32	-26.20
7,850.0	0.41	241.44	7,845.1	-155.4	105.0	-152.4	0.50	0.12	-71.24
7,875.0	0.45	236.12	7,870.1	-155.5	104.8	-152.5	0.23	0.16	-21.28

Company:	Concho Resources, Inc.	Local Co-ordinate Reference:	Well: Littlefield 33 Fed Com #707H
Project:	Eddy County (NAD27 NME)	TVD Reference:	KB @ 2888.4usft (Latshaw 44)
Site:	(Littlefield 33 Fed Com) Sec.33 T.26 S. R.29-E	MD Reference:	KB @ 2888.4usft (Latshaw 44)
Well:	Littlefield 33 Fed Com #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
7,900.0	0.49	239.18	7,895.1	-155.6	104.6	-152.6	0.19	0.16	12.24	
7,925.0	0.55	230.66	7,920.1	-155.7	104.5	-152.8	0.39	0.24	-34.08	
7,950.0	0.62	222.59	7,945.1	-155.9	104.3	-153.0	0.43	0.28	-32.28	
7,975.0	0.72	224.47	7,970.1	-156.1	104.1	-153.2	0.41	0.40	7.52	
8,000.0	0.76	225.46	7,995.1	-156.3	103.8	-153.4	0.17	0.16	3.96	
8,025.0	0.70	225.16	8,020.0	-156.5	103.6	-153.6	0.24	-0.24	-1.20	
8,050.0	0.78	223.39	8,045.0	-156.8	103.4	-153.9	0.33	0.32	-7.08	
8,075.0	0.72	207.54	8,070.0	-157.0	103.2	-154.1	0.86	-0.24	-63.40	
8,100.0	0.93	128.29	8,095.0	-157.3	103.3	-154.4	4.26	0.84	-317.00	
8,125.0	1.41	120.79	8,120.0	-157.6	103.7	-154.7	2.01	1.92	-30.00	
8,150.0	1.58	119.49	8,145.0	-157.9	104.3	-155.0	0.69	0.68	-5.20	
8,175.0	1.68	117.02	8,170.0	-158.2	104.9	-155.3	0.49	0.40	-9.88	
8,200.0	1.68	112.28	8,195.0	-158.5	105.6	-155.6	0.56	0.00	-18.96	
8,225.0	1.54	121.38	8,220.0	-158.9	106.2	-155.9	1.16	-0.56	36.40	
8,250.0	1.53	120.98	8,245.0	-159.2	106.8	-156.2	0.06	-0.04	-1.60	
8,275.0	1.45	123.48	8,270.0	-159.6	107.3	-156.6	0.41	-0.32	10.00	
8,300.0	1.23	123.03	8,295.0	-159.9	107.8	-156.9	0.88	-0.88	-1.80	
8,325.0	1.24	127.77	8,320.0	-160.2	108.2	-157.2	0.41	0.04	18.96	
8,350.0	1.12	125.40	8,345.0	-160.5	108.7	-157.5	0.52	-0.48	-9.48	
8,375.0	0.96	128.68	8,370.0	-160.8	109.0	-157.7	0.68	-0.64	13.12	
8,400.0	0.84	132.08	8,395.0	-161.0	109.3	-158.0	0.53	-0.48	13.60	
8,425.0	0.85	130.81	8,420.0	-161.3	109.6	-158.2	0.08	0.04	-5.08	
8,450.0	0.80	133.35	8,445.0	-161.5	109.9	-158.4	0.25	-0.20	10.16	
8,475.0	0.68	129.82	8,469.9	-161.7	110.1	-158.6	0.51	-0.48	-14.12	
8,500.0	0.64	141.03	8,494.9	-161.9	110.3	-158.8	0.54	-0.16	44.84	
8,525.0	0.93	154.05	8,519.9	-162.2	110.5	-159.1	1.35	1.16	52.08	
8,550.0	0.56	123.90	8,544.9	-162.5	110.7	-159.4	2.11	-1.48	-120.60	
8,575.0	0.54	118.12	8,569.9	-162.6	110.9	-159.5	0.24	-0.08	-23.12	
8,600.0	0.51	127.98	8,594.9	-162.7	111.1	-159.6	0.38	-0.12	39.44	
8,625.0	0.51	137.85	8,619.9	-162.9	111.2	-159.8	0.35	0.00	39.48	
8,650.0	0.54	138.44	8,644.9	-163.0	111.4	-159.9	0.12	0.12	2.36	
8,675.0	0.59	158.39	8,669.9	-163.2	111.5	-160.1	0.81	0.20	79.80	
8,700.0	0.54	167.81	8,694.9	-163.5	111.6	-160.4	0.42	-0.20	37.68	
8,725.0	0.72	164.91	8,719.9	-163.7	111.7	-160.6	0.73	0.72	-11.60	
8,750.0	0.72	136.89	8,744.9	-164.0	111.8	-160.9	1.39	0.00	-112.08	
8,775.0	0.91	114.56	8,769.9	-164.2	112.1	-161.1	1.47	0.76	-89.32	
8,800.0	0.94	114.05	8,794.9	-164.4	112.5	-161.2	0.12	0.12	-2.04	
8,825.0	0.98	110.01	8,819.9	-164.5	112.8	-161.4	0.31	0.16	-16.16	
8,850.0	0.84	115.23	8,844.9	-164.7	113.2	-161.5	0.65	-0.56	20.88	
8,875.0	0.77	122.01	8,869.9	-164.8	113.5	-161.7	0.47	-0.28	27.12	
8,900.0	0.63	125.43	8,894.9	-165.0	113.8	-161.8	0.58	-0.56	13.68	
8,925.0	0.65	131.84	8,919.9	-165.2	114.0	-162.0	0.30	0.08	25.64	
8,950.0	0.71	123.62	8,944.9	-165.4	114.2	-162.2	0.46	0.24	-32.88	

Company:	Concho Resources, Inc.	Local Co-ordinate Reference:	Well Littlefield 33 Fed Com #707H
Project:	Eddy County (NAD27-NME)	TVD Reference:	KB @ 2888.4usft (Latshaw 44)
Site:	(Littlefield 33 Fed Com) Sec.33 T-26 S. R-29-E	MD Reference:	KB @ 2888.4usft (Latshaw 44)
Well:	Littlefield 33 Fed Com #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

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)	
8,975.0	0.70	122.86	8,969.9	-165.5	114.5	-162.3	0.05	-0.04	-3.04	
9,000.0	0.52	111.97	8,994.9	-165.7	114.7	-162.5	0.85	-0.72	-43.56	
9,025.0	0.62	123.81	9,019.9	-165.8	114.9	-162.6	0.62	0.40	47.36	
9,050.0	0.61	129.86	9,044.9	-165.9	115.1	-162.7	0.26	-0.04	24.20	
9,075.0	0.51	127.70	9,069.9	-166.1	115.3	-162.9	0.41	-0.40	-8.64	
9,100.0	0.54	140.27	9,094.9	-166.3	115.5	-163.0	0.48	0.12	50.28	
9,125.0	0.57	144.03	9,119.9	-166.4	115.7	-163.2	0.19	0.12	15.04	
9,150.0	0.49	143.06	9,144.9	-166.6	115.8	-163.4	0.32	-0.32	-3.88	
9,175.0	0.61	154.86	9,169.9	-166.8	115.9	-163.6	0.66	0.48	47.20	
9,200.0	0.62	151.96	9,194.9	-167.1	116.0	-163.8	0.13	0.04	-11.60	
9,225.0	0.75	161.78	9,219.9	-167.4	116.1	-164.1	0.70	0.52	39.28	
9,250.0	0.61	162.16	9,244.9	-167.6	116.2	-164.4	0.56	-0.56	1.52	
9,275.0	0.64	159.09	9,269.9	-167.9	116.3	-164.6	0.18	0.12	-12.28	
9,276.0	0.64	158.97	9,270.9	-167.9	116.3	-164.7	0.13	0.00	-12.00	
Tie to SDI Gyro										
9,348.0	0.15	155.56	9,342.9	-168.4	116.5	-165.1	0.68	-0.68	-4.74	
9,442.0	0.31	189.50	9,436.9	-168.7	116.5	-165.5	0.22	0.17	36.11	
9,490.0	1.39	26.29	9,484.9	-168.3	116.8	-165.1	3.52	2.25	-340.02	
9,537.0	2.39	19.06	9,531.9	-166.9	117.3	-163.6	2.18	2.13	-15.38	
9,584.0	3.92	5.65	9,578.8	-164.4	117.8	-161.1	3.59	3.26	-28.53	
9,631.0	5.28	354.02	9,625.6	-160.6	117.7	-157.3	3.49	2.89	-24.74	
9,679.0	10.65	352.39	9,673.2	-154.0	116.9	-150.8	11.20	11.19	-3.40	
9,726.0	15.97	354.83	9,718.9	-143.3	115.8	-140.1	11.38	11.32	5.19	
9,745.0	18.43	353.24	9,737.0	-137.7	115.2	-134.5	13.18	12.95	-8.37	
9,792.0	26.42	350.28	9,780.4	-120.0	112.5	-116.8	17.16	17.00	-6.30	
9,835.0	38.70	353.74	9,816.6	-97.1	109.4	-94.1	28.87	28.56	8.05	
9,882.0	48.45	354.27	9,850.6	-64.9	106.1	-62.0	20.76	20.74	1.13	
9,929.0	56.68	356.72	9,879.2	-27.7	103.2	-24.9	17.99	17.51	5.21	
9,976.0	62.57	4.20	9,903.0	12.8	103.6	15.6	18.58	12.53	15.91	
10,023.0	66.39	6.41	9,923.2	55.0	107.5	57.9	9.17	8.13	4.70	
10,050.6	68.53	5.77	9,933.8	80.3	110.2	83.3	8.03	7.74	-2.32	
FTP @ 10050.6 MD, 330° FSL & 919° FWL										
10,070.0	70.03	5.33	9,940.6	98.4	112.0	101.4	8.03	7.75	-2.26	
10,117.0	74.50	5.24	9,955.0	142.9	116.1	146.1	9.51	9.51	-0.19	
10,163.0	80.44	3.04	9,964.9	187.7	119.3	190.9	13.73	12.91	-4.78	
10,213.0	87.00	1.93	9,970.4	237.3	121.5	240.6	13.30	13.12	-2.22	
10,306.0	90.48	0.68	9,972.4	330.3	123.6	333.5	3.98	3.74	-1.34	
10,399.0	90.18	358.58	9,971.9	423.3	123.0	426.5	2.28	-0.32	-2.26	
10,493.0	90.63	359.68	9,971.2	517.2	121.6	520.4	1.26	0.48	1.17	
10,588.0	91.85	0.39	9,969.2	612.2	121.6	615.3	1.49	1.28	0.75	
10,682.0	91.42	0.86	9,966.5	706.2	122.7	709.3	0.68	-0.46	0.50	
10,776.0	88.27	0.18	9,966.8	800.2	123.5	803.2	3.43	-3.35	-0.72	
10,869.0	86.03	358.63	9,971.4	893.0	122.5	896.0	2.93	-2.41	-1.67	
10,963.0	86.97	359.09	9,977.1	986.8	120.7	989.8	1.11	1.00	0.49	

Company:	Concho Resources, Inc.	Local Co-ordinate Reference:	Well Littlefield 33 Fed Com #707H
Project:	Eddy County (NAD27 NME)	TVD Reference:	KB @ 2888.4usft (Latshaw 44)
Site:	(Littlefield 33 Fed Com) Sec-33 T-26-S-R-29-E	MD Reference:	KB @ 2888.4usft (Latshaw 44)
Well:	Littlefield 33 Fed Com #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

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)	
11,057.0	90.21	4.86	9,979.4	1,080.7	123.9	1,083.7	7.04	3.45	6.14	
11,151.0	91.37	4.75	9,978.1	1,174.4	131.8	1,177.5	1.24	1.23	-0.12	
11,245.0	90.43	3.42	9,976.7	1,268.1	138.5	1,271.4	1.73	-1.00	-1.41	
11,339.0	88.71	0.81	9,977.4	1,362.0	142.0	1,365.4	3.33	-1.83	-2.78	
11,433.0	87.89	0.25	9,980.2	1,456.0	142.8	1,459.3	1.06	-0.87	-0.60	
11,527.0	88.49	0.24	9,983.1	1,549.9	143.2	1,553.3	0.64	0.64	-0.01	
11,621.0	87.83	359.68	9,986.1	1,643.9	143.2	1,647.2	0.92	-0.70	-0.60	
11,715.0	88.03	0.26	9,989.5	1,737.8	143.1	1,741.1	0.65	0.21	0.62	
11,809.0	89.72	2.11	9,991.4	1,831.8	145.1	1,835.1	2.67	1.80	1.97	
11,904.0	90.04	1.13	9,991.6	1,926.7	147.7	1,930.1	1.09	0.34	-1.03	
11,998.0	89.15	359.79	9,992.3	2,020.7	148.5	2,024.0	1.71	-0.95	-1.43	
12,091.0	89.27	359.33	9,993.5	2,113.7	147.8	2,117.0	0.51	0.13	-0.49	
12,186.0	91.08	359.22	9,993.2	2,208.7	146.6	2,211.9	1.91	1.91	-0.12	
12,280.0	91.09	358.02	9,991.5	2,302.7	144.3	2,305.7	1.28	0.01	-1.28	
12,374.0	91.21	358.61	9,989.6	2,396.6	141.6	2,399.6	0.64	0.13	0.63	
12,468.0	92.15	0.33	9,986.8	2,490.5	140.7	2,493.5	2.08	1.00	1.83	
12,561.0	90.82	1.19	9,984.4	2,583.5	141.9	2,586.4	1.70	-1.43	0.92	
12,655.0	89.95	1.65	9,983.8	2,677.5	144.2	2,680.4	1.05	-0.93	0.49	
12,749.0	88.35	1.63	9,985.2	2,771.4	146.9	2,774.4	1.70	-1.70	-0.02	
12,843.0	87.56	1.50	9,988.5	2,865.3	149.5	2,868.3	0.85	-0.84	-0.14	
12,937.0	88.21	1.59	9,992.0	2,959.2	152.0	2,962.3	0.70	0.69	0.10	
13,030.0	88.63	1.85	9,994.6	3,052.1	154.8	3,055.2	0.53	0.45	0.28	
13,125.0	89.71	1.74	9,995.9	3,147.1	157.8	3,150.2	1.14	1.14	-0.12	
13,219.0	90.32	1.67	9,995.9	3,241.0	160.6	3,244.2	0.65	0.65	-0.07	
13,313.0	88.93	0.05	9,996.5	3,335.0	162.0	3,338.2	2.27	-1.48	-1.72	
13,407.0	88.65	0.21	9,998.5	3,429.0	162.2	3,432.2	0.34	-0.30	0.17	
13,501.0	87.55	359.34	10,001.6	3,523.0	161.9	3,526.1	1.49	-1.17	-0.93	
13,595.0	88.58	0.04	10,004.8	3,616.9	161.3	3,620.0	1.32	1.10	0.74	
13,689.0	89.43	359.86	10,006.4	3,710.9	161.3	3,713.9	0.92	0.90	-0.19	
13,784.0	91.11	359.73	10,006.0	3,805.9	160.9	3,808.9	1.77	1.77	-0.14	
13,878.0	91.54	0.07	10,003.8	3,899.9	160.8	3,902.8	0.58	0.46	0.36	
13,972.0	87.84	0.64	10,004.3	3,993.8	161.3	3,996.8	3.98	-3.94	0.61	
14,067.0	88.33	1.33	10,007.5	4,088.8	163.0	4,091.7	0.89	0.52	0.73	
14,167.0	88.74	1.01	10,010.1	4,188.7	165.0	4,191.7	0.52	0.41	-0.32	
14,261.0	87.89	359.63	10,012.8	4,282.7	165.5	4,285.6	1.72	-0.90	-1.47	
14,355.0	87.96	0.36	10,016.2	4,376.6	165.5	4,379.5	0.78	0.07	0.78	
14,450.0	86.06	359.91	10,021.2	4,471.5	165.8	4,474.3	2.06	-2.00	-0.47	
14,544.0	86.40	359.73	10,027.4	4,565.3	165.5	4,568.1	0.41	0.36	-0.19	
14,638.0	88.84	0.25	10,031.3	4,659.2	165.4	4,662.0	2.65	2.60	0.55	
14,731.0	88.99	0.30	10,033.0	4,752.2	165.9	4,754.9	0.17	0.16	0.05	
14,825.0	91.67	2.16	10,032.5	4,846.1	167.9	4,848.9	3.47	2.85	1.98	
14,920.0	91.76	0.42	10,029.6	4,941.1	170.0	4,943.9	1.83	0.09	-1.83	
15,014.0	90.43	0.35	10,027.8	5,035.0	170.7	5,037.8	1.42	-1.41	-0.07	

Company:	Concho Resources, Inc.	Local Co-ordinate Reference:	Well: Littlefield 33 Fed Com #707H
Project:	Eddy County (NAD27 NME)	TVD Reference:	KB @ 2888.4usft (Latshaw 44)
Site:	(Littlefield 33 Fed Com) Sec-33 T-26-S-R-29-E	MD Reference:	KB @ 2888.4usft (Latshaw 44)
Well:	Littlefield 33 Fed Com #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

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)	
15,108.0	88.57	0.05	10,028.7	5,129.0	171.0	5,131.8	2.00	-1.98	-0.32	
15,202.0	89.25	0.29	10,030.5	5,223.0	171.3	5,225.7	0.77	0.72	0.26	
15,296.0	89.04	0.27	10,031.9	5,317.0	171.7	5,319.7	0.22	-0.22	-0.02	
15,390.0	88.48	0.22	10,033.9	5,411.0	172.1	5,413.7	0.60	-0.60	-0.05	
15,484.0	88.32	359.99	10,036.5	5,504.9	172.3	5,507.6	0.30	-0.17	-0.24	
15,578.0	88.56	359.07	10,039.1	5,598.9	171.5	5,601.5	1.01	0.26	-0.98	
15,672.0	88.53	358.46	10,041.5	5,692.8	169.5	5,695.3	0.65	-0.03	-0.65	
15,766.0	88.72	359.78	10,043.7	5,786.8	168.1	5,789.2	1.42	0.20	1.40	
15,859.0	89.89	359.07	10,044.8	5,879.8	167.1	5,882.2	1.47	1.26	-0.76	
15,953.0	89.93	0.66	10,045.0	5,973.8	166.9	5,976.1	1.69	0.04	1.69	
16,048.0	89.92	3.12	10,045.1	6,068.7	170.1	6,071.1	2.59	-0.01	2.59	
16,141.0	88.91	3.00	10,046.1	6,161.6	175.0	6,164.1	1.09	-1.09	-0.13	
16,236.0	89.38	4.48	10,047.5	6,256.4	181.2	6,259.0	1.63	0.49	1.56	
16,329.0	89.53	3.39	10,048.4	6,349.1	187.6	6,351.9	1.18	0.16	-1.17	
16,422.0	89.87	3.31	10,048.9	6,442.0	193.0	6,444.9	0.38	0.37	-0.09	
16,516.0	88.95	3.02	10,049.8	6,535.8	198.2	6,538.8	1.03	-0.98	-0.31	
16,610.0	89.39	1.37	10,051.2	6,629.8	201.8	6,632.8	1.82	0.47	-1.76	
16,704.0	89.96	1.44	10,051.7	6,723.7	204.1	6,726.8	0.61	0.61	0.07	
16,798.0	89.53	1.52	10,052.1	6,817.7	206.6	6,820.8	0.47	-0.46	0.09	
16,892.0	91.39	3.39	10,051.4	6,911.6	210.6	6,914.8	2.81	1.98	1.99	
16,986.0	90.20	3.01	10,050.1	7,005.4	215.8	7,008.7	1.33	-1.27	-0.40	
17,055.0	90.27	2.28	10,049.8	7,074.4	219.0	7,077.7	1.06	0.10	-1.05	
LTP @ 17055' MD, 330' FNL & 964' FWL										
17,080.0	90.29	2.02	10,049.7	7,099.3	220.0	7,102.7	1.06	0.10	-1.05	
17,112.0	90.01	2.03	10,049.6	7,131.3	221.1	7,134.7	0.88	-0.88	0.03	
LAST SVY										
17,175.0	90.01	2.03	10,049.6	7,194.3	223.3	7,197.7	0.00	0.00	0.00	
Projection to TD @ 17175' MD, 210' FNL & 968' FWL										

Company:	Concho Resources, Inc.	Local Co-ordinate Reference:	Well Littlefield 33 Fed Com #707H
Project:	Eddy County (NAD27 NME)	TVD Reference:	KB @ 2888.4usft (Latshaw 44)
Site:	(Littlefield 33 Fed Com) Sec 33-T-26-S-R-29-E	MD Reference:	KB @ 2888.4usft (Latshaw 44)
Well:	Littlefield 33 Fed Com #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Design Targets									
Target Name	hit/miss	Dip Angle	Dip Dir	TVD	+N/-S	+E/-W	Northing	Easting	
Shape		(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	
FTP (Littlefield 33 Fed		0.00	0.00	9,968.0	80.4	131.6	364,218.30	604,982.00	32° 0' 3.231 N 103° 59' 40.825 W
- actual wellpath misses target center by 37.7usft at 10064.7usft MD (9938.8 TVD, 93.4 N, 111.5 E)									
- Point									
1680.7'VS (Littlefield 33		0.00	0.00	9,983.0	1,677.2	145.9	365,815.10	604,996.30	32° 0' 19.034 N 103° 59' 40.600 W
- actual wellpath misses target center by 5.2usft at 11654.2usft MD (9987.4 TVD, 1677.0 N, 143.0 E)									
- Point									
2180.7'VS (Littlefield 33		0.00	0.00	9,990.0	2,177.4	150.5	366,315.30	605,000.92	32° 0' 23.984 N 103° 59' 40.529 W
- actual wellpath misses target center by 5.1usft at 12154.7usft MD (9993.7 TVD, 2177.4 N, 147.0 E)									
- Point									
LTP (Littlefield 33 Fed		0.00	0.00	10,013.0	7,074.6	195.8	371,212.50	605,046.20	32° 1' 12.448 N 103° 59' 39.824 W
- actual wellpath misses target center by 43.5usft at 17054.3usft MD (10049.8 TVD, 7073.7 N, 219.0 E)									
- Point									
PBHL (Littlefield 33 Fed		0.80	0.53	10,060.0	7,204.6	197.0	371,342.50	605,047.40	32° 1' 13.734 N 103° 59' 39.806 W
- actual wellpath misses target center by 30.1usft at 17175.0usft MD (10049.6 TVD, 7194.3 N, 223.3 E)									
- Rectangle (sides W60.0 H7,124.0 D30.0)									

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(usft)	(usft)			(°)	(°)
472.3	472.2	Rustler			
625.3	625.2	TOS			
2,628.7	2,626.2	BOS (Fletcher)			
2,813.9	2,811.2	LMAR (Top Delaware)			
2,846.9	2,844.2	BLCN			
3,725.0	3,721.2	CYCN			
4,994.5	4,990.2	BYCN			
6,508.0	6,503.2	Bone Sprg (BSGL)			
6,707.0	6,702.2	U Avalon Sh			
7,104.0	7,099.2	L Avalon Sh			
7,425.1	7,420.2	FBSG_sand			
8,154.2	8,149.2	SBSG_sand			
8,574.3	8,569.2	SBSG_sand base			
9,289.3	9,284.2	TBSG_sand			
9,653.7	9,648.2	WFMP			

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
9,276.0	9,270.9	-167.9	116.3	Tie to SDI Gyro
10,050.6	9,933.8	80.3	110.2	FTP @ 10050.6'MD, 330'FSL & 919'FWL
17,055.0	10,049.8	7,074.4	219.0	LTP @ 17055'MD, 330'FNL & 964'FWL
17,112.0	10,049.6	7,131.3	221.1	LAST SVY
17,175.0	10,049.6	7,194.3	223.3	Projection to TD @ 17175'MD, 210'FNL & 968'FWL



Intrepid
Survey Report



Company:	Concho Resources, Inc.	Local Co-ordinate Reference:	Well: Littlefield 33 Fed Com #707H
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Site:	(Littlefield 33 Fed Com) Sec 33 T-26-S-R-29-E	MD Reference:	KB @ 2888.4usft (Latshaw 44)
Well:	Littlefield 33 Fed Com #707H	North Reference:	Grid
Wellbore:	OWB	Survey Calculation Method:	Minimum Curvature
Design:	AWB	Database:	EDM 5000.15 Single User Db

Checked By: _____ Approved By: _____ Date: _____