



LEA COUNTY, NM (NAD83 NME)
SIRAY CAT 8-5 FED COM
212Y

PLAN #1
CACTUS 167

VELL DETAILS:

GROUND LEVEL: 3599.00

NH-S	IEP-S	NORTHING	EASTING	LATITUDE	LONGITUDE
0.00	0.00	84.8313 IR	574.62 36 32" IR	44° 54' 103" W	54.566 ...

SECTION DETAILS

HD	INC	ΔZ	TPD	NH-S	IEP-S	DEG	TEGGE	VSECT	TEMPER
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5965.00	0.00	0.00	5965.00	0.00	0.00	0.00	0.00	0.00	
4565.00	0.00	161.00	4565.90	-29.68	10.27	1.00	161.00	29.67	
8955.00	0.00	161.00	8950.80	44.55	159.96	0.00	161.00	44.52	
9565.00	0.00	0.00	9538.70	-4.94, 22	170.17	1.00	160.00	495.69	
9065.66	0.00	0.00	9057.57	-4.94, 22	170.17	0.00	0.00	495.69	
10866.66	0.30	359.50	10510.32	81.71	165.16	10.00	359.50	80.27	
2076.66	0.30	359.50	2006.60	9690.90	81.50	0.00	0.00	9690.91	
2076.66	0.30	359.50	2005.58	9960.98	79.15	0.00	0.00	9990.91	

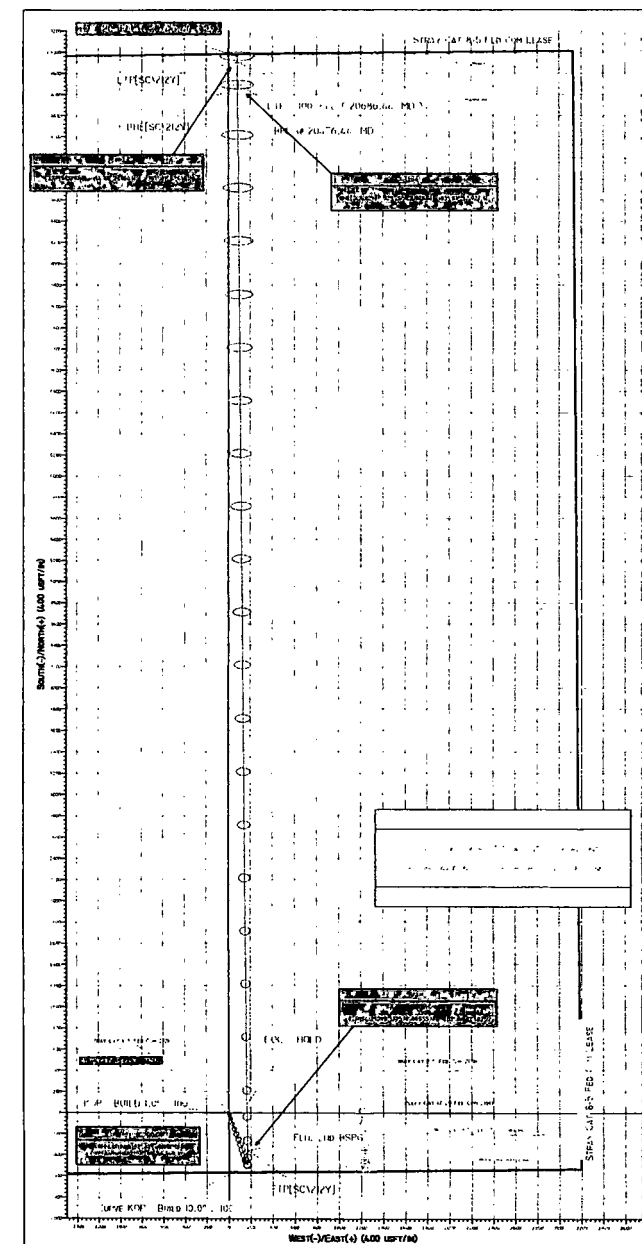
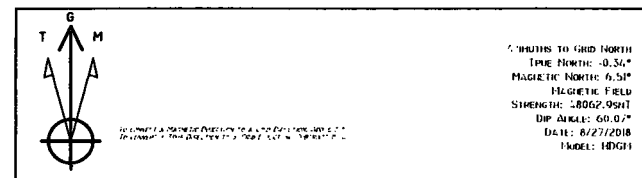
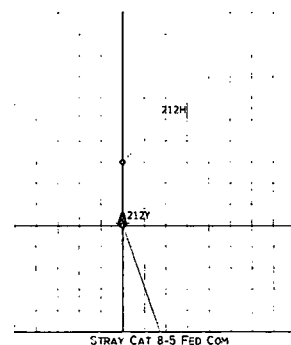
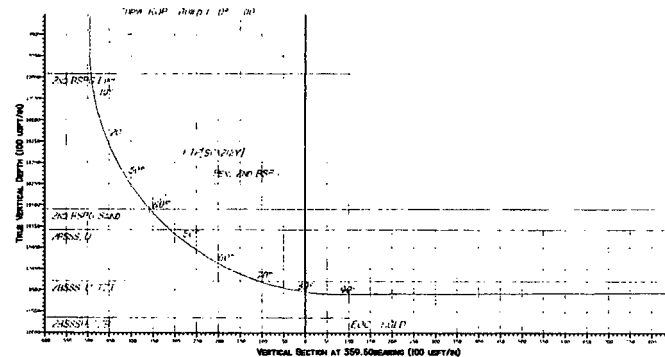
BIR (N 24°)

DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Nothing	Easting
FTP(SC1212Y)	10310.00	-356.50	168.98	477956.70	737631.33
LTP(SC1212Y)	10458.90	9890.98	78.87	488213.70	737542.03
BHL(SC1212Y)	10460.00	9890.98	81.50	488003.72	737543.86

SITE DETAILS: STP3; C&I 8-5 FEB COM
SITE CENTER NORTHING: 478545.18
EASTING: 757462.56
POSITIONAL UNCERTAINTY: 0.00
CONVERGENCE: 0.54
LOCAL NORTH: GRID

PROJECT DETAILS: LEA COUNTY, INDIAN RESERVE
 GEODETIC SYSTEM: US STATE PLANE 1983
 DATUM: NORTH AMERICAN DATUM 1983
 ELLIPSOID: GRS 1980
 ZONE: NORTH AMERICAN EASTERN ZONE
 SYSTEM DATUM: MEAN SEA LEVEL

FORMATION TOP DETAILS		
T PATH	H PATH	FORMATION
1923.00	1923.00	PUSLEP
1386.00	1386.00	SALZOD
4663.00	4663.64	DELACAP
6880.00	6889.85	BUNSHI LAYON
8278.00	8279.55	LALP BUNSHI
8587.00	8610.76	1ST HSPG LINE
9063.00	9109.38	2ND HSPG LINE
9993.00	10150.28	3RD HSPG LINE
10310.00	10350.86	2ND HSPG SADD
10359.00	10353.49	20SS5, U
10480.00	10576.42	2BSS, U, T, 1

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Scientific Drilling



Scientific Drilling

Devon Energy

Lea County, NM (NAD83 NME)

Stray Cat 8-5 Fed Com

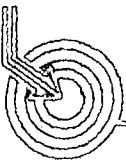
212Y

OH

Plan: Plan #1

Standard Planning Report

27 August, 2018



Scientific Drilling

www.scientificdrilling.com

Database:	Midland District	Local Co-ordinate Reference:	Well 212Y
Company:	Devon Energy	TVD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Site:	Stray Cat 8-5 Fed Com	North Reference:	Grid
Well:	212Y	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Lea County, NM (NAD83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site	Stray Cat 8-5 Fed Com		
Site Position:		Northing:	478,343.18 usft
From:	Map	Easting:	737,462.36 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 18' 48.389 N
		Longitude:	103° 41' 54.544 W
		Grid Convergence:	0.34 °

Well	212Y		
Well Position	+N/-S	-30.00 usft	Northing: 478,313.18 usft
	+E/-W	0.00 usft	Easting: 737,462.36 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 18' 48.092 N
		Longitude:	103° 41' 54.546 W
		Ground Level:	3,599.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	HDGM	8/27/2018	6.85
			Dip Angle
			60.07
			Field Strength
			48,063

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(bearing)
			359.50

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,965.00	0.00	0.00	3,965.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,565.00	6.00	161.00	4,563.90	-29.68	10.22	1.00	1.00	0.00	161.00	
8,965.00	6.00	161.00	8,939.80	-464.55	159.96	0.00	0.00	0.00	0.00	
9,565.00	0.00	0.00	9,538.70	-494.22	170.17	1.00	-1.00	0.00	180.00	
9,963.66	0.00	0.00	9,937.37	-494.22	170.17	0.00	0.00	0.00	0.00	
10,866.66	90.30	359.50	10,510.32	81.71	165.16	10.00	10.00	0.00	359.50	
20,476.44	90.30	359.50	10,460.00	9,690.99	81.50	0.00	0.00	0.00	0.00	BHL[SC\212Y]
20,746.44	90.30	359.50	10,458.59	9,960.98	79.15	0.00	0.00	0.00	-90.00	

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Site:	Stray Cat 8-5 Fed Com	North Reference:	Grid
Well:	212Y	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,023.00	0.00	0.00	1,023.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,386.00	0.00	0.00	1,386.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,965.00	0.00	0.00	3,965.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP - BUILD 1.0° / 100									
4,000.00	0.35	161.00	4,000.00	-0.10	0.03	-0.10	1.00	1.00	0.00
4,100.00	1.35	161.00	4,099.99	-1.50	0.52	-1.51	1.00	1.00	0.00
4,200.00	2.35	161.00	4,199.93	-4.56	1.57	-4.57	1.00	1.00	0.00
4,300.00	3.35	161.00	4,299.81	-9.26	3.19	-9.28	1.00	1.00	0.00
4,400.00	4.35	161.00	4,399.58	-15.61	5.37	-15.65	1.00	1.00	0.00
4,500.00	5.35	161.00	4,499.22	-23.60	8.13	-23.67	1.00	1.00	0.00
4,565.00	6.00	161.00	4,563.90	-29.68	10.22	-29.77	1.00	1.00	0.00
EOB - HOLD									

Database: Midland District
Company: Devon Energy
Project: Lea County, NM (NAD83 NME)
Site: Stray Cat 8-5 Fed Com
Well: 212Y
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 212Y
TVD Reference: KB = 24' @ 3623.00usft (Cactus 167)
MD Reference: KB = 24' @ 3623.00usft (Cactus 167)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,600.00	6.00	161.00	4,598.71	-33.14	11.41	-33.23	0.00	0.00	0.00
4,664.64	6.00	161.00	4,663.00	-39.53	13.61	-39.64	0.00	0.00	0.00
Delaware									
4,700.00	6.00	161.00	4,698.16	-43.02	14.81	-43.15	0.00	0.00	0.00
4,800.00	6.00	161.00	4,797.62	-52.90	18.22	-53.06	0.00	0.00	0.00
4,900.00	6.00	161.00	4,897.07	-62.79	21.62	-62.97	0.00	0.00	0.00
5,000.00	6.00	161.00	4,996.52	-72.67	25.02	-72.89	0.00	0.00	0.00
5,100.00	6.00	161.00	5,095.97	-82.55	28.43	-82.80	0.00	0.00	0.00
5,200.00	6.00	161.00	5,195.43	-92.44	31.83	-92.71	0.00	0.00	0.00
5,300.00	6.00	161.00	5,294.88	-102.32	35.23	-102.62	0.00	0.00	0.00
5,400.00	6.00	161.00	5,394.33	-112.20	38.63	-112.54	0.00	0.00	0.00
5,500.00	6.00	161.00	5,493.78	-122.09	42.04	-122.45	0.00	0.00	0.00
5,600.00	6.00	161.00	5,593.23	-131.97	45.44	-132.36	0.00	0.00	0.00
5,700.00	6.00	161.00	5,692.69	-141.85	48.84	-142.27	0.00	0.00	0.00
5,800.00	6.00	161.00	5,792.14	-151.74	52.25	-152.19	0.00	0.00	0.00
5,900.00	6.00	161.00	5,891.59	-161.62	55.65	-162.10	0.00	0.00	0.00
6,000.00	6.00	161.00	5,991.04	-171.50	59.05	-172.01	0.00	0.00	0.00
6,100.00	6.00	161.00	6,090.50	-181.39	62.46	-181.92	0.00	0.00	0.00
6,200.00	6.00	161.00	6,189.95	-191.27	65.86	-191.84	0.00	0.00	0.00
6,300.00	6.00	161.00	6,289.40	-201.15	69.26	-201.75	0.00	0.00	0.00
6,400.00	6.00	161.00	6,388.85	-211.04	72.67	-211.66	0.00	0.00	0.00
6,500.00	6.00	161.00	6,488.30	-220.92	76.07	-221.58	0.00	0.00	0.00
6,600.00	6.00	161.00	6,587.76	-230.80	79.47	-231.49	0.00	0.00	0.00
6,700.00	6.00	161.00	6,687.21	-240.69	82.88	-241.40	0.00	0.00	0.00
6,800.00	6.00	161.00	6,786.66	-250.57	86.28	-251.31	0.00	0.00	0.00
6,893.85	6.00	161.00	6,880.00	-259.85	89.47	-260.62	0.00	0.00	0.00
Brushy Canyon									
6,900.00	6.00	161.00	6,886.11	-260.45	89.68	-261.23	0.00	0.00	0.00
7,000.00	6.00	161.00	6,985.56	-270.34	93.08	-271.14	0.00	0.00	0.00
7,100.00	6.00	161.00	7,085.02	-280.22	96.49	-281.05	0.00	0.00	0.00
7,200.00	6.00	161.00	7,184.47	-290.10	99.89	-290.96	0.00	0.00	0.00
7,300.00	6.00	161.00	7,283.92	-299.99	103.29	-300.88	0.00	0.00	0.00
7,400.00	6.00	161.00	7,383.37	-309.87	106.70	-310.79	0.00	0.00	0.00
7,500.00	6.00	161.00	7,482.83	-319.75	110.10	-320.70	0.00	0.00	0.00
7,600.00	6.00	161.00	7,582.28	-329.64	113.50	-330.62	0.00	0.00	0.00
7,700.00	6.00	161.00	7,681.73	-339.52	116.91	-340.53	0.00	0.00	0.00
7,800.00	6.00	161.00	7,781.18	-349.40	120.31	-350.44	0.00	0.00	0.00
7,900.00	6.00	161.00	7,880.63	-359.29	123.71	-360.35	0.00	0.00	0.00
8,000.00	6.00	161.00	7,980.09	-369.17	127.12	-370.27	0.00	0.00	0.00
8,100.00	6.00	161.00	8,079.54	-379.05	130.52	-380.18	0.00	0.00	0.00
8,200.00	6.00	161.00	8,178.99	-388.94	133.92	-390.09	0.00	0.00	0.00
8,299.55	6.00	161.00	8,278.00	-398.78	137.31	-399.96	0.00	0.00	0.00
Lower Brushy									
8,300.00	6.00	161.00	8,278.44	-398.82	137.32	-400.00	0.00	0.00	0.00
8,400.00	6.00	161.00	8,377.90	-408.70	140.73	-409.92	0.00	0.00	0.00
8,500.00	6.00	161.00	8,477.35	-418.59	144.13	-419.83	0.00	0.00	0.00
8,600.00	6.00	161.00	8,576.80	-428.47	147.53	-429.74	0.00	0.00	0.00
8,610.26	6.00	161.00	8,587.00	-429.48	147.88	-430.76	0.00	0.00	0.00
1st BSPG Lime									
8,700.00	6.00	161.00	8,676.25	-438.35	150.94	-439.65	0.00	0.00	0.00
8,800.00	6.00	161.00	8,775.70	-448.24	154.34	-449.57	0.00	0.00	0.00
8,900.00	6.00	161.00	8,875.16	-458.12	157.74	-459.48	0.00	0.00	0.00
8,965.00	6.00	161.00	8,939.80	-464.55	159.96	-465.92	0.00	0.00	0.00

Database:	Midland District	Local Co-ordinate Reference:	Well 212Y
Company:	Devon Energy	TVD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Site:	Stray Cat 8-5 Fed Com	North Reference:	Grid
Well:	212Y	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
DROP 1.0° / 100									
9,000.00	5.65	161.00	8,974.62	-467.90	161.11	-469.29	1.00	-1.00	0.00
9,100.00	4.65	161.00	9,074.21	-476.39	164.03	-477.80	1.00	-1.00	0.00
9,200.00	3.65	161.00	9,173.95	-483.23	166.39	-484.67	1.00	-1.00	0.00
9,300.00	2.65	161.00	9,273.80	-488.43	168.18	-489.88	1.00	-1.00	0.00
9,400.00	1.65	161.00	9,373.73	-491.98	169.40	-493.44	1.00	-1.00	0.00
9,500.00	0.65	161.00	9,473.71	-493.87	170.05	-495.34	1.00	-1.00	0.00
9,565.00	0.00	0.00	9,538.70	-494.22	170.17	-495.69	1.00	-1.00	0.00
EOD - HOLD									
9,600.00	0.00	0.00	9,573.70	-494.22	170.17	-495.69	0.00	0.00	0.00
9,700.00	0.00	0.00	9,673.70	-494.22	170.17	-495.69	0.00	0.00	0.00
9,719.30	0.00	0.00	9,693.00	-494.22	170.17	-495.69	0.00	0.00	0.00
1st BSPG Sand									
9,800.00	0.00	0.00	9,773.70	-494.22	170.17	-495.69	0.00	0.00	0.00
9,900.00	0.00	0.00	9,873.70	-494.22	170.17	-495.69	0.00	0.00	0.00
9,963.66	0.00	0.00	9,937.37	-494.22	170.17	-495.69	0.00	0.00	0.00
Curve KOP - Build 10.0° / 100									
10,000.00	3.63	359.50	9,973.68	-493.07	170.16	-494.54	10.00	10.00	0.00
10,019.38	5.57	359.50	9,993.00	-491.52	170.15	-492.98	10.00	10.00	0.00
2nd BSPG Lime									
10,050.00	8.63	359.50	10,023.38	-487.73	170.12	-489.20	10.00	10.00	0.00
10,100.00	13.63	359.50	10,072.42	-478.08	170.03	-479.54	10.00	10.00	0.00
10,150.00	18.63	359.50	10,120.44	-464.19	169.91	-465.65	10.00	10.00	0.00
10,200.00	23.63	359.50	10,167.06	-446.17	169.76	-447.63	10.00	10.00	0.00
10,250.00	28.63	359.50	10,211.93	-424.15	169.56	-425.62	10.00	10.00	0.00
10,300.00	33.63	359.50	10,254.72	-398.31	169.34	-399.77	10.00	10.00	0.00
10,350.00	38.63	359.50	10,295.09	-368.84	169.08	-370.30	10.00	10.00	0.00
10,369.36	40.57	359.50	10,310.00	-356.50	168.98	-357.96	10.00	10.00	0.00
Pen. 2nd BSPG - 2nd BSPG Sand - FTP[SC1212Y]									
10,400.00	43.63	359.50	10,332.73	-335.96	168.80	-337.42	10.00	10.00	0.00
10,437.49	47.38	359.50	10,359.00	-309.22	168.56	-310.68	10.00	10.00	0.00
2BSSS_U									
10,450.00	48.63	359.50	10,367.37	-299.92	168.48	-301.38	10.00	10.00	0.00
10,500.00	53.63	359.50	10,398.74	-261.01	168.14	-262.46	10.00	10.00	0.00
10,550.00	58.63	359.50	10,426.59	-219.50	167.78	-220.96	10.00	10.00	0.00
10,600.00	63.63	359.50	10,450.72	-175.73	167.40	-177.19	10.00	10.00	0.00
10,650.00	68.63	359.50	10,470.95	-130.02	167.00	-131.48	10.00	10.00	0.00
10,676.42	71.28	359.50	10,480.00	-105.21	166.79	-106.66	10.00	10.00	0.00
2BSSS_U_TZT									
10,700.00	73.63	359.50	10,487.11	-82.73	166.59	-84.18	10.00	10.00	0.00
10,750.00	78.63	359.50	10,499.09	-34.20	166.17	-35.65	10.00	10.00	0.00
10,800.00	83.63	359.50	10,506.79	15.18	165.74	13.74	10.00	10.00	0.00
10,850.00	88.63	359.50	10,510.16	65.05	165.31	63.61	10.00	10.00	0.00
10,866.66	90.30	359.50	10,510.32	81.71	165.16	80.27	10.00	10.00	0.00
EOD - HOLD									
10,900.00	90.30	359.50	10,510.14	115.05	164.87	113.61	0.00	0.00	0.00
11,000.00	90.30	359.50	10,509.62	215.04	164.00	213.61	0.00	0.00	0.00
11,100.00	90.30	359.50	10,509.09	315.04	163.13	313.60	0.00	0.00	0.00
11,200.00	90.30	359.50	10,508.57	415.03	162.26	413.60	0.00	0.00	0.00
11,300.00	90.30	359.50	10,508.05	515.03	161.39	513.60	0.00	0.00	0.00
11,400.00	90.30	359.50	10,507.52	615.02	160.52	613.60	0.00	0.00	0.00
11,500.00	90.30	359.50	10,507.00	715.02	159.65	713.60	0.00	0.00	0.00
11,600.00	90.30	359.50	10,506.48	815.01	158.78	813.60	0.00	0.00	0.00

Database: Midland District
Company: Devon Energy
Project: Lea County, NM (NAD83 NME)
Site: Stray Cat 8-5 Fed Com
Well: 212Y
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well 212Y
 KB = 24' @ 3623.00usft (Cactus 167)
 KB = 24' @ 3623.00usft (Cactus 167)
 Grid
 Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,700.00	90.30	359.50	10,505.95	915.01	157.91	913.60	0.00	0.00	0.00
11,800.00	90.30	359.50	10,505.43	1,015.00	157.04	1,013.59	0.00	0.00	0.00
11,900.00	90.30	359.50	10,504.91	1,115.00	156.16	1,113.59	0.00	0.00	0.00
12,000.00	90.30	359.50	10,504.38	1,214.99	155.29	1,213.59	0.00	0.00	0.00
12,100.00	90.30	359.50	10,503.86	1,314.99	154.42	1,313.59	0.00	0.00	0.00
12,200.00	90.30	359.50	10,503.34	1,414.98	153.55	1,413.59	0.00	0.00	0.00
12,300.00	90.30	359.50	10,502.81	1,514.98	152.68	1,513.59	0.00	0.00	0.00
12,400.00	90.30	359.50	10,502.29	1,614.97	151.81	1,613.59	0.00	0.00	0.00
12,500.00	90.30	359.50	10,501.76	1,714.97	150.94	1,713.58	0.00	0.00	0.00
12,600.00	90.30	359.50	10,501.24	1,814.96	150.07	1,813.58	0.00	0.00	0.00
12,700.00	90.30	359.50	10,500.72	1,914.96	149.20	1,913.58	0.00	0.00	0.00
12,800.00	90.30	359.50	10,500.19	2,014.95	148.33	2,013.58	0.00	0.00	0.00
12,900.00	90.30	359.50	10,499.67	2,114.95	147.46	2,113.58	0.00	0.00	0.00
13,000.00	90.30	359.50	10,499.15	2,214.94	146.59	2,213.58	0.00	0.00	0.00
13,100.00	90.30	359.50	10,498.62	2,314.94	145.72	2,313.58	0.00	0.00	0.00
13,200.00	90.30	359.50	10,498.10	2,414.93	144.85	2,413.58	0.00	0.00	0.00
13,300.00	90.30	359.50	10,497.58	2,514.93	143.98	2,513.57	0.00	0.00	0.00
13,400.00	90.30	359.50	10,497.05	2,614.92	143.11	2,613.57	0.00	0.00	0.00
13,500.00	90.30	359.50	10,496.53	2,714.92	142.24	2,713.57	0.00	0.00	0.00
13,600.00	90.30	359.50	10,496.01	2,814.91	141.37	2,813.57	0.00	0.00	0.00
13,700.00	90.30	359.50	10,495.48	2,914.91	140.50	2,913.57	0.00	0.00	0.00
13,800.00	90.30	359.50	10,494.96	3,014.90	139.62	3,013.57	0.00	0.00	0.00
13,900.00	90.30	359.50	10,494.43	3,114.90	138.75	3,113.57	0.00	0.00	0.00
14,000.00	90.30	359.50	10,493.91	3,214.89	137.88	3,213.56	0.00	0.00	0.00
14,100.00	90.30	359.50	10,493.39	3,314.88	137.01	3,313.56	0.00	0.00	0.00
14,200.00	90.30	359.50	10,492.86	3,414.88	136.14	3,413.56	0.00	0.00	0.00
14,300.00	90.30	359.50	10,492.34	3,514.87	135.27	3,513.56	0.00	0.00	0.00
14,400.00	90.30	359.50	10,491.82	3,614.87	134.40	3,613.56	0.00	0.00	0.00
14,500.00	90.30	359.50	10,491.29	3,714.86	133.53	3,713.56	0.00	0.00	0.00
14,600.00	90.30	359.50	10,490.77	3,814.86	132.66	3,813.56	0.00	0.00	0.00
14,700.00	90.30	359.50	10,490.25	3,914.85	131.79	3,913.55	0.00	0.00	0.00
14,800.00	90.30	359.50	10,489.72	4,014.85	130.92	4,013.55	0.00	0.00	0.00
14,900.00	90.30	359.50	10,489.20	4,114.84	130.05	4,113.55	0.00	0.00	0.00
15,000.00	90.30	359.50	10,488.67	4,214.84	129.18	4,213.55	0.00	0.00	0.00
15,100.00	90.30	359.50	10,488.15	4,314.83	128.31	4,313.55	0.00	0.00	0.00
15,200.00	90.30	359.50	10,487.63	4,414.83	127.44	4,413.55	0.00	0.00	0.00
15,300.00	90.30	359.50	10,487.10	4,514.82	126.57	4,513.55	0.00	0.00	0.00
15,400.00	90.30	359.50	10,486.58	4,614.82	125.70	4,613.55	0.00	0.00	0.00
15,500.00	90.30	359.50	10,486.06	4,714.81	124.83	4,713.54	0.00	0.00	0.00
15,600.00	90.30	359.50	10,485.53	4,814.81	123.95	4,813.54	0.00	0.00	0.00
15,700.00	90.30	359.50	10,485.01	4,914.80	123.08	4,913.54	0.00	0.00	0.00
15,800.00	90.30	359.50	10,484.49	5,014.80	122.21	5,013.54	0.00	0.00	0.00
15,900.00	90.30	359.50	10,483.96	5,114.79	121.34	5,113.54	0.00	0.00	0.00
16,000.00	90.30	359.50	10,483.44	5,214.79	120.47	5,213.54	0.00	0.00	0.00
16,100.00	90.30	359.50	10,482.92	5,314.78	119.60	5,313.54	0.00	0.00	0.00
16,200.00	90.30	359.50	10,482.39	5,414.78	118.73	5,413.53	0.00	0.00	0.00
16,300.00	90.30	359.50	10,481.87	5,514.77	117.86	5,513.53	0.00	0.00	0.00
16,400.00	90.30	359.50	10,481.34	5,614.77	116.99	5,613.53	0.00	0.00	0.00
16,500.00	90.30	359.50	10,480.82	5,714.76	116.12	5,713.53	0.00	0.00	0.00
16,600.00	90.30	359.50	10,480.30	5,814.76	115.25	5,813.53	0.00	0.00	0.00
16,700.00	90.30	359.50	10,479.77	5,914.75	114.38	5,913.53	0.00	0.00	0.00
16,800.00	90.30	359.50	10,479.25	6,014.75	113.51	6,013.53	0.00	0.00	0.00
16,900.00	90.30	359.50	10,478.73	6,114.74	112.64	6,113.52	0.00	0.00	0.00
17,000.00	90.30	359.50	10,478.20	6,214.74	111.77	6,213.52	0.00	0.00	0.00

Database:	Midland District	Local Co-ordinate Reference:	Well 212Y
Company:	Devon Energy	TVD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Site:	Stray Cat 8-5 Fed Com	North Reference:	Grid
Well:	212Y	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,100.00	90.30	359.50	10,477.68	6,314.73	110.90	6,313.52	0.00	0.00	0.00
17,200.00	90.30	359.50	10,477.16	6,414.72	110.03	6,413.52	0.00	0.00	0.00
17,300.00	90.30	359.50	10,476.63	6,514.72	109.16	6,513.52	0.00	0.00	0.00
17,400.00	90.30	359.50	10,476.11	6,614.71	108.29	6,613.52	0.00	0.00	0.00
17,500.00	90.30	359.50	10,475.58	6,714.71	107.41	6,713.52	0.00	0.00	0.00
17,600.00	90.30	359.50	10,475.06	6,814.70	106.54	6,813.51	0.00	0.00	0.00
17,700.00	90.30	359.50	10,474.54	6,914.70	105.67	6,913.51	0.00	0.00	0.00
17,800.00	90.30	359.50	10,474.01	7,014.69	104.80	7,013.51	0.00	0.00	0.00
17,900.00	90.30	359.50	10,473.49	7,114.69	103.93	7,113.51	0.00	0.00	0.00
18,000.00	90.30	359.50	10,472.97	7,214.68	103.06	7,213.51	0.00	0.00	0.00
18,100.00	90.30	359.50	10,472.44	7,314.68	102.19	7,313.51	0.00	0.00	0.00
18,200.00	90.30	359.50	10,471.92	7,414.67	101.32	7,413.51	0.00	0.00	0.00
18,300.00	90.30	359.50	10,471.40	7,514.67	100.45	7,513.51	0.00	0.00	0.00
18,400.00	90.30	359.50	10,470.87	7,614.66	99.58	7,613.50	0.00	0.00	0.00
18,500.00	90.30	359.50	10,470.35	7,714.66	98.71	7,713.50	0.00	0.00	0.00
18,600.00	90.30	359.50	10,469.83	7,814.65	97.84	7,813.50	0.00	0.00	0.00
18,700.00	90.30	359.50	10,469.30	7,914.65	96.97	7,913.50	0.00	0.00	0.00
18,800.00	90.30	359.50	10,468.78	8,014.64	96.10	8,013.50	0.00	0.00	0.00
18,900.00	90.30	359.50	10,468.25	8,114.64	95.23	8,113.50	0.00	0.00	0.00
19,000.00	90.30	359.50	10,467.73	8,214.63	94.36	8,213.50	0.00	0.00	0.00
19,100.00	90.30	359.50	10,467.21	8,314.63	93.49	8,313.49	0.00	0.00	0.00
19,200.00	90.30	359.50	10,466.68	8,414.62	92.62	8,413.49	0.00	0.00	0.00
19,300.00	90.30	359.50	10,466.16	8,514.62	91.75	8,513.49	0.00	0.00	0.00
19,400.00	90.30	359.50	10,465.64	8,614.61	90.87	8,613.49	0.00	0.00	0.00
19,500.00	90.30	359.50	10,465.11	8,714.61	90.00	8,713.49	0.00	0.00	0.00
19,600.00	90.30	359.50	10,464.59	8,814.60	89.13	8,813.49	0.00	0.00	0.00
19,700.00	90.30	359.50	10,464.07	8,914.60	88.26	8,913.49	0.00	0.00	0.00
19,800.00	90.30	359.50	10,463.54	9,014.59	87.39	9,013.48	0.00	0.00	0.00
19,900.00	90.30	359.50	10,463.02	9,114.59	86.52	9,113.48	0.00	0.00	0.00
20,000.00	90.30	359.50	10,462.49	9,214.58	85.65	9,213.48	0.00	0.00	0.00
20,100.00	90.30	359.50	10,461.97	9,314.58	84.78	9,313.48	0.00	0.00	0.00
20,200.00	90.30	359.50	10,461.45	9,414.57	83.91	9,413.48	0.00	0.00	0.00
20,300.00	90.30	359.50	10,460.92	9,514.56	83.04	9,513.48	0.00	0.00	0.00
20,400.00	90.30	359.50	10,460.40	9,614.56	82.17	9,613.48	0.00	0.00	0.00
20,476.44	90.30	359.50	10,460.00	9,690.99	81.50	9,689.91	0.00	0.00	0.00
BHL @ 20476.44' MD - BHL[SC1212Y]									
20,500.00	90.30	359.50	10,459.88	9,714.55	81.30	9,713.48	0.00	0.00	0.00
20,600.00	90.30	359.50	10,459.35	9,814.55	80.43	9,813.47	0.00	0.00	0.00
20,686.44	90.30	359.50	10,458.90	9,900.98	79.67	9,899.91	0.00	0.00	0.00
LTP / 100' FLL (20686.44' MD) - LTP[SC1212Y]									
20,700.00	90.30	359.50	10,458.83	9,914.54	79.56	9,913.47	0.00	0.00	0.00
20,746.44	90.30	359.50	10,458.59	9,960.98	79.15	9,959.91	0.00	0.00	0.00
TD / 20' FLL (20746.44' MD)									

Database:	Midland District	Local Co-ordinate Reference:	Well 212Y
Company:	Devon Energy	TVD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Site:	Stray Cat 8-5 Fed Com	North Reference:	Grid
Well:	212Y	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Design Targets									
Target Name	hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	
- Shape		(°)	(bearing)	(usft)	(usft)	(usft)	(usft)	(usft)	Latitude Longitude
FTP[SCV212Y]	- plan hits target center	0.00	0.01	10,310.00	-356.50	168.98	477,956.70	737,631.32	32° 18' 44.555 N 103° 41' 52.602 W
	- Point								
LTP[SCV212Y]	- plan hits target center	0.00	0.00	10,458.90	9,900.98	79.67	488,213.70	737,542.03	32° 20' 26.056 N 103° 41' 52.934 W
	- Point								
BHL[SCV212Y]	- plan hits target center	-90.30	359.50	10,460.00	9,690.99	81.50	488,003.72	737,543.86	32° 20' 23.978 N 103° 41' 52.927 W
	- Rectangle (sides W60.00 H40.00 D10,000.00)								

Formations							
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction		
(usft)	(usft)			(°)	(bearing)		
1,023.00	1,023.00	Rustler					
1,386.00	1,386.00	Salado					
4,664.64	4,663.00	Delaware					
6,893.85	6,880.00	Brushy Canyon					
8,299.55	8,278.00	Lower Brushy					
8,610.26	8,587.00	1st BSPG Lime					
9,719.30	9,693.00	1st BSPG Sand					
10,019.38	9,993.00	2nd BSPG Lime					
10,369.36	10,310.00	2nd BSPG Sand					
10,437.49	10,359.00	2BSSS_U					
10,676.42	10,480.00	2BSSS_U_TZT					

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W	Comment	
(usft)	(usft)	(usft)	(usft)		
0.00	0.00	0.00	0.00		
3,965.00	3,965.00	0.00	0.00	KOP - BUILD 1.0° / 100	
4,565.00	4,563.90	-29.68	10.22	EOB - HOLD	
8,965.00	8,939.80	-464.55	159.96	DROP 1.0° / 100	
9,565.00	9,538.70	-494.22	170.17	EOD - HOLD	
9,963.66	9,937.37	-494.22	170.17	Curve KOP - Build 10.0° / 100	
10,369.36	10,310.00	-356.50	168.98	Pen. 2nd BSPG	
10,866.66	10,510.32	81.71	165.16	EOC - HOLD	
20,476.44	10,460.00	9,690.99	81.50	BHL @ 20476.44' MD	
20,686.44	10,458.90	9,900.98	79.67	LTP / 100' FLL (20686.44' MD)	
20,746.44	10,458.59	9,960.98	79.15	TD / 20' FLL (20746.44' MD)	



Scientific Drilling

Devon Energy

Lea County, NM (NAD83 NME)

Stray Cat 8-5 Fed Com

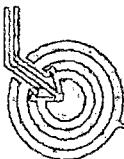
212Y

OH

Plan: Plan #1

Standard Planning Report - Geographic

27 August, 2018



Scientific Drilling

www.scientificdrilling.com

Database:	Midland District	Local Co-ordinate Reference:	Well 212Y
Company:	Devon Energy	TVD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Site:	Stray Cat 8-5 Fed Com	North Reference:	Grid
Well:	212Y	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project:	Lea County, NM (NAD83 NME)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site:	Stray Cat 8-5 Fed Com		
Site Position:		Northing:	478,343.18 usft
From:	Map	Easting:	737,462.36 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"
		Latitude:	32° 18' 48.389 N
		Longitude:	103° 41' 54.544 W
		Grid Convergence:	0.34 °

Well:	212Y		
Well Position	+N/-S	0.00 usft	Northing: 478,313.18 usft
	+E/-W	0.00 usft	Easting: 737,462.36 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 18' 48.092 N
		Longitude:	103° 41' 54.546 W
		Ground Level:	3,599.00 usft

Wellbore:	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	HDGM	8/27/2018	6.85	60.07	48,063

Design:	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(bearing)
	0.00	0.00	0.00	359.50

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Buidl Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,965.00	0.00	0.00	3,965.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,565.00	6.00	161.00	4,563.90	-29.68	10.22	1.00	1.00	0.00	161.00	
8,965.00	6.00	161.00	8,939.80	-464.55	159.96	0.00	0.00	0.00	0.00	
9,565.00	0.00	0.00	9,538.70	-494.22	170.17	1.00	-1.00	0.00	180.00	
9,963.66	0.00	0.00	9,937.37	-494.22	170.17	0.00	0.00	0.00	0.00	
10,866.66	90.30	359.50	10,510.32	81.71	165.16	10.00	10.00	0.00	359.50	
20,476.44	90.30	359.50	10,460.00	9,690.99	81.50	0.00	0.00	0.00	0.00	BHL[SC\212Y]
20,746.44	90.30	359.50	10,458.59	9,960.98	79.15	0.00	0.00	0.00	-90.00	

Database:	Midland District	Local Co-ordinate Reference:	Well 212Y
Company:	Devon Energy	TVD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Site:	Stray Cat 8-5 Fed Com	North Reference:	Grid
Well:	212Y	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
100.00	0.00	0.00	100.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
200.00	0.00	0.00	200.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
300.00	0.00	0.00	300.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
400.00	0.00	0.00	400.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
500.00	0.00	0.00	500.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
600.00	0.00	0.00	600.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
700.00	0.00	0.00	700.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
800.00	0.00	0.00	800.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
900.00	0.00	0.00	900.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
1,000.00	0.00	0.00	1,000.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
1,023.00	0.00	0.00	1,023.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
Rustler									
1,100.00	0.00	0.00	1,100.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
1,200.00	0.00	0.00	1,200.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
1,300.00	0.00	0.00	1,300.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
1,386.00	0.00	0.00	1,386.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
Salado									
1,400.00	0.00	0.00	1,400.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
1,500.00	0.00	0.00	1,500.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
1,600.00	0.00	0.00	1,600.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
1,700.00	0.00	0.00	1,700.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
1,800.00	0.00	0.00	1,800.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
1,900.00	0.00	0.00	1,900.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
2,000.00	0.00	0.00	2,000.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
2,100.00	0.00	0.00	2,100.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
2,200.00	0.00	0.00	2,200.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
2,300.00	0.00	0.00	2,300.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
2,400.00	0.00	0.00	2,400.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
2,500.00	0.00	0.00	2,500.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
2,600.00	0.00	0.00	2,600.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
2,700.00	0.00	0.00	2,700.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
2,800.00	0.00	0.00	2,800.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
2,900.00	0.00	0.00	2,900.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
3,000.00	0.00	0.00	3,000.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
3,100.00	0.00	0.00	3,100.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
3,200.00	0.00	0.00	3,200.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
3,300.00	0.00	0.00	3,300.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
3,400.00	0.00	0.00	3,400.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
3,500.00	0.00	0.00	3,500.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
3,600.00	0.00	0.00	3,600.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
3,700.00	0.00	0.00	3,700.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
3,800.00	0.00	0.00	3,800.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
3,900.00	0.00	0.00	3,900.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
3,965.00	0.00	0.00	3,965.00	0.00	0.00	478,313.18	737,462.36	32° 18' 48.092 N	103° 41' 54.546 W
KOP - BUILD 1.0° / 100									
4,000.00	0.35	161.00	4,000.00	-0.10	0.03	478,313.08	737,462.39	32° 18' 48.091 N	103° 41' 54.546 W
4,100.00	1.35	161.00	4,099.99	-1.50	0.52	478,311.68	737,462.87	32° 18' 48.077 N	103° 41' 54.540 W
4,200.00	2.35	161.00	4,199.93	-4.56	1.57	478,308.63	737,463.93	32° 18' 48.047 N	103° 41' 54.528 W
4,300.00	3.35	161.00	4,299.81	-9.26	3.19	478,303.93	737,465.54	32° 18' 48.001 N	103° 41' 54.510 W
4,400.00	4.35	161.00	4,399.58	-15.61	5.37	478,297.58	737,467.73	32° 18' 47.938 N	103° 41' 54.485 W
4,500.00	5.35	161.00	4,499.22	-23.60	8.13	478,289.58	737,470.48	32° 18' 47.858 N	103° 41' 54.453 W
4,565.00	6.00	161.00	4,563.90	-29.68	10.22	478,283.51	737,472.57	32° 18' 47.798 N	103° 41' 54.429 W
EOB - HOLD									

Database:	Midland District	Local Co-ordinate Reference:	Well 212Y
Company:	Devon Energy	TVD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Site:	Stray Cat 8-5 Fed Com	North Reference:	Grid
Well:	212Y	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
4,600.00	6.00	161.00	4,598.71	-33.14	11.41	478,280.05	737,473.77	32° 18' 47.764 N	103° 41' 54.416 W	
4,664.64	6.00	161.00	4,663.00	-39.53	13.61	478,273.66	737,475.97	32° 18' 47.700 N	103° 41' 54.391 W	
Delaware										
4,700.00	6.00	161.00	4,698.16	-43.02	14.81	478,270.16	737,477.17	32° 18' 47.666 N	103° 41' 54.377 W	
4,800.00	6.00	161.00	4,797.62	-52.90	18.22	478,260.28	737,480.57	32° 18' 47.568 N	103° 41' 54.338 W	
4,900.00	6.00	161.00	4,897.07	-62.79	21.62	478,250.40	737,483.97	32° 18' 47.470 N	103° 41' 54.299 W	
5,000.00	6.00	161.00	4,996.52	-72.67	25.02	478,240.52	737,487.38	32° 18' 47.372 N	103° 41' 54.260 W	
5,100.00	6.00	161.00	5,095.97	-82.55	28.43	478,230.63	737,490.78	32° 18' 47.274 N	103° 41' 54.221 W	
5,200.00	6.00	161.00	5,195.43	-92.44	31.83	478,220.75	737,494.18	32° 18' 47.176 N	103° 41' 54.182 W	
5,300.00	6.00	161.00	5,294.88	-102.32	35.23	478,210.87	737,497.59	32° 18' 47.078 N	103° 41' 54.143 W	
5,400.00	6.00	161.00	5,394.33	-112.20	38.63	478,200.98	737,500.99	32° 18' 46.980 N	103° 41' 54.104 W	
5,500.00	6.00	161.00	5,493.78	-122.09	42.04	478,191.10	737,504.39	32° 18' 46.882 N	103° 41' 54.065 W	
5,600.00	6.00	161.00	5,593.23	-131.97	45.44	478,181.22	737,507.80	32° 18' 46.784 N	103° 41' 54.026 W	
5,700.00	6.00	161.00	5,692.69	-141.85	48.84	478,171.34	737,511.20	32° 18' 46.686 N	103° 41' 53.987 W	
5,800.00	6.00	161.00	5,792.14	-151.74	52.25	478,161.45	737,514.60	32° 18' 46.588 N	103° 41' 53.948 W	
5,900.00	6.00	161.00	5,891.59	-161.62	55.65	478,151.57	737,518.00	32° 18' 46.490 N	103° 41' 53.909 W	
6,000.00	6.00	161.00	5,991.04	-171.50	59.05	478,141.69	737,521.41	32° 18' 46.392 N	103° 41' 53.870 W	
6,100.00	6.00	161.00	6,090.50	-181.39	62.46	478,131.80	737,524.81	32° 18' 46.294 N	103° 41' 53.831 W	
6,200.00	6.00	161.00	6,189.95	-191.27	65.86	478,121.92	737,528.21	32° 18' 46.196 N	103° 41' 53.792 W	
6,300.00	6.00	161.00	6,289.40	-201.15	69.26	478,112.04	737,531.62	32° 18' 46.098 N	103° 41' 53.753 W	
6,400.00	6.00	161.00	6,388.85	-211.04	72.67	478,102.16	737,535.02	32° 18' 46.000 N	103° 41' 53.714 W	
6,500.00	6.00	161.00	6,488.30	-220.92	76.07	478,092.27	737,538.42	32° 18' 45.902 N	103° 41' 53.675 W	
6,600.00	6.00	161.00	6,587.76	-230.80	79.47	478,082.39	737,541.82	32° 18' 45.804 N	103° 41' 53.636 W	
6,700.00	6.00	161.00	6,687.21	-240.69	82.88	478,072.51	737,545.23	32° 18' 45.706 N	103° 41' 53.597 W	
6,800.00	6.00	161.00	6,786.66	-250.57	86.28	478,062.62	737,548.63	32° 18' 45.608 N	103° 41' 53.558 W	
6,893.85	6.00	161.00	6,880.00	-259.85	89.47	478,053.35	737,551.82	32° 18' 45.516 N	103° 41' 53.522 W	
Brushy Canyon										
6,900.00	6.00	161.00	6,886.11	-260.45	89.68	478,052.74	737,552.03	32° 18' 45.510 N	103° 41' 53.519 W	
7,000.00	6.00	161.00	6,985.56	-270.34	93.08	478,042.86	737,555.44	32° 18' 45.412 N	103° 41' 53.480 W	
7,100.00	6.00	161.00	7,085.02	-280.22	96.49	478,032.97	737,558.84	32° 18' 45.314 N	103° 41' 53.441 W	
7,200.00	6.00	161.00	7,184.47	-290.10	99.89	478,023.09	737,562.24	32° 18' 45.216 N	103° 41' 53.403 W	
7,300.00	6.00	161.00	7,283.92	-299.99	103.29	478,013.21	737,565.65	32° 18' 45.118 N	103° 41' 53.364 W	
7,400.00	6.00	161.00	7,383.37	-309.87	106.70	478,003.33	737,569.05	32° 18' 45.020 N	103° 41' 53.325 W	
7,500.00	6.00	161.00	7,482.83	-319.75	110.10	477,993.44	737,572.45	32° 18' 44.922 N	103° 41' 53.286 W	
7,600.00	6.00	161.00	7,582.28	-329.64	113.50	477,983.56	737,575.85	32° 18' 44.824 N	103° 41' 53.247 W	
7,700.00	6.00	161.00	7,681.73	-339.52	116.91	477,973.68	737,579.26	32° 18' 44.726 N	103° 41' 53.208 W	
7,800.00	6.00	161.00	7,781.18	-349.40	120.31	477,963.79	737,582.66	32° 18' 44.628 N	103° 41' 53.169 W	
7,900.00	6.00	161.00	7,880.63	-359.29	123.71	477,953.91	737,586.06	32° 18' 44.530 N	103° 41' 53.130 W	
8,000.00	6.00	161.00	7,980.09	-369.17	127.12	477,944.03	737,589.47	32° 18' 44.432 N	103° 41' 53.091 W	
8,100.00	6.00	161.00	8,079.54	-379.05	130.52	477,934.15	737,592.87	32° 18' 44.334 N	103° 41' 53.052 W	
8,200.00	6.00	161.00	8,178.99	-388.94	133.92	477,924.26	737,596.27	32° 18' 44.236 N	103° 41' 53.013 W	
8,299.55	6.00	161.00	8,278.00	-398.78	137.31	477,914.42	737,599.66	32° 18' 44.139 N	103° 41' 52.974 W	
Lower Brushy										
8,300.00	6.00	161.00	8,278.44	-398.82	137.32	477,914.38	737,599.68	32° 18' 44.138 N	103° 41' 52.974 W	
8,400.00	6.00	161.00	8,377.90	-408.70	140.73	477,904.50	737,603.08	32° 18' 44.040 N	103° 41' 52.935 W	
8,500.00	6.00	161.00	8,477.35	-418.59	144.13	477,894.61	737,606.48	32° 18' 43.942 N	103° 41' 52.896 W	
8,600.00	6.00	161.00	8,576.80	-428.47	147.53	477,884.73	737,609.88	32° 18' 43.844 N	103° 41' 52.857 W	
8,610.26	6.00	161.00	8,587.00	-429.48	147.88	477,883.72	737,610.23	32° 18' 43.834 N	103° 41' 52.853 W	
1st BSPG Lime										
8,700.00	6.00	161.00	8,676.25	-438.35	150.94	477,874.85	737,613.29	32° 18' 43.746 N	103° 41' 52.818 W	
8,800.00	6.00	161.00	8,775.70	-448.24	154.34	477,864.97	737,616.69	32° 18' 43.648 N	103° 41' 52.779 W	
8,900.00	6.00	161.00	8,875.16	-458.12	157.74	477,855.08	737,620.09	32° 18' 43.550 N	103° 41' 52.740 W	
8,965.00	6.00	161.00	8,939.80	-464.55	159.96	477,848.66	737,622.30	32° 18' 43.486 N	103° 41' 52.715 W	
DROP 1.0° / 100										

Database:	Midland District	Local Co-ordinate Reference:	Well 212Y
Company:	Devon Energy	TVD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Site:	Stray Cat 8-5 Fed Com	North Reference:	Grid
Well:	212Y	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
9,000.00	5.65	161.00	8,974.62	-467.90	161.11	477,845.30	737,623.46	32° 18' 43.453 N	103° 41' 52.701 W	
9,100.00	4.65	161.00	9,074.21	-476.39	164.03	477,836.81	737,626.38	32° 18' 43.369 N	103° 41' 52.668 W	
9,200.00	3.65	161.00	9,173.95	-483.23	166.39	477,829.97	737,628.74	32° 18' 43.301 N	103° 41' 52.641 W	
9,300.00	2.65	161.00	9,273.80	-488.43	168.18	477,824.78	737,630.53	32° 18' 43.250 N	103° 41' 52.621 W	
9,400.00	1.65	161.00	9,373.73	-491.98	169.40	477,821.23	737,631.75	32° 18' 43.214 N	103° 41' 52.607 W	
9,500.00	0.65	161.00	9,473.71	-493.87	170.05	477,819.33	737,632.40	32° 18' 43.196 N	103° 41' 52.599 W	
9,565.00	0.00	0.00	9,538.70	-494.22	170.17	477,818.98	737,632.52	32° 18' 43.192 N	103° 41' 52.598 W	
EOD - HOLD										
9,600.00	0.00	0.00	9,573.70	-494.22	170.17	477,818.98	737,632.52	32° 18' 43.192 N	103° 41' 52.598 W	
9,700.00	0.00	0.00	9,673.70	-494.22	170.17	477,818.98	737,632.52	32° 18' 43.192 N	103° 41' 52.598 W	
9,719.30	0.00	0.00	9,693.00	-494.22	170.17	477,818.98	737,632.52	32° 18' 43.192 N	103° 41' 52.598 W	
1st BSPG Sand										
9,800.00	0.00	0.00	9,773.70	-494.22	170.17	477,818.98	737,632.52	32° 18' 43.192 N	103° 41' 52.598 W	
9,900.00	0.00	0.00	9,873.70	-494.22	170.17	477,818.98	737,632.52	32° 18' 43.192 N	103° 41' 52.598 W	
9,963.66	0.00	0.00	9,937.37	-494.22	170.17	477,818.98	737,632.52	32° 18' 43.192 N	103° 41' 52.598 W	
Curve KOP - Build 10.0° / 100										
10,000.00	3.63	359.50	9,973.68	-493.07	170.16	477,820.13	737,632.51	32° 18' 43.204 N	103° 41' 52.598 W	
10,019.38	5.57	359.50	9,993.00	-491.52	170.15	477,821.69	737,632.50	32° 18' 43.219 N	103° 41' 52.598 W	
2nd BSPG Lime										
10,050.00	8.63	359.50	10,023.38	-487.73	170.12	477,825.48	737,632.47	32° 18' 43.256 N	103° 41' 52.598 W	
10,100.00	13.63	359.50	10,072.42	-478.08	170.03	477,835.13	737,632.38	32° 18' 43.352 N	103° 41' 52.598 W	
10,150.00	18.63	359.50	10,120.44	-464.19	169.91	477,849.01	737,632.26	32° 18' 43.489 N	103° 41' 52.599 W	
10,200.00	23.63	359.50	10,167.06	-446.17	169.76	477,867.03	737,632.10	32° 18' 43.668 N	103° 41' 52.599 W	
10,250.00	28.63	359.50	10,211.93	-424.15	169.56	477,889.05	737,631.91	32° 18' 43.886 N	103° 41' 52.600 W	
10,300.00	33.63	359.50	10,254.72	-398.31	169.34	477,914.89	737,631.69	32° 18' 44.141 N	103° 41' 52.601 W	
10,350.00	38.63	359.50	10,295.09	-368.84	169.08	477,944.36	737,631.43	32° 18' 44.433 N	103° 41' 52.602 W	
10,369.36	40.57	359.50	10,310.00	-356.50	168.98	477,956.70	737,631.32	32° 18' 44.555 N	103° 41' 52.602 W	
Pen. 2nd BSPG - 2nd BSPG Sand - FTP[SC1212Y]										
10,400.00	43.63	359.50	10,332.73	-335.96	168.80	477,977.24	737,631.15	32° 18' 44.758 N	103° 41' 52.603 W	
10,437.49	47.38	359.50	10,359.00	-309.22	168.56	478,003.97	737,630.91	32° 18' 45.023 N	103° 41' 52.604 W	
2BSSS_U										
10,450.00	48.63	359.50	10,367.37	-299.92	168.48	478,013.27	737,630.83	32° 18' 45.115 N	103° 41' 52.604 W	
10,500.00	53.63	359.50	10,398.74	-261.01	168.14	478,052.19	737,630.49	32° 18' 45.500 N	103° 41' 52.605 W	
10,550.00	58.63	359.50	10,426.59	-219.50	167.78	478,093.69	737,630.13	32° 18' 45.911 N	103° 41' 52.607 W	
10,600.00	63.63	359.50	10,450.72	-175.73	167.40	478,137.46	737,629.75	32° 18' 46.344 N	103° 41' 52.608 W	
10,650.00	68.63	359.50	10,470.95	-130.02	167.00	478,183.17	737,629.35	32° 18' 46.796 N	103° 41' 52.609 W	
10,676.42	71.28	359.50	10,480.00	-105.21	166.79	478,207.98	737,629.14	32° 18' 47.042 N	103° 41' 52.610 W	
2BSSS_U_TZT										
10,700.00	73.63	359.50	10,487.11	-82.73	166.59	478,230.46	737,628.94	32° 18' 47.264 N	103° 41' 52.611 W	
10,750.00	78.63	359.50	10,499.09	-34.20	166.17	478,278.98	737,628.52	32° 18' 47.744 N	103° 41' 52.613 W	
10,800.00	83.63	359.50	10,506.79	15.18	165.74	478,328.37	737,628.09	32° 18' 48.233 N	103° 41' 52.614 W	
10,850.00	88.63	359.50	10,510.16	65.05	165.31	478,378.23	737,627.65	32° 18' 48.726 N	103° 41' 52.616 W	
10,866.66	90.30	359.50	10,510.32	81.71	165.16	478,394.89	737,627.51	32° 18' 48.891 N	103° 41' 52.616 W	
EOC - HOLD										
10,900.00	90.30	359.50	10,510.14	115.05	164.87	478,428.23	737,627.22	32° 18' 49.221 N	103° 41' 52.617 W	
11,000.00	90.30	359.50	10,509.62	215.04	164.00	478,528.22	737,626.35	32° 18' 50.211 N	103° 41' 52.621 W	
11,100.00	90.30	359.50	10,509.09	315.04	163.13	478,628.21	737,625.48	32° 18' 51.200 N	103° 41' 52.624 W	
11,200.00	90.30	359.50	10,508.57	415.03	162.26	478,728.20	737,624.61	32° 18' 52.190 N	103° 41' 52.627 W	
11,300.00	90.30	359.50	10,508.05	515.03	161.39	478,828.19	737,623.74	32° 18' 53.179 N	103° 41' 52.630 W	
11,400.00	90.30	359.50	10,507.52	615.02	160.52	478,928.18	737,622.87	32° 18' 54.169 N	103° 41' 52.634 W	
11,500.00	90.30	359.50	10,507.00	715.02	159.65	479,028.17	737,622.00	32° 18' 55.158 N	103° 41' 52.637 W	
11,600.00	90.30	359.50	10,506.48	815.01	158.78	479,128.16	737,621.13	32° 18' 56.148 N	103° 41' 52.640 W	
11,700.00	90.30	359.50	10,505.95	915.01	157.91	479,228.15	737,620.25	32° 18' 57.137 N	103° 41' 52.643 W	
11,800.00	90.30	359.50	10,505.43	1,015.00	157.04	479,328.14	737,619.38	32° 18' 58.126 N	103° 41' 52.647 W	

Database: Midland District
Company: Devon Energy
Project: Lea County, NM (NAD83 NME)
Site: Stray Cat 8-5 Fed Com
Well: 212Y
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 212Y
TVD Reference: KB = 24' @ 3623.00usft (Cactus 167)
MD Reference: KB = 24' @ 3623.00usft (Cactus 167)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/S (usft)	+E/W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,900.00	90.30	359.50	10,504.91	1,115.00	156.16	479,428.13	737,618.51	32° 18' 59.116 N	103° 41' 52.650 W
12,000.00	90.30	359.50	10,504.38	1,214.99	155.29	479,528.12	737,617.64	32° 19' 0.105 N	103° 41' 52.653 W
12,100.00	90.30	359.50	10,503.86	1,314.99	154.42	479,628.11	737,616.77	32° 19' 1.095 N	103° 41' 52.656 W
12,200.00	90.30	359.50	10,503.34	1,414.98	153.55	479,728.10	737,615.90	32° 19' 2.084 N	103° 41' 52.659 W
12,300.00	90.30	359.50	10,502.81	1,514.98	152.68	479,828.09	737,615.03	32° 19' 3.074 N	103° 41' 52.663 W
12,400.00	90.30	359.50	10,502.29	1,614.97	151.81	479,928.08	737,614.16	32° 19' 4.063 N	103° 41' 52.666 W
12,500.00	90.30	359.50	10,501.76	1,714.97	150.94	480,028.07	737,613.29	32° 19' 5.053 N	103° 41' 52.669 W
12,600.00	90.30	359.50	10,501.24	1,814.96	150.07	480,128.06	737,612.42	32° 19' 6.042 N	103° 41' 52.672 W
12,700.00	90.30	359.50	10,500.72	1,914.96	149.20	480,228.05	737,611.55	32° 19' 7.032 N	103° 41' 52.676 W
12,800.00	90.30	359.50	10,500.19	2,014.95	148.33	480,328.04	737,610.68	32° 19' 8.021 N	103° 41' 52.679 W
12,900.00	90.30	359.50	10,499.67	2,114.95	147.46	480,428.03	737,609.81	32° 19' 9.011 N	103° 41' 52.682 W
13,000.00	90.30	359.50	10,499.15	2,214.94	146.59	480,528.02	737,608.94	32° 19' 10.000 N	103° 41' 52.685 W
13,100.00	90.30	359.50	10,498.62	2,314.94	145.72	480,628.01	737,608.07	32° 19' 10.990 N	103° 41' 52.689 W
13,200.00	90.30	359.50	10,498.10	2,414.93	144.85	480,728.00	737,607.20	32° 19' 11.979 N	103° 41' 52.692 W
13,300.00	90.30	359.50	10,497.58	2,514.93	143.98	480,827.99	737,606.33	32° 19' 12.969 N	103° 41' 52.695 W
13,400.00	90.30	359.50	10,497.05	2,614.92	143.11	480,927.98	737,605.46	32° 19' 13.958 N	103° 41' 52.698 W
13,500.00	90.30	359.50	10,496.53	2,714.92	142.24	481,027.97	737,604.59	32° 19' 14.948 N	103° 41' 52.702 W
13,600.00	90.30	359.50	10,496.01	2,814.91	141.37	481,127.96	737,603.72	32° 19' 15.937 N	103° 41' 52.705 W
13,700.00	90.30	359.50	10,495.48	2,914.91	140.50	481,227.95	737,602.85	32° 19' 16.927 N	103° 41' 52.708 W
13,800.00	90.30	359.50	10,494.96	3,014.90	139.62	481,327.94	737,601.97	32° 19' 17.916 N	103° 41' 52.711 W
13,900.00	90.30	359.50	10,494.43	3,114.90	138.75	481,427.93	737,601.10	32° 19' 18.906 N	103° 41' 52.714 W
14,000.00	90.30	359.50	10,493.91	3,214.89	137.88	481,527.92	737,600.23	32° 19' 19.895 N	103° 41' 52.718 W
14,100.00	90.30	359.50	10,493.39	3,314.88	137.01	481,627.91	737,599.36	32° 19' 20.885 N	103° 41' 52.721 W
14,200.00	90.30	359.50	10,492.86	3,414.88	136.14	481,727.90	737,598.49	32° 19' 21.874 N	103° 41' 52.724 W
14,300.00	90.30	359.50	10,492.34	3,514.87	135.27	481,827.89	737,597.62	32° 19' 22.864 N	103° 41' 52.727 W
14,400.00	90.30	359.50	10,491.82	3,614.87	134.40	481,927.88	737,596.75	32° 19' 23.853 N	103° 41' 52.731 W
14,500.00	90.30	359.50	10,491.29	3,714.86	133.53	482,027.87	737,595.88	32° 19' 24.843 N	103° 41' 52.734 W
14,600.00	90.30	359.50	10,490.77	3,814.86	132.66	482,127.86	737,595.01	32° 19' 25.832 N	103° 41' 52.737 W
14,700.00	90.30	359.50	10,490.25	3,914.85	131.79	482,227.85	737,594.14	32° 19' 26.822 N	103° 41' 52.740 W
14,800.00	90.30	359.50	10,489.72	4,014.85	130.92	482,327.84	737,593.27	32° 19' 27.811 N	103° 41' 52.744 W
14,900.00	90.30	359.50	10,489.20	4,114.84	130.05	482,427.83	737,592.40	32° 19' 28.800 N	103° 41' 52.747 W
15,000.00	90.30	359.50	10,488.67	4,214.84	129.18	482,527.82	737,591.53	32° 19' 29.790 N	103° 41' 52.750 W
15,100.00	90.30	359.50	10,488.15	4,314.83	128.31	482,627.81	737,590.66	32° 19' 30.779 N	103° 41' 52.753 W
15,200.00	90.30	359.50	10,487.63	4,414.83	127.44	482,727.80	737,589.79	32° 19' 31.769 N	103° 41' 52.757 W
15,300.00	90.30	359.50	10,487.10	4,514.82	126.57	482,827.79	737,588.92	32° 19' 32.758 N	103° 41' 52.760 W
15,400.00	90.30	359.50	10,486.58	4,614.82	125.70	482,927.78	737,588.05	32° 19' 33.748 N	103° 41' 52.763 W
15,500.00	90.30	359.50	10,486.06	4,714.81	124.83	483,027.77	737,587.18	32° 19' 34.737 N	103° 41' 52.766 W
15,600.00	90.30	359.50	10,485.53	4,814.81	123.95	483,127.76	737,586.31	32° 19' 35.727 N	103° 41' 52.769 W
15,700.00	90.30	359.50	10,485.01	4,914.80	123.08	483,227.75	737,585.44	32° 19' 36.716 N	103° 41' 52.773 W
15,800.00	90.30	359.50	10,484.49	5,014.80	122.21	483,327.74	737,584.56	32° 19' 37.706 N	103° 41' 52.776 W
15,900.00	90.30	359.50	10,483.96	5,114.79	121.34	483,427.73	737,583.69	32° 19' 38.695 N	103° 41' 52.779 W
16,000.00	90.30	359.50	10,483.44	5,214.79	120.47	483,527.72	737,582.82	32° 19' 39.685 N	103° 41' 52.782 W
16,100.00	90.30	359.50	10,482.92	5,314.78	119.60	483,627.71	737,581.95	32° 19' 40.674 N	103° 41' 52.786 W
16,200.00	90.30	359.50	10,482.39	5,414.78	118.73	483,727.70	737,581.08	32° 19' 41.664 N	103° 41' 52.789 W
16,300.00	90.30	359.50	10,481.87	5,514.77	117.86	483,827.69	737,580.21	32° 19' 42.653 N	103° 41' 52.792 W
16,400.00	90.30	359.50	10,481.34	5,614.77	116.99	483,927.69	737,579.34	32° 19' 43.643 N	103° 41' 52.795 W
16,500.00	90.30	359.50	10,480.82	5,714.76	116.12	484,027.68	737,578.47	32° 19' 44.632 N	103° 41' 52.799 W
16,600.00	90.30	359.50	10,480.30	5,814.76	115.25	484,127.67	737,577.60	32° 19' 45.622 N	103° 41' 52.802 W
16,700.00	90.30	359.50	10,479.77	5,914.75	114.38	484,227.66	737,576.73	32° 19' 46.611 N	103° 41' 52.805 W
16,800.00	90.30	359.50	10,479.25	6,014.75	113.51	484,327.65	737,575.86	32° 19' 47.601 N	103° 41' 52.808 W
16,900.00	90.30	359.50	10,478.73	6,114.74	112.64	484,427.64	737,574.99	32° 19' 48.590 N	103° 41' 52.812 W
17,000.00	90.30	359.50	10,478.20	6,214.74	111.77	484,527.63	737,574.12	32° 19' 49.580 N	103° 41' 52.815 W
17,100.00	90.30	359.50	10,477.68	6,314.73	110.90	484,627.62	737,573.25	32° 19' 50.569 N	103° 41' 52.818 W
17,200.00	90.30	359.50	10,477.16	6,414.72	110.03	484,727.61	737,572.38	32° 19' 51.559 N	103° 41' 52.821 W
17,300.00	90.30	359.50	10,476.63	6,514.72	109.16	484,827.60	737,571.51	32° 19' 52.548 N	103° 41' 52.824 W

Database:	Midland District	Local Co-ordinate Reference:	Well 212Y
Company:	Devon Energy	TVD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Site:	Stray Cat 8-5 Fed Com	North Reference:	Grid
Well:	212Y	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (bearing)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
17,400.00	90.30	359.50	10,476.11	6,614.71	108.29	484,927.59	737,570.64	32° 19' 53.538 N	103° 41' 52.828 W
17,500.00	90.30	359.50	10,475.58	6,714.71	107.41	485,027.58	737,569.77	32° 19' 54.527 N	103° 41' 52.831 W
17,600.00	90.30	359.50	10,475.06	6,814.70	106.54	485,127.57	737,568.90	32° 19' 55.517 N	103° 41' 52.834 W
17,700.00	90.30	359.50	10,474.54	6,914.70	105.67	485,227.56	737,568.03	32° 19' 56.506 N	103° 41' 52.837 W
17,800.00	90.30	359.50	10,474.01	7,014.69	104.80	485,327.55	737,567.15	32° 19' 57.495 N	103° 41' 52.841 W
17,900.00	90.30	359.50	10,473.49	7,114.69	103.93	485,427.54	737,566.28	32° 19' 58.485 N	103° 41' 52.844 W
18,000.00	90.30	359.50	10,472.97	7,214.68	103.06	485,527.53	737,565.41	32° 19' 59.474 N	103° 41' 52.847 W
18,100.00	90.30	359.50	10,472.44	7,314.68	102.19	485,627.52	737,564.54	32° 20' 0.464 N	103° 41' 52.850 W
18,200.00	90.30	359.50	10,471.92	7,414.67	101.32	485,727.51	737,563.67	32° 20' 1.453 N	103° 41' 52.854 W
18,300.00	90.30	359.50	10,471.40	7,514.67	100.45	485,827.50	737,562.80	32° 20' 2.443 N	103° 41' 52.857 W
18,400.00	90.30	359.50	10,470.87	7,614.66	99.58	485,927.49	737,561.93	32° 20' 3.432 N	103° 41' 52.860 W
18,500.00	90.30	359.50	10,470.35	7,714.66	98.71	486,027.48	737,561.06	32° 20' 4.422 N	103° 41' 52.863 W
18,600.00	90.30	359.50	10,469.83	7,814.65	97.84	486,127.47	737,560.19	32° 20' 5.411 N	103° 41' 52.866 W
18,700.00	90.30	359.50	10,469.30	7,914.65	96.97	486,227.46	737,559.32	32° 20' 6.401 N	103° 41' 52.870 W
18,800.00	90.30	359.50	10,468.78	8,014.64	96.10	486,327.45	737,558.45	32° 20' 7.390 N	103° 41' 52.873 W
18,900.00	90.30	359.50	10,468.25	8,114.64	95.23	486,427.44	737,557.58	32° 20' 8.380 N	103° 41' 52.876 W
19,000.00	90.30	359.50	10,467.73	8,214.63	94.36	486,527.43	737,556.71	32° 20' 9.369 N	103° 41' 52.879 W
19,100.00	90.30	359.50	10,467.21	8,314.63	93.49	486,627.42	737,555.84	32° 20' 10.359 N	103° 41' 52.883 W
19,200.00	90.30	359.50	10,466.68	8,414.62	92.62	486,727.41	737,554.97	32° 20' 11.348 N	103° 41' 52.886 W
19,300.00	90.30	359.50	10,466.16	8,514.62	91.75	486,827.40	737,554.10	32° 20' 12.338 N	103° 41' 52.889 W
19,400.00	90.30	359.50	10,465.64	8,614.61	90.87	486,927.39	737,553.23	32° 20' 13.327 N	103° 41' 52.892 W
19,500.00	90.30	359.50	10,465.11	8,714.61	90.00	487,027.38	737,552.36	32° 20' 14.317 N	103° 41' 52.896 W
19,600.00	90.30	359.50	10,464.59	8,814.60	89.13	487,127.37	737,551.49	32° 20' 15.306 N	103° 41' 52.899 W
19,700.00	90.30	359.50	10,464.07	8,914.60	88.26	487,227.36	737,550.62	32° 20' 16.296 N	103° 41' 52.902 W
19,800.00	90.30	359.50	10,463.54	9,014.59	87.39	487,327.35	737,549.74	32° 20' 17.285 N	103° 41' 52.905 W
19,900.00	90.30	359.50	10,463.02	9,114.59	86.52	487,427.34	737,548.87	32° 20' 18.275 N	103° 41' 52.909 W
20,000.00	90.30	359.50	10,462.49	9,214.58	85.65	487,527.33	737,548.00	32° 20' 19.264 N	103° 41' 52.912 W
20,100.00	90.30	359.50	10,461.97	9,314.58	84.78	487,627.32	737,547.13	32° 20' 20.254 N	103° 41' 52.915 W
20,200.00	90.30	359.50	10,461.45	9,414.57	83.91	487,727.31	737,546.26	32° 20' 21.243 N	103° 41' 52.918 W
20,300.00	90.30	359.50	10,460.92	9,514.56	83.04	487,827.30	737,545.39	32° 20' 22.233 N	103° 41' 52.921 W
20,400.00	90.30	359.50	10,460.40	9,614.56	82.17	487,927.29	737,544.52	32° 20' 23.222 N	103° 41' 52.925 W
20,476.44	90.30	359.50	10,460.00	9,690.99	81.50	488,003.72	737,543.86	32° 20' 23.978 N	103° 41' 52.927 W
BHL @ 20476.44' MD - BHL[SC1212Y]									
20,500.00	90.30	359.50	10,459.88	9,714.55	81.30	488,027.28	737,543.65	32° 20' 24.211 N	103° 41' 52.928 W
20,600.00	90.30	359.50	10,459.35	9,814.55	80.43	488,127.27	737,542.78	32° 20' 25.201 N	103° 41' 52.931 W
20,686.44	90.30	359.50	10,458.90	9,900.98	79.67	488,213.70	737,542.03	32° 20' 26.056 N	103° 41' 52.934 W
LTP / 100' FLL (20686.44' MD) - LTP[SC1212Y]									
20,700.00	90.30	359.50	10,458.83	9,914.54	79.56	488,227.26	737,541.91	32° 20' 26.190 N	103° 41' 52.934 W
20,746.44	90.30	359.50	10,458.59	9,960.98	79.15	488,273.69	737,541.50	32° 20' 26.650 N	103° 41' 52.936 W
TD / 20' FLL (20746.44' MD)									

Database:	Midland District	Local Co-ordinate Reference:	Well 212Y
Company:	Devon Energy	TVD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Project:	Lea County, NM (NAD83 NME)	MD Reference:	KB = 24' @ 3623.00usft (Cactus 167)
Site:	Stray Cat 8-5 Fed Com	North Reference:	Grid
Well:	212Y	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(bearing)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
FTP[SCV212Y]	0.00	0.01	10,310.00	-356.50	168.98	477,956.70	737,631.32	32° 18' 44.555 N	103° 41' 52.602 W
- plan hits target center									
- Point									
LTP[SCV212Y]	0.00	0.00	10,458.90	9,900.98	79.67	488,213.70	737,542.03	32° 20' 26.056 N	103° 41' 52.934 W
- plan hits target center									
- Point									
BHL[SCV212Y]	-90.30	359.50	10,460.00	9,690.99	81.50	488,003.72	737,543.86	32° 20' 23.978 N	103° 41' 52.927 W
- plan hits target center									
- Rectangle (sides W60.00 H40.00 D10,000.00)									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(bearing)	
1,023.00	1,023.00	Rustler				
1,386.00	1,386.00	Salado				
4,664.64	4,663.00	Delaware				
6,893.85	6,880.00	Brushy Canyon				
8,299.55	8,278.00	Lower Brushy				
8,610.26	8,587.00	1st BSPG Lime				
9,719.30	9,693.00	1st BSPG Sand				
10,019.38	9,993.00	2nd BSPG Lime				
10,369.36	10,310.00	2nd BSPG Sand				
10,437.49	10,359.00	2BSSS_U				
10,676.42	10,480.00	2BSSS_U_TZT				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
0.00	0.00	0.00	0.00	
3,965.00	3,965.00	0.00	0.00	KOP - BUILD 1.0° / 100
4,565.00	4,563.90	-29.68	10.22	EOB - HOLD
8,965.00	8,939.80	-464.55	159.96	DROP 1.0° / 100
9,565.00	9,538.70	-494.22	170.17	EOD - HOLD
9,963.66	9,937.37	-494.22	170.17	Curve KOP - Build 10.0° / 100
10,369.36	10,310.00	-356.50	168.98	Pen. 2nd BSPG
10,866.66	10,510.32	81.71	165.16	EOC - HOLD
20,476.44	10,460.00	9,690.99	81.50	BHL @ 20476.44' MD
20,686.44	10,458.90	9,900.98	79.67	LTP / 100' FLL (20686.44' MD)
20,746.44	10,458.59	9,960.98	79.15	TD / 20' FLL (20746.44' MD)