

HOBBS OCD

FEB 29 2016

RECEIVED

Nadel & Gussman Permian, LLC

Eddy County, NM (NAD-83)

Sec 34, T18S, 32E

Scarecrow 34 Fed Com #3H

Wellbore #1

Plan: Design #2

DDC Well Planning Report

28 March, 2014



DDC
Well Planning Report



Database:	EDM 5000.1 Single User.Db	Local Co-ordinate Reference:	Well: Scarecrow 34 Fed Com #3H
Company:	Nadel & Gussman Permian, LLC	TVD Reference:	Well @ 3696.0usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	Well @ 3696.0usft
Site:	Sec 34, T18S, 32E	North Reference:	Grid:
Well:	Scarecrow 34 Fed Com #3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Project	Eddy County, NM (NAD-83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Sec 34, T18S, 32E		
Site Position:	Northing:	622,189.42 usft	Latitude: 32° 42' 32.888 N
From: Map	Easting:	717,272.08 usft	Longitude: 103° 45' 40.818 W
Position Uncertainty:	0.0 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.31 °

Well	Scarecrow 34 Fed Com #3H		
Well Position	+N/-S	-2,310.3 usft	Northing: 619,879.16 usft
	+E/-W	-84.4 usft	Easting: 717,187.68 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Ground Level:	3,696.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination:
			(°)
	IGRF2010	3/27/2014	7.37
			Dip Angle
			(°)
			60.53
			Field Strength
			(nT)
			48,603

Design	Design #2		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			89.83

Plan Sections:										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
9,022.5	0.00	0.00	9,022.5	0.0	0.0	0.00	0.00	0.00	0.00	
9,772.5	90.00	89.83	9,500.0	1.4	477.5	12.00	12.00	11.98	89.83	
13,908.3	90.00	89.83	9,500.0	13.6	4,613.3	0.00	0.00	0.00	0.00	PBHL Scarecrow 34

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Well:	Scarecrow 34 Fed Com #3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00

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Wellbore:	Wellbore #1		
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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	0.00	0.00	0.00
8,800.0	0.00	0.00	8,800.0	0.0	0.0	0.0	0.00	0.00	0.00
8,900.0	0.00	0.00	8,900.0	0.0	0.0	0.0	0.00	0.00	0.00
9,000.0	0.00	0.00	9,000.0	0.0	0.0	0.0	0.00	0.00	0.00
Build 12°/100'									
9,022.5	0.00	0.00	9,022.5	0.0	0.0	0.0	0.00	0.00	0.00
9,100.0	9.30	89.83	9,099.7	0.0	6.3	6.3	12.00	12.00	0.00
9,200.0	21.30	89.83	9,195.9	0.1	32.6	32.6	12.00	12.00	0.00
9,300.0	33.30	89.83	9,284.6	0.2	78.4	78.4	12.00	12.00	0.00
9,400.0	45.30	89.83	9,361.9	0.4	141.6	141.6	12.00	12.00	0.00
9,500.0	57.30	89.83	9,424.3	0.6	219.5	219.5	12.00	12.00	0.00
9,600.0	69.30	89.83	9,469.1	0.9	308.7	308.7	12.00	12.00	0.00
9,700.0	81.30	89.83	9,494.5	1.2	405.2	405.2	12.00	12.00	0.00
EOC @ 90° Inc / 89.83° Azm / 9500' TVD									
9,772.5	90.00	89.83	9,500.0	1.4	477.5	477.5	12.00	12.00	0.00
9,800.0	90.00	89.83	9,500.0	1.5	505.0	505.0	0.00	0.00	0.00
9,900.0	90.00	89.83	9,500.0	1.8	605.0	605.0	0.00	0.00	0.00
10,000.0	90.00	89.83	9,500.0	2.1	705.0	705.0	0.00	0.00	0.00
10,100.0	90.00	89.83	9,500.0	2.4	805.0	805.0	0.00	0.00	0.00
10,200.0	90.00	89.83	9,500.0	2.7	905.0	905.0	0.00	0.00	0.00

DDC

Well Planning Report



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10,300.0	90.00	89.83	9,500.0	3.0	1,005.0	1,005.0	0.00	0.00	0.00
10,400.0	90.00	89.83	9,500.0	3.3	1,105.0	1,105.0	0.00	0.00	0.00
10,500.0	90.00	89.83	9,500.0	3.5	1,205.0	1,205.0	0.00	0.00	0.00
10,600.0	90.00	89.83	9,500.0	3.8	1,305.0	1,305.0	0.00	0.00	0.00
10,700.0	90.00	89.83	9,500.0	4.1	1,405.0	1,405.0	0.00	0.00	0.00
10,800.0	90.00	89.83	9,500.0	4.4	1,505.0	1,505.0	0.00	0.00	0.00
10,900.0	90.00	89.83	9,500.0	4.7	1,605.0	1,605.0	0.00	0.00	0.00
11,000.0	90.00	89.83	9,500.0	5.0	1,705.0	1,705.0	0.00	0.00	0.00
11,100.0	90.00	89.83	9,500.0	5.3	1,805.0	1,805.0	0.00	0.00	0.00
11,200.0	90.00	89.83	9,500.0	5.6	1,905.0	1,905.0	0.00	0.00	0.00
11,300.0	90.00	89.83	9,500.0	5.9	2,005.0	2,005.0	0.00	0.00	0.00
11,400.0	90.00	89.83	9,500.0	6.2	2,105.0	2,105.0	0.00	0.00	0.00
11,500.0	90.00	89.83	9,500.0	6.5	2,205.0	2,205.0	0.00	0.00	0.00
11,600.0	90.00	89.83	9,500.0	6.8	2,305.0	2,305.0	0.00	0.00	0.00
11,700.0	90.00	89.83	9,500.0	7.1	2,405.0	2,405.0	0.00	0.00	0.00
11,800.0	90.00	89.83	9,500.0	7.4	2,505.0	2,505.0	0.00	0.00	0.00
11,900.0	90.00	89.83	9,500.0	7.7	2,605.0	2,605.0	0.00	0.00	0.00
12,000.0	90.00	89.83	9,500.0	8.0	2,705.0	2,705.0	0.00	0.00	0.00
12,100.0	90.00	89.83	9,500.0	8.3	2,805.0	2,805.0	0.00	0.00	0.00
12,200.0	90.00	89.83	9,500.0	8.5	2,905.0	2,905.0	0.00	0.00	0.00
12,300.0	90.00	89.83	9,500.0	8.8	3,005.0	3,005.0	0.00	0.00	0.00
12,400.0	90.00	89.83	9,500.0	9.1	3,105.0	3,105.0	0.00	0.00	0.00
12,500.0	90.00	89.83	9,500.0	9.4	3,205.0	3,205.0	0.00	0.00	0.00
12,600.0	90.00	89.83	9,500.0	9.7	3,305.0	3,305.0	0.00	0.00	0.00
12,700.0	90.00	89.83	9,500.0	10.0	3,405.0	3,405.0	0.00	0.00	0.00
12,800.0	90.00	89.83	9,500.0	10.3	3,504.9	3,505.0	0.00	0.00	0.00
12,900.0	90.00	89.83	9,500.0	10.6	3,604.9	3,605.0	0.00	0.00	0.00
13,000.0	90.00	89.83	9,500.0	10.9	3,704.9	3,705.0	0.00	0.00	0.00
13,100.0	90.00	89.83	9,500.0	11.2	3,804.9	3,805.0	0.00	0.00	0.00
13,200.0	90.00	89.83	9,500.0	11.5	3,904.9	3,905.0	0.00	0.00	0.00
13,300.0	90.00	89.83	9,500.0	11.8	4,004.9	4,005.0	0.00	0.00	0.00
13,400.0	90.00	89.83	9,500.0	12.1	4,104.9	4,105.0	0.00	0.00	0.00
13,500.0	90.00	89.83	9,500.0	12.4	4,204.9	4,205.0	0.00	0.00	0.00
13,600.0	90.00	89.83	9,500.0	12.7	4,304.9	4,305.0	0.00	0.00	0.00
13,700.0	90.00	89.83	9,500.0	13.0	4,404.9	4,405.0	0.00	0.00	0.00
13,800.0	90.00	89.83	9,500.0	13.3	4,504.9	4,505.0	0.00	0.00	0.00
13,900.0	90.00	89.83	9,500.0	13.6	4,604.9	4,605.0	0.00	0.00	0.00
TD @ 13908' MD / 9500' TVD									
13,908.3	90.00	89.83	9,500.0	13.6	4,613.3	4,613.3	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL Scarecrow 34 F	90.00	89.83	9,500.0	13.6	4,618.3	619,892.75	721,805.94	32° 42' 9.917 N	103° 44' 47.904 W
- plan misses target center by 5.0usft at 13908.3usft MD (9500.0 TVD, 13.6 N, 4613.3 E)									
- Rectangle (sides W100.0 H0.0 D4, 140.8)									
PBHL Scarecrow 34 F	0.00	0.00	9,500.0	13.6	4,613.3	619,892.74	721,800.94	32° 42' 9.918 N	103° 44' 47.962 W
- plan hits target center									
- Point									

DDC
Well Planning Report



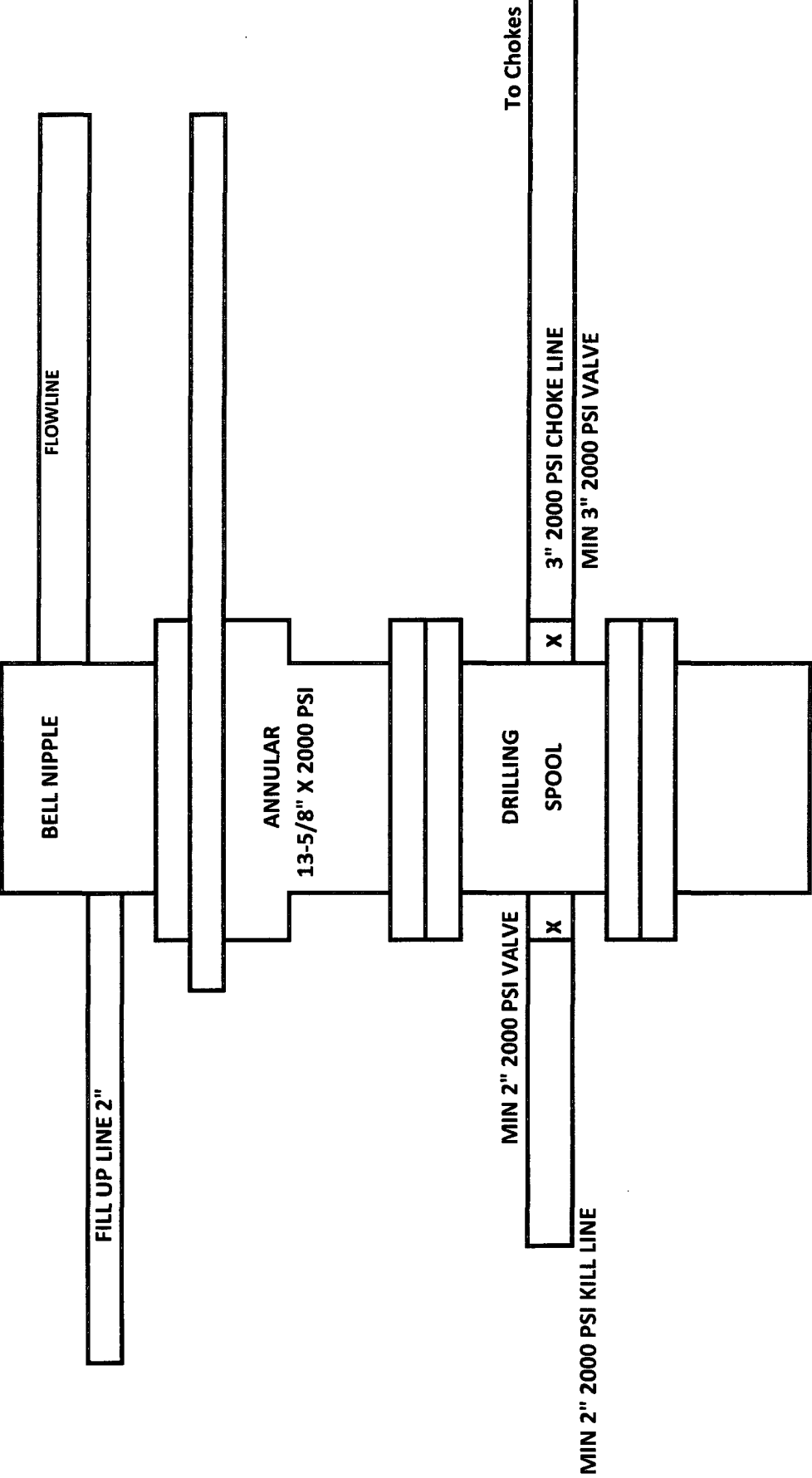
Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Scarecrow 34 Fed Com #3H
Company:	Nadel & Gussman Permian, LLC	TVD Reference:	Well @ 3696.0usft
Project:	Eddy County, NM (NAD-83)	MD Reference:	Well @ 3696.0usft
Site:	Sec 34, T18S, 32E	North Reference:	Grid
Well:	Scarecrow 34 Fed Com #3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #2		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,022.5	9,022.5	0.0	0.0	Build 12°/100'
9,772.5	9,500.0	1.4	477.5	EOC @ 90° Inc / 89.83° Azm / 9500' TVD
13,908.3	9,500.0	13.6	4,613.3	TD @ 13908' MD / 9500' TVD

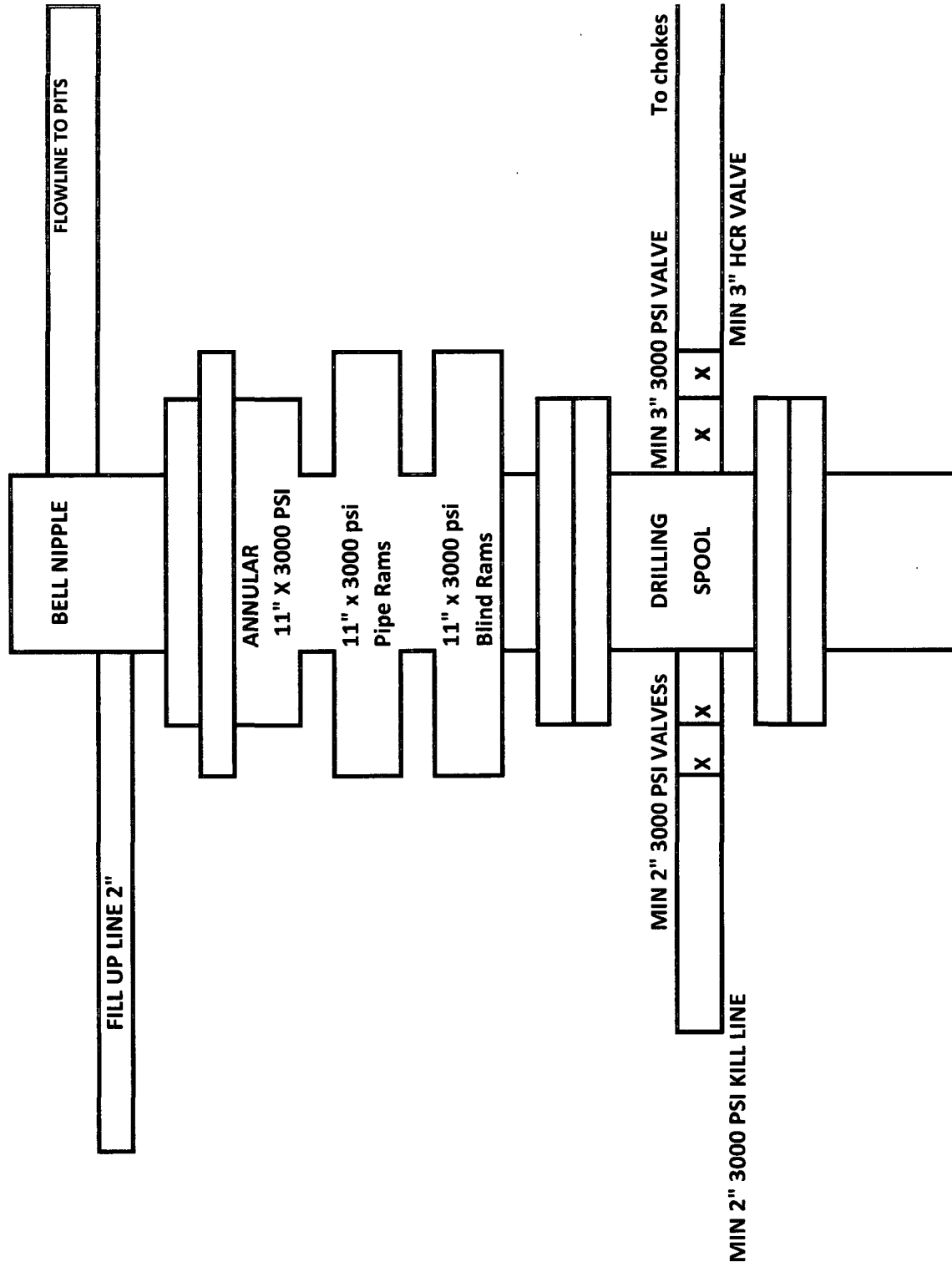
Well Scarecrow 34 Federal Com #3H
2210' FSL, 330' FWL, Sec. 34-T18S-R32E
Lea County, New Mexico

**Nadel and Gussman Permian, L.L.C.
BOP Schematic 12.25" hole**

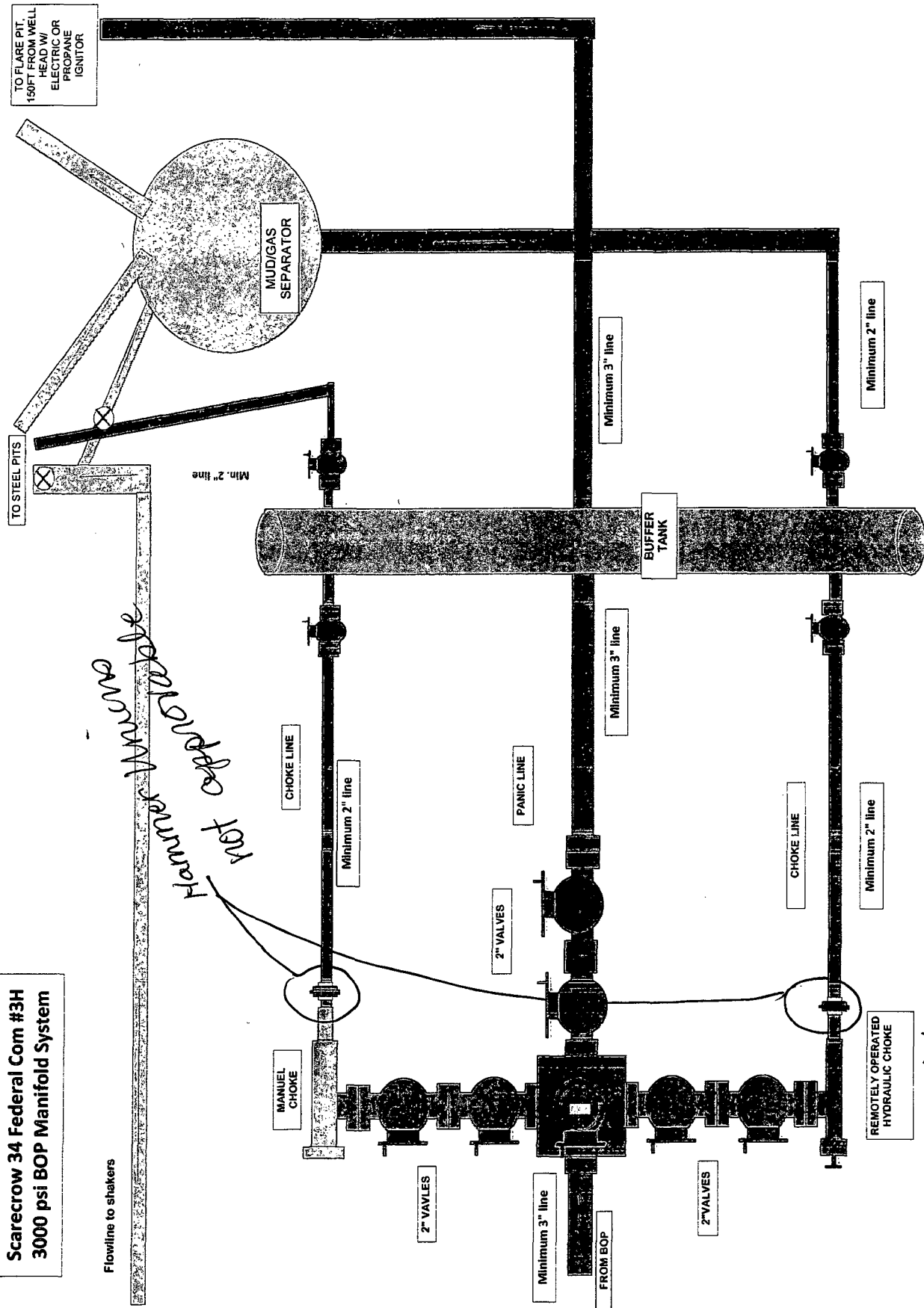


Well Scarecrow 34 Federal Com #3H
2210' FSL, 330' FWL, Sec. 34-T18S-R32E
Lea County, New Mexico

**Nadel and Gussman Permian, L.L.C.
BOP Schematic 8.75" & 6.125" hole**



**Scarecrow 34 Federal Com #3H
3000 psi BOP Manifold System**



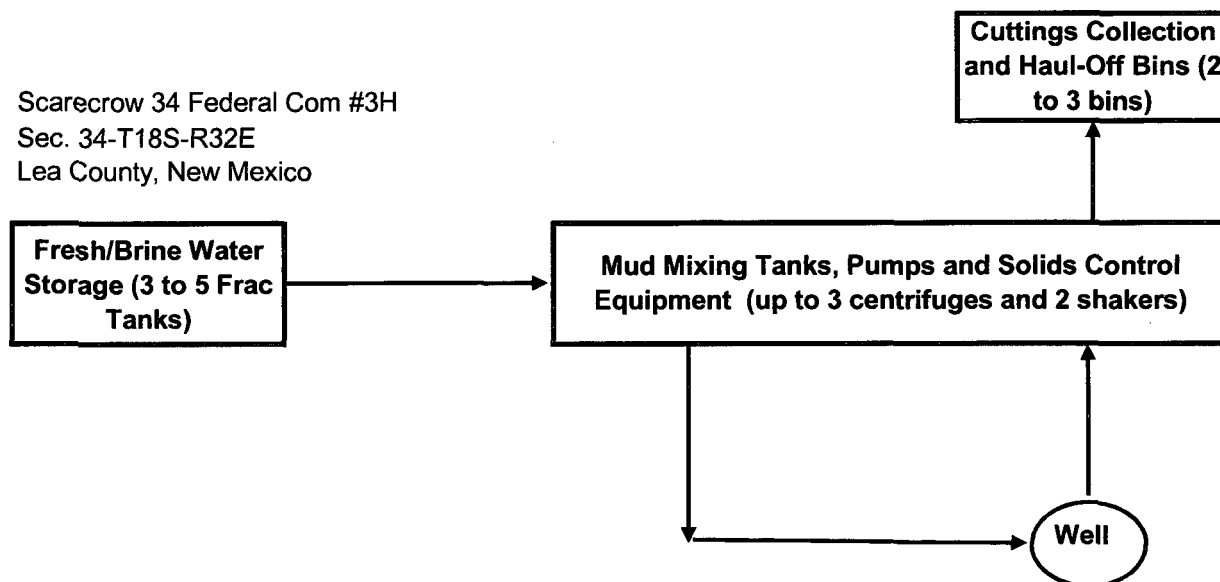
Exact manifold configuration may vary

remotely operated

CLOSED-LOOP SYSTEM

Design Plan:

Scarecrow 34 Federal Com #3H
Sec. 34-T18S-R32E
Lea County, New Mexico



Operating and Maintenance Plan:

During drilling operations, third party service companies will utilize solids control equipment to remove cuttings from the drilling fluid and collect it in haul-off bins. Equipment will be closely monitored at all times while drilling by the derrick man and the service company employees.

Closure Plan:

During drilling operations, third party service companies will haul-off drill solids and fluids to an approved disposal facility. At the end of the well, all closed loop equipment will be removed from the location.