

Mewbourne Oil Co

Eddy, New Mexico

Sec 20-18S-30E

Aries 20 Fed Com #2H

Wellbore #1

30-015-38392

Survey: MWD

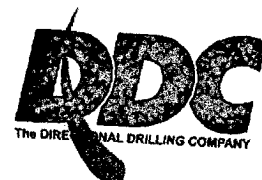
DDC Survey Report

18 February, 2011

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DDC Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Aries 20 Fed Com #2H
Project:	Eddy, New Mexico	TVD Reference:	WELL @ 3495.0usft (Patterson UTI #46)
Site:	Sec 20-18S-30E	MD Reference:	WELL @ 3495.0usft (Patterson UTI #46)
Well:	Aries 20 Fed Com #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project	Eddy, New Mexico		
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		Sec 20-18S-30E			
Site Position:		Northing:	631,082.30 usft	Latitude:	32° 44' 4.205 N
From:	Map	Easting:	602,014.20 usft	Longitude:	104° 0' 5.683 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.18 °

Well	Aries 20 Fed Com #2H					
Well Position	+N/-S	0.0 usft	Northing:	631,082.30 usft	Latitude:	32° 44' 4.205 N
	+E/-W	0.0 usft	Easting:	602,014.20 usft	Longitude:	104° 0' 5.683 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,474.0 usft

Wellbore:	Wellbore #1
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/28/2010	7.88	60.60	48,922

Design:	Wellbore #1
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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	89.09

Survey Program		Date 2/18/2011		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
100.0	7,440.0	GYRO (Wellbore #1)	Good_gyro	Good Gyro
7,539.0	12,646.0	MWD (Wellbore #1)	MWD default	MWD - Standard

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)
Tie-In										
	7,440.0	0.60	239.65	7,438.6	28.6	8.0	8.4	0.00	0.00	0.00
	7,539.0	1.00	209.30	7,537.6	27.6	7.1	7.6	0.58	0.40	-30.66
	7,571.0	1.20	191.10	7,569.5	27.1	6.9	7.3	1.25	0.63	-56.88
	7,603.0	3.20	125.50	7,601.5	26.2	7.6	8.0	9.11	6.25	-205.00
	7,634.0	6.60	109.30	7,632.4	25.1	10.0	10.4	11.73	10.97	-52.26
	7,666.0	10.30	104.40	7,664.1	23.8	14.5	14.9	11.77	11.56	-15.31
	7,698.0	13.40	101.90	7,695.4	22.3	20.9	21.2	9.82	9.69	-7.81
	7,729.0	15.80	102.00	7,725.4	20.7	28.5	28.8	7.74	7.74	0.32
	7,761.0	18.00	99.10	7,756.0	19.0	37.7	38.0	7.36	6.88	-9.06

DDC Survey Report



Company: Mewbourne Oil Co
Project: Eddy, New Mexico
Site: Sec 20-18S-30E
Well: Aries 20 Fed Com #2H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Aries 20 Fed Com #2H
TVD Reference: WELL @ 3495.0usft (Patterson UTI #46)
MD Reference: WELL @ 3495.0usft (Patterson UTI #46)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 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)
7,793.0	20.60	95.10	7,786.2	17.7	48.2	48.4	9.11	8.13	-12.50
7,825.0	23.10	91.50	7,815.9	17.1	60.0	60.3	8.86	7.81	-11.25
7,856.0	26.40	88.20	7,844.0	17.1	73.0	73.3	11.54	10.65	-10.65
7,888.0	29.40	88.40	7,872.3	17.6	88.0	88.2	9.38	9.38	0.63
7,920.0	32.50	88.60	7,899.8	18.0	104.4	104.7	9.69	9.69	0.63
7,952.0	35.70	88.90	7,926.2	18.4	122.4	122.6	10.01	10.00	0.94
Crossed Hard-Line @ 7962' MD									
7,962.0	36.48	88.67	7,934.3	18.5	128.3	128.5	7.92	7.81	-2.28
7,984.0	38.20	88.20	7,951.8	18.9	141.6	141.9	7.92	7.81	-2.15
8,015.0	40.40	88.50	7,975.8	19.4	161.2	161.5	7.12	7.10	0.97
8,047.0	43.10	88.80	7,999.7	19.9	182.5	182.8	8.46	8.44	0.94
8,079.0	46.30	89.20	8,022.4	20.3	205.0	205.3	10.04	10.00	1.25
8,110.0	50.00	89.20	8,043.1	20.7	228.1	228.4	11.94	11.94	0.00
8,142.0	53.80	88.00	8,062.8	21.3	253.3	253.6	12.24	11.88	-3.75
8,173.0	57.70	87.50	8,080.3	22.3	278.9	279.2	12.65	12.58	-1.61
8,205.0	60.60	87.40	8,096.7	23.5	306.3	306.6	9.07	9.06	-0.31
8,237.0	62.80	88.10	8,111.9	24.6	334.5	334.8	7.14	6.88	2.19
8,269.0	65.70	89.80	8,125.8	25.1	363.3	363.6	10.25	9.06	5.31
8,300.0	69.50	91.60	8,137.6	24.8	391.9	392.3	13.38	12.26	5.81
8,332.0	74.20	90.90	8,147.5	24.1	422.3	422.7	14.83	14.69	-2.19
8,364.0	78.30	89.50	8,155.1	24.0	453.4	453.7	13.50	12.81	-4.38
8,439.0	84.80	86.00	8,166.2	26.9	527.5	527.8	9.82	8.67	-4.67
8,471.0	87.10	85.80	8,168.4	29.2	559.3	559.7	7.21	7.19	-0.63
8,503.0	87.40	86.10	8,170.0	31.5	591.2	591.6	1.33	0.94	0.94
8,534.0	89.40	87.00	8,170.8	33.3	622.1	622.6	7.07	6.45	2.90
8,566.0	89.10	87.30	8,171.2	34.9	654.1	654.6	1.33	-0.94	0.94
8,598.0	89.00	87.10	8,171.8	36.5	686.0	686.5	0.70	-0.31	-0.63
8,630.0	90.10	88.50	8,172.0	37.7	718.0	718.5	5.56	3.44	4.38
8,662.0	90.40	88.00	8,171.9	38.7	750.0	750.5	1.82	0.94	-1.56
8,693.0	90.40	88.00	8,171.7	39.8	781.0	781.5	0.00	0.00	0.00
8,725.0	89.90	89.90	8,171.6	40.4	813.0	813.5	6.14	-1.56	5.94
8,757.0	89.50	90.50	8,171.8	40.3	845.0	845.5	2.25	-1.25	1.88
8,789.0	89.30	90.70	8,172.1	39.9	877.0	877.5	0.88	-0.63	0.63
8,820.0	89.40	90.20	8,172.4	39.7	908.0	908.5	1.64	0.32	-1.61
8,852.0	89.20	89.60	8,172.8	39.7	940.0	940.5	1.98	-0.63	-1.88
8,884.0	89.20	89.50	8,173.3	40.0	972.0	972.5	0.31	0.00	-0.31
8,915.0	88.80	89.10	8,173.8	40.4	1,002.9	1,003.5	1.82	-1.29	-1.29
8,947.0	88.60	88.90	8,174.5	40.9	1,034.9	1,035.5	0.88	-0.63	-0.63
8,979.0	88.30	89.40	8,175.4	41.4	1,066.9	1,067.4	1.82	-0.94	1.56
9,043.0	89.30	89.30	8,176.7	42.1	1,130.9	1,131.4	1.57	1.56	-0.16
9,107.0	88.90	88.60	8,177.8	43.3	1,194.9	1,195.4	1.26	-0.63	-1.09
9,170.0	88.50	88.70	8,179.2	44.8	1,257.8	1,258.4	0.65	-0.63	0.16
9,234.0	89.40	89.60	8,180.4	45.7	1,321.8	1,322.4	1.99	1.41	1.41

DDC Survey Report



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Site:	Sec 20-18S-30E	MD Reference:	WELL @ 3495.0usft (Patterson UTI #46)
Well:	Aries 20 Fed Com #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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)
9,296.0	88.40	89.90	8,181.5	46.0	1,383.8	1,384.4	1.68	-1.61	0.48
9,360.0	90.30	90.80	8,182.3	45.6	1,447.8	1,448.4	3.28	2.97	1.41
9,423.0	87.90	88.60	8,183.3	45.9	1,510.8	1,511.3	5.17	-3.81	-3.49
9,487.0	88.30	88.00	8,185.4	47.8	1,574.7	1,575.3	1.13	0.63	-0.94
9,551.0	90.00	87.80	8,186.3	50.2	1,638.7	1,639.3	2.67	2.66	-0.31
9,614.0	89.60	87.80	8,186.6	52.6	1,701.6	1,702.2	0.63	-0.63	0.00
9,678.0	93.80	91.60	8,184.7	52.9	1,765.6	1,766.2	8.85	6.56	5.94
9,741.0	93.30	93.10	8,180.8	50.4	1,828.4	1,829.0	2.51	-0.79	2.38
9,804.0	91.70	90.00	8,178.0	48.7	1,891.3	1,891.8	5.53	-2.54	-4.92
9,836.0	90.60	88.80	8,177.4	49.0	1,923.3	1,923.8	5.09	-3.44	-3.75
9,867.0	88.40	88.60	8,177.6	49.7	1,954.3	1,954.8	7.13	-7.10	-0.65
9,898.0	89.50	89.70	8,178.2	50.2	1,985.3	1,985.8	5.02	3.55	3.55
9,930.0	89.80	89.60	8,178.4	50.4	2,017.3	2,017.8	0.99	0.94	-0.31
9,962.0	87.30	88.70	8,179.2	50.8	2,049.3	2,049.8	8.30	-7.81	-2.81
9,994.0	87.30	89.10	8,180.7	51.4	2,081.2	2,081.8	1.25	0.00	1.25
10,026.0	88.10	89.70	8,182.0	51.8	2,113.2	2,113.7	3.12	2.50	1.88
10,058.0	88.20	89.50	8,183.0	52.0	2,145.2	2,145.7	0.70	0.31	-0.63
10,089.0	88.30	89.80	8,184.0	52.2	2,176.2	2,176.7	1.02	0.32	0.97
10,121.0	88.00	89.50	8,185.0	52.4	2,208.1	2,208.7	1.33	-0.94	-0.94
10,153.0	88.00	89.20	8,186.1	52.7	2,240.1	2,240.7	0.94	0.00	-0.94
10,185.0	87.80	88.80	8,187.3	53.3	2,272.1	2,272.6	1.40	-0.63	-1.25
10,217.0	87.70	88.90	8,188.6	53.9	2,304.1	2,304.6	0.44	-0.31	0.31
10,248.0	87.90	89.00	8,189.7	54.5	2,335.0	2,335.6	0.72	0.65	0.32
10,280.0	89.90	89.00	8,190.4	55.1	2,367.0	2,367.6	6.25	6.25	0.00
10,312.0	90.60	88.90	8,190.2	55.7	2,399.0	2,399.6	2.21	2.19	-0.31
10,344.0	90.30	89.10	8,190.0	56.2	2,431.0	2,431.6	1.13	-0.94	0.63
10,375.0	90.60	89.10	8,189.7	56.7	2,462.0	2,462.6	0.97	0.97	0.00
10,407.0	90.30	88.80	8,189.5	57.3	2,494.0	2,494.6	1.33	-0.94	-0.94
10,439.0	89.10	88.20	8,189.6	58.1	2,526.0	2,526.6	4.19	-3.75	-1.88
10,471.0	89.00	88.00	8,190.2	59.2	2,558.0	2,558.6	0.70	-0.31	-0.63
10,503.0	89.30	88.00	8,190.6	60.3	2,589.9	2,590.6	0.94	0.94	0.00
10,535.0	89.00	87.80	8,191.1	61.5	2,621.9	2,622.6	1.13	-0.94	-0.63
10,566.0	88.70	87.60	8,191.7	62.7	2,652.9	2,653.5	1.16	-0.97	-0.65
10,598.0	88.60	87.60	8,192.5	64.1	2,684.8	2,685.5	0.31	-0.31	0.00
10,630.0	88.80	87.70	8,193.2	65.4	2,716.8	2,717.5	0.70	0.63	0.31
10,662.0	88.60	88.40	8,194.0	66.5	2,748.8	2,749.5	2.27	-0.63	2.19
10,694.0	88.80	87.80	8,194.7	67.5	2,780.8	2,781.5	1.98	0.63	-1.88
10,726.0	88.80	87.80	8,195.3	68.8	2,812.7	2,813.5	0.00	0.00	0.00
10,757.0	89.20	88.90	8,195.9	69.6	2,843.7	2,844.5	3.78	1.29	3.55
10,789.0	89.40	88.40	8,196.3	70.4	2,875.7	2,876.5	1.68	0.63	-1.56
10,821.0	89.80	88.10	8,196.5	71.4	2,907.7	2,908.4	1.56	1.25	-0.94
10,853.0	89.30	89.60	8,196.8	72.0	2,939.7	2,940.4	4.94	-1.56	4.69
10,885.0	89.60	89.80	8,197.1	72.2	2,971.7	2,972.4	1.13	0.94	0.63
10,917.0	89.40	90.40	8,197.3	72.1	3,003.7	3,004.4	1.98	-0.63	1.88

DDC Survey Report



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Project: Eddy, New Mexico
Site: Sec 20-18S-30E
Well: Aries 20 Fed Com #2H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Aries 20 Fed Com #2H
TVD Reference: WELL @ 3495.0usft (Patterson UTI #46)
MD Reference: WELL @ 3495.0usft (Patterson UTI #46)
North Reference: Grid
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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)
10,949.0	89.80	90.50	8,197.6	71.9	3,035.7	3,036.4	1.29	1.25	0.31
10,980.0	89.60	90.00	8,197.7	71.7	3,066.7	3,067.4	1.74	-0.65	-1.61
11,012.0	89.10	89.30	8,198.1	71.9	3,098.7	3,099.4	2.69	-1.56	-2.19
11,044.0	89.00	90.40	8,198.6	72.0	3,130.7	3,131.4	3.45	-0.31	3.44
11,108.0	88.20	89.80	8,200.2	71.9	3,194.6	3,195.4	1.56	-1.25	-0.94
11,171.0	88.80	90.70	8,201.8	71.6	3,257.6	3,258.3	1.72	0.95	1.43
11,234.0	88.70	90.00	8,203.2	71.3	3,320.6	3,321.3	1.12	-0.16	-1.11
11,298.0	90.50	90.60	8,203.7	70.9	3,384.6	3,385.3	2.96	2.81	0.94
11,361.0	91.40	90.50	8,202.6	70.3	3,447.6	3,448.3	1.44	1.43	-0.16
11,424.0	92.00	90.60	8,200.7	69.7	3,510.5	3,511.2	0.97	0.95	0.16
11,488.0	89.40	90.50	8,200.0	69.1	3,574.5	3,575.2	4.07	-4.06	-0.16
11,552.0	88.60	90.40	8,201.1	68.6	3,638.5	3,639.2	1.26	-1.25	-0.16
11,616.0	88.00	89.60	8,203.0	68.6	3,702.5	3,703.1	1.56	-0.94	-1.25
11,679.0	87.20	89.80	8,205.6	68.9	3,765.4	3,766.1	1.31	-1.27	0.32
11,743.0	86.20	88.70	8,209.3	69.8	3,829.3	3,830.0	2.32	-1.56	-1.72
11,775.0	86.30	89.00	8,211.4	70.4	3,861.3	3,861.9	0.99	0.31	0.94
11,807.0	87.60	89.30	8,213.1	70.9	3,893.2	3,893.8	4.17	4.06	0.94
11,839.0	88.60	89.90	8,214.2	71.1	3,925.2	3,925.8	3.64	3.13	1.88
11,870.0	89.80	90.30	8,214.6	71.0	3,956.2	3,956.8	4.08	3.87	1.29
11,902.0	90.60	90.90	8,214.5	70.7	3,988.2	3,988.8	3.12	2.50	1.88
11,934.0	89.70	90.80	8,214.4	70.2	4,020.2	4,020.8	2.83	-2.81	-0.31
11,965.0	89.40	90.60	8,214.6	69.9	4,051.2	4,051.8	1.16	-0.97	-0.65
11,997.0	90.50	90.80	8,214.7	69.5	4,083.2	4,083.8	3.49	3.44	0.63
12,029.0	90.70	90.50	8,214.3	69.1	4,115.2	4,115.7	1.13	0.63	-0.94
12,061.0	90.40	90.00	8,214.0	69.0	4,147.2	4,147.7	1.82	-0.94	-1.56
12,093.0	90.50	90.30	8,213.8	68.9	4,179.2	4,179.7	0.99	0.31	0.94
12,125.0	90.20	90.60	8,213.6	68.6	4,211.2	4,211.7	1.33	-0.94	0.94
12,157.0	89.90	90.50	8,213.5	68.3	4,243.2	4,243.7	0.99	-0.94	-0.31
12,189.0	89.40	90.30	8,213.7	68.1	4,275.2	4,275.7	1.68	-1.56	-0.63
12,221.0	89.70	90.40	8,214.0	67.9	4,307.2	4,307.7	0.99	0.94	0.31
12,253.0	90.30	90.20	8,214.0	67.7	4,339.2	4,339.7	1.98	1.88	-0.63
12,285.0	90.10	90.30	8,213.9	67.6	4,371.2	4,371.7	0.70	-0.63	0.31
12,316.0	89.80	90.30	8,213.9	67.4	4,402.2	4,402.7	0.97	-0.97	0.00
12,348.0	89.30	90.20	8,214.2	67.3	4,434.1	4,434.7	1.59	-1.56	-0.31
12,380.0	88.90	90.20	8,214.7	67.2	4,466.1	4,466.6	1.25	-1.25	0.00
12,412.0	88.80	90.40	8,215.3	67.0	4,498.1	4,498.6	0.70	-0.31	0.63
12,444.0	87.70	90.00	8,216.3	66.9	4,530.1	4,530.6	3.66	-3.44	-1.25
12,476.0	87.30	90.20	8,217.7	66.8	4,562.1	4,562.6	1.40	-1.25	0.63
12,507.0	88.40	89.40	8,218.8	66.9	4,593.1	4,593.6	4.39	3.55	-2.58
12,539.0	88.20	88.90	8,219.8	67.4	4,625.1	4,625.5	1.68	-0.63	-1.56
12,571.0	89.40	88.60	8,220.5	68.1	4,657.0	4,657.5	3.87	3.75	-0.94
12,603.0	89.50	87.90	8,220.8	69.1	4,689.0	4,689.5	2.21	0.31	-2.19

TD

DDC Survey Report



Company:	Mewbourne Oil Co	Local Co-ordinate Reference:	Well Aries 20 Fed Com #2H
Project:	Eddy, New Mexico	TVD Reference:	WELL @ 3495.0usft (Patterson UTI #46)
Site:	Sec 20-18S-30E	MD Reference:	WELL @ 3495.0usft (Patterson UTI #46)
Well:	Aries 20 Fed Com #2H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 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)
12,646.0	89.50	87.90	8,221.1	70.7	4,732.0	4,732.5	0.00	0.00	0.00

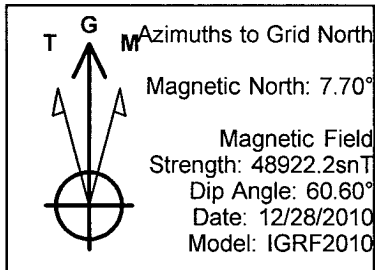
Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
7,440.0	7,438.6	28.6	8.0	Tie-In
7,962.0	7,934.3	18.5	128.3	Crossed Hard-Line @ 7962' MD
12,646.0	8,221.1	70.7	4,732.0	TD

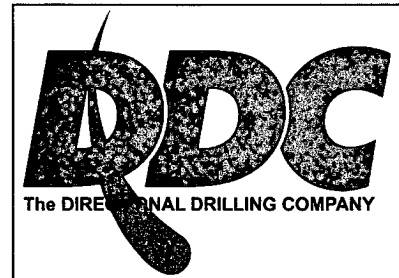
Checked By: _____	Approved By: _____	Date: _____
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Aries 20 Fed Com #2H
Eddy, New Mexico
Q100889 & WT-11032

Company Name: Mewbourne Oil Co
Aries 20 Fed Com #2H
Eddy, New Mexico
Rig: Patterson UTI #46
Created By: Kristen Koch
Date: 2/18/2011



Mewbourne Oil Company



PROJECT DETAILS: Eddy, New Mexico

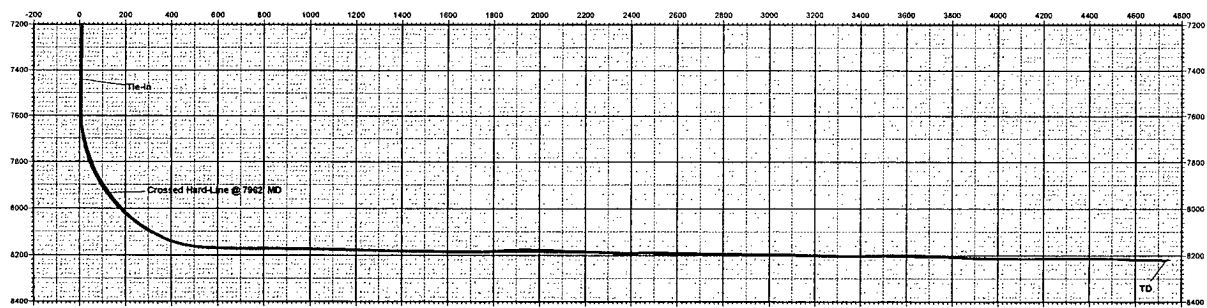
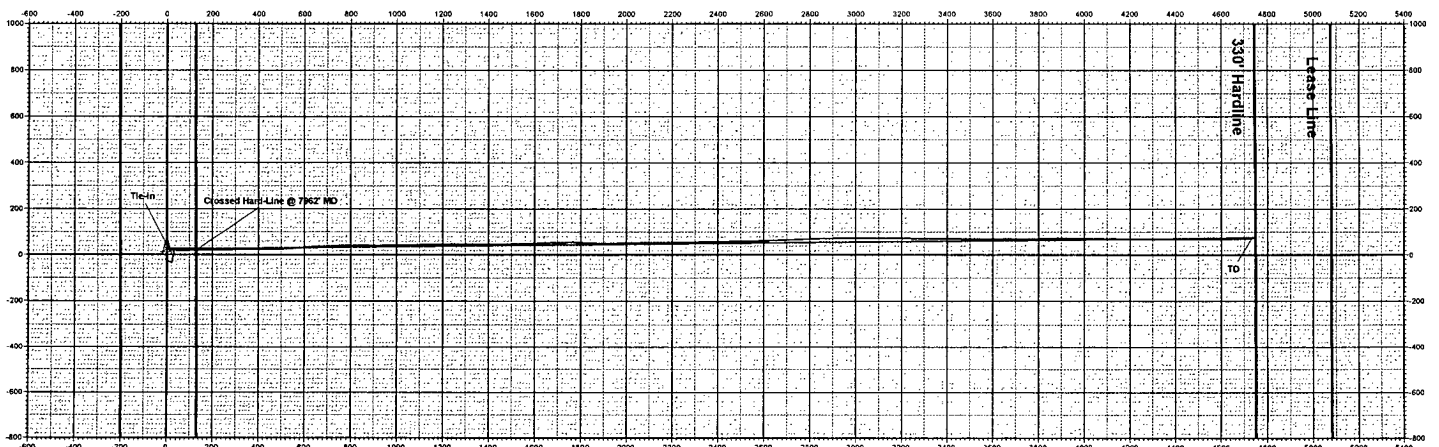
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

WELL DETAILS: Aries 20 Fed Com #2H

•N/-S	•E/-W	Ground Level:	3474.0
0.0	0.0	Northing	Easting
		631082.30	602014.20
		Latitude	Longitude
		32° 44' 4.205 N	104° 0' 5.683 W

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	V.Sect	Departure	Annotation
7440.0	0.60	238.65	7438.6	28.5	8.0	9.4	133.2	Tie-In
7962.0	36.48	88.67	7934.3	18.5	128.3	128.5	258.3	Crossed Hard-Line @ 7962' MD
12646.0	89.50	87.90	8221.1	70.7	4732.0	4732.5	4863.1	TD



Vertical Section at 89.09° (200 usft/in)