

30025-40642



Devon Energy, Inc.

Lea County (NAD83)

Butter Cup 35 State Com

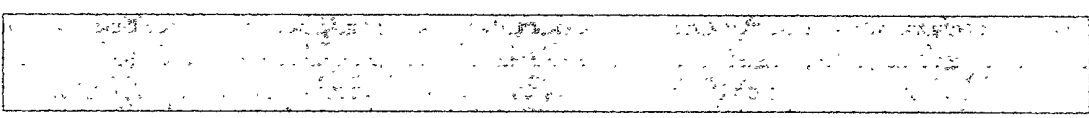
#2H

OH

Plan: Plan #1

PathfinderX & Y Report

04 June, 2012





Pathfinder

PathfinderX & Y Report



Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #2H
Project:	Lea County (NAD83)	TVD Reference:	KB = 19 @ 3990.2usft (McVay 8)
Site:	Butter Cup 35 State Com	MD Reference:	KB = 19 @ 3990.2usft (McVay 8)
Well:	#2H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Project	Lea County (NAD83)	System Datum:	Mean Sea Level
Map System:	US State Plane 1983		
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Butter Cup 35 State Com	Northing:	618,790.200 usft	Latitude:	32.698
Site Position:		Easting:	790,603.000 usft	Longitude:	-103.523
From:	Map	Slot Radius:	13-3/16 "	Grid Convergence:	0.44 °
Position Uncertainty:	0.0 usft				

Well	#2H	Northing:	619,789.800 usft	Latitude:	32.701
Well Position	+N/S	Easting:	790,545.300 usft	Longitude:	-103.523
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,971.2 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/4/2012	7.48	60.61	48,808

Design	Plan #1				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/S (usft)	+E/W (usft)	Direction (°)	
	0.0	0.0	0.0	274.75	

Survey Tool Program	Date	6/4/2012			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.0	15,102.9	Plan #1 (OH)	Pathfinder	Pathfinder MWD	



Pathfinder
PathfinderX & Y Report



Company:	Devon Energy, Inc.	Well #2H
Project:	Lea County (NAD83)	KB = 19 @ 3990 2usft (McVay 8)
Site:	Butter Cup 35 State Com	KB = 19 @ 3990 2usft (McVay 8)
Well:	#2H	Grid
Wellbore:	OH	Minimum Curvature
Design:	Plan #1	EDM 5000.1 Single User Db

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

Planned Survey	MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
	0.0	0.00	0.00	0.00	-3,990.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
	25.2	0.00	0.00	25.2	-3,965.0	0.0	0.0	0.0	0.00	619,789.80	790,545.30
QUATERNARY											
100.0	0.00	0.00	0.00	100.0	-3,890.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
200.0	0.00	0.00	0.00	200.0	-3,790.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
300.0	0.00	0.00	0.00	300.0	-3,690.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
400.0	0.00	0.00	0.00	400.0	-3,590.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
500.0	0.00	0.00	0.00	500.0	-3,490.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
600.0	0.00	0.00	0.00	600.0	-3,390.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
700.0	0.00	0.00	0.00	700.0	-3,290.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
800.0	0.00	0.00	0.00	800.0	-3,190.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
900.0	0.00	0.00	0.00	900.0	-3,090.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
1,000.0	0.00	0.00	0.00	1,000.0	-2,990.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
1,100.0	0.00	0.00	0.00	1,100.0	-2,890.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
1,200.0	0.00	0.00	0.00	1,200.0	-2,790.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
1,300.0	0.00	0.00	0.00	1,300.0	-2,690.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
1,400.0	0.00	0.00	0.00	1,400.0	-2,590.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
1,500.0	0.00	0.00	0.00	1,500.0	-2,490.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
1,600.0	0.00	0.00	0.00	1,600.0	-2,390.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
1,700.0	0.00	0.00	0.00	1,700.0	-2,290.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
1,800.0	0.00	0.00	0.00	1,800.0	-2,190.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
1,894.2	0.00	0.00	0.00	1,894.2	-2,096.0	0.0	0.0	0.0	0.00	619,789.80	790,545.30
RUSTLER DOL.											
1,900.0	0.00	0.00	0.00	1,900.0	-2,090.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
2,000.0	0.00	0.00	0.00	2,000.0	-1,990.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
2,100.0	0.00	0.00	0.00	2,100.0	-1,890.2	0.0	0.0	0.0	0.00	619,789.80	790,545.30
2,175.2	0.00	0.00	0.00	2,175.2	-1,815.0	0.0	0.0	0.0	0.00	619,789.80	790,545.30
SALADO SALT											



Pathfinder
PathfinderX & Y Report



Company:	Devon Energy, Inc.	Well #2H
Project:	Lea County (NAD83)	Local Co-ordinate Reference:
Site:	Butler Cup 35 State Com	TVD Reference:
Well:	#2H	KB = 19 @ 3990.2usft (McVay 8)
Wellbore:	OH	MD Reference:
Design:	Plan #1	KB = 19 @ 3990.2usft (McVay 8)
		Grid
		Minimum Curvature
		Survey Calculation Method:
		Database:
		EDM 5000.1 Single User Db

Planned Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	D/Leg (°/100usft)	Northing (usft)	Eastings (usft)
9,100.0	0.00	0.00	9,100.0	5,109.8	0.0	0.0	0.0	0.0	619,789.80	790,545.30
9,200.0	0.00	0.00	9,200.0	5,209.8	0.0	0.0	0.0	0.0	619,789.80	790,545.30
9,300.0	0.00	0.00	9,300.0	5,309.8	0.0	0.0	0.0	0.0	619,789.80	790,545.30
9,325.2	0.00	0.00	9,325.2	5,335.0	0.0	0.0	0.0	0.0	619,789.80	790,545.30
1ST BONE SPRING SS										
9,400.0	0.00	0.00	9,400.0	5,409.8	0.0	0.0	0.0	0.0	619,789.80	790,545.30
9,500.0	0.00	0.00	9,500.0	5,509.8	0.0	0.0	0.0	0.0	619,789.80	790,545.30
9,525.2	0.00	0.00	9,525.2	5,535.0	0.0	0.0	0.0	0.0	619,789.80	790,545.30
2ND BONE SPRING LM										
9,600.0	0.00	0.00	9,600.0	5,609.8	0.0	0.0	0.0	0.0	619,789.80	790,545.30
9,700.0	0.00	0.00	9,700.0	5,709.8	0.0	0.0	0.0	0.0	619,789.80	790,545.30
9,800.0	0.00	0.00	9,800.0	5,809.8	0.0	0.0	0.0	0.0	619,789.80	790,545.30
9,865.2	0.00	0.00	9,865.2	5,875.0	0.0	0.0	0.0	0.0	619,789.80	790,545.30
2ND BONE SPRING SS										
9,900.0	0.00	0.00	9,900.0	5,909.8	0.0	0.0	0.0	0.0	619,789.80	790,545.30
10,000.0	0.00	0.00	10,000.0	6,009.8	0.0	0.0	0.0	0.0	619,789.80	790,545.30
10,005.2	0.00	0.00	10,005.2	6,015.0	0.0	0.0	0.0	0.0	619,789.80	790,545.30
3rd Bone Spring Lime										
10,052.2	0.00	0.00	10,052.2	6,062.0	0.0	0.0	0.0	0.0	619,789.80	790,545.30
10,100.0	4.78	274.75	10,099.9	6,109.7	0.2	-2.0	2.0	10.00	619,789.97	790,543.31
10,150.0	9.78	274.75	10,149.5	6,159.3	0.7	-8.3	8.3	10.00	619,790.49	790,537.00
10,200.0	14.78	274.75	10,198.4	6,208.2	1.6	-18.9	19.0	10.00	619,791.37	790,526.41
10,250.0	19.78	274.75	10,246.1	6,255.9	2.8	-33.7	33.8	10.00	619,792.60	790,511.61
10,300.0	24.78	274.75	10,292.3	6,302.1	4.4	-52.6	52.8	10.00	619,794.17	790,492.73
10,350.0	29.78	274.75	10,336.8	6,346.6	6.3	-75.4	75.7	10.00	619,796.07	790,469.89
10,400.0	34.78	274.75	10,379.0	6,388.8	8.5	-102.0	102.4	10.00	619,798.28	790,443.29
10,450.0	39.78	274.75	10,418.8	6,428.6	11.0	-132.2	132.6	10.00	619,800.79	790,413.12

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #2H
Project:	Lea County (NAD83)	TVD Reference:	KB = 19 @ 3990.2usft (McVay 8)
Site:	Butter Cup 35 State Com	MD Reference:	KB = 19 @ 3990.2usft (McVay 8)
Well:	#2H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	EDM 5000.1 Single User Db

Planned Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Northing (usft)	Easting (usft)
10,458.4	40.62	274.75	10,425.2	6,435.0	11.4	-137.6	138.0	10.00	619,801.24	790,407.73
3rd Bone Spring Sand										
10,500.0	44.78	274.75	10,455.8	6,465.6	13.8	-165.7	166.3	10.00	619,803.58	790,379.61
10,550.0	49.78	274.75	10,489.7	6,499.5	16.8	-202.3	203.0	10.00	619,806.62	790,343.01
10,600.0	54.78	274.75	10,520.3	6,530.1	20.1	-241.7	242.5	10.00	619,809.90	790,303.61
10,650.0	59.78	274.75	10,547.3	6,557.1	23.6	-283.6	284.6	10.00	619,813.38	790,261.70
10,700.0	64.78	274.75	10,570.5	6,580.3	27.2	-327.7	328.8	10.00	619,817.05	790,217.61
10,750.0	69.78	274.75	10,589.8	6,599.6	31.1	-373.6	374.9	10.00	619,820.87	790,171.66
10,800.0	74.78	274.75	10,605.1	6,614.9	35.0	-421.1	422.5	10.00	619,824.81	790,124.21
10,850.0	79.78	274.75	10,616.1	6,625.9	39.1	-469.7	471.3	10.00	619,828.85	790,075.62
10,900.0	84.78	274.75	10,622.8	6,632.6	43.2	-519.0	520.8	10.00	619,832.96	790,026.26
10,952.2	90.00	274.75	10,625.2	6,635.0	47.5	-571.0	573.0	10.00	619,837.27	789,974.32
11,000.0	90.00	274.75	10,625.2	6,635.0	51.4	-618.6	620.8	0.00	619,841.24	789,926.68
11,100.0	90.00	274.75	10,625.2	6,635.0	59.7	-718.3	720.8	0.00	619,849.52	789,827.02
11,200.0	90.00	274.75	10,625.2	6,635.0	68.0	-817.9	820.8	0.00	619,857.81	789,727.36
11,300.0	90.00	274.75	10,625.2	6,635.0	76.3	-917.6	920.8	0.00	619,866.09	789,627.71
11,400.0	90.00	274.75	10,625.2	6,635.0	84.6	-1,017.2	1,020.8	0.00	619,874.38	789,528.05
11,500.0	90.00	274.75	10,625.2	6,635.0	92.9	-1,116.9	1,120.8	0.00	619,882.67	789,428.40
11,600.0	90.00	274.75	10,625.2	6,635.0	101.2	-1,216.6	1,220.8	0.00	619,890.95	789,328.74
11,700.0	90.00	274.75	10,625.2	6,635.0	109.4	-1,316.2	1,320.8	0.00	619,899.24	789,229.08
11,800.0	90.00	274.75	10,625.2	6,635.0	117.7	-1,415.9	1,420.8	0.00	619,907.52	789,129.43
11,900.0	90.00	274.75	10,625.2	6,635.0	126.0	-1,515.5	1,520.8	0.00	619,915.81	789,029.77
12,000.0	90.00	274.75	10,625.2	6,635.0	134.3	-1,615.2	1,620.8	0.00	619,924.10	788,930.12
12,100.0	90.00	274.75	10,625.2	6,635.0	142.6	-1,714.8	1,720.8	0.00	619,932.38	788,830.46
12,200.0	90.00	274.75	10,625.2	6,635.0	150.9	-1,814.5	1,820.8	0.00	619,940.67	788,730.80
12,300.0	90.00	274.75	10,625.2	6,635.0	159.2	-1,914.2	1,920.8	0.00	619,948.95	788,631.15
12,400.0	90.00	274.75	10,625.2	6,635.0	167.4	-2,013.8	2,020.8	0.00	619,957.24	788,531.49



Pathfinder
PathfinderX & Y Report



Company: Devon Energy, Inc
Project: Lea County (NAD83)
Site: Butter Cup 35 State Com
Well: #2H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:
TVD Reference: KB = 19 @ 3990 2usft (McVay 8)
MD Reference: KB = 19 @ 3990 2usft (McVay 8)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Well #2H

Planned Survey

MD (usft)	Inc. (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg. (°/100usft)	Northings (usft)	Eastings (usft)
12,500.0	90.00	274.75	10,625.2	6,635.0	175.7	-2,113.5	2,120.8	0.00	619,965.53	788,431.84
12,600.0	90.00	274.75	10,625.2	6,635.0	184.0	-2,213.1	2,220.8	0.00	619,973.81	788,332.18
12,700.0	90.00	274.75	10,625.2	6,635.0	192.3	-2,312.8	2,320.8	0.00	619,982.10	788,232.52
12,800.0	90.00	274.75	10,625.2	6,635.0	200.6	-2,412.4	2,420.8	0.00	619,990.38	788,132.87
12,900.0	90.00	274.75	10,625.2	6,635.0	208.9	-2,512.1	2,520.8	0.00	619,998.67	788,033.21
13,000.0	90.00	274.75	10,625.2	6,635.0	217.2	-2,611.7	2,620.8	0.00	620,006.96	787,933.55
13,100.0	90.00	274.75	10,625.2	6,635.0	225.4	-2,711.4	2,720.8	0.00	620,015.24	787,833.90
13,200.0	90.00	274.75	10,625.2	6,635.0	233.7	-2,811.1	2,820.8	0.00	620,023.53	787,734.24
13,300.0	90.00	274.75	10,625.2	6,635.0	242.0	-2,910.7	2,920.8	0.00	620,031.81	787,634.59
13,400.0	90.00	274.75	10,625.2	6,635.0	250.3	-3,010.4	3,020.8	0.00	620,040.10	787,534.93
13,500.0	90.00	274.75	10,625.2	6,635.0	258.6	-3,110.0	3,120.8	0.00	620,048.39	787,435.27
13,600.0	90.00	274.75	10,625.2	6,635.0	266.9	-3,209.7	3,220.8	0.00	620,056.67	787,335.62
13,700.0	90.00	274.75	10,625.2	6,635.0	275.2	-3,309.3	3,320.8	0.00	620,064.96	787,235.96
13,800.0	90.00	274.75	10,625.2	6,635.0	283.4	-3,409.0	3,420.8	0.00	620,073.24	787,136.31
13,900.0	90.00	274.75	10,625.2	6,635.0	291.7	-3,508.7	3,520.8	0.00	620,081.53	787,036.65
14,000.0	90.00	274.75	10,625.2	6,635.0	300.0	-3,608.3	3,620.8	0.00	620,089.82	786,936.99
14,100.0	90.00	274.75	10,625.2	6,635.0	308.3	-3,708.0	3,720.8	0.00	620,098.10	786,837.34
14,200.0	90.00	274.75	10,625.2	6,635.0	316.6	-3,807.6	3,820.8	0.00	620,106.39	786,737.68
14,300.0	90.00	274.75	10,625.2	6,635.0	324.9	-3,907.3	3,920.8	0.00	620,114.67	786,638.02
14,400.0	90.00	274.75	10,625.2	6,635.0	333.2	-4,006.9	4,020.8	0.00	620,122.96	786,538.37
14,500.0	90.00	274.75	10,625.2	6,635.0	341.4	-4,106.6	4,120.8	0.00	620,131.25	786,438.71
14,600.0	90.00	274.75	10,625.2	6,635.0	349.7	-4,206.2	4,220.8	0.00	620,139.53	786,339.06
14,700.0	90.00	274.75	10,625.2	6,635.0	358.0	-4,305.9	4,320.8	0.00	620,147.82	786,239.40
14,800.0	90.00	274.75	10,625.2	6,635.0	366.3	-4,405.6	4,420.8	0.00	620,156.10	786,139.74
14,900.0	90.00	274.75	10,625.2	6,635.0	374.6	-4,505.2	4,520.8	0.00	620,164.39	786,040.09
15,000.0	90.00	274.75	10,625.2	6,635.0	382.9	-4,604.9	4,620.8	0.00	620,172.67	785,940.43



Pathfinder
PathfinderX & Y Report



Company: Devon Energy, Inc.
Project: Lea County (NAD83)
Site: Butter Cup 35 State Com
Well: #2H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:
TVD Reference: KB = 19 @ 3990.2usft (McVay 8)
MD Reference: KB = 19 @ 3990.2usft (McVay 8)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

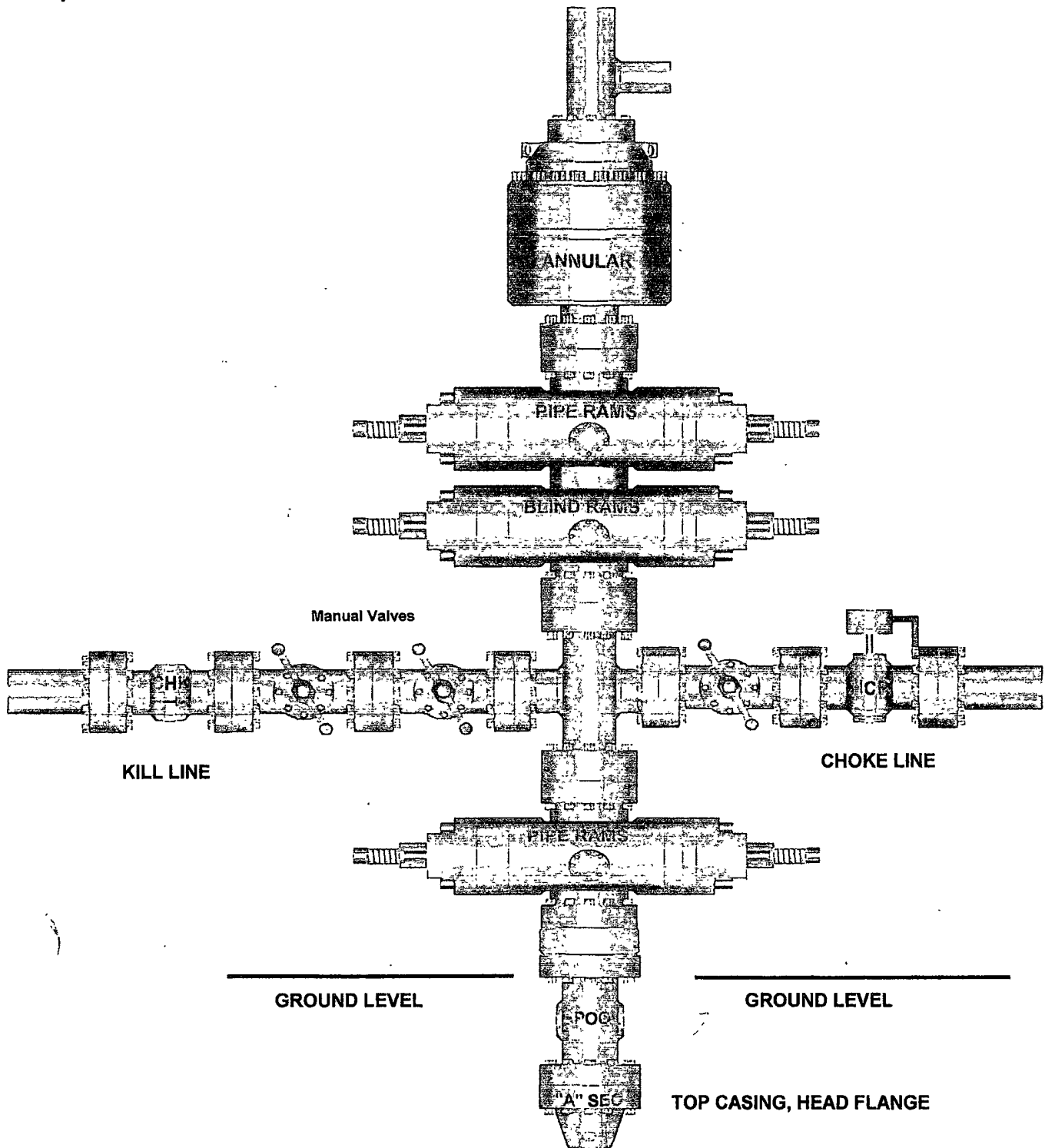
Well #2H

Planned Survey									
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	V. Sec (usft)	DLeg (°/100usft)	Eastings (usft)
15,102.9	90.00	274.75	10,625.2	6,635.0	391.4	-4,707.4	4,723.6	0.00	620,181.20
PBHL (Butter Cup 35 State #2H)									

Formations			Lithology		Dip Direction		Dip Direction	
Measured Depth (usft)	Vertical Depth (usft)	Name						
4,725.2	4,725.2	QUEEN SS.						
3,345.2	3,345.2	BASE SALT						
9,865.2	9,865.2	2ND BONE SPRING SS						
1,894.2	1,894.2	RUSTLER DOL.						
6,991.2	6,991.2	DELAWARE						
9,325.2	9,325.2	1ST BONE SPRING SS.						
5,305.2	5,305.2	GRAYBURG						
10,005.2	10,005.2	3rd Bone Spring Lime						
9,525.2	9,525.2	2ND BONE SPRING LM						
2,175.2	2,175.2	SALADO SALT						
25.2	25.2	QUATERNARY						
7,980.2	7,980.2	1ST BONE SPRING LM.						
3,450.2	3,450.2	YATES SS						
10,458.4	10,425.2	3rd Bone Spring Sand						

Checked By: _____ Approved By: _____ Date: _____

13-5/8" x 3,000 psi BOP Stack



13-5/8" 3M BOPE & Closed Loop Equipment Schematic

