

HOPPER

APR 29 2016

RECEIVED

DEVON ENERGY

Lea County, NM (NAD-83)

Hognose Viper 23 Fed

4H

OH

Plan: Plan #1

Standard Planning Report

20 May, 2015

MAY 03 2016

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 4H
Company:	DEVON ENERGY	TVD Reference:	3684.3' GL + 25' RKB @ 3709.30usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3684.3' GL + 25' RKB @ 3709.30usft
Site:	Hognose Viper 23 Fed	North Reference:	Grid
Well:	4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project:	Lea 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:	Hognose Viper 23 Fed		
Site Position:		Northing:	467,883.33 usft
From:	Map	Easting:	785,266.95 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 17' 1.746 N
		Longitude:	103° 32' 38.413 W
		Grid Convergence:	0.42 °

Well:	4H, 1st BS SS					
Well Position	+N/-S	0.00 usft	Northing:	467,883.33 usft	Latitude:	32° 17' 1.746 N
	+E/-W	0.00 usft	Easting:	785,266.95 usft	Longitude:	103° 32' 38.413 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	3,709.30 usft	Ground Level:	3,684.30 usft	

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	5/7/2015	7.28	60.14	48,210

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)	(°)
	0.00	0.00	0.00	0.00

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	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	
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,833.33	5.00	245.00	4,832.91	-6.14	-13.17	1.50	1.50	0.00	245.00	
6,333.33	5.00	245.00	6,327.20	-61.39	-131.66	0.00	0.00	0.00	0.00	
6,666.67	0.00	0.00	6,660.11	-67.54	-144.83	1.50	-1.50	0.00	180.00	
9,103.64	0.00	0.00	9,097.08	-67.54	-144.83	0.00	0.00	0.00	0.00	
10,010.61	90.70	360.00	9,670.00	512.39	-144.85	10.00	10.00	0.00	360.00	
14,118.84	90.70	360.00	9,620.00	4,620.32	-145.00	0.00	0.00	0.00	0.00	PBHL (HV23F 4H)

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db.	Local Co-ordinate Reference:	Well 4H
Company:	DEVON ENERGY	TVD Reference:	3684.3' GL + 25' RKB @ 3709.30usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3684.3' GL + 25' RKB @ 3709.30usft
Site:	Hognose Viper.23 Fed	North Reference:	Grid
Well:	4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (HV23F 4H)									
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
1,100.00	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
1,360.00	0.00	0.00	1,360.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
1,630.00	0.00	0.00	1,630.00	0.00	0.00	0.00	0.00	0.00	0.00
Top Salt									
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
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
Nudge									
4,600.00	1.50	245.00	4,599.99	-0.55	-1.19	-0.55	1.50	1.50	0.00
4,700.00	3.00	245.00	4,699.91	-2.21	-4.74	-2.21	1.50	1.50	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 4H
Company:	DEVON ENERGY	TVD Reference:	3684.3' GL + 25' RKB @ 3709.30usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3684.3' GL + 25' RKB @ 3709.30usft
Site:	Hognose/Viper 23 Fed	North Reference:	Grid:
Well:	4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
4,800.00	4.50	245.00	4,799.69	-4.98	-10.67	-4.98	1.50	1.50	0.00
4,833.33	5.00	245.00	4,832.91	-6.14	-13.17	-6.14	1.50	1.50	0.00
Hold									
4,900.00	5.00	245.00	4,899.32	-8.60	-18.44	-8.60	0.00	0.00	0.00
5,000.00	5.00	245.00	4,998.94	-12.28	-26.34	-12.28	0.00	0.00	0.00
5,091.41	5.00	245.00	5,090.00	-15.65	-33.56	-15.65	0.00	0.00	0.00
Base Salt									
5,100.00	5.00	245.00	5,098.56	-15.97	-34.24	-15.97	0.00	0.00	0.00
5,200.00	5.00	245.00	5,198.18	-19.65	-42.14	-19.65	0.00	0.00	0.00
5,287.15	5.00	245.00	5,285.00	-22.86	-49.02	-22.86	0.00	0.00	0.00
Delaware									
5,300.00	5.00	245.00	5,297.80	-23.33	-50.04	-23.33	0.00	0.00	0.00
5,400.00	5.00	245.00	5,397.42	-27.02	-57.93	-27.02	0.00	0.00	0.00
5,500.00	5.00	245.00	5,497.04	-30.70	-65.83	-30.70	0.00	0.00	0.00
5,600.00	5.00	245.00	5,596.66	-34.38	-73.73	-34.38	0.00	0.00	0.00
5,700.00	5.00	245.00	5,696.28	-38.07	-81.63	-38.07	0.00	0.00	0.00
5,800.00	5.00	245.00	5,795.90	-41.75	-89.53	-41.75	0.00	0.00	0.00
5,900.00	5.00	245.00	5,895.52	-45.43	-97.43	-45.43	0.00	0.00	0.00
6,000.00	5.00	245.00	5,995.14	-49.12	-105.33	-49.12	0.00	0.00	0.00
6,100.00	5.00	245.00	6,094.76	-52.80	-113.23	-52.80	0.00	0.00	0.00
6,200.00	5.00	245.00	6,194.38	-56.48	-121.13	-56.48	0.00	0.00	0.00
6,255.84	5.00	245.00	6,250.00	-58.54	-125.54	-58.54	0.00	0.00	0.00
Cherry Canyon									
6,300.00	5.00	245.00	6,294.00	-60.17	-129.03	-60.17	0.00	0.00	0.00
6,333.33	5.00	245.00	6,327.20	-61.39	-131.66	-61.39	0.00	0.00	0.00
Drop									
6,400.00	4.00	245.00	6,393.66	-63.60	-136.40	-63.60	1.50	-1.50	0.00
6,500.00	2.50	245.00	6,493.50	-66.00	-141.54	-66.00	1.50	-1.50	0.00
6,600.00	1.00	245.00	6,593.45	-67.29	-144.30	-67.29	1.50	-1.50	0.00
6,666.67	0.00	0.00	6,660.11	-67.54	-144.83	-67.54	1.50	-1.50	0.00
Hold									
6,700.00	0.00	0.00	6,693.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
6,800.00	0.00	0.00	6,793.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
6,900.00	0.00	0.00	6,893.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
7,000.00	0.00	0.00	6,993.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
7,100.00	0.00	0.00	7,093.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
7,200.00	0.00	0.00	7,193.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
7,300.00	0.00	0.00	7,293.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
7,400.00	0.00	0.00	7,393.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
7,500.00	0.00	0.00	7,493.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
7,596.55	0.00	0.00	7,590.00	-67.54	-144.83	-67.54	0.00	0.00	0.00
Brushy Canyon									
7,600.00	0.00	0.00	7,593.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
7,700.00	0.00	0.00	7,693.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
7,800.00	0.00	0.00	7,793.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
7,900.00	0.00	0.00	7,893.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
8,000.00	0.00	0.00	7,993.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
8,100.00	0.00	0.00	8,093.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
8,200.00	0.00	0.00	8,193.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
8,300.00	0.00	0.00	8,293.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
8,400.00	0.00	0.00	8,393.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
8,500.00	0.00	0.00	8,493.45	-67.54	-144.83	-67.54	0.00	0.00	0.00
8,600.00	0.00	0.00	8,593.45	-67.54	-144.83	-67.54	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 4H
Company:	DEVON ENERGY	TVD Reference:	3684.3' GL + 25' RKB @ 3709.30usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3684.3' GL + 25' RKB @ 3709.30usft
Site:	Hognose Viper 23 Fed	North Reference:	Grid
Well:	4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)	
8,700.00	0.00	0.00	8,693.45	-67.54	-144.83	-67.54	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,793.45	-67.54	-144.83	-67.54	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,893.45	-67.54	-144.83	-67.54	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,993.45	-67.54	-144.83	-67.54	0.00	0.00	0.00	
9,103.64	0.00	0.00	9,097.08	-67.54	-144.83	-67.54	0.00	0.00	0.00	
KOP 10" DLS										
9,150.00	4.64	360.00	9,143.40	-65.66	-144.83	-65.66	10.00	10.00	0.00	
9,156.63	5.30	360.00	9,150.00	-65.09	-144.83	-65.09	10.00	10.00	0.00	
Bone Spring										
9,200.00	9.64	360.00	9,192.99	-59.45	-144.83	-59.45	10.00	10.00	0.00	
9,250.00	14.64	360.00	9,241.86	-48.94	-144.83	-48.94	10.00	10.00	0.00	
9,300.00	19.64	360.00	9,289.62	-34.22	-144.83	-34.22	10.00	10.00	0.00	
9,350.00	24.64	360.00	9,335.92	-15.38	-144.83	-15.38	10.00	10.00	0.00	
9,400.00	29.64	360.00	9,380.41	7.42	-144.83	7.42	10.00	10.00	0.00	
9,450.00	34.64	360.00	9,422.73	34.01	-144.84	34.01	10.00	10.00	0.00	
9,500.00	39.64	360.00	9,462.58	64.18	-144.84	64.18	10.00	10.00	0.00	
9,550.00	44.64	360.00	9,499.65	97.72	-144.84	97.72	10.00	10.00	0.00	
9,600.00	49.64	360.00	9,533.65	134.35	-144.84	134.35	10.00	10.00	0.00	
9,650.00	54.64	360.00	9,564.33	173.81	-144.84	173.81	10.00	10.00	0.00	
9,700.00	59.64	360.00	9,591.45	215.80	-144.84	215.80	10.00	10.00	0.00	
9,750.00	64.64	360.00	9,614.81	259.99	-144.84	259.99	10.00	10.00	0.00	
9,800.00	69.64	360.00	9,634.23	306.05	-144.85	306.05	10.00	10.00	0.00	
9,850.00	74.64	360.00	9,649.57	353.62	-144.85	353.62	10.00	10.00	0.00	
9,900.00	79.64	360.00	9,660.69	402.35	-144.85	402.35	10.00	10.00	0.00	
9,950.00	84.64	360.00	9,667.53	451.86	-144.85	451.86	10.00	10.00	0.00	
10,000.00	89.64	360.00	9,670.03	501.79	-144.85	501.79	10.00	10.00	0.00	
10,010.61	90.70	360.00	9,670.00	512.39	-144.85	512.39	10.00	10.00	0.00	
LP										
10,100.00	90.70	360.00	9,668.91	601.78	-144.86	601.78	0.00	0.00	0.00	
10,200.00	90.70	360.00	9,667.69	701.77	-144.86	701.77	0.00	0.00	0.00	
10,300.00	90.70	360.00	9,666.48	801.76	-144.86	801.76	0.00	0.00	0.00	
10,400.00	90.70	360.00	9,665.26	901.76	-144.87	901.76	0.00	0.00	0.00	
10,500.00	90.70	360.00	9,664.04	1,001.75	-144.87	1,001.75	0.00	0.00	0.00	
10,600.00	90.70	360.00	9,662.83	1,101.74	-144.87	1,101.74	0.00	0.00	0.00	
10,700.00	90.70	360.00	9,661.61	1,201.73	-144.88	1,201.73	0.00	0.00	0.00	
10,800.00	90.70	360.00	9,660.39	1,301.73	-144.88	1,301.73	0.00	0.00	0.00	
10,900.00	90.70	360.00	9,659.17	1,401.72	-144.88	1,401.72	0.00	0.00	0.00	
11,000.00	90.70	360.00	9,657.96	1,501.71	-144.89	1,501.71	0.00	0.00	0.00	
11,100.00	90.70	360.00	9,656.74	1,601.70	-144.89	1,601.70	0.00	0.00	0.00	
11,200.00	90.70	360.00	9,655.52	1,701.70	-144.90	1,701.70	0.00	0.00	0.00	
11,300.00	90.70	360.00	9,654.31	1,801.69	-144.90	1,801.69	0.00	0.00	0.00	
11,400.00	90.70	360.00	9,653.09	1,901.68	-144.90	1,901.68	0.00	0.00	0.00	
11,500.00	90.70	360.00	9,651.87	2,001.67	-144.91	2,001.67	0.00	0.00	0.00	
11,600.00	90.70	360.00	9,650.66	2,101.67	-144.91	2,101.67	0.00	0.00	0.00	
11,700.00	90.70	360.00	9,649.44	2,201.66	-144.91	2,201.66	0.00	0.00	0.00	
11,800.00	90.70	360.00	9,648.22	2,301.65	-144.92	2,301.65	0.00	0.00	0.00	
11,900.00	90.70	360.00	9,647.00	2,401.64	-144.92	2,401.64	0.00	0.00	0.00	
12,000.00	90.70	360.00	9,645.79	2,501.64	-144.92	2,501.64	0.00	0.00	0.00	
12,100.00	90.70	360.00	9,644.57	2,601.63	-144.93	2,601.63	0.00	0.00	0.00	
12,200.00	90.70	360.00	9,643.35	2,701.62	-144.93	2,701.62	0.00	0.00	0.00	
12,300.00	90.70	360.00	9,642.14	2,801.62	-144.93	2,801.62	0.00	0.00	0.00	
12,400.00	90.70	360.00	9,640.92	2,901.61	-144.94	2,901.61	0.00	0.00	0.00	
12,500.00	90.70	360.00	9,639.70	3,001.60	-144.94	3,001.60	0.00	0.00	0.00	

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single-User Db	Local Co-ordinate Reference:	Well 4H
Company:	DEVON ENERGY	TVD Reference:	3684.3' GL + 25' RKB @ 3709.30usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3684.3' GL + 25' RKB @ 3709.30usft
Site:	Hognose Viper 23.Fed	North Reference:	Grid
Well:	4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)	
12,600.00	90.70	360.00	9,638.48	3,101.59	-144.95	3,101.59	0.00	0.00	0.00	
12,700.00	90.70	360.00	9,637.27	3,201.59	-144.95	3,201.59	0.00	0.00	0.00	
12,800.00	90.70	360.00	9,636.05	3,301.58	-144.95	3,301.58	0.00	0.00	0.00	
12,900.00	90.70	360.00	9,634.83	3,401.57	-144.96	3,401.57	0.00	0.00	0.00	
13,000.00	90.70	360.00	9,633.62	3,501.56	-144.96	3,501.56	0.00	0.00	0.00	
13,100.00	90.70	360.00	9,632.40	3,601.56	-144.96	3,601.56	0.00	0.00	0.00	
13,200.00	90.70	360.00	9,631.18	3,701.55	-144.97	3,701.55	0.00	0.00	0.00	
13,300.00	90.70	360.00	9,629.97	3,801.54	-144.97	3,801.54	0.00	0.00	0.00	
13,400.00	90.70	360.00	9,628.75	3,901.53	-144.97	3,901.53	0.00	0.00	0.00	
13,500.00	90.70	360.00	9,627.53	4,001.53	-144.98	4,001.53	0.00	0.00	0.00	
13,600.00	90.70	360.00	9,626.31	4,101.52	-144.98	4,101.52	0.00	0.00	0.00	
13,700.00	90.70	360.00	9,625.10	4,201.51	-144.98	4,201.51	0.00	0.00	0.00	
13,800.00	90.70	360.00	9,623.88	4,301.50	-144.99	4,301.50	0.00	0.00	0.00	
13,900.00	90.70	360.00	9,622.66	4,401.50	-144.99	4,401.50	0.00	0.00	0.00	
14,000.00	90.70	360.00	9,621.45	4,501.49	-145.00	4,501.49	0.00	0.00	0.00	
14,100.00	90.70	360.00	9,620.23	4,601.48	-145.00	4,601.48	0.00	0.00	0.00	
14,118.84	90.70	360.00	9,620.00	4,620.32	-145.00	4,620.32	0.00	0.00	0.00	
TD - PBHL (HV23F 4H)										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
SHL (HV23F 4H)	0.00	0.00	0.00	0.00	0.00	467,883.33	785,266.95	32° 17' 1.746 N	103° 32' 38.413 W	
- hit/miss target										
- Shape										
- Point										
PBHL (HV23F 4H)	0.00	0.00	9,620.00	4,620.32	-145.00	472,503.65	785,121.95	32° 17' 47.474 N	103° 32' 39.706 W	
- plan hits target center										
- Point										

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,360.00	1,360.00	Rustler		0.00		
1,630.00	1,630.00	Top Salt		0.00		
5,091.41	5,090.00	Base Salt		0.00		
5,287.15	5,285.00	Delaware		0.00		
6,255.84	6,250.00	Cherry Canyon		0.00		
7,596.55	7,590.00	Brushy Canyon		0.00		
9,156.63	9,150.00	Bone Spring		0.00		

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 4H
Company:	DEVON ENERGY	TVD Reference:	3684.3' GL + 25' RKB @ 3709.30usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3684.3' GL + 25' RKB @ 3709.30usft
Site:	Hognose Viper 23 Fed	North Reference:	Grid
Well:	4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N-S (usft)	+E-W (usft)	
4,500.00	4,500.00	0.00	0.00	Nudge
4,833.33	4,832.91	-6.14	-13.17	Hold
6,333.33	6,327.20	-61.39	-131.66	Drop
6,666.67	6,660.11	-67.54	-144.83	Hold
9,103.64	9,097.08	-67.54	-144.83	KOP 10° DLS
10,010.61	9,670.00	512.39	-144.85	LP
14,118.84	9,620.00	4,620.32	-145.00	TD