

Submit 1 Copy To Appropriate District Office

District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103

Revised August 1, 2011

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-015-41359
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐		5. Indicate Type of Lease STATE ☒ FEE ☐
2. Name of Operator Devon Energy Production Company, L.P.		6. State Oil & Gas Lease No.
3. Address of Operator 20 North Broadway Oklahoma City, Oklahoma 73102-8260 (405) 552-7848		7. Lease Name or Unit Agreement Name IRRITABLE 22 STATE COM
4. Well Location Unit Letter <u>B</u> : <u>330</u> feet from the <u>N</u> line and <u>1980</u> feet from the <u>E</u> line Section <u>22</u> Township <u>25S</u> Range <u>27E</u> NMPM Eddy County New Mexico		8. Well Number <u>2H</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3079'		9. OGRID Number 6137
		10. Pool name or Wildcat Hay Hollow; Bone Spring, North (30216)

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☒
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Devon Energy Production Co., L.P. respectfully requests approval to amend the approved drilling permit as follows:

- Add pilot hole; drilled to 8,015' MD/8,000' TVD.
- Change intermediate casing point from original 2,350' to 2,200'.
- Change production casing to 7" x 5-1/2" combo string.
- Revise Casing Program & Cement Program.
- Revise directional surveys.

NM OIL CONSERVATION

ARTESIA DISTRICT

FEB 09 2015

RECEIVED

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE [Signature] TITLE Regulatory Specialist DATE 1/28/2015

Type or print name David H. Cook E-mail address: david.cook@dvn.com PHONE: (405) 552-7848
For State Use Only

APPROVED BY: [Signature] TITLE Dist 11 Spvr DATE 2/9/15
Conditions of Approval (if any):

Irritable 22 State Com 2H – APD DRILLING PLAN

Casing Program

<u>Hole Size</u>	<u>Hole Interval</u>	<u>OD Csg</u>	<u>Casing Interval</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
17-1/2"	0 – 650	13-3/8"	0 – 650	48#	STC	H-40
12-1/4"	650 – 2,200	9-5/8"	0 – 2,200	36#	LTC	J-55
8-3/4"	2,200 – 7,000	7"	0 – 7,000	29#	BTC	HCP-110
8-3/4"	7,000 – 12,047	5-1/2"	7,000 – 12,047	17#	BTC	HCP-110

Note: only new casing will be utilized

Note: There will be a pilot hole drilled to 8,015' MD / 8,000' TVD

MAXIMUM LATERAL TVD 7,612'

Design Factors:

<u>Casing Size</u>	<u>Collapse Design Factor</u>	<u>Burst Design Factor</u>	<u>Tension Design Factor</u>
13-3/8", 48#, H-40, ST&C	1.98	4.44	8.94
9-5/8", 36#, J-55 LTC	1.81	1.69	21.94
5-1/2" 17# HCP-110 BTC	1.68	2.40	3.38
5-1/2" 17# HCP-110 BTC	1.53	2.19	2.14

Mud Program:

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc.</u>	<u>Fluid Loss</u>	<u>Type System</u>
0 – 650	8.4 – 9.0	30 – 34	N/C	FW
650 – 2,200	9.8 – 10.0	28 – 32	N/C	Brine
2,200 – 12,047	8.6 – 9.0	28 – 32	N/C-12	FW

Pressure Control Equipment:

The BOP system used to drill the intermediate hole will consist of a 13-5/8" Double Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2, a 3M system will be installed and tested prior to drilling out the surface casing shoe.

The BOP system used to drill the production hole will consist of a 13-5/8" Double Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 a 3M system will be installed prior to drilling out the intermediate casing shoe.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 5,000 psi WP.

Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line). The line will be kept as straight as possible with minimal turns.

Cementing Program (cement volumes based on 100% excess Surface, 50% excess Intermediate and at least 25% excess Production.)

13-3/8" Surface

650 ft

TOC @ surface

Tail: 710 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Poly-E-Flake + 63.1% Fresh Water, 14.8 ppg

Yield: 1.876 cf/sk

9 5/8" Intermediate 2200 ft **Lead:** 620 sacks (65:35) Class C Cement:Poz (Fly Ash) + 5% bwow Sodium Chloride + 0.125 lbs/sack Poly-E-Flake + 6% bwoc Bentonite + 70.9% Fresh Water, 12.9 ppg

Yield: 1.85 cf/sk

TOC @ surface

500 ft Tail: 260 sacks Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Water, 14.8 ppg

Yield: 1.33 c

5-1/2" Production 12047ft. **Lead:** 490 sacks (65:35) Class H Cement:Poz (Fly Ash) + 6% bwoc Bentonite + 0.125 lbs/sack Poly-E-Flake + 0.1% bwoc HR-601 + 74.1% Fresh Water, 12.5 ppg

Yield: 3.32 cf/sk

4500 ft Tail: 950 sacks (50:50) Class H Cement:Poz (Fly Ash) + 1 lb/sk Sodium Chloride + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.1% bwoc HR-601 + 2% bwoc Bentonite + 58.8% Fresh Water, 14.5 ppg

Yield: 1.22 cf/sk

TOC for All Strings:

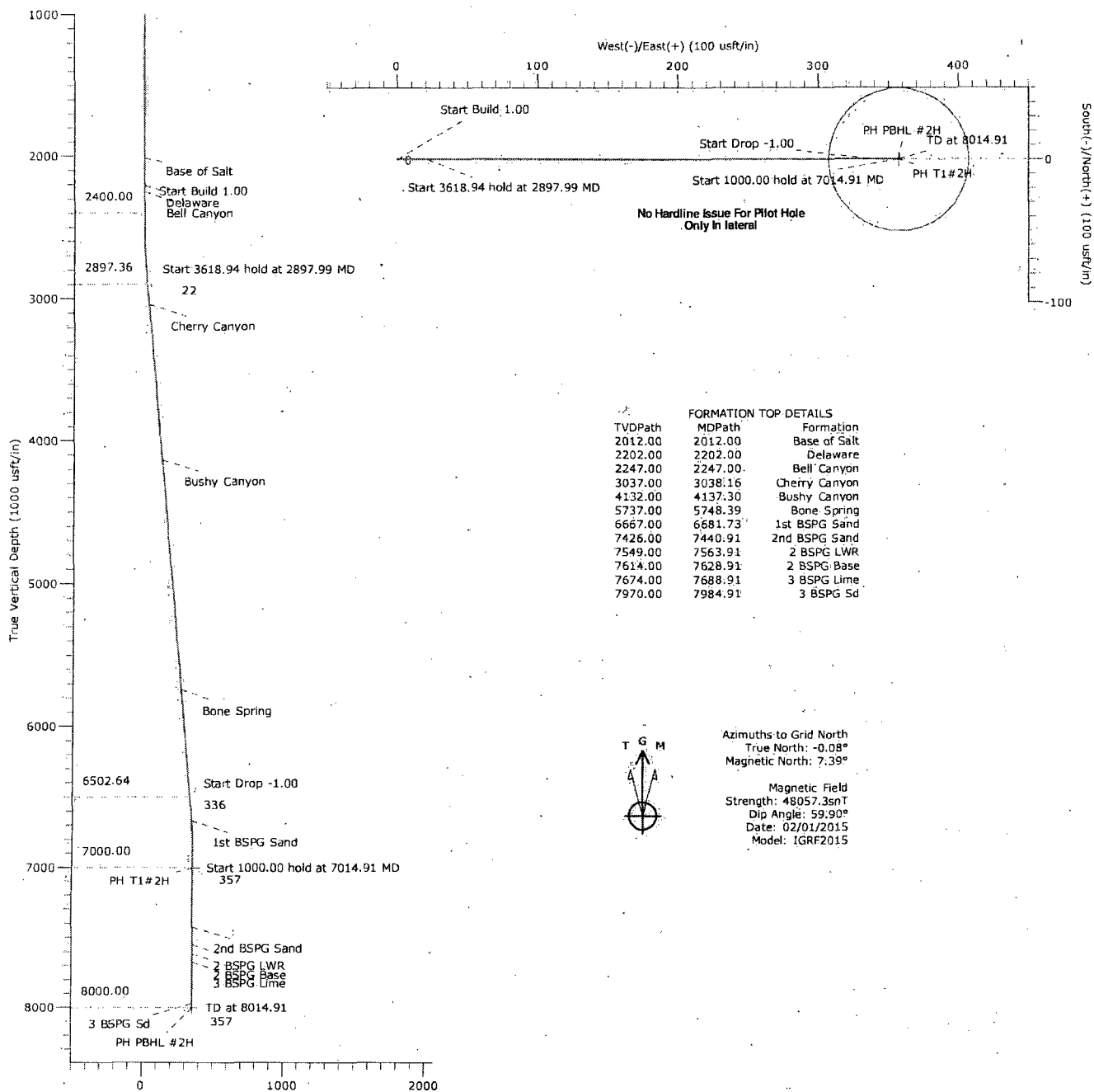
Surface:	0
Intermediate:	0
Production:	2000 ft

ACTUAL CEMENT VOLUMES WILL BE ADJUSTED BASED ON FLUID CALIPER AND CALIPER LOG DATA.

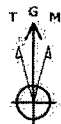
devon

DEVON ENERGY
Project: Hay Hollow W NME83
Site: Irritable 22 State Com 2H
Well: #2H
Wellbore: Pilot Hole
Design: Plan #2

Precision
 Directional Services



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
2012.00	2012.00	Base of Salt
2202.00	2202.00	Delaware
2247.00	2247.00	Bell Canyon
3037.00	3038.16	Cherry Canyon
4132.00	4137.30	Bushy Canyon
5737.00	5748.39	Bone Spring
6667.00	6681.73	1st BSPG Sand
7426.00	7440.91	2nd BSPG Sand
7549.00	7563.91	2 BSPG LWR
7614.00	7628.91	2 BSPG Base
7674.00	7688.91	3 BSPG Lime
7970.00	7984.91	3 BSPG Sd



Azimuths to Grid North
 True North: -0.08°
 Magnetic North: 7.39°

Magnetic Field
 Strength: 48057.3snT
 Dip Angle: 59.90°
 Date: 02/01/2015
 Model: IGRF2015

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Surface #2H	0.00	0.00	0.00	408118.49	590095.31	32° 7' 18.84 N	104° 10' 33.01 W	Point
PH T1#2H	7000.00	0.00	357.40	408118.49	590452.71	32° 7' 18.83 N	104° 10' 28.85 W	Circle (Radius: 50.00)
PH PBHL #2H	8000.00	0.00	357.40	408118.49	590452.71	32° 7' 18.83 N	104° 10' 28.85 W	Point

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	0.00	0.00	
3	2897.99	4.98	90.00	2897.36	0.00	21.63	1.00	90.00	21.63	
4	6516.93	4.98	90.00	6502.64	0.00	335.77	0.00	0.00	335.77	
5	7014.91	0.00	0.00	7000.00	0.00	357.40	1.00	180.00	357.40	
6	8014.91	0.00	0.00	8000.00	0.00	357.40	0.00	0.00	357.40	PH PBHL #2H

Plan: Plan #2 (22-Pilot Hole)
 Created By: Tony LaRocca Date: 15/28 January 22 2015

PRECISION DIRECTIONAL SERVICES, INC.

713.435.6250

DEVON ENERGY

Hay Hollow W NME83

Irritable 22 State Com 2H

#2H

Pilot Hole

Plan: Plan #2

Standard Planning Report

22 January, 2015

Precision Drilling Corporation

Planning Report

Database:	Compass_US	Local Co-ordinate Reference:	Well #2H
Company:	DEVON ENERGY	TVD Reference:	3079'KB+25'KB @ 3104.00usft (PD608)
Project:	Hay Hollow W NME83	MD Reference:	3079'KB+25'KB @ 3104.00usft (PD608)
Site:	Irritable 22 State Com 2H	North Reference:	Grid
Well:	#2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	Plan #2		

Project:	Hay Hollow W NME83, Eddy County		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site:	Irritable 22 State Com 2H		
Site Position:	Northing:	408,118.49 usft	Latitude: 32° 7' 18.84 N
From: Map	Easting:	590,095.31 usft	Longitude: 104° 10' 33.01 W
Position Uncertainty:	0.00 usft	Slot Radius: 13.20 in	Grid Convergence: 0.08 °

Well:	#2H		
Well Position	+N/-S	0.00 usft	Northing: 408,118.49 usft
	+E/-W	0.00 usft	Easting: 590,095.31 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Ground Level:	3,079.00 usft

Wellbore:	Pilot Hole		
Magnetics	Model Name	Sample Date	Declination
	IGRF2015	02/01/15	(°) 7.48
			Dip Angle (°) 59.90
			Field Strength (nT) 48,057

Design:	Plan #2		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction (°) 90.00

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	
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,897.99	4.98	90.00	2,897.36	0.00	21.63	1.00	1.00	0.00	90.00	
6,516.93	4.98	90.00	6,502.64	0.00	335.77	0.00	0.00	0.00	0.00	
7,014.91	0.00	0.00	7,000.00	0.00	357.40	1.00	-1.00	0.00	180.00	
8,014.91	0.00	0.00	8,000.00	0.00	357.40	0.00	0.00	0.00	0.00	PH PBHL #2H

Precision Drilling Corporation

Planning Report

Database:	Compass_US	Local Co-ordinate Reference:	Well #2H
Company:	DEVON ENERGY	TVD Reference:	3079'KB+25'KB @ 3104.00usft (PD608)
Project:	Hay Hollow W NME83	MD Reference:	3079'KB+25'KB @ 3104.00usft (PD608)
Site:	Irritable 22 State Com 2H	North Reference:	Grid
Well:	#2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	Plan #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)
0.00	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
1,100.00	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
1,400.00	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	1.00	90.00	2,499.99	0.00	0.87	0.87	1.00	1.00	0.00
2,600.00	2.00	90.00	2,599.96	0.00	3.49	3.49	1.00	1.00	0.00
2,700.00	3.00	90.00	2,699.86	0.00	7.85	7.85	1.00	1.00	0.00
2,800.00	4.00	90.00	2,799.68	0.00	13.96	13.96	1.00	1.00	0.00
2,897.99	4.98	90.00	2,897.36	0.00	21.63	21.63	1.00	1.00	0.00
2,900.00	4.98	90.00	2,899.37	0.00	21.80	21.80	0.00	0.00	0.00
3,000.00	4.98	90.00	2,998.99	0.00	30.48	30.48	0.00	0.00	0.00
3,100.00	4.98	90.00	3,098.61	0.00	39.16	39.16	0.00	0.00	0.00
3,200.00	4.98	90.00	3,198.23	0.00	47.84	47.84	0.00	0.00	0.00
3,300.00	4.98	90.00	3,297.86	0.00	56.52	56.52	0.00	0.00	0.00
3,400.00	4.98	90.00	3,397.48	0.00	65.21	65.21	0.00	0.00	0.00
3,500.00	4.98	90.00	3,497.10	0.00	73.89	73.89	0.00	0.00	0.00
3,600.00	4.98	90.00	3,596.72	0.00	82.57	82.57	0.00	0.00	0.00
3,700.00	4.98	90.00	3,696.35	0.00	91.25	91.25	0.00	0.00	0.00
3,800.00	4.98	90.00	3,795.97	0.00	99.93	99.93	0.00	0.00	0.00
3,900.00	4.98	90.00	3,895.59	0.00	108.61	108.61	0.00	0.00	0.00
4,000.00	4.98	90.00	3,995.21	0.00	117.29	117.29	0.00	0.00	0.00
4,100.00	4.98	90.00	4,094.84	0.00	125.97	125.97	0.00	0.00	0.00
4,200.00	4.98	90.00	4,194.46	0.00	134.65	134.65	0.00	0.00	0.00
4,300.00	4.98	90.00	4,294.08	0.00	143.33	143.33	0.00	0.00	0.00
4,400.00	4.98	90.00	4,393.70	0.00	152.01	152.01	0.00	0.00	0.00
4,500.00	4.98	90.00	4,493.33	0.00	160.69	160.69	0.00	0.00	0.00
4,600.00	4.98	90.00	4,592.95	0.00	169.37	169.37	0.00	0.00	0.00
4,700.00	4.98	90.00	4,692.57	0.00	178.05	178.05	0.00	0.00	0.00
4,800.00	4.98	90.00	4,792.19	0.00	186.73	186.73	0.00	0.00	0.00
4,900.00	4.98	90.00	4,891.82	0.00	195.41	195.41	0.00	0.00	0.00
5,000.00	4.98	90.00	4,991.44	0.00	204.09	204.09	0.00	0.00	0.00
5,100.00	4.98	90.00	5,091.06	0.00	212.77	212.77	0.00	0.00	0.00
5,200.00	4.98	90.00	5,190.68	0.00	221.46	221.46	0.00	0.00	0.00

Precision Drilling Corporation

Planning Report

Database:	Compass_US	Local Co-ordinate Reference:	Well #2H
Company:	DEVON ENERGY	TVD Reference:	3079'KB+25'KB @ 3104.00usft (PD608)
Project:	Hay Hollow W NME83	MD Reference:	3079'KB+25'KB @ 3104.00usft (PD608)
Site:	Irritable 22 State Com 2H	North Reference:	Grid
Well:	#2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	Plan #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)
5,300.00	4.98	90.00	5,290.31	0.00	230.14	230.14	0.00	0.00	0.00
5,400.00	4.98	90.00	5,389.93	0.00	238.82	238.82	0.00	0.00	0.00
5,500.00	4.98	90.00	5,489.55	0.00	247.50	247.50	0.00	0.00	0.00
5,600.00	4.98	90.00	5,589.17	0.00	256.18	256.18	0.00	0.00	0.00
5,700.00	4.98	90.00	5,688.80	0.00	264.86	264.86	0.00	0.00	0.00
5,800.00	4.98	90.00	5,788.42	0.00	273.54	273.54	0.00	0.00	0.00
5,900.00	4.98	90.00	5,888.04	0.00	282.22	282.22	0.00	0.00	0.00
6,000.00	4.98	90.00	5,987.66	0.00	290.90	290.90	0.00	0.00	0.00
6,100.00	4.98	90.00	6,087.29	0.00	299.58	299.58	0.00	0.00	0.00
6,200.00	4.98	90.00	6,186.91	0.00	308.26	308.26	0.00	0.00	0.00
6,300.00	4.98	90.00	6,286.53	0.00	316.94	316.94	0.00	0.00	0.00
6,400.00	4.98	90.00	6,386.15	0.00	325.62	325.62	0.00	0.00	0.00
6,500.00	4.98	90.00	6,485.78	0.00	334.30	334.30	0.00	0.00	0.00
6,516.93	4.98	90.00	6,502.64	0.00	335.77	335.77	0.00	0.00	0.00
6,600.00	4.15	90.00	6,585.45	0.00	342.38	342.38	1.00	-1.00	0.00
6,700.00	3.15	90.00	6,685.24	0.00	348.75	348.75	1.00	-1.00	0.00
6,800.00	2.15	90.00	6,785.14	0.00	353.37	353.37	1.00	-1.00	0.00
6,900.00	1.15	90.00	6,885.09	0.00	356.25	356.25	1.00	-1.00	0.00
7,000.00	0.15	90.00	6,985.09	0.00	357.38	357.38	1.00	-1.00	0.00
7,014.91	0.00	0.00	7,000.00	0.00	357.40	357.40	1.00	-1.00	0.00
7,100.00	0.00	0.00	7,085.09	0.00	357.40	357.40	0.00	0.00	0.00
7,200.00	0.00	0.00	7,185.09	0.00	357.40	357.40	0.00	0.00	0.00
7,300.00	0.00	0.00	7,285.09	0.00	357.40	357.40	0.00	0.00	0.00
7,400.00	0.00	0.00	7,385.09	0.00	357.40	357.40	0.00	0.00	0.00
7,500.00	0.00	0.00	7,485.09	0.00	357.40	357.40	0.00	0.00	0.00
7,600.00	0.00	0.00	7,585.09	0.00	357.40	357.40	0.00	0.00	0.00
7,700.00	0.00	0.00	7,685.09	0.00	357.40	357.40	0.00	0.00	0.00
7,800.00	0.00	0.00	7,785.09	0.00	357.40	357.40	0.00	0.00	0.00
7,900.00	0.00	0.00	7,885.09	0.00	357.40	357.40	0.00	0.00	0.00
8,000.00	0.00	0.00	7,985.09	0.00	357.40	357.40	0.00	0.00	0.00
8,014.91	0.00	0.00	8,000.00	0.00	357.40	357.40	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
PH T1#2H	0.00	0.01	7,000.00	0.00	357.40	408,118.49	590,452.71	32° 7' 18.83 N	104° 10' 28.85 W
- plan hits target center									
- Circle (radius 50.00)									
PH PBHL #2H	0.00	0.01	8,000.00	0.00	357.40	408,118.49	590,452.71	32° 7' 18.83 N	104° 10' 28.85 W
- plan hits target center									
- Point									

Precision Drilling Corporation

Planning Report

Database:	Compass_US	Local Co-ordinate Reference:	Well #2H
Company:	DEVON ENERGY	TVD Reference:	3079'KB+25'KB @ 3104.00usft (PD608)
Project:	Hay Hollow W NME83	MD Reference:	3079'KB+25'KB @ 3104.00usft (PD608)
Site:	Irritable 22, State Com 2H	North Reference:	Grid
Well:	#2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot Hole		
Design:	Plan #2		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,012.00	2,012.00	Base of Salt		0.00	
2,202.00	2,202.00	Delaware		0.00	
2,247.00	2,247.00	Bell Canyon		0.00	
3,038.16	3,037.00	Cherry Canyon		0.00	
4,137.30	4,132.00	Bushy Canyon		0.00	
5,748.39	5,737.00	Bone Spring		0.00	
6,681.73	6,667.00	1st BSPG Sand		0.00	
7,440.91	7,426.00	2nd BSPG Sand		0.00	
7,563.91	7,549.00	2 BSPG LWR		0.00	
7,628.91	7,614.00	2 BSPG Base		0.00	
7,688.91	7,674.00	3 BSPG Lime		0.00	
7,984.91	7,970.00	3 BSPG Sd		0.00	



DEVON ENERGY
Project: Hay Hollow W NME83
Site: Irritable 22 State Com 2H
Well: #2H
Wellbore: Lateral
Design: Plan #1

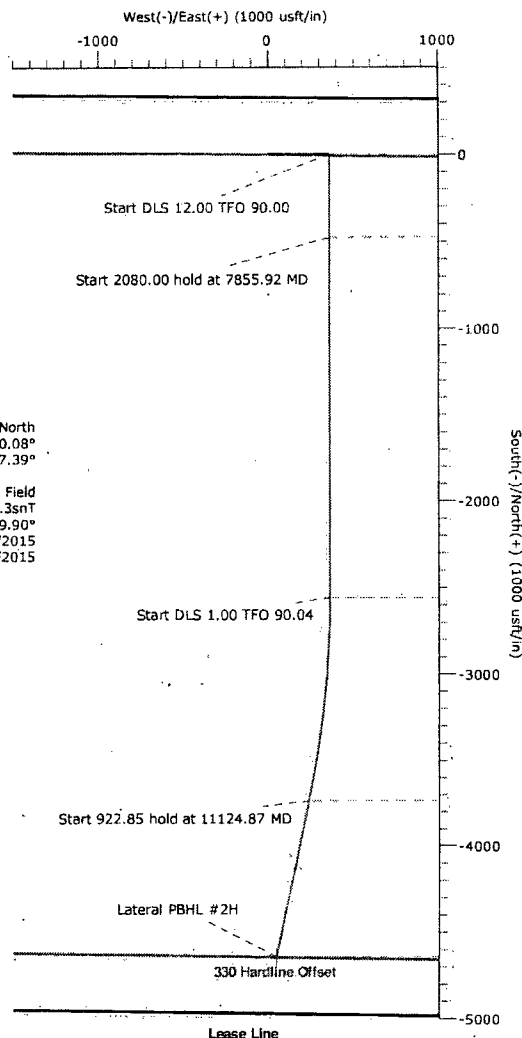
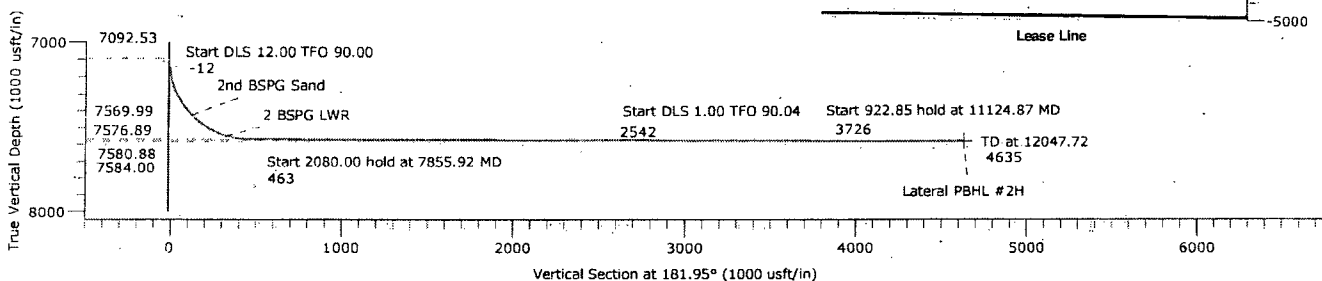
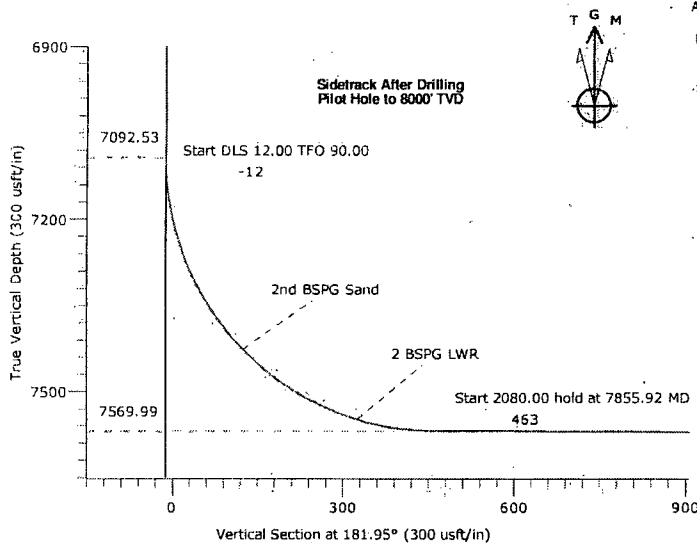


LEGEND

- #2H, Pilot Hole, Plan #1 VO
- Plan #1

FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
7426.00	7476.67	2nd BSPG Sand
7549.00	7715.38	2 BSPG LWR



Azimuths to Grid North
 True North: -0.08°
 Magnetic North: 7.39°

Magnetic Field
 Strength: 48057.3snT
 Dip Angle: 59.90°
 Date: 02/01/2015
 Model: IGRF2015

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Surface #2H	0.00	0.00	0.00	408118.49	590095.31	32° 7' 18.84 N	104° 10' 33.01 W	Point
Lateral PBHL #2H	7584.00	-4639.35	44.34	403479.14	590139.65	32° 6' 32.92 N	104° 10' 32.57 W	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	7107.50	0.00	90.00	7092.53	0.00	357.38	0.00	0.00	-12.16	
2	7855.92	89.81	180.00	7569.99	-475.88	357.39	12.00	90.00	463.44	
3	9935.92	89.81	180.00	7576.89	-2555.87	357.39	0.00	0.00	2542.23	
4	11124.87	89.81	191.89	7580.88	-3736.30	234.47	1.00	90.04	3726.16	
5	12047.72	89.81	191.89	7584.00	-4639.35	44.34	0.00	0.00	4635.15	Lateral PBHL #2H

DEVON ENERGY

**Hay Hollow W NME83
Irritable 22 State Com 2H
#2H**

Lateral

Plan: Plan #1

Standard Planning Report

22 January, 2015

Precision Drilling Corporation

Planning Report

Database:	Compass_US	Local Co-ordinate Reference:	Well #2H
Company:	DEVON ENERGY	TVD Reference:	3079'KB+25'KB @ 3104.00usft (PD608)
Project:	Hay Hollow W NME83	MD Reference:	3079'KB+25'KB @ 3104.00usft (PD608)
Site:	Irritable 22 State Com 2H	North Reference:	Grid
Well:	#2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Project:	Hay Hollow W NME83, Eddy County		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site:	Irritable 22 State Com 2H		
Site Position:	Northing:	408,118.49 usft	Latitude: 32° 7' 18.84 N
From: Map	Easting:	590,095.31 usft	Longitude: 104° 10' 33.01 W
Position Uncertainty:	0.00 usft	Slot Radius: 13.20 in	Grid Convergence: 0.08 °

Well:	#2H		
Well Position	+N/-S	0.00 usft	Northing: 408,118.49 usft
	+E/-W	0.00 usft	Easting: 590,095.31 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Ground Level:	3,079.00 usft

Wellbore:	Lateral				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2015	02/01/15	(°) 7.48	(°) 59.90	(nT) 48,057

Design:	Plan #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	7,107.50
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	181.95

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
7,107.50	0.00	90.00	7,092.53	0.00	357.38	0.00	0.00	0.00	0.00	
7,855.92	89.81	180.00	7,569.99	-475.88	357.39	12.00	12.00	12.03	90.00	
9,935.92	89.81	180.00	7,576.89	-2,555.87	357.39	0.00	0.00	0.00	0.00	
11,124.87	89.81	191.89	7,580.88	-3,736.30	234.47	1.00	0.00	1.00	90.04	
12,047.72	89.81	191.89	7,584.00	-4,639.35	44.34	0.00	0.00	0.00	0.00	Lateral PBHL #2H

Precision Drilling Corporation

Planning Report

Database:	Compass_US	Local Co-ordinate Reference:	Well #2H
Company:	DEVON ENERGY	TVD Reference:	3079'KB+25'KB @ 3104.00usft (PD608)
Project:	Hay Hollow W NME83	MD Reference:	3079'KB+25'KB @ 3104.00usft (PD608)
Site:	Irritable 22 State Com 2H	North Reference:	Grid
Well:	#2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
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)
7,107.50	0.00	90.00	7,092.53	0.00	357.38	-12.16	0.00	0.00	0.00
7,200.00	11.10	179.99	7,184.45	-8.93	357.38	-3.23	12.00	12.00	97.29
7,300.00	23.10	180.00	7,279.86	-38.28	357.38	26.10	12.00	12.00	0.00
7,400.00	35.10	180.00	7,367.08	-86.83	357.38	74.62	12.00	12.00	0.00
7,500.00	47.10	180.00	7,442.30	-152.44	357.39	140.20	12.00	12.00	0.00
7,600.00	59.10	180.00	7,502.23	-232.27	357.39	219.97	12.00	12.00	0.00
7,700.00	71.10	180.00	7,544.25	-322.81	357.39	310.46	12.00	12.00	0.00
7,800.00	83.10	180.00	7,566.54	-420.10	357.39	407.70	12.00	12.00	0.00
7,855.92	89.81	180.00	7,569.99	-475.88	357.39	463.44	12.00	12.00	0.00
7,900.00	89.81	180.00	7,570.14	-519.96	357.39	507.50	0.00	0.00	0.00
8,000.00	89.81	180.00	7,570.47	-619.96	357.39	607.44	0.00	0.00	0.00
8,100.00	89.81	180.00	7,570.80	-719.96	357.39	707.39	0.00	0.00	0.00
8,200.00	89.81	180.00	7,571.14	-819.96	357.39	807.33	0.00	0.00	0.00
8,300.00	89.81	180.00	7,571.47	-919.96	357.39	907.27	0.00	0.00	0.00
8,400.00	89.81	180.00	7,571.80	-1,019.96	357.39	1,007.21	0.00	0.00	0.00
8,500.00	89.81	180.00	7,572.13	-1,119.96	357.39	1,107.15	0.00	0.00	0.00
8,600.00	89.81	180.00	7,572.46	-1,219.96	357.39	1,207.09	0.00	0.00	0.00
8,700.00	89.81	180.00	7,572.79	-1,319.96	357.39	1,307.03	0.00	0.00	0.00
8,800.00	89.81	180.00	7,573.12	-1,419.96	357.39	1,406.98	0.00	0.00	0.00
8,900.00	89.81	180.00	7,573.46	-1,519.96	357.39	1,506.92	0.00	0.00	0.00
9,000.00	89.81	180.00	7,573.79	-1,619.96	357.39	1,606.86	0.00	0.00	0.00
9,100.00	89.81	180.00	7,574.12	-1,719.96	357.39	1,706.80	0.00	0.00	0.00
9,200.00	89.81	180.00	7,574.45	-1,819.96	357.39	1,806.74	0.00	0.00	0.00
9,300.00	89.81	180.00	7,574.78	-1,919.96	357.39	1,906.68	0.00	0.00	0.00
9,400.00	89.81	180.00	7,575.11	-2,019.96	357.39	2,006.63	0.00	0.00	0.00
9,500.00	89.81	180.00	7,575.45	-2,119.96	357.39	2,106.57	0.00	0.00	0.00
9,600.00	89.81	180.00	7,575.78	-2,219.96	357.39	2,206.51	0.00	0.00	0.00
9,700.00	89.81	180.00	7,576.11	-2,319.95	357.39	2,306.45	0.00	0.00	0.00
9,800.00	89.81	180.00	7,576.44	-2,419.95	357.39	2,406.39	0.00	0.00	0.00
9,900.00	89.81	180.00	7,576.77	-2,519.95	357.39	2,506.33	0.00	0.00	0.00
9,935.92	89.81	180.00	7,576.89	-2,555.87	357.39	2,542.23	0.00	0.00	0.00
10,000.00	89.81	180.64	7,577.10	-2,619.95	357.03	2,606.29	1.00	0.00	1.00
10,100.00	89.81	181.64	7,577.44	-2,719.93	355.04	2,706.27	1.00	0.00	1.00
10,200.00	89.81	182.64	7,577.77	-2,819.86	351.30	2,806.27	1.00	0.00	1.00
10,300.00	89.81	183.64	7,578.11	-2,919.71	345.83	2,906.25	1.00	0.00	1.00
10,400.00	89.81	184.64	7,578.44	-3,019.44	338.60	3,006.17	1.00	0.00	1.00
10,500.00	89.81	185.64	7,578.78	-3,119.04	329.64	3,106.02	1.00	0.00	1.00
10,600.00	89.81	186.64	7,579.11	-3,218.46	318.95	3,205.75	1.00	0.00	1.00
10,700.00	89.81	187.64	7,579.45	-3,317.69	306.52	3,305.34	1.00	0.00	1.00
10,800.00	89.81	188.64	7,579.79	-3,416.68	292.36	3,404.75	1.00	0.00	1.00
10,900.00	89.81	189.64	7,580.13	-3,515.41	276.47	3,503.96	1.00	0.00	1.00
11,000.00	89.81	190.64	7,580.46	-3,613.84	258.86	3,602.94	1.00	0.00	1.00
11,100.00	89.81	191.64	7,580.80	-3,711.95	239.54	3,701.65	1.00	0.00	1.00
11,124.87	89.81	191.89	7,580.88	-3,736.30	234.47	3,726.16	1.00	0.00	1.00
11,200.00	89.81	191.89	7,581.14	-3,809.82	218.99	3,800.16	0.00	0.00	0.00
11,300.00	89.81	191.89	7,581.48	-3,907.67	198.39	3,898.66	0.00	0.00	0.00
11,400.00	89.81	191.89	7,581.81	-4,005.53	177.79	3,997.16	0.00	0.00	0.00
11,500.00	89.81	191.89	7,582.15	-4,103.38	157.18	4,095.66	0.00	0.00	0.00
11,600.00	89.81	191.89	7,582.49	-4,201.24	136.58	4,194.16	0.00	0.00	0.00
11,700.00	89.81	191.89	7,582.83	-4,299.09	115.98	4,292.65	0.00	0.00	0.00
11,800.00	89.81	191.89	7,583.16	-4,396.94	95.38	4,391.15	0.00	0.00	0.00
11,900.00	89.81	191.89	7,583.50	-4,494.80	74.77	4,489.65	0.00	0.00	0.00
12,000.00	89.81	191.89	7,583.84	-4,592.65	54.17	4,588.15	0.00	0.00	0.00
12,047.72	89.81	191.89	7,584.00	-4,639.35	44.34	4,635.15	0.00	0.00	0.00

Precision Drilling Corporation

Planning Report

Database:	Compass_US	Local Co-ordinate Reference:	Well #2H
Company:	DEVON ENERGY	TVD Reference:	3079'KB+25'KB @ 3104.00usft (PD608)
Project:	Hay Hollow W NME83	MD Reference:	3079'KB+25'KB @ 3104.00usft (PD608)
Site:	Irritable 22 State Com 2H	North Reference:	Grid
Well:	#2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Design Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
Lateral PBHL #2H	0.00	0.00	7,584.00	-4,639.35	44.34	403,479.14	590,139.65	32° 6' 32.92 N	104° 10' 32.57 W
- plan hits target center									
- Point									

Formations

Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(usft)	(usft)			(°)	(°)
7,476.67	7,426.00	2nd BSPG Sand		0.00	
7,715.38	7,549.00	2 BSPG LWR		0.00	