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1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

NOV 30 2009

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised October 15, 2009

Submit one copy to appropriate  
District Office

HOBBS OIL

CONSERVATION DIVISION

1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-39385	Pool Code 79335	Pool Name JOHNSON RANCH; WOLFCAMP (GAS)
Property Code	Property Name THISTLE UNIT	Well Number 8
OGRID No. 6137	Operator Name DEVON ENERGY PRODUCTION COMPANY LP	Elevation 3666'

Surface Location

UL or lot No. N	Section 33	Township 23 S	Range 33 E	Lot Idn	Feet from the 1310	North/South line SOUTH	Feet from the 1600	East/West line WEST	County LEA
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Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No.						

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<b>OPERATOR CERTIFICATION</b> <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i>  Signature Date 11/25/09 Norvella Adams Printed Name
	<b>SURVEYOR CERTIFICATION</b> <i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief</i>  Date Surveyed Signature Professional Surveyor W.O. Nov 2008 Certificate No. Gary L. Jones 7977 BASIN SURVEYS

## THISTLE UNIT 8 - DRILLING APD

### 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' - 1355'	13 3/8"	0' - 1355'	54.5#	LTC	K-55
12 1/4"	1355' - 5300'	9 5/8"	0' - 5300'	40#	BTC	N-80
8 3/4"	5300' - 12,200'	7 5/8"	0' - 12,200'	39#	FJ	HCP-110
6 1/2"	12,200' - 14,200'	5"	12,200' - 14,200'	23.2#	FJ	HCP-110

### Design Parameter Factors:

<u>Casing Size</u>	<u>Collapse Design Factor</u>	<u>Burst Design Factor</u>	<u>Tension Design Factor</u>
13 3/8"	1.80	4.37	4.37
9 5/8"	1.22	2.26	2.26
7 5/8"	2.17	2.55	2.23
5"	2.16	2.09	1.69

### Mud Program

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc</u>	<u>Fluid Loss</u>	<u>Type System</u>
0' - 1355'	8.4 - 9.0	32 - 34	N/C	FW/Gel
1355' - 5300'	8.8 - 9.2	28 - 30	N/C	Brine
5300' - 12,200'	8.6 - 9.0	28	NC	Brine
12,200' - 14,000'	10.0 - 13	32 - 40	NC - 12cc	Brine

### BOP DESIGN

The blow out prevention system will consist of a bag type (hydril) preventer, a double ram preventer stack, and a rotating head. Both the hydril and ram stack will be hydraulically operated. Both BOP systems will be rated at 5000psi. Prior to drilling out the 9 5/8" intermediate shoe, the ram stack will be nipped up with 4.5" pipe rams installed. Once the 7 5/8" casing is set, 3.5" pipe rams will be used in the BOP. **The hydril will be tested to 1000psi (high) and 250psi (low). Tests on the 5000psi BOP will be conducted per the BLM Drilling Operations Order #2.**

The ram system 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 hydril, other BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 5000 psi WP

## Cementing Program

13 3/8" Surface

**Lead:** 770 sacks (35:65) Poz (Fly Ash):Premium Plus C Cement + 0.125 lbs/sack Cello Flake + 4% bwoc Bentonite + 5% bwow Sodium Chloride + 0.8% bwoc Sodium Metasilicate + 5% bwoc MPA-5 + 101.1% Fresh Water  
**Yield:** 1.96 cf/sack. TOC @ surface.

**Tail:** 300 sacks Premium Plus C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 56.3% Fresh Water  
**Yield:** 1.35 cf/sack.

9 5/8" Intermediate

**Lead:** 1255 sacks (50:50) Poz (Fly Ash):Premium Plus C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 107.8% Fresh Water  
**Yield:** 2.24 cf/sack. TOC @ surface.

**Tail:** 300 sacks (60:40) Poz (Fly Ash):Premium Plus C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 64.7% Water  
**Yield:** 1.37 cf/sack.

7 5/8" Intermediate

### 1<sup>st</sup> Stage

**Lead:** 220 sacks (50:50) Poz + 0.2% bwoc Sodium Metasilicate + 1.4% bwoc FL-62 + 0.4% bwoc  
**Yield:** 2.3 cf/sack.

### Tail

**Lead:** 335 sacks (15:61:11) Poz (Fly Ash):Premium Plus C Cement + 1% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 0.4% bwoc FL-52A + 0.4% bwoc R-3 + 103.1% Fresh Water  
**Yield:** 1.56 cf/sack.

**DV TOOL at ~8000'**

### 2<sup>nd</sup> Stage

**Lead:** 205 sacks (35:65) Poz (Fly Ash):Class H Cement + 0.125 lbs/sack Cello Flake + 3% bwoc Bentonite + 0.4% bwoc FL-52A + 99.3% Fresh Water  
**Yield:** 1.95 cf/sk

**Tail:** 150 sacks (60:40) Poz (Fly Ash):Class H Cement + 1% bwow Sodium Chloride + 0.15% bwoc  
63.2% Fresh Water  
**Yield:** 1.34 cf/sk

**5" Liner:** 420 sacks 50:50 Poz Cement + 0.75% bwoc EC-1 + 0.7% bwoc CD-32 + 1.2% bwoc  
**Yield:** 1.27 cf/sk

TOC for All Strings:

Surface:	0'
1 <sup>st</sup> Intermediate:	0'

2<sup>nd</sup> Intermediate:  
Liner:

4800'  
11,900'