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District II  
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District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
**Energy Minerals and Natural Resources** **HOBBS OCD**  
**Oil Conservation Division**  
**1220 South St. Francis Dr.**  
**Santa Fe, NM 87505**

Form C-101  
Revised December 16, 2011

Permit

SEP 30 2014

RECEIVED

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

<sup>1</sup> Operator Name and Address <b>DEVON ENERGY PRODUCTION COMPANY, L.P.</b> <b>333 W.SHERIDAN AVENUE</b> <b>OKLAHOMA CITY, OKLAHOMA 73102</b>		<sup>2</sup> OGRID Number <div style="text-align: center;">6137 ✓</div>
<sup>4</sup> Property Code <div style="text-align: center; font-size: 1.2em;">313750</div>		<sup>3</sup> API Number <div style="text-align: center; font-size: 1.2em;">30-025-42161</div>
<sup>3</sup> Property Name <div style="text-align: center;">SEAWOLF 16 SWD</div>		<sup>6</sup> Well No. <div style="text-align: center;">1</div>

**<sup>7</sup> Surface Location**

UL - Lot <b>P</b>	Section <b>16</b>	Township <b>26S</b>	Range <b>35E</b>	Lot Idn	Feet from <b>220</b>	N/S Line <b>SOUTH</b>	Feet From <b>180</b>	E/W Line <b>EAST</b>	County <b>LEA</b>
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**<sup>8</sup> Pool Information**

SWD;DEV-FUS-MON-SIMP-ELL	97775
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**Additional Well Information**

<sup>9</sup> Work Type <b>NW</b>	<sup>10</sup> Well Type <b>SWD</b>	<sup>11</sup> Cable/Rotary	<sup>12</sup> Lease Type <b>STATE</b> <i>S</i>	<sup>13</sup> Ground Level Elevation <div style="text-align: center;">3120.4'</div>
<sup>14</sup> Multiple	<sup>15</sup> Proposed Depth <div style="text-align: center;">21,700'</div>	<sup>16</sup> Formation <b>DEVONIAN</b>	<sup>17</sup> Contractor	<sup>18</sup> Spud Date <div style="text-align: center;">10/22/2014</div>
Depth to Ground water 160'		Distance from nearest fresh water well		Distance to nearest surface water

**<sup>19</sup> Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	26"	20"	94#	0-800'	1,880 CI C	Surface
Intermediate	17 1/2"	13 3/8"	68#	0-5,000'	3,490 CI C	Surface
Intermediate	12 1/4"	9 5/8"	53.5#	0-12,400'	1,880 CI H	4,000'
Liner	8 1/2"	7"	35#	0-19,207'	1,030 CI H	11,900'
OH	5 7/8"	NA	NA	Open Hole	NA	NA

**Casing/Cement Program: Additional Comments**

See attached Drilling Program; During this procedure we plan to use the Close-Loop System and haul contents to the required disposal.
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**Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
* See attached Drill Plan;	Pressure Control Equipment	discription	

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

I further certify that the drilling pit will be constructed according to NMOCD guidelines ☐, a general permit ☐, or an (attached) alternative OCD-approved plan ☒.

Signature:

Printed name: David H. Cook

Title: Regulatory Specialist

E-mail Address: david.cook@dvn.com

Date: 9/29/2014

Phone: (405) 552-7848

**OIL CONSERVATION DIVISION**

Approved By:

Title: **Petroleum Engineer**

Approved Date: *10/01/14*

Expiration Date: *10/01/16*

Conditions of Approval Attached

**OIL CONSERVATION DIVISION**  
 CONDITION OF APPROVAL - Approval for drilling / workover **ONLY - CANNOT INJECT OR DISPOSAL** until the injection/disposal order has been approved by the OCD Santa Fe office.

OCT 02 2014

**Casing Program:**

Hole Size	Hole Interval	Casing OD	Casing Interval	Weight (lb/ft)	Collar	Grade	Collapse Design Factor	Burst Design Factor	Tension Design Factor
26"	0 – 800'	20"	0 – 800'	94#	BTC	J-55	1.39	4.62	4.28
17-1/2"	800' – 5,000'	13-3/8"	0 – 5,000'	68#	STC	HCP-110	1.12	2.66	6.29
12-1/4"	5,000' – 12,400'	9-5/8"	0 – 12,400'	53.5#	LTC	HCP-110	1.12	2.66	5.03
8-1/2"	12,400' – 19,207'	7" Liner	11,900' - 19207'	35#	LTC	P-110	1.09	1.14	4.70
5-7/8"	19,207' – 21,700'	NA	NA	NA	NA	NA	NA	NA	NA

**Casing Notes:**

- This is an open hole completion, thus no casing is listed for hole interval 19,207' to 21,700'
- All casing is new and API approved
- Casing will never be fully evacuated when running in the hole.

**Proposed mud Circulations System:**

Depth	Mud Weight	Viscosity	Fluid Loss	Type System
0 – 800'	8.4-9.0	30-34	N/C	FW
800' – 5,000'	9.8-10.0	28-32	N/C	Brine
5,000' – 12,400'	8.6-9.0	28-32	N/C	FW
12,400' – 19,207'	9.8-12.0	30-34	N/C	FW
19,207 – 21,700'	8.4-9.0	28-32	N/C	FW

The necessary mud products for weight addition and fluid loss control will be on location at all times. Visual mud monitoring equipment will be in place to detect volume changes indicating loss or gain of circulating fluid volume. If abnormal pressures are encountered, electronic/mechanical mud monitoring equipment will be installed.

**Cementing Table:**

String	Number of sx	Weight lbs/gal	Water Volume g/sx	Yield cf/sx	Stage; Lead/Tail	Slurry Description
20" Surface	1880	14.8	6.34	1.33	Tail	Class C Cement + 63.5% Fresh Water
13-3/8" Intermediate	2545	12.9	9.81	1.85	Lead	(65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake + 70.9 % Fresh Water
	945	14.8	6.32	1.33	Tail	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water, 14.8 ppg
9-5/8" Intermediate	1480	11.9	12.89	2.26	Lead	(50:50) Class H Cement: Poz (Fly Ash) + 10% BWOC Bentonite + 1 lb/sk of Kol-Seal + 0.3% BWOC HR-601 + 0.5lb/sk D-Air 5000 + 76.4% Fresh Water
	400	14.5	5.37	1.22	Tail	(50:50) Class H Cement: Poz (Fly Ash) + 1 lb/sk Sodium Chloride + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% bwoc HR-601 + 2% bwoc Bentonite + 58.8% Fresh Water
7" Drilling Liner	1030	14.5	5.37	1.22	Tail	(50:50) Class H Cement: Poz (Fly Ash) + 1 lb/sk Sodium Chloride + 0.5% bwoc HALAD-344 + 0.4% bwoc CFR-3 + 0.2% bwoc HR-601 + 2% bwoc Bentonite + 58.8% Fresh Water

**TOC for all Strings:**

20" Surface Casing	0ft
13-3/8" Intermediate Casing	0ft
9-5/8" Intermediate Casing	4000ft
7" Drilling Liner	11,900ft

**Notes:**

- Cement volumes Surface 100%, Intermediate #1 75%, Intermediate #2 50% and Drilling Liner based on at least 25% excess

### **Pressure Control Equipment:**

A 3M 13-5/8" BOP system (Double Ram and 2M Annular preventer) will be installed and tested prior to drilling out the surface casing shoe. The BOP system used to drill the intermediate hole will be tested per BLM Onshore Oil and Gas Order 2.

A 5M 13-5/8" BOP system (Double Ram and 5M Annular preventer) will be installed and tested prior to drilling out the 1<sup>st</sup> intermediate casing shoe. The BOP system used to drill the 2<sup>nd</sup> intermediate hole will be tested per BLM Onshore Oil and Gas Order 2.

A 10M 13-5/8" BOP system (Double Ram and 5M Annular preventer) will be installed and tested prior to drilling out the 2<sup>nd</sup> intermediate and 3<sup>rd</sup> intermediate casing shoe. The BOP system used to drill the 3<sup>rd</sup> intermediate and production hole will be tested per BLM Onshore Oil and Gas Order 2.

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 10,000 psi WP.

Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line); **if an H&P rig drills this well. Otherwise no flex line is needed.** The line will be kept as straight as possible with minimal turns.

### **Auxiliary Well Control and Monitoring Equipment:**

- a. A Kelly cock will be in the drill string at all times.
- b. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.