

**District I**  
 1625 N. French Dr., Hobbs, NM 88240  
 Phone:(575) 393-6181 Fax:(575) 393-0720

**District II**  
 811 S. First St., Artesia, NM 88210  
 Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**  
 1220 S. St Francis Dr., Santa Fe, NM 87505  
 Phone:(505) 478-3470 Fax:(505) 478-3462

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

Form C-101  
 August 1, 2011  
 Permit 185888

*Amended*

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

1. Operator Name and Address DEVON ENERGY PRODUCTION COMPANY, LP 333 W. Sheridan Avenue Oklahoma City, OK 73102		2. OGRID Number 6137
		3. API Number 30-015-42377
4. Property Code 313246	5. Property Name Rosco 16 State SWD	6. Well No. 001

**7. Surface Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
L	16	23S	26E		1665	S	600	W	Eddy

**8. Proposed Bottom Hole Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
L	16	23S	26E	L	1665	S	600	W	Eddy

**9. Pool Information**

SWD;CANYON-MOR-DEV-ELLEN	96189
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**Additional Well Information**

11. Well Type New Well	12. Well Type <b>SWD</b>	13. Cable/Rotary	14. Lease Type State	15. Ground Level Elevation 3371
16. Multiple N	17. Proposed Depth 15103	18. Formation Simpson	19. Contractor	20. Spud Date 6/8/2014
Depth to Ground water		Distance from nearest fresh water well		Distance to nearest surface water

We will be using a closed-loop system in lieu of lined pits

**21. Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	26	20	94	180	470	0
Int1	17.5	13.375	68	1470	910	0
Int2	12.25	9.625	47	8800	1800	970
Prod	8.5	7	29	12403	550	8300
Prod	5.875	0	0	15103	0	0

**Casing/Cement Program: Additional Comments**

THIS IS AN SWD WELL "9-5/8" Intermediate and 7" production casing are actually "HCP-110", which did not fit. "Last production "string" shown is actually an open hole completion for salt water injection \*\*\*Complete Drilling plan was mailed to Artesia NMOC field office on 5/8/14. Two stage 2nd intermediate cementing option is included. Notes: • Cement volumes Surface 100%, Intermediate #1 75%, Intermediate #2 50% and Production based on at least 25% excess. • Actual cement volumes will be adjusted based on fluid caliper and/or caliper log data. • If lost severe circulation is encountered while drilling the intermediate wellbore, a DV tool will be installed a minimum of 50' below the previous casing shoe and of 200' above the current shoe. If the DV tool has to be moved, the cement volumes will be adjusted proportionately.

**22. Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
Annular	2000	2000	
Double Ram	5000	5000	

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC <input checked="" type="checkbox"/> and/or 19.15.14.9 (B) NMAC <input checked="" type="checkbox"/> , if applicable.  Signature:	<b>OIL CONSERVATION DIVISION</b>
Printed Name: Electronically filed by Randy Bolles	Approved By: Randy Dade
Title: Manager, Regulatory Affairs	Title: District Supervisor
Email Address: randy.bolles@dvn.com	Approved Date: 5/15/2014
Date: 5/8/2014	Expiration Date: 5/15/2016
Phone: 405-228-8588	Conditions of Approval Attached

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State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505



Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number <b>30-015-42377</b>		<sup>2</sup> Pool Code <b>96189</b>	<sup>3</sup> Pool Name <b>SWD: CANYON-MOR-DEV-ELLEN</b>
<sup>4</sup> Property Code <b>313246</b>	<sup>5</sup> Property Name <b>ROSCO 16 STATE SWD</b>		<sup>6</sup> Well Number <b>1</b>
<sup>7</sup> OGRID No. <b>6137</b>	<sup>8</sup> Operator Name <b>DEVON ENERGY PRODUCTION COMPANY, L.P.</b>		<sup>9</sup> Elevation <b>3371.1</b>

<sup>10</sup> Surface Location

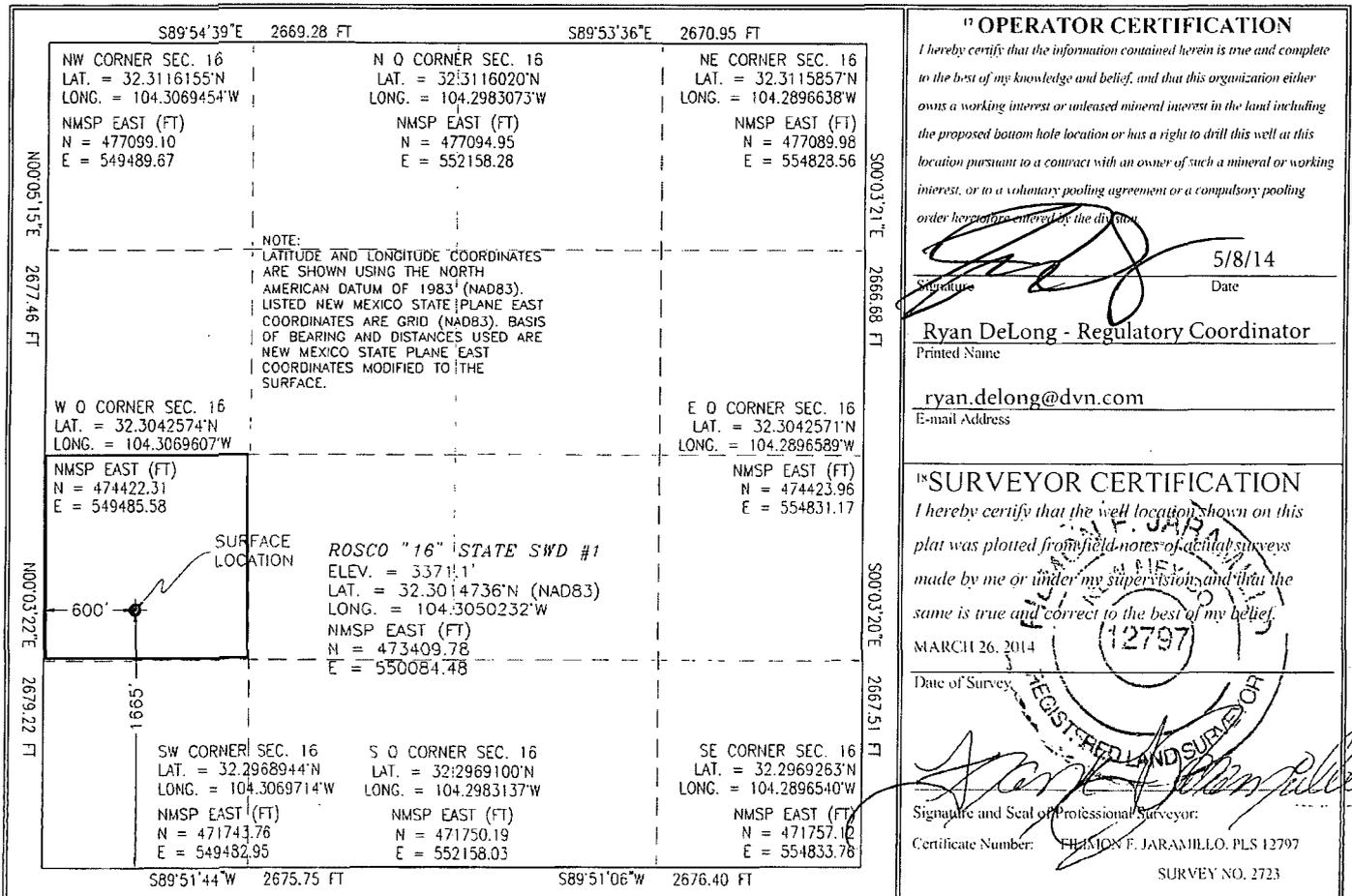
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>L</b>	<b>16</b>	<b>23 S</b>	<b>26 E</b>		<b>1665</b>	<b>SOUTH</b>	<b>600</b>	<b>WEST</b>	<b>EDDY</b>

<sup>11</sup> 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

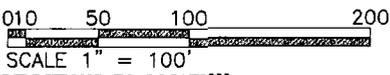
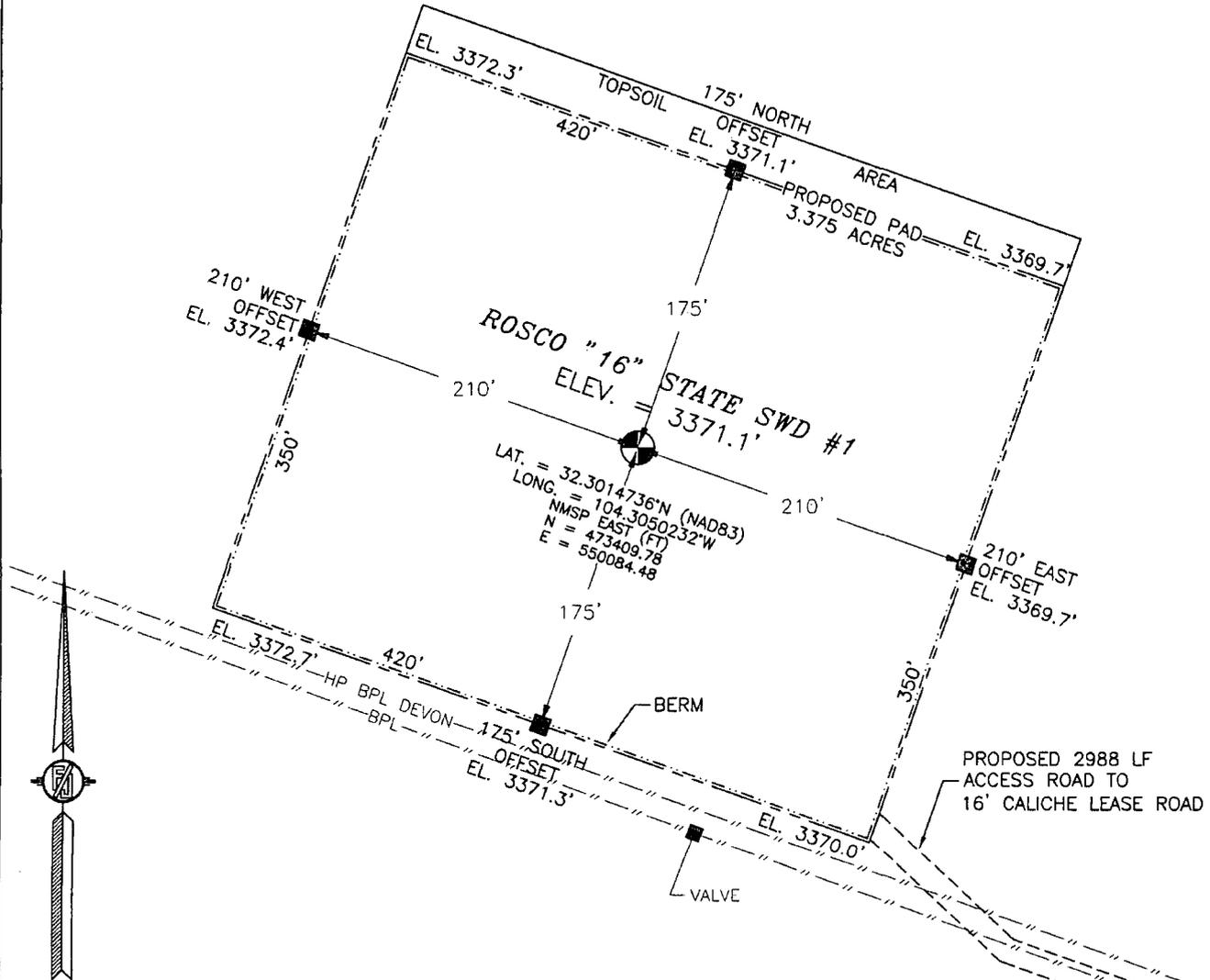
<sup>12</sup> Dedicated Acres <b>40 AC NA</b>	<sup>13</sup> Joint or Infill <b>NA</b>	<sup>14</sup> Consolidation Code	<sup>15</sup> Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



SECTION 16, TOWNSHIP 23 SOUTH, RANGE 26 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
**SITE MAP**

NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE



**DIRECTIONS TO LOCATION**  
 ABOUT 200' NORTH OF MILE MARKER 27 ON SOUTH BOUND LANE OF US HIGHWAY 62-180 (NATIONAL PARKS HIGHWAY) TURN RIGHT ON CALICHE LEASE ROAD, GO WEST ABOUT 1.45 MILES TO ROAD INTERSECTION, TURN LEFT GO SOUTH 0.50 MILES TO EXISTING PAD. GO TO EXISTING BPL ROAD SOUTH OF PAD TURN RIGHT GO NORTHWEST 0.49 MILES TO SOUTHEAST CORNER OF PROPOSED PAD.

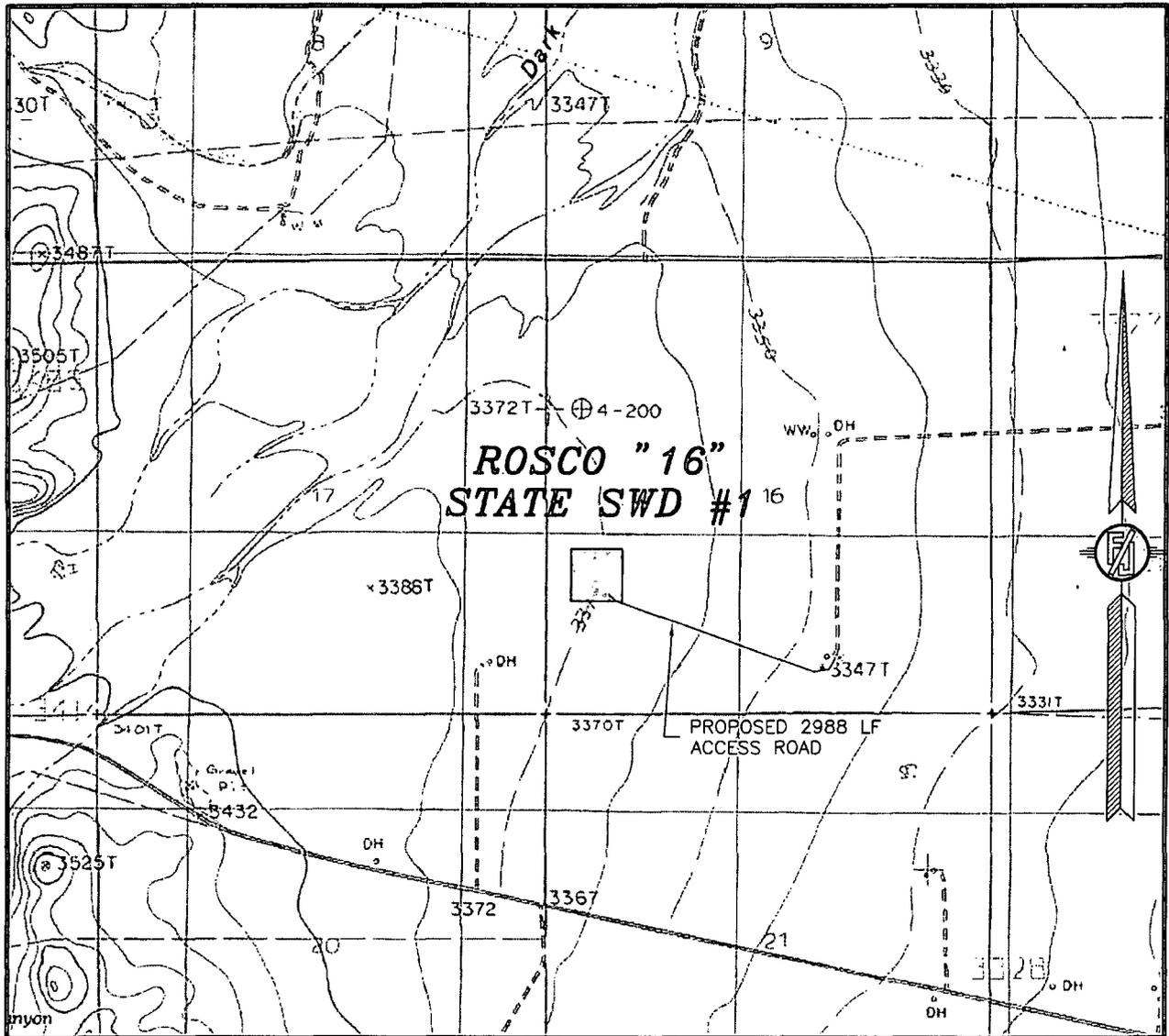
**DEVON ENERGY PRODUCTION COMPANY, L.P.**  
**ROSCO "16" STATE SWD #1**  
 LOCATED 1665 FT. FROM THE SOUTH LINE  
 AND 600 FT. FROM THE WEST LINE OF  
 SECTION 16, TOWNSHIP 23 SOUTH,  
 RANGE 26 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO

MARCH 26, 2014

SURVEY NO. 2723

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-3341

SECTION 16, TOWNSHIP 23 SOUTH, RANGE 26 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 LOCATION VERIFICATION MAP



USGS QUAD MAP:  
 KITCHEN COVE

NOT TO SCALE

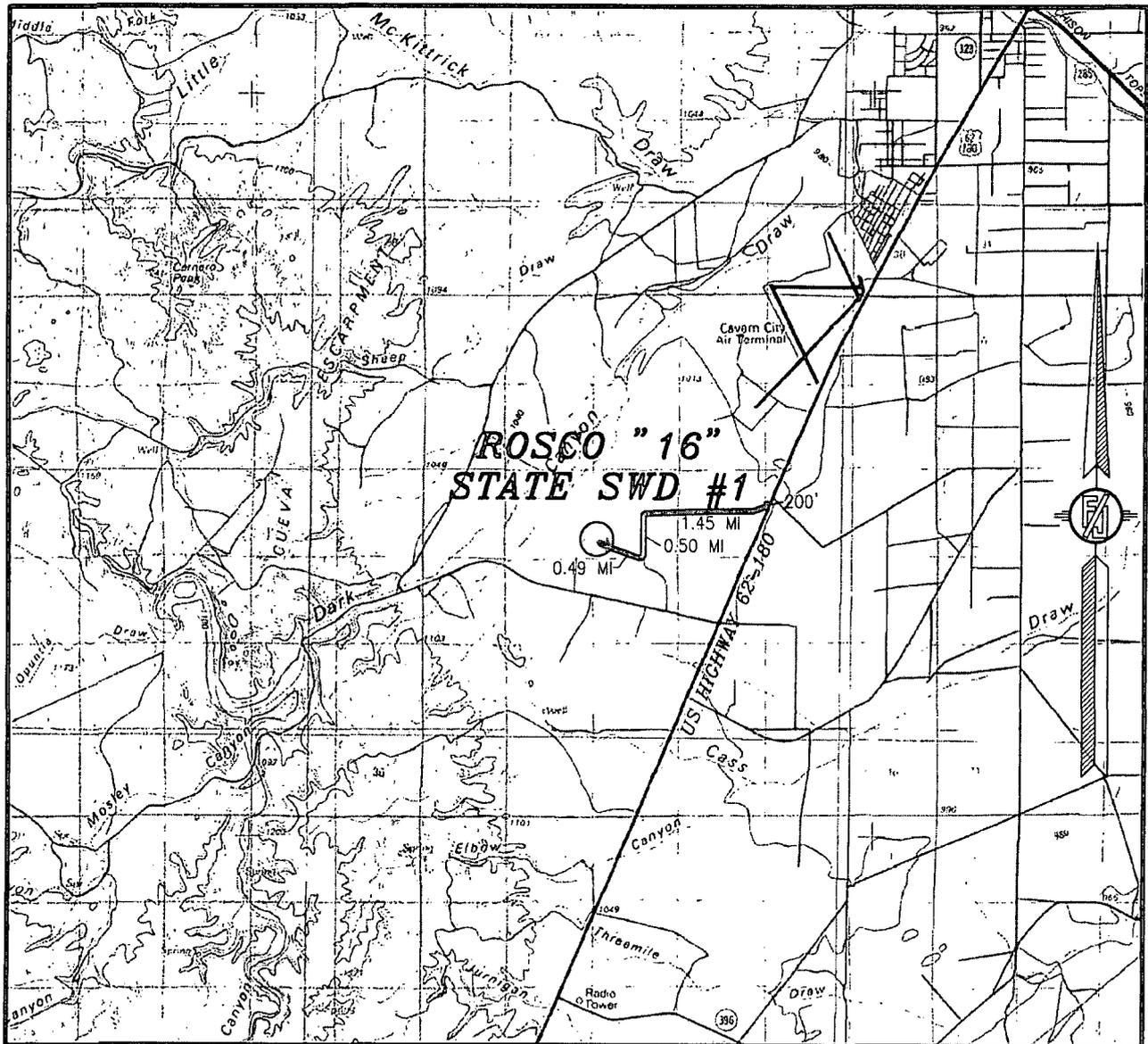
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SECTION 16, TOWNSHIP 23 SOUTH, RANGE 26 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 VICINITY MAP



DISTANCES IN MILES

NOT TO SCALE

DEVON ENERGY PRODUCTION COMPANY, L.P.

**ROSCO "16" STATE SWD #1**

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AND 600 FT. FROM THE WEST LINE OF

SECTION 16, TOWNSHIP 23 SOUTH,

RANGE 26 EAST, N.M.P.M.

EDDY COUNTY, STATE OF NEW MEXICO

**DIRECTIONS TO LOCATION**

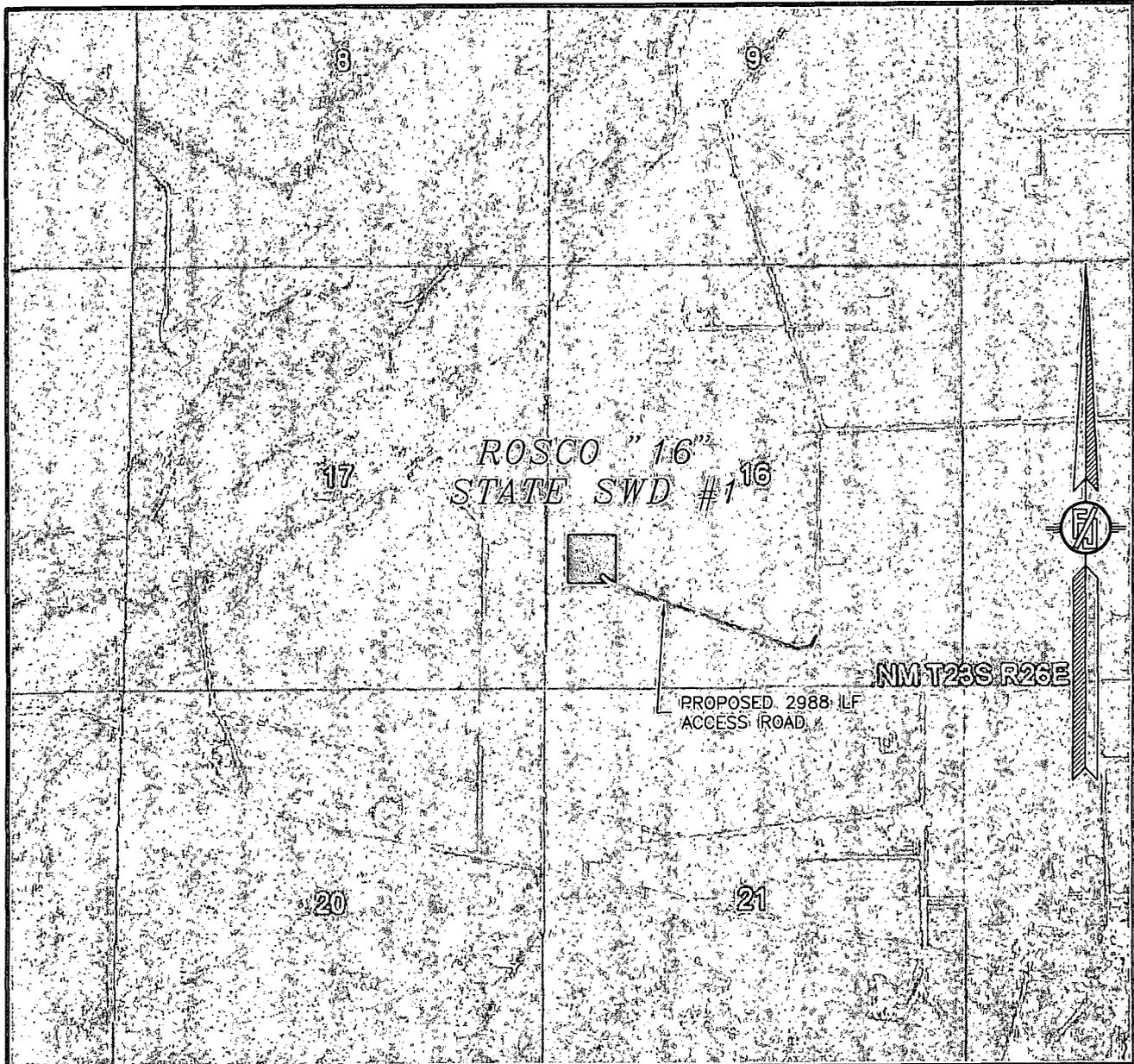
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 US HIGHWAY 62-180 (NATIONAL PARKS HIGHWAY) TURN RIGHT ON  
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 GO TO EXISTING BPL ROAD SOUTH OF PAD TURN RIGHT GO  
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MARCH 26, 2014

SURVEY NO. 2723

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 (575) 234-3341

SECTION 16, TOWNSHIP 23 SOUTH, RANGE 26 EAST, N.M.P.M.  
EDDY COUNTY, STATE OF NEW MEXICO  
AERIAL PHOTO



NOT TO SCALE  
AERIAL PHOTO:  
GOOGLE EARTH  
APRIL 2013

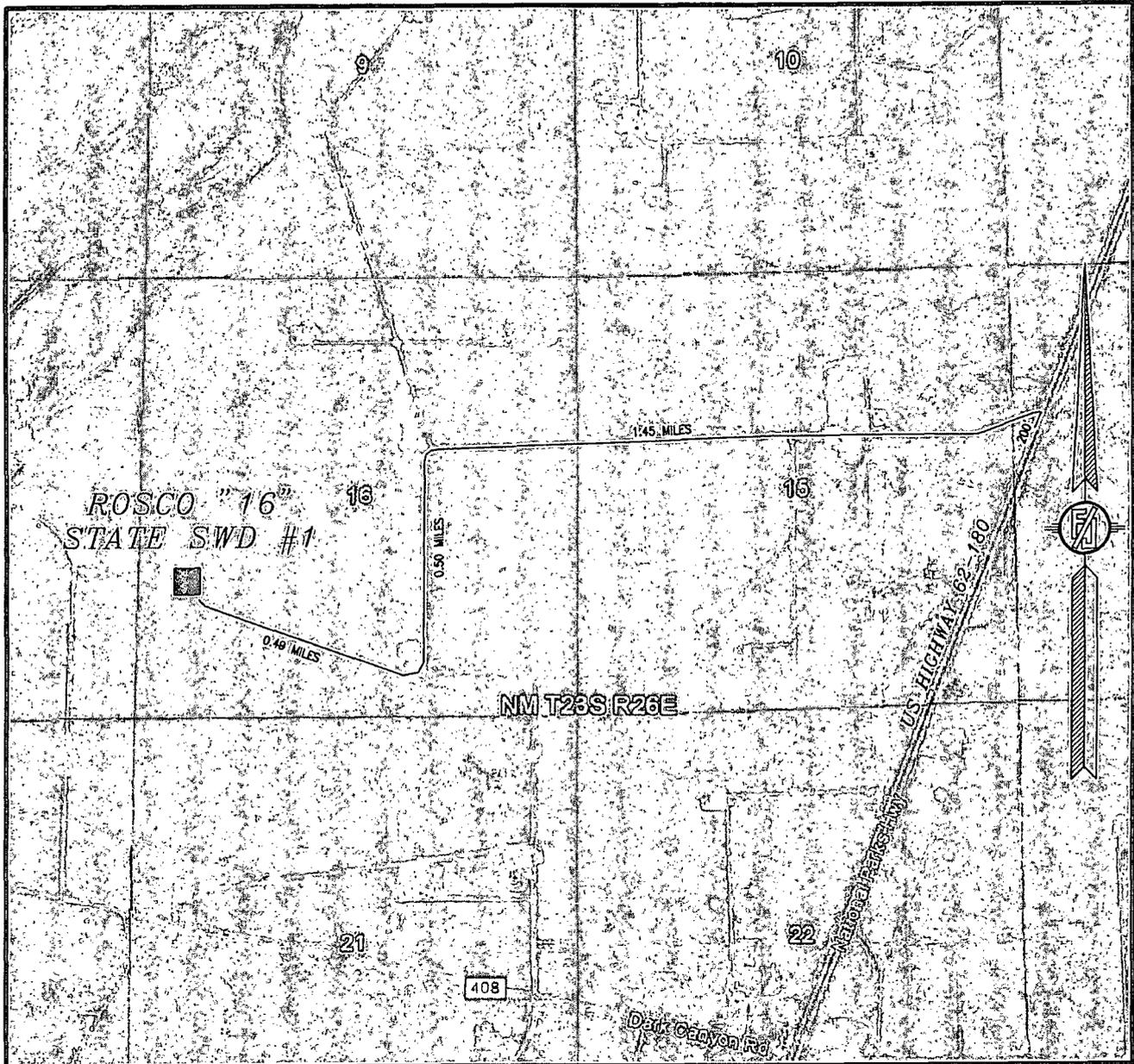
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EDDY COUNTY, STATE OF NEW MEXICO

MARCH 26, 2014

SURVEY NO. 2723

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(575) 234-3341

SECTION 16, TOWNSHIP 23 SOUTH, RANGE 26 EAST, N.M.P.M.  
 EDDY COUNTY, STATE OF NEW MEXICO  
 ACCESS AERIAL ROUTE MAP



NOT TO SCALE  
 AERIAL PHOTO:  
 GOOGLE EARTH  
 APRIL 2013

DEVON ENERGY PRODUCTION COMPANY, L.P.  
**ROSCO "16" STATE SWD #1**  
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 EDDY COUNTY, STATE OF NEW MEXICO

MARCH 26, 2014

SURVEY NO. 2723

MADRON SURVEYING, INC. 301 SOUTH CANAL CARLSBAD, NEW MEXICO  
 (575) 234-3341

## ROSCO 16 STATE SWD 1-APD DRILLING PLAN

### Casing Program

Hole Size	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
26"	0 – 180	20"	0 – 180	94#	BTC	J-55
17-1/2"	180 – 1470	13-3/8"	0 – 1470	68#	STC	J/K-55
12-1/4"	1470 – 8800	9-5/8"	0 – 8800	47#	LTC	HCP-110
8-1/2"	8800 – 12403	7"	0 – 12403	29#	BTC	HCP-110
5-7/8"	12403' – 15103'	Open hole completion				

Note: This will be an open hole completion, thus the hole interval is deeper than the 7" production casing depth

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
20", 94#, J-55, BT&C	5.79	23.48	82.86
13-3/8", 68#, J/K-55, BT&C	2.55	4.51	11.40
9-5/8", 47#, HCP-110, LT&C	1.63	2.17	2.93
7", 29#, HCP-110, BT&C	1.19	1.45	2.58

The maximum possible collapse load that the intermediate casing will experience will result from evacuated casing with the pore pressure exerting a collapse load at TD. There is no potential for the intermediate casing strings to be used as the injection string.

### Mud Program:

Depth	Mud Wt.	Visc.	Fluid Loss	Type System
0 – 180	8.4 – 8.8	30 – 34	N/C	FW
180 – 1470	10	28 – 32	N/C	Brine
1470 – 8800	8.8 – 9.5	28 – 30	N/C	FW
8800- 12403	10 - 12	28 – 30	N/C	FW
12403– 15103	8.4 – 8.8	28 – 30	N/C	FW

### Pressure Control Equipment:

The BOP system used to drill the 17-1/2" hole will consist of a 20" 2M Annular preventer. The BOP system will be tested as a 2M system per BLM Onshore Oil and Gas Order 2 prior to drilling out the casing shoe.

A 5M 13-5/8" BOP system (Double Ram and Annular preventer) will be installed and tested prior to drilling out the first and second intermediate hole sections. The BOP system will be tested as a 5M system per BLM Onshore Oil and Gas Order 2 prior to drilling out the casing shoes.

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); 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.

String	Number of sx	Weight lbs/gal	Water Volume g/sx	Yield cf/sx	Stage; Lead/Tail	Slurry Description
20" Surface Casing	470	14.8	6.34	1.34	Tail	Class C Cement + 1% Calcium Chloride + 64.2% Fresh Water
13-3/8" 1 <sup>st</sup> Intermediate Casing	620	12.9	9.82	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
	490	14.8	6.34	1.33	Tail	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water
9-5/8" 2 <sup>nd</sup> Intermediate Casing	1400	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	14.4	5.75	1.24	Tail	50% Premium H / 50% PozMix + 0.2% BWOC Halad-9 + 0.2% BWOC HR-800 + 64.7% Fresh Water
9-5/8" 2 <sup>nd</sup> Intermediate Casing Two-Stage Option	790	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
	210	14.4	5.75	1.24	Tail	50% Premium H / 50% PozMix + 0.2% BWOC Halad-9 + 0.2% BWOC HR-800 + 64.7% Fresh Water
	DV Tool at 4500ft					
	610	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
	180	14.8	6.34	1.33	Tail	Class C Cement + 0.125 lbs/sack Poly-E-Flake + 63.5% Fresh Water
7" Production Casing	550	14.5	5.32	1.21	Tail	(50:50) Class H Cement: Poz (Fly Ash) + 0.5% bwoc HALAD-344 + 0.25% 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" 1 <sup>st</sup> Intermediate Casing	0ft
9-5/8" 2 <sup>nd</sup> Intermediate Casing	970ft
7" Production Casing	8300ft

**Notes:**

- Cement volumes Surface 100%, Intermediate #1 75%, Intermediate #2 50% and Production based on at least 25% excess.
- Actual cement volumes will be adjusted based on fluid caliper and/or caliper log data.
- If lost severe circulation is encountered while drilling the intermediate wellbore, a DV tool will be installed a minimum of 50'

below the previous casing shoe and of 200' above the current shoe. If the DV tool has to be moved, the cement volumes will be adjusted proportionately.

## Permit Conditions of Approval

API: 30-015-42377

OCD Reviewer	Condition
CSHAPARD	Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string