

District I  
1625 N French Dr., Hobbs, NM 88240  
Phone (575) 393-6161 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 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  
Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

HOBBS OCD

JUN 25 2012

RECEIVED

Form C-101  
Revised August 1, 2011

Permit

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

<sup>1</sup> Operator Name and Address DEVON ENERGY PRODUCTION COMPANY, L.P. 333 W. SHERIDAN, OKLAHOMA CITY, OK. 73102		<sup>2</sup> OGRID Number 6137
		<sup>3</sup> API Number 30-025-40642
<sup>4</sup> Property Code 39284	<sup>5</sup> Property Name BUTTER CUP 35 STATE COM	<sup>6</sup> Well No. 2H

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

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
I	35	18S	34E		1550	S	250	E	LEA

**<sup>8</sup> Pool Information**

Airstrip UNDESIGNATED BONE SPRING	960
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**Additional Well Information**

<sup>9</sup> Work Type N	<sup>10</sup> Well Type 0	<sup>11</sup> Cable/Rotary R	<sup>12</sup> Lease Type S	<sup>13</sup> Ground Level Elevation 3971.2'
<sup>14</sup> Multiple No	<sup>15</sup> Proposed Depth TVD:10625 MD:15103	<sup>16</sup> Formation Bone Spring	<sup>17</sup> Contractor H & P	<sup>18</sup> Spud Date
Depth to Ground water 150'		Distance from nearest fresh water well 0.30 miles		Distance to nearest surface water 1/2 mile

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

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
	17 1/2"	13 3/8"	54.5#	1925	1645	Surface
	12 1/4"	9 5/8"	40#	5375	1420	Surface
	8 3/4"	5 1/2"	17#	10,052	2135	4875'
	8 3/4"	5 1/2"	17#	15103		

**Casing/Cement Program: Additional Comments**

See attached Drilling Plan, Horizontal Plan & BOP
---

**Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer
13 5/8" Triple Ram 2FZ35-35	3,000#	3,000#	Shaffer

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 ☐. Closed Loop.

Printed name: Barry W. Hunt

Title: Permit Agent

E-mail Address: [specialtpermitting@gmail.com](mailto:specialtpermitting@gmail.com)

Date: 06/20/12

Phone (575) 361-4078

**OIL CONSERVATION DIVISION**

Approved By:

Title:

Approved Date: JUN 26 2012

Expiration Date:

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, New Mexico 87505

HOBBS OCD

Form C-102  
Revised August 1, 2011

Submit one copy to appropriate  
District Office

JUN 25 2012

☐ AMENDED REPORT

RECEIVED

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number <b>30-025-40642</b>	Pool Code <b>960</b>	Pool Name <b>Airstrip-UNDESIGNATED-BONE SPRING</b>
Property Code <b>39284</b>	Property Name <b>BUTTER CUP 35 STATE COM</b>	Well Number <b>2H</b>
OGRID No <b>6137</b>	Operator Name <b>DEVON ENERGY PRODUCTION COMPANY, LP</b>	Elevation <b>3971.2'</b>

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>I</b>	<b>35</b>	<b>18 S</b>	<b>34 E</b>		<b>1550</b>	<b>SOUTH</b>	<b>250</b>	<b>EAST</b>	<b>LEA</b>

Bottom Hole Location If Different From Surface

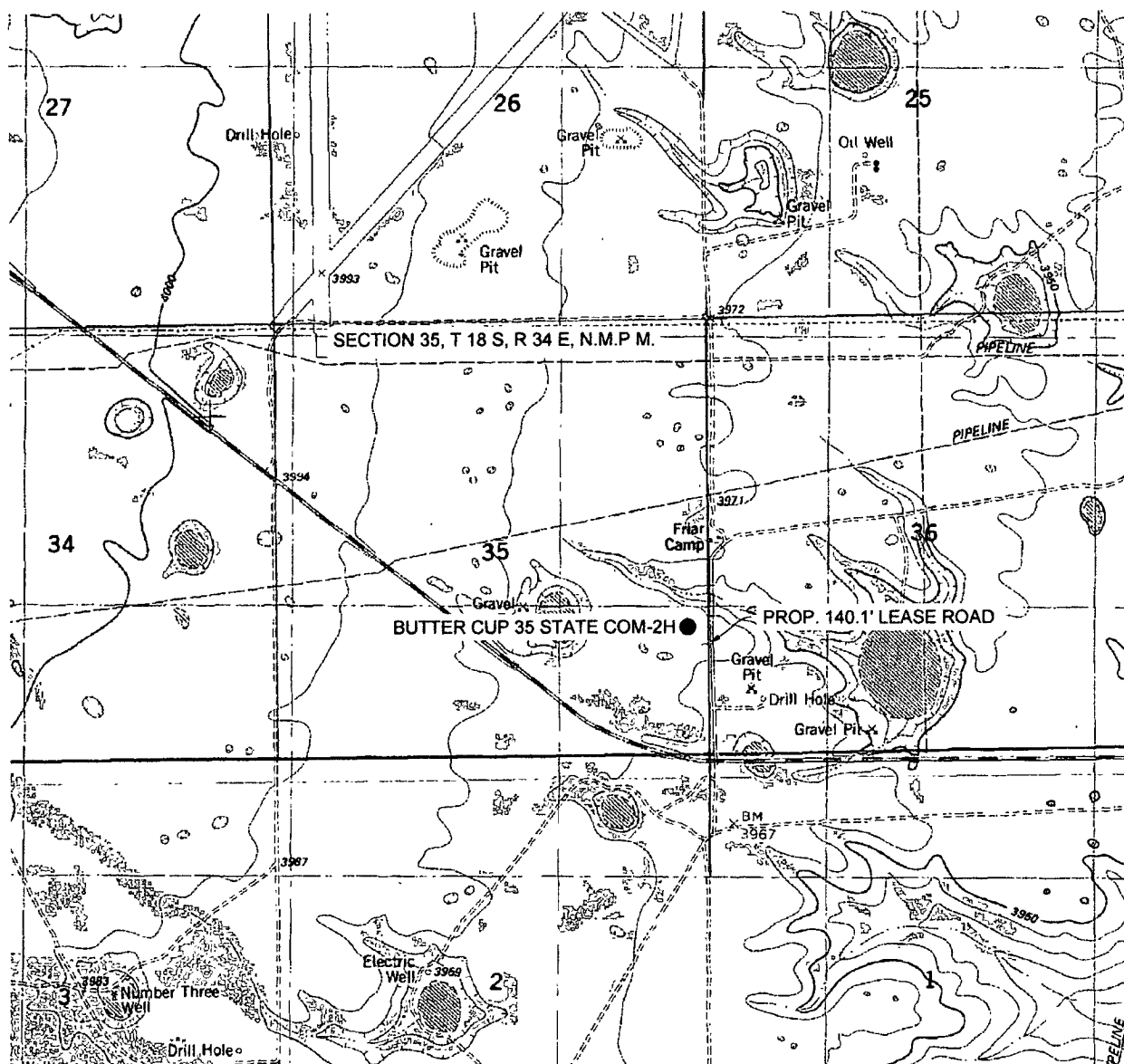
UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
<b>L</b>	<b>35</b>	<b>18 S</b>	<b>34 E</b>		<b>1980</b>	<b>SOUTH</b>	<b>330</b>	<b>WEST</b>	<b>LEA</b>

Dedicated Acres	Joint or Infill	Consolidated Code	Order No.
<b>160</b>			

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.

<p>NW COR SEC 35 NMSP-E (NAD 83) Y = 623482 1' N X = 785477 2' E LAT.= N32° 42' 41.33" LONG.= W103° 32' 22.47"</p>		<p>NE COR SEC 35 NMSP-E (NAD 83) Y = 623525 2' N X = 790766 4' E LAT.= N32° 42' 41.36" LONG.= W103° 31' 20.57"</p>	<p><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 voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p>Signature <u>Barry W. Hunt</u> Date <u>6/20/12</u> Print Name <u>Barry W. Hunt</u> E-mail Address _____</p>
<p>BUTTER CUP 35 STATE COM 2H BHL NMSP-E (NAD 83) Y = 620181.2' N X = 785837.9' E LAT.= N32° 42' 08.64" LONG.= W103° 32' 18.54"</p>		<p>BUTTER CUP 35 STATE COM 2H SHL NMSP-E (NAD 83) Y = 619789.8' N X = 790545 3' E LAT.= N32° 42' 04.42" LONG.= W103° 31' 23.49"</p>	
			<p><b>SURVEYORS 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></p> <p>MAY 15, 2012 Date of Survey Signature and Seal of Professional Surveyor <u>James E. Tompkins</u></p> <p>Job No. <u>WTC48541</u> JAMES E. TOMPKINS 14729 Certificate Number _____</p>

# LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

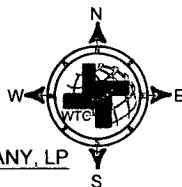
SECTION 35, T 18 S, R 34 E, N.M.P.M.

COUNTY: LEA STATE: NM

DESCRIPTION: 1550' FSL & 250' FEL

OPERATOR: DEVON ENERGY PRODUCTION COMPANY, LP

WELL NAME: BUTTER CUP 35 STATE COM-2H



DRIVING DIRECTIONS:

FROM JUNCTION OF STATE HIGHWAY 529 AND HIGHWAYS 62/180 ABOUT 12 MILES WEST OF HOBBS, NM.. GO WEST ON HIGHWAY 529 8.1 MILES TO VAN NOY LANE. GO NORTH 1389 FEET TO THE BEGINNING OF A PROPOSED ROAD TO THE WEST AND THE LOCATION FLAG IS ON YOUR LEFT.

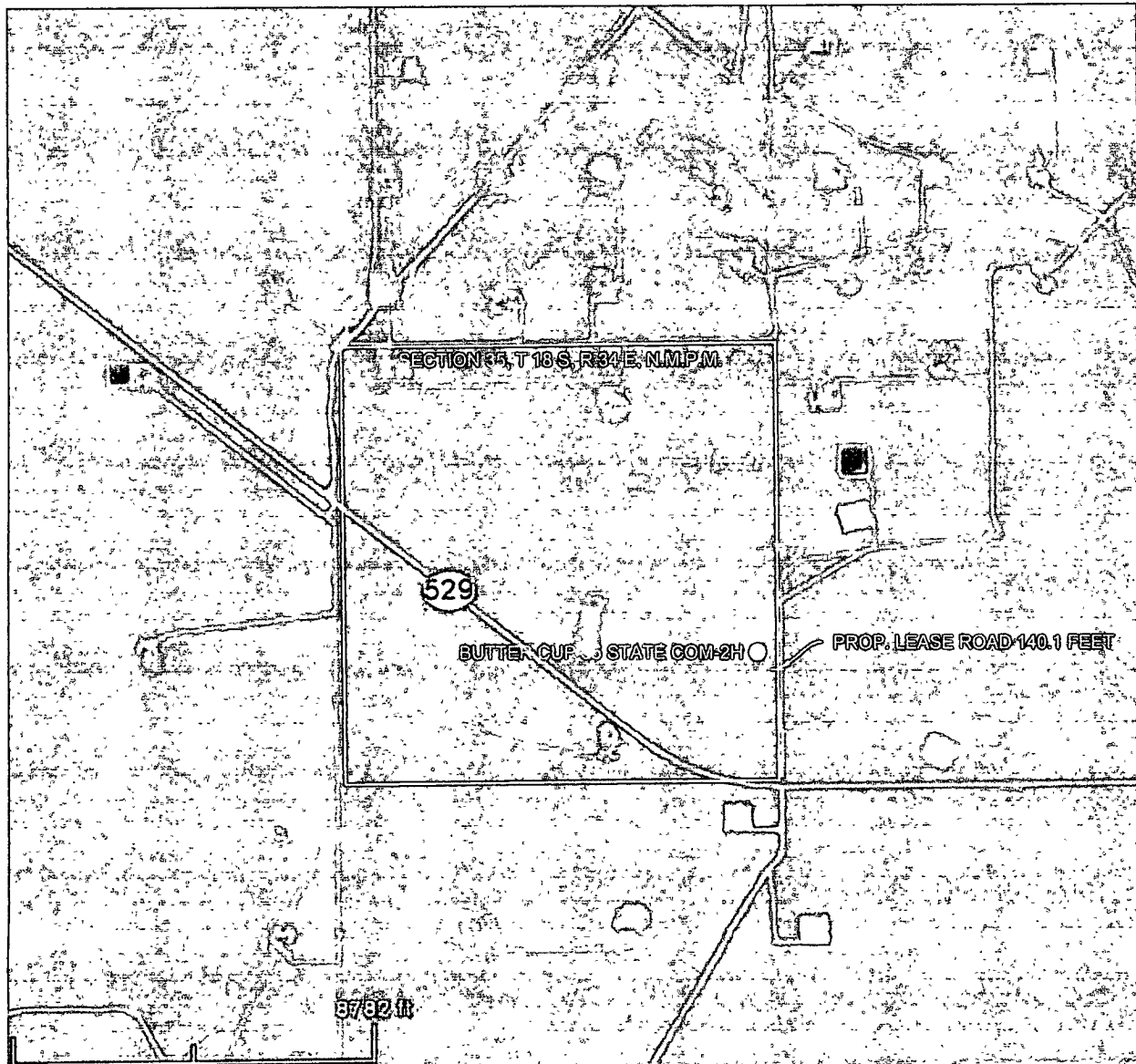


**WEST TEXAS CONSULTANTS, INC.**  
ENGINEERS PLANNERS SURVEYORS  
405 S W 1st STREET  
ANDREWS, TEXAS 79714  
(432) 523-2181



JOB No WTC48541

# AERIAL MAP



SCALE: 1" = 2000'

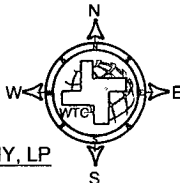
SECTION 35, T 18 S, R 34 E, N.M.P.M.

COUNTY: LEA STATE: NM

DESCRIPTION: 1550' FSL & 250' FEL

OPERATOR: DEVON ENERGY PRODUCTIN COMPANY, LP

WELL NAME: BUTTER CUP 35 STATE COM-2H



DRIVING DIRECTIONS:

FROM JUNCTION OF STATE HIGHWAY 529 AND HIGHWAYS 62/180 ABOUT 12 MILES WEST OF HOBBS, NM.. GO WEST ON HIGHWAY 529 8.1 MILES TO VAN NOY LANE. GO NORTH 1389 FEET TO THE BEGINNING OF A PROPOSED ROAD TO THE WEST AND THE LOCATION FLAG IS ON YOUR LEFT.

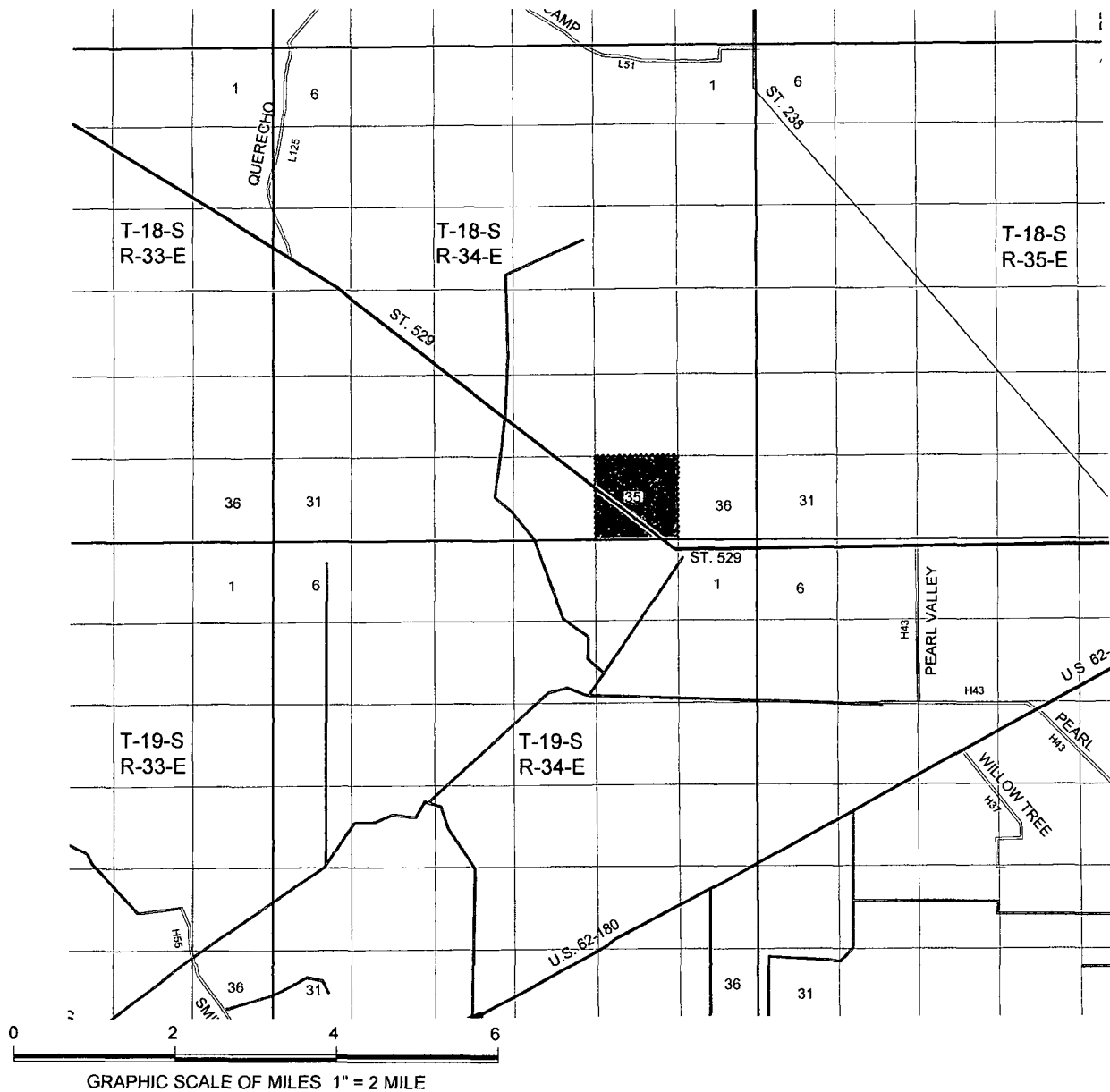


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# VICINITY MAP



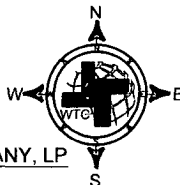
SECTION 35, T 18 S, R 34 E, N.M.P.M.

COUNTY: LEA STATE: NM

DESCRIPTION: 1550' FSL & 250' FEL

OPERATOR: DEVON ENERGY PRODUCTION COMPANY, LP

WELL NAME: BUTTER CUP 35 STATE COM-2H



DRIVING DIRECTIONS:

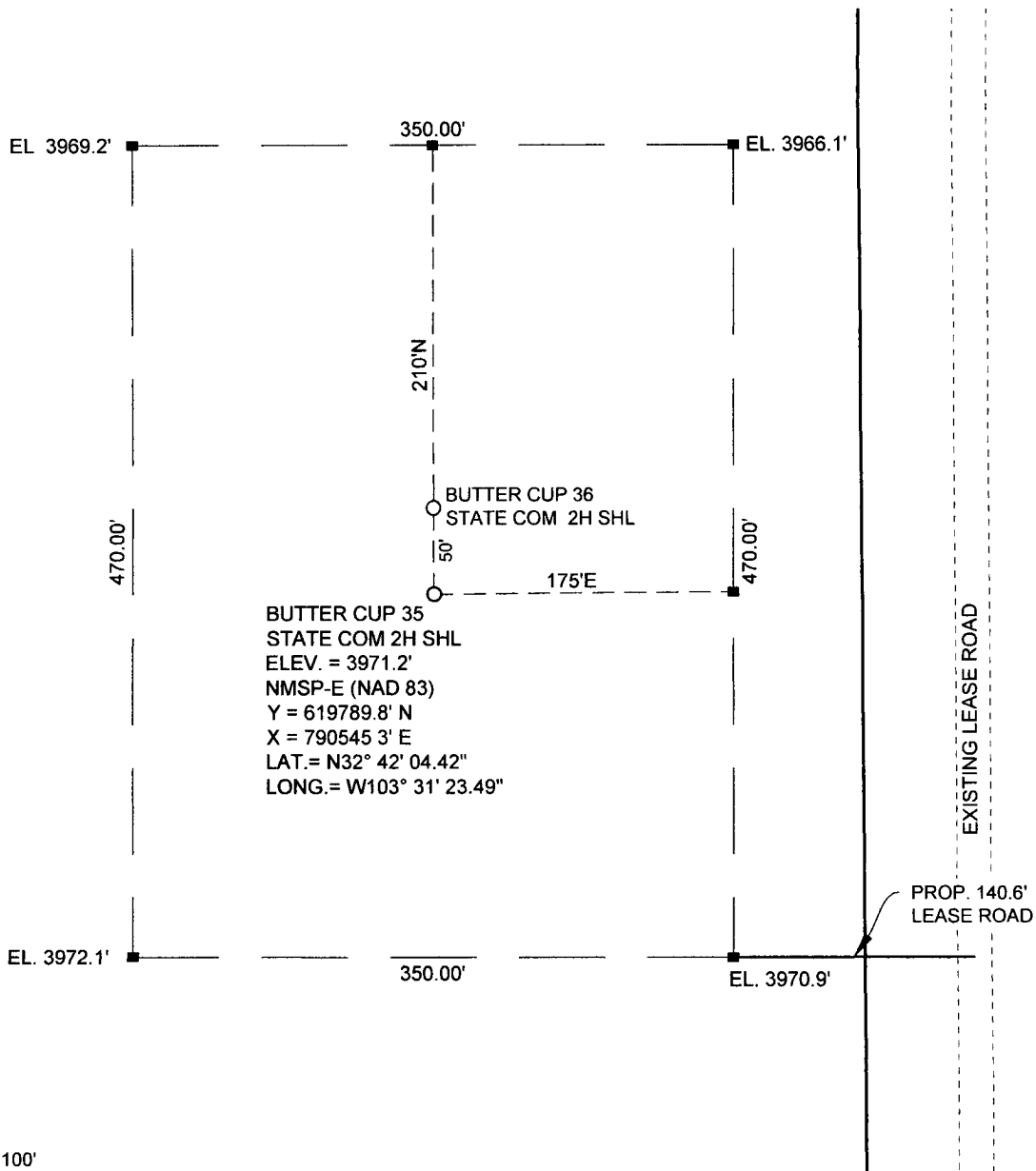
FROM JUNCTION OF STATE HIGHWAY 529 AND HIGHWAYS 62/180 ABOUT 12 MILES WEST OF HOBBS, NM.. GO WEST ON HIGHWAY 529 8.1 MILES TO VAN NOY LANE. GO NORTH 1389 FEET TO THE BEGINNING OF A PROPOSED ROAD TO THE WEST AND THE LOCATION FLAG IS ON YOUR LEFT.



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# SITE LOCATION



SCALE: 1" = 100'

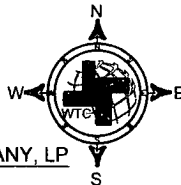
SECTION 35, T 18 S, R 34 E, N M P.M.

COUNTY: LEA STATE: NM

DESCRIPTION: 1550' FSL & 250' FEL

OPERATOR: DEVON ENERGY PRODUCTION COMPANY, LP

WELL NAME: BUTTER CUP 35 STATE COM-2H



DRIVING DIRECTIONS:

FROM JUNCTION OF STATE HIGHWAY 529 AND HIGHWAYS 62/180 ABOUT 12 MILES WEST OF HOBBS, NM.. GO WEST ON HIGHWAY 529 8.1 MILES TO VAN NOY LANE GO NORTH 1389 FEET TO THE BEGINNING OF A PROPOSED ROAD TO THE WEST AND THE LOCATION FLAG IS ON YOUR LEFT



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611 N. First St., Santa Fe, NM 87501  
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State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

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

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number	Pool Code	Pool Name
		<b>UNDESIGNATED BONE SPRING</b>
Property Code	Property Name	Well Number
	<b>BUTTER CUP 35 STATE COM</b>	<b>2H</b>
OGRID No.	Operator Name	Elevation
<b>6137</b>	<b>DEVON ENERGY PRODUCTION COMPANY, LP</b>	<b>3971.2'</b>

**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>I</b>	<b>35</b>	<b>18 S</b>	<b>34 E</b>		<b>1550</b>	<b>SOUTH</b>	<b>250</b>	<b>EAST</b>	<b>LEA</b>

**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
<b>L</b>	<b>35</b>	<b>18 S</b>	<b>34 E</b>		<b>1980</b>	<b>SOUTH</b>	<b>330</b>	<b>WEST</b>	<b>LEA</b>

Dedicated Acres	Joint or Infill	Consolidated Code	Order No.
<b>160</b>			

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.

<p>NW COR SEC 35 NMSP-E (NAD 83) Y = 623482.1' N X = 785477.2' E LAT. = N32° 42' 41.33" LONG. = W103° 32' 22.47"</p>	<p>NE COR SEC 35 NMSP-E (NAD 83) Y = 623625.2' N X = 790786.4' E LAT. = N32° 42' 41.36" LONG. = W103° 31' 20.57"</p>	<p><b>OPERATOR CERTIFICATION</b> 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 possesses 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 voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Barry W. Hunt</i> 6/20/12 Signature Date Print Name <i>Barry W. Hunt</i> E-mail Address</p>
<p><b>VB-1199</b> BUTTER CUP 35 STATE COM 2H SHL NMSP-E (NAD 83) Y = 620181.2' N X = 785637.9' E LAT. = N32° 42' 08.64" LONG. = W103° 32' 18.64"</p>	<p><b>VB-1210</b> BUTTER CUP 35 STATE COM 2H SHL NMSP-E (NAD 83) Y = 619789.8' N X = 790545.3' E LAT. = N32° 42' 04.42" LONG. = W103° 31' 23.49"</p>	
<p>SW COR SEC 35 NMSP-E (NAD 83) Y = 618188.6' N X = 785526.1' E LAT. = N32° 41' 49.05" LONG. = W103° 32' 22.56"</p>	<p>SE COR SEC 35 NMSP-E (NAD 83) Y = 618242.4' N X = 790807.4' E LAT. = N32° 41' 49.09" LONG. = W103° 31' 20.56"</p>	<p><b>SURVEYORS CERTIFICATION</b> 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.</p> <p><b>MAY 15, 2012</b> Date of Survey Signature and Seal of Professional Surveyor <i>James E. Tompkins</i> <b>JAMES E. TOMPKINS</b> 14729 Job No. WTC48541 James E. Tompkins 14729 Certificate Number</p>

// = Project Area

■ = VB-1199

■ = VB-1210

Drilling Program / Surface Use Plan  
Discipline-Specific Input Form

**Butter Cup 35 State Com 2H Drilling Plan**

**1. Casing and Cementing Plan Summary**

The surface fresh water sands will be protected by setting 13.375" casing at 1,925' and circulating cement back to surface. The fresh water sands will be protected by setting 9.625" casing at 5,375' and circulating cement to surface. The Delaware intervals will be isolated by setting 5-1/2" casing to total depth of 15,103' and circulating cement above the base of the 9-5/8" casing. All casing is new and API approved.

**2. Casing Program:**

Hole Size	Hole Interval	Casing OD	Casing Interval	Weight	Collar	Grade
17.5"	0 - 1,925'	13.375"	0 - 1,925'	54.5#	BTC	J-55
12.25"	1,925' - 5,375'	9.625"	0 - 5,375'	40#	BTC	HCK-55
8.75"	5,375' - 10,052'	5.5"	0 - 10,052'	17#	LTC	P-110HC
8.75"	10,052' - 15,103'	5.5"	10,052' - 15,103'	17#	BTC	P-110HC

**3. Design Factors:**

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
13.375"	1.25	3.03	9.23
9.625"	1.52	1.41	4.31
5.5" LTC	1.82	2.26	1.73
5.5" BTC	1.73	2.14	6.62

**4. Cement Program:**

String	Slurry	Amount and Type of Cement
<b>Surface</b>	<b>Lead</b>	1220 sacks Class C Cement + 0.125 lbs/sack Ply-E-Flake, 13.5 ppg, 1.76 cf/sk
	<b>Tail</b>	425 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Poly-E-Flake, 14.8 ppg, 1.35 cf/sk
<b>Intermediate</b>	<b>Lead</b>	995 sacks EconoCem HLC+ 5% bwow Sodium Chloride + 0.125 lbs/sack Poly-E-Flake, 12.5 ppg, 2.06 cf/sk
	<b>Tail</b>	425 sacks Halcem C Cement + 0.125 lbs/sack Cello Flake, 14.8 ppg, 1.33 cf/sk
<b>Production</b>		
	<b>1<sup>st</sup> Lead</b>	455 sacks EconoCem H Cement+ 0.3 Econolite BWOC + .125 lb/sk Poly-E-Flake + 0.3% BWOC HR-601, 11.8 ppg, 2.52 cf/sk
	<b>2<sup>nd</sup> Lead</b>	390 sacks EconoCem HLH Cement+ 0.1 HR-601 BWOC + .125 lb/sk Poly-E-Flake, 12.5 ppg, 1.95 cf/sk
	<b>Tail</b>	1290 sacks VersaCem H Cement + 0.5% BWOC Halad-344 + 0.3% BWOC CFR-3 + 1 lb/sk Salt + 0.2% BWOC HR-601, 14.4 ppg, 1.24 cf/sk



Drilling Program / Surface Use Plan  
Discipline-Specific Input Form

String	TOC
Surface	Surface
Intermediate	Surface
Production	4,875'

The above cement volumes are based on 25% excess. Actual cement volumes could be adjusted based on fluid caliper and caliper log data.

**5. Pressure Control Equipment**

BOP DESIGN: The BOP system used to drill the intermediate and production holes will consist of a 13-5/8" 3M Triple Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a 3M system prior to drilling out the prior 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 3,000 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.

**6. Proposed Mud Circulation System:**

Depth Range	Mud Weight	Viscosity	Fluid Loss	Type System
0 - 1,925'	8.4-9.0	28-34	NC	Fresh Water
1,925' - 5,375'	9.8-10.2	28-32	NC	Brine
5,375' - 15,103'	8.6-9.0	28-32	NC-12	Fresh Water

The necessary mud products for weight addition and fluid loss control will be on location at all times.

**7. Auxiliary Well Control and Monitoring Equipment:**

- A Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- Hydrogen Sulfide detection equipment will be in operation after drilling out the 13.375" casing shoe until the 5.5" casing is cemented. Breathing equipment will be on location upon drilling the 13.375" shoe until total depth is reached.

**8. Potential Hazards:**

No abnormal pressures or temperatures are expected. There is no known presence of H2S in this area. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP of 3,600 psi and estimated BHT 145°. No H2S is anticipated to be encountered.

**9. Anticipated Starting Date and Duration of Operations:**

- Road and location construction will begin after the BLM has approved the APD. Anticipated spud date will be as soon as a rig becomes available following BLM approval. Move in operations and drilling is expected to take 32 days. If production casing is run, then an additional 30 days will be needed to complete the well and construct surface facilities and/or lay flow lines in order to place well on production.

Drilling Program / Surface Use Plan  
Discipline-Specific Input Form

**10. Location and Types of Water Supply:**

This location will be drilled using a combination of water mud systems (outlined in the Drilling Program). The water will be obtained from commercial water stations in the area and hauled to location by transport truck using the existing and proposed roads shown in the C-102. On occasion, water will be obtained from a pre-existing water well, running a pump directly to the drill rig. In these cases where a poly pipeline is used to transport water for drilling purposes, proper authorizations will be secured. If a poly pipeline is used, the size, distance, and map showing route will be provided to the BLM via sundry notice.

**11. Methods of Handling Waste Material:**

- a. Drill cuttings will be disposed of in a closed loop system.
- b. All trash, junk and other waste material will be contained in trash cages or trash bins to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary landfill.
- c. The supplier will pick up salts remaining, including broken sacks, after completion of well.
- d. A Porto-john will be provided for the rig crews. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
- e. Remaining drilling fluids will be sent to a closed loop system.
- f. Disposal of fluids to be transported by the following companies:
  - i. American Production Service Inc, Odessa TX
  - ii. Gandy Corporation, Lovington NM
  - iii. I & W Inc, Loco Hill NM
  - iv. Jims Water Service of Co Inc, Denver CO

## GEOLOGIC PROGNOSIS

WELL NAME: Butter Cup 35 State 2H 35-18S-34E API#: 30-025-

SURFACE LOCATION: 250 FEL & 1550 FSL 35-18S-34E

BOTTOM HOLE LOCATION: BHL 330 FWL & 1980 FSL (270 degree azimuth from surface location) 0 degree updip, 35-18s-34eBHL

PLANNED TD: 15,124 PRIMARY OBJECTIVE: 3rd BONE SPRING SAND

KB: 3985 GL: 3965 MUD: CUT BRINE (confirm on location) BIT: CASING:

RIG: RIG CONTACT:

PRODUCING FM.: 3rd Bone Spring POOL NAME: Corbin

ESTIMATED BHP/BHT: 4600 psi 130degF

### GEOLOGISTS: ZACH POLAND AND STEVE BURNS

office: 405-228-8849/ 405-228-4346 cell (after hours/weekends): 405-323-1411/ 405-301-4852 home:

email: Zach.Poland@dvn.com/ stephen.burns@dvn.com mailing address: Devon Energy, 20 N Broadway, Oklahoma City, OK 73102-8260

## REFERENCE WELLS

WELL

LOCATION

## KNOWN OR POTENTIAL HAZARDS/REMARKS.

No known hazards.

**No Pilot Hole**

**All tops are 0' vertical section**

## GEOLOGIC MARKERS

KB:	3985	PROGNOSIS		MUDLOG			E-LOG			NOTES
		FORMATION / CASING	MD	subsea	MD	subsea	hi/lo	MD	subsea	
		QUATERNARY	20	3965						
		RUSTLER DOL	1889	2096						
		SALADO SALT	2170	1815						
		BASE SALT	3340	-645						
		YATES SS	3445	540						
		QUEEN SS.	4720	-735						
		GRAYBURG	5300	-1315						
		DELAWARE	6986	-3001						
		1ST BONE SPRING LM.	7975	-3990						
		1ST BONE SPRING SS.	9320	-5335						
		2ND BONE SPRING LM	9520	-5535						
		2ND BONE SPRING SS	9860	-5875						
		3rd Bone Spring Lime	10000	-6015						
		3rd Bone Spring Sand	10420	-6435						
		3rd Bone Spring Sand Target	10620	-6635						Primary Pay Target OIL

Total Depth

## MUDLOGGING PROGRAM

2 MAN SERVICE CASING TO TD. MORNING REPORT AT 9AM OKLAHOMA CITY TIME TO ZACH POLAND

## DEVON ENERGY OPEN HOLE LOGGING PROGRAM

WELL NAME: Butter Cup 35 State 2H 35-18S-34E API#: 30-025-  
SURFACE LOCATION: 250 FEL & 1550 FSL 35-18S-34E  
BOTTOM HOLE LOCATION: 330 FWL & 1980 FSL, updip 0 degrees (°)  
PLANNED TD: 15,124 PRIMARY OBJECTIVE: 3rd BONE SPRING SAND  
KB: 3985 GL: 3965 MUD: CUT BRINE (confirm on location) BIT: CASING:  
RIG: RIG CONTACT:  
PRODUCING FM.: 3rd Bone Spring POOL NAME: Corbin  
ESTIMATED BHP/BHT: 4600 psi 130degF

**GEOLOGISTS: ZACH POLAND AND STEVE BURNS**

office: 405-228-8849/ 405-228-4346 cell (after hours/weekends): 405-323-1411/ 405-301-4852 home:  
email: Zach.Poland@dvn.com/ stephen.burns@dvn.com mailing address: Devon Energy, 20 N Broadway, Oklahoma City, OK 73102-8260

### LOGGING COMPANY

COMPANY: CONTACT:  
LOGGING ENGINEER:

### LOGGING SERVICES

LOG	DEPTH INTERVALS
1st descent	1st descent
Horizontal	Horizontal
Gamma Ray while drilling	Kickoff to TD
3rd descent	3rd descent

PLEASE CALL Zach Poland or Steve Burns AS SOON AS YOU ARRIVE AT THE WELLSITE.

PLEASE INCLUDE NEUTRON-DENSITY LOGS ON A LIMESTONE MATRIX  
PLEASE INCLUDE SONIC POROSITY LOG ON A LIMESTONE MATRIX

### KNOWN OR POTENTIAL HAZARDS/REMARKS.

No known hazards.

### LOGGING INSTRUCTIONS

**CALIBRATIONS:** Before & after checks of all tools on location Present all calibrations and parameters on logs.

**IN-PIPE CHECKS:** 20' or more of calipers in pipe. Present in-pipe checks on logs @ 5"/100'.

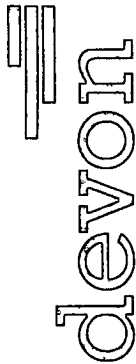
**MAIN LOG LABELS:** Label all tools' first and last readings. Label cycle skips, splices, tension pulls, fluid levels, repeat logs.

**TOOL DIAGRAM:** Present tool diagram on logs.

#### SCALES & PRESENTATIONS

**2"/100 LOG:** Spectral GR 0 to 100 (track 1); caliper 6 to 16 inches (track 1); cable tension (track 1); bulk density (2 to 3),  
neutron porosity (0.30 to -0.10), PE 0 to 10 (track 2)

**5"/100 LOG:** Spectral GR 0 to 100 (track 1); caliper 6 to 16 inches (track 1); cable tension (track 1); crossplot porosity (0.30 to -0.10),  
density porosity (0.30 to -0.10), neutron porosity (0.30 to -0.10), PE 0 to 10 (track 2), density correction (-0.1 to 0.9) (track 2)

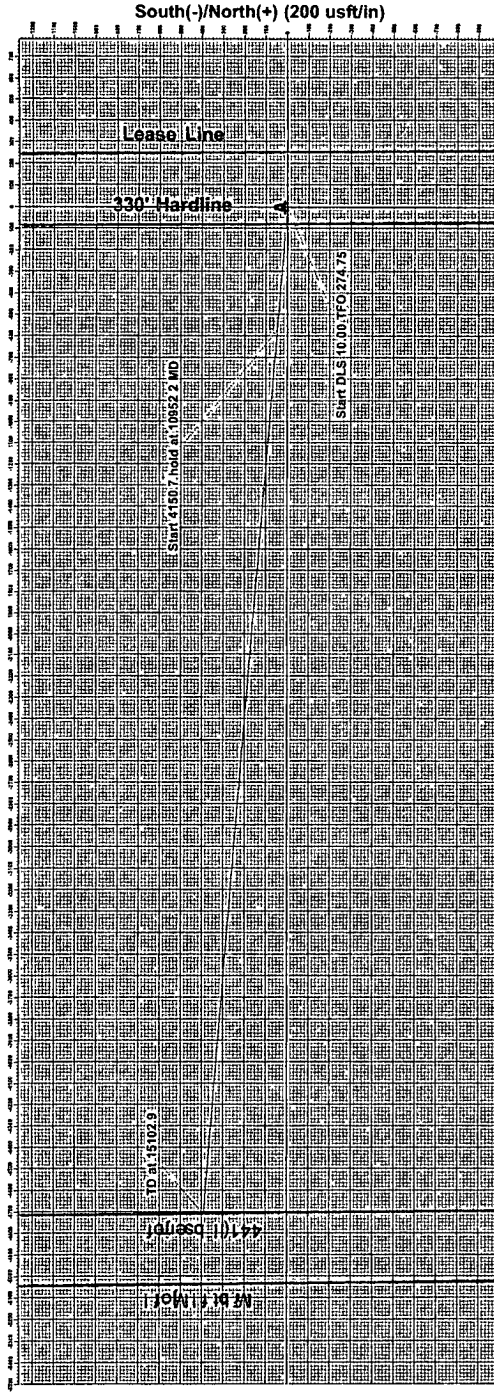


PROJECT DETAILS: Lea County (NAD83)  
Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone: New Mexico Eastern Zone  
System Datum: Mean Sea Level  
Local North: Grid

**PATHFINDER®**  
A Schlumberger Company

Project: Lea County (NAD83)  
Site: Butter Cup 35 State Com  
Well: #2H  
Wellbore: OH  
Plan: Plan #1 (#2H/OH)

West(-)/East(+) (200 usft/in)



#### WELL DETAILS: #2H

Ground Elevation: 3971.2  
RKB Elevation: KB = 19 @ 3950.2usft (McVay 8)  
Rig Name: McVay 8

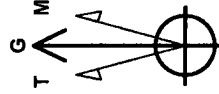
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	618763.800	790545.300	32.701	-103.523	

#### WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL (Butter Cup 35 State #2H)	10625.2	381.4	-4707.4	620181.200	765837.800	Point

#### SECTION DETAILS

Sec	MD	Inc	Adz	TVD	+N/-S	+E/-W	Dleg	TFace	V-Sect	Target
2	10625.2	0.00	0.00	10052.2	0.0	0.0	0.00	0.00	0.00	0.0
3	10625.2	90.00	274.75	10625.2	47.5	-571.0	10.80	274.75	573.0	573.0
4	15102.8	90.00	274.75	10625.2	391.4	-4707.4	0.00	0.00	4723.6	PBHL (Butter Cup 35 State #2H)



Azimuths to Grid North  
True North: -0.44°  
Magnetic North: 7.04°  
Magnetic Field  
Strength: 48808.0nT  
Dip Angle: 60.61°  
Date: 6/4/2012  
Model: IGRF2010

Vertical Section at 274.75° (200 usft/in)

Plan: Plan #1 (#2H/OH)

Created By: Sam Blife Date: 14 Oct, June 04 2012

Checked: \_\_\_\_\_ Date: \_\_\_\_\_

Scale: 1" = 200' USFT  
North Arrow: True North