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

[1] Operator Name and Address	[2] OGRID Number
DEVON ENERGY PRODUCTION COMPANY, L.P. 333 W. SHERIDAN, OKLAHOMA CITY, OK. 73102	6137
	[3] API Number 30-025-40641

[4] Property Code	[5] Property Name	[6] Well No.
39295	BUTTER CUP 36 STATE COM	2H

[7] Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
I	35	18S	34E		1600	S	250	E	LEA

[8] Pool Information

Airstrip ~~UNDESIGNATED~~ BONE SPRING	960

Additional Well Information

[9] Work Type	[10] Well Type	[11] Cable/Rotary	[12] Lease Type	[13] Ground Level Elevation
N	0	R	S	3971.3'
[14] Multiple	**[15] Proposed Depth**	**[16] Formation**	**[17] Contractor**	**[18] Spud Date**
No	TVD:10605 MD:15531	Bone Spring	H & P	

Depth to Ground water 150'	Distance from nearest fresh water well 0 30 miles	Distance to nearest surface water 1/2 mile

[19] Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
	17 ½"	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#	9992	2250	4875'
	8 3/4"	5 1/2"	17#	15531		

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
Date 06/20/12
Phone (575) 361-4078

OIL CONSERVATION DIVISION

Approved By:
Title: PETROLEUM ENGINEER
Approved Date: JUN 26 2012
Expiration Date:
Conditions of Approval Attached

HOBBS OCD

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 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) 476-3460 Fax (505) 476-3462

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

JUN 25 2012
RECEIVED

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
30-025-40641	960	Airstrip ~~UNDESIGNATED~~ BONE SPRING

Property Code	Property Name	Well Number
39295	BUTTER CUP 36 STATE COM	2H

OGRID No	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3971.3'

Surface Location

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	35	18 S	34 E		1600	SOUTH	250	EAST	LEA

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
I	36	18 S	34 E		2030	SOUTH	330	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidated Code	Order No
160			

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.

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"

NW COR SEC 36
NMSP-E (NAD 83)
Y = 623525 2' N
X = 790766 4' E
LAT.= N32° 42' 41 36"
LONG = W103° 31' 20.57"

NE COR SEC 36
NMSP-E (NAD 83)
Y = 623583 4' N
X = 796034 4' E
LAT.= N32° 42' 41.53"
LONG = W103° 30' 18.91"

BUTTER CUP 36 STATE COM 2H BHL
NMSP-E (NAD 83)
Y = 620315 8' N
X = 795735 2' E
LAT.= N32° 42' 09.23"
LONG.= W103° 30' 22.71"

BUTTER CUP 36 STATE COM 2H SHL
NMSP-E (NAD 83)
Y = 619839.7' N
X = 790544.8' E
LAT = N32° 42' 04.91"
LONG.= W103° 31' 23.49"

250'
1600'
330'
2030'

SW COR SEC 35
NMSP-E (NAD 83)
Y = 618198 5' N
X = 785526 1' E
LAT.= N32° 41' 49 05"
LONG.= W103° 32' 22 36"

SW COR SEC 36
NMSP-E (NAD 83)
Y = 618242 4' N
X = 790807 4' E
LAT = N32° 41' 49.09"
LONG = W103° 31' 20 56"

SE COR SEC 36
NMSP-E (NAD 83)
Y = 618288 8' N
X = 796084 8' E
LAT.= N32° 41' 49.14"
LONG.= W103° 30' 18 80"

OPERATOR CERTIFICATION

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.

Barry W. Hunt 6/20/12
Signature Date

Barry W. Hunt
Print Name

E-mail Address

SURVEYORS CERTIFICATION

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

May 15, 2012
Date of Survey

Signature and Seal of Professional Surveyor

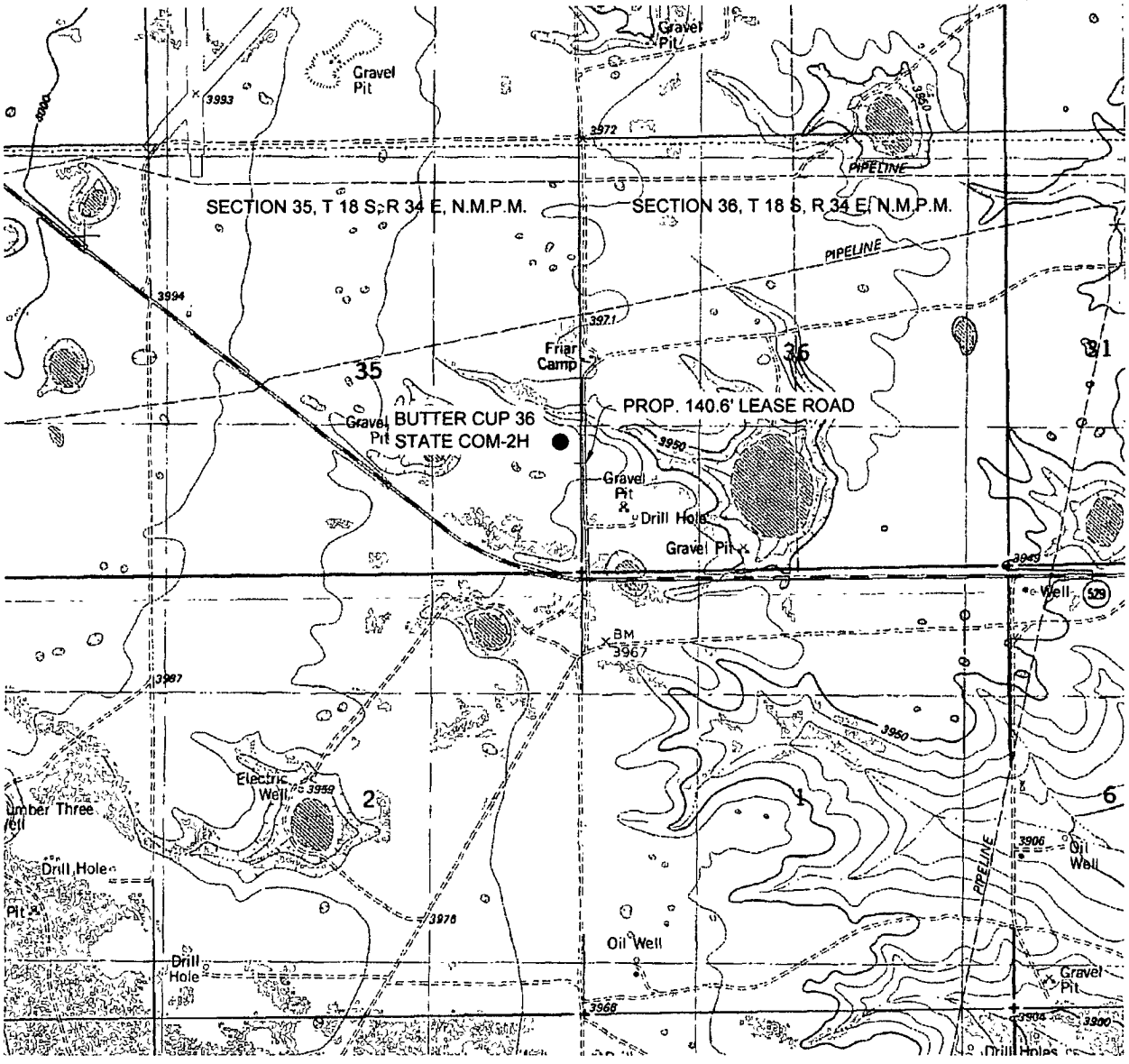
JAMES E. TOMPKINS NEW MEXICO 14729 REGISTERED PROFESSIONAL LAND SURVEYOR

James E. Tompkins

Job No. WTC48541

JAMES E. TOMPKINS 14729
Certificate Number

LOCATION VERIFICATION MAP



SCALE. 1" = 2000'

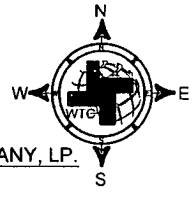
SECTION 35, T 18 S, R 34 E, N.M.P.M.

COUNTY LEA STATE NM

DESCRIPTION: 1600' FSL & 250' FEL

OPERATOR: DEVON ENERGY PRODUCTION COMPANY, LP.

WELL NAME: BUTTER CUP 36 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.

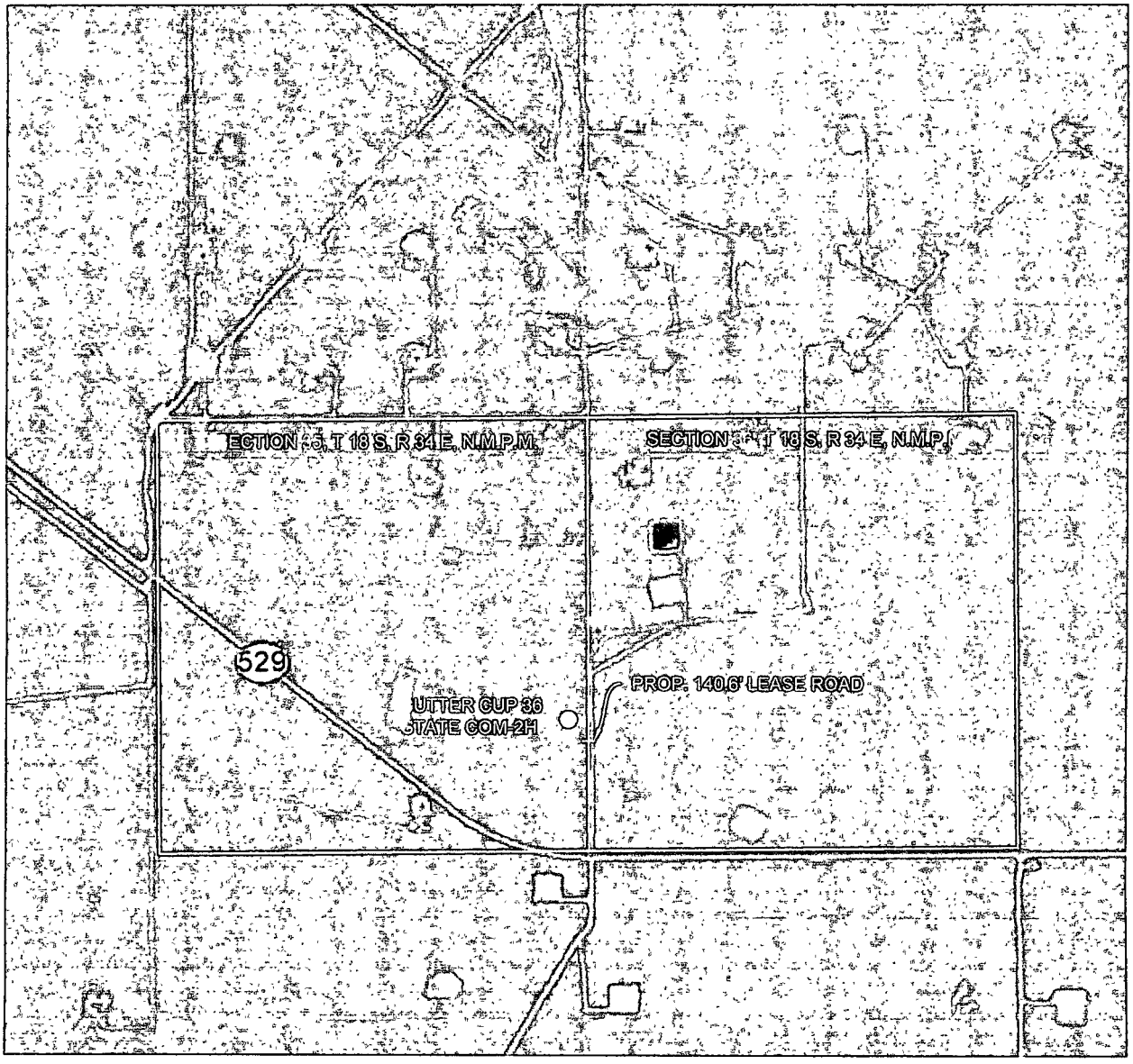
WEST TEXAS CONSULTANTS, INC
ENGINEERS PLANNERS SURVEYORS
405 S.W 1st STREET
ANDREWS, TEXAS 79714
(432) 523-2181

devon

JOB No . WTC48541

Z:\Projects\Oil & Gas Surveys\Devon Energy\48541-Devon Energy Stone & Pool 9 Store Wells in Lea Co\Drawings\48541 DEVON BUTTER CUP 36 STATE COM 2H.dwg

AERIAL MAP



SCALE: 1" = 2000'

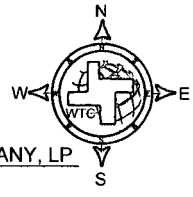
SECTION 35, T 18 S, R 34 E, N.M.P.M.

COUNTY: LEA STATE: NM

DESCRIPTION: 1600' FSL & 250' FEL

OPERATOR: DEVON ENERGY PRODUCTION COMPANY, LP

WELL NAME. BUTTER CUP 36 STATE COM-2H



DRIVING DIRECTIONS:

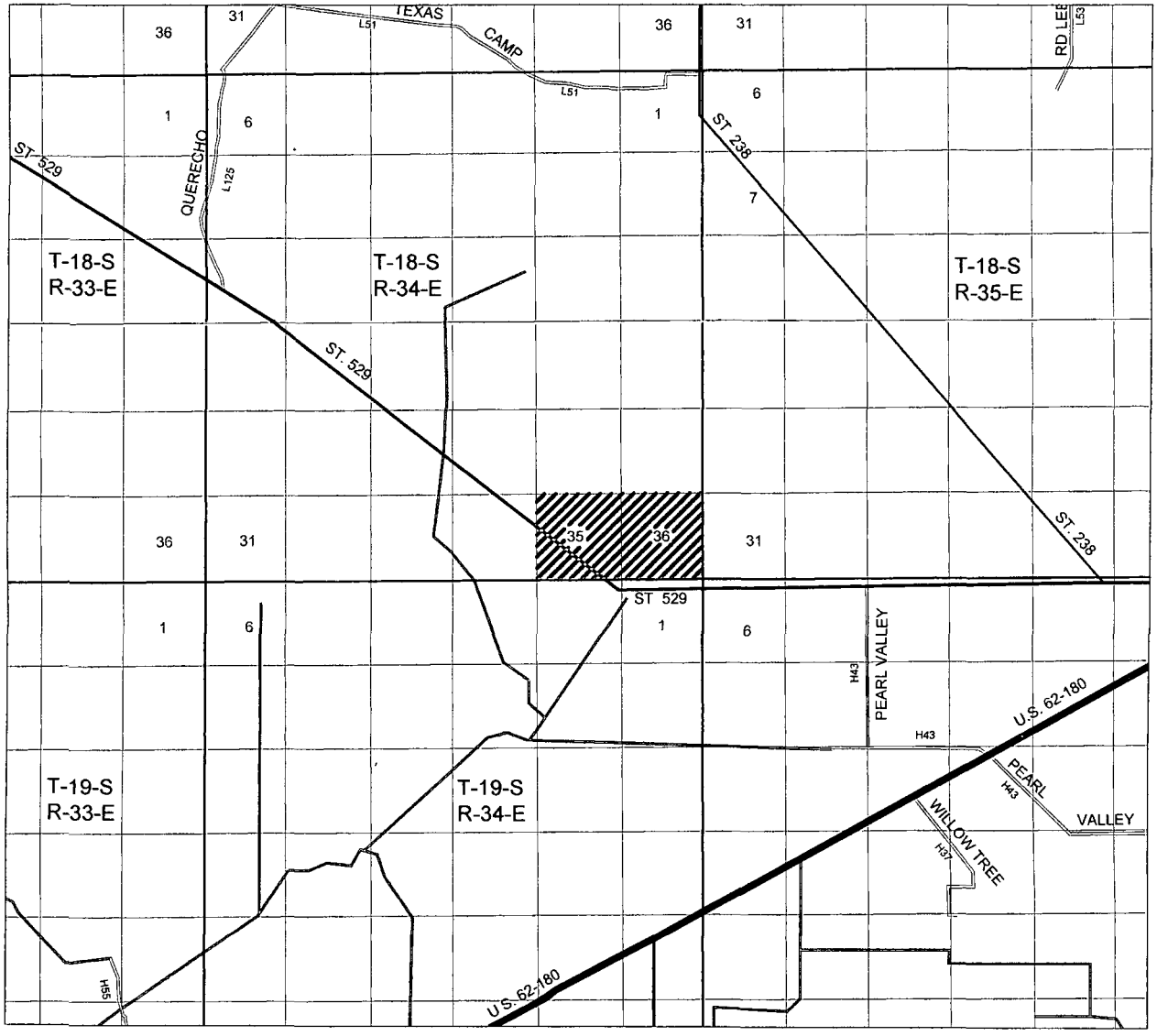
FROM JUNCTION OF STATE HIGHWAY 529 AND HIGHWAYS 62/180 ABOUT 12 MILES WEST OF HOBBS, NM.. GO WEST ON HIGHWAY 529 8.1 MILES TO VAN NOY LANE. GO NORTH 1389 FEET TO THE BEGINNING OF A PROPOSED ROAD TO THE WEST AND THE LOCATION FLAG IS ON YOUR LEFT.

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

devon

JOB No WTC48541

VICINITY MAP



0 2 4 6

GRAPHIC SCALE OF MILES 1" = 2 MILE

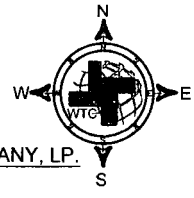
SECTION 35, T 18 S, R 34 E, N.M P.M.

COUNTY: LEA STATE: NM

DESCRIPTION: 1600' FSL & 250' FEL

OPERATOR: DEVON ENERGY PRODUCTION COMPANY, LP.

WELL NAME: BUTTER CUP 36 STATE COM-2H



DRIVING DIRECTIONS:

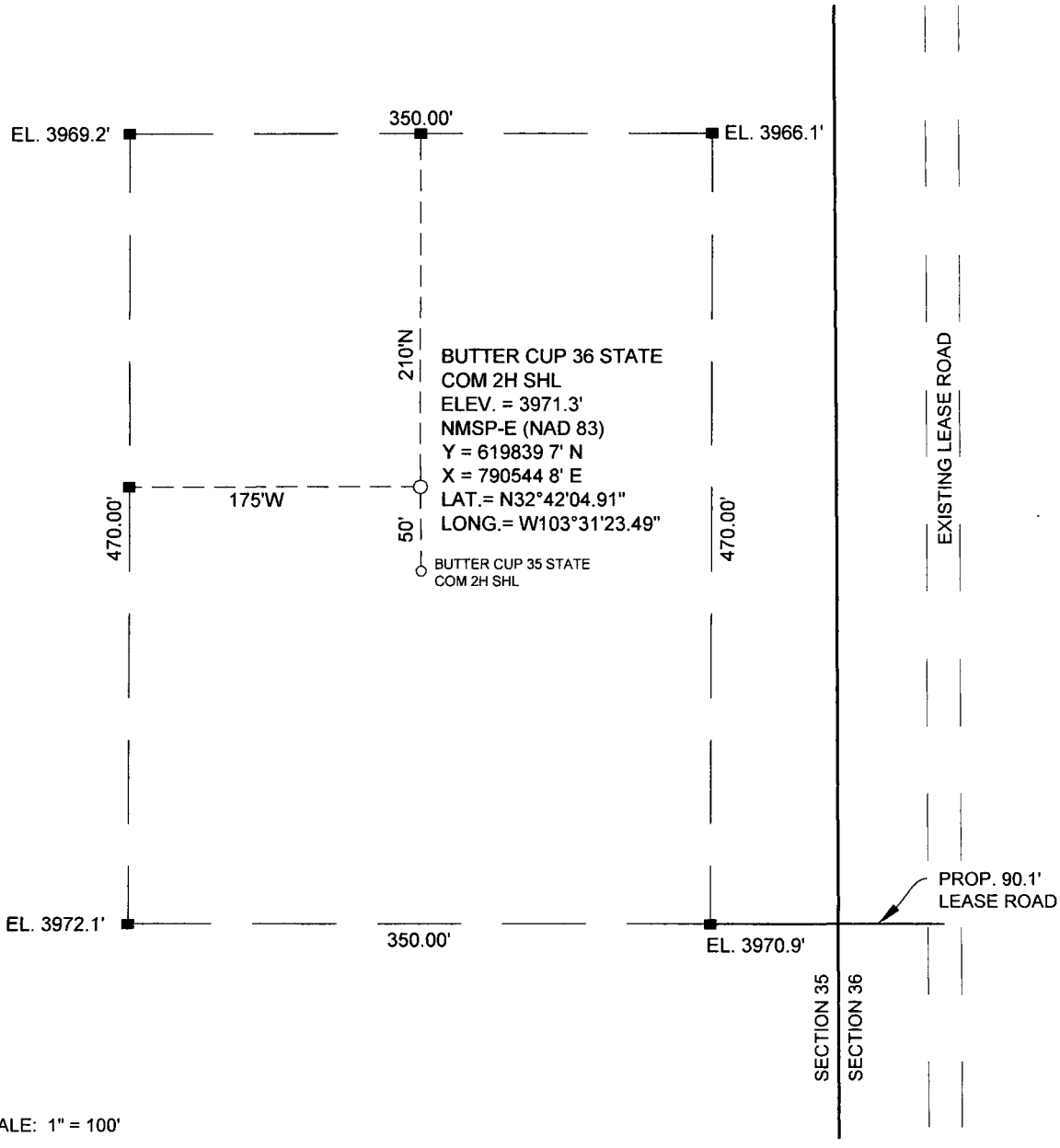
FROM JUNCTION OF STATE HIGHWAY 529 AND HIGHWAYS 62/180 ABOUT 12 MILES WEST OF HOBBS, NM.. GO WEST ON HIGHWAY 529 8.1 MILES TO VAN NOY LANE GO NORTH 1389 FEET TO THE BEGINNING OF A PROPOSED ROAD TO THE WEST AND THE LOCATION FLAG IS ON YOUR LEFT.

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

devon

JOB No WTC48541

SITE LOCATION



SCALE: 1" = 100'

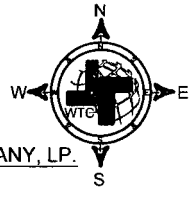
SECTION 35, T 18 S, R 34 E, N.M.P M

COUNTY: LEA STATE. NM

DESCRIPTION: 1600' FSL & 250' FEL

OPERATOR: DEVON ENERGY PRODUCTION COMPANY, LP.

WELL NAME: BUTTER CUP 36 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

devon

JOB No WTC48541

Z:\Projects\Oil & Gas Surveys\Devon Energy\48541-Devon Energy, Stake 2 Pad 9 State Wells on Lea Co\Drawings\48541 DEVON BUTTER CUP 36 STATE COM 2H.dwg

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 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) 476-3460 Fax: (505) 476-3462

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
		UNDESIGNATED BONE SPRING

Property Code	Property Name	Well Number
	BUTTER CUP 36 STATE COM	2H

OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3971.3'

Surface Location

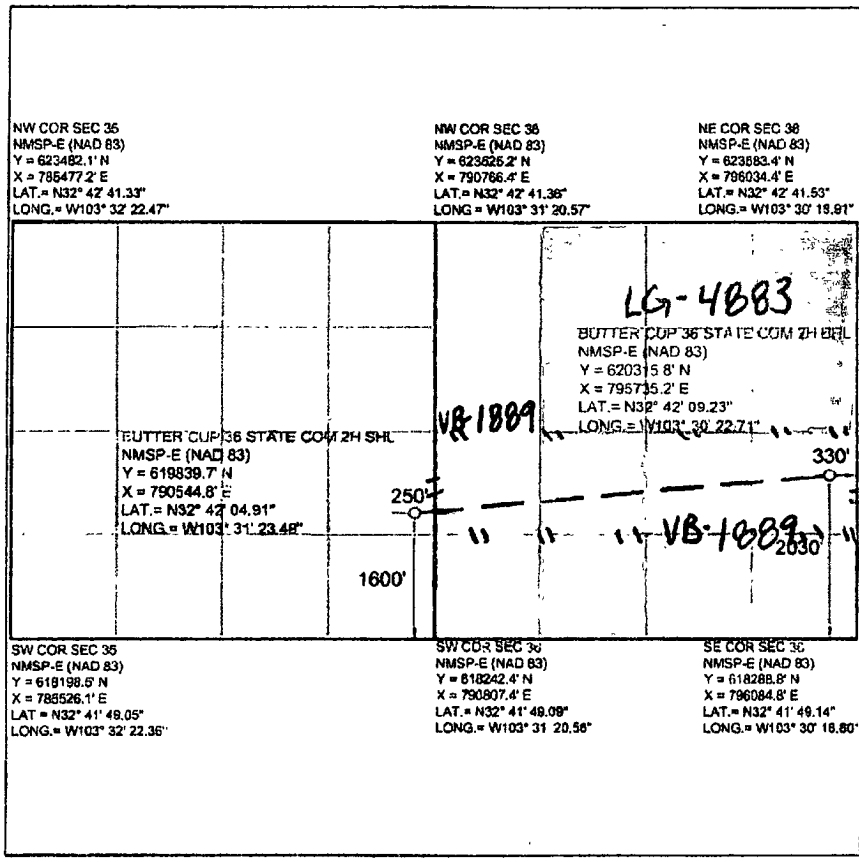
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	35	18 S	34 E		1600	SOUTH	250	EAST	LEA

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
I	36	18 S	34 E		2030	SOUTH	330	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidated Code	Order No.
160			

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.



OPERATOR CERTIFICATION

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.

Signature Date 6/20/12

Barry W. Hunt

Print Name

E-mail Address

SURVEYORS CERTIFICATION

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

May 15, 2012

Date of Survey

Signature and Seal of Professional Surveyor

JAMES E. TOMPKINS NEW MEXICO 14729 REGISTERED PROFESSIONAL LAND SURVEYOR

Job No. WTC48541

JAMES E. TOMPKINS 14729

Certificate Number

11 = Project Area

☐ = LG-4883

= VB-1889

Drilling Program / Surface Use Plan
Discipline-Specific Input Form

Butter Cup 36 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 15,531' 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' - 9,992'	5.5"	0 - 9,992'	17#	LTC	P-110HC
8.75"	9,992' - 15,531'	5.5"	9,992' - 15,531'	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	1.83	2.28	1.69
5.5" BTC	1.73	2.14	6.03

4. **Cement Program:**

String	Slurry	Amount and Type of Cement
Surface	**Lead**	1220 sacks Class C Cement + 0.125 lbs/sack Ply-E-Flake, 13.5 ppg, 1.76 cf/sk
	Tail	425 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Poly-E- Flake, 14.8 ppg, 1.35 cf/sk
Intermediate	**Lead**	995 sacks EconoCem HLC+ 5% bwow Sodium Chloride + 0.125 lbs/sack Poly-E-Flake, 12.5 ppg, 2.06 cf/sk
	Tail	425 sacks Halcem C Cement + 0.125 lbs/sack Cello Flake, 14.8 ppg, 1.33 cf/sk
Production		
	1st Lead	455 sacks EconoCem H Cement+ 0.3 Econolite BWOC + .125 lb/sk Poly-E-Flake + 0.3% BWOC HR-601, 11.8 ppg, 2.54 cf/sk
	2nd Lead	390 sacks EconoCem HLH Cement+ 0.1 HR-601 BWOC + .125 lb/sk Poly-E-Flake, 12.5 ppg, 1.95 cf/sk
	Tail	1405 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, 1.25 cf/sk

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' - 15,531'	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. 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.
c. 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:

a. 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.

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 36 State Com 2H 35-18S-34E API#: 30-025-

SURFACE LOCATION 250 FEL & 1600 FSL 35-18S-34E

BOTTOM HOLE LOCATION BHL 330 FEL & 2030 FSL 36-18S-34E (90 degree azimuth from surface loc.) 0.5 degree downdip

PLANNED TD: 15,544 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 feet Vertical Section

GEOLOGIC MARKERS

KB: 3985	PROGNOSIS		MUDLOG			E-LOG			
FORMATION / CASING	MD	subsea	MD	subsea	hi/lo	MD	subsea	hi/lo	NOTES
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	10600	-6615							Primary Pay Target OIL

Total Depth

MUDLOGGING PROGRAM

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

Weatherford Surface Logging Systems

DEVON ENERGY OPEN HOLE LOGGING PROGRAM

WELL NAME: Butter Cup 36 State Com 2H 35-18S-34E API#. 30-025-

SURFACE LOCATION: 250 FEL & 1600 FSL 35-18S-34E

BOTTOM HOLE LOCATION 330 FEL & 2030 FSL, downdip .5 degrees (') 36-18S-34E

PLANNED TD: 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)

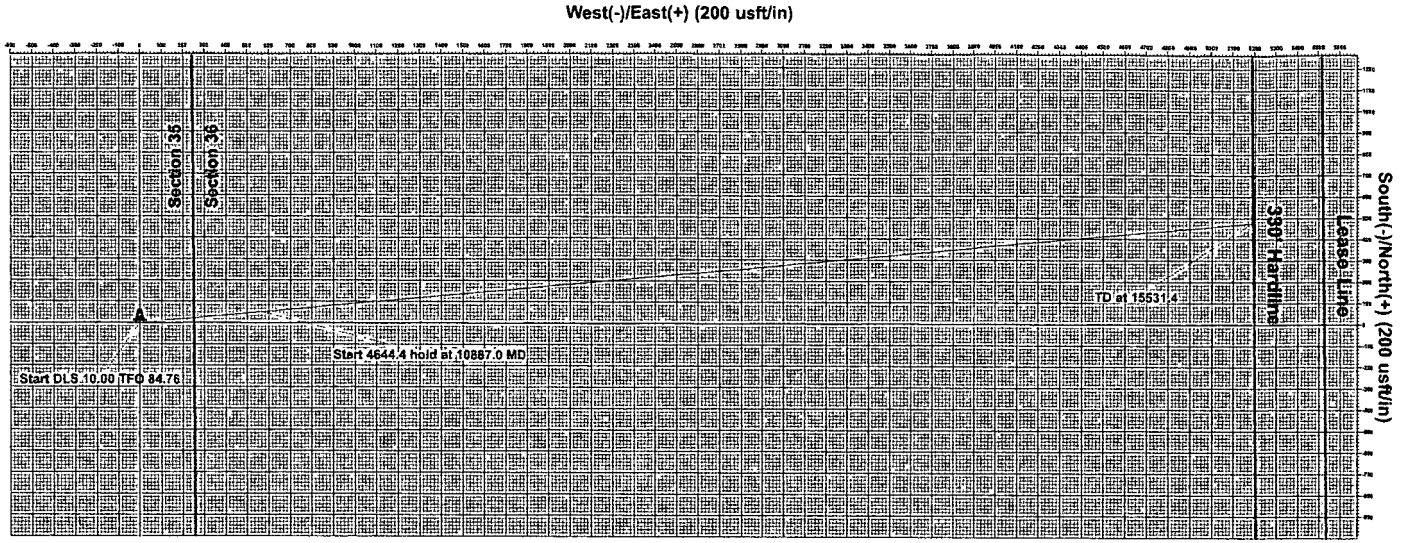
5"/100 LOG: Spectral GR 0 to 100 (track 1); caliper 6 to 16 inches (track 1); cable tension (track 1); crossplot porosity (0.30 to -0.10), density porosity (0.30 to -0.10), neutron porosity (0 30 to -0.10), PE 0 to 10 (track 2), density correction (-0.1 to 0.9) (track 2)

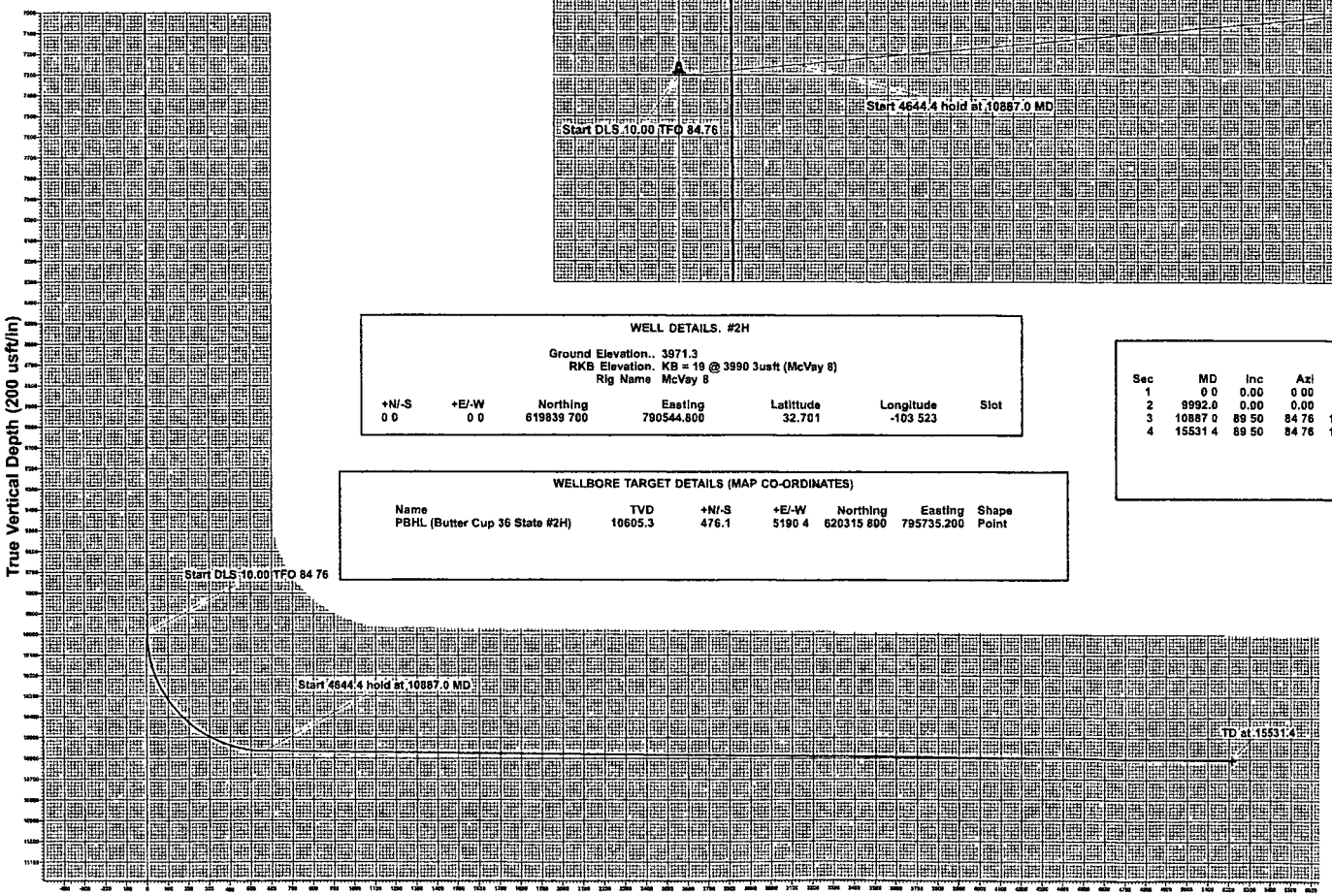
devon

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 36 State Com
Well: #2H
Wellbore: OH
Plan: Plan #2 (#2H/OH)





WELL DETAILS. #2H

Ground Elevation.. 3971.3
RKB Elevation. KB = 19 @ 3990.3usft (McVay 8)
Rig Name McVay 8

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	619839.700	790544.800	32.701	-103.523	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL (Butter Cup 36 State #2H)	10605.3	476.1	5190.4	620315.800	795735.200	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	9992.0	0.00	0.00	9992.0	0.0	0.0	0.00	0.00	0.0	
3	10887.0	89.50	84.76	10564.9	51.9	565.6	10.00	84.76	568.0	
4	15531.4	89.50	84.76	10605.3	476.1	5190.4	0.00	0.00	5212.2	PBHL (Butter Cup 36 State #2H)

Azimuths to Grid North
True North: -0.44°
Magnetic North: 7.04°

Magnetic Field
Strength: 48808.1snT
Dip Angle: 60.61°
Date: 6/4/2012
Model: IGRF2010

Plan: Plan #2 (#2H/OH)
Created By: Sam Biffle Date: 13:51, June 05 2012
Checked _____ Date: _____