

District I

1625 N. French Dr , Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Road, Aztec, NM 87410

District IV

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

State of New Mexico
Energy Minerals and Natural Resources

Form C-101

May 27, 2004

Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

Submit to appropriate District Office

SEP 06 2007

☒ AMENDED REPORT

OCD-ARTESIA

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

¹ Operator Name and Address Devon Energy Production Company L.P. 20 North Broadway OKC, OK 73102-8260		² OGRID Number 6137
³ Property Code 36072	⁴ Property Name Perfecto 2 State	⁵ API Number 30-015-35782
⁹ Proposed Pool 1 Happy Valley, Morrow (Gas)		¹⁰ Proposed Pool 2

⁷ Surface Location

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	2	22S	26E		2070	North	675	West	Eddy

⁸ Proposed 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
E	2	22S	26E		2070	North	675	West	Eddy

Additional Well Information

¹¹ Work Type Code New Well	¹² Well Type Code Gas	¹³ Cable/Rotary R	¹⁴ Lease Type Code State	¹⁵ Ground Level Elevation 3236'
¹⁶ Multiple N	¹⁷ Proposed Depth 11,650'	¹⁸ Formation Morrow	¹⁹ Contractor	²⁰ Spud Date 09/15/07
Depth to Groundwater		Distance from nearest fresh water well		Distance from nearest surface water
Pit <input type="checkbox"/> Liner Synthetic <input checked="" type="checkbox"/> 12_mils thick Clay <input type="checkbox"/> Pit Volume 20,000_bbls Drilling Method: Closed-Loop System <input type="checkbox"/> Fresh Water <input checked="" type="checkbox"/> Brine <input type="checkbox"/> Diesel/Oil-based <input type="checkbox"/> Gas/Air <input type="checkbox"/>				

²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17 1/2"	13 3/8"	48# HL40 ST&C	405'	543 sx CLC	Surface
12 1/2"	9 5/8"	40# L55 LT&C	2500'	751 sx CLC	Surface
8 3/4"	7"	26# HCP-110 LT&C	8750'	1311 sx CLC	Tie back to 9 5/8" cse 500'
6 1/8"	4 1/2"	13 5# HCP-110 LT&C	11650'	296 sx CLC	8450-11650 (see drllg prop)

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Permitted to comply with the City of Carlsbad Wellhead & Water Facilities Ordinance No. 2000-17; Section 34-64: If a well is to be drilled deeper than the Bone Springs formation, a pressure protection casing string shall be set and cemented into the top of the Wolfcamp or lower formation. See attached wellbore schematic.

Depth to groundwater is 50' or more, but less than 100', distance to surface water is approximately 1000' or more, well is not in the wellhead protection area. Although, this location will require a City Permit. OCD permit expired 07/13/2007.

City of Carlsbad Oil & Gas Wells and Pipelines Application for Permit to be refilled with Dave Hennard (RESPEC) & Richard Aguilar (City of Carlsbad). Copy of approved OCD permit to be provided to City of Carlsbad.

Non-Standard Location approved 10/06/06 via Administrative Order NSL-5445, BOP requirements and bench test for compressive strength per NMOCD Rule 19.15.3.107 (attached). No H2S is expected to be encountered; H2S plan provided. 5000 psi Double and Hydriil with drilling spool & rotating head to be used. If it is deemed non-commercial then it will be plugged and abandoned in accordance with the rules and regulations established by the New Mexico OCD.

²³ 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 ☐.

Printed name: Stephanie A. Ysasaga

Title: Sr. Staff Engineering Technician

E-mail Address: Stephanie.Ysasaga@dvn.com

Date 09/05/07

Phone: (405)-552-7802

OIL CONSERVATION DIVISION

Approved by

Title:

BRYAN G. ARRANT

Approval Date:

DISTRICT II GEOLOGIST

Expiration Date:

SEP 06 2007

SEP 06 2008

Conditions of Approval Attached ☐

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
811 South First, Artesia, NM 88210

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

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised March 17, 1999

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code 78060	Pool Name Happy Valley; Morrow (Gas)
Property Code	Property Name PERFECTO 2 STATE COM	Well Number 1
GRID No. 6137	Operator Name DEVON ENERGY PRODUCTION CO., L.P.	Elevation 3236'

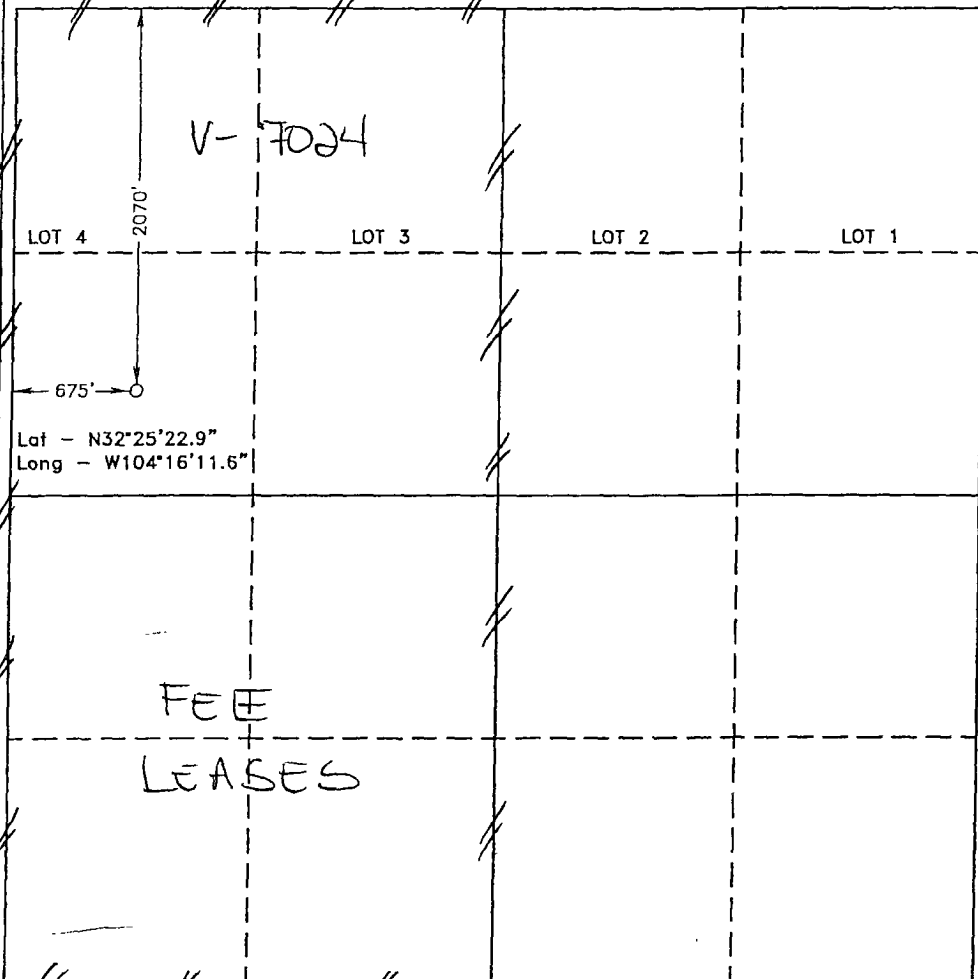
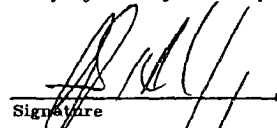
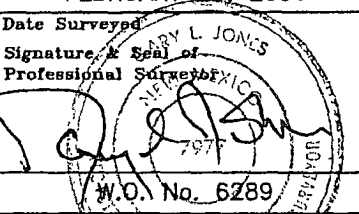
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	2	22 S	26 E		2070	NORTH	675	WEST	EDDY

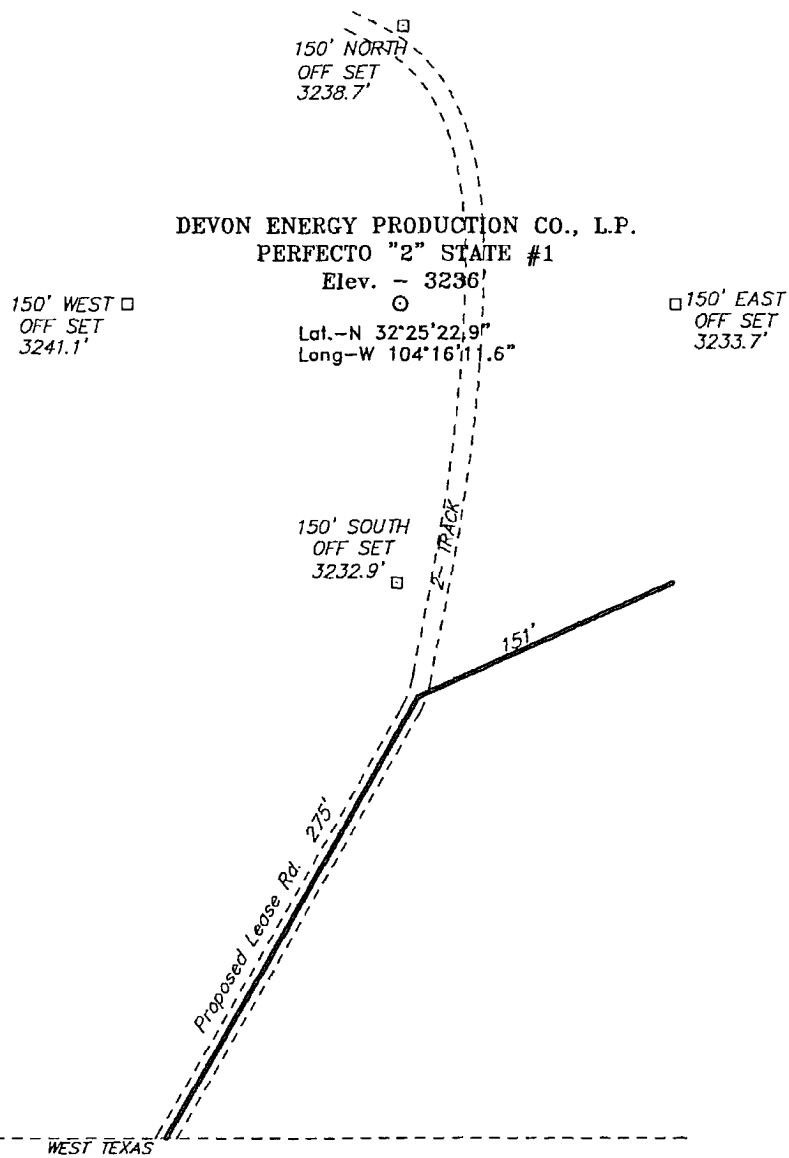
Bottom Hole Location If Different From Surface

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

 <p>V-7024</p> <p>LOT 4</p> <p>2070'</p> <p>675'</p> <p>Lot - N32°25'22.9"</p> <p>Long - W104°16'11.6"</p> <p>FEE LEASES</p>	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.</p> <p></p> <p>Signature Stephanie A. Ysasaga</p> <p>Printed Name Sr. Staff Engineering Tech</p> <p>Title 05/08/06</p> <p>Date</p> <p>SURVEYOR CERTIFICATION</p> <p>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>FEBRUARY 25, 2006</p> <p>Date Surveyed</p> <p>Signature & Seal of Professional Surveyor</p> <p></p> <p>W.O. No. 6289</p> <p>Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS</p>
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SECTION 2, TOWNSHIP 22 SOUTH, RANGE 26 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



100 0 100 200 FEET
SCALE: 1" = 100'

Directions to Location:

FROM THE JUNCTION OF HAPPY VALLEY ROAD AND
WEST TEXAS, GO EAST FOR 0.4 MILE TO 2-TRACK
ROAD; THENCE NORTH TO LOCATION.

DEVON ENERGY PROD. CO., L.P.

REF: PERFECTO "2" STATE No. 1 / Well Pad Topo

THE PERFECTO "2" STATE No. 1 LOCATED 2070' FROM
THE NORTH LINE AND 675' FROM THE WEST LINE OF
SECTION 2, TOWNSHIP 22 SOUTH, RANGE 26 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 6289

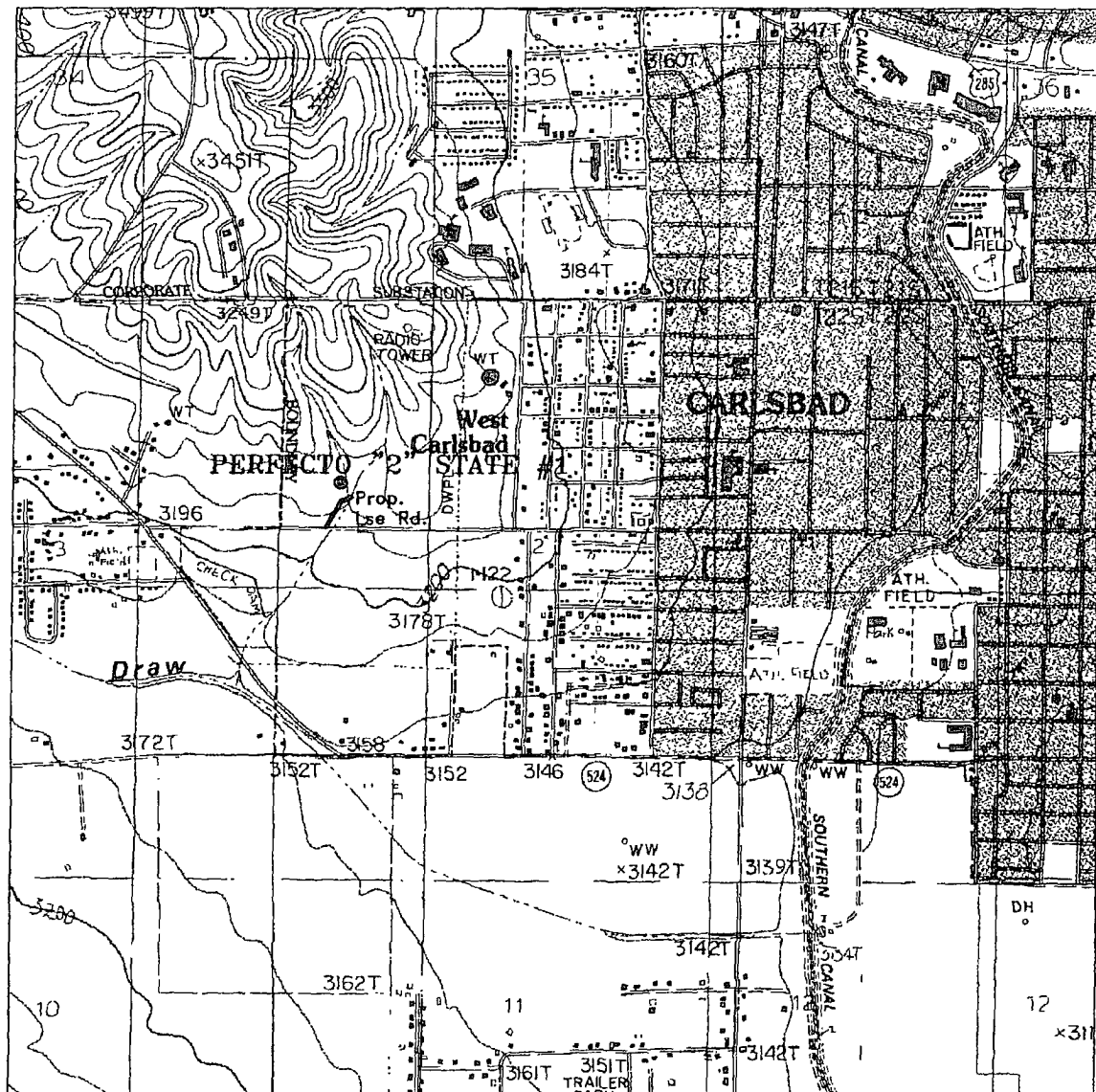
Drawn By: K. GOAD

Date: 03-03-2006

Disk: KJG CD#4 - 6302A.DWG

Survey Date: 02-25-2006

Sheet 1 of 1 Sheets



PERFECTO "2" STATE #1

Located at 2070' FNL AND 675' FWL
 Section 2, Township 22 South, Range 26 East,
 N.M.P.M., Eddy County, New Mexico.



P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (505) 393-7316 - Office
 (505) 392-3074 - Fax
 basinsurveys.com

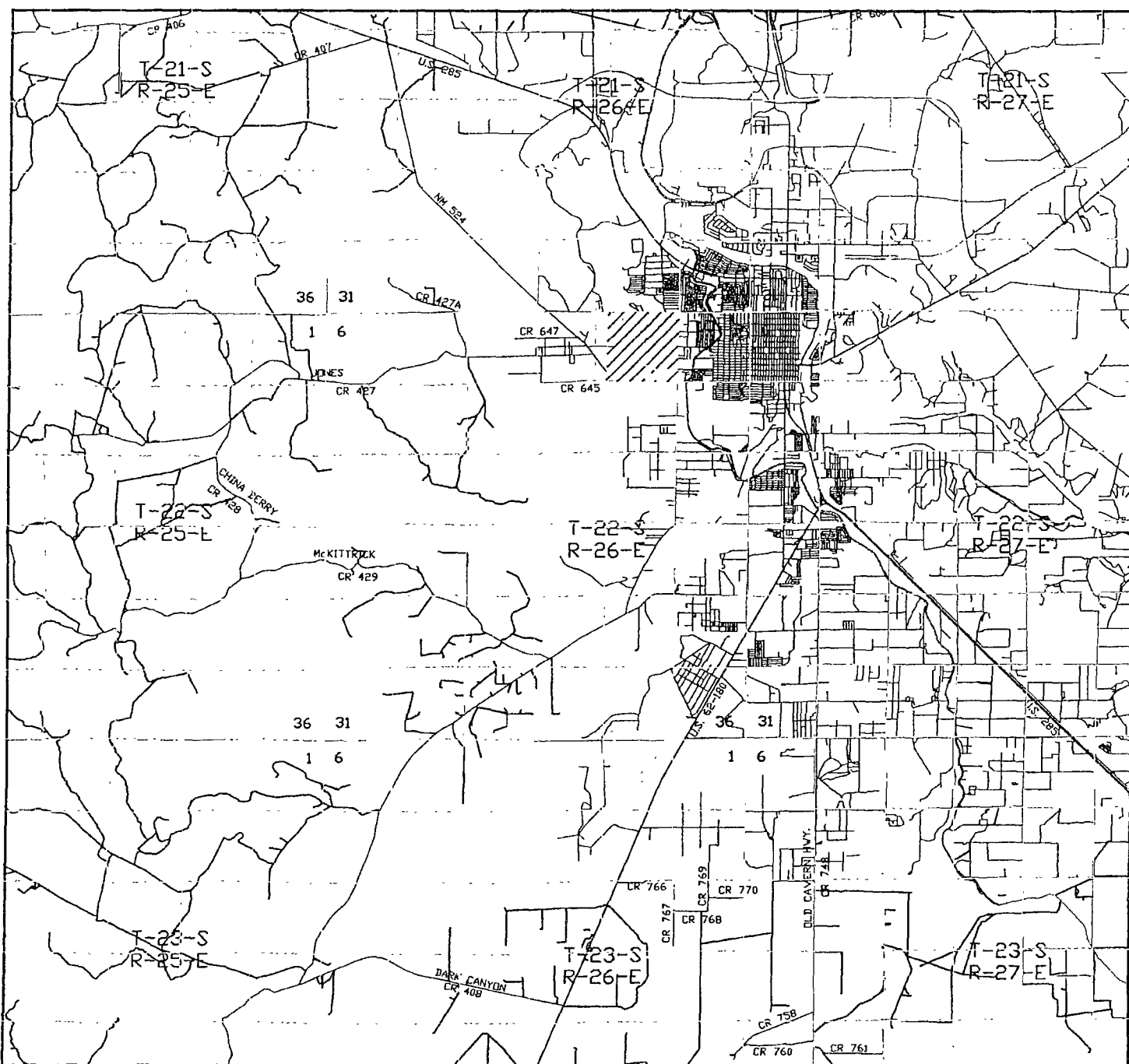
W.O. Number: 6289AA - KJG CD#4

Survey Date: 02-25-2006

Scale: 1" = 2000'

Date: 03-03-2006

DEVON ENERGY
 PROD. CO., L.P.



PERFECTO "2" STATE #1
 Located at 2070' FNL AND 675' FWL
 Section 2, Township 22 South, Range 26 East,
 N.M.P.M., Eddy County, New Mexico.

basin
surveys
 focused on excellence
 in the oilfield

P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (505) 393-7316 - Office
 (505) 392-3074 - Fax
 basinsurveys.com

W.O. Number: 6289AA - KJG CD#4

Survey Date: 02-25-2006

Scale: 1" = 2 MILES

Date: 03-03-2006

DEVON ENERGY
 PROD. CO., L.P.

ARTESIA, N.M.

AUG 08 2005

Wildcat Measurement Service
 P.O. Box 1836
 Artesia, New Mexico 88211-1836
 TollFree #888-421-9453
 Office #505-746-3481
 "Quality and Service is our First Concern"

PDS 06/25/00

Run No. 250728-35
 Date Run 07/28/2005
 Date Sampled 07/27/2005

Analysis for: DEVON ENERGY PRODUCTION COMPANY
 Well Name: RIPLEMAN "5" FEDERAL #4

GPANGL L60

Field:
 Sta. Number: 885-12-057
 Purpose: SPOT-EFM
 Sampling Temp: 82.2 DEG F
 Volume/day: 1.8 MMCF/DAY
 Pressure on Cylinder: 518.4 PSIG

Producer: DEVON ENERGY PRODUCTION
 County: EDDY State: NM
 Sampled By: JACK PITTMAN
 Atmos Temp: DEG F
 Formation:
 Line Pressure: 531.6 PSIA

GAS COMPONENT ANALYSIS

Pressure Base: 14.7300

		Mol %	GPM
Carbon Dioxide	CO2	1.9215	
Nitrogen	N2	0.5124	
Methane	C1	92.1455	
Ethane	C2	4.0539	1.0836
Propane	C3	0.8552	0.2355
Iso-Butane	IC4	0.1361	0.0445
Nor-Butane	NC4	0.1278	0.0403
Iso-Pentane	IC5	0.0496	0.0182
Nor-Pentane	NC5	0.0345	0.0125
Hexanes Plus	C6+	0.1635	0.0713
TOTAL		100.0000	1.5058

Real BTU Dry: 1049.11
 Real BTU Wet: 1030.85
 Real Calc. Specific Gravity: 0.6134
 Field Specific Gravity: 0.0000

Standard Pressure: 14.6960
 BTU Dry: 1044.28
 BTU Wet: 1026.11

Z Factor: 0.9977
 W Value: 1.3008
 Avg Mol Weight: 17.7347
 Avg CuFt/Gal: 57.9357
 26 Lb Product: 0.1630
 Methane+ GPM: 17.1241
 Ethane+ GPM: 1.5058
 Propane+ GPM: 0.4223
 Butane+ GPM: 0.1868
 Pentane+ GPM: 0.1020

REMARKS:
 SAMPLE TAKEN FOR EFM

Approved by: DON NORMAN

Thu Jul 28 20:40:45 2005

*Nearby Gas Analysis for the
 Perfect 1 State Com #1.*

Ysasaga, Stephanie

From: Ysasaga, Stephanie
Sent: Thursday, May 11, 2006 3:57 PM
To: 'Arrant, Bryan, EMNRD'
Cc: Gray, Ken (OKC)
Subject: Perfecto 2 State 1: BOP Requirements

Attachments: Perfecto 2 State 1_BOP Rqmts.pdf

Hi Bryan,

Attached are the BOP requirements you were asking for... I will get the H2S plan and residential proximity, as soon as I get it. ☺

Stephanie A. Ysasaga

Sr. Staff Engineering Technician
(405)-552-7802 Phone
(405)-552-4553 Fax
Stephanie.Ysasaga@dvn.com



Perfecto 2 State
1_BOP Rqmts.p...



Devon Energy Production Company
Operations
20 North Broadway – Suite 1100
Oklahoma City, Oklahoma 73102-8260
Phone: (405)-552-7802
Fax (405)-552-4553
Stephanie.Ysasaga@dev.com

May 11th, 2006

Bryan Arrant
Oil Conservation Division
1301 W. Grand Avenue
Artesia, New Mexico 88210

**Re: Perfecto 2 State 1: BOP Additional Requirements
Sec 2-T22S-R26E
2070' FNL & 675' FWL
Eddy County, NM**

Dear Mr. Arrant:

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. The functional tests will be documented on the daily drillers log.

Should we need to provide additional information, please call me at (405)-552-7802.

Very truly yours,

DEVON ENERGY PRODUCTION COMPANY, L.P.

Stephanie A. Ysasaga
Sr. Staff Engineering Technician ☺



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor

Joanna Prukop

Cabinet Secretary

Devon Energy Production Company, L. P.

20 North Broadway

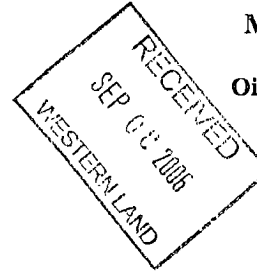
Oklahoma City, Oklahoma 73102-8260

September 6, 2006

Mark E. Fesmire, P.E.

Director

Oil Conservation Division



Attention: **Ken Gray**
ken.gray@dm.com

Administrative Order NSL-5445

Dear Mr. Gray:

Reference is made to the following: (i) your application submitted to the New Mexico Oil Conservation Division ("Division") in Santa Fe, New Mexico by telefax on July 6, 2006 (*administrative application reference No. pTDS0-618737283*); and (ii) the Division's records in Artesia and Santa Fe, which included an independent search by Mr. Michael E. Stogner, Staff Engineer with the Division in Santa Fe, of records in the public domain (i.e. topographic maps, aerial photos, Google Earth®, and personal knowledge and familiarity of the immediate area): all concerning Devon Energy Production Company, L. P.'s ("Devon") request for an unorthodox Morrow gas well location for its proposed Perfecto "2" State Well No. 1 (*API No. 30-015-34896*) to be drilled 2070 feet from the North line and 675 feet from the West line (Unit E) of Section 2, Township 22 South, Range 26 East, NMPM, Eddy County, New Mexico.

Your application has been duly filed under the provisions of Division Rules 104.F and 1210.A (2) [formerly Division Rule 1207.A (2), see Division Order No. R-12327-A, issued by the New Mexico Oil Conservation Commission in Case No. 13482 on September 15, 2005].

Lots 3 and 4, the S/2 NW/4, and the SW/4 (W/2 equivalent) of Section 2 is to be dedicated to this well in order to form a standard 320.63-acre stand-up deep gas spacing unit for either the Undesignated Happy Valley-Morrow Gas Pool (*78060*) or the Undesignated South Carlsbad-Morrow Gas Pool (*73960*).

By the authority granted me under the provisions of Division Rule 104.F (2) [see *Division Order No. R-11315*, issued in Case No. 12306 on January 31, 2000], the above-described unorthodox deep Morrow gas well location for Devon's proposed Perfecto "2" State Well No. 1 is hereby approved

Sincerely,

Mark E. Fesmire, P. E.
Director

MEF/ms

cc: New Mexico Oil Conservation Division -- Artesia
New Mexico State Land Office -- Santa Fe



**Devon Energy Corporation
20 North Broadway
Oklahoma City, Oklahoma 73102-8260**

Hydrogen Sulfide (H₂S) Contingency Plan

For

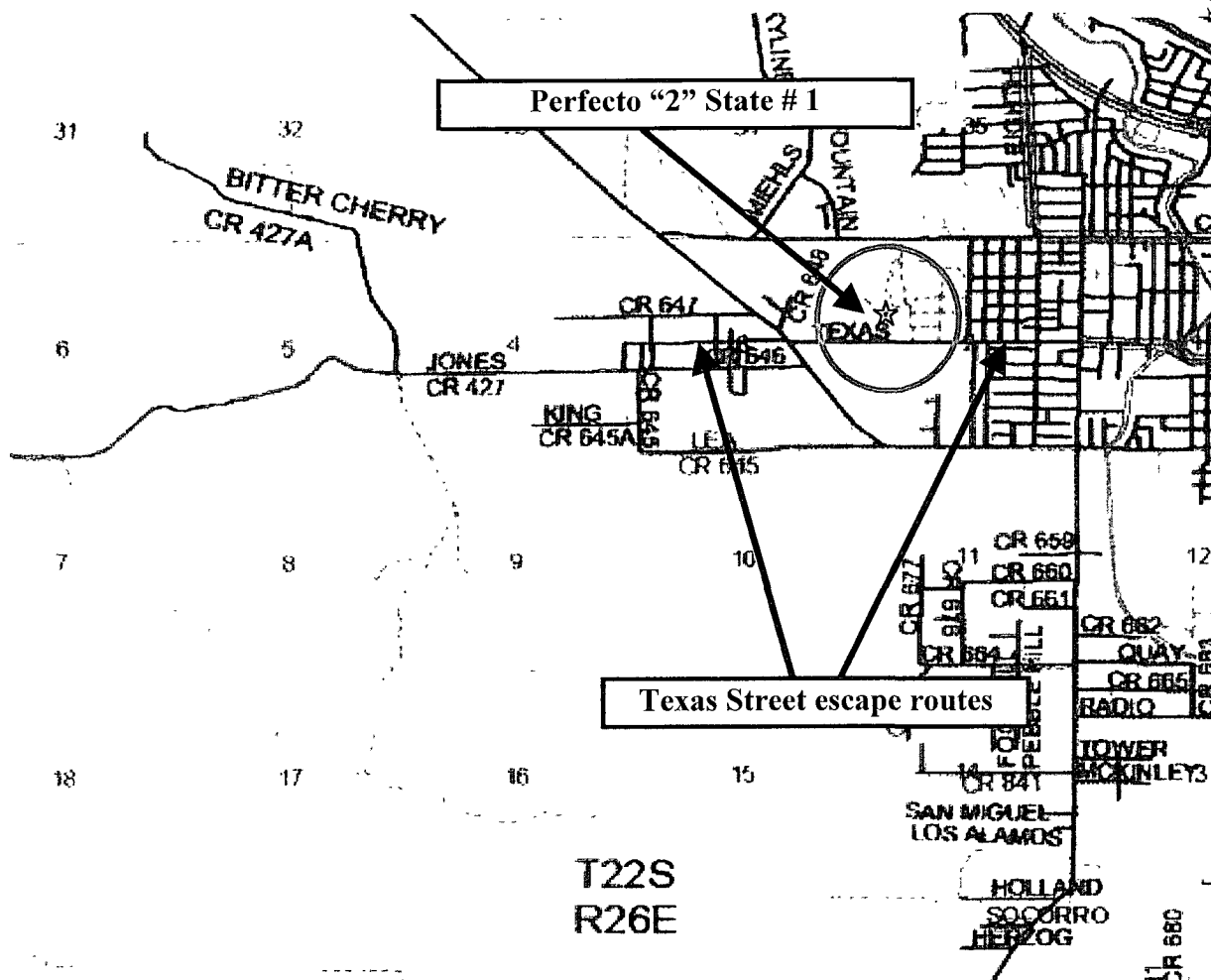
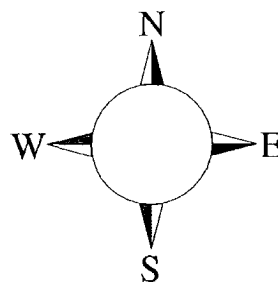
Perfecto “2” State # 1

**2070’ FNL & 675’ FWL,
Sec-2, T-22S R-26E**

Eddy County NM

Perfecto "2" State # 1

This is an open drilling site. H₂S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H₂S, including warning signs, wind indicators and H₂S monitor.



Assumed 100 ppm ROE = 3000' (Radius of Exposure)
100 ppm H₂S concentration shall trigger activation of this plan.

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated South East on lease road. Crews should then move to block access to the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There may be homes or buildings within or near the ROE. **Immediate response** should include the evacuation of any person(s) potentially affected by toxic or flammable gasses. Evacuation of the downwind areas should occur first. Perimeter monitoring should then be established to ensure safe areas.

Emergency Procedures

In the case of a release of gas containing H₂S, the first responder(s) must isolate the area and prevent entry by other persons into the 100 ppm ROE. Additionally the first responder(s) must evacuate any public places encompassed by the 100 ppm ROE. First responder(s) must take care not to injure themselves during this operation. Company and/or local officials must be contacted to aid in this operation. Evacuation of the public should be beyond the 100 ppm ROE.

All responders must have training in the detection of H₂S, measures for protection against the gas, equipment used for protection and emergency response. Additionally, responders must be equipped with H₂S monitors and air packs in order to control the release. Use the “buddy system” to ensure no injuries during the response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO₂). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Characteristics of H₂S and SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H ₂ S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO ₂	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

Devon Energy Corp. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Devon Energy Corp. Company response must be in coordination with the State of New Mexico’s ‘Hazardous Materials Emergency Response Plan’ (HMER)

Devon Energy Corp. Company Call List

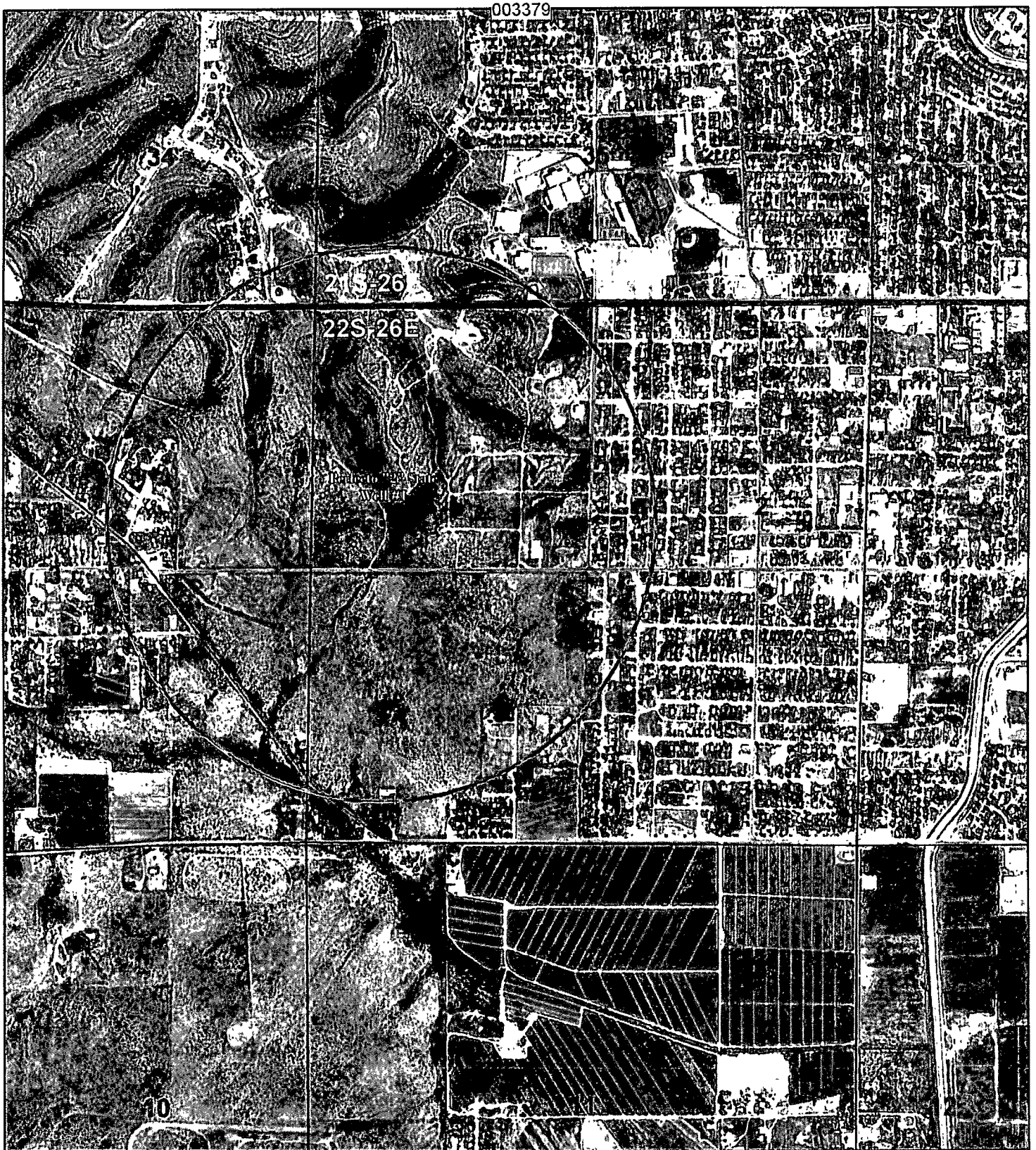
<u>Artesia (505)</u>	<u>Cellular</u>	<u>Office</u>	<u>Home</u>
Foreman – BJ Cathey.....	390-5893	748-0176.....	887-6026
Asst. Foreman – Bobby Jones.....	748-7447	748-0176.....	746-3194
Don Mayberry.....	748-7180	748-5235.....	746-4945
Linda Berryman	(505) 748-0177 ...	(505) 513-0534 ...	(505) 628-1864
Engineer – Greg McGowen	(405) 228-8965 ...	(405) 464-9769 ...	(405) 360-8998

Agency Call List

<u>Eddy</u>	<u>Artesia</u>	
<u>County</u>	State Police	746-2703
<u>(505)</u>	City Police	746-2703
	Sheriff's Office.....	746-9888
	Ambulance.....	911
	Fire Department.....	746-2701
	LEPC (Local Emergency Planning Committee)	746-2122
	NMOCD	748-1283
	Carlsbad	
	State Police	885-3137
	City Police	885-2111
	Sheriff's Office.....	887-7551
	Ambulance.....	911
	Fire Department.....	885-2111
	LEPC (Local Emergency Planning Committee).....	887-3798
	US Bureau of Land Management.....	887-6544
	New Mexico Emergency Response Commission (Santa Fe) ...	(505)476-9600
	24 HR	(505) 827-9126
	National Emergency Response Center (Washington, DC)	(800) 424-8802
	Emergency Services	
	Boots & Coots IWC	1-800-256-9688 or (281) 931-8884
	Cudd Pressure Control.....	(915) 699-0139 or (915) 563-3356
	Halliburton	(505) 746-2757
	B. J. Services.....	(505) 746-3569
<i>Give</i>	Flight For Life - Lubbock, TX	(806) 743-9911
<i>GPS</i>	Aerocare - Lubbock, TX	(806) 747-8923
<i>position:</i>	Med Flight Air Amb - Albuquerque, NM	(505) 842-4433
	Lifeguard Air Med Svc. Albuquerque, NM	(505) 272-3115

Prepared in conjunction with
Wade Rohloff of;





0 1,500 3,000 Feet



Section 2, T22N - R26E
Eddy County, New Mexico

devon

Perfecto 2 State Com #1
Notification List

Joseph William Sharp & Mee-Sun Sharp
3402 W. Lea Street
Carlsbad, NM 88220
505-885-8813

Thomas E. Phillips and Melba Phillips
3110 Washington Street
Carlsbad, NM 88220
505-885-5177

Bryan E. Nygren
3106 Washington Street
Carlsbad, NM 88220
505-887-6779

Clarence L. Magby and Wilma J. Magby
3108 West Florida
Carlsbad, NM 88220
505-887-2290

Clarence L. Magby and Wilma J. Magby
3102 West Florida
Carlsbad, NM 88220
505-887-2290

Israel Figuero
3102 Washington Street
Carlsbad, NM 88220
505-885-1566

De Los Santos and Margie Santos
408 South 14th
Carlsbad, NM 88220
505-887-6159

Paul C. Gomez and Christine M. Gomez
802 Fountain Drive
Carlsbad, NM 88220
505-234-1740

Donald G. Tincler
404 Bluebird Lane
Carlsbad, NM 88220
505-628-0875

William N. Mossier and Cordie I. Mossier
302 Valley View
Carlsbad, NM 88220
505-885-4632

Tommy L. Kevil
101 North Happy Valley Road
Carlsbad, NM 88220
505-885-0436

Michael M. Ramirez
4014 West Texas
Carlsbad, NM 88220
505-887-0137

Walter M. Moore
111 North Happy Valley Road
Carlsbad, NM 88220
505-885-9153

Guadalupe Rodriguez
4016 West Texas Street
Carlsbad, NM 88220
505-885-1453

Marco Sanchez and Erica I. Sanchez
4020 West Texas Street
Carlsbad, NM 88220
505-885-8004

Gabriel P. Munoz
4024 West Texas Street
Carlsbad, NM 88220
505-887-1511

Manuel B. Rubio
4026 West Texas Street
Carlsbad, NM 88220
505-887-8159

Charles C. Duff
201 North Happy Valley Road
Carlsbad, NM 88220
505-887-8020

Dalila S. Henderson
Mario Aguilar and Jana Aguilar
209 North Happy Valley Road
Carlsbad, NM 88220

James G. Thompson and Gayle Thompson
4023 Harmon Lane
Carlsbad, NM 88220

Robert Wallace
4025 Harmon Lane
Carlsbad, NM 88220
505-887-7938

Rosetta J. Adams and Beau Adams
4029 Harmon Lane
Carlsbad, NM 88220

Carolyn Taylor, etal
4031 Harmon Lane
Carlsbad, NM 88220
505-234-1420

Robbie G. Sing and Sonia G. Sing
207 Bluebird
Carlsbad, NM 88220
505-628-3674

Rita J. Woodfield
Stan Mayrhofen and Jo Mayrhofen
204 North Happy Valley Road
Carlsbad, NM 88220

Bonnie Prichard
304 North Happy Valley Road
Carlsbad, NM 88220
505-628-1626

Stephen W. Angell and Carye Lou Angel
308 North Happy Valley Road
Carlsbad, NM 88220
505-885-3686

Tina Leigh Singleton
310 North Happy Valley Road
Carlsbad, NM 88220
505-234-1548

Thelma Louise Ramsey
312 North Happy Valley Road
Carlsbad, NM 88220

Kurt Braun
314 North Happy Valley Road
Carlsbad, NM 88220
505-8852030

Howard Britton and Baudelia Britton
3910 West Texas
Carlsbad, NM 88220
505-885-9123

Robbie G. Sing, Jr.
210 Bluebird Lane
Carlsbad, NM 88220
505-234-9122

Darrell L. Wall and Riat L. Wall
302 Bluebird Lane
Carlsbad, NM 88220
505-885-9879

William F. Sherrell and Norma Lee Sherrell
310 Bluebird Lane
Carlsbad, NM 88220
505-887-2284

Jere L. Stell and Deana R. Stell
304 Valley View
Carlsbad, NM 88220
505-885-4942

Angie Martinez and Rudy J. Martinez
Rudolpho Martinez
3907 West Texas Street
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505-628-0999

Paul Ray Laney
4008 Jones Street
Carlsbad, NM 88220
505-885-6224

Dan Leslie, Jr.
Jane Tate
107 South Happy Valley Road
Carlsbad, NM 88220
505-887-3854

Alvis Mensch
3915 Jones Street
Carlsbad, NM 88220
505-887-2690

Roy B. Laney and Barbara L. Laney
4001 Jones Street
Carlsbad, NM 88220
505-887-1397

Stephen M. Mensch
3913 Jones Street
Carlsbad, NM 88220

Paulina Morales
3909 Jones Street
Carlsbad, NM 88220

Reyes A. Payanes
3911 Jones Street
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505-885-1387

Chance Winters and Sarah Winters
4003 Jones Street
Carlsbad, NM 88220
505-628-3336

Tommy Kevil and Kathy Kevil
101 South Happy Valley Road
Carlsbad, NM 88220
505-885-0436

Renee Jarnigan
103 South 11th Street
Carlsbad, NM 88220
505-887-0407

Ronnie Galbraith and Glenda Galbraith
101 South 11th Street
Carlsbad, NM 88220
505-885-1671

Stephen Thatcher and Nancy Thatcher
206 South 11th Street
Carlsbad, NM 88220
505-887-2652

Kenneth H. Willis and Reba D. Willis
102 South 10th Street
Carlsbad, NM 88220
505-887-1466

Ruthie J. Porter and Donald Porter
112 South 10th Street
Carlsbad, NM 88220
505-628-3891

Dean R. McAlester
302 South 11th Street
Carlsbad, NM 88220
505-885-6126

Mary Nell Justice and Flinko Justice
101 South 10th Street
Carlsbad, NM 88220

Daniel Middleton
108 South 11th Street
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505-628-8688
505-885-0706

David Armandariz
109 South 10th Street
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Prescilla Melendrez
114 South 11th Street
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505-628-8334

Marion Jenkins
201 South 10th Street
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Pilar A. Saucedo
202 South 11th Street
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505-628-0486

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204 South 11th Street
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505-885-5508

Larena K. Tanner and Michael D. Tanner
109 South 11th Street
Carlsbad, NM 88220
505-885-5376

Manual Rios
113 South 11th Street
Carlsbad, NM 88220

Lake Bennett
201 South 11th Street
Carlsbad, NM 88220
505-885-6906

Mary Ann Willis Folsom
203 South 11th Street
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505-887-0020

Doris W. Holmes and James W. Holmes
Marilyn Holmes Hadrill
205 South 11th Street
Carlsbad, NM 88220
505-885-8939

Annie Marjorie Loman Revocable Trust
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505-885-9580

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206 North 11th Street
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505-885-6121

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602 North 12th Street
Carlsbad, NM 88220
505-885-0941

Daniel Hernandez and Jenny C. Hernandez
506 North 12th Street
Carlsbad, NM 88220
505-628-1779

Ben Alvin Walker
2701 Eunice Street
Carlsbad, NM 88220
505-885-3240

Kenneth J. Jensen and Rebecca J. Jensen
614 North 12th Street
Carlsbad, NM 88220
505-887-5896

Jerry R. Villa and Belma M. Villa
603 North 11th Street
Carlsbad, NM 88220
505-885-6014

Edward Cobos and Erin Cobos
606 North 12th Street
Carlsbad, NM 88220
505-628-3067

Donald C. Neighbors and Deelona L. Neighbors
604 North 12th Street
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505-885-8008

Madeline Hayes and Tyrell Hayes
601 North 11th Street
Carlsbad, NM 88220
505-885-5976

Yolanda S. Villa
510 North 11th Street
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505-628-8970

Adelmo F. Castro and Virginia M. Castro
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Carlsbad, NM 88220
505-628-1777

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506 North 11th Street
Carlsbad, NM 88220
505-885-6329

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Estevan M. Quintela
504 North 11th Street
Carlsbad, NM 88220
505-887-1592

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Carlsbad, NM 88220

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512 North 12th Street
Carlsbad, NM 88220
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Michael D. Stephens and Loretta Stephens
510 North 12th Street
Carlsbad, NM 88220
505-887-0343

Alex Ruiz and Elva C. Ruiz
505 North 11th Street
Carlsbad, NM 88220
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Ricky Eugene Whitely
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505-628-1632

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505-887-2556

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406 North 12th Street
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Benito Mendoza
404 North 12th Street
Carlsbad, NM 88220
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505-885-6283
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505-628-1052

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109 North 10th Street
Carlsbad, NM 88220
505-628-3614

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505-885-0057

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Carlsbad, NM 88220

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215 North 11th Street
Carlsbad, NM 88220
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216 North 12th Street
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Alberto G. Mendoza
211 North 11th Street
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Richard D. Peek
212 North 12th Street
Carlsbad, NM 88220
505-885-2782
505-885-1256

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206 North 12th Street
Carlsbad, NM 88220
505-887-6162

Robert L. Torres and Ethel M Torres
202 North 12th Street
Carlsbad, NM 88220
505-885-2932

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Linda Marie Scott Brown
111 North 11th Street
Carlsbad, NM 88220
505-885-4529

Dalton R. Allison
108 North 12th Street
Carlsbad, NM 88220
505-885-2383

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Linda Marie Scott Brown
107 North 11th Street
Carlsbad, NM 88220
505-885-4529

Terrell V. Carter
106 North 12th
Carlsbad, NM 88220
505-887-8836

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103 North 11th Street
Carlsbad, NM 88220
505-885-9564
505-885-2811

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505-628-8538

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505-885-3800

Paul Neal Cosand, Jr.
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William A. Grinstead and M. Jennifer Grinstead
805 Dennis Way
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505-887-8027

Ysasaga, Stephanie

From: McKinney, Curt
Sent: Thursday, July 13, 2006 4:29 PM
To: Ysasaga, Stephanie; Blount, Jim; Brockman, Gerald; Abbitt, Wyatt
Subject: Perfecto intermediate pipe point.

I just spoke with Bryan Arrant with the NMOCD about the intermediate pipe point on the Perfecto well. After discussion, he agreed with the following plan:

We will put mudloggers on the well sufficiently early that they can call the top of the Delaware for us, estimated to be 2500'. I'll get them on about 2200' and I will work with them so we don't drill into it too far. I believe our APD has a depth of 2550', but we may reach the Delaware a little shallower than that.

I also gave him Jim Blount's phone number. Bryan said his boss wants to see us do a bench test for compressive strength of our intermediate cement slurry, assuming we chose option 2 (whatever that is).

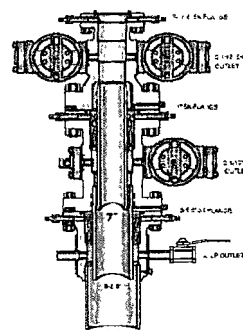
Curt McKinney

Senior Geologic Advisor
Western Division
Devon Energy Corporation
(405) 552-4542 office
(405) 833-9900 cell

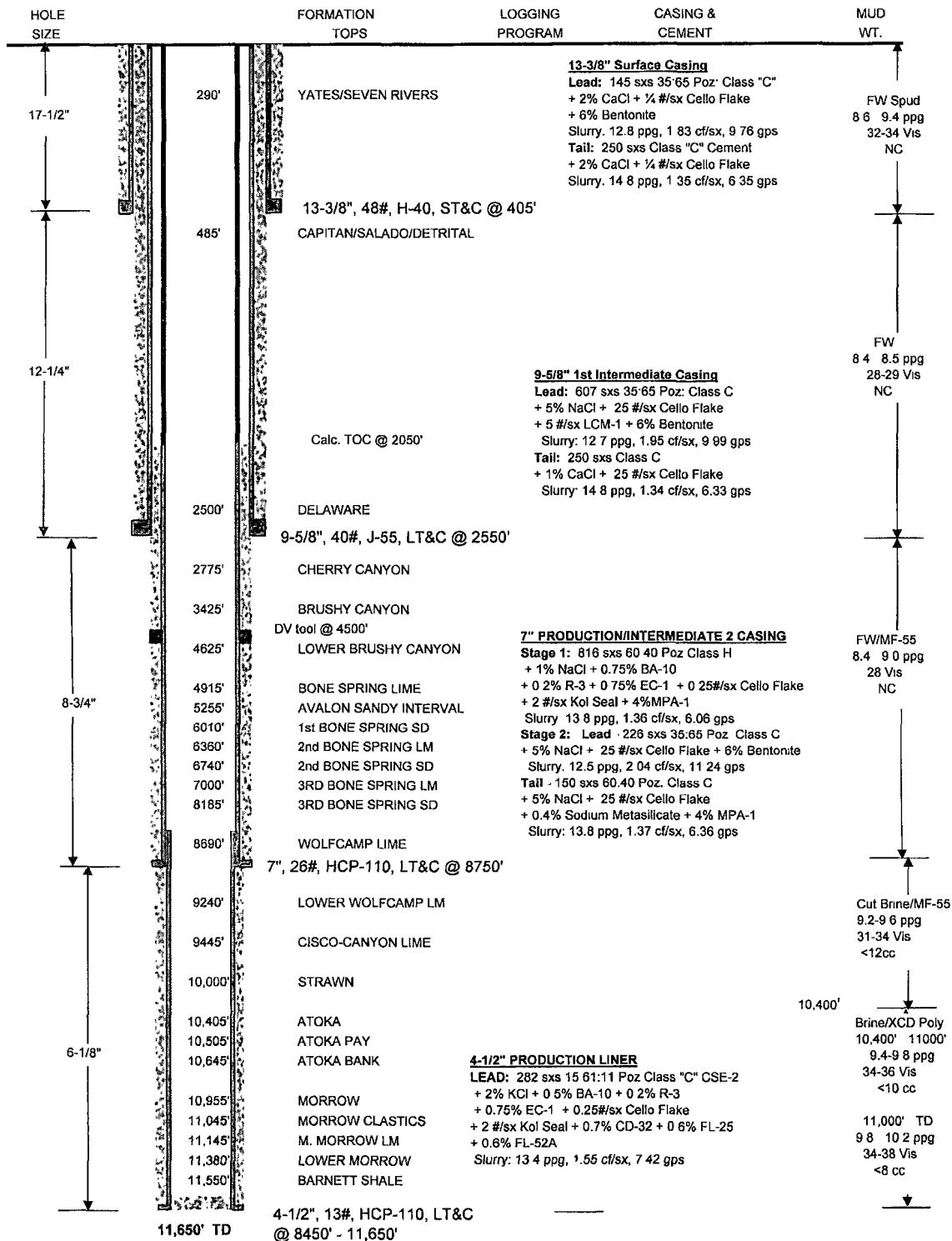


DRILLING PROGNOSIS

WELL: PERFECTO 2 STATE 1 BOP: 5000#
FIELD: HAPPY VALLEY
CATEGORY: DEVELOPMENT WELL - (GAS)
SHL: 2070' FNL & 675' FWL Sec. 2-T22S-R26E
BHL: 2070' FNL & 675' FWL
COUNTY: EDDY STATE: NEW MEXICO
ELEVATION: 3236' GL API NO.: 30-015-34896
RIG: Patterson 5 17' KB
ELEVATION: 3253' KB



FMC 13-5/8" 3K x 11" 5K x 7-1/16" 5K



DEVON ENERGY DRILLING PROGNOSIS

Perfecto 2 St #1

2070' FNL & 675' FWL, Sec 2, T22S, R26E
Eddy County, New Mexico

DISCUSSION & POSSIBLE HOLE PROBLEMS

Notify OCD of intent to spud at least 24 hrs prior to commencing operations. Report the time, date and name of the person notified on the Dims morning report. Drill an 11,650' test of the Morrow on a daywork basis in a projected drilling time of 36 days. The surface hole will be 17 1/2" to ±405' setting 13 3/8" casing. **THE SURFACE CASING MUST BE SET ABOVE THE SALADO FORMATION AS PER THE CONDITIONS OF APPROVAL.** Plan to set 30" Conductor to 40' if possible in order that a contingency string of 20" can be set if necessary due to shallow lost circulation and sand & gravel problems. Lost circulation is probable, need to run LCM sweeps 1st, if that fails, the hole will most likely need to be dry drilled if sand & gravel problems are manageable. Then drill a 12 1/4" intermediate hole to ±2550' setting 9 5/8" casing. Lost circulation can also be a problem here. First, attempt to regain with LCM sweeps and spotting LCM pills before dry drilling. The 2nd intermediate hole to 8,750' will be drilled with an 8 3/4" bit. There is a possibility of lost circulation in the Bone Springs in this area. A 7" casing string will be set at the top of the Wolfcamp @ 8750' and cemented to reach 500' into the 9 5/8" csg. The production hole to be drilled w/6 1/8" bit thru the Morrow. A 4 1/2" liner will be set at TD w/an overlap of 300' in 7" & fully cemented. Call Pipeco at (800) 927-4732 or (281) 955-3500 for delivery of all casing. Give at least 48 hr. notice.

New Mexico Oil Conservation District; (505) 748-1283

NOTE: Ensure the rig, the cementing and testing procedures ALL comply with BLM Onshore Oil and Gas Order No. 2 requirements including the COA's and special waivers granted to Devon from the NMOCD.

EMERGENCY NUMBERS

Eddy County Sheriff; (505) 887-7551
New Mexico State Police; (505) 885-3137
Emergency Response; (800) 424-9300
Toxic Spills; (800) 424-8802
New Mexico Oil Conservation Division, Artesia: (505) 748-1283

GENERAL INFORMATION

OBJECTIVE: Morrow

ELEVATION: 3236' GL

PROJECTED TOTAL DEPTH:

11,650' TVD/MD

SURFACE LOCATION:

2070' FNL & 675' FWL
Section 2-T22S-R26E

COUNTY: Eddy

STATE: New Mexico

DIRECTIONS TO LOCATION:

From the junction of US HWY 62-180 and US HWY 285 in Carlsbad, go south .2 mile to Happy Valley road, turn west & go 2.4 miles to West Texas, turn right & go east 0.4 mile, turn left & go 400' to location.

PROPOSED CASING PROGRAM:

<u>Hole Size</u>	<u>Depth (MD)</u>	<u>Casing Size and Weight</u>
17 1/2"	405'	13-3/8" 48# H-40 ST&C
12 1/4"	2550'	9-5/8" 40# J-55 LT&C
8 3/4"	8750'	7" 26# HCP-110 LT&C
6 1/8"	11,650'	4-1/2" 13# HCP-110 LT&C

GEOLOGICAL INFORMATION:

Formation	Perfecto 2 #1
Yates/Seven Rivers	290'
Capitan	485'
Delaware	2500'
Bone Spring Lm	4915'
1 st BS Sandstone	6010'
2 nd BS Sandstone	6740'
3 rd BS Sandstone	8185'
Upper Wolfcamp Lm	8690'
Lower Wolfcamp Lm	9240'
Cisco-Canyon Lmy Shale	9445'
Strawn	10,000'
Atoka	10,405'
Atoka Bank	10,645'
Morrow	10,955'
Morrow Clastics	11,045'
Middle Morrow Lime	11,145'
Lower Morrow Shale Mkr	11,380'
Barnet Shale	11,550'
Proposed Total Depth	11,650'

VENDORS LIST

Perfecto 2 St #1	Section 2, T22S, R26E		Eddy County, NM
Drilling Contractor	Patterson Rig 5	(505) 682-9401	Midland Office
Cementing	B.J. Services	(505) 746-3140	Mike Wiggins
Mud	Nova	(432) 570-6663	Dale Welch
Wellhead Equipment	FMC	(432) 563-0335	Dusty Allen
Mud Logger	Morco Mud Logging	(800) 748-2340	John Morris
Mud Logger	Morco Mud Logging	(505) 706-1921	Ronnie Read
Open Hole Logs	Schlumberger	(505) 622-9080	Ken Morgan (Roswell)
Open Hole Logs	Schlumberger	(505) 420-3225	Ken Morgan (Roswell)

TELEPHONE NUMBERS

Devon Energy Corporation – OKC	
DIMS	(866) 568-8723
Watts	(800) 583-3866
Office	(405) 235-3611
Emergency	(800) 361-3377
FAX	(405) 552-4261
Jim Blount – Sr. Well Engineering Advisor	
Office	(405) 228-4301
Home	(432) 348-0102
Mobile	(432) 834-9207
Bill Dougherty – Sr. Well Engineering Advisor	
Office	(405) 552-4590
Home	(405) 755-2800
Mobile	(405) 203-5616
Wyatt Abbitt – Operations Engineer	
Office	(405) 552-8137
Home	(405) 340-3879
Mobile	(405) 245-3471
Curt Mckinney – Geologist	
Office	(405) 552-4542
Mobile	(405) 833-9900
Don Mayberry – Superintendent	
Office	(505) 748-0164
Mobile	(505) 748-5235
Pager	(505) 370-6526
Joe Johnston – WO/Completion/Construction Superintendent	
Office	(505) 748-0171
Mobile	(505) 513-0630
Ronnie Carre – Field Foreman	
Office	(505) 748-0179
Mobile	(505) 748-5528
Ray Payne – Drilling Manager	
Office	(405) 228-8739
Mobile	(405) 323-4615
Bob Randolph – Drilling Consultant	
Devon Mobile	(505) 390-5223
State Agency	
NMOCD-Artesia office	(505) 748-1283

SURFACE HOLE: 0' to 405'

Drill a 17½" hole to approximately 405' with fresh water (make hole to fit 13 3/8" casing). Consider dry drilling if loss circulation cannot be healed with ±20 ppb LCM. Run survey at 200' and at TD or as needed to ensure a straight hole. Lost circulation can be troublesome in this area and deviation may be severe. If lost circulation occurs and there are problems with sand & gravel, consider setting 20" prior to setting 13 3/8" surface string. Deviation is also a problem in the area.

BHA:

Bit, bit sub, shock sub, 3-9"DC's, 8" drill collars as needed, crossover.
Run drill pipe float in BHA.

MUD PROGRAM FOR SURFACE HOLE

DEPTH	MUD WEIGHT	TYPE	VISC	pH	FLUID LOSS
0 - 600'	8.4 – 9.4	FW Gel/Lime	32-34	9	N/C

Drill surface with a fresh water spud mud. Maintain viscosity as needed to clean the large diameter hole. Add small amounts of Lime to flocculate the Bentonite for better carrying capacity and to reduce Gel usage. Periodically sweep the hole with Ground Paper to control seepage and aid in hole cleaning. If severe lost circulation is encountered, dry drill to TD, running periodic hole sweeps consisting of Bentonite for 40-50 vis with 10-20 ppb of various fibrous LCM's. Run fresh water as necessary to control weight and volume. Sweep the hole at TD with a viscous (50-60) FW gel pill prior to TOOH to run casing.

CASING PROGRAM FOR SURFACE HOLE

DEPTH	SIZE	LENGTH	WT	GRADE	THREAD	REMARKS
0 - 405'	13 3/8"	405'	48#	H-40	ST&C	

Casing Running Sequence:

Texas pattern notched guide shoe,

1 jt of 13 3/8" 48# H-40 ST&C

Insert float,

Balance of 13 3/8" 48# H-40 ST&C

5 – centralizers equally spaced.

Make-up Torque (using API modified lead free thread dope): **13 3/8" 48# H-40 ST&C**

Optimum 3220 ft-lb

Minimum 2420 ft-lbs

Maximum 4030 ft-lbs

RU BJ Services, hold safety meeting, test lines, cement 13-3/8" casing per attached recommendation. Displace with fresh water. ***Do not overdisplace cement.*** Calculate force required to pump casing out of the hole. Do not exceed this.

CEMENTING PROGRAM FOR SURFACE HOLE

Lead:

145 sx 35:65 Poz: Class C
2% Calcium Chloride
.25 lb/sx Cello Flake
6% Bentonite

Mixed at: 12.8 ppg
Yield: 1.83 ft³/sx
Water: 9.76 gal/sx

Tail:

250 sx Class C
ppg

Mixed at: 14.8

2% Calcium Chloride
.25 lb/sx Cello Flake

Yield: 1.35 ft³/sx
Water: 6.35 gal/sx

If circulation is lost during drilling, pump 150 sx Class H + 10% Gypsum + 1% CaCl₂ + 10 lb/sx Gilsonite + ¼ pps celloflake. Mix cement @ 14.6 ppg (6.16 gps water) and pump ahead of lead cement. Pilot test all slurries. See BJ cementing recommendation.

MUST CIRCULATE CEMENT TO SURFACE per NMOCD requirements. If the cement does **not** circulate to surface contact the NMOCD office at (505) 748-1283. They may require either a temperature survey or a cement bond log to be run, and then determine what remedial action will be taken before drilling out

WOC A TOTAL OF 8 HOURS :

Center casing in rotary table. Wait 4 hours then cut off conductor and 13-3/8" casing. Weld casing head and test with FMC to 50% of the collapse rating of 13-3/8" casing, NU BOPE and choke manifold as per drilling contract. NOTE: Cement must stand static until reaching a compressive strength of not less than 500 psi, but at the minimum time of 8 hrs provided that cement slurry properties are provided as per OCD Rulebook 19.15.3.107, Option 2, section H (attached). This information shall be reported on the Dims morning report to enable the Devon regulatory person to fill out Form C-103. If in a potash area then normal stipulations will be followed. Test BOPE to 1000 psi with rig pumps. Calculate pump out force of drill string and configure accordingly such that a test of 1000 psi can be achieved. Install H2S Equipment prior to drill-out of 13 3/8" casing.

INTERMEDIATE HOLE: 405' TO 2550'

Trip in the hole with a 12 1/4" bit. Test the casing to 1000 psi for 30 minutes and drill the intermediate hole from 406' to 2550' with fresh water circulating the outer reserve pit. Pump paper sweeps as needed for seepage control and to clean the hole. If severe lost circulation is encountered consider dry drilling to TD, sweeping hole with viscous (50-60) Bentonite Gel pills consisting of 3-10 ppb of fibrous LCM. Make hole to fit 9 5/8" casing. **Survey every 100-150' to a depth of 2550'** to ensure a straight hole. Deviation has been a significant problem in some wells in the area. If deviation of 3 degrees occurs notify the Drilling Superintendent immediately and consider picking up directional tools with MWD on low speed motor (0.16 rev/gal).

BHA:

Bit, Tri-collar, 3 pt roller reamer, **1- 9" DC**, IBS, **1-9 " DC**, IBS, **1-9" SS**, **1-9" DC**, XO, 12-8" Dc's, XO, 15- 6-1/4" DC's, Drilling Jars, 3- 6-1/4" DC's. Run drill pipe float in BHA

MUD PROGRAM FOR INTERMEDIATE HOLE

<u>DEPTH</u>	<u>MUD WEIGHT</u>	<u>TYPE</u>	<u>VISC</u>	<u>pH</u>	<u>FLUID LOSS</u>
405- 2550'	8.4-8.5	Fresh Water	28-29	9.5-10.5	N/C

Drill out with Fresh Water circulating the outer reserve pit. Use Lime for pH control. Periodically sweep the hole with Ground Paper to aid in seepage control and hole cleaning. Small amounts of MF-55 may be added to flocculate fine solids and keep the fluid clean. Should severe losses be encountered in the Capitan Reef consider dry drilling to the Delaware at 2550' sweeping the hole with viscous (50-60) Gel pills consisting of 10-20 ppb of fibrous LCM. Use an air package to decrease the hydrostatic to around 7.0 ppg. Approximately 1400 cfm should be sufficient.

CASING PROGRAM FOR INTERMEDIATE HOLE

<u>DEPTH</u>	<u>SIZE</u>	<u>LENGTH</u>	<u>WT</u>	<u>GRADE</u>	<u>THREAD</u>	<u>REMARKS</u>
0 – 2550'	9 5/8"	2550'	40#	J-55	LT&C	Drift csg to 8.750"

Rig up casing tools and run 9-5/8" production casing as follows:

Float shoe

2 joint of 9 5/8" 40# J-55 LT&C casing

Float collar

Balance of 9 5/8" 40# J-55 LT&C casing.

Run centralizers in the middle of the shoe joint and every 4th joint to surface

Make-up Torque (using API thread dope):

9 5/8" 40# J-55 LT&C

Optimum 5200 ft-lbs

Minimum 3900 ft-lbs

Maximum 6500 ft-lbs

BCI & drift all casing on location.

RU BJ Services, hold safety meeting, test lines.

Cement casing per attached BJ Services recommendation at maximum mix and displacement rates. ***Do not overdisplace cement.***

CEMENT PROGRAM FOR INTERMEDIATE CASING

Note: Use single stage option if no losses occur while drilling

Lead: 607 sx (35:65) Poz: Class C Cement
5% Sodium Chloride
.25 lb/sx Cello Flake
6% Bentonite
5 pps LCM-1

Weight: 12.7 ppg
Yield: 1.95 ft³/sx
Water: 9.99 gal/sx

Tail: 250 sx Class C
ppg 1% Calcium Chloride
ft³/sx
.25 lb/sx Celloflake

Weight: 14.8
Yield: 1.34
Water: 6.33 gal/sx

(*)Adjust volume to fluid caliper + 30% excess, calculate cement volume to circulate cement to surface.

MUST CIRCULATE CEMENT TO SURFACE per NMOCD requirements. If the cement does not circulate to surface contact the NMOCD office at (505) 748-1283. They may require either a temperature survey or a cement bond log to be run, then determine what remedial action will be taken before drilling out

WOC A TOTAL OF 8 HOURS BEFORE DRILLING OUT

After waiting 4 hours, cut off casing, NU FMC Wellhead. Test to 50% of collapse rating of 9 5/8" casing. N/U 11" 5000 BOP's, Test BOP's, kill line, choke manifold 250 psi low & 5000 psi high. Test annular to 250 low & 2500 psi high.

NOTE: Cement must stand static until reaching a compressive strength of not less than 500 psi, but at the minimum time of 8 hrs provided that cement slurry properties are provided as per OCD Rulebook 19.15.3.107, Option 2, section H (attached). This information shall be reported on the Dims morning report to enable the Devon regulatory person to fill out Form C-103. If in a potash area then normal stipulations will be followed.

2nd INTERMEDIATE HOLE: 2550' TO 8750'

Trip in the hole with an 8 3/4" bit. Test casing to 1000 psi for 30 min. Drill the production hole from 2550' to a TD of 8750' with F/W circulating to the outer reserve pit and adding the Brine from the inner reserve to raise mud weights. Lost circulation may be a problem in this section of the hole. Survey every 500' w/ maximum deviation of 5° & 1½"/100' change.

BHA:

Bit, Tri-collar, 3 pt roller reamer, 1- 6-1/4" DC, IBS, 1- 6-1/4" DC, IBS, 27- 6-1/4" DC's, Drilling Jars, 3-4 6-1/4" DC's. Run drill pipe float in BHA.

MUD PROGRAM FOR 2nd INTERMEDIATE HOLE

DEPTH	MUD WT.	TYPE	VISC	Ph	FL	Chlorides
2,550 – 8,750'	8.4 – 9.0	FW/MF-55	28	9.5-10.5	N/C	3-40K

2550 – 8750' Drill out from under the intermediate casing with fresh water circulating the outer reserve. Continue to use Lime for pH control. Ground Paper additions periodically will control seepage and aid in hole cleaning. MF-55 may be added periodically to flocculate fine solids and keep the fluid clean. Should hole conditions dictate sweep the hole with viscous (50-60) Bentonite pills mixed in fresh water to aid in hole cleaning. Should losses be encountered in the Lower Bone Spring add 10-20 ppb of various grades of LCM to the pills. Heavy seepage to loss of circulation is possible in this interval.

EVALUATION PROGRAM FOR 2nd INTERMEDIATE HOLE

At TD, circulate and condition hole clean for logs. Short trip to the last bit trip depth monitoring well closely for flow. Spot High Vis, Low water loss "Slick" Pill prior to TOH for logs. Strap drill string on TOH and report any correction on Dims report.

Mudlogger: Two-man unit from top of Delaware (≈ 2550') to TD.

Electric Logs: See Geologic Prognosis.

<u>TYPE Run #1</u>	<u>INTERVAL</u>
Platform Express	TD to base of intermediate casing

Note: Logs probable prior to setting intermediate casing. See Geological Prognosis.

Coring/DST: None anticipated

CASING PROGRAM FOR 2nd INTERMEDIATE HOLE

DEPTH	SIZE	LENGTH	WT	GRADE	THREAD	REMARKS
0' – 8750'	7"	8,750'	26.0#	HCP-110	LT&C	DV @ 4500'

Rig up casing tools and run 7" casing as follows:

Float shoe

2 joints of 7" 26.0# HCP-110 LT&C casing

Float collar

Centralize middle shoe joint and run centralizers every other joint through productive zones

Run balance of 7" 26.0# HCP-110.

DV tool @ 4500'

Utilize torque recorder on casing:

Make-up Torque (using API thread dope): **6930 ft-lbs**

CEMENT PROGRAM FOR 2nd INTERMEDIATE CASING

Tie Back into 9-5/8" casing 500'

1st Stage:

816 sx (60:40) Poz: Class H	Weight:	13.8 ppg
1% Sodium Chloride	Yield:	1.36 ft ³ /sx
0.75% BA-10 + 0.75% EC-1	Water:	6.06 gal/sx
.25 lb/sx Cello Flake		
2 lbs/sx Kol Seal + 0.2% R-3		
4% MPA-1		

2nd Stage thru DV @ 4500':

Lead:

226 sx (35:65) Poz: Class C	Weight:	12.5 ppg
5% Sodium Chloride	Yield:	2.04 ft ³ /sx
.25 lb/sx Cello Flake	Water:	11.24 gal/sx
6% Bentonite		

Tail:

150 sx (60:40) Poz: Class C	Weight:	13.8 ppg
5% Sodium Chloride	Yield:	1.37 ft ³ /sx
0.4% Sodium Metasilicate	Water:	6.36 gal/sx
.25 lb/sx Cello Flake		
4% MPA-1		

Use additives per B. J. cementing recommendation.

Actual cement volumes based on log caliper + 20%.

WOC A TOTAL OF 8 HOURS BEFORE DRILLING OUT

ND BOP's, set slips, cut off, NU & test wellhead with FMC to 50% of collapse rating of the 7" casing. Change DP rams to 3 1/2". NU BOP's and test to 250 psi and 5000 psi. Test hydrill to 250 psi and 2500 psi. NU rotating head and flowline.

NOTE: Cement must stand static until reaching a compressive strength of not less than 500 psi, but at the minimum time of 8 hrs provided that cement slurry properties are provided as per OCD Rulebook 19.15.3.107, Option 2, section H (attached). This information shall be reported on the Dims morning report to enable the Devon regulatory person to fill out Form C-103. If in a potash area then normal stipulations will be followed.

PRODUCTION HOLE: 8750' TO 11,650'

Trip in the hole with an 6 1/8" bit on 4 3/4" DCs and 3 1/2" DP. Test casing to 1000 psi for 30 min. Drill the production hole from 8750' to a TD of 11,650' with cut brine & brine circulating to the outer reserve pit and adding the Brine from the inner reserve to raise mud weights. Survey every 500' w/ maximum deviation of 5° & 1 1/2°/100' change.

BHA:

Bit, Tri-collar, 3 pt roller reamer, 1- 4 3/4" DC, IBS, 1- 4 3/4" DC, IBS, 27- 4 3/4" DC's, Drilling Jars, 3- 4 3/4" DC's. Run drill pipe float in BHA.

MUD PROGRAM FOR PRODUCTION HOLE

DEPTH	MUD WT.	TYPE	VISC	Ph	FL	Chlorides
8,750' – 10,400'	9.6 – 9.8	Cut Brine/MF-55	28	9.5-10.5	N/C	120-170K
10,400' – 10,950'	10.0	Brine XCD/Starch/PAC	30-33	9.5-10.5	8cc	186K
10,950' – 11,650'	10.0 – 10.7	Brine XCD/Starch/PAC	36-42	9.5-10.5	<6cc	186K

8750 – 10,400' Drill out from under the intermediate casing with cut brine 9.6 – 9.8 ppg. This is to control possible gases encountered in the Wolfcamp. By mud up point have the mud weight at 10.0 ppg by displacing the hole if necessary. Use Caustic Soda for pH control to prevent scaling. Use small amounts of MF-55 to flocculate fine solids and keep the fluid clear. Should hole conditions dictate sweep the hole with viscous (50-60) Bentonite pills mixed in fresh water to aid in hole cleaning.

10,400' – 11,650' Return to working pits with 10.0 ppg Brine water. Be sure that bar bins and gas control equipment is in place and operational. Discontinue the use of MF-55. Add Soda Ash to lower the total hardness to below 200 ppm. Use Caustic to control pH. Pre-treat the system with STC (biocide) additions to prevent bacteria growth. Add White Starch and Drispac to lower the filtrate to below 8cc. Lower the filtrate to below 6cc prior to entering the Morrow at 11,955'. Drispac may be used in conjunction with the White Starch to stabilize filtrate and act as a secondary viscosifier. Defoamer should be used while mixing mud to prevent foaming and aeration of the pumps. Use XCD polymer to adjust the viscosity as needed to control hole cleaning and to support any Barite that may be needed to control gas. Maintain mud weight as necessary (10.0 – 10.7 ppg) to prevent kicks and allow safe trips. Pills consisting of XCD polymer and 6-15 ppb of fine grades of LCM may be needed to control any seepage that may occur. Desco should be used to toughen filter cake and aid in foam prevention should excess pressures be encountered.

EVALUATION PROGRAM FOR PRODUCTION HOLE

At TD, circulate and condition hole clean for logs. Short trip to the last bit trip depth monitoring well closely for flow. Spot High Vis, Low water loss "Slick" Pill prior to TOH for logs. TIH and condition mud and hole for 4 1/2" liner. TOH laying down DP & DC.

Electric Logs: See Geologic Prognosis.

<u>TYPE Run #1</u>	<u>INTERVAL</u>
Platform Express	TD to base of 2 nd intermediate casing

Coring/DST: None anticipated

CASING PROGRAM FOR PRODUCTION HOLE

<u>DEPTH</u>	<u>SIZE</u>	<u>LENGTH</u>	<u>WT</u>	<u>GRADE</u>	<u>THREAD</u>	<u>REMARKS</u>
8450' – 11,650'	4 1/2"	3,200'	13.5#	HCP-110	LT&C	

Rig up casing tools and run 4 1/2" production casing as follows:

Float shoe

2 joints of 4 1/2" 13.0# HCP-110 LT&C casing

Float collar/landing collar

Centralize middle shoe joint and run centralizers every other joint through productive zones

Run balance of 4 1/2" 13.0# HCP-110.

Liner hanger

Plan on 300' of overlap and 200' of cement on top of liner hanger.

Utilize torque recorder on casing:

Make-up Torque (using API thread dope): **3660 ft-lbs**

CEMENT PROGRAM FOR PRODUCTION CASING

Lead:

282 sx (15:61:11) Poz: Class C CSE-2
2 % Potassium Chloride
0.75 % EC-1 + 0.2% R-3
.25 lb/sx Cello Flake + 2 pps LCM-1
0.7% CD-32 + 0.6 % FL-25 + 0.6% FL-52A
0.5% BA-10

Weight: 13.4 ppg
Yield: 1.55 ft³/sx
Water: 7.42 gal/sx

Use additives per B. J. cementing recommendation.

Actual cement volumes based on log caliper + 20%.

ND BOP's, NU wellhead. Set tbg hanger and BPV in wellhead. Nipple up a 5-K full opening valve with tapped bull plug in the top of the valve. Ensure all well head valves are closed and report on Dims report. Clean pits, change DP rams, and release rig.

ADMINISTRATIVE REQUIREMENTS

1. Maintain daily estimates of actual costs.
2. Delivery tickets and field invoices are to be signed by the on-site supervisor.
3. All suppliers of on-site goods and services are required to have a term agreement with Devon Energy Corporation. Complete vendor evaluation forms for all services at end of well.
4. Casing and cementing reports should be filled out and copies sent to the office along with the pipe tally (**Use Devon forms.**)
5. Furnish operator with material transfer on all excess casing and tangible equipment whether left on location or transferred to another location.
6. An inventory of all bits on location will be maintained at the well site.
7. IADC reports will be checked daily for accuracy and signed by the company representative. Report everything like it happened and when it happened. Write any comments on these sheets when required.
8. A register of all rental items on location will be maintained to facilitate keeping track of proper rental charges.

SPECIAL INSTRUCTIONS

1. Maintain an accurate drill string measurement.
2. Caliper, measure and record all downhole tools while picking up.
3. Deviation surveys will be run every 500' or each bit trip, whichever occurs first, except in surface hole, where surveys are to be run every 200', unless actual drilling contract is different. Contract takes precedence on this point. Additional surveys are to be run as deemed necessary by the company representative.

4. On all trips, the wellbore will be filled when each 5 stands of drill pipe are pulled and when each stand of drill collars is pulled. Fill hole periodically if drill string is to be on the bank for an extended period of time.
5. Close blind rams while changing bit or lower part of BHA. Inform rig crew before opening rams.
6. All trips should be made at **VERY** moderate speeds to prevent excessive surge and swab pressures.
7. Mud pits will be marked and monitored, upon any gain in pit volume due to a kick, stop drilling, raise kelly slowly with mud pump running, kick out pump and check for flow.
8. On drilling breaks, drill 1'- 3' of break and check for flow.
9. Record slow pump rates on both pumps daily, and record on IADC sheet.
10. BOP and choke manifold will be mechanically checked on each trip and pressure tested every two weeks.
11. BOP drills will be held weekly on each tour.
12. A wear bushing of same manufacture as wellhead will be used during drilling operations. Be sure to pull wear bushing prior to running casing.
13. One man will be on the shale shaker watching for flow at all times during logging operations.
14. Optimize bit hydraulics, rotary speed and WOB as well conditions allow.

SPECIAL EQUIPMENT

1. Mud logging unit will be in operation at **2500' top of Delaware**.
2. Keep inside BOP and full-open TIW safety valve on the rig floor at all times. Test when pressure testing BOP's.
3. Test plug of same manufacture as wellhead will be kept on location with spare O-rings.

DRILLING BREAK PROCEDURE

1. Drill 1' - 3' of break.
2. Raise kelly with pump running.
3. Shut down pump, let wellbore stabilize.
4. Check for flow, if none, continue to drill, or circulate bottoms up per geologist's orders.
5. If well is flowing, shut-in as detailed below.

SHUT-IN PROCEDURES

WHILE DRILLING

1. Raise kelly with pump running.
2. Shut down pump.
3. Close BOP's
4. Open HCR and gate valves. **Chokes should be closed (HARD SHUT IN)**
5. Bleed for trapped pressure. Allow no more than 1 bbl to be bled. Close choke.
6. Record pit gain.
7. Record drill pipe and casing pressure every 5 minutes until pressure stabilizes.

WHILE TRIPPING

1. Set tool joint on slips.
2. Install full opening safety valve.
3. Close Hydril.
4. Install inside BOP.
5. Strip in hole to TD.
6. Bleed back to trip tank capacity and displacement of each stand of drill pipe and drill collars run in the hole.
7. Read and record pressure and volume on each stand of drill pipe and drill collars run in the wellbore.
8. At TD, pick up kelly and record wellbore pressure on casing side.

BRINGING WELL ON CHOKE

1. All valves open from choke to gas buster, shale shaker, degasser, pits, etc.
2. Open choke slightly; after casing pressure drops 100-200 psi below SICP, bring pump up slowly to slow pump rate.
3. Close choke and let pump pressure increase back to SICP, then hold drill pipe pressure constant.
4. With pump at slow pump rate, hold drill pipe pressure to drill pipe pressure schedule on kill sheet.
5. When drill pipe is completely filled with kill weight mud, hold final drill pipe pressure constant throughout remainder of kill procedure.
6. After kill weight mud is circulated completely around, shut down pump and check for flow. Drill pipe and casing pressure should be zero.

TELEPHONE NUMBERS - EMERGENCY

Emergency Incident Crisis Team:

Don DeCarlo – VP Operations & Exploration
Greg Jacob – Operations Manager
Ray Payne- Drilling Manager
Jim Blount – Sr. Well Engineering Advisor
Bill Dougherty – Sr. Well Engineering Advisor
Wyatt Abbitt – District Engineer
Russ Ginanni – Wellsite Supervisor
Todd Tipton – Exploration Manager
Cici Leonard – Reservoir Manager
David Frank – Land Manager
Marian Moon – Public Relations

Emergency Telephone Numbers:

Ron Truelove	Office:	(405) 552-4516
Manager, Environmental & Safety	Home:	(405) 691-4957
	Mobile:	(405) 203-3557
Linda Berryman	Office:	(505) 748-0177
Environmental & Safety Spec.	Mobile:	(505) 513-0534
	Pager:	(505) 370-6679
Tom Cunningham	Office:	(505) 748-0166
DIMS Support	Mobile:	(505) 748-5508

Manpower and Equipment:

COMPANY

Devon Energy Corporation	
20 North Broadway, Suite 1500	(405) 235-3611
Oklahoma City, Oklahoma 73102	(800) 361-3377

FIRE

Carlsbad, Fire Department	911
Carlsbad, NM	(505) 885-2111

AMBULANCE

Carlsbad	911
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19.15.3.107 CASING AND TUBING REQUIREMENTS: OCD Rulebook

F. All casing strings shall be tested and proved satisfactory as provided in Subsection I. below.

G. After cementing, but before commencing tests required in Subsection I. below, all casing strings shall stand cemented in accordance with Option 1 or 2 below. Regardless of which option is taken, the casing shall remain stationary and under pressure for at least eight hours after the cement has been placed. Casing shall be "under pressure" if some acceptable means of holding pressure is used or if one or more float valves are employed to hold the cement in place.

(1) Option 1 Allow all casing strings to stand cemented a minimum of eighteen (18) hours prior to commencing tests. Operators using this option shall report on Form C-103 the actual time the cement was in place before initiating tests.

(2) Option 2 (May be used in the counties of San Juan, Rio Arriba, McKinley, Sandoval, Lea, Eddy, Chaves, and Roosevelt only.) Allow all casing strings to stand cemented until the cement has reached a compressive strength of at least 500 pounds per square inch in the "zone of interest" before commencing tests, provided however, that no tests shall be commenced until the cement has been in place for at least eight (8) hours.

(a) The "zone of interest" for surface and intermediate casing strings shall be the bottom 20 percent of the casing string, but shall be no more than 1000 feet nor less than 300 feet of the bottom-part of the casing unless the casing is set at less than 300 feet. The "zone of interest" for production casing strings shall include the interval or intervals where immediate completion is contemplated.

(b) To determine that a minimum compressive strength of 500 pounds per square inch has been attained, operators shall use the typical performance data for the particular cement mix used in the well, at the minimum temperature indicated for the zone of interest by Figure 107-A, Temperature Gradient Curves. Typical performance data used shall be that data furnished by the cement manufacturer or by a competent materials testing agency, as determined in accordance with the latest edition of API Code RP 10 B "Recommended Practice for Testing Oil-Well Cements."

(See Temperature Gradient - Page 17A)

H. Operators using the compressive strength criterion (Option 2) shall report the following information on Form C-103:

(1) Volume of cement slurry (cubic feet) and brand name of cement and additives, percent additives used, and sequence of placement if more than one type cement slurry is used.

(2) Approximate temperature of cement slurry when mixed.

(3) Estimated minimum formation temperature in zone of interest.

(4) Estimate of cement strength at time of casing test.

(5) Actual time cement in place prior to starting test.

I. All casing strings except conductor pipe shall be tested after cementing and before commencing any other operations on the well. Form C-103 shall be filed for each casing string reporting the grade and weight of pipe used. In the case of combination strings utilizing pipe of varied grades or weights, the footage of each grade and weight used shall be reported. The results of the casing test, including actual pressure held on pipe and the pressure drop observed shall also be reported on the same Form C-103.

(1) Casing strings in wells drilled with rotary tools shall be pressure tested. Minimum casing test pressure shall be approximately one-third of the manufacturer's rated internal yield pressure except that the test pressure shall not be less than 600 pounds per square inch and need not be greater than 1500 pounds per square inch. In cases where combination strings are involved, the above test pressure shall apply to the lowest pressure rated casing used. Test pressures shall be applied for a period of 30 minutes. If a drop of more than 10 percent of the test pressure should occur, the casing shall be considered defective and corrective measures shall be applied.

**Recommended Drilling Fluids Program
and
Cost Estimate**

For:

**Devon Energy Corporation
20 N. Broadway
Oklahoma City, OK 73102-8260**

The

Perfecto "2" State # 1

Located in:

**Sec-2, T-22-S, R-26-E,
Eddy Co., NM**

Prepared especially for:

**Mr. Bill Dougherty
Drilling Supervisor**

"The Nova Difference"

A Commitment to Service and Quality

INTERVAL: 0 - 405		17.5" hole	3 days	13.375" csg	1 drill bits		
Product	Function		Treatment	Unit Size	Usage	Unit Price	Total Price
Bentonite	Viscosifier		12-14 ppb	100 #	80	\$7.35	\$588.00
Cedar Fiber/Fiber Plug	LCM, sealant		3-10 ppb in pills	40 #	40	\$5.98	\$239.20
Ground Paper	Seepage and sweeps		1-3 sacks per 100 feet	40 #	80	\$6.80	\$528.00
Lime	pH additive, flocculant		1 sack per 15 sacks of bentonite	50 #	10	\$5.35	\$53.50
Maxi-Seal/Fiber Seal/Chem Seal	LCM, sealant		3-10 ppb in pills	40 #	40	\$9.77	\$390.80
MF-65/VisPlus(non-ionic)	Hole sweep		2-3 gal sweeps	5 gal.	5	\$82.08	\$410.40
Plastic	Storage aid		Cover mud	1 roll	1	\$26.25	\$26.25
Interval Total:							\$2,236.15

Projected Mud Properties

Depth	Mud Wt. - ppg	Viscosity	Filtrate	pH	Solids - % by vol.
0' - 405'	8.6-9.4	32-34	N/C	7-9	5-8

General Geological Data

Tops/Bases	Formation	Lithology	Notes/Challenges
250' - 405'	Yates/Seven Rivers	Conglomerates	Lost circulation

Interval Notes for 0 - 405

Drill surface with Fresh Water spud mud. Maintain the viscosity as needed to clean the large diameter hole. Add small amounts of Lime to control the pH and to flocculate the Gel for added carrying capacity. Ground Paper additions may be used periodically to aid in hole cleaning and control seepage. Should severe losses occur we suggest dry drilling to total depth sweeping the hole regularly with viscous (40-50) Bentonite pills containing 3-10 ppb of various fibrous LCM's. Vis Plus sweeps should be made as needed on connections to aid in hole cleaning

NOTE 1: it is highly possible that loss of circulation will be encountered in this interval. We suggest that consideration be given to placing an air package on this project to maintain returns.

NOTE 2: it may be possible to use Red Stripe in this interval to introduce aphrons into the system for lower equivalent mud weights.

NOTE 3: We suggest a complete corrosion program be utilized on this project. Nova Mud, Inc. carries a complete line of chemicals and can provide service and coupons.

INTERVAL: 405 - 2,550		12.25" hole	7 days	9,625" csg	2 drill bits	
Product	Function	Treatment	Unit Size	Usage	Unit Price	Total Price
Bentonite	Hole sweep	12-14 ppb in sweeps	100 #	90	\$7.35	\$681.50
Cedar Fiber/Fiber Plug	LCM, sealant	3-10 ppb in pills	40 #	50	\$5.98	\$299.00
Ground Paper	Seepage and sweeps	1-3 sacks per 200 feet	40 #	70	\$9.80	\$616.00
Lime	pH additive	.5-.75 ppb	50 #	70	\$5.35	\$374.50
Maxi-Seal/Fiber Seal/Chem Seal	LCM, sealant	3-10 ppb in pills	40 #	50	\$9.77	\$488.50
MF-55/VisPlus(non-ionic)	Hole sweep	2-3 gal sweeps	5 gal.	4	\$82.08	\$328.32
Interval Total:					\$2,767.82	

Projected Mud Properties

Depth	Mud Wt. - ppg	Viscosity	Filtrate	pH	Chlorides - ppm
405' - 2,550'	8.4-8.5	28-29	N/C	9.5-10.5	3-12K

General Geological Data

Tops/Bases	Formation	Lithology	Notes/Challenges
405' - 485'	Yates/Seven Rivers	Limestone, with glauconite stringers	
485' - 2,500'	Capitan Reef	Fractured Limestone	Lost circulation, air drilling, sloughing
2,500' - 2,550'	Delaware	Limestone	Casing seat

Interval Notes for 405 - 2,550

Drill out from under the surface casing with Fresh Water. Circulate a controlled portion of the reserve. Adjust the pH to 10.0 with Lime additions. Use an air package to decrease the hydrostatic to around 7.0 ppg. Approximately 1400 cfm should be sufficient. Continue to sweep the hole periodically with Ground Paper to control seepage and enhance hole cleaning. Use Bentonite pills only as necessary to control torque and/or drag. Small amounts of MF-55 may be added to aid in fine solids removal. Should severe losses occur we suggest dry drilling to total depth sweeping the hole as necessary with viscous (40-50) Bentonite pills containing 3-10 ppb of fibrous LCM. Vis Plus pills should be used on connections to aid in hole cleaning and to slick up the hole.

NOTE: Loss of circulation is highly likely through this interval at approximately 1,500'. Should losses occur dry drilling should be attempted. Sweep the hole as needed to keep the well bore clean.

INTERVAL: 2,550 - 8,750		8.75" hole	15 days	7" csg	3 drill bits		
Product	Function	Treatment	Unit Size	Usage	Unit Price	Total Price	
Bentonite	Hole sweep	12-14 ppb in sweeps	100 #	170	\$7.35	\$1,249.50	
Caustic Soda	pH additive	25 ppb below 8,000'	50 #	30	\$25.52	\$765.60	
Cedar Fiber/Fiber Plug	LCM, sealant	3-10 ppb in pills	40 #	170	\$5.98	\$1,016.60	
Ground Paper	Seepage and sweeps	1-3 sacks per 200 feet	40 #	80	\$8.80	\$704.00	
Lime	pH additive	.5- .75 ppb	50 #	120	\$5.35	\$642.00	
Maxi-Seal/Fiber Seal/Chem Seal	LCM, sealant	3-10 ppb in pills	40 #	150	\$9.77	\$1,465.50	
MF-55/VlsPlus(non-ionic)	Flocculant	1 qt in 50 gal water as needed	5 gal.	4	\$82.08	\$328.32	
Mlca	LCM, sealant	3-10 ppb in pills	50 #	120	\$10.35	\$1,242.00	
M-I-X II/Delta P	LCM, sealant	3-10 ppb in pills	25 #	170	\$25.50	\$4,335.00	
Salt Gel	Hole sweep	14-16 ppb in sweeps	50 #	60	\$8.08	\$484.80	
Interval Total:						\$12,233.32	

Projected Mud Properties

Depth	Mud Wt. - ppg	Viscosity	Filtrate	pH	Chlorides - ppm
2,550' - 3,400'	8.4-8.5	28	N/C	9.5-10.5	3-12K
3,400' - 8,750'	8.9-9.0	28	N/C	9.5-10.5	+40K

General Geological Data

Tops/Bases	Formation	Lithology	Notes/Challenges
2,550' - 2,775'	Delaware		Seepage
2,775' - 3,425'	Cherry Canyon	Sand	
3,425' - 4,625'	Brushy Canyon		
4,625' - 4,915'	Lower Brushy Canyon		
4,915' - 6,010'	Bone Spring Lime	Limestone	
6,010' - 6,740'	1st Bone Spring Sand	Sand	Seepage
6,740' - 8,185'	2nd Bone Spring Sand	Sand	Seepage, lost circ
8,185' - 8,690'	3rd Bone Spring Sand	Sand	Seepage
8,690' - 8,750'	Wolfcamp Lime	Shaly limestone	Poss. gas kick, sloughing

Interval Notes for 2,550 - 8,750

Drill out with Fresh Water circulating the outer reserve pit for solids control. Sweep hole periodically with Ground Paper sweeps to control seepage and to aid in hole cleaning. Continue to use Lime to control the pH down to 8,000' then switch to Caustic Soda to prevent scaling. MF-55 may be added periodically to flocculate fine solids and keep the fluid clean. Viscous (40-50) Bentonite pills may be used as needed to clean cuttings from the well bore and reduce torque and drag. Begin adjusting the weight and chlorides to 8.9-9.0 ppg and +40,000 ppm respectively below 3,500' to prepare for drilling the Wolfcamp and Cisco formations. Should any severe losses occur, add 3-20 ppb of various LCM's to viscous pills to regain returns. Sweep and spot viscous (50-60) Salt Gel pills at total depth to ensure a clean hole for logging and casing operations.

Devon Energy Corporation * Perfecto "2" Slate # 1 * Sec-2, T-22-S, R-26-E, Eddy, NM

INTERVAL: 8,750 - 11,650		6.125" hole	18 days	4.5" csg	4 drill bits	
Product	Function	Treatment	Unit Size	Usage	Unit Price	Total Price
Biocide (STC)	Biocide	1 gal./100 bbls.	5 gal	40	\$72.24	\$2,889.60
Caustic Soda	pH additive	.25 ppb	50 #	30	\$25.52	\$765.60
Drilspac/Poly Pac/StaFlo/Aquapac	Filtrate control, secondary viscosifier	.5 ppb	50 #	30	\$148.20	\$4,446.00
Maxi-Seal/Fiber Seal/Chem Seal	LCM, sealant	1-4 ppb in sweeps	40 #	40	\$9.77	\$390.80
Mica	LCM, sealant	3-10 ppb in sweeps	50 #	60	\$10.35	\$821.00
M-I-X II/Delta P	LCM, sealant	3-10 ppb in pills	25 #	60	\$25.50	\$1,530.00
Salt	Weighting agent	As needed	50 #	500	\$4.76	\$2,380.00
Silicone Defoamer	Defoamer	As needed	5 gal.	20	\$77.40	\$1,548.00
Soda Ash	Calcium remover	.5-.75 ppb	50 #	80	\$9.75	\$780.00
White Starch	Filtrate control	2-3 ppb	50 #	100	\$21.77	\$2,177.00
XCD Polymer/Flozan	Viscosifier, invasion control	.25-.5 ppb	25 #	40	\$152.88	\$3,115.20
Interval Total:					\$23,643.20	

Projected Mud Properties

Depth	Mud WL - ppg	Viscosity	Filtrate	pH	Chlorides - ppm
8,750' - 10,400'	9.2-9.6	31-34	<12 cc	9.5-10.5	+100K
10,400' - 11,000'	9.4-9.8	34-36	<10 cc	9.5-10.5	+130K
11,000' - 11,650'	9.8-10.2	34-38	<8cc	9.5-10.5	+170K

General Geological Data

Top/Bases	Formation	Lithology	Notes/Challenges
8,750' - 9,240'	Wolfcamp Lime	Limestone	
9,240' - 9,445'	Lower Wolfcamp Lime	Limestone	
9,445' - 10,000'	Cisco/Canyon Lime	Limestone	
10,000' - 10,405'	Strawn	Shaly limestone	
10,405' - 11,045'	Atoka	Sandy shale mostly shaly	Poss. gas kick
11,045' - 11,145'	Morrow Clastics	Shaly calcareous sand	Water sensitive
11,145' - 11,380'	Middle Morrow Lmo	Limestone	
11,380' - 11,550'	Lower Morrow	Shaly calcareous sand	
11,550' - 11,850'	Barnett	Shale	TD

Interval Notes for 8,750 - 11,650

Return to the working pits with a cut Brine. Discontinue the use of MF-55. Adjust the pH to no more than 10.0 with Caustic Soda. Pre-treat the system with Soda Ash to lower the total hardness to below 600 ppm and add STC (biocide) to prevent bacteria growth. Add amounts of Drispac and White Starch to lower the filtrate to 12cc. Use XCD Polymer to adjust the viscosity as necessary. Small amounts of Silicone Defoamer may be needed while mixing mud to prevent the aeration of the pumps. Sweep the hole as only as necessary with viscous (40-45) XCD Polymer pills that may be left in the system should added viscosity be needed. Adjust the weight with Brine or sack salt to 10.0 ppg. Should weights above the 10.0 ppg range be needed use Barite additions. Use M-I-X II or Delta P for seepage control while using viscous (40-45) XCD Polymer pills containing 3-10 ppb of various LCM's for more severe losses.

NOTE 1: if 7" has been set mud up after drilling the shoe. We would recommend mudding up with a 10.0 ppg Brine if the casing has been set and a 9.3-9.5 ppg cut brine if it has not.

NOTE 2: our estimate is based on mud weights not exceeding 10.2 ppg. we would estimate an additional \$8,000.00-\$10,000.00 would be needed to raise the weight to 11.4 ppg without additional losses

Recommended Drilling Fluids Program

Devon Energy Corporation * Perfecto "2" State # 1 * Sec-2, T-22-S, R-26-E, Lddy, NM

INTERVAL: 0 - 405		17.5" hole	3 days	13.375" csg	1 drill bits		
Product	Function	Treatment	Unit Size	Usage	Unit Price	Total Price	
Bentonite	Viscosifier	12-14 ppb	100 #	80	\$7.35	\$588.00	
Cedar Fiber/Fiber Plug	LCM, sealant	3-10 ppb in pills	40 #	40	\$5.98	\$239.20	
Ground Paper	Seepage and sweeps	1-3 sacks per 100 feet	40 #	60	\$8.80	\$528.00	
Lime	pH additive, flocculant	1 sack per 15 sacks of bentonite	50 #	10	\$5.35	\$53.50	
Maxi-Seal/Fiber Seal/Chem Seal	LCM, sealant	3-10 ppb in pills	40 #	40	\$9.77	\$390.80	
MF-55/VisPlus(non-ionic)	Hole sweep	2-3 gal sweeps	5 gal	5	\$82.08	\$410.40	
Plastic	Storage aid	Cover mud	1 roll	1	\$26.25	\$26.25	
					Interval Total:	\$2,236.16	

INTERVAL: 405 - 2,550		12.25" hole	7 days	9.625" csg	2 drill bits		
Product	Function	Treatment	Unit Size	Usage	Unit Price	Total Price	
Bentonite	Hole sweep	12-14 ppb in sweeps	100 #	90	\$7.35	\$681.50	
Cedar Fiber/Fiber Plug	LCM, sealant	3-10 ppb in pills	40 #	50	\$5.98	\$299.00	
Ground Paper	Seepage and sweeps	1-3 sacks per 200 feet	40 #	70	\$8.80	\$616.00	
Lime	pH additive	.5-.75 ppb	50 #	70	\$5.35	\$374.50	
Maxi-Seal/Fiber Seal/Chem Seal	LCM, sealant	3-10 ppb in pills	40 #	50	\$9.77	\$488.50	
MF-55/VisPlus(non-ionic)	Hole sweep	2-3 gal sweeps	5 gal	4	\$82.08	\$328.32	
					Interval Total:	\$2,787.82	

INTERVAL: 2,550 - 8,750		8.75" hole	15 days	7" csg	3 drill bits		
Product	Function	Treatment	Unit Size	Usage	Unit Price	Total Price	
Bentonite	Hole sweep	12-14 ppb in sweeps	100 #	170	\$7.35	\$1,249.50	
Caustic Soda	pH additive	.25 ppb below 8.000'	50 #	30	\$25.52	\$765.60	
Cedar Fiber/Fiber Plug	LCM, sealant	3-10 ppb in pills	40 #	170	\$5.98	\$1,016.60	
Ground Paper	Seepage and sweeps	1-3 sacks per 200 feet	40 #	80	\$8.80	\$704.00	
Lime	pH additive	.5-.75 ppb	50 #	120	\$5.35	\$642.00	
Maxi-Seal/Fiber Seal/Chem Seal	LCM, sealant	3-10 ppb in pills	40 #	150	\$9.77	\$1,465.50	
MF-55/VisPlus(non-ionic)	Flocculant	1 qt in 50 gal water as needed	5 gal	4	\$82.08	\$328.32	
Mica	LCM, sealant	3-10 ppb in pills	50 #	120	\$10.35	\$1,242.00	
M-I-X II/Delta P	LCM, sealant	3-10 ppb in pills	25 #	170	\$25.50	\$4,335.00	
Salt Gel	Hole sweep	14-16 ppb in sweeps	50 #	60	\$8.08	\$484.80	
					Interval Total:	\$12,233.32	

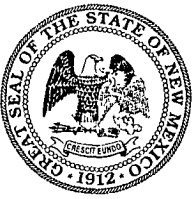
INTERVAL: 8,750 - 11,650		6 1/2" hole	18 days	4.5" csg	4 drill bits		
Product	Function	Treatment	Unit Size	Usage	Unit Price	Total Price	
Blockade (SIC)	Blockade	1 gal /100 bbls	5 gal	40	\$72.24	\$2,889.60	
Caustic Soda	pH additive	.25 ppb	50 #	30	\$25.52	\$765.60	
Dispac/Poly Pac/StaFlo/Aquapac	Filtrate control, secondary viscosifier	5 ppb	50 #	30	\$148.20	\$4,446.00	
Maxi-Seal/Fiber Seal/Chem Seal	LCM, sealant	1-4 ppb in sweeps	40 #	40	\$9.77	\$390.80	
Mica	LCM, sealant	3-10 ppb in sweeps	50 #	60	\$10.35	\$621.00	
M-I-X II/Delta P	LCM, sealant	3-10 ppb in pills	25 #	60	\$25.50	\$1,530.00	
Salt	Weighting agent	As needed	50 #	500	\$4.76	\$2,380.00	
Silicone Defoamer	Defoamer	As needed	5 gal	20	\$77.40	\$1,548.00	
Soda Ash	Calcium remover	.5-.75 ppb	50 #	80	\$9.75	\$780.00	
White Starch	Filtrate control	2-3 ppb	50 #	100	\$21.77	\$2,177.00	
XCO Polymer/Flozan	Viscosifier, invasion control	25- 5 ppb	25 #	40	\$152.88	\$6,115.20	
					Interval Total:	\$23,643.20	

Recommended Drilling Fluids Program

Devon Energy Corporation * Perfecto "2" State # 1 * Sec-2, T-22-S, R-26-E. Paddy, NM

	<u>Totals</u>
Bits	10
Days	43
Mud	\$56,318

Materials Cost.	\$40,880
Trucking Cost:	\$12,000
Sales Tax/Product @ 6.50%	\$2,657
Sales Tax/Trucking @ 6.50%	<u>\$780</u>
Estimated Total Mud	\$56,318



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor

Joanna Prukop

Cabinet Secretary

Mark E. Fesmire, P.E.

Director

Oil Conservation Division

July 14, 2006

Devon Energy Production Company, LP

20 North Broadway

Oklahoma City, OK 73102-8260

**RE: Condition of Approval for Devon Energy Production Company, LP
Application to drill the Perfecto '2' State # 1, that is to be located in Unit E of Section 2,
Township 22 South, Range 26 East, Eddy County, NM
API # 30-015-34896**

Dear Sirs/Madams,

In regards to the above noted well, the New Mexico Oil Conservation Division (NMOCD) has approved said application to drill the above noted well. A condition of approval (in part) is for representatives with Devon Energy Production Company, LP (Devon) to verify levels of chlorides in the drilling mud (every 100') from the flow line. Chloride readings from the drilling mud are to be taken after 13 3/8" casing is set and continue to the setting depth of the 9 5/8" casing which is to be @ 2500'. Results of these tests are to be submitted to the NMOCD office in Artesia before drilling to total depth of the well.

The NMOCD also notes your detailed mud program and only fresh water mud is to be used in drilling the Capitan Reef section of the well bore. In addition for any well, if Devon elects to follow option 2 of NMOCD Rule 19.15.3.107 (2), a bench test shall be conducted to determine the compressive strength of the slurry mix of cement at the contractor's cementing laboratory. Results of test(s) shall be submitted to the NMOCD District II office before determining wait on cement time.

Please call our office if there are any questions regarding this matter.

Respectfully yours,

Bryan G. Arrant

Petroleum Engineer Specialist/NMOCD-District II

505-748-1283 ext. 103

CC: Well file

EM: Tim Gum, District II Supervisor



PERMIAN REGION LAB

Cement Lab Report

Phone. (432) 530-2667 Fax. (432) 530-0279

Test Number: 529424675
Report Number:

Test Date: 7/18/2006

WELL INFORMATION

Operator: Devon Energy
API #:
Well Name: Perfecto 2 State #1
Slurry Type: Single
Blend Type: Lab
Comments:

County: Eddy
State: NM
Requested By: Scott Nelson
TVD: 2550 MD: 2550
District: Artesia

TEST DATA AND SCHEDULE

Time To Temp (min):	19.20	Mud Density (lb/gal):	10
Initial Press (psi):	310	Mix Water Density (lb/gal):	8.34
Final Press (psi):	1630	Mix Water Type:	Tap Water
BHST (deg F):	97	Surf Temp (deg F):	80
BHCT (deg F):	91	Job Type:	Intermediate
Comments: New Mexico State Test			

SLURRY AND TEST RESULTS

Vendor: Cemex
Slurry: Class 'C' + 1.00% CaCl₂ + 0.25 lb/sk Cello Flake

Density:	14.8 lb/gal	Pump Time (50 Bc):	
Yield:	1.337 CuFt/sk	Pump Time (70 Bc):	
Mix Water:	6.332 gal/sk (56.18%)	Pump Time (100 Bc):	
Total Mix Liquid:	6.332 gal/sk		
Fluid Loss:	cc/30 min	Free Water (ml):	(Tested at 90 Degrees)

Compressive Strength				Rheology (PL=Power Law, BP= Bingham Plastic)											
Temp	Time	Strength	Type	Temp	600	300	200	100	6	3	n'	k'	Yp	Pv	Best
97	6:56	500	UCA	80	103	79	69	57	21	14	0.34	0.102	29.8	56.4	PL
97	8	587	UCA												
97	12	859	UCA												
97	24	1388	UCA												

Comments: