ATS-07-447
EA-07-797

AUG 13 2007
OCD-ARTESIA

OCD-ARTESIA

R-111-POTASH

Form 3160-3
(April 2004)

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work ☑ DRILL ☐ REENTER	5 Lease Serial No. **NM-81953**
	6 If Indian, Allotee or Tribe Name
	7 If Unit or CA Agreement, Name and No
1b Type of Well ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone	8. Lease Name and Well No 36679 **North Pure Gold 5 Federal 1H**
2 Name of Operator **Devon Energy Production Company, LP** 6137	9 API Well No. 30-015-35761
3a Address **20 North Broadway Oklahoma City, Oklahoma City 73102-8260** / 3b Phone No. (include area code) **405-228-8699**	10 Field and Pool, or Exploratory **Los Medanos; Delaware**
4 Location of Well (Report location clearly and in accordance with any State requirements.*) At surface **150' FNL & 660' FEL PP: 650' FNL & 660' FEL** At proposed prod. zone **330' FNL & 660' FEL** (FSL)	11 Sec, T R M or Blk and Survey or Area **SEC 5 T23S R31E**
14 Distance in miles and direction from nearest town or post office* **Approximately 18 miles east of Loving, NM.**	12 County or Parish **Eddy County** / 13 State **NM**

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any)	16 No of acres in lease **1716.94**	17 Spacing Unit dedicated to this well **160 Acres E/2 E/2 SEC 5 T23S R31E**
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19 Proposed Depth **12505' MD, 7900' TVD**	20 BLM/BIA Bond No on file **CO-1104**
21 Elevations (Show whether DF, KDB, RT, GL, etc) **3337 ' GL**	22 Approximate date work will start* **09/01/2007**	23 Estimated duration **45 days**

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, shall be attached to this form

1. Well plat certified by a registered surveyor
2. A Drilling Plan
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office)
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above)
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer

25 Signature	Name (Printed/Typed) **Judy A. Barnett**	Date **04/30/2007**
Title **Regulaltory Analyst**		
Approved by (Signature) /s/ Rene C. Berkhoudt acting	Name (Printed/Typed) /s/ Rene C. Berkhoudt	Date 7/28/07
Title for STATE DIRECTOR	Office NM STATE OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon
Conditions of approval, if any, are attached

APPROVAL FOR TWO YEARS

Title 18 USC Section 1001 and Title 43 USC Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on page 2)

CARLSBAD CONTROLLED WATER BASIN

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

NSL-5626

Received Hobbs OCD

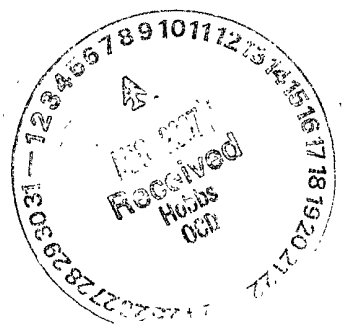
UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Roswell Field Office
2909 West Second Street
Roswell, New Mexico 88201-1287

Statement Accepting Responsibility for Operations

Operator Name:	**Devon Energy Production Company, LP**
Street or Box:	**20 North Broadway**
City, State:	**Oklahoma City, Oklahoma**
Zip Code:	**73102-8260**

The undersigned accepts all applicable terms, conditions, stipulations and restrictions concerning operations conducted on the leased land or portion thereof, as described below.

Lease No.:	**NM-81953**
Legal Description of Land:	**Acres 160** **E/2 E/2 SEC 5-T23S-R31E**
Formation(s):	**Delaware**
Bond Coverage:	**Nationwide**
BLM Bond File No.:	**CO-1104**
Authorized Signature:	**Judy A. Barnett**
Title:	**Regulatory Analyst**
Date:	**05/01/07**



DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Received
Hobbs
OCD

Form C-102
Revised October 12, 2005

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	40297	LOS MEDANOS; DELAWARE

Property Code	Property Name	Well Number
	NORTH PURE GOLD "5" FEDERAL	1H

OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION COMPANY LP	3337'

Surface Location

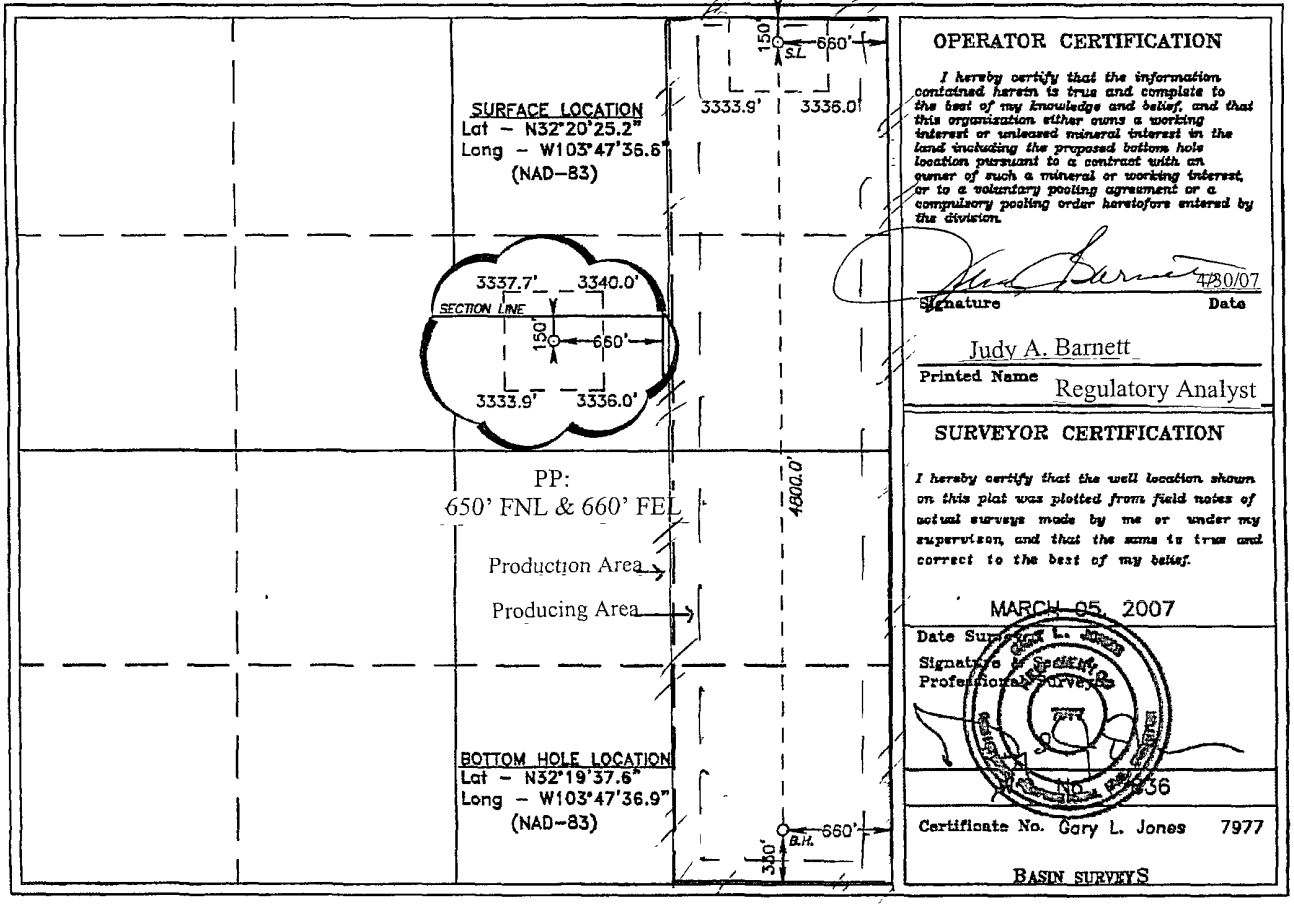
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	5	23 S	31 E		150	NORTH	660	EAST	EDDY

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
P	5	23 S	31 E		330	SOUTH	660	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation 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 pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature — Date: 4/30/07

Judy A. Barnett
Printed Name
Regulatory Analyst

SURVEYOR CERTIFICATION

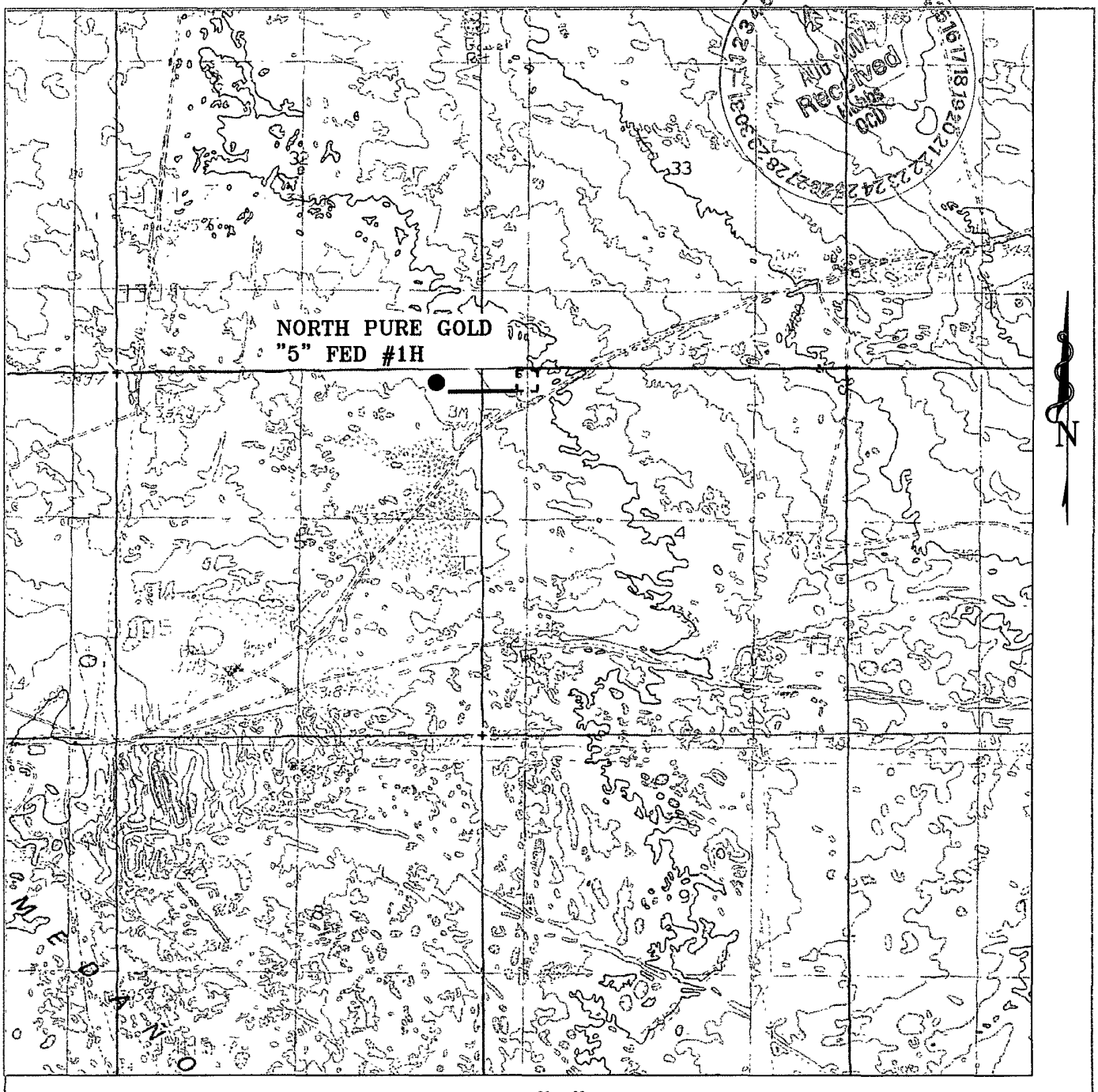
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

MARCH 05, 2007
Date Surveyed
Signature & Seal of Professional Surveyor

NEW MEXICO
12641
PROFESSIONAL SURVEYOR

Certificate No. Gary L. Jones 7977

BASIN SURVEYS



THE NORTH PURE GOLD "5" FEDERAL #1H

Located at 150' FNL AND 660' FEL
Section 5, Township 23 South, Range 31 East,
N.M.P.M., Eddy County, New Mexico.

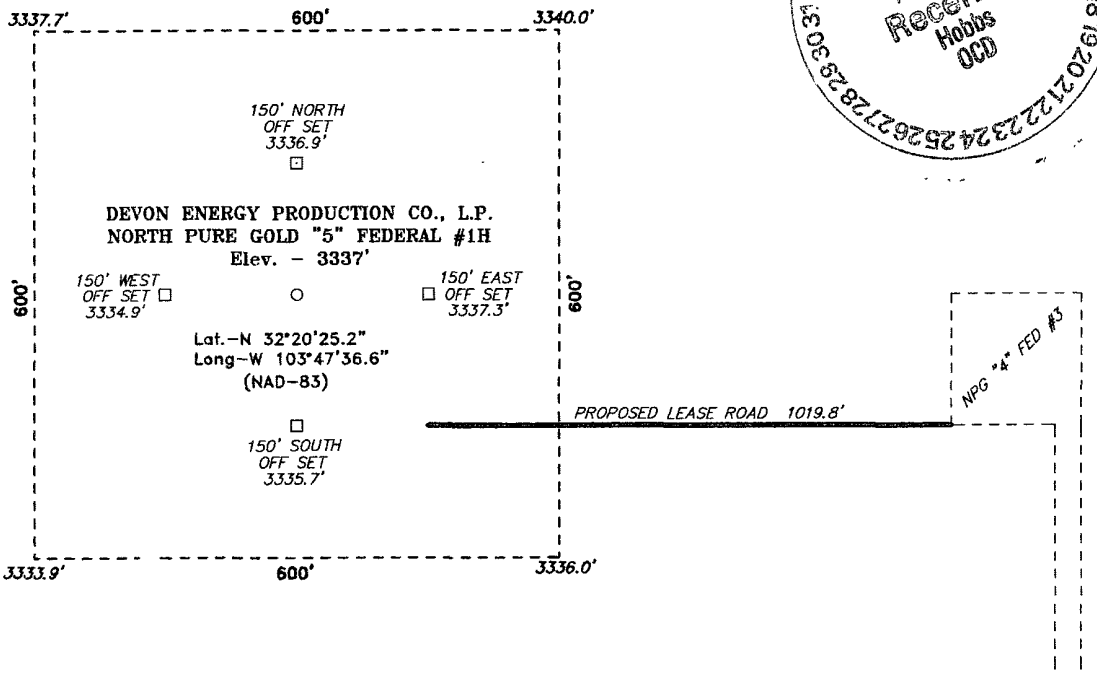
basin surveys
focused on excellence in the oilfield

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: JMS 17836T
Survey Date: 03-05-2007
Scale: 1" = 2000'
Date: 03-08-2007

DEVON ENERGY PROD. CO., L.P.

SECTION 5, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M.,
EDDY COUNTY, **NEW MEXICO.**



200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location:

FROM THE JUNCTION OF STATE HWY 128 AND CO. RD. 802 (WIPP RD), PROCEED NORTH ON CO. RD. 802 APPROX. 100 FEET TO A LEASE ROAD, ON LEASE ROAD PROCEED EASTERLY 2.4 MILES TO PROPOSED LEASE ROAD FOR THE NORTH PURE GOLD "4" FEDERAL #3 LOCATION.

DEVON ENERGY PROD. CO., L.P.

REF: NORTH PURE GOLD "5" FEDERAL #1H / WELL PAD TOPO

THE NORTH PURE GOLD "5" FEDERAL No. 1H LOCATED 150' FROM THE NORTH LINE AND 660' FROM THE EAST LINE OF SECTION 5, TOWNSHIP 23 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 17836	Drawn By: J. M. SMALL		
Date: 03-08-2007	Disk: 17836W JMS	Survey Date: 03-05-2007	Sheet 1 of 1 Sheets

Additional Operator Remarks:

Devon Energy Production Company, LP proposes to drill a Delaware well to 12,500' MD, 7900' TVD for commercial quantities of oil and gas. If the well is deemed noncommercial, the wellbore will be plugged and abandoned per Federal regulations. Devon Energy Production Co., LP plans to drill the well per the attached Drilling and Surface Use Plan.

Directions To Location: From the junction of State Hwy 128 and County Rd. 802 (WIPP Rd), go north on County Rd. approximately 100 feet to a lease road; then on lease road proceed easterly 2.2 miles to proposed lease road.

Access Road:

Approximately 1582.1' of access road will be required. Archeological survey's will be requested for the pad and access road.

H2S:

No H2S is anticipated to be encountered.

LPC Timing Stipulation Areas:

The location of this well does not fall in the LPC Timing Stipulation Area per BLM-CFO 2007 LPC Timing Stipulation Areas map.

DRILLING PROGRAM

Devon Energy Production Company, LP
North Pure Gold 5 Federal 1H
Surface Location: 150' FNL & 660' FEL, Lot A, Sec 5 T23S R31E, Eddy, NM
Bottom Hole Location: 330' FSL & 660' FEL, Lot P, Sec 5 T23S R31E, Eddy, NM

1. **Geologic Name of Surface Formation**

   a. Delaware

2. **Estimated tops of geological markers:**

a.	Rustler	500'
b.	Salado	815'
c.	Salt	950'
d.	Base of Salt	3940'
e.	Delaware	4185'
f.	Cherry Canyon	5100'
g.	Brushy-Canyon	6725'
h.	Bone Springs	8085'
i.	Total Depth	12505'

Estimated Depths of Anticipated Fresh Water, Oil or Gas

j.	Rustler	500'	Fresh Water
k.	Delaware	4185'-TD	Oil

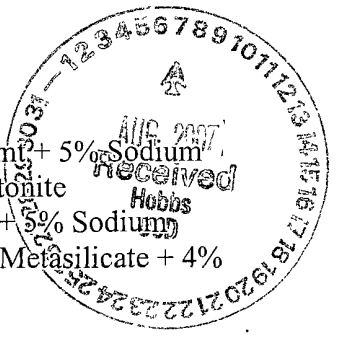
No other formations are expected to yield oil, gas or fresh water in measurable volumes. The surface fresh water sands will be protected by setting 13 3/8" casing at 750' and circulating cement back to surface. Potash and salt will be protected by setting 9 5/8" casing at 4150' and circulating cement to surface. The Delaware intervals will be isolated by setting 7" casing to 8175' and circulating cement above the base of the 9 5/8" casing. There will be a 4 ½" production liner set from 7750' to total depth with cement above top of liner.

3. **Casing Program:**

Hole Size	Interval	OD Csg	Weight	Collar	Grade
17 1/2"	0' –750'	13 3/8""	48#	ST&C	H-40
12 ¼"	0'– 4150'	9 5/8"	40#	LT&C	J-55
8 3/4"	0'-8175'	7"	26#	LT&C	J-55
6 1/8"	7750-12505'	4 ½"	13.5#	BT&C	HCP-110

4. **Cement Program:**

13 3/8"Surface — Lead Slurry: 520 sx 35:65 Poz (Fly Ash): Cl C Cmt + 2% Calcium Chloride + 0.25 lbs/sx Cello Flake + 6% Bentonite
Tail Slurry: 250 sx Class C Cmt + 2% Calcium Chloride + 0.25 lbs/sx Cello Flake



9 5/8" Intermediate — Lead Slurry: 1145 sx 35:65 Poz (Fly Ash): Cl C Cmt + 5% Sodium Chloride + 0.25 lbs/sx Cello Flake + 6% Bentonite
Tail Slurry: 300 sx 60:40 Poz (Fly Ash): Cl C Cmt + 5% Sodium Chloride + 0.25 lbs/sx Cello Flake + 0.4% Sodium Metasilicate + 4% MPA-1

8175' 2 Stage w/ DV tool @ 4,650'

7" 2nd Intermediate

STAGE 1
Spacer: 10.0 bbls Fresh Water @ 8.34 ppg; 1,500 gals Mud Clean II @ 8.45 ppg; 10 bbls FW @ 8.34 ppg

Lead Slurry: 130 sx 35:65 Poz (Fly Ash): Cl C Cmt + 3% Sodium Chloride + 0.25% R-3 + 0.25 lbs/sx Cello Flake + 3 lbs/sx LCM-1 + 6% Bentonite + 0.3% FL-52A

COA

Tail Slurry: 600 sx 60:40 Poz (Fly Ash): Cl C Cmt + 1% Sodium Chloride + 1.0% BA-10 + 0.75% EC-1 + 0.25 lbs/sx Cello Flake + 2 lbs/sx Kol Seal + 4% bwoc MPA-1

STAGE 2
Spacer: 30 bbls Fresh Water @ 8.34 ppg
Slurry: 184 sx 60:40 Poz (Fly Ash): Cl C Cmt + 5% Sodium Chloride + 0.25 bs/sx Cello Flake + 0.4% Sodium Metasilicate + 4% MPA-1

4 1/2" Liner — **Spacer:** 10.0 bbls Fresh Water @ 8.34 ppg; 1500 gals Mud Clean II @ 8.45 ppg; 10 bbls Fresh water @ 8.34 ppg
Slurry: 495 sx Cl H Cmt + 0.35% R-3 + 0.4% CD-32 + 1.4% FL-62 + 0.1% ASA-301 + 0.2% Sodium Metasilicate + 20 lbs/sx ASCA-1

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach approximately 500' above the 9 5/8" casing shoe.

COA

5. **Pressure Control Equipment:**
The blowout preventor equipment (BOP) shown in Exhibit #1 will consist of a (5M system) double ram type (5000 psi WP) preventor and a bag-type (Hydril) preventor (5000 psi WP) and rotating head. Both units will be hydraulically operated and the ram type preventor will be equipped with blind rams on top and 4 ½" drill pipe rams on bottom. The drilling head will be installed on the 13 3/8" surface casing and utilized continuously until total depth is reached. All BOP's and associated equipment will be tested to **1200 psi with the rig pump before drilling out the 13 3/8" casing shoe (70% of 48#, H-40 casing).** Prior to drilling out the 9 5/8" casing shoe, the BOP's and Hydril will be tested as per BLM Drilling Operations Order #2.

Pipe rams will be operated and checked each 24-hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drillers log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP

equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having 5000 psi WP rating.

6. **Proposed Mud Circulation System**

Depth	Mud Wt.	Visc	Fluid Loss	Type System
0' – 750'	8.4-9.4	32-34	NC	Gel/Lime
750' – 4150'	10	28	NC	Brine
4150'– 8175	8.3-8.4	28	NC	Fresh Water
8175'-12,505'	8.6-9.0	34-40	8-12 cc	Fresh Water/Polymer

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 3/8" casing shoe until the 7" casing is cemented. Breathing equipment will be on location upon drilling the 13 3/8" shoe until total depth is reached.

8. **Logging, Coring, and Testing Program:**
   a. Drill stem tests will be based on geological sample shows.
   b. The open hole electrical logging program will be:
      i. Total Depth to Intermediate Casing Dual Laterolog-Micro Laterolog with SP and Gamma Ray. Compensated Neutron – Z Density log with Gamma Ray and Caliper.
      ii. Total Depth to Surface Compensated Neutron with Gamma Ray
      iii. No coring program is planned
      iv. Additional testing will be initiated subsequent to setting the 7" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

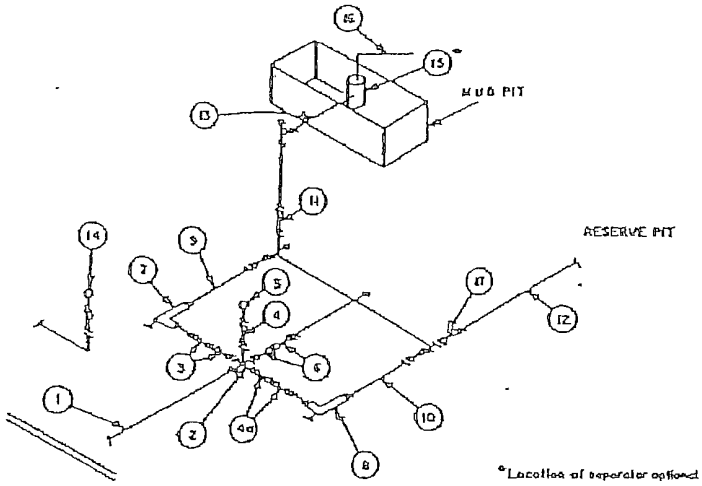
9. **Potential Hazards:**
   a. No abnormal pressures or temperatures are expected. There is no known presence of H2S in this area. If H2S is encountered the operator will comply with the provisions of Onshore Oil and Gas Order No. 6 No lost circulation is expected to occur. All personnel will be familiar with all aspects of safe operation of equipment being used to drill this well. Estimated BHP 2900 psi and Estimated BHT 120°.

10. **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 after BLM approval and as soon as a rig will be available. 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 well and construct surface facilities and/or lay flow lines in order to place well on production.

Exhibit E

MINIMUM CHOKE MANIFOLD
3,000, 5,000 and 10,000 PSI Working Pressure

3 MWP - 5 MWP - 10 MWP



MINIMUM REQUIREMENTS										
		3,000 MWP			5,000 MWP			10,000 MWP		
No.		I.D.	NOMINAL	RATING	I.D.	NOMINAL	RATING	I.D.	NOMINAL	RATING
1	Line from drilling spool		3"	3,000		3"	5,000		3"	10,000
2	Cross 3"x3"x3"x2"			3,000			5,000			
	Cross 3"x3"x3"x3"									10,000
3	Valves(1) Gate ☐ Plug ☐(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
4	Valve Gate ☐ Plug ☐(2)	1-13/16"		3,000	1-13/16"		5,000	1-13/16"		10,000
4a	Valves(1)	2-1/16"		3,000	2-1/16"		5,000	3-1/8"		10,000
5	Pressure Gauge			3,000			5,000			10,000
6	Valves Gate ☐ Plug ☐(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
7	Adjustable Choke(3)	2"		3,000	2"		5,000	2"		10,000
8	Adjustable Choke	1"		3,000	1"		5,000	2"		10,000
9	Line		3"	3,000		3"	5,000		3"	10,000
10	Line		2"	3,000		2"	5,000		3"	10,000
11	Valves Gate ☐ Plug ☐(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000
12	Lines		3"	1,000		3"	1,000		3"	2,000
13	Lines		3"	1,000		3"	1,000		3"	2,000
14	Remote reading compound standpipe pressure gauge			3,000			5,000			10,000
15	Gas Separator		2'x5'			2'x5'			2'x5'	
16	Line		4"	1,000		4"	1,000		4"	2,000
17	Valves Gate ☐ Plug ☐(2)	3-1/8"		3,000	3-1/8"		5,000	3-1/8"		10,000

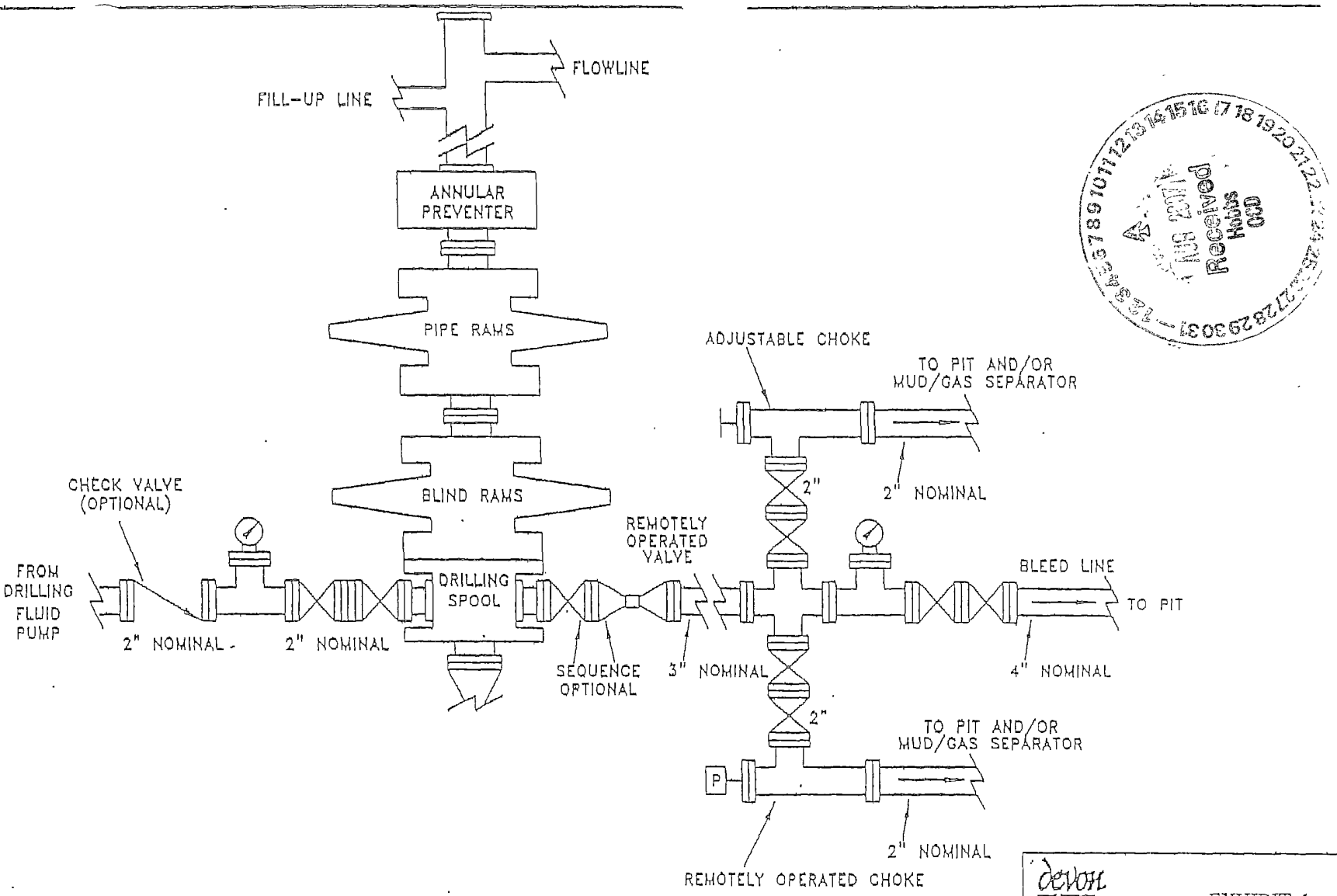
(1) Only one required in Class 3M.

(2) Gate valves only shall be used for Class 10M.

(3) Remote operated hydraulic choke required on 5,000 psi and 10,000 psi for drilling.

EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTIONS

1. All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating.
2. All flanges shall be API 6B or 6BX and ring gaskets shall be API RX or BX. Use only BX for 10 MWP.
3. All lines shall be securely anchored.
4. Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be available.
5. Choke manifold pressure and standpipe pressure gauges shall be available at the choke manifold to assist in regulating chokes. As an alternate with automatic chokes, a choke manifold pressure gauge shall be located on the rig floor in conjunction with the standpipe pressure gauge.
6. Line from drilling spool to choke manifold should be as straight as possible. Lines downstream from chokes shall make turns by large bends or 90° bends using bull plugged tees.
7. Discharge lines from chokes, choke bypass and from top of gas separator should vent as far as practical from the well.



devon

EXHIBIT 1

PROPOSED 5-M BOPE AND CHOKE ARRANGEMENT

s:\...\nm\plots
5mbope.dwg

sc

Attachment to Exhibit #1
NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP
North Pure Gold 5 Federal 1H
Surface Location: 150' FNL & 660' FEL, Lot A, Sec 5 T23S R31E, Eddy, NM
Bottom Hole Location: 330' FSL & 660' FEL, Lot P, Sec 5 T23S R31E, Eddy, NM

1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.

2. Wear ring will be properly installed in head.

3. Blowout preventer and all associated fittings will be in operable condition to withstand a minimum 5000 psi working pressure.

4. All fittings will be flanged.

5. A full bore safety valve tested to a minimum 5000 psi WP with proper thread connections will be available on the rotary rig floor at all times.

6. All choke lines will be anchored to prevent movement.

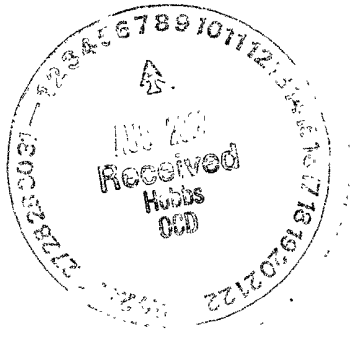
7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.

8. Will maintain a kelly cock attached to the kelly.

9. Hand wheels and wrenches will be properly installed and tested for safe operation.

10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.

11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.



devon

Planned Wellpath Report

Plan #1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Devon Energy**	Slot	**#1H_SHL**
Area	**Eddy County, NM**	Well	**#1H**
Field	**Sand Dunes West Field**	Wellbore	**#1H PWB**
Facility	**North Pure Gold 5 Federal #1H**		

REPORT SETUP INFORMATION			
Projection System	**NAD83 / TM New Mexico State Planes, Eastern Zone (3001)**	Software System	**WellArchitect™ 1.2**
North Reference	**Grid**	User	**GomeOscR**
Scale	**0.999941**	Report Generated	**04/19/07** at **17:36:15**
Wellbore last revised	**04/19/07**	Database/Source file	**WA_Midland/#1H_PWB.xml**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North [feet]	**East [feet]**	**Easting [meters]**	**Northing [meters]**	**Latitude [°]**	**Longitude [°]**
Slot Location	**0.00**	**0.00**	215816.93	148732.16	32 20 25.200N	103 47 36.600W
Facility Reference Pt			215816.93	148732.16	**32 20 25.200N**	**103 47 36.600W**
Field Reference Pt			**0.00**	**0.00**	30 59 18.404N	106 03 38.987W

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Rig on #1H_SHL (RT) to Facility Vertical Datum	**0.00 feet**
Horizontal Reference Pt	**Slot**	Rig on #1H_SHL (RT) to GRN. ELEV.	**3337.00 feet**
Vertical Reference Pt	**Rig on #1H_SHL (RT)**	Facility Vertical Datum to Mud Line (Facility)	**0.00 feet**
MD Reference Pt	**Rig on #1H_SHL (RT)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**GRN. ELEV.**	Section Azimuth	**180.02°**

devon

Planned Wellpath Report

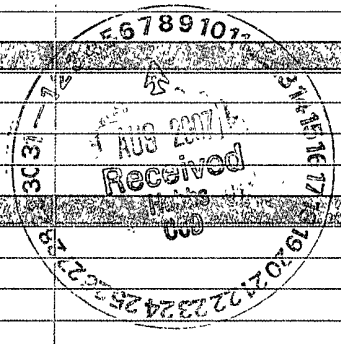
Plan #1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Devon Energy**	Slot	**#1H_SHL**
Area	**Eddy County, NM**	Well	**#1H**
Field	**Sand Dunes West Field**	Wellbore	**#1H PWB**
Facility	**North Pure Gold 5 Federal #1H**		

WELLPATH DATA (60 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]	Design Comments	Path Comment
0.00	0.000	180.018	0.00	0.00	0.00	0.00	0.00	Tie On	
400.00†	0.000	0.000	400.00	0.00	0.00	0.00	0.00		Rustler
850.00†	0.000	180.018	850.00	0.00	0.00	0.00	0.00		Top of Salt
3830.00†	0.000	180.018	3830.00	0.00	0.00	0.00	0.00		Base of Salt
4100.00†	0.000	180.018	4100.00	0.00	0.00	0.00	0.00		Top of Delaware/Lamar LS
4140.00†	0.000	180.018	4140.00	0.00	0.00	0.00	0.00		Bell Canyon
6650.00†	0.000	180.018	6650.00	0.00	0.00	0.00	0.00		Brushy Canyon
7420.00	0.000	180.018	7420.00	0.00	0.00	0.00	0.00	KOP	
7520.00†	11.930	180.018	7519.28	10.37	-10.37	0.00	11.93		
7620.00†	23.860	180.018	7614.27	41.05	-41.05	-0.01	11.93		
7720.00†	35.790	180.018	7700.87	90.69	-90.69	-0.03	11.93		
7820.00†	47.720	180.018	7775.33	157.17	-157.17	-0.05	11.93		
7920.00†	59.650	180.018	7834.45	237.60	-237.60	-0.07	11.93		
8020.00†	71.580	180.018	7875.66	328.51	-328.51	-0.10	11.93		
8120.00†	83.510	180.018	7897.19	425.98	-425.98	-0.13	11.93		
8174.43	90.004	180.018	7900.27	480.30	-480.30	-0.15	11.93	EOC	
8220.00†	90.004	180.018	7900.26	525.87	-525.87	-0.16	0.00		
8320.00†	90.004	180.018	7900.26	625.87	-625.87	-0.20	0.00		
8420.00†	90.004	180.018	7900.25	725.87	-725.87	-0.23	0.00		
8520.00†	90.004	180.018	7900.25	825.87	-825.87	-0.26	0.00		
8620.00†	90.004	180.018	7900.24	925.87	-925.87	-0.29	0.00		
8720.00†	90.004	180.018	7900.23	1025.87	-1025.87	-0.32	0.00		
8820.00†	90.004	180.018	7900.23	1125.87	-1125.87	-0.35	0.00		
8920.00†	90.004	180.018	7900.22	1225.87	-1225.87	-0.38	0.00		
9020.00†	90.004	180.018	7900.21	1325.87	-1325.87	-0.41	0.00		
9120.00†	90.004	180.018	7900.21	1425.87	-1425.87	-0.44	0.00		
9220.00†	90.004	180.018	7900.20	1525.87	-1525.87	-0.48	0.00		
9320.00†	90.004	180.018	7900.20	1625.87	-1625.87	-0.51	0.00		
9420.00†	90.004	180.018	7900.19	1725.87	-1725.87	-0.54	0.00		
9520.00†	90.004	180.018	7900.18	1825.87	-1825.87	-0.57	0.00		
9620.00†	90.004	180.018	7900.18	1925.87	-1925.87	-0.60	0.00		
9720.00†	90.004	180.018	7900.17	2025.87	-2025.87	-0.63	0.00		
9820.00†	90.004	180.018	7900.17	2125.87	-2125.87	-0.66	0.00		
9920.00†	90.004	180.018	7900.16	2225.87	-2225.87	-0.69	0.00		
10020.00†	90.004	180.018	7900.15	2325.87	-2325.87	-0.73	0.00		
10120.00†	90.004	180.018	7900.15	2425.87	-2425.87	-0.76	0.00		
10220.00†	90.004	180.018	7900.14	2525.87	-2525.87	-0.79	0.00		
10320.00†	90.004	180.018	7900.13	2625.87	-2625.87	-0.82	0.00		
10420.00†	90.004	180.018	7900.13	2725.87	-2725.87	-0.85	0.00		
10520.00†	90.004	180.018	7900.12	2825.87	-2825.87	-0.88	0.00		



Planned Wellpath Report

Plan #1

devon

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Devon Energy	Slot	#1H_SHL
Area	Eddy County, NM	Well	#1H
Field	Sand Dunes West Field	Wellbore	#1H PWB
Facility	North Pure Gold 5 Federal #1H		

WELLPATH DATA (60 stations) † = interpolated/extrapolated station

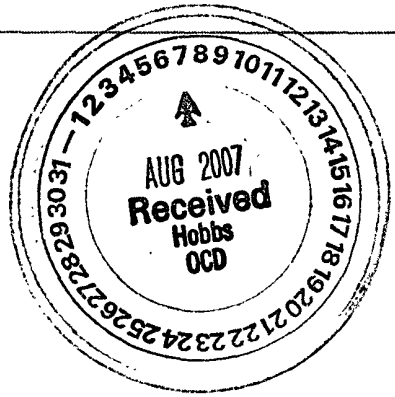
MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]	Design Comments	Path Comment
10620.00†	90.004	180.018	7900.12	2925.87	-2925.87	-0.91	0.00		
10720.00†	90.004	180.018	7900.11	3025.87	-3025.87	-0.94	0.00		
10820.00†	90.004	180.018	7900.10	3125.87	-3125.87	-0.97	0.00		
10920.00†	90.004	180.018	7900.10	3225.87	-3225.87	-1.01	0.00		
11020.00†	90.004	180.018	7900.09	3325.87	-3325.87	-1.04	0.00		
11120.00†	90.004	180.018	7900.09	3425.87	-3425.87	-1.07	0.00		
11220.00†	90.004	180.018	7900.08	3525.87	-3525.87	-1.10	0.00		
11320.00†	90.004	180.018	7900.07	3625.87	-3625.87	-1.13	0.00		
11420.00†	90.004	180.018	7900.07	3725.87	-3725.87	-1.16	0.00		
11520.00†	90.004	180.018	7900.06	3825.87	-3825.87	-1.19	0.00		
11620.00†	90.004	180.018	7900.05	3925.87	-3925.87	-1.22	0.00		
11720.00†	90.004	180.018	7900.05	4025.87	-4025.87	-1.26	0.00		
11820.00†	90.004	180.018	7900.04	4125.87	-4125.87	-1.29	0.00		
11920.00†	90.004	180.018	7900.04	4225.87	-4225.87	-1.32	0.00		
12020.00†	90.004	180.018	7900.03	4325.87	-4325.87	-1.35	0.00		
12120.00†	90.004	180.018	7900.02	4425.87	-4425.87	-1.38	0.00		
12220.00†	90.004	180.018	7900.02	4525.87	-4525.87	-1.41	0.00		
12320.00†	90.004	180.018	7900.01	4625.87	-4625.87	-1.44	0.00		
12420.00†	90.004	180.018	7900.01	4725.87	-4725.87	-1.47	0.00		
12504.44	90.004	180.018	7900.00†	4810.31	-4810.31	-1.50	0.00	#1H BHL	

HOLE & CASING SECTIONS Ref Wellbore: #1H PWB Ref Wellpath: Plan #1

String/Diameter	Start MD [feet]	End MD [feet]	Interval [feet]	Start TVD [feet]	End TVD [feet]	Start N/S [feet]	Start E/W [feet]	End N/S [feet]	End E/W [feet]
13.375in Casing	0.00	750.00	750.00	0.00	750.00	0.00	0.00	0.00	0.00
8.625in Casing	0.00	4150.00	4150.00	0.00	4150.00	0.00	0.00	0.00	0.00
6.125in Open Hole	4150.00	12504.44	8354.44	4150.00	7900.00	0.00	0.00	-4810.31	-1.50

TARGETS

Name	MD [feet]	TVD [feet]	North [feet]	East [feet]	Grid East [meters]	Grid North [meters]	Latitude [°]	Longitude [°]	Shape
1) #1H BHL	12504.44	7900.00	-4810.31	-1.50	215816.47	147265.98	32 19 37.600N	103 47 36.900W	point



Devon Energy

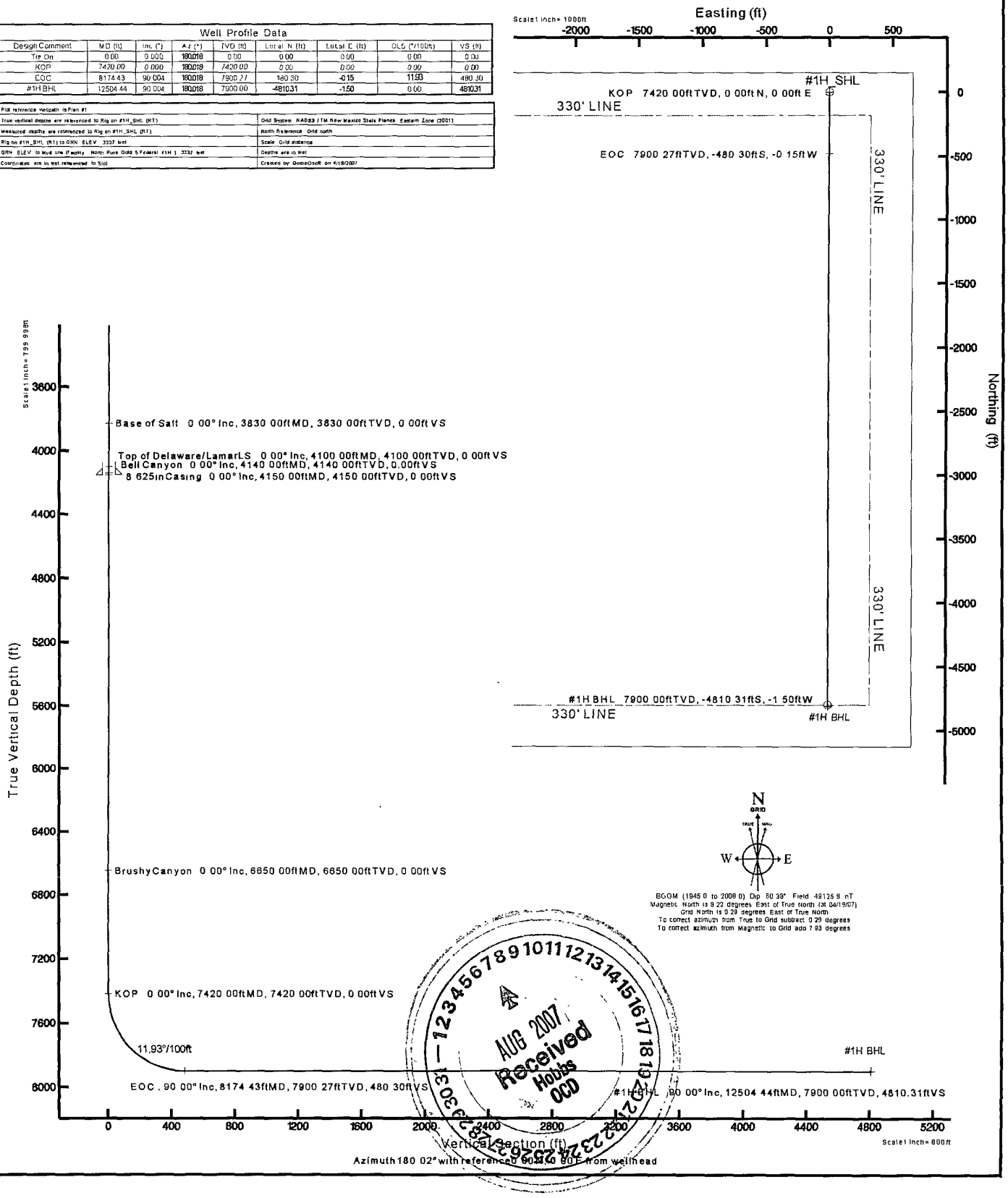
Location	Eddy County, NM	Slot	#1H_SHL
Field	Sand Dunes West Field	Well	#1H
Facility	North Pure Gold 5 Federal #1H	Wellbore	#1H PWB

BAKER HUGHES INTEQ

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Azi (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0.00	0.000	180.018	0.00	0.00	0.00	0.00	0.00
KOP	7420.00	0.000	180.018	7420.00	0.00	0.00	0.00	0.00
EOC	8174.43	90.004	180.018	7900.27	480.30	-0.15	11.93	480.30
#1H BHL	12504.44	90.004	180.018	7900.00	-4810.31	-1.50	0.00	4810.31

Plot reference wellpath is Plan #1	
True vertical depths are referenced to Rig on #1H_SHL (RT)	Grid System: NAD83 / TM New Mexico State Plane, Eastern Zone (3001)
Measured depths are referenced to Rig on #1H_SHL (RT)	North Reference: Grid north
Rig on #1H_SHL (RT) is GRN_ELEV_3337 feet	Scale: Grid distance
GRN_ELEV to Mud line (Facility_North Pure Gold 5 Federal #1H) 3337 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: DomeDocR on 4/18/2007



HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

1. All Company and Contract personnel admitted on location must be trained by a qualified H2S safety instructor to the following:
   a. Characteristics of H2S
   b. Physical effects and hazards
   c. Proper use of safety equipment and life support systems.
   d. Principle and operation of H2S detectors, warning system and briefing areas
   e. Evacuation procedures, routes and first aid.
   f. Proper use of 30-minute pressure demand air pack.

2. H2S Detection and Alarm System
   a. H2S detectors and audio alarm system to be located at bell nipple, end of blooie line (mud pit) and on derrick floor or doghouse.

3. Windsock and/or wind streamers
   a. Windsock at mud pit area should be high enough to be visible
   b. Windsock at briefing area should be high enough to be visible
   c. There should be a windsock at entrance to location

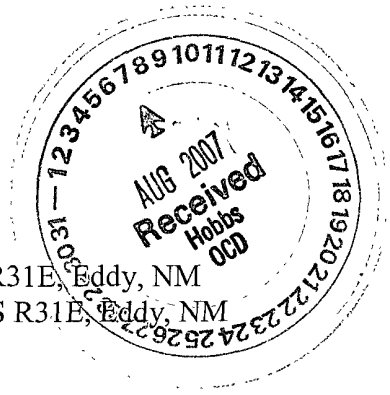
4. Condition Flags and Signs
   a. Warning Sign on access road to location
   b. Flags to be displayed on sign at entrance to location. Green flag, normal safe condition. Yellow flag indicates potential pressure and danger. Red flag, danger, H2S present in dangerous concentration. Only emergency personnel admitted to location.

5. Well Control Equipment
   a. See Exhibit "E" & "E-1"

6. Communication
   a. While working under masks chalkboards will be used for communication.
   b. Hand signals will be used where chalk board is inappropriate
   c. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.

7. Drill stem Testing
   a. Exhausts will be watered
   b. Flare line will be equipped with an electric igniter or a propane pilot light in case gas reaches the surface.
   c. If the location is near to a dwelling a closed DST will be performed.

8. Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubular goods and other mechanical equipment.
   If H2S is encountered, mud system will be altered if necessary to maintain control or formation. A mud gas separator will be brought into service along with H2S scavengers if necessary.



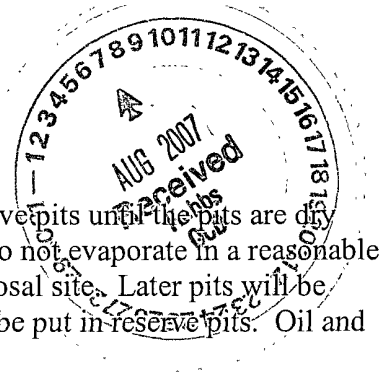
SURFACE USE PLAN
Devon Energy Production Company, LP
North Pure Gold 5 Federal 1H
Surface Location: 150' FNL & 660' FEL, Lot A, Sec 5 T23S R31E, Eddy, NM
Bottom Hole Location: 330' FSL & 660' FEL, Lot P, Sec 5 T23S R31E, Eddy, NM

1. **Existing Roads:**
   a. The well site and elevation plat for the proposed well are reflected on Exhibit 2. The well was staked by Basin Surveys.
   b. All roads into the location are depicted on Exhibit 3.
   c. Directions to Location: From the Junction of State Hwy 128 and Co. Rd. 802 (WIPP Rd), go North on Co. Rd 802 approximately 100 feet to lease road; on lease road proceed easterly 2.2 miles to proposed lease road.

2. **Access Road**
   a. Exhibit #3 shows the existing lease road. Approximately 1582.1' of new access road will be constructed as follows:
   b. The maximum width of the road will be 15'. It will be crowned and made of 6" of rolled and compacted caliche. Water will be deflected, as necessary, to avoid accumulation and prevent surface erosion.
   c. Surface material will be native caliche. This material will be obtained from a BLM approved pit nearest in proximity to the location. The average grade will be approximately 1%.
   d. No cattle guards, grates or fence cuts will be required. No turnouts are planned.

3. **Proposed Facilities**
   a. In the event the well is found productive, the North Pure Gold 4 Federal 3 tank battery would be utilized and the necessary production equipment will be installed at the well site.
   b. If necessary, the well will be operated by means of an electric prime mover. Electric power poles will be set along side of the access road.
   c. All flow lines will adhere to API standards.
   d. If the well is productive, rehabilitation plans are as follows:.
      i. The reserve pit will be back-filled after the contents of the pit are dry (within 120 days after completion, weather permitting).
      ii. The original topsoil from the well site will be returned to the location. The drill site will then be contoured as close as possible to the original state.

4. **Methods of Handling Waste Material:**
   a. Drill cuttings will be disposed of in the reserve pits.
   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, including broken sacks, will pick up salts remaining after completion of well.
   d. Wastewater from living quarters will be drained into hole with a minimum of 10'. These holes will be covered during drilling and will be back filled when the well is completed. 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 allowed to evaporate in the reserve pits until the pits are dry enough to be broken out for further drying. If the drilling fluids do not evaporate in a reasonable time they will be hauled off by transports to a state approved disposal site. Later pits will be broken out to speed dry. Water produced during completion will be put in reserve pits. Oil and condensate produced will be put in a storage tank and sold.

5. Well Site Layout

a. Exhibit D Shows the proposed well site layout.
b. This exhibit indicated proposed location of reserve and sump pits and living facilities.
c. Mud pits in the active circulating system will be steel pits & the reserve pit is proposed to be unlined unless subsurface conditions encountered during pit construction indicate that lining is needed for lateral containment of fluids.
d. If needed, the reserve pit is to be lined with polyethylene. The pit liner will be 6 mils thick. Pit liner will extend a minimum 2'00" over the reserve pits dikes where the liner will be anchored down.
e. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. The fourth side will be fenced after all drilling operations have ceased. If the well is a producer, the reserve pit fence will be torn down. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

6. Other Information:

a. The area surrounding the well site is grassland. The topsoil is very sandy in nature. The vegetation is moderately sparse with native prairie grass, some mesquite bushes and shinnery oak. No wildlife was observed but it is likely that deer, rabbits, coyotes, and rodents traverse the area.
b. The surface is owned by the US Government and is administered by the Bureau of Land Management. The surface is of limited use except for the grazing of livestock and the production of oil and gas.
c. A Cultural Resources Examination will be completed by Southern New Mexico Archaeological Services, Inc. and forwarded to the BLM office in Carlsbad, New Mexico.
d. There are no dwellings within 2 miles of location.

Operators Representative:

The Devon Energy Production Company, L.P. representatives responsible for ensuring compliance of the surface use plan are listed below.

Jim Cromer
Operations Engineer
Devon Energy Production Company, L.P.
20 North Broadway
Oklahoma City, OK 73102-8260

(405) 228-4464 (office)
(405) 694-7718 (Cellular)

Don Mayberry
Superintendent
Devon Energy Production Company, L.P.
Post Office Box 250
Artesia, NM 88211-0250

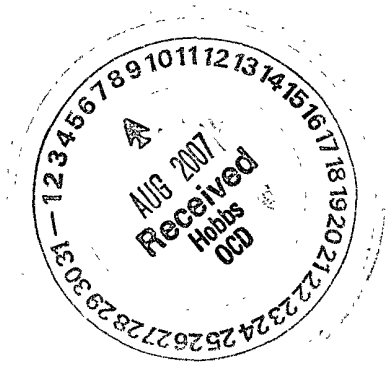
(505) 748-3371 (office)
(505) 746-4945 (home)

Certification

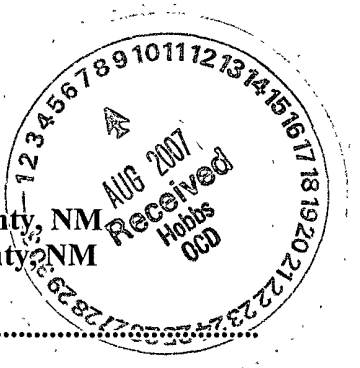
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road; that I am familiar with the conditions that presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Devon Energy Production Company, L.P. and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Signed: _____ Date: May 1, 2007

Judy A. Barnett
Regulatory Analyst



CONDITIONS OF APPROVAL - DRILLING



Operator's Name: **Devon Energy Prod. Co. LP**
Well Name & No. **1H-North Pure Gold 5 Federal**
Location SHL: **0150 FNL, 0660 FEL, Sec. 5, T-23-S, R-31-E, Eddy County, NM**
Location BHL: **0330 FSL, 0660 FEL, Sec. 5, T-23-S, R-31-E, Eddy County, NM**
Lease: **NM-81953**

I. DRILLING OPERATIONS REQUIREMENTS:

A. The Bureau of Land Management (BLM) is to be notified a minimum of 4 hours in advance for a representative to witness:
1. Spudding well
2. Setting and/or Cementing of all casing strings
3. BOPE tests

- Eddy County call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822

B. Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard.

C. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

D. Gamma-Ray/Neutron logs shall be run from the base of the Salado formation to the surface. The logs shall be run at a speed which allows the logs to be legible and no faster than manufactures of the logging tools recommended speed. (R-111-P area only)

II. CASING:

A. The **13.375** inch surface casing shall be set at **a minimum of 25 feet into the Rustler Anhydrite and above the salt at approximately 750 feet** and cemented to the surface.

1. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.
2. Wait on cement (WOC) time for a primary cement job will be a minimum of 12 hours for a non-water basin, 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compression strength, whichever is greater. (This is to include the lead cement)
3. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compression strength, whichever is greater.
4. If cement falls back, remedial action will be done prior to drilling out that string.

Possible lost circulation in the Delaware and Bone Spring formations.
Possible water flows in the Salado, Castile, Delaware, and Bone Spring formations.

B. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is **cement shall circulate to surface.** If cement does not circulate see A.1 thru 4.

C. The minimum required fill of cement behind the **7** inch production casing is **cement shall circulate to surface due to R-111-P potash requirements. Cement is to circulate for both stages.** If cement does not circulate see A.1 thru 4.

D. The minimum required fill of cement behind the **4-1/2** inch production casing is **cement shall circulate to top of liner.**

E. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

F. If hardband drill pipe is rotated inside casing; returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

III. PRESSURE CONTROL:

A. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53.

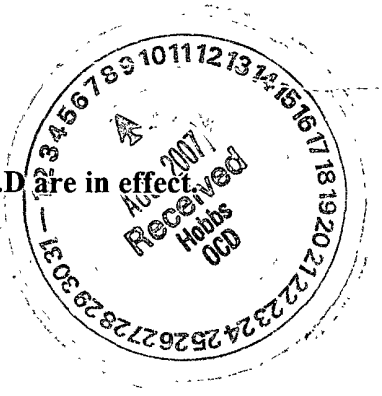
B. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** PSI.

C. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

1. The tests shall be done by an independent service company.
2. The results of the test shall be reported to the appropriate BLM office.
3. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.
4. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi in accordance with API RP 53. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.
5. A variance to test the surface casing and BOP/BOPE to the reduced pressure of **1200 psi, but not more than 70% of internal yield pressure of the casing** with the rig pumps is approved.

IV. Testing

If a drill stem test is performed, the conditions in Onshore Order 2.III.D are in effect.



V. WIPP Requirements

The proposed well is located within 330' of the WIPP Land Withdrawal Area boundary. As a result, Devon is required to submit daily logs and deviation survey information to the Department of Energy per requirements of the Joint Powers Agreement. Information from this well will be included in the Quarterly Drilling Report. Information will also be provided to Mr. Bryan Arrant of the Oil Conservation Division after drilling activities have been completed. Any future entry into the well for purposes of completing additional drilling will require supplemental information.

Devon can email the required information to me at gene.valett@wipp.ws or fax to my attention at 505-234-6003.

Engineer on call phone: 505-706-2779

WWI 051107

NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON
Governor
Joanna Prukop
Cabinet Secretary

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

May 21, 2007

Devon Energy Corporation
Attn: Ken Gray
20 North Broadway
Oklahoma City, OKL 73102-8260

Administrative Order NSL-5626

Re: North Pure Gold 5 Federal Well No. 1H
A-5-23S-31E
Eddy County

Dear Mr. Gray:

Reference is made to the following:

(a) your application **(administrative application reference No. pCLP07-11439554)** submitted to the New Mexico Oil Conservation Division (the Division) in Santa Fe, New Mexico on April 20, 2007,

(b) your supplemental email dated April 30, 2007, and

(c) the Division's records pertinent to this request.

Devon Energy Corporation (Devon) has requested to drill its North Pure Gold 5 Federal Well No. 1H at an unorthodox Delaware oil well location. This well will be a horizontal well, which will be drilled from an unorthodox surface location 150 feet from the North line and 660 feet from the East line (Unit A) of Section 5, Township 23 South, Range 31 East, N.M.P.M, in Eddy County, to an orthodox terminus, or bottom-hole location 330 feet from the South line and 660 feet from the East line (Unit P) of Section 5. The E/2 E/2 of Section 5 will be dedicated to this well in order to form a project area comprising four contiguous, standard 40-acre spacing units in the undesignated Los Medanos-Delaware Pool (40297). This pool is governed by statewide Rule 104.B, which provides for 40-acres units, with wells located at least 330 feet from a unit outer boundary.

It is our understanding that, although Devon does not anticipate perforating the intended production interval closer than 330 feet from the unit boundary, the point of penetration of the Delaware formation is anticipated to be less than 330 feet from the northern unit boundary. Hence, the location of this well is considered unorthodox under Rule 111.

Your application has been duly filed under the provisions of Division Rules 104.F and 1210.A(2).

It is our understanding that Devon is seeking this location in order to penetrate the maximum amount of the anticipated pay zone in the horizontal shaft of this well..

We also understand that due notice of this application was furnished to the only affected person in the spacing unit to the north.

Pursuant to the authority granted me under the provisions of Division Rule 104.F(2), the above-described unorthodox location is hereby approved.

Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

Sincerely,

Mark E. Fesmire, P.E.
Director

MEF/db

cc: New Mexico Oil Conservation Division - Artesia
United States Bureau of Land Management - Carlsbad