1032

OCD-ARTESIA

I-06-41

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

RECEIVED
AUG 2006
OCD-ARTESIA

5. Lease Serial No.
NM-0405444

6. If Indian, Allotee or Tribe Name

7. If Unit or CA Agreement, Name and No.

1a. Type of work: ☑ DRILL ☐ REENTER R-111-POTASH

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.
Todd 23A Federal 38

28496

2. Name of Operator
Devon Energy Production Company, LP 6137

Sand Dunes; Morrow

3a. Address **20 North Broadway, Oklahoma City, Oklahoma City 73102-8260**

3b. Phone No. *(include area code)* **405-552-7802**

10. API Well No.
30-015-35076

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface **Lot A NENE 660' FNL & 860' FEL**

At proposed prod. zone **Lot A NENE 660' FNL & 860' FEL**

11. Sec., T. R. M. or Blk. and Survey or Area
Lot A Sec 23, T23S R31E

14. Distance in miles and direction from nearest town or post office*
Approximately 21 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	17. Spacing Unit dedicated to this well
	1320	**320**
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. on file
	15,300'	**CO-1104**
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3486'	**06/30/2006**	**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)*	Date
	Stephanie A. Ysasaga	**06/19/2006**

Title: **Sr. Staff Engineering Technician**

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/s/ Jesse J. Juen	/s/ Jesse J. Juen	AUG 02 2006

Title: ACTING **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 1 YEAR

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. 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.

ACS 7/10/06

*(Instructions on page 2

If earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction.

CARLSBAD CONTROLLED WATER BASIN

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

Witness Surface & Intermediate Casing

Additional Operator Remarks:

Devon Energy Production Company, LP proposes to drill a ~~Delaware~~ MORROW well to 15,300' 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 Co. Rd. 779 (Red), go North on Co. Rd. 779 for 2.8 mile to lease road; thence east to 860 feet to proposed well location past Todd 23A Federal 29.

Access Road:

Existing lease road to be used. Archeological survey's will be requested for the pad and access road.

H2S:

No H2S is expected to be encountered.

DISTRICT I
1325 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

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87504-2088

Form C-102
Revised March 17, 1999

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
	84680	Sand Dunes; MORROW

Property Code	Property Name	Well Number
	TODD "23A" FEDERAL	38

OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION COMPANY LP	3486'

Surface Location

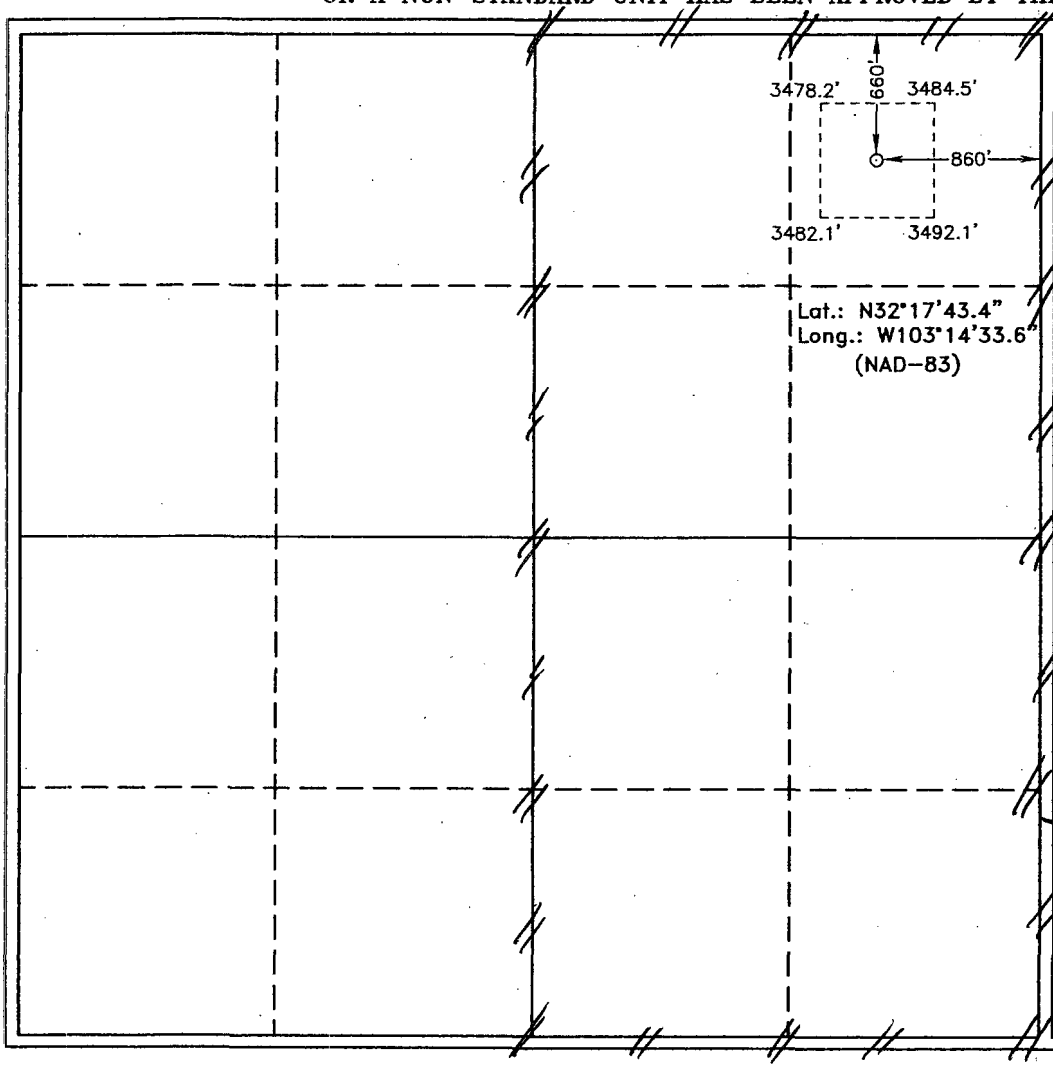
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	23	23 S	31 E		660	NORTH	860	EAST	EDDY

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

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 the the information contained herein is true and complete to the best of my knowledge and belief.

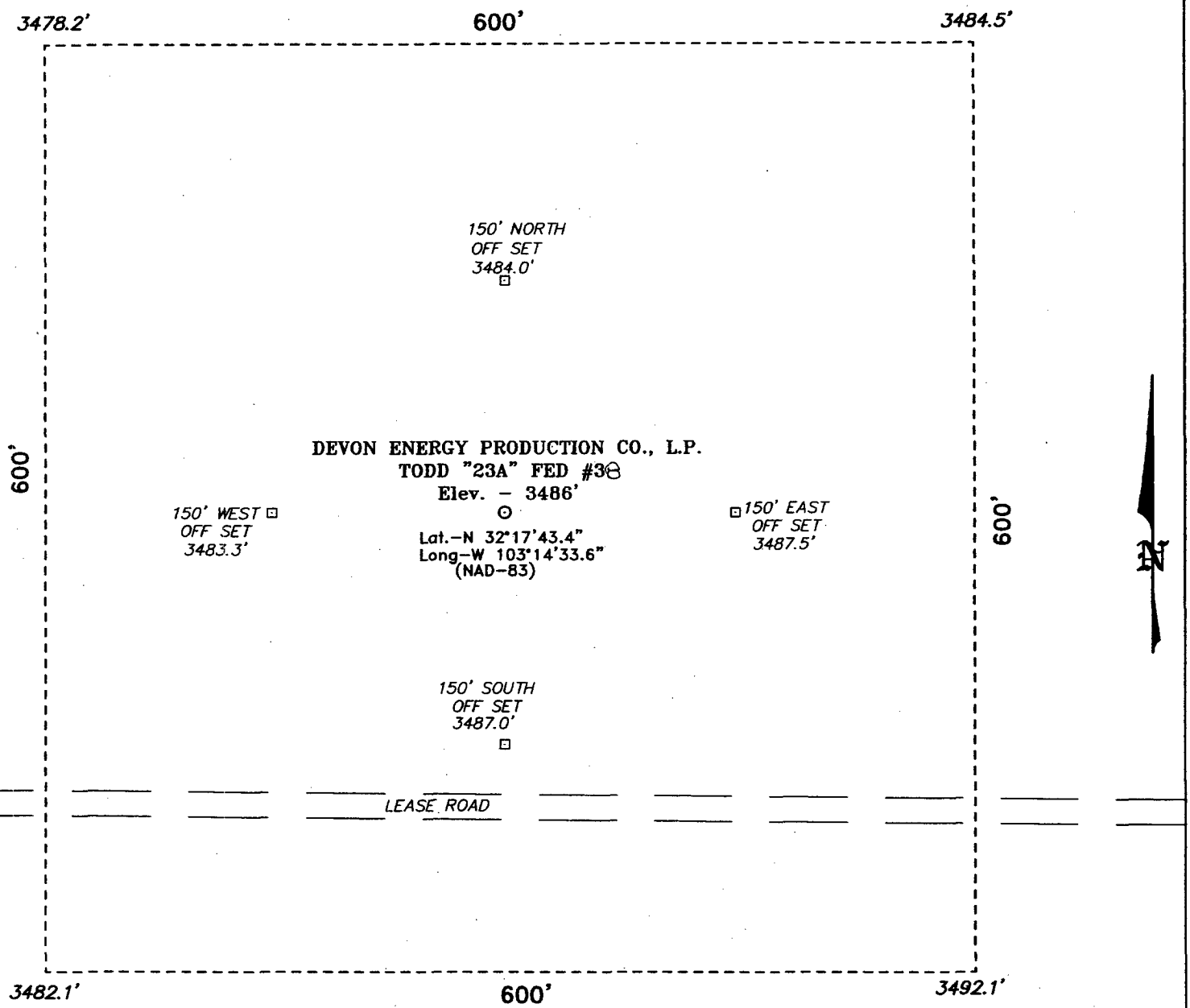
Signature
Stephanie A. Ysasaga
Printed Name
Sr. Staff Engineering Tech
Title
06/19/06
Date

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.

APRIL 25, 2006
Date Surveyed
Signature & Seal of Professional Surveyor
GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL LAND SURVEYOR
W.O. No. 65?
Certificate No. Gary L. Jones 7977
BASIN SURVEYS

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



100 0 100 200 FEET

SCALE: 1" = 100'

Directions to Location:

FROM THE JUNCTION OF STATE HWY 128 AND CO. RD. 779 (RED), GO NORTH ON CO. RD. 779 FOR 2.8 MILE TO LEASE ROAD; THENCE EAST 860 FEET TO PROPOSED WELL LOCATION PAST TODD 23A #29.

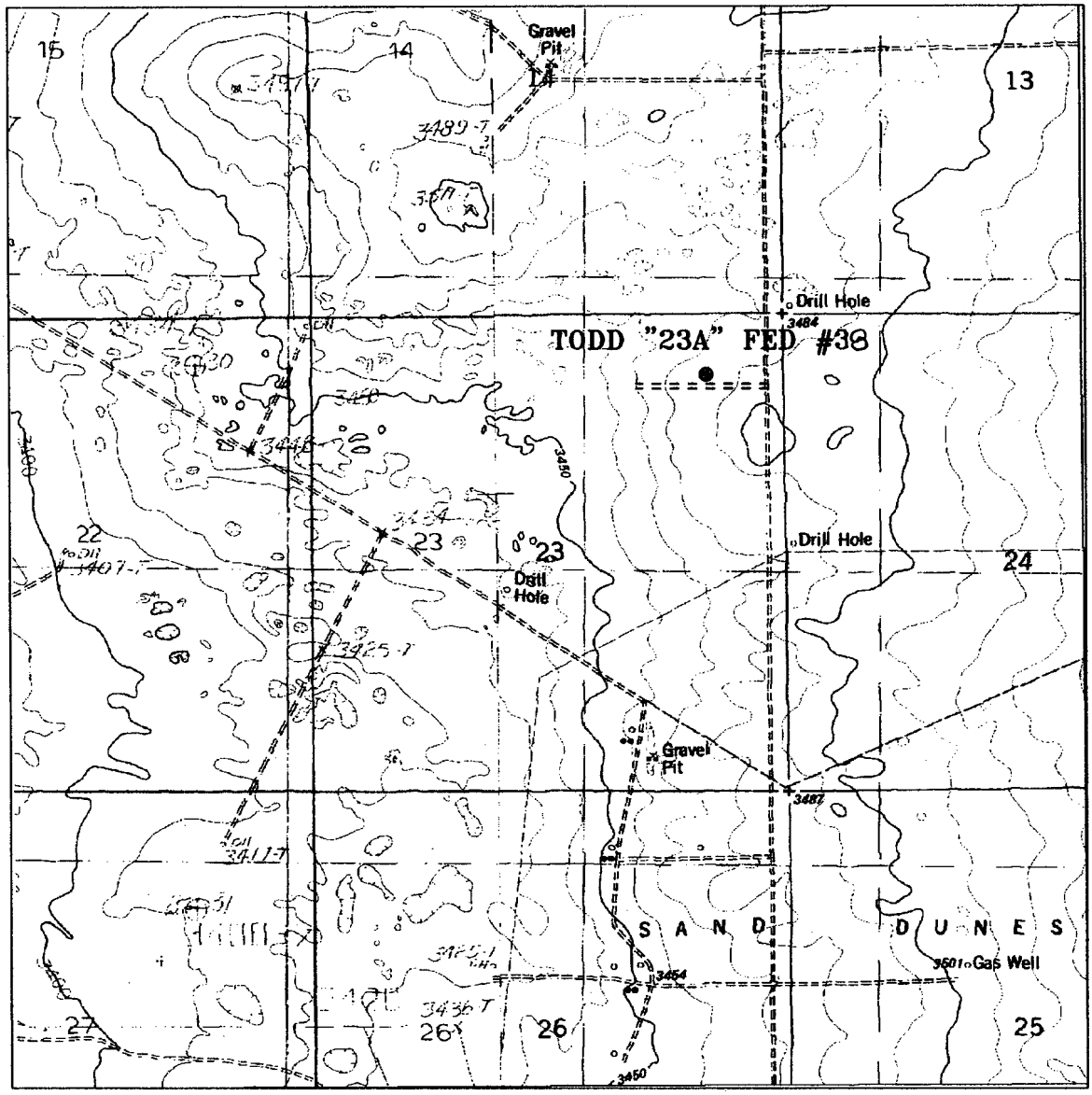
DEVON ENERGY PROD. CO., L.P.

REF: RESTAKE THE TODD "23A" FED #38

THE TODD "23A" FED #38 LOCATED 660' FROM THE NORTH LINE AND 860' FROM THE EAST LINE OF SECTION 23, 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: 6557	Drawn By: J. SMALL		
Date: 05-03-2006	Disk: JMS 6557W	Survey Date: 05-02-2006	Sheet 1 of 1 Sheets



TODD "23A" FEDERAL #38

Located at 660' FNL AND 860' FEL
Section 23, 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:	6557T - JMS
Survey Date:	05-02-2006
Scale:	1" = 2000'
Date:	05-03-2006

DEVON ENERGY PROD. CO., L.P.

DRILLING PROGRAM

Devon Energy Production Company, LP
Todd 23A Federal 38
Surface Location: 660' FNL & 860' FEL, Unit A, Sec 23 T23S R31E, Eddy, NM
Bottom hole Location: 660' FNL & 860' FEL, Unit A, Sec 23 T23S R31E, Eddy, NM

1. Geologic Name of Surface Formation

a. Permian

2. Estimated tops of geological markers:

a.	Castle	3012'
b.	Base of Salt	4223'
c.	Delaware	4431'
d.	Bell Canyon	4477'
e.	Cherry Canyon	5339'
f.	Brushy Canyon	6996'
g.	Bone Springs Lime	8281'
h.	1st Bone Springs	9368'
i.	2nd Bone Springs	9867'
j.	3rd Bone Springs	11176'
k.	Wolfcamp	11590'
l.	Atoka	13333'
m.	Base Upper Atoka Limestone	13530'
n.	Atoka AC S's	13582'
o.	Atoka Bank	13676'
p.	Upper Morrow	14274'
q.	Middle Morrow	14621'
r.	Lower Morrow	15034'
s.	Barnett	15225'

3. Estimated Depths of Anticipated Fresh Water, Oil or Gas

a.	Upper Permian Sands	100'	Fresh Water
b.	Base of Salt	4223'	Barren
c.	Delaware - Wolfcamp	4431-11590'	Oil
d.	Atoka – Lower Morrow	13333-15034'	Gas

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 16" casing at 850' and circulating cement back to surface. Potash and salt will be protected by setting 10 ¾" casing at 4415' and circulating cement to surface. The 7 5/8" casing will be set through the ~~Delaware~~ Morrow to 12,700'. The ~~Delaware~~ Morrow intervals will be isolated by setting 5 ½" casing to total depth and circulating cement above the base of the 7 5/8" casing.

4. **Casing Program:**

Hole Size	Interval	OD Csg	Weight	Collar	Grade
20"	0' – 850'	16"	65#	ST&C	H-40
14 3/4"	0' – 3,500'	10 3/4"	45.5#	LT&C	J-55
14 ¾"	3,500'–4,415'	10 3/4"	45.5#	LT&C	HCK-55
9 7/8"	0'-12,~~700'~~	7 5/8"	29.7#	LT&C	HCP-110
6 ½"	12,400'-15,300'	5 ½"	20#	LT&C	HCP-110

5. **Cement Program:**

a. 16" Surface — Cement to surface with 684 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 4% bwoc Bentonite + 81.3% Fresh Water. Tail with 300 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.25 lbs/sack Cello Flake + 56.3% Fresh Water.

WITNESS

b. 10 3/4" Intermediate — Cement to surface with 2019 sacks (35:65) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.25 lbs/sack Cello Flake + 6% bwoc Bentonite + 0.1% bwoc ASA-301 + 0.005 gps FP-13L + 107.8% Fresh Water. Tail with 300 sacks (60:40) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.25 lbs/sack Cello Flake + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-1 + 64.7% Fresh Water

WITNESS

c. 7 5/8" Production — Cement **Stage 1** with 908 sacks (15:61:11) Poz (Fly Ash):Class C Cement:CSE-2 + 2% bwow Potassium Chloride + 0.6% bwoc FL-25 + 0.6% bwoc FL-52A + 0.5% bwoc BA-10 + 0.7% bwoc CD-32 + 0.75% bwoc EC-1 + 5 lbs/sack LCM-1 + 0.25 lbs/sack Cello Flake + 0.2% bwoc R-3 + 70.5% Fresh Water. **Stage 2** lead slurry with 520 sacks (35:65) Poz (Fly Ash):Class C Cement + 6% bwoc Bentonite + 1% bwow Sodium Chloride + 0.3% bwoc FL-52A + 3 lbs/sack LCM-1 + 0.25 lbs/sack Cello Flake + 0.25% bwoc R-3 + 100.3% Fresh Water. Tail with 576 sacks (60:40) Poz (Fly Ash):Class C Cement + 1% bwow Sodium Chloride + 0.5% bwoc BA-10 + 0.1% bwoc R-3 + 0.25 lbs/sack Cello Flake + 2 lbs/sack Kol Seal + 4% bwoc MPA-1 + 61.3% Fresh Water.

d. 5 ½" Liner — Cement with 254 sacks Class H Cement + 1.2% bwoc FL-62 + 0.2% bwoc FL-52A + 0.5% bwoc CD-32 + 0.75% bwoc EC-1 + 0.25 lbs/sack Cello Flake + 0.15% bwoc R-21 + 45.5% Fresh Water.

The above cement volumes could be revised pending the caliper measurement from the open hole logs.

6. **Pressure Control Equipment:**
The blowout preventor equipment (BOP) shown in exhibit #B (A) 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. Both BOP's will be installed on the 16 " 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 16" casing shoe (70% of 48#, H-40 casing). Prior to drilling out the 10 ¾" 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 ofhte 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 equipment will include a Kelly cock, floor safety valve, choke lines and choke manifold having 5000 psi rating.

7. **Proposed Mud Circulation System**

Depth	Mud Wt.	Visc	Fluid Loss	Type System
0' – 850'	8.4-9.0	34-36	NC	Fresh Water
850' – 4415'	10.0-10.2	28	NC	Brine Water
4415'– 9000'	8.4-8.6	28-29	NC	Fresh Water
9000'-12700'	8.8-10	29-30	NC	Cut Brine
12700'-15300'	10.0-13	30-32	12-15cc	Brine/XCD

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

8. **Testing, Logging, and Coring 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 Laterol-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. **Auxilliary Well Control and Monitoring Equiptment:**
   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 operations after drilling out the 16" casing shoe until the 7 5/8" casing is cemented. Breathing equipment will be on location upon drilling the 16" shoe until total depth is reached.

10. 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 8000 psi and Estimated BHT 185°.

11. 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.

SURFACE USE PLAN
Devon Energy Production Company, LP
Todd 23A Federal 38
Surface Location: 660' FNL & 860' FEL, Unit A, Sec 23 T23S R31E, Eddy, NM
Bottom hole Location: 660' FNL & 860' FEL, Unit A, Sec 23 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 779 (Red), go north on Co. Rd 779 for 2.8 mile to lease road; thence east 860 feet to proposed well location past Todd 23A Federal 29.

2. **Access Road**
   a. Exhibit #3 shows the existing lease road and well pad.
   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, a tank battery would be constructed.
   b. The tank battery, all connections and all lines will adhere to API standards.
   c. If the well is productive, rehabilitation plans are as follows:
      i. The reserve pit will be closed pursuant to NM OCD rules and guidelines.
      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 will be lined with a 12 mil synthetic woven liner.
   d. The reserve pit will be fenced on three sides with four strands of barbed wire during drilling and completion phases. After the rig is removed, the reserve pit will be fenced on the fourth side to preclude endangering wildlife. The fencing will be in place until the pit is reclaimed. If the well is a producer, the reserve pit fence 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, sagebrush, yucca and miscellaneous weeds.
   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. An Archaeological survey will be forwarded to the Bureau of Land Management.
   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.

James Blount
Operations Engineer Advisor

Devon Energy Production Company, L.P.
20 North Broadway, Suite 1500
Oklahoma City, OK 73102-8260

(405) 228-4301 (office)
(405) 834-9207 (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: June 19th, 2006

Stephanie A. Ysasaga
Sr. Staff Engineering Technician

Attachment to Exhibit #1
NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP
Todd 23A Federal 38
Surface Location: 660' FNL & 860' FEL, Unit A, Sec 23 T23S R31E, Eddy, NM
Bottom hole Location: 660' FNL & 860' FEL, Unit A, Sec 23 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.

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, Suite 1500**
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 Name:	**Todd 23A Federal 38**
Lease No.:	**NM-0405444**
Legal Description of Land:	**Lot A Sec 23-T23S-R31E** **660' FNL & 860' FEL**
Formation(s):	**Ingle Wells; ~~Delaware~~** MORROW
Bond Coverage:	**Nationwide**
BLM Bond File No.:	**CO-1104**
Authorized Signature:	**Stephanie A. Ysasaga**
Title:	**Sr. Staff Engineering Technician**
Date:	**06/19/06**

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.

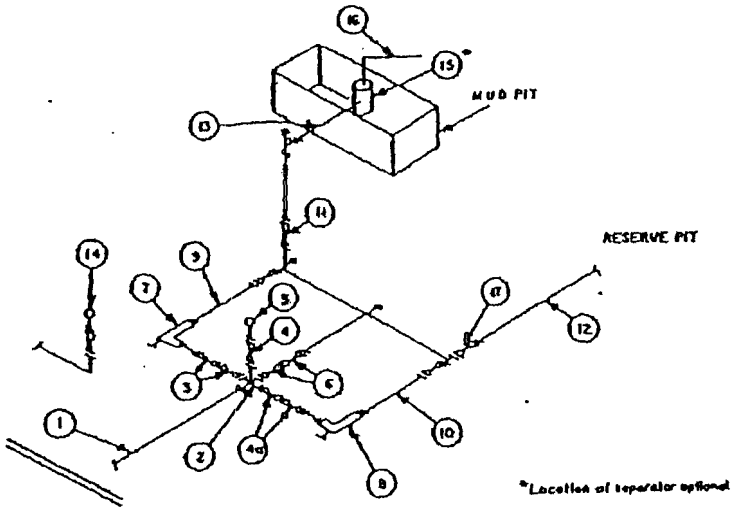
7. Drill stem Testing
   a. Exhausts will be watered
   b. Flare line will be equipped with an electric igniter or a propane pilot light in case gas reaches the surface.
   c. If the location is near to a dwelling a closed DST will be performed.

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.

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.

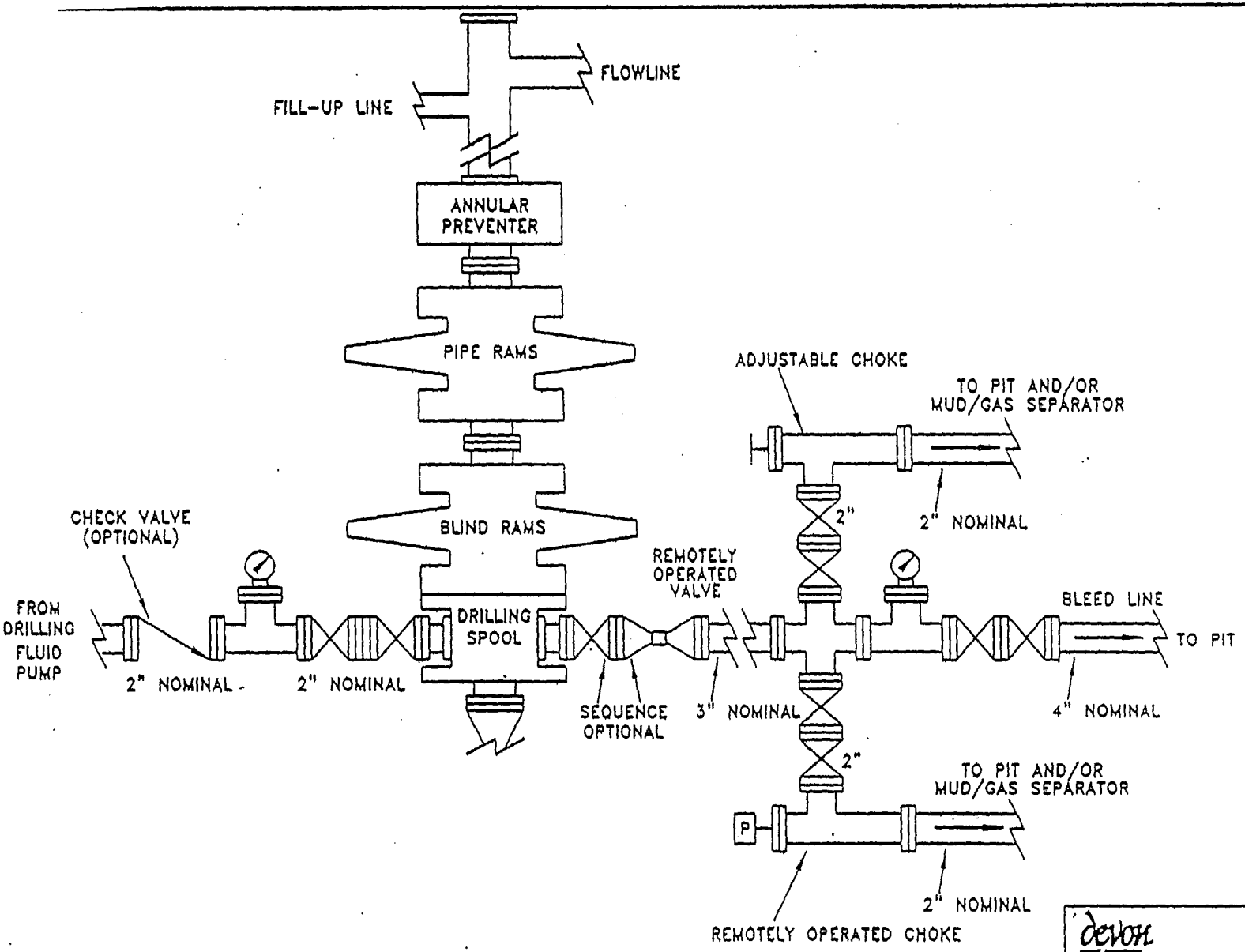


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EXHIBIT 1

PROPOSED 5-M BOPE AND CHOKE ARRANGEMENT

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CONDITIONS OF APPROVAL - DRILLING

Operator's Name:	**Devon Energy Production Company**
Well Name & No.	**Todd '23A' Federal # 38**
Location:	**660' FNL, 860' FEL, Section 23, T. 23 S., R. 31 E., Eddy County, New Mexico**
Lease:	**NM-0405444**

II. DRILLING OPERATIONS REQUIREMENTS:

1. The Bureau of Land Management (BLM) is to be notified at the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822 for wells in Eddy County in sufficient time for a representative to witness:

   A. Well spud

   B. Cementing casing: **16** inch **10-3/4** inch **7-5/8** inch **5-1/2** inch liner

   C. BOP tests

2. 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.

3. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

4. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

5. Gamma-Ray/Neutron logs shall be run from the base of the Salado formation to the surface; cable speed not to exceed 30 feet per minute.

II. CASING:

1. The **16** inch surface casing shall be set at **approximately 850 feet in the top of the Rustler anhydrite and cement circulated to the surface**. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the **10-3/4** inch intermediate casing is **to circulate to the surface**.

3. The minimum required fill of cement behind the **7-5/8** inch production casing is **to reach approximately 500 feet above the base of the 8-5/8 inch casing shoe.**

4. The minimum required fill of cement behind the **5-1/2** inch production liner is **to reach the top of the liner**.

5. Whenever a casing string is cemented in the R-111-P Potash Area, cement shall be allowed to stand a minimum of twelve (12) hours under pressure and a total of twenty-four (24) hours before drilling the plug or initiating tests.

III. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the **16** inch surface casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. A waiver to test the surface casing to 1200 psi with the rig pumps before drilling out the 16" casing shoe is approved.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **5000** psi to 12,700 feet. Below this depth a **10,000** psi system will be required.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.

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- The tests shall be done by an independent service company.
- The results of the test shall be reported to the appropriate BLM office.
- Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- Testing must be done in a safe workman-like manner. Hard line connections shall be required.

IV. DRILLING MUD:

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented. Monitoring equipment shall consist of the following:

- Recording pit level indicator to indicate volume gains and losses.
- Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
- Flow-sensor on the flow-line to warn of abnormal mud returns from the well.

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