AT5-07-522

OCD-ARTESIA

Form 3160-3
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

HIGH CAVEKARST

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

JUL 24 2007

APPLICATION FOR PERMIT TO DRILL OR REENTER

OCD-ARTESIA

1a Type of work ☑ DRILL ☐ REENTER	5 Lease Serial No. **NM-96212**
	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 **Indian Hill 6 Federal 1** 36627
2 Name of Operator **Devon Energy Production Co., LP** 6137	9 API Well No 30-015-35731
3a Address **20 North Broadway, OKC, OK 73102** / 3b Phone No. *(include area code)* **(405)-552-7802**	10 Field and Pool, or Exploratory **Angell Ranch; Atoka - Morrow**
4 Location of Well *(Report location clearly and in accordance with any State requirements *)* At surface **SWSW 660' FSL & 860' FWL** At proposed prod zone **SWSW 660' FSL & 860' FWL** CAPITAN CONTROLLED WATER BASIN	11 Sec, T R M or Blk and Survey or Area **Sec 6-T20S-R28E**
14 Distance in miles and direction from nearest town or post office* **Approximately 10 miles north of Carlsbad, NM.**	12 County or Parish **Eddy** / 13 State **NM**

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line, if any) **660'**	16 No of acres in lease **331.30**	17 Spacing Unit dedicated to this well **320**
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft **200'**	19 Proposed Depth **11,100'**	20 BLM/BIA Bond No on file **CO-1104**
21 Elevations (Show whether DF, KDB, RT, GL, etc) **3362'**	22 Approximate date work will start* **07/15/2007**	23 Estimated duration **45 days**

24 Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, must 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 must 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 BLM

25 Signature	Name *(Printed/Typed)* **Stephanie A. Ysasaga**	Date **06/20/2007**
Title **Sr. Staff Engineering Technician**		
Approved by *(Signature)* **/s/ James Stovall**	Name *(Printed/Typed)* **/s/ James Stovall**	Date JUL 23 2007
Title FIELD MANAGER	Office CARLSBAD FIELD 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 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

*(Instructions on page 2)

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

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

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

OCD-ARTESIA

Form 3160-5
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE – *Other instructions on page 2*

5 Lease Serial No
NM-96212

6 If Indian, Allottee or Tribe Name

7 If Unit of CA/Agreement, Name and/or No

1 Type of Well
☐ Oil Well ☑ Gas Well ☐ Other

8 Well Name and No
Indian Hill 6 Federal 1

2 Name of Operator
Devon Energy Production Co , LP

9 API Well No

3a Address
20 North Broadway
OKC, OK 73102-8260

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

10 Field and Pool or Exploratory Area
Angell Ranch, Atoka - Morrow

4 Location of Well *(Footage, Sec , T ,R ,M , or Survey Description)*
SWSW 660' FSL & 860' FWL
Lot M Sec 6-T20S-R28E

11 Country or Parish, State
Eddy County, New Mexico

12 CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other Add DV Tool to APD Casing Program
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13 Describe Proposed or Completed Operation Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA Required subsequent reports must be filed within 30 days following completion of the involved operations If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection)

Devon Energy Production Co , LP respectfully advises of DV tool @ 8,500' in Stage 2 of the Cementing Program for 5 1/2" casing This information was not available at time of APD packet compilation

14 I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
Stephanie A Ysasaga

Title Sr Staff Engineering Technician

Signature

Date 06/25/2007

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by **/s/ James Stovall**

Title FIELD MANAGER

Date JUL 23 2007

Conditions of approval, if any, are attached Approval of this notice 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*

Office CARLSBAD FIELD OFFICE

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

(Instructions on page 2)

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

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
	76310	ANGELL RANCH; ATOKA – MORROW

Property Code	Property Name	Well Number
	INDIAN HILL 6 FEDERAL	1

OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION COMPANY LP	3362'

Surface Location

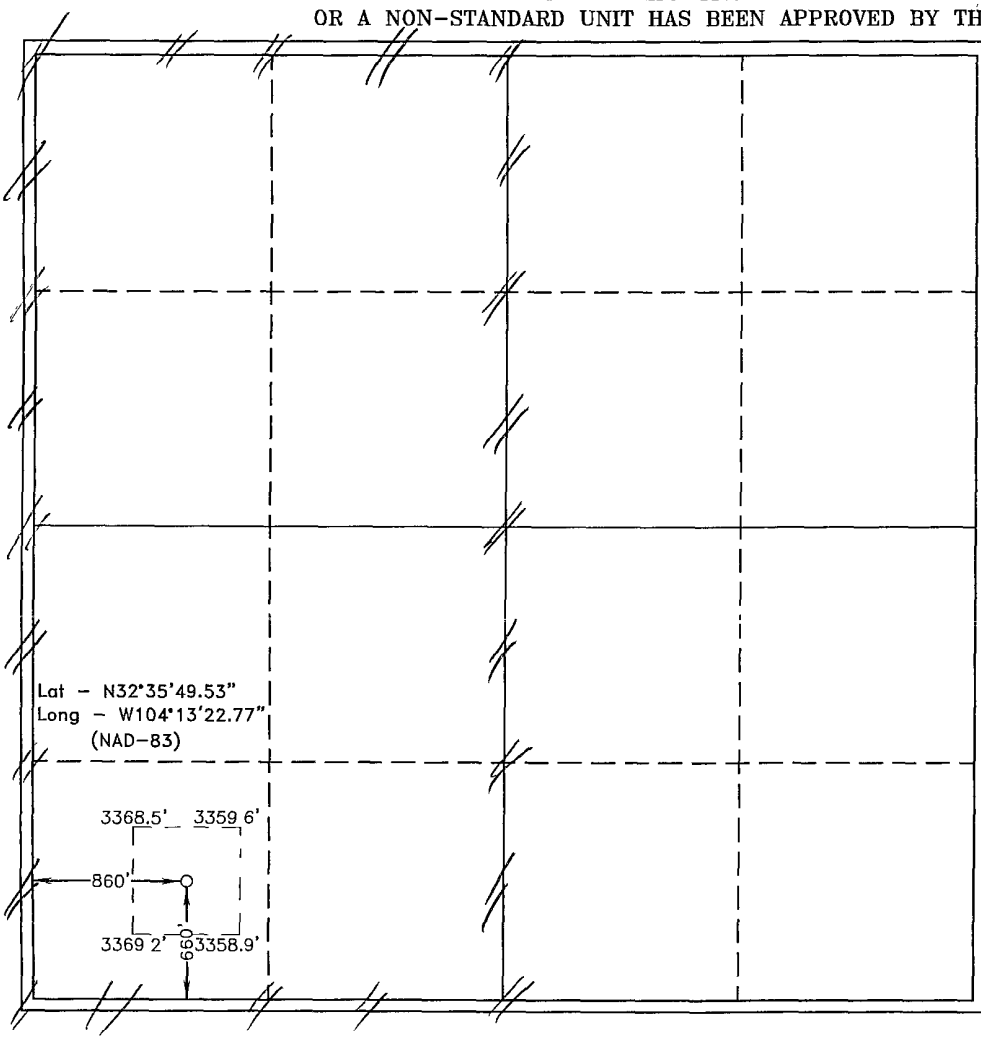
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	6	20 S	28 E		660	SOUTH	860	WEST	EDDY

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	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 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: 06/19/2007

STEPHANIE A. YSASAGA
Printed Name

SURVEYOR CERTIFICATION

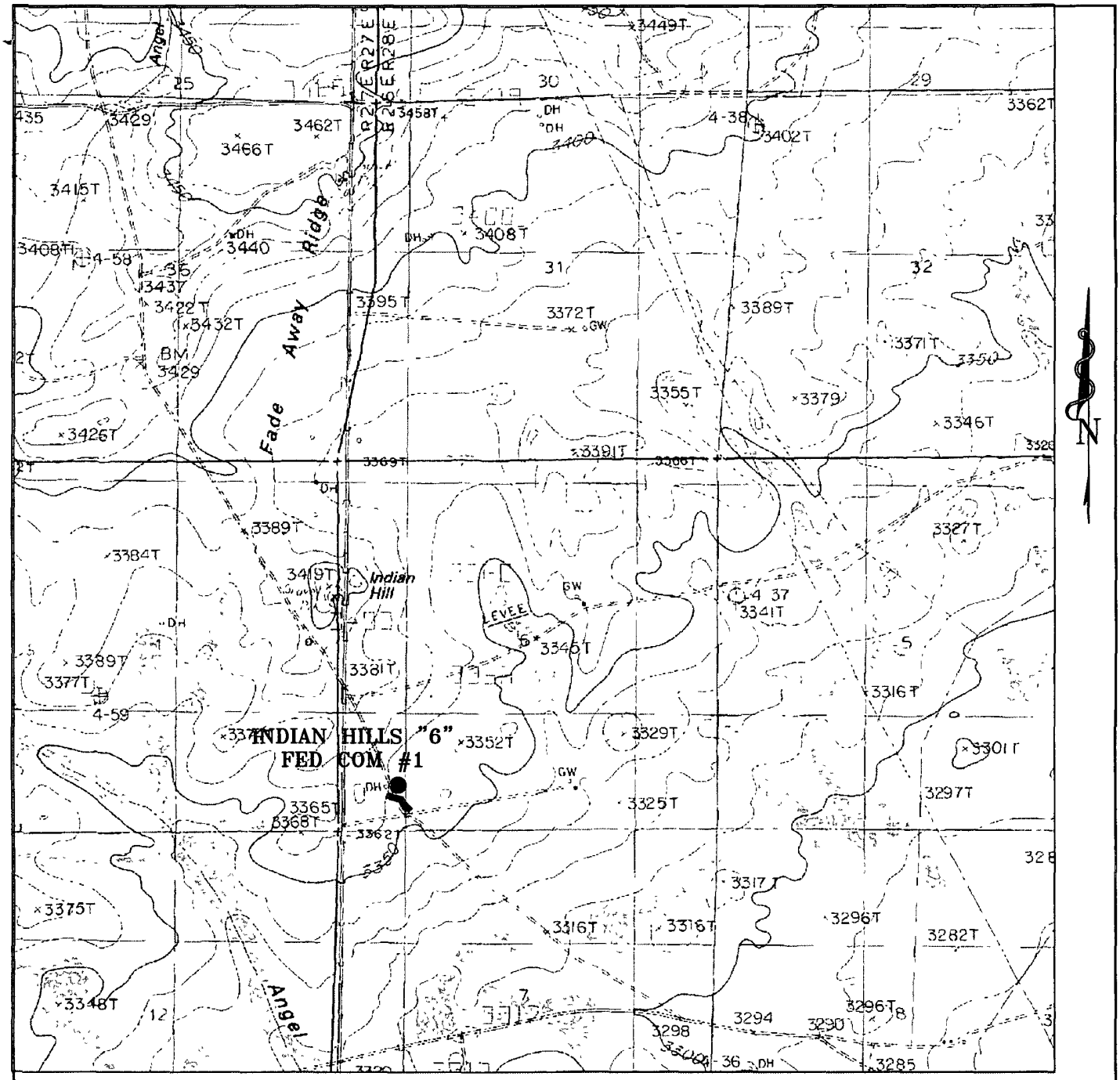
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief

Date Surveyed: JUNE 17, 2007
Signature & Seal of Professional Surveyor

W.O. [illegible]

Certificate No. Gary L. Jones 7977

BASIN SURVEYS



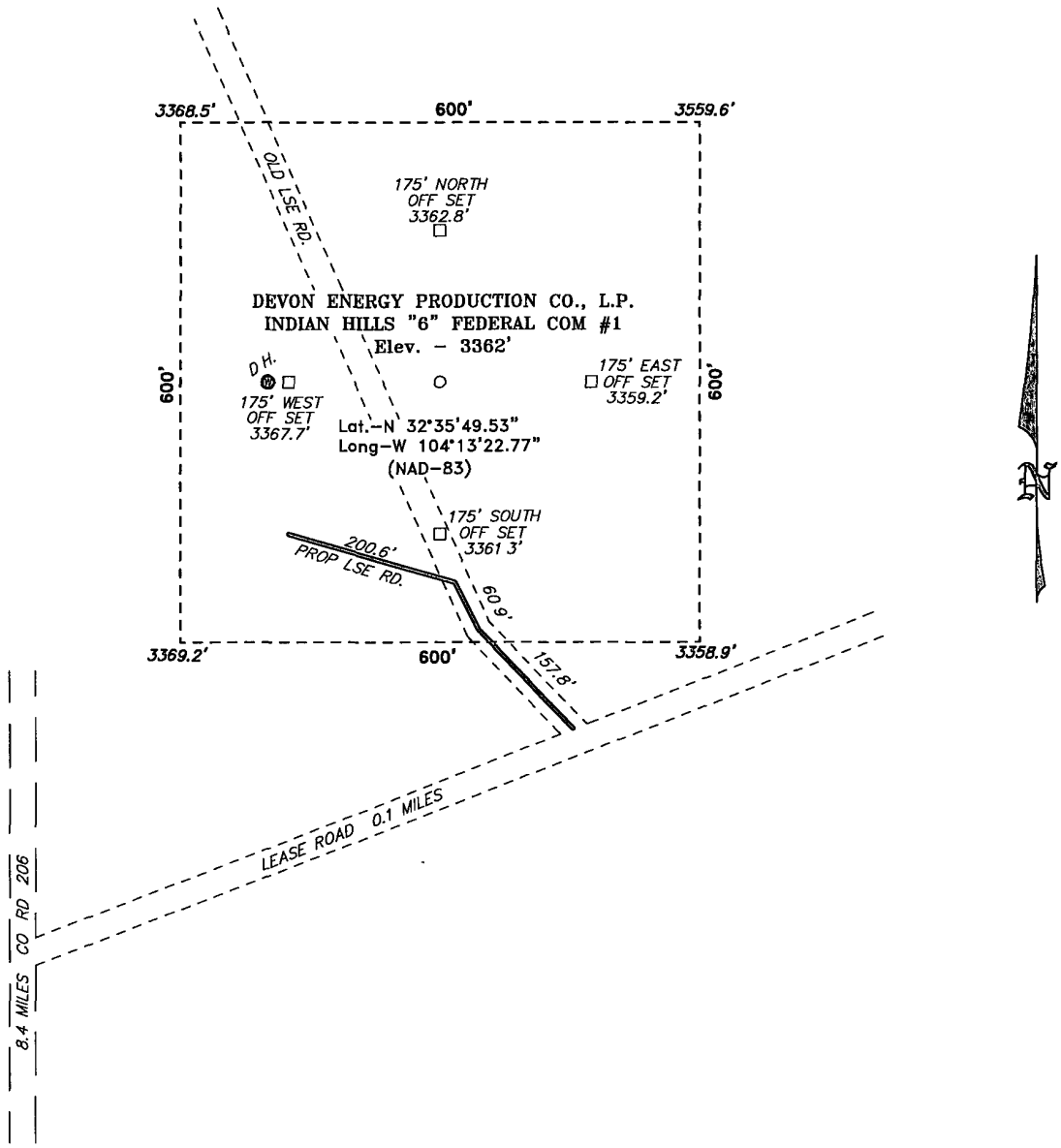
INDIAN HILLS "6" FEDERAL COM #1
Located at 660' FSL AND 860' FWL
Section 6, Township 20 South, Range 28 East,
N.M.P.M., Eddy County, New Mexico.

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 18105T
Survey Date:	06-17-2007
Scale:	1" = 2000'
Date:	06-18-2007

DEVON ENERGY PROD. CO., L.P.

SECTION 6, TOWNSHIP 20 SOUTH, RANGE 28 EAST, N.M.P.M.,
EDDY COUNTY, **NEW MEXICO.**



200 0 200 400 FEET

SCALE: 1" = 200'

Directions to Location:

FROM MILE MARKER 4 OF STATE HWY 200, PROCEED WEST 0.6 MILES TO CO RD. 206 (ILLINOIS CAMP), ON CO. RD 206 GO NORTH FOR 8.4 MILES TO LEASE ROAD, ON LEASE ROAD GO 0.1 MILES TO PROPOSED LEASE ROAD.

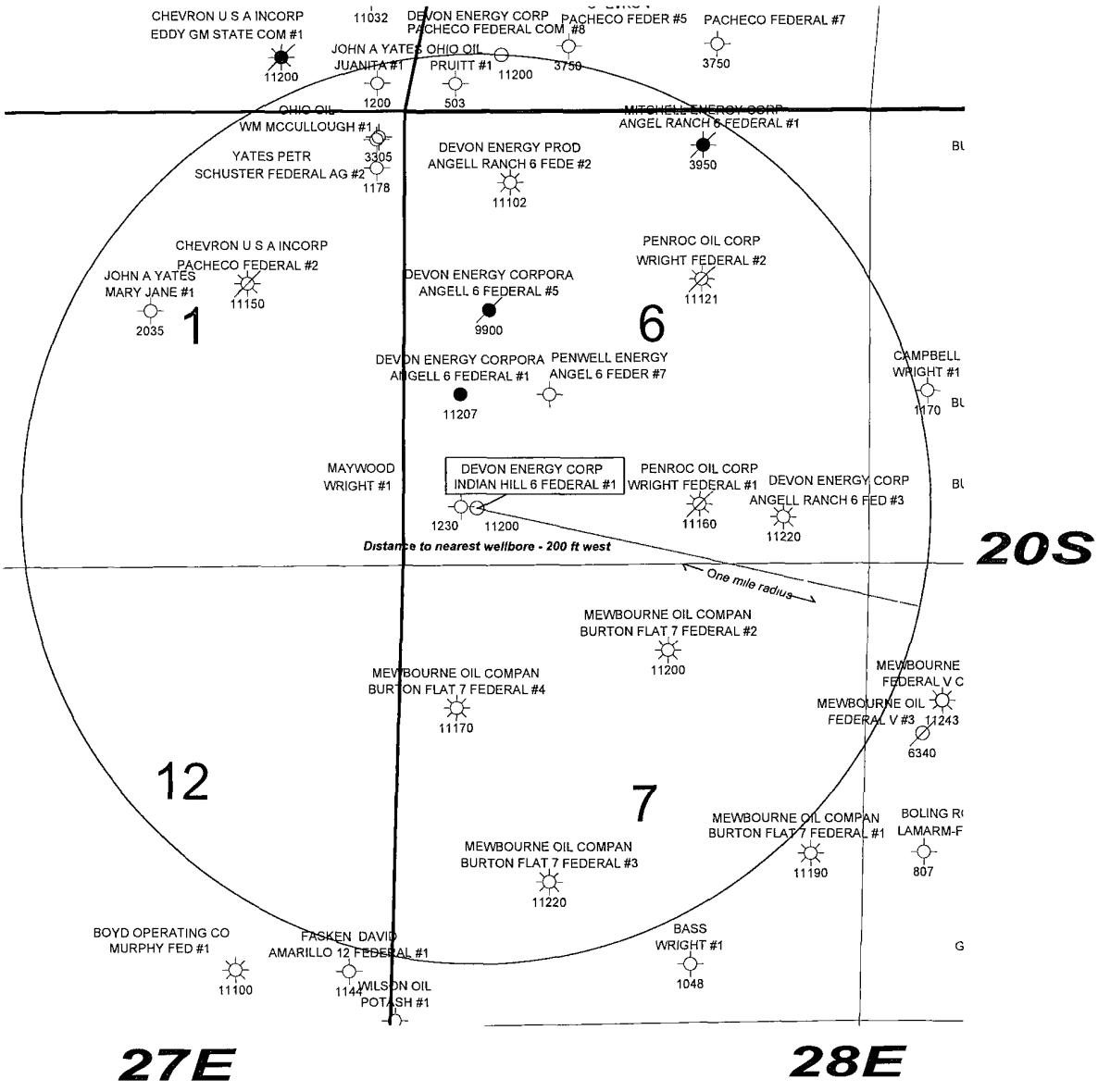
DEVON ENERGY PROD. CO., L.P.

REF: INDIAN HILLS "6" FEDERAL COM #1 / WELL PAD TOPO

THE INDIAN HILLS "6" FEDERAL COM #1 LOCATED 660' FROM THE SOUTH LINE AND 860' FROM THE WEST LINE OF SECTION 6, TOWNSHIP 20 SOUTH, RANGE 28 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 18105	Drawn By: J. M. SMALL		
Date: 06-18-2007	Disk: 18105W JMS	Survey Date: 06-17-2007	Sheet 1 of 1 Sheets



Well Status

D&A	INA-GAS
D&A-G	INA-OIL
D&A-O	INJ
D&A-OG	J&AW
D&AW	LOC
D&AWG	OIL
D&AWO	OIL-WO
J&A	SUS
P&A	TA
D&AWOG	TAW
SERVCE	TA-G
SERW	TA-O
W-INJ	TA-OG
W-INJW	
GAS	
GAS-WO	

devon

Eddy County, NM
Angell Ranch Area
Devon Indian Hill 6 Federal 1 offset well plat

Author		Date
		11 June 2007
	Scale 1" = 2000'	

DRILLING PROGRAM

Devon Energy Production Company, LP
Indian Hill 6 Federal 1
Surface Location: 660' FSL & 860' FWL, Unit M, Sec 6 T20S R28E Eddy, NM
Bottom Hole Location: 660' FSL & 860' FWL, Unit M, Sec 6 T20S R28E Eddy, NM

1. Geologic Name of Surface Formation

a. Quaternary

2. Estimated Tops of Geological Markers & Depths of Anticipated Fresh Water, Oil or Gas:

a.	Yates/Seven Rivers	850'	Oil/Gas/Water
b.	Queen	1075'	
c.	San Andres	1660'	
d.	Delaware	2820'	Oil
e.	Bone Springs Lime	4200'	Oil
f.	3rd Bone Springs Lime	7170'	Oil
g.	3rd Bone Springs Ss	8110'	Oil
h.	Wolfcamp	8650'	Oil
i.	Upper Penn	9325'	Oil
j.	Canyon	9550'	Gas/Oil
k.	Strawn	9850'	Gas/Oil
l.	Atoka	10175'	Gas
m.	Morrow	10675'	Gas
n.	Middle Morrow Lime	10750'	Gas
o.	Lower Morrow	10890'	Gas
p.	Barnett Shale	11020'	
q.	Total Depth	11100'	

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 11 3/4" casing at 400' and circulating cement back to surface. Fresh water sands will be protected by setting 8 5/8" casing at 2850' and circulating cement to surface. The Morrow intervals will be isolated by setting 5 ½" casing to total depth and circulating cement above the base of the 9 5/8" casing.

3. Casing Program:

Hole Size	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
14 ¾"	0' –400'	11 ¾"	0'-400'	42#/ft	ST&C	H-40
11"	400'–2850'	8 5/8"	0-2850'	32#/ft	LT&C	J-55
7 7/8"	2850'- 11100'	5 ½"	0'-11100'	17#/ft	LT&C	HCP-110

Design Parameter Factors:

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
11 ¾"	5.01	4.95	18.28
8 5/8"	1.71	1.38	4.57
5 ½"	1.18	1.26	2.36

4. **Cement Program:**

a. 11 3/4" Surface

Cement with **Lead Slurry:** 155 sacks (35:65) Poz (Fly Ash): Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 93.6% Fresh Water; **Yield:** 1.83 cf/sack. **Tail Slurry:** 200 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 56.3% Fresh Water; **Yield:** 1.35 cf/sack. **Displacement:** 43 2 bbls Mud @ 9.0 ppg. TOC to surface.

b. 8 5/8" Intermediate

Cement with **Lead Slurry:** 495 sacks (35:65) Poz (Fly Ash): Class C Cement + 5% bwow Sodium chloride + 0.125 lbs/sack Cello Flake + 5 lbs/sack LCM-1 + 6% bwoc bentonite + 5.8% Fresh Water; **Yield:** 1.95 cf/sack. **Tail Slurry:** 250 sacks (60:40) Poz (Fly Ash): Class C Cement + 5% bwow Sodium chloride + 0.5% bwoc sodium Metasilicate + 4% bwoc MPA-1 + 64.8% Fresh Water; **Yield:** 1.37 cf/sack. **Displacement:** 164.3 bbls Mud @ 9.5 ppg. TOC to surface.

c. 5 1/2" Production

Cement with **Stage 1:**
Cement Slurry: 580 sacks (15:61:11) Poz (Fly Ash): Class C Cement: CSE-2 + 0.6% bwoc FL-52A + 1% bwow potassium Chloride + 0.75% bwoc EC-1 + 0.125 lbs/sack Cello Flake + 0.4% bwoc CD-32 + 5 lbs/sack LCM-1 + 0.6% bwoc FL-25 + 70.4% Fresh Water; **Yield:** 1.57 cf/sack. **Displacement:** 256.2 bbls Displacement Fluid.

Stage 2:
Lead Slurry: 715 sacks (35:65) Poz (Fly Ash): Class H Cement + 0.125 lbs/sack Cello Flake + 3 lbs/sack LCM-1 + 6% bwoc bentonite + 0.4% bwoc FL-52A + 99.3% Fresh water; Yield: 1.95 cf/sack. **Tail Slurry:** 515 sacks (60:40) Poz (Fly Ash): Class H Cement + 1% bwow Sodium Chloride + 0.75% bwoc BA-10 + 0.1% woc R-3 + 2 lbs/sack Kol Seal + 4% bwoc MPA-1 + 0.125 lbs/sack Cello Flake + 61.3% Fresh Water; **Yield:** 1.34 cf/sack. Displacement: 197.6 bbls Displacement Fluid. TOC @ 2600'.

SEE COA

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 8 5/8" casing shoe. All casing is new and API approved.

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 BOP will be installed on the 11 3/4" 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 11 3/4" casing shoe (70% of 48#, H-40 casing).** Prior to drilling out the 8 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' – 400'	8.4-9.4	32-40	N/C	Fresh Water- Gel Lime
400'– 2850'	10.0	28	N/C	Brine Water
2850'–9600'	8.6–10.0	28	N/C	Cut Brine
9600'-11100'	9.4-10.8	32-40	6-10cc	BrineWater/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 11 3/4" casing shoe until the 5 1/2" casing is cemented. Breathing equipment will be on location upon drilling the 11 3/4" shoe until total depth is reached.

8. **Logging, Coring, and Testing Program:**
   a. Drill stem tests will be based on geological sample shows.
   b. If a drill stem test is anticipated; a procedure, equipment to be used and safety measures will be provided via sundry notice to the BLM.
   c. 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 5 ½" production casing. Specific intervals will be targeted based on log evaluation, geological sample shows and drill stem tests.

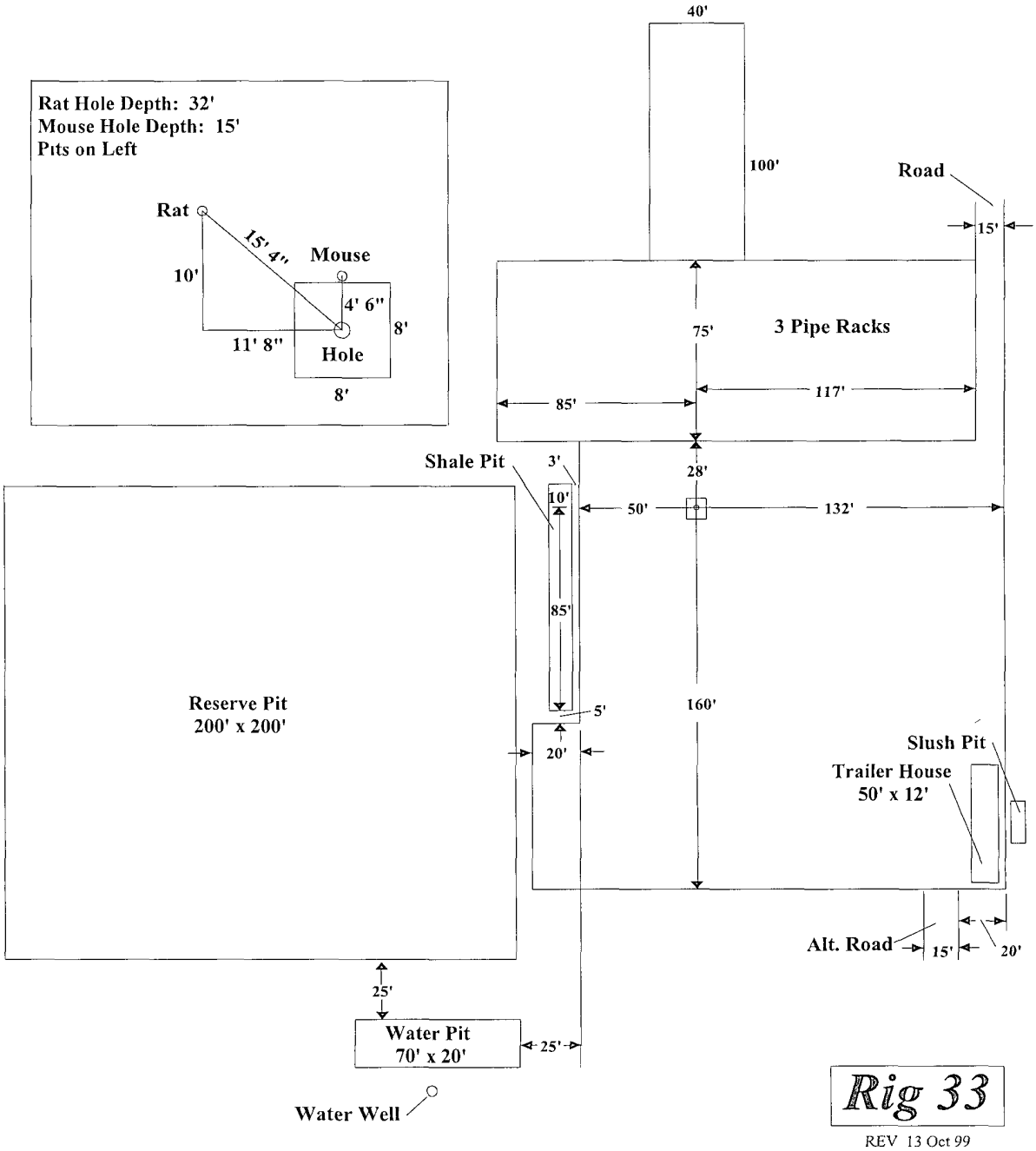
9. Potential Hazards:

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 4700 psi and Estimated BHT 180°. No H2S is anticipated to be encountered.

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.

Pits Southwest
V-Door Northwest



Rig 33

REV 13 Oct 99

RIG 33

CLASSIFICATION: National 80-UE SCR

DRILLING DEPTH CAPACITY: 15,000'

POWER SYSTEM:
Three (3) Caterpillar D-398 engines with Kato 800 KW AC generators, and
Ross Hill SCR model 1650, three (3) bays to power pumps, drawworks and lighting plus hotel load

DRAWWORKS:
National 80-UE with Elmagco 6032 brake driven by two (2) 1,000 HP GE 752 DC traction motors

MAST:
Pyramid 136' x 21' base, and 800,000# static hook load

DRILL LINE:
1-1/4" EIPS

SUBSTRUCTURE:
Pyramid box on box 21' high, 600,000# rotary capacity with 350,000# set back capacity, 16 67' clear height from rotary beam to ground level

MUD PUMPS:
Two (2) National 9-P-100 triplex pump rated at 1,000 HP, each driven by one (1) 1,000 HP GE 752 DC traction motor

ROTARY:
National C-275, 27-1/2"

CROWN BLOCK:
Pyramid with six (6) sheaves

TRAVELING BLOCK AND HOOK:
National 545-G-350 ton block with BJ hook

SWIVEL:
Oilwell PC-425, 425 ton

DRILL PIPE:
4-1/2" OD

DRILL COLLARS:
As Required

KELLY:
5-1/4" Hex x 41'

ANNULAR PREVENTERS:
Shaffer 13-5/8" x 5,000 psi WP

RAM PREVENTERS:
Cameron Type U, double ram, 13-5/8" x 10,000 psi WP, H2S trim

CHOKE MANIFOLD:
Cameron 4-1/16" x 3-1/16" 10,000 psi WP dual choke

ACCUMULATOR SYSTEM:
Koomey six (6) station Model T-20, 180 gal capacity with dual air pumps and one (1) electric pump

MUD TANK SYSTEM:
Two (2) tank 1124 BBL total
Two (2) Derrick Flow Line cleaner
Demco three (3) cone desander
Brandt, sixteen (16) cone desilter
Swaco vacuum degasser

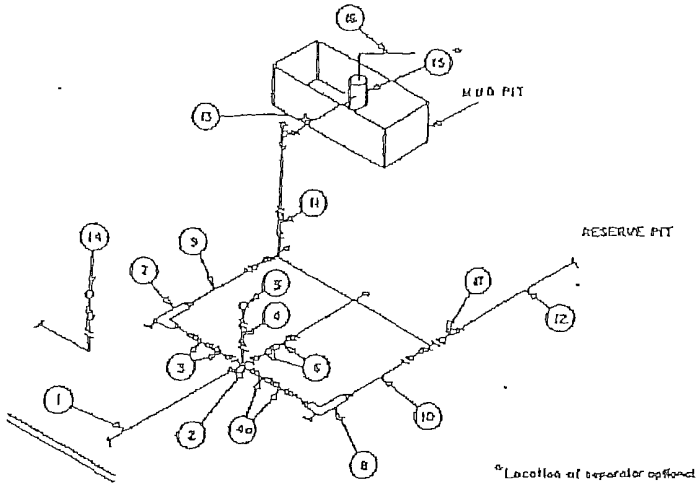
MUD MIXING PUMPS:
Two (2) 6" x 8" centrifugal pumps each driven by a 75 HP electric motor

AUXILIARY EQUIPMENT:
Toolpusher and crew quarters
Two (2) 500 BBL water tank
One (1) 9,000 gal fuel tank
Automatic driller
Two (2) air hoists
Kelly spinner
Pipe spinner
Electronic drilling recorder
0 - 7 degree drift indicator (standard only)

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

3 MWP - 5 MWP - 10 MWP

Exhibit E



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

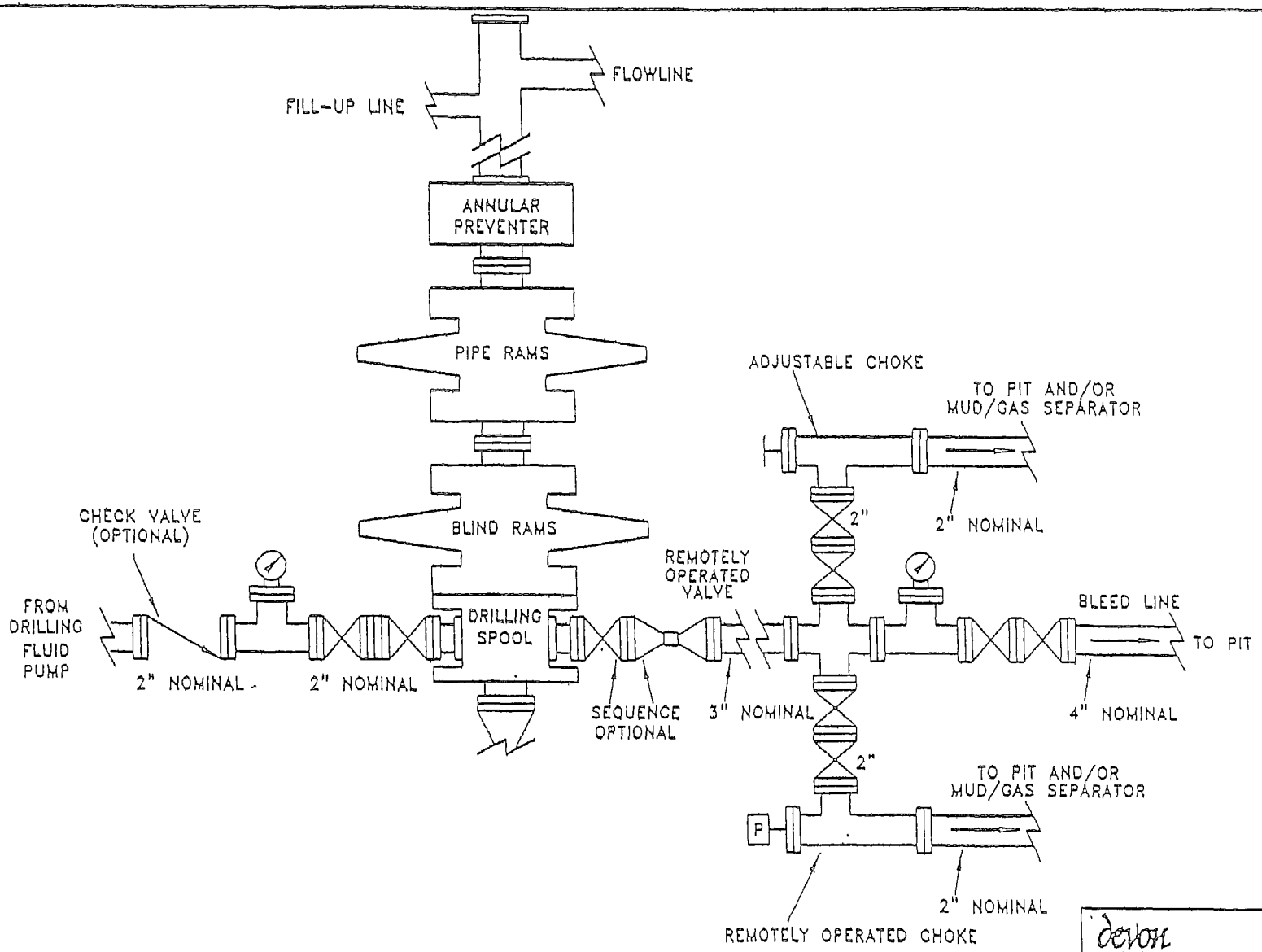
(1) Only one required in Class 3M.

(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
Indian Hill 6 Federal 1
Surface Location: 660' FSL & 860' FWL, Unit M, Sec 6 T20S R28E, Eddy, NM
Bottom hole Location: 660' FSL & 860' FWL, Unit M, Sec 6 T20S R28E, 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.

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
Indian Hill 6 Federal 1
Surface Location: 660' FSL & 860' FWL, Unit M, Sec 6 T20S R28E Eddy, NM
Bottom Hole Location: 660' FSL & 860' FWL, Unit M, Sec 6 T20S R28E Eddy, NM

1. **Existing Roads:**
   a. The well site and elevation plat for the proposed well are reflected on the well site layout; Form C-102. The well was staked by Basin Surveys.
   b. All roads into the location are depicted on Exhibit 3.
   c. Directions to Location: From mile marker 4 of State Hwy 200, proceed west 0.6 miles to Co. Rd 206 (Illinois Camp), on Co. Rd. 206 go north for 8.4 miles to lease road, on lease road go 0.1 miles to proposed lease road.

2. **New or Reconstructed Access Roads:**
   a. The well site layout, Form C-102 shows the existing County Road. Approximately 420' 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. **Location of Existing Wells:**
   1 Mile Radius Plat shows all existing and proposed wells within a one-mile radius of the proposed location. See attached plat.

4. **Location of Existing and/or Proposed Production Facilities:**
   a. In the event the well is found productive, the Indian Hill 6 Federal 1 tank battery would be utilized and the necessary production equipment will be installed at the well site. See Production Facilities Layout diagram.
   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. See attached plat on C-102 for proposed pipeline east of location to DCP. Will lay approximately 1540' of 4" steel pipeline flowing from the Indian Hill 6 Federal 1 location to the DCP connection. Will be buried 36" from surface to pipe.
   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.

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

6. **Construction Materials:**
All caliche utilized for the drilling pad and proposed access road will be obtained from an existing BLM approved pit or from prevailing deposits found under the location. All roads will be constructed of 6" rolled and compacted caliche. Will use BLM recommended use of extra caliche from other locations close by for roads, if available.

7. **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. 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.
   f. Disposal of fluids to be transported by the following companies:
      i. American Production Service Inc, Odessa TX
      ii. Gandy Corporation, Lovington NM
      iii. I & W Inc, Loco Hill NM
      iv. Jims Water Service of Co Inc, Denver CO

8. **Ancillary Facilities:** No campsite or other facilities will be constructed as a result of this well.

9. **Well Site Layout**
   a. Exhibit D shows the proposed well site layout with dimensions of the pad 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.
   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 to preclude endangering wildlife.

10. Plans for Surface Reclamation:

a. After concluding the drilling and/or completion operations, if the well is found non-commercial, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The road will be reclaimed as directed by the BLM. The reserve pit area will be broken out and leveled after drying to a condition where these efforts are feasible. The original top soil will again be returned to the pad and contoured, as close as possible, to the original topography. Will close the pits per OCD compliance regulations.
b. The pit lining will be buried or hauled away in order to return the location and road to their pristine nature. All pits will be filled and location leveled, weather permitting, within 120 days after abandonment.
c. The location and road will be rehabilitated as recommended by the BLM.
d. If the well is a producer, the reserve pit fence will be torn down after the pit contents have dried. The reserve pit and those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.
e. If the well is deemed commercially productive, the reserve pit will be restored as described in 10(A) within 120 days subsequent to the completion date. Caliche from areas of the pad site not required for operations will be reclaimed. The original top soil will be returned to the area of the drill pad not necessary to operate the well. These unused areas of the drill pad will be contoured, as close as possible, to match the original topography.

11. Surface Ownership

a. The surface is owned by the US Government and is administered by the Bureau of Land Management. The surface is multiple use with the primary uses of the region for the grazing of livestock and the production of oil and gas.
b. The proposed road routes and the surface location will be restored as directed by the BLM.

12. 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, sagebush, yucca and miscellanous weeds. No wildlife was observed but it is likely that deer, rabbits, coyotes, and rodents traverse the area.
b. There is no permanent or live water in the general proximity of the location.
c. There are no dwellings within 2 miles of location.
d. A Cultural Resources Examination will be completed by Southern New Mexico Archaeological Services, Inc. and forwarded to the BLM office in Carlsbad, New Mexico.

13. Bond Coverage:

Bond Coverage is Nationwide; Bond # is CO-1104

Operators Representatives:

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

Greg McGowen
Operations Engineer Advisor

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20 North Broadway, Suite 1500
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(405) 228-8965 (office)
(405) 464-9769 (cell)
Gregory.McGowen@dvn.com

Joe Johnson
Superintendent

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

(505) 748-0171 (office)
(505) 513-0630 (cell)
Joe.Johnson@dvn.com

Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road proposed herein; that I am familiar with the conditions that presently exist; that I have full knowledge of State and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or Devon Energy Production Company, L.P. am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

I hereby also certify that I, or Devon Energy Production Company, L.P. have made a good faith effort to provide the surface owner with a copy of the Surface Use Plan of Operations and any Conditions of Approval that are attached to the APD.

Executed this 19th day of June, 2007.
Printed Name: Stephanie A. Ysasaga
Signed Name: _____
Position Title: Sr. Staff Engineering Technician
Address: 20 North Broadway, OKC OK 73102
Telephone: (405)-552-7802
Field Representative (if not above signatory): Joe Johnson (see above)
Address (if different from above):
Telephone (if different from above):
E-mail (optional):

Conditions of Approval
Cave and Karst

EA#: NM-520-07-0971
Lease #: NM-96212
Devon Energy Production Company, L.P.
Indian Hill 6 Fed. #1

Cave/Karst Surface Mitigation
The following stipulations will be applied to minimize impacts during construction, drilling and production.

Berming:
Any tank batteries will be constructed and bermed large enough to contain any spills that may occur.

Bermed areas will be lined with rip-stop padding to prevent tears or punctures in liners and lined with a permanent 20 mil plastic liner.

Cave/Karst Subsurface Mitigation
The following stipulations will be applied to protect cave/karst and ground water concerns:

Rotary Drilling with Fresh Water:
Rotary drilling techniques in cave or karst areas will include the use of fresh water as a circulating medium in zones where caves or karst features are expected. Use depth to the deepest expected fresh water as listed in the geologist report.

Casing:
All casing will meet or exceed National Association of Corrosion Engineers specifications pertaining to the geology of the location and be run to American Petroleum Institute and BLM standards.

Lost Circulation:
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported.

Regardless of the type of drilling machinery used, if a void (bit drops) of four feet or more and circulation losses greater then 75 percent occur simultaneously while drilling in any cave-bearing zone, drilling operations will immediately stop and the BLM will be notified by the operator. The BLM will assess the consequences of the situation and work with operator on corrective actions to resolve the problem.

Record Keeping:
The Operator will track customary drilling activities, including the rate of penetration, pump pressure, weight on bit, bit drops, percent of mud returns, and presence of absence of cuttings returning to the surface. As part of customary record keeping, each detectable void or sudden increase in the rate of penetration not attributable to a change in the formation type should be documented and evaluated as it is encountered.

CONDITIONS OF APPROVAL - DRILLING

Operator's Name:	**Devon Energy Prod. Co. LP**
Well Name & No.	**Indian Hill 6 Federal # 1**
Location:	**660'FSL, 860'FWL, SEC6, T20S, R28E, Eddy County, NM**
Lease:	**NM-96212**

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. A Hydrogen Sulfide (H2S) Drilling Plan is N/A.

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. If floor controls are required, (3M or Greater) controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

II. CASING:

A. The **11.75** inch surface casing shall be set at **approximately 400 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 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.

B. The minimum required fill of cement behind the **8.625** inch intermediate casing is circulating cement to the surface. If cement does not circulate see A.1 thru 4.

C. The minimum required fill of cement behind the **5.5** inch production casing is circulating cement to 200 feet above the shoe of the _8.625 inch_ intermediate casing, **unless circulation is lost while drilling the well bore for the 8.625 inch casing; in which case, cement will be brought up to 200 feet above the most shallow lost circulation interval in that well bore.**

D. 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 I 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.

B. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **_2000_** psi.

C. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **8.625 inch** Intermediate casing shoe shall be _5000_ psi.

D. 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, section 17. 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. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.
6. A variance to test the BOP/BOPE **nippled up on the** surface casing to the reduced pressure of **1200** psi with the rig pumps is approved.

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.

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

V. Hazards:

1. Our geologist has indicated that there is High potential for Cave / Karst features.
2. Our geologist has indicated that there is potential for lost circulation in the Grayburg, San Andres, Wolfcamp and Delaware.
3. Our geologist has indicated that there is potential for abnormal pressure in the Wolfcamp formation and the Pennsylvanian system.

Engineering can be reached at 505-706-2779 for variances.

FWright 6/29/07