JUN 22 2009

OCD-ARTESIA

R-111-POTASH

Form 3160-3
(February 2005)

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

5 Lease Serial No.
NMNM-100561

6 If Indian, Allotee or Tribe Name

1a Type of work: ☑ DRILL ☐ REENTER

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.
Strawberry 7 Federal 3

2. Name of Operator
Devon Energy Production Co., LP

9 API Well No
30-015-37171

3a Address **20 North Broadway, OKC, OK 73102**

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

10 Field and Pool, or Exploratory
Hackberry; Bone Springs, North

4 Location of Well *(Report location clearly and in accordance with any State requirements.)*
At surface **NWNW 330' FNL & 660' FWL** UNORTHODOX LOCATION
At proposed prod zone **NWNW 330' FNL & 660' FWL**

11 Sec, T. R. M or Blk and Survey or Area
Sec 7 T19S-R31E Lot D

14 Distance in miles and direction from nearest town or post office*
Approximately 22 miles northeast 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) **330'**	16 No of acres in lease **193.44**	17 Spacing Unit dedicated to this well **36.64**
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft **930'**	19 Proposed Depth **9,800'**	20 BLM/BIA Bond No on file **CO-1104**
21 Elevations (Show whether DF, KDB, RT, GL, etc.) **3442' GL**	22 Approximate date work will start* **07/01/2008**	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)*	Date
	Stephanie A. Ysasaga	**09/25/2008**

Title **Sr. Staff Engineering Technician**

Approved by *(Signature)* **/s/ Jesse J. Juen**	Name *(Printed Typed)*	Date **JUL 16 2009**
Title **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 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)

Capitan Controlled Water Basin

SEE ATTACHED FOR CONDITIONS OF APPROVAL

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

7013

ATS-08-1080

OCD-ARTESIA

R-111-POTASH

Form 3160-3
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

1a. Type of work: ☑ DRILL ☐ REENTER	5 Lease Serial No.: NMNM-100561
1b Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone	6 If Indian, Allotee or Tribe Name
2 Name of Operator: Devon Energy Production Co., LP	7 If Unit or CA Agreement, Name and No
3a Address: 20 North Broadway, OKC, OK 73102	8 Lease Name and Well No: Strawberry 7 Federal 3
3b Phone No. (include area code): (405)-552-7802	9 API Well No.
4. Location of Well (Report location clearly and in accordance with any State requirements *)	10 Field and Pool, or Exploratory: Hackberry; Bone Springs, North
At surface: NWNW 330' FNL & 660' FWL	11 Sec, T R M or Blk and Survey or Area
At proposed prod zone: NWNW 330' FNL & 660' FWL	Sec 7 T19S-R31E Lot D
14 Distance in miles and direction from nearest town or post office*: Approximately 22 miles northeast 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): 330'	16 No of acres in lease: 193.44	17 Spacing Unit dedicated to this well: 36.64
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft: 930'	19 Proposed Depth: 10,000'	20 BLM/BIA Bond No. on file: CO-1104
21 Elevations (Show whether DF, KDB, RT, GL, etc): 3442' GL	22 Approximate date work will start*: 07/01/2008	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: 09/25/2008
Title: Sr. Staff Engineering Technician		
Approved by (Signature)	Name (Printed/Typed)	Date
Title	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

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
30-015-37171	97056	HACKBERRY; BONE SPRINGS, NORTH

Property Code	Property Name	Well Number
37757	STRAWBERRY "7" FEDERAL	3

OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION COMPANY LP	3442'

Surface Location

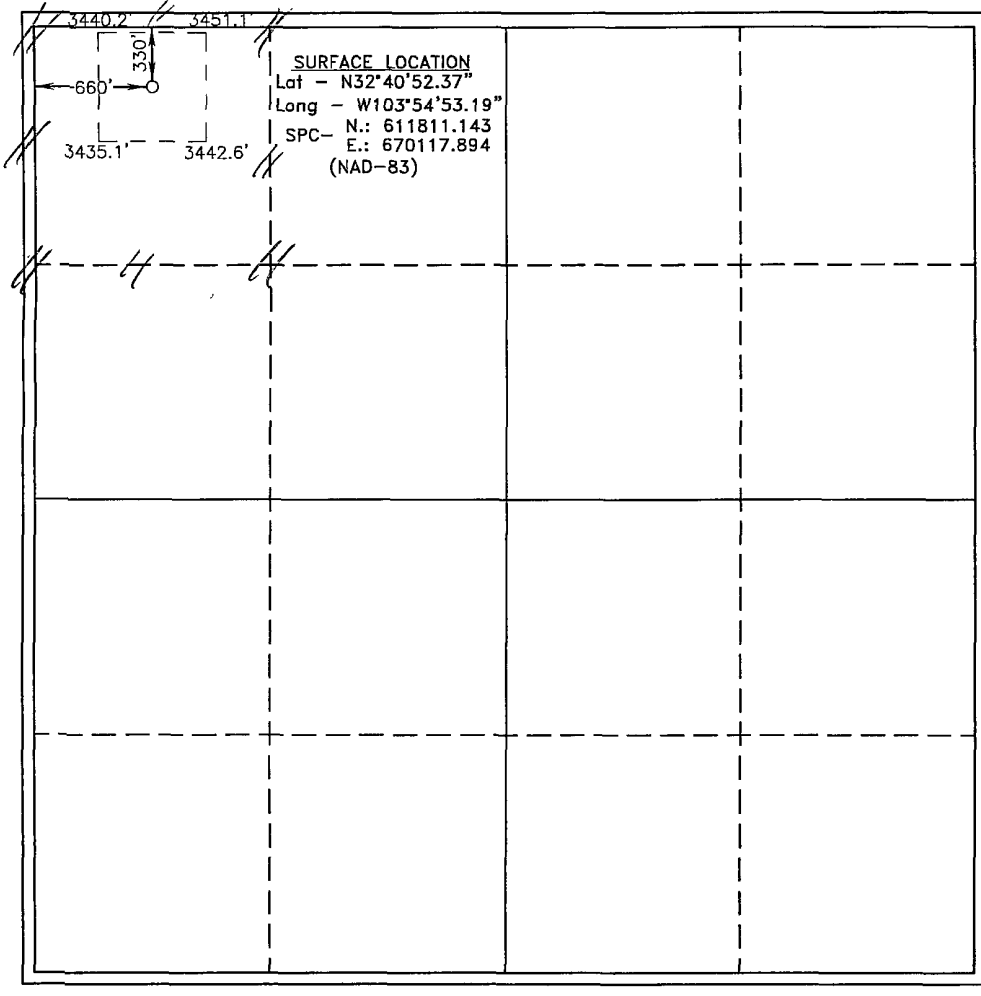
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	7	19 S	31 E		330	NORTH	660	WEST	EDDY

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.
36.64			

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.

06/09/08
Signature Date

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.

FEBRUARY 1, 2008
Date Surveyed

Signature & Seal of Professional Surveyor

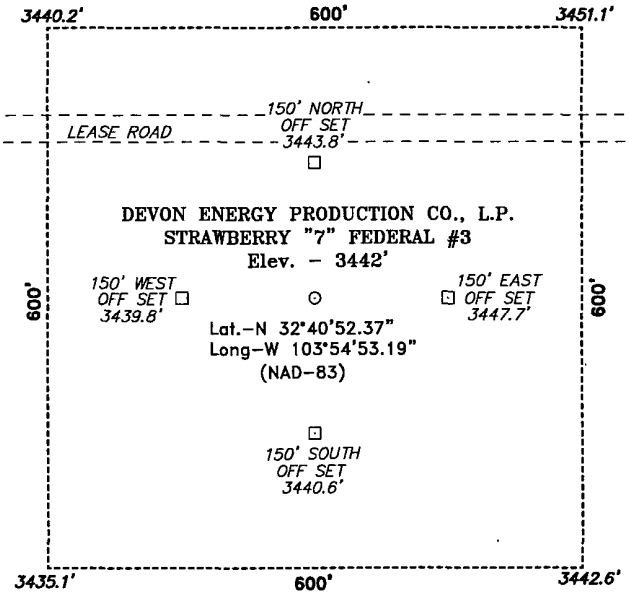
GARY L. JONES NEW MEXICO 7977

W.O. [illegible]

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

SECTION 7, TOWNSHIP 19 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 US HWY. 82 AND CO. RD. 222, GO SOUTH 8.2 MILES TO LEASE ROAD, ON LEASE ROAD GO WEST 2.5 MILES THENCE SOUTHEAST 0.1 MILES AROUND HILL THENCE EAST 0.1 MILES TO PROPOSED LOCATION.

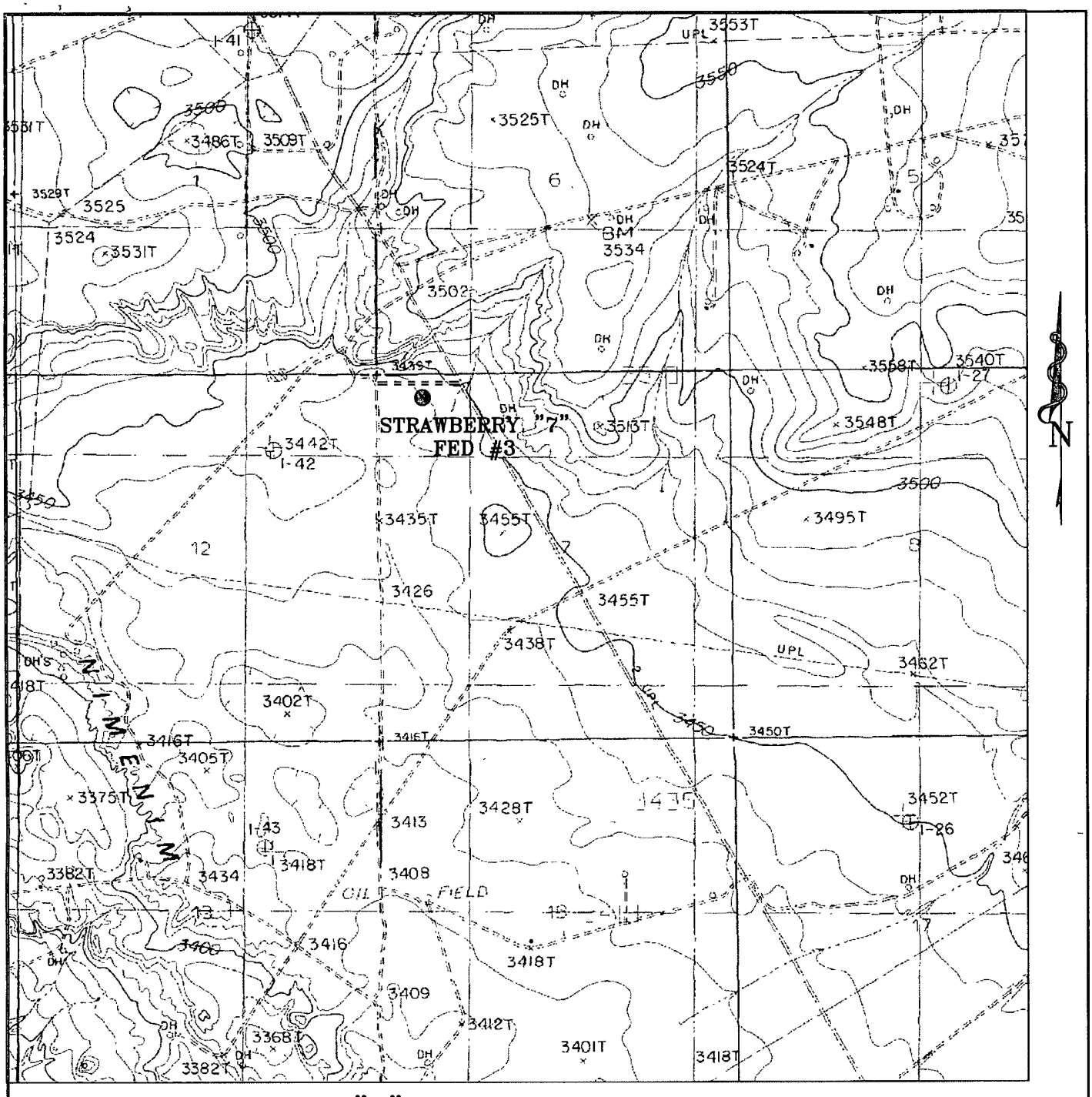
DEVON ENERGY PROD. CO., L.P.

REF: STRAWBERRY "7" FEDERAL #3 / WELL PAD TOPO

THE STRAWBERRY "7" FEDERAL #3 LOCATED 330' FROM THE NORTH LINE AND 660' FROM THE WEST LINE OF SECTION 7, TOWNSHIP 19 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

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

W.O. Number: 19066	Drawn By: J. M. SMALL		
Date: 02-19-2008	Disk: 19066W JMS	Survey Date: 02-01-2008	Sheet 1 of 1 Sheets



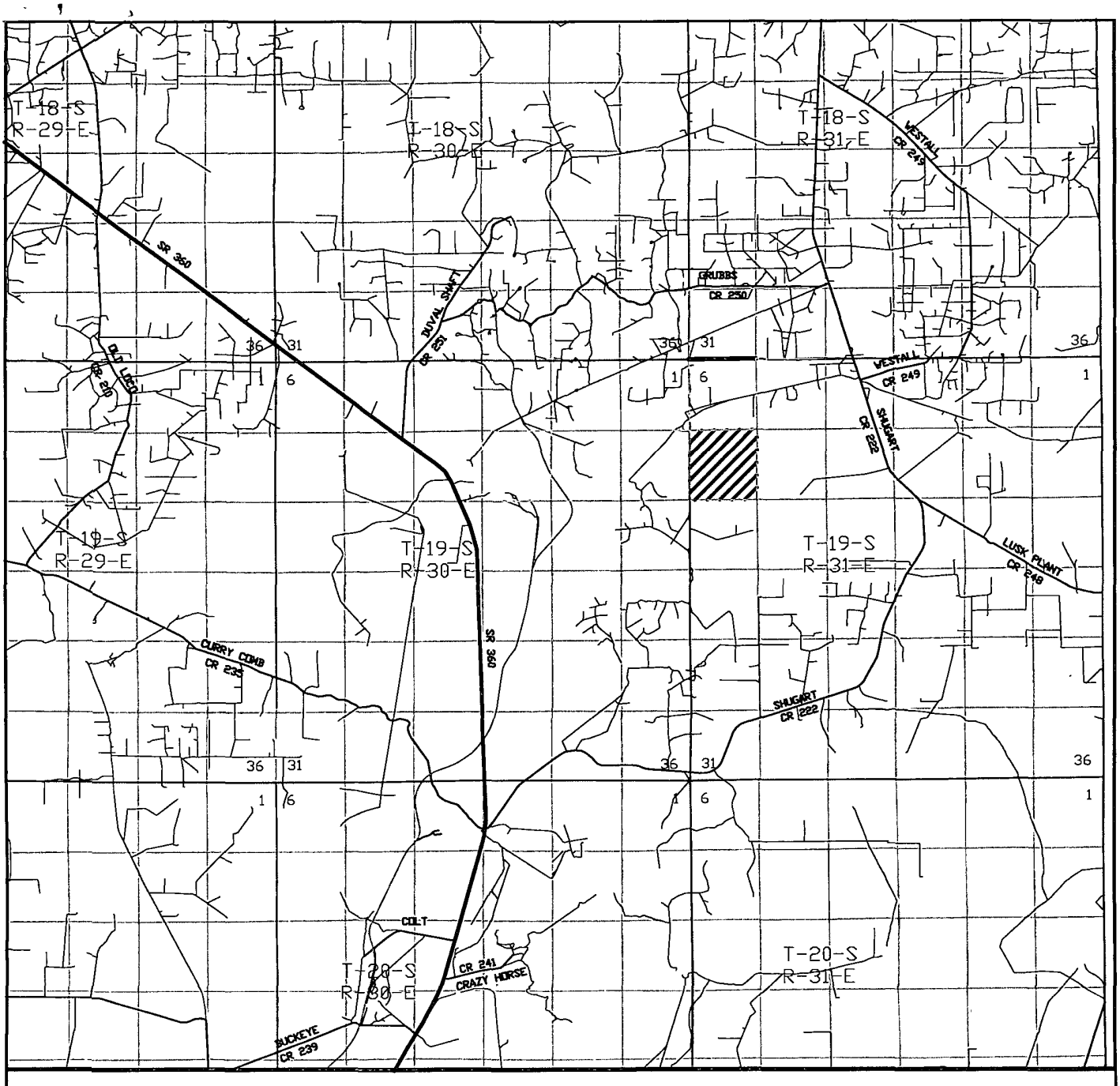
STRAWBERRY "7" FEDERAL #3
Located at 330' FNL AND 660' FWL
Section 7, Township 19 South, Range 31 East,
N.M.P.M., Eddy County, New Mexico.

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 19066T
Survey Date:	02-01-2008
Scale:	1" = 2000'
Date:	02-19-2008

DEVON ENERGY PROD. CO., L.P.



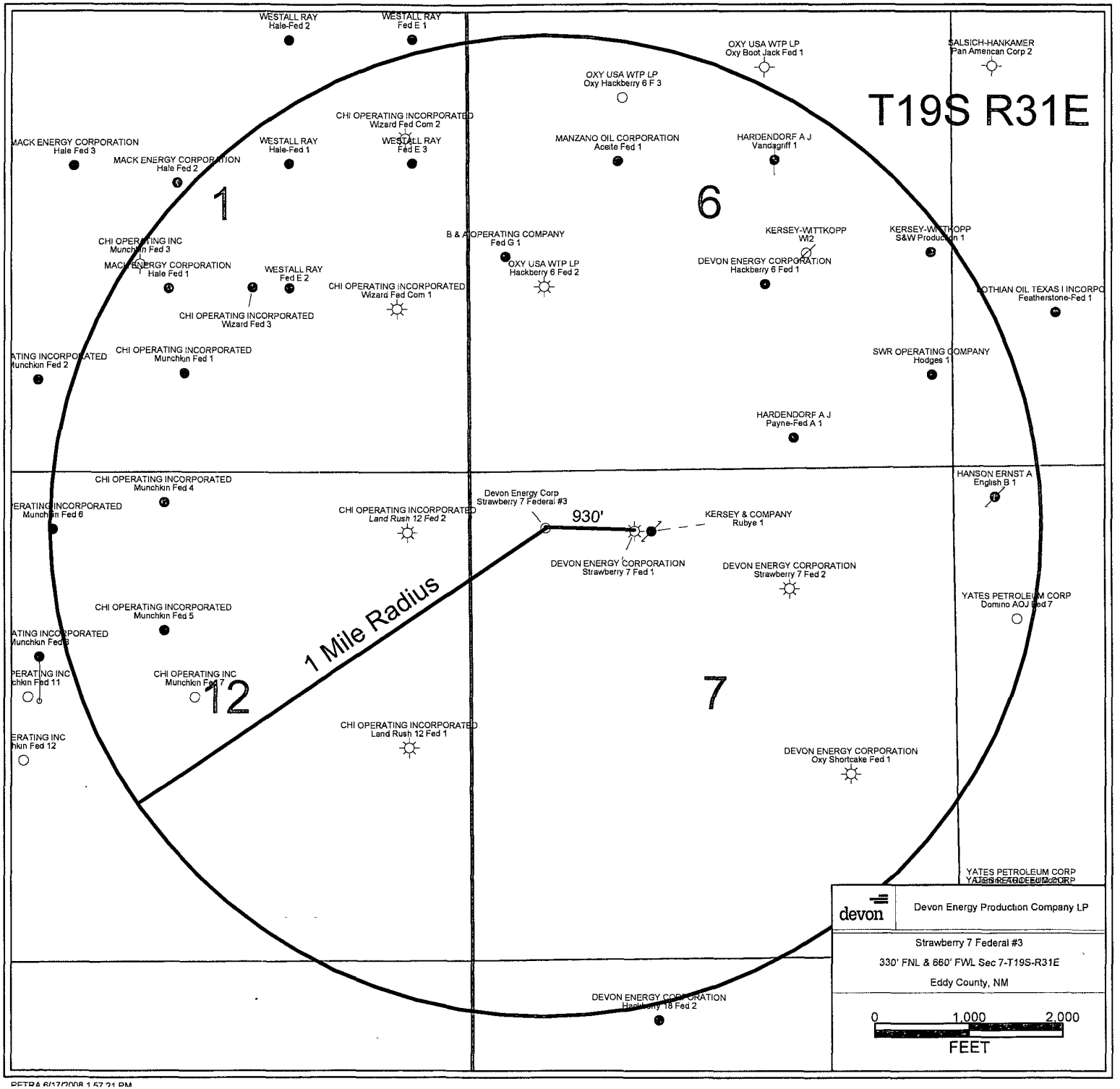
DEVON STRAWBERRY "7" FEDERAL #3
Located at 330' FNL AND 660' FWL
Section 7, Township 19 South, Range 31 East,
N.M.P.M., Eddy County, New Mexico.

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 19066TR
Survey Date:	02-01-2008
Scale:	1" = 2 MILES
Date:	02-19-2008

DEVON ENERGY PROD. CO., L.P.



PETRA 6/17/2008 1:57:21 PM

DRILLING PROGRAM

Devon Energy Production Company, LP
Strawberry 7 Federal 3
Surface Location: 330' FNL & 660' FWL, Unit D, Sec 7 T19S R31E, Eddy, NM
Bottom hole Location: 330' FNL & 660' FWL, Unit D, Sec 7 T19S R31, 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.	Rustler Dol	470'	
b.	Salado Salt	671'	
c.	Tansil Dol	2092'	
d.	Yates Ss	2310'	Oil
e.	Capitan Lm	3969'	
f.	Cherry Canyon Ss	4359'	Oil
g.	Brushy Canyon Ss	4672'	Oil
h.	1st Bone Spring Lm	6245'	Oil
i.	1st Bone Spring Ss	7662'	Oil
j.	2nd Bone Spring Lm	7972'	Oil
k.	2nd Bone Springs Ss	8504'	Oil
l.	3rd Bone Spring Lm	8913'	Oil
m.	3rd Bone Spring Ss	9361'	Oil
n.	Total Depth	9800'	

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 600' and circulating cement back to surface. Fresh water sands & potash will be protected by setting 8 5/8" casing at 3000' and circulating cement to surface. The Bone Springs intervals will be isolated by setting 5 ½" casing to total depth and circulating cement to surface.

See COA

3. Casing Program:

Hole Size	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
17 1/2"	0' – 600'	13 3/8"	0'-600'	48#/ft	ST&C	H-40
12 1/4"	600'-3000'	8 5/8"	0-3000'	32#/ft	LT&C	K-55
7 7/8"	3000'- 9800'	5 1/2"	0'-9800'	17#/ft	LT&C	N-80

See COA (R-111-P potash)

Design Parameter Factors:

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
13 3/8"	2.53	3.02	8.21
8 5/8"	1.59	2.36	4.93
5 ½"	1.32	2.03	2.01

4. Cement Program: ← See COA

a. 13 3/8" Surface — Cement with 300 sacks (35:65) Poz (Fly Ash):Premium Plus 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 with 250 sacks Premium Plus C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 56.3% Fresh Water. **Yield:** 1.35 cf/sack. Displacement: 87.9 bbls Mud @ 8.5 ppg. TOC to surface.

b. 8 5/8" Intermediate — Cement with 935 sacks (35:65) Poz (Fly Ash):Premium Plus C Cement + 3% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 0.005 gps FP-6L + 105.4% Fresh Water. **Yield:** 2.00 cf/sack. Tail with 300 sacks (60:40) Poz (Fly Ash):Premium Plus C Cement + 5% bwow Sodium Chloride + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-1 + 64.8% Fresh Water. **Yield:** 1.37 cf/sack. **Displacement:** 180.4 bbls Mud @ 9 ppg. TOC to surf.

c. 5 1/2" Production — Cement with **Stage 1:**
Cement Slurry: 570 sacks (60:40) Poz (Fly Ash):Class H Cement + 1% bwow Sodium Chloride + 0.75% bwoc BA-10A + 0.25% bwoc R-3 + 4% bwoc MPA-1 + 0.75% bwoc EC-1 + 0.125 lbs/sack Cello Flake + 3 lbs/sack Kol Seal + 63% Fresh Water. **Yield:** 1.39 cf/sack. **Displacement:** 230.6 bbls Displacement Fluid.

Stage 2
Lead Slurry: 480 sacks (35:65) Poz (Fly Ash):Premium Plus C Cement + 3% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.4% bwoc FL-52A + 6% bwoc Bentonite + 105.4% Fresh Water. **Yield:** 2.00 cf/sack. 390 sacks (60:40) Poz (Fly Ash):Premium Plus C Cement + 1% bwow Sodium Chloride + 0.5% bwoc BA-10A + 0.1% bwoc R-3 + 0.125 lbs/sack Cello Flake + 2 lbs/sack Kol Seal + 4% bwoc MPA-1 + 61.4% Fresh Water. **Yield:** 1.34 cf/sack. **Displacement:** 162.7 bbls Displacement Fluid. DV tool @ 7000'. TOC to surf.

The above cement volumes could be revised pending the caliper measurement from the open hole logs. All casing is new and API approved.

5. **Pressure Control Equipment:** See COA

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 (3000 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. An annular and rotating head will be installed on the 13⅜ surface casing and utilized to setting depth of the 8⅝" intermediate casing. The annular and associated equipment will be tested to **1000 psi with the rig pump before drilling out the 13-3/8" casing shoe.** The BOPE will be installed on the 8⅝" intermediate casing and utilized continuously until total depth is reached. 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.

See COA

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' – 600'	8.4-9.4	32-34	NC	Fresh Water
600'–3000'	9.8-10.2	28-30	NC	Brine
3000'–7500'	8.4-8.5	28	NC	Fresh
7500'-9800'	8.8-9.2	28	NC	Cut Brine

See COA

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 5 1/2" 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. 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

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 5500 psi and Estimated BHT 170°. 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.

Proposal No: 215854013A

Devon Energy Corp
Bone Spring Prospect

Sec. 7-19S-31E
Eddy County, New Mexico
December 21, 2007

Well Recommendation

Prepared for:
Don Webb
Drilling Engineer
Oklahoma City, Oklahoma
Bus Phone: (405) 228-7540

Prepared by:
John Parks
Region Technical Rep.
Oklahoma City, Oklahoma
Bus Phone: (405) 228-4302

THE BLUE WELLBORE℠
Makes better wells

Service Point:
Artesia
Bus Phone: (505) 746-3140
Fax: (505) 746-2293

Service Representatives:
Michael Palmer
Senior Sales Rep
Artesia, New Mexico

Operator Name: Devon Energy Corp
Well Name: Bone Spring Prospect
Job Description: Surface Casing
Date: December 21, 2007

Proposal No: 215854013A

JOB AT A GLANCE

Depth (TVD)	600 ft
Depth (MD)	600 ft
Hole Size	17.5 in
Casing Size/Weight :	13 3/8 in, 48 lbs/ft
Pump Via	13 3/8" O.D. (12.715" .I.D) 48
Total Mix Water Required	4,516 gals
Spacer	
Fresh Water	20 bbls
Density	8.3 ppg
Lead Slurry	
35:65:6 Poz:Class C	300 sacks
Density	12.8 ppg
Yield	1.83 cf/sack
Tail Slurry	
Class C	250 sacks
Density	14.8 ppg
Yield	1.35 cf/sack
Displacement	
Mud	88 bbls
Density	8.5 ppg

Operator Name: Devon Energy Corp
Well Name: Bone Spring Prospect
Job Description: Surface Casing
Date: December 21, 2007

Proposal No: 215854013A

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
17.500 HOLE	600	600

SUSPENDED PIPES

DIAMETER (in)		WEIGHT	DEPTH(ft)	
O.D.	I.D.	(lbs/ft)	MEASURED	TRUE VERTICAL
13.375	12.715	48	600	600

Float Collar set @	560 ft
Mud Density	8.50 ppg
Est. Static Temp.	80 ° F
Est. Circ. Temp.	80 ° F

VOLUME CALCULATIONS

383 ft	x	0.6946 cf/ft	with	100 % excess	=	532.5 cf
217 ft	x	0.6946 cf/ft	with	100 % excess	=	301.1 cf
40 ft	x	0.8818 cf/ft	with	0 % excess	=	35.3 cf (inside pipe)
				TOTAL SLURRY VOLUME	=	868.8 cf
					=	155 bbls

Operator Name: Devon Energy Corp
Well Name: Bone Spring Prospect
Job Description: Surface Casing
Date: December 21, 2007

Proposal No: 215854013A

FLUID SPECIFICATIONS

Spacer 20.0 bbls Fresh Water @ 8.34 ppg

FLUID	VOLUME CU-FT	VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Lead Slurry	532	/ 1.83	= 300 sacks (35:65) Poz (Fly Ash):Premium Plus C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 93.6% Fresh Water
Tail Slurry	336	/ 1.35	= 250 sacks Premium Plus C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 56.3% Fresh Water

Displacement 87.9 bbls Mud @ 8.5 ppg

CEMENT PROPERTIES

	SLURRY NO. 1	SLURRY NO. 2
Slurry Weight (ppg)	12.80	14.80
Slurry Yield (cf/sack)	1.83	1.35
Amount of Mix Water (gps)	9.76	6.35
Estimated Pumping Time - 70 BC (HH:MM)	4:45	2:30
COMPRESSIVE STRENGTH		
8 hrs @ 80 ° F (psi)		500
12 hrs @ 80 ° F (psi)	200	1150
24 hrs @ 80 ° F (psi)	350	2100
72 hrs @ 80 ° F (psi)	500	2700

Operator Name: Devon Energy Corp
Well Name: Bone Spring Prospect
Job Description: Intermediate Casing
Date: December 21, 2007

Proposal No: 215854013A

JOB AT A GLANCE

Depth (TVD)	3,000 ft
Depth (MD)	3,000 ft
Hole Size	12.25 in
Casing Size/Weight :	8 5/8 in, 32 lbs/ft
Pump Via	8 5/8" O.D. (7.921" .I.D) 32
Total Mix Water Required	12,195 gals
Spacer	
Fresh Water	20 bbls
Density	8.3 ppg
Lead Slurry	
35:65:6 Poz:Class C	935 sacks
Density	12.5 ppg
Yield	2.00 cf/sack
Tail Slurry	
60:40 Poz:Class C (MPA)	300 sacks
Density	13.8 ppg
Yield	1.37 cf/sack
Displacement	
Mud	180 bbls
Density	9.0 ppg

Operator Name: Devon Energy Corp
Well Name: Bone Spring Prospect
Job Description: *Intermediate Casing*
Date: December 21, 2007

Proposal No: 215854013A

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
12.715 CASING	600	600
12.250 HOLE	3,000	3,000

SUSPENDED PIPES

DIAMETER (in)		WEIGHT	DEPTH(ft)	
O.D.	I.D.	(lbs/ft)	MEASURED	TRUE VERTICAL
8.625	7.921	32	3,000	3,000

Float Collar set @	2,960 ft
Mud Density	9.00 ppg
Est. Static Temp.	100 ° F
Est. Circ. Temp.	93 ° F

VOLUME CALCULATIONS

600 ft	x	0.4760 cf/ft	with	0 % excess	=	285.6 cf
1,919 ft	x	0.4127 cf/ft	with	100 % excess	=	1583.9 cf
481 ft	x	0.4127 cf/ft	with	100 % excess	=	397.2 cf
40 ft	x	0.3422 cf/ft	with	0 % excess	=	13.7 cf (inside pipe)
				TOTAL SLURRY VOLUME	=	2280.4 cf
					=	406 bbls

Operator Name: Devon Energy Corp
Well Name: Bone Spring Prospect
Job Description: Intermediate Casing
Date: December 21, 2007

Proposal No: 215854013A

FLUID SPECIFICATIONS

Spacer 20.0 bbls Fresh Water @ 8.34 ppg

FLUID	VOLUME CU-FT	VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Lead Slurry	1870	/ 2	= 935 sacks (35:65) Poz (Fly Ash):Premium Plus C Cement + 3% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 0.005 gps FP-6L + 105.4% Fresh Water
Tail Slurry	411	/ 1.37	= 300 sacks (60:40) Poz (Fly Ash):Premium Plus C Cement + 5% bwow Sodium Chloride + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-1 + 64.8% Fresh Water

Displacement 180.4 bbls Mud @ 9 ppg

CEMENT PROPERTIES

	SLURRY NO. 1	SLURRY NO. 2
Slurry Weight (ppg)	12.50	13.80
Slurry Yield (cf/sack)	2.00	1.37
Amount of Mix Water (gps)	11.00	6.37
Amount of Mix Fluid (gps)	11.00	6.37
Estimated Pumping Time - 70 BC (HH:MM)	3:30	2:30
COMPRESSIVE STRENGTH		
8 hrs @ 112 ° F (psi)		500
12 hrs @ 112 ° F (psi)	150	1000
24 hrs @ 112 ° F (psi)	350	2400
72 hrs @ 112 ° F (psi)	900	3000

ACTUAL CEMENT VOLUMES MAY VARY BASED ON FLUID CALIPER.

Operator Name: Devon Energy Corp
Well Name: Bone Spring Prospect
Job Description: Long String
Date: December 21, 2007

Proposal No: 215854013A

JOB AT A GLANCE

Depth (TVD)	10,000 ft
Depth (MD)	10,000 ft
Hole Size	7.875 in
Casing Size/Weight :	5 1/2 in, 17 lbs/ft
Pump Via	5 1/2" O.D. (4.892" .I.D) 17
Total Mix Water Required	11,164 gals
Stage No: 1	**Float Collar set @** 9,920 ft
Spacer	
Turbo Flow III	40 bbls
Density	11.5 ppg
Spacer	
Fresh Water	5 bbls
Density	8.3 ppg
Spacer	
Surebond III	1,000 gals
Density	9.4 ppg
Spacer	
Fresh Water	10 bbls
Density	8.3 ppg
Cement Slurry	
60:40 Poz:Class H (MPA-1)	570 sacks
Density	13.7 ppg
Yield	1.39 cf/sack
Displacement	
Displacement Fluid	231 bbls

JOB AT A GLANCE (Continued)

Stage No: 2	**Stage Collar set @**	7,000 ft
Spacer		
Mud Clean II		1,000 gals
Density		8.5 ppg
Lead Slurry		
35:65:6 Poz:Class C		480 sacks
Density		12.5 ppg
Yield		2.00 cf/sack
Tail Slurry		
60:40 Poz:Class C (MPA)		390 sacks
Density		13.8 ppg
Yield		1.34 cf/sack
Displacement		
Displacement Fluid		163 bbls

Operator Name: Devon Energy Corp
Well Name: Bone Spring Prospect
Job Description: Long String
Date: December 21, 2007

Proposal No: 215854013A

WELL DATA

ANNULAR GEOMETRY

ANNULAR I.D. (in)	DEPTH(ft)	
	MEASURED	TRUE VERTICAL
7.921 CASING	3,000	3,000
7.875 HOLE	10,000	10,000

SUSPENDED PIPES

DIAMETER (in)		WEIGHT	DEPTH(ft)	
O.D.	I.D.	(lbs/ft)	MEASURED	TRUE VERTICAL
5.500	4.892	17	10,000	10,000

STAGE: 1

Float Collar set @	9,920 ft
Mud Density	10.00 ppg
Est. Static Temp.	160 ° F
Est. Circ. Temp.	139 ° F

VOLUME CALCULATIONS

3,000 ft	x	0.1733 cf/ft	with	50 % excess	=	779.6 cf
80 ft	x	0.1305 cf/ft	with	0 % excess	=	10.4 cf (inside pipe)
				TOTAL SLURRY VOLUME	=	790.1 cf
					=	141 bbls

STAGE: 2

Stage Collar set @	7,000 ft
Mud Density	10.00 ppg
Est. Static Temp.	134 ° F
Est. Circ. Temp.	117 ° F

VOLUME CALCULATIONS

500 ft	x	0.1772 cf/ft	with	0 % excess	=	88.6 cf
2,500 ft	x	0.1733 cf/ft	with	100 % excess	=	866.3 cf
1,500 ft	x	0.1733 cf/ft	with	100 % excess	=	519.8 cf
				TOTAL SLURRY VOLUME	=	1474.6 cf
					=	263 bbls

Operator Name: Devon Energy Corp
Well Name: Bone Spring Prospect
Job Description: Long String
Date: December 21, 2007

Proposal No: 215854013A

FLUID SPECIFICATIONS

STAGE NO.: 1

Spacer	40.0 bbls Turbo Flow III @ 11.5 ppg
Spacer	5.0 bbls Fresh Water @ 8.34 ppg
Spacer	1,000.0 gals Surebond III @ 9.35 ppg
Spacer	10.0 bbls Fresh Water @ 8.34 ppg

FLUID	VOLUME CU-FT	VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
Cement Slurry	790	/ 1.39	= 570 sacks (60:40) Poz (Fly Ash):Class H Cement + 1% bwow Sodium Chloride + 0.75% bwoc BA-10A + 0.25% bwoc R-3 + 4% bwoc MPA-1 + 0.75% bwoc EC-1 + 0.125 lbs/sack Cello Flake + 3 lbs/sack Kol Seal + 63% Fresh Water
Displacement			230.6 bbls Displacement Fluid

CEMENT PROPERTIES

	SLURRY NO. 1
Slurry Weight (ppg)	13.70
Slurry Yield (cf/sack)	1.39
Amount of Mix Water (gps)	6.20
Estimated Pumping Time - 70 BC (HH:MM)	4:00
Free Water (mls) @ 139 ° F @ 90 ° angle	0.0
Fluid Loss (cc/30min) at 1000 psi and 139 ° F	70.0
COMPRESSIVE STRENGTH	
12 hrs @ 160 ° F (psi)	800
24 hrs @ 160 ° F (psi)	2000
72 hrs @ 160 ° F (psi)	2600

Operator Name: Devon Energy Corp
Well Name: Bone Spring Prospect
Job Description: Long String
Date: December 21, 2007

Proposal No: 215854013A

FLUID SPECIFICATIONS (Continued)

STAGE NO.: 2

Spacer			1,000.0 gals Mud Clean II @ 8.45 ppg
Lead Slurry	955	/ 2	= 480 sacks (35:65) Poz (Fly Ash):Premium Plus C Cement + 3% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.4% bwoc FL-52A + 6% bwoc Bentonite + 105.4% Fresh Water
Tail Slurry	520	/ 1.34	= 390 sacks (60:40) Poz (Fly Ash):Premium Plus C Cement + 1% bwow Sodium Chloride + 0.5% bwoc BA-10A + 0.1% bwoc R-3 + 0.125 lbs/sack Cello Flake + 2 lbs/sack Kol Seal + 4% bwoc MPA-1 + 61.4% Fresh Water
Displacement			162.7 bbls Displacement Fluid

CEMENT PROPERTIES

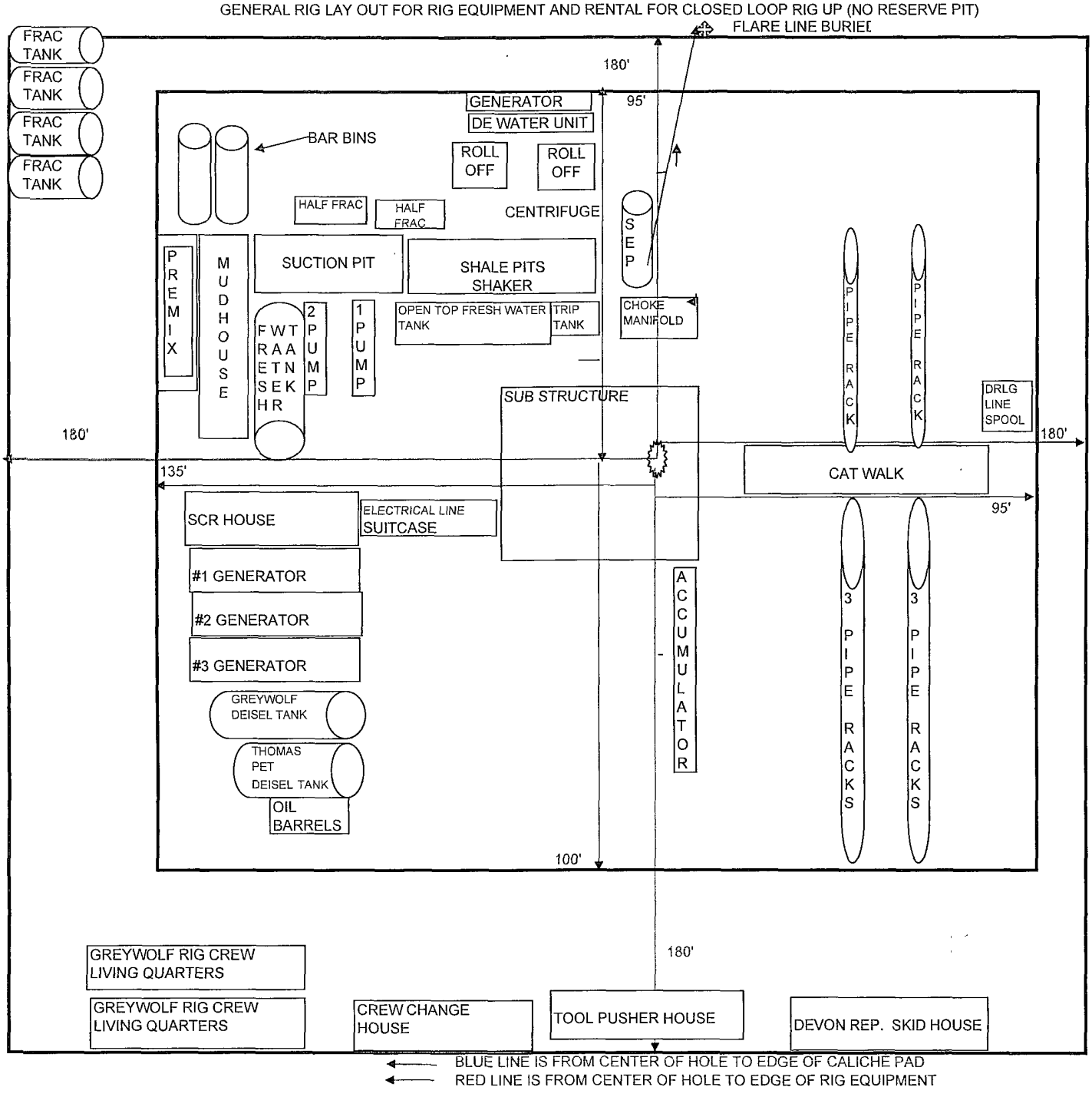
	SLURRY NO. 1	SLURRY NO. 2
Slurry Weight (ppg)	12.50	13.80
Slurry Yield (cf/sack)	2.00	1.34
Amount of Mix Water (gps)	11.00	6.03
Estimated Pumping Time - 70 BC (HH:MM)	3:30	3:00
Free Water (mls) @ ° F @ 90 ° angle		0.0
Fluid Loss (cc/30min) at 1000 psi and ° F		300.0
COMPRESSIVE STRENGTH		
12 hrs @ 134 ° F (psi)	250	900
24 hrs @ 134 ° F (psi)	500	2000
72 hrs @ 134 ° F (psi)	900	3000

ACTUAL CEMENT VOLUMES MAY VARY BASED ON CALIPER.

End of Report

GreyWolf RIG # 33

GENERAL RIG LAY OUT FOR RIG EQUIPMENT AND RENTAL FOR CLOSED LOOP RIG UP (NO RESERVE PIT)



BLUE LINE IS FROM CENTER OF HOLE TO EDGE OF CALICHE PAD

RED LINE IS FROM CENTER OF HOLE TO EDGE OF RIG EQUIPMENT

Attachment to Exhibit #1
NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP
Strawberry 7 Federal 3
Surface Location: 330' FNL & 660' FWL, Unit D, Sec 7 T19S R31E, Eddy, NM
Bottom hole Location: 330' FNL & 660' FWL, Unit D, Sec 7 T19S R31, 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.

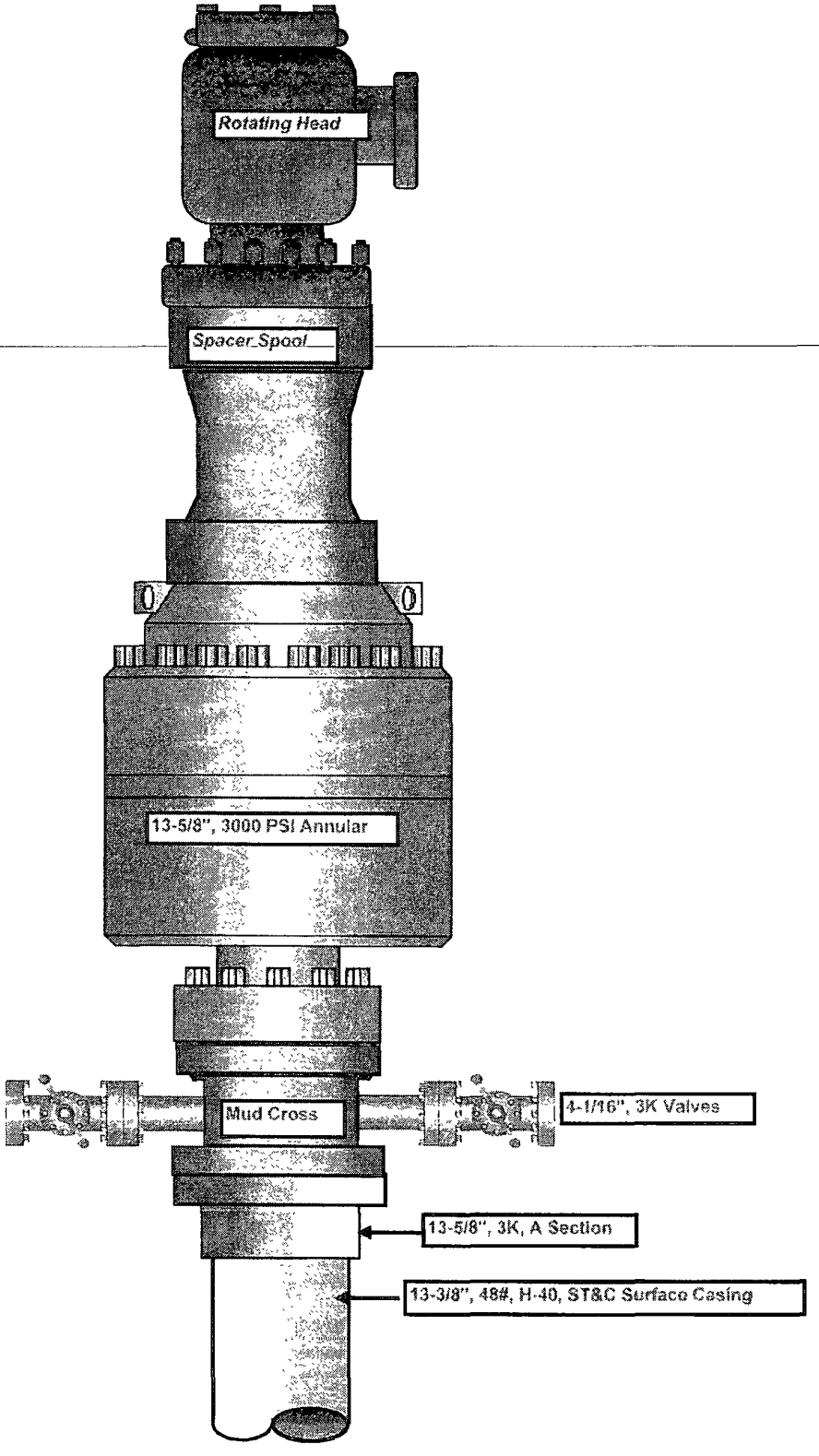
8. Will maintain a kelly cock attached to the kelly.

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

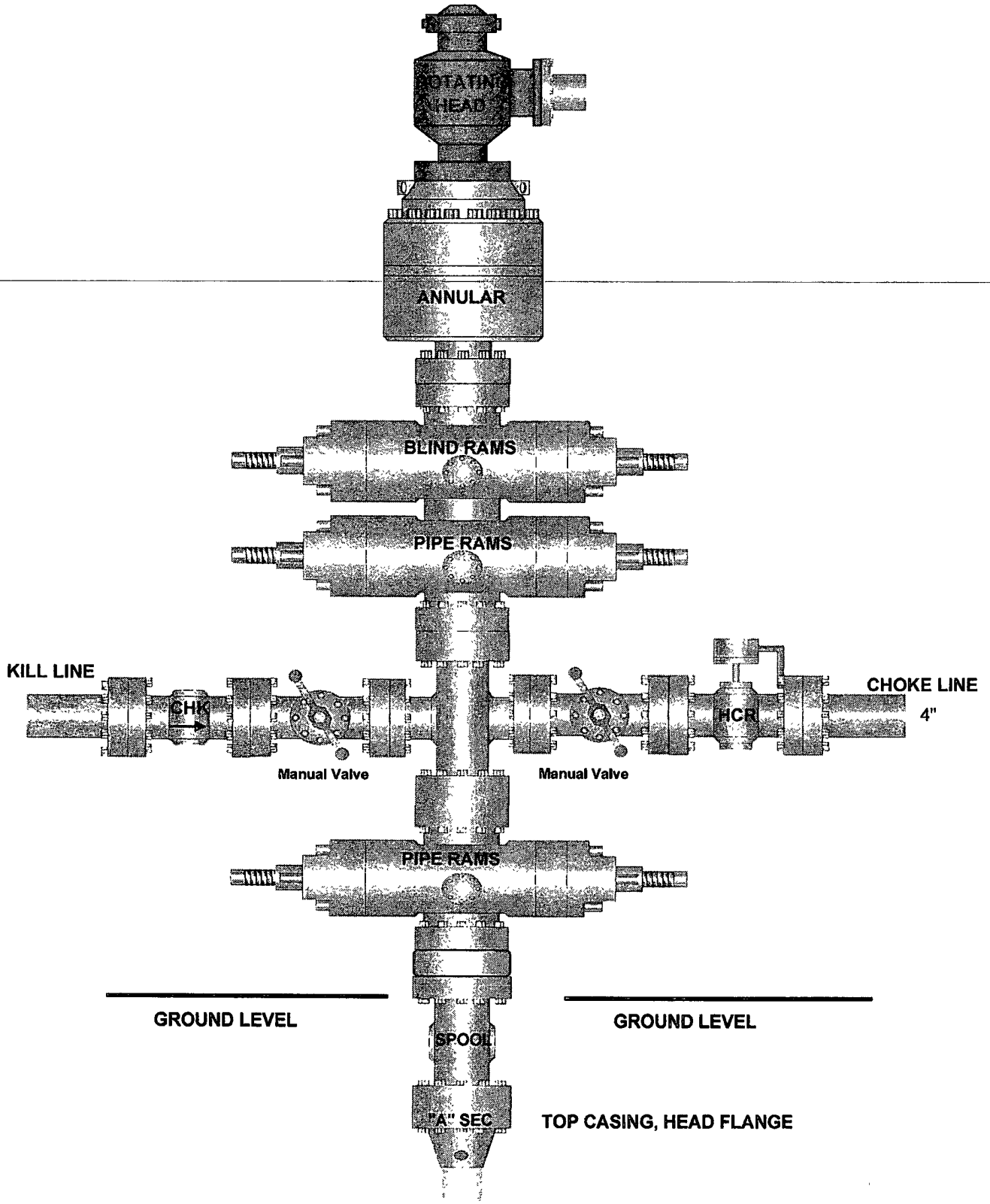
10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.

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.

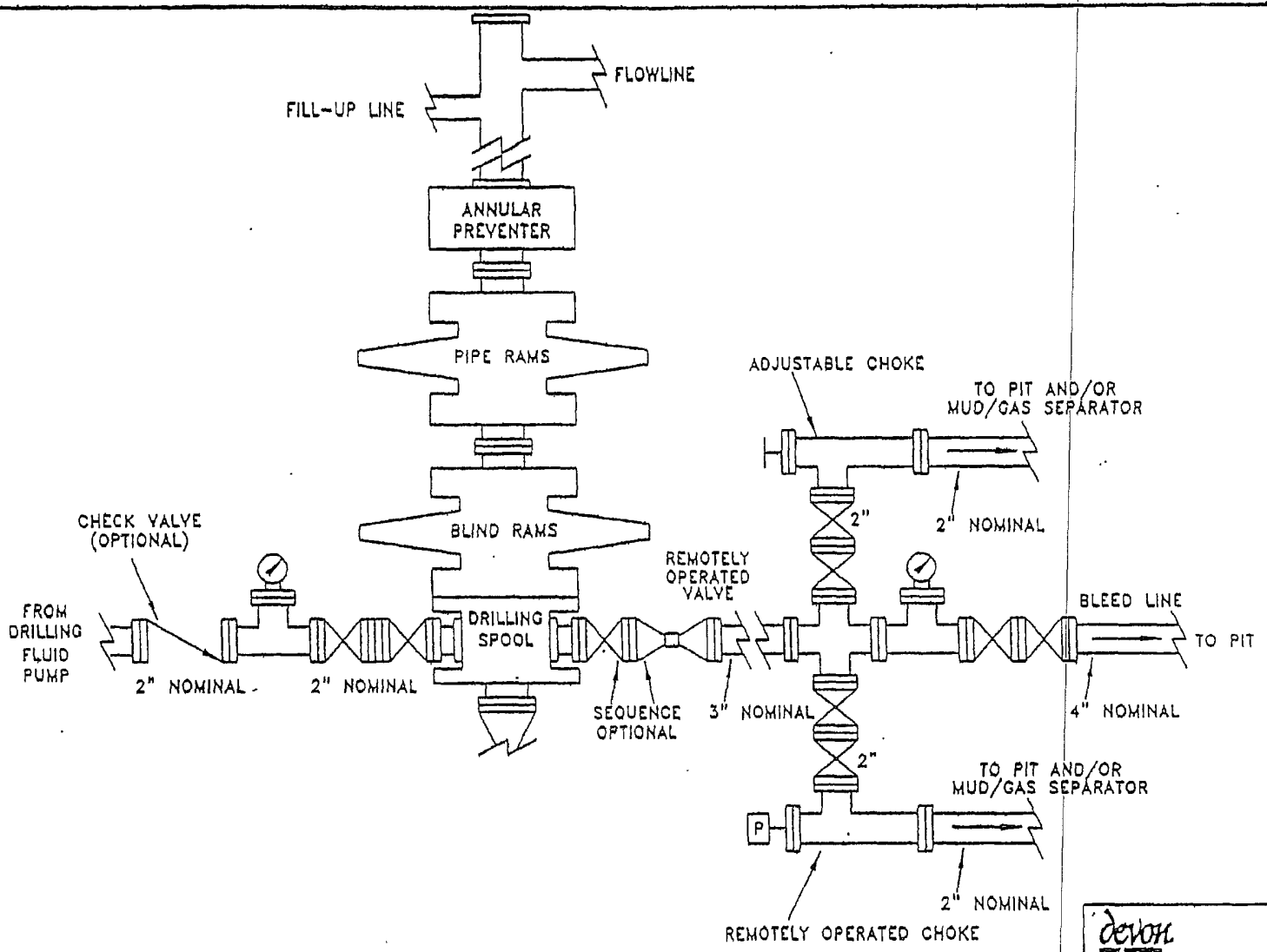
13-5/8" 3K Annular



13-5/8" x 5,000 psi BOP Stack



H:\Western Division Files\Rig Layouts\GW 33 plat BOP Manifold.xls



devon

EXHIBIT 1

PROPOSED 5-M BOPE AND CHOKE ARRANGEMENT

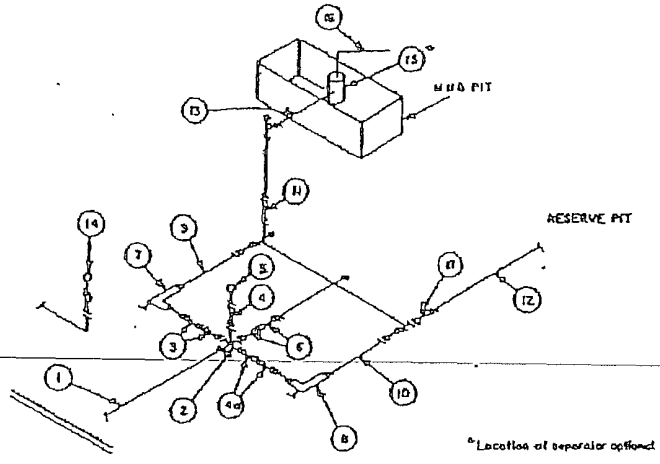
si\..\nm\plats
5mbope.dwg

sc

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.

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.

Emergency Procedures

In the case of a release of gas containing H_2S, the first responder(s) must isolate the area and prevent entry by other persons into the 100 ppm ROE. Additionally the first responder(s) must evacuate any public places encompassed by the 100 ppm ROE. First responder(s) must take care not to injure themselves during this operation. Company and/or local officials must be contacted to aid in this operation. Evacuation of the public should be beyond the 100 ppm ROE.

All responders must have training in the detection of H_2S, measures for protection against the gas, equipment used for protection and emergency response. Additionally, responders must be equipped with H_2S monitors and air packs in order to control the release. Use the "buddy system' to ensure no injuries during the response.

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

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

Devon Energy Corp. Company Call List

Artesia (575)	Cellular	Office	Home
Foreman – BJ Cathey	390-5893	748-0176	887-6026
Asst. Foreman – Bobby Jones	748-7447	748-0176	746-3194
Don Mayberry	748-7180	748-5235	746-4945
Montral Walker	(575) 390-5182	(575) 748-0193	
Linda Berryman	(575) 513-0534	(575) 748-0177	

Agency Call List

Lea County (505) — Hobbs

State Police	392-5588
City Police	397-9265
Sheriff's Office	393-2515
Ambulance	911
Fire Department	397-9308
LEPC (Local Emergency Planning Committee)	393-2870
NMOCD	393-6161
US Bureau of Land Management	393-3612

Eddy County (505) — Carlsbad

State Police	885-3137
City Police	885-2111
Sheriff's Office	887-7551
Ambulance	911
Fire Department	885-2111
LEPC (Local Emergency Planning Committee)	887-3798
US Bureau of Land Management	887-6544
New Mexico Emergency Response Commission (Santa Fe)	(575) 476-9600
24 HR	(575) 827-9126
National Emergency Response Center (Washington, DC)	(800) 424-8802

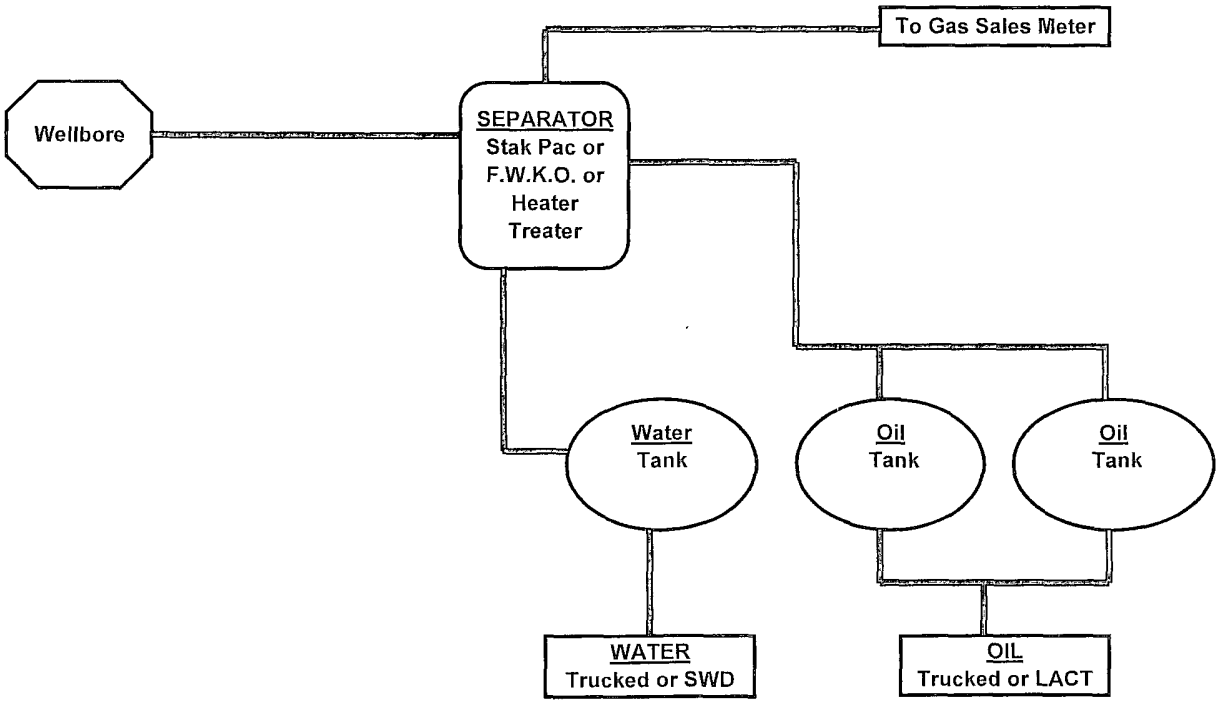
Emergency Services

Boots & Coots IWC	1-800-256-9688 or (281) 931-8884
Cudd Pressure Control	(915) 699-0139 or (915) 563-3356
Halliburton	(575) 746-2757
B. J. Services	(575) 746-3569
Flight For Life - Lubbock, TX	(806) 743-9911
Aerocare - Lubbock, TX	(806) 747-8923
Med Flight Air Amb - Albuquerque, NM	(575) 842-4433
Lifeguard Air Med Svc. Albuquerque, NM	(575) 272-3115

Give GPS position:

DEVON ENERGY PRODUCTION COMPANY LP

General Production Facilities Diagram



SURFACE USE PLAN
Devon Energy Production Company, LP
Strawberry 7 Federal 3
Surface Location: 330' FNL & 660' FWL, Unit D, Sec 7 T19S R31E, Eddy, NM
Bottom hole Location: 330' FNL & 660' FWL, Unit D, Sec 7 T19S R31, 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 the junction of US Hwy 82 and Co. Rd 222, go south 8.2 miles to lease road, on lease road go west 2.5 miles thence southeast 0.1 miles to proposed location.

2. **New or Reconstructed Access Roads:**
   a. The well site layout, Form C-102 shows the existing lease road. If new access road needed to be constructed, it would 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 Strawberry 7 Federal 3 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.
   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 Representative:

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

Marcos Ortiz
Operations Engineer Advisor

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

(405) 552-8152 (office)
(405) 317-0666 (cell)

Don Mayberry
Superintendent

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

(505) 748-0164 (office)
(505) 748-5235 (cell)

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 25th day of September, 2008.
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): Don Mayberry (see above)
Address (if different from above):
Telephone (if different from above):
E-mail (optional):

PECOS DISTRICT
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company, L.P.
LEASE NO.:	NM-100561
WELL NAME & NO.:	Strawberry 7 Fed. #3
SURFACE HOLE FOOTAGE:	330' FNL & 660' FWL
BOTTOM HOLE FOOTAGE	
LOCATION:	Section 07, T. 19 S., R 31 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

The well pad will be bermed to prevent any spills or surface runoff from entering the playa.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5972 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil of the well pad. The topsoil to be stripped is approximately 6 inches in depth. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

C. RESERVE PITS

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

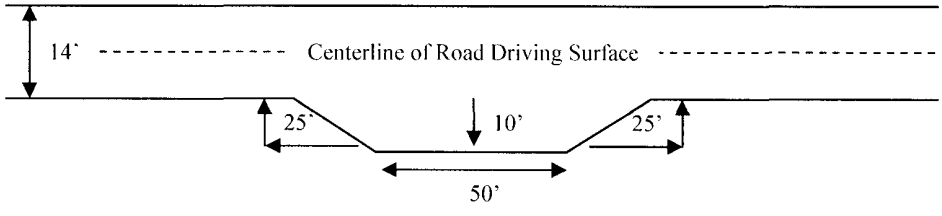
Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

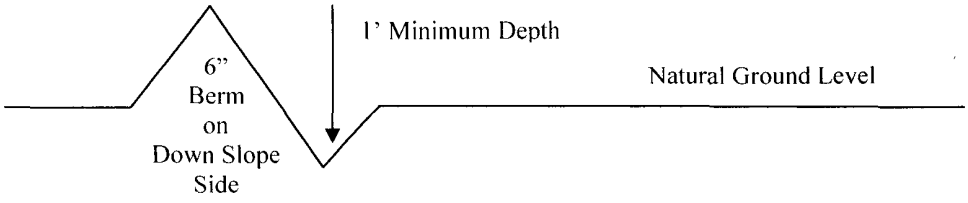
Standard Turnout – Plan View



Drainage
Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Culvert Installations
Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards
An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for

the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

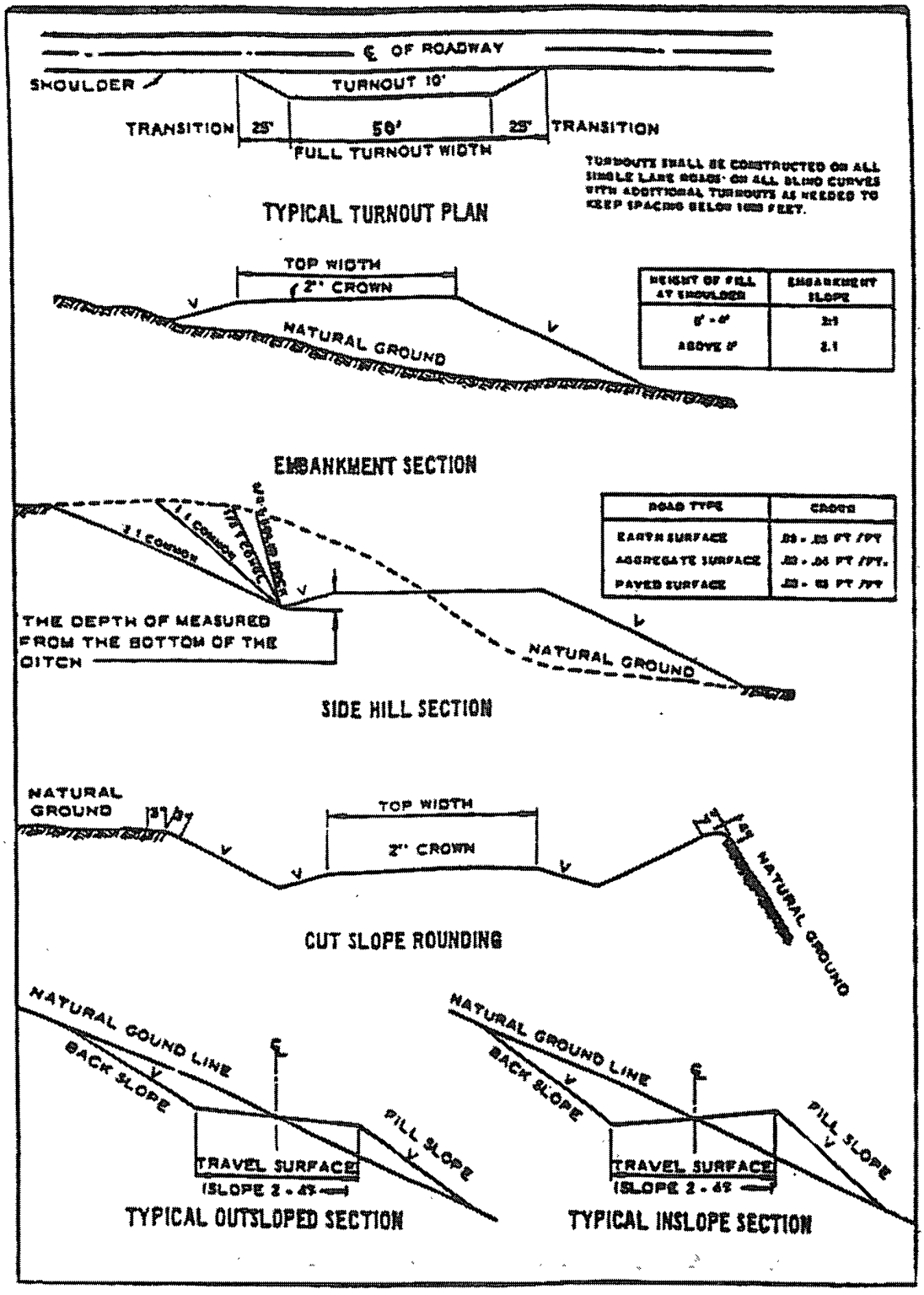
A gate shall be constructed and fastened securely to H-braces.

Fence Requirement
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

1. A Hydrogen Sulfide (H2S) Drilling Plan should be activated 500 feet prior to drilling into the **Yates** formation. **If Hydrogen Sulfide is encountered, please report measured amounts and formations to the BLM.**

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. Floor controls are required for 3M or Greater systems. These 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.

4. 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 manufacturer of the logging tools recommended speed. (R-111-P area only)

B. CASING

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possible lost circulation in the Artesia Group and the Capitan Reef.
Possible water flows in the Artesia and Salado Groups.

1. The **13-3/8** inch surface casing shall be set **at approximately 600 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface. **If the salt is encountered shallower than this depth, the casing is to be set 25' above the salt.**

    a. 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.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry. Per plan submitted, WOC will be greater than 24 hours.

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

    d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is: **Per R-111-P potash requirements, the salt protection string must be set a minimum of 100' below the salt and not more than 600' below the salt. Casing should be set in the Tansill formation at approximately 2200 feet.**

    ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to R-111-P potash. Per plan submitted, WOC will be greater than 24 hours.**

Fresh water mud to be used between 2200' and 7500'.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   a. First stage to DV tool, cement shall:

   ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office, before proceeding with second stage cement job.

   b. Second stage above DV tool, cement shall:

   ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office.

4. 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.

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

C. PRESSURE CONTROL

1. 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 Sec. 17.

2. 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.

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **8-5/8"** intermediate casing shoe shall be **5000 (5M)** psi. **Annular must be rated as 5M not 3M.**

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

   a. The tests shall be done by an independent service company.

   b. The results of the test shall be reported to the appropriate BLM office.

   c. 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.

d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. 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.

e. **Effective November 1, 2008, no variances will be granted on reduced pressure tests on the surface casing and BOP/BOPE. Onshore Order 2 requirements will be in effect.**

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

WWI 110408

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures
The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color
Shale Green, Munsell Soil Color Chart # 5Y 4/2

IX. INTERIM RECLAMATION & RESERVE PIT CLOSURE

A. INTERIM RECLAMATION

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

The operators should work with BLM surface management specialists to devise the best strategies to reduce the size of the location. Any reductions should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

Seed Mixture 1, for Loamy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection bye the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent gemination = pounds pure live seed

(Insert Seed Mixture Here)

X. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

Upon abandonment of the well and/or when the access road is no longer in service the Authorized Officer shall issue instructions and/or orders for surface reclamation and restoration of all disturbed areas.

On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the private surface land owner agreement.