OPERATOR'S COPY

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

R-111-POTASH

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. SL: NMNM 54113 / BHL: LC 064964A

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 COM 38180
Strawberry 7 Federal 6H

2 Name of Operator
Devon Energy Production Co., LP (6137)

9 API Well No
30-015-38195

3a Address 20 North Broadway
OKC, OK 73102

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

10 Field and Pool, or Exploratory NORTH (97056)
Hackberry; Bone Spring, ~~NW~~

4. Location of Well (Report location clearly and in accordance with any State requirements *)
At surface NESE 1650' FSL & 340' FEL (I)
At proposed prod. zone NWSW 1650' FSL & 340' FWL

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

14 Distance in miles and direction from nearest town or post office*
Approximately 10 miles southeast of Loco Hills, NM.

12 County or Parish
Eddy

13 State
NM

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drlg. unit line, if any)	16 No of acres in lease	17 Spacing Unit dedicated to this well
340'	760 acres	160

18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19 Proposed Depth	20 BLM/BIA Bond No on file
SL: 725' BHL:1045'	TVD 8,835' MD 13,090'	CO-1104

21 Elevations (Show whether DF, KDB, RT, GL, etc)	22 Approximate date work will start*	23 Estimated duration
3465' GL	09/01/2010	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	07/29/2010

Title: Sr. Staff Engineering Technician

Approved by (Signature)	Name (Printed/Typed)	Date
Linda S. C. Rundell	Linda S. C. Rundell	9/21/10

Title	Office
STATE DIRECTOR	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

KZ 09/22/10

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Approval Subject to General Requirements & Special Stipulations Attached

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 July 16, 2010

Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-38195	97056	HACKBERRY; BONE SPRING, ~~NW (O)~~ NORTH

Property Code	Property Name	Well Number
38180	STRAWBERRY "7" FEDERAL COM	6H

OGRID No.	Operator Name	Elevation
6137	DEVON ENERGY PRODUCTION CO., L.P.	3465'

Surface Location

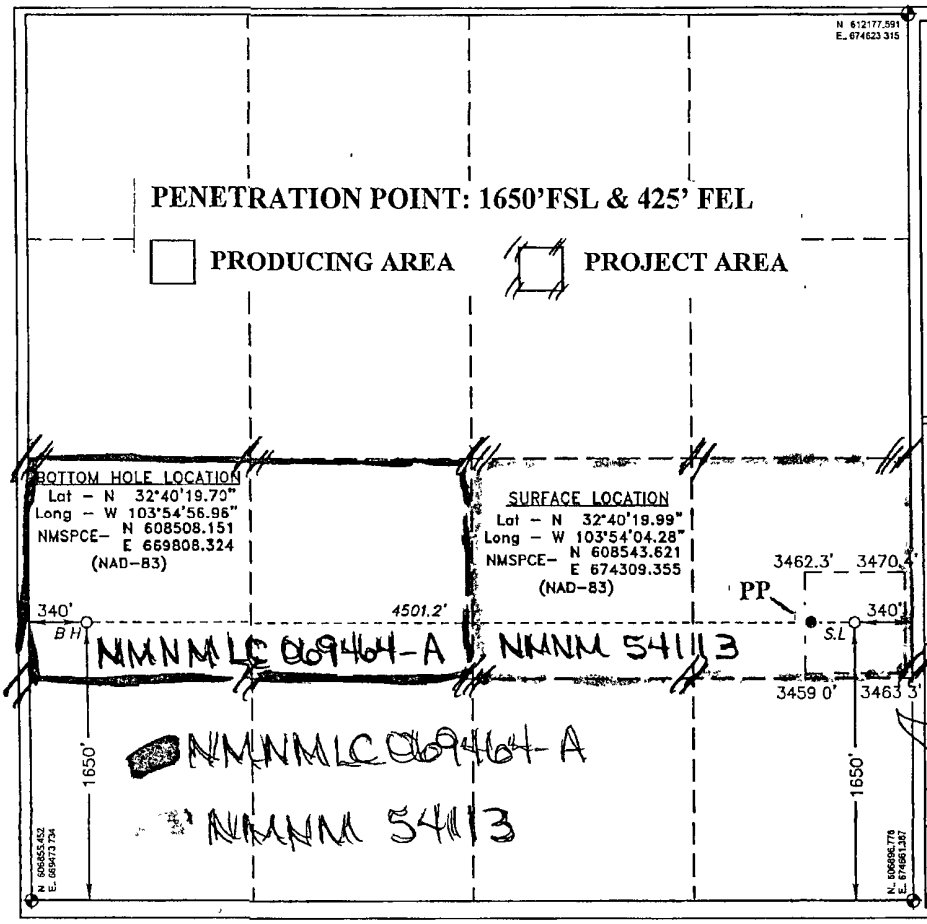
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	7	19 S	31 E		1650	SOUTH	340	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	7	19 S	31 E		1650	SOUTH	340	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this 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.

07/29/2010
Signature Date

STEPHANIE A. YSASAGA
Printed Name

STEPHANIE.YSASAGA@DVN.COM
Email Address

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

MAY 1, 2010
Date Surveyed

Signature & Seal of Professional Surveyor

NEW MEXICO 7977 REGISTERED PROFESSIONAL SURVEYOR

No. 7977

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

Form 3160-5
(February 2005)

OPERATOR'S COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

5 Lease Serial No
SHL: NMNM-54113 / BHL: LC069464A

6 If Indian, Allottee or Tribe Name

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*

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

1 Type of Well

☑ Oil Well ☐ Gas Well ☐ Other

8 Well Name and No
Strawberry 7 Federal 6H

2 Name of Operator
Devon Energy Production Co , LP

9 API Well No

3a Address
20 North Broadway
OKC OK 73102

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

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

4 Location of Well *(Footage, Sec , T ,R ,M , or Survey Description)*
NESE 1650' FSL & 340' FEL
Sec 7-T19S-R31E

11 Country or Parish, State
Eddy County, NM

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 Lifting & Safety Equipment
	☐ 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 also respectfully submits the requested documentation, per BLM request, for Federal permits regarding lifting and safety equipment

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

Title Sr Staff Engineering Technician

Signature

Date 08/30/2010

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title STATE DIRECTOR

Date 9/21/10

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 **NM STATE 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)

Continental CONTITECH

Fluid Technology

ContiTech Beattie Corp.
Website: www.contitechbeattie.com

Monday, June 14, 2010

RE: Drilling & Production Hoses
Lifting & Safety Equipment

To Helmerich & Payne,

A Continental ContiTech hose assembly can perform as intended and suitable for the application regardless of whether the hose is secured or unsecured in its configuration. As a manufacturer of High Pressure Hose Assemblies for use in Drilling & Production, we do offer the corresponding lifting and safety equipment, this has the added benefit of easing the lifting and handling of each hose assembly whilst affording hose longevity by ensuring correct handling methods and procedures as well as securing the hose in the unlikely event of a failure; but in no way does the lifting and safety equipment affect the performance of the hoses providing the hoses have been handled and installed correctly. It is good practice to use lifting & safety equipment but not mandatory.

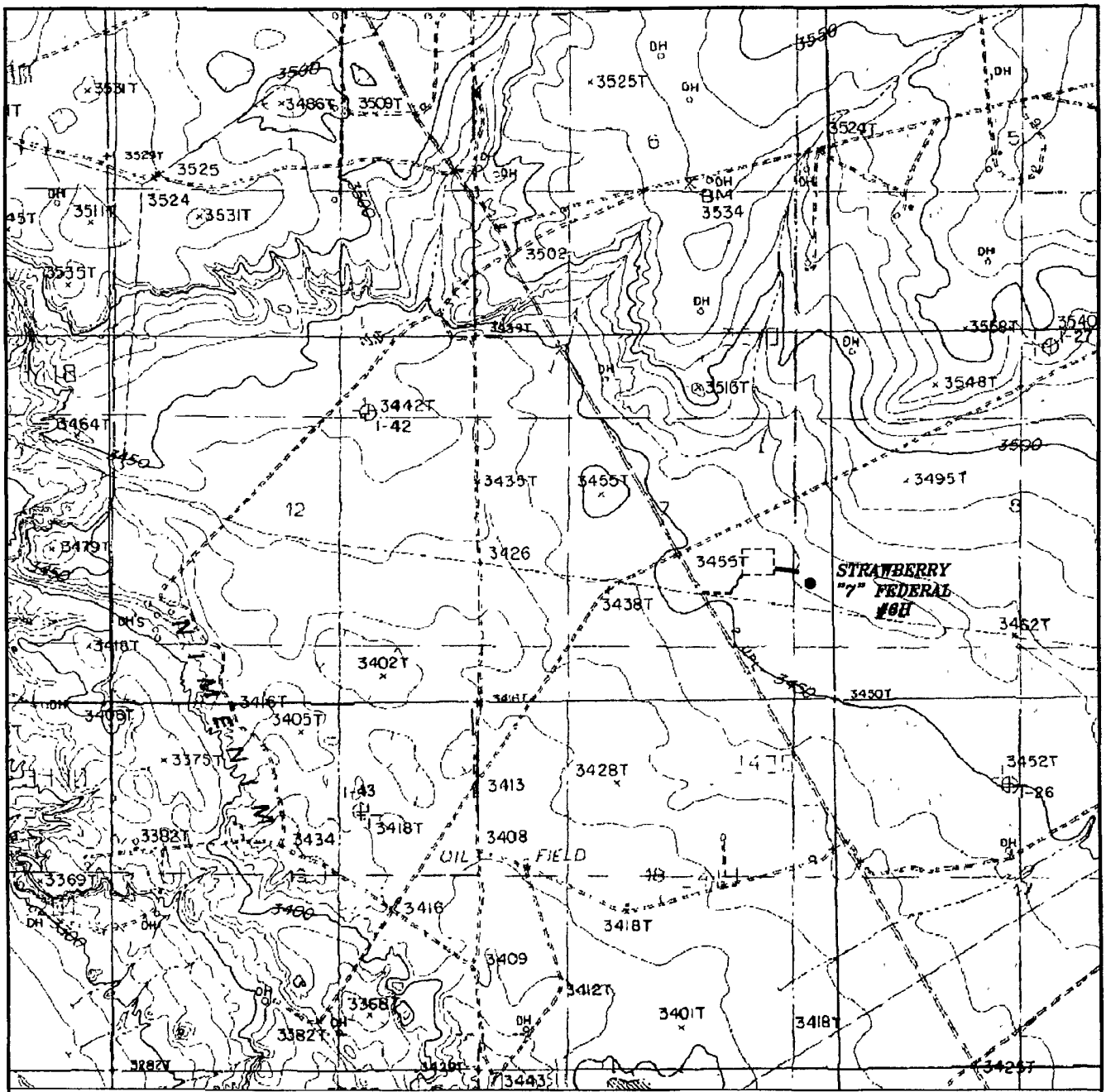
Should you have any questions or require any additional information/clarifications then please do not hesitate to contact us.

ContiTech Beattie is part of the Continental AG Corporation and can offer the full support resources associated with a global organization.

Best regards,

Robin Hodgson
Sales Manager
ContiTech Beattie Corp

ContiTech Beattie Corp,
11535 Brittmoore Park Drive,
Houston, TX 77041
Phone: +1 (832) 327-0141
Fax: +1 (832) 327-0148
www.contitechbeattie.com



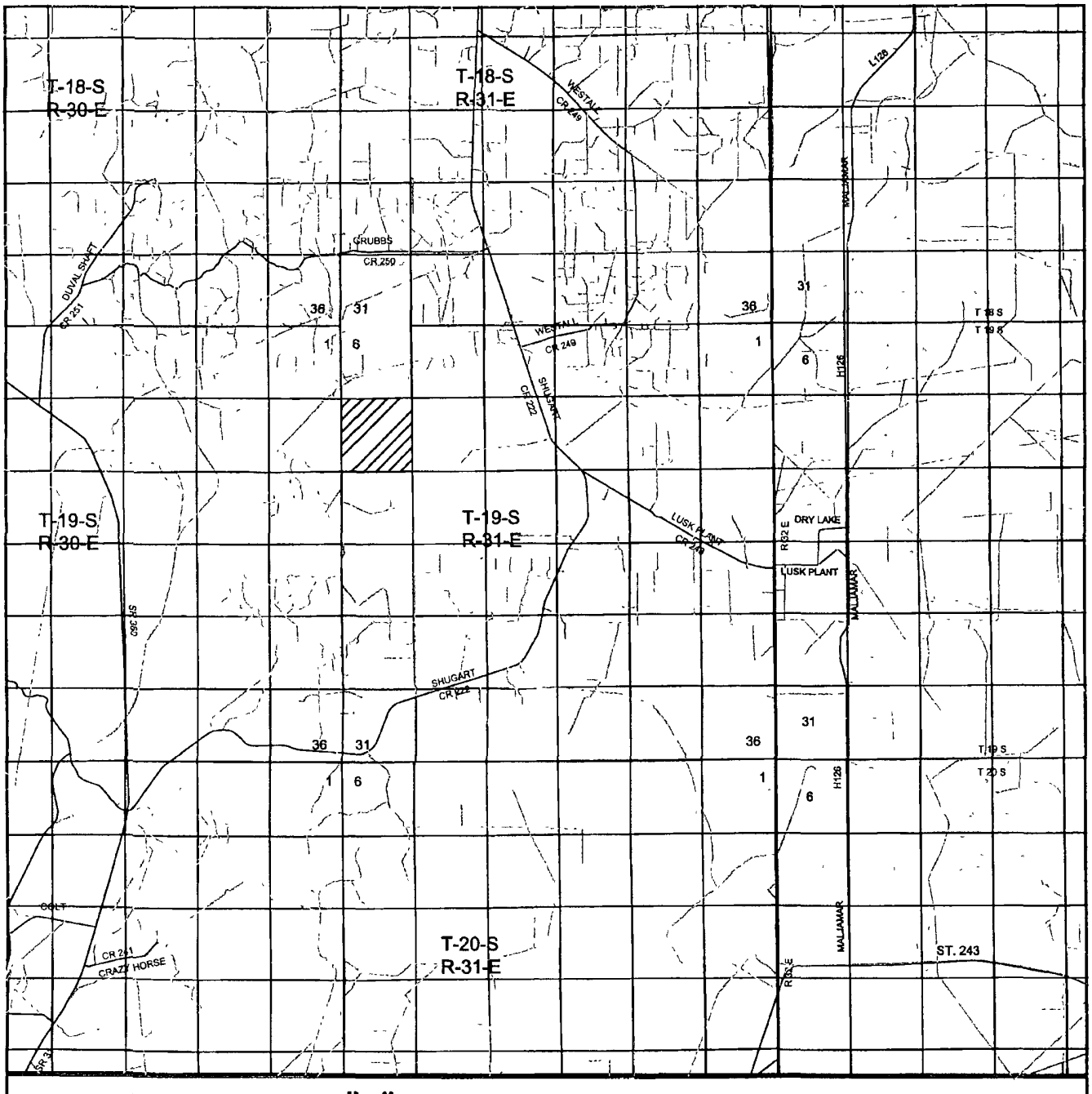
STRAWBERRY "7" FEDERAL #6H
Located 1650' FSL and 340' FEL
Section 7, Township 19 South, Range 31 East,
N.M.P.M., Eddy County, New Mexico.

basin Surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number:	KJG 23066
Survey Date:	07-09-2010
Scale:	1" = 2000'
Date:	07-28-2010

N

DEVON ENERGY PROD. CO., L.P.



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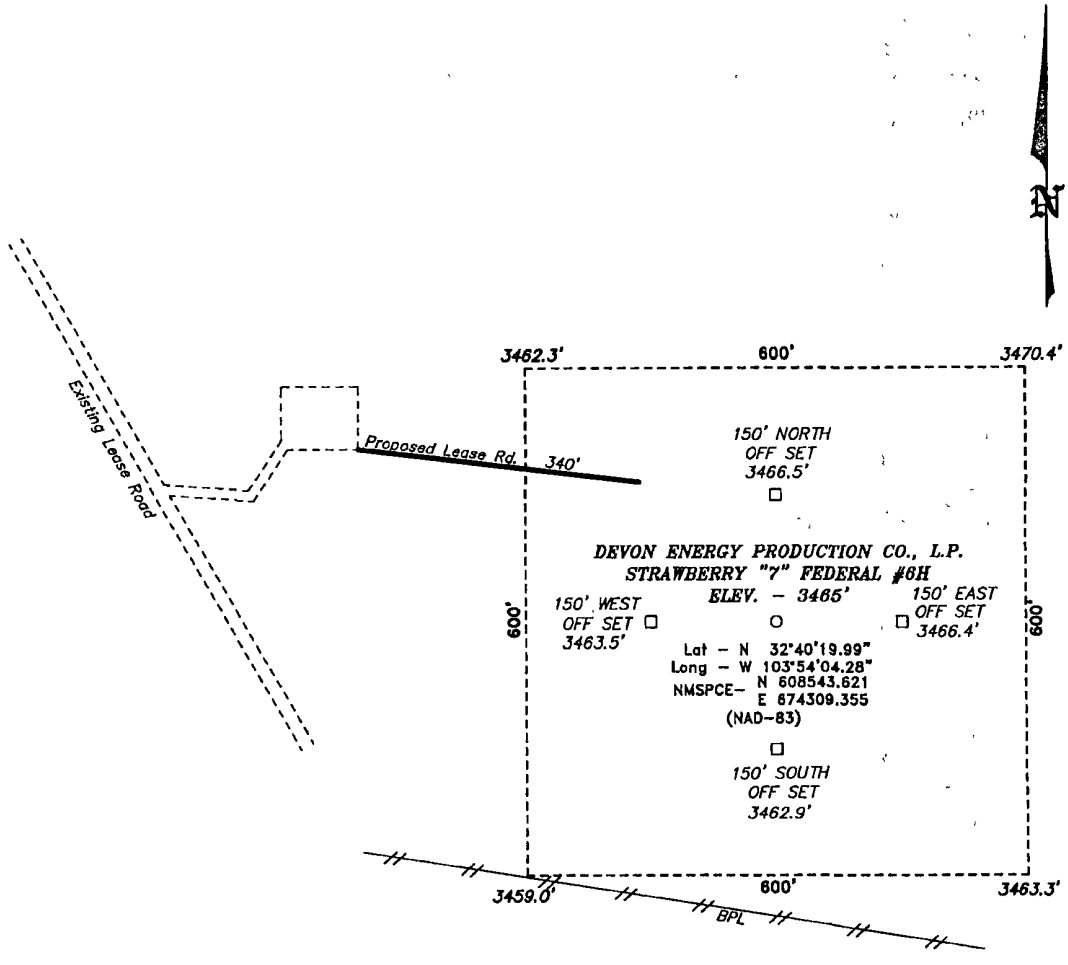
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number:	KJG 23066
Survey Date:	07-09-2010
Scale:	1" = 2 Miles
Date:	07-28-2010

N

DEVON ENERGY PROD. CO., L.P.

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 WESTALL AND SHUGART, GO NORTHWEST ON SHUGART FOR 0.1 MILE TO LEASE ROAD; THENCE WEST ON LEASE ROAD FOR 2.8 MILE, CONTINUE FOLLOWING LEASE ROAD CURVING TO THE SOUTH AND THEN TO THE EAST FOR 0.3 MILE; THENCE SOUTHEAST FOR 0.7 MILE; THENCE EAST FOR 0.2 MILE TO EXISTING PAD AND PROPOSED LEASE ROAD.

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

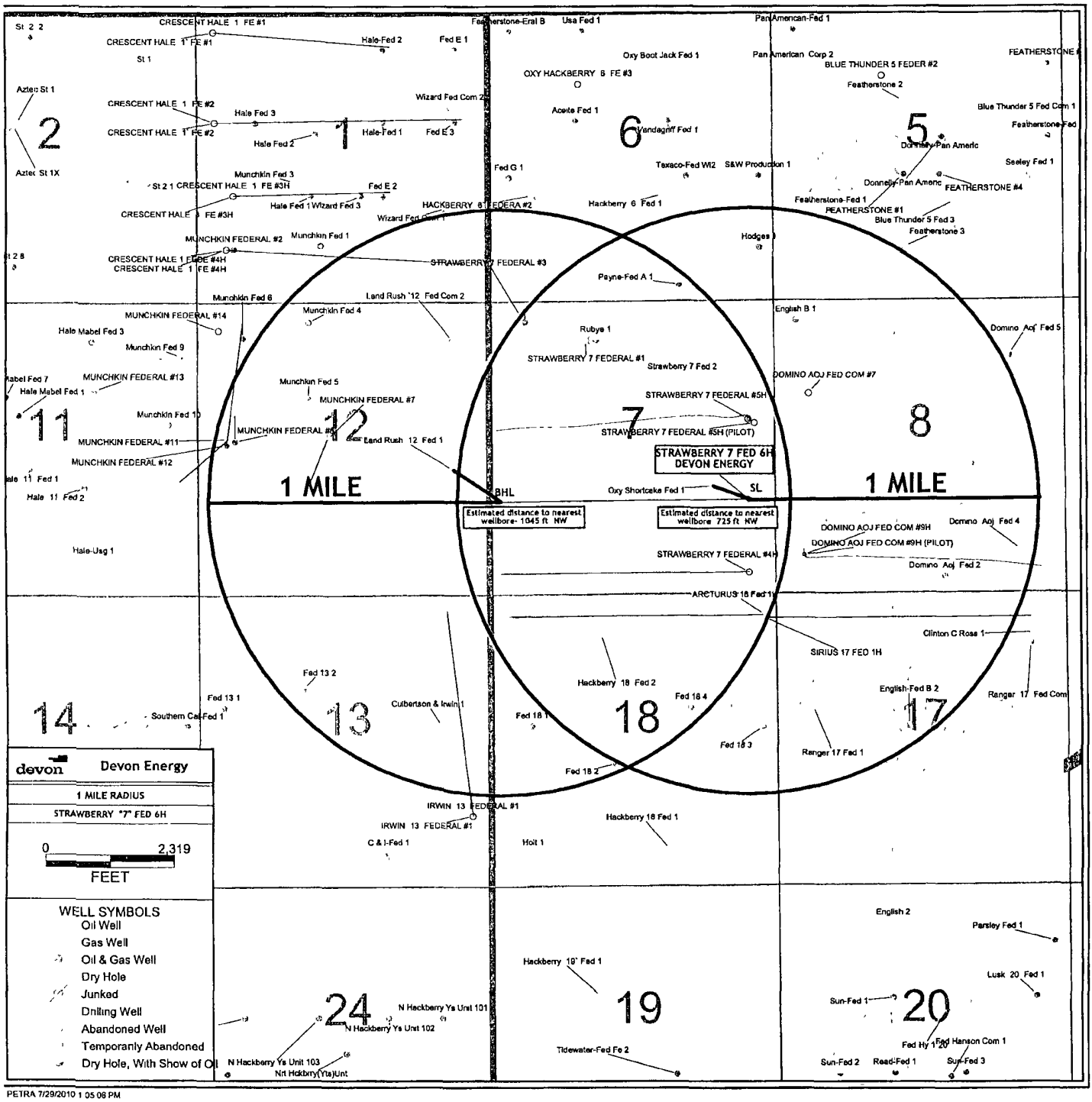
W.O. Number: 23066	Drawn By: K. GOAD
Date: 07-28-2010	Disk: KJG - 23066WELL.DWG

DEVON ENERGY PRODUCTION CO., L.P.

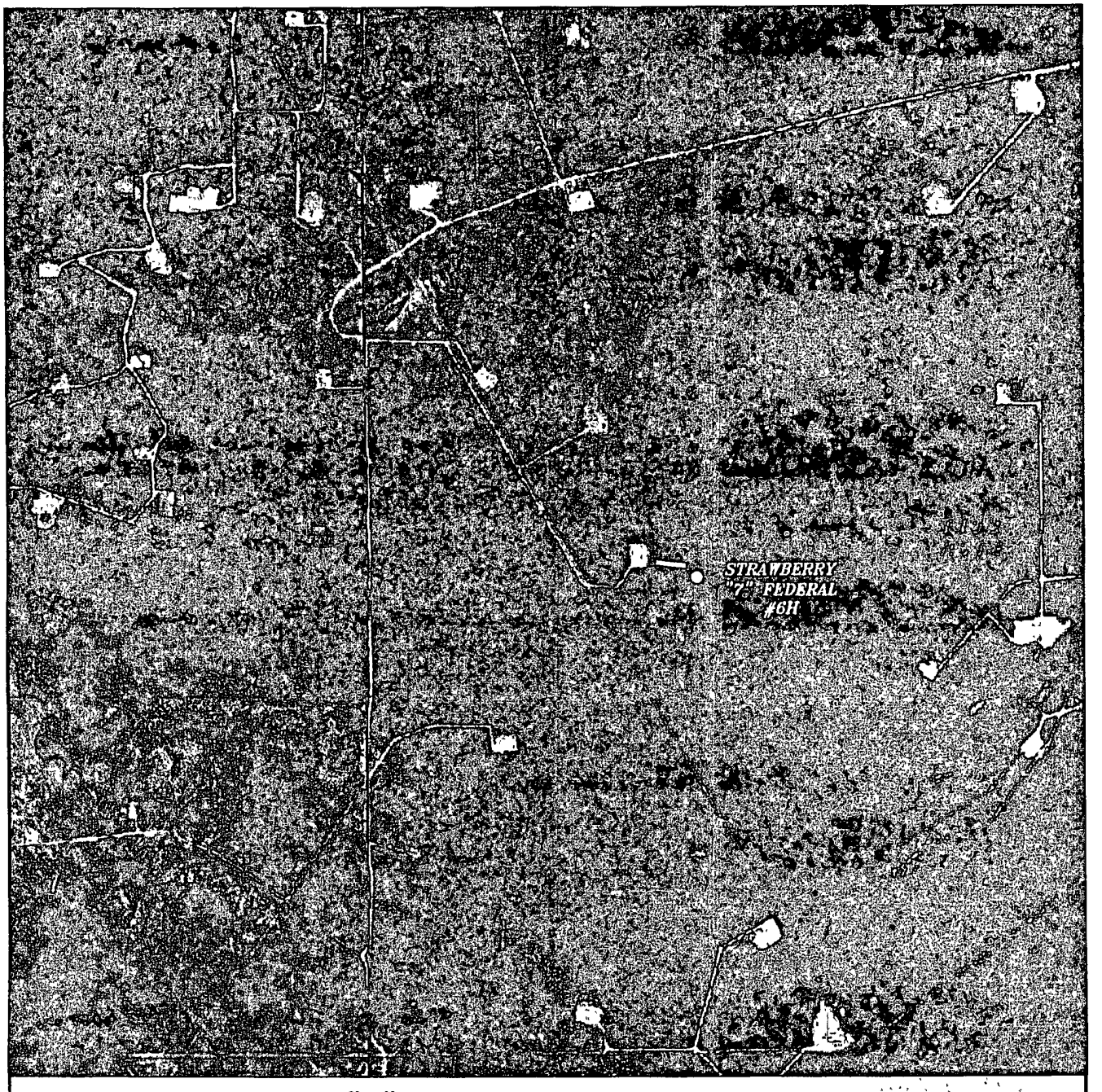
REF: STRAWBERRY "7" FEDERAL #6H / WELL PAD TOPO

THE STRAWBERRY "7" FEDERAL #6H LOCATED 1650' FROM THE SOUTH LINE AND 340' FROM THE EAST LINE OF SECTION 7, TOWNSHIP 19 SOUTH, RANGE 31 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 07-09-2010	Sheet 1 of 1 Sheets



PETRA 7/29/2010 1 05 08 PM



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W.O. Number: KJG 23066

Scale: 1" = 2000'

YELLOW TINT - USA LAND
BLUE TINT - STATE LAND
NATURAL COLOR - FEE LAND

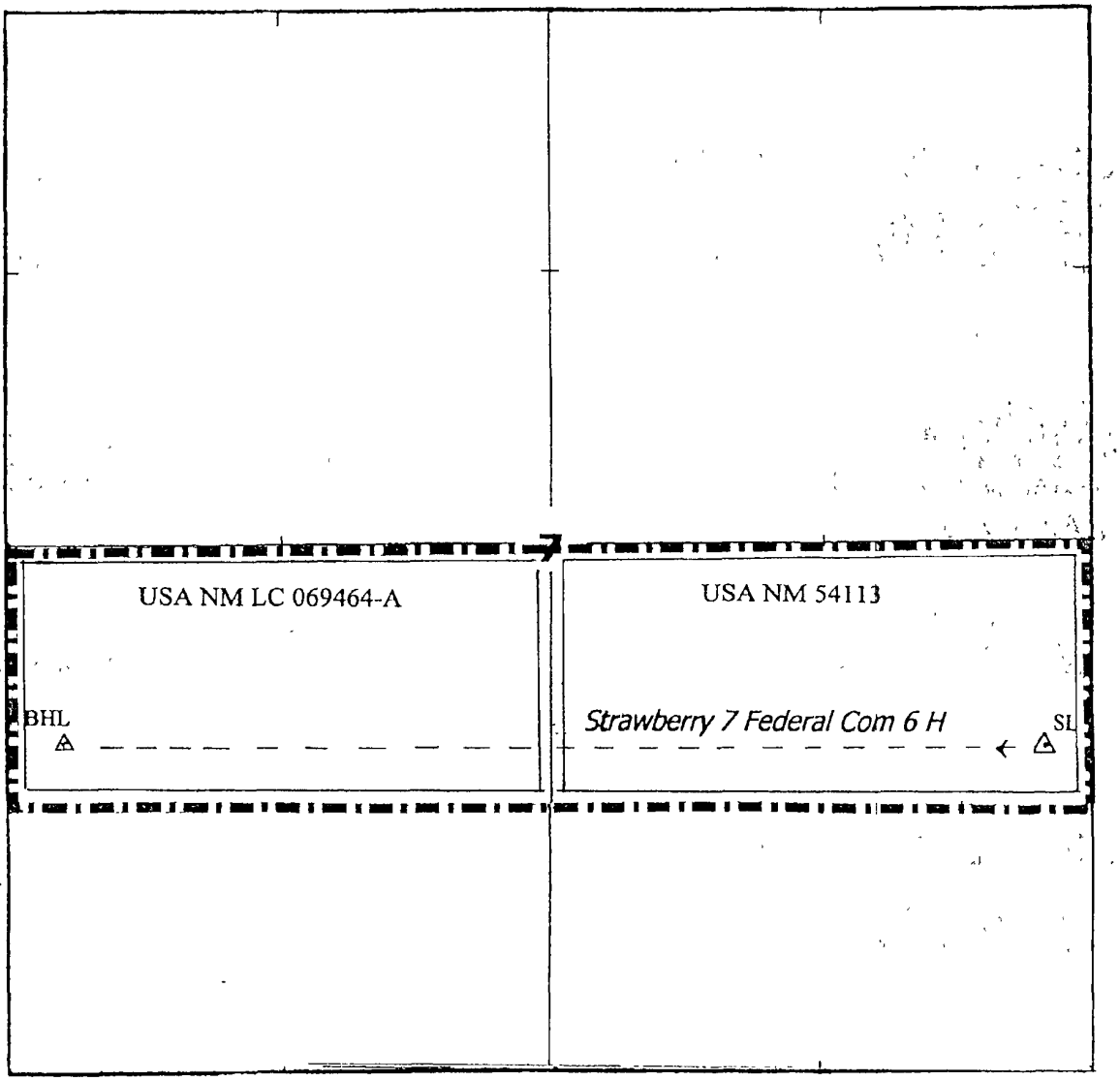
N

DEVON ENERGY PROD. CO., L.P.

SECTION PLAT

Eddy County, State of New Mexico

Section 7 Township 19S Range 31E



Spaced unit

o/g lease

PATRICK H. LYONS
COMMISSIONER

State of New Mexico
Commissioner of Public Lands
310 OLD SANTA FE TRAIL
P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

COMMISSIONER'S OFFICE
Phone (505) 827-5760
Fax (505) 827-5766
www.nmstatelands.org

July 29, 2010

Yates Petroleum Corporation
105 South Fourth Street
Artesia, New Mexico 88210-2118

Attn. Ms. Janet Richardson

Re: Final Approval
Herradura Exploratory Unit
Eddy County, New Mexico

Dear Ms. Richardson:

Thank you for your letter of July 28, 2010 requesting final approval of the Herradura Exploratory Unit Agreement, Eddy County, New Mexico.

It is our understanding that all tracts are fully committed to the unit agreement at this time except for Tract Nos. 5, 23, 24, 25 and 26.

The Commissioner of Public Lands has this date granted final approval to the Herradura Exploratory Unit Agreement. Our approval is subject to like approval by the Bureau of Land Management.

Enclosed are five (5) Certificates of Approval.

Your $390.00 filing fee has been received.

If you have any questions or if we may be of further help, please contact Pete Martinez at (505) 827-5791.

Very truly yours,

PATRICK H. LYONS
COMMISSIONER OF PUBLIC LANDS

BY: Larry D Bagley
for JAMI BAILEY
Oil, Gas & Minerals Division
PL/JB/pm
pc: Reader File,
BLM-Attn: Mr. Wesley Ingram
OCD-Santa Fe, Attn: Mr. Ed Martin
TRD-Attn: Mr. Valdean Severson
RMD-Attn: Mr. Kurt McFall

DRILLING PROGRAM

Devon Energy Production Company, LP
Strawberry 7 Federal 6H
Surface Location: 1650' FSL & 340' FEL, Unit I, Sec 7 T19S R31E, Eddy, NM
Bottom hole Location: 1650' FSL & 340' FWL, Unit L, Sec 7 T19S R31E, Eddy, NM

1. Geologic Name of Surface Formation

a. Permian

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

a.	Rustler	425'	Barren
b.	Salado	575'	Barren
c.	Tansil Dolomite	2125'	Barren
d.	Yates	2240'	Oil
e.	Seven Rivers	2535'	Oil
f.	Queen	3190'	Oil
g.	San Andres	3775'	Oil
h.	Delaware	4575'	Oil
i.	Bone Springs	6410'	Oil
j.	1st Bone Spring Ss	7815'	Oil
k.	2nd Bone Spring Lime	8065'	Oil
l.	2nd Bone Spring Ss	8595'	Oil
m.	2nd Bone Spring Middle Ss	8745'	Oil
n.	2nd Bone Spring Middle Ss Base	8860'	Oil
o.	Total Depth	TVD 8835' MD 13090'	

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 550' and circulating cement back to surface. The fresh water sands will be protected by setting 9 5/8" casing at 3150' and circulating cement to surface. The Delaware intervals will be isolated by setting 5 ½" casing to total depth and circulating cement above the base of the 9 5/8" casing. All casing is new and API approved.

3. Casing Program:

Hole Size	Hole Interval	OD Csg	Casing Interval	Weight	Collar	Grade
17 1/2"	0'-550'	13 3/8"	0'-550'	48#	STC	H-40
12 ¼"	550'-3150'	9 5/8"	0'-3150'	36#	LTC	J-55
8 ¾"	3150'–8200	5 ½"	0'-8200'	17#	LTC	P-110HC
8 ¾"	8200'- 13090'	5 ½"	8200-13090'	17#	BTC	P-110HC

Design Parameter Factors:

Casing Size	Collapse Design Factor	Burst Design Factor	Tension Design Factor
13 3/8"	2.99	6.72	12.20
9 5/8"	1.23	2.15	2.74
5 1/2" LTC	1.64	2.02	1.55
5 ½" BTC	1.84	2.27	5.22

4. **Cement Program:**

a. 13 3/8" Conductor

Lead: 250 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 4% bwoc Bentonite + 81.4% Fresh Water, 13.5 ppg. **Yield:** 1.75 cf/sk

Tail: 250 sacks Class C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 56.3% Fresh Water, 14.8 ppg. **Yield:** 1.35 cf/sk.. **TOC @ surface.**

b. 9 5/8" Intermediate

Lead: 750 sacks (35:65) Poz (Fly Ash):Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 107.8% Fresh Water, 12.5 ppg. **Yield**: 1.96 cf/sk

Tail: 300 sacks Class C Cement + 5% bwow Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 52.7% Water, 14.8 ppg. **Yield**: 1.34 cf/sk. **TOC @ surface.**

c. 5 ½" Production

1st Stage

Lead: 900 sacks (35:65) Poz (Fly Ash):Class H Cement + 5% bwow Sodium Chloride + 0.3% bwoc CD-32 + 0.5% bwoc FL-25 + 2% bwoc Bentonite + 0.6% bwoc Sodium Metasilicate + 0.5% bwoc FL-52A + 102.5% Fresh Water, 12.5 ppg. **Yield**: 2.00 cf/sk

Tail: 1,300 sacks (50:50) Poz (Fly Ash):Class H Cement + 1% bwow Sodium Chloride + 0.2% bwoc R-3 + 0.125 lbs/sack Cello Flake + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 58.3% Fresh Water, 14.2 ppg. **Yield**: 1.28 cf/sk

DV TOOL at ~4,500 ft

2nd Stage

Lead: 215 sacks Class C Cement + 1% bwow Calcium Chloride + 0.125 lbs/sack Cello Flake + 157.8% Fresh Water, 11.4 ppg. **Yield**: 2.89 cf/sk

Tail: 150 sacks (60:40) Poz (Fly Ash):Class C Cement + 1% bwow Sodium Chloride + 0.2% bwoc R-3 + 0.125 lbs/sack Cello Flake + 0.5% bwoc BA-10A + 4% bwoc MPA-5 + 63.2% Fresh Water, 13.8 ppg. **Yield**: 1.37cf/sk. **TOC @ 2,650 ft**

TOC for All Strings:

Surface:	0'
Intermediate:	0'
Production:	2,650'

The above cement volumes could be revised pending the caliper measurement from the open hole logs. Actual cement volumes will be adjusted bases on fluid caliper and caliper log data.

5. **Pressure Control Equipment:**

BOP DESIGN: The BOP system used to drill the intermediate hole will consist of a 13-5/8" 5M Double Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a 3M system prior to drilling out the surface casing shoe.

The BOP system used to drill the production hole will consist of a 13-5/8" 5M Double Ram and Annular preventer. The BOP system will be tested as per BLM Onshore Oil and Gas Order No. 2 as a 5M system prior to drilling out the intermediate casing shoe.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 5,000 psi WP.

6. **Proposed Mud Circulation System**

Depth	Mud Wt.	Visc	Fluid Loss	Type System
0' – 550'	8.4-9.0	30-34	NC	Fresh Water
550'– 3150'	9.8-10.0	28-32	NC	Brine
3150'–13090'	8.6-9.0	28-32	NC-12	Fresh Water

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:

see COA

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 3600 psi and Estimated BHT 145°. 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.

devon

Devon Energy, Inc.

Eddy County
Strawberry "7" Federal Com
#6H
OH

Plan: Plan #1

Pathfinder X & Y Planning Report

29 July, 2010

PATHFINDER

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County	TVD Reference:	WELL @ 3483 00ft (18' KB MCvay #8)
Site:	Strawberry "7" Federal Com	MD Reference:	WELL @ 3483.00ft (18' KB MCvay #8)
Well:	#6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Project Eddy County

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site Strawberry "7" Federal Com

Site Position:		**Northing:**	607,233 892 ft	**Latitude:**	32° 40' 6 915 N
From:	Map	**Easting:**	674,319.009 ft	**Longitude:**	103° 54' 4 250 W
Position Uncertainty:	0 00 ft	**Slot Radius:**	"	**Grid Convergence:**	0 23 °

Well #6H

Well Position	**+N/-S**	0.00 ft	**Northing:**	608,543 621 ft	**Latitude:**	32° 40' 19.875 N
	+E/-W	0.00 ft	**Easting:**	674,309 355 ft	**Longitude:**	103° 54' 4 301 W
Position Uncertainty		0 00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	3,465.00 ft

Wellbore OH

Magnetic Model	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	08/25/2010	7.86	60.59	48,963

Design Plan #1

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0 00	0 00	269 55

Survey Program **Date** 07/29/2010

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	13,090 24	Plan #1 (OH)	Pathfinder	Pathfinder MWD

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County	TVD Reference:	WELL @ 3483.00ft (18' KB MCvay #8)
Site:	Strawberry "7" Federal Com	MD Reference:	WELL @ 3483.00ft (18' KB MCvay #8)
Well:	#6H	North Reference:	Grid
Wellpath:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Planned Survey

MD (ft)	Inc (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
0 00	0.00	0 00	0.00	-3,483.00	0 00	0.00	0 00	0 00	608,543 62	674,309 36
100 00	0 00	0 00	100.00	-3,383 00	0 00	0 00	0 00	0 00	608,543 62	674,309 36
200.00	0 00	0 00	200 00	-3,283 00	0 00	0 00	0 00	0 00	608,543 62	674,309 36
300 00	0.00	0.00	300 00	-3,183 00	0 00	0.00	0 00	0 00	608,543 62	674,309 36
400 00	0.00	0 00	400 00	-3,083 00	0 00	0 00	0 00	0 00	608,543 62	674,309 36
500.00	0.00	0 00	500 00	-2,983 00	0 00	0 00	0.00	0 00	608,543 62	674,309.36
600.00	0.00	0.00	600.00	-2,883.00	0 00	0 00	0.00	0 00	608,543 62	674,309 36
700 00	0.00	0 00	700.00	-2,783 00	0 00	0 00	0 00	0 00	608,543 62	674,309 36
800.00	0.00	0 00	800.00	-2,683 00	0 00	0 00	0 00	0 00	608,543 62	674,309 36
900 00	0.00	0 00	900 00	-2,583 00	0 00	0 00	0 00	0 00	608,543 62	674,309 36
1,000.00	0 00	0 00	1,000.00	-2,483 00	0 00	0 00	0 00	0 00	608,543 62	674,309 36
1,100.00	0 00	0 00	1,100.00	-2,383 00	0.00	0.00	0.00	0.00	608,543 62	674,309 36
1,200.00	0.00	0 00	1,200 00	-2,283.00	0.00	0 00	0 00	0 00	608,543.62	674,309 36
1,300.00	0.00	0 00	1,300.00	-2,183.00	0.00	0 00	0 00	0 00	608,543.62	674,309.36
1,400.00	0.00	0 00	1,400.00	-2,083.00	0 00	0 00	0 00	0.00	608,543 62	674,309 36
1,500.00	0.00	0.00	1,500 00	-1,983.00	0.00	0 00	0 00	0 00	608,543.62	674,309 36
1,600 00	0.00	0 00	1,600 00	-1,883.00	0 00	0 00	0 00	0.00	608,543 62	674,309.36
1,700.00	0 00	0 00	1,700.00	-1,783.00	0.00	0 00	0.00	0.00	608,543 62	674,309.36
1,800 00	0 00	0.00	1,800 00	-1,683.00	0.00	0.00	0 00	0 00	608,543 62	674,309 36
1,900.00	0 00	0 00	1,900 00	-1,583.00	0.00	0 00	0.00	0 00	608,543 62	674,309 36
2,000 00	0.00	0 00	2,000 00	-1,483 00	0 00	0.00	0.00	0.00	608,543 62	674,309 36
2,100 00	0 00	0 00	2,100.00	-1,383 00	0 00	0 00	0 00	0.00	608,543 62	674,309 36
2,200 00	0 00	0 00	2,200.00	-1,283.00	0 00	0 00	0 00	0 00	608,543 62	674,309 36
2,300 00	0.00	0 00	2,300.00	-1,183.00	0.00	0 00	0 00	0 00	608,543 62	674,309.36
2,400.00	0.00	0 00	2,400 00	-1,083.00	0 00	0 00	0 00	0 00	608,543.62	674,309 36
2,500.00	0.00	0.00	2,500.00	-983.00	0.00	0.00	0 00	0 00	608,543 62	674,309 36
2,600.00	0.00	0 00	2,600.00	-883.00	0 00	0 00	0.00	0 00	608,543 62	674,309 36

Company:	Devon Energy, Inc	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County	TVD Reference:	WELL @ 3483 00ft (18' KB MCvay #8)
Site:	Strawberry "7" Federal Com	MD Reference:	WELL @ 3483.00ft (18' KB MCvay #8)
Well:	#6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Planned Survey

MD (ft)	Incl (°)	Azi (°) (ft)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
2,700.00	0 00	0 00	2,700.00	-783 00	0.00	0 00	0.00	0 00	608,543 62	674,309 36
2,800 00	0.00	0 00	2,800 00	-683 00	0.00	0 00	0 00	0 00	608,543 62	674,309.36
2,900.00	0 00	0 00	2,900 00	-583.00	0 00	0.00	0 00	0 00	608,543 62	674,309 36
3,000 00	0 00	0 00	3,000 00	-483.00	0 00	0 00	0 00	0.00	608,543 62	674,309 36
3,100.00	0.00	0 00	3,100.00	-383 00	0.00	0 00	0.00	0.00	608,543 62	674,309.36
3,200.00	0.00	0 00	3,200 00	-283 00	0.00	0.00	0 00	0 00	608,543 62	674,309 36
3,300 00	0.00	0.00	3,300 00	-183 00	0 00	0.00	0 00	0.00	608,543 62	674,309 36
3,400.00	0 00	0 00	3,400 00	-83 00	0 00	0.00	0 00	0 00	608,543 62	674,309 36
3,500.00	0 00	0.00	3,500.00	17 00	0.00	0 00	0 00	0 00	608,543 62	674,309.36
3,600.00	0.00	0 00	3,600 00	117 00	0 00	0.00	0.00	0 00	608,543 62	674,309 36
3,700.00	0.00	0.00	3,700 00	217 00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
3,800.00	0.00	0.00	3,800 00	317.00	0 00	0 00	0 00	0.00	608,543 62	674,309 36
3,900.00	0.00	0.00	3,900.00	417.00	0 00	0.00	0 00	0.00	608,543.62	674,309 36
4,000 00	0.00	0.00	4,000 00	517 00	0.00	0.00	0.00	0 00	608,543 62	674,309 36
4,100.00	0.00	0.00	4,100.00	617.00	0.00	0 00	0.00	0.00	608,543.62	674,309.36
4,200 00	0.00	0.00	4,200 00	717 00	0 00	0 00	0 00	0 00	608,543.62	674,309 36
4,300.00	0.00	0.00	4,300 00	817.00	0.00	0 00	0 00	0 00	608,543.62	674,309 36
4,400.00	0 00	0.00	4,400 00	917.00	0 00	0 00	0.00	0 00	608,543 62	674,309 36
4,500.00	0.00	0 00	4,500.00	1,017 00	0.00	0.00	0 00	0 00	608,543 62	674,309.36
4,600.00	0.00	0 00	4,600.00	1,117.00	0 00	0 00	0 00	0.00	608,543 62	674,309 36
4,700.00	0.00	0.00	4,700.00	1,217.00	0.00	0.00	0 00	0 00	608,543 62	674,309 36
4,800.00	0.00	0.00	4,800.00	1,317 00	0 00	0 00	0.00	0 00	608,543 62	674,309.36
4,900.00	0.00	0.00	4,900.00	1,417 00	0 00	0 00	0.00	0.00	608,543.62	674,309 36
5,000.00	0.00	0 00	5,000 00	1,517.00	0 00	0.00	0 00	0 00	608,543.62	674,309.36
5,100.00	0.00	0.00	5,100.00	1,617.00	0.00	0 00	0 00	0 00	608,543 62	674,309 36
5,200.00	0 00	0 00	5,200.00	1,717.00	0.00	0.00	0.00	0 00	608,543 62	674,309 36
5,300.00	0.00	0 00	5,300.00	1,817.00	0.00	0 00	0 00	0.00	608,543 62	674,309.36

Company:	Devon Energy, Inc	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County	TVD Reference:	WELL @ 3483.00ft (18' KB MCvay #8)
Site:	Strawberry "7" Federal Com	MD Reference:	WELL @ 3483.00ft (18' KB MCvay #8)
Well:	#6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Planned Survey

MD (ft)	Incl (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
5,400.00	0.00	0.00	5,400.00	1,917.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
5,500.00	0.00	0.00	5,500.00	2,017.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
5,600.00	0.00	0.00	5,600.00	2,117.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
5,700.00	0.00	0.00	5,700.00	2,217.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
5,800.00	0.00	0.00	5,800.00	2,317.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
5,900.00	0.00	0.00	5,900.00	2,417.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
6,000.00	0.00	0.00	6,000.00	2,517.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
6,100.00	0.00	0.00	6,100.00	2,617.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
6,200.00	0.00	0.00	6,200.00	2,717.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
6,300.00	0.00	0.00	6,300.00	2,817.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
6,400.00	0.00	0.00	6,400.00	2,917.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
6,500.00	0.00	0.00	6,500.00	3,017.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
6,600.00	0.00	0.00	6,600.00	3,117.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
6,700.00	0.00	0.00	6,700.00	3,217.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
6,800.00	0.00	0.00	6,800.00	3,317.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
6,900.00	0.00	0.00	6,900.00	3,417.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
7,000.00	0.00	0.00	7,000.00	3,517.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
7,100.00	0.00	0.00	7,100.00	3,617.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
7,200.00	0.00	0.00	7,200.00	3,717.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
7,300.00	0.00	0.00	7,300.00	3,817.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
7,400.00	0.00	0.00	7,400.00	3,917.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
7,500.00	0.00	0.00	7,500.00	4,017.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
7,600.00	0.00	0.00	7,600.00	4,117.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
7,700.00	0.00	0.00	7,700.00	4,217.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
7,800.00	0.00	0.00	7,800.00	4,317.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
7,900.00	0.00	0.00	7,900.00	4,417.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36
8,000.00	0.00	0.00	8,000.00	4,517.00	0.00	0.00	0.00	0.00	608,543.62	674,309.36

Company:	Devon Energy, Inc	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County	TVD Reference:	WELL @ 3483.00ft (18' KB MCvay #8)
Site:	Strawberry "7" Federal Com	MD Reference:	WELL @ 3483.00ft (18' KB MCvay #8)
Well:	#6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Planned Survey

MD (ft)	Inc (ft)	Azi (ft)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	Dl eg. (°/100ft)	Northing (ft)	Easting (ft)
8,100 00	0.00	0 00	8,100.00	4,617.00	0 00	0.00	0.00	0.00	608,543 62	674,309.36
8,200 00	0 00	0 00	8,200 00	4,717 00	0 00	0.00	0 00	0 00	608,543 62	674,309 36
8,262 00	0 00	0 00	8,262 00	4,779 00	0 00	0.00	0.00	0 00	608,543 62	674,309 36
8,300 00	3.80	269 55	8,299 97	4,816 97	-0 01	-1.26	1 26	10 00	608,543 61	674,308.10
8,350 00	8 80	269 55	8,349 65	4,866 65	-0 05	-6.74	6 74	10 00	608,543 57	674,302.61
8,400 00	13 80	269.55	8,398 67	4,915 67	-0.13	-16.54	16.54	10.00	608,543 49	674,292.82
8,450.00	18.80	269.55	8,446 65	4,963 65	-0 24	-30 56	30.57	10.00	608,543.38	674,278 79
8,500.00	23 80	269 55	8,493.22	5,010.22	-0 38	-48 72	48.72	10.00	608,543.24	674,260 64
8,550.00	28 80	269 55	8,538 03	5,055.03	-0 56	-70.86	70.87	10.00	608,543.06	674,238 49
8,600 00	33.80	269 55	8,580 74	5,097 74	-0.76	-96 83	96.83	10.00	608,542 86	674,212.53
8,650 00	38.80	269 55	8,621.02	5,138.02	-0 99	-126 42	126 42	10 00	608,542.63	674,182 94
8,700.00	43.80	269 55	8,658.57	5,175.57	-1 25	-159 40	159 41	10 00	608,542.37	674,149 95
8,750 00	48.80	269 55	8,693 11	5,210.11	-1 54	-195 54	195 54	10.00	608,542 09	674,113.82
8,800 00	53.80	269.55	8,724 36	5,241.36	-1.84	-234 54	234.55	10.00	608,541 78	674,074 81
8,850.00	58.80	269 55	8,752.10	5,269 10	-2 17	-276 12	276 13	10 00	608,541 45	674,033 23
8,900.00	63.80	269 55	8,776 11	5,293 11	-2 51	-319 97	319.97	10 00	608,541 11	673,989 39
8,950.00	68.79	269 55	8,796.20	5,313 20	-2 87	-365 73	365.74	10 00	608,540.75	673,943.62
9,000.00	73.79	269 55	8,812.23	5,329 23	-3.24	-413 07	413.09	10.00	608,540.38	673,896 28
9,050.00	78.79	269.55	8,824.08	5,341.08	-3 63	-461.63	461.65	10.00	608,540 00	673,847 72
9,100.00	83 79	269.55	8,831.64	5,348.64	-4 01	-511.04	511 06	10.00	608,539.61	673,798 32
9,150.00	88 79	269.55	8,834.87	5,351 87	-4 41	-560.92	560 93	10 00	608,539 22	673,748 44
9,162.07	90 00	269.55	8,835.00	5,352 00	-4 50	-572 98	573 00	10 00	608,539.12	673,736 37
9,200.00	90 00	269 55	8,835 00	5,352 00	-4.80	-610 91	610.93	0 00	608,538 82	673,698 44
9,300.00	90.00	269 55	8,835.00	5,352 00	-5.58	-710 91	710 93	0.00	608,538.04	673,598 44
9,400.00	90.00	269.55	8,835 00	5,352 00	-6.37	-810 91	810 93	0 00	608,537.25	673,498.45
9,500.00	90.00	269.55	8,835.00	5,352 00	-7.15	-910.91	910.93	0.00	608,536 47	673,398 45
9,600 00	90 00	269 55	8,835.00	5,352 00	-7.94	-1,010.90	1,010 93	0 00	608,535 68	673,298 45

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #6H
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Well:	#6H	North Reference:	Grid
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Planned Survey

MD (ft)	Incl (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
9,700.00	90.00	269.55	8,835.00	5,352.00	-8.73	-1,110.90	1,110.93	0.00	608,534.90	673,198.46
9,800.00	90.00	269.55	8,835.00	5,352.00	-9.51	-1,210.90	1,210.93	0.00	608,534.11	673,098.46
9,900.00	90.00	269.55	8,835.00	5,352.00	-10.30	-1,310.89	1,310.93	0.00	608,533.33	672,998.46
10,000.00	90.00	269.55	8,835.00	5,352.00	-11.08	-1,410.89	1,410.93	0.00	608,532.54	672,898.46
10,100.00	90.00	269.55	8,835.00	5,352.00	-11.87	-1,510.89	1,510.93	0.00	608,531.75	672,798.47
10,200.00	90.00	269.55	8,835.00	5,352.00	-12.65	-1,610.88	1,610.93	0.00	608,530.97	672,698.47
10,300.00	90.00	269.55	8,835.00	5,352.00	-13.44	-1,710.88	1,710.93	0.00	608,530.18	672,598.47
10,400.00	90.00	269.55	8,835.00	5,352.00	-14.22	-1,810.88	1,810.93	0.00	608,529.40	672,498.48
10,500.00	90.00	269.55	8,835.00	5,352.00	-15.01	-1,910.87	1,910.93	0.00	608,528.61	672,398.48
10,600.00	90.00	269.55	8,835.00	5,352.00	-15.79	-2,010.87	2,010.93	0.00	608,527.83	672,298.48
10,700.00	90.00	269.55	8,835.00	5,352.00	-16.58	-2,110.87	2,110.93	0.00	608,527.04	672,198.49
10,800.00	90.00	269.55	8,835.00	5,352.00	-17.36	-2,210.87	2,210.93	0.00	608,526.26	672,098.49
10,900.00	90.00	269.55	8,835.00	5,352.00	-18.15	-2,310.86	2,310.93	0.00	608,525.47	671,998.49
11,000.00	90.00	269.55	8,835.00	5,352.00	-18.94	-2,410.86	2,410.93	0.00	608,524.69	671,898.50
11,100.00	90.00	269.55	8,835.00	5,352.00	-19.72	-2,510.86	2,510.93	0.00	608,523.90	671,798.50
11,200.00	90.00	269.55	8,835.00	5,352.00	-20.51	-2,610.85	2,610.93	0.00	608,523.11	671,698.50
11,300.00	90.00	269.55	8,835.00	5,352.00	-21.29	-2,710.85	2,710.93	0.00	608,522.33	671,598.50
11,400.00	90.00	269.55	8,835.00	5,352.00	-22.08	-2,810.85	2,810.93	0.00	608,521.54	671,498.51
11,500.00	90.00	269.55	8,835.00	5,352.00	-22.86	-2,910.84	2,910.93	0.00	608,520.76	671,398.51
11,600.00	90.00	269.55	8,835.00	5,352.00	-23.65	-3,010.84	3,010.93	0.00	608,519.97	671,298.51
11,700.00	90.00	269.55	8,835.00	5,352.00	-24.43	-3,110.84	3,110.93	0.00	608,519.19	671,198.52
11,800.00	90.00	269.55	8,835.00	5,352.00	-25.22	-3,210.83	3,210.93	0.00	608,518.40	671,098.52
11,900.00	90.00	269.55	8,835.00	5,352.00	-26.00	-3,310.83	3,310.93	0.00	608,517.62	670,998.52
12,000.00	90.00	269.55	8,835.00	5,352.00	-26.79	-3,410.83	3,410.93	0.00	608,516.83	670,898.53
12,100.00	90.00	269.55	8,835.00	5,352.00	-27.57	-3,510.83	3,510.93	0.00	608,516.05	670,798.53
12,200.00	90.00	269.55	8,835.00	5,352.00	-28.36	-3,610.82	3,610.93	0.00	608,515.26	670,698.53
12,300.00	90.00	269.55	8,835.00	5,352.00	-29.15	-3,710.82	3,710.93	0.00	608,514.48	670,598.54

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #6H
Project:	Eddy County	TVD Reference:	WELL @ 3483 00ft (18' KB MCvay #8)
Site:	Strawberry "7" Federal Com	MD Reference:	WELL @ 3483.00ft (18' KB MCvay #8)
Well:	#6H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	Plan #1	Database:	Midland Database

Planned Survey

MD (ft)	Incl (°)	Azi (°)	TVD (ft)	TVDSS (ft)	N/S (ft)	E/W (ft)	V. Sec (ft)	DLeg (°/100ft)	Northing (ft)	Easting (ft)
12,400.00	90 00	269.55	8,835 00	5,352 00	-29 93	-3,810.82	3,810 93	0 00	608,513 69	670,498 54
12,500 00	90 00	269 55	8,835.00	5,352 00	-30 72	-3,910 81	3,910.93	0.00	608,512 90	670,398.54
12,600 00	90.00	269 55	8,835 00	5,352.00	-31.50	-4,010 81	4,010 93	0 00	608,512 12	670,298 55
12,700.00	90.00	269.55	8,835.00	5,352.00	-32 29	-4,110.81	4,110 93	0 00	608,511 33	670,198 55
12,800.00	90.00	269.55	8,835.00	5,352 00	-33 07	-4,210.80	4,210 93	0.00	608,510 55	670,098.55
12,900.00	90 00	269 55	8,835.00	5,352 00	-33.86	-4,310 80	4,310 93	0 00	608,509 76	669,998 55
13,000.00	90 00	269 55	8,835.00	5,352.00	-34 64	-4,410 80	4,410 93	0 00	608,508.98	669,898 56
13,090 24	90.00	269 55	8,835 00	5,352 00	-35 35	-4,501 03	4,501.17	0.00	608,508 27	669,808 32
BPHL(str#6H)										

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
BPHL(str#6H) - plan hits target center - Point	0.00	0 00	8,835.00	-35 47	-4,501 03	608,508 151	669,808 324	32° 40' 19.702 N	103° 54' 56 961 W

Checked By: _____ Approved By: _____ Date: _____

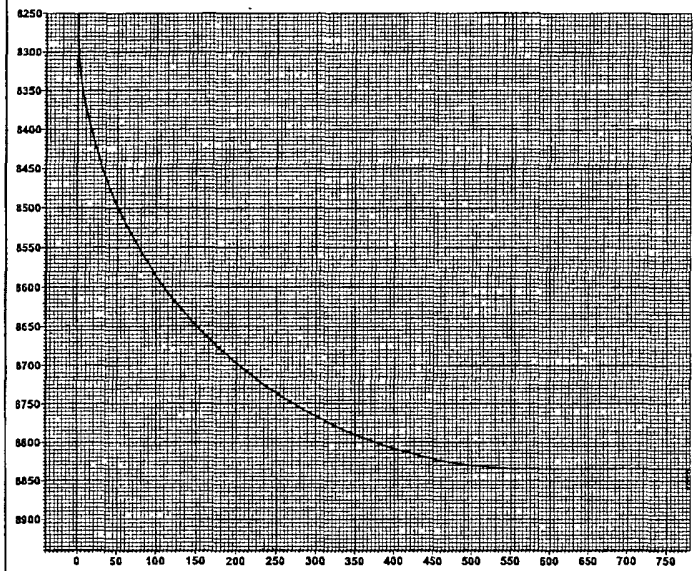
devon

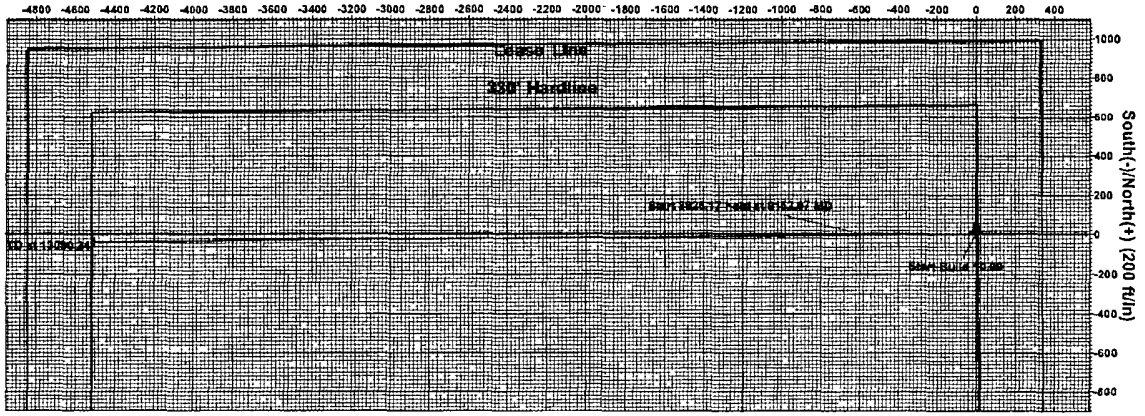
Project: Eddy County
Site: Strawberry "7" Federal Com
Well: #6H
Wellbore: OH
Plan: Plan #1 (#6H/OH)

Azimuths to Grid North
True North: -0.23°
Magnetic North 7.62°

Magnetic Field
Strength: 48963.3snT
Dip Angle: 60 58°
Date: 08/25/2010
Model IGRF200510

PATHFINDER





SECTION DETAILS

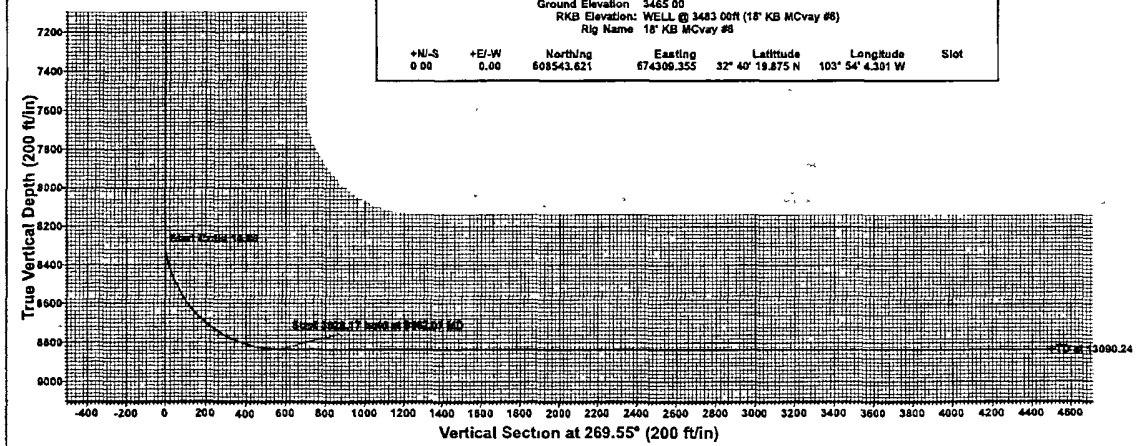
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	8262.00	0.00	0.00	8262.00	0.00	0.00	0.00	0.00	0.00	
3	9162.07	90.00	269.55	8835.00	-4.50	-572.98	10.00	269.55	573.00	
4	13090.24	90.00	269.55	8835.00	-35.35	-4501.03	0.00	0.00	4501.17	BPHL(str#6H)

WELL DETAILS #6H

Ground Elevation 3465.00
RKB Elevation: WELL @ 3483.00ft (18' KB MCvay #6)
Rig Name 18' KB MCvay #6

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	608543.621	674309.355	32° 40' 19.875 N	103° 54' 4.301 W	

PROJECT DETAILS Eddy County
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level
Local North: Grid

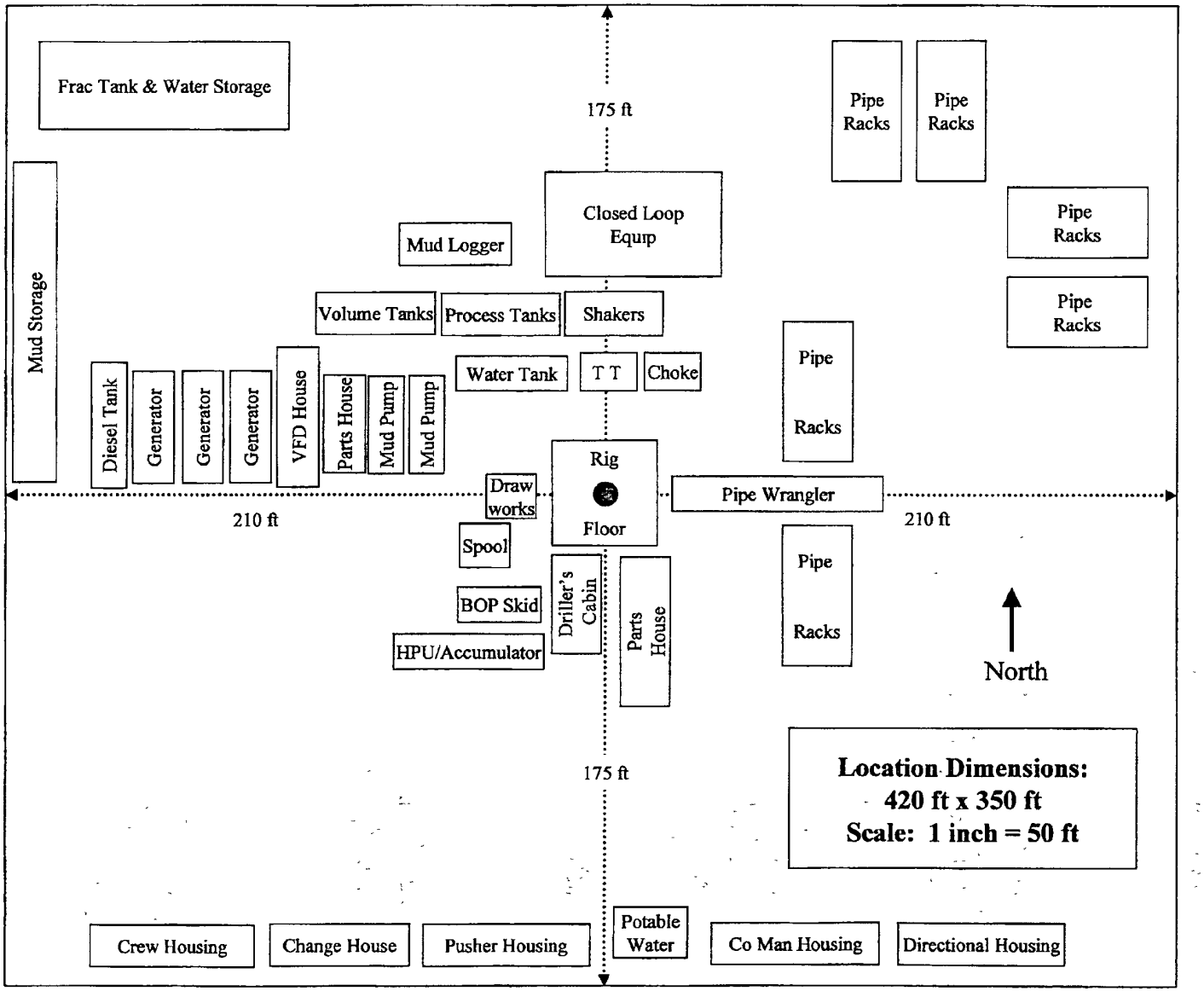


WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
BPHL(str#6H)	8835.00	-35.47	-4501.03	608508.151	669808.324	Point

Plan: Plan #1 (#6H/OH)
Created By Nate Bingham Date 9:05, July 29 2010
Checked _____ Date _____

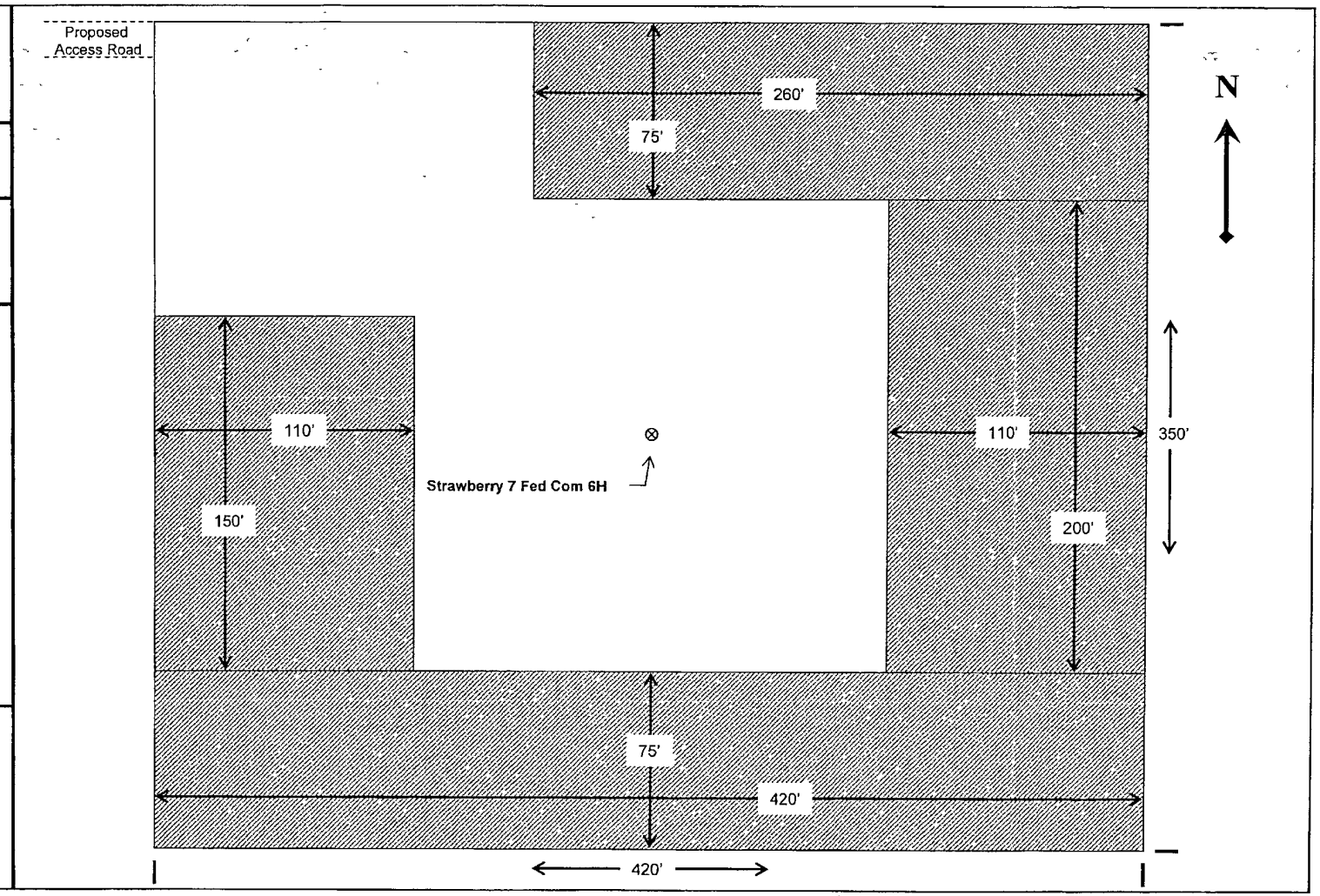
H&P Flex Rig Location Layout



devon

Proposed Interim Site Reclamation

Devon Energy Production Co.
Strawberry 7 Fed Com 6H
1650' FSL & 340' FEL
Sec. 7-T19S-R31E
Eddy County, NM



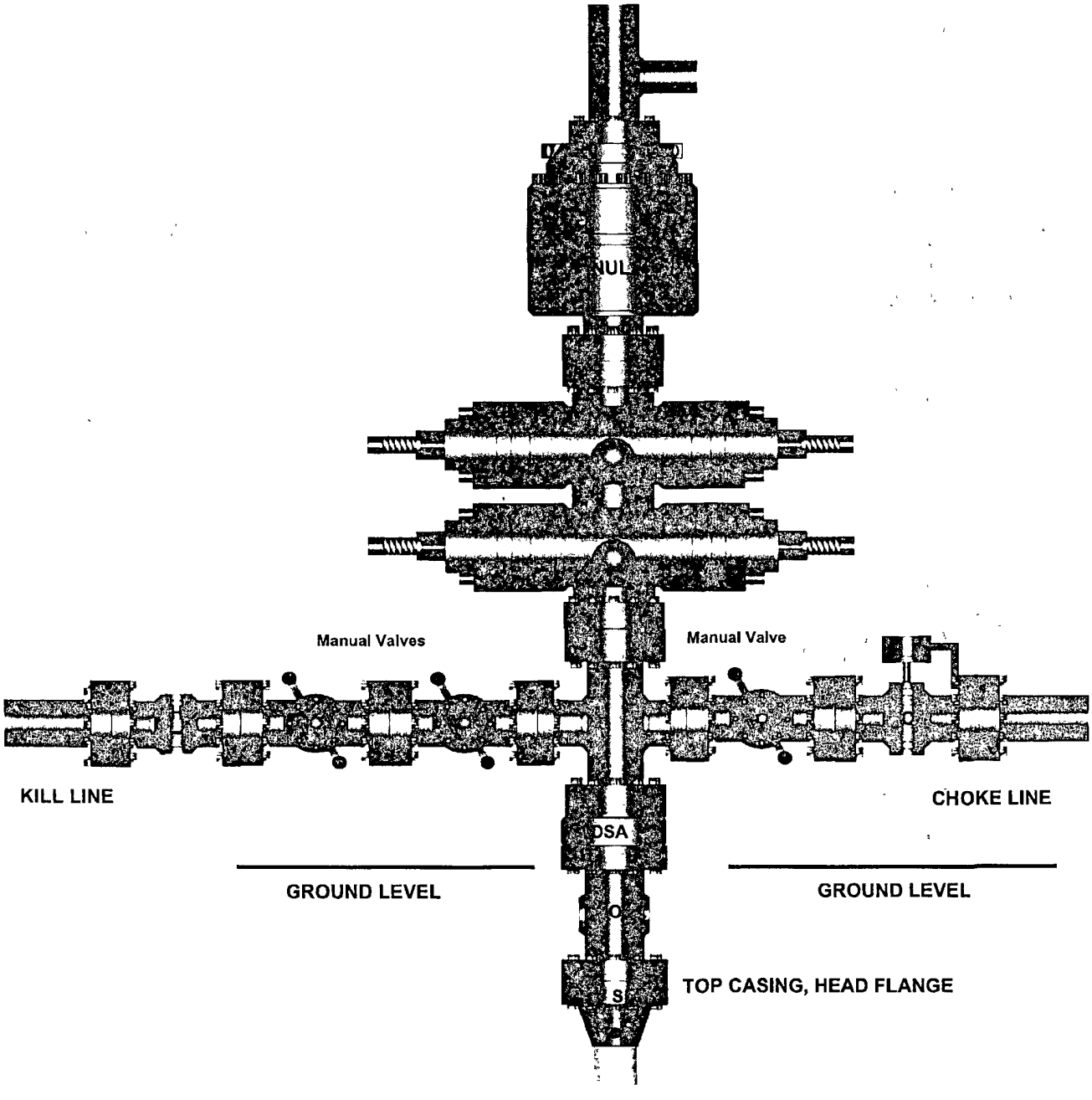
Proposed Reclamation Area

1" : 50'

Attachment to Exhibit #1
NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP
Strawberry 7 Federal 6H
Surface Location: 1650' FSL & 340' FEL, Unit I, Sec 7 T19S R31E, Eddy, NM
Bottom hole Location: 1650' FSL & 340' FWL, Unit L, Sec 7 T19S R31E, Eddy, NM

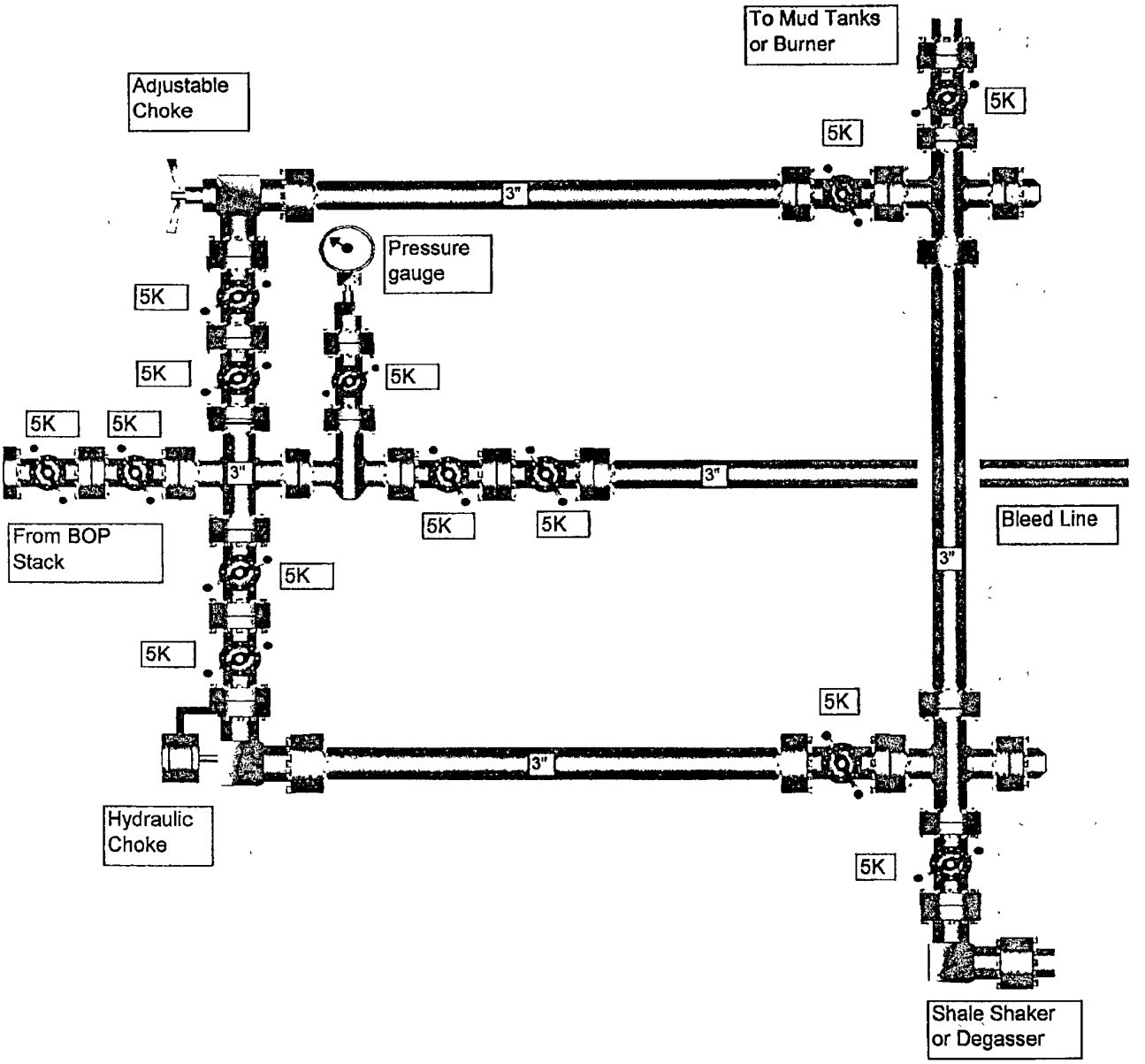
1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.
2. Wear ring will be properly installed in head.
3. Blowout preventer and all associated fittings will be in operable condition to withstand a minimum 5000 psi working pressure.
4. All fittings will be flanged.
5. A full bore safety valve tested to a minimum 5000 psi WP with proper thread connections will be available on the rotary rig floor at all times.
6. All choke lines will be anchored to prevent movement.
7. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.
8. Will maintain a kelly cock attached to the kelly.
9. Hand wheels and wrenches will be properly installed and tested for safe operation.
10. Hydraulic floor control for blowout preventer will be located as near in proximity to driller's controls as possible.
11. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

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



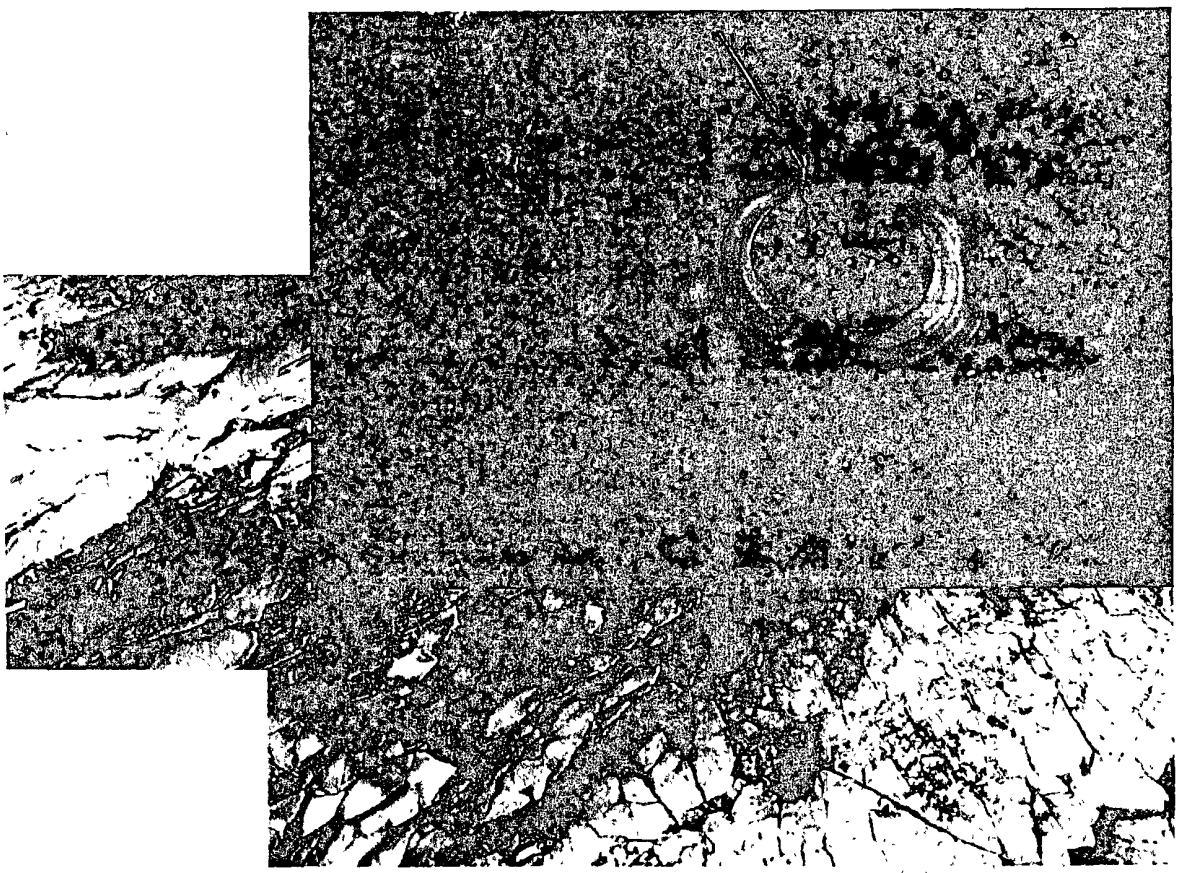
L:\Western\Drilling\Wes Handley\Drawings\BOPS\BOPs.xls

5,000 PSI CHOKE MANIFOLD



devon

Commitment Runs Deep



Design Plan
Operation and Maintenance Plan
Closure Plan

SENM - Closed Loop Systems
June 2008

I. Design Plan

Devon uses MI SWACO closed loop system (CLS). The MI SWACO CLS is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This insures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

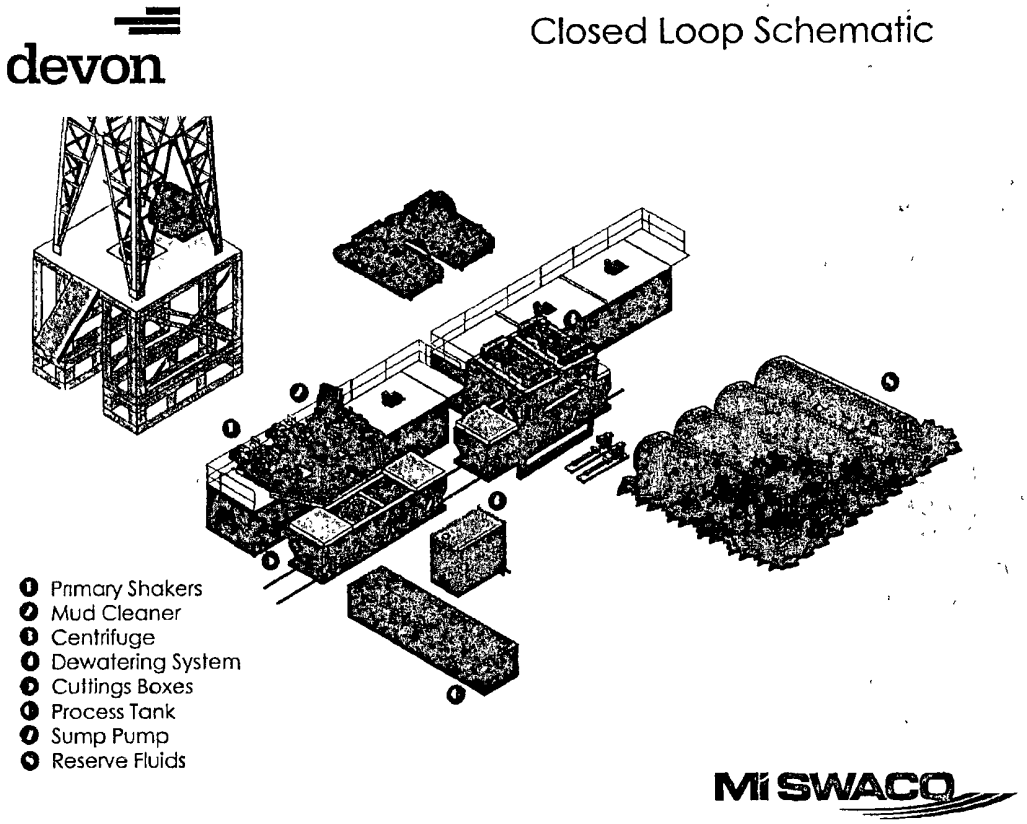
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

Signs will be posted on the fence surrounding the closed-loop system unless the closed-loop system is located on a site where there is an existing well, that is operated by Devon.

II. Operations and Maintenance Plan

Primary Shakers: The primary shakers make the first removal of drill solids from the drilling mud as it leaves the well bore. The shakers are sized to handle maximum drilling rate at optimal screen size. The shakers normally remove solids down to 74 microns.

Mud Cleaner: The Mud Cleaner cleans the fluid after it leaves the shakers. A set of hydrocyclones are sized to handle 1.25 to 1.5 times the maximum circulating rate. This ensures all the fluid is being processed to an average cut point of 25 microns. The wet discharged is dewatered on a shaker equipped with ultra fine mesh screens and generally cut at 40 microns.



Centrifuges: The centrifuges can be one or two in number depending on the well geometry or depth of well. The centrifuges are sized to maintain low gravity solids at 5% or below. They may or may not need a dewatering system to enhance the removal rates. The centrifuges can make a cut point of 8-10 microns depending on bowl speed, feed rate, solids loading and other factors.

The centrifuge system is designed to work on the active system and be flexible to process incoming fluids from other locations. This set-up is also dependant on well factors.

Dewatering System: The dewatering system is a chemical mixing and dosing system designed to enhance the solids removal of the centrifuge. Not commonly used in shallow wells. It may contain pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing. Chemical flocculation binds ultra fine solids into a mass that is within the centrifuge operating design. The

dewatering system improves the centrifuge cut point to infinity or allows for the return of clear water or brine fluid. This ability allows for the ultimate control of low gravity solids.

Cuttings Boxes: Cuttings boxes are utilized to capture drill solids that are discarded from the solids control equipment. These boxes are set upon a rail system that allows for the removal and replacement of a full box of cuttings with an empty one. They are equipped with a cover that insures no product is spilled into the environment during the transportation phase.

Process Tank: (Optional) The process tank allows for the holding and process of fluids that are being transferred into the mud system. Additionally, during times of lost circulation the process tank may hold active fluids that are removed for additional treatment. It can further be used as a mixing tank during well control conditions.

Sump and Sump Pump: The sump is used to collect storm water and the pump is used to transfer this fluid to the active system or to the tank for to hold in reserve. It can also be used to collect fluids that may escape during spills. The location contains drainage ditches that allow the location fluids to drain to the sump.

Reserve Fluids (Tank Farm): A series of frac tanks are used to replace the reserve pit. These are steel tanks that are equipped with a manifold system and a transfer pump. These tanks can contain any number of fluids used during the drilling process. These can include fresh water, cut brine, and saturated salt fluid. The fluid can be from the active well or reclaimed fluid from other locations. A 20 ml liner and berm system is employed to ensure the fluids do not migrate to the environment during a spill.

If a leak develops, the appropriate division district office will be notified within 48 hours of the discovery and the leak will be addressed. Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and testing will be performed to determine if a release has occurred.

All trash is kept in a wire mesh enclosure and removed to an approved landfill when full. All spent motor oils are kept in separate containers and they are removed and sent to an approved recycling center. Any spilled lubricants, pipe

dope, or regulated chemicals are removed from soil and sent to landfills approved for these products.

These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

III. Closure Plan

A maximum 340' X 340' caliche pad is built per well. All of the trucks and steel tanks fit on this pad. All fluid cuttings go to the steel tanks to be hauled by various trucking companies to an agency approved disposal.

SURFACE USE PLAN
Devon Energy Production Company, LP
Strawberry 7 Federal 6H
Surface Location: 1650' FSL & 340' FEL, Unit I, Sec 7 T19S R31E, Eddy, NM
Bottom hole Location: 1650' FSL & 340' FWL, Unit L, Sec 7 T19S R31E, 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 the surveyor plats.
   c. Directions to Location: From the junction of Westall and Shugart, go northwest on Shugart for 0.1 mile to lease road; thence west on lease road for 2.8 mile, continue to following lease road curving to the south and then to the east for 0.3 mile; thence southeast for 0.7 mile; thence east for 0.2 mile to existing pad and proposed lease road.
   d. Routine grading and maintenance of existing roads will be conducted as necessary to maintain their condition as long as any operations continue on this lease.
   e. If existing road is shared with other operators, Devon will share in its cost to maintain the road as required by the BLM.

2. **New or Reconstructed Access Roads:**
   a. The well site layout, Form C-102 shows approximately 340' of new access road will be constructed as follows:
   b. The maximum width of the road will be 14'. 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 2%.
   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 4H tank battery (would be utilized and the necessary production equipment will be installed at the well site.
   b. If necessary, the well will be operated by means of an electric prime mover. Electric power poles will be set along side of the access road.
   c. If the well is productive, rehabilitation plans are as follows:
      i. A closed loop system will be utilized.
      ii. The original topsoil from the well site will be returned to the location. The drill site will then be contoured as close as possible to the original state.

4. **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.

5. **Construction Materials:**
The caliche utilized for the drilling pad and proposed access road will be from minerals that are located onsite or will be used onsite. If minerals are not available onsite, then an established mineral pit will be used to build the location and stem road.

6. **Methods of Handling Waste Material:**
   a. Drill cuttings will be disposed of in a closed loop system.
   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 sent to a closed loop system. Water produced during completion will be put into a closed loop system. Oil and condensate produced will be put into 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

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

8. **Well Site Layout**
   a. The rig layout diagram 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. A closed loop system will be utilized.
   d. If a pit or closed loop system will be utilized, Devon will comply with the NMOCD requirements 19.15.17 and submit form C-144 CLEZ to the appropriate NMOCD District Office. An unapproved copy is provided within the APD.
   e. Topsoil Stockpiling:
      i. Standard practice is topsoil will be pushed to the high side of location to prevent water from running across location to control erosion. If a cut out is done and there are two or three high sides, we will use those there.

9. **Plans for Surface Reclamation Include Both Final & Interim:**
   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 used for other drilling locations, repair existing roads, repair existing locations, etc. The road will be reclaimed as directed by the BLM. The original top soil will again be returned to the pad and contoured, as close as possible, to the original topography. We will use a closed loop system.
   b. The location and road will be rehabilitated as recommended by the BLM.
   c. If the well is deemed commercially productive, 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.
   d. All disturbed areas not needed for active support of production operations will undergo interim reclamation. The portions of the cleared well site not needed for operational and safety purposes will be recontoured to a final or intermediate contour that blends with the surrounding topography as much as possible. Topsoil will be respread over areas not needed for all-weather operations.

10. **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.

11. **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 miscellaneous 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.

Steven Jones
Operations Engineer Advisor

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

(405) 552-7994 (office)
(405) 596-8041 (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 29th day of July, 2010.
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 Co. LP
LEASE NO.:	NMLC069464A
WELL NAME & NO.:	Strawberry 7 Federal 6H
SURFACE HOLE FOOTAGE:	1650' FSL & 340' FEL (Lease # NM54113)
BOTTOM HOLE FOOTAGE	1650' FSL & 340' FWL
LOCATION:	Section 7, 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)

Communitization Agreement

A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

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. V-DOOR DIRECTION: not stipulated

C. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be used for interim and final reclamation.

D. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

E. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call theCarlsbad Field Office at (575) 234-5972.

F. 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.

G. 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.

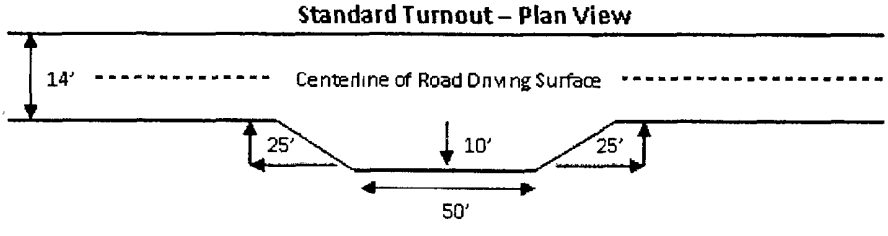
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing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

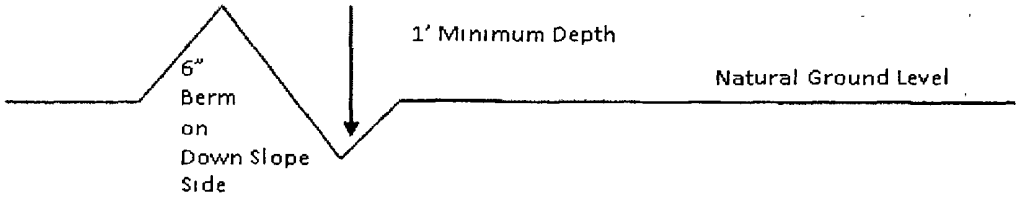


Drainage

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

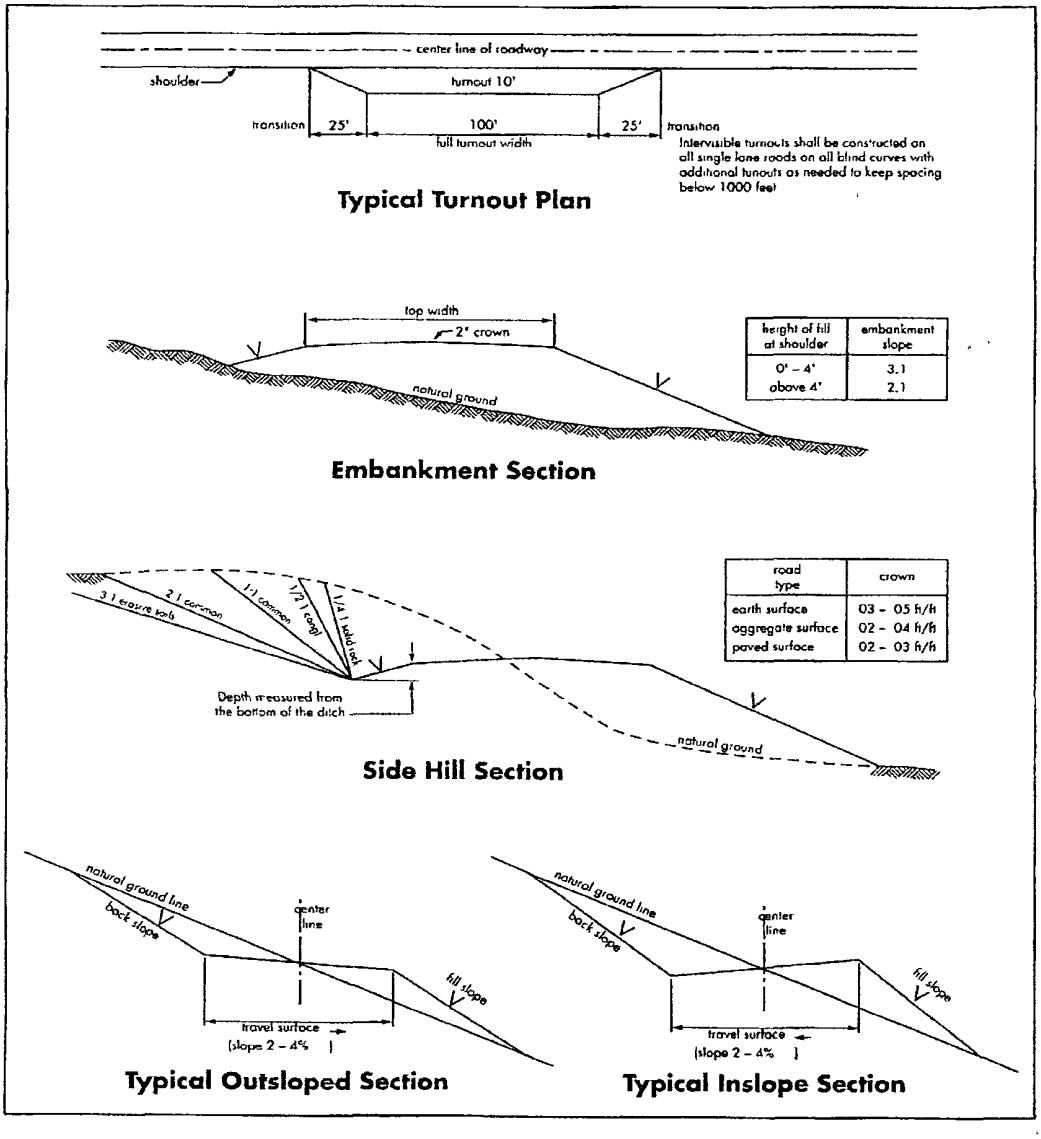
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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. **Due to recent H2S encounters in the salt formation, it is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide prior to drilling out the surface shoe. If Hydrogen Sulfide is encountered, please report measurements 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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

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. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) will be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

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 prior to drilling out 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. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. 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.

Secretary's Potash
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 **550** 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 surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

    b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.

    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:

    ☒ 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 Secretary's potash.**

If any lost circulation occurs below the Base of the Salt, the operator is to switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.

Centralizers required on horizontal leg, must be type for horizontal service and minimum of one every other joint.

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. Operator should have plans as to how they will achieve circulation on the next stage.

b. Second stage above DV tool, cement shall:

☒ Top of cement should tie-back at least **500** feet into previous casing string. Operator shall provide method of verification.

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.

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 **3000 (3M)** psi. **Operator installing a 5M and testing as a 3M.**

a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be **5000 (5M)** psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

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

    a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.

    b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) prior to initiating the test.

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

    d. 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.**

    e. 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.

D. DRILL STEM TEST

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

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

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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

B. PIPELINES (Not applied for in APD)

C. ELECTRIC LINES (Not applied for in APD)

IX. 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.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation 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 that is free of contaminants 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.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture for LPC Sand/Shinnery 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 by the authorized officer.

Seed will be planted using a drill equipped with a 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 (smaller/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 Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A
**Four-winged Saltbush	5lbs/A

* This can be used around well pads and other areas where caliche cannot be removed.

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed