

ATS-11-10

Form 3160-3
(February 2005)

OCD-HOBBSON RECEIVED

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FEB 08 2011

HOBBSON

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. USA NMNM 114990	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee 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. Ichabod 7 Fed # 38479	
3b. Phone No. (include area code) (405)-236-3511		9. API Well No. # 30-025-40043	
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface SESE 195' FSL & 330' FEL Unit P At proposed prod. zone NENE 330' FNL & 330' FEL Unit A		10. Field and Pool, or Exploratory Salado Draw NE w/duct Bone Springs	
11. Sec., T. R. M. or Blk. and Survey or Area Sec 7 T26S R34E		12. County or Parish Lea	
13. State NM		14. Distance in miles and direction from nearest town or post office* Approximately miles southeast of, NM.	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 195'	16. No. of acres in lease 1,241.6 ac	17. Spacing Unit dedicated to this well 160 acres	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. See attached map	19. Proposed Depth TVD 9859' MD 14,286' PH 10,270'	20. BLM/BIA Bond No. on file CO-1104	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3363' GL	22. Approximate date work will start* 05/01/2011	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:

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

25. Signature <i>Spence Laird</i>	Name (Printed/Typed) Spence Laird	Date 09/30/2010
--------------------------------------	--------------------------------------	--------------------

Title
Regulatory Analyst

Approved by (Signature) /s/ James Stovall	Name (Printed/Typed)	Date FEB - 4 2011
---	----------------------	----------------------

Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE
------------------------	---------------------------------

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

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

*(Instructions on page 2)

Carlsbad Controlled Water Basin

NSL-6327

KZ 02/10/11

SEE ATTACHED FOR
CONDITIONS OF APPROVALAPPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND 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 87412

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico

Energy, Minerals & Natural Resources Department

RECEIVED

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-102

Revised October 15, 2009

Submit one copy to appropriate

District Office

☐ AMENDED REPORT

FEB 08 2011

HOBBSD

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-40043		² Pool Code 96403		³ Pool Name Wildcat Bone Spring		⁴ AVALON SHALE			
⁵ Property Code 38479		⁶ Property Name ICHABOD "7" FED.				⁷ Well Number 1H			
⁸ OGRID No. 6137		⁹ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.				¹⁰ Elevation 3363.1			
¹¹ Surface Location									
UL or lot no. P	Section 7	Township 26 S	Range 34 E	Lot Idn	Feet from the 195	North/South line SOUTH	Feet from the 330	East/West line EAST	County LEA
¹² Bottom Hole Location If Different From Surface									
UL or lot no. A	Section 7	Township 26 S	Range 34 E	Lot Idn	Feet from the 330	North/South line NORTH	Feet from the 330	East/West line EAST	County LEA
¹³ Dedicated Acres 160		¹⁴ Joint or Infill		¹⁵ Consolidation Code		¹⁶ Order No. NSL-6327			

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.

N. Q. CORNER SEC. 7 LAT. = 32°03'54.80"N LONG. = 103°30'32.34"W NMSP EAST (FT) N = 388371.92 E = 796726.43		BOTTOM OF HOLE LAT. = 32°03'51.56"N LONG. = 103°30'05.48"W NMSP EAST (FT) N = 388062.01 E = 799040.78		BOTTOM OF HOLE 330'		¹⁷ 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 released 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.	
NE CORNER SEC. 7 LAT. = 32°03'54.89"N LONG. = 103°30'01.65"W NMSP EAST (FT) N = 388394.89 E = 799367.86		ICHABOD "7" FED. #1H ELEV. = 3363.1 LAT. = 32°03'04.452"N (NAD83) LONG. = 103°30'05.434"W NMSP EAST (FT) N = 383300.45 E = 799081.34		SE CORNER SEC. 7 LAT. = 32°03'02.52"N LONG. = 103°30'01.60"W NMSP EAST (FT) N = 383108.02 E = 799412.97		¹⁸ 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 supervision, and that the same is true and correct to the best of my belief.	
S. Q. CORNER SEC. 7 LAT. = 32°03'02.52"N LONG. = 103°30'32.30"W NMSP EAST (FT) N = 383087.26 E = 796770.26		SURFACE LOCATION 330'		SEPTEMBER 7, 2010 Date of Survey Signature and Seal of Professional Surveyor Certificate Number SURVEY NO. 244		SPENCE LAIRD Signature Date 10/1/10 Printed Name SPENCE LAIRD	

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

FEB 08 2011

FORM APPROVED
OMB No. 1004-0135
Expires: January 31, 2004

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 reverse side.

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

2. Name of Operator
Devon Energy Production Company L.P.

3a. Address
P.O. Box 250, Artesia, New Mexico 88211

3b. Phone No. (include area code)
575 748 0163

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
W/2 SE/4 SE/4 Section 7, T26S, R34E

5. Lease Serial No.
NM-114990

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
Ichabod Frac Pond

9. API Well No.
30-025-40043

10. Field and Pool, or Exploratory Area

11. County or Parish, State
Lea, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other Install Frac Pond
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> 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 recompleat 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 shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

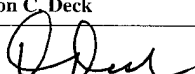
To install a 450' x 450' x 10' deep Frac Pond holding 285,000 bbls of water to serve the Ichabod 7 Federal no. 1H, Ichabod 7 Federal no. 2H & the Ichabod 18 Federal No. 1h. The pond will be lined with 20 mil plastic and hold fresh water.

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

Don C. Deck

Title **Right of Way Agent**

Signature



Date

12/08/2010

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

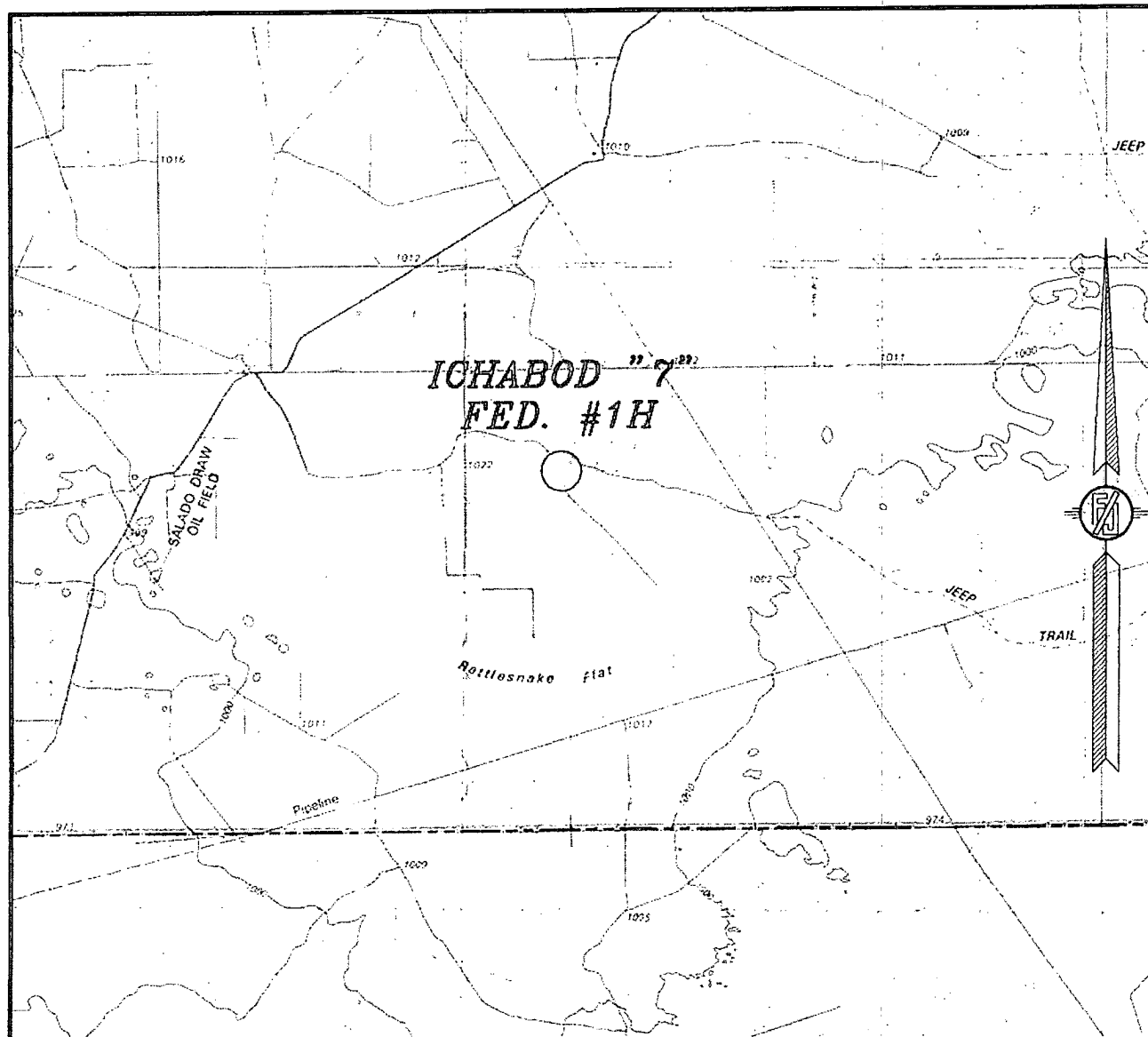
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

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)

SECTION 7, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
VICINITY MAP



NOT TO SCALE

SEC. 7 TWP. 26-S RGE. 34-E
SURVEY N.M.P.M.
COUNTY LEA STATE NEW MEXICO
DESCRIPTION 195' FSL & 330' FEL
ELEVATION 3363.1
OPERATOR DEVON ENERGY PRODUCTION COMPANY, LP
LEASE ICHABOD

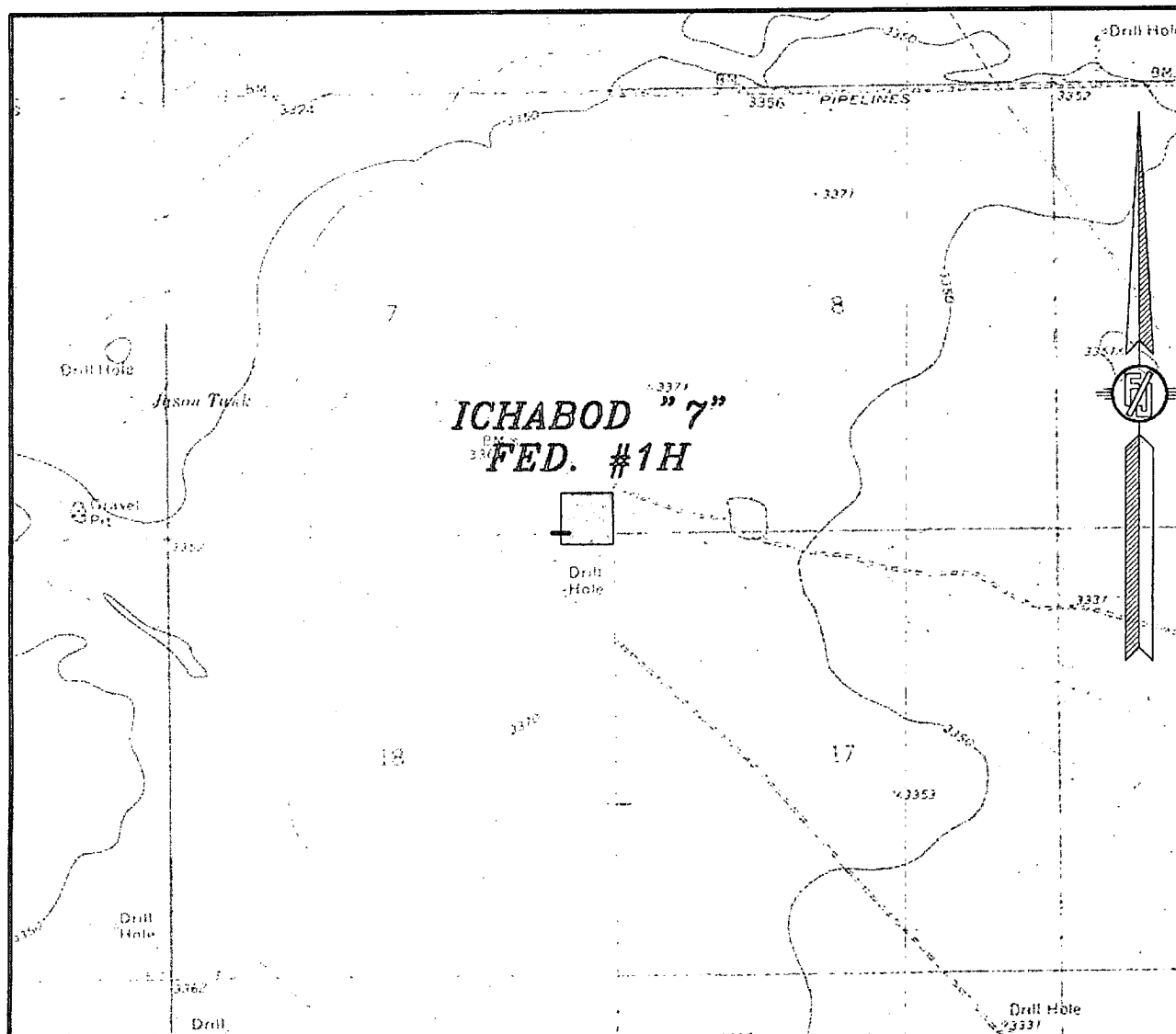
DEVON ENERGY PRODUCTION COMPANY, L.P.
ICHABOD "7" FED. #1H
LOCATED 195 FT. FROM THE SOUTH LINE
AND 330 FT. FROM THE EAST LINE OF
SECTION 7, TOWNSHIP 26 SOUTH,
RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

SEPTEMBER 7, 2010

SURVEY NO. 244

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 887-5830 CARLSBAD, NEW MEXICO

SECTION 7, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO
LOCATION VERIFICATION MAP



CONTOUR INTERVAL:
PADUCA BREAKS EAST
ANDREWS PLACE

NOT TO SCALE

SEC. 7 TWP. 26-S RGE. 34-E
SURVEY N.M.P.M.
COUNTY LEA STATE NEW MEXICO
DESCRIPTION 195' FSL & 330' FEL
ELEVATION 3363.1
OPERATOR DEVON ENERGY PRODUCTION COMPANY, LP
LEASE ICHABOD

DEVON ENERGY PRODUCTION COMPANY, L.P.
ICHABOD "7" FED. #1H
LOCATED 195 FT. FROM THE SOUTH LINE
AND 330 FT. FROM THE EAST LINE OF
SECTION 7, TOWNSHIP 26 SOUTH,
RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

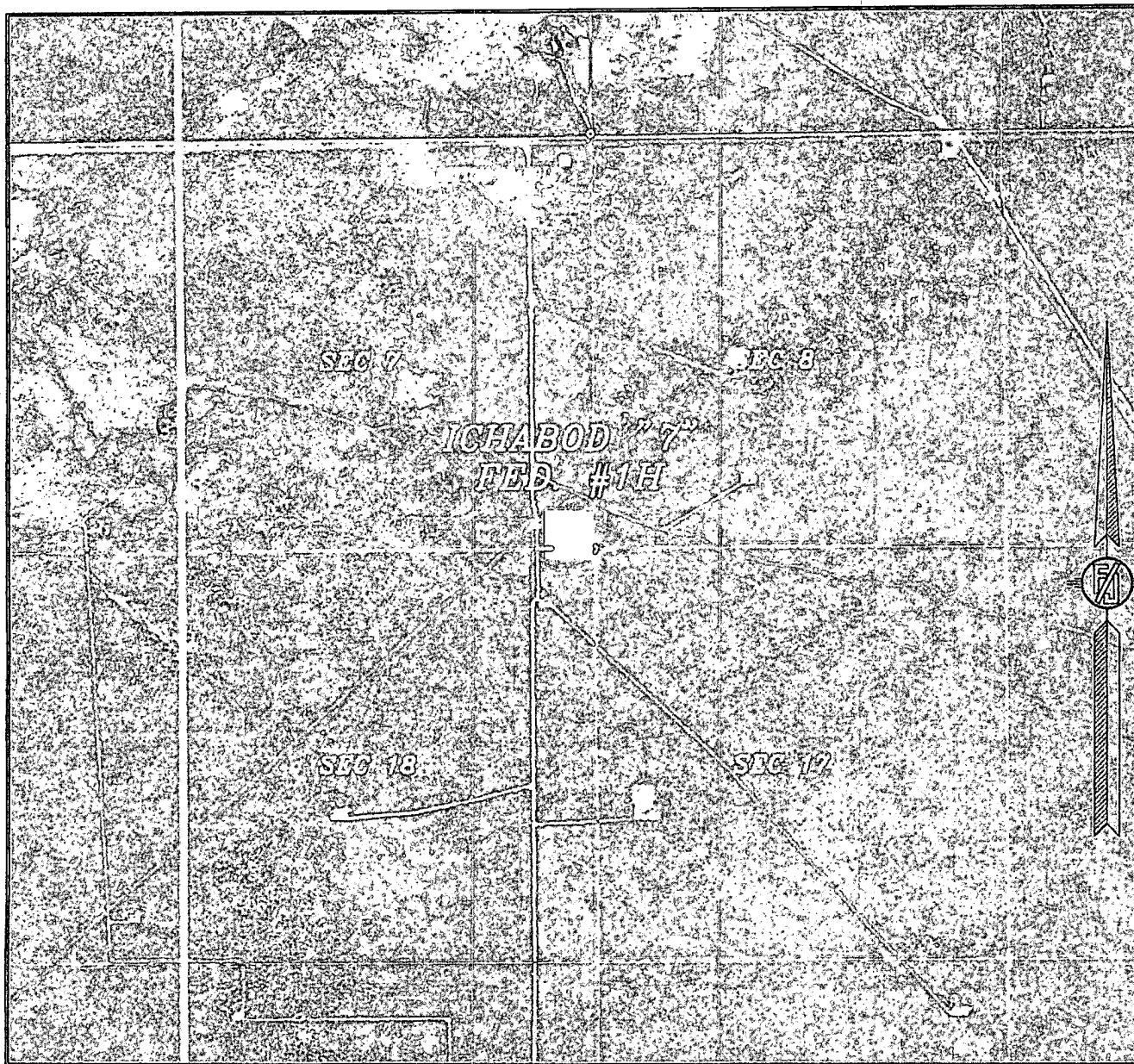
SEPTEMBER 7, 2010

SURVEY NO. 244

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 867-5830 CARLSBAD, NEW MEXICO

SECTION 7, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

AERIAL PHOTO



NOT TO SCALE
AERIAL PHOTO:
GOOGLE EARTH
USDA - AUG, 2009

DEVON ENERGY PRODUCTION COMPANY, L.P.

ICHABOD "7" FED. #1H

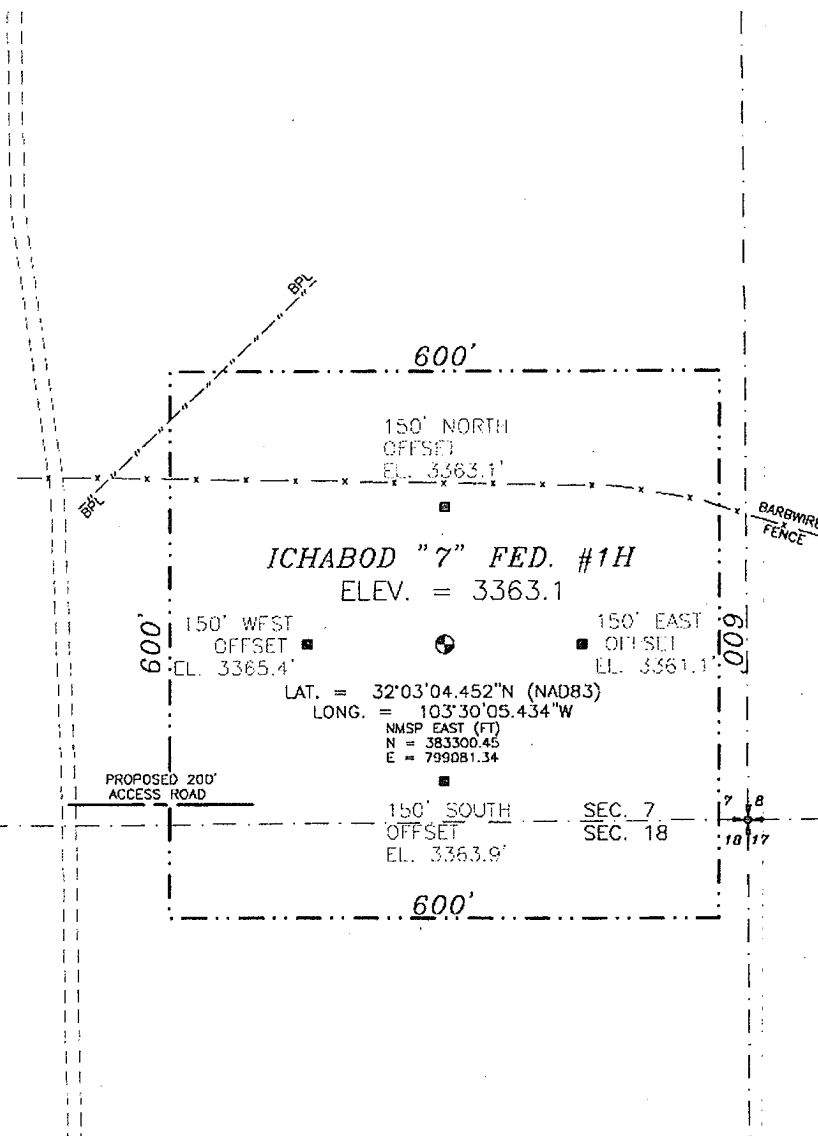
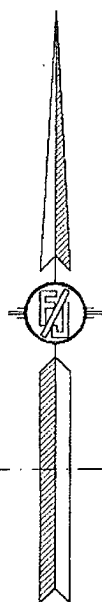
LOCATED 195 FT. FROM THE SOUTH LINE
AND 330 FT. FROM THE EAST LINE OF
SECTION 7, TOWNSHIP 26 SOUTH,
RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

SEPTEMBER 7, 2010

SURVEY NO. 244

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 897-5830 CARLSBAD, NEW MEXICO

SECTION 7, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO



0 20 100 200 400

SCALE 1" = 200'

DIRECTIONS TO LOCATION

FROM CO. RD. #1 (ORLA RD.-PAVED) AND CO. RD. #2 (BATTLE AXE RD.-CALICHE) GO EAST ON BATTLE AXE APPROX. 14 MILES WHERE ROAD BENDS NORTH AND CONTINUE EAST ON CALICHE PIPELINE ROAD 2.5 MILES TURN RIGHT ON CALICHE ROAD AND GO SOUTH 1.0 MILES AND FOLLOW PROPOSED ROAD SURVEY EAST 200' TO THE SW. CORNER OF THE PROPOSED PAD FOR THIS LOCATION.

DEVON ENERGY PRODUCTION COMPANY, L.P.

ICHABOD "7" FED. #1H

LOCATED 195 FT. FROM THE SOUTH LINE
AND 330 FT. FROM THE EAST LINE OF
SECTION 7, TOWNSHIP 26 SOUTH,
RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

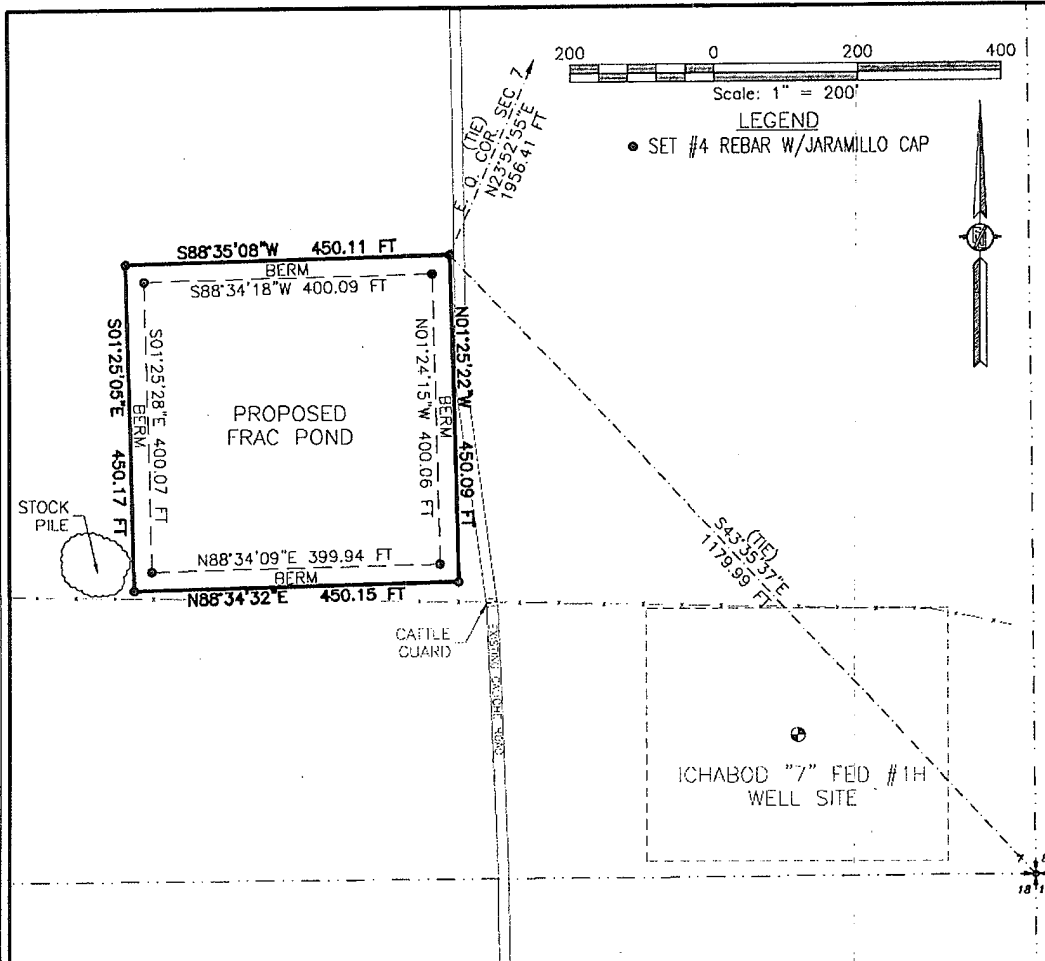
SEPTEMBER 7, 2010

SURVEY NO. 244

MADRON SURVEYING, INC. 301 SOUTH CANAL (575) 887-5530 CARLSBAD, NEW MEXICO

DEVON ENERGY PRODUCTION COMPANY, L.P.
ICHABOD FRAC POND
IN THE W/2 SE/4 SE/4 OF
SECTION 7, TOWNSHIP 26 SOUTH,
RANGE 34 EAST, N.M.P.M.
LEA COUNTY, STATE OF NEW MEXICO

SEPTEMBER 7, 2010



DESCRIPTION

A CERTAIN PIECE OR PARCEL OF LAND AND REAL ESTATE LYING IN THE W/2 SE/4 SE/4 OF SECTION 7, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

BEGINNING AT THE NORTHEAST CORNER OF THE PARCEL, WHENCE THE EAST QUARTER CORNER OF SECTION 7, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M. BEARS N23°52'55\"E, A DISTANCE OF 1956.41 FEET, AND WHENCE THE SOUTHEAST CORNER OF SECTION 7, TOWNSHIP 26 SOUTH, RANGE 34 EAST, N.M.P.M. BEARS S43°35'37\"E, A DISTANCE OF 1179.99 FEET;

THENCE S88°35'08\"W A DISTANCE OF 450.11 FEET TO THE NORTHWEST CORNER OF THE PARCEL;

THENCE S01°25'05\"E A DISTANCE OF 450.17 FEET TO THE SOUTHWEST CORNER OF THE PARCEL;

THENCE N88°34'32\"E A DISTANCE OF 450.15 FEET TO THE SOUTHEAST CORNER OF THE PARCEL;

THENCE N01°25'22\"W A DISTANCE OF 450.09 FEET TO THE NORTHEAST CORNER OF THE PARCEL, THE POINT OF BEGINNING;

CONTAINING 4.651 ACRES MORE OR LESS.

SURVEYOR CERTIFICATE

I, FILMON F. JARAMILLO, A NEW MEXICO PROFESSIONAL SURVEYOR NO. 12797, HEREBY CERTIFY THAT I HAVE CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND THAT THIS SURVEY AND PLAT MEET THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO.

IN WITNESS WHEREOF, THIS CERTIFICATE IS EXECUTED AT SOCORRO,

NEW MEXICO, THIS 7TH DAY OF SEPTEMBER 2010

[Signature]
FILMON F. JARAMILLO - PLS 12797

MADRON SURVEYING, INC.
301 SOUTH CANAL
CARLSBAD, NEW MEXICO 88220
Phone (505) 887-5830

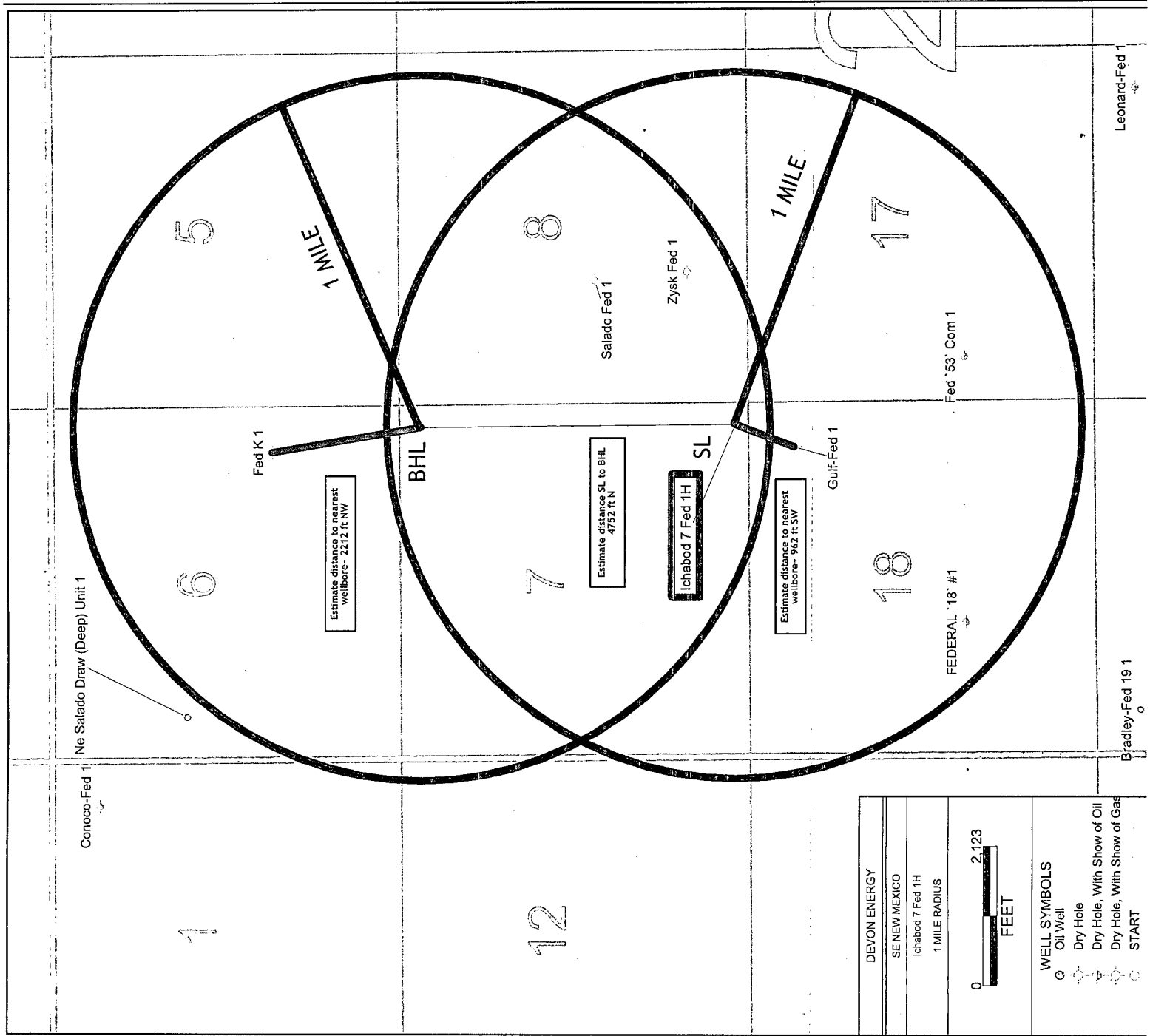
GENERAL NOTES

1.) THE INTENT OF THIS SURVEY IS TO ACQUIRE A BUSINESS LEASE ON BLM LAND FOR THE PURPOSE OF BUILDING A FRAC. POND

2.) BASIS OF BEARING IS NEW MEXICO STATE PLANE EAST ZONE

SURVEY NO. 247

MADRON SURVEYING, INC. CARLSBAD, NEW MEXICO



DEVON ENERGY
SE NEW MEXICO
Ichabod 7 Fed 1H
1 MILE RADIUS

0	2,123
FEET	

WELL SYMBOLS
Oil Well
Dry Hole
Dry Hole, With Show of Oil
Dry Hole, With Show of Gas
START

RECEIVED

DRILLING PROGRAM

FEB 08 2011

HOBBSUCD

Devon Energy Production Company, LP

Ichabod 7 Fed 1H

Surface Location: 195' FSL & 330' FEL, Unit P, Sec 7 T26S R34E, Lea, NM

Bottom hole Location: 330' FNL & 330' FEL, Unit A, Sec 7 T26S R34E, Lea, NM

1. Geologic Name of Surface Formation

a. Permian

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

a. Quaternary	20'	Water
b. Rustler	903'	Water
c. Salado Salt	1250'	Water
d. Bell Canyon	5241'	Oil
e. Cherry Canyon	6292'	Oil
f. Brushy Canyon	8307'	Oil
g. Avalon Shale/top Bone Springs	9520'	Oil
h. Primary Target landing zone	9920'	Oil
i. Pilot Hole TD	10270'	

Pool Name: Salado Draw NE

Proposed Penetration Point: 9522'

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 975' and circulating cement back to surface. The fresh water sands will be protected by setting 9 5/8" casing at 5300' and circulating cement to surface. The Avalon Shale/Bone Spring intervals will be isolated by setting 5 1/2" 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:

<u>Hole Size</u>	<u>Hole Interval</u>	<u>OD Csg</u>	<u>Casing Interval</u>	<u>Weight</u>	<u>Collar</u>	<u>Grade</u>
17 1/2"	0' - 975' <i>see COA</i>	13 3/8"	0' - 975'	48#	STC	H-40
12 1/4"	975' - 5300'	9 5/8"	0' - 5300'	40#	BTC	HCK-55
8 3/4"	5300' - 10270'	5 1/2" (PH)				
8 3/4"	10270' - 14430'	5 1/2"	0' - 9200'	17#	LTC	HCP-110
			9200' - 14430'	17#	BTC	HCP-110

14287'
per directional plan

Design Parameter Factors:

<u>Casing Size</u>	<u>Collapse Design Factor</u>	<u>Burst Design Factor</u>	<u>Tension Design Factor</u>
13 3/8"	1.6	3.6	6.7
9 5/8"	1.5	1.4	4.4
5 1/2"	1.3	1.7	2.3

4. Cement Program:

All Cement Volumes exceed 25% excess

Plug Back Volume: cement plug from 10,270' - 9,300' 570 sacks class H with a .9 cuft/sack yield

13 3/8" Surface: **Lead:** 565 sacks Premium Plus C Cement + 0.125 lbs/sack Cello Flake + 4% bwoc Bentonite + 5% bwoc Sodium Chloride + 0.8% bwoc Sodium Metasilicate + 5% bwoc MPA-5 + 101.1% Fresh Water
Yield: 1.75 cf/sack. TOC @ surface.

Tail: 300 sacks Premium Plus C Cement + 2% bwoc Calcium Chloride + 0.125 lbs/sack Cello Flake + 56.3% Fresh Water
Yield: 1.35 cf/sack.

9 5/8" Intermediate: **Lead:** 1315 sacks (35:65) Poz (Fly Ash):Premium Plus C Cement + 5% bwoc Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 107.8% Fresh Water
Yield: 2.04 cf/sack. TOC @ surface.
Tail: 300 sacks (60:40) Poz (Fly Ash):Premium Plus C Cement + 5% bwoc Sodium Chloride + 0.125 lbs/sack Cello Flake + 0.4% bwoc Sodium Metasilicate + 4% bwoc MPA-5 + 64.7% Water
Yield: 1.37 cf/sack.

5 1/2" Production: **1 St Stage**

Lead: 755 sacks (35:65) Poz + 0.2% bwoc Sodium Metasilicate + 1.4% bwoc FL-62 + 0.4% bwoc
Yield: 2.01 cf/sack.

Tail

Lead: 1260 sacks (50:50) Poz (Fly Ash):Premium Plus C Cement + 1% bwoc Sodium Chloride + 0.125 lbs/sack Cello Flake + 6% bwoc Bentonite + 0.4% bwoc FL-52A + 0.4% bwoc R-3 + 103.1% Fresh Water
Yield: 1.28 cf/sack.

DV TOOL at ~6000'

2nd Stage

*120 * Per Operator (Pat Brown w/Devon)*

Lead: *sacks (35:65) Poz (Fly Ash):Class H Cement + 0.125 lbs/sack Cello Flake + 3 6% bwoc Bentonite + 0.4% bwoc FL-52A + 99.3% Fresh Water
Yield: ~~1.95 cf/sk~~ *2.88 cf/sk*

100
Tail: *sacks (60:40) Poz (Fly Ash): Class H Cement + 1% bwoc Sodium Chloride + 0.15% bwoc + 63.2% Fresh Water
Yield: 1.34 cf/sk

Yield: 1.34 cf/sk

TOC for All Strings:

Surface:	0'
1 st Intermediate:	0'
Production:	4800'

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

5. Pressure Control Equipment:

See COA
BOP DESIGN: The blow out prevention system will consist of a bag type (hydril) preventer, a double ram preventer stack, and a rotating head. Both the hydril and ram stack will be hydraulically operated. Both BOP systems will be rated at 5000psi. As shown in the attachment, the Surface Casing BOP will be a 3000 psi Hydril annular. It will be tested as a 2000 psi Hydril annular. Prior to drilling out the 9 5/8" intermediate shoe, the ram stack will be nipped up with 4.5" pipe rams installed and will be used in the BOP. (The hydril will be tested to 1000psi (high) and 250psi (low). Tests on the 5000psi BOP will be conducted per the BLM Drilling Operations Order #2.

5 M on 9 5/8"

only on 3000 psi Hydril

The ram system 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 hydril, other BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 5000 psi WP

6. Proposed Mud Circulation System

See COA

<u>Depth</u>	<u>Mud Wt.</u>	<u>Visc</u>	<u>Fluid Loss</u>	<u>Type System</u>
0' - 975'	8.4-9.0	32-34	NC	Fresh Water/Gel
975' - 5300'	10.0	28-32	NC	Brine
5300' - 14430'	8.8-9.3	28-40	NC	Fresh Water/Brine

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 Kelly cock will be in the drill string at all times.
- A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- 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:

- Drill stem tests will be based on geological sample shows.
- 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.
- The open hole electrical logging program will be:
 - 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; therefore, no H₂S is anticipated to be encountered. 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 4600 psi and Estimated BHT 135°.

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.



Project: Lea Co., New Mexico (Nad 83)
Well: Ichabod 7 Fed #1H
Wellbore: Lateral #1
Design: Design #1



SECTION DETAILS									
Sec	MD	Inc	Asi	TVD	+N/S	+E/W	Dip	TFace	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	9339.49	0.00	0.00	9339.49	0.00	0.00	0.00	0.00	0.00
3	10246.99	90.75	360.00	9912.40	990.46	0.00	10.00	360.00	580.46
4	14296.88	90.75	360.00	9659.52	4620.00	0.00	0.00	4620.00	PB-L - TD (TFF#1H)

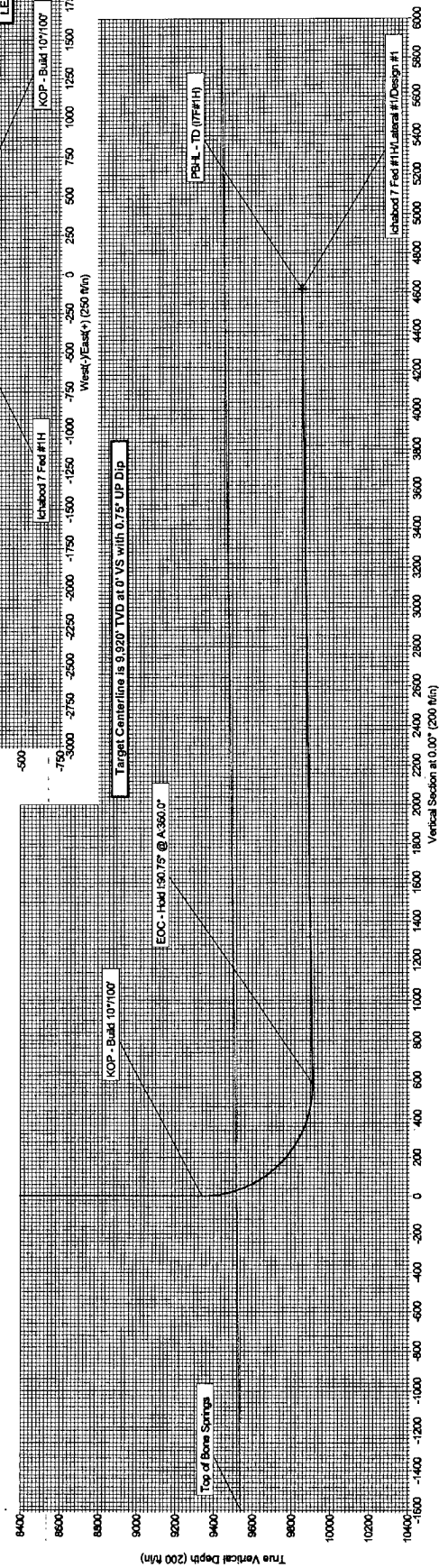
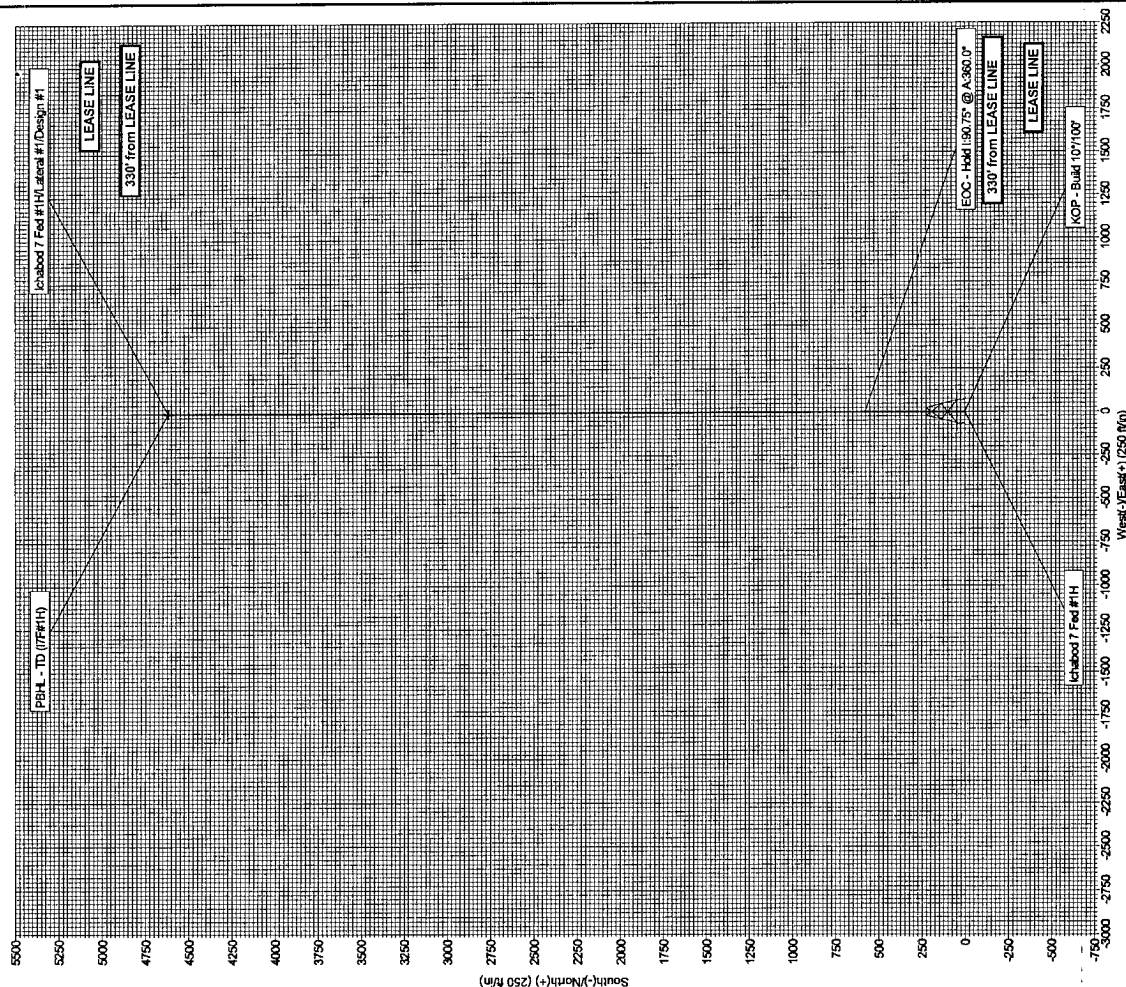
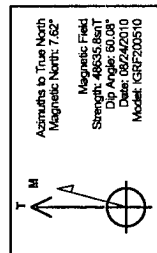
ANNOTATIONS	
TVD	MD
9339.49	9339.49
9912.40	10246.99
KOP - Build 107100'	
EOC - Hold 150.75' @ A360.0°	

PROJECT DETAILS: Lea Co., New Mexico (Nad 83)	
Geologic System: US State Plane 1983	
Datum: North American Datum 1983	
Ellipsoid: GRS 1980	
Zone: New Mexico Eastern Zone	
System Datum: Mean Sea Level	

WELLDROP TARGET DETAILS (MAP COORDINATES AND LAT/LONG)						
Name	TVD	+N/S	+E/W	Northing	Easting	Latitude
PB-L - TD (TFF#1H)	9659.52	4620.00	0.00	30797.24	803186.07	32° 3' 49.717" N
Shape	Point					

WELL DETAILS: Ichabod 7 Fed #1H	
Ground Level: 5800.00	
WELL @ 3380.000' (Original Well Elev)	
+N/S	0.00
+E/W	0.00
Northing	303357.39
Easting	803222.25
Latitude	32° 3' 4.000" N
Longitude	103° 29' 17.000" W
Slot	

Plot: Design #1 (Ichabod 7 Fed #1H Lateral #1)	Date: 14.51, August 24, 2010
Created By: Mike Starkey	Date: _____
Checked: _____	Date: _____
Reviewed: _____	Date: _____
Approved: _____	Date: _____




devon

Devon Energy

Lea Co., New Mexico (Nad 83)

Icabod 7 Fed #1H

Ichabod 7 Fed #1H

Lateral #1

Plan: Design #1

Standard Survey Report

24 August, 2010

RECEIVED

FEB 08 2011

HOBBSOCD



**DRILLING & MEASUREMENT
SERVICES**



CUDD Drilling & Measurement Services

Survey Report



Company:	Devon Energy	Local Co-ordinate Reference:	Site Icabod 7 Fed #1H
Project:	Lea Co., New Mexico (Nad 83)	TVD Reference:	WELL @ 3380.00ft (Original Well Elev)
Site:	Icabod 7 Fed #1H	MD Reference:	WELL @ 3380.00ft (Original Well Elev)
Well:	Icabod 7 Fed #1H	North Reference:	True
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDM 2003/21 Single User Db

Project	Lea Co., New Mexico (Nad 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Icabod 7 Fed #1H, Sec 7, T-26S, R-34E				
Site Position:		Northing:	383,357.39 ft	Latitude:	32° 3' 4.000 N
From:	Lat/Long	Easting:	803,222.25 ft	Longitude:	103° 29' 17.000 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.45 °

Well	Icabod 7 Fed #1H					
Well Position	+N/-S	0.00 ft	Northing:	383,357.39 ft	Latitude:	32° 3' 4.000 N
	+E/-W	0.00 ft	Easting:	803,222.25 ft	Longitude:	103° 29' 17.000 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	3,380.00 ft	Ground Level:	3,355.00 ft

Wellbore		Lateral #1			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	08/24/10	7.62	60.08	48,636

Design	Design #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	0.00

Survey Tool Program		Date 08/24/10			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	9,200.00	Design #1 (Lateral #1)	NS-GYRO-MS	North sensing gyrocompassing m/s	
9,200.00	14,286.88	Design #1 (Lateral #1)	CUDD MWD	MWD - Standard CUDD MWD	

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,241.00	0.00	0.00	5,241.00	0.00	0.00	0.00	0.00	0.00	0.00
Bell Canyon									
6,292.00	0.00	0.00	6,292.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
8,307.00	0.00	0.00	8,307.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon									
9,339.49	0.00	0.00	9,339.49	0.00	0.00	0.00	0.00	0.00	0.00
KOP - Build 10°/100'									
9,522.73	18.32	360.00	9,519.62	29.05	0.00	29.05	10.00	10.00	0.00
Top of Bone Springs									



CUDD Drilling & Measurement Services
Survey Report



Company:	Devon Energy	Local Co-ordinate Reference:	Site Icabod 7 Fed #1H
Project:	Lea Co., New Mexico (Nad 83)	TVD Reference:	WELL @ 3380.00ft (Original Well Elev)
Site:	Icabod 7 Fed #1H	MD Reference:	WELL @ 3380.00ft (Original Well Elev)
Well:	Icabod 7 Fed #1H	North Reference:	True
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #1	Database:	EDM 2003.21 Single User Db

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
10,246.99	90.75	360.00	9,912.40	580.46	0.00	580.46	10.00	10.00	0.00	
EOC - Hold 1:90.75* @ A:360.0*										
14,286.88	90.75	360.00	9,859.52	4,620.00	0.00	4,620.00	0.00	0.00	0.00	
PBHL - TD (I7F#1H)										

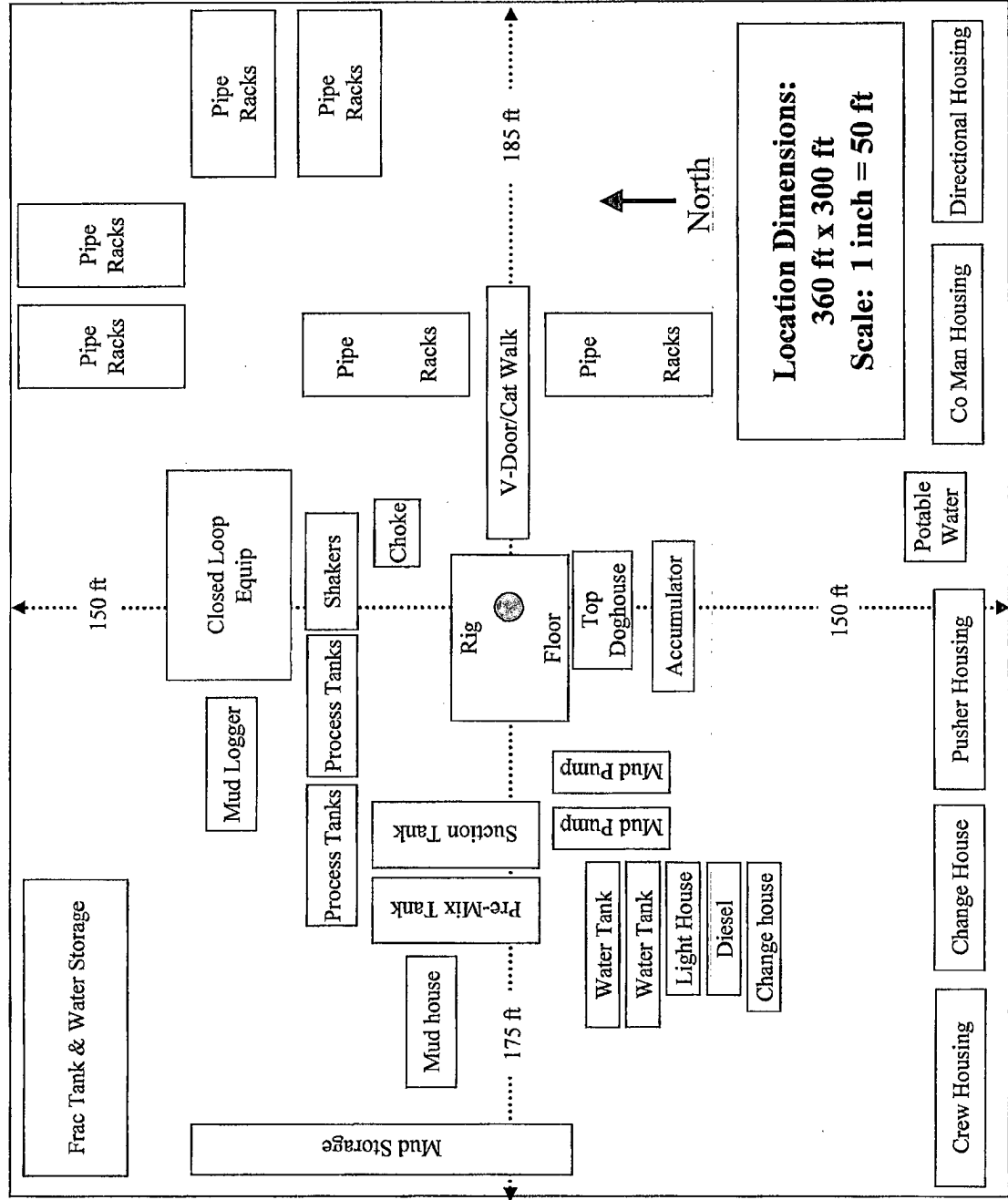
Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL - TD (I7F#1H)	0.00	0.00	9,859.52	4,620.00	0.00	387,977.24	803,186.07	32° 3' 49.717 N	103° 29' 17.000 W
- plan hits target center									
- Point									

Formations							Dip (°)	Dip Direction (°)
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology					
5,241.00	5,241.00	Bell Canyon					-0.75	0.00
6,292.00	6,292.00	Cherry Canyon					-0.75	0.00
8,307.00	8,307.00	Brushy Canyon					-0.75	0.00
9,522.73	9,520.00	Top of Bone Springs					-0.75	0.00

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
9,339.49	9,339.49	0.00	0.00	KOP - Build 10*/100'	
10,246.99	9,912.40	580.46	0.00	EOC - Hold 1:90.75* @ A:360.0*	

Checked By: _____ Approved By: _____ Date: _____

Conventional Rig Location Layout





devon

Proposed Interim Site Reclamation

Devon Energy Production Co.

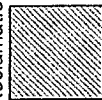
Ichabod 7 Federal 1H

195' FSL & 330' FEL

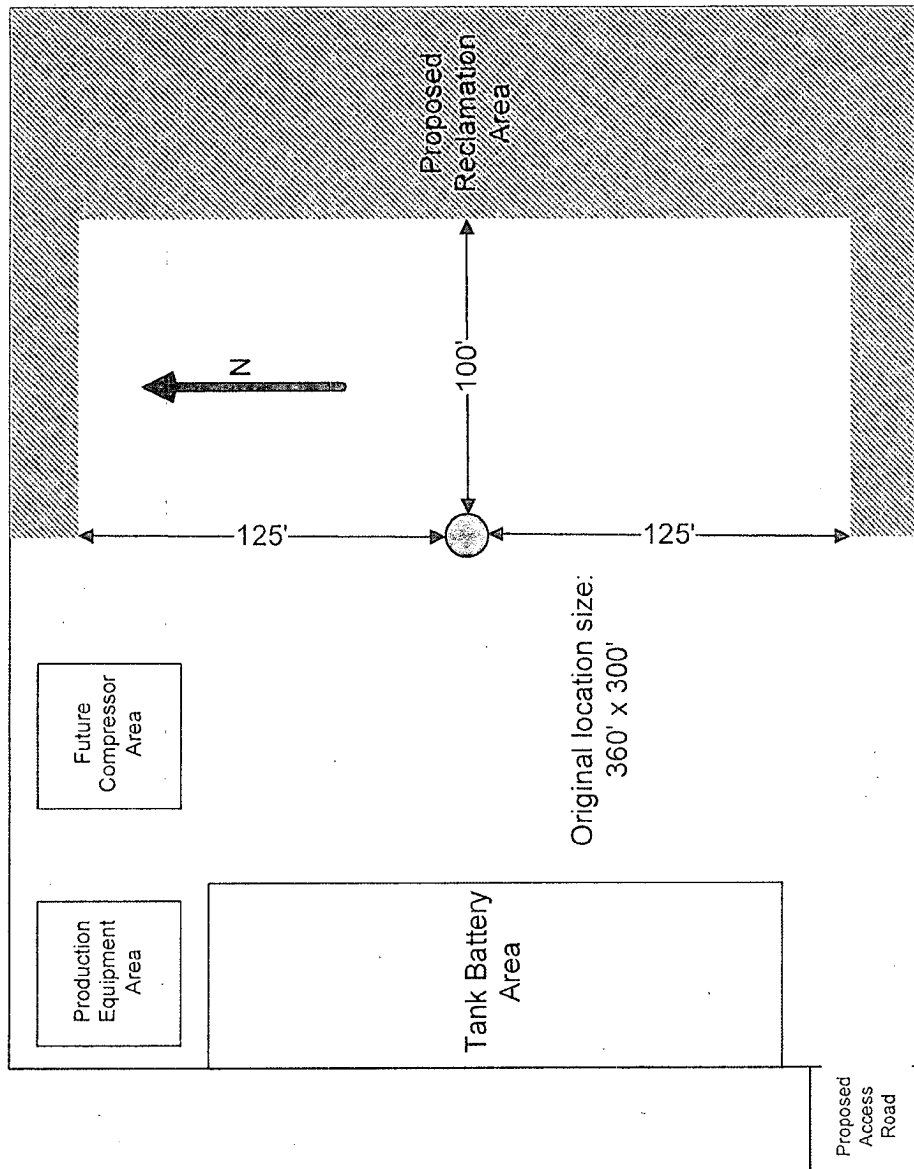
Sec. 7 - T26S - R34E

Lea County, NM

Proposed
Reclamation Area



1" = 60'



Attachment to Exhibit #1
NOTES REGARDING BLOWOUT PREVENTERS
Devon Energy Production Company, LP

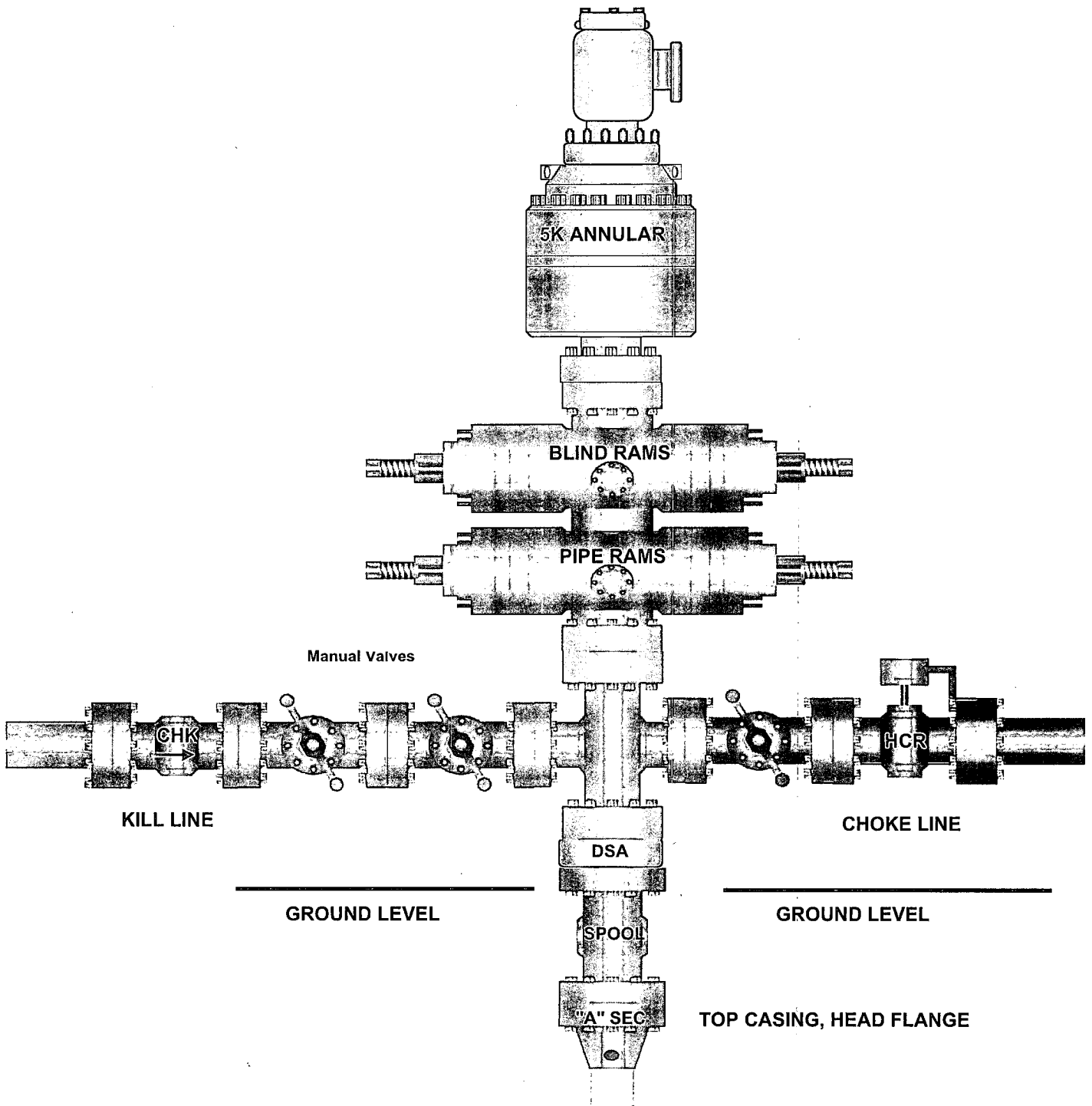
Ichabod 7 Fed 1H

Surface Location: 195' FSL & 330' FEL, Unit P, Sec 7 T26S R34E, Lea, NM

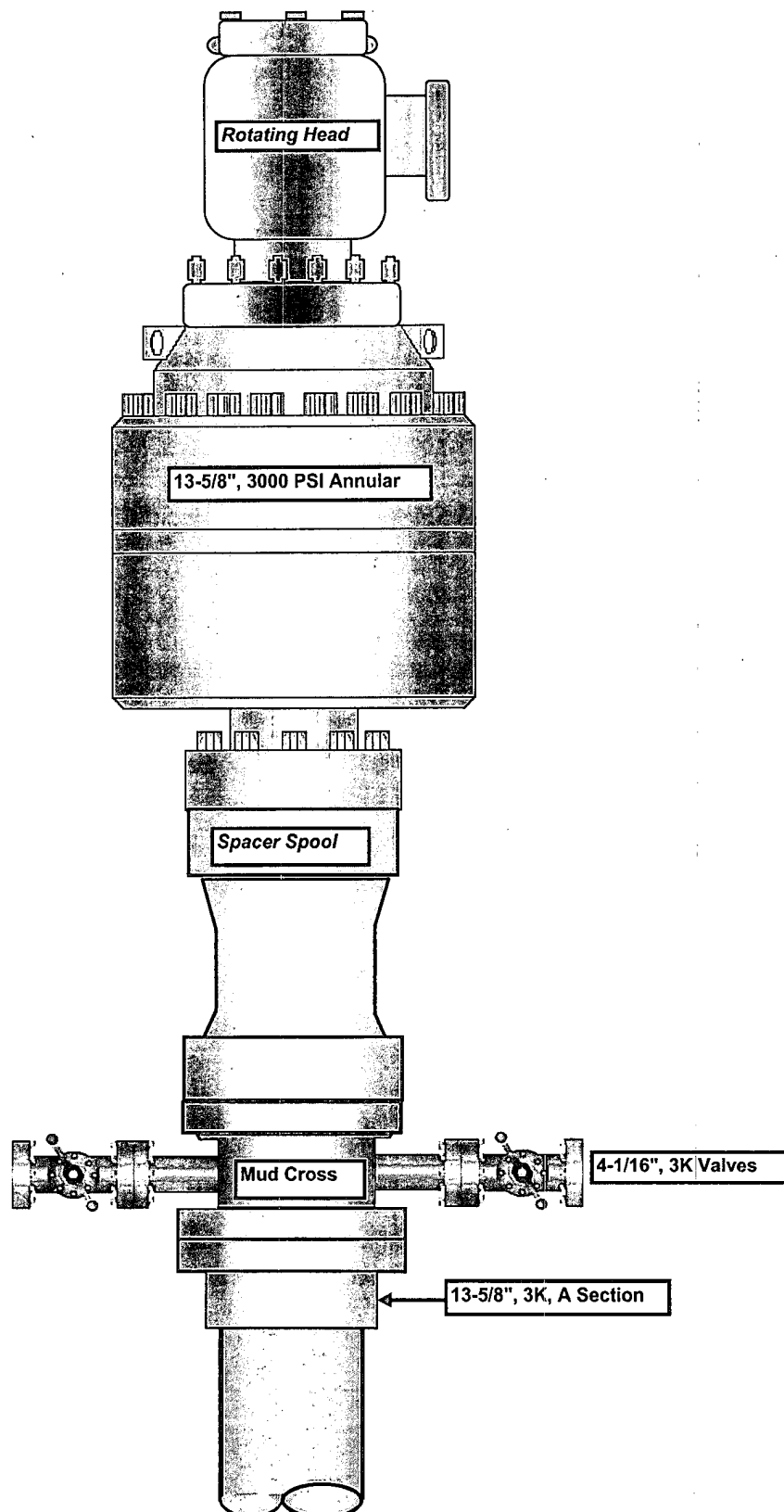
Bottom hole Location: 330' FNL & 330' FEL, Unit A, Sec 7 T26S R34E, Lea, NM

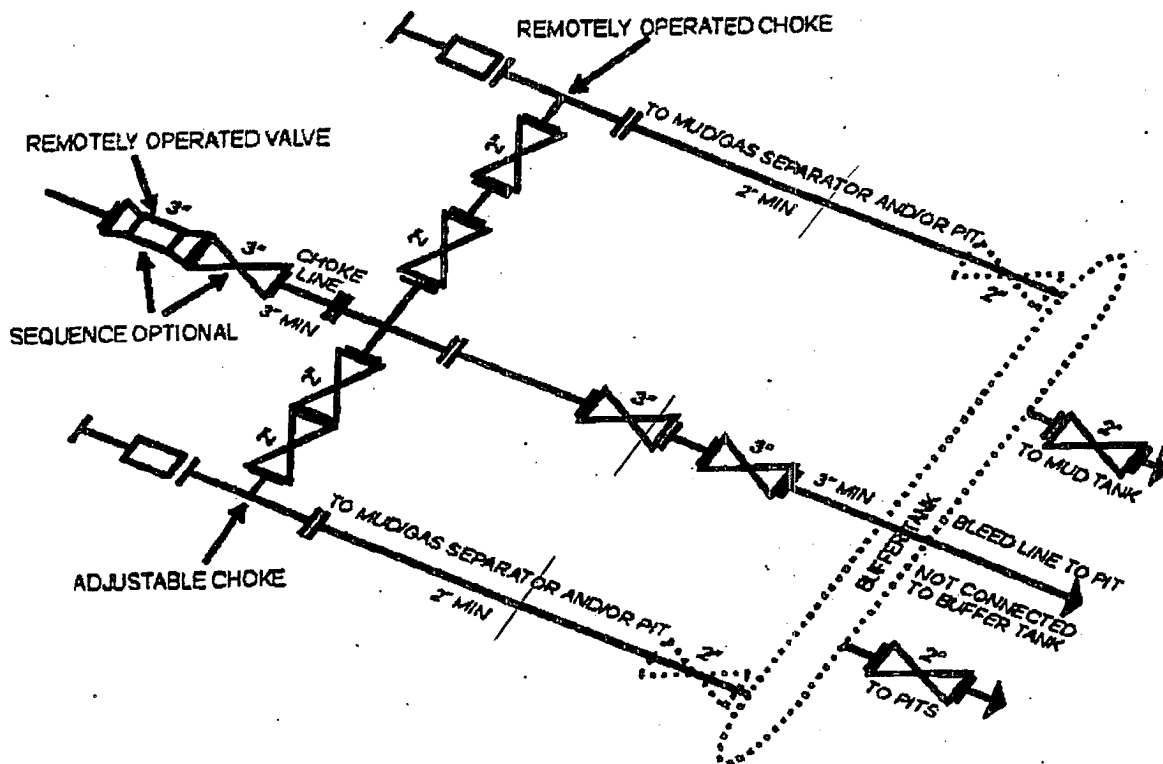
1. Drilling nipple will be constructed so it can be removed mechanically without the aid of a welder. The minimum internal diameter will equal BOP bore.
2. Wear ring will be properly installed in head.
3. Blowout preventer and all associated fittings will be in operable condition to withstand a minimum 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.

11" x 5,000 psi BOP Stack



13-5/8" 3K Annular





5M CHOKE MANIFOLD EQUIPMENT - CONFIGURATION OF CHOKES MAY VARY

Although not required for any of the choke manifold systems, buffer tanks are sometimes installed downstream of the choke assemblies for the purpose of manifolding the bleed lines together. When buffer tanks are employed, valves shall be installed upstream to isolate a failure or malfunction without interrupting flow control. Though not shown on 2M, 3M, 10M, OR 15M drawings, it would also be applicable to those situations.

[54 FR 39528, Ser 27, 1989]

*Diagram is
inadequate.*
mmv
2/2/2011