

N.M. Oil Cons. DIV-Dist. 2
1301 W. Grand Avenue
Artesia, NM 88210

N, P, F

Form 3160-3
(September 2001)

JUN 2003
RECEIVED
OCD - ARTESIA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004

5. Lease Serial No.
NMLC029389B
6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.
26908

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

8. Lease Name and Well No.

Anadarko Federal #2

2. Name of Operator

Pecos Production Company

9. API Well No.

30-015-32852

3a. Address Midland, TX 79701

400 W. Illinois, Ste 1070,

3b. Phone No. (include area code)

(915) 620-8480

10. Field and Pool, or Exploratory

N. Shugart, McAnaw

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

At surface 660' FSL & 660' FWL

At proposed prod. zone 660' FSL & 660' FWL

11. Sec., T., R., M., or Blk. and Survey or Area

Sec 4-T18S-R31E

14. Distance in miles and direction from nearest town or post office*

7 miles ESE from Loco Hills, NM

12. County or Parish

Eddy Co.

13. State

NM

15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any)

660' FSL/FWL

16. No. of Acres in lease

480

17. Spacing Unit dedicated to this well

Strawn 160 / 320 Morrow

18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft.

316'

19. Proposed Depth

12,000'

20. BLM/BIA Bond No. on file

NMB000020

21. Elevations (Show whether DF, KDB, RT, GL, etc.)

3709' GL

22. Approximate date work will start*

As Soon As Approved

23. Estimated duration

60 Days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature

William R. Huck

Name (Printed/Typed)

William R. Huck

Date

3/14/03

Title

VP - Engr. & Operations

Approved by (Signature)

/s/ Joe G. Lara

Name (Printed/Typed)

/s/ Joe G. Lara

Date

26 JUN 2003

Title

ACTING FIELD MANAGER

Office

CARLSBAD FIELD OFFICE

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

Conditions of approval, if any, are attached.

APPROVAL FOR 1 YEAR

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

*(Instructions on reverse)

CAPITAN CONTROLLED WATER BASIN

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

RECEIVED
JUN 16 2003
OCD - ARTESIA

DISTRICT I

P.O. Box 1060, Hobbs, NM 88241-1060

DISTRICT II

P.O. Drawer 80, Artesia, NM 88211-0710

DISTRICT III

1000 Rio Grande Rd., Alamo, NM 87410

DISTRICT IV

P.O. Box 2088, Santa Fe, N.M. 87504-2088

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Revised February 10, 1994

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT☐ AMENDED REPORT

API Number	Pool Code	Pool Name Cedar Lake Morrow, East
Property Code	Property Name ANADARKO FEDERAL	Well Number 2
OCRID No. 215758	Operator Name PECOS PRODUCTION COMPANY	Elevation 3715'

Surface Location

UL or lot No.	Section	Township	Range	Lot 1st	Feet from the	North/South Line	Feet from the	East/West line	County
M	4	18-S	31-E		660'	SOUTH	660'	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot 1st	Feet from the	North/South Line	Feet from the	East/West line	County
Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No.						

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

LOT 4 32.0 ac.	LOT 3	LOT 2	LOT 1
40.04 AC	40.04 AC	40.04 AC	40.04 AC
OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature: <u>William R. Huck</u> Printed Name: William R. Huck Title: VP - Engr. & Operations Date: 3/14/03			
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. MARCH 13, 2003 Date Surveyed: _____ A.W.B. Signature: <u>Ronald J. Edson</u> Printed Name: Ronald J. Edson Title: Professional Surveyor Date: 03.11.03 Certificate No. RONALD J. EDSON 3230 State of New Mexico 12641			

DISTRICT I
P.O. Box 1060, Hobbs, NM 88241-1060

DISTRICT II
P.O. Drawer 90, Artesia, NM 88211-0710

DISTRICT III
1000 Rio Grande Rd., Alamogordo, NM 87410

DISTRICT IV
P.O. Box 2088, Santa Fe, N.M. 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088
WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
		Shugart, Strawn, North
Property Code	Property Name	Well Number
	ANADARKO FEDERAL	2
OCRID No.	Operator Name	Elevation
21578	PECOS PRODUCTION COMPANY	3715'

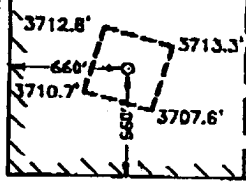
Surface Location

UL or lot No.	Section	Township	Range	Lot 1/4	Feet from the	North/South Line	Feet from the	East/West line	County
M	4	18-S	31-E		660'	SOUTH	660'	WEST	EDDY

Bottom Hole Location If Different From Surface

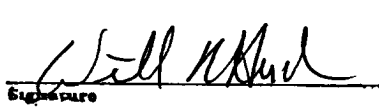
UL or lot No.	Section	Township	Range	Lot 1/4	Feet from the	North/South Line	Feet from the	East/West line	County
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.						
160									

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

LOT 4	LOT 3	LOT 2	LOT 1
40.04 AC	40.04 AC	40.04 AC	40.04 AC
160 AC.			
			

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.


Signature
William R. Huck
Printed Name
VP - Engr. & Operations
Title
3/14/03
Date

SURVEYOR CERTIFICATION

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

MARCH 13, 2003

Date Surveyed
Signature of Surveyor
Professional Surveyor
NEW MEXICO
3/14/03
03.11.03168
Certificate No. RONALD J. EDSON 3230 12641

BLOWOUT PREVENTOR ARRANGEMENT

11" SHAFFER TYPE LWS, 5000 psi WP

11" CAMERON SPHERICAL, 5000 psi WP

120 GALLON, 5 STATION KOOMEY ACCUMULATOR

5000 psi WP CHOKE MANIFOLD

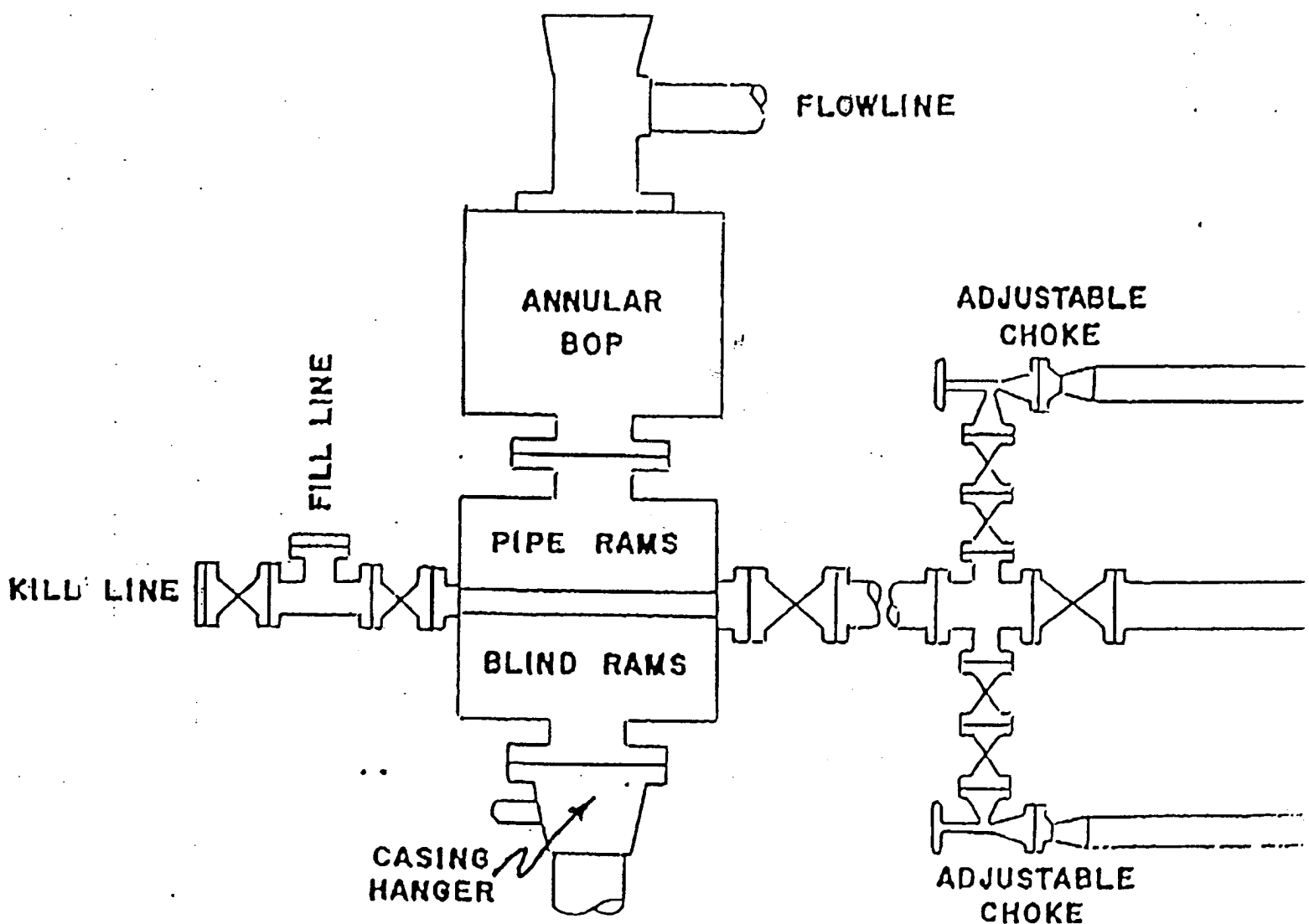


Exhibit #1
Pecos Production Company
Anadarko Federal #2
660' FSL & 660' FWL
Sec. 4, T-18-S, R-31-E
Eddy Co., NM

DRILLING PROGRAM

Attachment to Form 3160-3
Pecos Production Company
Anadarko Federal No. 2
660' FSL & 660' FWL
Section 4, T18S, R31E
Eddy County, New Mexico

1. Geologic Name of Surface Formation

Quaternary Alluvium

2. Estimated Tops of Important Geological Formations

Top of Salt Section	830'
Base of Salt Section	2050'
Yates	2050'
Queen	3175'
San Andres	4125'
Bone Spring	5880'
Wolfcamp	9150'
Strawn	10,500'
Atoka	11,010'
Morrow Clastics	11,625'
Lower Morrow	11,850'
Upper Mississippian Lime	11,950'

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

Water:	None Anticipated
Oil:	3175', 7800', 8050', 10,500'
Gas:	11,010'; 11,625'; 11,850'

No other formations are expected to yield oil, gas or fresh water in measurable volumes. Any surface fresh water sands will be protected by setting 13-3/8" casing at 400' and circulating cement back to surface. The Salt will be isolated with a 8-5/8" intermediate casing string set into the San Andres @ approximately 4500' and cement circulated to surface. The Strawn and Morrow will be isolated with 5-1/2" casing to total depth (12000'±) and cemented with cement back into the 8-5/8" intermediate casing.

4. Casing Program

	<u>Hole Size</u>	<u>Interval</u>	<u>Casing</u> <u>OD</u>	<u>Weight</u>	<u>Grade</u>	<u>Type</u>	
WITNESS	17-1/2"	0' - 400' ^{650'}	13-3/8"	48#	H-40	ST&C	WITNESS
	12-1/4"	0' - 4500'	8-5/8"	32#	J-55	ST&C	
	7-7/8"	0' - 12000'	5-1/2"	17#	K-55 & N-80	LT&C	

Cementing Program

400' 13-3/8" Surface Casing: Cement to surface 200 sxs Class C containing 4% Gel, 2% Calcium Chloride, 0.25 pps Cello-flake followed by 150 sxs 25:75 Poz C containing 2% Calcium Chloride.

4500' 8-5/8" Intermediate Casing: Cement to surface:

Lead Slurry: 1400 sxs 50:50:10 Poz C containing 10% bentonite, 6.0 pps salt, 0.2% Antifoam, 0.25 pps Cello-flake.

Tail Slurry: 220 sxs Class C containing 0.25 pps Cello-flake. 1% CaCl.

12000' 5-1/2" Production Casing with DVT @ 9000'

First Stage

Lead Slurry: 50:50:10 Poz H containing 10% bentonite, 0.5% FLAC, 0.25 pps Cello-Flake, 5 pps Gilsonite.

Tail Slurry: 15:61:11 Poz H containing 5% Salt, 0.5% FL-52, 0.5% FL-25.

Second Stage DVT into 8-5/8" Intermediate Casing

Lead Slurry: 50:50:10 Poz H containing 10% bentonite, 0.1% FLAC, 0.25 pps Cello-flake – or equivalent.

Tail Slurry: 50:50:2 Poz H containing 2% bentonite, 5% (bwow) salt, 0.25 pps Cello-flake – or equivalent.

5. Minimum Specifications for Pressure Control

The blowout preventor equipment (BOP) shown in Exhibit #1 will consist of a (5M system) double ram type (5000# WP) preventor. This unit will be hydraulically operated. The BOP will be installed on the 8-5/8" intermediate casing and utilized continuously until total depth is reached. As per BLM Drilling Operations Order #2, prior to drilling out of the 8-5/8" casing shoe, the BOP will be pressure tested.

Pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These function test will be documented on the daily driller's log. Other accessory BOP equipment will include a kelly cock, floor safety valve, choke lines and choke manifold having a 5000# WP rating.

6. Types and Characteristics of Proposed Mud System

This well will be drilled to total depth with fresh water, brine and Duo Vis/Polypac cut brine mud systems. Depths are as follows:

<u>Depth</u>	<u>Type</u>	<u>Weight (ppg)</u>	<u>Viscosity</u>	<u>Water Loss</u>
0' - 400'	Spud Mud	8.3 - 9.2	28 - 36	No control
400' - 4500'	Brine	10.0 - 10.3	29	No control
4500' - 8900'	Fresh Water	8.3 - 8.6	28	No control
8900' - 10400'	Cut Brine	9.5 - 9.8	29	No control
10400' - TD	Duo Vis/Poly Pac	9.8 - 10.0	35 - 38	5 - 6 cc

Will add 3 to 5% KCL @ mudup

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.

8. Logging, Testing and Coring Program

A. Possible of drill stem test of Strawn.

B. The open hole electrical logging program will be:

1. DLL/MSFL/GR (TD-4500')
Note: GR will be pulled to Ground Level
2. DEN/NEU/CAL (TD to 4500')
Note: Neutron log will be pulled to Ground Level

C. No coring program is planned.

D. No additional testing will be initiated subsequent to setting the 5-1/2" production casing.

9. Abnormal Pressures, Temperatures and Potential Hazards

No abnormal pressures or temperatures are expected. The anticipated bottom hole temperature at total depth is 180 degrees and maximum bottom pressure is 5000 psia. Lost circulation within the surface and intermediate intervals have been encountered in adjacent wells. Small quantities of hydrogen sulfide gas are associated with the Queen, Grayburg and San Andres formations in this area. A hydrogen sulfide plan is attached.

10. Anticipated Starting Date and Duration of Operations

Archeological Survey Consultants has been requested to perform and submit a cultural resources examination to the BLM office in Carlsbad, New Mexico.

Road and location preparation will not be undertaken until approval has been received from the BLM. The anticipated spud date for this well is as soon as permitted. The drilling operation should require approximately 35 days. If the well is deemed productive, completion operations will require, at minimum, an additional 30 days for completion and testing.

13. Lessee's and Operator's Representative

The Pecos Production Company representative responsible for ensuring compliance of the surface use plan is:

William R. Huck
VP – Engr. and Operations
(915) 620-8480

Pecos Production Company
400 W. Illinois, Suite 1070
Midland, TX 79701

Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access road, that I am familiar with the conditions that presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Pecos Production Company and its contractors under which it is approved.

Signed: _____



William R. Huck – VP-Engr. & Operations

Date: _____

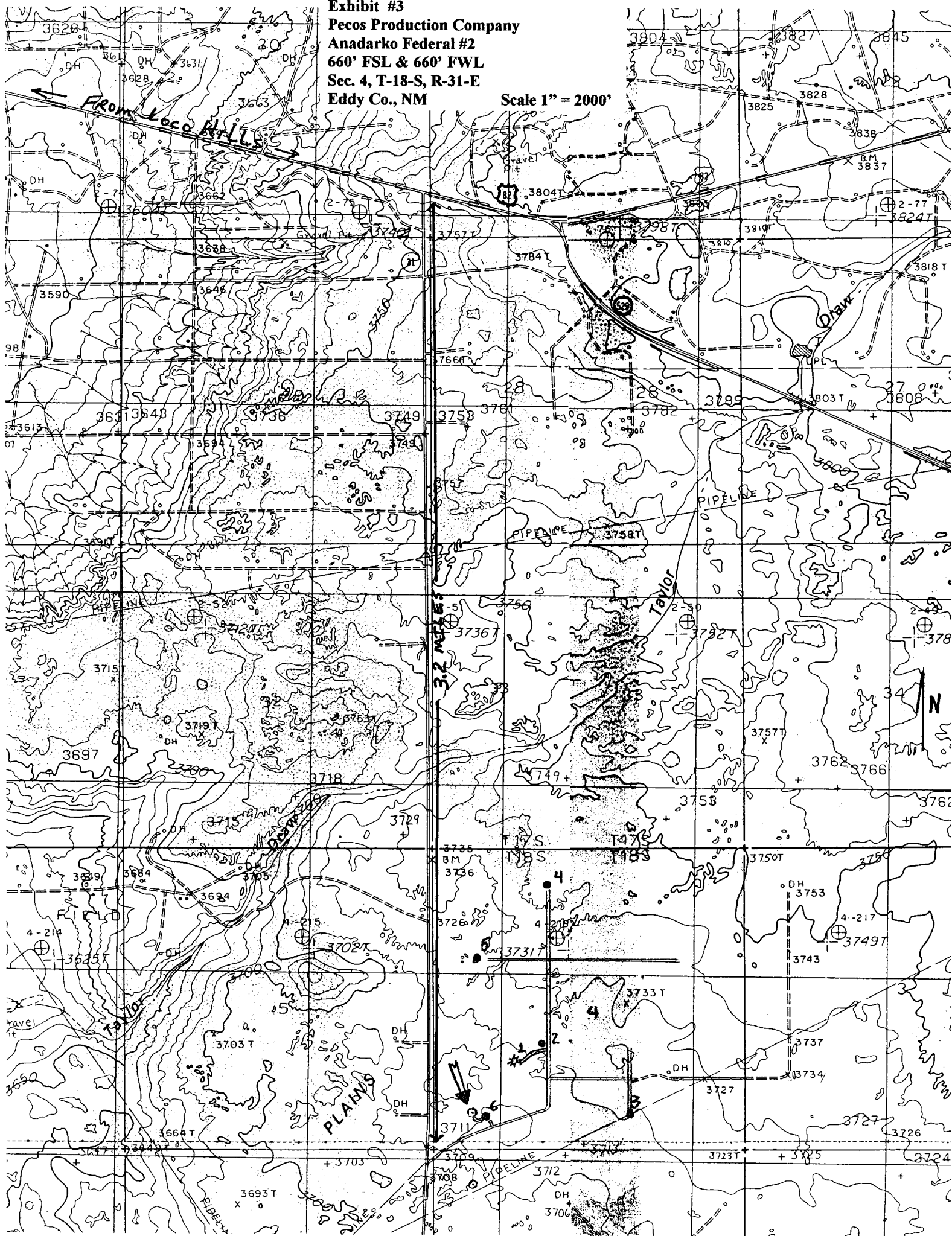
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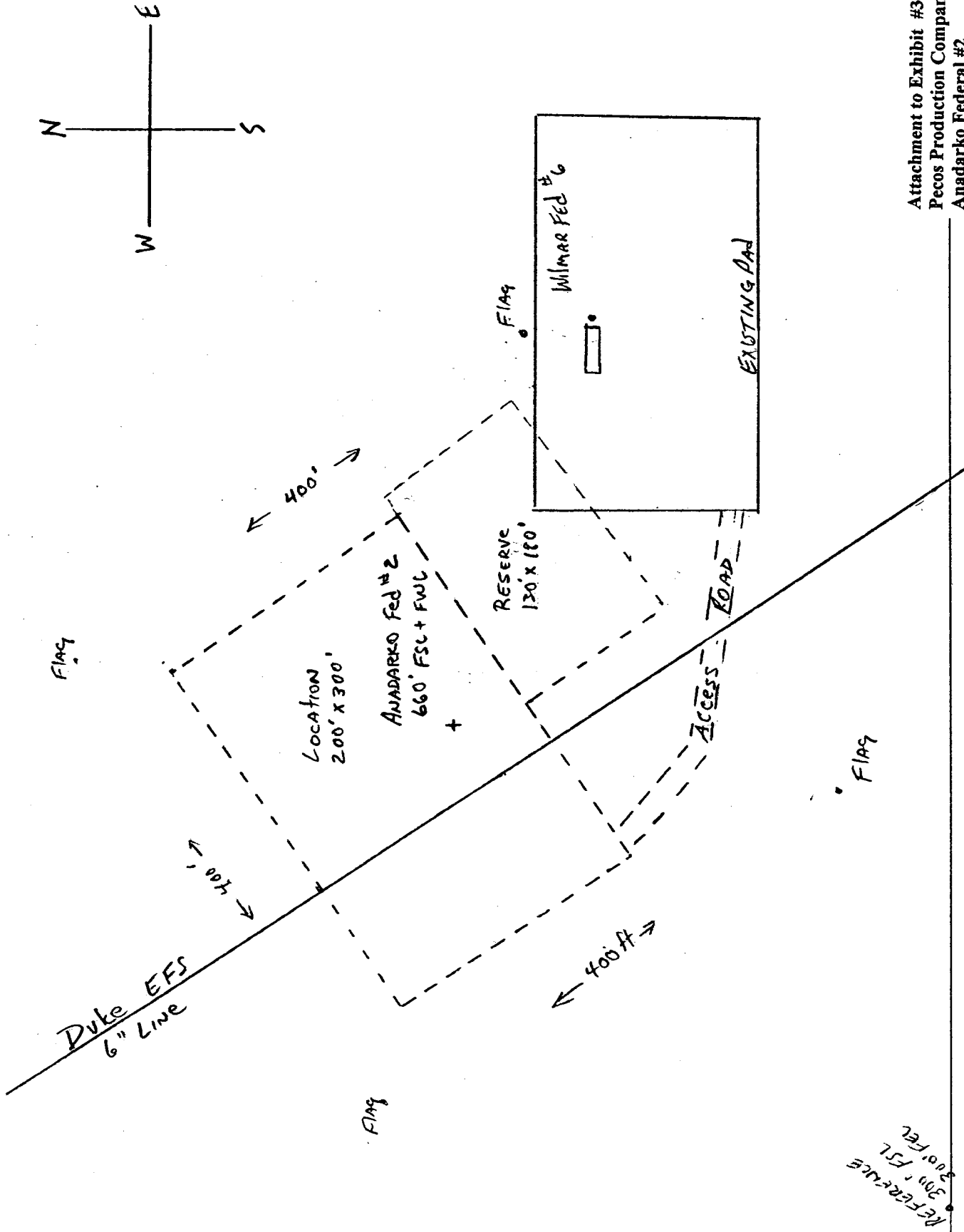
Attachment to Exhibit #1
Attachment to Form 3160-3
Pecos Production Company
Anadarko Federal No. 2
660' FSL & 660' FWL
Section 4, T18S, R31E
Eddy County, New Mexico

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 preventor and all associated fittings will be in operable condition to withstand a minimum 3000 psi working pressure.
4. All fittings will be flanged.
5. A full bore safety valve tested to a minimum 3000 psi WP with proper thread connections will be available on the rotary rig floor at all times.
6. All BOP equipment will be equal to or larger in bore than the internal diameter of the last casing string.
7. Will maintain a kelly cock attached to the kelly.
8. Hand wheels and wrenches will be properly installed and tested for safe operation.
9. All BOP equipment will meet API standards and include a minimum 40 gallon accumulator having two independent means of power to initiate closing operation.

Exhibit #3
Pecos Production Company
Anadarko Federal #2
660' FSL & 660' FWL
Sec. 4, T-18-S, R-31-E
Eddy Co., NM

Scale 1" = 2000'





1. Brothers
Prod.
(Moriah Res.)
11-1-2011
029388
NE1/4
- Fed Johnson -

2. Hudson F.
Hudson
Shugart

3. Hudson F.
Delmar
W.A. F. R.
Hudson
"8"
89879

4. Shugart

5. Hudson F. Delmar
Map
89879

6. Brothers Prod. et al
11-1-2011
29388

Kincaid
 1042000
 Mewbourne
 02939
 042015
 Pensacola
 02939
 Burlington
 No. Shogart
 Fed.
 2-A
 WI
 1-A
 Devon Ener
 H. Shogart
 17 Fed
 Kenwood
 TD 3930
 (Canadian Kenwood)
 Vintage Dr. g.
 (Kenwood)
 02939
 1-C
 3
 4
 1-A
 3-1-95
 83601
 1600⁰⁰ Gruu

2 1 Texam Nadele
Me Tex) A22 MIL HBP Gussman
Brothers * F35 B-207 12-1-92
Prod. Westwlr V-2481
Shugart State L

Vintage Burrington MD 4016
1-A 3-11-83
W1 (1)
E 882 LG 1101
Moog Str 3833 Cockburn
HB- W2 6 Amoco

J.J. Travis 2 N.J. Texdm
St. Phillips O Ledbetter - 880
TD 3605 Brothers E 882 8-2-23
A R Co

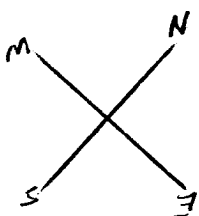
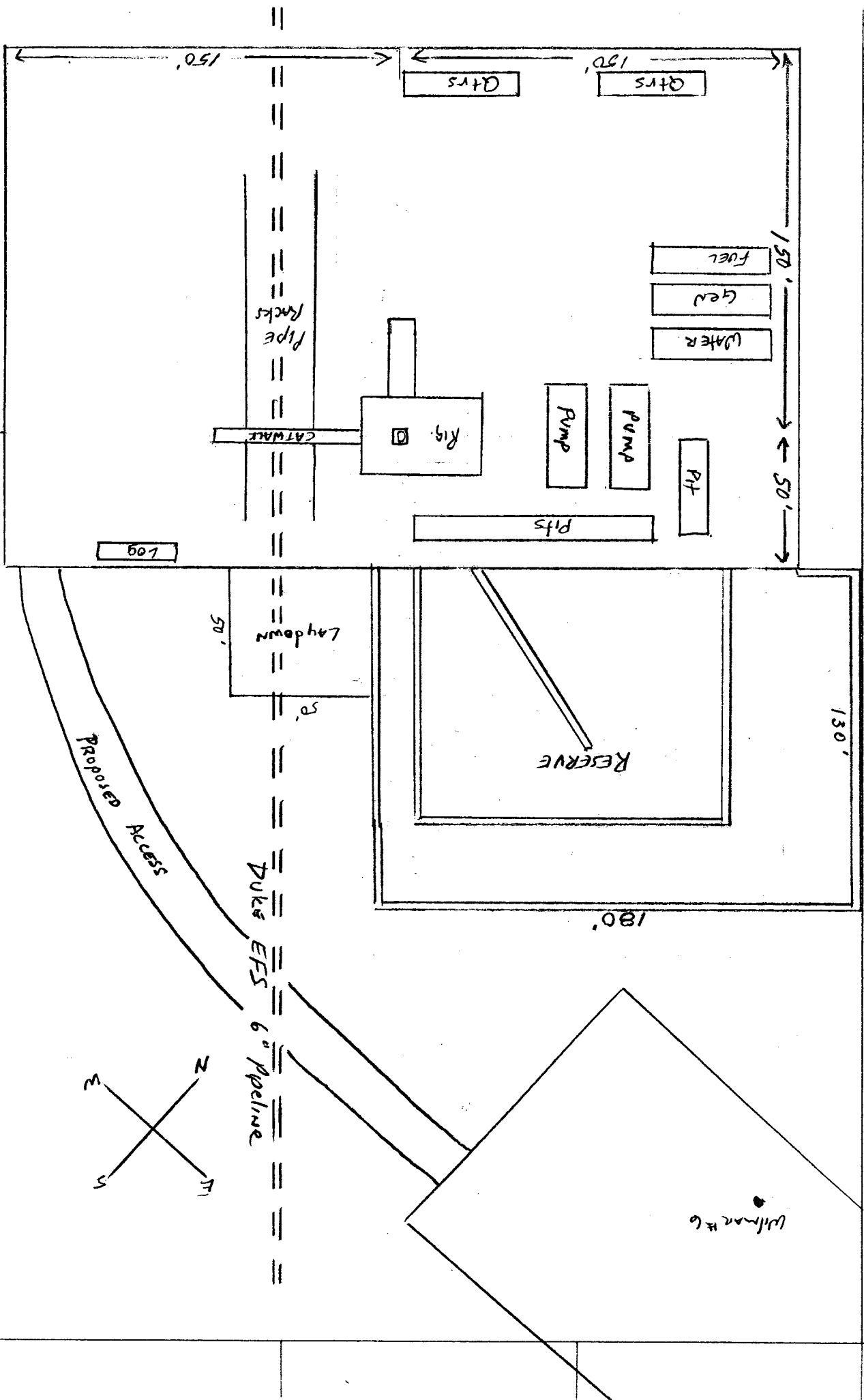


Exhibit #5 - Site Layout
Pecos Production Company
Anadarko Federal #2

660' FSL & 660' FWL

Sec. 4, T-18-S, R-31-E

Eddy Co., NM

Scale 1" = 50'

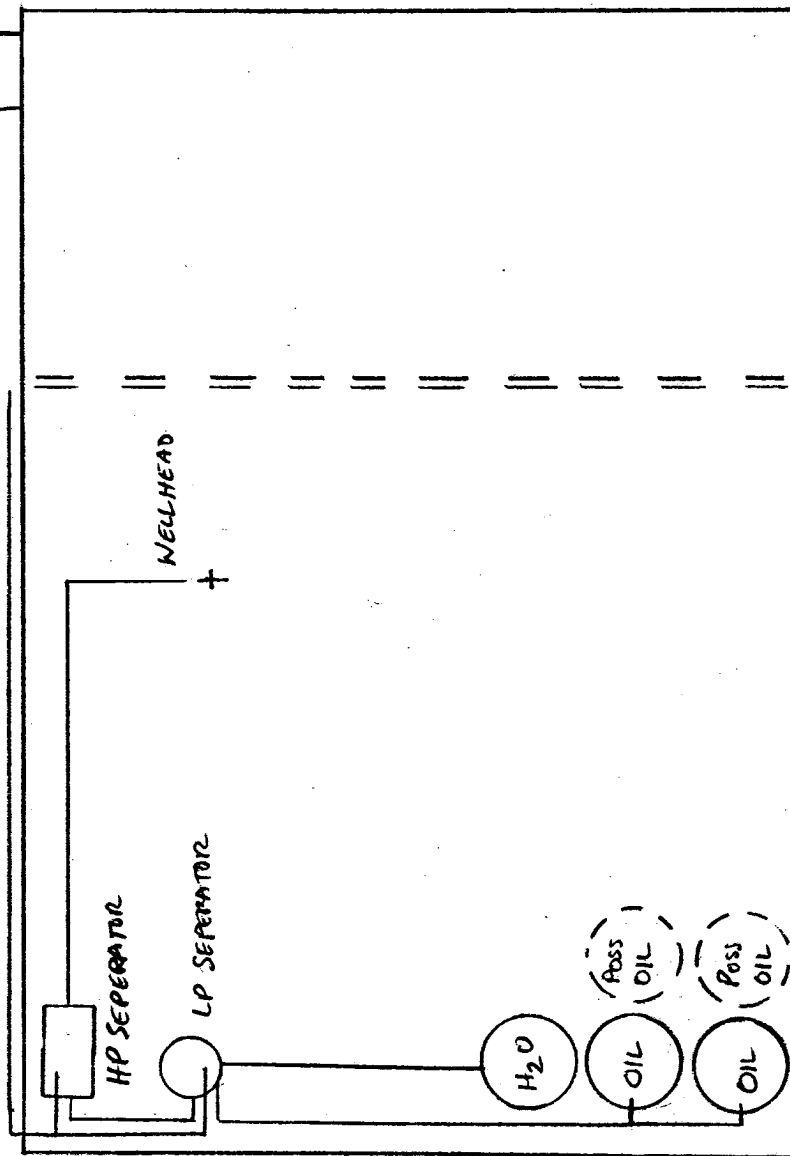
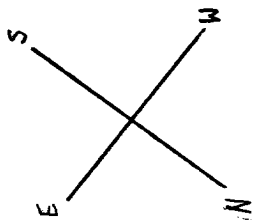


Exhibit #6
Pecos Production Company
Anadarko Federal #2
660' FSL & 660' FWL
Sec. 4, T-18-S, R-31-E