New Mexico Oil Conservation Division, District I
1625 N. French Drive
Hobbs, NM 88240

Form 3160-3
(September 2001)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.: NMNM94967
6. If Indian, Allottee or Tribe Name:
7. If Unit or CA Agreement, Name and No.: NMNM092017
8. Lease Name and Well No.: Querecho Plains Unit #2
9. API Well No.:
10. Field and Pool, or Exploratory: North Lusk Morrow
11. Sec., T., R., M., or Blk. and Survey or Area: Sec 22, T18S, R32E

1a. Type of Work: ☒ DRILL ☐ REENTER

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

2. Name of Operator: Pecos Production Company

3a. Address: 400 W. Illinois, Ste 1070, Midland TX 79701

3b. Phone No. *(include area code)*: (432) 620-8480

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface: 1980' FNL & 660' FWL
At proposed prod. zone: 1980' FNL & 660' FWL Unit C

12. County or Parish: Lea
13. State: NM

14. Distance in miles and direction from nearest town or post office*: 9 Miles South of Maljamar

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of Acres in lease	17. Spacing Unit dedicated to this well
660'	320 Acres	320

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
1866'	Morrow / Strawn 12,900'/11,800'	NMB000020

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3773' GL	Upon Approval	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	Name *(Printed/Typed)*	Date
William R. Huck	William R. Huck	11-25-03

Title: VP - Engr. & Operations

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/S/ JOE G. LARA	/S/ JOE G. LARA	JAN 16 2004

Title	Office
ACTING FIELD MANAGER	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)

OPER. OGRID NO. 215758
PROPERTY NO. 32086
POOL CODE 80800
EFF. DATE 1/21/04
API NO. 30-025-36541

RECEIVED
2004
Hobbs
OCD

APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

DRILLING PROGRAM

Attachment to Form 3160-3
Pecos Production Company
Querecho Plains Unit No. 2
1980' FNL & 660' FWL
Section 22, T18S, R32E
Lea County, New Mexico

1. Geologic Name of Surface Formation

   Quaternary Alluvium

2. Estimated Tops of Important Geological Formations

Top of Salt Section	1100'
Base of Salt Section	2700'
Yates	2700'
Queen	3850'
San Andres	4740'
Bone Spring	6850'
Wolfcamp	10,100'
Strawn	11,450'
Atoka	11,850'
Morrow Clastics	12,200'
Lower Morrow	12,400'
Upper Mississippian Lime	12,850'

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

Water:	Approximately 200'
Oil:	3850', 6850', 10,100', 11,450'
Gas:	11,850'; 12,400'

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 725' 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 (13000'±) and cemented with cement back into the 8-5/8" intermediate casing.

4. Casing Program

Hole Size	Interval	Casing OD	Weight	Grade	Type
17-1/2"	0' - 725'	13-3/8"	48#	H-40	ST&C
12-1/4"	0' - 4500'	8-5/8"	32#	J-55 & HCK-55	ST&C
7-7/8"	0' - 13000'	5-1/2"	17# & 20#	K-55 & N-80 & P-110	LT&C

Cementing Program*

725' 13-3/8" Surface Casing:		Cement to surface 400 sxs Class C containing 4% Gel, 2% Calcium Chloride, 0.25 pps Cello-flake, 5# Gilsonite followed by 150 sxs Class 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.

13000' 5-1/2" Production Casing with DVT @ 10,000'

First Stage

Lead Slurry:	200 sxs 50:50:10 Poz H containing 10% bentonite, 0.5% FLAC, 0.25 pps Cello-Flake, 5 pps Gilsonite.
Tail Slurry:	400 sxs 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.

*Cement designs may change as hole conditions dictate.

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 Operatings 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:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0' - 725'	Spud Mud	8.3 - 9.2	28 - 36	No control
725' - 4500'	Brine	10.0 - 10.3	29	No control
4500' - 11200'	Cut Brine	8.6 - 9.8	29	No control
11200' - TD	Duo Vis/Poly Pac	9.8 - 10.0	35 - 38	5 - 6 cc

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 and Morrow.

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.

SURFACE USE AND OPERATING PLAN

Attachment to Form 3160-3
Pecos Production Company
Querecho Plains Unit No. 2
1980' FNL & 660' FWL
Section 22, T18S, R32E
Lea County, New Mexico

1. Existing Roads

   A. The well site and elevation plat for the proposed Querecho Plains Unit No. 2 are reflected on Exhibit #2. The well was staked by John West Engineering of Hobbs, New Mexico.

   B. Approximately 1100 feet of new road will be built from the existing lease road to the NE corner of drilling pad on Exhibit #3.

   C. Intersection of Hwy 529 and Hwy 126 in Lea County. South (on Hwy 126) 1.6 miles to Mewbourne Oil Querecho Plains Unit sign. Left 2.5 miles on main lease road. Right 0.6 miles on existing lease road. Right onto new lease road 1100 feet to Querecho Plains Unit No. 2.

2. Proposed Access Road

   Only 1100 feet of new road will be built.

3. Location of Existing Wells

   Exhibit #4 shows all existing wells within a one-mile radius of the proposed Querecho Plains Unit No. 2.

4. Location of Existing and/or Proposed Facilities

   A. If the well is productive, a new facility will be built on well pad. Gas produced will be transported through a 3 or 4" line to be buried along, existing road East and South to Querecho Plains Unit No. 1 located 1980' FSL & 1980' FWL of Sec 22.

   B. New tank battery facility will consist of one high pressure 3 phase gas unit, one low pressure 3 phase gas unit, two to four 500 barrel steel stock tanks, and one 300 barrel fiberglass water tank as reflected on Exhibit 6.

   C. The well should be a flowing oil or gas well with flow rate controlled through an adjustable choke.

   D. If the well is productive, rehabilitation plans are as follows:

      1. Free water will be hauled to disposal and the reserve pit will be back-filled after the contents of the pit are dry, and topsoil replaced (within 120 days of completion, weather permitting).

2. At abandonment caliche from the drill pad will be removed. The original topsoil from well site will be returned to the location. The drill site will then be contoured to the original natural state.

5. Location and Type of Water Supply

The Querecho Plains Unit No. 2 will be drilled using a combination of brine and fresh water mud systems (outlined in Drilling Program). The water will be obtained from commercial sources and trucked to location.

6. Sources of Contruction Materials

All caliche utilized for the drilling pad will be obtained from the reserve pit area or an existing BLM approved pit.

7. Methods of Handling Water and Waste Disposal

A. Drill cuttings will be disposed into the reserve pit.

B. Drilling fluids will be contained in steel mud tanks or lined earthen pits and the reserve pit. After drilling operations are complete, free water will be hauled to disposal, the cuttings and mud allowed to dry, and the pit backfilled.

C. The reserve pit will be fenced on three sides throughout drilling operations and will be totally isolated upon removal of the rotary rig. The pit will be lined using a 5-7 mil plastic to minimize loss of drilling fluids.

D. Water produced from the well during completion operations will be disposed into a steel tank or reserve pit, if volumes prove excessive. After placing the well on production through the production facilities, all water will be collected in tanks, pumped to a nearby lease for injection or trucked to disposal.

E. Garbage, trash and waste paper produced during drilling operations will be collected in a contained trailer and disposed at an approved lanfill. All waste material will be contained to prevent scattering by the wind. All water, fluids, salt or other chemicals will be disposed into the reserve pit. No toxic wast or hazardous chemicals will be generated by this operation.

8. Ancillary Facilities

No campsite or other facilities will be constructed as a result of this well.

9. Well Site Layout

   A. The drill pad is shown on Exhibit #5. Approximate dimensions of the pad, pits and general location of the rig equipment are displayed. Top soil, if any found, will be stored adjacent to the pad until reclamation efforts are undertaken. Only modest cuts will be necessary to build the pad which will be covered with 6" compacted caliche.

   B. No permanent living facilities are planned, temporary trailers for the tool pusher, and company supervisors may be on location throughout drilling operations.

   C. The reserve pit and earthen pits will be lined using plastic sheeting of 5-7 mil thickness.

10. Plans for Restoration of Surface

   A. After concluding the drilling, completion and/or production operations, the caliche will be removed from the pad and transported to the original caliche pit or used for other drilling locations. The original top soil will again be returned to the pad and contoured, as close as possible, to the original topography.

   B. The pit lining will remain intact during reclamation in order to prvent leaching. All pits will be filled and location leveled, weather permitting, within 120 days after abandonment. Original topsoil will be returned to the pit area.

   C. The location will be rehabilitated as recommended by the BLM.

11. Surface Ownership

   This well site is owned by the U.S.A. An agreement for surface orientation and use has been reached with the BLM Field Inspector during the onsite meeting.

12. Other Information

   A. The area surrounding the well site is gypsiferous and supportive of desert scrub and grassland formation. The vegetation is moderately sparse with desert scrub.

   B. No permanent water or water wells are within a 1 mile radius of this location.

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

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	Pecos Production Company
VP – Engr. and Operations	400 W. Illinois, Suite 1070
(432) 620-8480	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 exsit; that the statements made in this plan are, to the best if 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: _____ Date: 11-25-03
William R. Huck – VP-Engr. & Operations

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

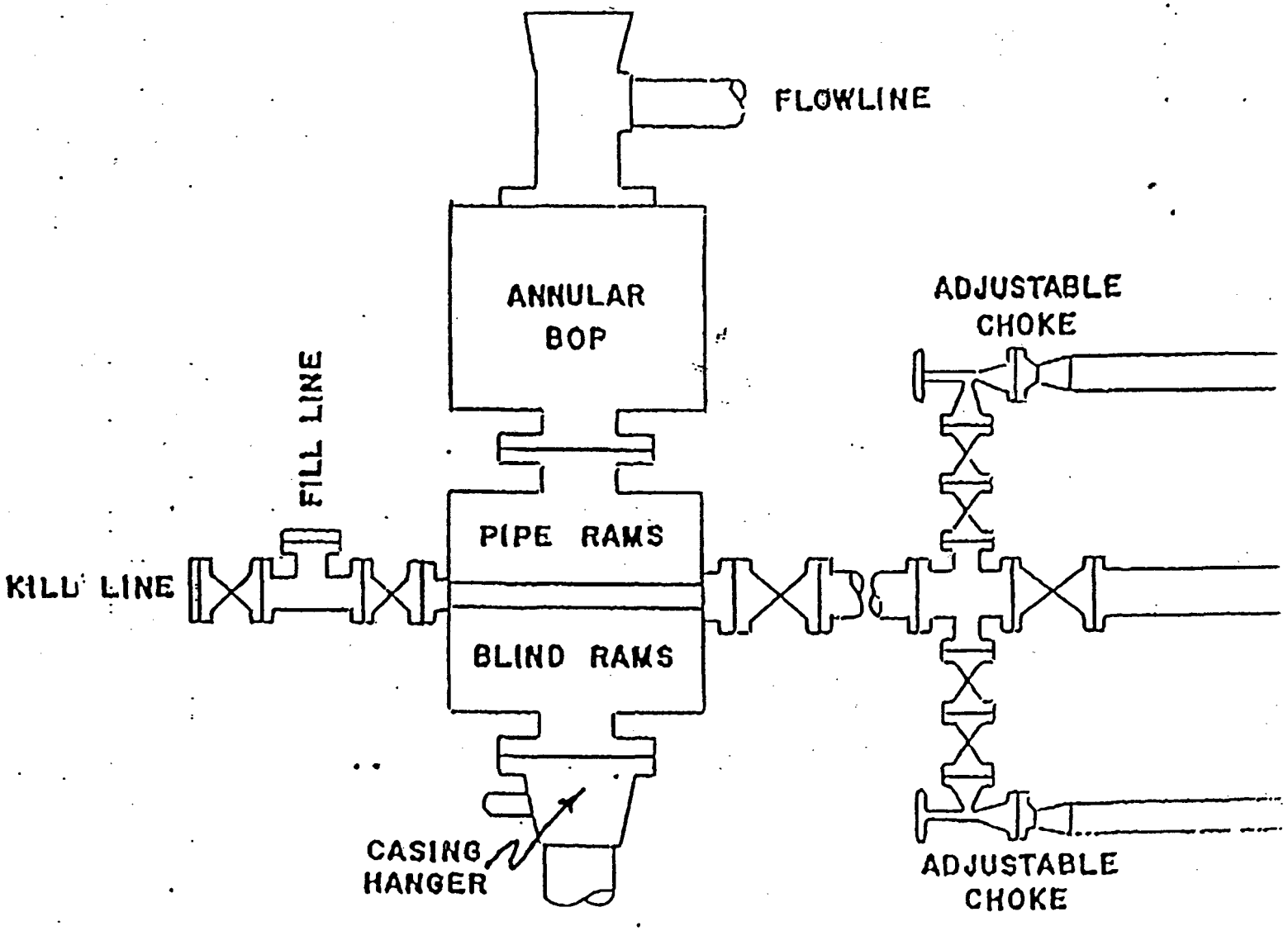


Exhibit #1
Pecos Production Company
Querecho Plains Unit No. 2
1980' FNL & 660' FWL
Sec. 22, T-18-S, R-32-E
Lea Co., NM

Attachment to Exhibit #1
Attachment to Form 3160-3
Pecos Production Company
Querecho Plains Unit No. 2
1980' FNL & 660' FWL
Section 22, T18S, R32E
Lea 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.

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
30-025-36541	80800	North Lusk Morrow

Property Code	Property Name	Well Number
32086	QUERECHO PLAINS UNIT	2

OGRID No.	Operator Name	Elevation
215758	PECOS PRODUCTION COMPANY	3773'

Surface Location

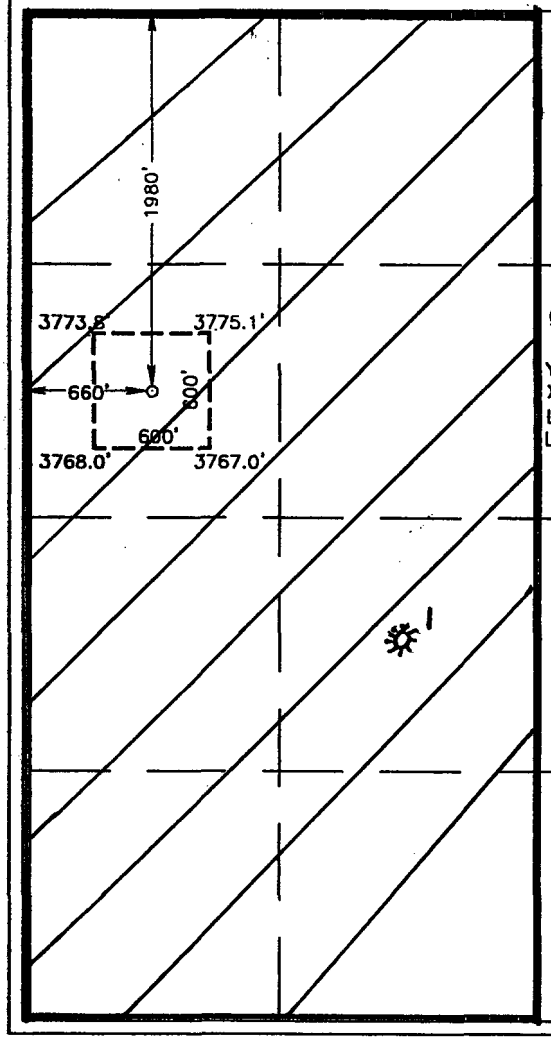
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	22	18-S	32-E		1980'	NORTH	660'	WEST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320			

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



GEODETIC COORDINATES
NAD 27 NME
Y = 631464.9 N
X = 676254.4 E
LAT.= 32°44'04.85"N
LONG.= 103°45'36.53"W

OPERATOR CERTIFICATION

I hereby certify the 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

11-25-03
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 supervison, and that the same is true and correct to the best of my belief.

November 14, 2003
Date Surveyed A.W.B

Signature & Seal of Professional Surveyor

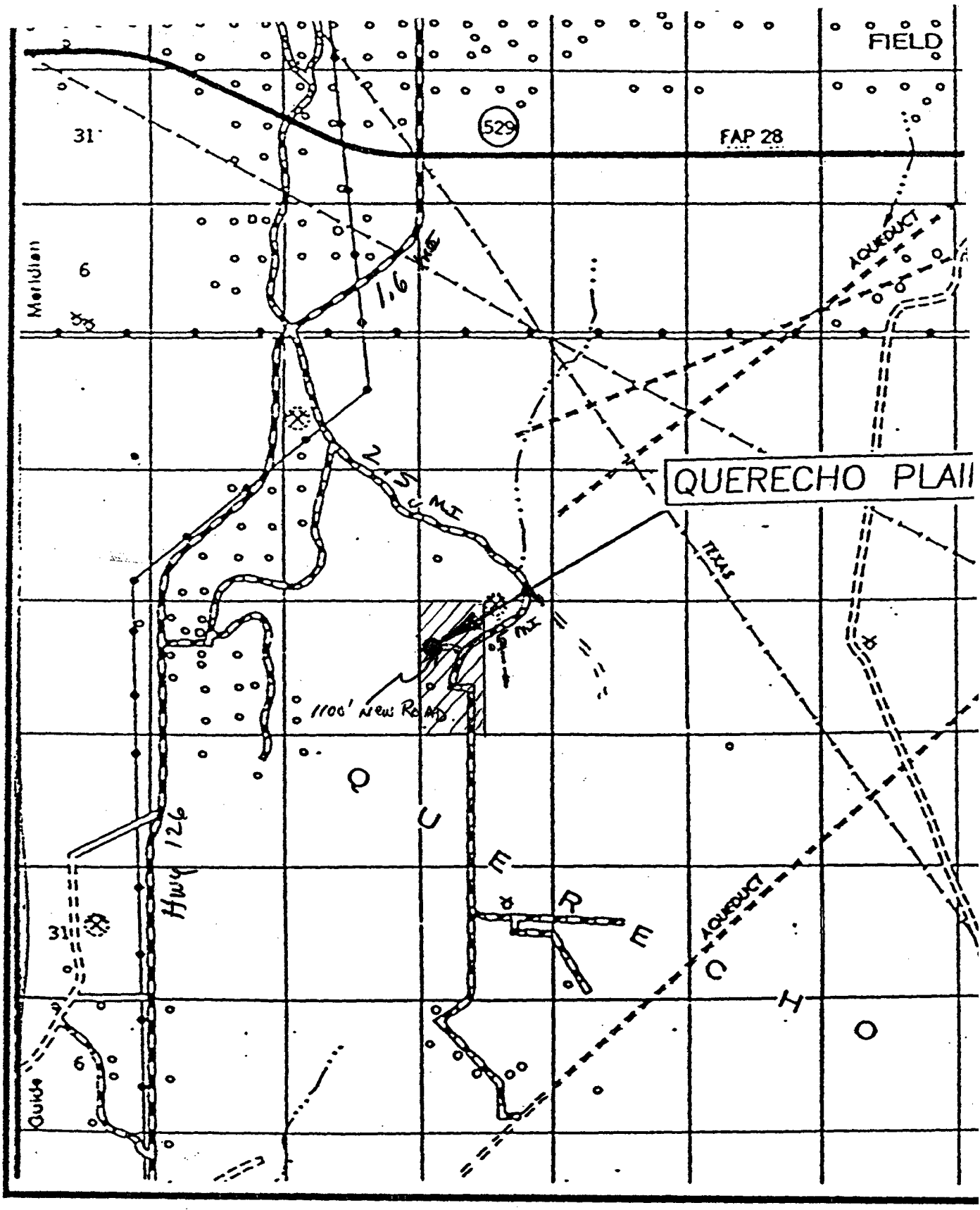
GARY L. EIDSON
NEW MEXICO
12641
REGISTERED PROFESSIONAL SURVEYOR

11/24/03

03.11.1267

Certificate No. GARY EIDSON 12641

Exhibit #2



SEC. 22 TWP. 18-S RGE. 32-E

SURVEY N.M.P.M.

COUNTY

Exhibit #3
Pecos Production Company
Querecho Plains Unit No. 2
1980' FNL & 660' FWL
Sec. 22, T-18-S, R-32-E
Lea Co., NM

Scale 1" = 1 Mile

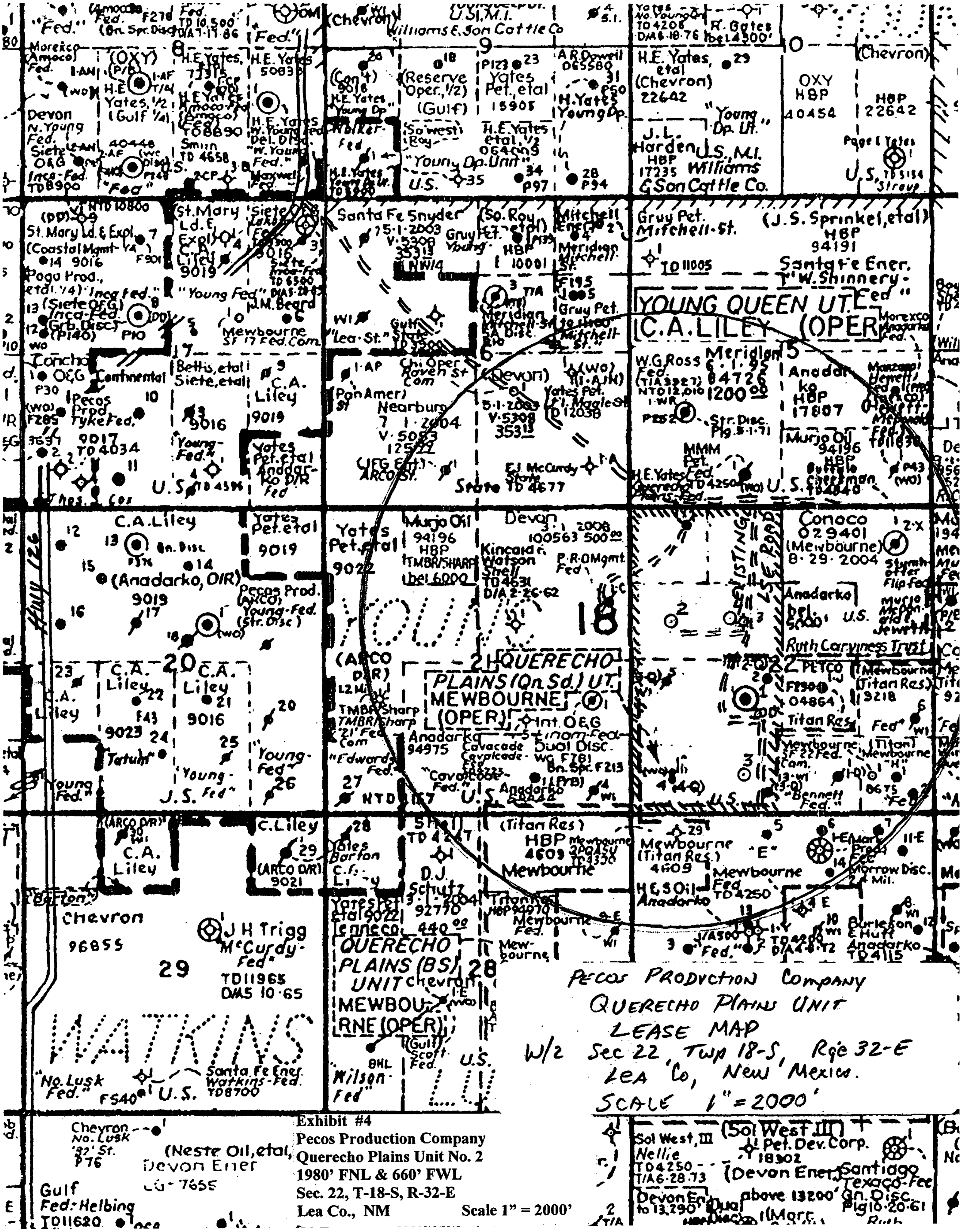
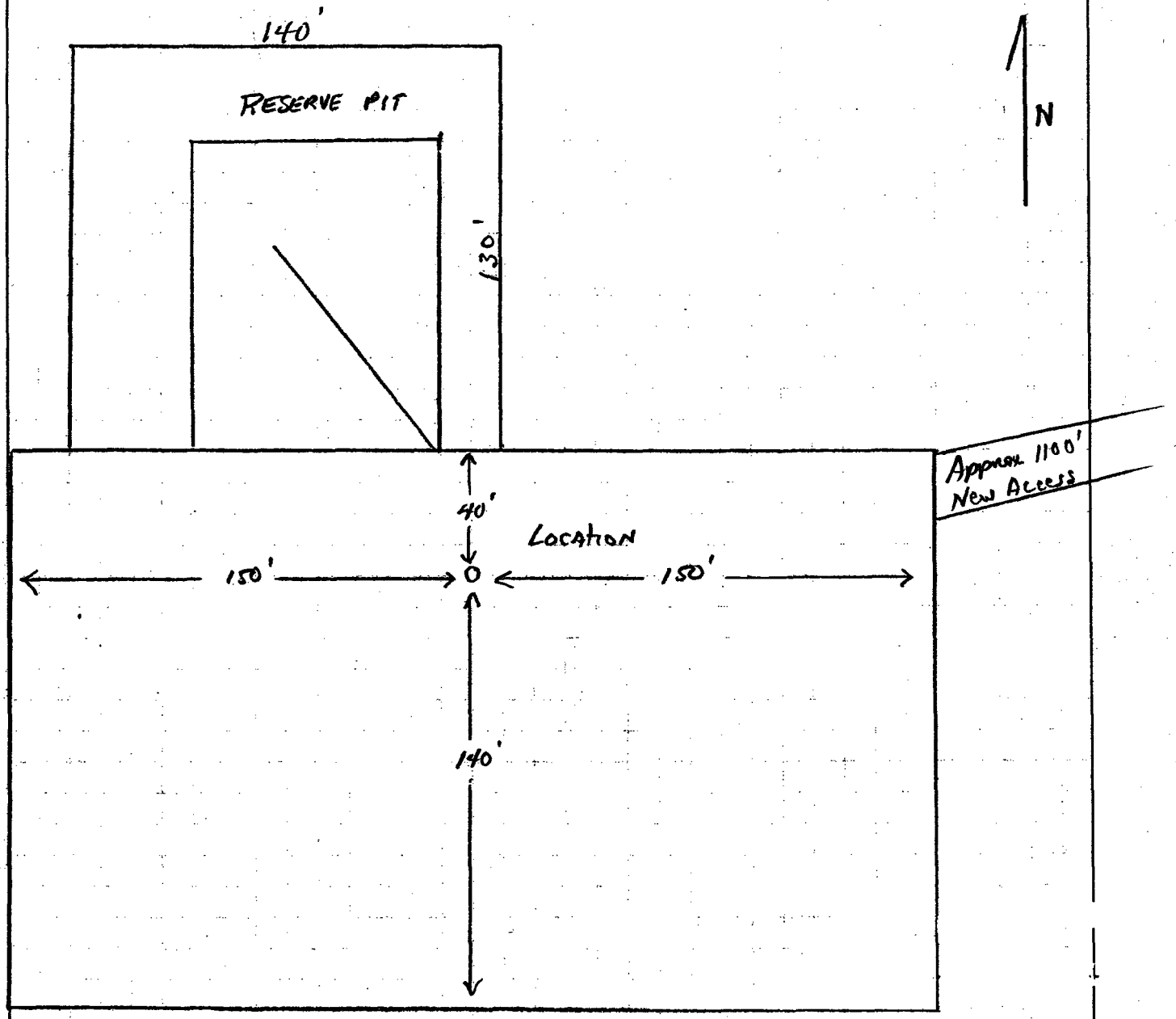
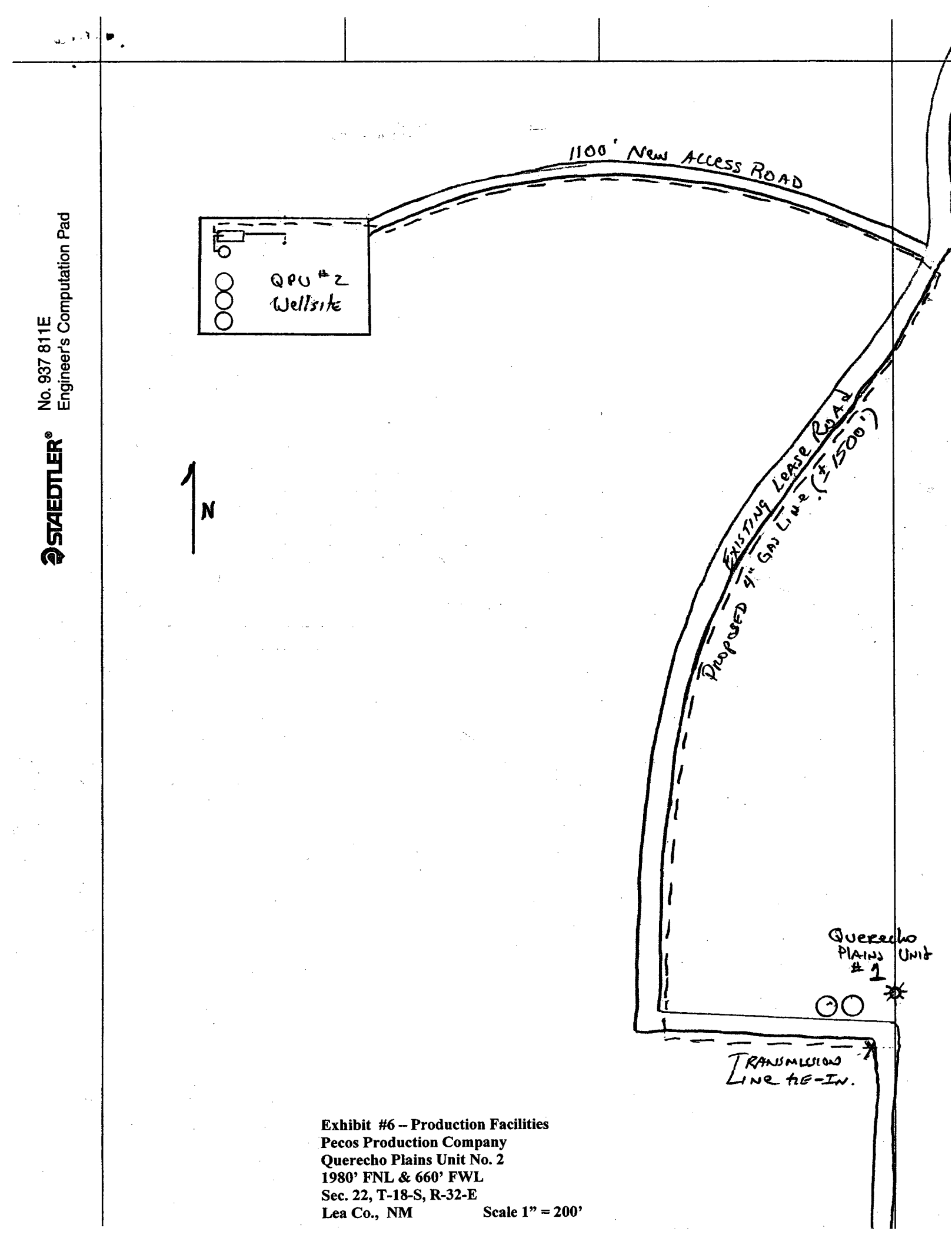


Exhibit #4
Pecos Production Company
Querecho Plains Unit No. 2
1980' FNL & 660' FWL
Sec. 22, T-18-S, R-32-E
Lea Co., NM Scale 1" = 2000'

STAEDTLER® No. 937 811E Engineer's Computation Pad

Exhibit #5 - Site Layout
Pecos Production Company
Querecho Plains Unit No. 2
1980' FNL & 660' FWL
Sec. 22, T-18-S, R-32-E
Lea Co., NM **Scale 1" = 50'**





STAEDTLER®
No. 937 811E
Engineer's Computation Pad

Exhibit #6 -- Production Facilities
Pecos Production Company
Querecho Plains Unit No. 2
1980' FNL & 660' FWL
Sec. 22, T-18-S, R-32-E
Lea Co., NM **Scale 1" = 200'**

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Roswell Field Office
2909 West Second Street
Roswell, New Mexico 88201-1287

Statement Accepting Responsibility for Operations

Operator Name	:	Pecos Production Company
Street or Box	:	400 W. Illinois, Suite 1070
City, State	:	Midland, TX
Zip Code	:	79701

The undersigned accepts all applicable terms, conditions, stipulations, and restrictions concerning operations conducted on the leased land or portion thereof, as described below:

Lease No.: NM NM 94967

Legal Description of Land: 1980' FNL & 660' FWL of Section 22, T18S-R31E:

Formation (s) (if applicable): Morrow & Strawn

Bond Coverage (State if individually bonded or another's bond): $25,000
Statewide (NM)

BLM Bond File No.: NMB000020

Authorized Signature: _____

Title: VP-Engr & Operations

Date: 11-25-03