M. OIL CONS. COMMISSION
P. O. BOX 1980
HOBBS, NEW MEXICO 88240

Form 3160-3
(July 1992)

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

FORM APPROVED
OMB NO. 1004-0136
Expires: February 28, 1995

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. LEASE DESIGNATION AND SERIAL NO.: NMLC 030187

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

1a. TYPE OF WORK: DRILL ☒ DEEPEN ☐ JP 9/30/97

7. UNIT AGREEMENT NAME:

b. TYPE OF WELL: OIL WELL ☐ GAS WELL ☐ OTHER — SINGLE ZONE ☐ MULTIPLE ZONE ☐

8. FARM OR LEASE NAME, WELL NO.: C. E. Lamunyon #66

2. NAME OF OPERATOR: Arch Petroleum Inc.

9. API WELL NO.: 30-025 - 34202

3. ADDRESS AND TELEPHONE NO.: 10 Desta Drive, Suite 420E Midland, Texas 79705

10. FIELD AND POOL, OR WILDCAT: Teague Paddock-Blinebry

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: Unit C, 1300' FNL and ~~2620~~ 2520' FWL
At proposed prod. zone:

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec 27, T23S R37E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 10.5 miles South of Eunice, New Mexico

12. COUNTY OR PARISH: Lea

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. NO. OF ACRES ASSIGNED TO THIS WELL
1300'	1520	20
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
640'	6000'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 3281'

22. APPROX. DATE WORK WILL START*: 10/26/97

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4	K-55, 8-5/8"	24#	1025'	600 sx Class C" circulated
7-7/8	J-55, 5-1/2"	15.5#	6000'	1600 sx Class "C" circulated

WITNESS

Mud Program:

0-1075 FW/Spud Mud 88 - 9.0#/gal, Visc 32,pH 10
1075-5000' BW 10#/gal., Visc 28 pH 10
5000-6000' BW/Starch 10#/gal, Visc 30, pH 10

See attached BOP drawing for psi system

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS ATTACHED

BUREAU OF LAND MANAGEMENT
ROSWELL OFFICE
97 SEP 29 P 1:20
RECEIVED

IN ABOVE SPACE DESCRIBE PROGRAM: If proposal is to deepen, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.

SIGNED Robin S. McCarley TITLE Technical Assistant DATE 09/26/97

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

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:

APPROVED BY (ORIG. SGD.) ARMANDO A. LOPEZ TITLE Acting ADM. MINERALS DATE NOV 04 1997

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes 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.

DRILLING PROGRAM

C. E. LAMUNYON #66
Arch Petroleum Inc.
Section 27, T23S, R37E
Lea Co., New Mexico

1. Geologic Name of Surface Formation: Quaternary

2. Estimated Tops of Geologic Markers:

Rustler 1,030'	7 Rivers 2,780'	Paddock 4,950'
Top Salt 1,130'	Penrose 3,375'	T/Blinebry 5,290'
Base Salt 2,365'	Grayburg 3,555'	B/Blinebry 5,850'
Yates 2,535'	San Andres 3,800'	Tubb 5,950'

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

Fresh Water 300'-500'
Penrose 3,375'-3,550'
Paddock 4,950'-5,290'
Blinebry 5,290'-5,950'

4. Casing Program:

Casing	Hole Size	Weight	Grade	Setting Depth
Surface	8 5/8"	24#	K-55	1,075'
Production	5 1/2"	15.5#	J-55	6,000'

Cement Program:

(a) Surface casing will be 8-5/8" set at 1075' and cemented with 400 sacks of Class 'C' lead cement and 200 sacks of Class 'C' tail cement.
(b) Production casing will be 5-1/2" set at approximately 6,000' and cemented in one stage with approximately 1150 sacks of Class 'C' lead cement and 500 sacks of tail cement. Exact volumes to circulate to surface to be determined by caliper log.

5. Pressure Control Equipment:

The minimum specifications for pressure control equipment can be seen on the attached Exhibit 1 for a blowout preventer hook-up for 3,000 psi working pressure.

6. Proposed Mud System:

0-1075' fresh water spud mud
1075'-5000' saturated salt water
5000'-6000' salt water polymer with the following properties: Viscosity 30 sec., water loss 10 cc or less, weight 10 ppg with 5% KCl. Heavier weight mud will be used if required by well condition. 10 ppg brine is only used to minimize salt washout and formation damage and not for well control. No significant well control problems are anticipated.

7. Logging, Testing, and Coring Program:

(a) Formation testing may be done at any depth where samples, drilling rate, or log information indicates a possible show of oil or gas.
(b) Open hole logs will be run at total depth
(c) Plans are to possibly core one of these wells in the Blinebry.

8. Abnormal Conditions, Pressures, Temperatures, and Potential Hazards:

No abnormal pressures or temperatures are anticipated. The estimated Bottom Hole Temperature (BHT) at TD is 115°F and estimated maximum Bottom Hole Pressure (BHP) is 3000 psig. Hydrogen sulfide is not considered to be a significant safety hazard since well control should not be a problem. In anticipation of encountering H_2S gas, Exhibit 2 is the Plan of Operation for H_2S Drilling. No major loss circulation zones have been reported in offsetting wells.

9. Anticipated Starting Date and Duration of Operations:

Road and location work will not begin until approval has been received from the BLM. Anticipated spud date should be October 25. Once commenced, the drilling operation should be finished in approximately 15 days. The time required to complete and test the well will be about 30 days.

10. Other Facets of the Proposed Operation: None.

MULTI-POINT SURFACE USE PLAN

C. E. LAMUNYON 66
Arch Petroleum Inc.
Sections 27, T23S, R37E
Lea Co., New Mexico

1. Existing Roads:

To reach the proposed locations, go 10 miles south of Eunice on Highway #18. Just south of the old abandoned Carbon Black Plant, turn east and go through cattle guard for approximately 1/2 mile. Continue on new lease road that heads generally east. This will take you into the C. E. Lamunyon lease. See Exhibit A for individual well locations and elevations. See Exhibit B for the nearest wells to the proposed locations.

2. Planned Access Roads:

Each location will require between 183 to 668 feet of new access road to the location. The required access road will be constructed from the existing lease road to the new location from the shortest direction to minimize the amount of new road construction. The road will be crowned and ditched and constructed of 6" of rolled and compacted caliche. Water will be diverted where necessary to avoid ponding, prevent erosion, maintain good drainage, and to be consistent with local drainage patterns. See Exhibit C for the vicinity map. See Exhibit D with the proposed access road marked.

3. Location of Existing Wells:

Exhibit F shows all existing wells within a one-mile radius of these proposed well. Listed below is the proposed well and the nearest existing well to it:

Proposed Well	Nearest Existing Well	Distance	Direction
C. E. Lamunyon 66	C. E. Lamunyon 48	640'	NE

4. Location of Production Facilities:

Arch Petroleum Inc. operates two separate Blinebry production facilities on this lease. This well will be produced into Battery #1. Battery #1 is located in unit letter A of Sect. 28.

In the event of production, a steel flow line will be laid from well #66 to Battery #1. The new flow line will be approximately 4000' long.

To protect livestock and wildlife, the reserve pit will be fenced. Upon completion of drilling, the location and surrounding area will be cleared of all debris. All trash will be disposed in an enclosed trash trailer and hauled off.

5. Water Supply:

Water for drilling and completion operations will be purchased from a supplier and transported to the wellsite by truck.

6. Source of Construction Materials:

All caliche required for construction of the drill pad and the proposed new access road will be obtained from a caliche pit owned by the surface owner in the area. Construction contractor to pay caliche royalty to the landowner.

7. Methods of Handling Waste Disposal:

A. The drill cuttings, fluids, and completion fluids will be placed in the reserve pit. The reserve pit will be fenced on three sides away from the pad during drilling. The fence will be completed on the fourth side as soon as the rig moves out. The reserve pit will be allowed to dry and materials remaining in the reserve pit buried. The reserve pit will be backfilled, leveled, and contoured so as to prevent any materials being carried into the watershed.

Upon completion, the pad will be leveled, contoured, and reseeded with the appropriate seed mixture.

B. All garbage and trash will be placed in a covered trash trailer. This trailer will be emptied in an approved landfill as needed during the drilling operations.

C. Chemical toilets will be provided and maintained during drilling operations. See Exhibit E for location.

8. Ancillary Facilities:

No ancillary facilities are planned.

9. Well Site Layout:

Location of drilling equipment, rig orientation, and access road is shown on Exhibit E. The reserve pit will be lined with plastic to prevent liquids from soaking into the surrounding soil.

10. Plans for Restoration of the Surface:

When the well is abandoned, the location and access road will be cleaned and restored to the original topographical contours as much as possible. The area will be reseeded with the appropriate seed mixture.

If the well is productive, areas not used in production will be contoured and seeded with stipulated seed mixture. Production equipment will be painted the color designated by the surface managing agency.

11. Surface Ownership:

C. E. Lamunyon #66: Surface owner is D. K. Boyd Land & Cattle Co.

Surface damages for the location, road, flow line, and power line have been settled with the landowner.

12. Other Information:

The Archeological Survey is being performed by Pecos Archeological Consultants and will be filed as soon as it is completed and will include a description of the topography, flora, fauna, soil characteristics, dwellings, historical, and cultural sites.

13. Lessee's or Operators Representative:

Robin S. McCarley
Arch Petroleum Inc.
10 Desta Dr., Suite 420E
Midland, TX 79705
Phone: (915) 685-1961 (office)

14. Certification:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; 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 Arch Petroleum Inc., and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

Robin S. McCarley
Technical Assistant

BAA/
Attachments

ARCH PETROLEUM INC.

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

I. Hydrogen Sulfide Training

All personnel, whether regularly assigned, contracted , or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H_2S).

2. The proper use and maintenance of personal protective equipment and life support systems.

3. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.

4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H_2S on metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.

2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.

3. The contents and requirements of the H_2S Drilling Operations Plan and the Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days of 500 feet) and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S Drilling Operations Plan. This plan shall be available at the well site. All personnel will be required to carry documentation that they have received the proper training.

II. H_2S SAFETY EQUIPMENT AND SYSTEMS

Note: All safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to cohtain H_2S.

1. Well Control Equipment:

   A. Flare line with electronic igniter or continuous pilot.

   B. Choke manifold with a minimum of one remote choke.

   C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit.

   D. Auxiliary equipment to include: annular preventer, mud-gas separator, rotating head, and flare gun with flares.

2. Protective equipment for essential personnel:

   A. Mark II Surviveair 30-minute units located in the dog house and at briefing areas, as indicated on well site diagram.

3. H_2S detection and monitoring equipment:

   A. 2 - portable H_2S monitors positioned on location for best coverage and response. These units have warning lights and audible sirens when H_2S levels of 20 ppm are reached.

4. Visual warning systems:

   A. Wind direction indicators as shown on well site diagram.

   B. Caution/Danger signs shall be posted on roads providing direct access to location. Signs will be painted a high visibility yellow with black lettering of sufficient size to be readable at a reasonable distance from the immediate location. Bilingual signs will be used, when appropriate.

5. Mud program:

   A. The mud program has been designed to minimize the volume of H_2S circulated to the surface. Proper mud weight, safe drilling practices, and the use of H_2S scavengers will minimize hazards when penetrating H_2S bearing zones.

6. Metallurgy:

   A. All drill strings, casings, tubing, wellhead, blowout preventers, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H_2S service.

   B. All elastomers used for packing and seals shall be H_2S trim.

7. Communication:

   A. Radio communications in company vehicles including cellular telephone and 2-way radio.

   B. Land line (telephone) communications at field office.

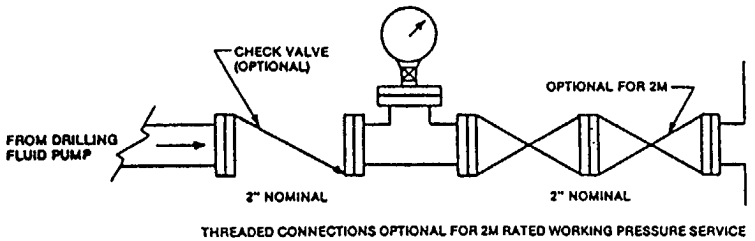
8. Well testing:

   A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity which are necessary to safely and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill stem testing operations conducted in an H_2S environment will use the closed chamber method of testing.

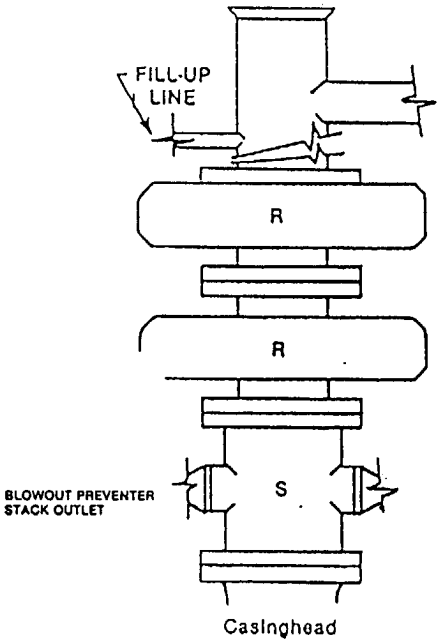
BOP SCHEMATIC

IADC Class 3

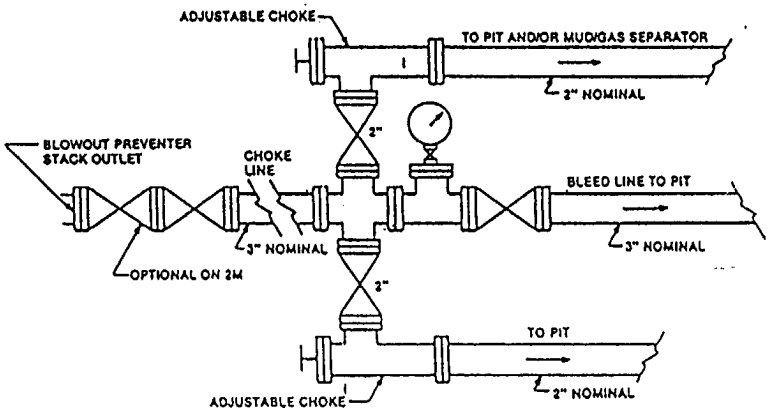
3M (3000 psi) Working Pressure



Typical Kill Line



BOP Stack



Choke Manifold

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-025	58300	Teague Paddock-Blinebry

Property Code	Property Name	Well Number
014898	C.E. LAMUNYON	66

OGRID No.	Operator Name	Elevation
000962	ARCH PETROLEUM, INC.	3281

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	27	23 S	37 E		1300	NORTH	2620	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.

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

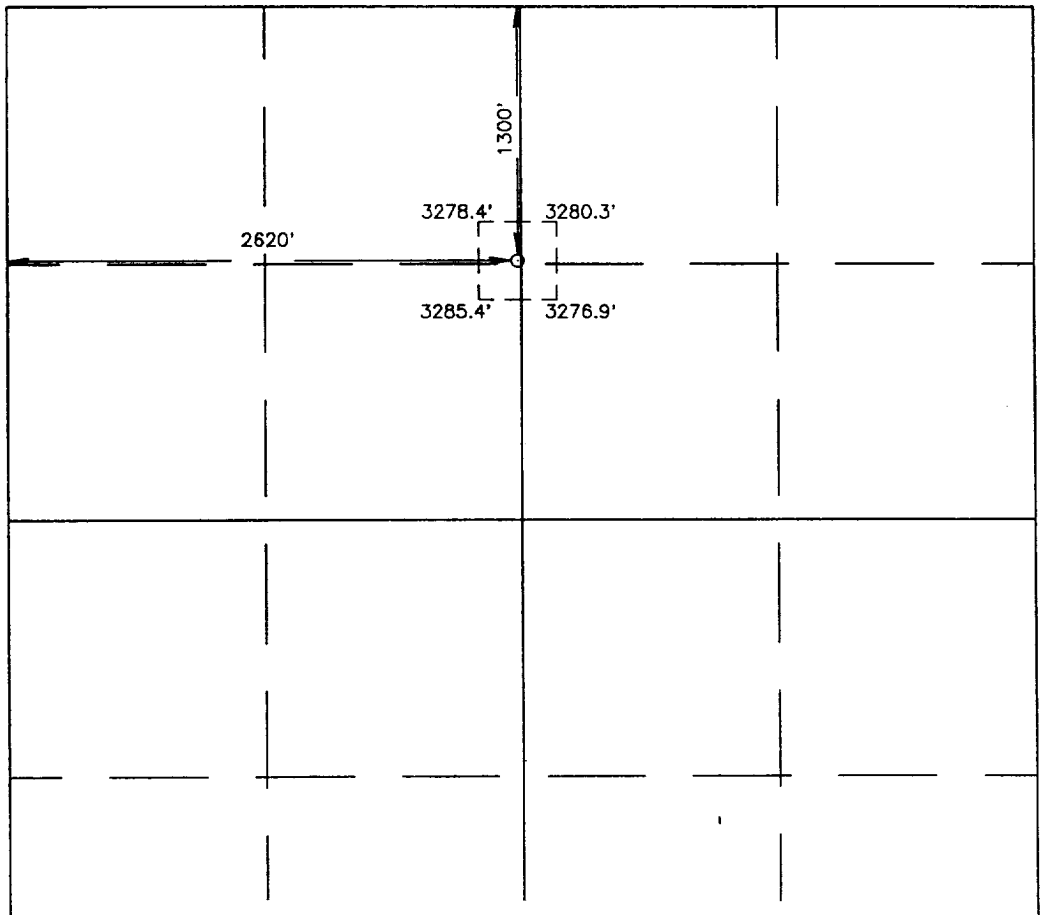


EXHIBIT A

OPERATOR CERTIFICATION

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

Robin S. McCarley
Signature

Robin S. McCarley
Printed Name

Technical Assistant
Title

09/22/97
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.

SEPTEMBER 11, 1997
Date Surveyed DMCC

Signature & Seal of Professional Surveyor

RONALD J. EIDSON NEW MEXICO 3239 REGISTERED PROFESSIONAL SURVEYOR

9-17-97
97-11-1488

Certificate No. JOHN W. WEST 676
RONALD J. EIDSON 3239
GARY L. EIDSON 12641

See Amended Plat

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

Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
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OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

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API Number	Pool Code	Pool Name
30-025	58300	Teague Paddock-Blinebry

Property Code	Property Name	Well Number
014898	C.E. LAMUNYON	66

OGRID No.	Operator Name	Elevation
000962	ARCH PETROLEUM, INC.	3281

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	27	23 S	37 E		1300	NORTH	2620	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.

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

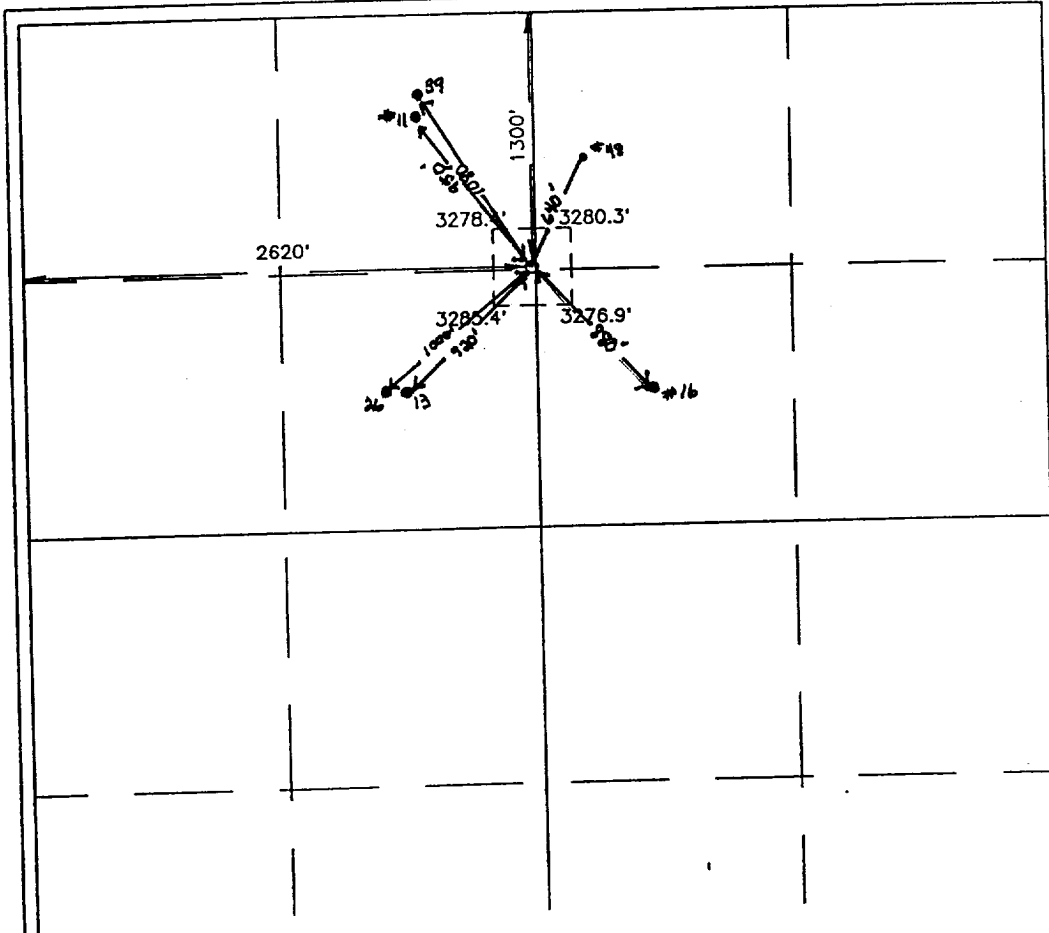


EXHIBIT B

OPERATOR CERTIFICATION

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

Signature: Robin S. McCarley

Robin S. McCarley
Printed Name

Technical Assistant
Title

09/22/97
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.

SEPTEMBER 11, 1997
Date Surveyed DMCC

Signature & Seal of Professional Surveyor: Ronald J. Eidson

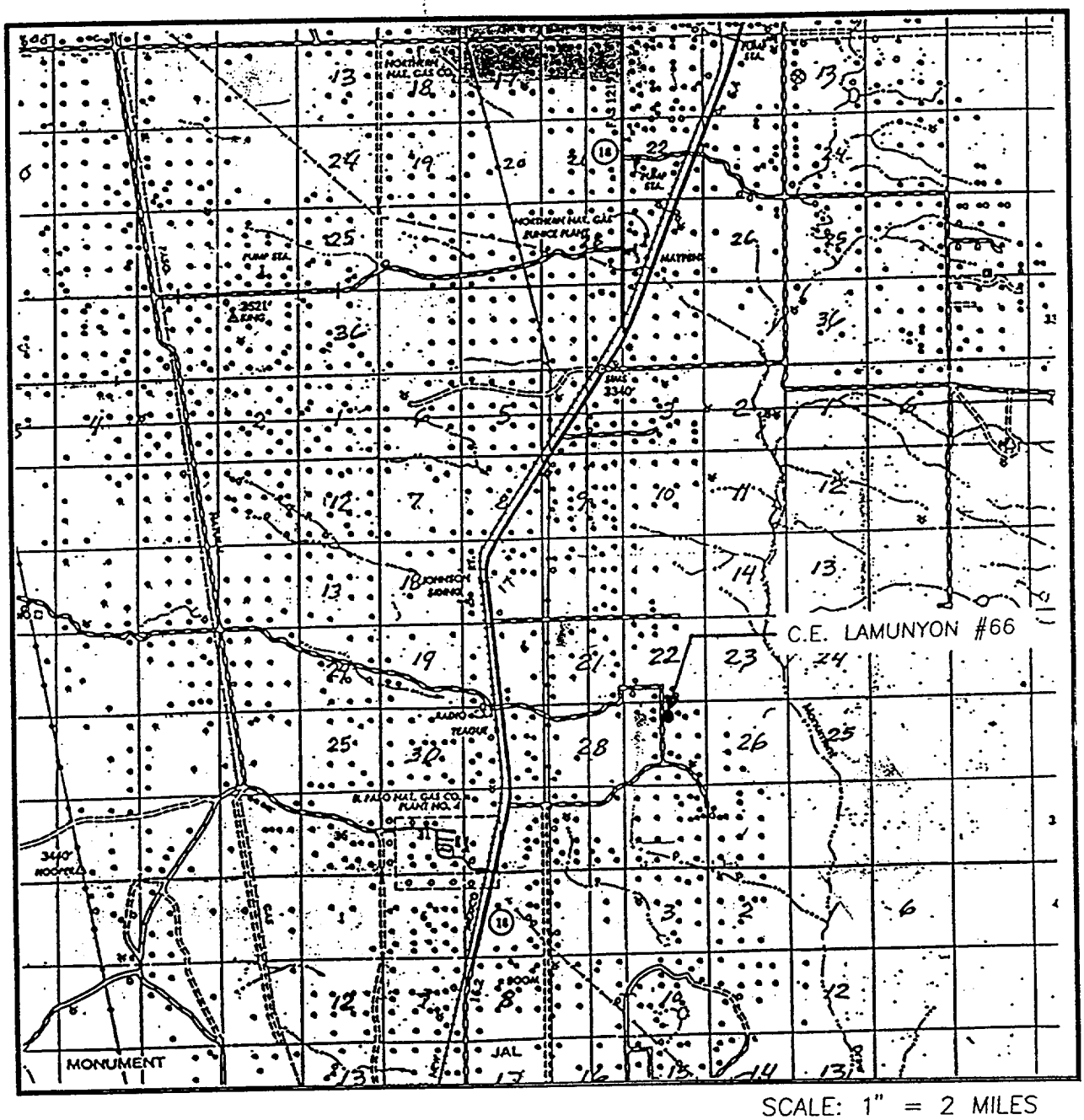
NEW MEXICO 3239 REGISTERED PROFESSIONAL SURVEYOR

9-17-97

97-11-1488

Certificate No. JOHN W. WEST 676
RONALD J. EIDSON 3239
GARY L. EIDSON 12641

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 27 TWP. 23-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 1300' FNL & 2620' FWL

ELEVATION 3281

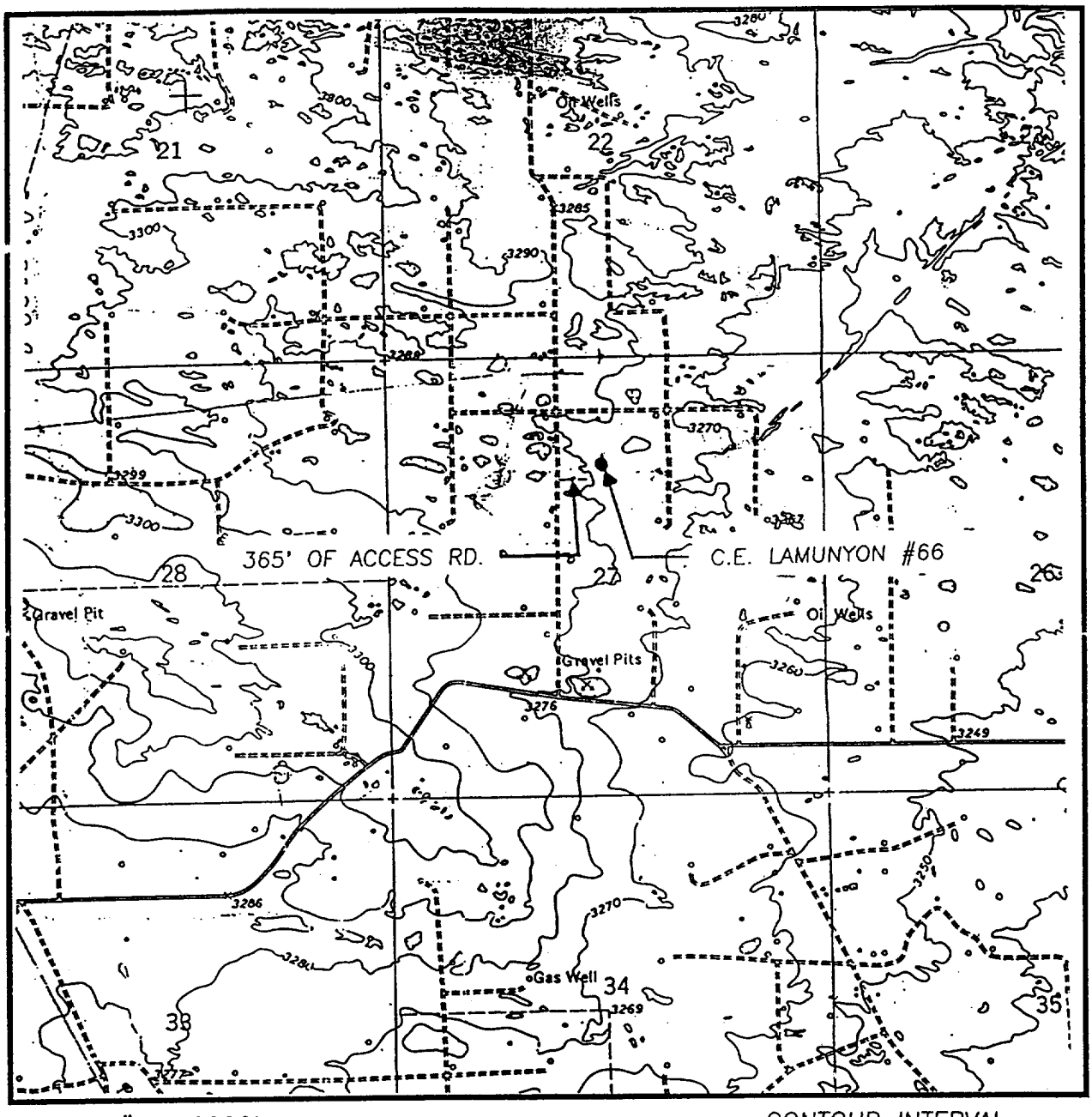
OPERATOR ARCH PETROLEUM, INC.

LEASE C.E. LAMUNYON

JOHN WEST ENGINEERING
HOBBS, NEW MEXICO
(505) 393-3117

EXHIBIT C

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
RATTLESNAKE CANYON – 10'

SEC. 27 TWP. 23-S RGE. 37-E

SURVEY N.M.P.M.

COUNTY LEA

DESCRIPTION 1300' FNL & 2620' FWL

ELEVATION 3281

OPERATOR ARCH PETROLEUM, INC.

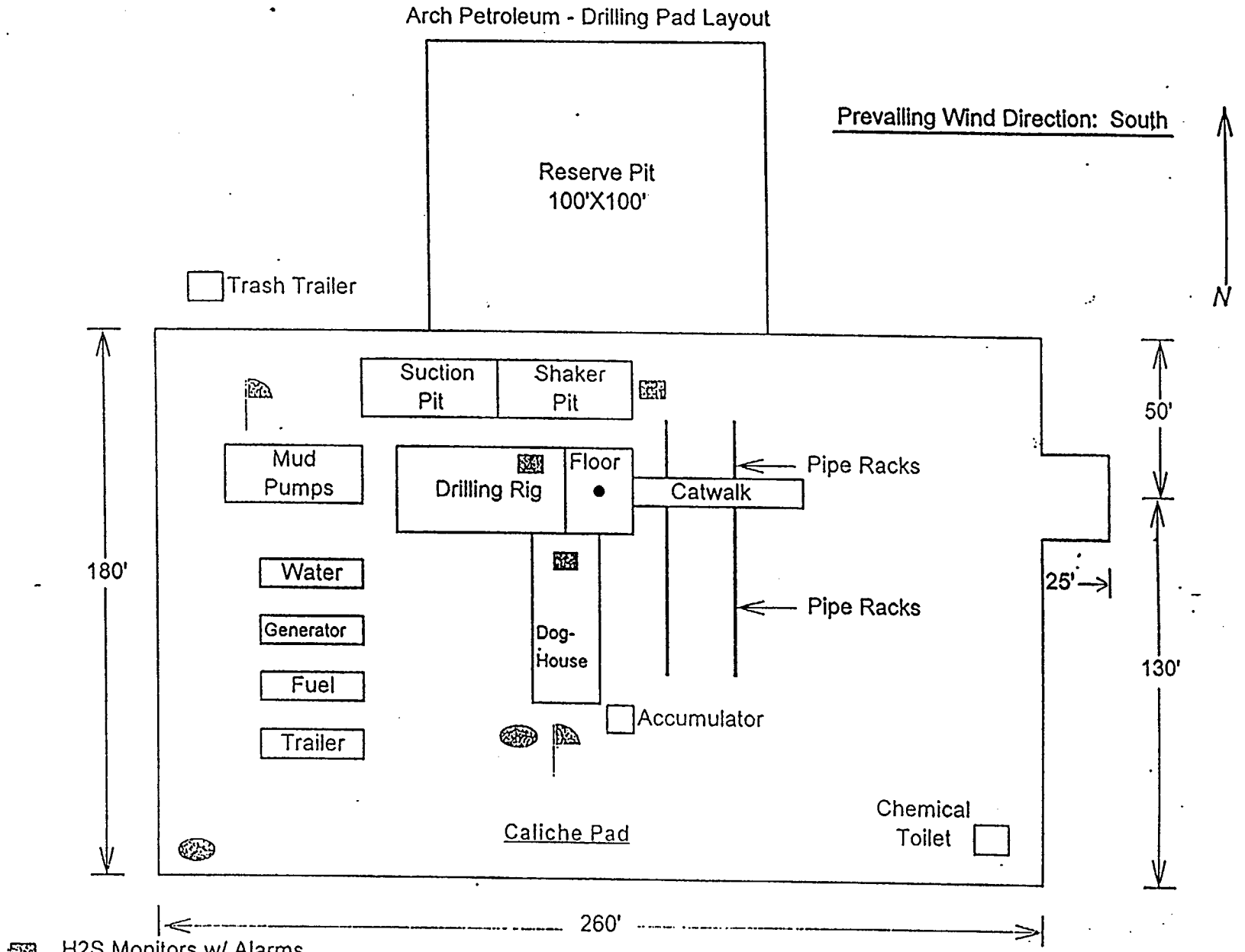
LEASE C.E. LAMUNYON

U.S.G.S. TOPOGRAPHIC MAP
RATTLESNAKE CANYON, N.M.

JOHN WEST ENGINEERING
HOBBS, NEW MEXICO
(505) 393-3117

EXHIBIT D

Exhibit No. E



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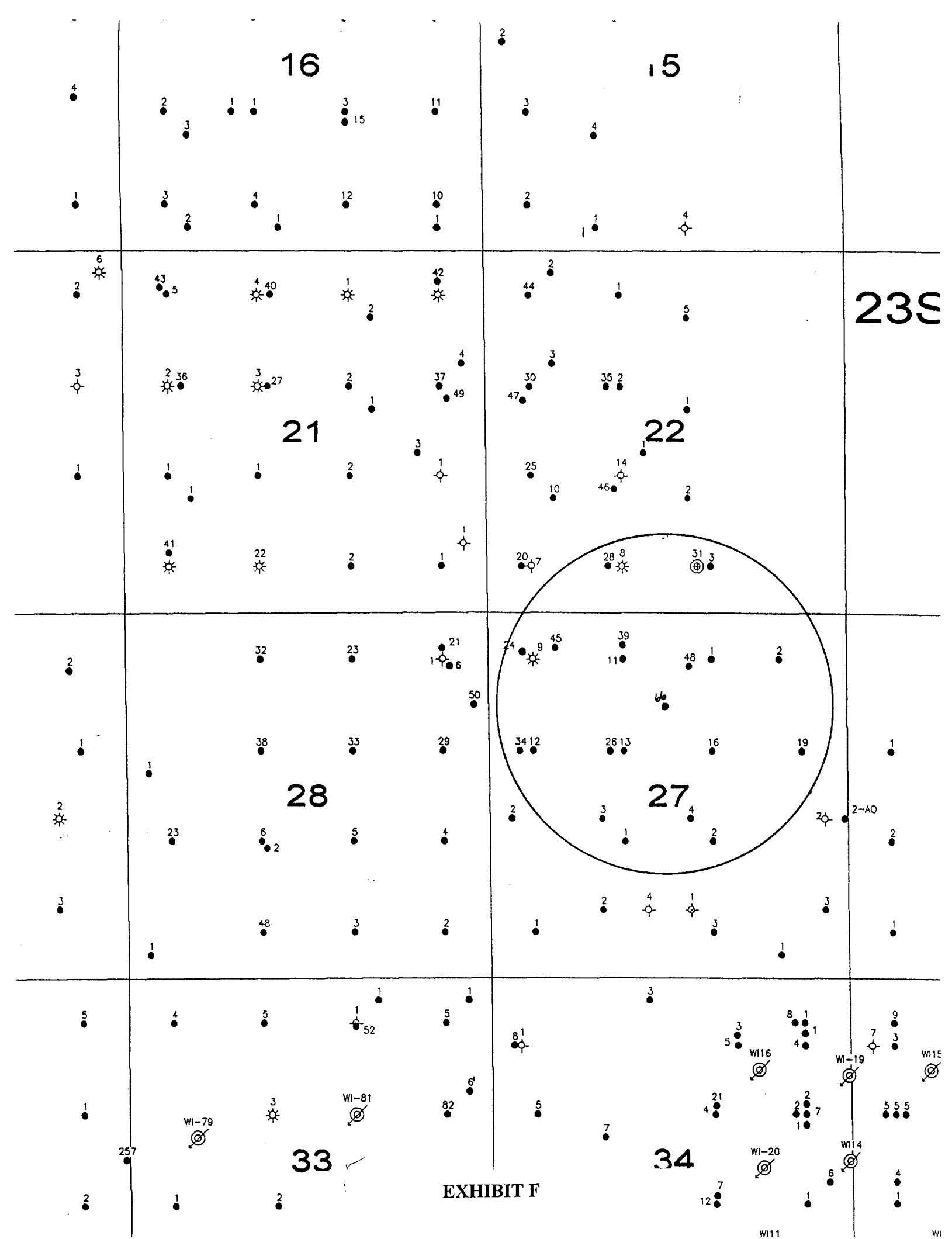
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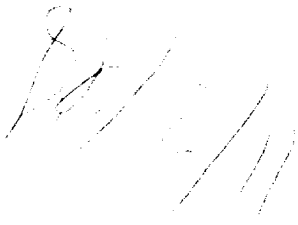
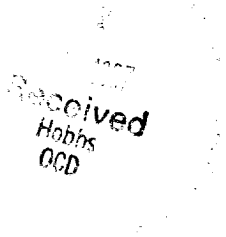
EXHIBIT F




Received
Hobbs
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