Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

30-045-23566

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: ~~SF-079070~~ ~~SF0-790-70~~

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

1a. TYPE OF WORK: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

7. UNIT AGREEMENT NAME: N/A

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [X] OTHER — SINGLE ZONE [ ] MULTIPLE ZONE [ ]

8. FARM OR LEASE NAME: Humble-North Kirtland

2. NAME OF OPERATOR: Ladd Petroleum Corporation

9. WELL NO.: #1E

3. ADDRESS OF OPERATOR: 830 Denver Club Building, Denver, CO 80202

10. FIELD AND POOL, OR WILDCAT: Basin Dakota

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 1695' FSL & 1660' FEL (NW SE)
At proposed prod. zone: same

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 13 T30N R14W

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 8.7 miles from junction of Hwy. 550 & Hwy. 17 in Farmington, N. M.

12. COUNTY OR PARISH: San Juan | 13. STATE: New Mexico

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
980'	306.78	~~320~~ E/306.78
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**
2460+'	6,470'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5887' GR

22. APPROX. DATE WORK WILL START*: November 1, 1979

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12¼"	9-5/8" new	36#K 55 ST&C	250'	225 sx Class "B" w/ additives
7-7/8"	4½' new	10.5#K 55 ST&C	6,470'	1st stage-230 sx 65-35 poz w/additives + 130 sx 50-50 poz w/additi 2nd stage-150sx 65-35 poz w/additives + 320sx 50-50 poz w/additiv

1) Drill 12¼" hole and set 9-5/8" surface casing to 250' with good returns.
2) Log BOP checks in daily drill reports and drill 7-7/8" hole to 6,470'.
3) Run tests if warranted and run 4½" casing if productive.
4) Run logs, as needed, and perforate and stimulate as needed.

EXHIBITS ATTACHED

"A" Location Elevation Plat
"B" The Ten-Point Compliance Program
"C" The Blowout Preventer Diagram
"D" The Multi-Point Requirements for A.P.D.
"E" Access Road Map to Location
"F" Radius Map of Field
"G" Drill Pad Layout & Production Facilities
"H" Drill Rig Layout
"K" Fracturing Program Layout

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, 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 David K Dillon TITLE Drilling Engineer DATE 9-28-79

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

Additional well needed pursuant to New Mexico order R-1670-V. U.S.G.S. ratification effective July 1, 1979.

NMOCC

*See Instructions On Reverse Side

RECEIVED
OCT 01 1979
U. S. GEOLOGICAL SURVEY
FARMINGTON, N. M.

EXHIBIT "A"
Location & Elevation Plat

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
Ladd Petroleum	Humble-North Kirtland B	1E

Unit Letter	Section	Township	Range	County
J	13	30 North	14 West	San Juan

Actual Footage Location of Well:
1695 feet from the South line and 1660 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
[illegible]	[illegible]	[illegible]	306.78 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

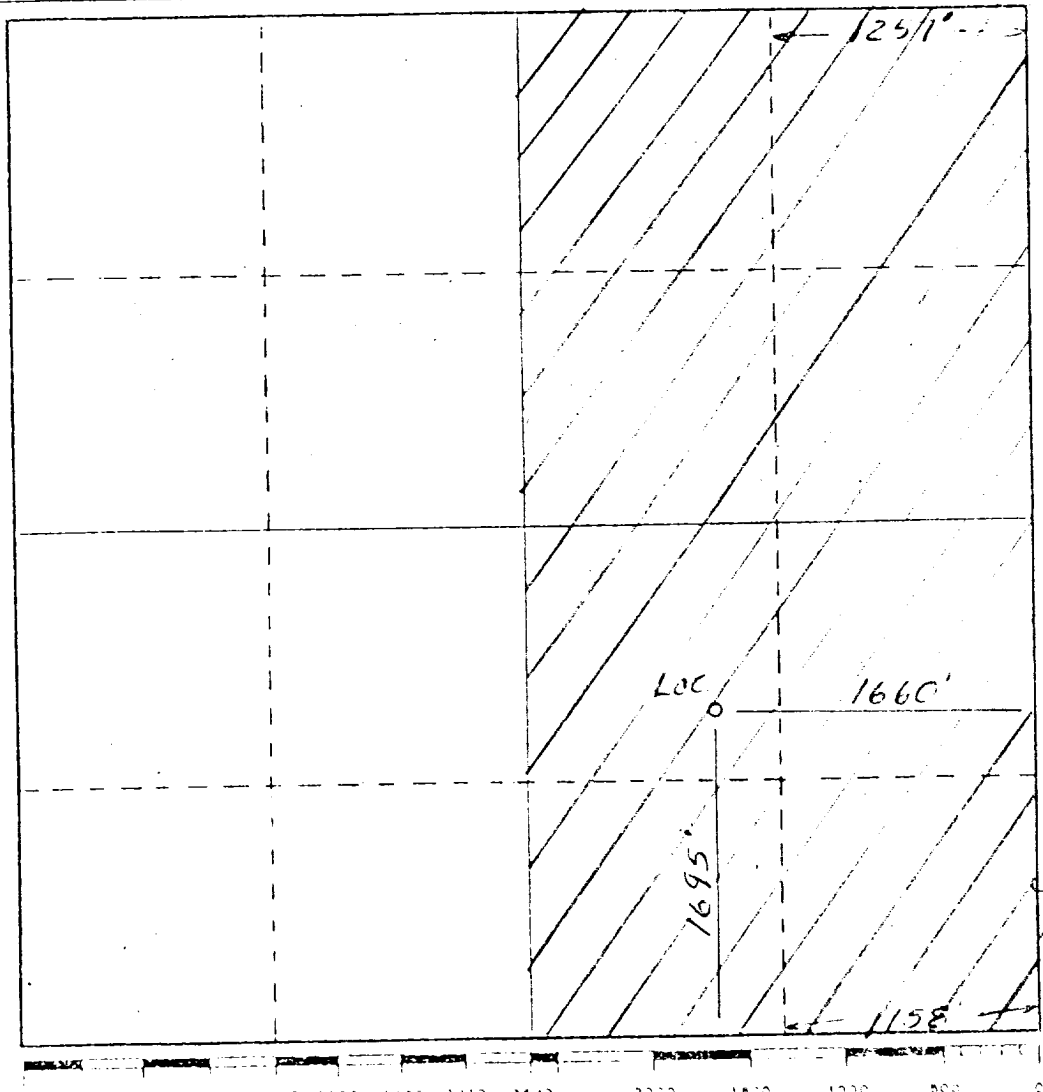
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Name: Agent Consultant for Ladd Petroleum Corp.

Position: Powers Elevation

Company: 9-27-79

Date

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 knowledge and belief.

NEALE C. EDWARDS
NEW MEXICO
6857
REGISTERED LAND SURVEYOR

9-22-79

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

6857

Certificate No.

EXHIBIT "B"

TEN-POINT COMPLIANCE PROGRAM

OF NTL-6 APPROVAL OF OPERATIONS

Attached to Form 9-331C
Ladd Petroleum Corporation
#1E Humble-North Kirtland 13
NW SE Sec. 13 T30N R14W
San Juan County, New Mexico

1. The Geologic Surface Formation

The surface formation is of the Tertiary Period.

2. Estimated Tops of Important Geologic Markers

Ojo Alamo	198'
Pictured Cliffs	1,598'
Lewis	1,751'
Gallup	5,355'
Greenhorn	6,105'
Graneros	6,165'
Dakota	6,220'
Total Depth	6,470'

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

Ojo Alamo	198'	Possibly Water
Pictured Cliffs	1,598'	Possibly Gas
Dakota	6,220'	Gas

4. The Proposed Casing Program

HOLE SIZE	INTERVAL	SECTION LENGTH	SIZE (OD)	WEIGHT, GRADE & JOINT	NEW OR USED
12 1/4"	0-250'	250'	9 5/8"	36# K-55 ST&C	New
7 7/8"	0-6470'	6470'	4 1/2"	10.5# K-55 ST&C	New

Cement Program

(a) Surface Casing: Cement with 225 sacks Class "B" with ¼#/sack flocele and 2% $CaCl_2$.

(b) Production Casing:

1st Stage - Cement with 230 sacks 65-35 Pozmix with 12% gel and ¼#/sack flocele, and 130 sacks 50-50 Pozmix with 2% gel, ¼#/sack flocele and 1% Halad 9.

2nd Stage - Cement with 150 sacks 65-35 Pozmix, 12% gel, ¼#/sack flocele, and 320 sacks 50-50 Pozmix with 2% gel, ¼#/sack flocele and .6% Halad 9.

5. The Operator's Minimum Specifications for Pressure Control

EXHIBIT "C" is a schematic diagram of the blowout preventer equipment. The BOP's will be hydraulically tested to the full working pressure after nippling up and after any use under pressure. Pipe rams will be operationally checked each 24-hour period, as will blind rams and annular preventer each time pipe is pulled out of the hole. Such checks of BOP will be noted on daily drilling reports.

Accessories to BOP will include a kelly cock, floor safety valve, drill string BOP and choke manifold with pressure rating equivalent to the BOP stack.

6. The Type and Characteristics of the Proposed Circulating Muds

Mud system will be gel-chemical with adequate stocks of sorptive agents on site to handle possible spills of fuel and oil on the surface. Heavier muds will be on location to be added if pressure requires.

INTERVAL	TYPE	WEIGHT #/gal.	VISCOSITY-sec./qt.	FLUID LOSS cc
0-250'	Gel, lime	----------	45±	----------
250'-4500'	Water flocculence	----------	45±	----------
4500'-6470'	Gel, Water	8.8-9.0	as required	10

7. The Auxiliary Equipment to be Used

(a) A kelly cock will be kept in the string.

(b) A float will not be used at the bit.

(c) Neither a mud logging unit nor a gas detecting device will be monitoring the system.

(d) A stabbing valve will be on the floor to be stabbed into the drill pipe when kelly is not in the string.

8. The Testing, Logging and Coring Programs to be Followed

(a) DST's are not anticipated.

(b) The logging program will consist of and IES and a GR-Neutron Density 2000' over selected intervals. Other logs will be determined at well site to best evaluate any shows.

(c) No coring is anticipated.

(d) Stimulation procedures will consist of sand-water fracturing of the Dakota formation. See EXHIBIT "K" for Fracturing Layout.

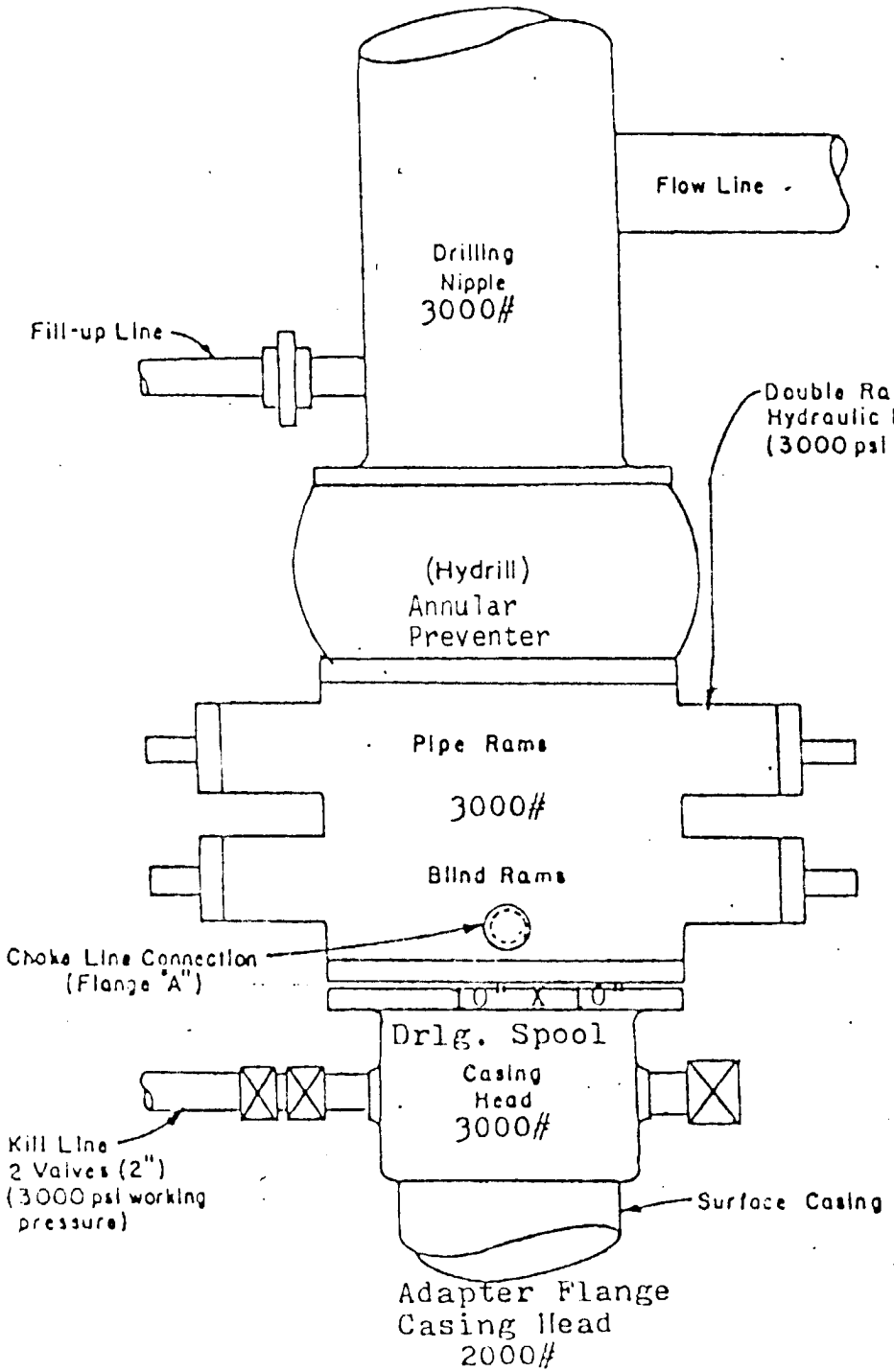
9. Any Anticipated Abnormal Pressures or Temperatures

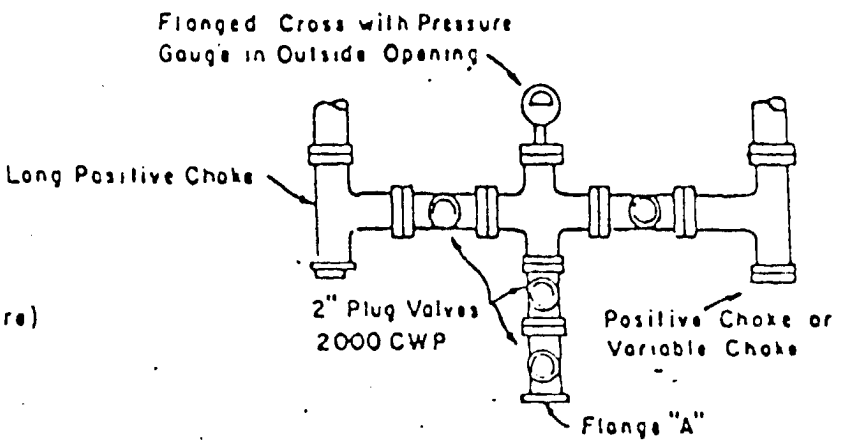
No abnormal pressures or temperatures have been noted or reported in wells drilled in the area nor at the depths anticipated in this well. Bottom hole pressure expected is 2000 psi maximum.

No hydrogen sulfide or other hazardous fluids or gases have been found, reported or known to exist at these depths in the area.

10. Anticipated Starting Date and Duration of the Operations

The anticipated starting date is set for November 1, 1979, or as soon as possible after examination and approval of drilling requirements. Operations should be completed within two weeks after spudding the well and drilling to casing point.





PLAN VIEW - CHOKE MANIFOLD

EXHIBIT "C"
BLOWOUT PREVENTER
DIAGRAM

EXHIBIT "D"

MULTI-POINT REQUIREMENTS TO ACCOMPANY A.P.D.

Attached to Form 9-331C
Ladd Petroleum Corporation
#1E Humble-North Kirtland 13
NW SE Sec. 13 T30N R14W
1695' FSL & 1600' FEL
San Juan County, New Mexico

1. Existing Roads

A. The proposed well site and elevation plat is shown as EXHIBIT "A".

B. The distance from junction of Highway #550 and Highway #17 in Farmington, New Mexico is 8.7 miles. Proceed North from junction for 4.1 miles, then left on dirt road for 3.8 miles then right (Northeast) on dirt road for .3 mile, then right (Southeast) and follow flagged access road for .5 mile, as shown on EXHIBIT "E".

C. All roads to location are color-coded on EXHIBIT "E". An access road .5 mile from the existing dirt road will be required, as shown on EXHIBIT "E".

D. N/A

E. This is a development well. All existing roads within a one-mile radius are shown on EXHIBIT "E".

F. The existing roads need some improvement. Maintenance will be performed as required.

2. Planned Access Roads

Map showing all necessary access roads to be constructed or reconstructed is shown as EXHIBIT "E" for the following:

(1) The maximum width of the running surface of the .5 mile of access road, extending beyond the existing dirt road will be 18'.

(2) The grade will be 8% (eight percent) or less.

(3) No turn outs are planned.

(4) Appropriate water bars will be constructed to assure drainage off location to conform with the natural drainage pattern.

(5) Three culverts are possibly needed. No major cuts or fills are anticipated along access road during drilling operation.

(6) Surfacing materials will be native soil.

(7) No gates, cattle guards, or fence cuts are needed.

(8) The new access road to be constructed was staked and centerline flagged, as shown on EXHIBIT "E".

3. Location of Existing Wells

For all existing wells within a one mile radius of development well, see EXHIBIT "F".

(1) There are no water wells within a one-mile radius of this location.

(2) There is one abandoned wells in this one-mile radius.

(3) There are no temproarily abandoned wells.

(4) There are no disposal wells.

(5) There are no wells presently being drilled.

(6) There are five producing wells within this one-mile radius.

(7) There are no shut-in wells.

(8) There are no injection wells.

(9) There are no monitoring or observation wells for other uses.

4. Location of Existing and/or Proposed Facilities

A. Within a one-mile radius of location the following existing facilities are owned or controlled by lessee/operator:

(1) Tank Batteries: None

(2) Production Facilities: None

(3) Oil Gathering Lines: None

(4) Gas Gathering Lines: None

(5) Injection Lines: None

(6) Disposal Lines: None

B. If the well is productive, new facilities will be as follows:

(1) Production facilities will be located on solid ground of cut area of drill pad, as shown on EXHIBIT "G".

(2) All well flow lines will be buried and will be on the well site and battery site.

(3) Facilities will be 300 feet long and 150 feet wide.

(4) All construction materials for battery site and pad will be obtained from site. No additional material from outside sources is anticipated.

(5) Any necessary pits will be fenced and flagged to protect livestock and wildlife.

C. Rehabilitation, whether well is productive or dry, will be made on all unused areas in accordance with B.L.M. stipulations.

5. Location and Type of Water Supply

A. The water will be hauled in by a commercial hauler in Farmington.

B. Water will be transported by truck over existing roadways.

C. No water well is to be drilled on this lease.

6. Construction Materials

A. No construction materials are needed for drilling or constructing access roads into the drilling location unless well is productive. The surface soil materials will be sufficient or will be purchased from Dirt Contractor as needed.

B. No construction materials will be taken off Federal land.

C. All surface soil materials for construction of access roads are sufficient.

D. All major access roads presently exist as shown on EXHIBIT "E".

7. Handling of Waste Materials and Disposal

(1) Drill cuttings will be buried in the reserve pit.

(2) Drilling fluids will be handled in the reserve pit.

(3) Any fluids produced during drilling test or while making production test will be collected in a test tank. If a test tank is not available during drilling, fluids will be handled in reserve pit. Any spills of oil, gas, salt water or other noxious fluids will be cleaned up and removed.

(4) Chemical facilities will be provided for human waste.

(5) Garbage, waste, salts and other chemicals produced during drilling or testing will be handled in trash/burn pit. Drill fluids, water, drilling mud and tailings will be kept in reserve pit, as shown on EXHIBIT "H". The trash/burn pit will be totally enclosed with small mesh wire to prevent wind scattering trash before being burned or buried. Reserve pit will be fenced on three sides and the fourth side fenced upon removal of the rig.

(6) After the rig moves out, all materials will be cleaned up and no adverse materials will be left on location. Any dangerous open pit will be fenced during drilling and kept closed until the pit has dried and is filled.

8. Ancillary Facilities

No air strip, camp or other facilities will be built during drilling of this well.

9. Well Site Layout

(1) EXHIBIT "G" is the Drill Pad Layout as staked, with elevations, by Powers Elevation of Durango, Colorado. Cuts and fills have been drafted to visualize the planned cut across the location spot and the deepest part of the pad. Topsoil will be stockpiled per BLM specifications determined at time of pre-drill inspection.

(2) EXHIBIT "H" is a plan diagram of the proposed rig and equipment, reserve pit, trash/burn pit, pipe racks and mud tanks. No permanent living facilities are planned. There will be a trailer on site.

(3) EXHIBIT "G" is a diagram showing the proposed production facilities layout.

(4) The reserve pits will not be lined. Steel mud tanks may be used during drilling operations.

10. Plans for Restoration

(1) Backfilling, leveling and contouring are planned as soon as all pits have dried. Waste disposal and spoils materials will be buried or hauled away immediately after drilling is completed. If production is obtained, the unused area will be restored as soon as possible.

(2) The soil banked material will be spread over the area. Revegetation will be accomplished by planting mixed grasses as per formula provided by the BLM. Revegetation is recommended for road area, as well as around drill pad.

(3) Three sides of the reserve pit will be fenced during drilling operations. Prior to rig release, the reserve pit will be fenced on the fourth side to prevent livestock or wildlife from becoming entrapped; and the fencing will be maintained until leveling and cleanup are accomplished.

(4) If any oil is on the pits and is not immediately removed after operations cease, the pit containing the oil or other adverse substances will be flagged overhead or covered with wire mesh.

(5) The rehabilitation operations will begin immediately after the drilling rig is removed. Removal of oil or other adverse substances will begin immediately or area will be flagged and fenced. Other cleanup will be done as needed. Planting and revegetation is considered best in Fall, 1980, unless requested otherwise.

11. Other Information

(1) The soil is sandy. No distinguishing geological features are present. The area is covered with cactus, sagebrush, Pinon pine, scrub cedar, scrub oak, Mormon tea, and native grasses. There are livestock, rabbits, and deer in the area. The topography is hilly, dipping Southeast toward La Plata River.

(2) The primary surface use is for grazing. The surface is owned by the U.S. Government.

(3) The closest live water is La Plata River 2½ miles East of location, as shown on EXHIBIT "E".

The closest occupied dwellings are houses located along the La Plata River 2½ miles Southeast of the proposed site, as shown on EXHIBIT "E".

There are no known archaeological, historical, or cultural heritages that will be disturbed by this drilling.

(4) There are no reported restrictions or reservations noted on the oil and gas lease.

(5) Drilling is planned for on or about November 1, 1979. It is anticipated that the casing point will be reached within 30 days after commencement of drilling.

12. Lessee's or Operator's Representative

George Lapaseotes
Agent Consultant for
Ladd Petroleum
600 South Cherry Street
Suite 1201
Denver, Colorado 80222
Phone (303) 321-2217

David Dillon
Drilling Engineer
Ladd Petroleum
830 Denver Club Building
Denver, Colorado 80202
Phone (303) 620-0100

13. Certification

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

9-21-79
Date

George Lapaseotes
Agent Consultant for
Ladd Petroleum

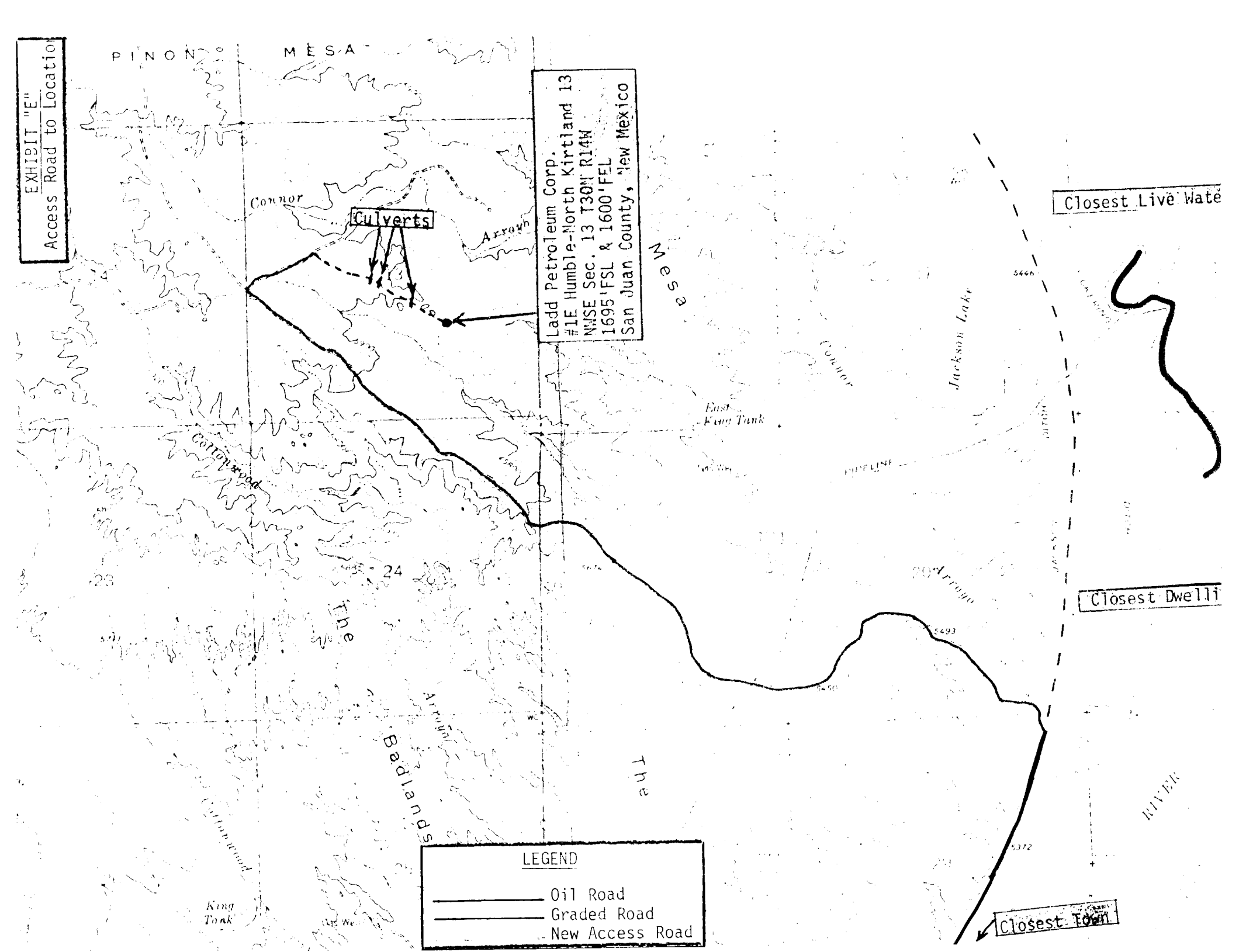


EXHIBIT "E"
Access Road to Locatio
PINON MESA
Culverts
Ladd Petroleum Corp.
#1E Humble-North Kirtland 13
NWSE Sec. 13 T30N R14W
1695'FSL & 1600'FEL
San Juan County, New Mexico
Closest Live Wate
Closest Dwelli
Closest Town
LEGEND
Oil Road
Graded Road
New Access Road

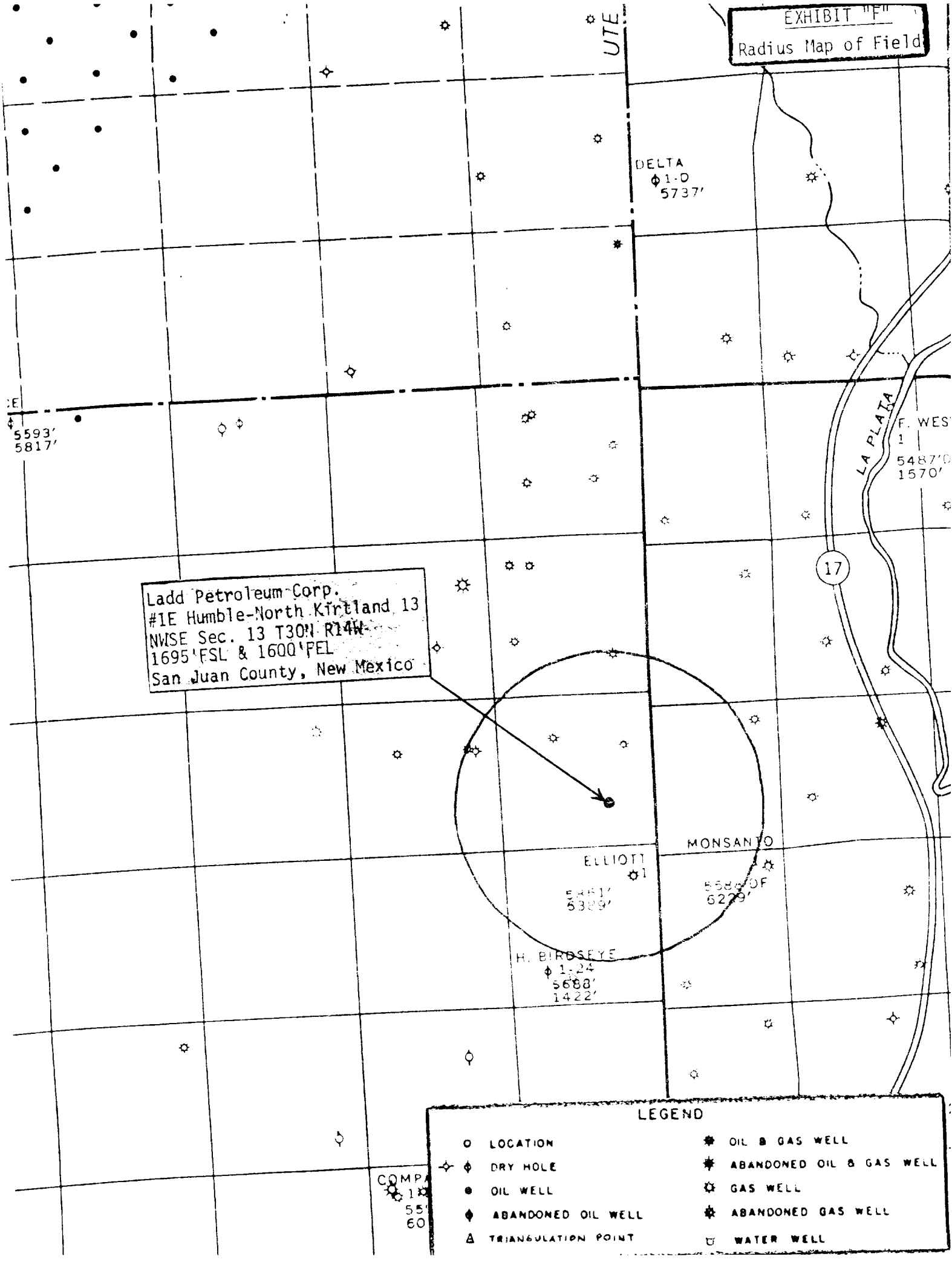
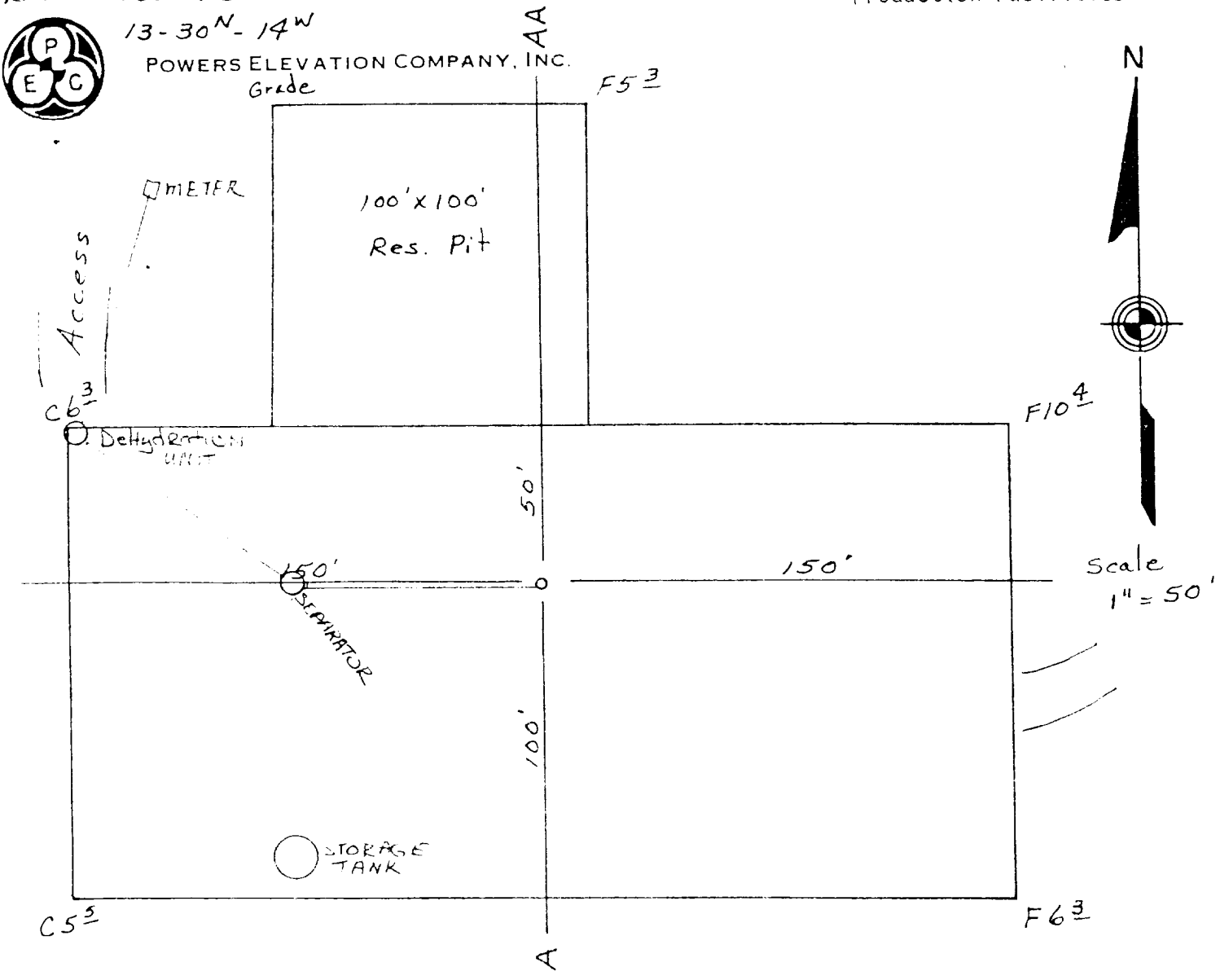


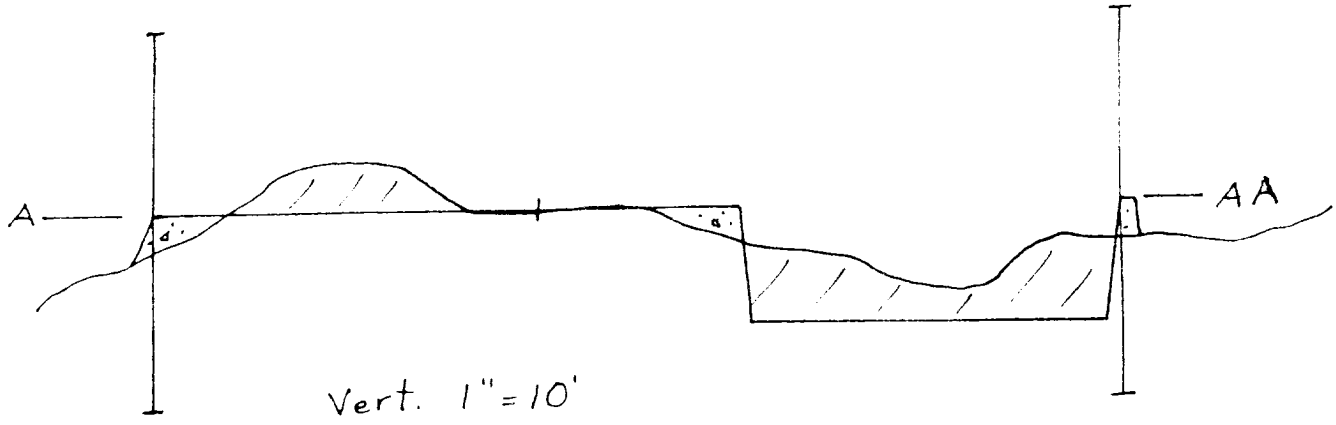
EXHIBIT "F"
Radius Map of Field
Ladd Petroleum Corp.
#1E Humble-North Kirtland 13
NWSE Sec. 13 T30N R14W
1695'FSL & 1600'FEL
San Juan County, New Mexico
DELTA
#1-D
5737'
5593'
5817'
LA PLATA
17
ELLIOTT
#1
MONSANTO
H. BIRDSEYE
#1-24
5688'
1422'
LEGEND
LOCATION
DRY HOLE
OIL WELL
ABANDONED OIL WELL
TRIANGULATION POINT
OIL & GAS WELL
ABANDONED OIL & GAS WELL
GAS WELL
ABANDONED GAS WELL
WATER WELL

Lado Petroleum
#1E Humble - North Kirtland 13
1695'FSL 1660'FEL
13-30N-14W

EXHIBIT "G"
Drill Pad Layout &
Production Facilities

POWERS ELEVATION COMPANY, INC.

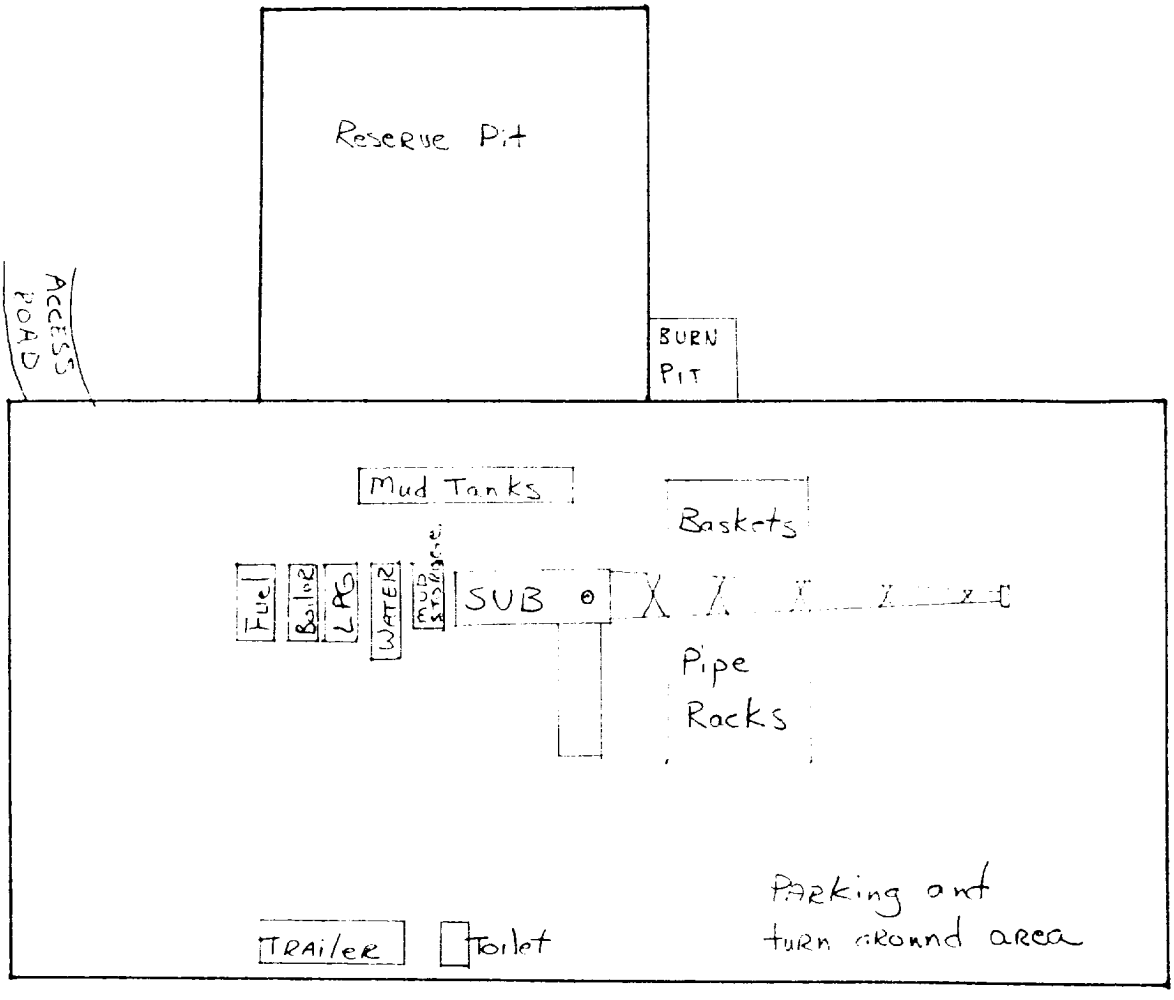




Vert. 1" = 10'
Horz. 1" = 50'

Ladd Petroleum
#1E Humble-North Kirtland 13
1695' FSL & 1660' FEL
NW SE Sec. 13 T30N R14W
POWERS ELEVATION COMPANY, INC.

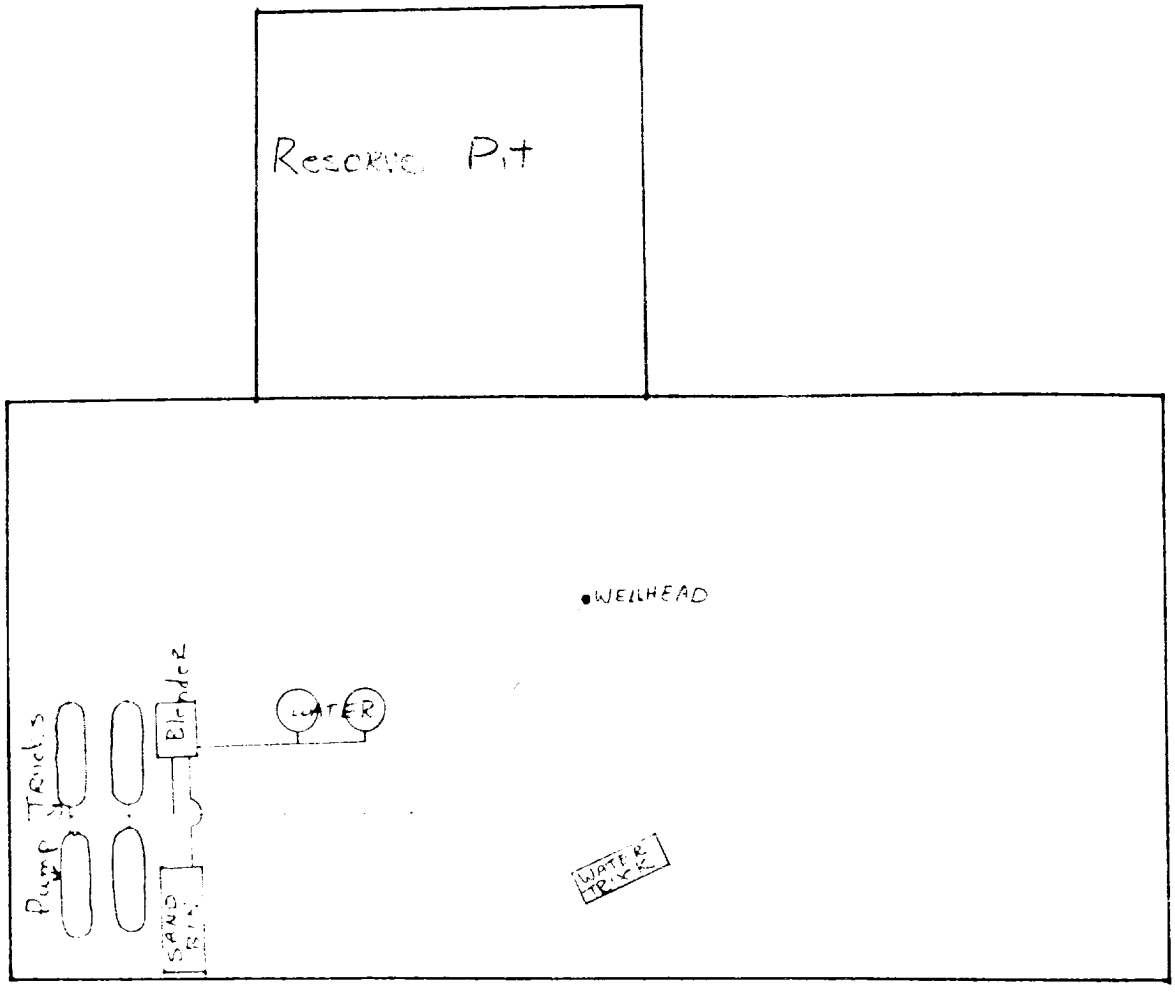
EXHIBIT "H"
Drill Rig Layout



POWERS ELEVATION COMPANY, INC.

EXHIBIT "K"

Fracturing Program Layout



POWERS ELEVATION

OIL WELL ELEVATIONS AND LOCATIONS
CHERRY CREEK PLAZA, SUITE 1201
600 SOUTH CHERRY STREET
DENVER, COLORADO 80222
PHONE NO. 303/321-2217

September 28, 1979

U. S. Geological Survey
Office of the District Engineer
P.O. Box 959
Farmington, New Mexico 87401

Re: Filing NTL-6 and A.P.D. Form 9-331C
Ladd Petroleum Corporation
#1E Humble-North Kirtland 13
NW SE Sec. 13 T30N R14W
San Juan County, New Mexico

Dear Sir:

Enclosed are ~~three~~ five copies of the NTL-6 program and A.P.D. Form 9-331C for the above-captioned well location.

Please notify us when you have arranged a time with the Bureau of Land Management to inspect the site, in order that Neale Edwards, our surveyor who did the ground work for this applicaton, may be present during the inspection. If Neale Edwards is not available, the Powers Elevation representative will be George Lapaseotes.

The archaeological report is not included with the NTL-6 report but will be forwarded to your office and to the BLM office, from our Archaeological Division in Eagle, Colorado.

Designation of operator will be forwarded under separate cover.

We shall appreciate your earliest attention to the above matter.

Very truly yours,

POWERS ELEVATION

Connie L. Frailey

Connie L. Frailey

ic

enclosures

cc: David Dillon, Ladd Petroleum Corporation
Neale Edwards, Powers Elevation
Dirt Contractor

Powers Elevation Company, Inc.
Suite 1201 Cherry Creek Plaza
600 So. Cherry St.
Denver, Colorado 80222

Gentlemen:

This is to confirm our understanding with you concerning any kind of work you may be requested to perform from time to time as an agent or contractor for environmental and engineering services.

The jobs to be performed by you will be as requested by an authorized representative of the organization listed below.

_____
Company

by: _____

Title _____

Date _____

RE: NTL-6/APD From 9-331C
Ladd Petroleum Corporation
#1E Humble-North Kirtland 13
NW SE Sec.18 T30N R13W
San Juan County, New Mexico