

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
 DRILL DEEPEN PLUG BACK
 b. TYPE OF WELL
 OIL WELL GAS WELL OTHER
 SINGLE ZONE MULTIPLE ZONE

2. NAME OF OPERATOR
 SUNDANCE OIL COMPANY

3. ADDRESS OF OPERATOR
 Suite 510, 1776 Lincoln Street, Denver, CO 80203

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
 At surface
 1980' FNL, 660' FWL Unit E
 At proposed prod. zone
 Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
 1 1/2 miles south of Kenna, New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 660

16. NO. OF ACRES IN LEASE 560

17. NO. OF ACRES ASSIGNED TO THIS WELL 40

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1870

19. PROPOSED DEPTH 4350

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
 4441.5' GL

22. APPROX. DATE WORK WILL START*
 August 20, 1978

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
11"	8 5/8"	28	1800	300 sx Econ & 100 sx Class C
7 7/8"	4 1/2"	11.60 & 10.5	4350	300 sx 50/50 Poz

Well will be drilled to T.D. and evaluated by running logs and DST's when necessary. Casing will be run when logs and DST's indicate possible commercial production.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

RECEIVED

JUN 20 1978

U. S. GEOLOGICAL SURVEY
HOBBS, NEW MEXICO

"APPROVAL TO FLARE GRANTED WHILE DRILLING AND TESTING."

Unless Drilling Operations have
Commenced, this drilling approval
Expires Dec 12, 1978

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 Richard O. Dimit TITLE Vice President, Production DATE June 13, 1978

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____

CONDITIONS OF APPROVAL, IF ANY:

APPROVED
AS AMENDED
SEP 12 1978
JAMES F. SIMS
DISTRICT ENGINEER

*See Instructions On Reverse Side

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form No. 1
Superintendent of
Oil and Gas

All distances must be from the outer boundaries of the Section

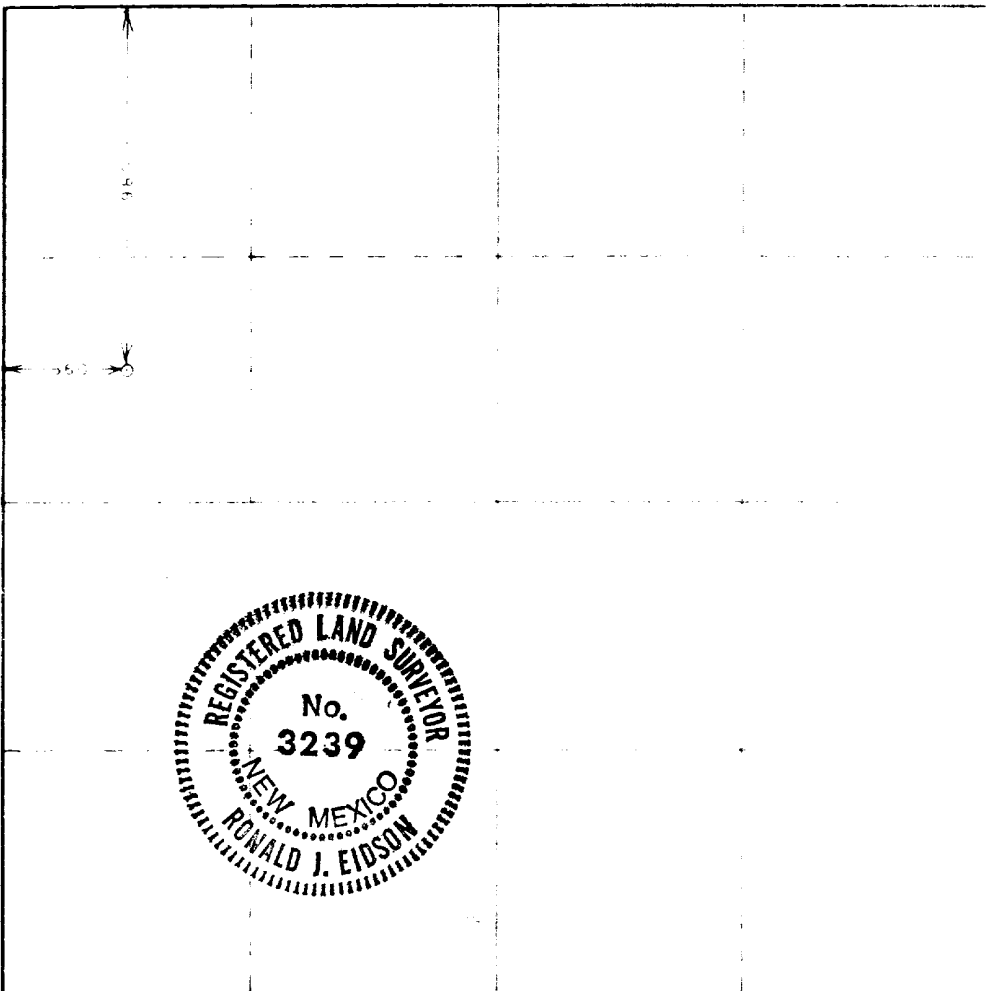
Sundance Oil Co.		Federal Cone		5
E	31	7South	2East	Roosevelt
1980	feet to center	North	660	West
4441.5	San Andres	Tomahawk		37.49 40

- Outline the acreage dedicated to the subject well by colored pencil or hairline marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty)
- 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 already been consolidated (if so) on reverse 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 furnished herein is true and complete to the best of my knowledge and belief.

Richard O. Dimit

Richard O. Dimit
Vice President, Production
Sundance Oil Company

June 13, 1978

I hereby certify that the well is a valid well and was drilled from these lands in good faith and that the same is true and correct to the best of my knowledge and belief.

May 24, 1978

Ronald J. Eidson

Certificate No. John W West 676
Ronald J. Eidson 3239



Attachment to Form 9-331 C
Application for Permit to Drill

Sundance Oil Company, #5 Cone Federal
1980' FNL and 660' FWL of Section 31, T. 7S., R. 32E.
Roosevelt County, New Mexico

1. The geologic name of the surface information is Triassic red beds overlain by wind blown sands.
2. The estimated tops of important geologic markers are as follows:

Rustler	1780'
Salado	1810'
Yates	2200'
San Andres	3360'
P-1	4060'
P-2	4145'
T.D.	4350'
3. The estimated depths at which anticipated water, oil, gas or other mineral bearing formations will be encountered are as follows:

Ogalala	150'	water
Salado	1810'	salt
San Andres	3360'	oil and gas
P-1	4060'	oil and gas
P-2	4145'	oil and gas
4. The proposed casing program is as follows:

Surface - New 8 5/8", 28 #/ft., ST&C, Secondary 45 (J&L).
Production - New 4½", 10.5 #/ft., ST&C, K-55 and 11.6 #/ft., ST&C, JCW-36 (J&L).
5. A sketch of an API Series 900 Blowout Preventer is attached. Pipe rams and blinds will be checked to 1,000 PSI for 30 minutes when BOP is installed. BOP will be checked when casing is set and operated daily for checks.
6. The proposed mud program is as follows:

0-1800' spud mud	8.5 - 9.0 lbs./gal.
1800-3500' native mud	9.0 - 9.5 lbs./gal.
3500-T.D. salt gel	9.0 - 10.0 lbs./gal.
7. The auxiliary equipment to be used is:
 1. Kelly cocks.
 2. Floats at the bit.
 3. Stabbing valve on rig floor with sub to fit drill pipe.
8. It is proposed to run 2" and 5" GR, CNL, FDC, DLL/MLL Logs from TD to 1800'.
9. No abnormal pressures or temperatures are expected to be encountered in this well.
10. The anticipated starting date for this well is August 20, 1978. Estimated duration of drilling operations is 10 to 12 days.

MULTI-POINT SURFACE USE & OPERATIONS PLAN

Sundance Oil Company: Cone Federal #5
1980' FNL and 660' FWL of Section 31, T. 7S., R. 32E.
Roosevelt County, New Mexico

This plan is to accompany "Application for Permit to Drill" the subject well which is located approximately 15½ miles south of Kenna, New Mexico. The following is a discussion of pertinent information concerning possible effect which the proposed drilling of the well may have on the environment of the well and road sites and surrounding acreage.

1. Existing Roads

- A. The proposed well site is 660' FWL and 1980' FNL of Section 31, T. 7S., R. 32E., Roosevelt County, New Mexico.
- B. Exhibit "A" is portion of a map showing existing roads with directions to the location from Kenna, New Mexico. The route to the location is marked in red along side of roads to be used. The well location is approximately 15½ miles south of Kenna, New Mexico.
- C., D. & E. Access roads are shown on Exhibit "A".
- F. No improvement or maintenance is anticipated for the existing roads.

2. Planned Access Roads

- A. Length & Width: New road required will be 2640' long and 12' wide. This new road is labeled and color coded Red on Exhibites "A" and "B". The center line of the proposed new road has been flagged and staked with the stakes being visible from one to the next.
- B. Surfacing Material: Six inches of caliche, watered, compacted and graded.
- C. Drainage Design: New road will have a drop of six (6) inches from center line on each side.
- D. Culverts: None.
- E. Turnouts: None.
- F. Cuts and Fills: The location and pits will be constructed as shown on Exhibit "C". Maximum cut and maximum fill will be 3' on the location, other than leveling sand dunes.
- G. Gates, Cattleguards, Fences: None.

3. Location of Existing Wells

- A. See Exhibit "B".

4. Location of Existing and/or Proposed Facilities

- A. The tank battery and production facilities are located on this lease at or near the Cone Federal #1 location (NE NE Section 31).
- B. If commercial production is established, a flow line will be connected to the existing tank battery and no additional surface disturbance will occur. Facilities will be fenced and/or covered to protect livestock and wildlife.
- C. All unused areas disturbed by construction will be restored to natural terrain profile after construction is completed.

5. Location and Type of Water Supply

- A. Water will be obtained from well at Kenna and/or Crossroads.
- B. Water will be transported by truck.

6. Source of Construction Materials

- A. Caliche will be obtained from a pit in Section 7, T. 7S., R. 32E.

7. Methods for Handling Waste Disposal

- A. Drill cuttings will be disposed of in the reserve pit.
- B. Drilling fluids will be allowed to evaporate in the drilling pits until pits are dry.
- C. Water produced during tests will be disposed of in the drilling pits. Oil produced during tests will be stored in test tanks until sold.
- D. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- E. Trash, waste paper, garbage, and junk will be buried in a separate trash pit and covered with a minimum of twenty-four (24) inches of dirt. All waste material will be contained to prevent scattering by the wind. Location of trash pit is shown on Exhibit "C". If well is productive, maintenance waste will be placed in special trash cans and hauled to an approved sanitary landfill, periodically. Any produced water will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted to the Survey for appropriate approval.

8. Ancillary Facilities: None.

9. Well Site Layout

- A. Exhibit "C" shows the relative location and dimensions of the well pad, mud pits, reserve pit, trash pit, and location of major rig components.

9. Well Site Layout (cont.)

- B. The reserve pit will be lined with plastic.
- C. The pad and pit area has been flagged and staked.

10. Plans for Restoration of Surface

- A. Pits will be backfilled and leveled as soon as practical to original condition. Commencement of rehabilitation operations will immediately follow removal of drilling and completion equipment from location and rehabilitation of the surface is planned to be completed within forty-five (45) days from commencement.

11. Other Information

- A. Terrain: Low rolling sand hills.
- B. Soil: Sandy.
- C. Vegetation: Scrub oak, bear grass and very sparse vegetation.
- D. Surface Use: Grazing.
- E. Ponds and Streams: None within one mile.
- F. Water Wells: One mile northwest of location.
- G. Residences and Buildings: One mile northwest of location.
- H. Arroyos, Canyons, Etc.: Caprock escarpment approximately one mile west of location.
- I. Well Sign: Sign identifying and locating well will be maintained at drill site with the spudding of the well.
- J. Open Pits: All pits containing mud or other liquids will be fenced.
- K. Archaeological Resources: None observed.

12. Lessee's or Operator's Representative

Richard O. Dimit
Sundance Oil Company
Suite 510
1776 Lincoln Street
Denver, CO 80203

Business phone (303) 861-4694

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

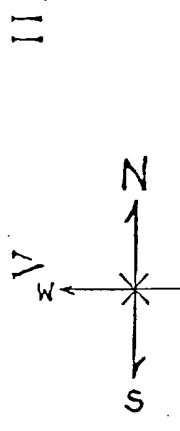
13. Certification (cont.)

my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by SUNDANCE OIL COMPANY and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

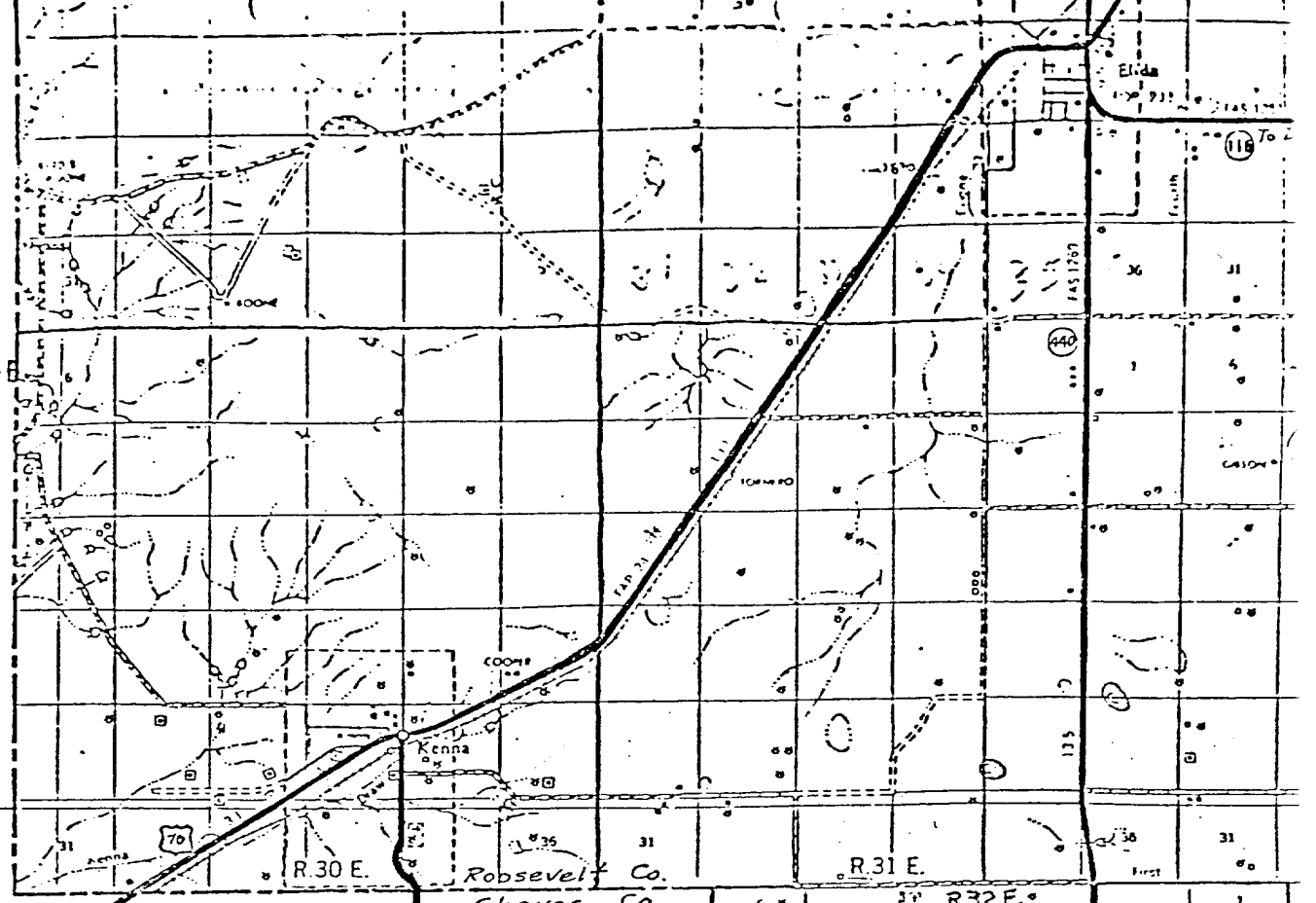
June 13, 1978
Date

Richard O. Dimit
Richard O. Dimit
Vice President, Production

T4S



T5S



U2



To Roswell

CONE FEDERAL #5

EXHIBIT "A"

Existing Caliche Roads ———
New Roads ———

Scale: 1" = 2 miles

R30E

R31E

R32E

T6S

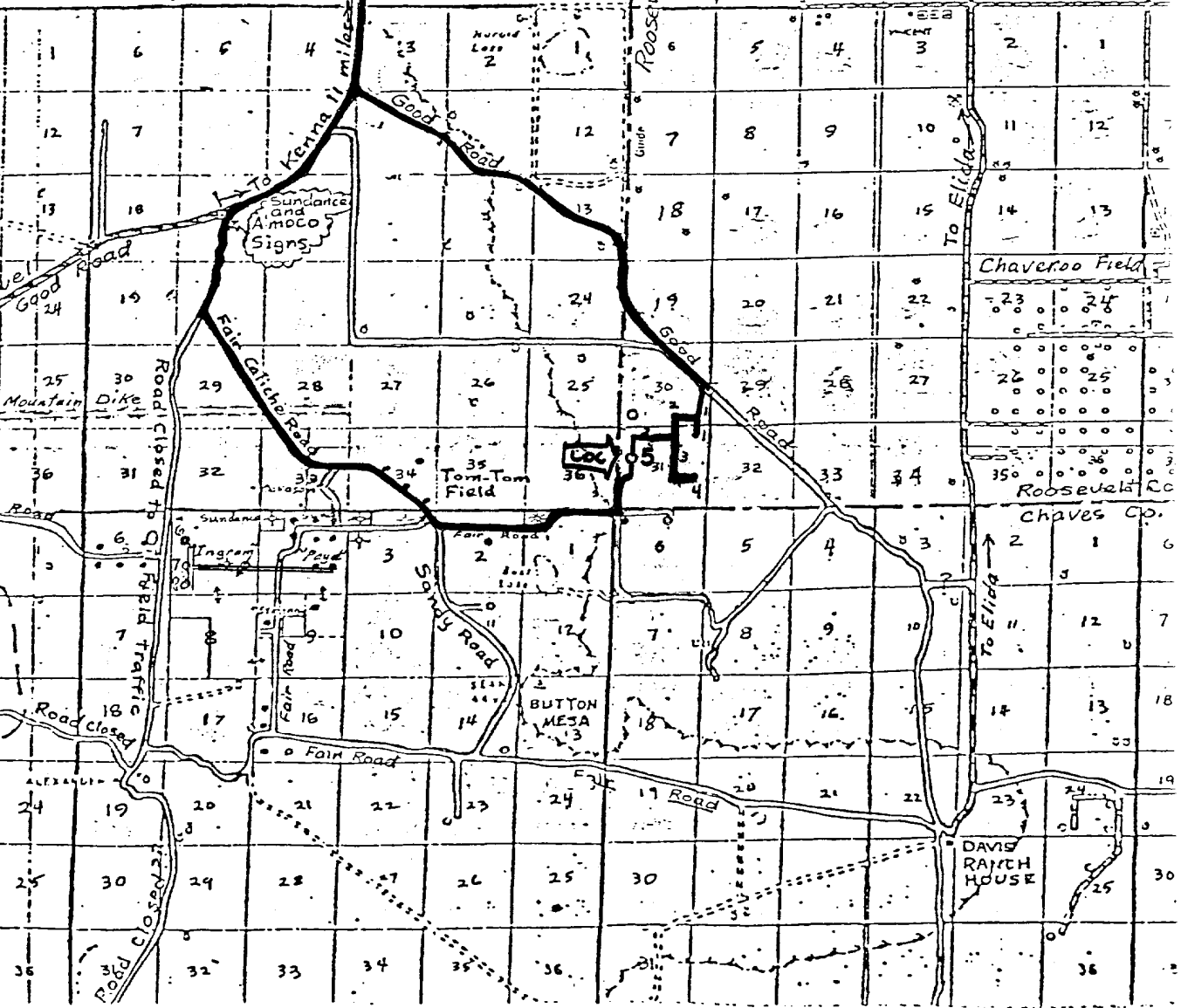
HNS

To US 70

Fair All-Weather Road

Cato Field

ROAD CLOSED



R31E

R32E

Chaves Co.
Roosevelt Co.

Paved Road

To Elida

To Elida

ROAD CLOSED

LOCATION, MUD PIT AND PROPOSED TANK BATTERY AREA SPECIFICATIONS

- ① Shole Pit 30' x 8'
- ② Mud Pit 20' x 6'
- ③ Suction Pit 30' x 6'
- ④ Reserve Pit 100' x 50'
- ⑤ Pump
- ⑥ Water Tank
- ⑦ Fuel Tanks
- ⑧ Rig Racks
- ⑨ Pipe Racks
- ⑩ Day Hoist
- ⑪ Coil Walk 60'
- ⑫ Slinger
- ⑬ Trailer
- ⑭ Burn Pit & TRASH

NOTE
 Lines from well to battery facilities will lay directly south from wellhead.

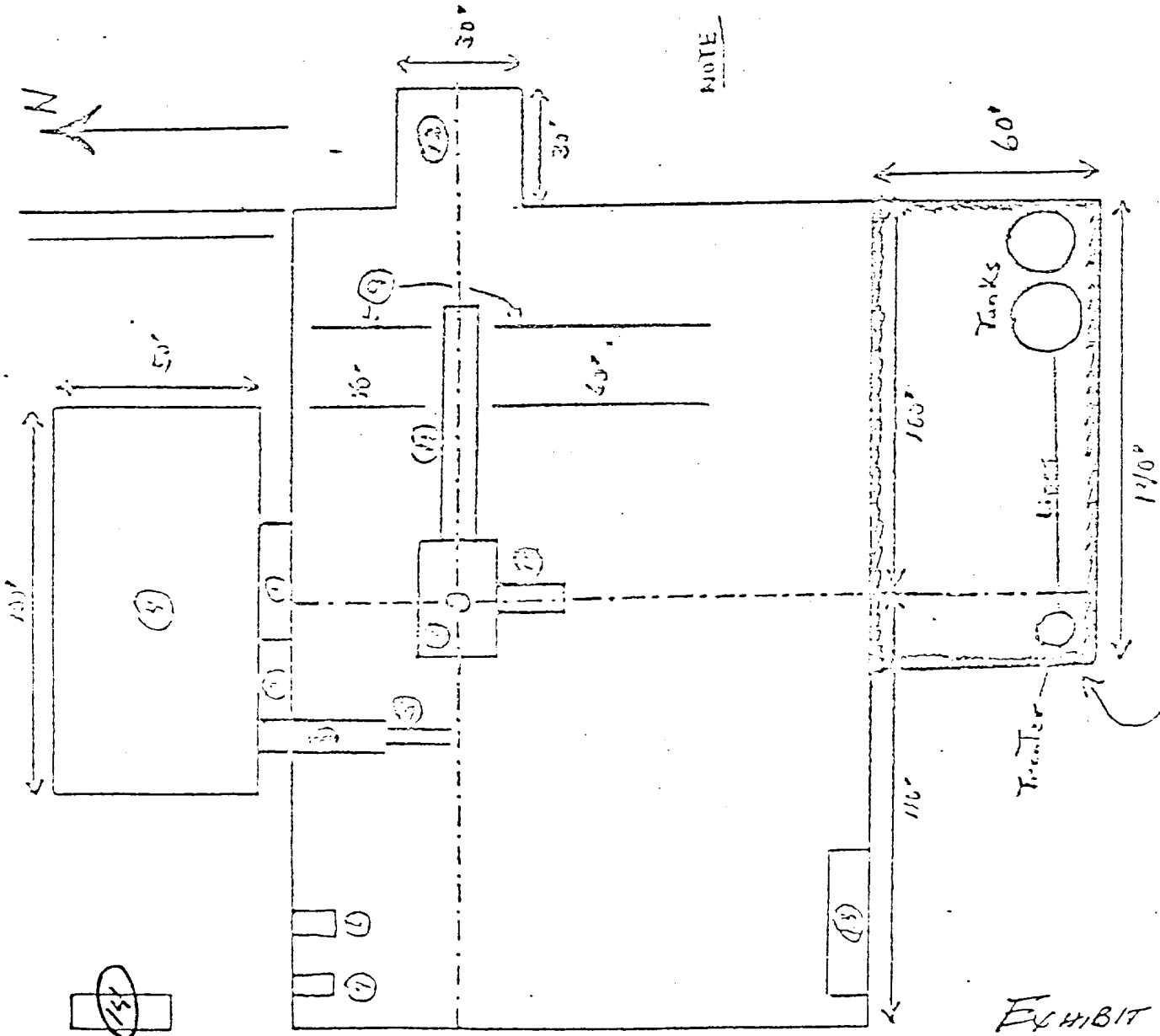
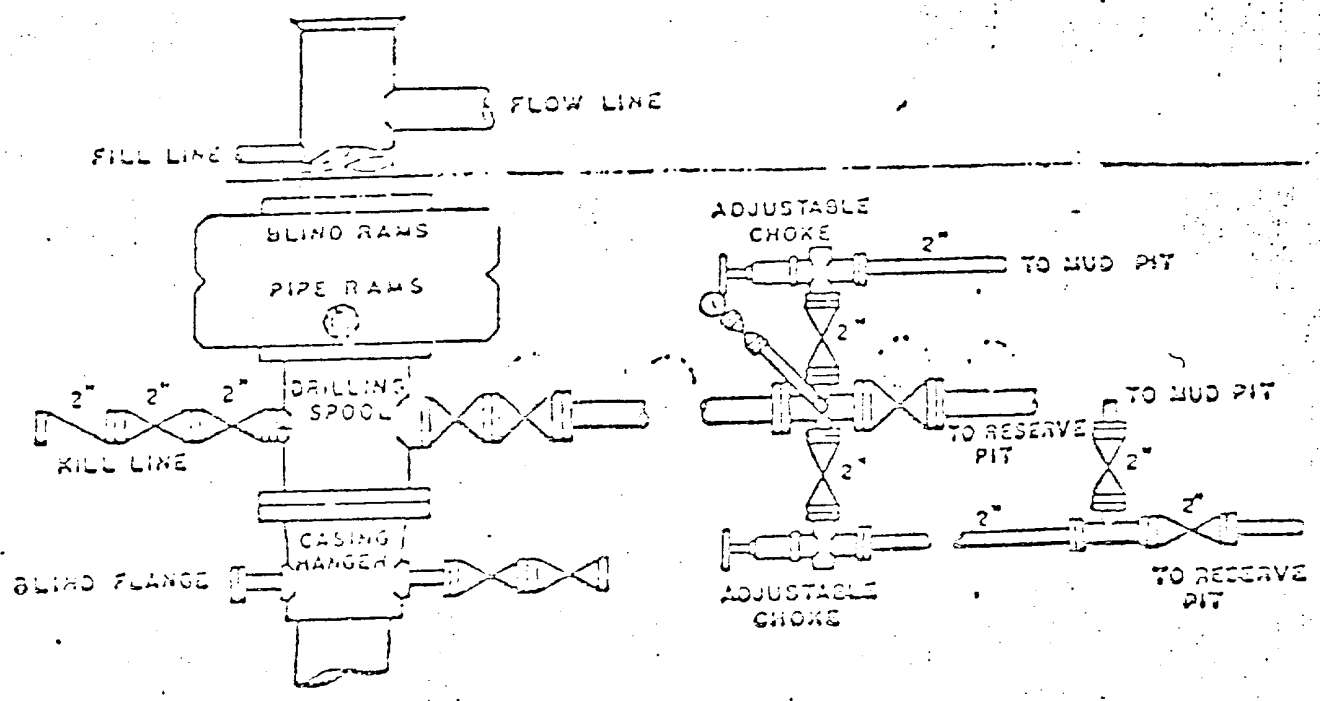


EXHIBIT C

BLOWOUT PREVENTER & CHOKES MANIFOLD

A.P.I. 3M-8410-RdS



U. S. Geological Survey

HOBBS DISTRICT

Sundance Oil Company No. 5 Cone Federal Lot 2 31-7S-32E Roosevelt County, New Mexico

Above Data Required on Well Sign

CONDITIONS OF APPROVAL

1. Drilling operations authorized are subject to compliance with the attached General Requirements for Drilling Operations on Federal Oil and Gas Leases, dated January 1, 1977.
2. Notify this office (telephone (505) 393-3612) when the well is to be spudded and in sufficient time for a representative to witness all cementing operations. Attached are names and telephone numbers of Geological Survey and Bureau of Land Management personnel who are available for consultation during construction, drilling, completion, and rehabilitation activities.
3. Immediate notice is required of all blowouts, fires, spills, and accidents involving life-threatening injuries or loss of life.
4. Secure prior approval of the District Engineer for variance from the approved drilling program and before commencing plugging operations, plug-back work, casing repair work, corrective cementing operations, or suspending drilling operations indefinitely.
5. Blowout prevention equipment is to be installed, tested, and in working order before drilling below the surface casing and shall be maintained ready for use until drilling operations are completed.
6. Operations must be in compliance with the provisions of the landowner agreement concerning surface disturbance and surface restoration.
7. All pits found to contain toxic liquids will be fenced and covered with a fine mesh netting for the protection of wildlife.