

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 St., Denver, CO 80203

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements*)

At surface

660 FNL and 1980 FWL

Unit C

At proposed prod. zone

San Andres

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*

15 1/2 miles southeast 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

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.

1320

19. PROPOSED DEPTH

4350

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

20. ROTARY OR CABLE TOOLS

Rotary Tools

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

4428.5 GL

22. APPROX. DATE WORK WILL START*

On Approval

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	1750	260 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 TD and evaluated, if further evaluation is required, will log to determine if casing will be run.

SEE ATTACHED
CONDITIONS OF APPROVAL

Unless Drilling Operations have
Commenced, this permit is approval
Expires 12-29-77

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 C. Dimit

TITLE Chief Engineer

DATE September 13, 1977

PERMIT NO.

APPROVAL DATE

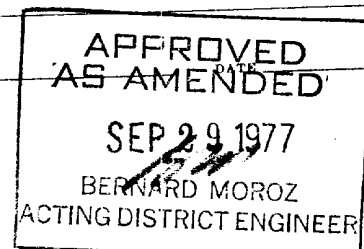
APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

"APPROVAL TO FLARE GRANTED
WHILE DRILLING AND TESTING."

*See Instructions On Reverse Side



RECEIVED
JUN 19 1967

OIL CONSERVATION COMM.
HOBBBS, H. M.

1977

1977

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

Sundance Oil Company, #2 Cone Federal
660' FNL and 1980' 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	1750'
Salado	1790'
Yates	2180'
San Andres	3310'
P-1	4020'
P-2	4100'
T.D.	4220'

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	1790' salt
San Andres	3310' oil and gas
P-1	4020' oil and gas
P-2	4220' oil and gas

4. The proposed casing program is as follows:

Surface - New 8 5/8", 28 lb/ft., ST&C, Secondary 45 (J&L).
Production - New 4 1/2", 10.5 lb/ft., ST&C, K-55 and 11.6 lb/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.
1800-3800' native mud	9.0 - 9.5 lbs./gal.
3800' to TD 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 December 1, 1977. Estimated duration of drilling operations is 10 to 12 days.

SUNDANCE OIL CO.
P.O. BOX 115
Roswell, N.M. 88201
September 19, 1977

USGS
PO Box 1157
205 N. Linam Street
Hobbs, NM 88240

Re: Agreement with Surface
Landowner - Sundance
Oil Co. #2 Cone Fed.,
Sec. 31-T7S-R32E,
660' FN & 1980' FWL
Roosevelt Co., NM

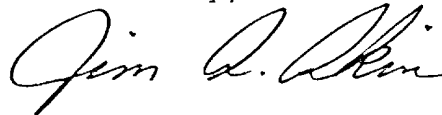
Dear Sir:

This is to certify that in regard to captioned well, Sundance Oil Co. has an agreement with the surface owner in regard to the surface restoration.

If this well is completed as a producing well, the pits are to be filled and covered and the location cleaned of all trash and junk in order to leave the wellsite in an aesthetically pleasing condition. Prior to the filling of the pits any unguarded pit containing fluid will be fenced.

If the well is completed as a dry hole and plugged and abandoned, pits will be covered, location cleaned of all trash and junk. The road will remain in place. The drilling pad will either remain or be ripped at the landowner's option.

Sincerely,



Jim A. Akin
Field Superintendent
Permian Basin Area

JAA:ss

SURFACE USE PLAN

Sundance Oil Company: Cone Federal #2
660' FNL and 1980' 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 $15\frac{1}{2}$ miles SSE 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' FNL and 1980' FWL 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 $15\frac{1}{2}$ miles SSE 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. A road will be required. It will be approximately 1300' due south from Chambers Federal #2 and 1300' due west to the location.
- B. Turnouts: None.
- C. Drainage Design: New road will have a drop of 6 inches from center line on each side.
- D. Culverts, Cuts and Fills: Culverts - none. The location and pits will be constructed as shown on Exhibit C. Maximum cut will be 3' on the east and maximum fill will be 3' on the west of the location, other than leveling sand dunes.
- E. Surfacing Material: Six inches of caliche, bladed, watered and compacted.
- F. Gates, Cattleguards, Fences: None.
- G. The proposed road is existing.

3. Location of Existing Wells

- A. See Exhibit B.

4. Location of Existing and/or Proposed Facilities

- A. There is an existing tank battery with production facilities and lines owned by the lessee/operator on this lease.
- B. If commercial production is established, facilities and lines will be connected to the existing battery. Pads for equipment will be made with caliche. 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. Fee minerals owned by F. P. Southard.

7. Methods for Handling Waste Disposal

- A. Waste Disposal - well cuttings will be disposed in reserve pit. Barrel trash containers to be in accessible locations within drill site area during drilling and completion procedures. All detrimental waste will be hauled away, burned or buried with a minimum cover of 24" of dirt. See Exhibit C for location of pits. If well is productive, maintenance waste will be placed in special trash cans and hauled away periodically. Any produced water will be collected in tanks until hauled to an approved disposal system, or separate disposal applications 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 pit, reserve pit, trash barrel, etc. The reserve pit will be lined with plastic. The pad and pits are 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 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: Three miles 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 St.
Denver, CO 80203

Business phone: (303) 825-7657

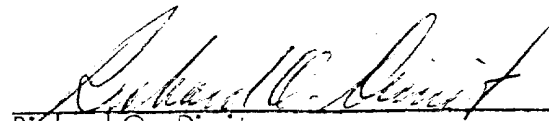
Home phone: (303) 841-4592

13. Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site 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 SUNDANCE OIL COMPANY and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

Date

9/13/77


Richard O. Dimit
Chief Engineer

April 21, 1977

AGREEMENT

Sundance Oil Co. agrees to pay \$100.00 each time they cut and set a cattle guard in the fence line.

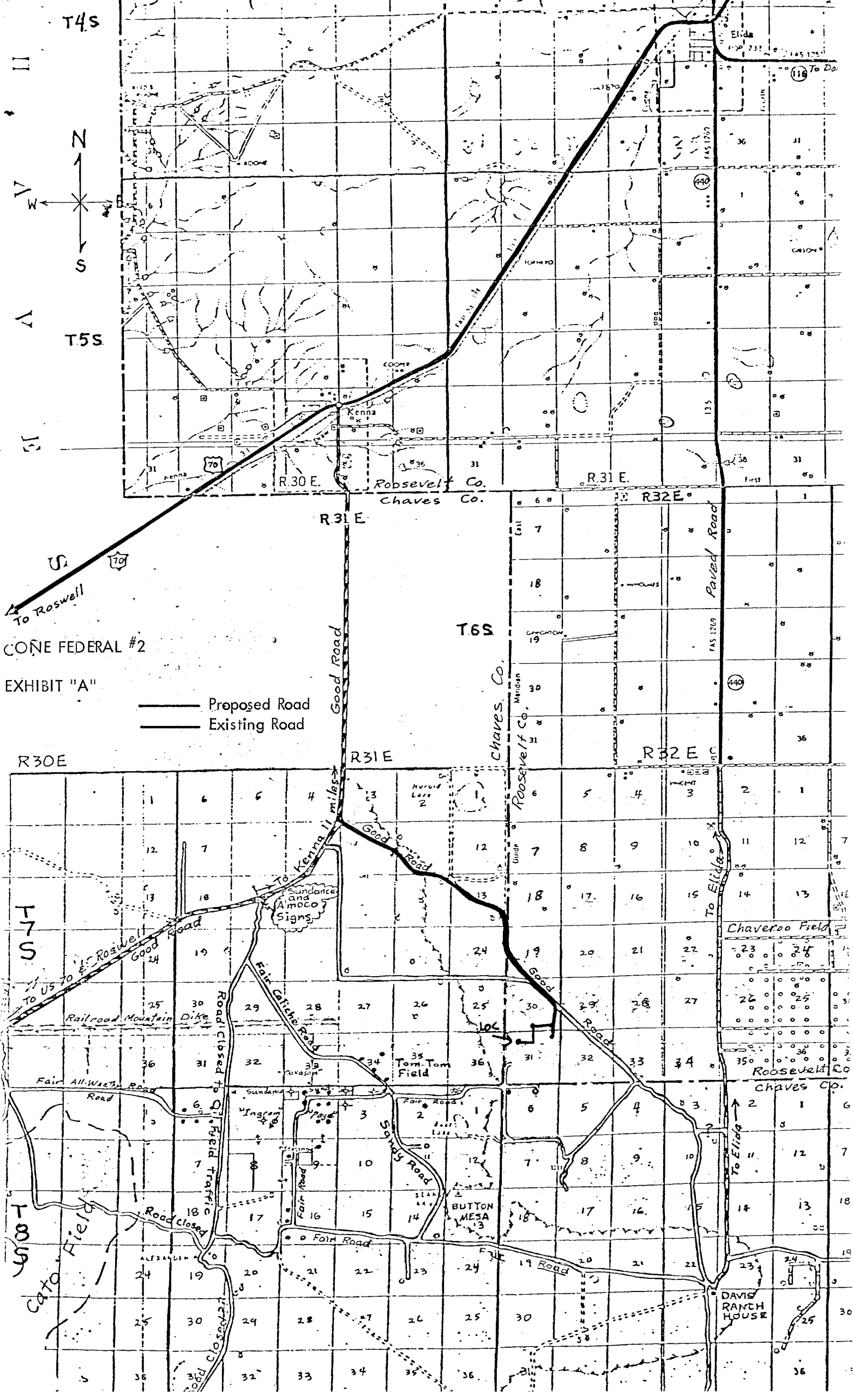
Sundance Oil Co. agrees to pay \$4.00 a rod for new roads and \$750.00 for each well site location, \$250.00 for a tank battery pad built between locations and \$1.00 a rod for pipeline not laid beside road right-of-ways. \$3.00 a rod for pipeline right-of-way that have to be built or made by a tractor or motor grader.

This agreement is payable only to Sec. 30 & 31, Twn. 7S, Rge. 32E, which is Fee surface.

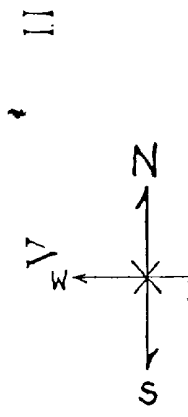
Caliche to be hauled from pit in Sec. 7, Twn. 7S, Rge. 32E. Price on yardage will be paid directly from Sundance Oil Co.

William N. Morgan
William N. Morgan
Representative of
Sundance Oil Co.

Frank P. Southard
Frank P. Southard
Land Owner



T4S



T5S

COFFE FEDERAL #2

EXHIBIT "A"

— Proposed Road
— Existing Road

R30E

T7S

T6S

R31E

Roosevelt Co.
Chaves Co.

T6S

Chaves Co.
Roosevelt Co.

R31E

R32E

Paved Road

Chaveroo Field

Roosevelt Co.
Chaves Co.

DAVIS RANCH HOUSE

BUTTON MESA

Tom-Tom Field

Sundance and Amoco Signs

Railroad Mountain Dike

Fair All-Weather Road

Road closed to field traffic

Road closed

Good Road

Good Road

Good Road

Sandy Road

Fair Road

19 Road

To Elida

To Elida

To Elida

To Elida

To Elida

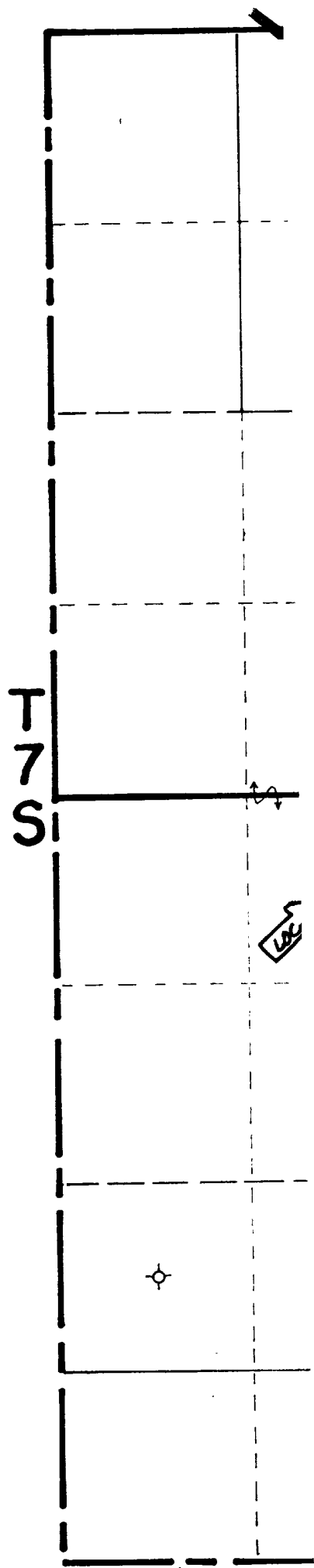
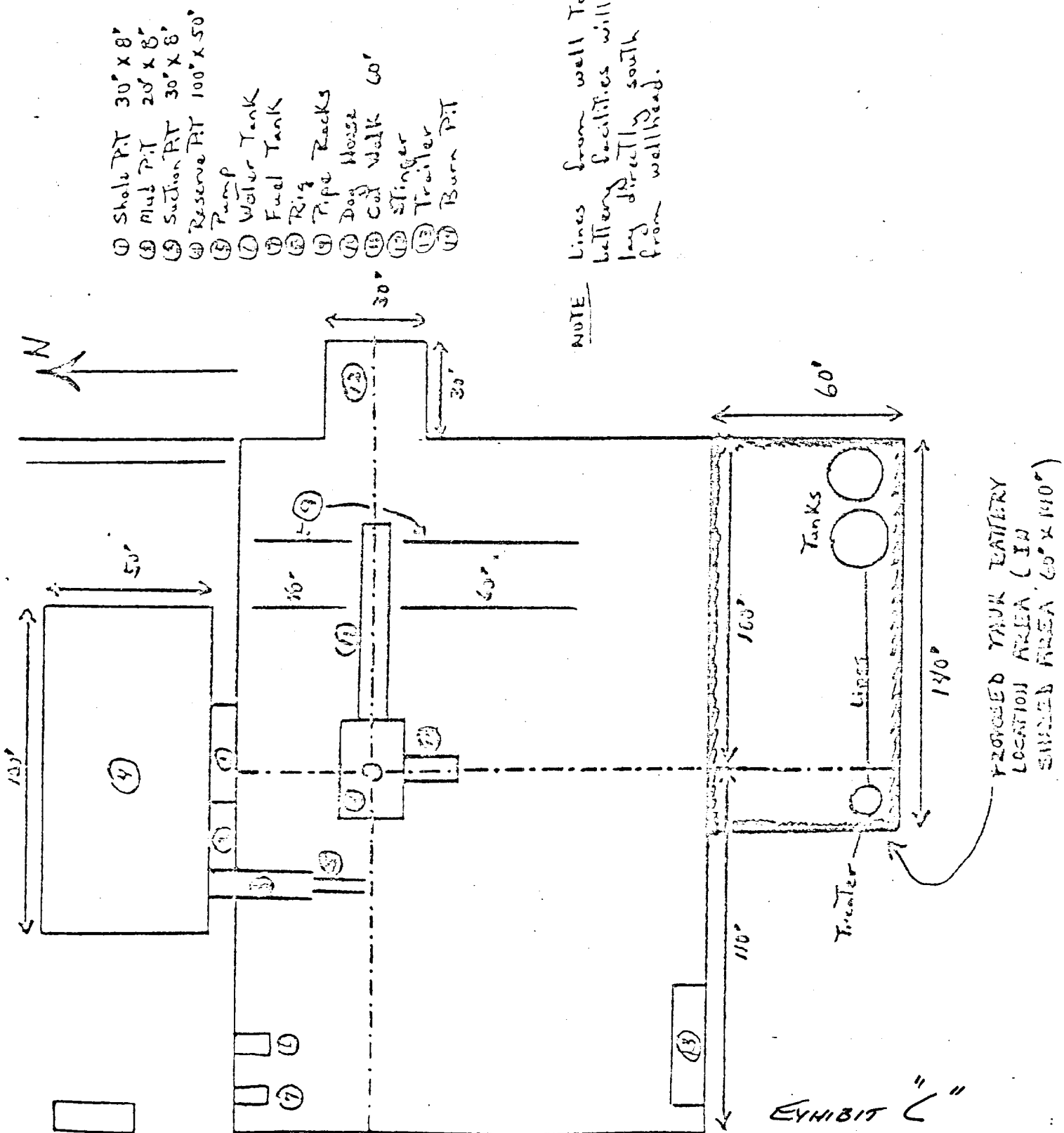


EXHIBIT "B"

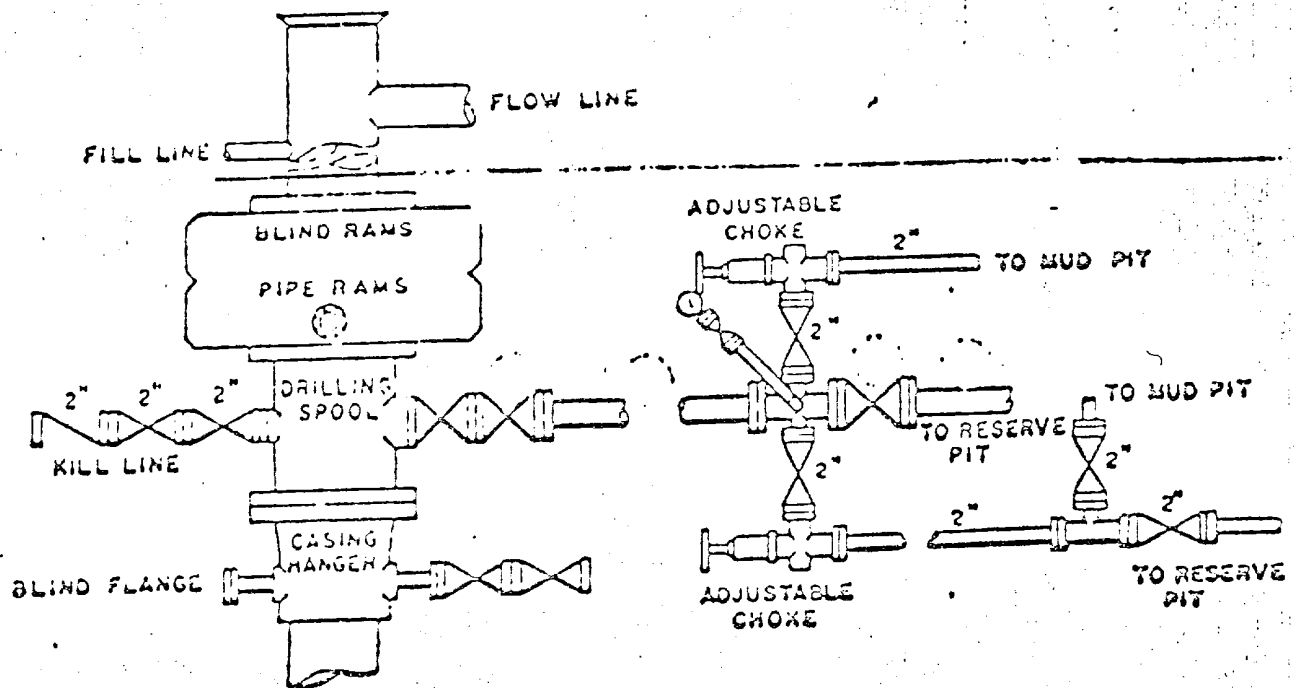
Cone Federal #2

LOCATION, MUD PIT AND
PROPOSED TANK BATTERY
AREA SPECIFICATIONS



BLOWOUT PREVENTER A CHOKE MANIFOLD

API 3M-8410-RdS



SUNDANCE OIL CO.
P.O. BOX 115
Roswell, N.M. 88201
September 19, 1977

USGS
PO Box 1157
205 N. Linam Street
Hobbs, NM 88240

Re: Agreement with Surface
Landowner - Sundance
Oil Co. #2 Cone Fed.,
Sec. 31-T7S-R32E,
660' FN & 1980' FWL
Roosevelt Co., NM

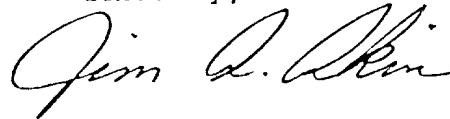
Dear Sir:

This is to certify that in regard to captioned well, Sundance Oil Co. has an agreement with the surface owner in regard to the surface restoration.

If this well is completed as a producing well, the pits are to be filled and covered and the location cleaned of all trash and junk in order to leave the wellsite in an aesthetically pleasing condition. Prior to the filling of the pits any unguarded pit containing fluid will be fenced.

If the well is completed as a dry hole and plugged and abandoned, pits will be covered, location cleaned of all trash and junk. The road will remain in place. The drilling pad will either remain or be ripped at the landowner's option.

Sincerely,



Jim A. Akin
Field Superintendent
Permian Basin Area

JAA:ss

U. S. Geological Survey

HOBBS DISTRICT

Sundance Oil Company
No. 2 Cone Federal
NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 31-7S-32E
Lea County, N. M.

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. 8-5/8" surface casing should be set in the Rustler Anhydrite formation and cement circulated to the surface. If surface casing is set at a lesser depth, the 4 $\frac{1}{2}$ " casing must be cemented from the casing shoe to the surface or cemented to the surface through a stage tool set at least 50 feet below the top of the Rustler, after cementing around the shoe with sufficient cement to fill to the base of the salt section.
8. For the protection of livestock and wildlife all pits containing toxic liquids will be fenced and covered with a fine mesh netting (i.e., Hardware Cloth) with openings being 1/2 inch or less.