

UNITED STATES
DEPARTMENT OF THE INTERIORGEOLOGICAL SURVEY *51-017-2011*

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

Bronco Oil & Gas Company, LeClair-Westwood, Inc., Agent

3. ADDRESS OF OPERATOR

388 Denver Club Building, Denver, Colorado 80202

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

At surface

1980' FWL & 660' FSL Section 31, T12N, R12E
At proposed prod. zone *11.14*

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

5 miles east of White Lake

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

2012.04

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

19. PROPOSED DEPTH

3500'

17. NO. OF ACRES ASSIGNED
TO THIS WELL

40

20. ROTARY OR CABLE TOOLS

Rotary

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

7072' GR

22. APPROX. DATE WORK WILL START*

October 10, 1977

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	9-5/8"	36#/ft.	200'	130 sx. class "B" w/2% CaCl ₂
8-3/4"	4-1/2" or 5-1/2"	10.5 or 14#	2000'	300 sx. 65% HCL 35% Pozmix w/6% Bentonite, 1/4#/sx. floccle

We propose to drill a well to 3500' to test the Pennsylvania formation for oil production. If productive, we will case as shown and proceed to complete; if dry, we will P&A as per USGS & State of New Mexico requirements.

ILLEGIBLE

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

TITLE

President

DATE

9-16-77

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACERAGE DEDICATION PLAT

All distances must be from the outer boundaries of the Section

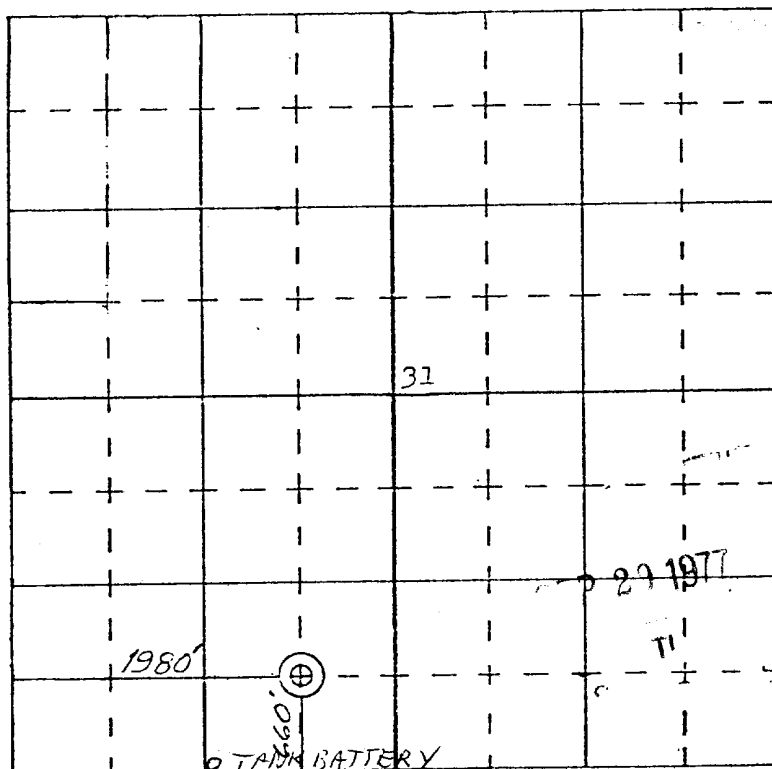
Operator LE CLAIR - WESTWOOD, INC.			Lease		Well No.	
Unit Letter N	Section 31	Township 12 NORTH	Range 12 EAST	County SAN MIGUEL		
Actual Footage Location of Well: 660 feet from the SOUTH line and 1980 feet from the WEST line						
Ground Level Elev. 7072	Producing Formation		Pool		Dedicated Acreage: <div style="text-align: right;">Acres</div>	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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 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.



SCALE—4 INCHES EQUALS 1 MILE

SAN JUAN ENGINEERING COMPANY, FARMINGTON, N. M.

CERTIFICATION

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

Name _____

Position _____

Company _____

Date _____

SEP 8 1977
OIL CON. COM.
DIST 3

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.

25 July 1977

Date Surveyed _____

James P. Leese
 Registered Professional Engineer
 and/or Land Surveyor James P. Leese

1463

Certificate No. _____

APPLICATION FOR APPROVAL OF OPERATIONS

(NTL-6)

BRONCO OIL COMPANY
LeCLAIR-WESTWOOD, INC., AGENT

RECEIVED
SEP 11 1977

FEDERAL #31-14

SE/4, SW/4, SECTION 31, T12N, R12E
SAN MIGUEL COUNTY, NEW MEXICO



I. General Statement of Environmental Impact

We propose to drill the subject well to a depth of 3500'± to test the Pennsylvanian Formation. In this undertaking, it will be necessary to move in a rotary drilling rig to drill the well, and a completion unit, at a later date (assuming production is discovered) to complete this well. In the latter regard 4-1/2" or 5-1/2" O.D. casing will be utilized. As a final measure, it will be necessary to build production facilities.

Roads will be built only as necessary to assure access to temporary and permanent facilities. The map(s) attached show the location of these facilities and the required roads. In the case of all roads and excavations made for production facilities, all of these will be restored to their original condition, when no longer required.

In no case will the drainage pattern of the land be changed or divereted.

Likewise in no case, save and except leveling the drill site and tank battery site, will the topography or terrain be changed or altered in any way. No permanent facilities other than a tank battery are contemplated for construction.

RECEIVED
SEP 22 1977
U.S. DEPT. OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

II. Drilling Operations

A. Preliminary Environmental Review

Bronco Oil and Gas Company's letter, dated June 27, 1977, was sent to District Engineer in Durango, Colorado. To date no rebuttal or refusal has been received (copy of letter attached).

B. Application for Permit to Drill

1. See surveyors plat, attached.
2. See surveyors plat, attached.
3. Surface formation, San Andres limestone.
4. See rig inventory, attached.
5. 3500'
6. See geological prognosis, attached.
7. See geological prognosis, attached.
8. See form 9-331C, attached.
9. See form 9-331C, attached.
10. See rig diagram of blow out preventer equipment, attached. Daily check of blow out preventer equipment will be made and reports of same to USGS by drilling contractor.
11. a. See rig inventory and diagram for circulating system specifications.
b. See geological prognosis, attached.
12. See geological prognosis, attached. Operator, however, reserves the right to drill stem test any and all hydrocarbon shows encountered.
13. No abnormal pressures or temperatures or unusual conditions expected. Hazards of a gaseous nature can be handled by the equipment spelled out in (10) above.

14.. This project can start approximately October 1, 1977 and should
require approximately 40 days duration.

15. No additional comments.

III. Multi-Point Surface Use and Operations Plan

As a general statement of policy, it is the intention of the operator and his representatives to utilize as little surface land as possible and to re-grade, restore and/or replace all damages or any land used that has served its purpose. In no way will water right-of-ways, or drainage areas be affected, and in no way will fresh water be disturbed or polluted.

A-1 Existing Roads - Access to this well will be accomplished by proceeding 5 miles east of White Lakes, New Mexico on the county road that goes from White Lakes, to Leyba, New Mexico, thence 1/2 mile through the cattleguard to the location (see Figure 1, attached). The route is marked in red.

Existing roads are to be improved as required for the movement of our equipment. We will also maintain existing roads as required and as dictated by any deterioration we may cause. We will need to resurface by grading, only, the last 1/2 mile to our location.

A-2 Planned Access Roads - No new access roads are planned.

A-3 Location of Existing Wells - No wells exist in this area.

A-4 Location of Tank Batteries, Production Facilities, and Production Gathering and Servicing Lines - A. No production facilities exist in this area.

B. See figure 1 and plat for location of proposed tank battery if well is productive. See figure 2, attached, for layout and dimensions of tank battery. Materials are standard oil field (API and ASTM rated). Proper fencing with a turn-style gate will be installed to protect wildlife from entering production facilities or tank battery. Wire will be layed across pits to prevent any wildlife entry. No fill or load lines will extend

beyond fences so that wildlife cannot tamper with same. Also, as an added protection, such lines will be equipped with snap on plugs, so they cannot be rubbed loose. Only native materials should be required for ground-bed preparation.

C. Any disturbed areas no longer needed will be returned to their original contours and reseeded.

A-5 Location and Type of Water Supply - Negotiations are currently being made to obtain drilling water.

A-6 Source of Construction Materials - It is not anticipated that materials will be required to build this location. Rather, only ground leveling and reserve pit digging are contemplated.

A-7 Methods for Handling Waste Disposal - Adequate steel pits will be used to handle the recycling of drilling mud. A reserve pit will be dug to handle mud that is no longer serviceable and also to handle cuttings, salts, and chemicals, etc. A pit will be dug and fenced to burn the garbage in. Human waste (sewage) will be handled by a portable privy.

Mud pits will be allowed to dry after drilling is completed and then adequately filled, tamped and leveled. All garbage and/or sewage pits will be filled as soon as the rig leaves the location. The location will be leveled and graded prior to moving in completion equipment and after completion equipment is removed.

Any fluid recovered during testing will be contained in temporary frac tanks. Any oil will eventually be sold. Water will be physically removed from the premises.

A-8 Ancillary Facilities - None anticipated at this time.

A-9 Well Site Layout - See plat of rig (Signal Oilfield Service, Inc., Rig #20) attached. No cuts or fills are anticipated. At this present time there appears to be no reason to contemplate lining earthen pits.

A-10 Plans for Restoration of the Surface - The surface of land will be restored by stockpiling soil and then replacing the soil and reseeding, when drilling equipment has been removed.

No change in topography should occur as a result of this work. No rerouting of existing roads is expected.

It is anticipated that pits will be fenced prior to rig release and remain so until clean-up and restoration. In this regard, should any oil become evident on pits, same will be removed.

Any damage done to access roads will be repaired.

Final cleanup scheduling (other than above) will be dependent upon weather and moisture content of soil. In no case will such cleanup exceed six months.

A-11 Other Information - The topography of the subject area is basically flat and the soil is sandy. Vegetation is sparse and primarily weed-grasses with a few trees surrounding the perimeter of the location. No pronounced geological (surface or subsurface) features exist. No significant water exists in proximity to this location. No archeological, historical or cultural sites are in the area. As stated earlier, no cuts or fills are anticipated. Surface ownership is recorded at the San Miguel County Courthouse as belonging to the following:

Mr. Ralph H. Gray
P. O. Box 6769
Moore, Oklahoma 73160
405-794-6571

As per the letter attached, arrangements are being made to settle damages.

Mr. Gray is the owner of all surface land involved. The surface of the land is used sparingly (due to lack of vegetation) for cattle. No crops are raised and no cultivating in the very near future is anticipated.

A-12 Operator's Representative - For the purpose of this venture the designated Operator's representative is as follows:

Bronco Oil & Gas Company
LeClair-Westwood, Inc., Agent
W. H. Leach, Jr., President
388 Denver Club Building
Denver, Colorado 80202
303-825-4258

A-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 the 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 Bronco Oil and Gas Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Sept 19, 1977 W. H. Leach, Jr. Agent
Date Name & Title

IV. Environmental Analysis Requirements

Previously requested.

V. Approval of Subsequent Operations

Not requested at this time.

VI. Agreement for Rehabilitation of Privately Owned Surface

See letter attached.

VII. Well Abandonment

Not required at this time.

VIII. Water Well Conversion

Not applicable to this request.

105°45' 650 000 FEET (CENTRAL) 433000m E. 434 R. 11 E. R. 12 E. 42°30" 436

23 24 19

Big Lake

26 25 30

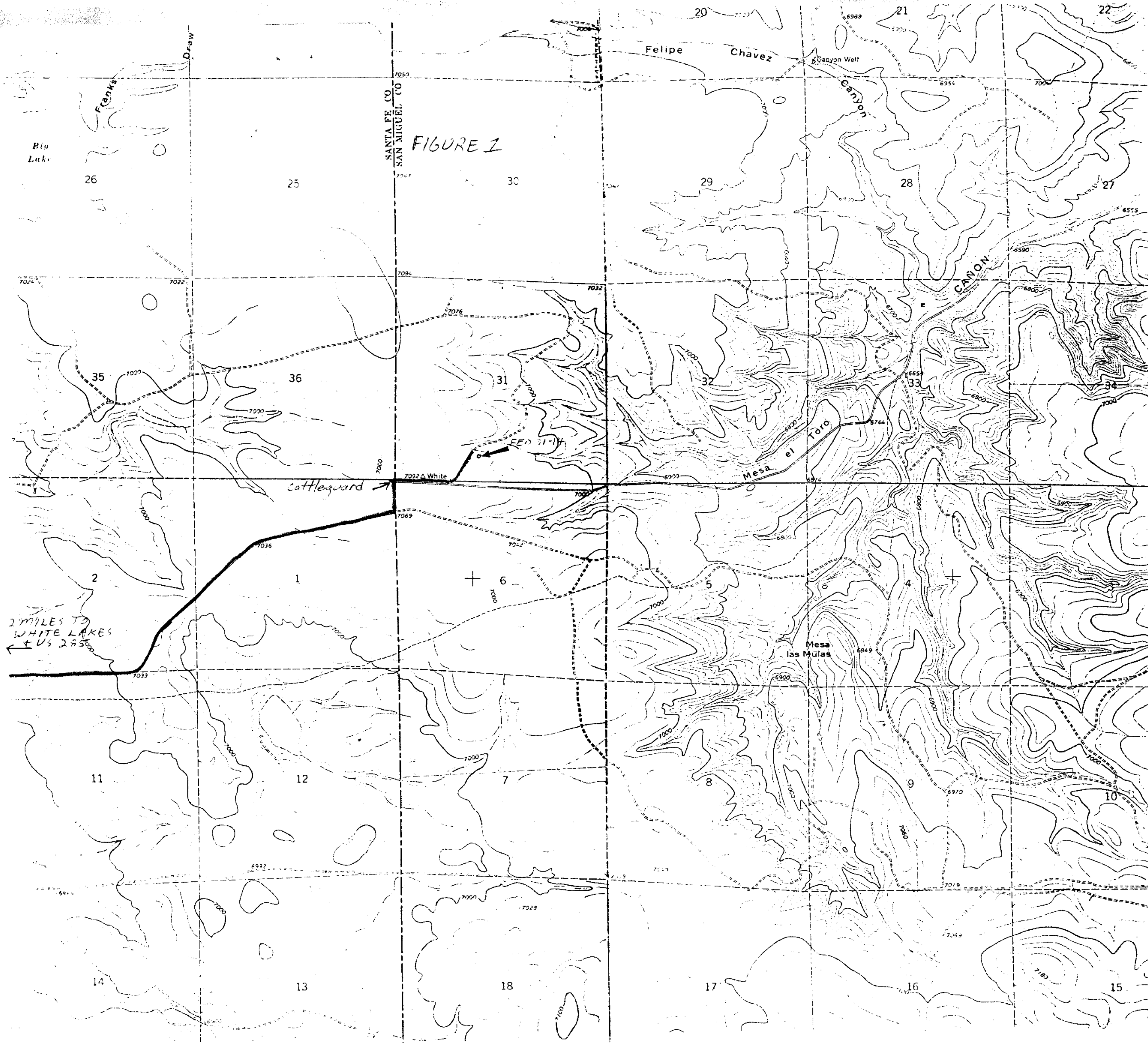
35 36 31

2 1

7092 White 5560'

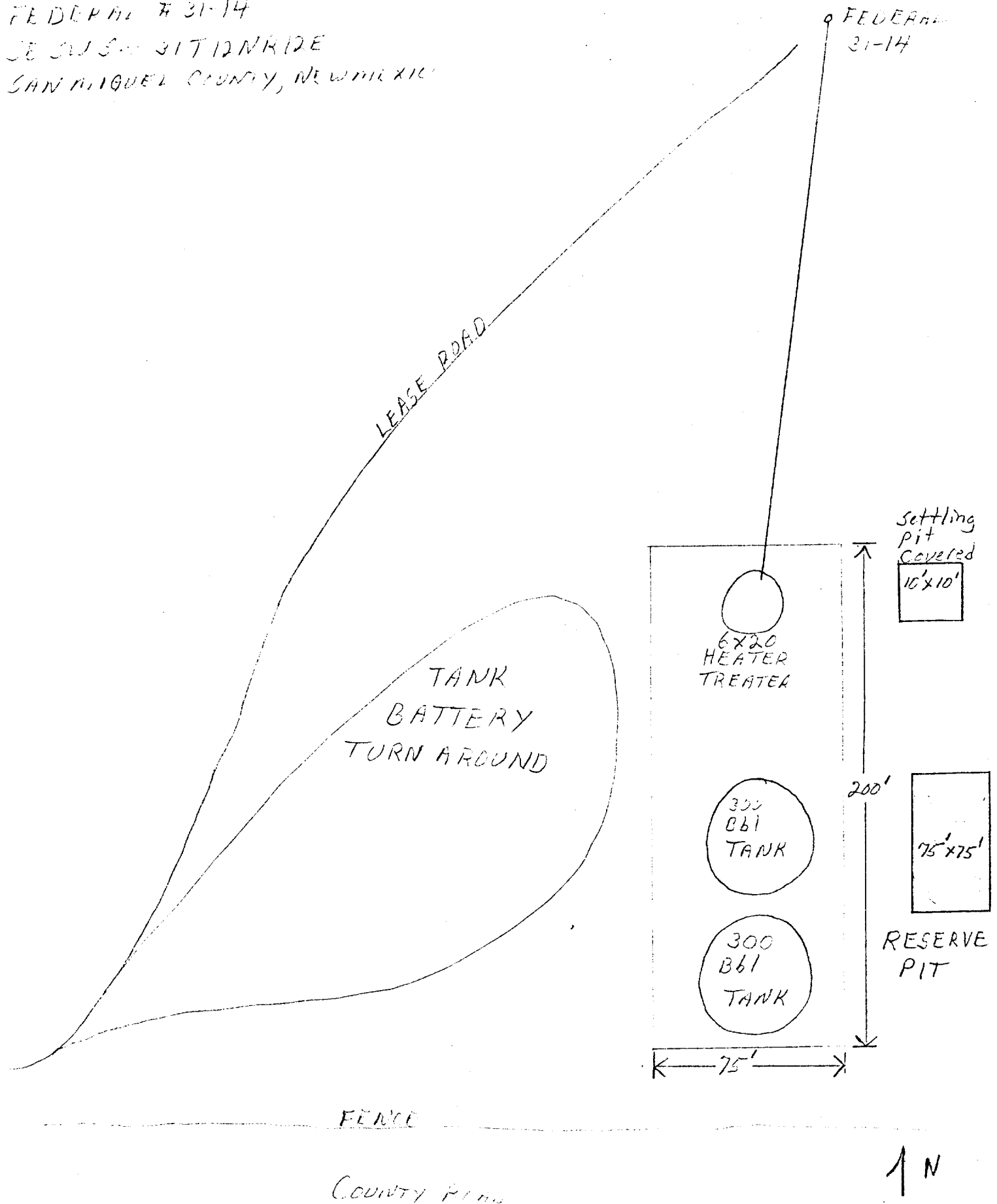
VICINITY MAP FOR
Le-Clair-Westwood
Inc.
Well location in SE 1/4
SW 1/4 Sec. 31, T12N, R12E
N.M.F.M., San Miguel Co.
New Mexico

Well location is SE 1/4
SW 1/4 Sec. 31, T12N, R12
N.M.F.M., San Miguel Co
New Mexico



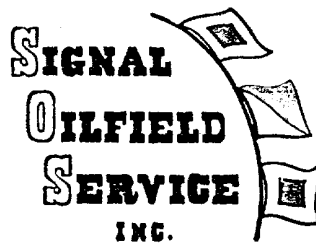
TANK BATTERY AREA
BRADCO OIL & GAS CO.
FEDERAL # 31-14
300 BBL TURN AROUND
SANTOPIQUEL COUNTY, NEW MEXICO

FIGURE 2



NOT TO SCALE

1200 SECURITY LIFE BUILDING
DENVER, COLORADO 80202



TELEPHONE
303 - 629-1050

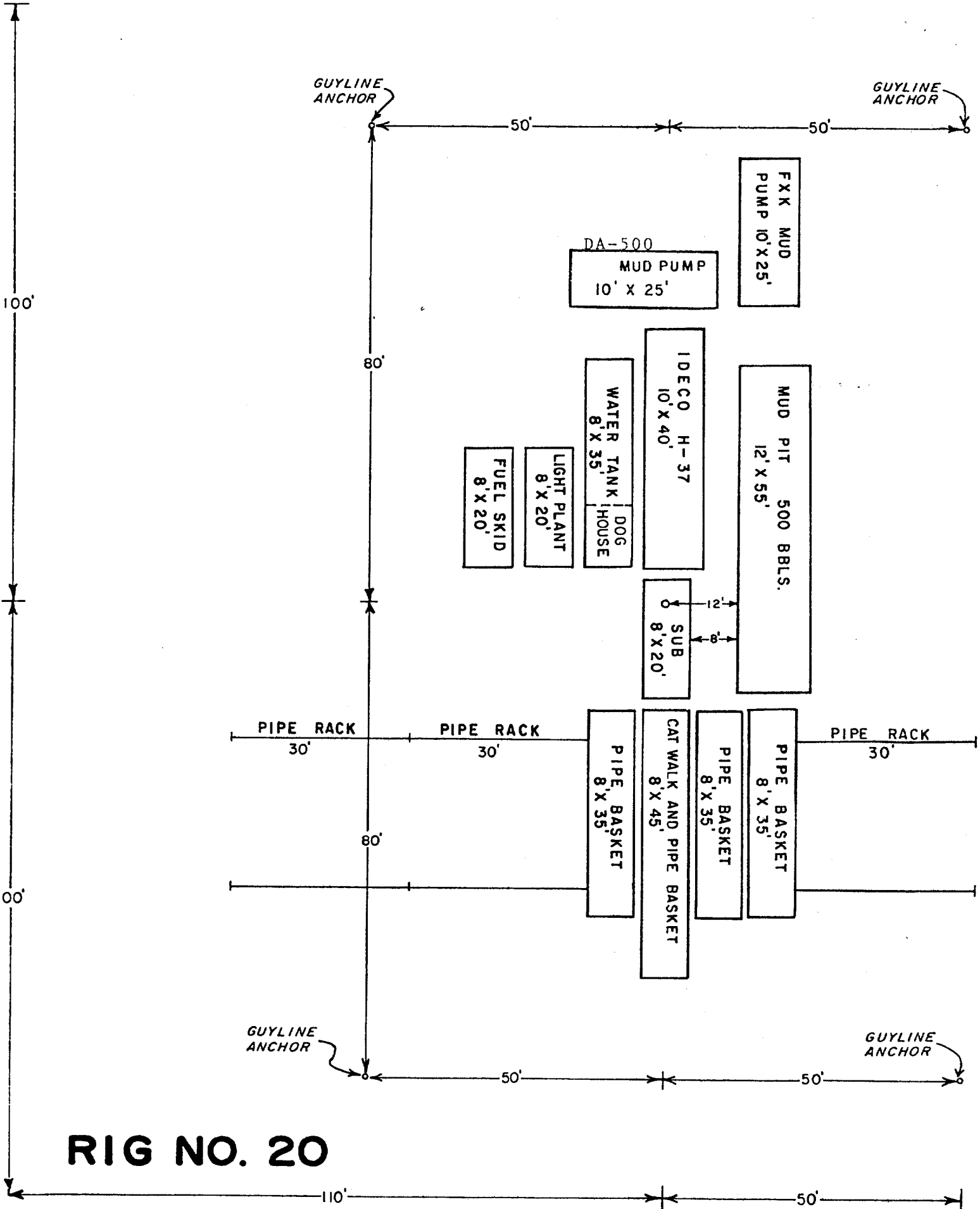
RIG NO. 20

DRILLING RIG SPECIFICATIONS AND EQUIPMENT

(See Reverse Side for Drawing of Rig Layout)

RIG	Ideco BIR-550 H-37 Back-In Rambler with 12V-71 Engine and 103' - 224,000# capacity mast
SUBSTRUCTURE	11' high - 224,000# capacity
ROTARY TABLE	17 1/2" Ideco
PUMP #1	Emsco DA-500 7 1/2" x 16" 500 h.p. powered by 1 16V-71 GMC Diesel Engine
PUMP #2	Gardner-Denver FXK 7 1/4" x 14" 255 h.p. powered by 2 - 671 GMC Diesel Engines
MUD PIT	1 - 12' wide, 5' high, 50' long, 500 bbl. with Desilter and Shale Shaker
BLOWOUT PREVENTER	10" Double Gate Type E, Shaffer
LIGHT PLANT	1 - 75 kw and 1 - 50 kw in light plant house
WATER TANK	400 bbls.
FUEL TANK	2,500 gal.
DRILL PIPE	4 1/2" XH - 7,000 ft.
DRILL COLLARS	20 - 6" x 30'

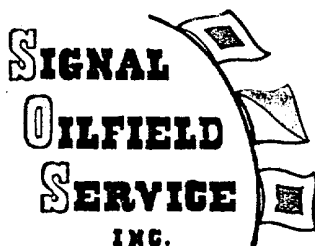
June 1976



RIG NO. 20

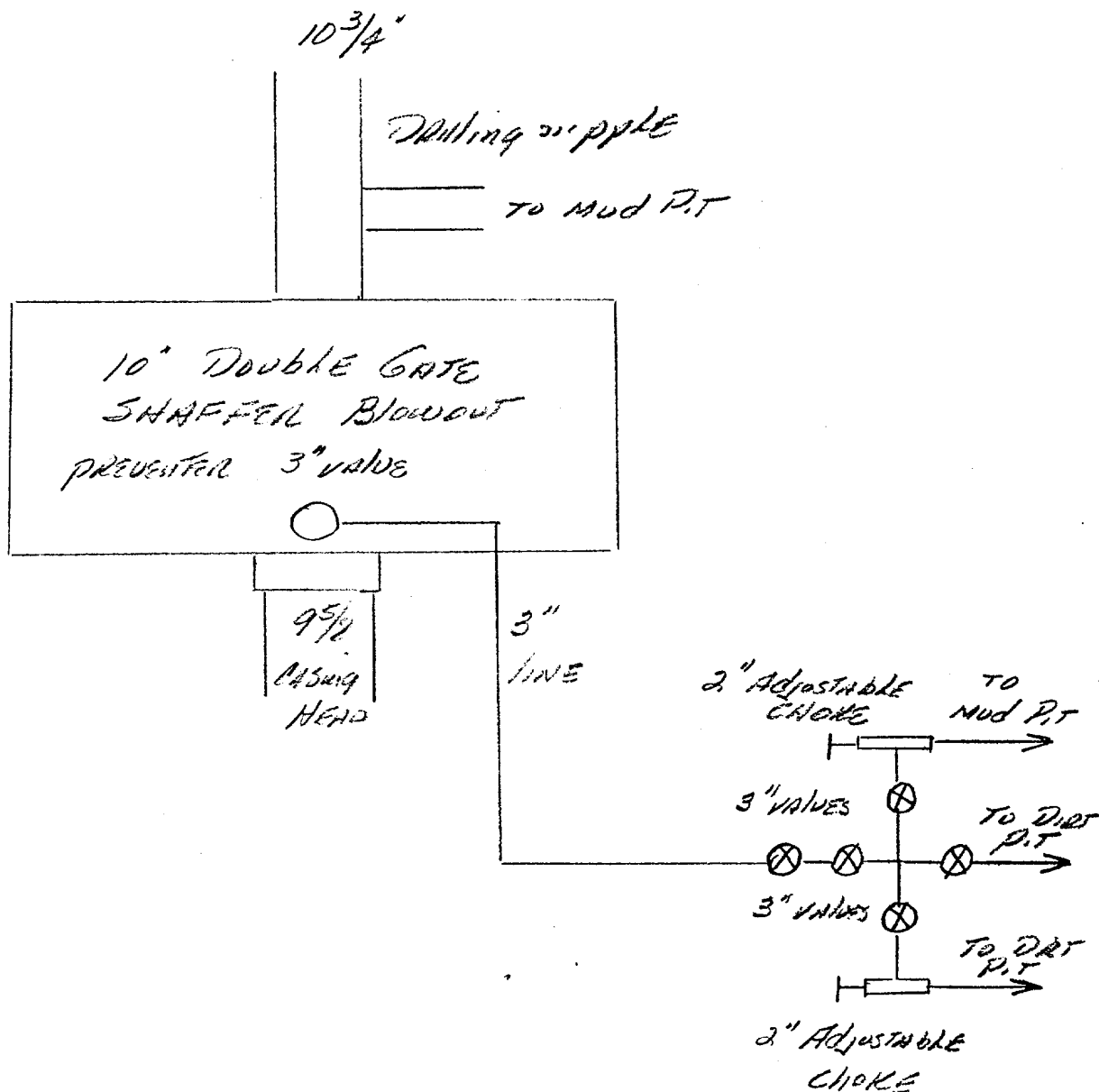
SCALE : 1" = 20'

1200 SECURITY LIFE BUILDING
DENVER, COLORADO 80202



TELEPHONE
303 - 629-1050

Aug 16. 20
Blowout Preventer Installation



BRONCO OIL AND GAS COMPANY

SUITE 1704 EXECUTIVE TOWER INN
1405 CURTIS STREET
DENVER, COLORADO 80202

TELEPHONE 303/372-1511

LeClair-Westwood, Inc.

Well Prognosis
Bronco Oil & Gas #31-14 Federal

SE SW 31-T12N-P12E
San Miguel Co., New Mexico

Elevation: 7065 ground estimated

Formation Tops

Spud in San Andres limestone

Glorieta sand: 10'

Yesa silt and sandy shale: 160'

Abo red shale: 550'

Includes Sangre de Cristo fresh granite wash and arkosic sand
oil & gas shows can be expected at any depth from top Pennsylvanian to
TD.

Pennsylvanian: 900'

A gradational contact with Sangre de Cristo.

Gray shale increasing & red shale decreasing with depth. Arkosic
sand and thin bedded limestone.

Mid Pennsylvanian: 1700'

Thicker limestones, may have arkosic sand stringers

Lower Penn-Sandia: 2000'

Black shaled, sandstone

Mississippian limestone: 2300'

Pre-Cambrian: 2400'

Surface Casing

As directed by state Oil & Gas Commission

Mud Program

Fresh gel system of sufficient viscosity to maintain excellent sample
quality from base of surface casing to total depth.

Problem Zones

Loss of circulation may be encountered in the Pennsylvanian, have LCM
on location. Anhydrite may be present in the Yeso, may clabber the mud.

Samples

Catch samples as follows:

Surface hole - each 30'

Below surface casing to total depth - each 10'

Wash samples thoroughly, mark legibly and hang in 10 sack bundles
in a dry place.

Mud Logging

Gas detector on location and operating from 700' to total depth

W.H.L.	uwl	
R.B.E.	.	
(cc)		
D.L.L.		
K.R.G.		
(cc)		
J.C.G.		
S.M.		
B.L.W.		

Electrical Logging

Induction Electrical

Compensated Neutron Formation Density with Gamma Ray caliper

Testing

DST oil and gas shows as directed by the well site geologist.

Well Site Geologist

Jerry Bailey, Denver
303-534-8066, office
303-697-8259, home

or

Bob Doak, Santa Fe
505-982-8937

Notification

Daily call with morning report to Bronco Oil & Gas Co., Casper
307-266-3366, office

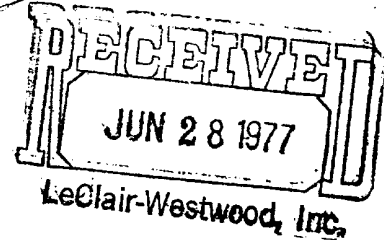
Forest Twiford

BRONCO OIL AND GAS COMPANY

SUITE 300 CENTURY BUILDING
P.O. BOX 834
CASPER, WYOMING 82602

TELEPHONE 307/266-3366

June 27, 1977



U. S. G. S.
1809 Jarvis Bldg.
Durango, Colorado 81301

Attn: Mr. Jerry W. Long
District Engineer

Dear Sir:

Bronco Oil & Gas requests, in accordance with the NTL-6 Program, permission to stake a location in the below described area:

SESW Section 31
T12N R12E
San Miguel County
New Mexico
Federal Lease - NM-22137

Thank you in advance for your attention to this request.

Yours very truly,

Dan Lewis
Drilling Engineer

DL/ims



LeCLAIR - WESTWOOD, INC.

388 DENVER CLUB BUILDING
DENVER, COLORADO 80202
(303) 825-4258

September 8, 1977

Mr. Ralph H. Gray
P. O. Box 6769
Moore, Oklahoma 73160

RE: Surface Damages for Location &
Access Road into Location
SE/4, SW/4, Section 9, T12N, R12E
San Miguel County, New Mexico

Dear Mr. Gray:

As per our phone conversation on September 7, 1977, this letter concerns settlement of surface damages for drillsite location and road to be built on your land. We feel that \$200 would be sufficient to cover these damages. In addition, a temporary cattleguard will be installed where a barbed wire gate now exists. If the well is productive, then the road will be made permanent and a permanent cattleguard will be installed. Also, at this time we will discuss damage settlement for a tank battery site.

If you have any questions, please feel free to call me at 303-825-4258.

If we have not heard from you within 10 days, we will assume you are in complete agreement with these terms and we will draft a release for you to sign at which time you will receive a check for damages.

Yours very truly,

LeCLAIR-WESTWOOD, INC.

K. R. Gordon
Production Engineer

KRG:blw

CC: Dan Lewis - Casper
John Head - Denver

405-794-6571

p. o. box 6769

moore, okla. 73160 SEP 14 1977

LeClair-Westwood, Inc.



JOINT OIL & GAS VENTURES

September 12, 1977

LeClair-Westwood, Inc.
388 Denver Club Bldg.
Denver, Colorado 80202

RE: Surface Damages, etc
San Miguel County,
New Mexico Prospect.

Gentlemen:

Attn: Mr. K. R. Gordon, Production Engineer

Your letter of September 8, 1977 regarding reference prospect has been received.

For the right of egress and ingress, roads, surface damages, etc., I feel like \$300.00 will be more equitable. In addition to the dollar adjustment, I also want the following:

1) Use the existing gate to the west. When laying out the road, use the shortest route possible to the drill-site.

2) Install a cattle guard wide enough across (at least 8' wide) and leave it there as a permanent installation.

3) If the well is not productive, do not plug. Just put a suitable cap over the top. I will use the hole for another watering place for cattle, by installing a windmill over the hole. I will also need your drilling log showing water depths.

4) If the well is dry, I will expect you to restore the surface to its original condition as soon as possible.

Actually, with all these requirements, I think it will cost you less money, for your explorations.

Hoping to hear favorably from you regarding my requirements, I remain

Yours very truly,

Raymond H. Gray
Raymond H. Gray

PHG/e

ILLEGIBLE

REHABILITATION AGREEMENT

Lease No.: NM 22137; Well Name and No.: Federal #31-14;
Location: SE 1/4 SW 1/4 Sec. 31, T. 12 N., R. 12E W.

Bronco Oil Company intends to drill a well on surface owned by Mr. Ralph Gray. The lessee/operator agrees to complete the following rehabilitation work if the well is a producer:

☒ Yes ☐ No Maintain access road and provide adequate drainage to road.

☒ Yes ☐ No Reshape and reseed any area in excess of the pump and support facilities.

Other requirements: _____

The following work will be completed when the well is abandoned:

☐ Yes ☒ No Site will require reshaping to conform to existing topography.

☒ Yes ☐ No Pit will be fenced until dry, then filled to conform to topography.

☒ Yes ☐ No Entire disturbed area will be reseeded. If yes, the following seed mixture will be used:

☐ Yes ☒ No Access road will be rehabilitated and reseeded using the same seed mixture as above.

☒ Yes ☐ No Access road will remain for landowner's use.

Other requirements: Permanent cattleguard will be installed where wire gate now exists.

Landowner

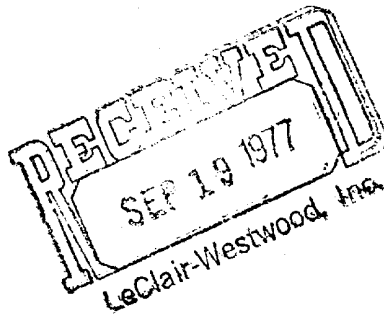
Name: Mr. Ralph H. Gray
Address: P. O. Box 6769
City: Moore
State: Oklahoma 73160
Telephone: 4-5-794-6571
Date: ..

Operator/Lessee

Name: _____
Address: _____
City: _____
State: _____
Telephone: _____
Date: _____

☐ Yes ☐ No I certify rehabilitation has been discussed with the surface owner.

This agreement covers rehabilitation requirements only and does not affect any other agreements between the lessee/operator and surface owner.



Museum of New Mexico



September 13, 1977

K. R. Gordon
Production Engineer
LeClair-Westwood, Inc.
388 Denver Club Building
Denver, Colorado 80202

Dear Mr. Gordon:

On September 12, 1977, an archeological clearance investigation was conducted for Le-Clair Westwood Inc. by the Contract Archeological Section of the Museum of New Mexico. The purpose of the survey was to investigate a proposed well location in the SE $\frac{1}{4}$, of the SW $\frac{1}{4}$, Section 31, Township 12 North, Range 12 West, San Miguel County, New Mexico for cultural resources.

Contract agreements for the survey were arranged by K. R. Gordon of Le-Clair Westwood and David H. Snow of the Museum of New Mexico. Allan MacGillivray III of the Museum of New Mexico performed the field work.

The well location surveyed is on land administered by the Bureau of Land Management. The legal description is SE $\frac{1}{4}$, of the SW $\frac{1}{4}$, Section 31, Township 12 North, Range 12 East, San Miguel County, New Mexico. UTM Zone 13: 435560 East, 3897100 North.

The clearance investigation consisted of 100% on foot coverage of the SE $\frac{1}{4}$, of the SW $\frac{1}{4}$, Section 31, Township 12 North, Range 12 East, San Miguel County, New Mexico.

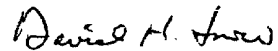
Vegetation includes a sparse cover of piñon and juniper forest. Succulents include yucca and prickly pear cactus with some cholla. Other vegetation includes a good cover of grama grass with some bunch grass, western wheat grass and various mountain wild flowers.

K. R. Gordon
September 13, 1977

Page 2

No cultural resources were located within the area surveyed and archeological clearance is recommended.

Sincerely,



David H. Snow
Contract Archeology Section

DHS/btr

cc: U.S. Department of Interior
Bureau of Land Management
3550 Pan American Freeway
Albuquerque, New Mexico 87102

USGS
District Engineer
Box 1809 Jarvis Building
Durango, Colorado 81301
Attn: Jerry Lang

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

6000 FEET (CENTRAL)

433000m E

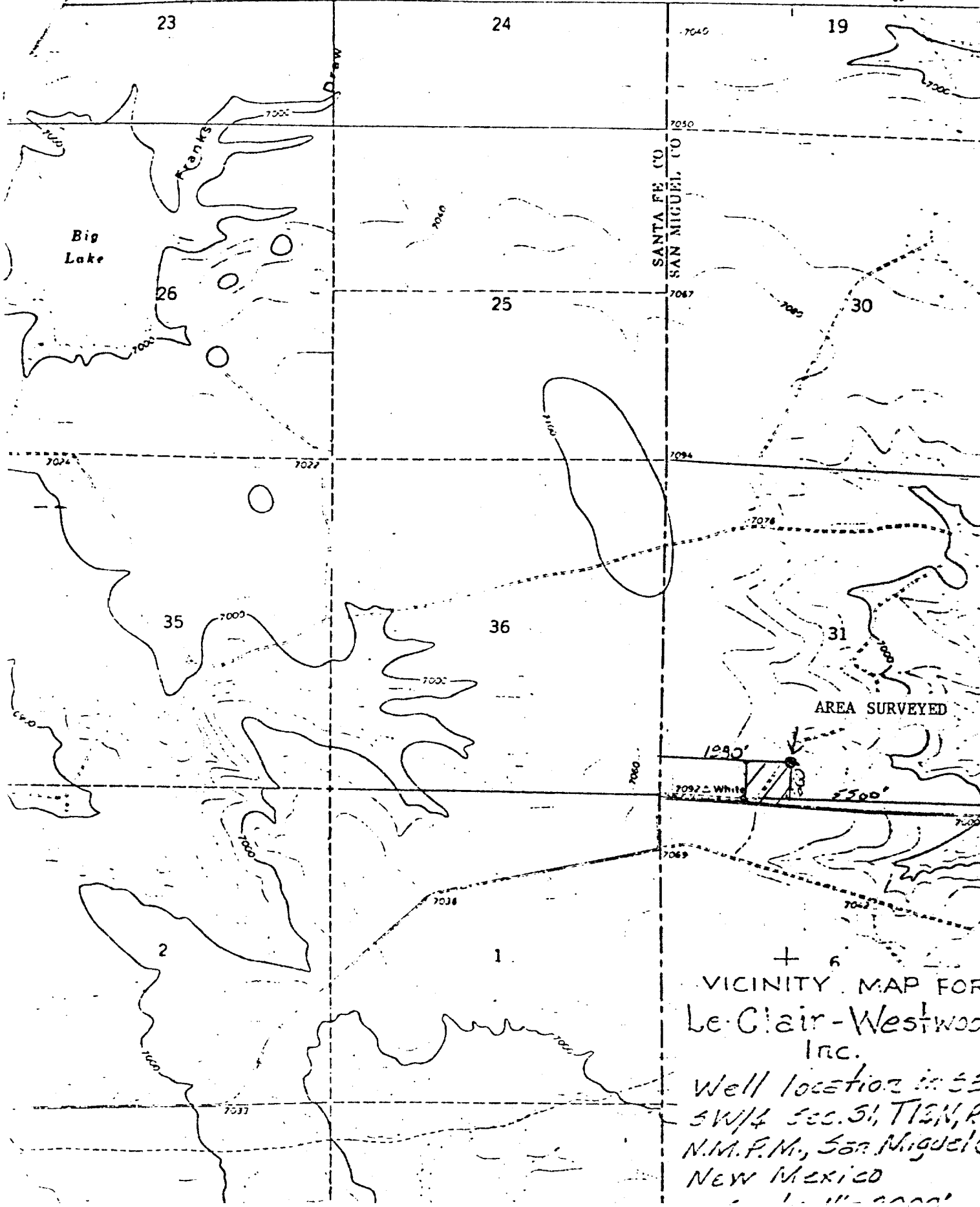
434

R 11 E

R 12 E

42°30"

436



VICINITY MAP FOR
Le Clair-Westwood
Inc.

Well location in SE
3/4 Sec. 31, T12N, R
N.M.F.M., San Miguel,
New Mexico