

UTAH DIVISION OF OIL, GAS AND MINING

REMARKS: WELL LOG \_\_\_\_\_ ELECTRIC LOGS \_\_\_\_\_ FILE  WATER SANDS \_\_\_\_\_ LOCATION INSPECTED \_\_\_\_\_ SUB. REPORT/ABD. \_\_\_\_\_

DATE FILED 6-9-78

LAND: FEE & PATENTED STATE LEASE NO. PUBLIC LEASE NO. INDIAN N00-C-14-20-5296

DRILLING APPROVED: 6-8-78

SPUDED IN:

COMPLETED: PUT TO PRODUCING:

INITIAL PRODUCTION:

GRAVITY A.P.I.

GOR:

PRODUCING ZONES:

TOTAL DEPTH:

WELL ELEVATION:

DATE ABANDONED: 3-24-80 LOCATION ABANDONED- WELL NEVER DRILLED

FIELD: Wildcat 3/86

UNIT:

COUNTY: San Juan

WELL NO. Navajo #2

API NO: 43-037-30444

LOCATION 660' FT. FROM ~~XX~~ (S) LINE. 1980' FT. FROM ~~XX~~ (W) LINE. SE SW 1/4 - 1/4 SEC. 4

TWP.	RGE.	SEC.	OPERATOR	TWP.	RGE.	SEC.	OPERATOR
40S	25E	4	SANCHEZ-O'BRIEN PETROLEUM				

FIELD NOTATIONS

Entered in NID File ..... ✓  
Location Map Pinned ..... ✓  
Card Indexed ..... ✓

Checked by Chief .....  
Approval Letter .....  
Disapproval Letter .....

COMPLETION DATA:

Date Well Completed .....  
OW..... WW..... TA.....  
GW..... OS..... PA.....

Location Inspected .....  
Bond released  
State or Fee Land .....

LOGS FILED

Driller's Log.....  
Electric Logs (No.) .....  
E..... I..... Dual I Lat..... GR-N..... Micro.....  
BHC Sonic GR..... Lat..... MI-L..... Sonic.....  
CBLog..... CCLog..... Others.....

2-10-91  
JLC

14

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.  
NOO-C-14-20-5296

6. IS APPLICANT AN ALLOTTEE OR TRIBE NAME  
Navajo

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME  
Navajo

9. WELL NO.  
2

10. FIELD AND POOL, OR WILDCAT  
Wildcat

11. SEC. T. R. M. OR BLM. AND SURVEY OR AREA  
Section 4, T40S, R25E

12. COUNTY OR PARISH  
San Juan

13. STATE  
Utah

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*  
14 miles northeast of Aneth, Utah

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  
1280

17. NO. OF ACRES ASSIGNED TO THIS WELL  
80

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

19. PROPOSED DEPTH  
6300

20. ROTARY OR CABLE TOOLS  
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
5217' GR

22. APPROX. DATE WORK WILL START\*  
March 1, 1978

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17-1/2"	13-3/8" H-40	48#/ft.	500	250 sx. class "B" w/2% CaCl
8-5/8"	5-1/2" New K-55	15.5 & 17.0 #/ft.	6300	250 sx. 50-50 Pozmix w/2% gel, 10% salt, 75% CFR-2, 8% Halad-

We propose to drill a well to 6300' to test the Desert Creek Formation and any zone of significance. If productive, we will case as shown and complete. If dry, we will P&A as per USGS and State of Utah requirements.

*Accepted*  
*Drilled*  
*Accepted*  
*For*



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 K. R. Gordon TITLE LeClair-Westwood, Inc., Agent  
Production Engineer

DATE: 11-28-77

(This space for Federal or State office use)

PERMIT NO. 43-037-30444 APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_

CONDITIONS OF APPROVAL, IF ANY:

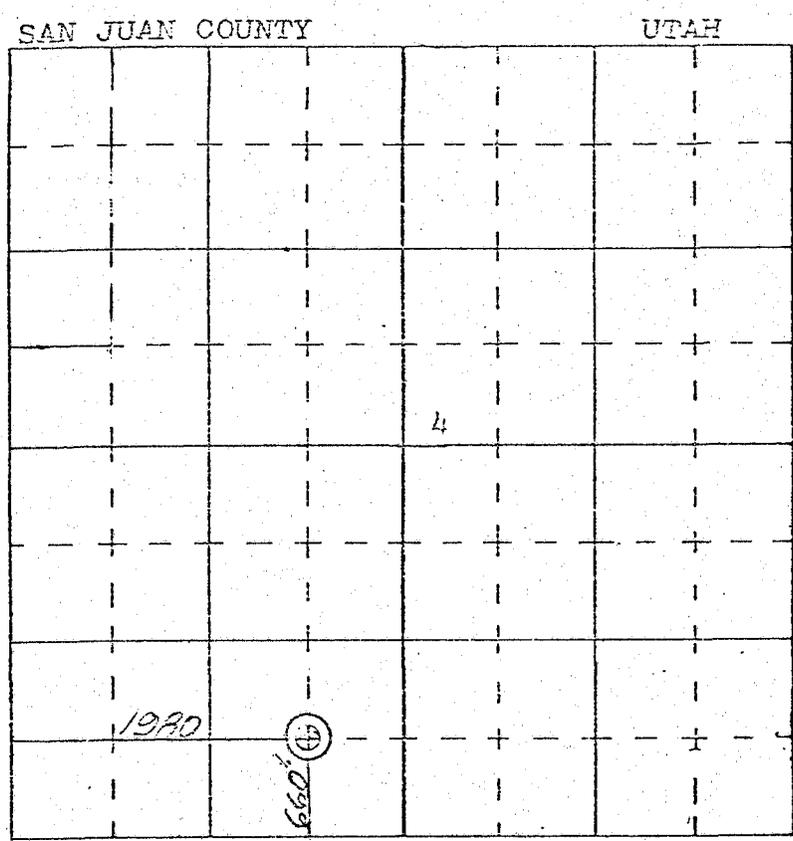
COMPANY SANCHEZ-O'BRIEN

LEASE \_\_\_\_\_ WELL NO. 2

SEC. 4 T. 40 SOUTH R. 25 EAST S.L.M.

LOCATION 660 FEET FROM THE SOUTH LINE  
1980 FEET FROM THE WEST LINE

ELEVATION 5217



SCALE—4 INCHES EQUALS 1 MILE

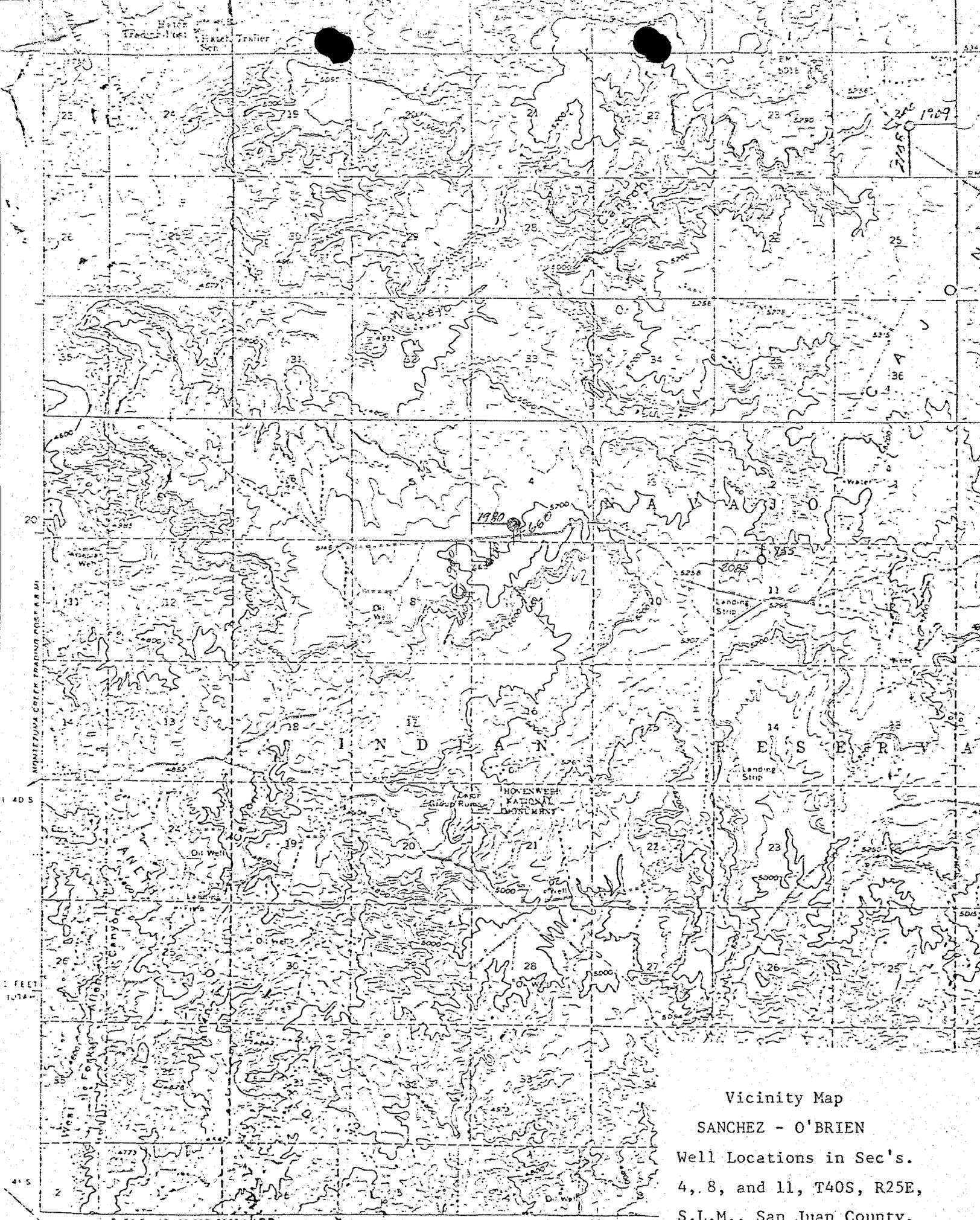
THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTE OF ACTUAL SURVEYS MADE BY ME UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

SEAL:

*James P. Leese*  
Registered Land Surveyor.  
James P. Leese  
Utah Reg. #1472

SURVEYED 29 October 1977





Vicinity Map

SANCHEZ - O'BRIEN

Well Locations in Sec's.  
4, 8, and 11, T40S, R25E,  
S.L.M., San Juan County,  
Utah

Scale: 1" = 1 Mile

4158 IV  
(MONTEZUMA)

4135

4134

20'

MONTEZUMA CREEK TRADING POST 518 MI

T 40 S

4129

4128

230 000 FEET  
(UTAH)

4126

4125

T 41 S

109° 15'

2 660 000 FEET (UTAH)

659

660

661

662

663

664

665

(ANETH) 4158 II

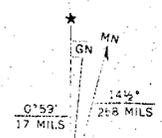
SCALE 1:62 500

Mapped, edited, and published by the Geological Survey  
 Control by USGS and USC&GS

Topography from aerial photographs by photogrammetric methods  
 Aerial photographs taken 1955. Field check 1958

Polyconic projection. 1927 North American datum  
 10,000-foot grids based on Utah coordinate system, south zone  
 and Colorado coordinate system, south zone  
 1000-meter Universal Transverse Mercator grid ticks,  
 zone 12, shown in blue

Dashed land lines indicate approximate locations  
 Unchecked elevations are shown in brown



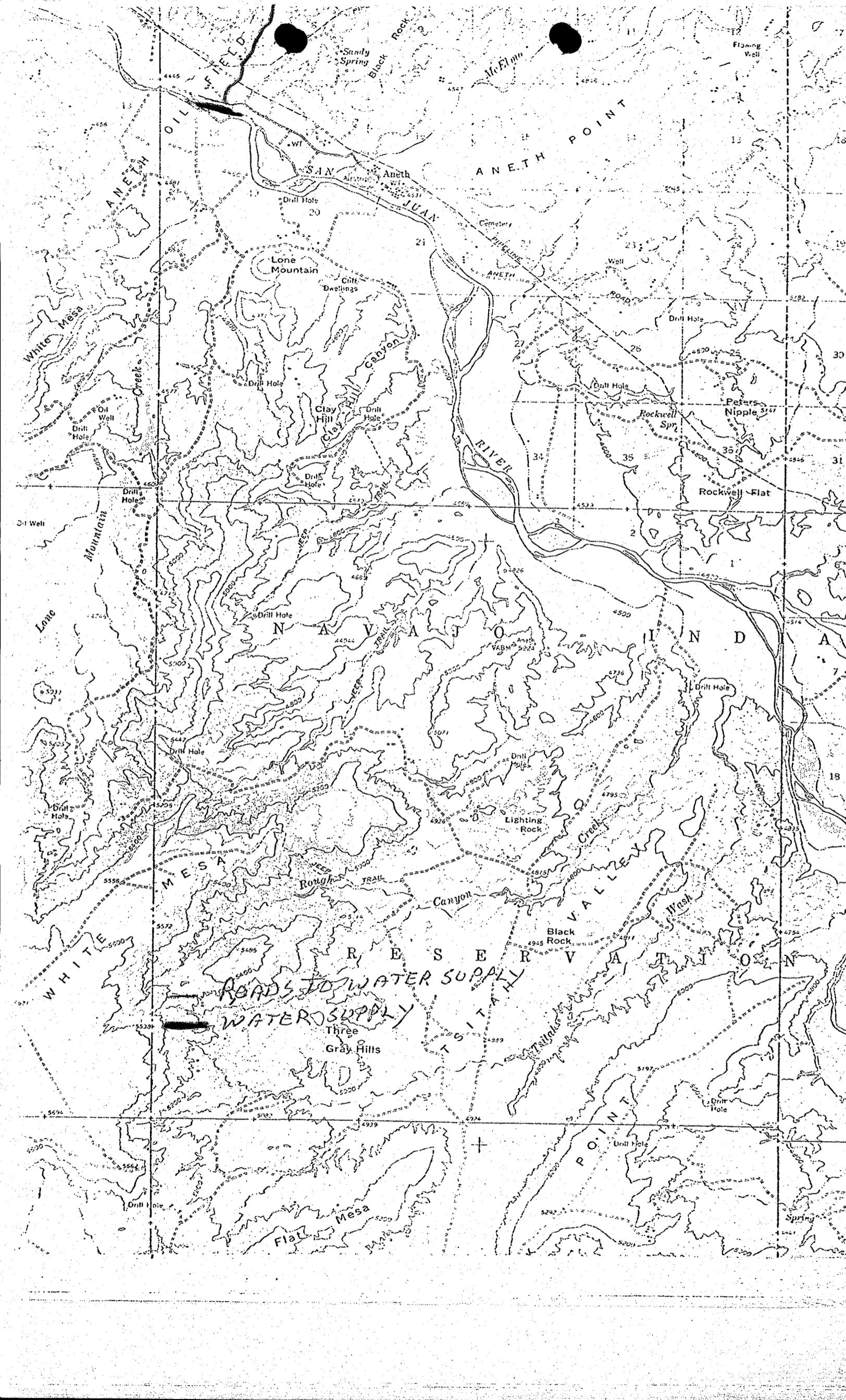
UTM GRID AND 1958 MAGNETIC NORTH  
 DECLINATION AT CENTER OF SHEET



CONTOUR INTERVAL 40 FEET  
 DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH THE STATE MAP ACT  
 FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER 25, CO.  
 A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS

MESA VILLAGE  
 4158 III



ANETH OIL FIELD

ANETH POINT

JUAN RIVER

White Mesa

Lone Mountain

Clay Hill

Rockwell Spr

Peters Nipple

Rockwell Flat

NAVJO INDIAN

WHITE MESA

Three Gray Hills

ROADS TO WATER SUPPLY  
WATER SUPPLY

Black Rock

WHITE MESA

Flat Mesa

POINT

APPLICATION FOR APPROVAL OF OPERATIONS

(NTL-6)

SANCHEZ-O'BRIEN PETROLEUM GROUP  
LeCLAIR-WESTWOOD, INC., AGENT

NAVAJO #2

SE SW SECTION 4, T40S, R25E  
SAN JUAN COUNTY, UTAH

I. General Statement of Environmental Impact

We propose to drill the subject well to a depth of 6300' to test the Desert Creek 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, 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 diverted.

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.

## II. Drilling Operations

### A. Preliminary Environmental Review

Our letter, dated October 19, 1977, was sent to District Engineer in Farmington, New Mexico and Bureau of Indian Affairs in Window Rock, Arizona. 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) Morrison Formation
- (4) See rig inventory, attached.
- (5) 6300'
- (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.

The pressure control equipment will be a 10" Shaffer LWS 3000 psi working pressure hydraulic blow out preventer. Daily check of blow out preventer equipment will be made and reports made 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. This general area has sufficient history to make a reasonably accurate prognosis. Hazards of a gaseous nature can be handled by the equipment spelled out in (10) above.
- (14) This project can start upon approval and should require approximately 45 days duration.
- (15) No additional comments.

### III. Multi-point Surface Use and Operations Plan

As a general policy, it is the intention of the operator and his representative 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 - See maps, attached. 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.

A-2 Planned Access Roads - No new roads are planned but approximately the last 600 feet (north) from the main road to the location (as shown in blue on map). The other access roads (existing) are shown. No new cuts, fills or culverts will be required. There are no fences to be cut or cattleguards to be set. No surfacing materials will be needed to be hauled to this location. Approximately 600 feet of road will be centerline flagged from the main road south to the location.

A-3 Location of Existing Wells - See map attached.

A-4 Location of Tank Batteries, Production Facilities, and Production, Gathering and Servicing Lines - A. Tank battery and heater treater are located on the drill site location. There are two 400 barrel tanks and a 6' x 20' heater treater. All flow lines are buried.

B-4. See map and plat(s) for location of proposed tank battery if well is productive. See figure 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 preparations.

C-4. Any disturbed areas no longer needed will be returned to their original contours and reseeded.

A-5 Location and Type of Water Supply - Drilling water will be supplied from the San Juan River west of the location (see map). State water permits in this regard have been previously secured by water hauler (Northwest Carriers, Inc., Farmington, New Mexico). No new roads or permanent lines will be required.

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, 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 (Coleman Drilling Co. Rig #2) attached. There will be approximately 6 feet of cut and fill. At this present time, there appears to be no reason to contemplate lining of earthen pit.

A-10 Plans for Restoration of the Surface - The surface of the land will be restored by stockpiling any growing grasses or weeds or sods, then re-sodding those areas as required, when drilling equipment has been removed. Where sodding may prove impractical, re-seeding will be employed or required.

Approximately 6 feet of cut and fill is expected. Drainage ditches will be routed around the high side of the location during drilling operations and also if the well is productive. If the well is a dry hole, the location will be reshaped to its original topography. 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 clean-up scheduling (other than above) will be dependent upon weather and moisture content of soil. In no case will such clean-up exceed six months.

A-11 Other Information - The topography of the subject area is basically gentle rolling hills and the soil is sandy. Vegetation is sparse and primarily weed-grasses and sage brush. No pronounced geological (surface or subsurface) features exist. No significant water exists in proximity to this location. There is an archeological site approximately 200 feet west of the edge of the drilling pad. As stated earlier, there will be about 6 feet of cut and fill. Surface ownership is recorded as belonging to the following:

Navajo Indian Tribe

Window Rock, Arizona

Mr. Charles Morrison of the Navajo Land Administration in Window Rock, Arizona has been contacted and is in agreement with this program.

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

Sanchez-O'Brien Petroleum Group  
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 drill site and access route; that I am familiar with the conditions which previously 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 Sanchez-O'Brien Petroleum Group and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

Nov 28, 1977

Date

W. H. Leach, Jr.

Name and Title

, Agent

IV. Environmental Analysis Requirements

Previously requested.

V. Approval of Subsequent Operations

Not requested at this time.

VI. Agreement for Rehabilitation of Privately-Owned Surface

Not applicable to this request.

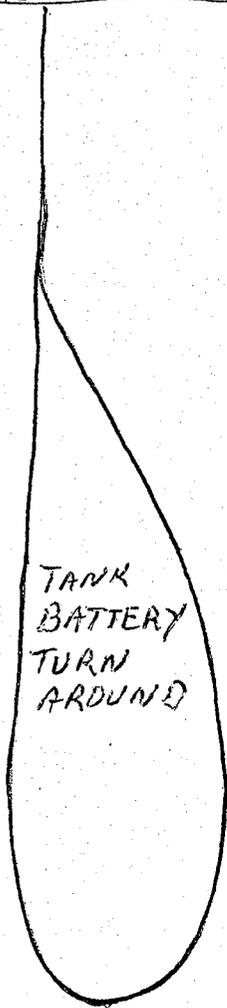
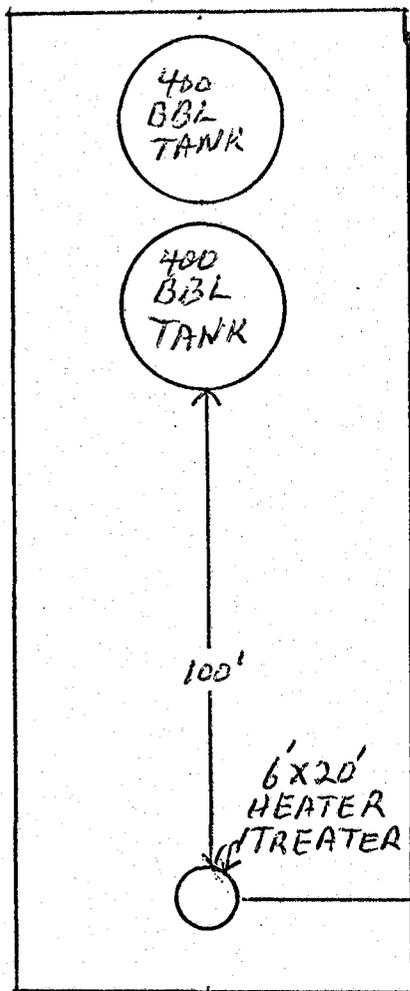
VII. Well Abandonment

Not required at this time.

VIII. Water Well Conversion

Not applicable to this request.

EXISTING ROAD



KN



SRIM  
PIT  
10'x10'

SANCHEZ-O'BRIEN  
NAVAJO #2  
TANK BATTERY LAYOUT

COLEMAN DRILLING CO.

P. O. BOX 1915

FARMINGTON, N. M. 87401

PHONE 505 / 325-6892

DRILLING RIG INVENTORY

RIG # 2

RATED DEPTH CAPACITY 8,000 FEET WITH 4 1/2" DRILL PIPE

DERRICK: 127' LEE C. MOORE W/440,000 HOOK LOAD CAPACITY

SUBSTRUCTURE: LEE C. MOORE - 13' K.B.

DRAWWORKS: H-40 D IDECO

ENGINES: 2 EACH V-8 DETROIT DIESEL

MUD PUMPS: IDECO MM600 W/CATERPILLER D-379TA      AUXILIARY MUD PUMP  
                  555 MAX. HP AT 1100 RPM                   GARDNER-DENVER F X Z  
                  500 INT. HP AT 1100 RPM                   W/343TAC CATERPILLER  
                  420 CONT. HP AT 1100 RPM

DESILTER: PIONEER 8 CONE      CAPACITY 400 GPM

MUD TANK: 1 EACH 500 BBL. (42 GAL PER BBL.) WORKING CAPACITY

WATER STORAGE: 1 EACH 480 BBL. (42 GAL PER BBL.)

GENERATORS: 1 EACH 90 KW AC AND 1 EACH 30 KW AC

ROTARY TABLE: 23" IDECO

TRAVELING BLOCK: NATIONAL 430 - 150 TONS W/COMB. HOOK

SWIVEL: OILWELL PC 225

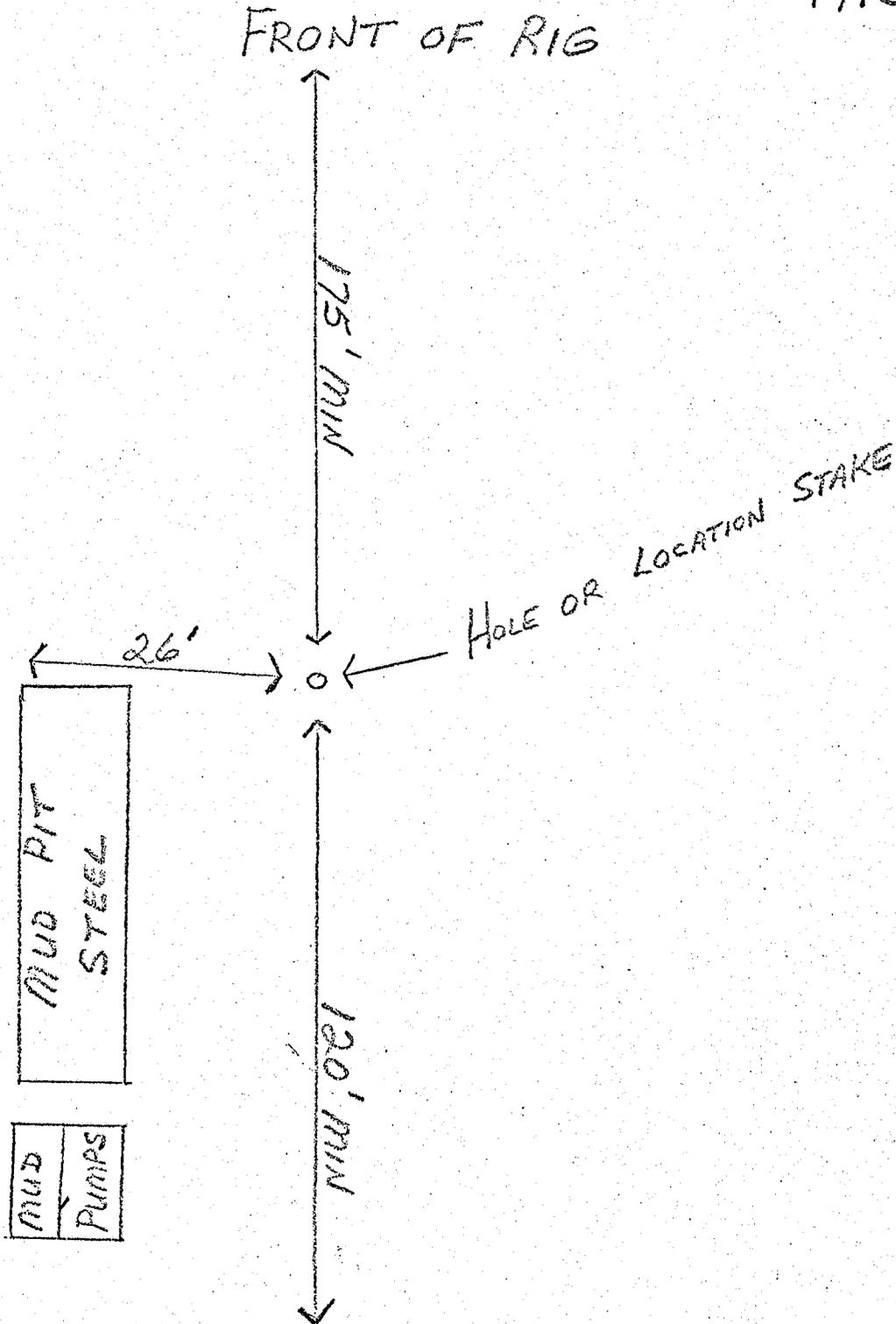
BLOW OUT PREVENTER: 10" SHAFFER LWS 3000 WP HYDRAULIC

SPECIAL: CROWN-O-MATIC  
          SATELITE AUTOMATIC DRILLER  
          TONG TORQUE GAUGE  
          RATE OF PENETRATION RECORDER  
          SHALE SHAKER  
          TRAILER HOUSE  
          TWO-WAY RADIO

JUNE 1977

COLEMAN DRILLING CO.  
P. O. BOX 1915  
FARMINGTON, N. M. 87401  
PHONE 505 / 325-6892

RIG # 2



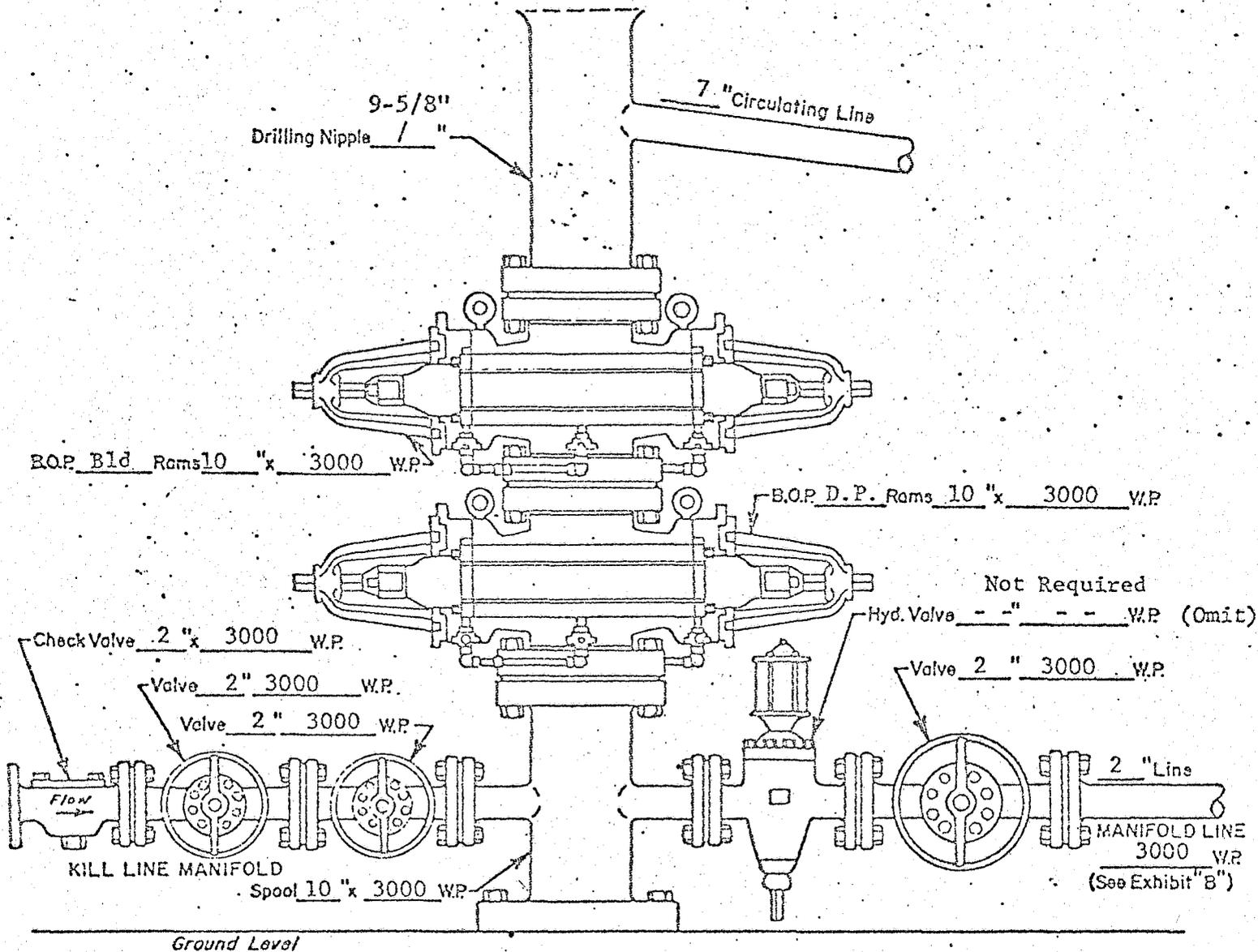
RESERVE PIT 150' X 150' X 5' DEEP

COLEMAN DRILLING CO.

WELL NAME: NAVAJO # 3 AND NAVAJO # 4

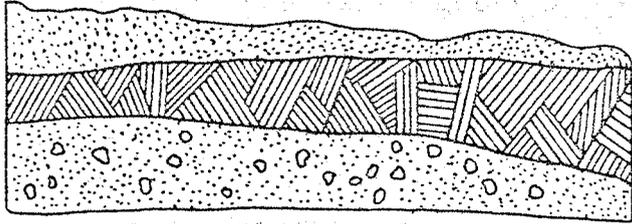
LOCATION: NE NW SECTION 11, T40S, R25E

SE NE SECTION 8, T40S, R25E



WELL HEAD B.O.P.  
3000 # W.P.

Hydraulic



*william g. hare*

consulting geologist

Suite 1585  
1600 Broadway  
Denver, Colorado 80202

Office 303-861-9275  
Home 303-985-4714

WELL PROGNOSIS

OPERATOR: Sanchez-O'Brien Petroleum Group -  
Dyco Petroleum Corporation

WELL: #2 Navajo

LOCATION: <sup>SE SW</sup>  
~~C NW-NW~~ 4-T40S-R25E  
San Juan County, Utah

ELEVATION: 5200 GL  
5210 KB

SURFACE PIPE: Approximately 250' of 13 3/8" surface casing

FORMATION TOPS: The following tops are calculated from an  
estimated elevation:

	<u>Depth</u>	<u>Datum</u>
Bluff SS	785	
Entrada	1035	
Carmel	1150	
Navajo	1180	
Kayenta	1525	
Wingate	1610	
Chinle	1910	
Shinarump	2845	
Moenkopi	2885	
DeChelly	3060	
Organ Rock	3125	

	<u>Depth</u>	<u>Datum</u>
Hermosa	4945	
Ismay	5845	
Desert Creek	6035	-825
Total Depth	6160	

#### DRILLING PROGRAM:

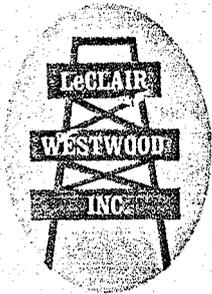
1. Catch 30' samples from 3000' to 5600'; 10' samples from 5600' to TD. Tie samples in bundles of ten, and store in dry place.
2. Mud up at 2600' with 9.3# to 9.4# mud with viscosity at 36°. Maintain water loss at 10 to 12 cc. At top of Ismay or approximately 5800', reduce water loss to 8 cc. At total depth and prior to logging, bring viscosity up to 45°.
3. Drill stem testing will be done at the discretion of the well-site geologist.
4. Strap drill pipe before all testing and logging.
5. Call well-site geologist, Clint White, when well spuds and at 5600'.

#### LOGGING PROGRAM:

1. Run Dual Induction-Laterolog from surface to TD.
2. Run Compensated Neutron-Formation Density Log from surface to TD.

#### Telephone Numbers:

Clint White:	303-247-1600
Bill Hare:	Office: 303-861-9275
	Home: 303-985-4714
Robert Gutierrez:	Office: 512-722-8092
	Home: 512-724-8547
Dyco Petroleum Corp. -	
Carroll Rouse:	303-893-1062
Apexco, Inc.:	303-861-1305



**LeCLAIR - WESTWOOD, INC.**

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

October 19, 1977

Bureau of Indian Affairs  
U. S. Department of Interior  
Navajo Area Office  
Window Rock, Arizona 86515

Attention: Mr. Thomas Lynch

RE: Federal No. N00-C-14-20-5296  
Sanchez-O'Brien  
LeClair-Westwood, Inc., Agent  
SE SW Section 4, T40S, R25E  
San Juan County, Utah

Gentlemen:

In compliance with rule A. Preliminary Environmental Review of Part II (Drilling Operations) of your Approval of Operations procedure, please find enclosed a topographic map of the subject area with the proposed location stipulated.

We ask your early consideration and approval of this site.

Yours very truly,

LeCLAIR-WESTWOOD, INC.

W. H. Leach, Jr.  
President

WHL:blw

CC: U. S. Geological Survey  
William G. Mare  
Robert Gutierrez  
Brian O'Brien



# THE NAVAJO NATION

WINDOW ROCK, NAVAJO NATION (ARIZONA) 86515

PETER MACDONALD  
CHAIRMAN, NAVAJO TRIBAL COUNCIL

WILSON C. SKEET  
VICE CHAIRMAN, NAVAJO TRIBAL COUNCIL

M-E-M-O-R-A-N-D-U-M

TO : Ken Gordon,  
LeClair - Westwood Inc., 388 Denver Club Building  
Denver, Colorado 80202

FROM : Richard A. Goddard, Coordinator  
Cultural Resource Management Program  
c/o National Park Service  
PO Box 539, Farmington, New Mexico 87401

SUBJECT : Archaeological Report

Attached is a copy of the report of our recent archaeological field work. This report was mailed from our office to George West, Supervisory Archaeologist, Southwest Cultural Resources Center on November 14, 1977.

This report does not constitute an archaeological clearance. Such clearance must be obtained from the Southwest Cultural Resources Center.

Please contact this office if you have any questions. (505) 325-5036

*Richard A. Goddard*

Richard A. Goddard,  
Coordinator

ARCHAEOLOGICAL CLEARANCE SURVEY REPORT

for

three drill holes in  
San Juan County, Utah

11 November 1977

Field Survey conducted by  
Malcolm K. Sender, Supervisory Archaeologist

Submitted by  
Richard A. Goddard, Archaeological Coordinator  
Cultural Resource Management Program  
C/O National Park Service  
P.O. Box 539  
Farmington, New Mexico 87401

To  
George G. West, Archaeologist  
Southwest Cultural Resources Center  
Southwest Region  
P.O. Box 728  
Santa Fe, New Mexico 87501

for  
Ken Gordon  
LeClair-Westwood Inc.  
388 Denver Club Building  
Denver, Colorado 80202

In response to a telephone request from Ken Gordon, Le Clair-Westwood, Inc., an archaeological survey for three drill hole sites was conducted on November 9, 1977. The locations of these drill holes are: a) Navajo #2 Southeast quarter of Southwest quarter, Section 4 Township 40 south, Range 25 east, b) Navajo #3 Southeast quarter of Northeast quarter of Northwest quarter, Section 11 Township 40 south, Range 25 east, and c) Navajo #4 Southeast quarter of Northeast quarter, Section 8, Township 40 south, Range 25 east. All are in San Juan County, Utah. The survey was conducted under Federal Antiquities Act Permit No. 77-AZ-070, expiration date of 21 March 1979 and Navajo Tribal consent to issuance of Antiquities Act Permit No. 33, expiration date of 09 March 1979.

The proposed construction at each site is to include a drill hole, an access road, a tank battery and an overflow pit. The entire drill pad requires an area of approximately 300 feet in diameter.

#### S U R V E Y M E T H O D

The proposed use area for each drill hole was surveyed by a three man archaeological crew headed by Malcolm K. Sender, Archaeologist from the Cultural Resource Management Program of the Navajo Tribe. The method of survey was to make several sweeps back and forth over the proposed area with men spaced about twenty to thirty feet apart. The center stake at each drill hole was used as a pivot point while the dimensions of use area was approximated. The survey continued somewhat beyond the proposed use area to be certain that no adverse impact to cultural resources

would occur.

D R I L L H O L E - N A V A J O # 2

Navajo #2, located in the Southeast quarter of Southwest quarter, section 4 , Township 40 south, Range 25 east, lies in a gently rolling grassland terrain on top of a mesa. The land slopes from one degree to four degrees (downslope to the west). Drainage is generally to the Northwest into Navajo Canyon, about 1.2 kilometers away. There are no visible rock outcrops in or visible from the investigated area (the soil is also devoid of rock). The soil has a reddish clay base and supports a vegetation of sagebrush, snakeweed, tumbleweed, and wild grasses. The soil is relatively stable and there is little erosion.

One archaeological site (C-42-2) is located in the vicinity of this drill hole in the Southwest quarter of Southeast quarter of section 4. This site is a sherd and lithic scatter with a few (about ten) semi-shaped blocks interspersed. No structural or other features could be ascertained except for a nearly check dam, probably associated with the site, about 35 meters to the southwest. The site covers an area of about ten meters in diameter. Two shaped (pecked and ground) sandstone slabs are included among the rubble. Artifact density is low but includes Black on white sherds (late PIII to early PIII), corrugated sherds, and chert and quartzite flakes.

It is felt by the supervisory archaeologist that this site represents, at most, the remains of an early PIII field house. Depth on the site is possible and it could yield some significant data. The easternmost edge of this site lies 200 feet from the

proposed center of the drill pad. Since the site also lies on a slope of four degrees, it appears to be out of the way of drilling activity. The access road for this site approaches the pad from the south and will not be at all close to the site. On this basis, clearance for Navajo #2 is recommended as long as the proposed drill hole location is not moved.

#### D R I L L H O L E - N A V A J O # 3

Navajo #3, located in the Southeast quarter of Northeast quarter of Northwest quarter of Section 11, is situated in a flat grassy area on top of a rocky outcrop. The slope of the terrain ranges from zero degree to one degree and drainage is mainly to the west and ultimately into Navajo Canyon. The clay base soil supports a vegetative community of sagebrush, snakeweed, tumbleweed and wild grasses.

Only one site (C-42-3) was located in the area, although there are lithics sparsely scattered over the entire flat top of the rock outcrop. This site is a sherd and lithic scatter (nintynine per cent lithic and one per cent ceramics) covering an area of about twenty meters in diameter. No features were located, however depth is possible. The three sherds which were found belong to the same pot and date to early Pueblo III. The artifact density for the site area is a maximum of fourteen per square meter. A source for the majority of the lithic material on the site (a greenish coarse grained chert) can be seen eroding out of a rock outcrop about one kilometer to the north.

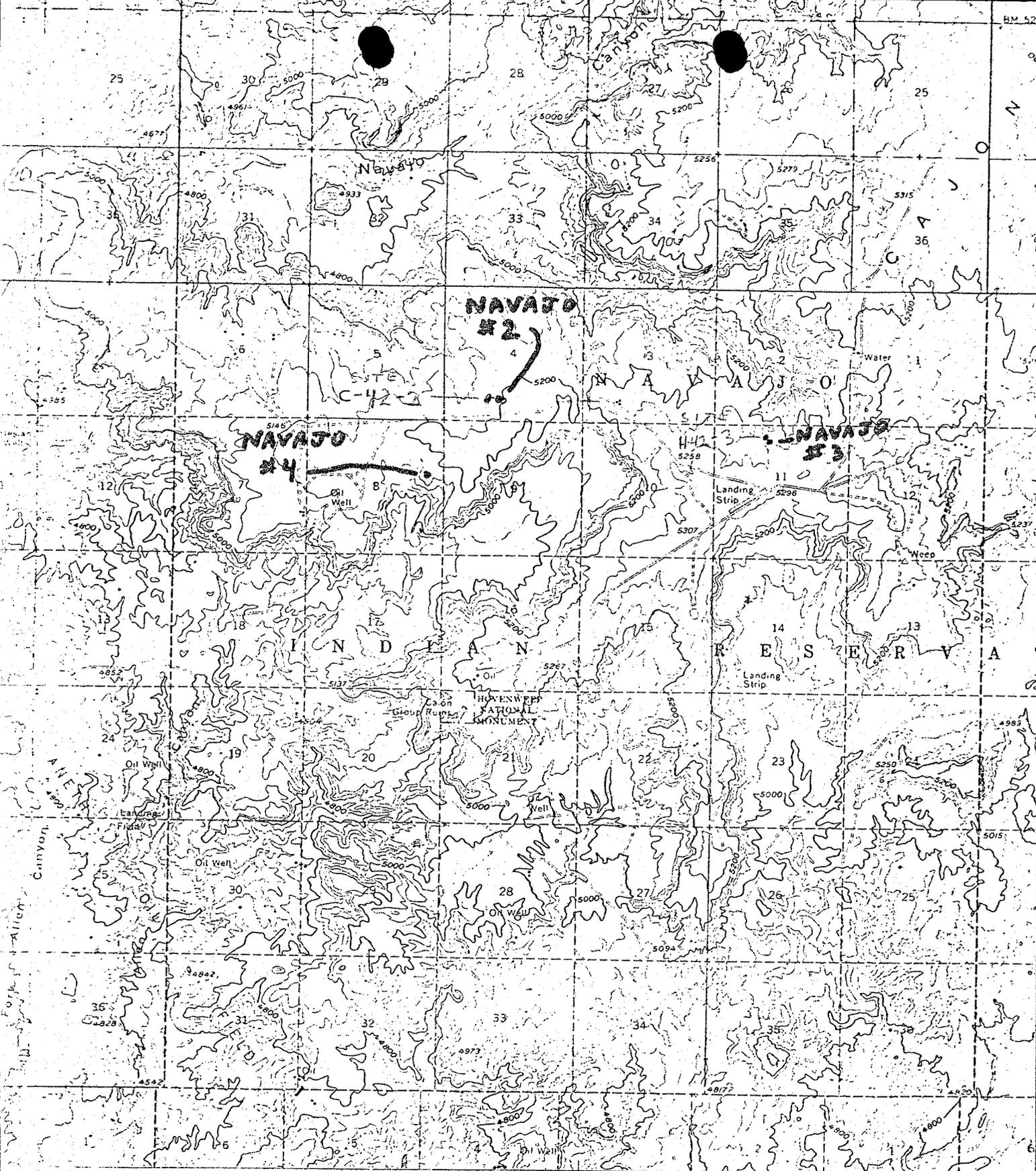
As originally staked, the drill site would have overlapped with site C-42-3. In order to avoid the expenses of test excavation, Ken Gordon moved the center stake so that the drill pad will not encroach upon the site. He assured us that the pad will be laid out with the overflow pit lying no closer than five to eight meters from the site's southern edge. The fence which usually surrounds the pit will prevent any vehicular or human access to the site. The access road to the site is a pre-existing dirt road which does not affect any cultural resources.

If the drill site is laid out as stated by Mr. Gordon, site C-42-3 will not be endangered. The site itself could only yield a minimum of significance at best and should be tested only if disturbance is eminent. Therefore, it is felt that if Mr. Gordon follows the precautions stated above, clearance is recommended.

#### D R I L L H O L E - N A V A J O # 4

Navajo #4, located in the Southeast quarter of Northeast quarter of Section 8, is situated on a southerly facing bench overlooking Allen Canyon. The slope of the immediate area is minimal but drops to about a ten degrees to fourteen degrees slope only 150 feet from the center point of the drill pad. The clay based sandy soil supports a vegetative community of sagebrush, snakeweed, narrow-leaf yucca, and wild grasses. Drainage is into Allen Canyon.

There were no cultural resources being impacted by either the proposed drill pad or the access road for it. Therefore, clearance for this drill site is recommended.



Published by the Geological Survey

Scale 1:62500

ANETH 4158 II

CONTOUR INTERVAL 30 FEET

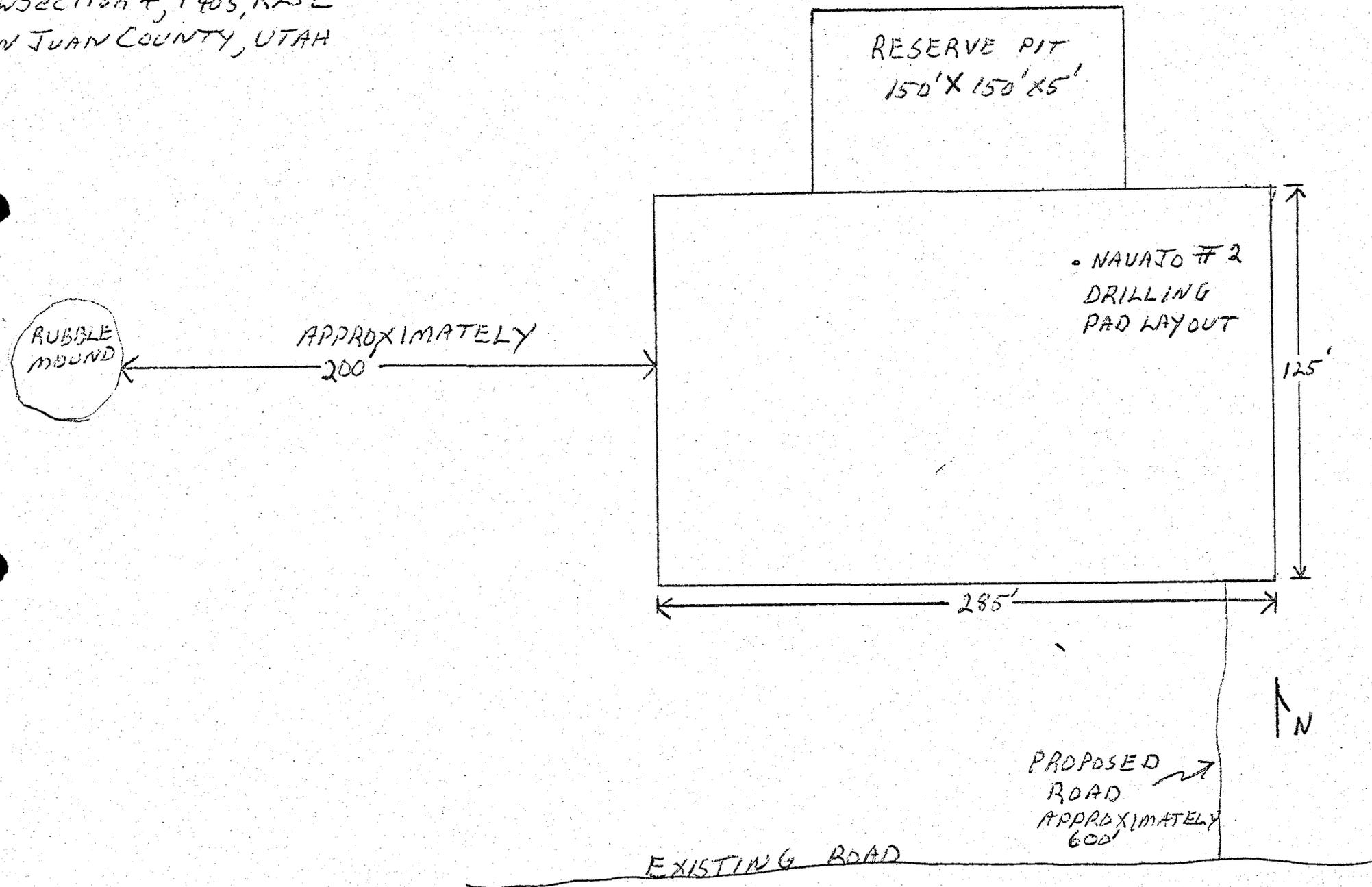
DATUM IS MEAN SEA LEVEL

258 MILES

17 MILES

Scale bar showing 0 to 258 miles and 0 to 17 miles.

SANCHEZ-O'BRIEN  
NAVATO #2  
DRILLING PAD LAYOUT  
SESW Section 4, T40S, R25E  
SAN JUAN COUNTY, UTAH



NOT TO SCALE

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING

\*\* FILE NOTATIONS \*\*

Date: June 7  
Operator: Sanchez-O'Brien Pet Group  
Well No: Nalgis # 2  
Location: Sec. 4 T. 40s R. 25E County: San Juan

File Prepared:  Entered on N.I.D.:   
Card Indexed:  Completion Sheet:

API NUMBER: B-031-30444

CHECKED BY:

Administrative Assistant [Signature]  
Remarks: No other well - Sec. 4  
Petroleum Engineer [Signature]  
Remarks:  
Director 7  
Remarks:

INCLUDE WITHIN APPROVAL LETTER:

Bond Required:  Survey Plat Required:   
Order No.  Surface Casing Change   
to \_\_\_\_\_

Rule C-3(c), Topographic exception/company owns or controls acreage within a 660' radius of proposed site

O.K. Rule C-3  O.K. In \_\_\_\_\_ Unit

Other:

Letter Written/Approved

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE\*  
(Other instructions on reverse side)

Form Approved  
Budget Bureau No. 42-R1424  
5. LEASE DESIGNATION AND SERIAL NO.

N00-C-14-20-5296

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

Navajo

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME

Navajo

9. WELL NO.

#2

10. FIELD AND POOL, OR WILDCAT

Wildcat

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA

Section 2, T40S, R25E

12. COUNTY OR PARISH 13. STATE

San Juan

Utah

1. OIL WELL  GAS WELL  OTHER

2. NAME OF OPERATOR

Sanchez-O'Brien Petroleum Group & 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.\* See also space 17 below.)  
At surface

SW SE Section 2, T40S, R25E

14. PERMIT NO.

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

5217 GR

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF

FRACTURE TREAT

SHOOT OR ACIDIZE

REPAIR WELL

(Other)

FULL OR ALTER CASING

MULTIPLE COMPLETE

ABANDON\*

CHANGE PLANS

SUBSEQUENT REPORT OF:

WATER SHUT-OFF

FRACTURE TREATMENT

SHOOTING OR ACIDIZING

(Other)

REPAIRING WELL

ALTERING CASING

ABANDONMENT\*

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

We propose to drill 500' of 12-1/4" hole to set 500' of 9-5/8" 36#/ft., H-40, ST&C csg. Originally we had planned to drill 500' of 17-1/4" hole & set 500' of 13-3/8", 48#/ft., H-40, ST&C csg.



APPROVED BY THE DIVISION OF OIL, GAS, AND MINING

DATE: June 2, 1978

BY: Ph. [Signature]

18. I hereby certify that the foregoing is true and correct

SIGNED

[Signature]

TITLE

LeClair-Westwood, Inc., Agent

Production Engineer

DATE

April 27, 1978

(This space for Federal or State office use)

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

June 8, 1978

Sanchez-O'Brien Petroleum Group  
& LeClair-Westwood, Inc.  
388 Denver Club Building  
Denver, Colorado 80202

Re: Well No. Navajo #2  
Sec. 2, T. 40 S, R. 25 E,  
San Juan County, Utah

Gentlemen:

Insofar as this office is concerned, approval to drill the above referred to well is hereby granted in accordance with Rule C-3, General Rules and Regulations.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

PATRICK L. DRISCOLL - Chief Petroleum Engineer  
HOME: 582-7247  
OFFICE: 533-5771

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling.

Further, it is requested that this Division be notified within 24 hours after drilling operations commence, and that the drilling contractor and rig number be identified.

The API number assigned to this well is 43-037-30444.

Very truly yours,

CLEON B. FEIGHT  
Director



SCOTT M. MATHESON  
Governor

OIL, GAS, AND MINING BOARD

GORDON E. HARMSTON  
Executive Director,  
NATURAL RESOURCES

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES

CHARLES R. HENDERSON  
Chairman

CLEON B. FEIGHT  
Director

DIVISION OF OIL, GAS, AND MINING  
1588 West North Temple  
Salt Lake City, Utah 84116  
(801) 533-5771

JOHN L. BELL  
C. RAY JUVELIN  
THADIS W. BOX  
CONSTANCE K. LUNDBERG  
EDWARD T. BECK  
E. STEELE McINTYRE

February 7, 1980

~~Sanchez-O'Brien Petroleum~~ → 861-9275  
~~388 Denver Club Bldg.~~  
~~Denver, Colo. 80202~~

1600 Broadway  
Denver Suite 1585  
80202

RE: Well No. Navajo #2  
Sec. 2, T. 40S, R. 25E,  
San Juan County, Utah

Gentlemen:

In reference to above mentioned well(s), considerable time has gone by since approval was obtained from this office.

This office has not recieved any notification of spudding. If you do not intend to drill this well (these wells), please notify this Division. If spudding or any other activity has taken place, please send necessary forms.\* If we do not hear from your company within fifteen (15) days, we will assume you do not intend to drill this well, and action will be taken to terminate the application. If you plan on drilling this well at a later date, please notify as such.

Your prompt attention to the above will be greatly appreciated.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

DEBBIE BEAUREGARD  
CLERK-TYPIST

March 18, 1980

Sanchez-O'Brien Petroleum  
1600 Broadway  
Suite 1585  
Denver, Colorado 80202

Re: Well No. Navajo #~~4~~  
Sec. 2, T. 40S, R. 25E.  
San Juan County, Utah

Gentlemen:

In reference to above mentioned well, considerable time has gone by since approval was obtained from this office.

This office has not received any notification of spudding. If we do not hear from your company within thirty (30) days, we will assume you do not intend to drill this well and we will terminate the application.

Your prompt attention to the above will be greatly appreciated.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

  
JANICE TABISH  
CLERK-TYPIST

March 27, 1980

Sanchez-O'Brien Petroleum  
Suite 1585  
1600 Broadway  
Denver, Colorado 80202

Re: Well No. 2 Navajo  
Sec. 4, T. 40S, R. 25E.  
San Juan County, Utah

Gentlemen:

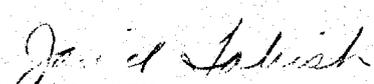
According to a letter dated 3-24-80, the above mentioned well was abandoned. This letter is to advise you that the Well Completion or Recompletion Report and Log is due and has not been filed with this office as required by our rules and regulations.

Please complete the enclosed Form OGC-3, in duplicate, and forward them to this office as soon as possible.

Thank you for your cooperation relative to the above.

Very truly yours,

DIVISION OF OIL, GAS, AND MINING

  
JANICE TABISH  
CLERK-TYPIST

SANCHEZ-O'BRIEN PETROLEUM CORPORATION

SUITE 270  
4544 POST OAK PLACE  
HOUSTON, TEXAS 77027  
AREA CODE 713  
629-9800

SUITE 1585  
1600 BROADWAY  
DENVER, COLORADO 80202  
AREA CODE 303  
861-9275

P.O. BOX 1337  
LAREDO, TEXAS 78040  
AREA CODE 512  
722-8092

March 24, 1980

Ms. Janice Tabish  
State of Utah  
Department of Natural Resources  
Division of Oil, Gas and Mining  
1588 West North Temple  
Salt Lake City, Utah 84116

Re: Well No. 2 Navajo  
T40S-R25E, Sec. *X4*  
San Juan County, Utah

**RECEIVED**  
MAR 26 1980

DIVISION OF  
OIL, GAS & MINING

Dear Ms. Tabish:

This letter is to advise that the location for the above-entitled well has been abandoned. Please excuse any inconvenience this delay in responding may have caused.

Sincerely,

SANCHEZ-O'BRIEN PETROLEUM  
CORPORATION

*W. G. Hare*

William G. Hare

WGH/lhs

SANCHEZ-O'BRIEN PETROLEUM CORPORATION

SUITE 270  
4544 POST OAK PLACE  
HOUSTON, TEXAS 77027  
AREA CODE 713  
629-9800

SUITE 1585  
1600 BROADWAY  
DENVER, COLORADO 80202  
AREA CODE 303  
861-9275

P.O. BOX 1337  
LAREDO, TEXAS 78040  
AREA CODE 512  
722-8092

April 3, 1980

Ms. Janice Tabish  
State of Utah  
Department of Natural Resources  
Division of Oil, Gas and Mining  
1588 West North Temple  
Salt Lake City, Utah 84116

RECEIVED  
APR 07 1980  
DIVISION OF  
OIL, GAS & MINING

Re: Well No. 2 Navajo  
T40S-R25E, Sec. 2  
San Juan County, Utah

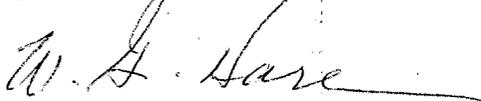
Dear Ms. Tabish:

As stated in our letter of March 24, 1980, the location for the above-entitled well was abandoned. The well was never drilled.

Should you have any questions regarding this matter, please do not hesitate to contact me.

Sincerely,

SANCHEZ-O'BRIEN PETROLEUM  
CORPORATION



William G. Hare

WGH/lhs