(May 1963)

(Other instructions on reverse side)

30-043-20835

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: NM-11757

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: —

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

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

7. UNIT AGREEMENT NAME: —

8. FARM OR LEASE NAME: CANDY BUTTE

2. NAME OF OPERATOR: HANSON OIL CORPORATION

9. WELL NO.: 3

3. ADDRESS OF OPERATOR: Post Office Box 1515, Roswell, New Mexico 88201

10. FIELD AND POOL, OR WILDCAT: Wildcat Entrada

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 660' FNL and 660' FWL
At proposed prod. zone: Sec. 8, T. 17 N., R. 2 W., NMPM

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 8, T. 17 N., R. 2 W.

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

12. COUNTY OR PARISH: Sandoval | 13. STATE: New Mexico

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	16. NO. OF ACRES IN LEASE	17. NO. OF ACRES ASSIGNED TO THIS WELL
660'	640	40
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	**19. PROPOSED DEPTH**	**20. ROTARY OR CABLE TOOLS**
None	4500'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 6633' G.L.

22. APPROX. DATE WORK WILL START*: November 15, 1979

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
18"	16" cond.	-----	10'	20 sx
12¼"	8-5/8"	24#	300'	350 sx
7-7/8"	5½"	15.5#	4500'	350 sx

It is proposed to drill the above captioned well to 4500' or a depth sufficient to test the Entrada formation.

If oil or gas is encountered in commercial quantities the well will be perforated and stimulated as conditions require.

B.O.P. will be used during drilling and completion operations.

APPROVED
SEP 25 1979
OIL CON. COM.
DIST. 3

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 A. J. Deans TITLE Vice-President, Production DATE 9-14-79

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

RECEIVED
SEP 21 1979
U. S. GEOLOGICAL SURVEY
DURANGO, COLO.

*See Instructions On Reverse Side

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
HANSON OIL CORPORATION	CANDY BUTTE	3

Unit Letter	Section	Township	Range	County
D	8	17N	2W	Sandoval

Actual Footage Location of Well:
660 feet from the West line and 660 feet from the North line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6633	ENTRADA	WILDCAT	40 Acres

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

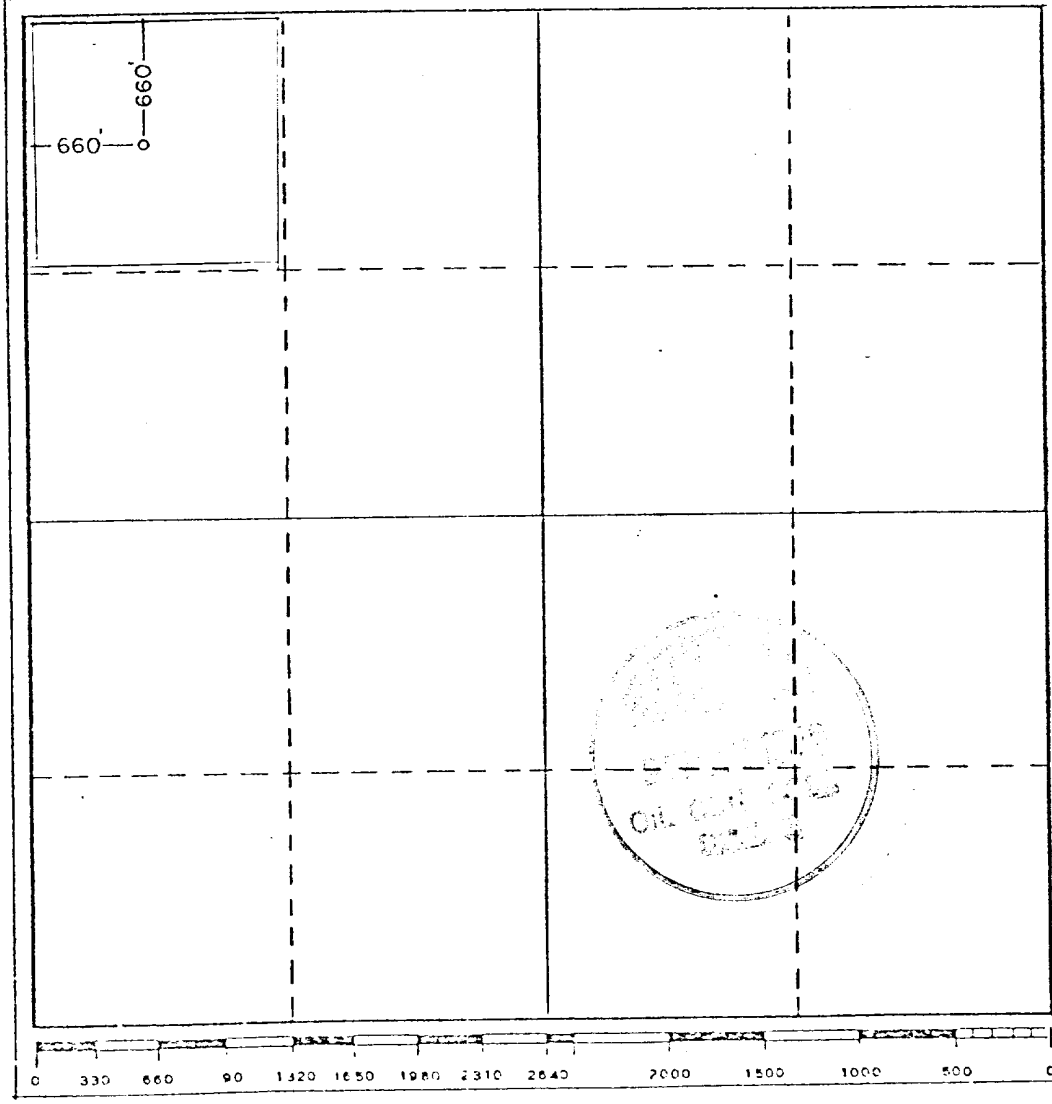
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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

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

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

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



CERTIFICATION

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

Name: Vice-President, Land

Position: Hanson Oil Corporation

Company: September 14, 1979

Date

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Aug 31 1979

Date Surveyed

George I Walla

Registered Professional Engineer and/or Land Surveyor

NM LS 6159

Certificate No.

SURFACE USE AND OPERATIONS PLAN

CANDY BUTTE #3

SANDOVAL COUNTY, NEW MEXICO

The following multipoint requirements and surface use plan is submitted for the subject well by Hanson Oil Corporation.

1. Existing Roads

A. Proposed well as staked. See surveyor's plat.

B. As shown, the planned well is approximately twenty-nine (29) miles Southeast of Cuba, New Mexico. To reach the planned well, take paved Highway 44 South out of Cuba for approximately eighteen (18) miles; at this point, turn Southwest on improved road and continue in a Southwesterly direction for approximately 3-3/4 miles to a crossroad; then turn North Northeasterly approximately three (3) miles to beginning of proposed access road ($SW\frac{1}{4}SW\frac{1}{4}$ Section 32-18N-2W); thence turn South on proposed access road 1-1/4 mile to proposed location as shown on Exhibit 1. Location is situated in the $NW\frac{1}{4}NW\frac{1}{4}$ of Section 8, T. 17 N., R. 2 W., N.M.P.M.. Proposed access road is approximately 1-1/4 miles in length and would be bladed and watered only until commercial production is established, at which time road would be topped with gravel.

C. Existing Roads: See Exhibit #1.

D. See Exhibit #1.

E. Not applicable

F. Existing roads will be bladed and watered as is necessary to maintain a useable road.

2. Planned Access Roads: See Exhibit #1.

1. Width: See Exhibit #5

2. Maximum grades: See Exhibit #5

3. Turnouts: See Exhibit #1

4. Drainage Design: See Exhibit #5

5. Culverts will be installed as per B.L.M. requirements.

6. Surfacing Material: All construction materials will be of local origin and no surface material will be disturbed except for the grading of the actual roads and location.

7. Gates or cattleguards will be used if fence cuts are made.

8. The planned access road has been center-line flagged.

3. Location of existing wells in a one-mile radius are shown on attached Exhibit #1.

(1) Water Wells: None
(2) Abandoned Wells: None
(3) Temporarily Abandoned Wells: None
(4) Disposal Wells: None
(5) Drilling Wells: None
(6) Producing Wells: None
(7) Shut-In Wells: None
(8) Injection Wells: None
(9) Monitoring or observation wells for other resources: None.

4. Location of Existing and/or Proposed Facilities:

A. There is no existing facility within a one-mile radius from location owned or controlled by Hanson Oil Corporation.

(1) Tank Batteries: None
(2) Production facilities: None
(3) Oil gathering lines: None
(4) Gas gathering lines: None
(5) Injection lines: None
(6) Disposal lines: None

B. In the event production is established, Hanson Oil Corporation will build a tank battery on the well pad.

(1) Proposed location of tank battery to be on well pad.
(2) Dimensions of facilities - See Exhibit #2.
(3) All construction material will be of local origin and no surface material will be disturbed except those necessary for the actual grading of well pad. Scoria or gravel will be from a private source.
(4) The entire tank battery will be surrounded by a 3' ditch and 2½' fire wall to prevent overflow spillage into surrounding drainage areas. The entire tank battery will then be fenced. Any pits left open will be flagged to protect water fowl if this precautionary measure is deemed necessary by Wildlife management.

C. Rehabilitation of disturbed areas:

If production is established, following completion of tank battery erection, necessary well producing equipment, etc., all pits with the exception of a flare pit, will be filled, after all fluids have been removed and the surrounding location leveled. Disturbed area no longer needed for operations will then be reseeded using as much topsoil as possible and utilizing seed types and quantities as recommended for this area by agronomist and the Bureau of Land Management. All reseeding will be done with a reasonable effort to establish as near as possible a growth of vegetation as previously existed. Reseeding will take place at the first opportunity following completion of well in accordance with the recommended seasonal seeding periods (late Spring). The unused disturbed area then will be fenced from time of reseeding until grass is established.

5. Location and Type of Water Supply

A. Water to be used in drilling the proposed well will be hauled from private sources.

B. Said water will be transported by truck over improved and proposed access road shown on Exhibit #1.

C. No water wells are planned to be drilled on the lease in connection with the drilling of the proposed well.

6. Source of Construction Materials

A. All construction material will be of local origin and no surface areas will be disturbed except for the actual grading of the road and drilling site.

B. No construction material will be moved from Federal or Indian land.

C. Materials such as sand, gravel and stone, if used, will be moved from a private source.

D. See Exhibit #1

7. Methods for Handling Waste Disposal

(1) Cuttings: Drill cuttings will be accumulated in the earthen reserve pit and after the pit has dried will be bladed into the bottom of the pit and buried.

(2) Drilling Fluids: The drilling fluids will be pumped out of the reserve pit and disposed of in a more suitable pit, after any oil accumulation in the pit has been removed and hauled to the production facility for recovery.

(3) Produced Fluids (oil, water): If production is established, oil will be trucked by the purchaser over access road shown on Exhibit #1. Water will be trucked to an approved water disposal system over the same road.

(4) Sewage: Sewage will be contained in a chemical latrine.

(5) Trash and garbage will be contained in an earthen pit. See Exhibit #4, and buried following drilling operations. Said pit to be fenced with small mesh wire to prevent wind from scattering trash before being burned or buried.

(6) Following completion of drilling operations, all pits will be filled (after they dry up) and area surrounding the location leveled.

8. Ancillary Facilities

No ancillary facilities will be constructed.

9. Well Site Layout

(1) Cross sections of drill pad - See Exhibit #3
(2) See Exhibit #4
(3) See Exhibit #4
(4) Statement as to whether pits are to be lined or unlined. There are plans to reline the earthen pit with a polyethylene liner if deemed necessary by the B.L.M. or U.S.G.S.

10. Plans for Restoration of Surface

(1) Following completion of drilling operations, any oil accumulation in pits will be removed and hauled to a production facility to be recovered. All pits will be filled (after they dry up) and the area surrounding the location leveled. The location will then be graded to conform with the original topography and contours made as are necessary to achieve the same. All waste material will be buried in an earthen pit following completion of operations.

CANDY BUTTE #3

SANDOVAL COUNTY, NEW MEXICO

10. Plans for Restoration of Surface (Continued)

(2) Reseeding of the drillsite, including access roads, will take place at the first opportunity following completion of operations in accordance with the recommended seasonal seeding periods. All reseeding will be as recommended for this area by agronomist and the Bureau of Land Management.

(3) Prior to rig release, pits will be fenced and so maintained until clean-up operations are complete. After the location has been leveled and all pits backfilled, said location will be fenced from time of reseeding until grass is established.

(4) Any oil accumulations in pits shall be removed and hauled to production facility for recovery. In the event it becomes necessary to leave oil in any pit for any reason, we will install overhead flagging.

(5) Commencement of rehabilitation operations shall begin immediately after rig release and shall continue in a good and workmanlike manner until complete.

11. Other Information

(1) The area around the drilling site is gently sloping small valley floors with steep inclines to a small mesa where location is proposed. The vegetation in the area is a sparse cover of blue grama, galleta, cholla and prickly pear with scattered stands of juniper and sagebrush.

(2) There are no other surface use activities planned. The surface at the location is FEDERALLY owned.

(3) There are no fresh water wells in the area of the proposed location. There are no occupied dwellings; no known archeological, historical or cultural sites in the general area of the location.

12. The Hanson Cil Corporation representative conducting this drilling operation is:

CANDY BUTTE #3

SANDOVAL COUNTY, NEW MEXICO

Mr. A. J. Deans
Post Office Box 1515
Roswell, New Mexico 88201

Phone No. (505) 622-7330 Office
Phone No. (505) 623-7364 Home

CERTIFICATION

I hereby certify that I, or persons under my direct supervision have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and, that work associated with the operations proposed herein will be performed by Hanson Oil Corporation and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

9-14-79
(Date)

A.J. Deans
A.J. DEANS, VICE -PRESIDENT, PRODUCTION

APPLICATION FOR DRILLING

CANDY BUTTE #3

SANDOVAL COUNTY, NEW MEXICO

In conjunction with permitting subject well for drilling in Section 8, T. 17 N., R. 2 W., N.M.P.M., Hanson Oil Corporation submits the following Ten (10) points of pertinent information in accordance with United States Geological Survey letter of July 1, 1976:

1. The surface formation is of the Travessilla-Persayo-Rockland association.

2. The estimated tops of geologic markers are as follows:

Gallup	1275'
Sanastee	1775'
Granerous	2480'
Dakota	2640'
Morrisson	2800'
Todilto	3660'
Entrada	3770'

3. The depth at which water is expected to be encountered is at approximately 200'. The depth at which oil and gas is expected to be encountered is at 3000' - 4500'.

4. Casing Program:

16" conducter to 10'
24# H-40, 8-5/8" to 300' (New)
15.5# K-55, 5½" to 4500' (New)

5. Blowout preventer: Ram type, series 900 with double hydraulic 10# rams. This is a Shaffer blowout preventer (3000# working pressure) with a Payne closing unit. In the event a different brand of blowout preventer is used, the different blowout preventer will be of a like or better quality. The fill, kill, and choke lines are indicated on the blowout preventer specification sheet Exhibit #6.

6. Circulating Medium: Steel pits will be used to hold mud and cuttings and the drilling fluid as follows:

DEPTH	WEIGHT	VISCOSITY	FLUID LOSS
0-30'	8.6 - 8.9	As required	N/C

Drill this interval with a Gel/lime slurry with sufficient viscosity to clean hole, land and cement surface casing.

DEPTH	WEIGHT	VISCOSITY	FLUID LOSS
300' - TD	8.9 - 9.6	34-42	6cc

APPLICATION FOR DRILLING (Continued)

CANDY BUTTE #3

SANDOVAL COUNTY, NEW MEXICO

7. Auxiliary Equipment: Kelly cocks or floats at the bit will not be used in drilling the subject well. The mud system (pit levels) will be monitored visually by the rig crew. A sub with a full opening valve in good working order for stabbing into the drill pipe will be available on the drilling rig floor.

8. Testing and Logging Program: D.S.T.'s will be taken in the Entrada formation as well conditions dictate. No cores are planned. Gamma-Ray Caliper, Dual Laterlog, Borehold Compensated-Neutron logs will be run at the direction of Geologist.

9. Anticipated bottom hole pressure (BHP): The BHP in subject well in anticipated to be 1800# @ 4,500'. This is equivalent to a pressure gradient of .40 lbs. per foot of depth.

10. The anticipated starting date is November 15, 1979, with completion of drilling operation on November 25, 1979. Stimulating and completion of well would be immediately after drilling operations are finished.

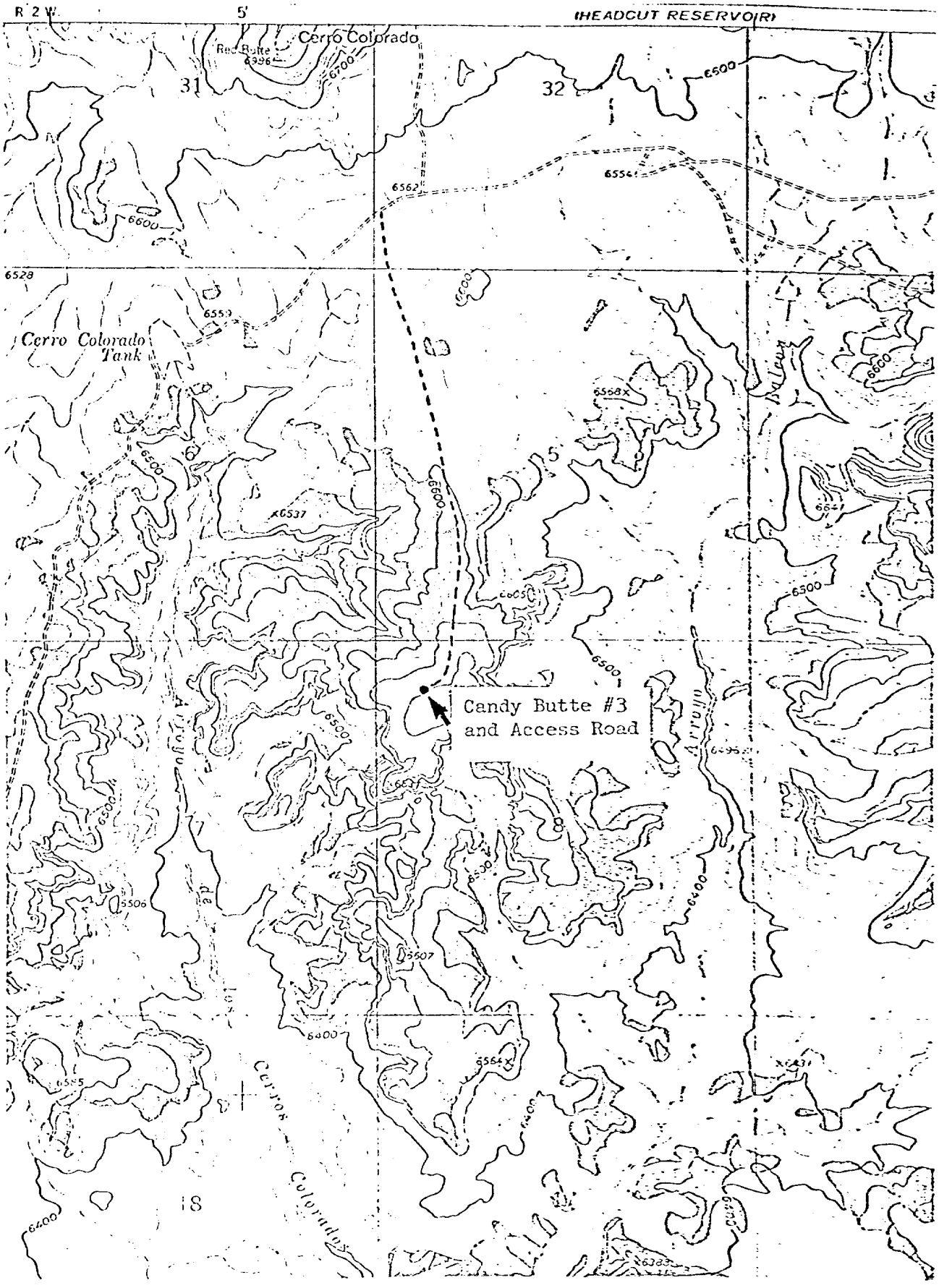


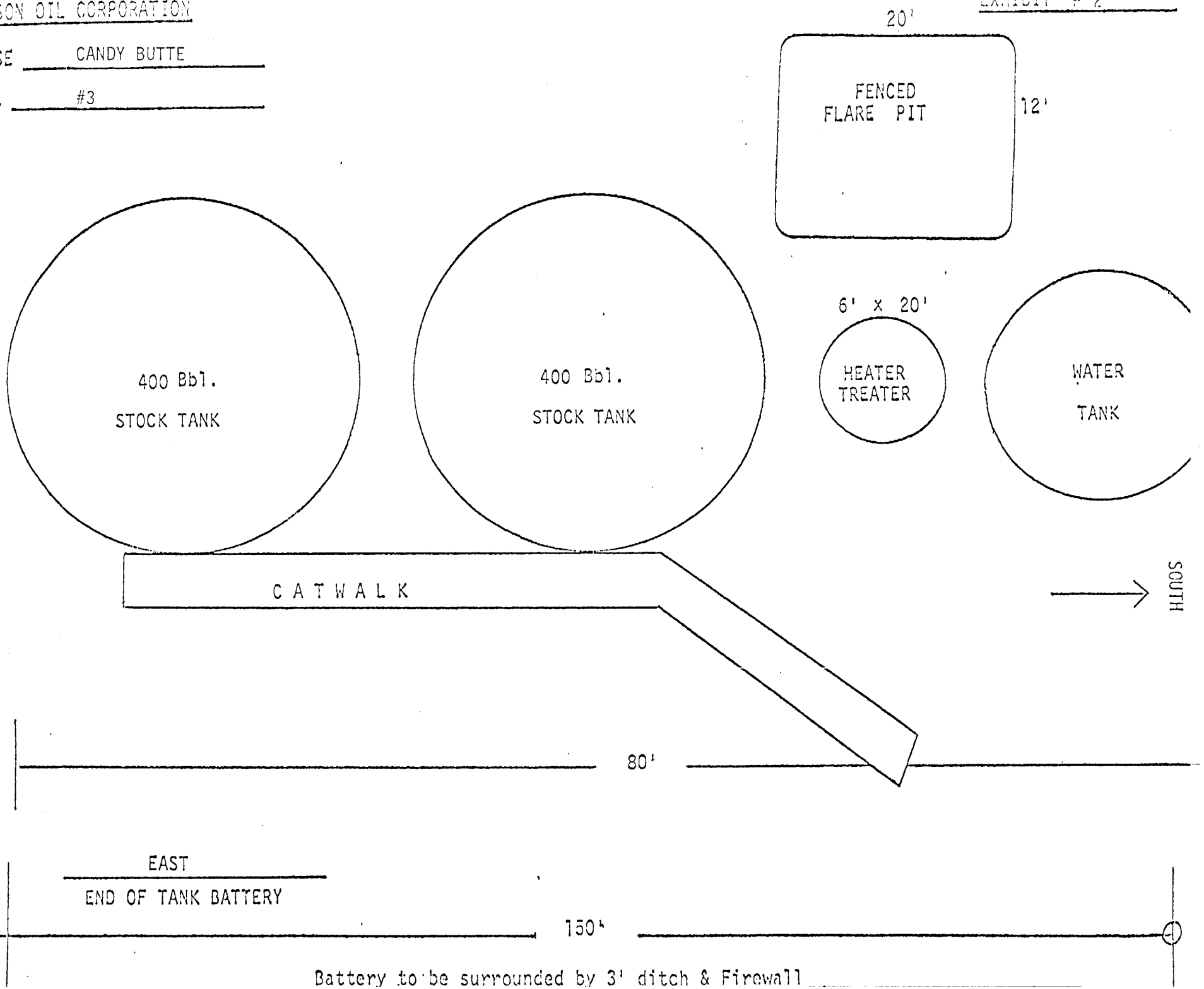
Figure 2. Location of drill pad and access road for Candy Butte #3 (from 1961 USGS 7.5' quadrangle map, San Luis, N.M.)

HANSON OIL CORPORATION

LEASE CANDY BUTTE

WELL #3

EXHIBIT # 2



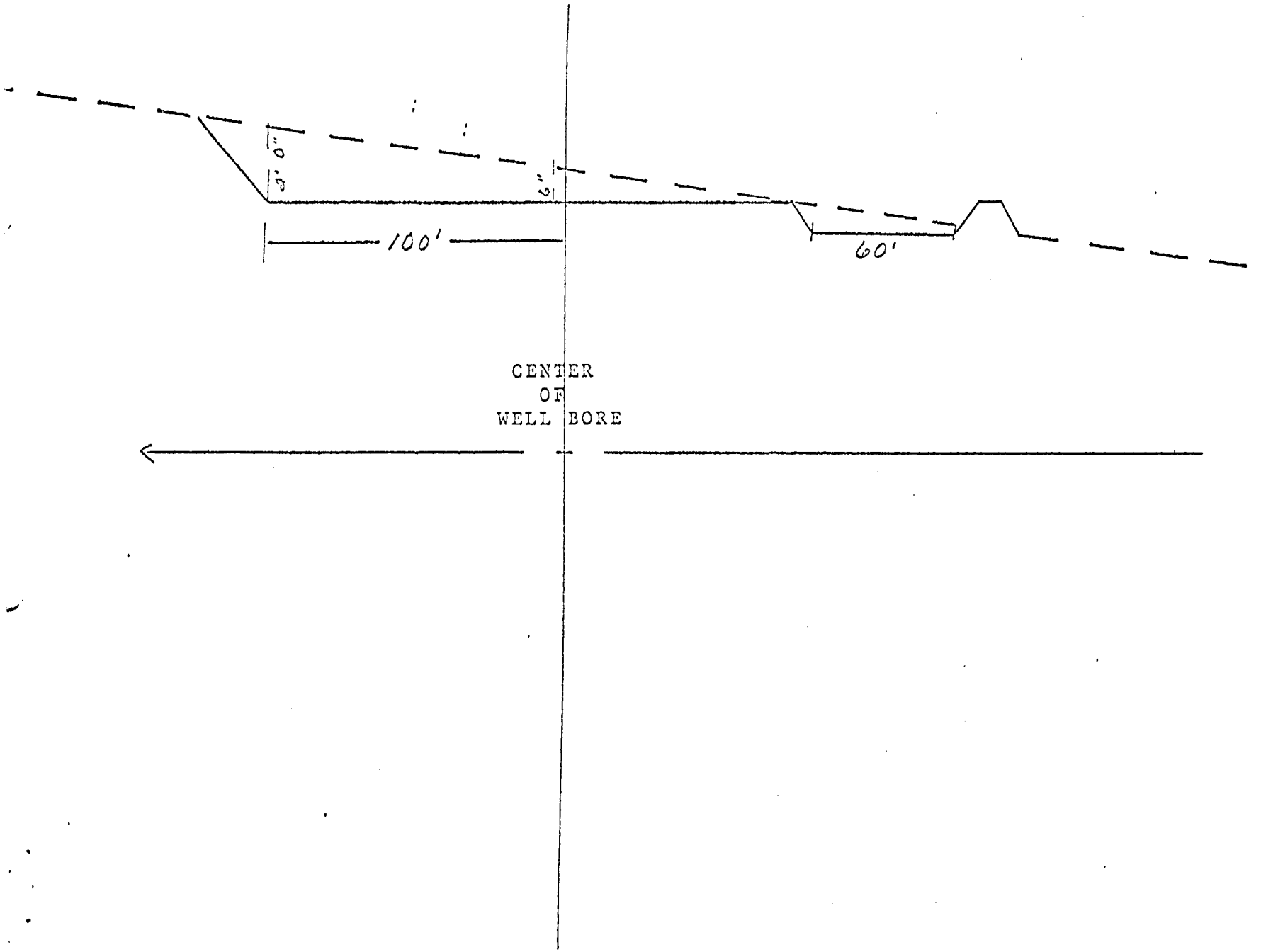
Battery to be surrounded by 3' ditch & Firewall

EXHIBIT " 3 "

LEASE CANDY BUTTE

WELL #3

CROSS SECTION OF DRILLING SITE



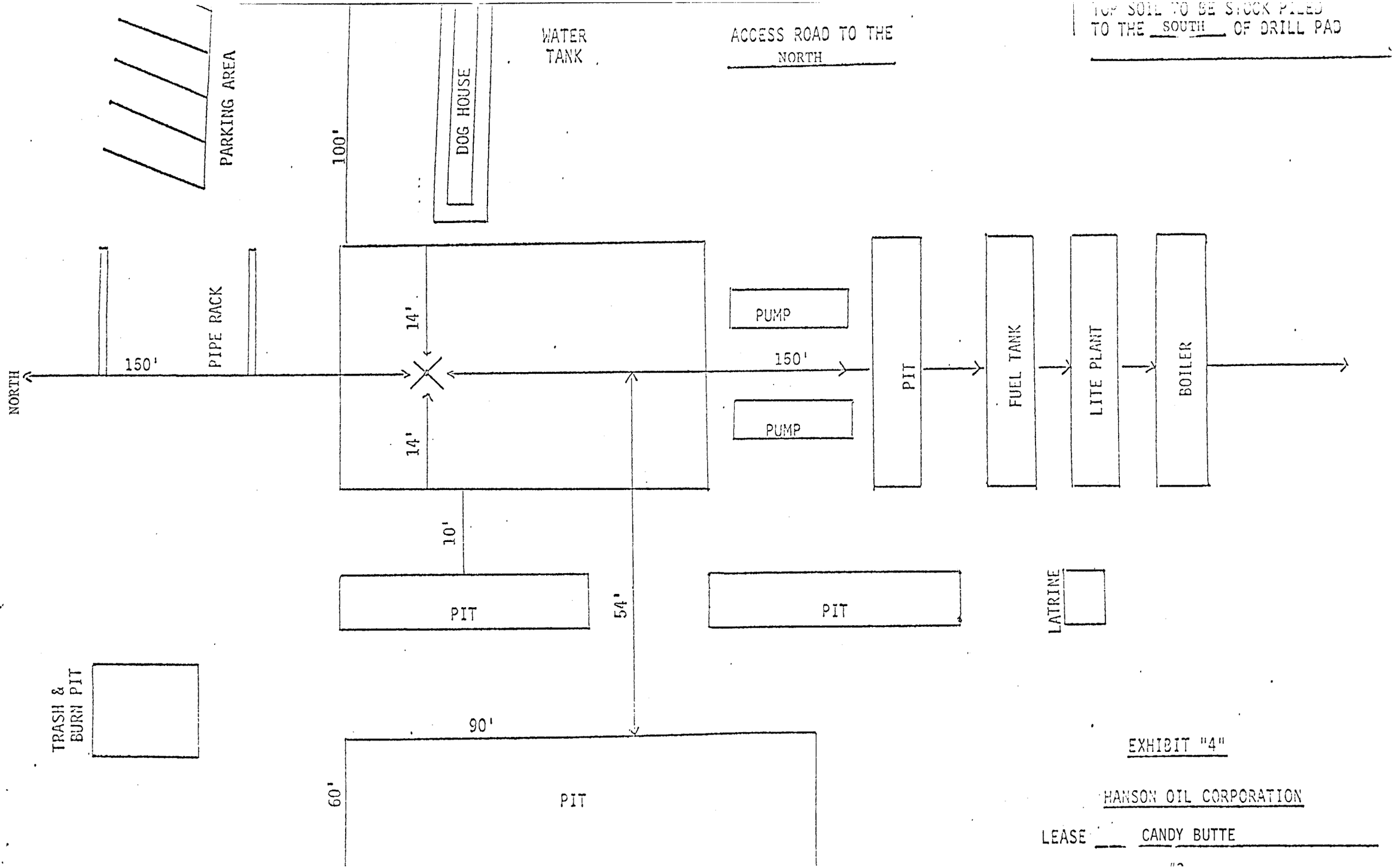


EXHIBIT "4"

HANSON OIL CORPORATION

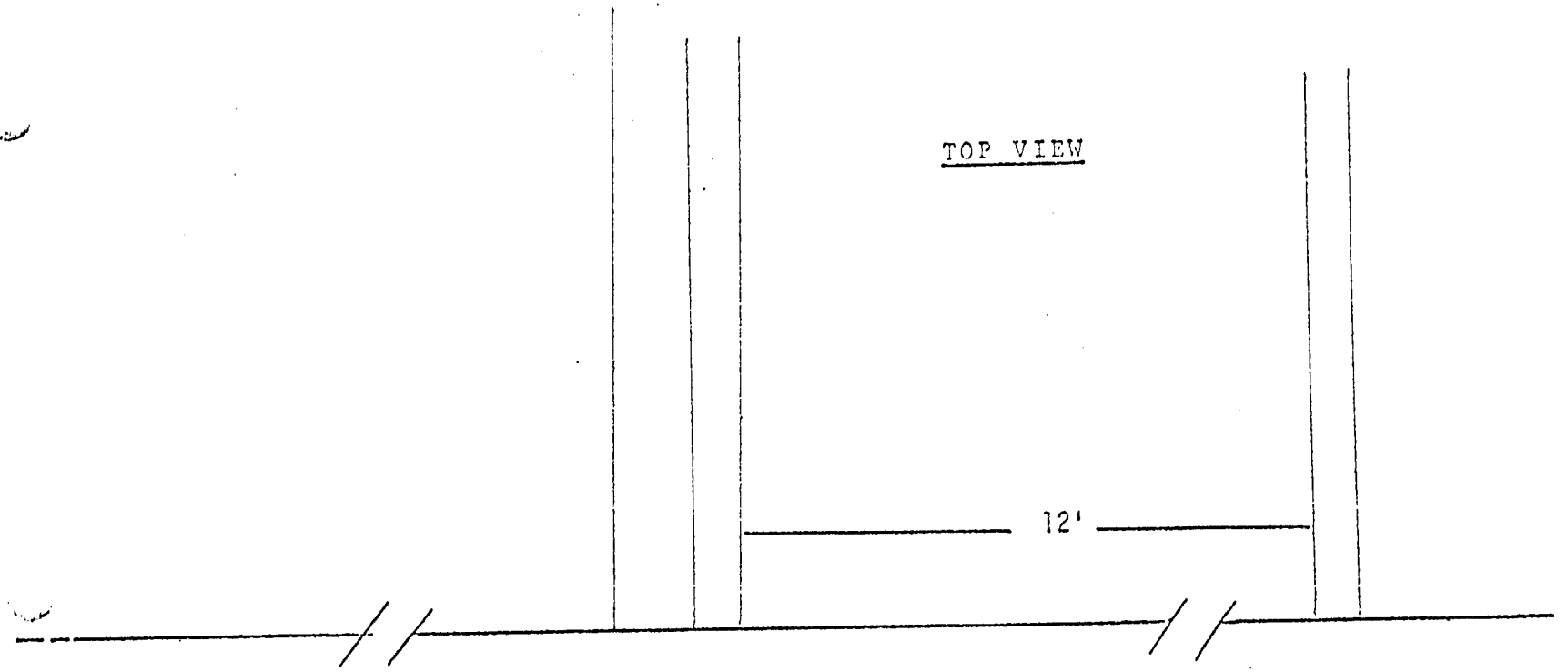
LEASE CANDY BUTTE

EXHIBIT " 5 "

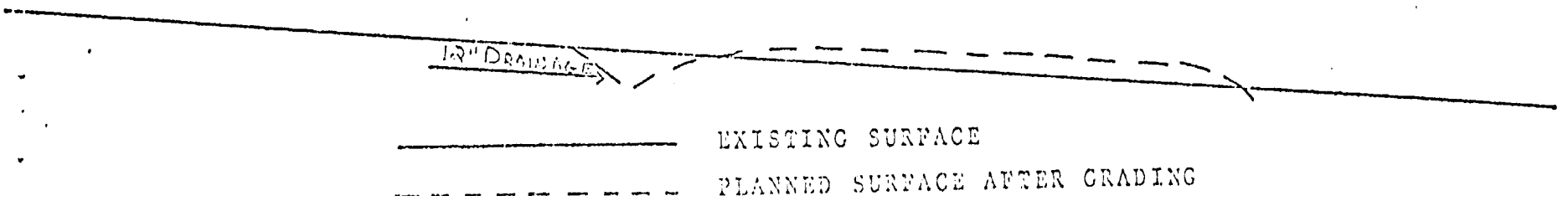
LEASE CANDY BUTTE

WELL #3

CROSS-SECTION OF PLANNED ACCESS ROAD



CROSS - SECTION



EXISTING SURFACE

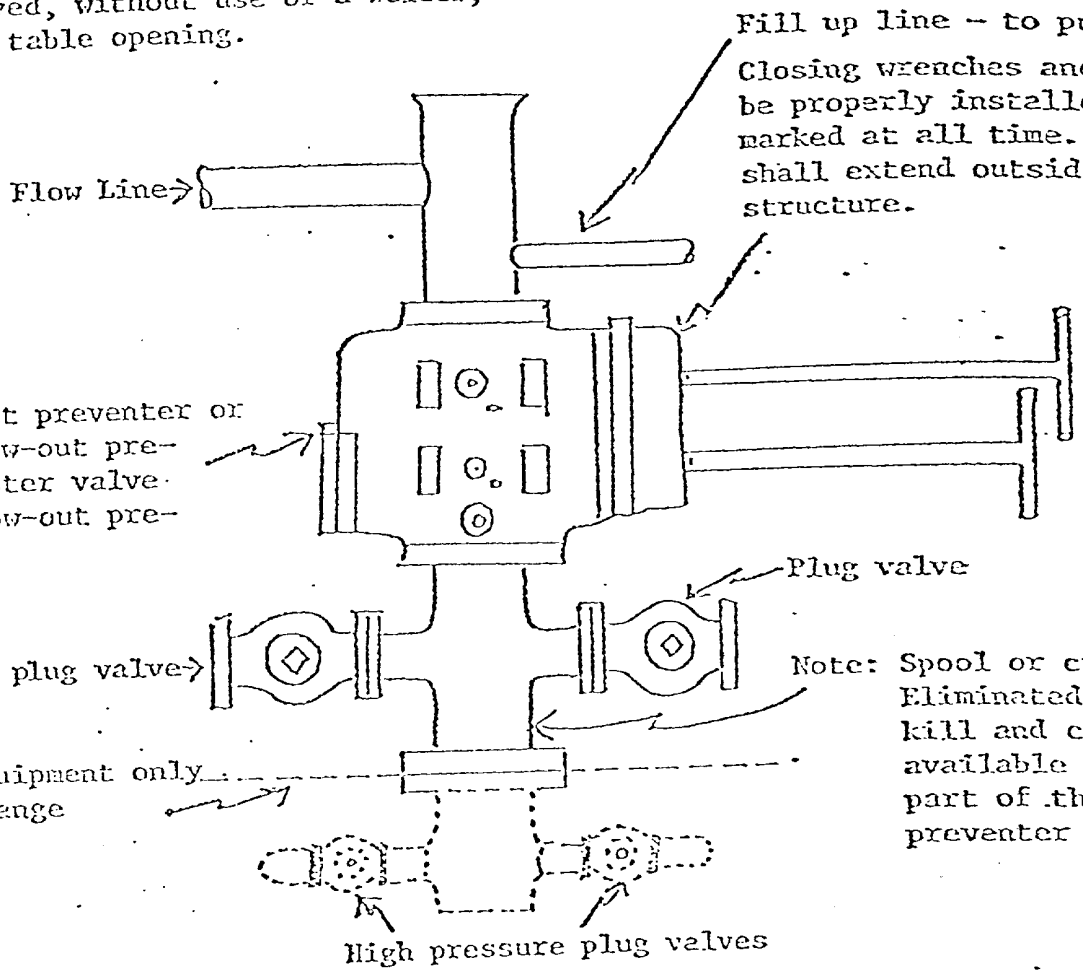
PLANNED SURFACE AFTER GRADING

HANSON OIL CORPORATION

MINIMUM BLOW-OUT PREVENTER REQUIREMENTS

EXHIBIT "6"

Drilling nipple to be so constructed that it can be removed, without use of a welder, through rotary table opening.



NOTE:

When drilling use:
Top Preventer–Blind rams or master valve
Bottom Preventer–Drill pipe rams

When running casing use:
Top Preventer–Casing rams
Bottom Preventer–Blind rams or master valve

NOTE:

1. Blow-out preventers, master valve an all fittings must be in good conditi 2,000# W.P. (4,000 P.S.I. test) mini
2. Equipment through which bit must pas shall be as large as inside diameter the casing that is being drilled thr
3. Nipple above blow-out preventer shal same size as casing being drilled th
4. All fittings to be flanged.
5. Safety Valve (2" minimum opening) w sub or connection to drill pipe on floor at all times.

CANDY BUTTE

#3

AN INTENSIVE ARCHAEOLOGICAL SURVEY OF THE CANDY BUTTE DRILL PADS AND ACCESS ROADS FOR THE HANSON OIL COMPANY IN SANDOVAL COUNTY, NEW MEXICO

Prepared by
Kenneth J. Lord
Research Archaeologist

Submitted by
Albert E. Ward
Director/Principal Investigator
Center for Anthropological Studies
P.O. Box 14576
Albuquerque, New Mexico 87191

Submitted to
Albuquerque District Manager
and
Rio Puerco Resource Area Manager
Bureau of Land Management
3550 Pan American Freeway
P.O. Box 6770
Albuquerque, New Mexico 87107

September 11, 1979

An Intensive Archaeological Survey of the Candy Butte Drill Pads and Access Roads for the Hanson Oil Company in Sandoval County, New Mexico

by
Kenneth J. Lord

MANAGEMENT SUMMARY

The Center for Anthropological Studies (Center) recently completed an intensive archaeological clearance survey of three drill pads and three access roads in Sandoval county, New Mexico, on land administered by the Bureau of Land Management. No archaeological sites or artifacts were encountered during the survey and the Center recommends that archaeological clearance be granted.

INTRODUCTION

The present project was undertaken and completed according to the stipulations of the Center's Federal Antiquities Act Permit no. 79-NM-054, and it complies with requirements of the Albuquerque District of the Bureau of Land Management. The project was done in response to a request from the Hanson Oil Company of Roswell, New Mexico. Mr. Ray Willis, Vice-President of Land, initiated this contract for the Hanson Oil Company on August 27, 1979. Mr. Albert E. Ward, as the Director of the Center, served as the Principal Investigator. The actual field work was conducted by the author and Frank W. Marlowe on September 6, 1979.

PROJECT AREA

The project area consists of three drill pads and three access roads situated across San Luis mesa. This land is administered by the Bureau

of Land Management, Albuquerque District. The drill holes are located in the NW¼ of the NE¼ of Section 25 (Candy Butte #1), the NE¼ of the NW¼ of Section 25 (Candy Butte #2), in Township 17N, Range 3W and in the NW¼ of the NW¼ of Section 8 (Candy Butte #3), in Township 17N, Range 2W. The center points of these drill holes are located in the exact center of these ¼ sections. The UTM (Universal Transverse Mercator) grid locations of these points are: within Zone 13, Candy Butte #1, 309050 m. E. and 3950300 m. N.; Candy Butte #2, 309850 m. E. and 3950340 m. N.; and Candy Butte #3, 312360 m. E. and 3955110 m. N. The drill pad locations and their respective access roads are shown in Figures 1 and 2, both of which are reproductions from the 1961 USGS 7.5' quadrangle map of San Luis, New Mexico.

Drill holes were staked allowing easy location based on maps of the localities surveyed by Lawrence A. Brewer and Associates, Inc. Access roads were center line-flagged and also placed on the survey maps.

The access road for Candy Butte #1 begins in the NW¼ of the SW¼ of Section 24 running through the SW¼ of the SW¼ of Section 24 to the drill hole location in the NW¼ of the NW¼ of Section 26 in Township 17N, Range 3W. The access road is .4 mile long. The access road for Candy Butte #2 begins and terminates in the NW¼ of the NE¼ of Section 25 in Township 17N, Range 3W. This road is .2 mile long. Finally, the road for Candy Butte #3 begins in the SW¼ of the SW¼ of Section 32 in Township 18N, Range 2W, then runs south through the westernmost ½ sections of Section 5 and terminates at Candy Butte #3 in the NW¼ of the NW¼ of Section 8 in Township 17N, Range 2W. This road is 1.4 miles in length.

The project area is 25 air-miles southwest of Cuba near the small town of San Luis, west of New Mexico Highway 44. The area ranges in

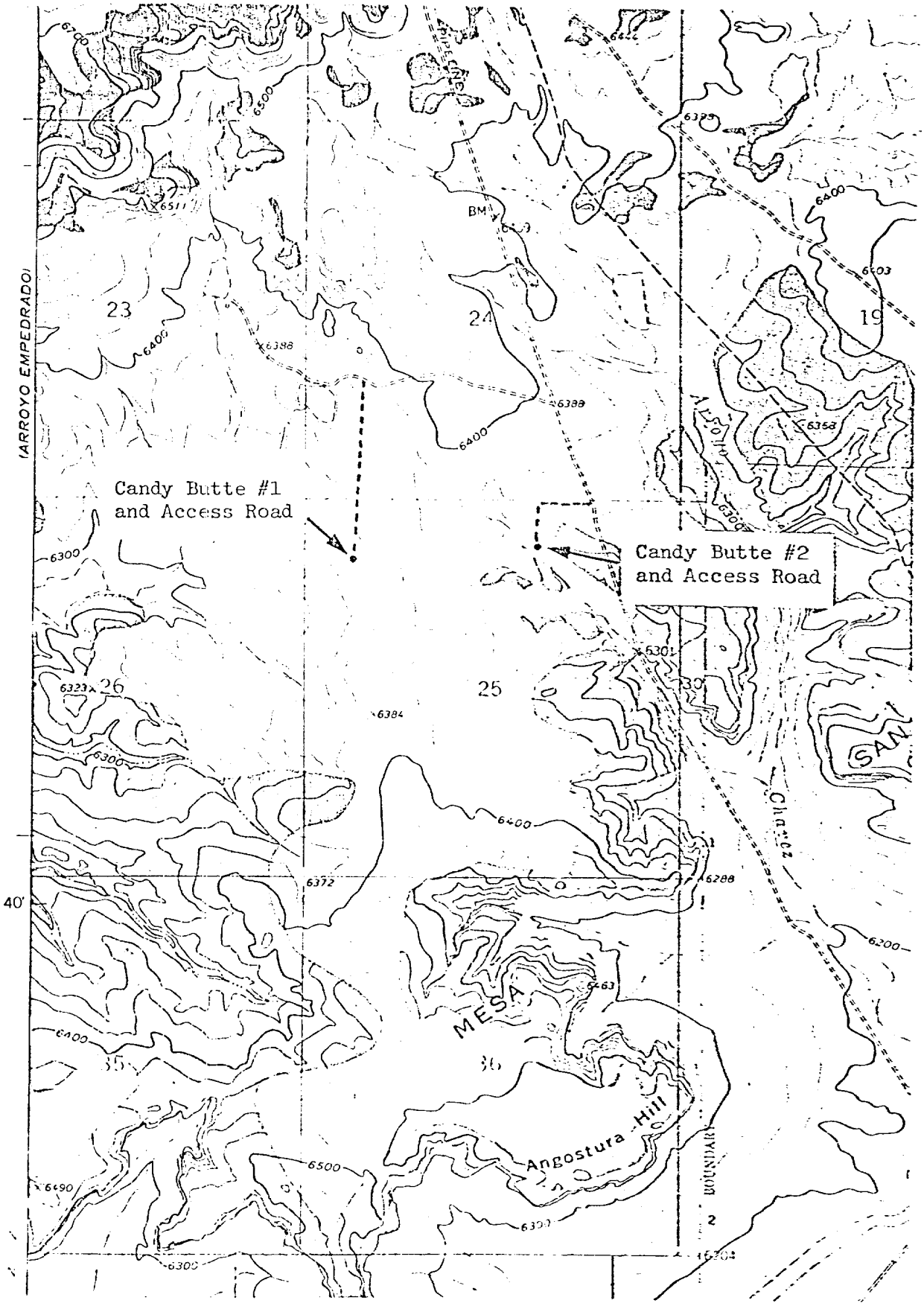


Figure 1. Location of drill pads and access roads for Candy Butte #1 and Candy Butte #2 (from 1961 USGS 7.5' quadrangle map, San Luis, N.M.)

elevation from 6300 ft. to 6650 ft. Environmentally, the area is in the Upper Sonoran life zone with mule deer being the principal game animal (Bailey, 1913). It receives 10-12 inches of precipitation each year with an annual frost-free season of 160 days (Tuan et al., 1973). The closest major water course is the Rio Puerco (East) to the east.

The soils of the area belong to the Travessilla-Persayo-Rockland association. This association is found on nearly-level to gently-sloping small valley floors forming on a sandstone and/or shale base. The soils are generally light-colored calcareous fine sandy-loam or loamy-sands (Maker et al., 1971). The drill pad locations are in the Travessilla soils while the access roads, particularly that to Candy Butte #3, go through all of the above associations.

The vegetation in this area is a sparse cover of blue grama (Bouteloua gracilis), galleta (Hilaria sp.), cholla, (Opuntia sp.), and prickly pear (Opuntia sp.), with scattered stands of juniper (Juniperus monosperma) and sagebrush (Artemisia tridentata). The juniper and sagebrush are particularly evident on the access road to Candy Butte #3. A single jack-rabbit (Lepus californicus) and numerous doves (Zenaidura sp.) were observed during the field investigation.

METHODOLOGY

The field examination of the project area was completed by the archaeologists walking parallel transects 5 m. apart over each drill pad location until 100% coverage of the area was attained. The coverage was 50 m. (167 ft.) in radius which resulted in intensive coverage of 2 acres at each drill pad location.

Access roads were inspected by the archaeologists by walking 3 m.

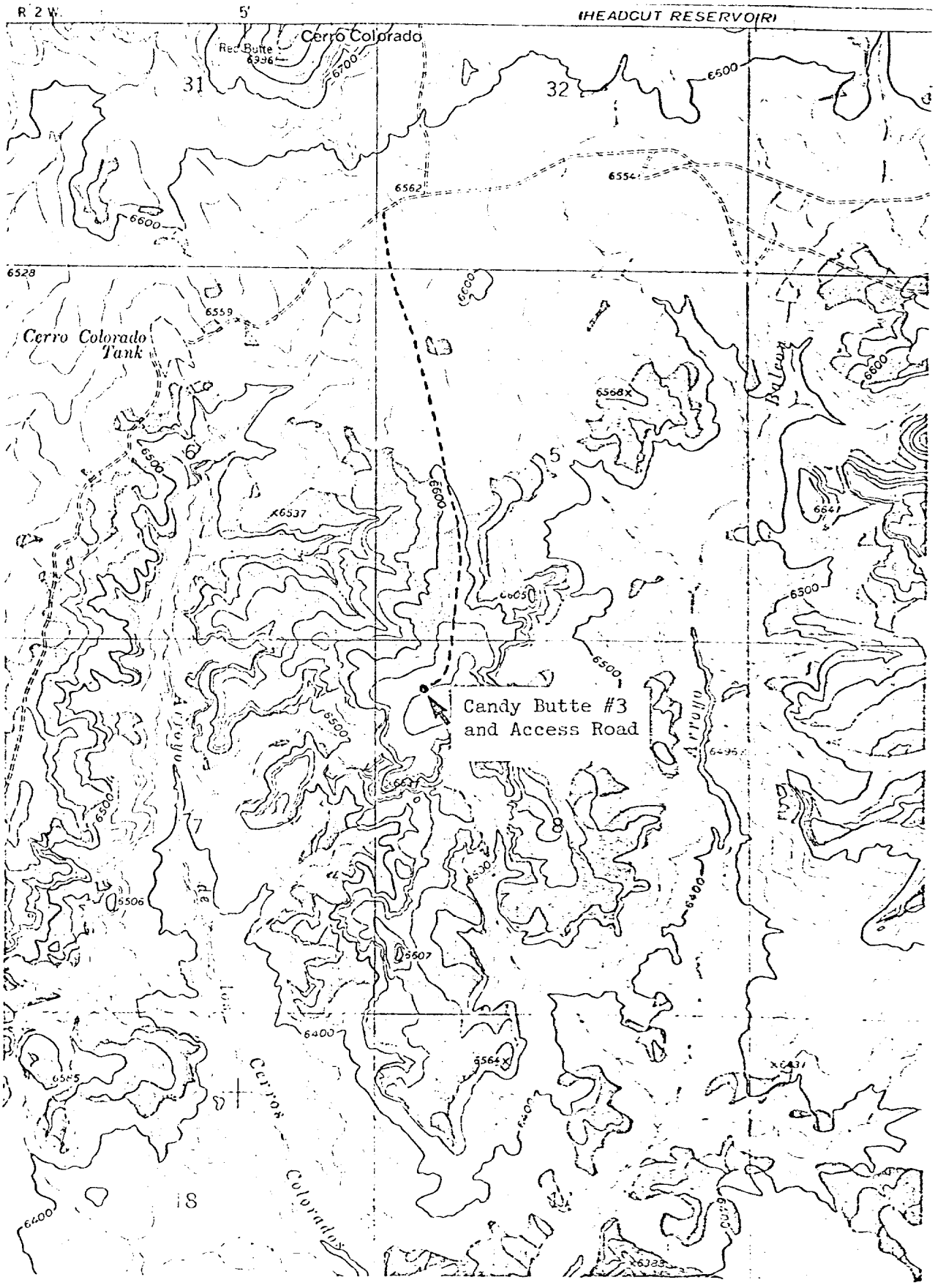


Figure 2. Location of drill pad and access road for Candy Butte #3 (from 1961 USGS 7.5' quadrangle map, San Luis, N.M.)

apart on either side of the flagged center line of the roads for their total length. This provided coverage 12 m. (40 ft.) wide.

Cultural resources were defined in two ways. Isolated finds were artifacts or clusters of artifacts found in an area with no associated architectural feature or evidence of subsurface features. Archaeological sites were defined as all loci of architectural or artifactural remains which represent human use of the locality in the prehistoric or historic past.

PROJECT RESULTS AND RECOMMENDATIONS

The intensive foot-survey of the project area identified no cultural resources. The Historic Preservation Officer of New Mexico and the latest listing of the National Register of Historic Places have been consulted. No sites which appear on or have been nominated to or are eligible for nomination to the National Register exist within the project area. Since no sites on the National Register were found within the project area, no cultural resources were found, and the project has complied with the requirements of 36 CFR 800, it is the evaluation of the Center that the proposed drilling explorations will have no adverse effect on the cultural resources found within the BLM lands. It is recommended that the Hanson Oil Company be granted an archaeological clearance to conduct its proposed testing operations. It is further recommended that if any archaeological remains are encountered during subsurface investigation, the Hanson Oil Company should contact the BLM District or Area Archaeologist.

REFERENCES CITED

Advisory Council of Historic Preservation
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