SUBMIT IN TRIPLICATE*

(Other instructions on reverse side)

Form approved. Budget Bureau No. 42-R1425.

UNITED STATES DEDARTMENT OF THE INTERIOR

=	30 -	03	1-0	206	38	
i.	LEASE	DESIGN	NATION	AND SER	IAL NO.	_

DEFAITMENT OF THE INTERIOR							5. LEASE DESIGNATION	AND SERIAL NO.
	GEOLOGICAL SURVEY						NM 6999	
APPLICATION	APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK					6. IF INDIAN, ALLOTTE	E OR TRIBE NAME	
1a. Type of work	la. Type of work							
	DRILL ☑ DEEPEN ☐ PLUG BACK ☐					7. UNIT AGREEMENT N	AME	
OIL TY GA							S. FARM OR LEASE NA	ME
2. NAME OF OPERATOR							FEDERAL E	
Cities Servi	ce Company						9. WELL NO.	
3. ADDRESS OF OPERATOR							2	
	dland, TX 79						10. FIELD AND POOL, (DE WILDCAT
4. LOCATION OF WELL (Re			-	-			Undesignat	entro
→ 1650' FNL &	990' FEL of	Sec 28-Tl	9N-F	R5W, McK	inley		11. SEC., T., R., M., OR AND SURVEY OR AL	BLK.
same as abov	At proposed prod. zone County, NM same as above					1.	Sec 28-T19	N-R5W
14. DISTANCE IN MILES A	ND DIRECTION FROM NEA	REST TOWN OR POS	OFFIC	C*		-	12. COUNTY OR PARISH	13. STATE
8¼ miles NW	of Torreon,	NM					McKinley	NM
LOCATION TO NEAREST PROPERTY OR LEASE L	5. DISTANCE FROM PROPOSED* 16. NO. OF ACRES IN LEASE 17. N						F ACRES ASSIGNED ASSIGNED 40	
18. DISTANCE FROM PROPO	OSED LOCATION*		19. PR			20. ROTAR	Y OR CABLE TOOLS	
	TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 1476 NW			5390	•	Rotary		
21. ELEVATIONS (Show whe	ther DF, RT, GR, etc.)						22. APPROX. DATE WO	RK WILL START*
6645' GR	6645' GR					August 1,	1980	
23.	23. PROPOSED CASING AND CEMENTING PROGRAM						:	
SIZE OF HOLE	SIZE OF HOLE SIZE OF CASING WEIGHT PER FO		от	OT SETTING DEPTH			QUANTITY OF CEMENT	
12½"	8-5/8"	24#		200	1	Cir	culated	
7-7/8"	5½"	14#		5390	1		00 sx	
It is proposed to drill to a total depth of 5390' to test the Entrada formation. The blow out prevention program is as follows:								

- 1. one set of blind rams.
- one set of drill pipe rams.

The acreage allocated to this well is not dedicated to any gas ga

ORILLING OPERATIONS AUTHORIZED ARE RECEIVED SUBJECT TO COMPLIANCE WITH ATTACHE "GENERAL REQUIPEMENTS JUL 1 C 1980

This action is subject to administrative appeal pursuant to 30 CFR 290.

U. S. GEOLOGICAL SURVEY U. S. GLULUGION, N. M. IN ABOVE SPACE DESCRIBERATIONS DESCRIBERATIONS DESCRIBERATION OF THE PROPERTY. GRAM: If proposal is to deepen or plug back, give data on present productive zone and zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical preventer program, if any.

7/8/80 SIGNED (This space for Federal or State office use) PERMIT NO. _ APPROVED BY

oh 3m

CONDITIONS OF APPROVAL, IF ANY:

Instructions

General: This form is designed for submitting proposals to perform certain well operations, as indicated, on all types of lands and leases for appropriate action by either a Federal or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable State or Federal regulations concerning subsequent work proposals or reports on the well.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on this reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal or State agency offices.

Items 15 and 18; If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective production zone. Item 22: Consult applicable Federal or State regulations, or appropriate officials, concerning approval of the proposal before operations are started.

な U.S. GOVERNMENT PRINTING OFFICE: 1963—O-711-396

2

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO EHERGY AND MINERALS DEPARTMENT

P. O. BOX 2088

Form C-107 Revised 10-1-78 SANTA FE, NEW MEXICO 87501

All distances must be from the cuter boundaries of the Section

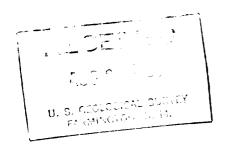
Operator			i .		
1 -			Legse	Well No.	
CITIES SERVICE COMPANY Unit Letter Section Township			FEDERAL E	To-	
H	28	19N	Range 5W	County	
Actual Footage Loc		1711		McKinley	
1650	N-	rth	990	Post	
Ground Level Elev.	Producing Form	Tine Grid		eet from the East	line
6645	Entrada		Wild.	. <i>+</i>	Dedicated Acreage:
					Acres
1. Outline the	e acreage dedicat	ted to the subject we	ell by colored pencil	or hachure marks on t	he plat below.
	_				
2. If more th	an one lease is	dedicated to the well	, outline each and id	lentify the ownership (thereof (both as to working
interest an	d royalty).				_
3. It more tha	n one lease of di	therent ownership is	ledicated to the well	, have the interests o	f all owners been consoli-
dated by co	ommunitization, u	nitization, force-pooli	ng. etc?		
Yes	No If an	swer is "yes;" type o	consolidation		
	44				
It answer i	s "no," list the o	wners and tract desc	riptions which have a	ctually been consolid	ated. (Use reverse side of
	necessary.)				•
No allowab	le will be assigne	d to the well until all	interests have been	consolidated (by com	munitization, unitization,
forced-pool	ing, or otherwise)	or until a non-standard	l unit, eliminating su	ch interests, has been	approved by the Commis-
sion.					
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				best of m	y knowledge and belief.
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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.)*

The proposed casing and cementing program has been changed as follows:

SIZE OF SIZE OF WEIGHT SETTING QUANTITY OF CASING PER FT. HOLE DEPTH CEMENT 12½" 9-5/8" 32.3# 200' 300 sacks (Circulate) 8-3/4" 20 & 23# 5420' 900 sacks

The proposed depth has been changed from 5390' to 5420'.



Bruillamy



18. I hereby certify that tile tregoing is true and correct SIGNED	TITLE Region Oper. Mgr.	DATE 8/18/80
(This space for Federal or State office use)		
APPROVED BY CONDITIONS OF APPROVAL, IF ANY:	TITLE	DATE

Instructions

General: This form is designed for submitting proposals to perform certain well operations, and reports of such operations when completed, as indicated, on Federal and Indian lands jursuant to applicable Federal law and regulations, and, if approved or accepted by any State, on all lands in such State, pursuant to applicable State law and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be salouitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 17: Proposals to abandon a well and subsequent reports of abandonment should include such special information as is required by local Federal and/or State offices. In addition, such proposals and reports should include reasons for the abandonment; data on any former or present productive zones, or other zones with present significant fluid contents not scaled off by cement or otherwise; depths (top and bottom) and method of placement of cement plugs; mud or other material placed below, between and above plugs; amount, size, method of parting of any casing, liner or tubing pulled and the depth to top of any left in the hole; method of closing top of well; and date well site conditioned for final inspection looking to approved of the abandonment.

GPO 680-160



CITIES SERVICE COMPANY ENERGY RESOURCES GROUP

Box 1919 Midland, Texas 79702 (915) 684-7131

July 10, 1980

United States Department of the Interior Geological Survey P.O. Box 959 Farmington, New Mexico 87401

Re: Application for Permit to Drill Federal "E" No. 2 McKinley County, New Mexico

Gentlemen:

Cities Service Company respectfully requests permission to drill our Federal "E" No. 2, located 1650' from the north line and 990' from the east line of Section 28-19N-5W, McKinley County, New Mexico, Federal Lease No. NY-6999.

The location, work area and access road have been staked. It is approximately 40 miles by road to Cuba and about 85 miles by road to Bloomfield, New Mexico.

In accordance with requirements stipulated in the National Environmental Policy Act, as stated in NTL-6 Section IIB, our application for permission to drill and supporting evidence is hereby submitted:

- I. Application for Permit to Drill:
 - 1. Form 9-331C
 - 2. Form C-102 Location and Acreage Dedication Plat certified by Fred Kerr, Registered Land Surveyor #3950 in the State of New Mexico.
 - 3. The elevation of the unprepared ground is 6645 feet above sea level.
 - 4. The geologic name of the surface is Lewis formation in the Cretaceous.

RECEIVED

JUL 1 5 1980

U. S. GEOLOGICAL SURVEY FARMINGTON, N. M.

- 5. Rotary drilling equipment will be utilized to drill the well to TD 5420' and run casing. This equipment will then be rigged down and the well will be completed with a pulling unit.
- 6. Proposed total depth is 5420 feet.
- 7. Estimated tops of important geologic markers:

Mesa Verde Group	Near Surface
Point Lookout Ss	1990'
Mancos Sh	2100'
Gallups Ss	2901'
Greenhorn Ls	3900 '
Dakota Ss	4140'
Morrison Fm	4260'
Todilto	5120'
Entrada Ss	5134'
Carmel Fm	5370 '
TD	5420 '

- 8. Estimated depths at which anticipated water, oil, gas or other mineral bearing formations are expected to be encountered.
 - A. Primary objective Entrada Ss (Jurassic) Top 5134'.
 - B. Secondary objective Dakota Ss (Cretaceous) Top 4140'.
- 9. The proposed casing program is as follows:

Surface: 9-5/8" OD 32.3# H40 ST&C new casing

Production: 7" OD 20# & 23# K55 ST&C new casing

- 10. Casing setting depth and cementing program;
 - A. 9-5/8" OD surface pipe set at 200'. Circulate cement with 300 sax Class "B" w/3% CaCl.
 - B. 7" OD production casing set at 5420', with DV tool at 2700'. Cement first stage with 500 sax 50/50 Class B Pozmix w/2% Gel, 6-1/4# Gilsonite and 6# salt per sack. Cement second stage with 400 sax Halliburton Lite with 6-1/4# Gilsonite per sack.

11. Pressure Control Equipment:

0 - 200

None

200 - 5420'

10"/3000# hydraulic BOP with blind and pipe rams with floor and remote operating stations.

Blowout prevention equipment will be installed, tested and in working order before drilling below the surface casing and shall be maintained ready for use until drilling operations are completed.

A kill line will be properly installed and will not be used as a fill-up line.

Drill string safety valve(s) to fit all pipe in the drill string to be maintained on the rig floor while drilling operations are in progress.

The pipe rams will be activated once each 24 hours and the blind rams each time the pipe is out of the hole to assure the equipment is operational and each crew is properly trained to carry out emergency duties.

Auxiliary equipment is an upper kelly cock and a drill pipe float.

12. Mud Program:

0 - 200'

Spud mud. Gel floculated with Lime. Maintain 45-60 Sec Viscosity.

200 - 5420'

Drill out with a fresh water low solids, nondispersed mud maintaining the following properties:

> Mud Weight 8.6 - 8.8 Ib/Gal Viscosity 34 - 34 cc Water Loss 8 - 10 cc

Prior to drill the Gallup sandstone, pretreat mud with 10% LCM reducing to 5% LCM from the Dakota sandstone to TD.

- 13. Testing, Logging and Coring Program
 - A. No drillstem tests.
 - B. Mud Logging Program. One man unit 1500' TD 5420'.
 - C. Electric Logging Program. CNL-FDC, Dual Induction Laterolog, BHC Sonic GR, Proximity Microlog Caliper. Dipmeta to be determined later (Schlumberger).
 - D. Coring Program None.
- 14. No abnormal temperature, pressures or H₂S gas is anticipated.
- 15. Anticipated starting date is one week to one month after approval of this application by the Geological Survey, depending upon rig availability.
- 16. Form 9-1123 "Designation of Operator" designates Cities Service Company as Operator by the Lessee, James L. Ludwick.
- 17. The Multi Point Surface Use and Operation Plan for submission to the Bureau of Land Management is attached.

Yours very truly,

E. Y. Wilder

Region Operations Manager

Southwest Region E & P Division

EYW/dtd

attachments

DESIGNATION OF OPERATOR

The undersigned is, on the records of the Bureau of Land Management, holder of lease

DISTRICT LAND OFFICE:

Santa Fe

SERIAL NO.:

NM 6999

and hereby designates

NAME:

Cities Service Company

Address:

P. O. Box 300

Tulsa, Oklahoma 74102

as his operator and local agent, with full authority to act in his behalf in complying with the terms of the lease and regulations applicable thereto and on whom the supervisor or his representative may serve written or oral instructions in securing compliance with the Operating Regulations with respect to (describe acreage to which this designation is applicable):

Township 19 North, Range 5 West, N.M.P.M.

Section 22: $SW_{4}^{\frac{1}{4}}$:

Section 28: $E_2^{\frac{1}{2}}$, $NW_{\frac{1}{4}}$, $N_2^{\frac{1}{2}}SW_{\frac{1}{4}}$, $SE_4^{\frac{1}{4}}SW_{\frac{1}{4}}$.

It is understood that this designation of operator does not relieve the lessee of responsibility for compliance with the terms of the lease and the Operating Regulations. It is also understood that this designation of operator does not constitute an assignment of any interest in the lease.

In case of default on the part of the designated operator, the lessee will make full and prompt compliance with all regulations, lease terms, or orders of the Secretary of the Interior or his representative.

The lessee agrees promptly to notify the supervisor of any change in the designated operator.

(Signature of le

Ludwick

P. O. Box 70

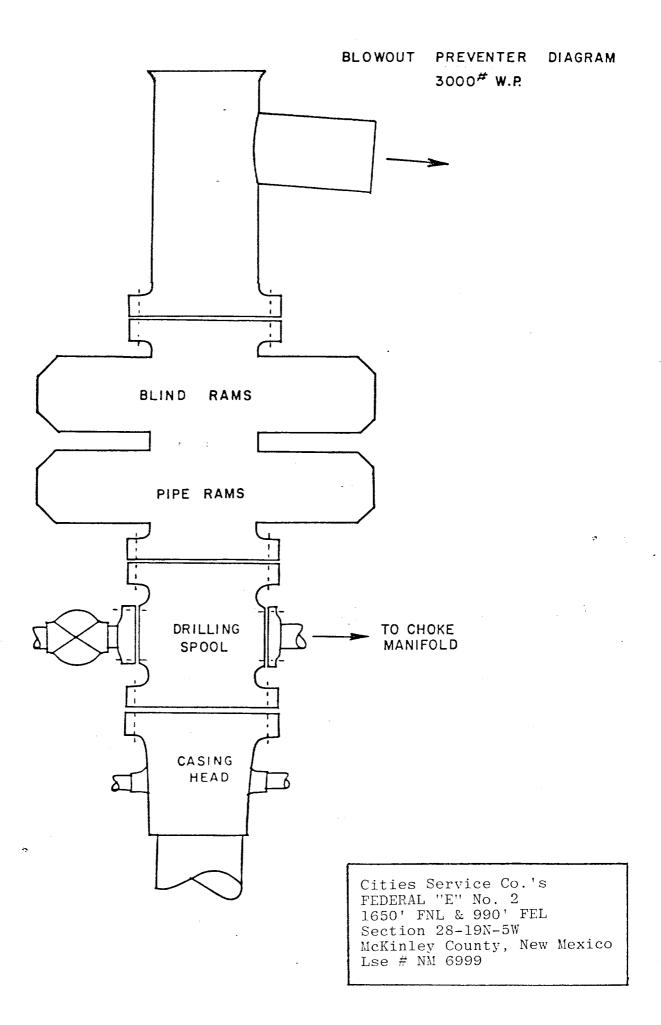
Farmington, New Mexico 87401

(Address)

March 24, 1980

(Date)

U. S. GOVERNMENT PRINTING OFFICE 16-53598-3



MULTI-POINT SURFACE USE AND OPERATIONS PLAN

CITIES SERVICE COMPANY
WELL NO. 2 FEDERAL "E"

1650' FNL & 990' FEL, SECTION 28-19N-5W
MCKINLEY COUNTY, NEW MEXICO
FEDERAL LEASE NO. NM-6999

This plan is submitted with the Application for Permit to Drill the captioned well. The purpose of the plan is to describe the location of the proposed well, the proposed construction activities and operation plan, the magnitude of necessary surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operation, so that a complete appraisal can be made of the environmental effects associated with the operation.

The well has been staked by Mr. Fred Kerr, a registered Land Surveyor, and the work area and access road have been staked and flagged. Mr. Bill Naylor with the San Juan Community College in Farmington has been commissioned to make an archaeological survey of the work area and access road. His findings concerning cultural resources will be reported to the Bureau of Land Management in Farmington, New Mexico.

1. Existing Roads

A portion of a McKinley County highway map is attached which shows the proposed location in relation to the towns of Cuba and Torreon, New Mexico and the existing road system leading into the area.

Direction to Location

Start at Torreon which is 27 miles southwest of Cuba, New Mexico. From Torreon go northwesterly 7 miles to a gate on the right and a large pink water storage tank. About 100 yards before coming to the water tank, turn right and follow the old road 2.7 miles. Turn right and follow an existing road approximately 3000 feet. The new access road starts at this point, veering slightly to the right. It is staked and flagged to the well location.

2. Planned Access Road

- A. Dirt contractor will grade the 2.7 miles of old road and the 3000' of existing road. The proposed new access road to the new location will be 12' wide and approximately 2000' long. See attached vicinity map.
- B. Surfacing Material: The roadway will be bladed, watered and graded. There may be some spots that will need to be topped with local red rock. The work area will be topped with red rock if necessary.

Planned Access Road - cont.

- C. Maximum grade: The terrain is rolling. Maximum grade 3%.
- D. Turnouts: One passing turnout will be constructed at a halfway point on the new access road approximately 1000' west of the Federal "E" No. 2 location. This construction will increase the width of the new road to 20 feet for a distance of 30 feet.
- E. Drainage design: Access road will have a drop of 6 inches from center line to each side.
- F. Culverts: None needed.
- G. Cuts and fills: Location will need to be leveled as shown on attached profile prepared by Kerr Land Surveying 6-30-80.
- H. Gates and cattleguards: None required.

3. Location of Existing Wells

Existing wells within a two mile radius of our proposed Federal "E" No. 2 are spotted on the third attached plat.

4. Location of Existing and/or Proposed Facilities

There are no existing facilities in the area.

Proposed production facilities will be set on the drilling pad approximately 150 feet from the well. The equipment will consist of a heater treater and two 500 barrel tanks to store crude oil and one 500 barrel tank to store produced water. All equipment will be fenced with a chain link fence and painted in accordance with BIM stipulation.

5. Location and Type of Water Supply

A fresh water mud system will be used to drill this well and fresh water will be purchased and trucked to the well site over existing and proposed roads.

One source of supply is Entrada produced water available in Section 15 to the north from Dome Petroleum Corp's tank battery in the Papers Wash Pool.

Another source is at the Pueblo Alto Trading Post and a third source is Chapman's water hole at Escrito on Highway 44.

6. Source of Construction Material

Red Rock for the access road and well pad will be purchased and hauled by the dirt contractor from the nearest possible source.

7. Methods of Handling Waste Disposal

- A. Drill cuttings will be disposed of the in drilling pits.
- B. Drilling fluids will be allowed to evaporate in the drilling pits until pits are dry.
- C. Water produced during tests will be disposed of in the drilling pits. Oil produced during tests will be stored in test tanks until sold.
- D. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- E. Trash, waste paper, garbage and junk will be collected and buried in a separate trash pit and covered with a minimum of 24 inches of dirt. All waste material will be contained to prevent scattering by wind.
- F. All trash and debris will be buried or removed from the well site within 30 days after finishing drilling and/or completion operations.

8. Ancillary Facilities

None needed.

9. Well Site Layout

A plat of the well site is attached which shows dimensions of well pad, mud pits, reserve pit and location of major rig components.

10. Plans for Restoration of the Surface

- A. After completion of the well, all equipment not needed for operations will be removed.
- B. All unattended pits containing liquids will be fenced and the liquid portion allowed to evaporate before the pits are broken and backfilled.
- C. All waste associated with the drilling operation will be buried in place in a separate pit. Garbage and debris will be buried at least 3 feet deep.

Plans for Restoration of the Surface - cont.

- D. Surface restoration will be in accordance with the requirements of the Bureau of Land Management.
- E. The well site, if a producer, will be maintained and kept clean of all trash and litter or other foreign material which detracts from the surrounging environment. Equipment will be maintained in accordance with good operating practices.

After the well site is cleaned and pits backfilled, any obstruction to the natural drainage will be corrected by ditching and/or terracing. All disturbed area, including any access road no longer needed, will be ripped and sown in grass seed recommended by the BLM.

11. Other Information

- A. Topography: Terrain is rolling and broken. Drainage is to the north into Papers Wash.
- B. Soil: Thin fine sandy soil with numerous Red Rock outcrops.
- C. Flora and Fauna: Vegetative cover is sparse sage and native grasses. No trees. Wildlife in the area includes coyotes, rabbits, rodents, reptiles, dove, quail and deer.
- D. Ponds and Streams: No streams or ponds were noted in the area.
- E. Residences and Other Structure: None noted in the immediate area.
- F. Archaeological, Historical and Cultural Sites: None observed. Mr. Bill Naylor with the San Juan Community College in Farmington, New Mexico has been engaged to make a survey of the well pad and access road.
- G. Land Use: Ranching.
- H. Surface Ownership: The well site and access road are all on Federal surface administered by the BIM.

12. Lessee's or Operator's Representative:

Cities Service Company's representative responsible for assuring compliance with the approved surface use and operation plan is:

E. Y. Wilder Cities Service Company Region Operations Manager P.O. Box 1919 Midland, Texas 79702

Office Phone: 915/685-5751 Home Phone: 915/694-8626

13. Certification

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

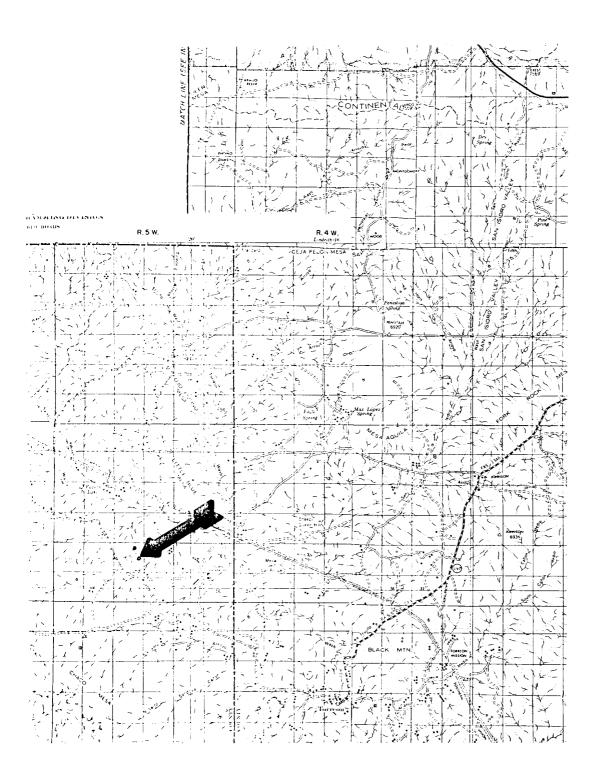
7/10/80

Region Operations Manager

Please contact me at the above address if further information is needed to properly evaluate this proposal.

EYW/dtd

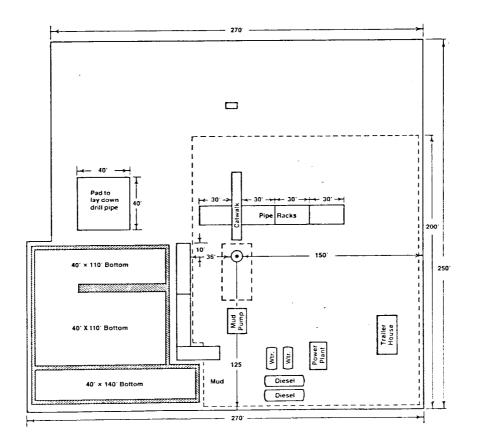
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KERR LAND SURVEYING Date: 6-30-80

LOCATION PLAT



Cities Service Co.'s FEDERAL "E" No. 2 1650' FNL & 990' FEL Section 28-19N-5W McKinley County, New Mexico Lse # NM 6999