Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

30-045-24498

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: NM03561

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

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

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

8. FARM OR LEASE NAME: Sullivan G[illegible] "A"

2. NAME OF OPERATOR: Tenneco Oil Company

9. WELL NO.: 1E

3. ADDRESS OF OPERATOR: 720 So. Colorado Blvd., Denver, Colorado 80222

10. FIELD AND POOL, OR WILDCAT: Basin Dakota Undes. M.V. Bloomfield Chacra

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 990' FSL 810' FWL
M
At proposed prod. zone

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 25, T29N, R11W

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 2 miles SE of Bloomfield

12. COUNTY OR PARISH: San Juan | 13. STATE: N.M.

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
	915.29	W/320/160/160
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**
	6400'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5589 GR

22. APPROX. DATE WORK WILL START*: July 1980

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" new	36#	±250'	Circulate to surface
8 3/4"	7" new	23#	±4700'	Circulate to surface
6 1/4"	4 1/2" new	10.5#	±6400'	Circulate to liner top

See Attached.

The gas is dedicated.

RECEIVED
JUL 21 1980
U. S. GEOLOGICAL SURVEY
FARMINGTON, N.M.

OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS".

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

RECEIVED
AUG 8 1980
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 M. L. Freeman TITLE Staff Production Analyst DATE July 16, 1980

(This space for Federal or State office use)

PERMIT NO. [illegible] APPROVAL DATE

APPROVED BY [illegible] TITLE DATE

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions On Reverse Side

DHC R-6313 ok Sue

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-107
Revised 10-1-78

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

Operator	Lease	Well No.
TENNECO OIL COMPANY	SULLIVAN ~~GAS UNIT~~ "A"	1E

Unit Letter	Section	Township	Range	County
M	25	29N	11W	San Juan

Actual Footage Location of Well:
990 feet from the South line and 810 feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
5589	Dakota/MesaVerde/Chacra	Basin Undesignated Bloomfield Dakota Mesa Verde Chacra	320/160/160 Acres

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

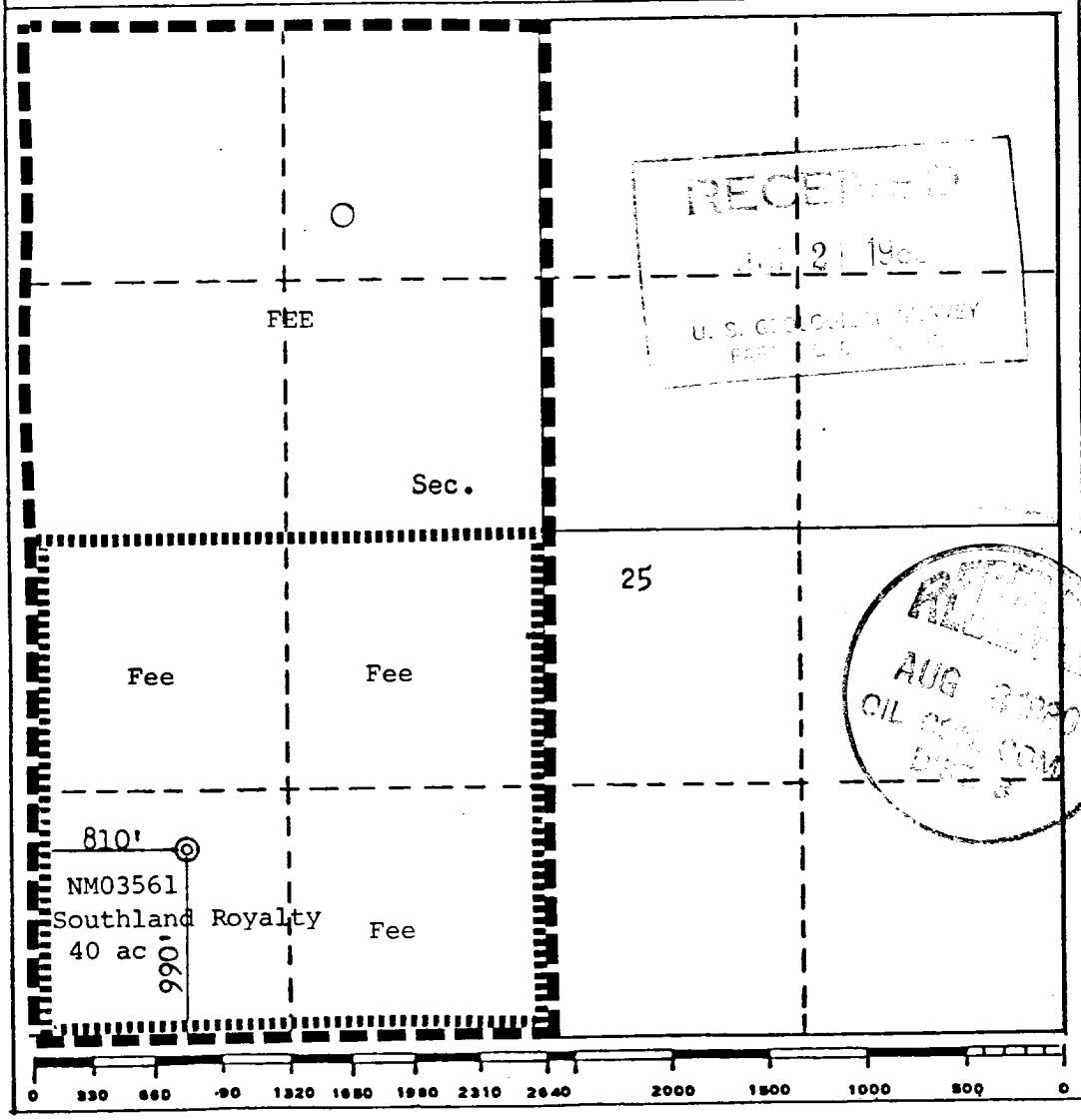
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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?

[X] Yes [ ] No If answer is "yes," type of consolidation communitization in progress

If answer is "no," list the owners and tract descriptions which have actually been 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.



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U. S. GEOLOGICAL SURVEY

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OIL CON. COM.

CERTIFICATION

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

Name: M. L. Freeman
Position: Staff Production Analyst
Company: Tenneco Oil Company
Date: July 16, 1980

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.

Date Surveyed: June 13, 1980
Registered Professional Engineer and/or Land Surveyor: Fred B. Kerr Jr.
Certificate No. 3950

ESTIMATED FORMATION TOPS

OJO Alamo	620'
Farmington	1000'
Pictured Cliffs	1560'
Chacra	2350'
Chacra A	2700'
Chacra B	2800'
Cliffhouse	3300'
Menefee	3390'
Point Lookout	4090'
Mancos	4465'
Greenhorn	6080'
Dakota	6170'
T.D.	6400'

TENNECO OIL COMPANY
ROCKY MOUNTAIN DIVISION
PENTHOUSE, 720 SOUTH COLORADO BOULEVARD
DENVER, COLORADO 80222

DRILLING PROCEDURE

REVISED
DATE: July 10, 1980

LEASE: Sullivan Gas Unit

WELL NO.: A-1E

LOCATION: 990' FSL, 810' FWL
Sec. 25, T 29N, R 11W
San Juan County, New Mexico

FIELD: Basin Dakota

ELEVATION: 5,589' Est. D.F.

TOTAL DEPTH: 6,400'

PROJECTED HORIZON: Dakota/Mesa Verde-Chacra Dual

SUBMITTED BY: _____ DATE: 7/11/80

APPROVED BY: _____ DATE: 7/ /80

GT/MS

CC: Administration
DSB Well File
Field File

DRTLLING, CASING, AND CEMENT PROGRAM

1. Move in, rig up rotary tools.

2. Drill a 12-1/4" hole to ± 250'.

3. Run 9-5/8", 36#, K-55, ST&C casing to T.D.

4. Cement with Class "B" with 2% $CaCl_2$ in sufficient volume to circulate to surface.

5. Wait on cement a minimum of 12 hours. Install 9-5/8", Series-900 casing head.

6. Nipple up blowout preventers and manifold with relief lines. Pressure test choke manifold lines and valves to 1500 psi for 30 minutes. Pressure test blind rams to 1500 psi for 30 minutes.

7. Run in hole with 8-3/4" bit, drill collars, and drill pipe. Test pipe rams to 1500 psi for 30 minutes. Record all Tests on the IADC Daily Report Form.

8. Drill an 8-3/4" hole to ± 4700'. Log as per Wellsite Geological Engineer.

9. Run 7" OD, 23#, K-55, ST&C casing to ± 4700'. Run four cement baskets, (above Point Lookout ± 4090'; above Menefee ± 3390'; above Cliffhouse ± 3300'; and below DV tool ± 2900').

10. Cement in two stages with DV tool at ± 2900', (100' below bottom perforations in Chacra). WOC in first stage four hours and circulate through DV tool. Cement second stage with sufficient volume to circulate cement to the surface. WOC a minimum of 18 hours.

11. Land casing in slips and cut off. Install drilling spool and nipple up BOP equipment. Test blind rams and casing to 1000 psi for 30 minutes. Run in hole with 6-1/4" bit, drill collars, and 3-1/2" drill pipe to ± 2900'. Test pipe rams to 1000 psi for 30 minutes.

12. Drill out DV tool at ± 2900' and float collar at ± 4650' with water and test casing to 1000 psi for 30 minutes. Rig up to gas drill.

13. Displace fluid in casing with nitrogen. Displace nitrogen with gas and drill out of shoe into 5' of formation. Blow hole with gas until dusting. Drill to T.D., log as per Wellsite Geological Engineer, and guage the natural flow from the Dakota.

14. If productive, run 4-1/2", 10.5, K-55, LT&C casing liner to T.D. with ± 150' overlap inside 7" casing. Cement with sufficient volume to circulate cement above liner lap.

CASING PROGRAM

0-250'	9-5/8", 36#, K-55, ST&C casing.
0-4700'	7", 23#, K-55, ST&C casing.
4550-6400'	4-1/2", 10.5#, K-55, LT&C casing.

15. If non-productive, P & A according to USGS regulations.

16. MORT.

MUD PROGRAM

0-250'	Native solids. Run viscous sweeps as necessary to clean hole. Have sufficient viscosity to run casing.
250'-4700'	Benex and water. Sweeps as necessary. Have sufficient viscosity to log and run casing. Control WL for logging.
4700'-6400'	Gas.

EVALUATION

Deviation Surveys:

1. Survey surface hole at 100' intervals. Maximum allowable deviation on surface is 1^{o}.

2. From surface to T.D., deviation surveys must be taken every 500' or each trip, whichever is first. This may entail running the TOTCO on wireline. Record each survey on the IADC Drilling Report Sheet. Maximum allowable change in deviation is 1^{o} per 100'. Maximum deviation is 5^{o}.

Cores & DST's: None.

Samples: None.

Logs: GR/FDC/CNL Caliper from T.D. to Base of Mesa Verde.

GR/SP/SN Induction from T.D. to surface casing.

BLOWOUT EQUIPMENT

Arrangement C, Tenneco Oil Company, Rocky Mountain Division, required minimum blowout preventer and choke manifold. (See Attachment.)

REPORTS

Drilling reports for the past 24 hours will include depth, footage, time distribution, activity breakdown, mud properties, bit record, bottom hole assembly, daily and cumulative mud costs, plus any other pertinent information, will be called into Tenneco Oil Company, Denver, Colorado, between 7:30 a.m. and 8:00 a.m.

1. 303-758-7130 (Office) Don Barnes
   303-758-7287 (Office) Don Barnes' private line, Monday-Friday (before 7:45 a.m.)
   303-936-0704 (Home) Don Barnes, weekends and holidays.

2. George Ramsey (Home) 303-771-5154.

3. John Owen (Home) 303-795-0221.

The yellow sheet of the IADC Report is to be filled out completely. The original copy of the drilling time recorder, and copies of any invoices from this well, signed and received for Tenneco Oil Company, will be mailed daily to:

TENNECO OIL COMPANY
ROCKY MOUNTAIN DIVISION
PENTHOUSE, 720 SOUTH COLORADO BOULEVARD
DENVER, COLORADO 80222

ATTENTION: Drilling Department

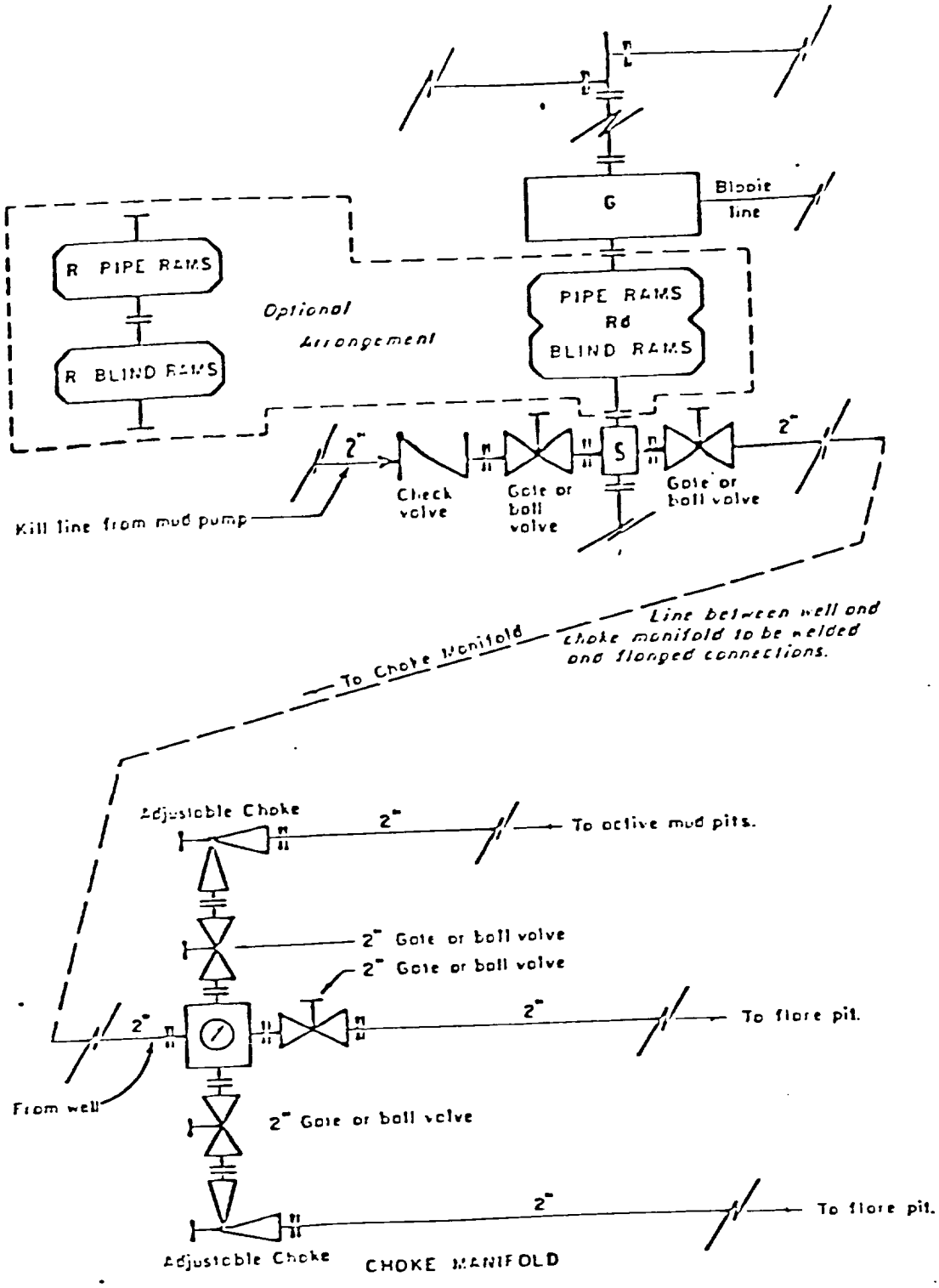
IN CASE OF EMERGENCY, NOTIFY THE FOLLOWING:

1. Mr. Don Barnes, Division Drilling Engineer.

2. Mr. George E. Ramsey, Jr., Drilling Engineers Supervisor

3. Mr. John W. Owen, Project Drilling Engineer.

4. Mr. Mike Lacey, Division Production Manager (Home 303-979-0509).



All equipment to be 3,000 psi working pressure except as noted.

- Rd Double ram type preventer with two sets of rams.
- R Single ram type preventer with one set of rams.
- S Drilling spool with side outlet connections for choke and kill lines.
- G Rotating head 150 psi working pressure minimum

ARRANGEMENT C

TENNECO OIL COMPANY
ROCKY MOUNTAIN DIVISION

REQUIRED MINIMUM
BLOWOUT PREVENTER AN
CHOKE MANIFOLD

J. MAGILL 10-26-78 EVI

SURFACE USE PLAN

1. Existing Road - Please refer to Map No. 1 which shows the existing roads. New roads which will be required have been marked on this map. All existing and new roads will be properly maintained during the duration of this project.

2. Planned Access Roads - Please refer to Map No. 1. The grade of the access roads will be consistent with that of the local terrain. The road surface will not exceed twenty feet (20') in width. Upon completion of the project, the access road will be adequately drained to control soil erosion. Drainage facilities may include ditches, water bars, culverts or any other measure deemed necessary by trained Company personnel to insure proper drainage. Gates and/or cattleguards will be installed if necessary.

3. Location of Existing Wells - Please refer to Map No. 2.

4. Location of Tank Batteries, Production Facilities, and Production Gathering and Service Lines - Please refer to Maps No. 1 and No. 2. Map No. 2 shows the existing roads and new proposed access roads. All known production facilities are shown on these two maps.

5. Location and Type of Water Supply - Water for the proposed project will be obtained from

6. Source of Construction Materials - No additional materials will be required to build either the access road or the proposed location.

7. Methods of Handling Waste Materials - All garbage and trash materials will be put into a burn pit shown on the attached Location Plat No. 1. When clean-up operations are begun on the proposed project, the burn pit with its refuse will be buried to a depth of at lease three feet (3'). A latrine, the location of which is also shown on Plat No. 1. will be provided for human waste. If large amounts of liquids are left in the reserve pit after completion of the project, the pit will be fenced until the liquids have had adequate time to dry. The location clean-up will not take place until such time as the reserve pit can be properly covered over to prevent run-off from carrying any of these materials into the watershed. No earthen pit will be located on natural drainage; all earthen pits will be so constructed as to prevent leakage from occurring.

8. Ancillary Facilities - No camps or airstrips will be associated with this project.

9. Wellsite Layout - Please refer to the attached Plat No. 1.

10. Plans for Restoration of the Surface - After completion of the proposed project the location will be cleaned and leveled. The location will be left in such a condition that will enable reseeding operations to be carried out. Seed mixture as designated by the responsible government agency will be used. The reseeding operation will be performed during the time period set forth by the regulatory body. The location production equipment will be painted as designated by the responsible government agency.

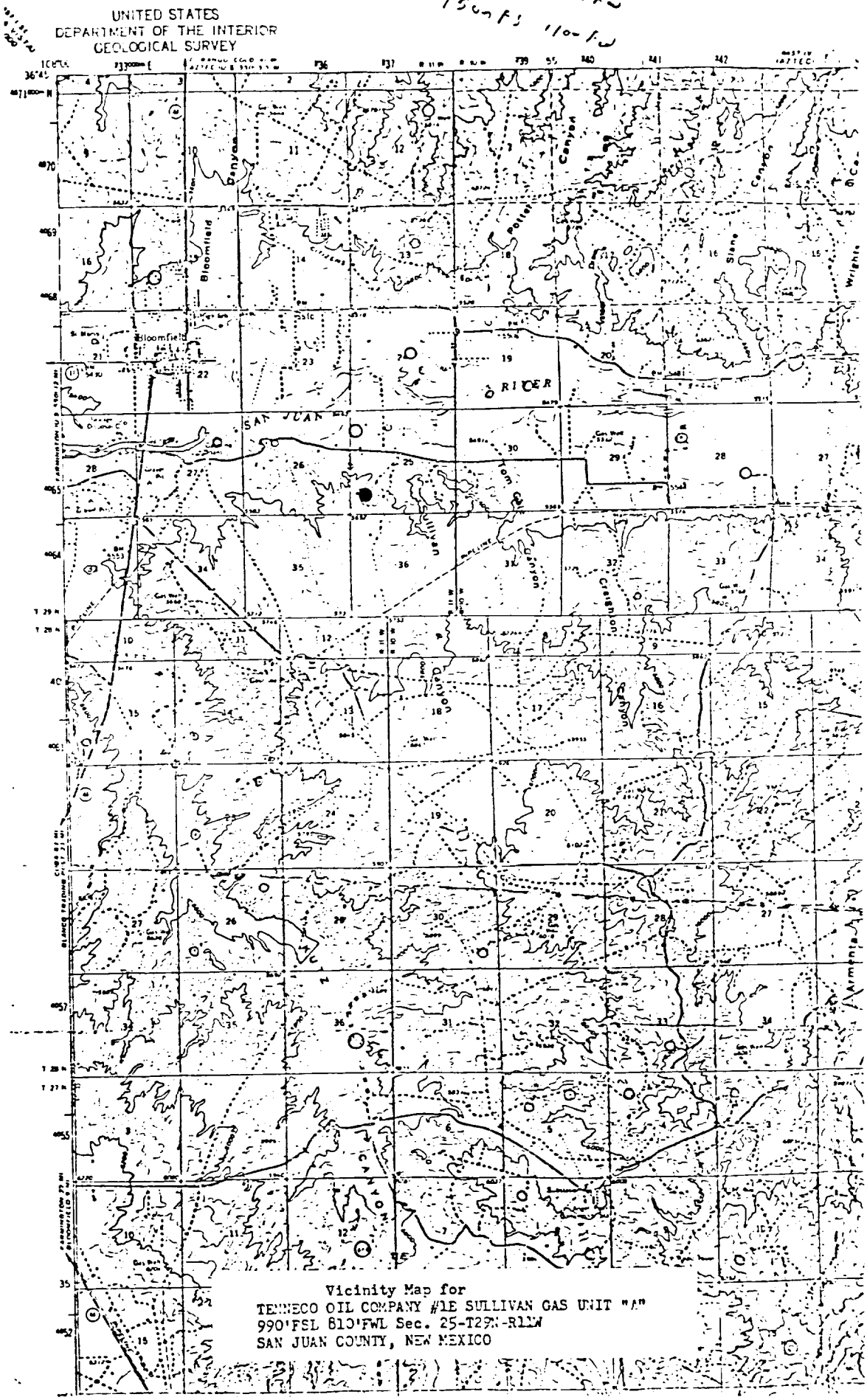
11. Other Information - The proposed site is located on Federal surface. The topography is rolling hills broken by erosional drainages. The soil is sandy loam with many gravels supporting pinon, juniper, sage and native grasses.

12. Operator's Representative - See drilling prognosis.

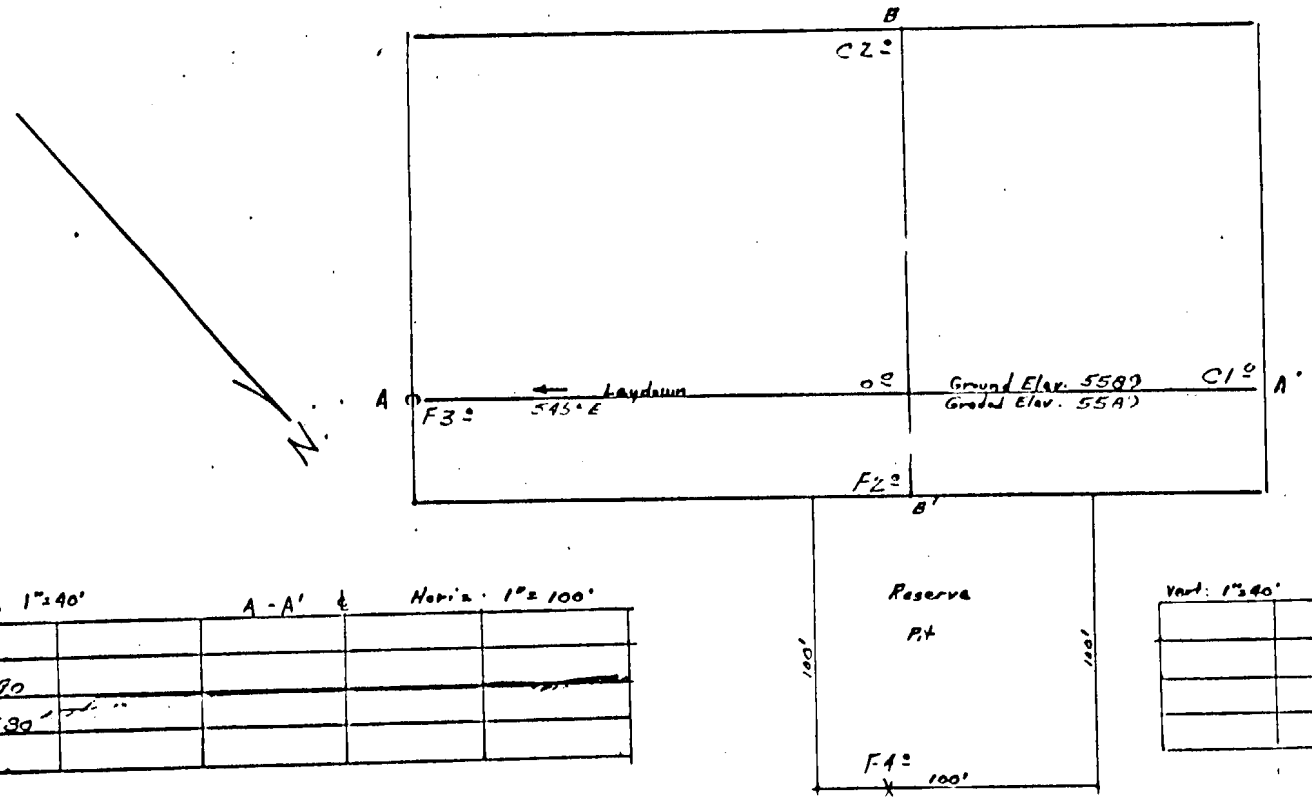
13. Certification - I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements mad in this plan are, to the best of my knowledge, true and correct; and that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

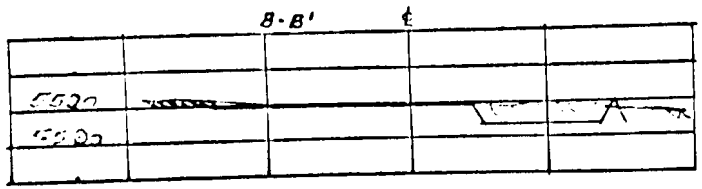
L. Freeman
Staff Production Analyst

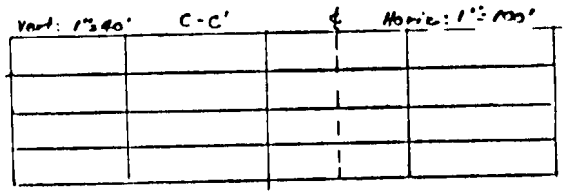
LF/gh

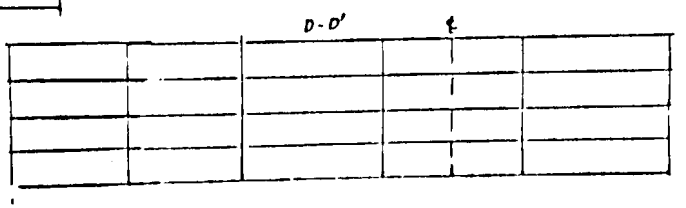

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Bloomfield
Bloomfield Canyon
SAN JUAN
RIVER
Vicinity Map for
TENNECO OIL COMPANY #1E SULLIVAN GAS UNIT "A"
990'FSL 810'FWL Sec. 25-T29N-R11W
SAN JUAN COUNTY, NEW MEXICO

Location Profile for
TENNECO OIL COMPANY #1E SULLIVAN GAS UNIT "A"
990'FSL 810'FWL Sec. 25-T29N-R11W
SAN JUAN COUNTY, NEW MEXICO









KERR LAND SURVEYING
Date: June 13, 1980

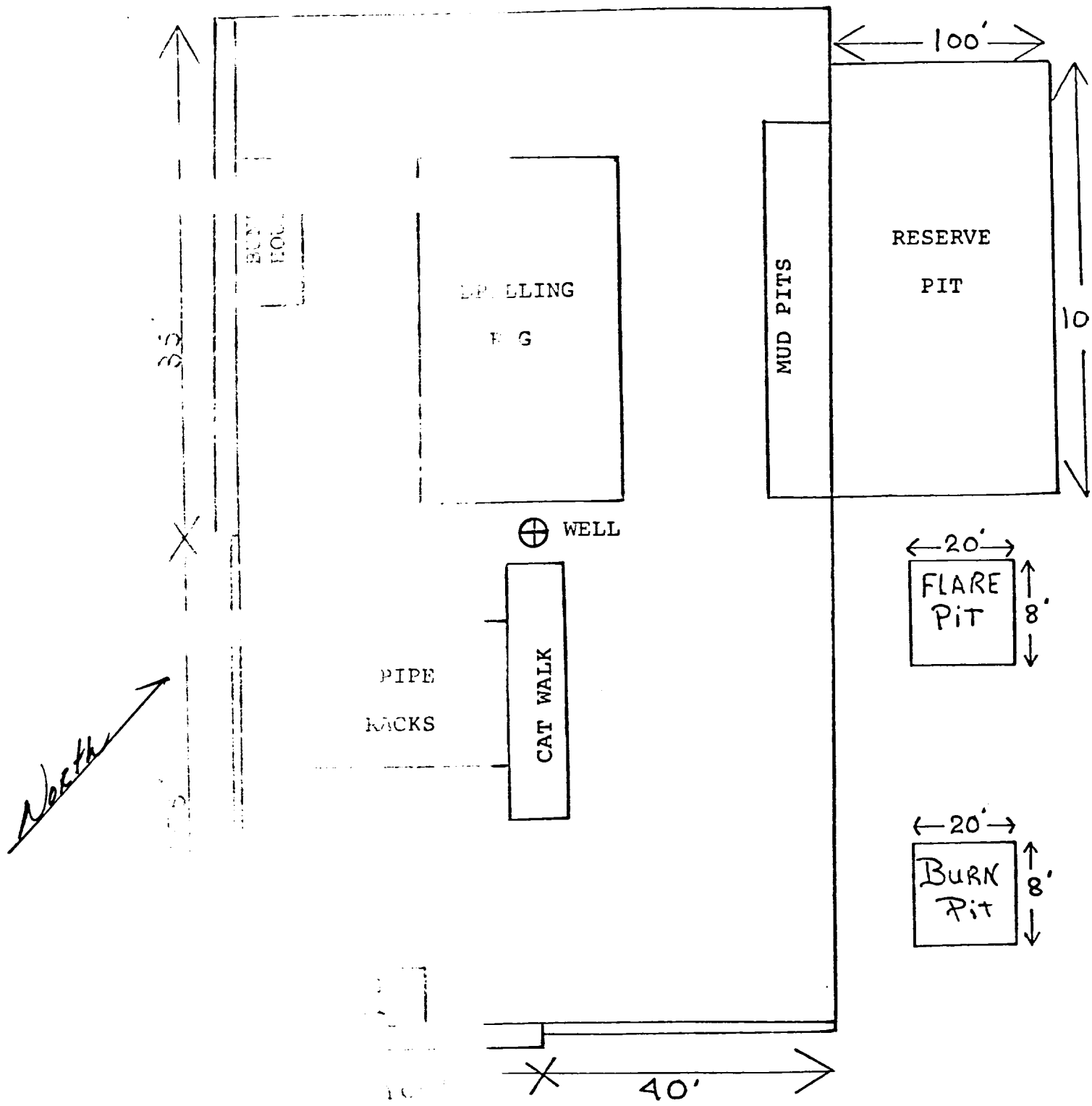
ENNECO OIL COMPANY

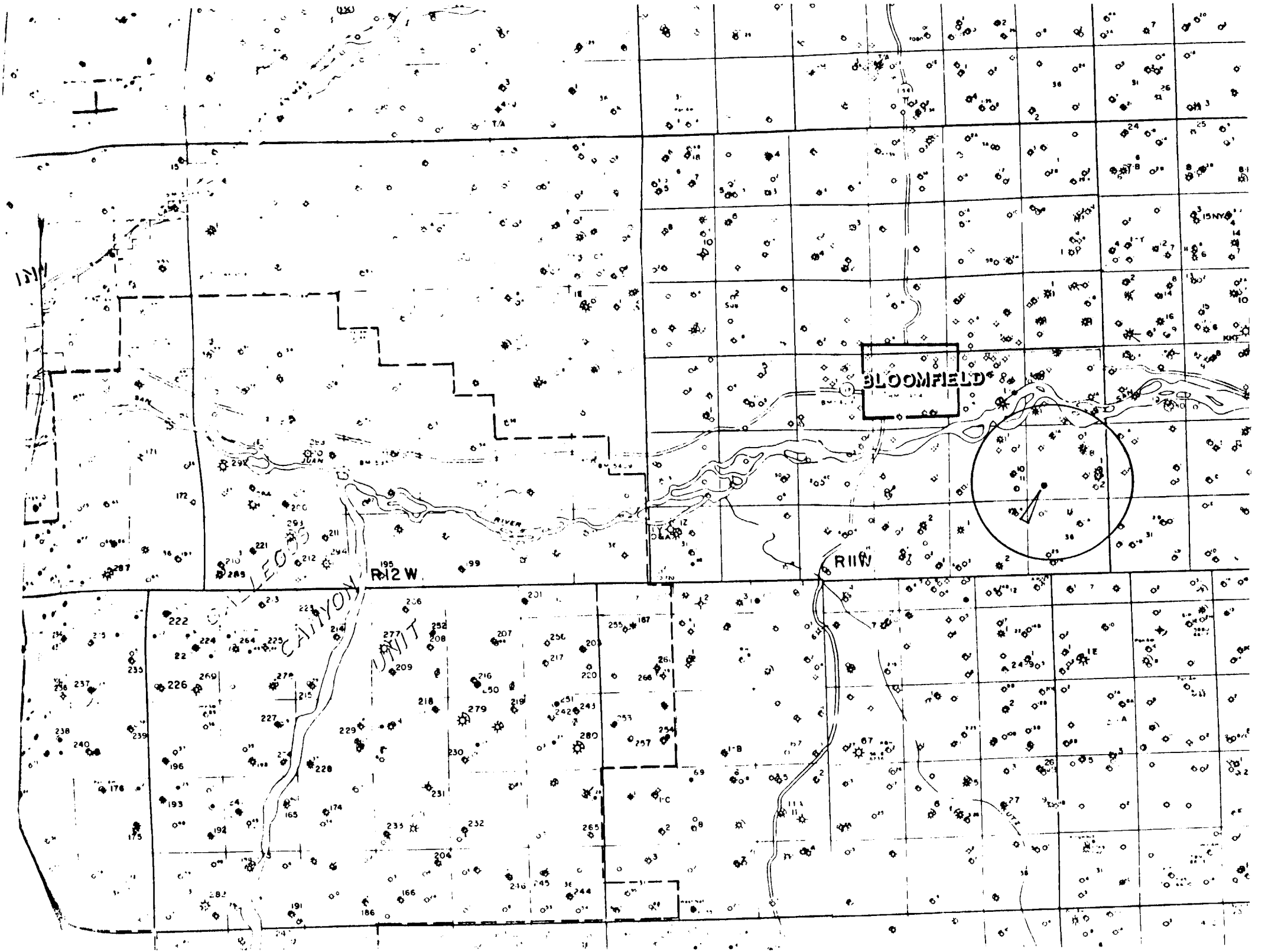
CALCULATION SHEET

EXHIBIT

DRILLING WELL SITE LAYOUT Sullivan Gas Unit "A" 1C

DATE 7-17-80




BLOOMFIELD
R12W
R11W
SAN JUAN RIVER
GALLEGOS CANYON UNIT