Form 9-331 C
(May 1963)

N. M. O. C. C. COPY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

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

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

2. NAME OF OPERATOR: Shell Oil Company

3. ADDRESS OF OPERATOR: P. O. Box 1509, Midland, Texas 79702

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 660' FNL and 1980' FEL
At proposed prod. zone: Same

5. LEASE DESIGNATION AND SERIAL NO.: NM-073394-A

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Corder Federal

9. WELL NO.: 3

10. FIELD AND POOL, OR WILDCAT: Cato San Andres

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Section 5, T-9-S, R-30-E

12. COUNTY OR PARISH: Chaves

13. STATE: New Mexico

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 20 miles northwest of Caprock

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: 799.97

17. NO. OF ACRES ASSIGNED TO THIS WELL: 40

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.: 1320

19. PROPOSED DEPTH: 3450'

20. ROTARY OR CABLE TOOLS: Rotary

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

22. APPROX. DATE WORK WILL START*: May 15, 1977+

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
11"	8 5/8"	24#	250'	100 sacks to surface
7 7/8"	5 1/2"	14#	3450'	1500 sacks to surface

Attachments:
- 12 Point Development Plan for Surface Use
- New Mexico Oil Conservation Commission Form C-102
- County Road Map
- Access Road Plat
- Ownership Map
- Facilities Plats
- Rig Layout Plat
- Drilling Prognosis
- Casing and Cement Program
- BOP Assembly Drawing
- Choke Manifold Drawing

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ARTESIA, NEW MEXICO

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 L. M. Ortiz FOR J. D. D. TITLE J. D. D'Agostino Senior Drilling Engineer DATE 4-11-77

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED

APPROVED BY _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

THIS APPROVAL IS RESCINDED IF OPERATIONS ARE NOT COMMENCED WITHIN 3 MONTHS.

MAY 11 1977

EXPIRES AUG 11 1977

R. L. [illegible]
ACTING DISTRICT ENGINEER

*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.
SHELL OIL COMPANY	SHELL CORDER FEDERAL	3

Unit Letter	Section	Township	Range	County
B	5	9 South	30 East	Chaves

Actual Footage Location of Well:
660 feet from the North line and 1980 feet from the East

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
4108.9			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.) _____

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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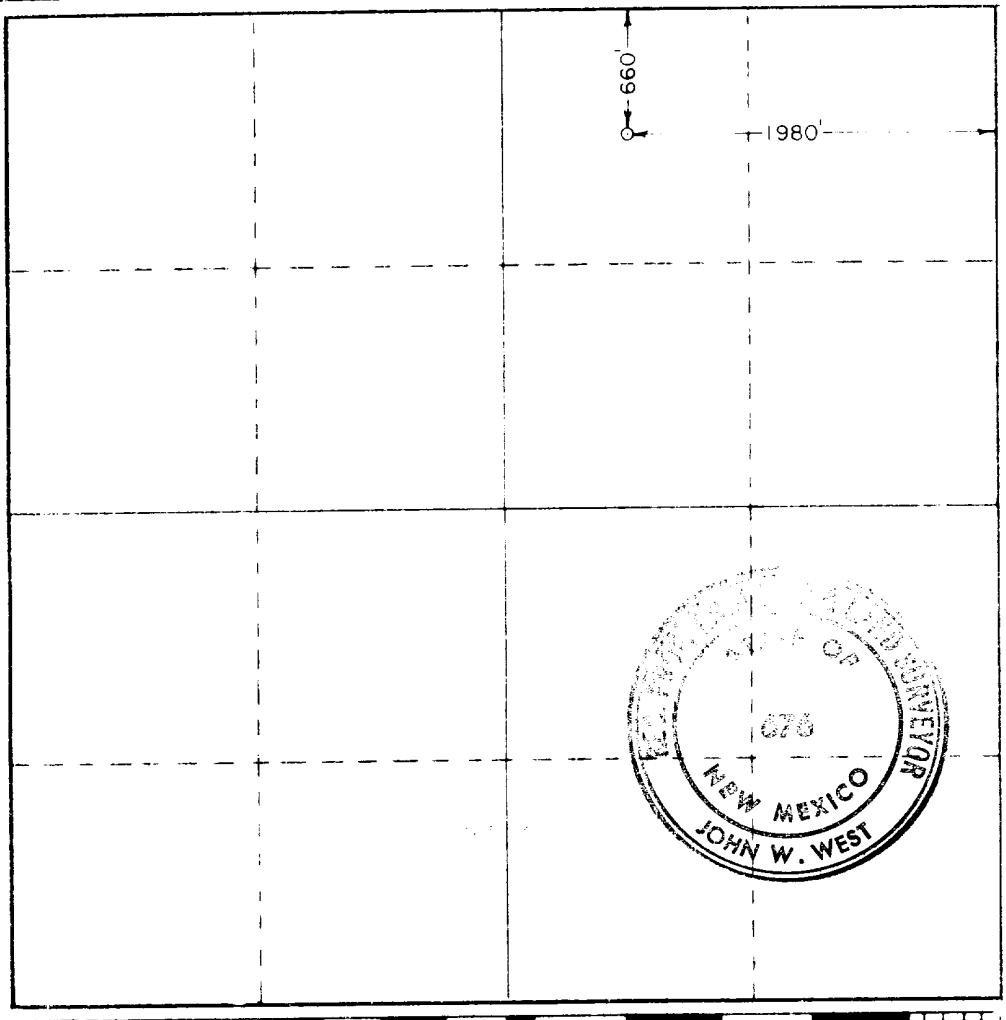
ARTESIA, NEW MEXICO



CERTIFICATION

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

K.M. Craik FOR

Name: J. D. D'Agostino

Position: Senior Drilling Engineer

Company: Shell Oil Company

Date: April 13, 1977

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.

March 5, 1977

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No. 676

12-POINT DEVELOPMENT PLAN FOR SURFACE USE

SHELL OIL COMPANY
CORDER FEDERAL NO. 3
CATO SAN ANDRES FIELD
CHAVES COUNTY, NEW MEXICO

1. Existing Roads to Well Location

To reach this well location, proceed west from Caprock (located on U.S. 380) ten miles. Turn right (north) on a primitive road for ten miles to the location. (See attached county road map.)

2. Planned Access Roads

Approximately 1120' of 12' wide access road will be required from the well site to the existing lease road east of the location. (See attached plat showing existing and planned access roads.)

3. Location of Existing Wells

Location of existing wells is shown on the attached ownership plat.

4. Location of Tank Batteries, Production Facilities, etc.

A plat showing the existing tank batteries and flowlines and proposed flowlines is attached.

5. Location and Type of Water Supply

We plan to contract with a private supplier to haul the water to be used during this drilling operation.

6. Source of Construction Materials

The materials needed to construct the access roads or well location will be purchased from a private supplier.

7. Methods for Handling Waste Disposal

All waste that can be burned will be burned in a pit located in the northwest corner of the drill site. All other waste and drilling fluids will be buried in a pit and covered with a minimum of two feet of cover.

8. Ancillary Facilities

There will be no permanent structures or airstrips. Trailer locations are shown on the attached location layout sheet.

9. Well Site Layout

See attached location layout sheet.

10. Plans for Restoration of the Surface

Any topsoil removed while digging pits will be stockpiled. The burn pit will be covered and leveled. The reserve pit will be allowed to dry, filled in and leveled. The location will be cleaned, topsoil spread over the disturbed areas and reseeded as directed by the Bureau of Land Management.

11. Other Environmental Information

The immediate area under concern has caliche and sandy soil which is sparsely covered with unidentified native grasses and scrub mesquite. There are no water wells, flowing streams or bodies of water in the immediate area.

12. Field Representative

R. E. Henson
4415 Versailles
Midland, Texas 79703
915-697-3374

or

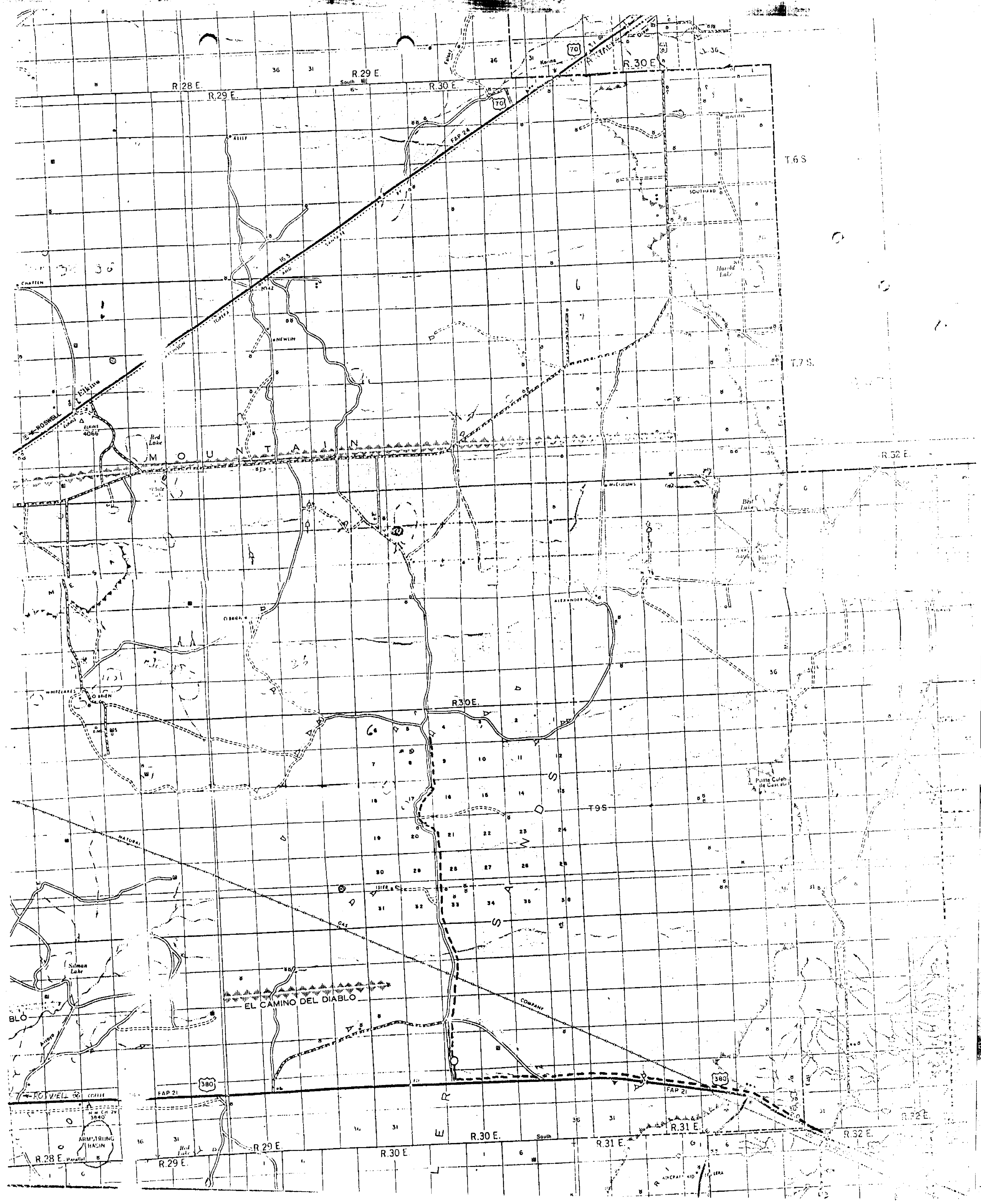
J. E. Miller
3331 Providence
Midland, Texas 79701
915-697-1069

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

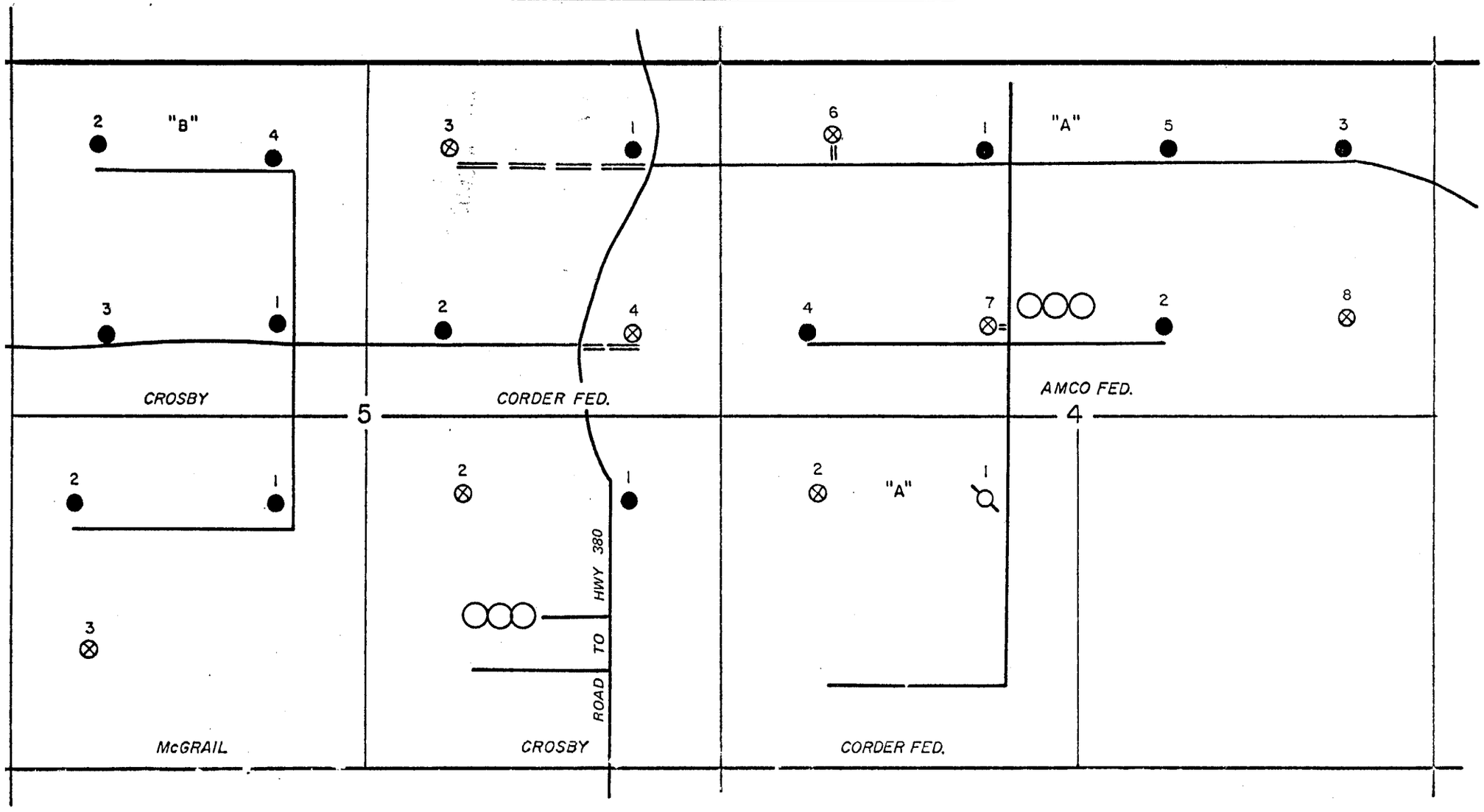
4-11-77
Date

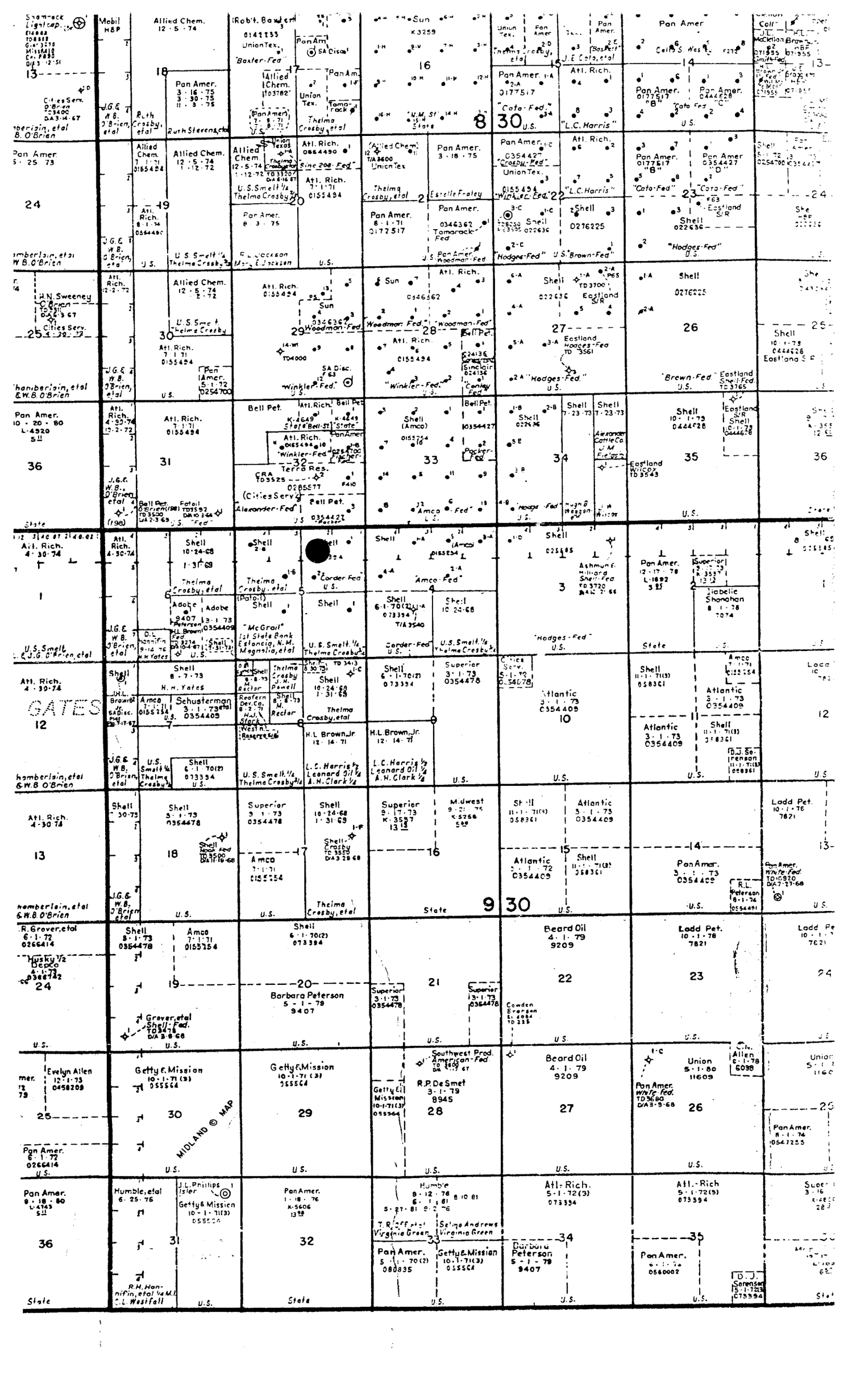
C. A. Simar
Division Drilling Superintendent
(Name and title)



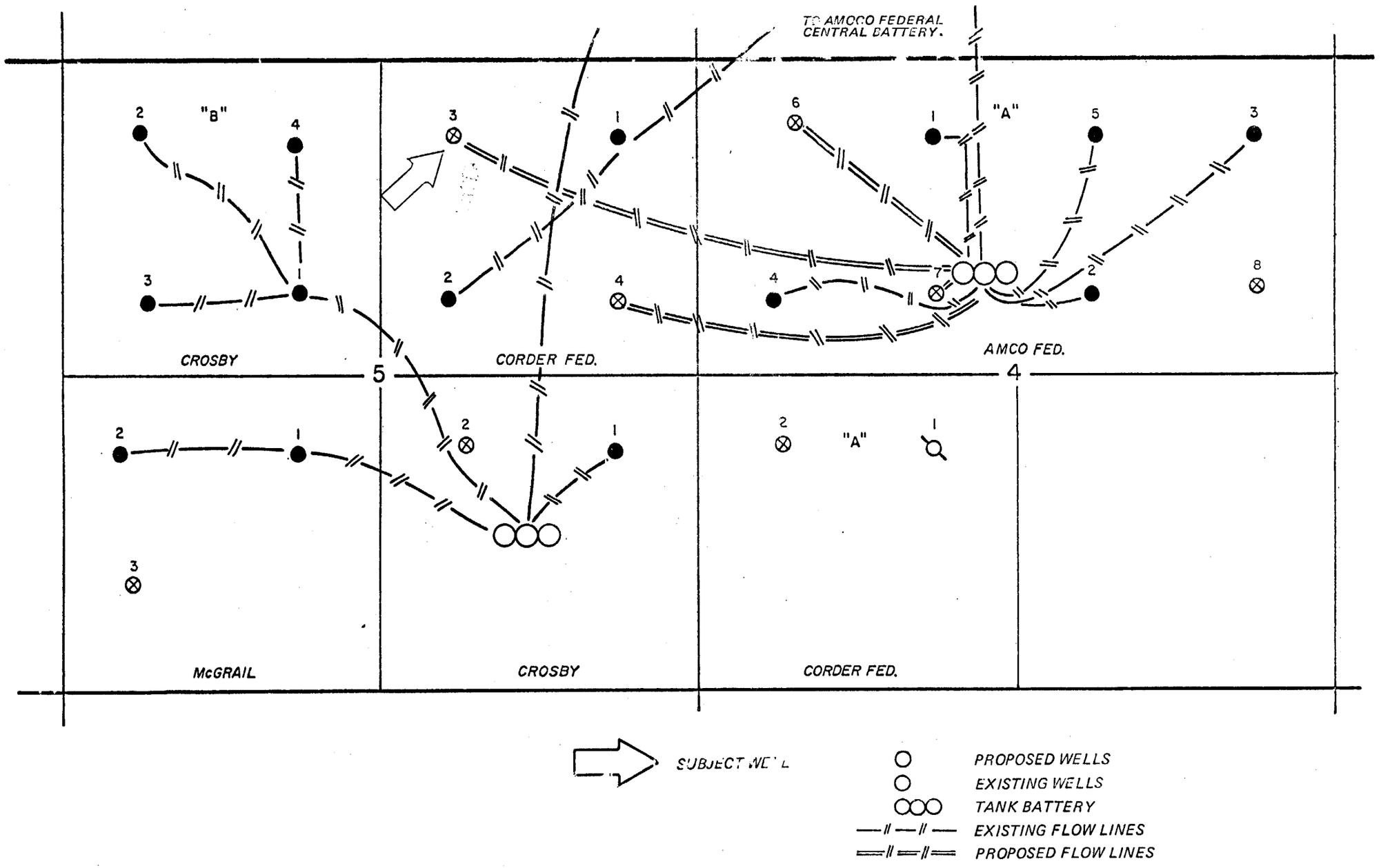
R.28 E.
R.29 E.
R.30 E.
R.31 E.
R.32 E.
R30E.
T.6 S.
T.7 S.
T9S
South
Parallel
70
FAP 24
FAP 21
380
KELLY
CHAFFEN
BOAZ
NEWLIN
Kenna
Elkins
ROSWELL
ELKINS
4066
Red Lake
White Lake
MOUNTAIN
MESA
WHITELAKES
O'BRIEN
ALEXANDER
McCOLUMS
JENKINS
SOUTHARD
Harold Lake
Best Lake
Punta Culebra de Gascate
ISIFE
NATURAL
GAS
COMPANY
EL CAMINO DEL DIABLO
SANDS
Silman Lake
Arroyo
ARMSTRONG BASIN
3840
Red Lake
AIRCRAFT AID

EXISTING AND PLANNED ACCESS ROADS



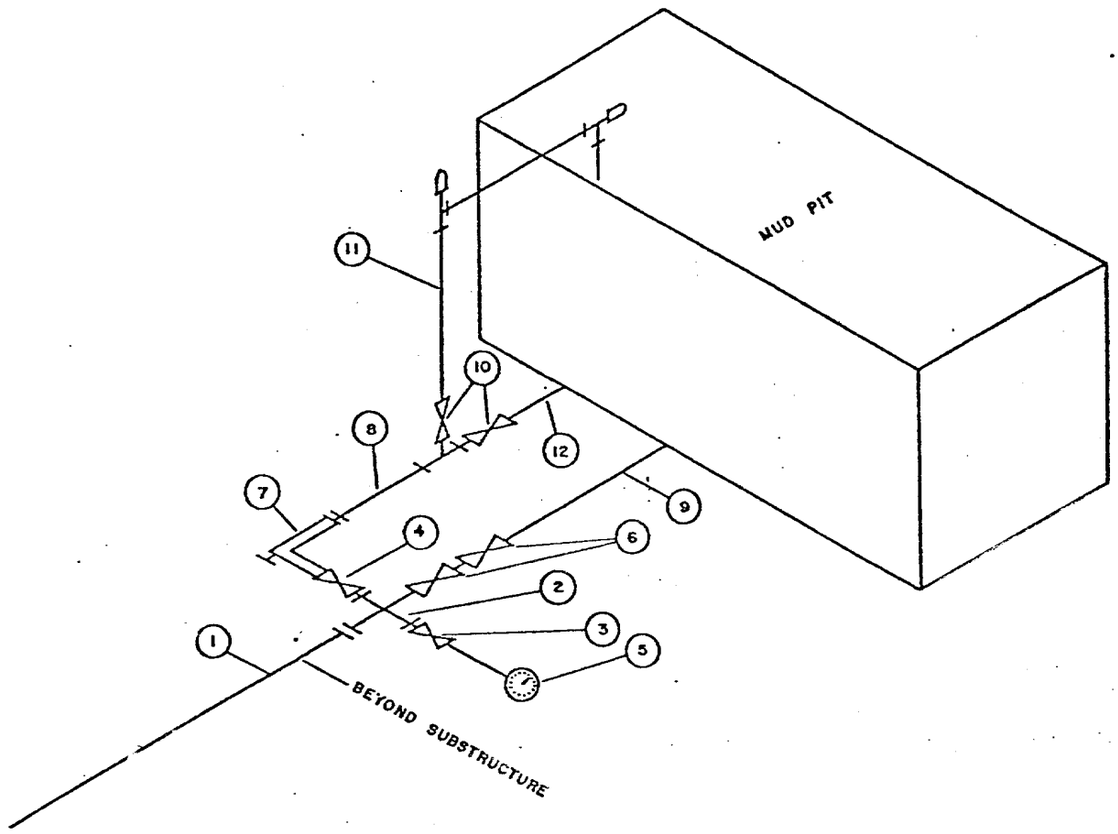

GATES
MIDLAND © MAP

TANK BATTERIES AND FLOW LINES



DRAWING AND CHECK LIST NO. EP-1005-3
(ATTACHMENT 3 TO BID SHEET AND DRILLING ORDER)
MINIMUM BLOWOUT PREVENTER CHOKE MANIFOLD FOR LARGE SURFACE AND CONDUCTOR STRINGS
2000 psi API Class 2M
SPECIFICATIONS FOR WELL NO. Cato Field CASING SIZE 8 5/8

GENERAL LAYOUT
CHOKE MANIFOLD, CHOKE DISCHARGE LINES



Contractor and Operator to furnish items checked (x)

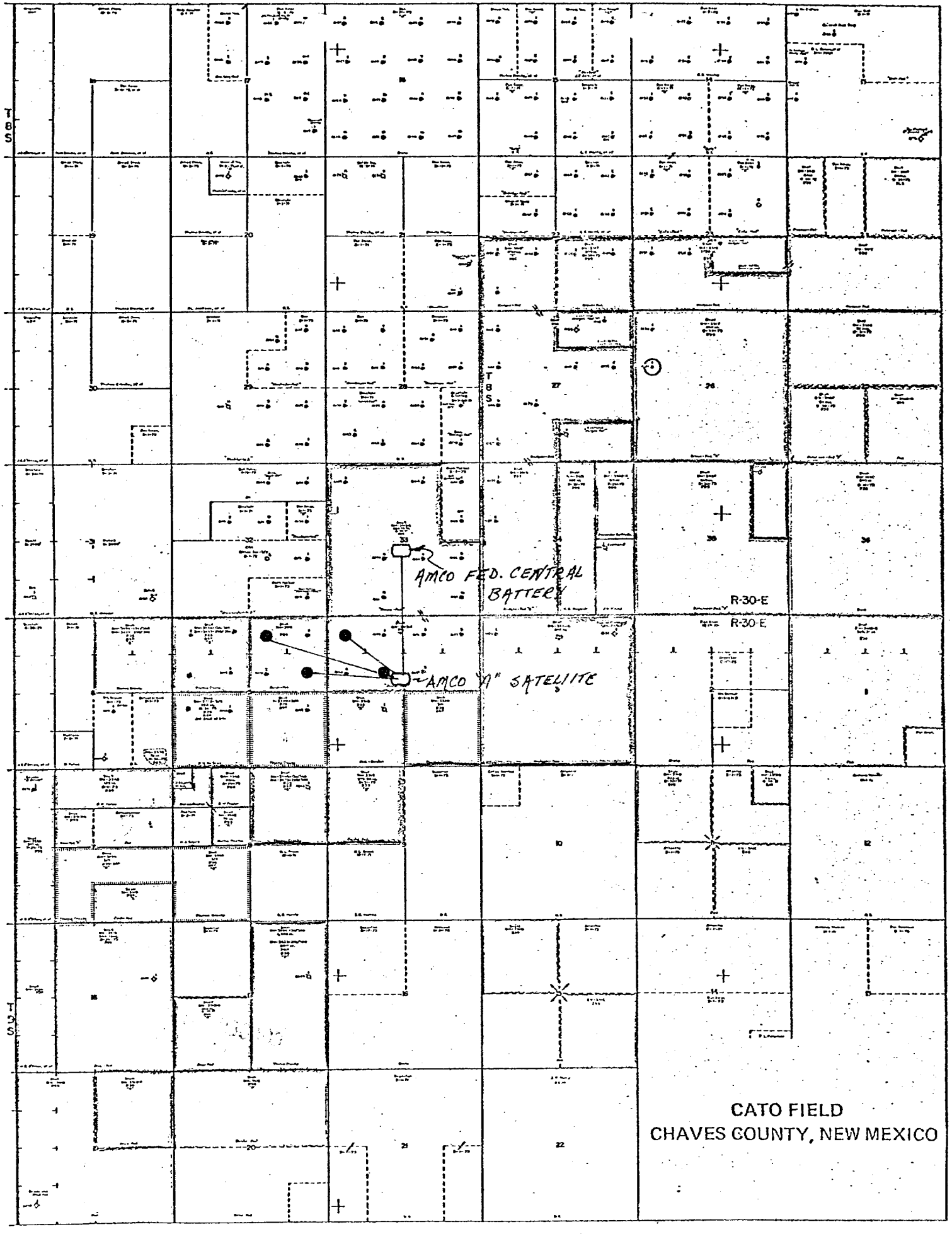
No.		Min. Size	Type	Press. Rating	Furnished by Contr.	Oper.
1	Line from drilling spool	2"		2000	X	
2	Cross 2 x 2 / 2 x 2			2000	X	
3	Gate Valve	2	*CIW F	2000	X	
4	Gate Valve	2	*CIW F		X	
5	Pressure Gauge			3000	X	
6	Gate Valves	2	*CIW F	2000	X	

*or equivalent

No.		Min. Size	Type	Press. Rating	Furnished by Contr.	Oper.
7	Adjustable Choke	2	*H-2	2000	X	
8	Line to Reserve Pit	2		2000	X	
9	Line to Reserve Pit	2		1000	X	
10	Gate Valves	2	*CIW F	2000	X	
11	Line to Mud Pit	2		1000	X	
12	Line to Reserve Pit	2		1000	X	

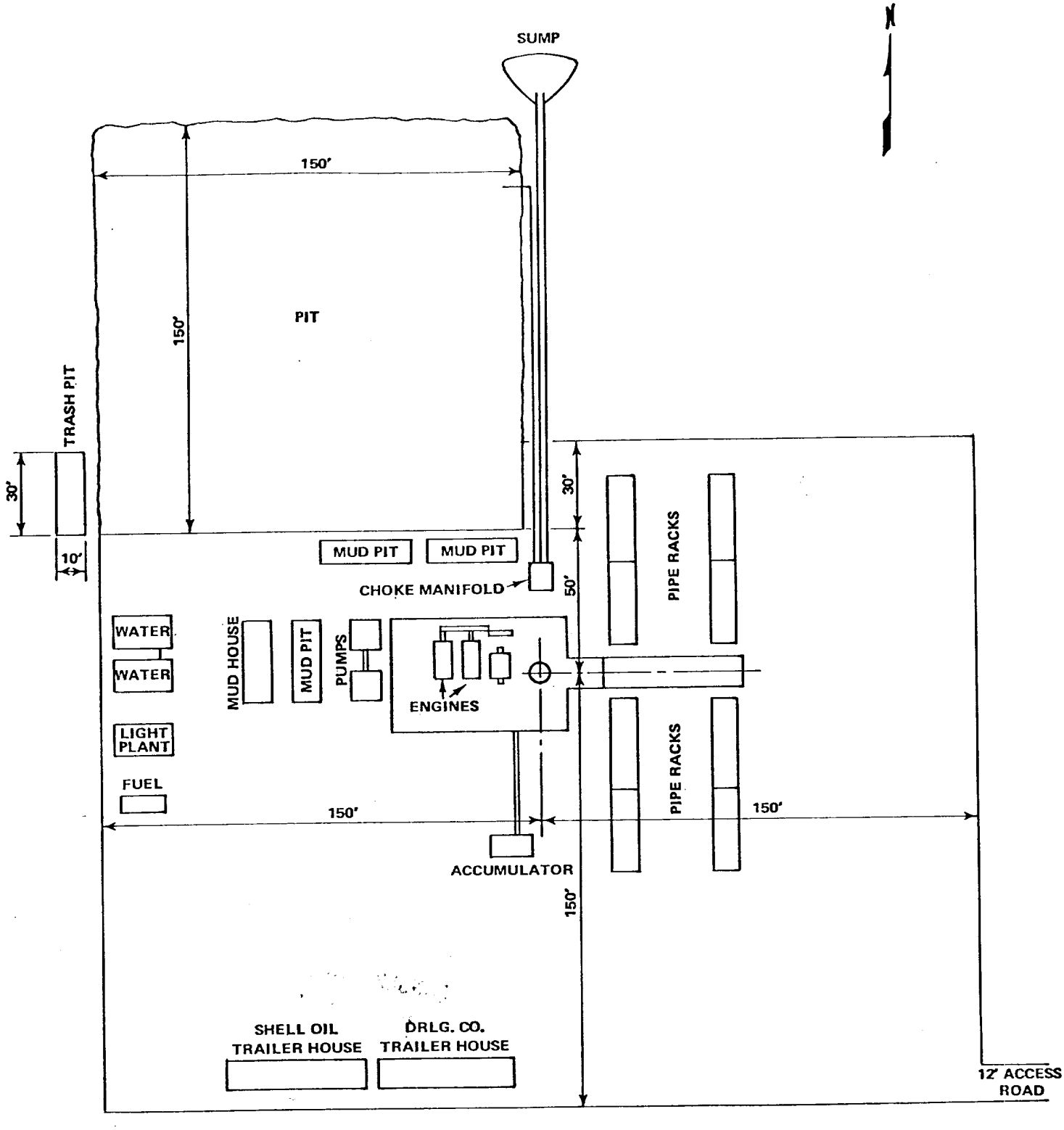
EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTIONS

1. All connections in choke manifold shall be flanged or Cameron clamp of comparable rating. Low pressure lines downstream from a choke can contain screwed connections.
2. All flanges to be API 6B and ring gaskets shall be API RX.
3. All lines shall be securely anchored.
4. Choke to be equipped with tungsten carbide seat and needle and replacement parts shall be available.
5. Line from drilling spool to choke manifold to be as straight as possible. Line downstream from chokes shall make turns by large radius bend or 90° bends using bull plugged tees.
6. Discharge lines from chokes and choke bypass shall vent at a minimum of 100 ' from the well.



CATO FIELD
CHAVES COUNTY, NEW MEXICO

LOCATION PLAT FOR CATO FIELD



SCALE: 1" = 50'

DRILLING PROGNOSIS

WELL: Corder Federal No. 3.

LOCATION: 660' FNL & 1980' FEL Section 5, T-9-S, R-30-E, Chaves County, New Mexico

OBJECTIVE: San Andres

W.O. NO. 932401

FIELD: Cato San Andres

EST. ELEVATION: 4100'

EVALUATION			GEOLOGY	DRILLING			
LOG. TIME SAMPLES	ELEC. SURVEYS	MUD LOGGER	SIGNIFICANT FORMATIONS	WELL DEPTH	HOLE SIZE	CASING & CEMENT	MUD PROGRAM

11"

8 5/8" 24# K-55 ST&C

Fresh water native mud

8 5/8" @ 250' or 25' into Red Beds (whichever is deeper)

2MR-10-SRd

Rustler 934' (+3166')

1450'

Yates 1469' (+2631')

San Andres 2638' (+1462')

7 7/8"

Fresh water native mud w/dissolved salt

3150'

3000'

S. A. Marker 3190' (+910')

S. A. Slaughter 3340' (+760')

Salt gel & starch mud, Wt. 9.8-10.3 ppg; vis. 32-36;

10' Samples

2' Drlg. Time

SDLL, SNP, GR TD to 1450'

BHC/GR TD to Sfc.

TD 3450'

5 1/2" 14# K-55 ST&C

DRILLING DATA
CORDER FEDERAL NO. 3
CHAVES COUNTY, NEW MEXICO

CASING AND CEMENT:

8 5/8" 24# K-55 ST&C surface casing set at 250' or 25' into Red Beds (whichever is deeper). Circulate cement with 100± sacks.

5 1/2" 14# K-55 ST&C production casing at 3450'±. Circulate cement with 1500±sacks.

EP-1004-2 (8-71)

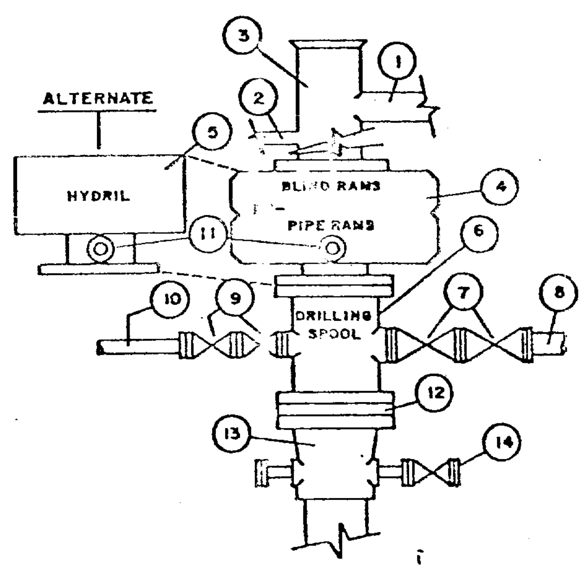
DRAWING AND CHECK LIST NO. EP-1004-2
(ATTACHMENT 2 TO BID SHEET AND DRILLING ORDER)
MINIMUM BLOWOUT PREVENTER EQUIPMENT REQUIREMENTS
FOR SHALLOW AND INTERMEDIATE NORMAL PRESSURE WELLS

2000 psi WP-API Class 2M

SPECIFICATIONS FOR WELL NO. Cato Field CASING SIZE 8 5/8

Contractor and Operator to furnish items checked (x)

No.		Min. Size	Type	Press. Rating	Furnished by Contr.	Furnished by Oper.
1	Flowline	8 5/8			X	
2	Fill up line	2"			X	
3	Drilling Nipple	11"			X	
4	Two single or one dual hydraulically operated CIW or Shaffer rams	10"	Shaffer	2000	X	
5	Hydril* (Alternate to #4)					
6	Drilling spool with " and " outlets			2000	X	
7	Gate valves	2"	CIW "F" or equal	2000	X	
8	Line to choke manifold	2"		2000	X	
9	Gate valves	2"	CIW "F" or equal	2000	X	
10	Line to rig mud pump manifold	2"		2000	X	
11	" and " outlets in ram or Hydril. Run kill line & choke line from these outlets (Alternate to #6 above)	NA				
12	Wear flange or bushing	— —	— — —	— — —	— —	— —
13	Casing Spool	10"		2000		X
14	Gate Valve	2"		2000		X



*or equivalent