Form 3160-3
(November 1983)
(formerly 9-331C)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

30-015-26534

Form approved.
Budget Bureau No. 1004-0136
Expires August 31, 1985

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: NM0542015

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

7. UNIT AGREEMENT NAME: N/A

8. FARM OR LEASE NAME: SCB 13 Fed

9. WELL NO.: 13-4

10. FIELD AND POOL, OR WILDCAT: East Loving Delaware

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 13, T-23-S, R-28-E

12. COUNTY OR PARISH: Eddy

13. STATE: NM

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

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

2. NAME OF OPERATOR: RB Operating Company

RECEIVED
NOV 9 '90
O. C. D.
ARTESIA, OFFICE

3. ADDRESS OF OPERATOR: 2412 N. Grandview, Suite 201, Odessa, Texas

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
At surface: 664' FNL, 662' FWL, Sec. 13, T-23-S, R-28-E, Eddy Co., New Mexico
At proposed prod. zone: Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 2 miles northeast of Loving, 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
662' W. line of EL	320	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**
1322'	6500'	Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 2979'

22. APPROX. DATE WORK WILL START*: November 20, 1990

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8"	24#	570'	350 sacks CIRCULATE
7-7/8"	5-1/2"	15.5 & 17#	6350'	1670 sacks, DV tool @ 3350' CIRCULATE

1. Drill 12-1/4" hole to 570', run 8-5/8" casing and cement with 350 sacks.
2. Test casing to 1500#, if successful, drill out cement and test to 11 ppg equivalent.
3. Drill 7-7/8" hole to T.D.
4. Mud log from 2600' to T.D.
5. Electric log at T.D. to surface casing.
6. If commercial, set 5-1/2" casing to T.D. Cement to surface with 1670 sacks.
7. Completion program will be submitted under Sundry notice.
8. If non-commercial, plug as per BLM and New Mexico Oil & Gas Commission specifications.

Part ID-1
11-16-90
New Lse + API

RECEIVED
OCT 23 10 44 AM '90

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 _____ TITLE Area Manager DATE 10-19-90

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY Don Ashley TITLE Acting AREA MANAGER DATE 11-8-90

CONDITIONS OF APPROVAL, IF ANY:
APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS
ATTACHED

*See Instructions On Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Submit to the Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

State of New Mexico
Energy, Minerals, and Natural Resources Department

Form C-102
Revised 1-1-89

DISTRICT I
P. O. Box 1980
Hobbs, NM 88240

DISTRICT II
P. O. Drawer DD
Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd
Aztec, NM 87410

OIL CONSERVATION DIVISION
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT
All distances must be from the outer boundaries of the section

Operator	Lease	Well No.
R B OPERATING COMPANY	SOUTH CULIBRA BLUFF 13 Fed	~~13~~-4

Unit Letter	Section	Township	Range	County
D	13	23-SOUTH	28-EAST NMPM	EDDY

Actual Footage Location of Well:
664 feet from the NORTH line and 662 feet from the WEST line

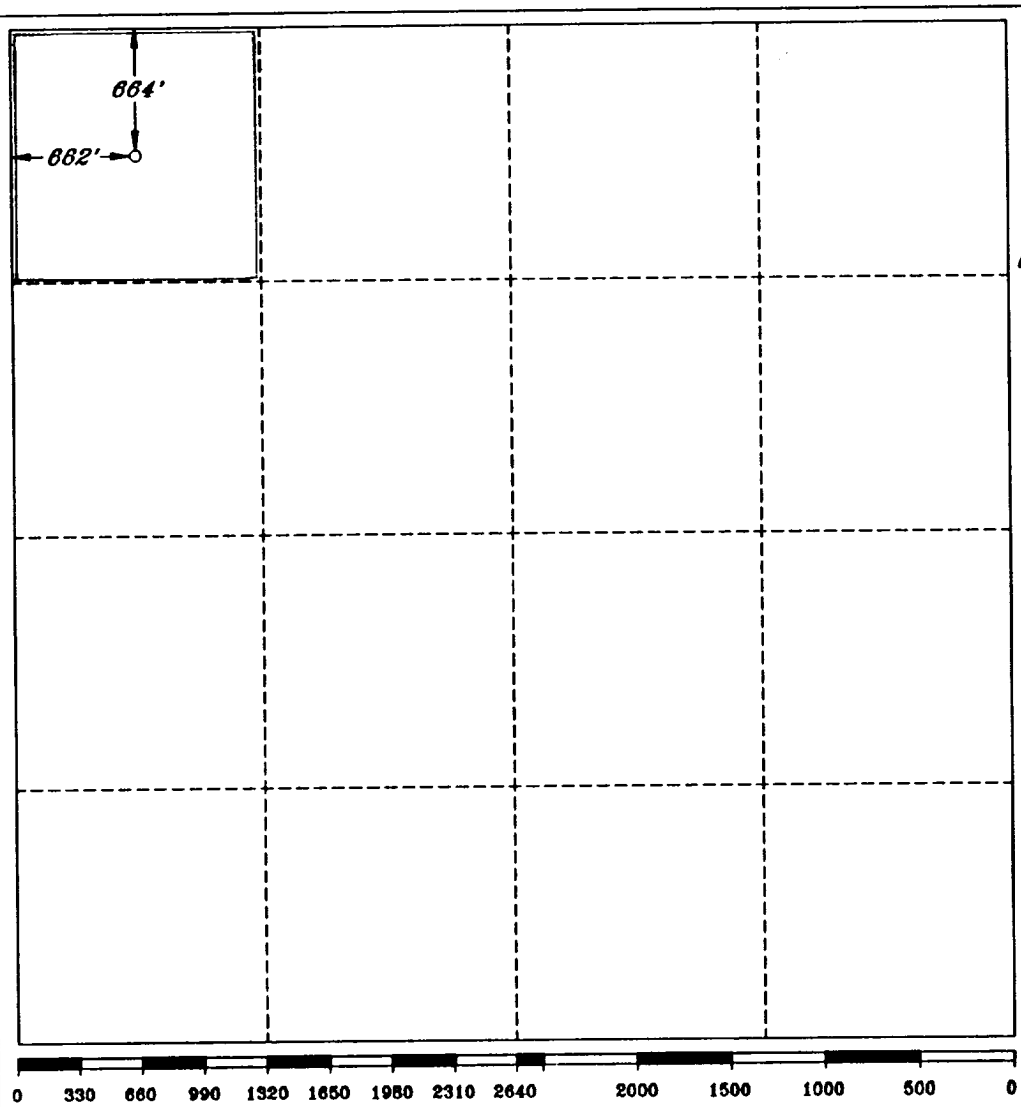
Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage
2979'	Bone Springs	East Loving Delaware	40 Acres

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 interest of all owners been consolidated by communitization, unitization, forced-pooling, etc.?

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

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

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 interest, has been approved by the Division.



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

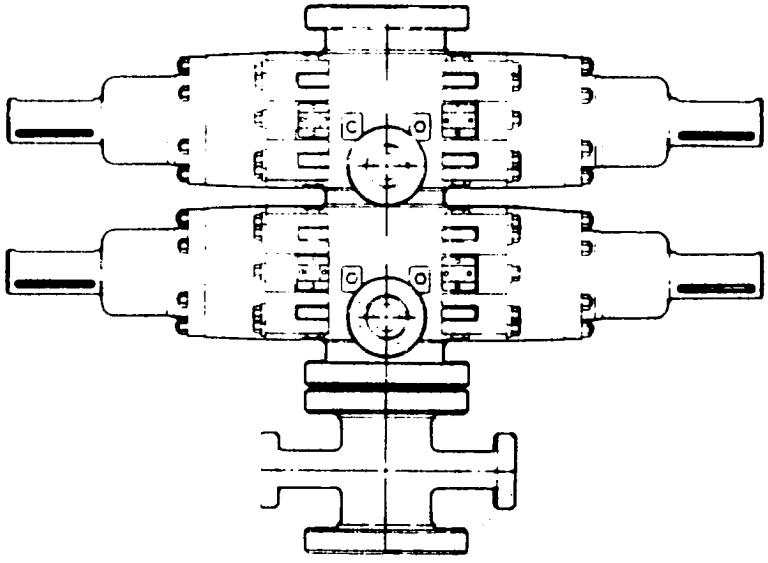
Signature: James L. Sharpe
Printed Name: James L. Sharpe
Position: Sr. Production Engineer
Company: RB Operating Company
Date: October 5, 1990

SURVEYOR CERTIFICATION
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: SEPT. 18, 1990
Signature and Seal of Professional Surveyor: V. LYNN BEZNER NO. 7920 REGISTERED NEW MEXICO SURVEYOR
Certificate No. V. L. BEZNER, Reg. No. 7920

125630

BLOW OUT PREVENTION EQUIPMENT



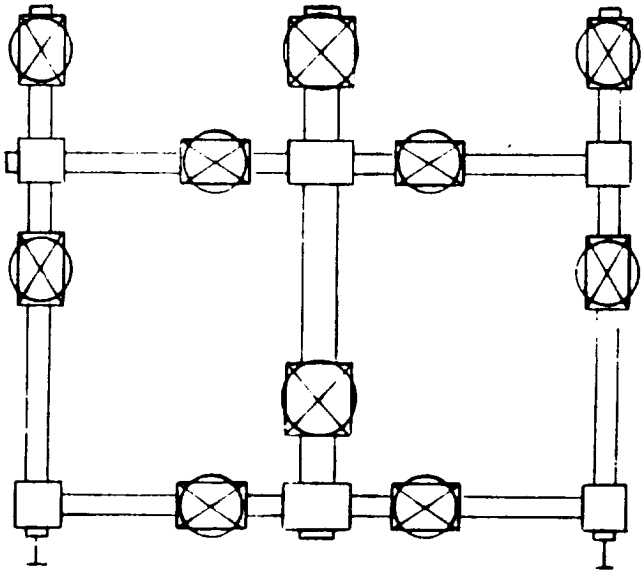
BOP Stack

— 1 Rucker Shaffer "B" double ram
10" - 3000 psi WP

Closing Unit

— Hydril model 80 three station accumulator
— Controls located in accumulator house and on rig floor

CHOKE MANIFOLD



900 Series, 3000 psi WP

PLAT #2

DRILLING PROGRAM

WELL: RB Operating, SCB 13-4
FIELD: East Loving Delaware
CATEGORY: Development
STATE: New Mexico
COUNTY: Eddy
LOCATION: 664 FNL & 662 FWL, Sec. 13, T-23-S, R-28-E
ELEVATION (G.L.): 2979'

1. Estimated Formation Tops: (See Plat #1)

Salt	570'
Delaware	2590'
Cherry Canyon	3700'
Brushy Canyon	4750'
Bone Springs	6200'
Total Depth	6350'

There are no potential drilling problems.

Estimated Time to Drill and Evaluate: 10 days

Hole Size:

0' - 570' ----------12 1/4"
570' - 6350'---------- 7 7/8"

2. Estimated Depth at which Water, Oil or Gas are expected to be encountered:

Water:	160' to 180'	
Oil, Gas:	Delaware	2590'
	Cherry Canyon	3700'
	Lower Brushy Canyon	6050'

3. BOP & Accessory Equipment: (See plat 2)

0 - 570: None
570' -6350'

1 set - 10" double ram 3000# W.P. BOP's
3000# W.P. choke manifold

Wellhead Equipment:

8 5/8" sow x 11" 2000 psi Casing head Larkin Model 92 or equivalent
5 1/2" sow x 2 7/8" 2000 psi Tubing head Larkin Model R or equivalent
5000# single master valve

4. Casing Program: (See Plat #1)

Conductor Casing:

No conductor pipe will be used.

SURFACE CASING:

0 - 570------8 5/8", 24#, J-55, ST&C

PRODUCTION CASING:

0 - 6350-----5 1/2", 15.5 & 17#, J-55, LT &C

Accessory Equipment:

Surface Casing:

1 - 8 5/8" Texas Pattern shoe
1 - 8 5/8" Insert Float Collar
1 - 8 5/8" x 12 1/4" Centralizer 3 - 5' above shoe
1 - 8 5/8" x 12 1/4" Centralizer next two Joints
1 - 8 5/8" Stop Ring
Note: Run shoe and insert Collar 1 Joint apart

Production Casing:

1 - 5 1/2" Float Shoe
1 - 5 1/2" Float Collar
2 - 5 1/2" Stop Rings
1 - 5 1/2" x 7 7/8" Centralizer 3 - 5' above float shoe
1 - 5 1/2" x 7 7/8" Centralizer around next collar
1 - 5 1/2" x 7 7/8" Centralizer immediately below float collar
1 - 5 1/2" x 7 7/8" Centralizer around next 2 collars

1 - 5 1/2" x 7 7/8" Centralizer alternating collars for next 10 joints (5 centralizers)
Note: Run float shoe and float collar 2 joints apart

1 - 5 1/2" DV Tool @ 3350
5 1/2" x 7 7/8" Centralizer 1 joint above & below DV Tool

Cementing Program:

Surface Casing: (based on 100% excess) (circulated to surface)

Spacer: 10 bbl water

Lead Slurry:

350 sx. Class "C" + .25 pps Cello-Seal
Slurry Weight----14.81 ppg.
Slurry Yield----- 1.33 cu. ft./sx.
Water Ration----- 6.32 gal/sx

Production casing: (based on 100% excess) (circulated to surface)

Spacer: 15BBL., 8.40 ppg WMW-1 flush

FIRST STAGE

Lead Slurry:

600 sx. 50:50 POZ (Base "C") + 2% Gel + 0.40% TF-4 + 57% water + 0.3% CF-2 + 10 pps Gilsonite
Slurry Weight----13.62 ppg
Slurry Yield----- 1.41 cu. ft./sx.
Water Ratio------ 5.75 gal/sx.

Tail Slurry:

150 sx. Class "C" + 0.2% TF-4 + .3% CF-14 + 56% water
Slurry Weight----14.78 ppg
Slurry Yield----- 1.33 cu. ft./sx.
Water Ratio------ 6.32 gal/sx.

SECOND STAGE (DV Tool @ 3350) (based on 100% excess)

Lead Slurry:

820 sx. Pacesetter Lite (c) + 6% Gel + 10% salt + 105% water
Slurry Weight----12.67 ppg
Slurry Yield----- 2.03 cu. ft./sx.
Water Ratio------ 10.97 gal/sx.

Tail Slurry:

100 sx. Class "C" + 0.2% CaCl2 + 56% water
Slurry Weight----14.78 ppg
Slurry Yield----- 1.33 cu. ft./sx.
Water Ratio------ 6.32 gal/sx.

6. Mud Program: (See Plat # 1)

Specification	0 - 570'	570' - 6000'	6000'-6350'
Mud wt (ppg)	8.6 -9.0	9.0 - 10.0	10.0
Vis (sec)	36 - 45	28 - 31	34 -38
WL (ml)	N/C	N/C	15 or less
Type Systerm	Gel-Fresh	Gel-Brine	Gel-Brine

Closed Mud System: (See Plat #3)

A closed mud system will be used and cuttings and drill fluids will be disposed of as per Section 7 of the Multi-Point Surface Use Plot.

Casing Test:

Before drilling out test surface casing to 1500 psi.

Casing Seat Test:

After drilling out surface casing test to leak off or 11 ppq equivalent, whichever is less.

Deviation Specifications:

Maximum Deviation	Maximum Rate of Charge
5 deg.	1.5 deg/ 100'

7. Logging & Testing Program:

Open Hole: 570' to 6350'

First Run
Dual Laterolog
Micro Laterolog
Gamma Ray Neutron

Second Run
Densilog
Compensated Neutron
Gamma Ray Neutron

DST's: None planned

Mud Logging

2000' to Total Depth

8. No abnormal pressures or temperatures are anticipated. H2S should not be encountered.

9. Anticipated Starting Date:
November 20, 1990

Multi-Point Surface Use Operating Plan
R.B. Operating
SCB 13-4

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well,and the proposed construction. And the procedures to be followed in rehabilitation of the surface after completion of the operations, so that a complete appraisal can be made of the environmental affects associated with the operation.

1. Existing Roads

   A. Plat #4 is a portion of the USGS Carlsbad, N.M. regional map. The proposed location is situated approximately 3 miles North East of Loving, New Mexico, via the access route shown in red. Plat #5 is a portion of the USGS Loving, New Mexico map showing existing roads, and New roads to be constructed.

   B. Directions:
   --From Carlsbad go south 12 miles on US 285
   --Turn East on Highway 31 for 4 miles
   --Turn South just after crossing the Pecos River Bridge onto existing dirt road, go 1/8 mile to SCB 14-7 location, follow road 1/2 mile and take new road left 1/8 mile to location.

2. Planned Access Road (Plat #6)

   A. The proposed well site is located 900' North East of an existing dirt road that lies generally in a North West direction.

   B. The access road will be 800' long and run in a Northeasterly direction to the location. The road will be surfaced with caliche as needed. No drainage ditches or culverts will be needed.

3. Location of Existing Wells

   A. The well locations in the vicinity are shown on plat #7.

4. Location of Existing and/or Proposed Facilities (Plat #8 and 9)

   A. The layout of the drilling rig and closed mud system are shown on plat #8.

B. In the event that this well is productive, the Tank Battery and production facilities will be constructed on site as shown on plat #9.

C. The production facility will consist of two 500 bbl steel oil storage tanks, one 300 bbl closed top fiberglass tank, one separator and one heater treater.

5. Location and Type of Water Supply

A. The well is to be drilled with both fresh and brine water to be hauled to the location by truck & will be bought from commercial sources.

6. Source of Construction Material

A. Any caliche required for construction of the access road and the well pad will be obtained from the existing pit located on Fee land in the SW-NW 1/4 of Section 23,T-23-S,R-28 -E.

7. Methods of Handling Waste Disposal
The well will be drilled using a closed mud system & no reserve pits will be used. (Plat #3 & #8)

A. Drill cuttings will be continued on site in steel tanks. They will then be trucked to the Reserve Pit area of the existing Amoco Fed. #11-1 and be buried (see Plat #6). A small-pit will be dug & the cuttings will be dumped into it. The cuttings will be allowed to set and all fluids that separate out will be taken to an approved disposal well. And the pit will then be back filled when operations in the section have been completed, sand will be placed on the pit area for cover after all operations in the section have been completed.

B. Water and drilling fluids will be hauled to a commerical disposal facility.

C. Oil produced during operations will be stored in tanks and hauled off site.

D. Human sewage will be contained in a portable chemical toilet, transported from the site and disposed of at an approved site.

E. Trash will be deposited in a metal container and hauled to an approved disposal site.

F. Within 30 days following drilling and/or completion operations, trash and debris will be hauled to an approved disposal site.

8. Ancillary Facilities

None

9. Wellsite Layout

A. Plat #8 shows the dimensions of the well pad. As mentioned in Section 7, no reserve pits will be used. Location of the major rig components, and well pad orientation are shown. It is currently planned to use Grace Drilling Co. Rig # 403, this could change however depending on availability.

B. Topography of the area is relatively level with 6 to 10' sand dunes across the entire location. Fills should be no more than 3' deep. The location will be capped with 4 to 6" of caliche.

C. No reserve pit will be used however the pit used for the drill cuttings at the Amoco Federal #11-1 will be lined with plastic.

D. No diversion ditches are planned.

E. The pad has been staked and flagged for the archeological study.

10. Plans for restoration of the Surface.

A. Upon completion of drilling, completion and production operations the area disturbed by the project will be restored to BLM specifications or to as near their former natural condition as possible.

B. All of the caliche material will be removed and the area will be leveled to pre-project grade.

C. No drainage systems will be needed on the site.

D. No segregation of spoils is planned at this time as it is a blow sand area.

E. Waste disposal was out lined in section 7.

F. Revegetation and fertilization will be as per BLM stipulations.

G. All areas not used for production will be restored

11. Surface Restored

A. This is private surface, and a damage agreement is being negotiated with Mississippi Chemical Corp., P. O. Box 101, Carlsbad, New Mexico, 88220, the surface owner.

12. Other Information

A. The general location of this site is a sand dune and mesquite brush area. The sand has a very small amount of vegetation and stockpiling of material is not planned.

B. The vegetation is dune-desert characterized by various species of cacti and mesquite.

C. Wildlife species that occur in the area include: rabbits, muledeer, coyote, snakes and various rodents.

D. An archaeological survey of the site and proposed access road has been conducted and the report will be sent to you by the archaeologist.

13. Operator's Representative and Certification

A. The field representatives responsible for assuring compliance with the approved surface use plan are:

	Office	Home
Operations Manager Fritz Schoch	915-362-6302	915-683-3635
Sr. Production Engineer Jim Shatzsall	915-362-6302	915-699-1210
Field Foreman - Construction David Mitchell	505-745-2329	505-397-6002
Compliance Gary Miller	915-682-4559	915-699-4672

B. Certification:

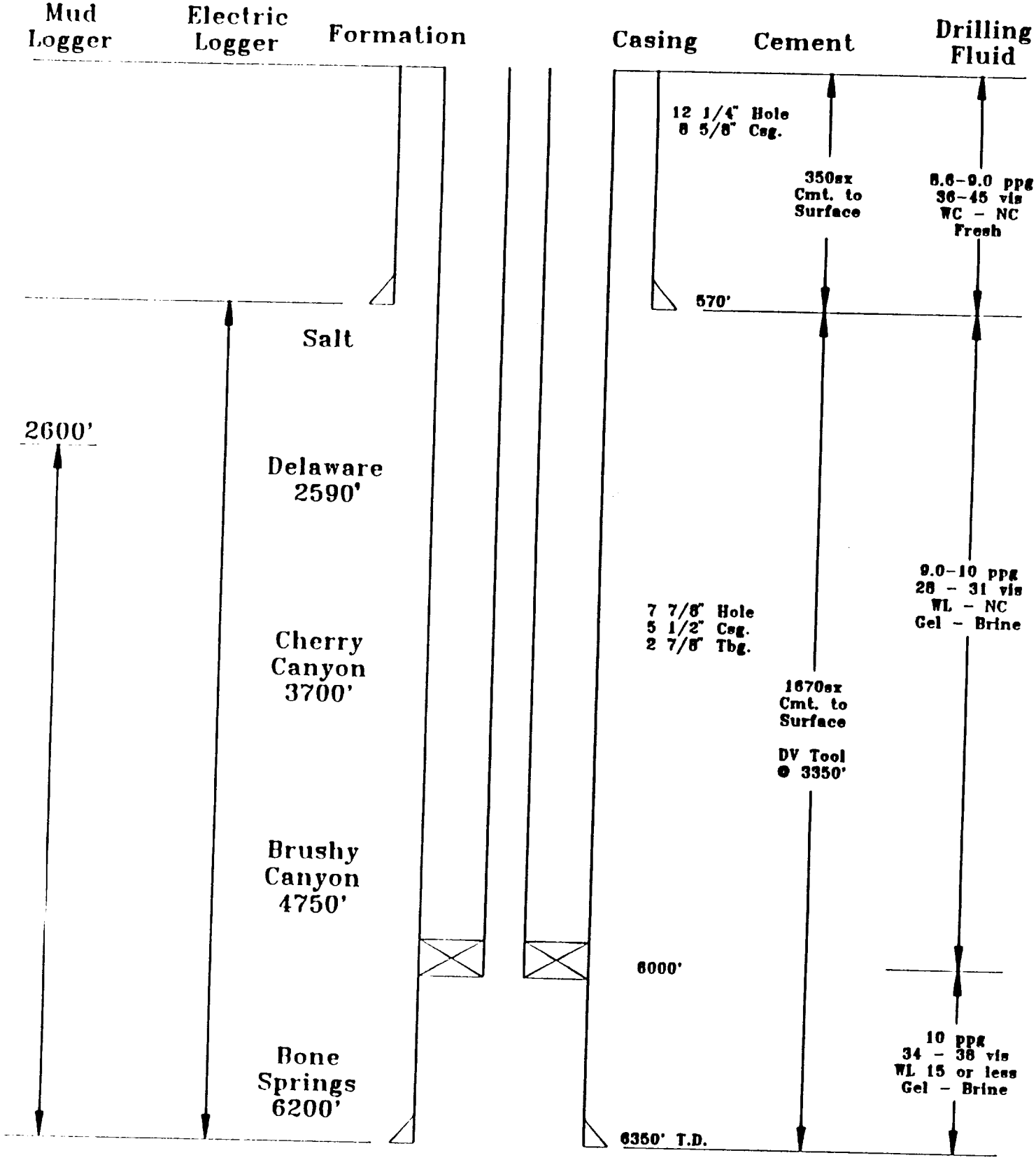
I herby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which currently exist; that the statements made in this plan are to the best of my knowledge, true and correct; and that the work associated with operations proposed herein will be performed by RB Operating and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of the 18 U.S.C. 1001 for the filing of a false statement.

Date: 10-19-90

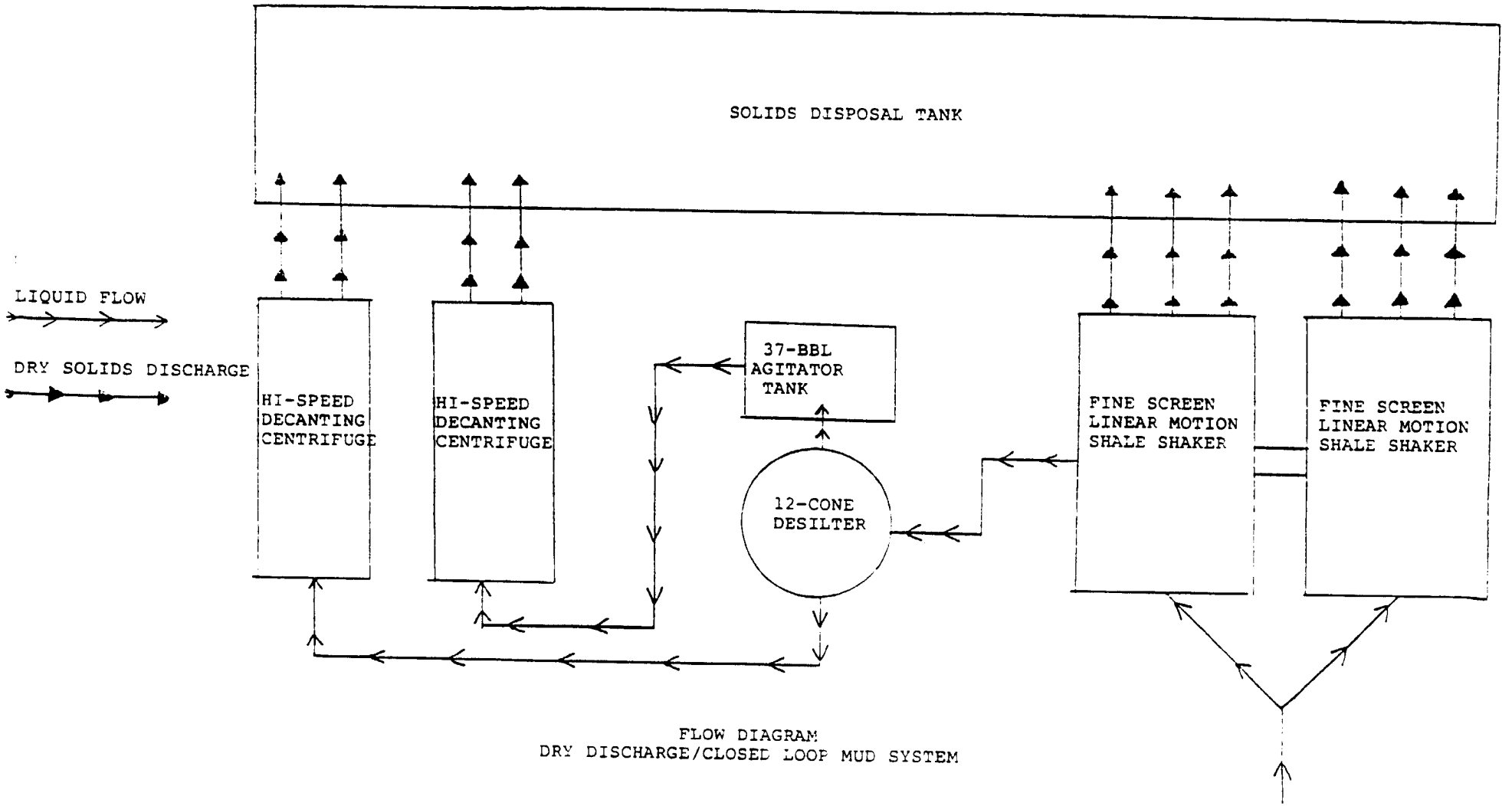
Fritz Schoch
Area Manager

PLAT #1	Drilling Program
PLAT #2	BOP and Choke Diagram
PLAT #3	Closed mud system
PLAT #4	Regional Map
PLAT #5	Topographic Map
PLAT #6	Access Road and Location
PLAT #7	Offset Wells
PLAT #8	Rig and Location Layout
PLAT #9	Production Facility Layout
PLAT #10	Survey Plat

WELL: RB Operat' , SCB 13-4
FIELD: East Loving Delaware
CATEGORY: Development
STATE: New Mexico
COUNTY: Eddy
LOCATION: 664' FNL & 662' FWL, Sec. 13, T-23-S, R-28-E
ELEVATION: (G.L.) 2979'

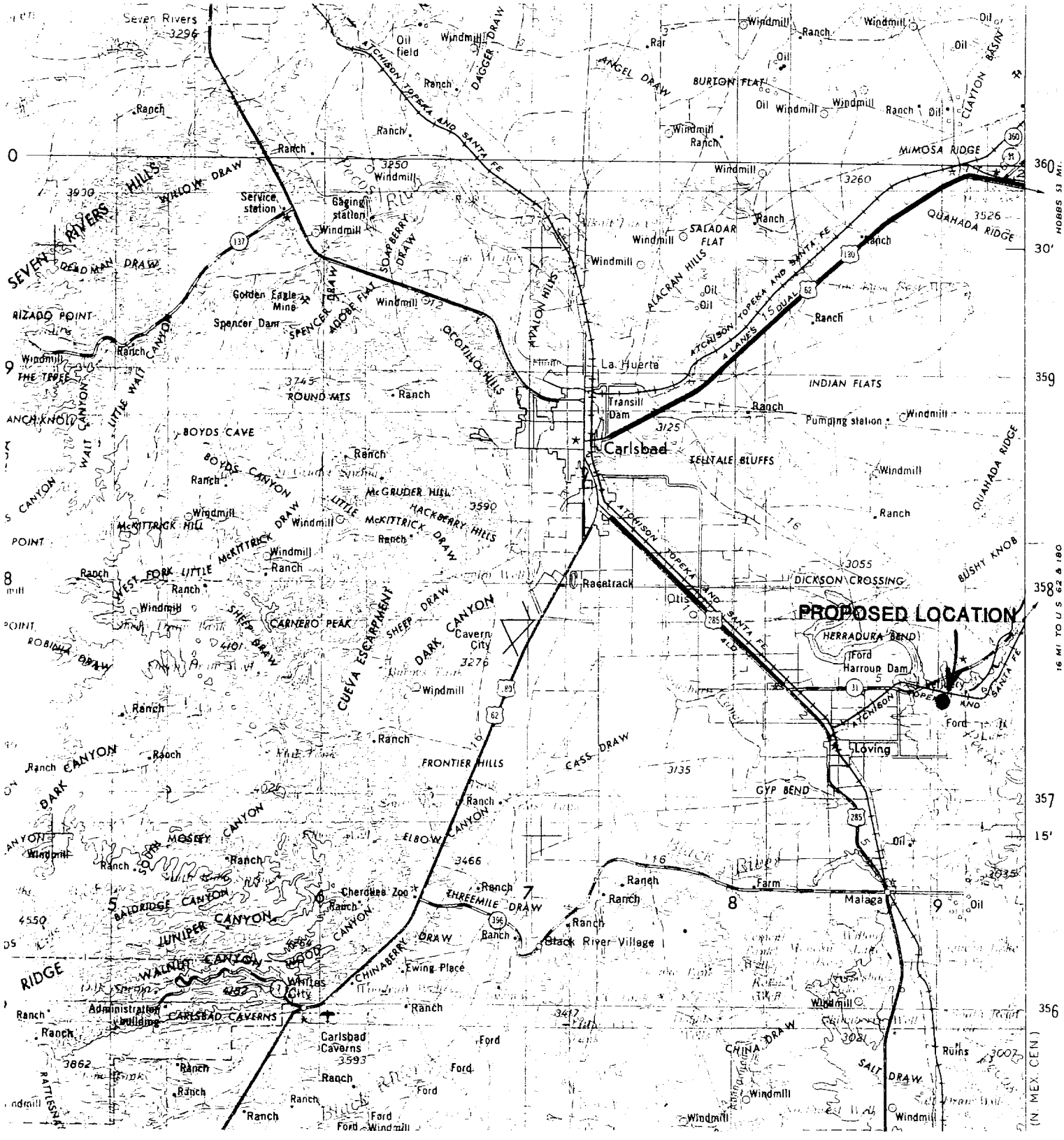


PLAT #1



FLOW DIAGRAM
DRY DISCHARGE/CLOSED LOOP MUD SYSTEM

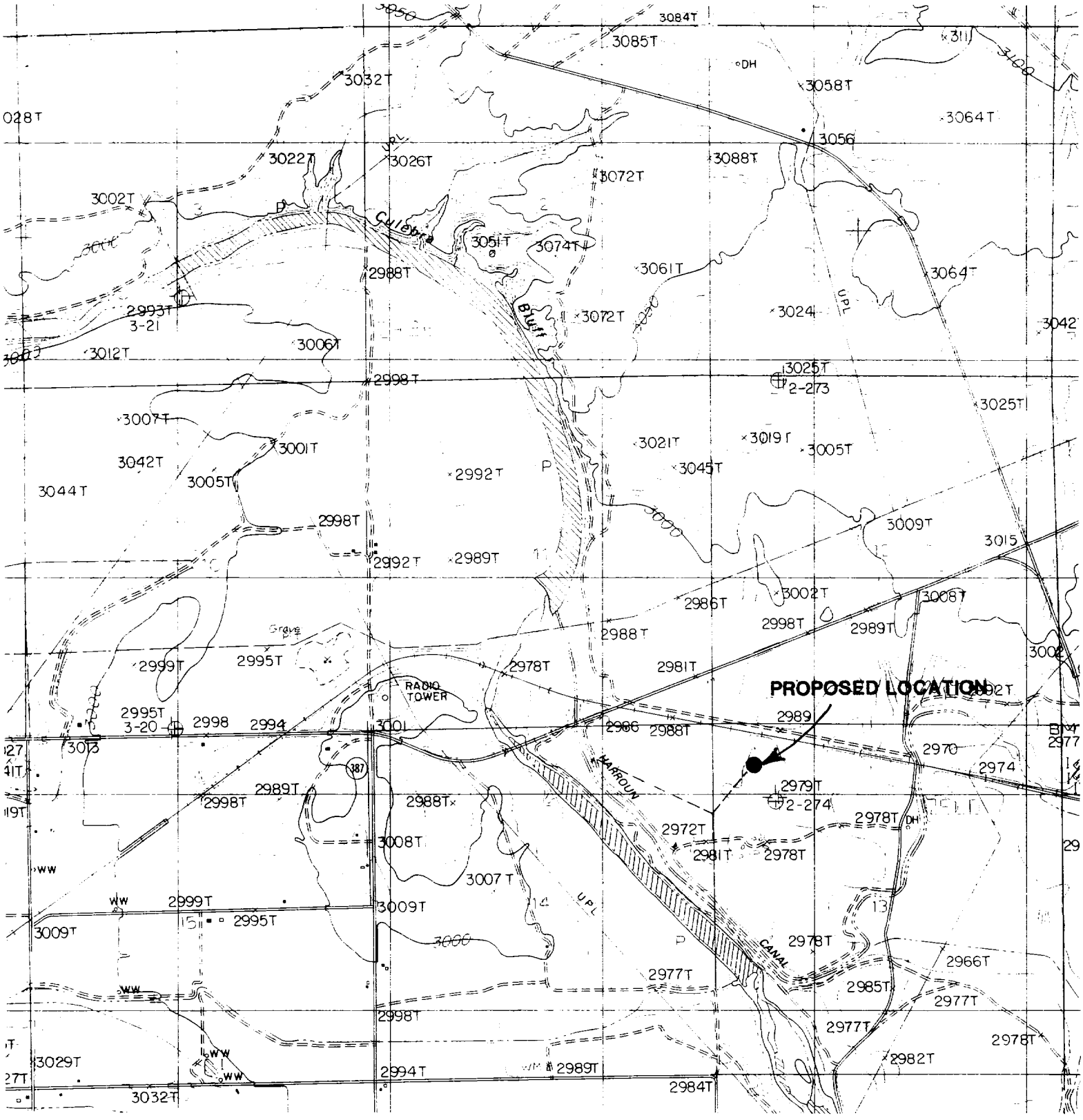
PLAT #3



Note: Taken from USGS Regional Topographic Map, Carlsbad, New Mexico

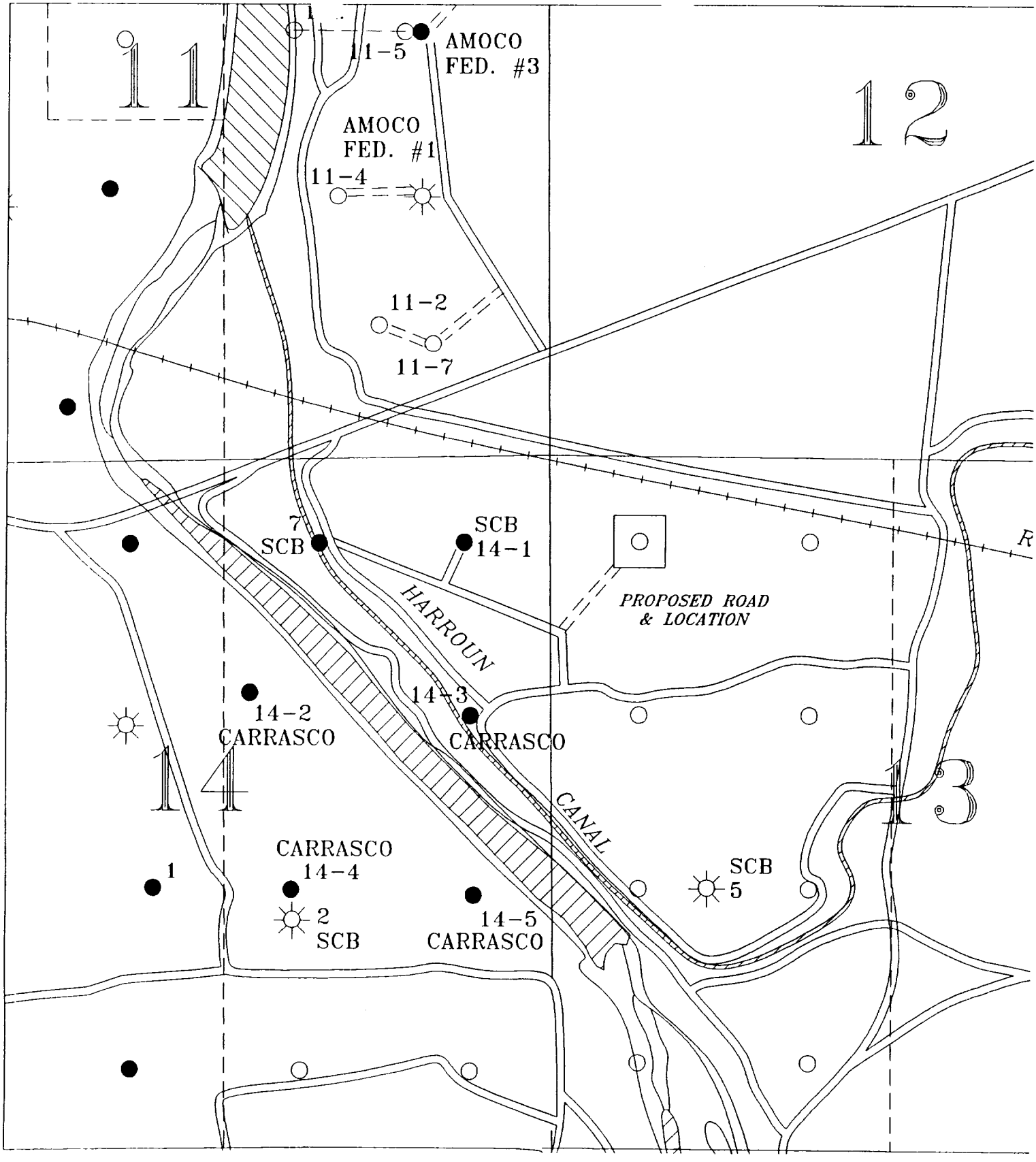
Well: SCB 13-4
Regional Topographic Map

Plat #4



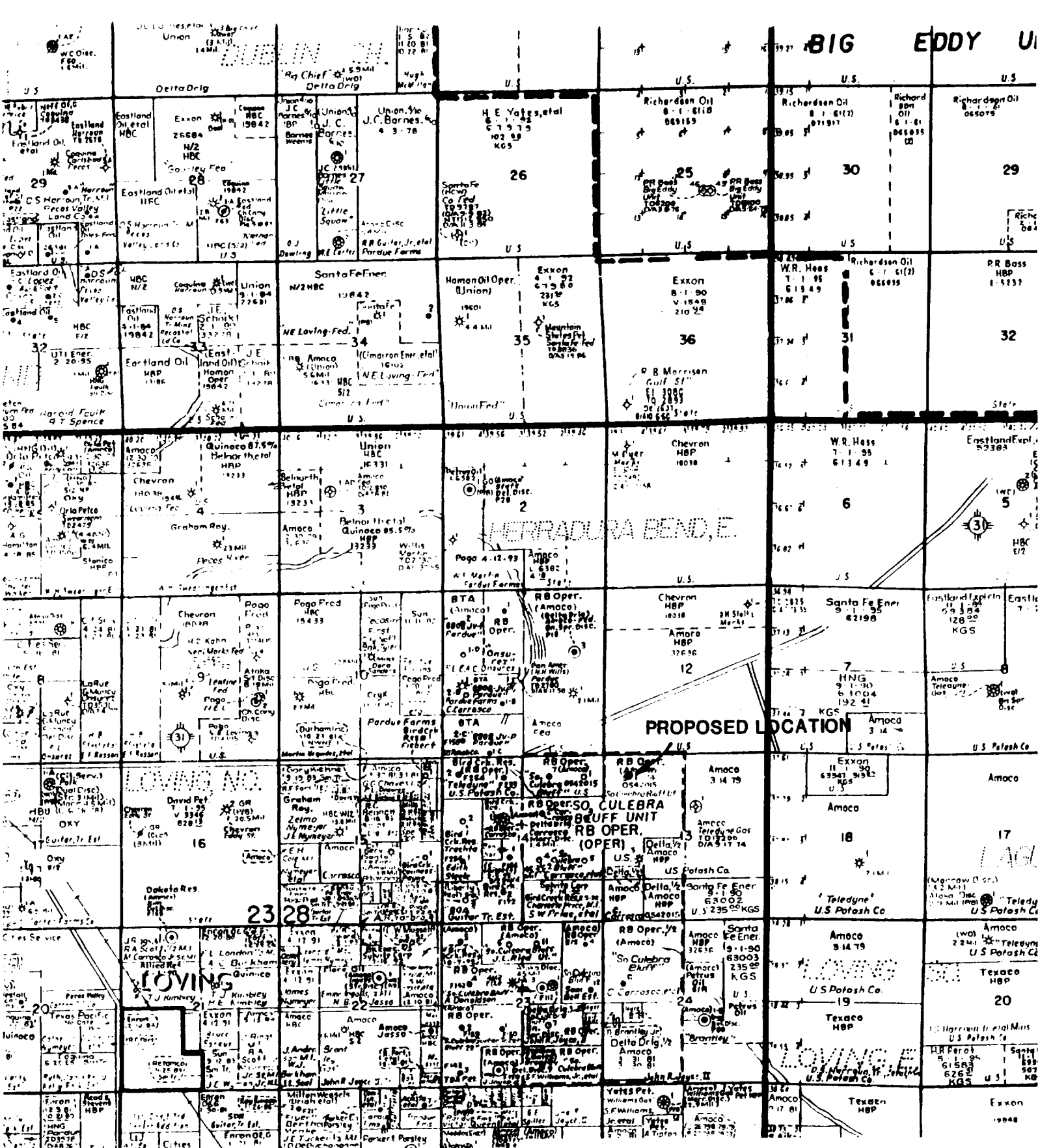
NOTE: Taken from USGS Topographic Map, Loving, New Mexico

WELL: SCB 13-4
Topographic Map
PLAT #5

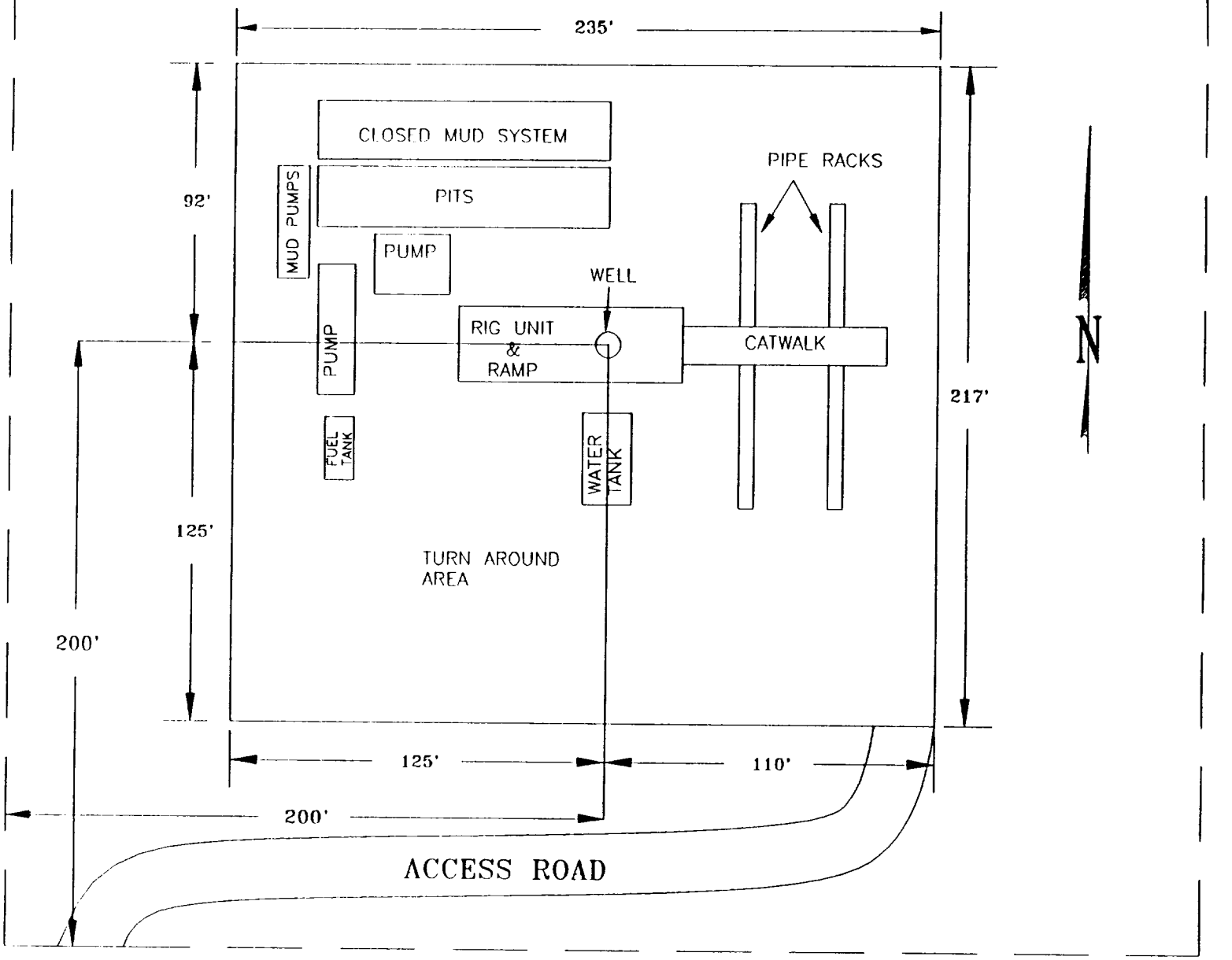


Scale 1"=1000'

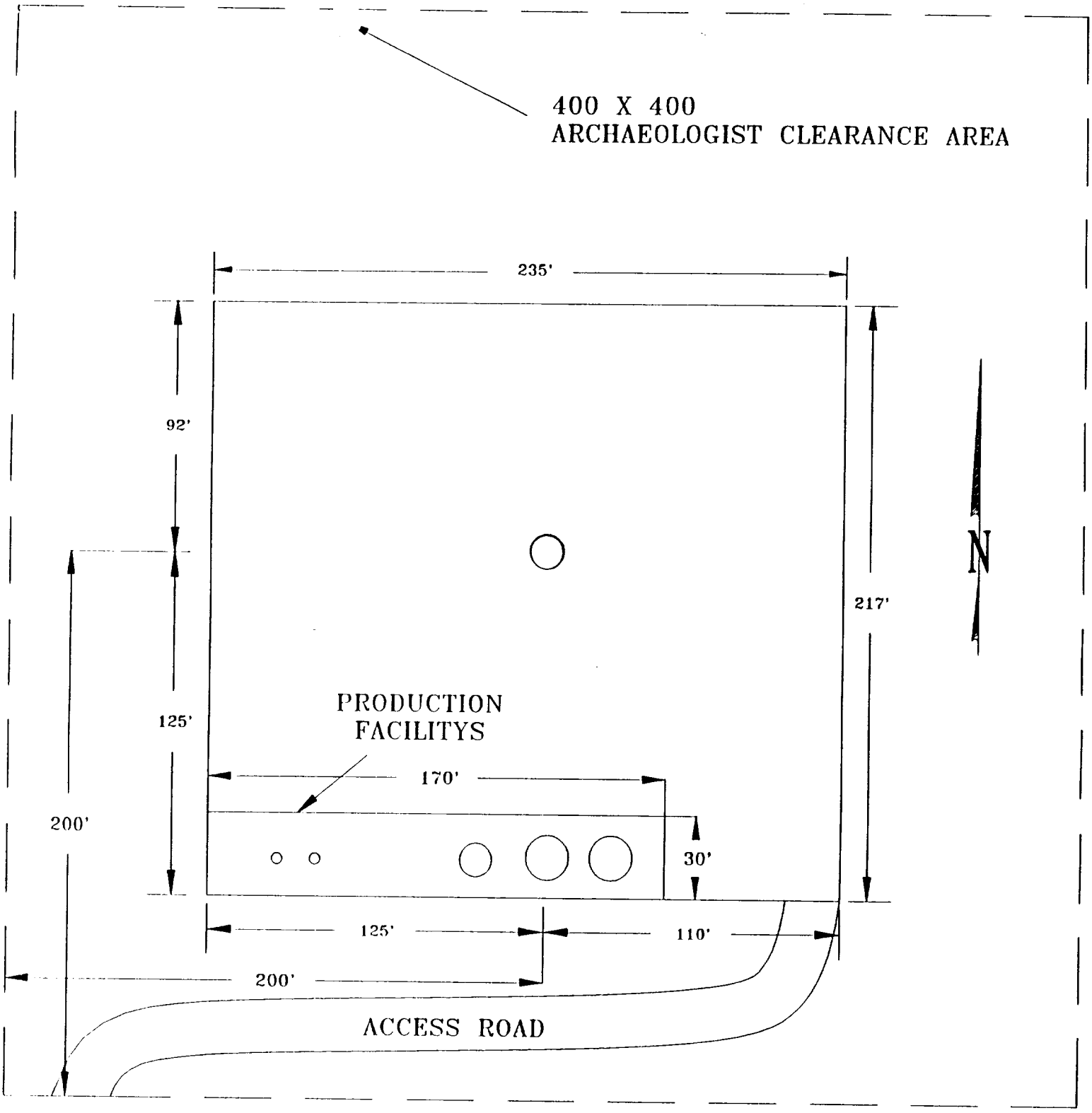
Access Road and Location
SCB #13-4
Plat #6


BIG EDDY
HERRADURA BEND E.
PROPOSED LOCATION
SO. CULEBRA BLUFF UNIT
RB OPER. (OPER)
LOVING
Well: SCB 13-4
Offset Wells
Plat #7

400 X 400
ARCHAEOLOGIST CLEARANCE AREA



SCB # 13-4
Rig and Location Layout
Plat #8



SCB #13-4
Production Facility Layout
Plat #9