



United States Department of the Interior

GEOLOGICAL SURVEY

Roswell, New Mexico

August 30, 1973

RECEIVED

AUG 31 1973

Mr. Henry C. Ladd
Post Office Box 11
Roswell, New Mexico

O. C. C.
ARTESIA, OFFICE

Dear Mr. Ladd:

Applicant's intent to drill well in the 15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31-32-33-34-35-36-37-38-39-40-41-42-43-44-45-46-47-48-49-50-51-52-53-54-55-56-57-58-59-60-61-62-63-64-65-66-67-68-69-70-71-72-73-74-75-76-77-78-79-80-81-82-83-84-85-86-87-88-89-90-91-92-93-94-95-96-97-98-99-100-101-102-103-104-105-106-107-108-109-110-111-112-113-114-115-116-117-118-119-120-121-122-123-124-125-126-127-128-129-130-131-132-133-134-135-136-137-138-139-140-141-142-143-144-145-146-147-148-149-150-151-152-153-154-155-156-157-158-159-160-161-162-163-164-165-166-167-168-169-170-171-172-173-174-175-176-177-178-179-180-181-182-183-184-185-186-187-188-189-190-191-192-193-194-195-196-197-198-199-200-201-202-203-204-205-206-207-208-209-210-211-212-213-214-215-216-217-218-219-220-221-222-223-224-225-226-227-228-229-230-231-232-233-234-235-236-237-238-239-240-241-242-243-244-245-246-247-248-249-250-251-252-253-254-255-256-257-258-259-260-261-262-263-264-265-266-267-268-269-270-271-272-273-274-275-276-277-278-279-280-281-282-283-284-285-286-287-288-289-290-291-292-293-294-295-296-297-298-299-300-301-302-303-304-305-306-307-308-309-310-311-312-313-314-315-316-317-318-319-320-321-322-323-324-325-326-327-328-329-330-331-332-333-334-335-336-337-338-339-340-341-342-343-344-345-346-347-348-349-350-351-352-353-354-355-356-357-358-359-360-361-362-363-364-365-366-367-368-369-370-371-372-373-374-375-376-377-378-379-380-381-382-383-384-385-386-387-388-389-390-391-392-393-394-395-396-397-398-399-400-401-402-403-404-405-406-407-408-409-410-411-412-413-414-415-416-417-418-419-420-421-422-423-424-425-426-427-428-429-430-431-432-433-434-435-436-437-438-439-440-441-442-443-444-445-446-447-448-449-450-451-452-453-454-455-456-457-458-459-460-461-462-463-464-465-466-467-468-469-470-471-472-473-474-475-476-477-478-479-480-481-482-483-484-485-486-487-488-489-490-491-492-493-494-495-496-497-498-499-500-501-502-503-504-505-506-507-508-509-510-511-512-513-514-515-516-517-518-519-520-521-522-523-524-525-526-527-528-529-530-531-532-533-534-535-536-537-538-539-540-541-542-543-544-545-546-547-548-549-550-551-552-553-554-555-556-557-558-559-560-561-562-563-564-565-566-567-568-569-570-571-572-573-574-575-576-577-578-579-580-581-582-583-584-585-586-587-588-589-590-591-592-593-594-595-596-597-598-599-600-601-602-603-604-605-606-607-608-609-610-611-612-613-614-615-616-617-618-619-620-621-622-623-624-625-626-627-628-629-630-631-632-633-634-635-636-637-638-639-640-641-642-643-644-645-646-647-648-649-650-651-652-653-654-655-656-657-658-659-660-661-662-663-664-665-666-667-668-669-670-671-672-673-674-675-676-677-678-679-680-681-682-683-684-685-686-687-688-689-690-691-692-693-694-695-696-697-698-699-700-701-702-703-704-705-706-707-708-709-710-711-712-713-714-715-716-717-718-719-720-721-722-723-724-725-726-727-728-729-730-731-732-733-734-735-736-737-738-739-740-741-742-743-744-745-746-747-748-749-750-751-752-753-754-755-756-757-758-759-760-761-762-763-764-765-766-767-768-769-770-771-772-773-774-775-776-777-778-779-780-781-782-783-784-785-786-787-788-789-790-791-792-793-794-795-796-797-798-799-800-801-802-803-804-805-806-807-808-809-810-811-812-813-814-815-816-817-818-819-820-821-822-823-824-825-826-827-828-829-830-831-832-833-834-835-836-837-838-839-840-841-842-843-844-845-846-847-848-849-850-851-852-853-854-855-856-857-858-859-860-861-862-863-864-865-866-867-868-869-870-871-872-873-874-875-876-877-878-879-880-881-882-883-884-885-886-887-888-889-890-891-892-893-894-895-896-897-898-899-900-901-902-903-904-905-906-907-908-909-910-911-912-913-914-915-916-917-918-919-920-921-922-923-924-925-926-927-928-929-930-931-932-933-934-935-936-937-938-939-940-941-942-943-944-945-946-947-948-949-950-951-952-953-954-955-956-957-958-959-960-961-962-963-964-965-966-967-968-969-970-971-972-973-974-975-976-977-978-979-980-981-982-983-984-985-986-987-988-989-990-991-992-993-994-995-996-997-998-999-1000-1001-1002-1003-1004-1005-1006-1007-1008-1009-1010-1011-1012-1013-1014-1015-1016-1017-1018-1019-1020-1021-1022-1023-1024-1025-1026-1027-1028-1029-1030-1031-1032-1033-1034-1035-1036-1037-1038-1039-1040-1041-1042-1043-1044-1045-1046-1047-1048-1049-1050-1051-1052-1053-1054-1055-1056-1057-1058-1059-1060-1061-1062-1063-1064-1065-1066-1067-1068-1069-1070-1071-1072-1073-1074-1075-1076-1077-1078-1079-1080-1081-1082-1083-1084-1085-1086-1087-1088-1089-1090-1091-1092-1093-1094-1095-1096-1097-1098-1099-1100-1101-1102-1103-1104-1105-1106-1107-1108-1109-1110-1111-1112-1113-1114-1115-1116-1117-1118-1119-1120-1121-1122-1123-1124-1125-1126-1127-1128-1129-1130-1131-1132-1133-1134-1135-1136-1137-1138-1139-1140-1141-1142-1143-1144-1145-1146-1147-1148-1149-1150-1151-1152-1153-1154-1155-1156-1157-1158-1159-1160-1161-1162-1163-1164-1165-1166-1167-1168-1169-1170-1171-1172-1173-1174-1175-1176-1177-1178-1179-1180-1181-1182-1183-1184-1185-1186-1187-1188-1189-1190-1191-1192-1193-1194-1195-1196-1197-1198-1199-1200-1201-1202-1203-1204-1205-1206-1207-1208-1209-1210-1211-1212-1213-1214-1215-1216-1217-1218-1219-1220-1221-1222-1223-1224-1225-1226-1227-1228-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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

30-015-20940

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK

DRILL ☒DEEPEN ☐PLUG BACK ☐

b. TYPE OF WELL

OIL
WELL ☐GAS
WELL ☒

OTHER

SINGLE
ZONE ☒MULTIPLE
ZONE ☐

2. NAME OF OPERATOR

PERRY R. BASS

3. ADDRESS OF OPERATOR

P. O. Box 1178 Monahans, Texas 79756

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements*)

At surface

660' FNL & 1980' FWL, Unit letter C

At proposed prod. zone

Same

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

14 miles east of Carlsbad, New Mexico

N. M. O. C. C.

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*

800

17. NO. OF ACRES ASSIGNED

TO THIS WELL

320

18. DISTANCE FROM PROPOSED LOCATION*

TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE, FT.First
well

19. PROPOSED DEPTH

13300

20. ROTARY OR CABLE TOOLS

Rotary

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

3426.5 GR

22. APPROX. DATE WORK WILL START*

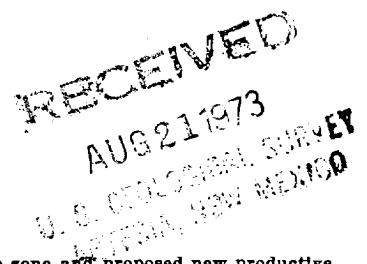
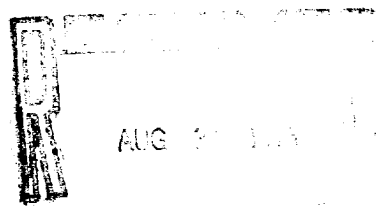
60 days after appr.

23.

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
17 1/2"	13 3/8"	48	500	Sufficient to circulate annulus
12 1/4"	8 5/8"	24-28-32	3350	" " " "
7 7/8"	5 1/2"	17-20	13300	Sufficient to fill annulus to approximately 9000'; 1300' above Wolfcamp.

FOR COMPLETE DETAILS, SEE ATTACHED DRILLING PROGNOSIS.



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

Division Engineer

DATE

August 17, 1973

(This space for Federal or State office use)

PERMIT NO.

APPROVAL DATE

APPROVED BY

TITLE

DATE

CONDITIONS OF APPROVAL, IF ANY:

NEW MEXICO GEOLOGICAL SURVEY COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

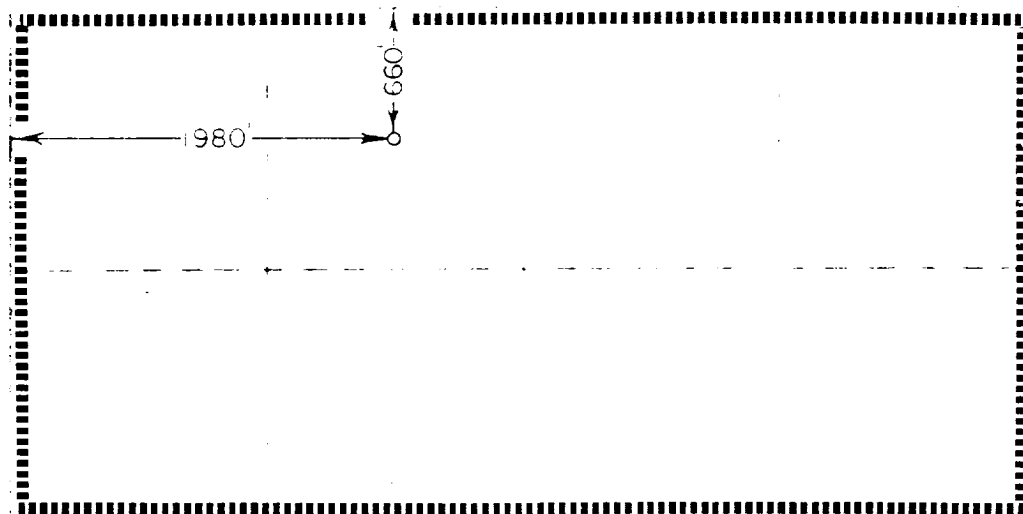
PERRY R. BASS		BIG EDDY UNIT		38
C	34	21 SOUTH	29 EAST	EDDY
660	NORTH		1980	WEST
3426.5	Wildcat		320	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership, portion of royalty, and interest and royalty.
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners consolidated.

☐ 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).



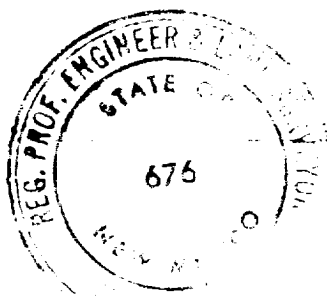
DECLARATION

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

Jack Loman
Division Engineer

PERRY R. BASS

August 17, 1973



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JULY 27, 1973

Mr. Jim Knauf
U. S. Geological Survey
Page 2.

ATTACHMENTS:

1. Form 9-331C, application to drill with complete drilling prognosis.
2. Location plat.
3. Plat of location layout.
4. Small scale map of existing roads with proposed access road.
5. Schematic diagram of BOP equipment, manifold, kill-lines, etc.

In addition, please be advised:

1. Mud pits will be of steel.
2. No camp site or air strip is proposed.
3. Tank battery will be located near or adjacent to a corner of the location pad.
4. Water supply will be trucked to the well, secured from a rancher in the immediate area, or a water well will be drilled near the southwest corner of the location pad.
5. The land surface will be restored to as near original conditions as possible, and to the satisfaction of the U. S. G. S. after drilling and completion operations have ceased.
6. All detrimental waste will be disposed of in accordance with good disposal practices.
7. Well control equipment with 5000 psi choke manifold. The drill pipe BOP's and Hydril BOP's are to be opened and closed daily. The blank BOP's are to be opened and closed each trip.
8. PVT equipment, flow line sensor, and pump stroke counter are to be utilized while drilling the proposed well.

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PROPOSED DRILLING AND COMPLETION
PROCEDURE

for

PERRY R. BASS
BIG EDDY UNIT # 38
EDDY COUNTY, NEW MEXICO

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PROPOSED DRILLING AND COMPLETION PROCEDURE

Operator: PERRY R. BASS

Lease and Well No: Big Eddy Unit #38 (13300' Morrow Test)

Location: 660' from the north line and 1980' from the west line
of Section 34, T21S, R29E, Eddy County, New Mexico.

Surface Casing:

17½" surface hole is to be drilled using a fresh water-gel-lime mud to an approximate depth of 500'. 13 3/8" OD casing setting is anticipated as follows:

No. Jts.	Description	Thds Off Length	From	To
--	Rotary correction	16	0	16
12	13 3/8" OD 48#/ft, H-40 ST&C csg	444	16	460
--	Float collar	2	460	462
1	13 3/8" OD 48#/ft, H-40 ST&C csg	36	462	498
--	Float shoe*	2	498	500

* The float shoe is to be equipped with lateral exits for cement as it is intended to rest part of the casing weight on bottom.

The bottom three (3) joints are to be sand blasted to remove mill scale and lacquer and in addition are to be welded and sealed with HOWCO-weld. Positive type centralizers are recommended; one set on each of the bottom three (3) joints. API modified thread lubricant is to be used on the casing threads.

Casing is to be cemented to the surface using API class "C" containing 2% CaCl₂, mixed at 14.0 PPG (yield 1.53 CF/sk); an estimated 400 sacks will be required. A W.O.C. time of 24 hours will be observed after the plug is down.

Prior to drilling the float collar, the casing is to be displaced with water (fresh water or brine) and the casing is to be pressure tested to 600 psi for 30 minutes. After drilling the shoe the casing is again to be pressure tested to 600 psi for 30 minutes.

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Intermediate Casing:

12½" hole is to be drilled below the surface casing to an anticipated depth of 3350' (in top of Delaware) using a saturated salt fluid.

Casing setting is anticipated as follows:

No. Jts.	Description	Thds Off Length	From	To
--	Rotary correction	15	0	15
65	8 5/8" OD 24#/ft K-55 ST&C csg	2585	15	2600
15	8 5/8" OD 28#/ft H-40 ST&C csg	600	2600	3200
3	8 5/8" OD 32#/ft H-40 ST&C csg	106	3200	3306
--	Float collar	2	3306	3308
1	8 5/8" OD 32#/ft H-40 ST&C csg	40	3308	3348
--	Float shoe*	2	3348	3350

* The float shoe is to be equipped with lateral exits for cement as it is intended to rest part of the casing weight on bottom.

The 8 5/8" OD casing is to be drifted for a 7 7/8" bit.

The bottom three (3) joints are to be sand blasted to remove mill scale and lacquer and in addition are to be welded and sealed with HOWCO-weld. Positive type centralizers are to be recommended; one set on each of the bottom three (3) joints. API modified thread lubricant is to be used on the casing threads.

Prior to running the 8 5/8" casing, a caliper survey is to be run to determine actual cement volume required.

Assuming a single stage cement job, the 8 5/8" OD casing is to be cemented to the surface using a sufficient volume of API class "C" containing 24 ½# salt per sack and 1% CaCl₂ by weight of cement (mixed at a slurry weight of 14.7 PPG, (yield of 1.68 CF/sk) to fill from the base of salt to the surface, followed by a sufficient volume of API class "C" containing 2% CaCl₂ (mixed at 14.0 PPG, yield of 1.53 CF/sk) to fill from TD to the base of salt. A W.O.C. time of 24 hrs will be observed after the plug is down.

APPROVED
DATE 1/13/73
BY [Signature]
[Stamp]

PERRY R. BASS
BIG EDDY UNIT #38
PROPOSED DRILLING AND COMPLETION PROCEDURE

Intermediate Casing: (continued)

Prior to drilling the float collar the 8 5/8" casing is to be displaced with fresh water and pressure tested to 1000 psi for 30 minutes. After drilling the float shoe the casing is again to be tested to 1000 psi for 30 minutes.

Production Casing:

7 7/8" hole is to be drilled from below the 8 5/8" OD casing point to total depth. Fresh water with flo-sal is to be used to the lower Bone Spring, about 9500'; then the hole is to be displaced with 10.0 brine water containing a minimum of 4% potassium chloride. Hole conditions below the Wolfcamp may require mudding up to fluid weights in excess of 10.0 PPG, however, minimum drilling fluid weights, sufficient to control the well are to be used to total depth. Water loss is to be reduced to 10 cc or less at the top of the Morrow formation.

5 1/2" OD casing is to be set at total depth and is anticipated as follows:

No. Jts	Description	Thds Off Length	From	To
--	Rotary correction	14	0	14
18	5 1/2" OD, 17#/ft, N-80 Buttress casing	732	14	746
284	5 1/2" OD, 17#/ft, N-80 LT&C casing	11350	746	12096
29	5 1/2" OD, 20#/ft, N-80 LT&C casing	1160	12096	13256
--	Float collar	2	13256	13258
1	5 1/2" OD, 20#/ft, N-80 LT&C casing	40	13258	13298
--	Float shoe*	2	13298	13300

* The float shoe is to be equipped with lateral exits as it is intended to rest part of the casing weight on bottom.

The bottom three (3) joints are to be sealed with HOWCO-weld. API modified thread lubricant is to be used on casing threads. Casing centralizers are recommended to be included over any pay zones in conjunction with sand blasting to remove mill scale and lacquer.

5 1/2" casing is to be inspected using a combination mechanical optical and magnetic particle inspection - full length.

Prior to running the 5 1/2" OD casing a caliper survey is to be made to determine actual cement volume required to fill the annulus back to 9000' (1300' above the expected top of Wolfcamp). Casing will be cemented as follows:

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PROPOSED DRILLING AND COMPLETION PROCEDURE

Production Casing: (continued)

Cement is to be API class "H" containing 1% CFR-2 and 3# KCl per sack, mixed at 15.8 PPG, (yield of 1.10 CF/sk). An estimated 970 sacks will be required to fill to 9000'.

After the plug is down, the 5½" casing is to be cut off, equipment nipped down and the drilling rig released.

Completion:

A well service unit is to be moved in and if necessary drilling-out equipment rigged up to drill out to a depth sufficient to test any potential pay zone.

It is anticipated that the well will be a singly completed (Morrow gas) well. 2 7/8" OD, 6.50#/ft, N-80, EUE, 8 round thread tubing with ABC modified coupling is to be used with a suitable production packer. Tubing is to be inspected using a combination mechanical optical and magnetic particle inspection, full length.

Logging:

Logs are to be run prior to setting 5½" OD casing. The types of logs will be determined by the geological department.

A PDC (GR-N) Log is to be run after drilling out inside the 5½" OD csg to a depth sufficient to test any potential pay zone. The PDC Log is to be correlated to open hole logs to assist in perforating.

Drill Stem Test:

A maximum of three (3) DST's are anticipated, however, the exact number will be as required by the geological department when zones of interest are encountered.

Samples:

Ten foot samples from surface to total depth or as required by geological department.

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PERRY R. BASS
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PROPOSED DRILLING AND COMPLETION PROCEDURE

Estimated Formation Tops:

Elevation	3,426' GR
Surface to Rustler	Rubble sand
Rustler Anhy	Missing
B/Rustler Dolo	450'
T/Salt	525'
B/Salt	3,020'
T/Delaware Lime	3,350'
T/Bone Springs	7,030'
T/Wolfcamp	10,275'
T/Strawn	11,540'
T/Atoka	11,880'
T/Morrow	12,340'
B/Morrow Sand	13,105'
T/Barnett	13,400'

Blow Out Preventers:

The Hydril and BOP's containing pipe rams are to be opened and closed daily. The BOP's containing blank rams are to be opened and closed each time a trip is made.

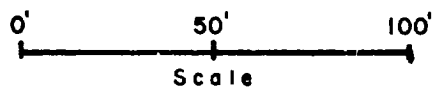
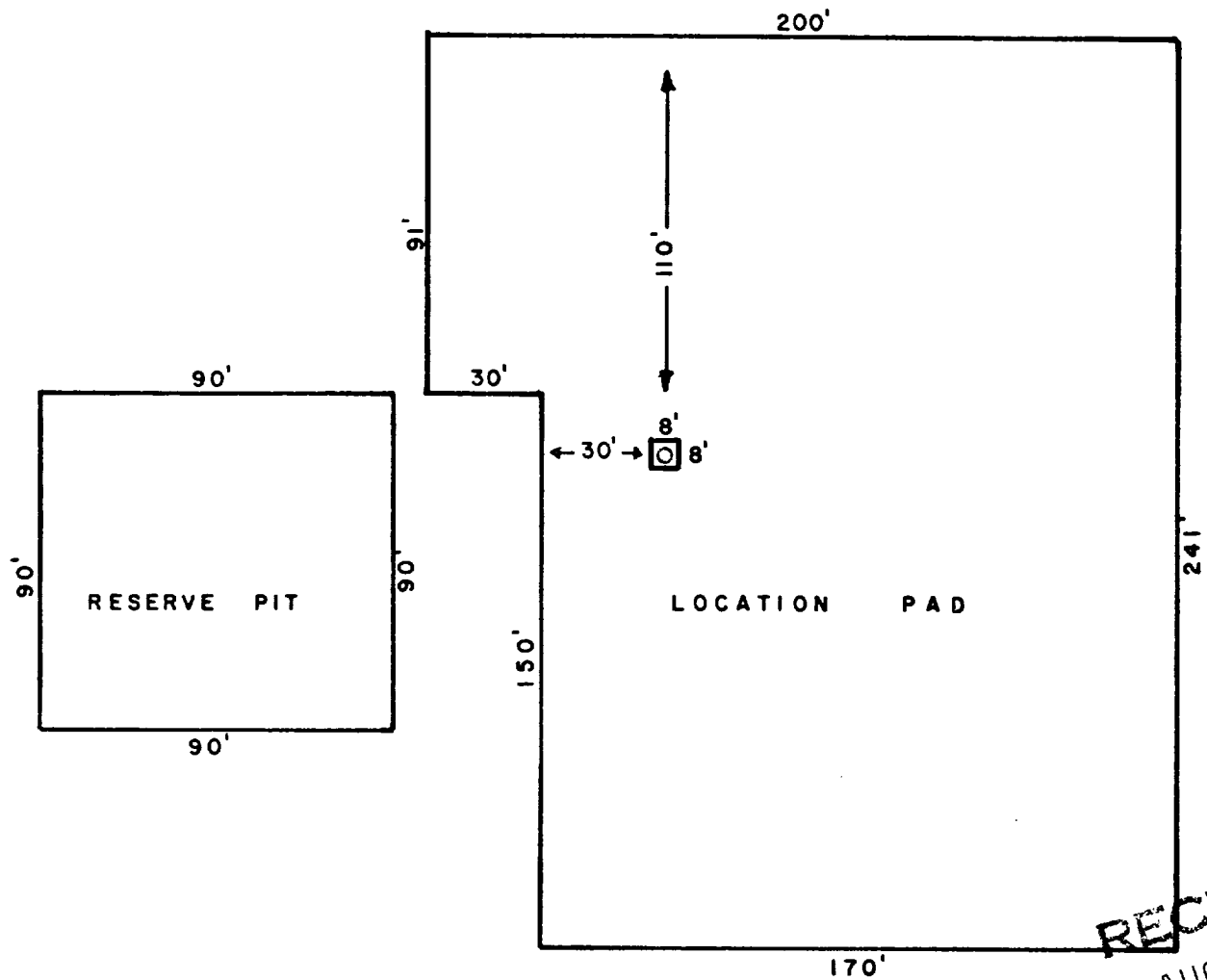
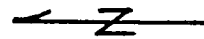
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 PROPOSED DRILLING AND COMPLETION PROCEDURE

Casing and Tubing Data:

OD	Wt	Grade	Type Joint	Cplg or Jt OD	Min Collapse	Burst at MIY	ID	Drift Dia
13 3/8"	48#	H-40	ST&C	14.375	770	1730	12.715	12.559
8 5/8"	24#	K-55	ST&C	9.625	1370	2950	8.097	7.972
	28#	H-40	ST&C	9.625	1640	2470	8.017	7.892
	32#	H-40	ST&C	9.625	2210	2860	7.921	7.796
5 1/2"	17#	N-80	Buttress	6.050	6280	7740	4.892	4.767
	17#	N-80	LT&C	6.050	6280	7740	4.892	4.767
	20#	N-80	LT&C	6.050	8830	9190	4.778	4.653
2 7/8"	6.50#	N-80	EUE T&C	3.668	9420	10570	2.441	2.347

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