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## STATE OF COLORADO

## BOARD OF LAND COMMISSIONERS

620 Centennial Building  
1313 Sherman St., Denver, Colorado 80203  
(303) 866-3454

Department of Natural Resources

December 11, 1985



Commissioners

ROWENA ROGERS  
TOMMY NEAL  
JOHN S. WILKES III

Mr. B. G. Cannon  
Box 333  
Hayden, Colorado 81639

Re: Colorado Oil & Gas Lease No. 69/7290-S  
S/2NW/4, Sec. 18-6N-86W, Routt County  
Your Recent Letter

RECEIVED

DEC 13 1985

COLO. OIL &amp; GAS CONS. COMM.

Dear Mr. Cannon:

Permission is hereby granted to shut your wells in until such time as the weather permits proper operations. Please advise when this occurs.

By copy of this letter we are requesting permission of the Oil & Gas Conservation Commission to extend the deadline for completion of your lined pits also until such time as weather permits resumption of that project.

Sincerely,

T. E. Bretz  
Minerals Director

TEB:yd

cc: Bill Smith, OGCC  
Dennis DeVore  
Robert Clift  
Accounting

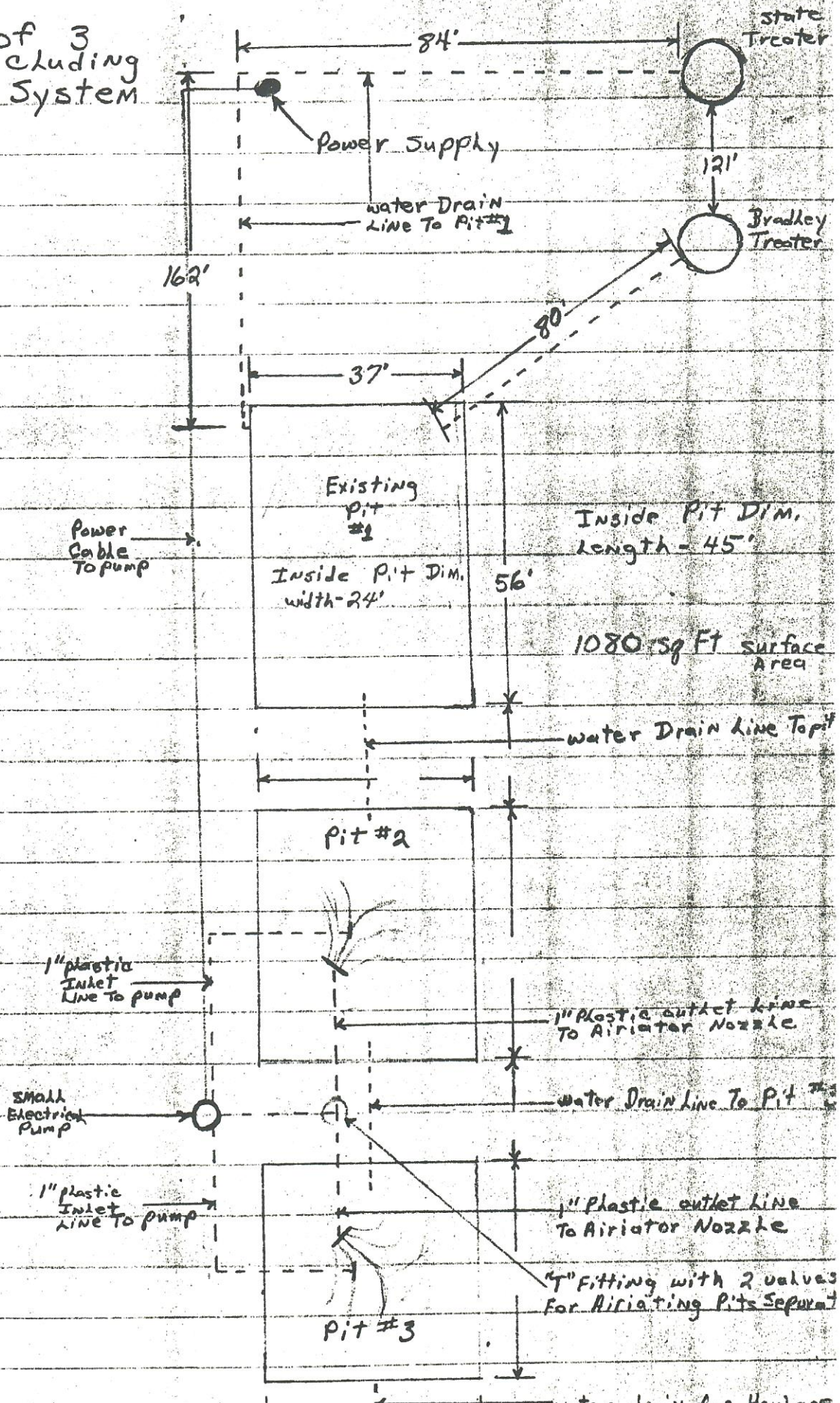
IT WAS AGREED THAT JUNE 1, 1986  
would be our 'goal' FOR POLLUTION ABATEMENT.

JJK

Situation resolved 7/22/86. See State #1 file



# Plan #1 - Series of 3 pits including Aerator System





Plan #1 consists of The use of 3 pits, decreasing slightly in size. Water From Treater will drain To Existing pit #1 which will retain B.S., oil, salt deposits, etc. After allowing Time To Settle out, Water from Pit#1 will be drained manually To Pit#2 where it will be allowed To Settle again. After Settling There water will be drained manually To Pit#3, where an Aerator system will be used To Circulate water From pit#3 Through a small electric pump, and out a small spray nozzle over center of same pit To Increase Evaporation Rate by putting more water in Contact with The atmosphere.

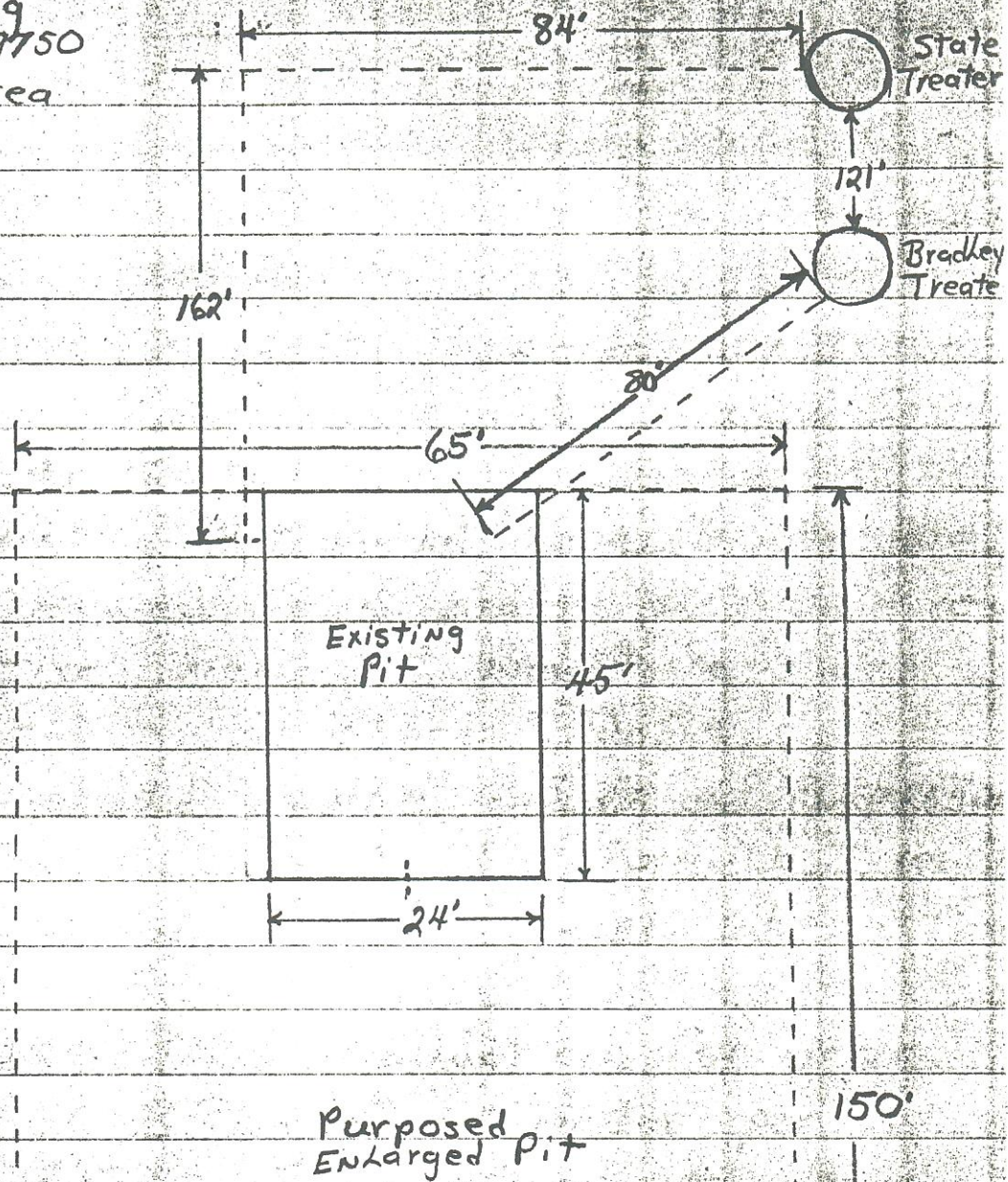
Pit#2 could also Be equiped with an Aerator as Shown in drawing, But due To The added expense, we would Like To Aerate only Pit#3 if possible

Pits #2 + #3 will be lined with Bentonite, Black Plastic or other Liner That will meet regulations



Plan #2  
Existing  
Sq. Feet

Enlarging  
Pit To 9750  
Surface Area



Surface Area - 9750 sq. Ft.



Plan #2 consists of Enlarging The Existing Pit From 1080 sq. Ft of surface Area To 9750 sq. Ft of surface Area. The Area we need For a 40 BBL per day water evaporation is 9,625 sq. ft. I made my Inside demention slightly larger For a Safety margin of 125 sq ft.

The existing Pit would have To Be dug out and Hauled To a proper disposal area The entire new pit would be lined with Bentonite or Black Plastic.

This Pit should handle 3.5 Ft. of Evaporation per year according To The Formula I recieved From Jim Kenny - Field Engineer - Oil + Gas Comm.

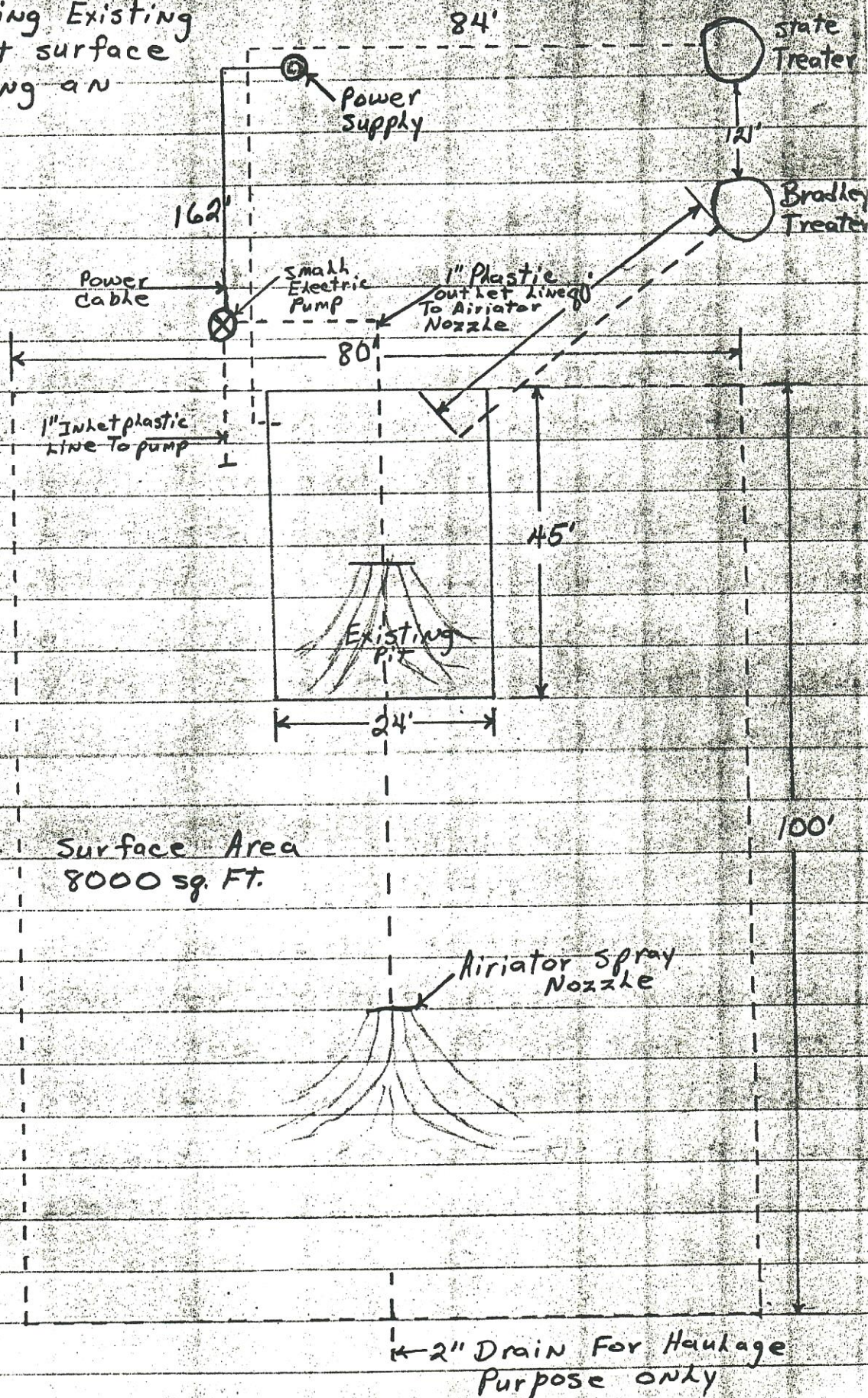
Given - 150 Days Production Per year  
40 BBLs Salt water per Day  
3.5 Ft. Evaporation per year  
Production = Evaporation

$$\left( \frac{150 \text{ Days Prod.}}{\text{year}} \right) \left( \frac{40 \text{ BBLs}}{\text{Days Prod}} \right) \left( \frac{5.6146 \text{ Ft}^3}{\text{BBLs}} \right) \left( \frac{\text{Acre}}{43,560 \text{ Ft}^2} \right) = \left( \frac{3.5 \text{ Ft.}}{\text{year}} \right) (X \text{ acres}) = 0.22 \text{ Acres, or } 9625 \text{ Ft}^2$$

Possible Pit sizes For 9,625 Ft<sup>2</sup> surface area are  
100' x 96' — 80' x 120' — 70' x 138' — 60' x 160'



Plan #3 - Enlarging Existing Pit To 8000 sq ft surface area + Installing an Airiator System.





Plan #3 consists of Enlarging Existing Pit From 1080 sq. Ft To 8000 sq Ft of surface area. It would also include an Airiation System used To circulate water From The Pit Through a small electric Pump and out a small spray nozzle near The center of The Pit, To increase The evaporation Rate by Putting More water in contact with The Atmosphere. A second Airiation nozzle could be installed, one at The center of Each end as Shown in The Drawing. But Due To The added expense we would Like To install only one if possible. Existing Pit will be dug out and hauled To a proper Disposal area.

The Entire new Pit would be lined with Bentonite or Black Plastic.

A 2" drain Pipe would be installed at The Far End For Haulage Purpose only. In The Case of heavy Run off or some other Emergency where The Pit Became Too Full. A Truck could be brought in To Haul away Excess water.



Plan #4 involves The process of Injecting salt water into a well That is no longer Producing oil.

My understanding of This process is That The water is injected into The Formation at approximately 9000 lbs Pressure, and a history of The Casing and The Formation must be known To avoid complications.

Unfortunately, we have no records on This Particular well. There fore The possibility of endangering our entire Production Field exists.

We would like more Time To Investigate This idea, before we build new pits. The expense could be considerably less. Also The existing Pit could be reclaimed, and returned To Wheat Field or other Surface use.

Water Could Be Stored in a holding Tank until injection Process is Required. A Line would run From Tank To well, approximately  $\frac{1}{4}$  mile away.

Before This idea can be used, an entire History of The well and Formation must be investigated.