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LEASE INSPECTION FORMDate OCT 1, 1985Operator CANNONField TOW CREEKLease Name & No. STATECounty ROOTT CTY

Tank Battery No. _____

Location 18-6N-86W

Legal Description

Type of Inspection POLLUTION COMPLAINT

Water Inflow _____ (Bbls. Per Day)

RESULTS OF INSPECTION

(Est. Pit Dimensions, CVD, Lined, Oil on Surface, etc.)

Type of Tank

SKIM TANK 6-210 BBL STEELPit No. 1 1 HEATER TREATERPit No. 2 30 X 40 X ? , UNLINED, OPEN, POORLY FENCED, HAS SOME BRIGHTLY COLORED FLAGS FOR BIRDS, SMALL FLOW OF WATER INTOPit No. 3 PIT, COVERED W/ B.S.W.PIT HAS 2" PIPE THROUGH BERM ON BACKSIDE, FLOW HAS ADDITIONAL PITS CREATED 1-3' DEEP DITCH, WHICH GOES DOWN TO POND IN YAMPA RIVER VALLEY

CONDITION OF LEASE (Describe - Oil CVD. or Sat. Gr., Any Leaking, Safety Conditions, Etc.)

DISCUSSED PROBLEM W/ MR. MORTON, MR. CANNON, MR. ROBERT CLIFT DECIDED ON FOLLOWING RECOMMENDATION DUE TO WEATHER + OPERATIONAL CONSTRAINTSRECOMMENDED ACTION (If Required) 90 DAYS TO SUBMIT PLAN, EXECUTE PLAN BY JUNE 1, 1986. AFTERWARDS HEARING + POSSIBLE PENALTYINSPECTOR JJK

STATE OF COLORADO
OIL AND GAS CONSERVATION COMMISSION

DEPARTMENT OF NATURAL RESOURCES
SUITE 380 LOGAN TOWER BUILDING
1580 LOGAN STREET

DENVER, COLORADO 80203

WILLIAM R. SMITH
Director

(303) 866-3531

RICHARD D. LAMM
Governor

FRANK J. PIRO
Deputy Director

October 4, 1985

To: Mr. Bill Smith, Director, Oil & Gas Conservation Commission

From: James Kenney, Field Engineer

Re: Pollution in Tow Creek Field

On October 1, 1985 a Lease Inspection of four wells in Sec 18-T6N-R86W was conducted. Investigation of this state lease was prompted by complaints from Mr. Wayne Morton, surface owner.

Present during the inspection were Mr. Wayne Morton, Mr. Robert Clift of the State Land Board, Mr. Bob Cannon (operator) and his sons-in-law.

Current production is between 30 and 40 bbl of water per day according to Mr. Cannon. After treatment the water flows into a retaining pit for evaporation. The pit has a pipe through which this water, and any associated oil or waste, flows directly onto the ground. A small drainage 'ditch' (1-3 feet deep) exists as a result. This ditch meanders downslope until reaching a pond, which appears to be an oxbow lake in the Yampa river floodplain. It is certain that any product* introduced to the retaining pit is effluencing into the Yampa river and thereby the Colorado river.

Mr. Cannon was informed this constitutes a violation of State Rules and Regulations. Rule 324 States:

"The owner shall take such precautions as are necessary to prevent polluting the waters of the state, surface or subsurface, by oil, gas, salt or brackish water or other oil field wastes. No discharge shall be made from any disposal system or otherwise into the waters of the state which shall be below the water quality standard fixed by the Water Quality Control Commission for such discharge."

It is recommended that Mr. Cannon be given 90 days from the date of inspection to submit to the O.G.C.C. a plan to prevent pollution of state waters. Further, that he be given until June 1, 1986 to implement this plan.

If Mr. Cannon fails to attain compliance with Rule 324 a hearing date should be set as soon as possible according to Rule 504. Non-compliance should be dealt with by penalization as provided for under 34-60-121 of the Oil and Gas Conservation Act.

"Any person who violates any provision of this article, or any rule, regulation, or order of the commission shall be subject to a penalty of not more than one thousand dollars for each act of violation and for each day that such violation continues, unless the penalty for such violation is otherwise specifically provided for and made exclusive in this article."

*R.M.A.G. publication "Oil and Gas Field Volume, Colorado-Nebraska " lists associated water production at 24,572 ppm TDS.

cc JM,MM,FP

MR. CANNON : I CHECKED ON THE SALINITY OF WATER
IN THE TOW CREEK FIELD, AND FOUND IT TO BE
AROUND 25,000 ppm. THE STANDARD FOR DRINKING WATER
IS 500 ppm (MAXIMUM). THE OCEAN HAS A SALINITY OF
AROUND 33,000 ppm. I THINK ITS EASY TO SEE
THAT PUTTING YOUR PRODUCED SALT WATER INTO THE
YAMPA RIVER IS UNACCEPTABLE.

OF COURSE IT IS POSSIBLE, BUT NOT LIKELY,
THAT THE WATER PRODUCED FROM YOUR WELLS IS OF BETTER
QUALITY. ITS JUST AS LIKELY TO BE EVEN WORSE. THE ONLY
WAY TO TELL IS TO HAVE IT ANALYZED.

TRY CALLING COUNTY, STATE, AND FEDERAL HEALTH AND
SAFETY AGENCIES. YOU MAY BE ABLE TO GET A FREE ANALYSIS.

J. KENNEY

THERE SEEMS TO BE A SMALL ERROR IN
MR. CLIFTS CALCULATION OF SURFACE AREA NEEDED
FOR A RETAINING PIT.
HERE'S HOW I APPROACHED THE PROBLEM.

GIVEN: 150 DAYS OF PRODUCTION IN A YEARS TIME
40 BARRELS OF SALT WATER PRODUCED IN A DAY
3.5' feet OF EVAPORATION IN A YEAR
TO KEEP A PIT FROM OVERFLOWING THE AMOUNT OF
SALT WATER PRODUCED IN A YEAR HAS TO EQUAL THE
AMOUNT EVAPORATED IN A YEAR.

PRODUCTION = EVAPORATION

$$\left(\frac{150 \text{ DAYS PROD.}}{\text{YEAR}} \right) \left(\frac{40 \text{ BBL}}{\text{DAYS PROD.}} \right) \left(\frac{5.6146 \text{ ft}^3}{\text{BBL}} \right) \left(\frac{\text{ACRE}}{43,560 \text{ ft}^2} \right) = \left(\frac{3.5 \text{ ft}}{\text{YEAR}} \right) (X \text{ ACR})$$

SOLVING FOR (X) ACRES = 0.22 ACRES, OR 9,625 ft²

POSSIBLE PIT SIZES TO MAKE 9,625 ft² SURFACE AREA:

100' X 96'

80' X 120'

70' X 138'

60' X 160'