PROPOSED CC TANK UNIT EDDY COUNTY, NEW MEXICO

YATES PETROLEUM CORPORATION

ARTESIA, NEW MEXICO

	RIEXANDA Punyona	
CATENO	5661	
Sobreda	1. 1. 371 E.	King n
Hearing I	Date 3 - 77-	26

### TABLE OF CONTENTS

EXHIBIT NO.	1REGIONAL INDEX MAP
EXHIBIT NO.	2LAND PLAT
GEOLOGICAL	REPORT
EXHIBIT NO.	3
EXHIBIT NO	4 CROSSECTION LAI (DOCKET)

1-pm.	Constitute Of	Stote	5101/23781 130 Key 1	46C \$1101.16 -3248	ngniad	Yates Pal.	Yo
13	6-1-04 2054 U.S.	(5un   Gulf 4-19-76   4-1-88 K-5804   L0-27/0 IS U   14688	7074	Pennzoil	State 14110	34110	1
	Chopural Prod.	24	8165 00 1075 -1 - 19 25 - 1711 Scuthland Roy 1/16/75 2013	71.1.61 213.3 1.1.61 213.3 1.3.54 20	Yotas Pet & Union Fex 9 2 76	Yotes Pet 6 Union Tex 6 · 2 · 75 Chiston-Fet. Control of the Contr	77. 7
entice repoter	Spelman Prentice Blicerotre 0 CG V2 11-1-16 6-5B U.S. 26 State	Amoco Allied 12-21-75 Chemical Spokes 22 21.55 Spokes 25 25 25 25 25 25 25 25 25 25 25 25 25	12.50 / So. Roy. 10. 21. 19 12.647 25.82  20.38 21 (N) 21. 19 13. 21 21.	Amaco 3-1-81 19621 29	Gulf 9-1-76 0559774 (R.C.Hanks Yates Petr. 9-1-78 (R.C.Hanks Yates	Yales 9-1-76 R.C. 12246 Hanks 1-76 8 1-76 8 1-76 8 1-76 8 1-76 8 1-76 8 1-76 1 102 1418 U.J.	G.5.0.2.3
	0.t.Humafin 4 - 1 ti 5304 972 0.t.Humafin 1 - 1737	Central 30 West Oir Corp.  9 - 21 - 75  10 - 2291  10 - 10 - 10 - 10 - 10 - 10 - 10 - 10	Gulf 11-1-76 13-50 I	Gulf II- 19 78 L-1646 31-25	Gulf 5 · 1 · 70 0559715	Yutes Pet. 9 1 00 12246	G.1 8- 25
-/	717 35  Tem Brown  To West Antelope  Milin 181 1 78790  14.181 1 78790  1535 1316 0/4 3.9.64	16-3303	15 h seet seet s	32	33    Yates   Pet.   Pe	34 u.s.	74.
teod &	1031 11031 34030 114036	Allied Chemicali Chem. 2-1-77	Gulf Gulf	Gulf 5:1:76	Gulf 5 · 1 · 76	La Rue Ope-Rts Colifornia	G.C. HB 1-1
. 1 - 79	Reserved by Assert Land	Gulf 2:1:77	13.48 57 81 05539778  S3.13 6 6  Allied Chem. I  Gulf-Fed. 104174 17 22 70  13.8 7	Magnelia Mamilton-Fed Th 3552		Old 142	Var. 6.63
•	Sally Hummel 7-10-75 0560239	Ailed Chems Frank 2 · I · 77 Rungan 2 · I · 77 Solly Hummel 7 · I · 76	33.33 / A.B.   Guif   Cooper   Guif 8   1   6   1   5   1   76 8   1   1   1   5   1   76 59.28   7     J 0559778	Gulf   Gulf   2-1-77   2-1-77   1369   3561	Gulf   Gulf 7 · 1 · 77   82 1361   82	Gulf   Nockies Ltd. 8-1-76   3-1-50 87   11319  11319  114.01Ex.   Danabus-Fed   D	R.
	Sally Hummel 7 1 7 7 6 , 0360239	u.s.	Golf 1755-751 U.S.	Gulf Fowers-Fed Silmagge Author) 10 5054 10 2068 10 A 3-31-69  U.S.	7:1.76 0560245j HuberCorp. + 5td. Fad TD 4400 DM4:21-66 U.S	U.S.	A
	Sally Kummid 7 : 76 0 56 0 239	Coranada  Anderson  10 1642  Gulf Gulf  2.1.77  1358  1361	Gulf 2 - 1 - 77	Gulf   Gulf 2-1-77   8-1-76 1361   81	Gulf   R.H.Hannifin   12-1-8    12-1-8    12-1-8    13-1	R.C. Hanks HBP 143625 Armour	Un-
:Gee	Allied Chem. 3 · 1 · 18 4584	Myco Ind. 6 1 78 6023	Gulf 12-1-76	Gulf 12 - 1 - 76 898	Mark Gulf Prod Tis-16 State [10,46201312]	R.C. Honks HBP 045275 Armour	Hann Arr
4 ∞	U.S.	U.S.	U.S.	U.S.	Tosloot State 120	Carus. Rolph Nis	0 45

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2

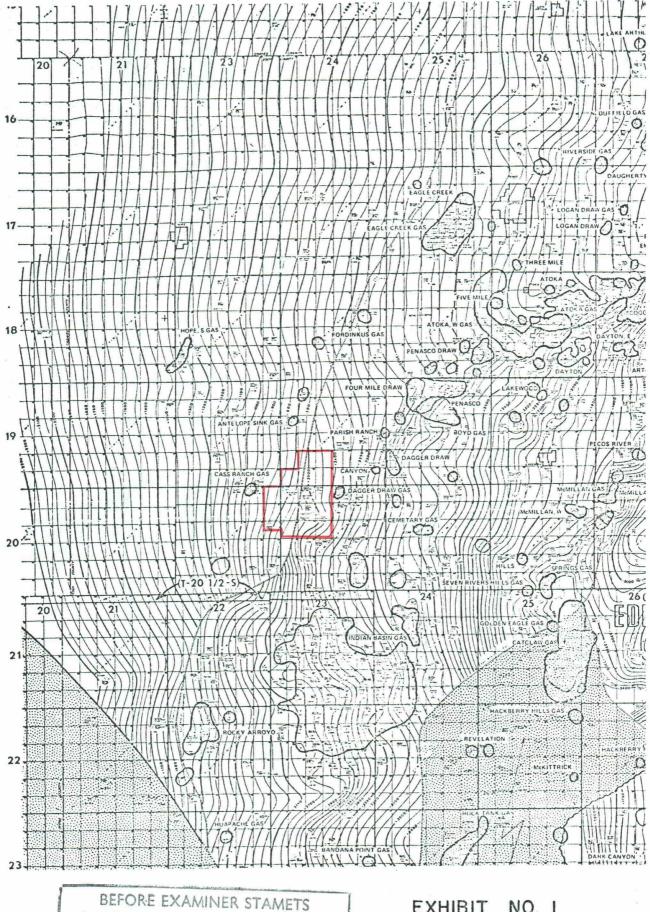
CASE NO. 566/
Submitted by AM Reclaration
Hearing Date 3-31-76

EXHIBIT NO. 2

LAND PLAT

CC TANK UNIT

EDDY COUNTY, NEW MEXICO



BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
EXHIBIT NO. /
CASE NO. 566/
Submitted by KM kilalm
Hearing Date 3 -3/- 76

EXHIBIT NO. I
REGIONAL INDEX MAP
CC TANK UNIT
EDDY COUNTY, NEW MEXICO



# GEOLOGICAL REPORT PROPOSED CC TANK UNIT EDDY COUNTY, NEW MEXICO

#### PURPOSE

The purpose of this report is to briefly summarize the geological reasons for forming a sixteen and one-half section Federal Unit. A 9,000 foot Morrow Wildcat will be drilled within the unit.

#### LOCATION AND LAND

The proposed CC Tank Unit is located 20 miles southwest of Artesia, New Mexico, in semi-arid, low relief rangeland drained by generally eastwardly-running draws. The unit area is easily accessible by a county-maintained road extending westwardly from U. S. 285. Ground level elevation is approximately 3720 feet.

The proposed unit area contains sixteen and one-half sections or 10,550.24 acres. The unit includes sections 28, 29, 31, 32 and 33 in T19S-R24E, Sections 1, 12 and north half of 13 in T2OS-R23E and Section 4, 5, 6, 7, 8, 9, 16, 17 and 18 in T2OS-R24E.

#### GENERAL GEOLOGICAL DISCUSSION

The CC Tank Unit is located on the Northwestern Shelf of the greater Permian Basin of West Texas and Southeastern New Mexico. Approximately 10,800 feet of Permian, Pennsylvanian, Mississippian, Devonian, Silurian, Ordovocian and Cambrain sedimentary rocks are present. A 9,000 foot wildcat in the unit will entirely penetrate the principally prospective Lower Pennsylvanian Morrow and bottom in the Chester Limestone of Mississippian age. Expected tops are as follows:

San Andres	301
Glorieta	1661
Yeso	1751
Abo	3776
Wolfcamp Limestone	5074
Lower Canyon	7316
Strawn	7943
Atoka	8394
Morrow Clastics	8706
Chester Limestone	8956

The primary objective is the Lower Pennsylvanian Morrow clastics interval. Secondary objectives include Permian Yeso carbonates and Pennsylvanian Canyon carbonates, Strawn clastics and Atoka clastics.

Shoreline strike sands (beaches, bars) of the Morrow trend generally northeast-southwest in this area of Eddy County. Thicker, but narrower and more elusive "shoestring-like" channel sand bodies (alluvial, distributary) generally trend normal or subnormal to the shoreline strike sands.

#### GEOLOGICAL DISCUSSION OF UNIT AREA AND ENVIRONS

The primary objective of the CC Tank Prospect is the gasbearing shoreline strike sands of the Morrow "A" Zone (or upper zone of the Morrow, see Exhibit No. 4). Exhibit No. 3 is a map showing the varying thickness of the total net pay in the Morrow "A" Zone and the structural configuration on top of the Morrow Clastics.

Zero net pay in 4 wells to the west and northwest of the unit operated by Tom Brown, namely the Rewanee State in Section 2 of 20S-23E, the Siegrest Draw No. 2 in Section 34 of 19S-23E, the West Antelope Sink in Section 35 of 19S-23E and the Antelope Sink in Section 18 of 19S-24E, limit the prospect to the west and northwest and form an updip permeability barrier to trap gas in the Morrow "A" Zone within the CC Tank Unit.

Three wells in 20S-24E, the Standard No. 1 Cass Ranch in Section 3, the Mark No. 1 State "D" in Section 16 and the Carper No. 1 Monsanto in Section 21 limit the CC Tank Prospect on the downdip side. The Mark No. 1 Foster in Section 21 of 20S-24E is a fairly recent, low volume Morrow gas well, but the operators

have not yet released the "electric" logs.

The prospect is limited to the northeast by either a lack of "A" Zone sands or a permeability barrier because the Yates No. 1 Allison "CQ" in Section 22 of 195-24E is completed in the "A" Zone but has demonstrated by production history to be in a limited reservoir. The Allison "CQ" was put on stream in August of 1974 and as of January, 1976, the well only had a cumulative production of 17.3 Million CFG and was down to 30 MCFPD. Therefore, the Allison "CQ" is draining a limited resevoir and is not thought to be connected at all with the areally extensive "A" Zone sands in the CC Tank Unit which would have yielded hundreds of times more gas than the Allison "CQ" in the same time span of production.

The key wells to the prospect are the abandoned Allied Chemical No. 1 Gulf Federal in Section 6 of 20S-24E and the abandoned Gulf No. 1 Powers Federal in Section 8 of 20S-24E. Neither of the wells were drillstem tested or cored. Therefore, analysis of the Morrow sand quality and hydrocarbon potential must come from the open hole "electric" logs which were run in the wells. The following table shows that 18 feet of potentially gas-bearing "A" Zone sand is present in the Allied Chemical No. 1 Gulf Federal well and that 19 feet of potentially gas-bearing "A" Zone sand is present in the Gulf No. 1 Powers Federal well.

#### LOG ANALYSES

OF

## POTENTIALLY PRODUCTIVE AND

# UNTESTED MORROW "A" ZONE SANDS IN THE

### ALLIED CHEMICAL & GULF WELLS

Allied Chemical No. 1 Gulf Federal - Section 6-T203-R24E

Depth	Porosity	Water Saturation	Analyst's I	Remarks		-
8772-74	13%	31%	Potentially	Hydrocarbon	Bearing	
8782-90	8%	20%	и	"	a	
8822-30	8%	46%	11	n	tt	

Gulf Oil No. 1 Powers "A" Federal - Section 8-205-R24E

Depth	Porosity	Saturation	Remarks	······································	
8930-33	10%	47%	Potentially	Hydrocarbon	Bearing
8937-44	9%	38%	11	tt	11
8949-58	12%	28%	11	11	***

The Gulf No. 1 Powers Federal was completed in 1969 and the Allied Chemical No. 1 Gulf Federal was completed in 1970. Since that time techniques of analyzing open hole logs of gas-bearing sands has improved significantly. Application of these improved techniques indicates that both the Gulf and Allied Chemical wells

are by passed Morrow "A" Zone gas wells. If the above wells had been drilled recently and logged with modern open hole logs designed for gas-bearing sands it is very likely that they would have been completed in the Morrow "A" Zone.

Exhibit No. 4 is stratigraphic crossection traversing the CC Tank Unit from northwest (updip) to southeast (downdip).

The crossection shows the stratigraphy and zonation of the Morrow Clastics, the permeability barriers and the "A" Zone pay sands in the bypassed gas wells.

#### SUMMARY AND CONCLUSION

Extant subsurface data in the environs of the CC Mank Unit was used to construct a net pay map of the Morrow "A" Lone shoreline strike sands which shows a stratigraphic trap underlying the proposed unit outline.

Close log analysis of the Morrow interval in two older, untested and abandoned key wells within the unit indicates that they are bypassed gas wells.

Potential exists for additional pays in the Yeso, Canyon, Strawn, Atoka and Morrow "B" Zone.

In conclusion, the sixteen and one-half sections as outlined appear to be properly located by geologic reasons that give cause and justification for the formation of the CC Tank Unit as proposed.