BEFORE THE OIL CONSERVATION COMMISSION

OF THE STATE OF NEW MEXICO

IN THE MATTER OF APPLICATION OF KEWANEE OIL COMPANY TO CONVERT PEARL WELLS NOS. 22 AND 24, IN SECTION 25, TOWNSHIP 17 SOUTH, RANGE 32 EAST, N.M.P.M., AND PEARL WELL NO. 26, IN THE W/2 SECTION 30, TOWNSHIP 17 SOUTH, RANGE 33 EAST, N.M.P.M., IN LEA COUNTY, NEW MEXICO FROM PRODUCING OIL WELLS TO GAS INJECTION WELLS, AND FOR PERMISSION TO INJECT GAS PRODUCED FROM CORBIN "A" WELL NO. 3, IN THE W/2 SECTION 10, TOWNSHIP 18 SOUTH, RANGE 33 EAST, N.M.P.M., IN LEA COUNTY, NEW MEXICO, INTO THE GRAYBURG-SAN ANDRES HORIZONS OF THE MALJAMAR POOL RESERVOIR, THROUGH PEARL WELLS NOS. 22, 24 AND 26.

NO. 356

APPLICATION

KEWANEE OIL COMPANY, Applicant herein, in connection herewith, respectfully shows to the Oil Conservation Commission:

1. That Applicant is a corporation, organized under the laws of the State of Delaware, and is duly licensed to transact business in the State of New Mexico; that in connection with this Application, its mailing address is P. O. Box 3786, Odessa, Texas.

2. That Applicant is the owner and holder of Federal Oil and Gas Lease Las Cruces Serial No. 058697(b) insofar as said lease covers the following described land in Lea County, New Mexico, to-wit:

> All Section 25, Township 17 South, Range 32 East, N.M.P.M.; Lots 1, 2, 3 and 4, E/2 W/2 Section 30, Township 17 South, Range 33 East, N.M.P.M., and containing 968.56 acres, more or less,

which said lease is designated as Applicant's Pearl Lease.

3. That a total of twenty-seven wells, three of

which are abandoned or were dry holes, have been drilled upon said lands. That each of said wells were drilled to a sufficient depth to test the Grayburg-San Andres Horizons encountered from a depth ranging from 4150 feet to 4250 feet. That at the present time there are twenty-four producing wells on said lease, producing from the Grayburg-San Andres Horizons. That the present oil production from said lease is 365 barrels per day.

4. That Applicant is the owner and holder of Federal Oil and Gas Lease Las Cruces Serial No. 029489(a) insofar as said lease covers the following described land in Lea County, New Mexico, to-wit:

> W/2 Section 10, Township 18 South, Range 33 East, N.M.P.M., and containing 320 acres, more or less,

which said lease is known as its Corbin "A" Lease.

5. That there is located on said Corbin "A" Lease one gas well which, although shut in at the present time, is capable of producing 7,900,000 cubic feet of gas per twenty-four hours; that said gas well produces from the Queen Sand, encountered from a depth of 4225 feet to 4327 feet.

6. That on Plat attached hereto, marked Exhibit "A" and by reference made a part hereof, is shown the Pearl Lease and the Corbin "A" Lease, together with all wells drilled thereon.

7. That Pearl Wells Nos. 22, 24 and 26, as shown on said Exhibit "A", attached hereto, and which wells it is proposed to convert to gas injection wells, were originally drilled as unorthodox five-spot locations, after hearing before and approval by the New Mexico Oil Conservation Commission.

8. That as a result of engineering studies of reservoir conditions, it is Applicant's belief that it would be in the interest of conservation, prevent waste, and enable Applicant to obtain a greater ultimate recovery of oil and hydrocarbons if Pearl Wells Nos. 22, 24 and 26 are converted from producing wells to gas injection wells, and gas produced from Corbin "A" Well No. 3 injected in the reservoir underlying the Pearl Lease through said three wells, as gas injection wells.

9. That attached hereto are copies of Logs of Pearl Wells Nos. 22, 24 and 26, showing the formations encountered from the top of the Grayburg Lime to the total depth of each well, the description and size of the casing run and set in each well and the quantity of cement with which each string of casing is cemented.

10. Applicant proposes at the beginning of this gas injection program to inject each day the following volumes of gas into the three gas injection wells, respectively:

INJECTION WELL NO.	VOLUME MCF PER DAY
Pearl No. 22	200
Pearl No. 24	175
Pearl No. 26	155

As results of gas injections become known and are studied the above gas injection volumes will be gradually increased so that at all times the volume of gas injected into each of said three gas injection wells will be consistent with withdrawals from offset producing oil wells.

11. Applicant does not now ask, nor is it Applicant's intention to ask that the current oil allowable produced

from Pearl Wells Nos. 22, 24 and 26 be transferred to other wells on the Pearl Lease by reason of said three wells being converted from producing oil wells to gas injection wells.

WHEREFORE, Applicant prays that the Commission set a date for hearing this Application, in accordance with its rules and regulations; that upon presentation hereof Applicant be granted permission to convert Pearl Wells Nos. 22, 24 and 26, as hereinabove described, from producing oil wells to gas injection wells, and that Applicant be further granted permission to inject gas produced from Corbin "A" Well No. 3 gas well, hereinabove described, into the Grayburg-San Andres Horizons of the Maljamar Pool Reservoir, through Pearl Wells Nos. 22, 24 and 26, as gas injection wells.

John E. Cochran, Jr.
308 Carper Building
Artesia, New Mexico
Attorney for Applicant
Kewanee Oil Company

STATE OF NEW MEXICO)
: ss.
COUNTY OF EDDY)

W. H. MILLS, being first duly sworn upon his oath, deposes and states: That he is Division Engineer for New Mexico properties of Applicant, KEWANEE OIL COMPANY, in the within and foregoing Application; that he has read the same and from personal knowledge knows the matters therein contained to be true and correct, except such statements as are alleged upon information and belief and as to those, he verily believes them to be true.

W. H. Mills

SUBSCRIBED AND SWORN TO before me this 12th day of March, 1952.

Notary Public

My commission expires:
April 15, 1954

KEWANEE OIL COMPANY

SAMPLE ANALYSIS OF PEARL NO. 22

Surface string - 1264' of 24#, J-55, 8-5/8" O.D. Casing and cemented with 100 sacks cement.

Top of Lime: 3790'

8-26-48	3755' to 3770'	Anhydrite
	3770' to 3790'	Anhydrite
	3790' to 3798'	Lime
8-27-48	3798' to 3814'	Gray sandy lime
	3814' to 3835'	Red Sandy shale
8-28-48	3835' to 3849	Sandy lime
	3849' to 3864'	Brown sandy lime and shale
8-29-48	3864' to 3875'	Sandy lime, slightly broken
	3875' to 3885'	Sandy lime, slightly broken
	3885' to 3895'	Lime
8-30-48	3895' to 3911'	Lime
8-31-48 to 9-4-48		Ran 3907' of new 23#, J-55, 7" OD casing, cemented with 200 sacks, drilling plugs and testing water shut off.
9-4-48	3911' to 3915'	Gray lime
9-5-48	3915' to 3930'	Gray lime
	3930' to 3940'	Gray lime
	3940' to 3950'	Gray lime
9-6-48	3950' to 3959'	Gray lime
	3959' to 3970'	Gray lime
	3970' to 3980'	Gray lime
9-7-48	3980' to 3985'	Gray lime
	3985' to 3990'	Gray lime
	3990' to 3993'	Gray sandy lime, little show of oil and gas
	3993' to 4001'	Sandy lime, little show of oil. Little free oil.
	4001' to 4005'	Light brown sandy lime, little show of oil
9-8-48	4005' to 4015'	Light brown sandy lime, little tan stain
	4015' to 4024'	Light brown sandy lime, little tan stain
	4024' to 4038'	Light brown sandy lime, fair tan stain
9-9-48	4038' to 4048'	Gray lime
9-9-48 to 9-13-48		Repairing rig
9-13-48	4048' to 4058'	Gray lime
9-15-48	4058' to 4062'	Gray lime
	4062' to 4066'	Gray lime
	4066' to 4072'	Gray lime
	4072' to 4081'	Gray lime
9-16-48	4081' to 4085'	Light sandy lime
	4085' to 4088'	Light sandy lime
	4088' to 4093'	White lime
	4093' to 4100'	White lime
9-17-48	4100' to 4106'	White lime
	4106' to 4108'	White lime
	4108' to 4112'	White lime
	4112' to 4116'	White lime
	4116' to 4127'	White lime

9-18-48	4127' to 4134'	White sandy lime, good porosity & fair tan stain
	4134' to 4137'	White sandy lime, no oil. Bailed hole dry
	4137' to 4143'	White lime, no oil. Bailed hole dry. 1/3 bailer oil.
	4143' to 4149'	Light brown sandy lime, good oil stain. Bailed hole dry. 1/3 bailer of oil.
	4149' to 4155'	Light brown sand, fair saturation. Little increase in gas and oil. About 6 or 8 gallons. Bailed hole dry.
	4155' to 4161'	Soft, light brown sand, fair saturation, little increase in oil. Bailed hole dry.
9-19-48	4161' to 4165'	Soft gray sand, little more gas, good porosity. Bailed hole dry.
	4165' to 4170'	Soft light brown sand, good porosity, increase in oil and gas. Bailed hole dry.
	4170' to 4175'	Good rich brown sand, good saturation and porosity. Hole started to fill and could not bail oil. Hole filled 1000' with oil in about 2 hours while drilling 5'.
	4175' to 4181'	Brown sand, good saturation and porosity.
		Shut down and tested at this point. Swabbed hole down to bottom of pipe and made 28.60 barrels. Shut down 2 hours and swabbed to bottom of pipe again and well made 4.60 barrels of oil. Started drilling ahead.
9-20-48	4181' to 4184'	Some pieces of good sand and oil show, some gray dry sand.
	4184' to 4189'	White lime.
	4189'	Total Depth.

KEWANEE OIL COMPANY

SAMPLE ANALYSIS OF PEARL NO. 24

Surface String - 1232' of new 24# and 28# H-40, 8-5/8" OD casing cemented with 100 sacks.

Top of Lime : 3750'

11-5-48	3690' to 3705'	Lime
	3705' to 3730'	Red sandy shale
	3730' to 3750'	Anhydrite
11-6-48	3750' to 3765'	Lime
	3765' to 3775'	Lime
	3775' to 3790'	Lime
11-7-48	3790' to 3805'	Lime
	3805' to 3820'	Lime
	3820' to 3835'	Lime
11-8-48	3835' to 3855'	Lime
	3855' to 3865'	Lime
	3865' to 3880'	Lime
11-9-48	3880' to 3892'	Lime
11-9-48 to 11-13-48		Ran 3891' of new 23#, J-55, 7" OD casing and cemented with 200 sacks, drilling plugs and testing water shut off.
11-14-48	3892' to 3905'	White lime, dolomite
	3905' to 3920'	White lime, dolomite
	3920' to 3932'	White lime, trace of sand
	3932' to 3944'	White and gray sandy lime
11-15-48	3944' to 3950'	White lime
	3950' to 3965'	White lime, trace of sand
	3965' to 3975'	White lime
	3975' to 3985'	White lime
11-16-48	3985' to 3996'	White lime
	3996' to 4011'	White lime
	4011' to 4027'	White, lime, little sand, slight show of oil and gas.
11-17-48	4027' to 4044'	White lime, littl sand
	4044' to 4055'	White sandy lime
	4055' to 4075'	White sandy lime
	4075' to 4096'	White sandy lime, trace of oil stain
	4096' to 4110'	White sandy lime
11-18-48	4110' to 4127'	Gray sand
11-18-48 to 11-19-48		Fishing for tools
11-20-48	4127' to 4135'	Gray sand, fair oil stain, show of white lime. Hole started to fill.
	4135' to 4140'	White lime, very slight show of sand
	4140' to 4144'	White lime, trace of sand
	4144' to 4150'	White lime
	4150' to 4156'	White lime
11-21-48	4156' to 4163'	White lime
	4163' to 4171'	White lime
	4171' to 4175'	White lime
	4175' to 4182'	White lime
	4182' to 4184'	White lime
11-22-48	4184' to 4191'	White lime
	4191'	Total Depth

KEWANEE OIL COMPANY

SAMPLE ANALYSIS OF PEARL NO. 26

Surface String - 1272' of new 24# and 28# H-40, 8-58" OD casing, cemented with 100 sacks.

Top of Lime: 3833'

11-3-48	3815' to 3825'	Anhydrite
	3825' to 3833'	Anhydrite
	3833' to 3835'	Gray lime
	3835' to 3845'	Gram lime
11-4-48	3845' to 3855'	Gray lime
	3855' to 3865'	Gray lime
	3865' to 3875'	Gray lime
11-5-48	3875' to 3885'	Gray lime
	3885' to 3890'	Gray lime
		Ran steel line measurement and hole corrected to 3923'
	3923' to 3925'	Gray lime
	3925' to 3931'	Gray lime
11-6-48 to 11-10-48		Ran 3930' of new 23# J-55, 7" OD casing, and cemented with 200 sacks, drilling plugs and testing water shut off.
11-1-48	3931' to 3944'	White and gray lime
11-11-48	3944' to 3948'	White and gray lime, some crystalline lime
	3948' to 3953'	White lime
	3953' to 3959'	White lime
	3959' to 3965'	White lime, little show of anhydrite
	3965' to 3970'	White lime, little show of anhydrite
11-12-48	3970' to 3975'	White lime, and anhydrite
	3975' to 3980'	White lime, sand, and anhydrite break
	3980' to 3993'	White lime, and sand and anhydrite break
	3993' to 4000'	White lime, trace of anhydrite
11-13-48	4000' to 4004'	White lime
	4004' to 4010'	White lime, trace of stain
	4010' to 4023'	White lime, light stain, little gas
	4023' to 4032'	White lime, trace of oil stain
11-14-48	4032' to 4047'	Gray sand, trace of oil, little more gas
	4047' to 4053'	White lime and gray sand
	4053' to 4055'	White lime
	4055' to 4065'	White lime, little gray sand
11-15-48	4065' to 4070'	Gray sand, trace of oil stain
	4070' to 4075'	White lime
	4075' to 4080'	White lime, trace of gray sand
11-16-48	4080' to 4094'	White lime, trace of gray sand
	4094' to 4100'	White lime, little of oil stain
11-17-48	4100' to 4107'	White lime
	4107' to 4110'	White lime
	4110' to 4120'	White lime
	4120' to 4132'	White lime, some gray sand
11-18-48	4132' to 4147'	White lime, some gray sand
	4147' to 4150'	White lime
	4150' to 4156'	White lime, some gray sand
	4156' to 4170'	White lime, some gray sand

11-19-48	4170' to 4175'	White lime, trace of gray sand
	4175' to 4178'	White lime
	4178' to 4183'	White lime, some good light brown sand, good oil show (Tools showed top of pay at 4180')
	4183' to 4190'	White lime, some good light brown sand, good oil show
	4190' to 4200'	White lime, some good sand, fair stain (150' of oil in hole)
	4200' to 4205'	White lime, very little stain in sand. (200' of oil in hole)
11-20-48	4205' to 4212'	White lime, gray sand, light stain
	4212' to 4220'	Gray sand, trace of oil stain
	4220' to 4225'	Gray sand, fair oil stain
	4225' to 4230'	Gray sand and white lime, fair stain
	4230'	Total Depth