

APPLICATION TO UNITIZE

Etz State Unit
Sections 16 and 17, T17S-R30E
Eddy County, New Mexico

Geologic Exhibits

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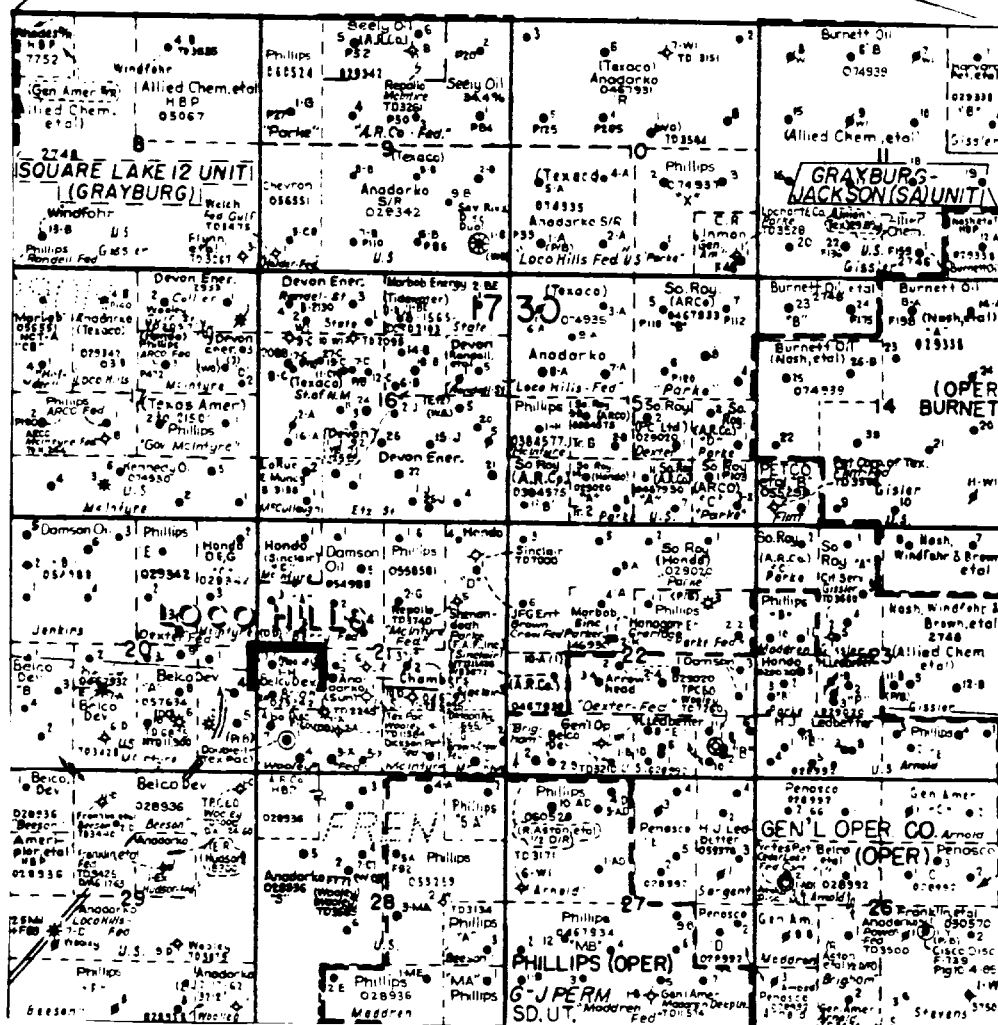
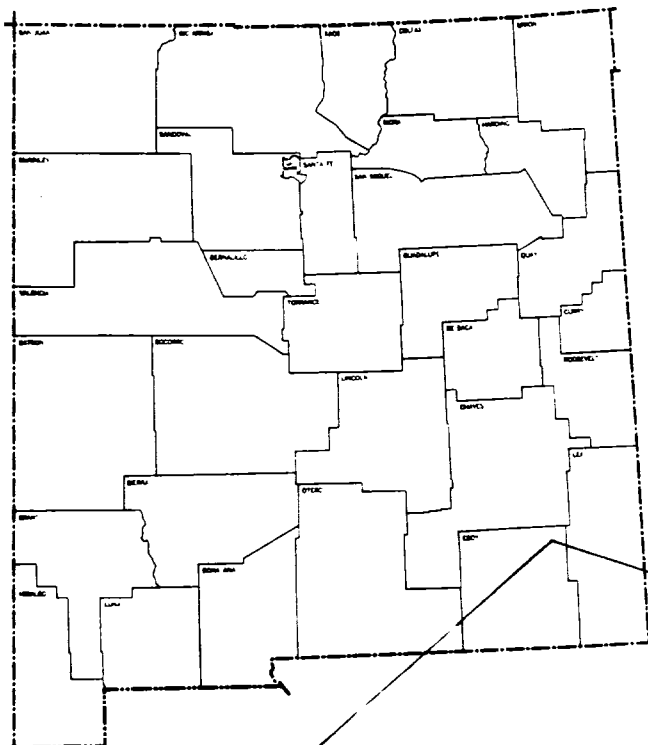
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GEOLOGIC SUMMARY FOR THE ETZ STATE UNIT

The Devon Energy Corporation proposed Etz-State Unit Grayburg waterflood includes all or parts of Sections 16 and 17 of Township 17 South, Range 30 East of Eddy County, New Mexico. This property lies on the structural axis of an easterly plunging anticline which defines the Grayburg-Jackson oil field. The field was discovered in March of 1929 and has established production from the Seven Rivers, Queen, Grayburg and San Andres Formations.

The formation of interest here is the Grayburg which consists of several lenses of porous, dolomitic sand occurring throughout 300 feet of massive dolomite found in the depth interval of 2500 feet to 2800 feet. Examination of geophysical logs in the local area indicates good lateral continuity of these porous intervals across the proposed Etz-State Unit. Core analyses in the immediate area are not available. Core observations of the porous zones within the Grayburg elsewhere in the Grayburg-Jackson field describe it as a tan, medium-grained, friable sand, sucrosic in portions with fair to good oil stain throughout and having fair to good intergranular porosity throughout. The sand appears well sorted and contains occasional thin stringers of tight anhydritic sand.

At the Etz-State Unit specifically there are five distinct porosity intervals identifiable on geophysical logs; the Loco Hills, the Upper, Middle and Lower Metex and the Premier. Assuming a sandy dolomite lithology, the porosity averages 14.5% for the three primary producing Grayburg zones; the Loco Hills, the Middle Metex and the Premier. The sandy intervals are believed to be lenticular with a permeability pinch out occurring laterally and bearing a solution gas drive as the reservoir mechanism.



LOCATION PLAT

ETZ-STATE AREA TYPE LOG

No. 23

			
FILE NO.	COMPANY <u>TEXAS AMERICAN OIL CORPORATION</u>		
	WELL <u>ETZ STATE NO. 23</u>		
	FIELD <u>GRAYBURG JACKSON</u>		
	COUNTY <u>EDDY</u> STATE <u>NEW MEXICO</u>		
LOCATION		Other Services	
990' FSL & 1650' FWL			
SEC <u>16</u> TWP <u>17-S</u> ROR <u>30-E</u>			
Permanent Datum	G.L.	Elev. <u>3665'</u>	MB <u>3672'</u>
Log Measured from	R.B.	ft. Above Permanent Datum	MB
Logging Measured from	R.B.		GA <u>3665'</u>
Date	<u>11-25-22</u>		
Run No.	<u>5019</u>		
Logg. Driller	<u>W. R. BRYD</u>		
Logg. Logger	<u>5019</u>		
Bottom Logged Interval	<u>5017</u>		
Top Logged Interval	<u>5017</u>		
Logging Driller	<u>1/2 4050</u>		
Logging Logger			
Bit Size			
Type Fluid in Hole	<u>WATER</u>		
Density and Viscosity			
pH and Fluid Loss			
Source of Sample			
Run @ Mass Temp			
Run @ Mass Temp			
Run @ Mass Temp			
Source of Run and Run			
Run @ BHT			
Time Since Cnt.			
Max. Run Temp. Day			
Flow No. and Location	<u>2078 4050</u>		
Flow No. and Location			
Flow No. and Location			

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