

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION OF TIDEWATER OIL  
COMPANY FOR APPROVAL OF A  
WATER FLOOD PROJECT IN THE  
EAST EUMONT UNIT AREA, EUMONT  
POOL, LEA COUNTY, NEW MEXICO

No. 3234

APPLICATION

Comes now Tidewater Oil Company by its Attorneys and seeks authority to institute a Water Flood Project in the East Eumont Unit Area, Eumont Pool, Lea County, New Mexico and in support of its Application states:

1. By a separate Application Applicant is seeking approval of the East Eumont Unit Agreement covering the following lands in Lea County, New Mexico:

Township 18 South, Range 37 East,  
N.M.P.M., Lea County, New Mexico

Section 33: S/2 NE/4, SE/4 NW/4, SE/4,  
S/2 SW/4 and NE/4 SW/4  
Section 34: SW/4 SW/4

Township 19 South, Range 37 East,  
N.M.P.M., Lea County, New Mexico

Section 3: Lot 4, S/2 NW/4 and SW/4  
Section 4: Lots 1, 2, 3 and 4, S/2 NW/4,  
S/2 NE/4 and E/2 SE/4  
Section 9: N/2 NE/4  
Section 10: NW/4, SW/4, and NW/4 NE/4  
Section 15: W/2  
Section 16: E/2 E/2 and SW/4 SE/4  
Section 21: E/2 E/2  
Section 22: W/2 and S/2 SE/4  
Section 26: SW/4 NW/4, NW/4 SW/4,  
S/2 SW/4, and SW/4 SE/4  
Section 27: N/2, SE/4, and E/2 SW/4  
Section 28: E/2 NE/4  
Section 34: NE/4 NW/4, NW/4 NE/4,  
and E/2 NE/4  
Section 35: E/2, NW/4 and E/2 SW/4  
Section 36: SW/4 NW/4, NW/4 SW/4 and S/2 SW/4

DOCKET MAILED

Date 3/24/40

Township 20 South, Range 37 East,  
N.M.P.M., Lea County, New Mexico

Section 1: Lots 2, 3 and 4, S/2 NW/4,  
SW/4 NE/4, SW/4 and W/2 SE/4  
Section 2: Lots 1, 2 and 3, SE/4 NW/4,  
S/2 NE/4, SE/4, and SE/4 SW/4  
Section 11: NE/4 NE/4  
Section 12: NW/4 NW/4, E/2 NW/4 and W/2 NE/4

2. Applicant proposes to conduct a Water Flood Project in the proposed East Eumont Unit Area by the injection of water into sixty-nine wells located within the Unit Area. The location of each injection well is shown on the plat attached hereto entitled Unit Well Designation and is described on the Table of Proposed Injection Wells also attached to this Application.

3. The initial injection in the proposed unit area will be through four injection wells designated as Unit Wells Numbers 98, 101, 103 and 107 on the plat and table attached to this Application. The area in which this initial injection program will be conducted is shown colored in green as the Pilot Flood Area on the plat attached to this Application.

4. The Plat attached to this Application shows all Wells within a radius of two miles from each of the proposed injection wells and the formation from which those wells are producing or have produced; this plat also indicates the Lessees within the two mile radius.

5. Submitted with this Application are logs of each of the proposed injection wells to the extent that such logs are available.

6. Attached to this Application is a diagrammatic sketch of a typical single zone, dual zone and triple zone injection well for the proposed Water Flood Project. Other data concerning the proposed injection wells is shown on the

table attached to this Application. Attached to this Application is a plat showing the proposed water distribution system to be employed when the project is placed in full operation. Each of the three plants shown on this plat will have as its source a separate water supply well; each plant will have a capacity estimated between 8,000 and 10,000 barrels per day. Injection into each injection well is estimated at the rate of 350 barrels per day at a pressure of twenty-two hundred pounds per square inch.

7. On March 5, 1965 Application was made by Tidewater Oil Company to the Office of the State Engineer in Roswell, New Mexico for permission to drill a San Andres Water Supply Well in the Southeast quarter Southeast quarter of Section 35, Township 19 South, Range 37 East, within the proposed Pilot Flood Area.

8. The Wells in the proposed Water Flood Project have reached an advanced state of depletion and are to be regarded as "stripper" wells.

9. Approval of the subject Application will permit the recovery of oil that would not be recovered by primary means of production and will thereby prevent waste. Operation of the proposed project as a unit will adequately protect correlative rights.

Wherefore, Applicant requests that this Application be set for hearing before the Commission or one of its Examiners and that the Commission enter its order approving the proposed Water Flood Project.

SETH, MONTGOMERY, FEDERICI & ANDREWS

By

Richard S. Morris

Post Office Box 2307

Santa Fe, New Mexico

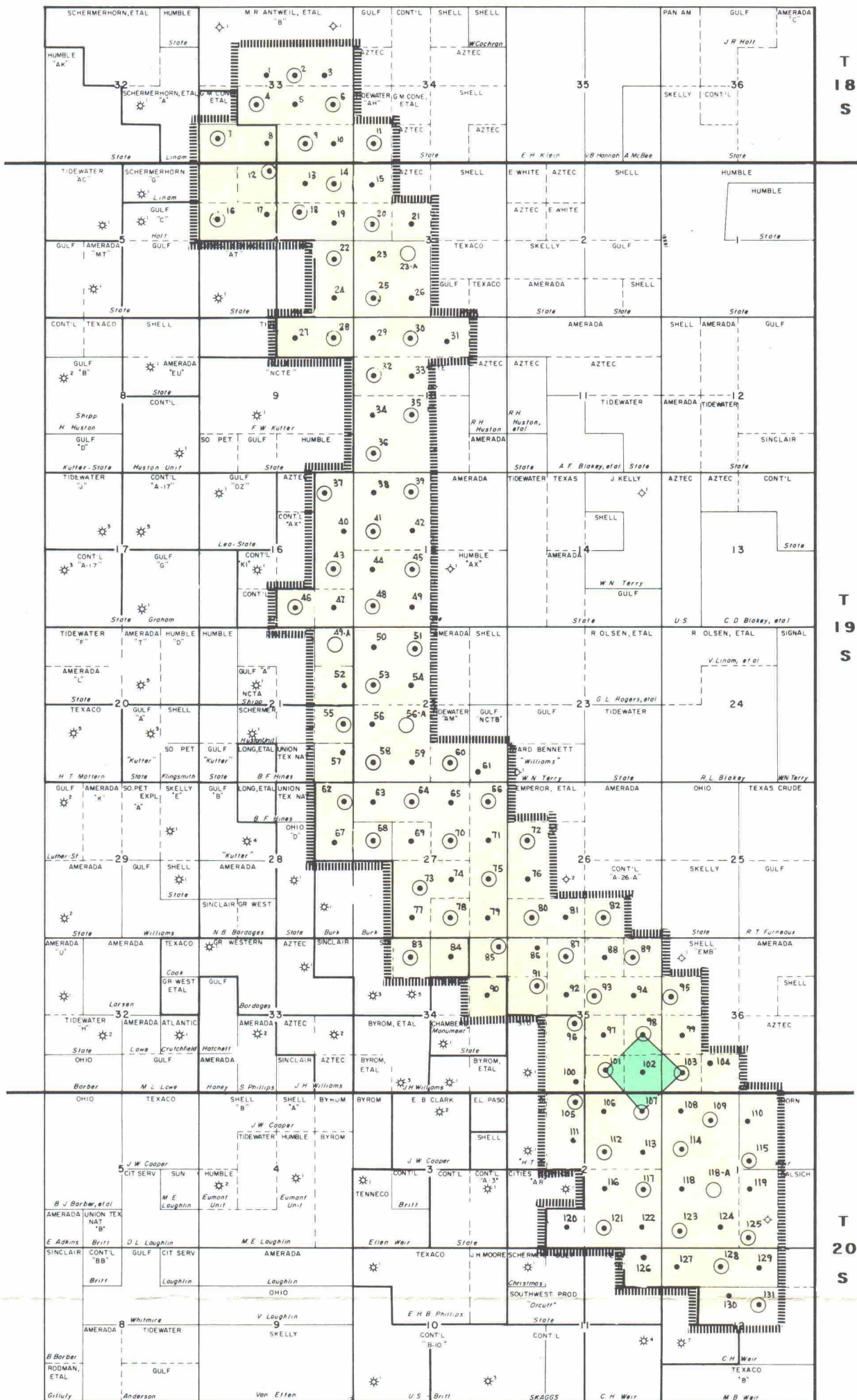
Attorneys for Applicant Tidewater  
Oil Company

CERTIFICATE OF MAILING

I hereby certify that on this 17th day of March, 1965  
I mailed a copy of this Application with Exhibits attached  
thereto to the State Engineer Office, Capitol Building,  
Santa Fe, New Mexico as required by Rule 701 of the Rules  
and Regulations of the New Mexico Oil Conservation Commission.

Richard S. Morris

R 37 E



0 500 1000 2000 3000 4000 5000  
SCALE IN FEET

LEGEND

UNIT AREA

- EUMONT OIL WELL
- \* EUMONT GAS WELL
- ⊙ PROPOSED INJECTION WELL
- FUTURE INJECTION WELL TO BE DRILLED

MD - H - 24

EAST EUMONT UNIT  
EUMONT POOL  
LEA COUNTY, NEW MEXICO

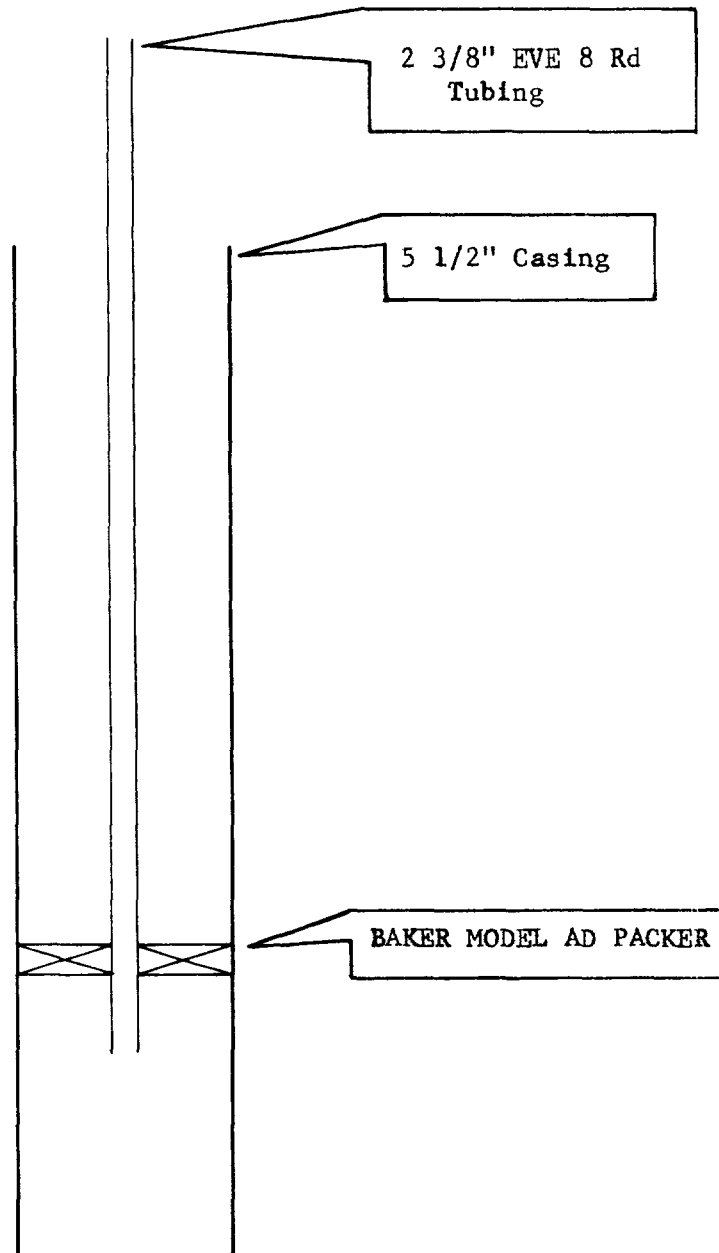
UNIT WELL  
DESIGNATION

FAST FUMONT UNIT  
TABLE OF PROPOSED INJECTION WELLS

| Unit<br>Well No. | Operator - Lease              | Well<br>No. | Distances         | Location | Unit         | Sec./Top. Reg. | Surface      | Casing  | Production | Cement<br>(Sk.) | Top<br>(Ft.) | Perforations | I.D.  | PHD   |
|------------------|-------------------------------|-------------|-------------------|----------|--------------|----------------|--------------|---------|------------|-----------------|--------------|--------------|-------|-------|
| 4                | Antwiel Lowe State "B"        | 2           | 2310FNL & 1980FNL | G        | 33-18S-37E   | 8-5/8" 301'    | 5-1/2" 4012' | 326     | 2708(E)    | 3929-3993'      | 4012'        | 4008'        | 4012' | 4008' |
| 6                | Continental State "C-33"      | 1           | 1980FNL & 660FNL  | T        | 33-18S-37E   | 8-5/8" 303'    | 5-1/2" 3998' | 1225    | 1725(F)    | 3754-3824'      | 4000'        | -            | 4000' | -     |
| 7                | Schomethorn Llanam "B"        | 1           | 660FNL & 880FNL   | M        | 8-5/8" 1541' | 5-1/2" 3965'   | 400          | 1965(E) | 3880-3946' | 3965            | 3965         | 4070'        | 4070' | 4070' |
| 9                | Aztec State "E-33-A"          | 2           | 660FNL & 1650FNL  | O        | 33-18S-37E   | 8-5/8" 339'    | 5-1/2" 4096' | 700     | 1296(E)    | 3912-3962'      | 4096'        | 4061'        | 4096' | 4061' |
| 11               | Tidewater State "AH"          | 1           | 660FNL & 660FNL   | C        | 34-18S-37E   | 8-5/8" 371'    | 5-1/2" 4012' | 600     | 2055'      | 3908-3970'      | 4015'        | 4005'        | 4015' | 4005' |
| 12               | Schomethorn Llanam "P"        | 1           | 273FNL & 2600FNL  | B        | 4-19S-37E    | 8-5/8" 1611    | 5-1/2" 4080' | 550     | 1880(E)    | 3890-3950'      | 4080'        | -            | 4080' | -     |
| 14               | Texaco-Sanders Federal        | 1           | 660FNL & 660 FNL  | A        | 4-19S-37E    | 8-5/8" 1650'   | 4-1/2" 3960' | 700     | 100(E)     | 3884-3958'      | 3960'        | 3928'        | 3960' | 3928' |
| 16               | Schomethorn Llanam            | 1           | 589FNL & 2144FNL  | E        | 8-5/8" 335'  | 5-1/2" 3864'   | 125          | 330(E)  | 3600-3620' | 3730-3835'      | 3956'        | -            | 3956' | -     |
| 18               | Atlantic Federal "A"          | 2           | 187FNL & 1650FNL  | G        | 4-19S-37E    | 8-5/8" 423'    | 5-1/2" 4010' | 1230    | 320(E)     | 3864-39390H     | 4010'        | 3785*        | 4010' | 3785* |
| 20               | Aztec State "E-3"             | 4           | 2064FNL & 660FNL  | T        | 3-18S-37E    | 8-5/8" 345'    | 5-1/2" 4004' | 675     | 1300(E)    | 3882-3934'      | 4004'        | 3990*        | 4004' | 3990* |
| 22               | Texaco McMillan "B"           | 2           | 1983FNL & 660FNL  | E        | 4-19S-37E    | 8-5/8" 1640'   | 5-1/2" 3949' | 550     | 1750(E)    | 3852-3892'      | 3950'        | 3942'        | 3950' | 3942' |
| 23A              | Proposed Inj. Well            |             |                   |          | 3-18S-37E    |                |              |         |            |                 |              |              |       |       |
| 23               | Texaco McMillan "A"           | 2           | 660FNL & 660FNL   | M        | 8-5/8" 1646' | 4-1/2" 3930'   | 1000         | 950(E)  | 3876-3936' | 3876-3936'      | 3950'        | 3947'        | 3950' | 3947' |
| 28               | Tidewater State "AD"          | 1           | 660FNL & 660FNL   | A        | 9-18S-37E    | 8-5/8" 486'    | 5-1/2" 3975' | 650     | 1580(E)    | 3868-3954'      | 3975'        | 3969*        | 3975' | 3969* |
| 30               | Aztec State "E-10"            | 2           | 600FNL & 1950FNL  | C        | 10-18S-37E   | 8-5/8" 340'    | 5-1/2" 4096' | 750     | 1100(E)    | 3896-3999'      | 4096'        | 4061'        | 4096' | 4061' |
| 32               | Gulf Kutter NCT E             | 2           | 1980FNL & 660FNL  | E        | 10-18S-37E   | 8-5/8" 1594'   | 5-1/2" 4020' | 890     | Surf.      | 3882-3940'      | 4020'        | 4010*        | 4020' | 4010* |
| 35               | Humble State "E"              | 4           | 1980FNL & 1980FNL | K        | 10-18S-37E   | 8-5/8" 304'    | 5-1/2" 4070' | 1050    | 585        | 3964-4018'      | 4070'        | 4030'        | 4070' | 4030' |
| 36               | Humble State "E"              | 2           | 600FNL & 640FNL   | A        | 16-18S-37E   | 8-5/8" 1660'   | 5-1/2" 3989' | 1270    | 1385       | 3875-3955'      | 3989'        | 3988'        | 3989' | 3988' |
| 37               | Continental State "KH"        | 3           | 660FNL & 900FNL   | M        | 16-18S-37E   | 8-5/8" 307'    | 5-1/2" 3963' | -       | -          | 3892-3934'      | 3943'        | -            | 3943' | -     |
| 39               | Tidewater State "AI"          | 4           | 1980FNL & 680FNL  | C        | 15-18S-37E   | 8-5/8" 375'    | 5-1/2" 4009' | 800     | 1940'      | 3973-3998'      | 4011'        | 4005'        | 4011' | 4005' |
| 41               | Continental State "AI"        | 2           | 680FNL & 680FNL   | E        | 15-18S-37E   | 8-5/8" 372'    | 5-1/2" 3965' | 1000    | 1420'      | 3910-3922'      | 3970'        | 3961'        | 3970' | 3961' |
| 43               | Continental State "KH"        | 1           | 660FNL & 1980FNL  | K        | 16-18S-37E   | 8-5/8" 315'    | 5-1/2" 3972' | 400     | 2500(E)    | 3888-3940'      | 4100'        | 3966'        | 4100' | 3966' |
| 45               | Tidewater Mobil State "Q"     | 1           | 1980FNL & 1980FNL | I        | 15-18S-37E   | 8-5/8" 382'    | 5-1/2" 4045' | 1600    | Surf. (E)  | 3984-4003'      | 4045'        | 4018'        | 4045' | 4018' |
| 46               | Continental State "QJ"        | 1           | 660FNL & 740FNL   | M        | 16-18S-37E   | 8-5/8" 254'    | 5-1/2" 3875' | 400     | 2470(E)    | 3675-38890H     | 4065'        | 3889*        | 4065' | 3889* |
| 48               | Tidewater Mobil State "Q"     | 1           | 660FNL & 660FNL   | O        | 15-18S-37E   | 8-5/8" 360'    | 5-1/2" 4070' | 1700    | Surf.      | 3941-3956'      | 4070'        | 4033'        | 4070' | 4033' |
| 49A              | Proposed Inj. Well            |             |                   |          | 21-18S-37E   | 9-5/8" 438'    | 7" 4115'     | 300     | 2620(E)    | 3932-3978'      | 4116'        | 4103'        | 4116' | 4103' |
| 51               | Std. of Tex. State "1-22"     | 4           | 760FNL & 2080FNL  | A        | 22-19S-37E   | 9-5/8" 471'    | 7" 3938'     |         |            | 3754-3819'      | 3974'        | 3974'        | 3974' | 3974' |
| 53               | Std. of Tex. State "1-22"     | 1           | 1980FNL & 660FNL  | E        | 22-19S-37E   |                |              |         |            | 3888-3904'      |              |              |       |       |
| 55               | Gulf - Shipp                  | 1           | 1980FNL & 1980FNL | I        | 21-18S-37E   | 8-5/8" 308'    | 5-1/2" 4104' | 250     | 2720(E)    | 3621-37920H     | 3975'        | 3792'        | 3975' | 3792' |
| 56A              | Proposed Injector             |             |                   |          | 22-19S-37E   |                |              |         |            | 3525-37155H     |              |              |       |       |
| 58               | Amerada State EM "A"          | 2           | 60FNL & 660FNL    | M        | 22-19S-37E   | 8-5/8" 1500'   | 6-5/8" 3970' | 200     | 2444'      | 3603-3642'      | 3910'        | 3969*        | 3910' | 3969* |
| 60               | Tidewater State "AM"          | 1           | 660FNL & 1980FNL  | O        | 22-19S-37E   | 8-5/8" 375'    | 5-1/2" 3960' | 600     | 1600'      | 3864-3874'      | 3960'        | 3958'        | 3960' | 3958' |
| 62               | Aztec Burk                    | 4           | 660FNL & 330FNL   | A        | 28-19S-37E   | 8-5/8" 374'    | 5-1/2" 3950' | 750     | 970(E)     | 3761-3824'      | 3950'        | 3921'        | 3950' | 3921' |
| 64               | Gulf Kutter "NCTP"            | 3           | 660FNL & 1980FNL  | C        | 27-19S-37E   | 8-5/8" 247'    | 5-1/2" 3974' | 825     | 1100(E)    | 3908-3972'      | 3975'        | 3985'        | 3975' | 3985' |
| 66               | Tidewater State "AJ"          | 4           | 660FNL & 660FNL   | E        | 27-19S-37E   | 8-5/8" 375'    | 5-1/2" 3909' | 800     | 1160'      | 3861-3871'      | 3910'        | 3905'        | 3910' | 3905' |
| 68               | Aztec Burk                    | 3           | 1980FNL & 660FNL  | A        | 27-19S-37E   | 9-5/8" 502'    | 5-1/2" 3977' | 1275    | 770'       | 3752-3794'      | 3982'        | 3958'        | 3982' | 3958' |
| 70               | Gulf Kutter "NCTP"            | 1           | 1980FNL & 1980FNL | E        | 27-19S-37E   | 8-5/8" 252'    | 5-1/2" 3896' | 1050    | 65'        | 3836-3872'      | 3867'        | 3867'        | 3867' | 3867' |
| 72               | Humble New Mex.-St."AT"       | 3           | 1980FNL & 660FNL  | C        | 26-19S-37E   | 8-5/8" 301'    | 5-1/2" 3935' | 1750    | 665'       | 3864-3902'      | 3935'        | 3915*        | 3935' | 3915* |
| 73               | Aztec Maxwell State           | 1           | 1650FNL & 2310FNL | J        | 27-19S-37E   | 9-5/8" 224'    | 7" 3600'     | 325     | 1370'      | 3600-37900H     | 3790'        | 3905'        | 3790' | 3905' |
| 75               | Tidewater State "AJ"          | 1           | 1980FNL & 660FNL  | J        | 27-19S-37E   | 8-5/8" 370'    | 5-1/2" 3912' | 800     | 1500'      | 3823-3837'      | 3912'        | 3905'        | 3912' | 3905' |
| 78               | Water Flood Assoc. St."EB"    | 2           | 660FNL & 660FNL   | O        | 27-19S-37E   | 8-5/8" 313'    | 5-1/2" 3899' | 980     | 480(E)     | 3823-3862'      | 3909'        | -            | 3909' | -     |
| 80               | Gulf Hudson                   | 1           | 660FNL & 810FNL   | M        | 26-19S-37E   | 8-5/8" 241'    | 5-1/2" 3899' | 1100    | 1250'      | 3816-3862'      | 3900'        | 3896'        | 3900' | 3896' |
| 82               | Continental State "A-26-A"    | 1           | 660FNL & 1980FNL  | C        | 26-19S-37E   | 8-5/8" 328'    | 5-1/2" 3979' | 800     | 1590'      | 3768-3878'      | 3980'        | -            | 3980' | -     |
| 83               | Stinclair Williams            | 4           | 660FNL & 1980FNL  | C        | 34-19S-37E   | 8-5/8" 304'    | 5-1/2" 3907' | 200     | 2900(E)    | 3761-3869'      | 3900'        | 3815'        | 3900' | 3815' |
| 85               | Shell Williams "EPK"          | 1           | 330FNL & 330FNL   | A        | 34-19S-37E   | 8-5/8" 309'    | 5-1/2" 4002' | 550     | 1800(E)    | 3774-3958'      | 4002'        | 3960'        | 4002' | 3960' |
| 87               | Stinclair State "6847"        | 2           | 660FNL & 1980FNL  | E        | 35-19S-37E   | 8-5/8" 309'    | 5-1/2" 3892' | 300     | 2400(E)    | 3810-3832'      | 3900'        | 3893'        | 3900' | 3893' |
| 89               | Texaco State CC NCT-1         | 1           | 1650FNL & 990FNL  | A        | 35-19S-37E   | 8-5/8" 319'    | 4-1/2" 3950' | 350     | 2375(E)    | 3846-3895'      | 3950'        | 3947'        | 3950' | 3947' |
| 91               | Water Flood Assoc. St."EA"    | 1           | 1980FNL & 2310FNL | E        | 35-19S-37E   | 8-5/8" 265'    | 5-1/2" 3865' | 750     | 875(E)     | 3789-3834'      | 3875'        | 3876'        | 3875' | 3876' |
| 93               | Stinclair State "6010"        | 1           | 1980FNL & 330FNL  | E        | 35-19S-37E   | 8-5/8" 301'    | 4-1/2" 4029' | 1125    | 675(E)     | 3827-3865'      | 4050'        | 4029*        | 4050' | 4029* |
| 96               | Std. of Tex. State "1-35"     | 2           | 2310FNL & 2310FNL | I        | 35-19S-37E   | 9-5/8" 412'    | 5-1/2" 3930' | 300     | 1195(E)    | 3840-3870'      | 3880'        | 3929*        | 3880' | 3929* |
| 98               | Humble State "AS"             | 2           | 660FNL & 1980FNL  | J        | 35-19S-37E   | 8-5/8" 304'    | 5-1/2" 3950' | 1600    | Surf. (E)  | 3806-3874'      | 3950'        | 3865'        | 3950' | 3865' |
| 101              | Stinclair State "6847"        | 3           | 760FNL & 1980FNL  | I        | 35-19S-37E   | 8-5/8" 3899'   | 5-1/2" 3899' | 200     | 1010       | 3794-3818'      | 3900'        | 3893'        | 3900' | 3893' |
| 103              | Shell State "EMA"             | 1           | 660FNL & 660FNL   | M        | 36-19S-37E   | 8-5/8" 309'    | 5-1/2" 3824' | 600     | 1545(E)    | 3824-39450H     | 3945'        | -            | 3945' | -     |
| 105              | Gulf Orcutt "NCTE"            | 2           | 330FNL & 2304FNL  | A        | 2-20S-37E    | 8-5/8" 407'    | 5-1/2" 3858' | 1200    | 0'         | 3698-3830'      | 3860'        | 3852'        | 3860' | 3852' |
| 107              | Tidewater State "AG"          | 2           | 660FNL & 660FNL   | C        | 2-20S-37E    | 8-5/8" 296'    | 5" 3990'     | 1000    | 1550'      | 3797-3840'      | 3887'        | 3884'        | 3797' | 3884' |
| 109              | Humble State "AG"             | 6           | 990FNL & 1650FNL  | A        | 2-20S-37E    | 8-5/8" 296'    | 5" 3990'     | 1450    | Surf.      | 3822-3892'      | 3950'        | 3915'        | 3950' | 3915' |
| 112              | Tidewater State "AG"          | 2           | 1980FNL & 1975FNL | C        | 2-20S-37E    | 8-5/8" 278'    | 5-1/2" 3898' | 800     | 2196'      | 3800-3860'      | 3900'        | 3893*        | 3900' | 3893* |
| 116              | Humble State "AG"             | 2           | 1980FNL & 660FNL  | F        | 1-20S-37E    | 8-5/8" 278'    | 5-1/2" 3960' | 1200    | 300'       | 3755-3840'      | 3900'        | -            | 3900' | -     |
| 117              | Schomethorn Well              | 1           | 2310FNL & 2310FNL | E        | 1-20S-37E    | 13-3/8" 228'   | 8-5/8" 3866' | 700     | 1140'      | 3388-3940H      | 3941'        | -            | 3941' | -     |
| 118-A            | Continental State "A-2-A"     | 2           | 1980FNL & 660FNL  | J        | 2-20S-37E    | 8-5/8" 3975'   | 5-1/2" 3957' | 1100    | 1650'      | 3710-3816'      | 3957'        | 3952'        | 3957' | 3952' |
| 121              | Proposed Injector             |             |                   |          | 2-20S-37E    |                |              |         |            |                 |              |              |       |       |
| 123              | Continental State "A-2-A"     | 1           | 660FNL & 1980FNL  | O        | 2-20S-37E    | 8-5/8" 318'    | 5-1/2" 3868' | 1220    | 180'       | 3700-3816'      | 3849'        | 3849'        | 3700' | 3849' |
| 123              | Humble State "AG"             | 3           | 560FNL & 560FNL   | M        | 1-20S-37E    | 7-5/8" 2698'   | 5-1/2" 6925' | 406     | 7105'      | 3717-3908'      | 6925'        | 3960'        | 7105' | 3960' |
| 123              | Water Flood Assoc. Gulf St. 2 | 2           | 330FNL & 2310FNL  | A        | 1-20S-37E    | 8-5/8" 304'    | 4-1/2" 3915' | 200     | 2240(E)    | 3670-3784'      | 3942'        | 3915'        | 3942' | 3915' |
| 126              | Texaco Well "B"               | 3           | 330FNL & 660FNL   | A        | 11-20S-37E   | 8-5/8" 1640'   | 4-1/2" 3801' | 400     | 2900(E)    | 3670-3784'      | 3801'        | 3796'        | 3801' | 3796' |
| 128              | Continental "A-S-Skags-B"     | 3           | 660FNL & 1980FNL  | C        | 12-20S-37E   | 8-5/8" 303'    | 5-1/2" 3875' | 1300    | Surf. (E)  | 3713-3828'      | 3875'        | 3875'        | 3713' | 3875' |
| 131              | Texaco Well "A"               | 6           | 1980FNL & 1980FNL | G        | 12-20S-37E   | 8-5/8" 1650'   | 4-1/2" 3815' | 350     | Surf. (E)  | 3744-3812'      | 3815'        | 3815'        | 3744' | 3815' |

\* F&A  
(E) Estimated

EAST EUMONT UNIT  
DIAGRAMMATIC SKETCH  
OF  
SINGLE ZONE INJECTION WELL



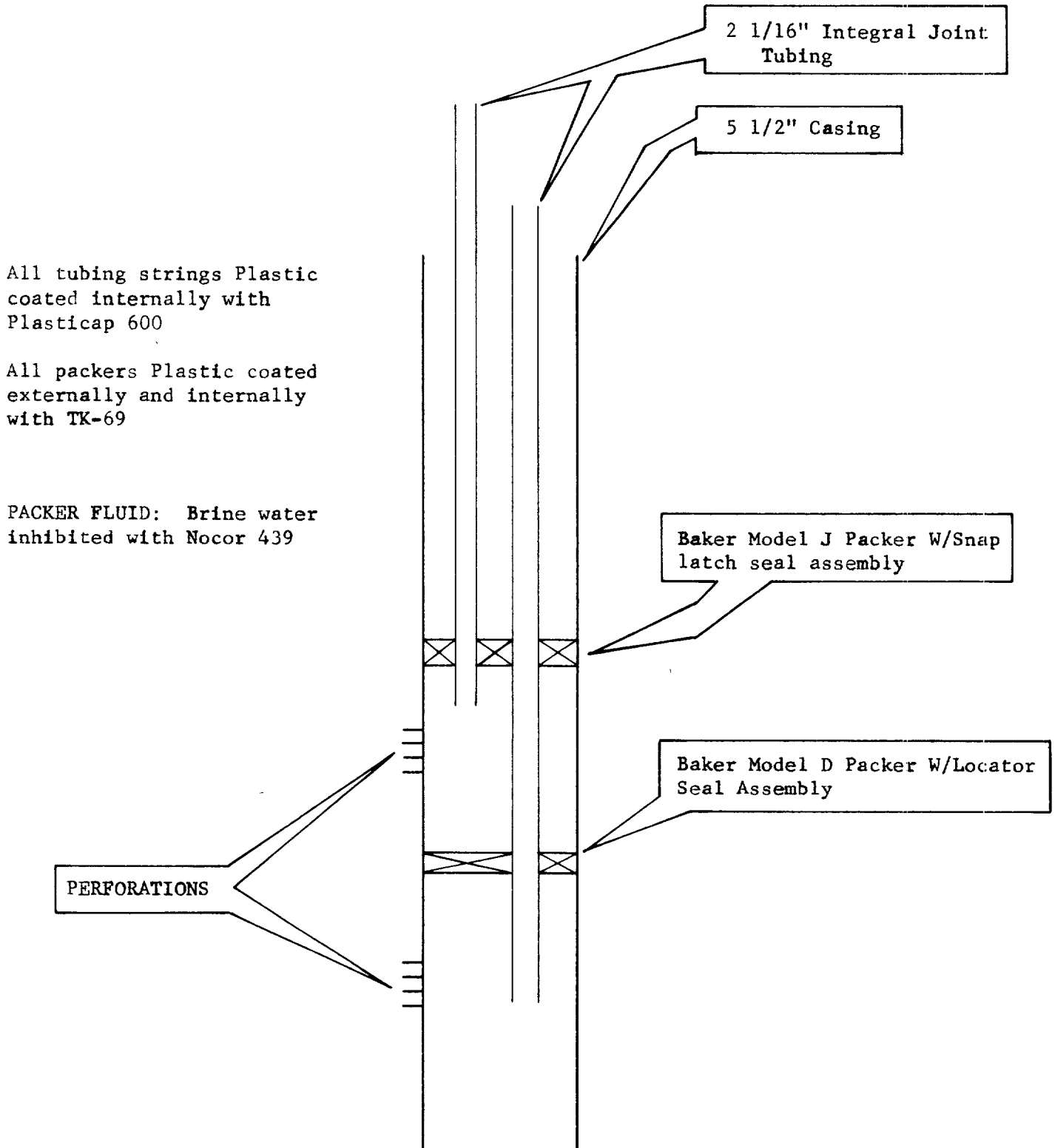
Tubing plastic coated internally with Plasticap 600

Packer plastic coated internally and externally with TK-69

Packer fluid: Brine water inhibited with Nocor 439

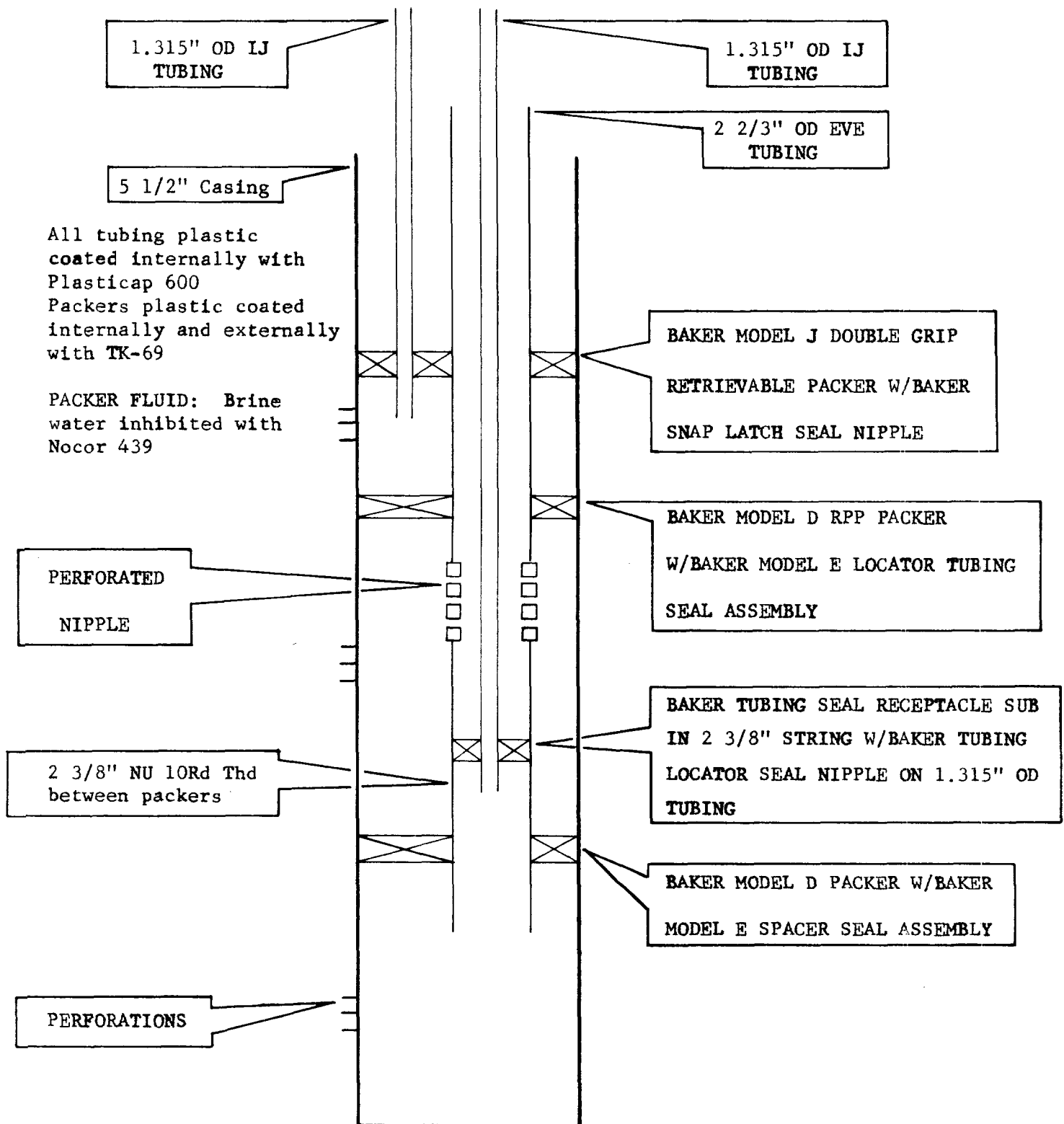
EAST EUMONT UNIT

DIAGRAMMATIC SKETCH  
OF  
DUAL ZONE INJECTION WELL





**EAST EUMONT UNIT**  
**DIAGRAMMATIC SKETCH**  
**OF**  
**TRIPLE ZONE INJECTION WELL**



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