STATE OF NEW MEXICO DEPARTMENT OF ENERGY AND MINERALS OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION OF THE EASTLAND OIL COMPANY FOR APPROVAL OF A SECONDARY RECOVERY UNIT AND WATERFLOOD PROJECT FOR ITS POWER GRAYBURG UNIT, EDDY COUNTY, NEW MEXICO.

CASE: \$ 75 7

APPLICATION

Comes now THE EASTLAND OIL COMPANY, by and through its attorneys, Kellahin & Kellahin, and applies to the New Mexico Oil Conservation Division for approval of its Power Grayburg Unit and for approval of its secondary recovery waterflood project in the Power Grayburg-San Andres Pool, including a surface injection limitation pressure of 1,000 psi, and in support thereof would show:

1. Applicant is the proposed operator of the Power Grayburg Unit which consists of four federal leases in the following described acreage:

T18S, R3ØE, NMPM

Section 1: Lots 1 & 2 (N/2NE) and S/2NE/4

T18S, R31E, NMPM

Section 5: N/2NW/4 (Lots 3 & 4)

Section 6: N/2N/2; SW/4NW/4 (lots 1 thru 5)

Containing 427.44 acres, more or less, of federal lease acreage, Eddy County, New Mexico.

2. Applicant operates the following four wells which will be converted to injection wells in the Power Grayburg-San Andres Pool:

Sibyl Federal #2 Well: 330 FEL & 1650 FNL, Section 1, T18S, R30E, perforations: 3302-3428 feet.

Arco Federal #3 Well: 330 FEL & 1980 FWL, Section 5,
T18S, R31E, perforations: 3474-3542 feet.

Allied Federal #2 Well: 660 FNL & 1980 FEL, Section 6, T18S, R31E, perforations: 3333-3444 feet.

Kenwood Federal #3 Well: 660 FNL & 660 FWL, Section
6, T18S, R31E, perforations: 3315-3441 feet.

- 3. Applicant proposes a surface limitation pressure of 1,000 psi (which exceeds the OCD guideline of .2 psi x footage depth) said pressure limitation being below the parting pressure of the formation.
- 4. That the proposed unit is logically subject to operation under unitization.
- 5. The proposed Unit is geologically suitable for waterflood operatings.
- 6. The proposed Unit is appropriate to conserve natural resources by instituting secondary recovery operations.
- 7. A sufficient number of working interest owners have approved the unit operations in order to give the applicant, as operator, effective control of the unit.

- 8. Applicant has completed and attached as an Exhibit to this application the New Mexico Oil Conservation Division Form C-108 with attachments.
- 9. Copies of this application and the Form C-108 are being sent to all offset operators and the surface owner by certified mail as of the date of submittal of this application.
- 10. Approval of this application is in the best interest of conservation, the prevention of waste and the protection of correlative rights.

Kellahin & Kellahin

By______ W. Thomas Kellahin

P. O. Box 2265

Santa Fe, New Mexico 87501

STATE OF NEW MEXICO **ENERGY AND MINERALS DEPARTMENT**

of the earlier submittal.

OIL CONSERVATION DIVISION POST OFFICE BOX 2018 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 8/501

FORM C-108 Revised 7-1-81

Cuse 8787.

APPLICATION FOR AUTHORIZATION TO	INJEC	TD	ATION	AUTHORIZA	FOR	TION	CA	PPL	A
----------------------------------	-------	----	-------	-----------	-----	------	----	-----	---

FFETCH	TION FOR AUTHORIZATION TO INJECT
I.	Purpose: X Secondary Recovery Pressure Maintenance Disposal Storage Application qualifies for administrative approval? yes x no
II.	Operator: The Eastland Oil Company
	Address: P.O.Drawer 3488, Midland,
	Contact party: George D. Neal Phone: 915/683/6293
111.	Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.
IV.	Is this an expansion of an existing project? \square yes \square no If yes, give the Division order number authorizing the project
٧.	Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
VI.	Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
VII.	Attach data on the proposed operation, including:
	 Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
111.	Attach appropriate geological data on the injection zone including appropriate lithological detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
IX.	Describe the proposed stimulation program, if any.
х.	Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
XI.	Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
XII.	Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.
III.	Applicants must complete the "Proof of Notice" section on the reverse side of this form.
XIV.	Certification
	I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
	Name: George D. Neal Title Vice President - Production Signature: Learne Date: November 20, 1985
	Signature: Alama Sheel Date: November 20 1985

III. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application.

 The data must be both in tabular and schematic form and shall include:
 - Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
 - (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
 - (3) A description of the tubing to be used including its size, lining material, and setting depth.
 - (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.
 - (1) The name of the injection formation and, if applicable, the field or pool name.
 - (2) The injection interval and whether it is perforated or open-hole.
 - (3) State if the well was drilled for injection or, if not, the original purpose of the well.
 - (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
 - (5) Sive the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

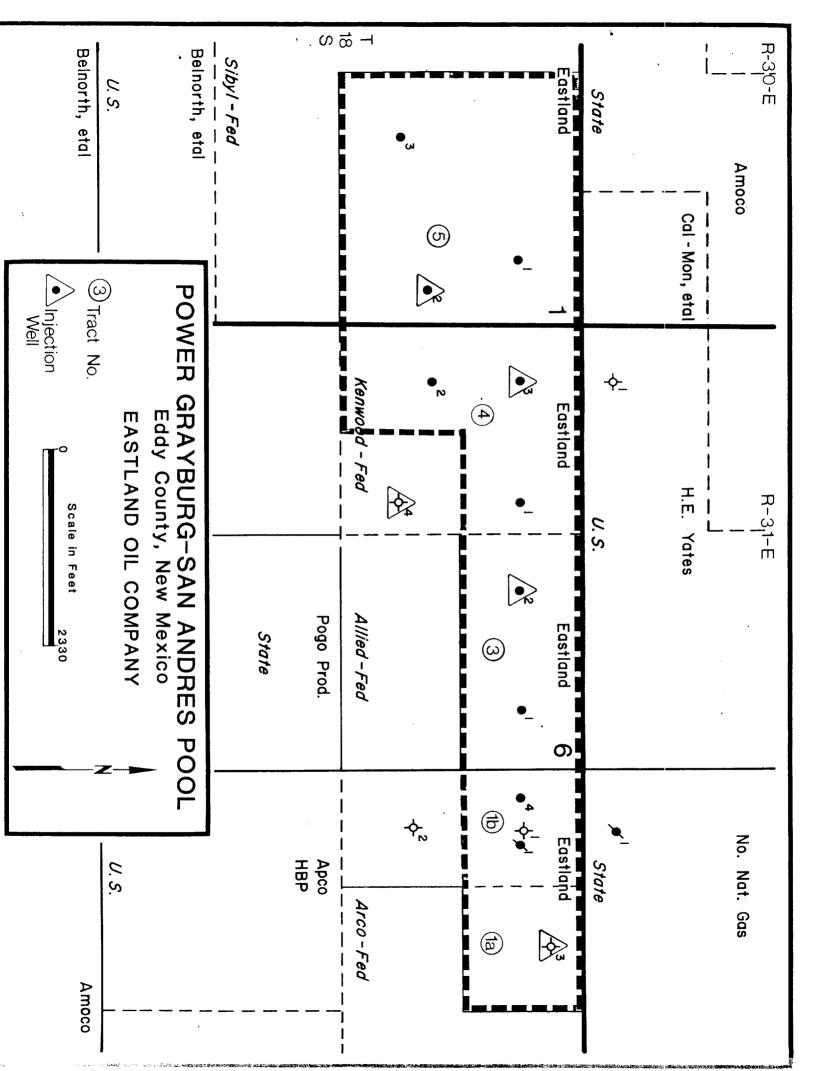
Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

R.Co.	(Pencoc) (MO) A R	e 10 8	6ulf	12.5	- 0	18:31 nc. 029395 6:20:18:20:	5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	31 Inc. Gulf	Kersey & Co Hanson Dil, etal 18 N 18 N 18	Arrowhead Oil Brewer 1	103185 I	ones) &	200
Plan Plan Plan Plan Plan A U.S. S A A A C.S. S A	- 7	Marathen 029388 3	Hudson & Hudson Hap Obtos:	H.J. Texdm Ledberter Bp Hebrer P ?:13 Verbar J. Hebrer P ?:13 Verbar P ?:13 Verbar J. Hebrer P ?:13 Verbar P P ?:13 Verbar P P ?:13 Verbar P P ?:13 Verbar P P P ?:13 Verbar P P P P P P P P P P P P P P P P P P P	5 Phillips 10 360E 10	Condinkerwood THE CONF	d	118"		P19 17:15 P10 17:16 P10 17:15 P10 17	McElvain Teg256 Lucia Brooks	ones see	30
047633#3 A.R.Co	0.438	Hudson E Hudson E 3 8 97 061051 6 5 hugart	y 2	Texam Col-Mon	H.J. Union	BO CO	. \	Con Ken	T 18 ON UNIT	70tes Pet. 83		HER STORES	Burle Vonce
ARCO 029386 029386	Hudson Ohio - 8- 104198	38-50	Chudson or Mar Chudson or Mar Orssass	Edwards Edwin	Dioneer F. Polina.	Huledbetter 2 3070133	9000	5 4 Abone Fed Texaco	Topic Fed 28 8 405	"Fed"	Pennzoil-Fed	1 6 80	Se co 25
Wudson E.Hudson HBP 06205₽	athon 38	(Pennzoil) Hudson E Hudson E Hudson I 13388	eta	E. Maskins (0.4050) Pioneer Prod Prod (23) (23) (5) (23) (6) (23) (6) (7)	Tex HBP 28098	Amoco (OPER)		a d Z 2 234702 Microllon Allied Chem. 234702 Microllon 034702 Microllon 034702	Holly Energy, etal 1-9, 1-19,	9 26097	(Pennzoii) 28059	Holly Energy, etal One Sp Velson Velson	нош
1152 156 70 1152 156 70	Nontagene 2 15 3625 2 25 25 25		Hudson 052	C. G.		Real of Feb. (1998) H B P Allied Chemy Allied Town 10334707 10344707 103447		1 Chem. F	Anodarka, Alling (2-11-9) (Alling (2-11-	Dex John Votes 3 7970 3 7970 Hondo HBP 5101e E 78.11	Featherstone NBP B 101	Yates Pet Julison. Yates Fed	, e 5
40 4 2 40 2 Shell 1045 8 0462 63	46.4 1 50 4 3	3	JOSS JIJOCS S (APENAZOII SH. (Marathon) Lise 0293 B Frad 7504	Canadian Kenwoods TR Parker 28095	4004 440.04 Honde H B P 029389	9 Disc 15362	1	Costona Costona Fin Costona Co	(20) Monson (20) (20) (20) (20) (20) (20) (20) (20)	Hondo HBP	Holly Ener Sand Jones Eggeow-St	Sty Energy, et al.	
W.A E.R. Hudson Lower Fed	WAFER Hudson	Surroy C Pet 3 33 33 33 33 33 33 34 - 34 - 34 - 34 34 34 34 - 34 34 - 34 - 34 - 34 - 34 - 34 - 34 - 34 - 34 - 34 - 34 - 34 - 34 - 34 - 34 - 34 - 34 - 34 - 34 - 3	5/2 + 8c Su			No. No. 1665 12 - 1 - 88 16 - 6139 36 - 62	Eastland	English & Hormon 1933 1994(San	347 225 347 225 347 225 347 225 347 225 347 225 347 225 347 225	Georifameri Armer Gillo Armer Gossas 79 Armer Grustee Mulane Trustee	Ardayo -Fed	Mais Dr. Andstro	1558560 NB 155855
R.B. Whitehead Saunderifadd El 3878 TD 4005 DAR-2157 Maralo, Inc. 070003	Maralo Inc. HBP 273003 Yoths Pel 3-1883 3-1883 3-1855 3-1863 3-186	170 has Per	H.E. Yores (Maralo,Inc.) 0/10043 West no. Feograf 10, 8436 0/4 5 31	Getty H B P 212410	1	HE Marker Septiment of the Section o	-	33.13 2 Schuster 1 3 3 3 3 3 3 3 3 3	36. 36. 36. 36. 36. 36. 36. 36. 36. 36.	Sy Jefra Stan, et al. 1879 1	Accept An Accept An Accept Acc	04(5)93432 04(5)93432 04(5)93432 05(8)8117486 05(8)817486 0	35 A ner 3584573 Anodor
\$ 6 0 \$ 5 0	529	- // -	D194 Lynch U.S.	SS (WO)		metal. Tur	53 64 16-wil 11 103597 10375	Sincloin Se	Stevens of the steven	TOSSOU CASCOMOC TOSSOU TOSS	100	COPA 322	SD. UT.
	120 0 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	66 85 84 600 Getty 138 600 600 6135 138 600 6135 138 6135 6135 138 6135 6135 6135 6135 6135 6135 6135 6135	V :: 6-	92 93 93 93 85 93 86 93 95 95 95 95 95 95 95 95 95 95 95 95 95	×	ARCO (Sincion)		T P	esh, Win	DPER. CO. Armore U. (OPER) Princesco Service	39.65	Perrosco H ULLEd L Sossars L Sossars Sorgent	\$ 100 mm
1038 42 81 1038 42 81	78 025418 079 121 79	SECTIV (OPER) SECTION TO THE SECTION OF THE SECTION	SKELLY SS GETTY SS GETTY	75 (Pra) 76 77 Duoi	1 5 S	103416 103416 103416 14.5.5 14.5 14	,	OCT A C	27 26-8 W. 5 28 8 33 1024 1024 1024 1024 1024 1024 1024 1024	OZD GISSIEC	THE SE	Feditory iden in the series of	St. Senitor
1 1 2 2 1	119 47 (82) A's	6.2541945 124 46	125 101 Getty	21 065	63,7	39	E	I I I I I I I I I I I I I I I I I I I	ed Chem. D/R	Nosh, windfahr & Brown, etal 2748 2(Allied Chem etal)	Gen Am. Dasso	PIB LA	
10	40 40 39	1	*	6 60 125 59	6 5		11 3 23 92	A.R.Co. 123355	Wind S 4 3 374	Nash T Windfahr & Brown Etal	So. Roy 2 Sc. 1	So Roy.	Sincton Torroxa
	33 P U.S. ~	S 951 0	\$ 126 X U.S	Co	-AZ 2 3	6 37 6 35 U.S. 6 77 6 9 1		\$3 0 77 0 28	Stevens U.S. Jackson	, , , o	A CONTRACTOR	. 84-100, 1.5.17 14.00	. 0



The Eastland Oil Company Sibyl Federal . UP WATUR LEAST	
Producing well from Power Gravburg Completed 9-4-71	
Schematic Tabular Data	
Surface Casing	
Surf Size 8-5/8 " Cemented with 350	
sacks Hole size 11"	
Intermediate Casing	
Size " Cemented with	_sx.
8-5/80 TOC feet determined by	
Hole size	
Long string	
Corrosion Size 4-1/2 " Cemented with 250	sx.
Inhibited TOC 2100 feet determined by Calc	
Hole size 7-7/8	
Total depth 3472' 3443'PBTD	
TOC @ 2100' Injection interval (perforated)	
	•
· 3303 to 3361	
2" EUE tbg w/epoxy internal coating @ 3280'	
Baker AD-1 Tension packer @ 32801	
Baker AD-1 Tension packer & 3280	
Csg perfs	
33021-34281	
4½'' Csg PRTD 3443'	
© 3472 TD 3472'	
Tubing size 2-3/8" FUF lined with TK-75 (fusion applied powder epoxy) set in a (material)	
Baker Model AD 1 Tension packer at 3280 feet	
(brand and model) (or describe any other casing-tubing seal).	
Other Data	TISS BADE TOURNEL CONTINUE TOURNEL CONTINUE TOURNEL CONTINUE SETTION SETTION SUFFICE Surface Cosing TOC Surface Feet determined by Circulation TOC Surface Feet determined by Circulation Size Size Size Size Long string Corrosion Size 4-1/2 Completed 9-4-7/8 Total depth 3472 TOC 9 2100' Injection interval (perforated) Feet determined by Calc TOC 9 2100' Injection interval (perforated) Size 2200' Injection interval (perforated) Size 2200' Feet determined by Calc TOC 9 2100' Injection interval (perforated) Size 2200' Size 3488 Feet Size 2200' Size Size Completed 9-4-1/2 Commented with 250 Ex. TOC 9 2100' Injection interval (perforated) Size Size Completed 9-4-1/2 TOC 9 2100' Injection interval (perforated) Size Size Completed 9-4-1/2 Toc 9 2100' Injection interval (perforated) Size Size Completed 9-4-1/2 Commented by Calc Feet Size 3428 Feet Size 2-7-1/8 Total depth 3471 3432 Feet Size Completed 9-4-1/2 Commented with 250 Ex. Total depth 3472 Total depth 3473 Feet Completed 9-4-1/2 Commented with 250 Ex. Total depth 3471 3432 Feet Size Completed 9-4-1/2 Commented with Size Andrea Feet Completed 9-4-1/2 Commented by Circulation Size Andrea Feet Completed 9-4-1/2 Commented with Size Andrea Feet Size Completed 9-4-1/2 Commented by Commented with Size Andrea Feet Size Completed 9-4-1/2 Commented with Size Comm
1. Name of the injection formation Grayburg	_
	-
If no, for what purpose was the well originally drilled? Oil & Gas	Tock Follow Stellow Township RANGE
4. Has the well over been perforated in any other zone(s)? List all such perforated interval	- ils
and dive binddind derait (aacks of comput of priode brodie) asen. <u>170</u>	
5. Cive the doubt to and name of any overlying and/or underlying oil or gas zoney (occlu) in	
this area. Harvey E. Yates Co. Power Deep "32" State #1 producing from Bone Sprin	gs

The	Eastland Oil Comn	anv	Arca Fo	domo 1	
				deral	
WELL NO.	330' FNL, 1	10N	SECTION	T18S	
Propo	sed re-entry and	completion :	as injection w		
So	Chematic			Tabular Data	
1.71			rface Casing		
		TOC Si	ze <u>8-5/8</u>	Cemente	d with $35()$ sx.
		Circ TO	C <u>Surface</u>	feet determine	ed by <u>Circulation</u>
		Ho	le size	11''	_
	1111	in	termediate Casi	ng	
	علم	∠ Si	2e	" Cemented	withsx.
•		2 5 / 0110			ed by
			le size		
		Lo	ng string (H	Proposed)	
ţ	/ 				with <u>600</u> sx.
}	/ B				d by
ţ				'8''	
		Tot		'' (3570'PB)	
t		orrossion nhibited In	jection interva	l perforated	
	/1 1// P	acker			Foot
		Tura (pe	erforated or op	eet to <u>3536</u> en-hole, indicate w	feet hich)
. }			3504' to	3500!	
F			3486' to		
		2" FI	IF The w/oneser	4-4	
t		$-4-1/2^{11}$ cs	g @ 3570'	internal coating	@ 3450'
E		Baker AD-1	Tension pkr @	3450 '	
F					
į.		Csg perfs 3474'-3542'			
t					
		•			
É		PBTD 3570'			
Ł		TD 3647'			
Tubing siz	2-3/8 FUE	lined wit	th <u>TK-75</u> (fusi	ion applied powder	epoxy) set in a
Bake	er Model AD-1 Tens	sion	pack	er at <u>3450</u>	feet
	rand and model) be any other casin		1).		
Other Data	-				
	of the injection fo	rmation a	Gravburg		
	_			yburg - San Andres	
	s a new well drill				
			_	lled? Oil and gas	5 -
·	ged and abandoned				
4. Has th	e well ever been p ve plugging detail	erforated in (sacks of c	sny other zone ement or bridge	e(s)? tist all such e plug(s) used) <u>No</u>	perforated intervals zones perforated.
3410-	3298 w/40 sx, 280	05-2693 w/40	sx, 1710-1598	3 w/40 sx. 758-646	w/40 sx.
<u>30'</u> s	urface w/10 sx.				
5. Give this	he depth to and no rea. Harvey E.)	me of any ov Tates Co. Po	wer Deep "32"	underlying oil or g State #1 producing	as zones (pools) in gfrom undesignated
Bone	Springs (7742-79	926') 1/2 mi	<u>le North.</u> Or	nly other producing	z zone in area (1 mile
radi	us).				

- The Eastland Oil Com	pany	Allied Feder	al	
2 660' FN	L, 1980' FEL	6	T18S	R31E
WELL NO. FOOTAGE	LOCATION	SECTION	TÜWNSIIIP	RANGE
WELL NO. FOOTAGE	TOC Surf Corrosion Inhibited Packer Fluid TOC @ 2000' Calc	SECTION coleted 1-17-71 Surface Casing Size 8 5/8 TOC Surface Hole size 11' Intermediate Casi Size TOC Hole size Long string Size 4 1/2 Toc 2000 Hole size 7 Total depth 35: Injection interva 3444 f	Tobular Data " Cemented wing feet determined by the common of the commo	range ith 350 sx. by Circulation ith sx. by Calculation feet
'' csg	Graybu Baker csg. p 33333' TD 355	AD-1 Tension paces oerfs - 3444'	t off by packer cker @ 3300'	
Tubing size 2 3/8"	EUE lined w	with TK-75 (fusi	ion applied powder epo (material)	oxy) set in a
(brand and mode	:1)		ker at3300	feet
	casing-tubing s	5 C d I / •		
Schematic TOC Surface Cosing Size 8 5/8 " Cemented with 350 sx. TOC Surface feet determined by Circulation Hole size 11" Intermediate Casing Size 679' Hole size Long string Corrosion Feet determined by Calculation Packer Fluid Hole size 77/8" TOC Total depth 3550' 8 2000' Injection interval (perforated) Calc Injection interval (perforated) 3344 feet to 3440 feet (perforated or open-hole, indicate which) 3394' to 3588' 3337' to 3583' 3337' to 3533' 2" EUE the w/epoxy internal coating @ 3500' Grayburg gas zone shut off by packer Baker AD-1 Tension packer @ 3300' Cag. perfs 3333' 3444' TD 3550' Tubing size 2 3/8" EUE lined with TK-75 (fusion applied powder epoxy) set in a				
			yburg - San Andres	
If no, for what pur	pose was the w	ell originally, dr	illed? Oil and Gas	
perforated in Gra	detail (sacks of ayburg zone 316	f cement or bridge	e plug(s) used) Add1	tionally
5. Give the depth to a	and name of any	overlying and/or	underlying oil or gas	zones (pools) in
this area. Harvey	7 E. Yates Co.	Power Deep 32 S	tate #1 producing fro	om sone Springs

The Eastla	nd Oil Company	Kenwood Federal		
3	660'FNL & 660' FWL	6 6	T100	D 71F
	FOOTAGE LOCATION	SECTION	T18S TUWNSHIP	R31E RANGE
Producing	well from Power Graybu	urg. Completed 4-2-7	1	•
	•			_
Schei	matic .		Tabular Data	
	TOC	Surface Casing		
	Surface	Size8 5/8	" Cemented wi	th 350 sx.
			feet determined b	
			-	y direction
		Hole size 11"		
		Intermediate Casing		
		Size	Cemented wi	ths
	8 5/8" @	TOC		
	696'	Hole size		
		•		
		Long string		
	Corrosion	Size <u>4 1/2</u>	Cemented wi	th <u>250</u> sx
	Inhibited	TOC 2050	feet detérmined b	y <u>Calculation</u>
	Packer Fluid	Hole size 7 7/8"		
1. 1	Fruid	Total depth 34781		
	TOC	3455'		
	2050'	Injection interval		
	Calc.	3441 feet (perforated or open-	to 3435	feet
		3377 to	•	1,
•		3323 to	3315	
			,	
	2" EUE tb.	g w/epoxy internal co	oating @ 3280'	
	Grayburg	gas zone shut off by	packer	
	baker AD-	1 tension packer @ 32	280'	
	Csg. perf	S		
	3315 - 3			
1				
1/2" csg	PBTD 3455	1		
3478'	TD 3478'			
Tubing size	2 3/8" EUE lineo	with TD-75 (Fusion	applied powder epo	xy) set in a
Baker Mode	el AD-1 Tension	,	at3280	feet
	nd and model)			
(or describe	any other casing-tubing	; seal).		-
Other Data				
	the injection formation			
	Field or Pool (if applic		g - San Andres	
	new well drilled for i		<u>/</u> ₹7 No	
	or what purpose was the		ed?Oil and Gas	
11 7104 11	or mind backage was and			
			19 (2-2 - 11 1	
4. Has the ward give	well ever been perforate plugging detail (sacks	ed in any other zone(s) of cement or bridge p): List all such pe lug(s) used) <u>Additi</u>	riorated intervals onally
-	ted in Grayburg gas zon			
	by packer.	5222 5255 and 6	STATE OF THE STATE	
				
	depth to and name of an a. Harvey E. Yates Co			
	signated pool. No oth			
in umdes				

TABULATION OF WELL DATA POWER GRAYBURG UNIT ATTACHMENT TO FORM C-108 ITEM NO. VI

No. 3	No 2.	Kenwood Federal No• 1	No. 2	Allied Federal No. 1	No. 4	No. 3	No. 2	The Eastland Oil Company ARCO Federal No. 1	OPERATOR NAME LEASE NAME WELL NO.
D-6-18-31	E-6-18-31	C-6-18-31	B-6-18-31	A-6-18-31	D-5-18-31	C-5-18-31	E-5-18-31	D-5-18-31	LOCATION
011	011	011	011	011	Oil	Dry	Dry	011	TYPE OF WELL
04-02-71	07-02-71	12-20-70	01-17-71	10-09-70	06-29-78	02-28-71	12-21-70	08-18-70	DATE DRILLED
Producing	Producing	Producing	Producing	Producing	Producing	P&A 02-28-71	P&A 05-10-75	P&A 11-09-78	PRESENT STATUS
8 5/8 4 1/2	8 5/8 4 1/2	8 5/8 4 1/2	8 5/8 4 1/2	8 5/8 4 1/2	8 5/8 4 1/2	8 5/8	8 5/8 4 1/2	8 5/8 4 1/2	SIZE CASING
696 3478	657 3520	687 3845	6 79 3550	700 3870	701 3560	694	713 3963	712 3684	SET AT
350 250	350 250	350 450	350 450	350 250	350 350 Lite 250 "C"	350	350 450	350 250	SACKS CEMENT
Surface 2050	Surface 2095	Surface 1420	Surface 2000	Surface 2400	Surface Surface	Surface	Surface 2030	Surface 2300	TOP OF CEMENT
Circ. Calc.	Circ. Calc.	Circ. T. S.	Circ. Calc.	Circ. Calc.	Circ. Circ.	Circ.	Circ. T.S.	Circ. Calc.	DETERMINED BY
3441-3315 3139-3121	3427-3316	3462-3334	3444-3333	3831-3803 3486-3392	3524-3502 3498-3400	None	3878-3868 3723-3456 2663-2653 2160-2150	3514-3410	COMPLETION INTERVAL
3478 3455 PB	3520 34 9 7 PB	3845 3827 PB	3550 3519 PB	3870 3530 РВ	3560 3536 PB	3647	3963	3684 3570 PB	TOTAL DEPTH

English & Harmon STAGNER No. 1	Harvey E. Yates Company Power Deep "32" State No. 1	No. 1		No. 3	No. 2	Sibyl Federal No. 1	No. 4	OPERATOR NAME LEASE NAME WELL NO.
J-31-17-31	L-32-17-31	M-32-17-31	M-31-17-31	G-1-18-30	H-1-18-30	A-1-18-30	F-6-18-31	LOCATION
Dry	011	011	Dry	011	011	011	Dry	TYPE OF
12-19-56	04-08-85	03-21-71	07-11-71	09-01-83	09-04-71	07-09-71	02-19-76	DATE DRILLED
P&A 03-21-57	Producing	P&A 05-08-75	P&A 07-11-71	Producing	Producing	Producing	Water Disp. 08-24-77	PRESENT STATUS
8 1/4 5 1/2	13 3/8 8 5/8 5 1/2	8 5/8 4 1/2	8 5/8	8 5/8 4 1/2	8 5/8 4 1/2	8 5/8 4 1/2	13 3/8 8 5/8	SIZE
670 4108	608 3622 9611	700 3650	659	692 3698	671 3472	682 3512	720 4200	SET AT
50 30	500 1400 550	350 250	350	350 1050 Lite 350 Poz	350 250	350 250	675 1050	SACKS
470 3950	Surface Surface 6600	Surface 2225	Surface	Surface Surface	Surface 2100	Surface 2087	Surface 1300	TOP OF
Calc. Calc.	Circ. Circ. Calc.	Circ. Calc.	Circ.	Circ. Circ.	Circ. Calc.	Circ. Calc.	Circ. T. S.	DETERMINED BY
2407-2425 60 quarts	7926-7742	3503-3493	None	3364-3308	3428-3302	3229-3194	3598-3506	COMPLETION INTERVAL
4252 2425 PB	11,700 8000 PB	3650 3625 PB	3564	3700 3706 PB	3472 3443 PB	3512 3487 PB	11,810 4110 PB	TOTAL DEPTH

(Re-entry of above well) Solar Oil Company Atlantic Federal No. 1	Allied Chemical Atlantic Federal No. 1	Ernest A. Hanson Gulf State No. 1	(Re-entry of above well) Ernest A. Hanson STAGNER No. 1 (Could not clean-out below 295')	OPERATOR NAME LEASE NAME WELL NO.
D-5-18-31	D-5-18-31	L-32-17-31	J-31-17-31 295')	LOCATION
Dry	Dry	Dry	Dry	TYPE OF WELL
05-16-69	02-07-69	12-03-56	12-19-56	DATE DRILLED
P&A	P&A	P&A 01-18-57	P&A 03-21-57	PRESENT STATUS
5 1/2	11 3/4 8 5/8	8 5/8 5 1/2	8 1/4	SIZE CASING
9004	719 3994	706 3814	670	SET AT
200	700 1024	100 250	15	SACKS
7924	Surface 1400	313 2457	Surface Plug	TOP OF CEMENT
Calc.	Circ. Calc.	Calc.	Circ.	DETERMINED BY
8850		None		COMPLETION INTERVAL
9004 PB	11025	4059 3814 PB	295 PB	TOTAL

			stland				
			Federal				
			tic of Plu				
4 A: 7	-11-71	Forz	n C-108	Item VI	<u></u>	cation M	-31-17
	 		1//////	11/15	 	 	· · · · · · · · · · · · · · · · · · ·
Plug +	rom surfe 30' w/ 10	re			TOC @ SU	rface -ci	re.
+0	30 W/ 103	s X					
				1	cemente	d w/ 3.50	SX.
					11"hole		
.			77777				
Plug	from 58	38 70		1 1 2 3	3 8 csg.	set @ 659	
700	w/ 33 3	X . 1 	7////	4			
				<u> </u>			
							1
	†			1			
	1						
Plu	g from 1 43' W 3	1423 to	17777				
. /	43 W 3	SSX.				,	
	ļ					<u> </u>	
		- i					
				7/2	s hole		
							1
					1		
PI	ug from	3120 to					
* *	3240' W,	135 sx -	1/1//				
		+			1111111	1	<u> </u>
P	109 from 3564' w,	n 3444 to					
	3564' W,	/35 sx —		356	4' 10		
				+++++++++++++++++++++++++++++++++++++++	+		

n., n o +	20			CBI COT	T : .	Loca	
04 A 2-7- 5-16		entered		eral No	1 :		18-31
		Schemet	ic of Pl	ugging D			
		For	n C-108	Item VI			
Plug @	surface	2 W/	3/1/11	2272111	113/4	cemente	d to
103					sur	face w/ 7	OO.SX.
<i>.</i>	6 610	.,]	·		15%	k"hole	
	from 619 9 w/60				113/4	e 719'	
+			76/1/	1////			
	From 130				TOC	@ 1400'	
						6-1-	
			1			hole	
				1	cem	ented w/	1024 sx.
-			11	/			
, -	from 3		19///		8 5/8	@ 3994'	
				,			
Pluc	from s	800 to	-, -, -				
5	900'w/	35 sx.	- 1/				
					7 %	" hole	
- · · · · · · · · · · · · · · · · · · ·							· ·
PI	ua from	7.700 +0					
	1800 W/	i	- 2//				
		0'-5/2" cs	9-7		TOC @ :	7924	
P	109 8200	-8700' W/	00 sx. 277		T		
					5 1/2" ce	mented w,	200 SX
p	lug 8800	-8850 w/	30sx 7				
	• · · · · · · · · · · · · · · · · ·		122	414	5 1/2" @ 9	004'	
	lug from	9240 +	4//		+		
	. , , , , , , , , , , , , , , , , , , ,	7.70.30					
· · · · · · · · · · · · · · · · · · ·							
	olvo fro	m 10,450	10 777	777			
. j	10,600	w/45 sx.		1///			
		m 10,925		27//	0 11,025		
	11,0K5	W/305X		Z-+4	01,023		

				d Oil Comp	Bny	
•				9/ No. /		
				7/499119 4		
P + A: 1	1-0-70	For	m C-108	3 1+em V1		ocation: 0-5-18-3
P + A . /	7- 2 7 6	121	12222			
Pum	ped 300	ex //			TOC @ SU	face - circ.
10 70	85/8" cs				40 man4a	d w/ 350 sx.
10	1000'				-cemenne	
4/2	csq. pul	ed A			, , ,	<u> </u>
007	t of colle	~ 1//				
@ 3	21'					
•				144	8 % csg.	@ 7/2'
· · · · · · · · · · · · · · · · · · ·		· · · - · - · · · · · · · · · · · · · ·	44	 		
	· · · · · · · · · · · · · · · · · · ·		- 			
						,
	ment on		1.			
	to 1614					
	etainer :					
S	gueeged &	OSX @				
	1650		11	<u> </u>		
•						
	1	1		I . I		
					70C @ 23	po' by cale,
					70C @ 23	oo' by cale,
					70C @ 23	oo' by calc.
				•		
					4 1/2" csg.	cemented w/
						cemented w/
					4 1/2" csg.	cemented w/
					4 1/2" csg.	cemented w/
					4 1/2" csg.	cemented w/
					4 1/2" csg.	cemented w/
					4 1/2" csg.	cemented w/
	ment on	BP to			4 1/2" csg.	cemented w/
	3288'				4 1/2" csg.	cemented w/
					4 1/2 1 csg. 250 sx	cemented w/
	3288'				4 1/2 " esg. 250 sx	rations 34-10-3514
	3288' (BP @ 33	B '			4 1/2 1 csg. 250 sx	rations 34-10-3514
	3288'	B '			4 1/2 " esg. 250 sx	rations 34-10-3514

		The E	astlana	Oil Com	pany		
		Ar	co-Fede	ral No. E			
				Jugging			
			Form C-1	OB Item	V		
PYA	5-10-75					ATION: E-5-18-	3/
:	rom surfe				<u> </u>		
40	45' w/ 15	sx		1/5	8 % csq	cemented to	
					Surface	W/ 350 5X.	
					+		
				1	11" hole		
,				[]			
Pluat	ram 6.56	m 1		+#1			
756	rom 656' 'W/ 35's				85/8 csg. s	et@ 7/3	
,06	<i>w</i> / 30 3	'A'	7	11			
		,					
*							
							•
				< 7	" hole		
					,		
		1					
Plug	from 15	80 to 7					
168	from 15.	SX.					
	' ' '.						
CWF	4/2" csg	7 - 2 miles - 1 - 1 - 1	1				
	and pul	1 -	27777	10		by remp. survey	
CIBA	@2100'w						
	102060			Ca.	ing perfs	2150-2160	
			/[<u>_</u>				
CIBI	P @ 2230 'u						
	+0 2220				1:,		
			्य ह	Ca	sing perf	2653'-2663'	
CIBA	@2750'u	· · ·			1		•
	to 2740	·	1				
			11:				
			1				
						The second secon	
		1		C.	sing perf.	s 3456'-3723'	
			1		+		
			/				
			1				
CIBI	@ 3800'w		77777				
•	+0 379	00'		c	asing pers	s 5868'-3878'	
	1						
			1777	PBY	03989		
		4		70 3	963'		

			Eastland			P+A 2-2	R-71
			rco Fede				
		Schem	atic of P	lugging	Detail	Location : 0	-5-18-31
			27 m C-708	J. Tem. V	*		
PI	g from s	SUYF.	11/1/				
10	30' w/16	SX.					
					8 % csq.	cemented	10
					surface	cemented w/ 350 sx.	
•					+		
P	lug from	646					
+	o 758' W/	40 sx			3 % csg.	@ 694'	
			12/2/2				
							ļ
				<-7// ₈	" hole		
<i>p</i>	luo from	1598		7%	" hole		
P	lug from	1598'		7%	" hole		
P	lug from 0 1710' w	1598' 40 sx.		<-7// ₆	" hole		
P +	lug from	1598' 40 sx.		7%	" hole		
. P	lug from o 1710' w	1598' 40 sx.		<-7// ₆	" hole		
	lug from	1598' 40 sx.		7%	" hole		
	lug from 0 1710' w	1598' 40 sx.		<-7// ₆	" hole		
P +	lug from o 1710' w	1598' 40 sx.		<-7%	" hole		
	lug from	1598' 40 sx.		<-7// ₆	" hole		
P +	lug from o 1710' w	1598' 40 sx.		<-7// ₆	" hole		
				<-7// ₆	" hole		
				<-7// ₆	" hole		
	olug from			<-7/6	" hole		
				<-7// ₆	" hole		
				<-7/6	" hale		
				<-7/6	" hole		
				<-7/6	" hale		
				< 7 1/6	" hole		
	0/ug from to 2805'	2693' cu/ 40 sx		< 7 %	" hale		
	0/ug from to 2805'	2693' cu/ 40 sx		<-7/6	" hale		
		2693' cu/ 40 sx					
	0/ug from to 2805'	2693' cu/ 40 sx					
	0/ug from to 2805'	2693' cu/ 40 sx					

			Eastlan				
			1/1ed 5+		1 1		
			atic of				
P+A:	5-8-75	F	orm C-10	8 Item VI	400	ation: M-	32-17-3
			(//////	11/1			
	g from so			4//			
10	45' W/13	SX.					
					cement +	o surface o	1/ 350 sx
						<u> </u>	
					-,		
PI	o 748' w/	48					
*	0 748' W/.	35 sx /			85/8 csq. (700'	
			<i>X </i>	4			
							1 .
	· · · · · · · · · · · · · · · · · · ·			1			
		†					
<i></i>	Vug from	1580 40					
	1680' W/			1			
)
					1		
	· · · · · · · · · · · · · · · · · · ·						· · · · · · · · · · · · · · · · · · ·
			. .				
	Plug from	2 2107' to	1777777				
	2207' 4/	35 sx					
		+					
	Shot and			73	C @ 2225	(ca/c.)	
	2R09'-4	2" csq.					
	1			7			
•		• • • • • •			‡ : : : : : : : : : : : : : : : : : : :	<u> </u>	
				1/2	csq. @ 36	50	
					emented .		
				1			
			M K	1			
c e	ment on	BP to				·	
	3430'	· · · · · · · · · · · · · · · · · · ·			+	! • • • •	
C	1BP @ 34.	50'		C\$9	perfs. 3	493-3505	∮
				14	0-3625		
			1/7//	14	3650'		
					T	- 4	
		1		1			

			Ernest	A. Han.	sen			
		· · · · · · · · · · · · · · · · · · ·	Gulf 5+			+		٠
		Scho	ematic e	F Plugg	ing Deta	11		
א מיים	10 57		Form C-	108 17	em VI		: L-3R-17-3	
+7	18-57	· · · · · · · · · · · · · · · · · · ·	• • • • • • • • •	7 7 71		LOCATION		
Plug	from sur	face						
+0	40' w/ 13	5 5X						
					- TOC	313' by	ealc.	
		\ /	4 -			inted w/	100 SX.	-
			1					
Pluc	from 5	90' /	111///					
+0	650'W1.	155x		114	8 5/8°	@ 706'		
		+						
		=						
	1 1 1							
								-
Ple	g from	1608' +0	1////					
	650' W/	15 sx -	1///					
	· · · · · · · · · · · · · · · · · · ·					· · · · · · · · · · · · · · · · · · ·		
		,						
P	ug from to 2335'	KR 93_	1/4//		CL - 1 - 4		المستادين	
	to 2333.	W/13 3X		á	3007 3/2	"csg. @ 2.	333 8114	
				, -	700 0 2	d 157' by ca	10	٠
						4		
				1	-Cement	ed w/ 250) 5 X	
					7/4			
					7 % h	o/e		
								-
	1	· · · · · · · ·						
	PE	37-0			5 % " "	sq. @ 381	a .,	
		3814				sg. @ 38/		
					TD 40.	59'		٠
	1							

					nglish					
					Stag			Dayati		
					natic o					
P	+A: 1	0-28-40			Form C		T.1.6.74		Location	: U-31-17-
Z	2 5x 0	ement		1/	////	44				
		surfa	CR							
		· · · · · · · · · · · · · · · · · · ·								
F	0109	from 17	2 10	2						
	ન	0' W 10.	\$ <i>X</i> -					70 0 170		
	-							1/4 450 0	by cale.	
									emented	W .90.37
								14 csq. 6	670	
,								****		-
			+	+						
				1						
	140	le fille	d w/mv	α						
	-							ote: Enn	est A. Han	Can
				-					to re-en	
							i		on 11-29	l l
						1			out to 29	l .
									untered ,	1
	·	· · · · · · · · · · · · · · · · · · ·		-11	· · · · · · · · · · · · · · · · · · ·		. 1		21-57 by	1
	Plug	from 1	578' to		////	才			n 295' to	
		0' w/23		72		41	L.		and setting	
			1::::::::::						to surface	≥ w/
				:				15 sx.		
			,	:						
		+ 5/2 cs		01			1111			
	an	d pulled								
			1							
-					1552					
				.						
	- +				11/1/					
				-	11/1	-	-8" he	le		
· · · · · · · · · · · · · · · · · · ·		9 40/ 100			1///		+======================================			
		sol, and			3/1					
		ttings 160' to 41		-						
	A	-wy 70 7 1	Ψ.	-						
		· · · · · · · · · · · · · · · · · · ·					700	@ 3950'	by calc.	
					11/1		-Ce me	nted 5	" asg W	305X
							* { *	++++		
							13/2	259 @ 9	*/0 <i>8</i>	
	1	1 1 1 1 1 1 1					-5" he	ماه		
	.	T. D. 425	٠٠٠٠٠٠ ج	. +40	カンプラニ アプラ	-		246		

The Eastlar	nd Oil Company	Kenwood Fed	leral (SWD).	•	
4	1980' FNL & 1980'	'FWL 6	T	`18S	R31E
				UWNSHIP	RANGE
Originally	drilled as American	n Quasar Power Deep	Unit No. 1		•
Schem	natic .	Surface Casing	Tabular	<u>Data</u>	
		rf Size 13 3/8			
	65	TOC Surface 75sx Hole size		-	Circulation
	17	1211 Intermediate Ca			
4.		3/8 TOC 1300			
	@ 7	Hole size 12			Temp Sarvey
osion bited	1300'	Long string N			
Fluid	1050s	TOC			
		Hole size 7			· · · · · · · · · · · · · · · · · · ·
		Total depth 1			
	← 12 ½"	Injection interv	val		
	Ho1e	3506	feat to 3	598	feet
		(perforated or c	ppen-hole, ind	icate which)	
		2" internally plas	tic coated tu	bing @ 3443'	
	GO p	lastic-coated pack	er set @ 3443		
ien t	Inje	ction zone 3506' -	3598'		
g from	8 5/	8 csg @ 4200'			
0-4310' 0 sx					
	← 7 7/8''	hole.			•
	1770	nore			
		•		·	
-	TD 11,8	10'			
Tubing siz≄ _	2 7/8" EUE li	ned with TK-75 (fus	sion applied (material)	powder epoxy)	set in a
GO G-LOK	nd and model)	pa	cker at 34	43	feet
•	any other casing-tub	ing seal).			•
Other Data					
1. Name of t	the injection formation	on Grayburg			
	ield or Pool (if app)		yburg - San A	ndres	
3. Is this a	new well drilled for	r injection? <u>/</u> 7 Y	es <u>/X</u> 7 No		
If no, fo	or what purpose was t	he well originally d	rilled? <u>Oi</u>	1 and Gas	
4. Has the wand give	vell ever been perform plugging detail (sac	ated in any other zooks of cement or brid	ne(s)? List a ge plug(s) usa	all such perfo	rated interval
Dry as M	Morrow test by Ameri	can Quasor Petrole	um Co. of New	Mexico and p	olugged
back to	4110' on 2-21-76				
5. Give the this area	depth to and name of No overlying or	any overlying and/o underlying oil or	r underlying ogas zones pro	oil or gas zon ductive in th	es (pools) in nis area.

The Eastland Oil Company

Power Grayburg Unit

Eddy County, New Mexico

November 20, 1985

Attachment to Form C-108: Statement of Proposed Maximum Injection Pressure for Water Injection Wells

Based on required injection pressure for Eastland's Kenwood Federal No. 4, a saltwater disposal well in the Power Grayburg Pool, a maximum surface pressure of 1000 psi is proposed for this secondary recovery project. A copy of the letter from the Oil Conservation Division dated July 17, 1980 authorizing this surface pressure is attached.



STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

BRUCE KING GOVERNOR LARRY KEHOE SECRETARY

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87501 (505) 827-2434

July 17, 1980

Eastland Oil Company P. O. Drawer 3488 560 One Marienfeld Place Midland, Texas 79702

Attention: George D. Neal

Re: Kenwood Federal (SWD) No. 4

SE/4 SW/4 Section 6, Township 18 South, Range 31 East, Eddy County,

New Mexico

Gentlemen:

I have reviewed your request to increase injection pressure in your Kenwood Federal No. 4.

We do not allow operators to inject at fracture pressures. Therefore, based on your fracture pressure of 1100 psi, you are hereby authorized to inject at a pressure not to exceed 1000 psi surface pressure.

Very truly yours,

JOE D. RAMEY Division Director

JDR/MH/og



IN REPLY REFER TO: 31 80 (060)

United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Roswell District Office
P. O. Box 1397
Roswell, New Mexico 88201

June 5, 1985

Eastland Oil Company Attention: George Neal P.O. Drawer 3488 Midland, TX 79702

Re: Designation of Proposed Power Grayburg Secondary

Recovery Unit, Eddy, County, New Mexico

Gentlemen:

Your application of May 28, 1985, filed with the Bureau of Land Management, Roswell, New Mexico, requests the designation of the Power Grayburg Unit Area, embracing 427.44 acres, more or less, Eddy County, New Mexico, as logically subject to operation under the unitization provisions of the Minerals Leasing Act as amended.

Pursuant to unit plan regulations 43 CFR 3180, the land requested as outlined on your plat marked "Exhibit "A", Power Grayburg-San Andres Pool, Eddy County, New Mexico" is hereby designated as a logical unit area to more properly conserve natural resources by instituting secondary recovery operations.

If conditions are such that modification of said standard form is deemed necessary three copies of the proposed modifications with appropriate justification must be submitted to this office for preliminary approval.

In the absence of any other type of land requiring special provisions or any objections not now apparent, a duly executed agreement identical with said form will be approved if submitted in approvable status within a reasonable period of time. However, notice is hereby given that the right is reserved to deny approval of any executed agreements submitted which, in our opinion, do not have the full commitment of sufficient lands to afford effective control of operations in the unit area.

When the executed agreement is transmitted to the District Manager, Roswell, New Mexico for approval, include the latest status of all acreage. In preparation of Exhibits "A" and "B", follow closely the format of the sample exhibits attached to the standard unit agreement form.

Sincerely yours,

Francis R. Cherry, Jr.

District Manager

POWER GRAYBURG UNIT ATTACHMENT TO FORM C-108 LIST OF SURFACE OWNERS AND LEASEHOLD OPERATORS WITHIN ONE-HALF MILE

- 1. Surface Owners: (All leases in Unit)
 Federal Lands
 Bureau of Land Management
 Roswell District Office
 P.O.Box 1397
 Roswell, New Mexico 88201
- 2. Leasehold Operators: Anadarko Producing Company Box 2497, 900 Gibralter Savings Center Midland, Texas 79702

Amoco Production Company Box 68 Hobbs, New Mexico 88240

APCO Production Company 80 Sierra Cr., C.R. 240 Durango, Colorado 81301

ARCO Oil & Gas Company Box 1610 Midland, Texas 79702

Belnorth Petroleum Corporation One Petroleum Center, Bldg. 6 3300 N. "A" Street Midland, Texas 79705

Cal-Mon Oil Company P.O.Box 2066 Midland, Texas 79702

El Paso Natural Gas Company Box 1492 El Paso, Texas 79978

Northern Natural Gas Company One Petroleum Center, Bldg. 6 3300 N. "A" Street Midland, Texas 79705 Pogo Producing Company Box 10340, 300 Midland Tower Midland, Texas 79702

Union Texas Petroleum Corporation Division of Allied Chemical Corporation P.O.Box 200128 Houston, Texas 77216

Harvey E. Yates Company Box 1933 Roswell, New Mexico 88201