

20 North Broadway, Suite 1500 Oklahoma City, Oklahoma 73102-8260 Telephone:405/235-3611 FAX 405/552-4667

February 19, 1996

Oil Conservation Division 2040 South Pacheco Santa Fe, NM 87505 Attn: Mr. Ben Stone

RE:

H.E. West "B" #9 H.E. 660' FSL 660' FWL Section 4-17S-31E Eddy County, NM

H.E. West "B" #6 2005' FNL 660' FWL Section 4-17S-31E Eddy County, NM West "B" #11

1980' FSL 1980' FWL Section 4-17S-31E Eddy County, NM

H.E. West "A" #4 1980' FNL 1980' FWL Section 4-17S-31E Eddy County, NM

Mr. Stone:

Please find enclosed Applications for Authority to Inject on the above referenced wells. Each of these wells had previously been a water injection well, but had been shut in for over one year. Since these four wells are a continuation of the Phase III project which was approved in January, I am sending copies of the publications, and using some of the attachments from the original Phase III application.

Please advise if additional information is required and direct questions regarding this matter to Randy Jackson at (405) 552-4560 or Diana Keys at (405) 552-4511.

Sincerely,

Devon Energy Corporation

ellis Milano

Diana M. Keys

Engineering Technician

/dmk enclosures

xc: Well Files

STATE OF NEW MEXICO ENERGY AND MINERALS

DIL CONSERVATION DIVISION

i ti	LAILU	OIL CONSCIONATION OIL
D	CPARTHENT	POST OFFICE BOX 2010
		STATE LAND OFFICE BUILDING
		SANTA FE, NEW MEXICO 87501

		on qualifies for adminis		yesno
II.	Operator:	Devon Energy Operat		72102
	Address:		Suite 1500, Oklahoma	
	Contact part	y: <u>Randy Jackson</u>	Pho	ne: (405) 552-4560
III.		proposed for injection.	Additional sheets may	of this form for each well be attached if necessary: Refer to Attachment(s)
IV.	If yes, give	xpansion of an existing the Division order numb	er authorizing the pro	ject <u>R-2268</u> .
٧.	injection we	that identifies all wel ll with a one-half mile circle identifies the we	radius circle drawn ar	wo miles of any proposed ound each proposed injection Refer to Attachment I
VI.	penetrate th	e proposed injection zon	 e. Such data shall include, location, depth, strating all plugging 	within the area of review which clude a description of each record of completion, and detail. Refer to Attachment VI
VII.	Attach data	on the proposed operatio	n, including:	
	2. Wheth 3. Propose 4. Sourt the 5. If it	her the system is open o osed average and maximum ces and an appropriate a e receiving formation if njection is for disposal or within one mile of t	r closed; injection pressure; nalysis of injection fi other than reinjected purposes into a zone of the proposed well, attack n water (may be measure	luid and compatibility with produced water; and not productive of oil or gas ch a chemical analysis of ed or inferred from existing Refer to Attachment VII
III.	detail, geold bottom of all total dissolv	ogical name, thickness, I underground sources of ved solids concentration he as well as any such s	and depth. Give the go drinking water (aquifo s of 10,000 mg/1 or les	ncluding appropriate lithologic eologic name, and depth to ers containing waters with ss) overlying the proposed diately underlying the
IX.	Describe the	proposed stimulation pr	ogram, if any.	
х.	Attach appropriate the OCD.	riate logging and test ision they need not be r	data on the well. (If esubmitted.) This info	well logs have been filed rmation is on file with
XI.	Attach a chem available and	nical analysis of fresh d producing) within one wells and dates samples	mile of any injection o	fresh water wells (if or disposal well showing rater wells in this area.
CII.	examined avaior or any other	or disposal wells must m lable goologic and engi hydrologic connection b loking water.	neering data and find r etween the disposal zor	no evidence of open faults ne and any underground
11.		•		tachment XII the reverse side of this form.
IV.	Certification	-	Refer to At	
	I hereby cert	ify that the information of my knowledge and beli	n submitted with this a	application is true and correct
		ly Jackson		District Engineer
	Signature:	Ravox (polson	Date:	2/19/9/

DISTRIBUTION: Original and one copy to Santa le with one copy to the appropriate Division

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 Diétrict 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) Give 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 amplications within 15 days from the date this application was mailed to them.

ATTACHMENT III (tabular)

Well Data

- A. (1) H.E. West "A" #4 1980' FNL 1980' FWL Section 4-17S-31E Eddy County, NM
 - (2) Surface Casing: 8-5/8" 24#, set @ 706' w/100 sxs cmt. Est TOC @ 546'. (12-1/4" hole)

Production Casing: 7" set @ 3169' w/200 sxs cmt.

Est TOC @ 1555'. (8" hole)

Liner: 4-1/2" 9.5# liner f/3068-3842' w/95 sxs cmt.

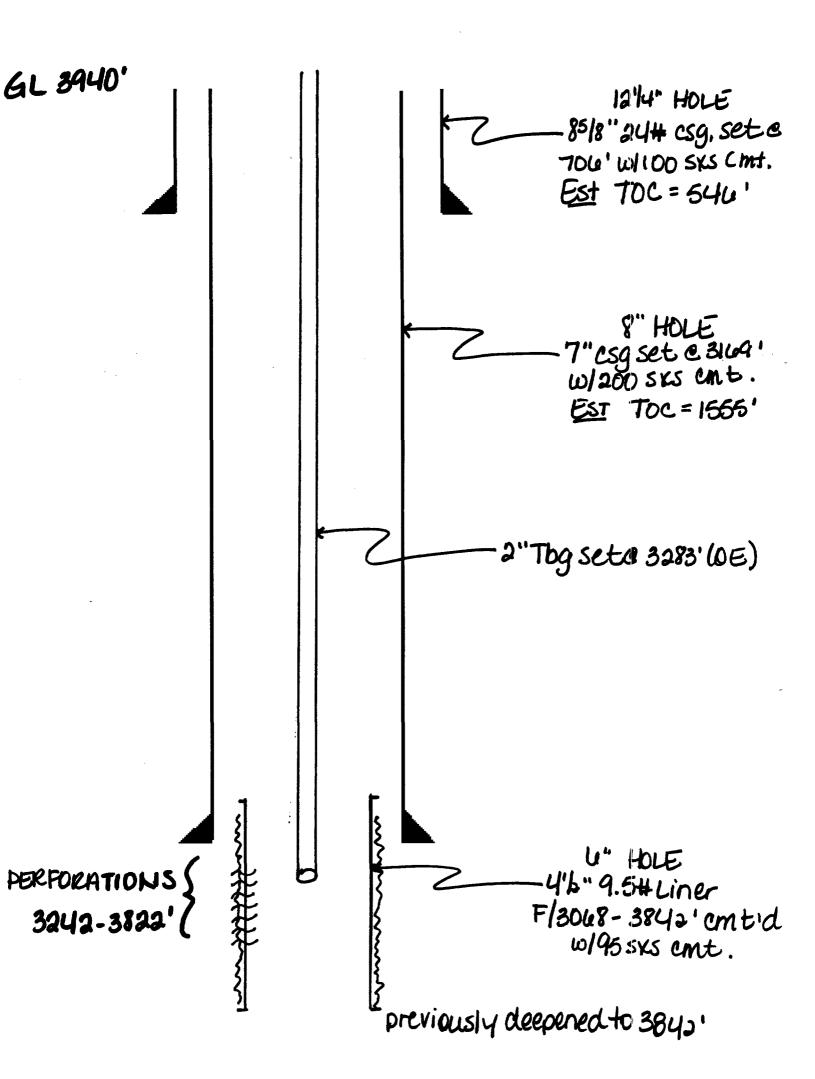
Please also refer to the wellbore schematic labeled Attachment III -

(schematic)

- (3) Tubing will be 2-3/8" plastic coated 4.7#, set @ 3025'.
- (4) A Baker J-Loc Pkr will be set @ 3025'
- B. (1) The injection formations will be the Grayburg/San Andres in the Grayburg/Jackson field.
 - (2) The proposed intervals are 3100-4000'. The injection interval will be open hole 3842-4000' and through existing and proposed perforations 3100-3842'.
 - (3) This well was originally drilled and completed as an oil well. It produced from the Grayburg/San Andres Formations.
 - (4) Additional Perforations may be added in the 3100-3842' interval.
 - (5) The Top of the Seven Rivers Formation is approximately 2300', there are no known lower oil formations.

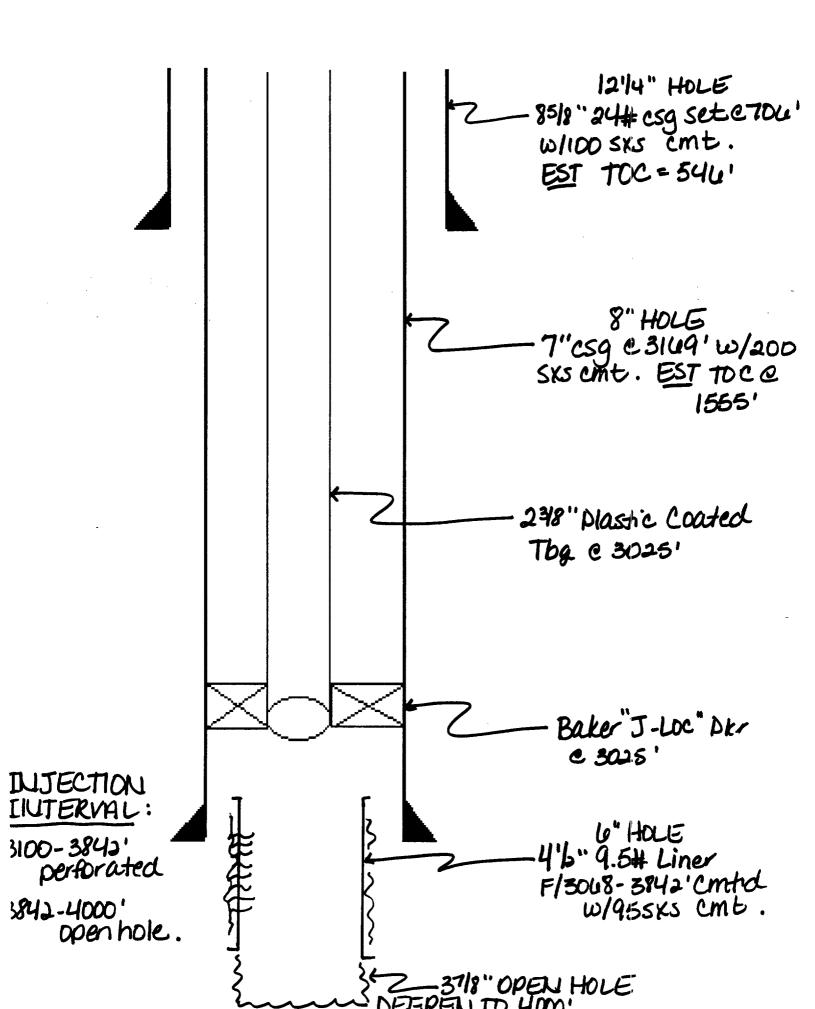
Devon Energy Operating Corporation Attachment III - Schematic EXISTING WELLBORE

H.E. West "A" #4 1980' FNL 1980' FWL Section 4-17S-31E Eddy County, NM



Devon Energy Operating Corporation Attachment III - Schematic PROPOSED WELLBORE

H.E. West "A" #4 1980' FNL 1980' FWL Section 4-17S-31E Eddy County, NM



ATTACHMENT III (tabular)

Well Data

- A. (1) H.E. West "B" #6
 2005' FNL 660' FWL
 Section 4-17S-31E
 Eddy County, NM
 - (2) Surface Casing: 10-3/4" 32.75#, set @ 669' w/100 sxs cmt.

 Est TOC @ 318'. (12-1/4" hole)

 Production Casing: 7" 26#, set @ 3123' w/200 sxs cmt.

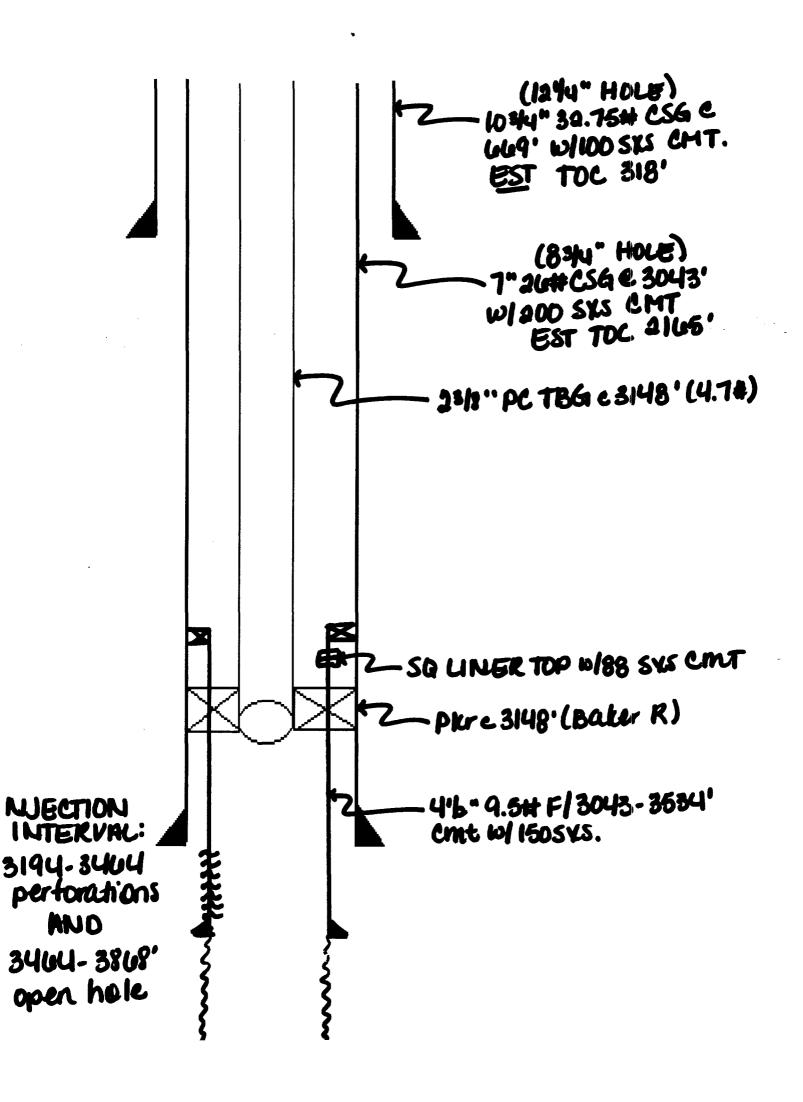
 Est TOC @ 2165'. (8-3/4" hole)

 Liner: 4-1/2" liner f/3043 to 3534'. Cmt'd w/150 sxs cmt, Sq'd liner top @ 3060' w/88 sxs cmt, 2-3/8" tbg @ 3148' w/Baker "R" Pkr.

 Please also refer to the wellbore schematic labeled Attachment III (schematic)
 - (3) Tubing will be 2-3/8" Plastic coated 4.7#, set @ 3148'
 - (4) Baker Model "R" Packer set @ 3148'
- B. (1) The injection formations will be the Grayburg/San Andres in the Grayburg/Jackson field.
 - The proposed intervals are 3126-3868'. The injection interval will be through open hole and perforations 3194-3464
 - (3) This well was originally drilled and completed as an oil well and converted to a water injection well 7/29/64.
 - (4) Injection will be through open hole interval 3534-3868'.
 - (5) The Top of the Seven Rivers Formation is approximately 2300', there are no known lower oil formations.

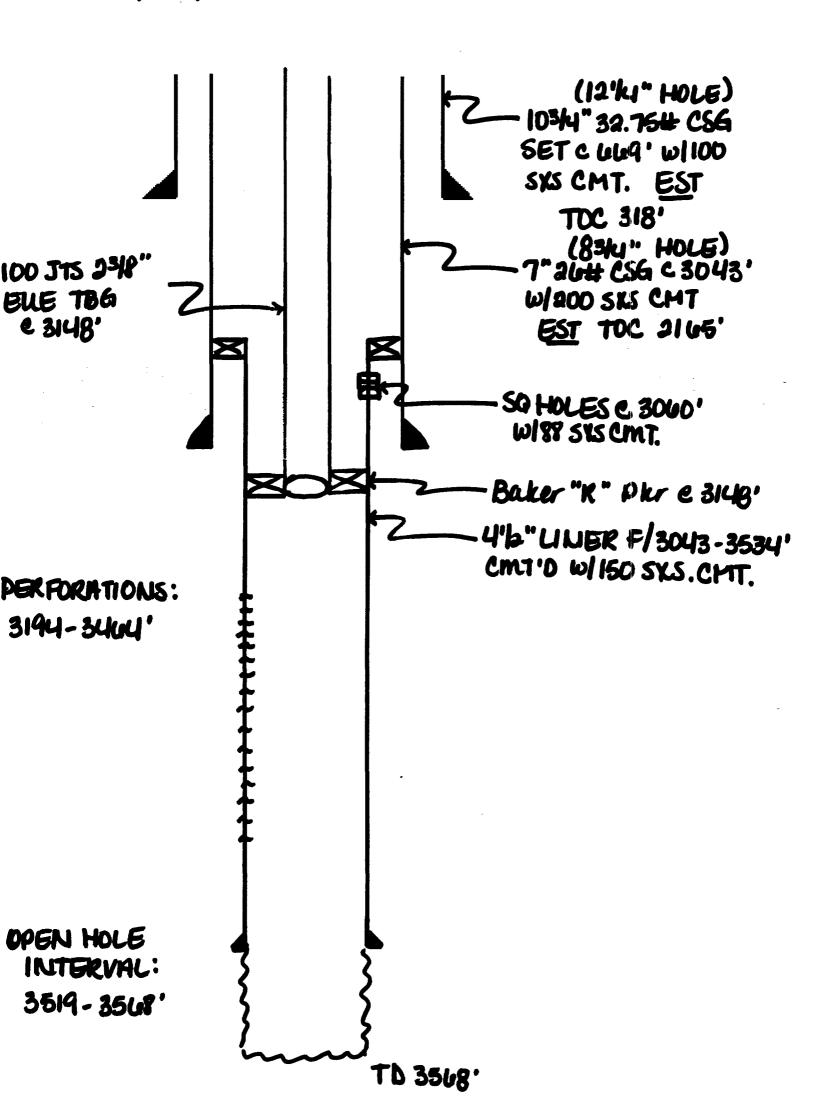
Devon Energy Operating Corporation Attachment III - Schematic PROPOSED WELLBORE

H.E. West "B" #6 2005' FNL and 660' FWL Section 4-17S-31E Eddy County, NM



Devon Energy Operating Corporation Attachment III - Schematic EXISTING WELLBORE

H.E. West "B" #6 2005' FNL and 660' FWL Section 4-17S-31E Eddy County, NM



ATTACHMENT III (tabular)

Well Data

- A. (1) H.E. West "B" #9
 660' FSL 660' FWL
 Section 4-17S-31E
 Eddy County, NM
 - (2) Surface Casing: 8-5/8" 24#, set @ 678' w/100 sxs cmt.

 Est TOC @ 418'. (11" hole)

 Production Casing: 7" 20# set @ 3089' w/200 sxs cmt.

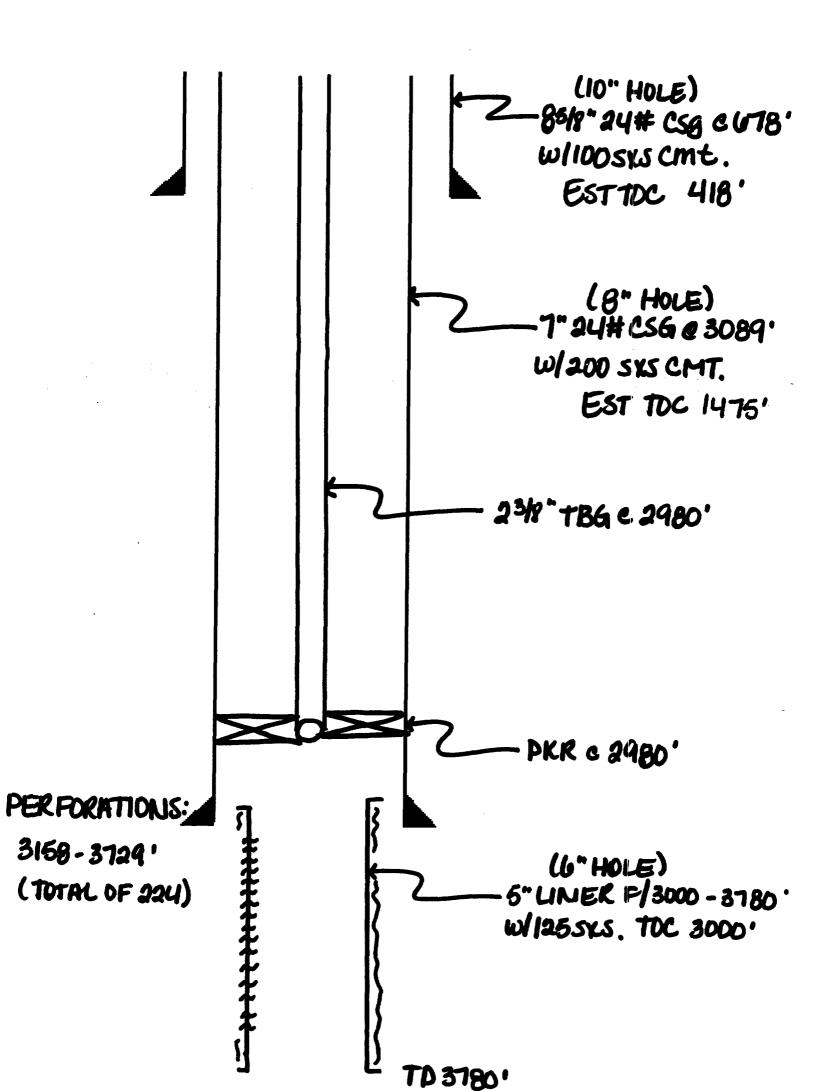
 Est TOC @ 1475'. (8" hole)

 Liner: 5" f/3000-3780' w/125sxs cmt. TOC @ liner top.

 Please also refer to the wellbore schematic labeled Attachment III (schematic)
 - (3) Tubing will be 2-3/8" Plastic Coated 4.7#, set @ 2985'
 - (4) A Baker J-Loc Pkr will be set @ 2985'
- B. (1) The injection formations will be the Grayburg/San Andres in the Grayburg/Jackson field.
 - (2) The proposed intervals are 3083-3880'. The injection interval will be open hole and through existing and proposed perforations 3134-3729'.
 - (3) This well was originally drilled and completed as an oil well and coverted to a water injection well 12/27/63.
 - (4) Additional Perforations may be added in the 3134-3780" interval.
 - (5) The Top of the Seven Rivers Formation is approximately 2300', there are no known lower oil formations.

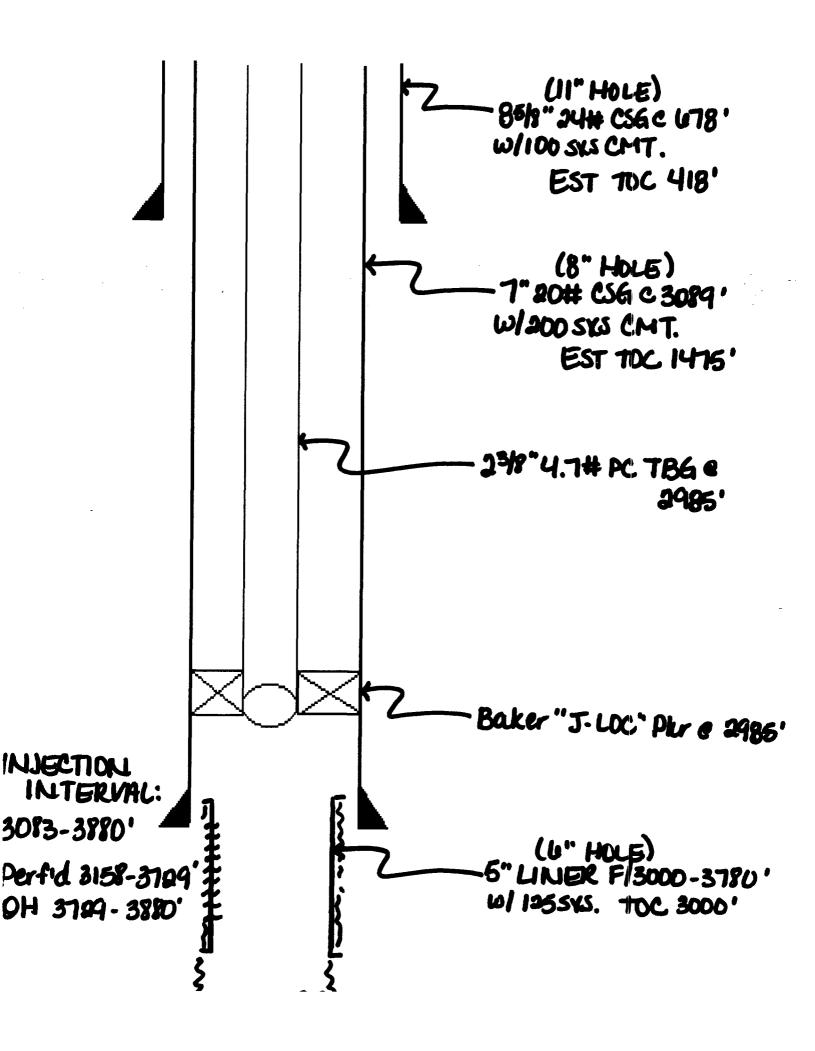
Devon Energy Operating Corporation Attachment III - Schematic EXISTING WELLBORE

H.E. West "B" #9 660' FSL and 660' FWL Section 4-17S-31E Eddy County, NM



Devon Energy Operating Corporation Attachment III - Schematic PROPOSED WELLBORE

H.E. West "B" #9 660' FSL and 660' FWL Section 4-17S-31E Eddy County, NM



ATTACHMENT III (tabular)

Well Data

- A. (1) H.E. West "B" #11 1980' FSL 1980' FWL Section 4-17S-31E Eddy County, NM
 - (2) Surface Casing: 8-5/8" 24#, set @ 683' w/100 sxs cmt.

 Est TOC @ 425'. (11" hole)

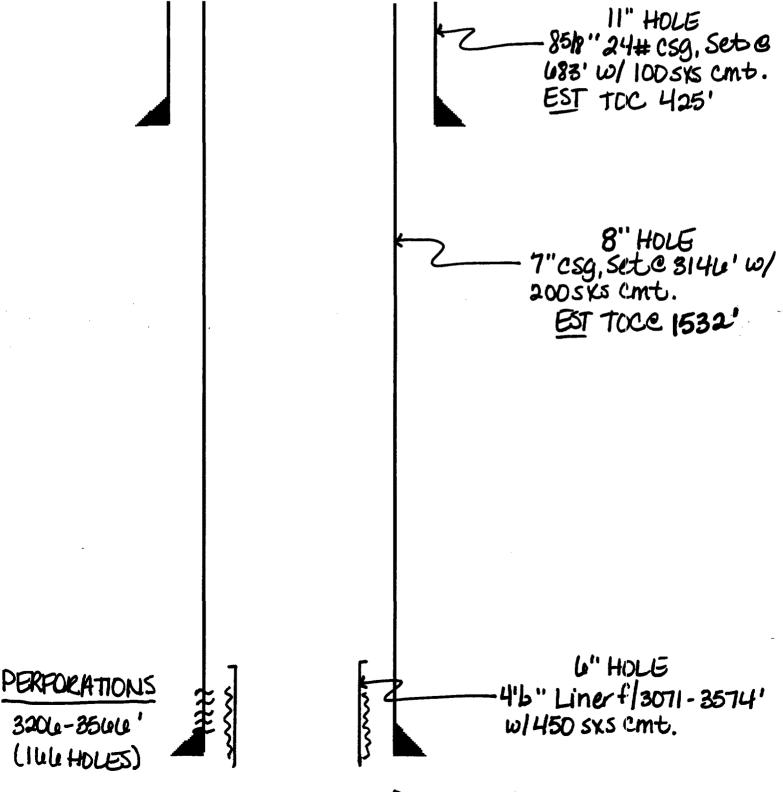
 Production Casing: 7" set @ 3146' w/200 sxs cmt.

 Est TOC @ 1532'. (8" hole)

 Please also refer to the wellbore schematic labeled Attachment III (schematic)
 - (3) Tubing will be 2-3/8" plastic coated 4.7#, set @ 2975'.
 - (4) A Baker J-Loc packer will be set @ 2975'
- B. (1) The injection formations will be the Grayburg/San Andres in the Grayburg/Jackson field.
 - (2) The proposed intervals are 3050-3950'. The injection interval will be open hole and through existing perforations 3206-3566'.
 - (3) This well was originally drilled and completed as an oil well. It produced from the Grayburg/San Andres Formations.
 - (4) Additional Perforations may be added in the 3050-3574' interval.
 - (5) The Top of the Seven Rivers Formation is approximately 2300', there are no known lower oil formations.

Devon Energy Operating Corporation Attachment III - Schematic EXISTING WELLBORE

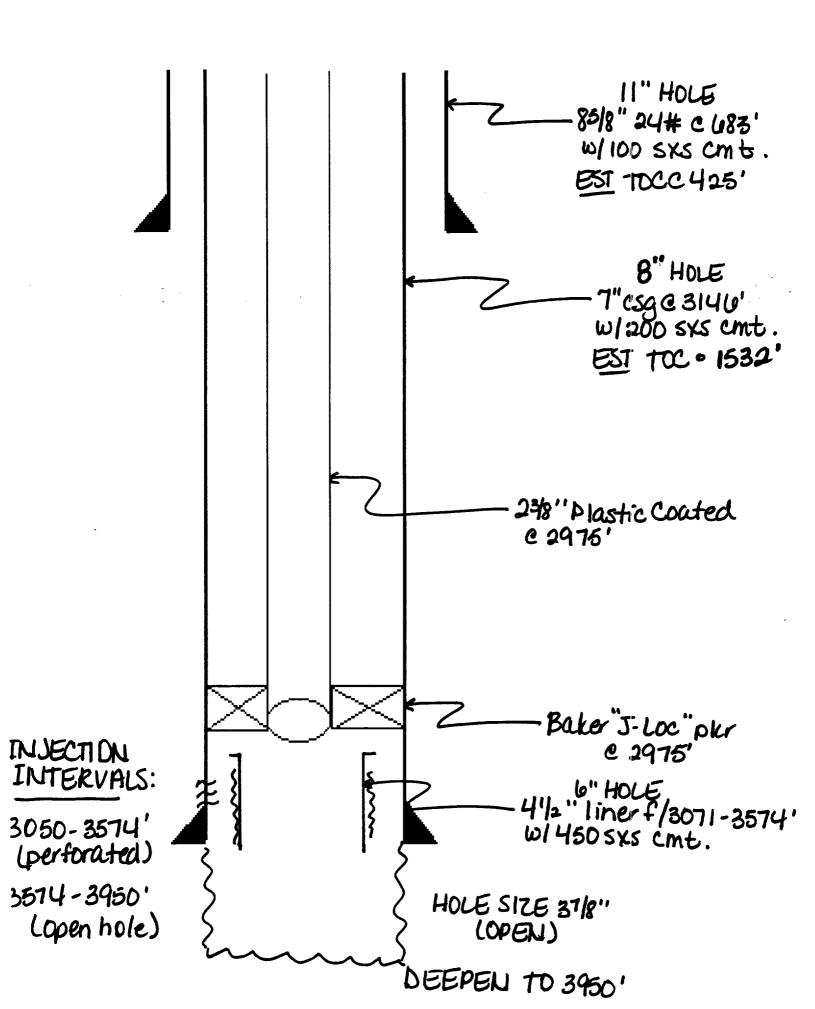
H.E. West "B" #11 1980' FSL 1980' FWL Section 4-17S-31E Eddy County, NM



PBTD 3572' TD 3574'

<u>Attachment III - Schematic</u> PROPOSED WELLBORE

H.E. West "B" #11 1980' FSL 1980' FWL Section 4-17S-31E Eddy County, NM



<u>Tabular Sum</u>		rea of Review"	
		MEL :	
roposed Injection Well	NAME	WELL#	Operator
West "A" #4	West B	3	DEOC
West "A" #4	West A	2	DEOC
West "A" #4	West A	7	DEOC
West "A" #4	West B	6	DEOC
West "A" #4	West B	5	DEOC
West "A" #4	West A	4	DEOC
West "A" #4	West A	6	DEOC
West "A" #4	West A	8	DEOC
West "A" #4	West B	73	DEOC
West "A" #4	West A	20	DEOC
West "A" #4	West A	24	DEOC
West "A" #4	West B	11	DEOC
West "A" #4	West A	5	DEOC
West "A" #4	West A	9	DEOC
West "B" #11	West B	3	DEOC
West "B" #11	West B	83	DEOC
West "B" #11	West B	75	DEOC
West "B" #11	West B	6	DEOC
West "B" #11	West B	5	DEOC
West "B" #11	West A	4	DEOC
West "B" #11	West B	84	DEOC
West "B" #11	West B	75	DEOC
West "B" #11	West B	86	DEOC
West "B" #11	West A	20	DEOC
West "B" #11	Keel B	16	DEOC
West "B" #11	West B	7	DEOC
West "B" #11	West B	11	DEOC
West "B" #11	West A	5	DEOC
West "B" #11	West A	9	DEOC
West "B" #11	Keel B	85	DEOC
West "B" #11	West B	87	DEOC
West "B" #11	West A	33	DEOC
West "B" #11	West A	19	DEOC
West "B" #11	West B	9	DEOC
West "B" #11	West B	27	DEOC
West "B" #11	West A	14	DEOC
West "B" #11	West B	77	DEOC
West "B" #11	West B	64	DEOC
West "B" #11	West B	29	DEOC
West "B" #6	Keel B	9	DEOC
West "B" #6	Keel B	16	
West "B" #6			DEOC
	Keel B	44	DEOC
West "B" #6	Keel B	45	DEOC
West "B" #6	Keel B	68	DEOC
West "B" #6	Keel B	70	DEOC
West "B" #6	Keel B	72	DEOC

West "B" #6	Keel B	84	DEOC
West "B" #6	Keel B	85	DEOC
West "B" #6	West B	3	DEOC
West "B" #6	West B	4	DEOC
West "B" #6	West B	5	DEOC
West "B" #6	West B	7	DEOC
West "B" #6	West B	9	DEOC
West "B" #6	West B	11	DEOC
West "B" #6	West B	73	DEOC
West "B" #6	West B	74	DEOC
West "B" #6	West B	83	DEOC
West "B" #6	West B	84	DEOC
West "B" #6	West B	86	DEOC
West "B" #6	West B	87	DEOC
West "B" #6	West A	4	DEOC
West "B" #6	M 33	4	Newmont
West "B" #6	West A	34	DEOC
West "B" #9	Keel B	12	DEOC
West "B" #9	Keel B	13	DEOC
West "B" #9	Keel B	14	DEOC
West "B" #9	Keel B	18	DEOC
West "B" #9	Keel B	50	DEOC
West "B" #9	Keel B	72	DEOC
West "B" #9	Keel B	74	DEOC
West "B" #9	Keel B	85	DEOC
West "B" #9	Keel B	87	DEOC
West "B" #9	Keel B	89	DEOC
West "B" #9	West B	5	DEOC
West "B" #9	West B	6	DEOC
West "B" #9	West B	7	DEOC
West "B" #9	West B	9	DEOC
West "B" #9	West B	10	DEOC
West "B" #9	West B	11	DEOC
West "B" #9	West B	27	DEOC
West "B" #9	West B	29	DEOC
West "B" #9	West B	64	DEOC
West "B" #9	West B	73	DEOC
West "B" #9	West B	77	DEOC
West "B" #9	West B	78	DEOC
West "B" #9	West B	84	DEOC
West "B" #9	West B	87	DEOC
West "B" #9	West B	88	DEOC
West "B" #9	West A	14	DEOC
West "B" #9	West A	33	DEOC

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1/15/64
7/9/52
9/24/81
7/8/52
1/4/64
A Para Carlo
4/24/52
1/22/64 WIW
1/4/64 WIW
1/29/52
Completion Date Type of Well

Perfs: 3131-4098' = 72 holes. 10/27/95 Oil 4325' 8-5/8" J-55 24# @ 550' in 12-1/4" hole w/380 sxs cmt, TOC Surf PBTD 4279' 5-1/2" J-55 15.5# @ 4324' in 7-7/8" hole w/1175 sxs cmt, TOC Surf. 2-7/8" tbg @ 4117' OE Perfs: 3223-4087' = 77 holes 10/3/95 Oil 4065' 14" cond @ 40', 8-5/8" J-55 24# @ 514' in 12-1/4" hole. w/380 sxs cmt, TOC surf. PBTD 4018 5-1/2" J-55 15.5# @ 4064' in 7-7/8" hole w/825 sxs cmt. TOC Surf. 2-7/8" tbg OE @ 3792.93'.	9/6/95	760' FEL	
Oil 4325' PBTD 4279' Oil 4065' PBTD 4018	9/6/95		
Oil 4325' PBTD 4279' Oil 4065'	9/6/95	2230' FSL	
Oil 4325' PBTD 4279'		ulu	J.L. Keel "B" #72
Oil 4325' PBTD 4279'		Sec. 5-17S-31E	
Oil 4325' PBTD 4279'		40' FEL	
Oil 4325'		1338' FNL	
Perfs: 3131-4098' = 72 holes.	9/21/96	" H"	J.L. Keel "B" #70
2-1/0 mg OF @ TIOZ :		Sec. 5-17S-31E	
2.7/8" the OE @ 4182"		1300' FEL	
PBTD 4217' 5-1/2" 15.5# @ 4264' in 7-7/8" hole w/975 sxs cmt. TOÇ-Surf.		1250' FNL	
11/4/95 Oil 4265' 8-5/8" 24# @ 506' in 12-1/4" hole w/380 sxs cmt, TOC Surf	10/1/95	"A"	J.L. Keel "B" #68
Perfs: 3041-3852' (54 holes)		Sec. 5-17S-31E	
2-7/8" OET @ 3903'.		1310' FEL	
PBTD 4112' 5-1/2" 15.5# @ 4166' in 7-7/8" hole w/1425 sxs cmt, TOC Surf		1310' FSL	
3/8/95 Oil 4167' 8-5/8" 24# @ 482' in 12-1/4" hole w/365 sxs cmt, TOC Surf	12/7/94	"P"	J.L. Keel "B" #50
Perfs: 3136-3730' = 149 holes.		Sec. 5-17S-31E	
2-3/8" tbg @ 3731' (OE)		1830' FEL	
PBTD 3828' 5-1/2" 17# @ 3883' in 7-7/8" hole w/1150 sxs HCL + 350 sxs "C" Est TOC		1930' FNL	
3/30/89 Oil 3883' 8-5/8" 24# @ 464' in 12-1/4" hole w/300 sxs cmt, Est TOC	2/13/89	"G"	J.L. Keel "B" #45
Perf'd 3641-3374' 194 holes.		Sec. 5-17S-31E	
2-3/8" tbg OE @ 3732'.		660' FEL	
PBTD 3800' 3082' w/200 sxs cmt, Est TOC 2204'.		660' FNL	
3/24/89 Oil 3916' 10-3/4" 32.75# csg @ w/100 sxs cmt, Est TOC @ '; 7" 24# csg @	1/31/89	"A"	J.L. Keel "B" #44
PBTD 3766' tbg w/pkr @ 2823'. Perfd 2879-3342' and 3450-3701' w/59 holes.			
6/16/95 WIW 3810' 4-1/2" 11.6# K-55 @ 3809' (6-1/4" hole) w/400 sxs cmt, TOC Surf. 2-3/8"		Sec. 8-17S-31E	
2" @ 2815'. Zone: 2985-3232'.		660' FWL	
5-1/2" 17# @ 3916' in 7-7/8" hole w/900 sxs HLC + 350 sxs "C". TOC Surf		660' FNL	
2/4/54 Oil 3232' 8-5/8" 24# @ 504' in 12-1/4" hole w/300 sxs cmt, TOC surf.	12/19/54	"D"	J.L. Keel "B" #18
Completion Date Type of Well Depth/PBTD Completion Record	Spud Date C	Location	Well Name

Well Name	Location	Spud Date	Completion Date	Type of Well	Depth/PBTD	Completion Record
J.L. Keel "B" #74	ָם מַיּ	8/1/95	9/11/95	Oil	4235	8-5/8" J-55 24# @ 464' in 12-1/4" hole w/500 sxs cmt, TOC Surf.
	338' FNL				PBTD 4187	5-1/2" J-55 15.5# @ 4234' in 7-7/8" hole w/1350 sxs cmt. TOC surf.
	1455' FEL					2-7/8" @ 4099' OE.
	Sec. 8-17S-31E					Perfs: 3130-4022' (71 holes)
J.L. Keel "B" #84	ij	7/3/95	8/13/95	ü	4220'	8-5/8" 24# @ 438' w/350 sxs cmt, TOC Surf
	2598' FNL				PBTD 4171'	PBTD 4171' 5-1/2" 15.5# @ 4219' w/900 sxs cmt, TOC Surf
	1293' FEL					2-7/8" OET @ 4093'.
	Sec. 5-17S-31E					Perfs: 3135-4066'. (84 holes)
J.L. Keel "B" #85	n n	8/29/95	10/15/95	liO	4290'	10-3/4" 32.75# csg @ w/100 sxs cmt, Est TOC @ '; 7" 24# csg @
	1341' FSL				PBTD 4242'	Est TOC 2204'.
	10' FEL					2-7/8" @ 4118' OE.
	Sec. 5-17S-31E		The state of the s			Perfs: 3153-4061' (65 holes)
J.L. Keel "B" #87	"A"	8/20/95	8/27/95	liO	4275'	8-5/8" 24# @ 513' in 12-1/4" hole w/380 sxs cmt, TOC Surf
	40' FNL				PBTD 4176'	5-1/2" 15.5# @ 4274' in 7-7/8" hole w/1500 sxs cmt, TOC Surf.
	40' FEL					2-7/8" OET @ 4108.72'.
	Sec. 8-17S-31E					Perfs: 3113-4069' (63 holes)
J.L. Keel "B" #89	"A"	8/11/95	9/27/95	Oil	4290'	8-5/8" 24# @ 519' in 12-1/4" hole w/500 sxs cmt. TOC Surf.
	1194' FNL				PBTD 4245'	5-1/2" 15.5# @ 4289' in 7-7/8" hole w/1540 sxs cmt. TOC Surf.
	100' FEL					2-7/8" @ 4127' OE.
	Sec. 8-17S-31E					Perfs: 3177-4033' (66 holes)

						Wtr Injection Sec.	Current Status: 19		H.E. West "A" #5									Temp. Aband. Sec.	Current Status: 19	19	H.E. West "A" #4				Oil Well Sec.	Current Status: 19	Ō	H.E. West "A" #2	
					111	Sec. 4-17S-31E	980' FEL	1980' FSL	ڀّ									Sec. 4-17S-31E	980' FEL	1980' FNL	" G"				Sec. 4-17S-31E	1980' FEL	660' FNL	₽	Location
					Management of the second of th	The state of the s		er og skringer skriveringer	10/20/54								8/23/62				8/7/54							2/5/48	Spud Date
					02/85				12/23/54	09/92		5/6/81	! ! ! !	9/12/63			9/19/62	i ! !			9/13/54	01/91	05/66	04/66	11/53			3/21/48	Completion Date
	WIW	 				1 1 1 1 1 1			O <u>i</u>	TA'd	 	WIWS	 	WIWT	 		DWIW	ı			Oil			电电电压器 医牙毛 医甲状状腺 医皮肤 医皮肤 医甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基				Oil	Type of Well
PBTD 4016	4070'	! ├							3650'												3341'							3494'	Depth/PBTD
TOC surf. Perf'd 53 holes f/3170-3580',	Deepen to 4070', Ran 4-1/2" 11.6# csg, set @ 4070, cmt'd w/365 sxs,	CO to 3650', SN @ 3170',	Perfd 2 JSPF @ 695', set pkr @ 582', Circ cmt thru csg ann, POOH w/pkr,	hole. C.O 7" bel hole.	Repair well: RBP set @ 3115' w/2 sxs sd. Found split in csg. Set pkr bel	Formation: 3276-81',	2" @ 3398'	7" @ 3169' w/200 sxs cmt, TOC 1500'.	8-5/8" @ 695' w/100 sxs cmt, TOC Surf	Well temporarily abandoned.	wtr into perfs 3242-3822'. (Single Wtr Injection well.)	POOH w/triple assembly. Set pkr @ 3167'. 4/28/61 commence injecting	(6) 3392-98'. Ran 2" tbg landed in 4-1/2" pkr @ 3450'.	Perf (1) 3242-44'; (2) 3252-54'; (3) 3296-98'; (4) 3304-06'; (5) 3382-86';	2" tbg @ 3600'. Inj 202 BW into perfs below pkr @ 3404'. Comp as a dual inj well.	3816-22' w/18 holes. 2" tbg to 3825', pkr @ 3735'.Perf'd 3331-3604' w/132 holes	Set 774' of liner @ 3842' cmt'd w/95 sxs. Perf'd 4-1/2" liner 3760-63' &	Formation: f/3326-3336'	2" @ 3283'.	7" set @ 3169' w/200 sxs cmt, TOC est @ 2356'.	8-5/8" set @ 706' w/100 sxs cmt. TOC est @ 600'	Began pumping well.	Perf Opn hole Grayburg 3340-3465' w/7 holes. Ran 2-7/8" tbg, set @ 3348'.	Run logs. Perf Open hole f/3343-3460'.	C.O f/3455-92' w/cable tools. set pkr @ 3285'. Ran 3155' of 2-1/2" tbg.	Shot f/3407-82' w/ 4-1/2" shell.	7" csg set @ 3338 w/150 sxs cmt, TOC Est @ 2728'.	10-3/4" 43# csg set @ 649' w/125 sxs cmt, TOC est @ 211'.	Completion Record

Well Name	Location	Spud Date	Completion Date	Type of Well	Depth/PBTD	Completion Record
H.E. West "A" #14	"O"	11/2/88	12/2/88	<u>©</u>	3935'	8-5/8" 24# set @ 542' w/350 sxs cmt, TOC Surf
	720' FSL				PBTD 3892'	5-1/2" 17# set @ 3935' w/1500 sxs cmt, TOC Surf
Current Status:	1980' FEL			' 1		2-7/8" @ 3774'
Wtr Injection	Sec. 4-17S-31E		02/95	WW	 	Drld out CIBP @ 3828' & CO to 3926', Perf 3886-3906',
						Set pkr @ 3065', Convert to Injection Well
H.E. West "A" #19	"P"	7/19/94	10/22/94	O <u>i</u>	4360'	8-5/8" 24# set @ 650' w/365 sxs cmt, TOC surf.
	1230' FSL				PBTD 4312"	5-1/2" 15.5# set @ 4360' w/1280 sxs cmt, TOC Surf
Current Status:	1305' FEL			-		2-7/8" @ 4259' (OE)
Oil Well	Sec. 4-17S-31E					Slaughter 4058-4259'; Jackson 3784-3851'; Premier 3445-3502';
						Loco Hills 3309-3317'; Metex 3350-3418'.
H.E. West "A" #20	"P"	11/14/94	1/25/95	<u>Q.</u>	4325'	8-5/8" @ 606' w/365 sxs cmt, TOC surf
	2525' FSL					5-1/2" @ 4324' w/675 sxs 35/65 poz + 425 sxs "C", TOC surf
Current Status:	1305' FEL					2-7/8" @ 4257' (OET)
Oil Well	Sec. 4-17S-31E					Formations: Slaughter f/4017-4246'; San Andres 3617-3878'; Grayburg
						f/3276-3503'.
H.E. West "A" #24	"A"	8/27/94	12/16/94	O <u>i</u>	4380'	8-5/8" FC @ 528' cmt w/365 sxs cmt. TOC Surf.
	2625' FNL				PBTD 4345'	5-1/2" FC @ 4345.75' w/955 sxs 35/65 poz & 510 sxs cl "C", TOC Surf
Current Status:	15' FEL					Formations: Slaughter 4108-4222' (21 holes), San Andres: 3650-3925' (22 holes),
Oil Well	Sec. 4-17S-31E					

Perfs: 3244-3972' (49 holes)					Sec. 4-17S-31E	
2-7/8" @ 4035'. OE					2622' FEL	
PBTD 4318' 5-1/2" J-55 15.5# @ 4364' in 7-7/8" hole w/975 sxs cmt, TOC Surf.	PBTD 4318'				1334' FNL	
8-5/8" J-55 24# @ 612' in 12-1/4" hole w/400 sxs cmt, TOC Surf.	4365'	Oil	11/19/95	10/29/95	ູ້ ຕູ	H.E. West "A" #34
Vacuum & Lovington f/3521-3628' (9), Grayburg f/3275-3462'.						
Formation: Slaughter f/3974-4211' (23 holes); Jackson f/3979-3901' (18);					Sec. 4-17S-31E	Oil Well
2-7/8" @ 4236' (OET)					2675' FWL	Current Status:
PBTD 4237' 5-1/2" 15.5# @ 4284' w/850 sxs "H" poz & 350 RFC. TOC surf.	PBTD 4237'				1299' FSL	
8-5/8" @ 601' w/165 sxs cmt, TOC surf.	4285'	Oil	4/25/95	2/7/95	"O"	H.E. West "A" #33
Completion Record	Depth/PBTD	Type of Well	Completion Date Type of Well	Spud Date	Location	Well Name

			_	_	Current Status: 66	H.E. West "B" #6							Current Status: 198	19	H.E. West "B" #5					Sec.	66		H.E. West "B" #4		Sec.	191		H.E. West "B" #3	Well Name Lo	
				Sec. 4-17S-31E	660' FWI	-						Sec. 4-17S-31E	1980' FWL	1980' FNL	Ţ,					Sec 4-17S-31F	660' FWL	660' FNI	"		Sec. 4-17S-31E	1980' FWL	660' FNL	"C"	Location	
			11/8/52			3/10/51				a para					8/11/50							-	6/7/46					8/14/64	Spud Date	
			11/28/52			5/10/95				09/66	07/63				10/12/50					5/16/81			10/2/46					-	Completion Date	
06/80	09/64	09/62	으			<u>S</u>				으	Pmpg Oil				ᄋᆲ					P&A			O <u>i</u>					īŋ.	Type of Well	
swiw	DWIW	WIW	3556			3314				1 1 1	3841'				3487'								3429'				55'	3800'	Depth/PBTD	
w/ 3/8" holes. Set ret in 7" csg @ 2958'. Ran 2" tbg to 2958' & squeeze 4-1/2" liner 3008-3519' w/88 sxs. Comp as a dual WIW POOH w/tbg & pkr. Inst BOP. RIH & set pkr @ 3112'. Return to inj 5/14/80	Set 511' of 4-1/2" liner w/150 sxs cmt. f/3043-3554'. Squeeze liner @ 3060'	Pulled rods & tbg. ran logs. Ld hole w/wtr. Started injecting wtr 300 BPM.	Deepen to 3556'. Formation: 3526-38'. 2" 4.7# tbg set to 3390'.	Formation: 3286-97'	7" tha set @ 3141'	10-3/4" set 669' w/100 sxs, TOC est @ 318'.	1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	3483' (18 holes): Lovinaton f/3548-58' (20 holes):	Pkr to 3648'. Perf liner Gravburg 3393-3425' (25 holes): Vacuum (/3472-	4-1/2" liner hung f/3105-3794', squeezed w/300 sxs. Csg scrapper to 3665',	Deepen well to 3841'. Pulled pkrs & RR 2-7/8" tbg to 3200'. (well on pmp)	Formation: 3331-3487'	2-1/2" tbg # 3266', Pkr @ 3463'.	7" 26# set @ 3186' w/150 sxs TOC surf.	10-3/4" 40.5# set @ 682' w/150 sxs cmt. TOC Surf	Spot 60' cl "C" cmt plug @ surf. CO WH, inst marker, Well P&A	between 8-5/8" x 7" ann. Spot 20 sxs cl "C" in 7" csg 682-582' (100') plug.	1759'. Pmpd 250 sxs cl "C". T	TOC @ 1860' Perfd 2 JSPF @ 1818-1820' Set pkr @ 1761'	POOH w/tha @ 3001' Set cmt retr @ 3007' Pmpd 150 sxs cl "C" cmt	Zone: 3285-3327'	7" csg @ 3097' w/125 sxs. Est TOC @ 2548'	8-5/8" csg @ 666' cmt w/125 sxs. Est TOC @ 466'	Perfd" 3210-3426' (132 holes)	2-3/8" tbg @ 3307' w/pkr set @ 3311'.	4-1/2" liner f/3227-3799' w/755 sxs cmt, Est TOL @ top	3291' w/200 sxs cmt, Est TOC @ 2158'.	10-3/4" 32.75# csg @ 714' w/100 sxs cmt, Est TOC @ 488'; 7" 24# csg @	Completion Record	

			Wtr Injection St	Current Status:		H.E. West "B" #11				wir injection Se	S:		H.E. West "B" #10	Wtr Injection S	Current Status:		H.E. West "B" #9	Oil Well Se	Current Status:		H.E. West "B" #7	Well Name
			Sec. 7-17S-31E	1980' FWL	1980' FSL	Τ,	- Company			Sec. 9-1/3-31E	660' FWL	1980' FNL	្នាំ	Sec 4-17S-31E	660' FWL	660' FSL	"Μ"	Sec. 4-17S-31E	660' FWL	1980' FSL	Т.	Location
						12/26/53							2/23/53				4/29/52				2/7/52	Spud Date
10/16/80	1	9/29/54				2/6/54	8/15/89		8/9/89		7/14/64		4/9/53		12/27/63		6/11/52		12/7/63		4/23/52	Completion Date
SWIW	WIW		 			<u>Oi</u>	WIW		1 1 1 1 1		WIW		Oil		WIW		Oil		O <u>i</u>	1 {	임	Type of Well
			1 1 1 1 1 1 1			3574'			1 1 1				3623'		3749'		3595'		3765'		3541'	Depth/PBTD
Squeeze cmt w/335 sxs. Comp as dual injection well Set pkr @ 3147, return to single wtr injection well.	Convert to wtr injection well 2-3/8" tbg @ 3385' w/pkr. Ran 503' of 4-1/2" csg f/liner. Perf 3334-36',	Ran 10-3/4" csg to 240', Ran 8-5/8" to 817', Pulled 240' of 10-3/4" & cmt'd 8-5/8" w/100 sxs.	Formation: 3146-3574'; 3290-3311'; 3540-3560'.	2" @ 3103'		8-5/8" @ 683' w/100 sxs, TOC est @ 523'.		2938'. Ready for injection	Perfd 31 new holes f/3190-3496', Ran Tbg & pkr, Set @	3242-52, 3302-05, 3331-34, 3345-56, 3358-61, 3364-67, 3410-16,	2-3/8" tbg @ 3040', Pkr @ 3040', Jet perf 112 holes 3161-67', 3209-15',	TOC est @ 2200'. 2-1/2" @ 3300'. Perf 3297-3313',	8-5/8" 24# @ 642' w/100 sxs, TOC est @ 482'. 7" 20# @ 3097' w/200 sxs,	f/3000-3780' w/125 sxs cmt, 2-3/8" tbg w/pkr to 2979'.	Deepen f/3544-3749', Perf G-SA 4 spf, 3158-3729' (224), Set 5" liner	Oil pay: 3198-3207', 3350-3359', 3410-23'.	8-5/8" 24# @ 678', 7" @ 3089', 2-1/2" @ 3595'. No cmt report available	Ran tbg to 3401'.	Deepen to 3765'.	w/200 sxs cmt, Est TOC 3379'	8-5/8" 24# csg @ 649' w/100 sxs cmt, Est TOC @ 490'; 7" 24# csg @ 3105'	Completion Record

							Se			H.E. West "B" #84	G			H.E. West "B" 83	S			H.E. West "B" 78					H.E. West "B" 77	Well Name
							Sec. 4&5-17S-31E	10' FWL	2620' FSL		Sec 4-17S-31E	1283' FWL	1195' FNL	"D"	Sec 9-17S-31E	660' FWL	510' FNL	ם יי			1210' FWL	111' FSL	"M"	Location
										9/13/95				101/9/95				11/3/95					10/26/95	Spud Date
										10/6/95				12/12/95				12/7/95					12/10/95	Completion Date
										Oil				Oil				으					Oil	Type of Well
									PBTD 4275'	4230'			PBTD 4292'	4330'			PBTD 4044'	4090'				PBTD 4284'	4330'	چ ا
				the state of the s					2-7/8" @ 3908' (OE). Perfd Middle Jackson f/3673-3779',	8-5/8" 24# @ 516' w/380 sxs cmt, 5-1/2" 15.5# @ 4319' w/1050 sxs cmt,	Perfs: 3205-3795' (37 holes)	2-7/8" @ 3855.15' (OET)	5-1/2" 15.5# @ 4329' w/875 sxs cmt, TOC Surf.	8-5/8" 24# @ 540' w/450 sxs cmt, TOC surf.	Perfs: 3144-3888'	2-7/8" @ 3943' (OET)	5-1/2" 15.5# @ 4089' w/1075 sxs cmt, TOC surf.	8-5/8" 24# @ 550' w/380 sxs cmt, TOC Surf.	Perfd 3110-4056 (65 holes)	2-7/8" Tbg OE @ 4095'.	5-1/2" 15.5# @ 4329' w/1225 sxs cmt, TOC Surf	8-5/8" 24# @ 556' w/400 sxs cmt, TOC Surf		Completion Record

Well Name	Location	Spud Date	Completion Date Type of Well	Type of Well	Depth/PBTD	Depth/PBTD Completion Record
H.E. West "B" 86	"K"	4/1/95	5/17/95	일	4360'	8-5/8" 24# @ 607' w/325 sxs cmt TOC Surf
	2588' FSL				PBTD 4320'	PBTD 4320' 5-1/2" 15.5# @ 4359' w/1325 sxs cmt TOC Surf
	2526' FWL					2-7/8" OFT @ 4297 85'
	Sec. 4-17S-31E					Perfs: 3162-4167' (58)
H.E. West "B" 87	, N	10/18/95	12/9/95	Oi	4345'	8-5/8" 24# @ 545' w/450 sxs cmt, TOC Surf
	1310' FSL				PBTD 4298'.	PBTD 4298'. 5-1/2" 15.5# @ 4344' w/1150 sxs cmt, TOC Surf
	1308' FWL	The first of the Market and American Company of the				2-7/8" OET @ 4147'.
	Sec. 4-17S-31E					Perfs: 3120-4089' (66 holes)
H.E. West "B" 88	" "	11/10/95	12/21/95	<u>©</u>	4345'	8-5/8" 24# @ 551' w/380 sxs cmt TOC Surf
	1309' FNL			-	PBTD 4297'	PBTD 4297' 5-1/2" 15.5# @ 4344' w/1565 and 380 sxs cmt TOC Surf
	1310' FWL					2-7/8" OET @ 3943'
	Sec. 9-17S-31E					Perfs: 3172-3882'. (44 holes)

			NON	NON-OPERATED WELLS IN AREA OF REVIEW	/ELLS IN /	REA OF F	REVIEW
Well Name	Operator	Location	Spud Date	Completion Date	Type of Well	Depth/PBTD	Date Type of Well Depth/PBTD Completion Record
Johnson "B" #14	Suppes, GB	510' FSL	5/20/48	7/18/48	D&A	3798'	8-1/4" @ 532', 5-1/2" @ 3279' w/150 sxs cmt.
		2130' FEL					See attached plugging schematic
		Sec. 33-16S-31E					
Johnson #16	Mercury Prod Co.	330' FSL	6/6/55	7/24/55	으	3597	8-5/8" @ 583' w/50 sxs cmt, TOC Est @ 503'
		2310' FEL					5-1/2" @ 3561' w/50 sxs cmt, TOC Est @ 3370'
		Sec. 33-17S-31E					IP: 3428-3597' 47 BOPD.

Well Information and Downhole Schematics Plugged and Abandoned Wells within Area of Review **Devon Energy Corporation** Grayburg/Jackson Waterflood Project

Well Name: J.L. Keel "B" #16 Location: Section 5-17S-31E

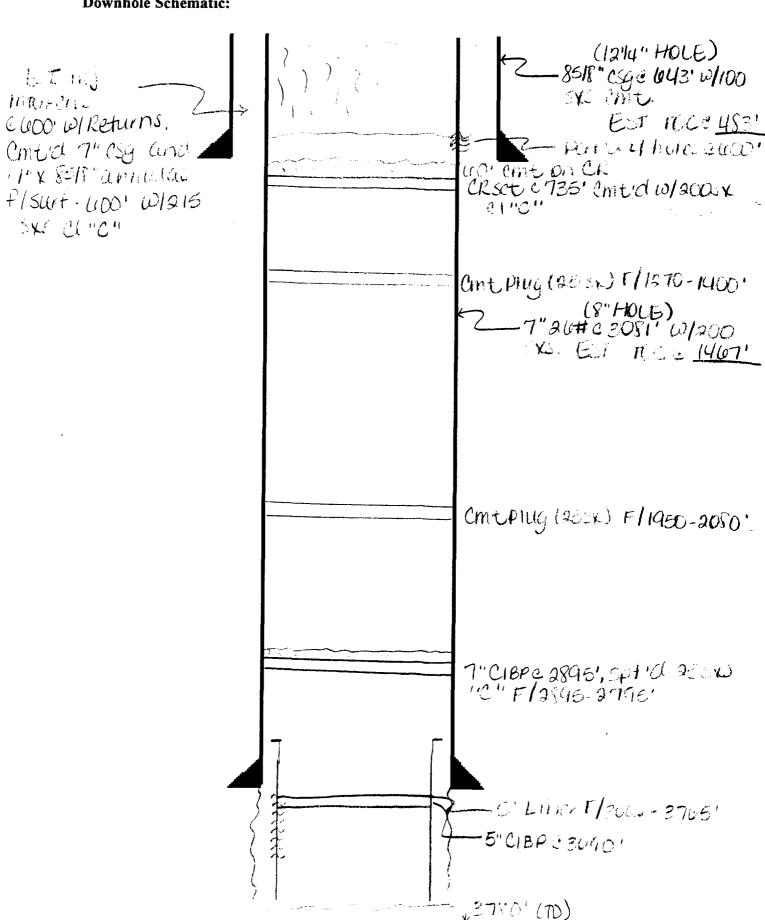
Operator (at time of plugging): ARCO Oil and Gas Company

Date Plugged: 5/24/86

Information Obtained From: BLM Sundry Notice

Comments: CIBP @ 3090', CIBP @ 2895' w/25 sxs cmt on top. 25 sxs cmt plug f/1950-2080'. 25 sx cmt plug f/1270-1400'. CR 735' w/60' on CR. Perf'd 4 holes @ 600' cmt inside & outside of 7" csg to surface w/215 sxs. C/O WH. Inst dry hole marker & 10' cmt plug @ surf.

Downhole Schematic:



Well Information and Downhole Schematics Plugged and Abandoned Wells within Area of Review Devon Energy Corporation Grayburg/Jackson Waterflood Project

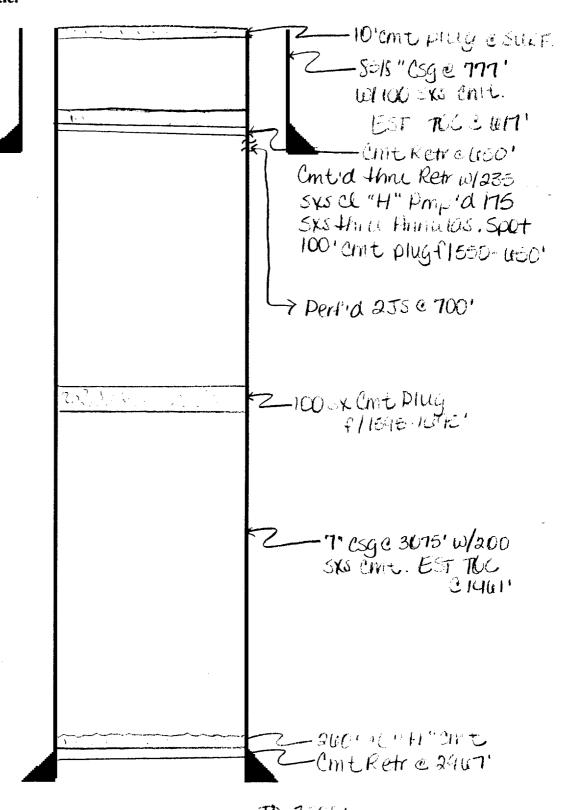
Well Name: J.L. Keel "B" #15 Location: Section 8-17S-31E Operator (at time of plugging):

Date Plugged: 9/24/81

Information Obtained From: BLM Sundry Notice

Comments: POOH w/3077' tbg. Cmt retr set @ 2967'. Spotted 260' cl "H" cmt on top of retr. Spt 100' cmt f/1595-1695'. Perf'd 2 JS @ 700'. Set cmt retr @ 650'. Cmt'd thru retr w/235 sxs cl "H". Pmpd 175 sxs thru ann. Spot 100' cmt plug on top of retr @ 650'. Spot 10' cmt @ surf. CO WH. Inst dry hole mrkr. Well P&A.

Downhole Schematic:



Well Information and Downhole Schematics Plugged and Abandoned Wells within Area of Review Devon Energy Corporation Grayburg/Jackson Waterflood Project

Well Name: Johnson "B" #14 Location: Section 33-16S-31E

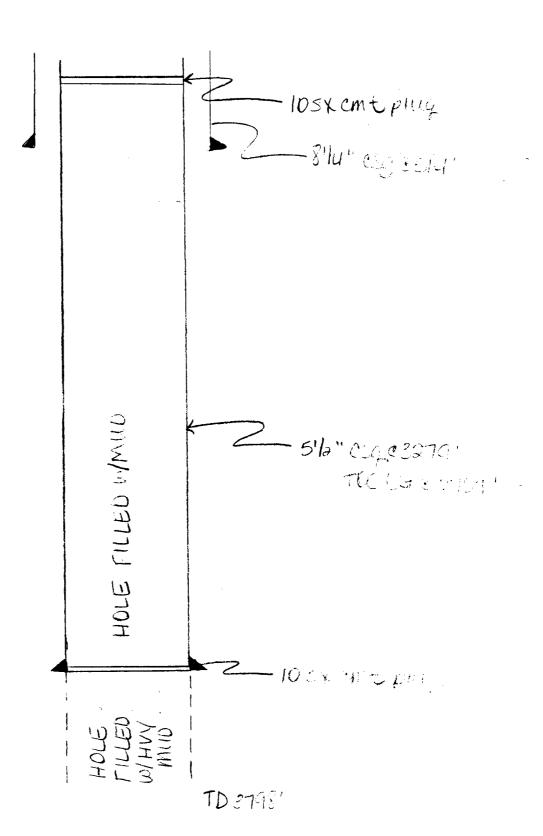
Operator (at time of plugging): Suppes

Date Plugged: 1948

Information Obtained From: BLM Sundry Notice

Comments: Plugged by filling hole with heavy mud 3798' back to 5-1/2" setting depth of 3280'. Set 10 sx cmt plug @ 3280'. Filled hole w/mud f/ 5-1/2" to 510'. Set 10 sx cmt plug @ 110'. Filled hole w/mud to surface. (TD 3798')

Downhole Schematic:



Well Information and Downhole Schematics Plugged and Abandoned Wells within Area of Review Devon Energy Corporation Grayburg/Jackson Waterflood Project

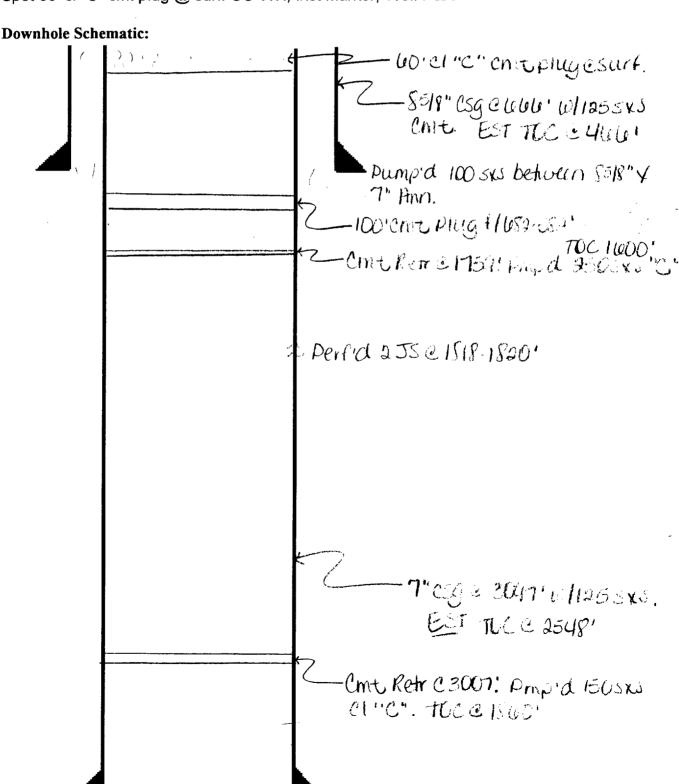
Well Name: H.E. West #4 Location: Section 4-17S-31E Operator (at time of plugging):

Date Plugged: 5-16-84

Information Obtained From: BLM Sundry Notice

Comments:

POOH w/tbg @ 3001'. Set cmt retr @ 3007'. Pmpd 150 sxs cl "C" cmt TOC @ 1860'. Perf'd 2 JSPF @ 1818-1820'. Set cmt retr @ 1759'. Pmpd 250 sxs cl "C". TOC @ 1600'. Pmpd 100 sxs between 8-5/8" x 7" ann. Spot 20 sxs cl "C" in 7" csg 682-582' (100') plug. Spot 60' cl "C" cmt plug @ surf. CO WH, inst marker, Well P&A



TD 2420.

Attachment VII

Devon Energy Operating Corporation "Typical Well Information" Grayburg/Jackson Waterflood Project Eddy County, NM

Proposed Operation:

- 1. Plans are to inject 600 barrels maximum, 500 barrels average of produced water per day.
- 2. The Injection system will be a closed system.
- 3. The proposed injection pressure is 2000 psig. Maximum pressure will be 2500 psig.
- 4. The injection fluid will be reinjected produced water; Plus makup water from the Keel West Fresh Water System.
- 5. N/A.

Attachment VIII

Devon Energy Operating Corporation "Typical Well Information" Grayburg/Jackson Waterflood Project Eddy County, NM

Geology and Lithology

Injection zones are sand lenses within the Grayburg/San Andres formation at an average depth of 3196-4070 feet.

Specifically they are:

Grayburg Formation consist primarily of Dolomite sand w/Dolmide Cementation. The San Andres formation consists primarily of Dolomite with Intermingled Stringers of Quartz sand with Dolomite Cementation.

Fresh Water Zones

There are no known sources of fresh water overlying or underlying the Proposed Injection Interval.

Attachment XII

Devon Energy Operating Corporation "Typical Well Information" Grayburg/Jackson Waterflood Project Eddy County, NM

No evidence of fault communication between the shallow aquifers and the proposed injection zones has been encountered as the result of detailed studied of formations in Grayburg Jackson Unit.

Attachment XIII

Devon Energy Operating Corporation "Typical Well Information" Grayburg/Jackson Waterflood Project Eddy County, NM

Proof of Notice

Devon Energy Operating Corporation operates the Grayburg Jackson Unit in Sections 3,4,9 and 10. Notices had previously been sent to all operators in each of these sections.

Attachment XIII (cont)

Proof of Publication

Proof of Publication from the Carlsbad Current-Argus is enclosed.

Affidavit of Publication

State of New Mexico,

County of Eddy, ss.
Amy McKay,
being first duly sworn, on oath says:
That she is Business Manager of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the state wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:
July 26, 19 95
,19
,19
,19
That the cost of publication is \$ 25.70, and that payment thereof has been made and will be assessed as court costs. Subscribed and swom to before me this
27th day of July , 1995
My commission expires 08/01/98
Notary Public

July 26, 1995

LEGAL ADVERTISEMENT

Notice is hereby given that Devon Energy Corporation (Nevada) is applying to the New Mexico Oil Conservation Division to convert twenty (20) wells to injection wells for secondary recovery purposes in:

Sections 3, 4, 9, & 10 of Township 17S, Range 31E, Eddy County, NM

The intended purpose of these wells is to inject produced waters into the Grayburg/San Andres Formations to enhance oil production through secondary recovery. Maximum injection rates of 600 bwpd and a maximum pressure of 2500 psig are expected.

Interested parties must file objections or requests for hearing within 15 days to the following commission.

Oil Conservation Division P.O. Box 2088 Santa Fe, NM 87501

Randy Jackson
District Engineer
Devon Energy Corporation
(Nevada)
20 North Broadway,
Suite 1500
Oktahoma City, OK 73102
(405) 552 4560