

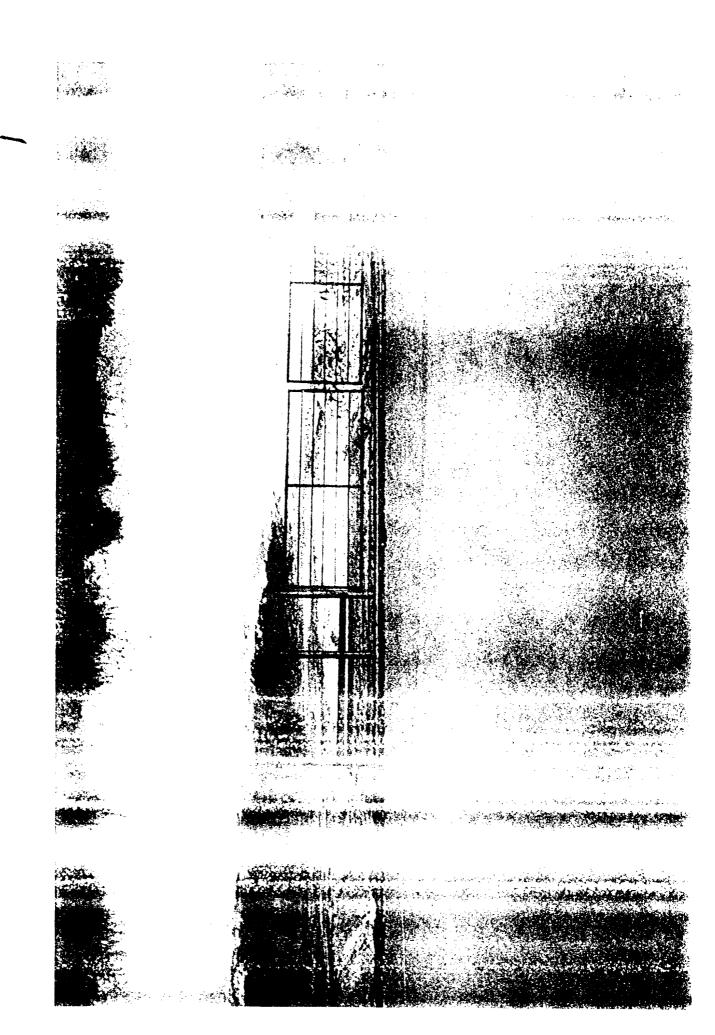
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 1050 Exhibit No. 1050
Submitted By: 5 1050
Submitted By:

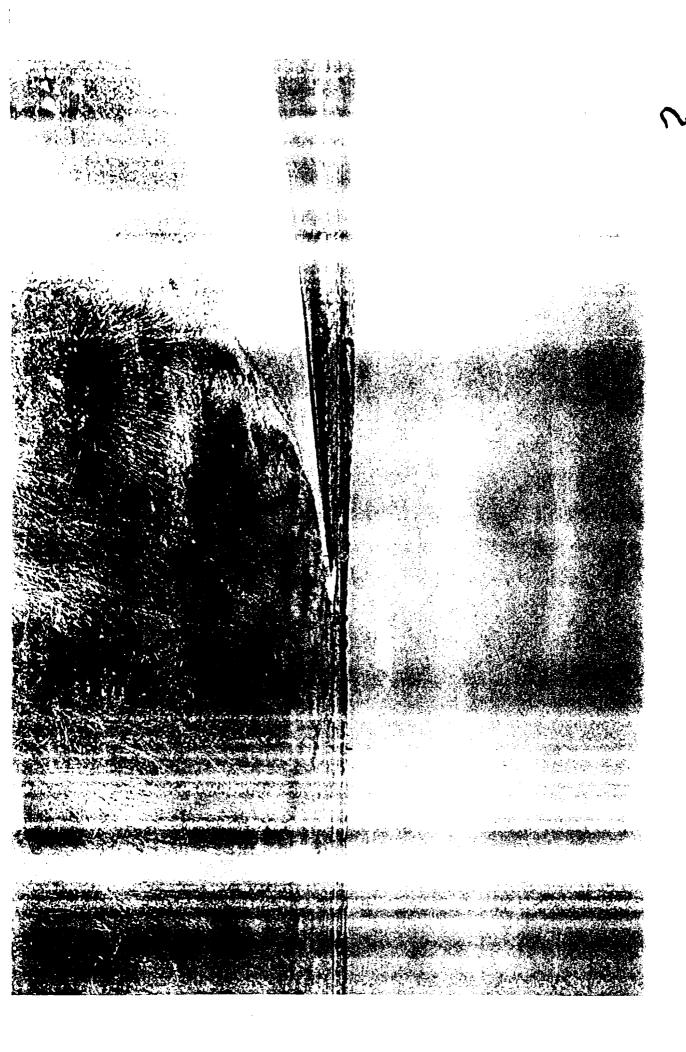


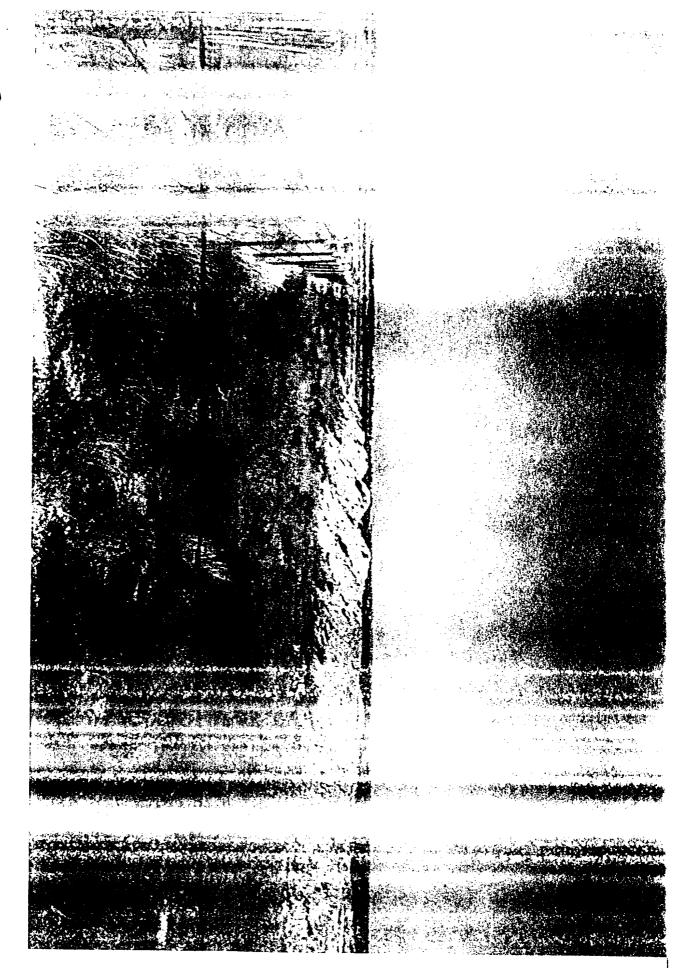
HOBBS, NEW MEXICO 882

Information (Clarification) of Photographs:

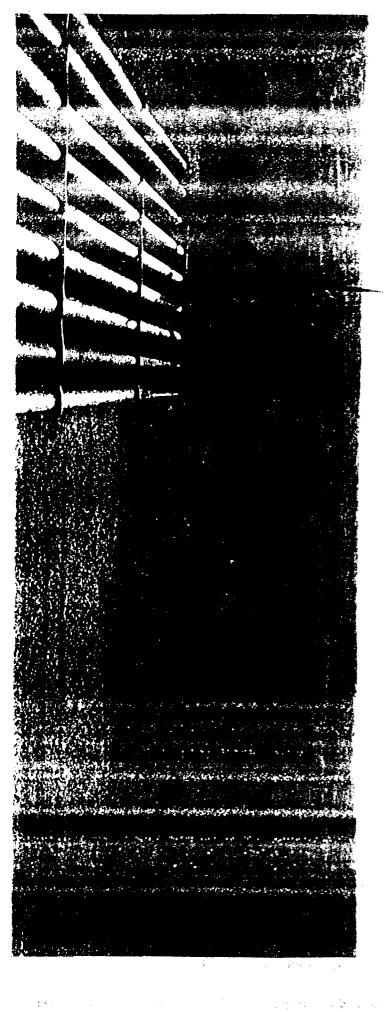
- Entrance to Cooper Facility. Photograph from East to West.
- S-W Cattle Co. State Land with gravel pit. Photograph from southeast corner of Cooper to the south.
- #3 Photograph from southeast corner of Cooper to the west.
- Photograph from southeast corner of Cooper to the east.
- Photograph from southeast corner of Cooper to the north. **#5** -
- Photograph of Cooper Facility from southeast corner showing decline of terrain to the west and southwest.
- #7 East monitor hole.
- #8 Middle monitor hole which is locate approximately 700' from southeast corner of Cooper Facility. Shows the decline of terrain and a draw that runs north and south - to the S-W Cattle Co. windmill.
- #9 Photograph from middle monitor hole to the northeast.
- #10 Southwest monitor hole on Cooper Facility.
- #11 Southwest monitor hole photograph from southwest corner of Cooper to the northeast.
- #12 Photograph from southwest corner of Cooper Facility to the west showing north - south draw.
- #13 S-W Cattle Company windmill. Photograph taken from southwest corner of Cooper.
- #14 S-W Cattle Company windmill. Photograph taken from southeast corner of Cooper Facility.
- #15 Photograph of Cooper Facility taken from dry hole on BLM land (Conoco -Britt B23).
- #16 Photograph of windmill taken from dry hole on BLM land.
- #17 Photograph from windmill to northeast.







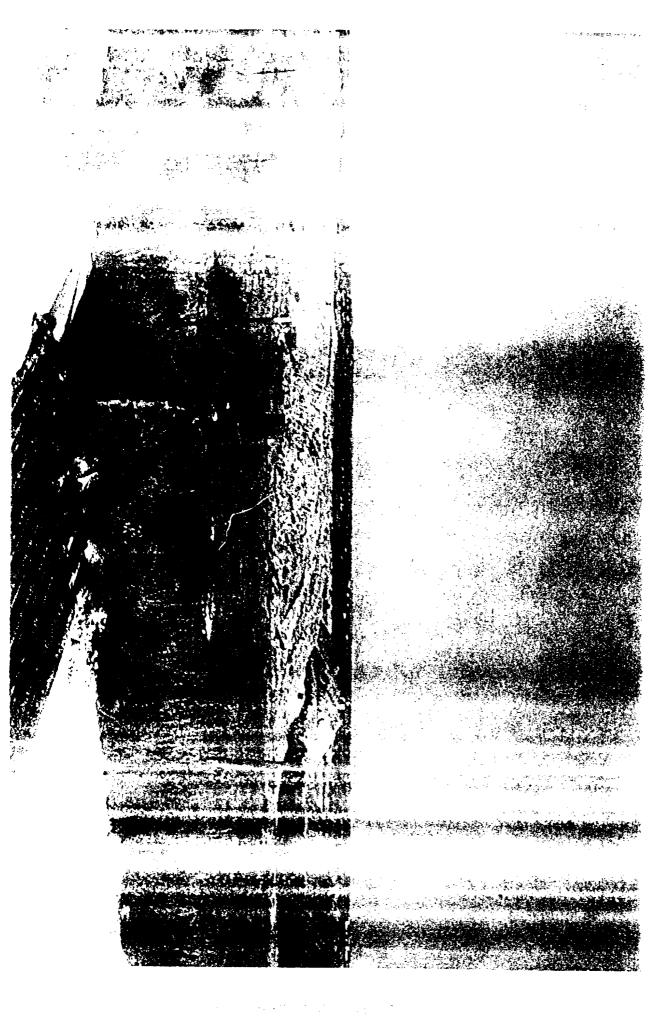




Land - La Back



<u>'</u>

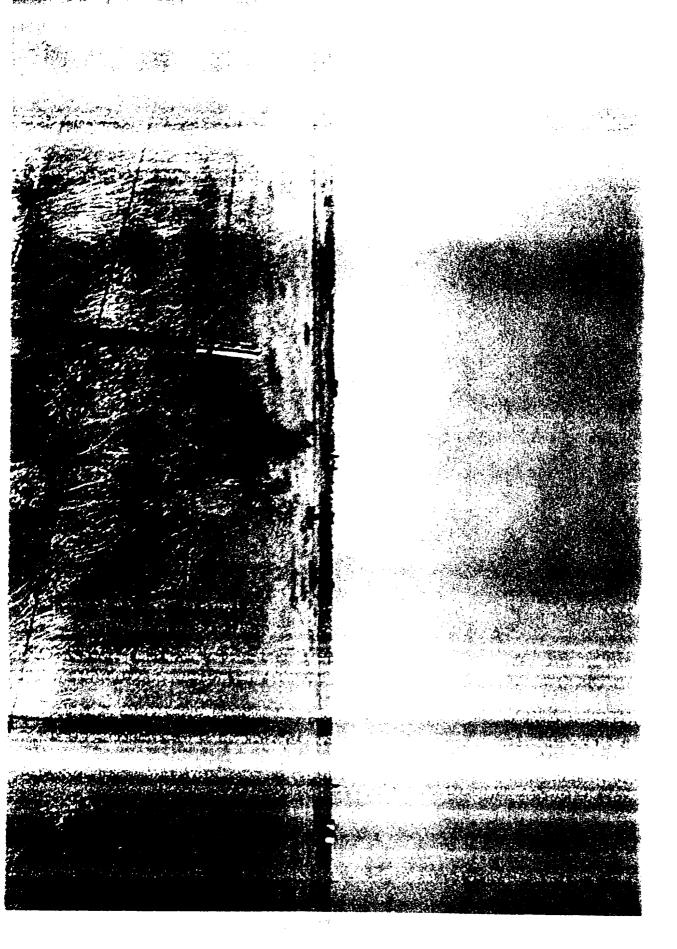


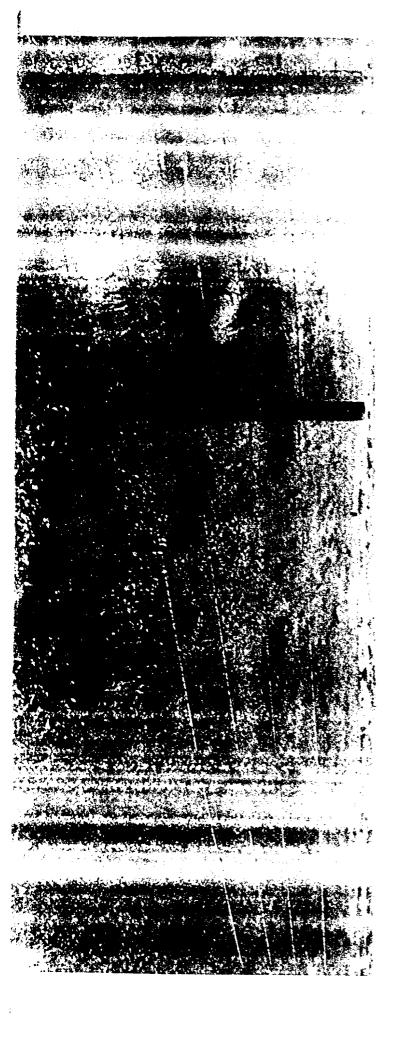


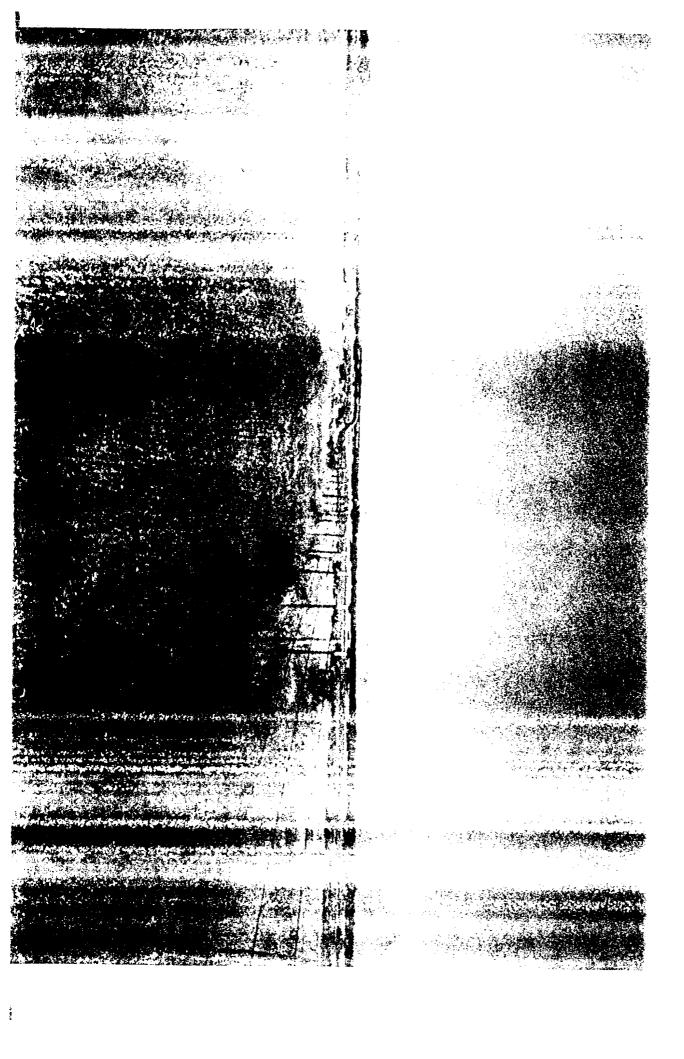
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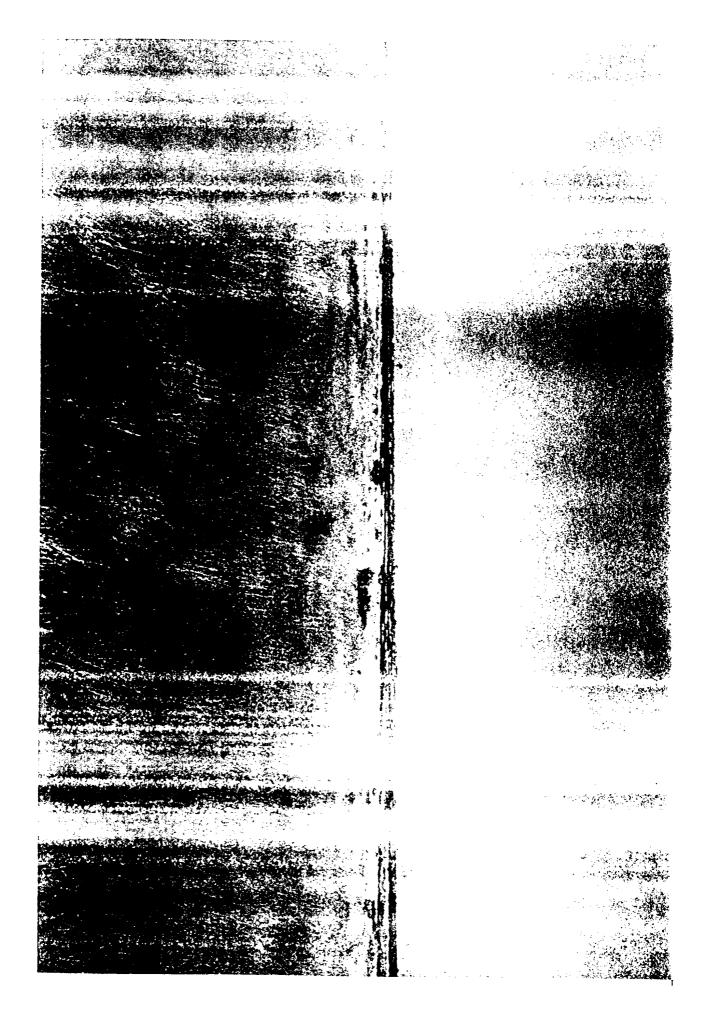


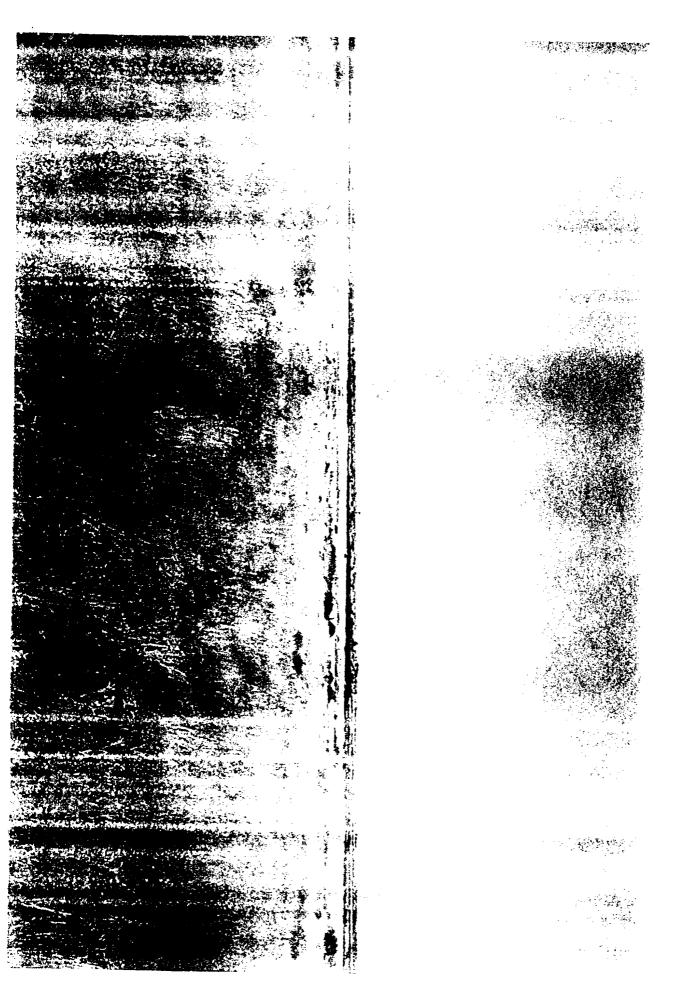


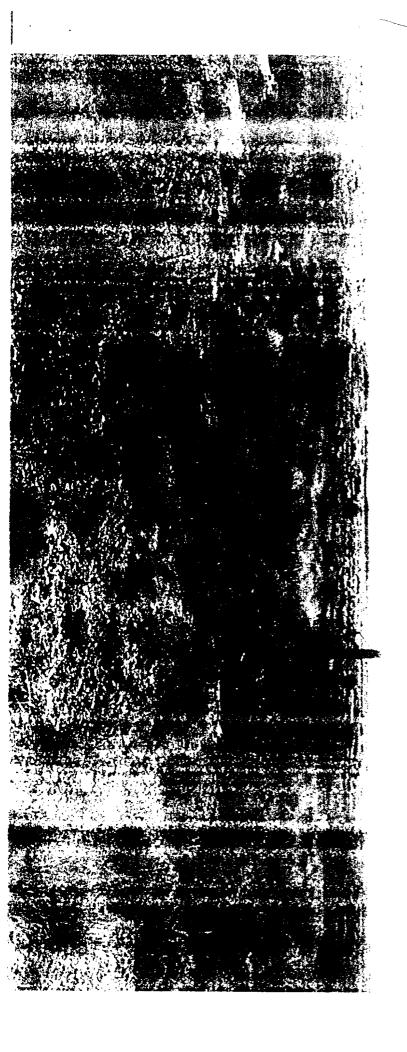


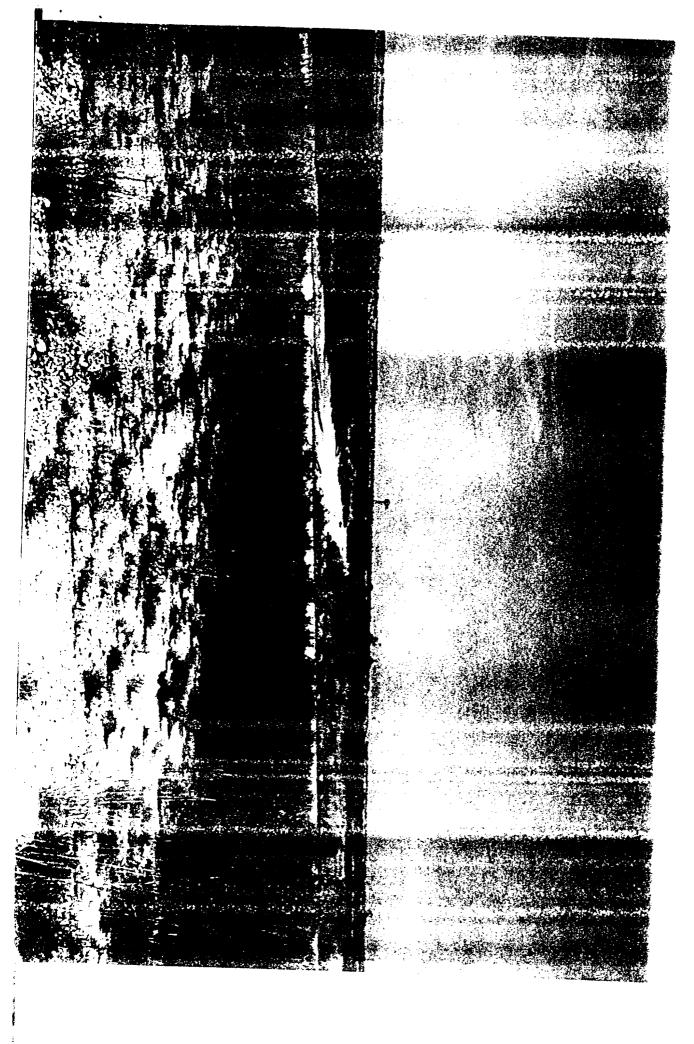


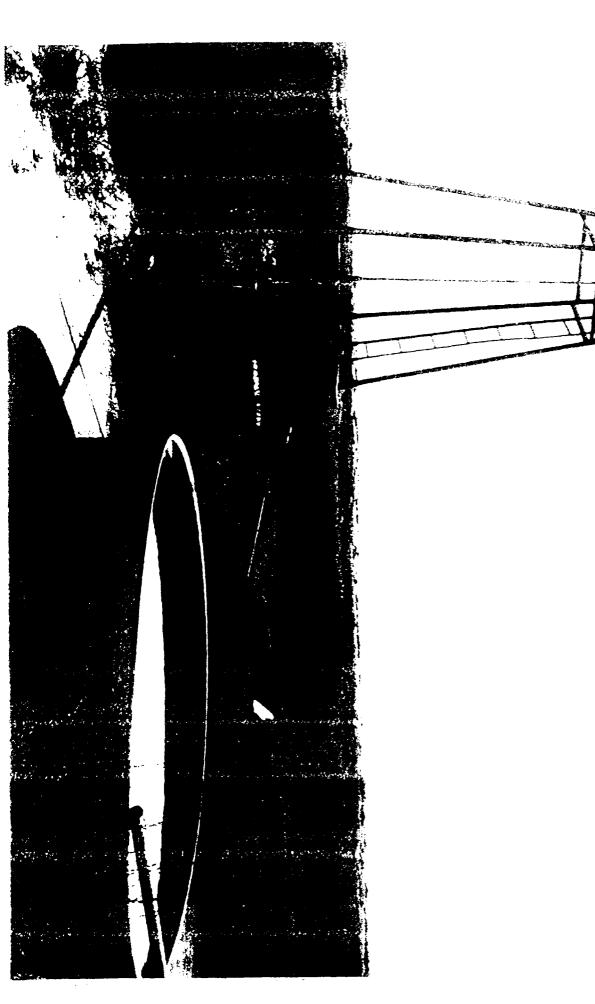














July 20, 1992

Mr. Tom Kellahin Kellahin and Kellahin P.O. Box 2265 Santa Fe, NM 87504-2265

Dear Mr. Kellahin:

Enclosed please find copies of the analyses of three water samples taken from weils.

These waters show a marked similarity in their chemical and physical properties. The greatest variance is in their sodium concentration, due mainly to differences in the amount of sodium sulfate present. However, calcium, magnesium, chloride, and bicarbonate concentrations are almost identical in all samples. Hardness (CaCO3) and pH are very close in all samples. There was no iron, carbonate, or hydroxide found in any of the samples.

It appears these three samples have the same source.

We appreciate the opportunity to do this work for you.

Sincerely,

Gayle A. Potter

LOSU? 5-W Coulte
Hearing Date:



## CHEMICAL ANALYSIS OF WATER

Company: Kellahin and Kellahin

City, St.: Santa Fe, NM

Proj. Name: Location:

PARAMTER RESULT (mg/L)

					3, 4,	
SOOUING		1	2	SAMPLE 3	4	5
SODIUM(Calculated)		1296	328	1666		
CALCIUM		180	140			
MAGNESIUM			140	120		
IRON		24	<b>6</b> 1	49		
·		0	Ó	0		
SULFATE		2850	1100	2700		
CHLORIDE				3700		
CARBONATE		266	106	177		•
		Ó	0	0		
BICARBONATE		<b>2</b> 8	24	29		
HYDROXYL	į	o				
TOS			Q	Ó		
PH		4645	1759	5741		
		8.5	8.3	8.5		
RESISTIVITY (um/cm)		2.103/cm	A AEE (			
HARDNESS AS CaCO3			7.435/01	n 1.614/cm	i	
		<b>5</b> 50	601	500		

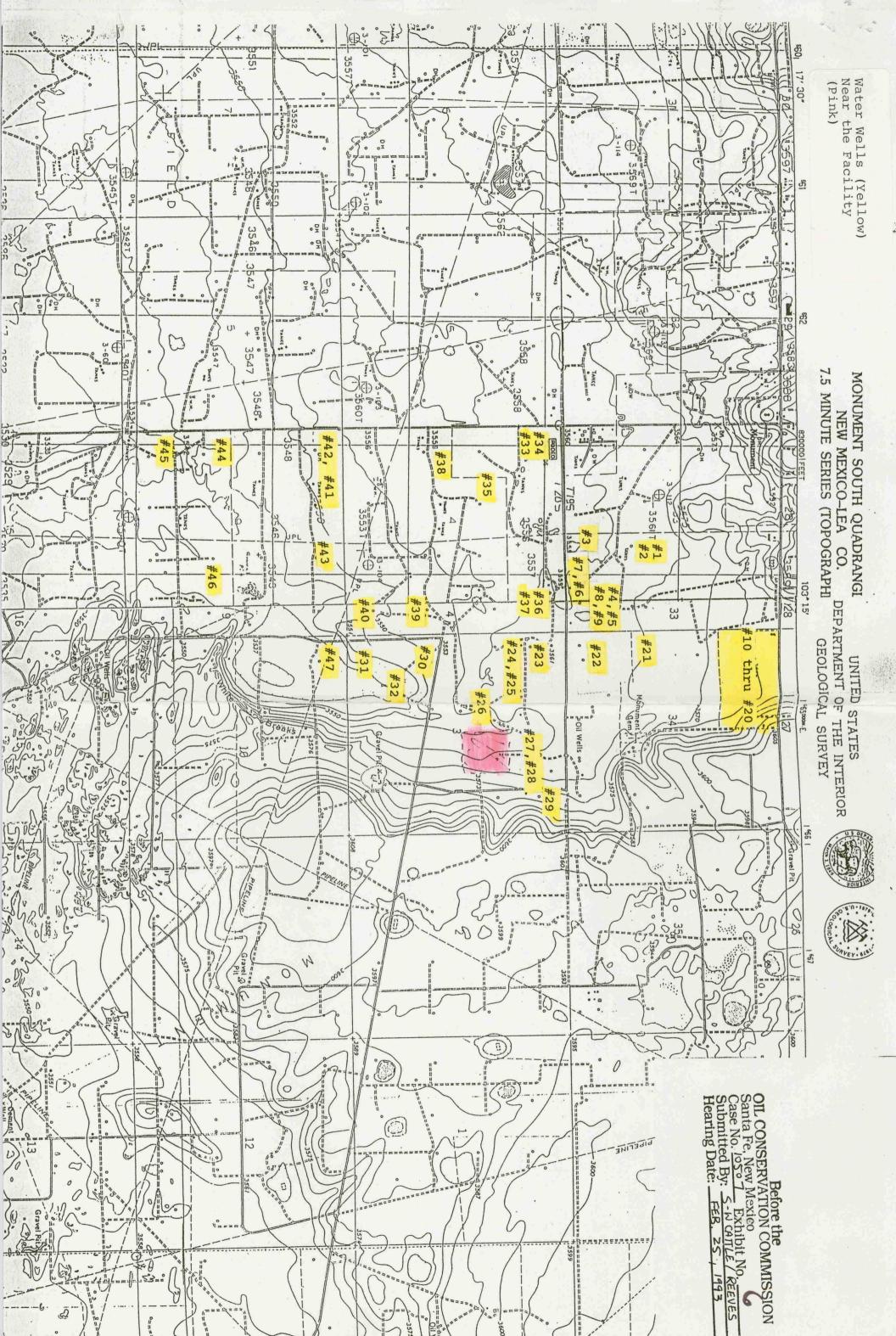
Gayle A. Potter

Lab #: 1421

Windmill

NE 1/4 SE 1/4 Sec 9, R205, T37E

NW 1/4 SW 1/4 Sec 9, R205, T37E 2 3



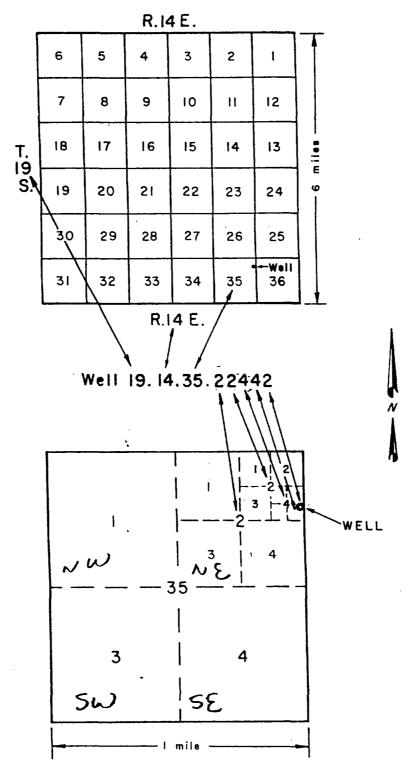
## Water Wells Near the Facility with Depth to Water Level in Feet

#### Township 19 South, Range 37 East:

#1	Sec	33.4132	Water	Level	39 <b>′</b>
#2	Sec	33.41341	Water	Level	35 <b>′</b>
#3	Sec	33.434	Water	Level	29′
#4	Sec	33.442122	Water	Level	23′
#5	Sec	33.442142	Water	Level	31′
#6	Sec	33.44322	Water	Level	42′
#7	Sec	33.44323	Water	Level	31′
#8	Sec	33.44441	Water	Level	42′
#9	Sec	33.444411	Water	Level	31'
#10	Sec	34.111114	Water	Level	22′
#11	Sec	34.11140	Water	Level	30 <b>′</b>
#12	Sec	34.11223	Water	Level	35 <b>′</b>
#13	Sec	34.11233	Water	Level	24′
#14	Sec	34.11233	Water	Level	20′
#15	Sec	34.112333	Water	Level	24'
#16	Sec	34.112334	Water	Level	23′
#17	Sec	34.1124	Water	Level	36′
#18	Sec	34.11243	Water	Level	35 <b>′</b>
#19	Sec	34.11323	Water	Level	24′
#20	Sec	34.12133	Water	Level	36 <b>′</b>
#21	Sec	34.31313	Water	Level	25′
#22	Sec	34.3441	Dry		

#### Township 20 South, Range 37 East:

- #23 Sec 3.11100 Water Level 37'
- #24 Sec 3.1130 Water Level 55'
- #25 Sec 3.13100 Water Level 37'
- #26 Sec 3.14000 Water Level 40'
- #27 Sec 3.21000 Water Level 540'
- #28 Sec 3.212434 Water Level 541'
- #29 Sec 3.221344 Water Level 541'
- #30 Sec 3.31100 Water Level Unknown
- #31 Sec 3.33300 Water Level 28'
- #32 Sec 3.34131 Water Level 15'
- #33 Sec 4.111311 Water Level 30'
- #34 Sec 4.111312 Water Level 29'
- #35 Sec 4.14000 Water Level 70'
- #36 Sec 4.22100 Water Level 37'
- #37 Sec 4.221321 Water Level 31'
- #38 Sec 4.312434 Water Level 29'
- #39 Sec 4.42000 Water Level 35'
- #40 Sec 4.44411 Water Level 20'
- #41 Sec 9.112114 Water Level 34'
- #42 Sec 9.112122 Water Level 29'
- #43 Sec 9.21000 Water Level Unknown
- #44 Sec 9.31113 Water Level 25'
- #45 Sec 9.33122 Water Level 13'
- #46 Sec 9.41411 Water Level 30'
- #47 Sec 10.11000 Water Level Unknown



Tracts within a section

So by 1 3 "

## Water Wells Near the Facility with Depth to Water Level in Feet

Before the OIL CONSERVATION COMMISSION Santa Fe. New Mexico
Case No. 10501 Exhibit No. Submitted By: S-W CATLE - REEVES
Hearing Date: FEB. 25, F163

#### Township 19 South, Range 37 East:

#1	Sec	33.4132	Water	Level	39'
#2	Sec	33.41341	Water	Level	35 <b>′</b>
#3	Sec	33.434	Water	Level	29′
#4	Sec	33.442122	Water	Level	23′
#5	Sec	33.442142	Water	Level	31′
#6	Sec	33.44322	Water	Level	42′
#7	Sec	33.44323	Water	Level	31'
#8	Sec	33.44441	Water	Level	42′
<b>#</b> 9	Sec	33.444411	Water	Level	31′
#10	Sec	34.111114	Water	Level	22′
#11	Sec	34.11140	Water	Level	30 <b>′</b>
#12	Sec	34.11223	Water	Level	35 <b>′</b>
#13	Sec	34.11233	Water	Level	24′
#14	Sec	34.11233	Water	Level	20′
#15	Sec	34.112333	Water	Level	24′
#16	Sec	34.112334	Water	Level	23′
#17	Sec	34.1124	Water	Level	36'
#18	Sec	34.11243	Water	Level	35 <b>′</b>
#19	Sec	34.11323	Water	Level	24′
#20	Sec	34.12133	Water	Level	361
#21	Sec	34.31313	Water	Level	257
#22	Sec	34.3441	Dry		

#### Township 20 South, Range 37 East:

- #23 Sec 3.11100 Water Level 37'
- #24 Sec 3.1130 Water Level 55'
- #25 Sec 3.13100 Water Level 37'
- #26 Sec 3.14000 Water Level 40'
- #27 Sec 3.21000 Water Level 540'
- #28 Sec 3.212434 Water Level 541'
- #29 Sec 3.221344 Water Level 541'
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- #44 Sec 9.31113 Water Level 25'
- #45 Sec 9.33122 Water Level 13'
- #46 Sec 9.41411 Water Level 30'
- #47 Sec 10.11000 Water Level Unknown

#### SECTION 33

Township 19 South, Range 37 East

# STATE ENGINEER OFFICE WELL RECORD

#### Section 1. GENERAL INFORMATION

Street or	Post Office Ad	R. Willi	215				Own	er's Well No	0	
City and	State	Monu	ment, P	IM 88265	<del></del>	<del></del>	<del></del>			
Well-was drilled	under Permit	No. L-	9681		_ and i	s located	in the:			
a <u>SW</u> _						•	19 <b>S</b> Ra	_		
b. fract	No	of Map No		of the	e					
		of Block No l in						<del> </del>		
		_ feet, Y=			.M. Co		ystem			
(B) Drilling	ontractor	Joe R. Wi	lliams			· · ·	_ License No	WD-107	88	
Address	Box 21	5 <b>,</b> M		· ·	265					
Dulling Began	February	, 1986Comp	leted Fe	bruary, 19	9.86 <sub>ype</sub>	tools	Cable Too	1 Size o	of hole_	12" in.
Flevation of lar	nd surface or _	3,,20	00*	at we	11 is_3	200+-	_ ft. Total dept	h of well_	52	<u>.</u> ft.
Completed wel	is 💌 st						upon completio	n of well		ft.
Depth From	in Feet	Thickness in Feet		CIPAL WATE			<del></del>		timated	
39	5 <b>2</b>	13	Wa	ter sand	and	grav	el		g./n	
2 22								1		
						<del></del>	<del></del>	-		
								<del> </del>	<del></del>	
		l				<del></del>		<u></u>		
1	1			n 3. RECORD in Feet	<del></del>			<del></del>	Danfa	rations
Diameter (inches)	Pounds pgr foot	Threads per in.	Тор	Bottom		ength feet)	Type of Sh	100	From	То
10	steel				1	0	· · · · · · · · · · · · · · · · · · ·		0	
l		Section	n 4 RECOI	RD OF MUDD	ING A	ND CEMI	FNTING	<u></u>		<u></u>
Depth		Hole	Sack	s C	ubic F	eet		nod of Plac	ement	
From	То	Diameter	of M	ud o	f Ceme	ent				
0					<u>.</u>					
			·							
	•			n 5. PLUGGII		CORD				
Plugging Contr. Address	_					No.	Depth i	n Feet	Ct	ibic Feet
Plugging Metho Date Well Plug						1	Тор	Bottom	of	Cement
Plagging appro	ved by:					2				
		State Engi	neer Repres	entative		3 4				
			FOR USE	OF STATE E	NGINE	ER ONL	Y			**************************************
Date Received	July 22,	1986		Ouad	I		FWL		FSI	
File No.	L-9681						Location No.			
гие Мо.							Location No			

Section 6. LOG OF HOLE

Depth	no beet	Thickness	Color and Type of Material Encountered
. From	10	in Feet	Color and Type of Material Inconnected
. 0	2	2	Brown surface soil
2	12	10	Red clay soil
12	20	8	White caliche rock and soil
50_	39	19	White-grey clay
39	5 <b>2</b>	13	White-grey clay to red bed at 52 ft.
	-		,
Maria Mariana America			
-			
		,	
		L	

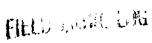
Section 7. REMARKS AND ADDITIONAL INFORMATION

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

ANSTRUCTIONS: This for of the State Engineer. All one, except Section 5, shall be answered as completely and accurately drilled, repaired or deepened. Then this form is used as a plugging record, only Section 1(a) and Section 5 ced be completed.

## STATE ENGINEER OFFICE

WELL RECORD



#2

#### Section 1. GENERAL INFORMATION

(A) Owner of Street or I City and S	wellJoe_l Post Office Ad State Albue	R. Williams Idress _ querque, Ne	P. O. B	ox 2051 o. 87103		Owner	's Well No.	
					_ and is located	in the:		
							<b>37</b> F	
			•					N.M.P.M.
b. Tract l	N	of Map No	<del></del>	of the	·			
		of Block No d in						
		_ feet, Y=						Zone in Grant.
(B) Drilling C	ontractor <u>G</u>	ade Oldakei	<u> </u>		····	_ License No. W	D-657	<u></u>
Address P.	(). Box 23	21, Hobbs,	Ne wMex	ico, 88240	<del></del>			
Drilling Began	4/24/80	Comp	leted <b>4/25</b>	/80	_ Type tools <b>r</b>	otary	Size of I	nole 10½ in.
Flevation of lan	d surface <b>or</b> =	3650		at wel	l is3650	_ ft. Total depth	of well	_45ft.
Completed well		hallow 🔲 ar				upon completion		
Completed vien	., (						or wen	
Depth i	n Feet	Secti Thickness	ion 2. PRIN	CIPAL WATER	R-BEARING ST	RATA	Fetim	ated Yield
	То	in Feet		Description of	Water-Bearing Fo	ormation		per minute)
1	45	10	Wa	ter, Sand			<b>2</b> 5 G1	PM
		L		on 3. RECORD	OF CASING	<del></del>		
Diameter	Pounds	Threads		in Feet	Length	m		Perforations
(inches)	per foot	per in.	Тор	Bottom	(feet)	Type of Sho	e Fre	om To
6 5/8		<u> </u>	0	45	45	none	25	45
		-L	an A BECO	DD OF MUDD	ING AND CEMI	ENTING		
Depth i	n l'ect	Hole	Sac		bic Feet	·	1 - 6 DI	
Lrom	То	Diameter	of M	lud of	Cement	metno-	d of Placem	ent
		10½						
		<u> </u>				· <del></del>		
			Section	on 5. PLUGGIN	G RECORD			
					No.	Depth in I	Feet Bottom	Cubic Feet of Cement
Date Well Plugg	ed	<del></del>						
Plugging approv	ed by:				3		·	
		State Engi	neer Repres	sentative	4			
en vol. t.	_		FOR USE	OF STATE EN	GINEER ONL	Y		····
Date Received	June 2	23 <b>,1980</b> 二/3						FSL
	7513 <b>-S-</b> 2	•		Τt				
Little May				Han II	\I\• ,	19	1 37 33 4	13/11

Section 6. LOG OF HOLE Depth in Feet Thickness Color and Type of Material Encountered in Feet From 0\_ \_3\_ Top Soil 20 3... 23 Caliehe 1... 23\_ Sand . 45\_... OFFICE

The undersigned here by certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

INSTRUCTIONS: This fe of the State Engineer, A.

hould be executed in triplicate, preferably typewritten, and submitted tions, except Section 5, shall be answered as completely and accurate drilled, repaired or deepened. When this form is used as a plugging record, only Section 1(a) and Section

appropriate district office s possible when any well is need be completed.

### Section 1. GENERAL INFORMATION

						webb Owne			
Well was drilled	under Permit	No.2 P			and is locate	ed in the:			
						Rar	nge/	1.	_N.M.P.M.
							1		
						•			
Sabdi	ision, recorde	d in	Lea		County.				
				feet,	N.M. Coordinat	e System		·	Zone in Grant.
(B) Drilling (	contractor <u>2</u>	-Bus	S Dr.	Hilly .	<u>(</u> 0	License No2	V i	97	<u>C'</u>
Address	· x 83	- >-	1101	6	N. Al.	·			
Dalling Began	1.118	8/ Co	mpleted $\mathcal{I}_{\ell}$	22/8/	Type tools _	Rotary	Size of	hole.∠	in.
				,		ft. Total depth			
Completed well		hallow 🔲				er upon completion			
Depth	a Leet	Thickne		CIPAL WAT	ER-BEARING S	STRATA	Esti	mated Y	ield
1	10	in Fee	ı	escription o	f Water-Bearing	Formation		is pei m	<b>I</b>
37	43'	14	11	late	v <u>. a</u>	n d	2. 1	<u> </u>	PM.
		<u> </u>				· · · · · · · · · · · · · · · · · · ·		<del></del> -	
1	· · · · · · · · · · · · · · · · · · ·	·			D OF CASING	<del></del>	· 	n. r	<del></del>
Drameter (mches)	Pounds per foot	Threads per in.	Depth Top	Bottom	Length (feet)	Type of Sho	oe Perforation From		1 o
السلط الأسلام			+1 abose	-431	44'	open		4'	431
,		Sec	tion 4. RECOR	D OF MUD	DING AND CE	MENTING			
Depth from	n Feet To	Hole Diameter	Sack of Mu		Cubic Feet of Cement	Method of Placement			
			_					<del></del>	
							· · · · · · · · · · · · · · · · · · ·		
1	- v			<u>.</u>			<del></del>		
Distriction Control			Section	n 5. PLUGG	ING RECORD				
Plugging Contr. Address					No.	Depth in	Feet	Cul	oic Feet
Playing Methodate Well Plays	wd					Тор	Bottom	of	Cement
Playgling appro-	· · · · · · · · · · · · · · · · · · ·	State F	ngineer Represe	entative	3				
<del></del>			·						
Date Received	August 3,	1981	FOR USE		ENGINEER ON				
File No	L-8501		······································	•	N ATU	FWL _			
		5	Te 77			5E45W4	_		

Section 6. LOG OF HOLE

Depth Trom	in freet	Thickness in Feet	Color and Type of Material Encountered
<i>O</i> .	5-1	5'	TOP Soil & Sand R. 1916
			Top Soil & Sand Brown + And Son.  Broken Rock & Caliche white + Brown  Water Sand Jan to Brown
29	29'	14'	Water Sand Jan to Brown
- · ·	·		
	·		
-			
	- ·		
~ <u>-</u>	 		
and the second second			
	; 		
			· · · · · · · · · · · · · · · · · · ·
	·		C. DEMARKS AND ADDITIONAL INCOMA STORY

Section 7. REMARKS AND ADDITIONAL INFORMATION

Co

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole

INSTRUCTIONS This fe of the State Empireer, A

hould be executed in triplicate, preferably typewritten, and submitted tions, except Section 5, shall be answered as completely and accurat dulled, repaired or deepener. When this form is used as a plugging record, only Section 1(a) and Section

a appropriate district office a possible when any well is need be completed.

PAGE

629

UNIOUE NUMBER IN 20 30 30012900148	E ME P		COUNTY FORMATION	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
O MENDRELL SIN. CSG.	TATUM-LOVHOSSS		BAGHE MAMIN	# 2
DRUHT STARA NO THE	19 8 37 833.442122		LOCATION	
	UNKNOWN SE SE NE 4		O 気 20m カ	
	3563.00	1 1 1 1 1 1	ALTITUDE	
	30.	1 1 1 1 1	OMPTH	

(1) (1) (1) MATHR LEVEL 0 14 11 MEAST NELEM WATER CHVIII

JAN. 29 1975 22.52 ひみずま WATER LEVEL 1 1 1 1 1 1 DATE WATER LEVEL

۲. انا ا UNIQUE NUMBER IS 259000012297:IPR. WELL WITH 16 IN. CSS. TURBINE PUMP & WAT. GAS ENGINE. FILE L-744-S. COUNTY MODELLE E V 35 の Lの13 名 とは iii TARUSTIOV. THOUSE LOCATION 19 S 37 E33.44.411 COY COYAL SE"SE" O SE 21131 ALTITUDE 3559.20

> DEPTH 1111

> > 1

TEB. 23 [] [] [] 1961 1961 MATER LEVEL 30.00 30.00 30.00 30.00 C+ -+ |||| MATER LEVEL 30.77 JAN. 20 1971 DATE WATER LEVEL DATE WATER LEVEL 27.15 JAN. 29 1976 23.57 JAN. 20 1981 CATE WATER LEVEL 29.93

### STATE ENGINEER OFFICE

### WELL RECORD

# G

### Section 1. GENERAL INFORMATION

A) Owner o	of vell	oy har	gya],	7	<del> </del>	Owner	r's Well No	
Street o	of vell	ddress P. (unice, i	New Mex.	88231			<u> </u>	
	ed under Permit					ed in the		
'ell was drift	ed ander l'ermit	No	77 5 2	23 3	_ and is locat	19-S Ran	37	
J	i, HW ,	/4 1/4 _	¼ of Se	ection	Township	19-5 Ran	ge	N.M.P.M
b And	t l ->	of Map N	o	of the	·		······································	
	No hysion, recorde							
d. Xe., the						te System		
3) Drilling	Contractor	1 . L. V	an Noy			License No	D-208	
ddress				enter. N				
						spudder		
levation of L	ac I surface <b>or</b> =			at we	ll is XX	ft. Total depth	of well	50 ft
	alis 🔁 s					ter upon completion		
		Se		ICIPAL WATEI				
	rint cet	Thickne	L	Description of	Water-Rearin	Formation	Estimated	
ZZ From	10	in Feet					(gallons per	minute)
. Ш	30							
31	36	5	Co	ourse san	ıd .		70	
					·			
-		-						<del></del>
-	!	<u> </u>						
		·   · · · · · · · · · · · · · · · · · ·		on 3. RECORD	T			<del>-   .</del>
Diameter (molies)	Pounds per foot	Threads per in.	Top	in Feet Bottom	Length (feet)	Type of Sho	e From	orations To
) )	and dod		0	50	50	none	34	50
		Sec	tion 4. RECO	RD OF MUDD	ING AND CE	EMENTING		
Depth From	i in leet To	Hole Diameter	Sactof M		ubic Feet f Cement	Metho	d of Placement	
· —————								<del></del>
								<del></del>
							<del></del>	<del></del>
			Section	on 5. PLUGGIN	IG RECORD			
	liactor					D- 0	<u> </u>	
	ned				No.	Depth in Top		Cubic Feet of Cement
ate Well Piu lugging appr	pped		<del></del>	······································				
midden for		State Fr	ngineer Repres	entativo				
. =	* 11 <del>Till and and</del> the	Grait El	- <del></del>	<del></del>				+
		1 4 3		OF STATE E	NGINEER OI	NLY		
ate Received	⊢Sept <b>emb</b>	er 14, 1	LJ//					
			LJ//			FWL		•

			Section 6. LOG OF HOLE
Depth Fron	in freet To	Thickness in Feet	Color and Type of Material Encountered
<u>0</u>	<u>5</u> 25	5 20	top soil caliche
$\alpha_{j}$	3.1	6	firm sand rock
31	36	5	course water sand,
36	45	9	red XIXX shale
1,5	50	5	red clay.
<u> </u>			
	<u> </u>		
			Contact Str. 36
			tion 1 to 3527
			1 19.37.33 442142 Habitania 19.00 FB
			Hall Area ( ) Prof. LB
			Configure on a treater GI/133
	,,,, <u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>		Secretary of the second of the
<del></del> -			
yr a mae gan a canada a c			
<u></u>			\$77. 77
		Section	7. REMARKS AND ADDITIONAL INFORMATION
			14 July 14
			ER OFFICE

the undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

W. L. Vin Jan Daller

of the State Engineer, 7

INSTRUCTIONS: This for should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office tions, except Section 5, shall be answered as completely and accura drilled, repaired or deepene. When this form is used as a plugging record, only Section 1(a) and Secti-

s possible when any well is oneed be completed.

# STATE ENGINEER OFFICE WELL RECORD

### Section 1. GENERAL INFORMATION

A) Ovener (d	well	Joe R. W	Rox 215			Owr	ner's Well No.	L-9127
Street or Cry and	Post Office A	ddress	Monumen	t, New M	exico 88	265		
'ell was drift :	ander <b>Permit</b>	NoL-912	7		_ and is located	t in the:		
a. SW	4 SE_ 9	4 <u>SE</u>	¼ of Sec	ction <u>33</u>	Township _	<b>19-5</b> R	ange <u>   37=</u> E	N.M.P
b. Tract	· (1)	of Map No.	·	of the	·			
		of Block No						
d 3						System		Zone
the								
O Duiling (						License No	•	
ldress .				•		3265		*
				•		Rotary		
						ft. Total dept		
supple ed wes	ias I <b>A</b> I s	shallow 🗀 a				r upon completic	on of well	40'
Depth	in Feet	Thickness			R-BEARING S' Water-Bearing I			nated Yield
lifon 1	1 <sub>6</sub> 8	in Feet				Omation		s per minute)
*t&*	,40	9.	Dai	nd and G	ravel		1.0	gal./min.
				·	<del></del>			
		.1	Section	3. RECORD	OF CASING			
Diajareter (inches)	Pounds per foot	Threads per in.	Depth i		Length (feet)	Type of Si	100	Perforations
6.#			above S					6 52
<del>-</del>				<u>, , , <del></del></u>				
	· ·							
a.		Secti	ion 4. RECOR	RD OF MUDD	ING AND CEN	IENTING		
Deptie for an	in freet	Hole Diameter	Sack of Mu	4	tbic Feet Cement	Metl	hod of Placen	nent
								· · · · · · · · · · · · · · · · · · ·
		j						
i	t	ť	Section	n 5. PLUGGIN	G RECORD			
og <mark>ging (Co</mark> nt). Idress						Depth i	n Feet	Cubic Feet
regine Metho de Well Phoe					No.	Тор	Bottom	of Cement
ezemp appro-	.ed by: 1	1		· ·	3			
	t 	State Eng	gineer Represe		4			
its Received		11 10			NGINEER ONI			
		ary 11, 19	<b>1</b> 00			FWL		,
Life ive	L-9127			Use D	om & D & S	Location No.	19.37.3	3.44322

Section 6. LOG OF HOLE

Depth		Thickness in Feet	Color and Type of Material Encountered
From	10	1 <sub>4</sub> ,0	P
() <sup>†</sup>	4.		Brown top soil and clay dirt
	81	74.8	Clay dirt and rock
8 <b>1</b>	13'	5'	Grey flint and caliche rock
	33'	201	Brown clay dirt
33 <u>*</u>	)+2 <u>1</u>	9:	Clay and some sand
421	50 1	81	White sand and Gravel
5 <b>Q</b> 1	52 <b>'</b>	21	Red clay (Red Bed)
	-		
	·		
	·		
			1 ( Cloy 35.45)
			1 ( Nov. 2007) Double to 1 1. 50
			1
			1
Nation			n or see that the K
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			$(m, r) \in \{-r\}$
			popular to the terminal transfer of the popular to the popular transfer of the
=			(Iffin)
-			
			)
	·	<u> </u>	

Section 7. REMARKS AND ADDITIONAL INFORMATION

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above De L. Williams)
Driller described hole.

### WELL RECORD

Ran.

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1	i		(A) Owr	or of well	Mak:	in Drillin	o Go.		
			Street an	d Number	Bo	x 1628	Jag Marine Co		
Ι ,	3 <b>k</b>	ı	lity			Hobb	ii State	New M	exico
			-				and		
	i <sup>2</sup>		1/4	4 SE 4	SE4	of Section	31978wp.19 S	Rge	e. 37_K
							Licer		
1	1 1	1		_					
	- 1 -		1				obbs State!		
			1 -				Des		
L		L	1				Dec		
,	Plat of 640 a	•	_	_					
							epth of well		
		l is shallo					ater upon comple	tion	31
Section 2		· 1	<del></del>	NCIPAL WA	TER-BEARI	ING STRATA			
No.	Depth in	To To	Thickness in Feet		Des	cription of Wate	er-Bearing Formatio	n	
1	}			The same of	+09				
- l	37	ly <b>l</b> t	13	PLOMIT	water	sand			
2	44	-55		Red w	mter s	and			
3	<b>5</b> 5	67		Brown	water.	sand		<del></del>	
4				_					
5		l		<u> </u>		·	<del></del>		
Section 3	.:	_		RECOR	D OF CAS	ING			
Dia	Pounds	Thread	· · · · · · · · · · · · · · · · · · ·	epth	Feet	Type Shoe	I	orations	
in.		in	Тор	Bottom			From	<u></u>	То
7	19	_10	0	621-8n	621-81	none	221-8m	62	t_8m
		-		<u>                                     </u>		<u> </u>		_	<u>م در</u>
		_					<del> </del>		
			1		1	<u> </u>		.	
Section 5	a	_	RECO	RD OF MUC	DING AN	D CEMENTING			
	b m Feet	Diamet		No. Sac			Trathagla Head		
From	To	Hole in	in. Clay	Cem	ent	·	Methods Used		
	-								
•									
						·			
Section 5	· .			PLUGE	SING RECO	ORD			
		Contract				Company of the second	License No	~	
						*	State		
					_		rpe of roughage		
	•						vpe or roughage		
	g memod <b>u</b> ga <b>p</b> proved		<del></del>		•		igs were placed a		
<sup>1 τα</sup> bb= ο	<b>սբ</b> յո	υ,.				Depth of P		5 IV	/s.
			Basin Su	pervisor	No.	.	To No. o	of Sacks	Used
	EVAN USI			7 18	7	1			
İ	FOR von	OF SALL	E MUIII	MILL					
Date	Received .	!	DEC 11 15			-			
			•	W10		-			
i		1000		v) : ' : !		<u> </u>			· · · · · · · · · · · · · · · · · · ·
i		:					- 10		
File No	237	38		Use	<u>کر، یک</u>	Locatio	on No./ <u>9,37</u>	33.4	40

### LOG OF WELL

Depth From	in ricet To	Thickness in Feet	Color	Type of Material Encountered
O	6	6		Surface soil
6	31	25		Caliche
31	44	13	Brown	Water Sand
44	55	11	Red	Water Sand
55	62	7	Brown	Water Sand
62	72	10	Red	Clay
				336
				Depth to K Elev of K  Lister A  List
<del></del> .			······································	Elev of I
				- M
				Toc. No. 19. 37. 33.44 3
				Hydro, Survey Field Chack x 1/2/-7/
				SOURCE OF ALTITUDE GLYEN
		·		2ntgrpolated from Topo. Sheet
				Determined by Irist. Leveling
			1 33	- Other
	- ·			
	· ·			·
·				
•				
	\			

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record  $\phi$  the above described well.

Calward Daske Well Driller

# WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section	1	<del></del>	(A) Own	er of well.	AA	52206	2/5/212	
	}							
ı		-	City	1066	<u> </u>	·	State	
			Well was	drilled ur	nder Perm	it No. 744	and and	is located in the
	#8		11. 11. 14	1/4	ı <sup>1</sup> 4	of Section ${\cal S}$	3_Twp. 195	Rge. 3/7_
			(B) Drill	ing Control  Number	actor 1	119 Luch	Licens Licens	e No. / 2 /
<b> </b>	-  <del>-</del>  -		一 City	1/11/11	٠		State	11-1244
			Drilling v	vas comm	enced	1-12	State	19 5 8
<u>L</u>			Drilling w	as comple	eted	2-12	**************************************	19.5 &
	Plat of 640		1			m . 1 1	41 6 11	Cit
Elevatio	n at top o	f casing in	ieet above se	a leveL	// . 1 .	Total dep	oth of well	4
State w	netner we	ii is snaiiov	v or artesian.		lafan Eire He San	Depth to wat	er upon completi	on A
Section	2	<del></del>	PRIN	CIPAL WA	ATER-BEAR	NG STRATA		
No.	Depth i	n Feet To	Thickness in Feet		Des	cription of Water	-Bearing Formation	
1	1/10	50	8		2.1	in fe 22 - 1	·	1.
2	7-1-						4	4
3				<del></del>	<del></del>	<u></u>		
4								
5						- <del> </del>		
<u> </u>				DECOR	D OF CAS	INIC		
Section	<u> </u>	· · · · · · · · · · · · · · · · · · ·			OF CAS	ING	The second	
Dia in.	Pounds ft.	Thread:	Top	Bottom	Feet	Type Shoe	Perfora From	To
		-			<del> </del>			
		_	- 12/2		· · · · · ·			
	-		Ple	C-2-	12721/	·		
<del></del>								
Section	4		RECOR	D OF MUI	DDING AN	D CEMENTING		•
Dept	h in Feet	Diamete	r Tons	No. Sa	cks of	· · · · · · · · · · · · · · · · · · ·	Mathed II-3	
From	To	Hole in i	n. Clay	Cen	nent		Methods Used	
		124	,					
****			•					
								· · · · · · · · · · · · · · · · · · ·
	<u>i</u>			1			· · · · · · · · · · · · · · · · · · ·	
Section	5			PLUG	SING RECO	ORD		
	_	. Contracto	r	. –			License No.	
		-					State	
					-		e of roughage	
	•					· <del>-</del>	gged	
	g approve					·	s were placed as	
	•	•				Depth of Pl		
			Basin Sur	ervisor-	No.		No. of	Sacks Used
	FOR US	E OF STATE	ENGINEER	NLY				
	1010 02	T. T.	(Carly Carlotter					
Date	Received .		EB 11 (3)	12/06	_     _			
			Ortici	K, 1				
		GRO	grafies a free fr	S COUNTY				
	1-74	; []	BCM MILLS CHARLES		クカ	<b>T</b>	n No. /9.37.	27 HA
File No	D. F	7		Use	· ·	Location	n No. / /	
				· <del>-</del>				11/67

Depth From	in feet To	Thickness in Feet	Color	Type of Material Encountered
- 0	3	NA.		Colone toce - Subsail
33	35	33		Clearhie
35	1/2	7		ling Storie
42	( ) Z).	8		Water 3 r.
50	1/2	2.6		led Steele
762	30	O-		Red thed
	**************************************			
** •	, <u> </u>	~ <del></del>		2361
				I S Flev
				Depth to K. Trc. 3.5// Elev of K. Trc. 3.5//
				Loc. No. 18,57, 3.5, 10/200-
				Eydro, Survey Field Check A
-				
				SOURCE OF ALTITUDE GIVEN
				Interpolated from Topo, Sheet
				Other
-				
	. — —			
				:
e .				
				<u> </u>
•				
		·	:	

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described well.

Well Driller

# SECTION 34 Township 19 South, Range 37 East

l 		#10	
COUNTY	1   1   1   1   1   1   1   1   1   1	LOCATHON OWNER	)     
E A .	ALVA TATUM-LOVHCBS	5 10 S 37 E34, J111114	3577.00
UNIQUE NUM	BER ES 250000012502:STOCK WHILL WITH W	H COSHIEL.	
1.7 35 -4 110	5 - 4 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	SVEC DATE WATER LEVEL DATE WATER	VEL DATE WATER L
	974	12 JAN. 13 1970 20.37A JAN. 97 1977 20.	5A JAN. 94 1979 18
		#13	
OUNTY	FORMATION BASIN NAME	LOCATION	LTITU
	OBLE TATUM-LOVHOBS	35 19 S 37 E34.11235 V. O. SETZLER Nω" Nω" Nω" NE"	3576.00
こと こ	BER IS REGULATIVES OF WELLY ONCORSE	ED & UNEXUIPPED. PLUGGED BY 1972.	
D -1 -1	WATER DOTA SETERAL	SVEL DATE WATER LEVEL DATE WATER LE	EVEL DATE WATER L
A 2 1 2 1 2 1 1 2 1 1 1 1 1 1 1 1 1 1 1	¥71 23.33	#15	
-		の	7170
	0011 TATURHLOV-H8088	19 S 37 E34.112333	3577.30
INTEGE ROSSES IS	15 60 05 04 62 65 5 15 7 7 7 8 6 6 6 8 14 7 7 COMENSO OF	UMP G BIBO. MOTOR. LH743.	
	TOVOL OPEN SPECIAL COVIDA	OPTO SATOR COVER	DATE WATER LE
1986	24.14 Jan. 20 1971 24.66 Ja	29 1976 21.31 JAN. 20 1931 25.54	. 13 1936 24.01
COUNTY		うのたけつりぎ	
1·1 1 3 1 1		· · · · · · · · · · · · · · · · · · ·	
		THE COMPANY ACTIONS OF THE CONTRACT OF TAXABLE CONTRACT OF THE	0 1 V D EN 1 1 9 0 5 .
( ) ; ( ) ; ( ) ; ( ) ( ( ) ( ) ; ( ) ( ) ; ( ) ( ) ;		THE CONTROL OF THE CO	
10 -4 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2 -2	21.01 HE: 15 1996 22.52		

# STATE ENGINEER OFFICE WELL RECORD

### Section 1. GENERAL INFORMATION

Street or	v ellTC Post Office Ac	idressG	eneral I	<u>Deliver</u>	<u>:Y</u>		Owner		·
	State			-					
nt was drilled	t nder Permit	No. L-8	1803		and	is located	in the:		
а П <b>W</b>	_ ¼ <u>NW _</u> ½	4 <u>NW</u> 4 _	NW 14 of S	ection_34	1 То	wnship	<b>19S</b> Ran	ge <u>37E</u>	N.M.P.I
b. Tract	N >	of Map N	o	0	f the		•		
c. Lot to Subdo	ovi ion, tecorde	of Block No	Lea	o	f the	·			·
							System		
Dailling C	'catractor	Abbott F	ros. Dr	illing	<del></del>		License NoV	VD-46	
dress	1.0. Box	637, E	lobbs, N	ew Mexi	lco	88240			
illing 3 qan .	5/18/8	32 Cor	npleted	5/18/8	32Typ	e tools	Cable	Size of hol	e 12 <sup>1</sup> 2 ii
vation of far	no surface or _	<del> </del>	<del></del>	a	t well is	<del></del>	_ ft. Total depth	of well 41	:
mpleted well	t∍s <b>X</b> □ s	hallow $\square$	artesian.		Depth	to water	upon completion	of well 25	ſ
٠		Se	ection 2. PRIN	NCIPAL WA	ATER-BEA	RING ST	RATA	, —	
	ir Feet To	Thickne in Fee		Description	of Water-	Bearing F	ormation		ed Yield er minute)
25	39	14							
								<del></del>	
	L	1	Section Section	on 3. RECC	ORD OF C	A SING		<u> </u>	
Dianacter	Pounds	Threads	<del></del>	in Feet	L	ength	Type of Sho	e Pe	rforations
(inches)	per foot	per in.	Тор	Bottor	m (	(feet)		From	To
5½	14	-0-	0	42		42	None	28	42
		<u> </u>		<u> </u>					
				<u> </u>					L
	in Feet	<del></del>	tion 4. RECC	·			ENTING		
From	To	Hole Diameter	Sac of N		Cubic F of Cem		Metho	d of Placemen	t
•									
•		<u> </u>	Sant:		CINC DE	CORD		<del></del>	
			Secti	on 5. PLUC	OING KE	CORD			
gging Contr	actor								
diess		<del></del>				No.	Depth in		Cubic Feet of Cement
diess gging Metho te Well Plugg	od					1	Depth in Top	Feet Bottom	Cubic Feet of Cement
diess gging Metho te Well Plugg	od								
diess igging Metho te Well Plugg	od					1 2			
idiess igging Metho te Well Plugg igging approv	edved by:	State E	ngineer Repre		E ENGINI	1 2 3 4	Тор		
ldress rgging Metho ite Well Plugg rgging approv	od	State E	ngineer Repre FOR USI	sentative E OF STAT	)uad	1 2 3 4 EER ONL	Тор	Bottom	of Cement

-			Section 6, LOG OF HOLE	
Depth From	in Feet	Thickness in Feet	Color and Type of Material Encountered	
0		15	Caliche	
_ 15		10	Clay	
25	30	5	Water Clay	
_ 3.0	_ 39	9	Sandy clay-water	
39	41	2	Red Clay	
<u> </u>				
			15 Flor 3576	
			LS flev 3576  Depth to K. Tro. 37.  Elev of K. Tro. 37.	
**** ******* *************************			Control of the second s	
			Les 110 237, 34, 11140	
			the time for your and the transfer stad	
			populage proceeds agency	
			The first of the f	
			(Mar)	
				<del></del>
· · · · · · · · · · · · · · · · · · ·				
			;	
		Section	7. REMARKS AND ADDITIONAL INFORMATION	<b>.</b>

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

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### WELL RECORD

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Section 1			(A) Owne	r of well	Λ	. 0. se	etzler			
			04	NT 1	1	117 Gu	lf			
		l	City	ITUIIDEI	Hobba	•		State Nov	Mexico	
			Well was	irilled unde	r Permi	t No -	1-7413	$3-5^{\circ}2$ and is	s located in the	
	1.0		(							
	, 12		(B) Drilli	or Contract	or W	L. Va	an Noy	License	Rge. WD-208	
			(Street and	Number	F	. O. Bo	эх 74		Ne:	
			- City	il Cent	er,			New State	Me:.	
			Drilling w	as commen	ed	May 1	L4,		19.72	
			Drilling w	as complete	<b>d</b>	May ]	L4,	····	<b>19.</b> 72	
(P	Plat 67 640	acres)		•				161		
Elevatior	n at top c	of casing in	feet above sea	level		Tota	al depth of	f well	21'	
State wh	iether we	ll is shallov	v or artesian			Depth t	o water u	pon completion	n	
Section 2	2		PRINC	CIPAL WATE	R-BEARII	NG STRAT	- <b>A</b>			
	Depth i	n Feet	Thickness in		Dose	rintian of	Whter Peer	ing Formation		
No,	Frein	То	Feet		Desc	aiption of	water-bear	ing Formation		
1	Ø 35 45 10			Water	sand	& grav	el			
2	<b>⊈</b> 35…	42					<del> </del>			
3										
4						·	<del></del>			
5		<u> </u>	1							
Section 3	3			RECORD	OF CAS	NG				
Dia	1 ands	Thread	Dep	Depth			10e	Perforations		
in.	ſt.	in	Тор	Top Bottom				From	То	
8 57:		welded	0	<u>-</u> 行の	46			28	43	
						·				
Section 1	1		RECOR	OF MUDDI	NG ANI	CEMENT	ING		<i>,</i>	
	i m :'cet	Diamete		No. Sacks	<del></del>		<del></del> -			
From	То	Hole in	in. Clay	Cemen	Cement Methods Used					
· · · · · · · · · · · · · · · · · · ·										
-	-									
Section 5	,			PLUGGIN						
		g Contracto								
Street ar	nd Mumb			oughage use						
Street ar Fons of C	nd Numb Clay used	ì					. Disamod		10	
Street ar Fons of C	nd Numb Clay used	ì	Tons of Ro							
Street ar Fons o: C Plugging	nd Numb Clay used	used						ere placed as f		
Street ar Fons o: C Plugging	nd Numb Clay used ( method	used	:		No.	Cemen	t Plugs we	re placed as f		
Street ar Fons o: C Plugging	nd Numb Clay used ( method	used				Cemen	t Plugs we	re placed as f	ollows:	
Street ar Tons o: ( Plugging	nd Aumb Clay used method approve	usedd by:	:	ervisor		Cemen	t Plugs we	re placed as f	ollows:	
Street ar Tons of C Plugging Plugging	nd Mumb Clay used method approve FOR US	used d by:	Basin Sup	ervisor		Cemen	t Plugs we	re placed as f	ollows:	
Street ar Tons of C Plugging Plugging	nd Mumb Clay used method approve	used d by:	Basin Sup	ervisor		Cemen	t Plugs we	re placed as f	ollows:	
Street ar Tons of C Plugging Plugging	nd Mumb Clay used method approve	used d by:	Basin Sup	ervisor		Cemen	t Plugs we	re placed as f	ollows:	
Street ar Tons o: ( Plugging Plugging	nd Mumb Clay used method approve	used d by:	Basin Sup	ervisor		Cemen	t Plugs we	re placed as f	ollows:	
Street ar Tons o: 0 Plugging Plugging Date	nd Numb Clay used g method g approve FOR US	used d by:	Basin Sup	ervisor NLY	No.	Cemen  Depth From	t Plugs we	No. of S	ollows:	

### Section 6

### LOG OF WELL

Depth From	in Feet	Thickness in Feet	Color	Type of Material Encountered		
O	· · · · · · · · · · · · · · · · · · ·			Top XXXX soil		
5 30 30	20	25	grey	Caliche		
<u>30</u>	5,1,	_ 5	brown	Hard rock		
		10	grey	water sand & gravel		
33	1,:,	1	red	water sand & gravel		
· · ·						
				· · · · · · · · · · · · · · · · · · ·		
				43		
				3332		
				19 37 34 /122 3		
enace the second				19.37.34.11223 HWP		
******* · · · · · · · · · · · · · · · ·				7447		
				SHILLES IN LEGICION COMP		
				W 1 351/		
				e e e e e e e e e e e e e e e e e e e		
		<del></del>				
- · · · · · · ·	•	<u> </u>	·			

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described well.

₩.	L.	Văn	Ngy.	 
			Well Driller	

GR. LOG

### WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1	1		(A) Own	of wall	Chaw	Dunt hang					
							St.				
	i				•			Yew Maxico			
								l is located in the			
			_					Rge. 37 E			
	la a i							nse No. ID 99			
	#14		• •	•		_					
							Ct 4-				
								New Mexico			
			-					19_5.7			
(1	Plat or 640 a	acres)	Drilling v	vas comple	eted	ULY 25		195.7.			
		•	n feet above se	ea level	·	Total de	oth of well	)			
	-	_				-	=	tion 20			
Section :		1 10 411				RING STRATA		•			
No.	Depth in	n Feet	Thickness in Feet		De	scription of Wate	er-Bearing Formation	on .			
1		25	2								
2		38									
	<b>3</b> 3	- 30	5	Sanu	E BLH	AUT					
4			ı————								
-			ı	·							
5				1		· · · · · · · · · · · · · · · · · · ·					
Section ?	3			RECOF	RD OF CAS	SING					
Dia	Pennds	Thread		Depth		Type Shoe	İ	orations			
iu.	It.	in	Тор	Bottom	Feet	1,10	From	То			
10	18	none	9 0	10	_10_	none	none				
				<u> </u>							
						T					
Section -	-1		RECOF	RD OF MU	DDING AI	ND CEMENTING					
Depti	h in Feet	Diamet	eter Tons	No. S	acks of						
From	To	Hole in	in. Clay	1	ment	Methods Used					
	<del></del>										
	1			1							
		1		~							
Section :					GING REC						
	*****							)			
					_		State				
	•					•	•	***************************************			
	_							19			
Plugging	g approved	. <b>by:</b>				Cement Plu	gs were placed as	s follows:			
					No	Depth of P	No. o	f Sacks Used			
			Basin-Sur	pervisor	<b></b>	From 7	To				
i	FOR USF	s or star	re encineer o	MEY							
i			709 <b>23 1</b> 057	noth							
Date	Received		. Jul 6-2 100 1	K1,							
i			OFFICE								
l			JAD VIATER SUPEI OSWELL, NEW ALD								
l		<u></u>			40		2.45				
File No	1. L-74	3		Use\L	10 8 Dor	1 Locatic	on No. 19.32	34.102-13			

### **LOG OF WELL**

Depth From	in Feet To	Thickness in Feet	Color Type of Material Encountered		
0	4	4	Brown	Soil	
4	.ય3	19	White	Cleachie & rock	
_ 23	25	2	Grey	Sand rock	
25	33	8	Gray	Sandy shale	
33	38	5	Red	Sand & gravel	
38	- 4Q	2	Red	Red bed	
				L S Elev	
				Depth to KTrc_3537	
				Elev of K	
			-		
				LOC. No. 19.37.34.1123	
				f ,	
				Hydro, Survey X Field Check	
	-				
				SOURCE OF ALTITUDE GIVEN	
				Interpolated from Topo. Sheet	
				Datermined by Inst. Leveling X	
				Other	
a					

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described well.

Charles and be

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### STATE ENGINEER OFFICE

WELL	RECORD	

	W <b>.</b>	O. & D.	a a.	d/ 37	<b>^</b> (	ormation Setzler					' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '
(A) Owner of Street or City and	well Post Office Ad	dan A Mana M	0. Box ¥X. Mo	205 nument	Ne	w Mex.	ow <del>88265</del>	ner's We	ell No		
City and :	State		3-S-4		,						
Well was drilled a. XXXX	under Permit	No	NITAL		a	nd is located	in the:		<b>30</b> 10		
a. —	14 XMN 14	¼	¼ of Se	ction	4	Township	F	lange	<i>37-</i> ₽		_N.M.P.M.
	No										
c. Lot Ne Subdiv	o	of Block No I in		ა	f the _ _ Cou	nty.			1		
					t, N.M.		System				
(B) Drilling C								WD-	-208		
Address	P.	0. Box 7	4 Oil	Cente	r, N	lew Mex.	88266		··		
Dulling Bepan											
I levation of lan	nd surface or			a	well is		_ ft. Total dep	th of we	:II	<b>,</b> Ο	ft.
Completed well							upon completi			20	
, · · · · · · · · · · · · · · · · · · ·		Sect	tion 2. PRIN	CIPAL WA	TER-E	EARING ST	RATA				
Depth i	Depth in Feet Thickness in Feet Description o					ter-Bearing F	ormation	(	Estima gallons p		1
36 _	36 40 4 fine water sand.										
									··		
=											
			Sectio	n 3. RECC	RD OI	F CASING					
Diameter (inches)	Pounds per foot	Threads per in.	Depth Top	in Feet Bottor		Length (feet)	Type of Shoe Perforations From To				
6 5/8	weld <b>ed</b>		0	40		40	none			447	
		Section	on 4, RECO	RD OF MU	DDIN	G AND CEM	ENTING	····			
Depth	in Feet To	Hole Diameter	Sacl of M			c Feet ement	Me	hod of	Placemer	nt	
							<del></del>				
l					<del></del>			· · · · · ·			
			Section	on 5. PLUC	GING	RECORD					
Plugging Contra Address							Depth	in lient	<del></del>	- C- L	. <b>.</b> .
Plugging Metho	d					No.	Тор	Bott	tom		ic Feet Coment
Date Well Plugg Plugging approv						-   1		· · · · · · · · · · · · · · · · · · ·			
	· <del> </del>	State Engi	incer Repres	entative		$-\frac{3}{4}$					
	. 1. 107		<del></del>	OF STAT		INEER ONL		<b>***</b>			
Date Received	March l	.0, 1978				No. 6	on Mon				
		_				PLEMENTA	AL.		I		
File No	L-743 <u>-S</u> -						Location No		37.34	-112	4
		Dec	34 7	175	7.376	e Va	" NEU4 A	JE			

Section 6, LOG OF HOLE Depth in Feet Thickness Color and Type of Material Encountered in Feet 0 5 5 top soil 5 36 31 **caliche** 36 40 fine water sand. 1 1

Section 7. REMARKS AND ADDITIONAL INFORMATION



The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole

of the State Engineer,  $\mathbf{A}^{\prime}$ 

INSTPUCTIONS: This four should be executed in triplicate, preferably typewritten, and submitted to ions, except Section 5, shall be answered as completely and accurat drilled, repaired or deepene. Alien this form is used as a plugging record, only Section 1(a) and Section need be completed.

he appropriate district office possible when any well is

### STATE ENGINEER OFFICE

### WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1			(A) Owne	er of well.	ν. ( "דדי	). Setzler 7 Gulf				
		Ì	Street and	Number.	TTT	he Her Me	1 co   88250			
1 1	ł	1	City				State			
								and is located in the		
	₹ . 3		1⁄4	1/4		of Section	Twp	Rge		
			(B) Drilli	ing Contra	actor	. 0. B0x 7L	Lie	cense No. 10-208		
1	١									
	1		1 CITY				State			
			Drilling W	vas comm	encea	иау 15,		19 <mark>72</mark> 19		
· (1'	lat or 610 a	cres)	— Drilling w	as comple	:tea		•			
Elevation	at top of	casing in	feet above se	a level		Total de	pth of well	46.1		
State wh	other wel	l is shallov	w or artesian			Depth to wa	ter upon comp	oletion.		
Section 7			PRIN	CIPAL WA	TER-BEAR	NG STRATA				
	Depth in	Legath in Feet   Thickness in			Des	cription of Wate	r-Bearing Forms	tion		
Pto.	From	То	Feet		Des	compiled water				
1	<i>5</i>	45	10	Late	r sand	& gravel				
22	Í									
.s	-									
1		-						· · · · · · · · · · · · · · · · · · ·		
5										
. '				DECOR	D 05 040					
Section 3					D OF CAS	ING				
Duc	Peands	Thread:	Top	Bottom	Feet	Type Shoe	From	rforations To		
(; · · · ·		Lded	0	1,6 1,6			23	13		
t;	**.	Clack	<del></del>				7.3			
								···		
Section 1				<del></del>		D CEMENTING		<del></del>		
Dept. From	in rect t To	Diamete Hole in		No. Sa Cem		Mathoda Hand				
1 1 1 1 1 1 1 1										
							<del></del>			
	1									
			<del></del>		<u>.</u>					
Section 5					SING REC		_			
								No		
						_		e		
****	approved		·				gs were placed	19		
r mggmg	арриочен	by.				<del></del>	<u> </u>	as follows:		
			Basin Sup	ervisor	No	Depth of F	ro No.	. of Sack <b>s Used</b>		
	January 1988	OF STATE	ENGINEER O		7					
	rin Uar			17111		-				
Date 1	teccived .	( .	7. 72			-   <del></del>				
						-				
				(	<u>                                   </u>					
1	1 -711	2 /			-		10 0-	74 455		
File No.	L- 14.	)->		Use	KR	Locatio	on No./7.3/	134, 11243		

King ad tras Ponti day May Mi

#### Section 6

### LOG OF WELL

Proph.	m.Fc.i.	Thickness in Feet	Color	Type of Material Encountered
		5		Top soil
*,	4	25	en ou	Caliche
			grey	1
967		5	brown	Hard rock
90	1.	10	grey	water sand & gravel
$t_1^{\pm}$	$t_1$	1.	${f red}$	shole.
		- ···		
				.357.5
				73 / 2
				3530
-				
	:			
				19.37.34.11243 Half
				Halt's
	-			
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	<u> </u>			3574
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The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described well.

	Noy.	 	
 	ell Driller		

### WELL RECORD

(N) Ovar for a	al James	Dowell				Own	er's Well No	
No. 1 April 1	st Office Adi	dress i500	x 211 . N. M.	88265				
Well was fuller a								
						19 S Ra		E N.M.P.M.
		in						
d.						e System		
(16) Dr (6.19) - 3	atractor	В &	A Water	Well S	ervice	License No	<u> </u>	64
Address :		Box 129,	Loving	ton, N.	ы. 88260	0		<del></del>
Dudhag Assau	/18/85	Compl	leted <u>12/</u>	19/85	Type tools _	Spudder	Size of ho	olein.
Herman dilant	surface or			at w	ell is	ft. Total depti	n of well.	9ft.
Conglet owe i	. [K.] sh	allow 🗆 ar	tesian.		Depth to wat	er upon completio	n of well	274 ft.
		Secti	ion 2. PRING		ER-BEARING S			
teption troop		Thickness in Feet	1	Description of	Water-Bearing	Formation		ted Yield per minute)
	I I	17	San	d Clay	gravel		<del> </del>	ested
						·		
ļ							<u></u>	
lan or	Pounds	Threads	Section Depth		OF CASING Length	77. (0)		erforations
Time in all	per foot	per in.	Тор	Bottom	(feet)	Type of Sh	06   1.tot	
; 1	1 VC		-0-	39				·
:								
}	leret	Sectio Hole	n 4. RECOI		DING AND CE	MENTING		
it is .	10	Diameter	of Mi	I .	of Cement	Meth	od of Placeme	rt
	ilone							
		Í						
			Sectio	n 5. PLUGGI	NG RECORD			
Phoeping core.	led							
Addres Plugging federic					No.	Depth ir	Feet Bottom	Cubic Feet of Cement
Data Wasa Phalas Plucyrny appa	t by			· · · · · · · · · · · · · · · · · · ·	1 2			
		State Engi	neer Represe	entative				
	, <del></del>	~·	·		ENGINEER ON			
Date Received	Februar	y 17, 1986						voj
tate de	19768			De		Location No.	•	
1 15c				Heo Di	J J . L U	Location No.		

Line of the trade Raye Not the

X

	Section 6. LOG OF HOLE									
er ( Leon	pti. ja ko	ret To	Thickness in Feet	Color and Type of Material Encountered						
Д.	7 Die	3	3	Top soil - dark brown						
· j	1	18	15	Caliche - White						
to	:	20	2	Rock - White						
(1)		28	8	sand - brown						
'.;		39	10	sand streads of yellow clay gravel yellowish brow						
31)		39 1	1/2	Red bed- Red						
	!									
	- :									
,	•									
	i -									
	f s									
•	, 1 !									
	i 1									
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	:									
	i									
	:									
		·	Section 7	REMARKS AND ADDITIONAL INFORMATION						
		Grave	el pack w	ith 3 yds gravel.						
				် တ						

the undersign d hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above certibed not

al felman Driller

ld be executed in triplicate, preferably typewritten, and submittee IRSTRUCTIONS This for appropriate district office of the State Cogineer, All s ions, except Section 5, shall be answered as completely and accurated as possible when any well is will decrease the deepened then this form is used as a plugging record, only Section 1(a) and Section and be completed.

## STATE ENGINEER OFFICE

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į	1 1 1 1 1 1	 	1.1

	320			WELL RE	CORD				, , , , , ,
					. INFORMATION				
A) Owner of Street or City and	of Office Add	. & D. Control P. Iress P. Iress Nument, M	O. Shar O. Bo New Me	w % V. x 205 x. 88265	O. Setzle	Cwne			
Weit was dialied	ras der Permit N	No. L-743	3-S-3		and is located	d in the:			
· 少线	1111 _ 14	NE XXX 1/2 NV	14 of S	ection 34	Township_	19-S Ran	nge	'≭EN.M	.P.M.
$\nu = l: \varepsilon(t)$		_ of Map No		ot t	he	<del></del>			
						·			
it .		fcet, Y=				System		Zoi	
B: Dull e C	aractor W	. L. Van	Noy			License No	WD-208	And the second section of the	
Xud.v., 1	. (). Box	74 Oil	Cente	r, New A	lexico 882	66		·	
Ordina Berna	Feb. <u>18</u>	, 1978 <sub>Comple</sub>	eted F	eb. 20,	1978e tools_	Spudder	Size of h	ole 10	_ in.
levetom et lar	arlace or			at w	vell is	ft. Total depth	of well	I <sub>1</sub> C	. It.
omport de cl.	(X) sh	allow 🔲 art	esian.		Depth to water	r upon completion	of well	22	_ II.
		Section	on 2. PRIN	CIPAL WAT	ER-BEARING S	TRATA			
Dayah . Lion 3	leet	Thickness in Feet		Description of	of Water-Bearing I	Formation		ited Yield per minute)	
30 <u>6</u> 9	40	4	f	ine w at	cer sand				- 1
							-		
!									
:								-	
			Section	on 3. RECOR	D OF CASING				,
Dining Co.	Pounds per foot	Threads per in.	Depth Top	in Feet Bottom	Length (feet)	Type of Sho	e Pro	erforations m To	······································
o 5/8	welded		0	40	40		30	1	4()
ļ !									
,	L	Section	1.4. RECO	RD OF MUD	DING AND CEN	IENTING	I		
Doguty Lion	a feet	Hole Diameter	Sac of N	ks	Cabic Feet of Cement		d of Placeme	nt	
. , ()[(.									
l					L				
			Secti	on 5, PLUGG	ING RECORD				
Phogrand Contr Address					No.	Depth in		Cubic Fee	
Plugging Motho Date Web Plugi 	.1					Top	Bottom	of Cemen	
Managrajas (	. A by	0							
	a maria	State Engin	eer Repre	sentative	4	2. 72			
			FOR USE	OF STATE	ENGINEER ONI	_Y			

Did Record March 10, 1970	Diffs Received	March	10.	1978
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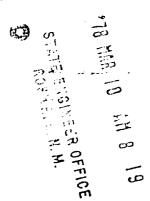
SUPPLEMENTAL	FWL	I'SL

| Supplemental | 19.37.34.12133 | Use | IRR. | Location No. | 19.37.34.12133 |

NU "NE"

Section 6, LOG OF HOLE Thickness Color and Type of Material Encountered in Feet Front 5 top soil () 29 31 36 caliche 40 fine water sand. 30

Section 7. REMARKS AND ADDITIONAL INFORMATION

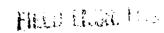


The ander great hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

W Ze Min Tray

1885 (RCC 1103). This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Logimeer. Also ons, except Section 5, shall be answered as completely and accurate possible when any well is drifted or deepened, when this form is used as a plugging record, only Section 1(a) and Section 1, need be completed.

# STATE ENGINEER OFFICE WELL RECORD



### Section 1. GENERAL INFORMATION

aree at l	cil Joe (	dress 1330 N. M., 87	Cenfial 105				Owner		
'ell was drifted	ander Permit	No. L-751	3 <b>-</b> S		ar	d is located	d in the:		
A 1	. NN 14	SW 1/4	¼ of Se	ction <u>- </u>	34	Fownship _	19S Ran	ge37E	N.M.
b. In ti	1-1	of Map No.			of the			<del></del>	
1 14		of Block No	·		of the				
ne t die	тин, recorded	l in	. <del></del>	Lea	Cour	ty.			
d A							System		
) Drilling C	calfactorf	G <u>. D. Olda</u>	ker,	• -			License No. W	D-657	
May 14 - 12 🚅	н. Во <b>х232</b>	1, Hobbs,	New Mexi	co, 88	1240				
illing Berson	12/15/7	9 Comp	leted _ <b>12</b> /	17/79	T	pe tools_	rotary	Size of 1	role 103
evanou e Clan	o ortace or	3650			at well is.	3650	ft. Total depth	of well	44
impleted ch	X) sh	nallow 🗀 an	rtesian.		Dep	th to wate	r upon completion	of well	25
		Sect	ion 2. PRIN	CIPAL W	/ATER-BI	EARING S	TRATA		
A CONTRACTOR OF THE PROPERTY O	n Leet	Thickness in Feet	1	Description	on of Wat	er-Bearing	Formation		ated Yield per minute)
from .	To				3				
	44	19	Wat	cer, Sa	ind	<del></del>			G PM
}									
,					ORD OF	CASING	<del></del>		-
Dranct a timelic.)	Pounds per foot	Threads per in.	Depth Top	in Feet Botte	om	Length (feet)	Type of Shoo	Fre	Perferations on To
0.57.			0	44		44	none	25	40
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,									
	. <del></del>						*		
i		Section	on 4. RECO	RD OF M	IIIDDING	AND CEA	AFNTING	<del></del>	
Depth 1		Hole	Sacl	ks	Cubic	Feet		d of Placem	ent
trom	10	Diameter	of M	ua 	of Ce	ment			
-		10½		····					
	-							<del></del>	
			Section	on 5. PLU	IGGING I	RECORD			
						- <sub> </sub>	- <sub>1</sub>		
		· · · · · · · · · · · · · · · · · · ·				No.	Depth in I	Bottom	Cubic Fee of Cemen
te Well Plugg grang aj prov					······································	- 1			
shang at two.			•			$-\frac{2}{3}$			
		State Engi	neer Repres	entative		4			
	A 1. <del>1221</del>		FOR USE	OF STA	TE ENGI	NEER ON	LY		
te Received	March 12,	1980			Ouad		FWL _		FS1
1.0.31	2= 0135			• •					
THE ROLL	1.)17 =2			Use	TKK*	·	Location No. 19.	<b>37.3</b> 4.31	31.

Section 6. LOG OF HOLE topth of reet Thickness Color and Type of Material Encountered in Feet Lim 2 Brown Top Soil 8 LO. Caliche 19. -9 Gray Soil 10 Water, Sand Rock 41. ... 19 41 44 Red Bed 44 3504 Depth to couper of a trium cally Interp lated from Tribo, Wood Uttot

> STATE ENGINEER OF BY ENGINEER OFFICE Section 7. REMARKS AND ADDITIONAL INFORMATION 0

The undersign 4 hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above ce a ribed holi

Driller

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HISTRUCTION II. This for ould be executed in triplicate, preferably typewritten, and submitted ' appropriate district office ions, except Section 5, shall be answered as completely and accurate. . . possible when any well is of the State Lagranger, Al. drilled, repaired or deepened. When this form is used as a plugging record, only Section 1(a) and Section 5 need be completed.

# STATE ENGINEER OFFICE WELL RECORD

### Section 1. GENERAL INFORMATION

Street	or off	idress P.O.	Box_163			Owne		
	d state				_			
Well was drill	ed ander Permit SE‡							
a	E1320',	S330", W	1320', be	ginning,	lO ac	) <u>5 50.                                   </u>		
c. Lot	N	of Block No.		of the				
	di alon, recorde							
$rac{d_{s}}{dt} rac{X}{thc}$ .		_ feet, Y=			1. Coordinate	System		Zone in Grant.
(B) Drilling	ContractorW	L. Van No	<b>Эу</b>			License No	WD-208	
Address	В	ox 7, 0il (	Center, N	M 88266		···		
Drifting Begar	2-25-91	Comp	leted	2-26-91	Type tools _	Cable	Size of ho	ole8!!in.
Elevation of I	and surface or _			at well	is	ft. Total depth	of well	<b>35</b> it.
Completed w	ett s	hallow 🗀 ai	tesian.	Ĭ	Depth to water	upon completion	of well-dry	it.
		Sect	ion 2. PRINC	IPAL WATER	BEARING ST	TRATA		
Deptl From	n. Feet	Thickness in Feet	De	escription of W	ater-Bearing F	ormation		ted Yield per minute)
dry								
					· · · · · · · · · · · · · · · · · · ·			
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L		<u> </u>	Section	3. RECORD (	OF CASING	· · · · · · · · · · · · · · · · · · ·	<u> </u>	<del></del>
Diameter	Pounds	Threads	Depth in		Length	Type of Sho	e P	errorations
(mehes)	per foot	per in.	Тор	Bottom	(feet)	1,7,000	Fron	m To
Hence					<del></del>			
						<u> </u>		
<u></u>				D OF MUDDI		ENTING	····	
From —	To To	Hole Diameter	Sacks of Muc	1	bic Feet Cement	Metho	od of Placeme	nt
			·			· · · · · · · · · · · · · · · · · · ·		
			Section	5. PLUGGIN	G RECORD			
	tractor							
	rod				No.	Depth in Top	Feet Bottom	Cubic Feet of Cement
Date Well Plu Plugging appr	gged oved b <b>y</b> :							
Critic alili		State Engi	neer Represer	tative	3			
			·		4			
Date Receive	March 1	7, 1992	FOR USE C	OF STATE EN				
		(1) /***	nor m			FWL _		
_File No	110,166	(1) (DRY	HOLE)	Use	& STK	Location No	9.37.34.3	441

Section 6. LOG OF HOLE

Section 6. LOG OF HOLE						
bqth brom	To	Thickness in Feet	Color and Type of Material Encountered			
	5	5	top soil			
5	15	10	caliche			
15	30	15	sandy shale			
30	35	5	red bed			
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WARE A PER A ANA						
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Section 7. REMARKS AND ADDITIONAL INFORMATION

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

INSTRUCTIONS: This for of the State Engineer, All

ald be executed in triplicate, preferably typewritten, and submitted t ns, except Section 5, shall be answered as completely and accurate duffed, repaired or deepened. Then this form is used as a plugging record, only Section 1(a) and Section 5 need be completed.

ppropriate district office possible when any well is

### SECTION 3

Township 20 South, Range 37 East

Section 6, LOG OF HOLE

	Section 6. LOG OF HOLE								
	petiți	1 . I cet	Thickness in Feet	Color and Type of	Material Encountered				
. 1	rom	<u>fo</u>	in rect						
	() <u>.</u>	25		Caliche					
	25	37		Red shale	#23				
-	37	50		Water sand	#23				
	·,(,	1.75		Sand, shale					
	175	920		Red bed					
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Section 7. REMARKS AND ADDITIONAL INFORMATION

This well record is an excer	pt from Oil Conservation Co	ommission files	at Hobbs, N.1
1376311 13111 20101101	Nict Nic + Nic +	Elevation:	3558' ТТН
Owner: W. K. Byrom J. W. Cooper "F" Record of Casing: 10"	#2 _ 200'	·	
Rorary	C		
330' ENL 4950' FEL			

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

<b>~~~</b>	
<b>Driller</b>	

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### WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only faction 1A' and Section 5 need be completed.

	<del></del>				Pet. Corp		
1					1916x 1955		
		City	obbs			State	New Mexico
8 10 2	t. From N	. Line,	330 from	W. I	Ick Section 3	Twp2	08 Rge. 38E
		(B) Drilli	ing Contract	tor O.	R. Musslew	hite L	cense No. WD99
51			_				
	Jugad.					State	New Mozico
	1,10,11	Drilling v	vas commen				
at , ii 10 ;	icres)	Drining W	as complete			***************************************	· · · · · · · · · · · · · · · · · · ·
ace quoi	casing in fee	t above se	a level		Total dej	oth of well	80 Tt.
itivel	l is shallow o	r artesian.	Shallo	W	Depth to wa	ter upon com	pletion 21 ft.
		DDIN	CIPAL WAT	ED.READ	ING STRATA		
	Tark I m		I TALL WATER	LK-DLAIN			· · · · · · · · · · · · · · · · · · ·
	1	Feet		De	scription of Water	-Bearing Form	ation
5.	65	10	Aqueou	s roe	k, white		~-· · <u>~ ~~~</u> -
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vuds	Threads	Dep	pth	Foot	Type Shoe	Pe	rfo. ations
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		RECOR	D OF MUDD	ING AN	ID CEMENTING		
in reet	Diameter	Tons				Methods Use	d
To	Hole in in.	Clay	Cemer	ıt	·		
}							
} }							
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			PLUGGI	NG REC	ORD		
Pagging	Contractor					License	No.
d Humbe	r			City		State	
d Humbe Lay used	r	Tons of R	oughage use	City	Ту	State	(e
d Humbe llay used mathod v	rsr	Tons of R	oughage use	City	Ty	State State pe of roughaged	ge
d Humbe Lay used	rsr	Tons of R	oughage use	City	Date Plu	State  pe of roughaged gs were placed	ge
d Humbe llay used mathod v	rsedby:	Tons of R	oughage use	City	Date Plu Cement Plu Depth of P	State pe of roughag gged gs were place	ge
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d Humbe lay used mothod v approved	or state E	Tons of R  T Basin Sup  I Basin	oughage use	City	Date Plus Cement Plus Depth of P	pe of roughagedgs were placed	
	at , 640 ; the polyage of spth in France of the cost	at . 040 acres) at . p of casing in feet time. Well is shallow of the shallow of	Well was Line/ (B) Drill Street and City H Drilling w Drilling w Drilling w Orilling w Orilling w At a 40 acres)  At a 40 acres  At a 40	(B) Drilling Contract Street and Number City Hobbs Drilling was comment Drilling was complete Shallo  PRINCIPAL WATE  PRINCIPAL WATE  To Feet  Thickness in Feet From To Feet  Thickness in Feet  To Aqueou  RECORD  RECORD  RECORD OF MUDD  RECORD OF MUDD  RECORD OF MUDD  RECORD No. Sack	Well was drilled under Perm  Line, 330 from W. J.  (B) Drilling Contractor O.  Street and Number	Well was drilled under Permit No. L-310  Well was drilled under Permit No. L-310  Line,330 frpm W. Linesection3  (B) Drilling Contractor O. R. Musslew Street and Number Box 56  City Hobbs  Drilling was commenced Feb. 16  Drilling was completed Feb. 17  At 1 of the feet of thickness in Feet of Feet	Well was drilled under Permit No. L=3107  The From No. Line/130 from No. Line(130 fr

	in Feet	Thickness in Feet	Color	Type of Material Encountered
<u>.</u> . ز	3	3	Brown	Soil, Sand
[1]	.50	47	White	Cleachie
<b>5</b> ()	55	5	Red	Sandy shale
55	65	10	White	Aqueous rook
<b>6</b> 5	-77	12	Brown	Sand Stone
Tr =	80	3_	Rod	#hele
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				L S Elev
				Depth to KTrc
				Elev of KTrc3/10-7
				Loc. No. 20.37. 3. //30
				Hydro, Survey Field Check X
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				SOURCE OF ALTITUDE GIVEN
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				Determined by Inst. Leveling
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The made signed hereby certifies that, to the best of his knowledge and belief, the foregoing is a frue and correct sectors of the above described well.

Section 6. LOG OF HOLE					
Lepte from	in Feet To	Thickness in Feet	Color and Type of Material Encountered		
t) .	25		Caliche		
25	37		Red shale #25		
37	50	STREET, CONTRACT STREET, S.	Water Sand		
*, . I	1.75		Sand and shale		
( '',	840		Red bed		
630_	885		Water sand		
នុសភ	1.300		Shale		
			2750		
			L S Elev		
			Elev of K		
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Section 7. REMARKS AND ADDITIONAL INFORMATION

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thin politicecord is an excerpt	from Oil Conservation	Commission files	at Hobbs, N
Hogarion 20.37.3.13100° Owner: A. K. Byrom J. W. Cooper G #3 Record or Casing: 16"	- 135'	Elevation:	3558' TC
Cable   1650   Rec   330 FWL			

the initiary of hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hoc Driller

			Section 6, LOG OF HOLE		<u>i.</u>	_
Depth : Cet Thickness		Thickness in Feet	Color and Type of Material Encountered			
4 com	10	III Peet				
	30		Caliche			-
30	40		Red shale	#26		
40	50		Water Sand	<b>"</b> -		
50	562		Red bed, shale		m = 1000	_
562	582		Water sand 8 BPH			
582	1007		Red shale			
1007	1052		Water sand			_
1052	11.05		Shale			_
<b>€.</b>						
	: <del></del>			3510		-
Water -	4 <u>0' - 5</u>	50'	L S Elev Depth to K	Trc 30		
	5621 <b>- 58</b>	32 <b>'</b>	Elev of K.	Irc 3510	· · · · · · · · · · · · · · · · · · ·	-
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Section 7. REMARKS AND ADDITIONAL INFORMATION

This well record is an excerpt from Oil Conservation Commission files at Hobbs, N.M.

Location: 20.37.3.14000

Owner: W. K. Byrom

1. W. Cooper 'B" #1

Record of dasing: 20" - 75'

10" - 250'
Cable 8" - 200'

Casing publed

1980' FIL. 1980' FWL

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Elevation: 3560' GL

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

<del>-</del>	
	Driller

Section 6. LOG OF HOLE					
Depth of cet		Thickness in Feet	Color and Type of Material Encountered		
Uçlir	10	In rect			
()	10		Cellar		
10	_20		Caliche #27		
20 _	25		Sand		
25	540		Shale, red rock		
540	593		Water sand		
593	1020		Red bed, shale		
1020	1043		Water sand		
1043	1193		Sandy shale, sand		
11,93	1200		Sand - water		
1200	1208		Sand - hard		
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	!		LS Floy 35%3		
·	·		Depth to KTrc23		
			Elev of KTre_353_8		
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### Section 7. REMARKS AND ADDITIONAL INFORMATION

this well record is an excerpt from Oil Conservation Commission files at Hobbs, N.M.

focation: 20.37.3.21000 Elevation: 3563' TC

Owner: V. Ryrom

J. V. Cooper "C" #1

Record of Casing: 16" - 75'

8½" - 200'

5½" - 200

Casing pelled

Cable

660' FIL. 1980' FEL

The undersign of hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Driller	

Section 6. LOG OF HOLE

Depth in Leet			· · · · · · · · · · · · · · · · · · ·	Thickness	Section 6. LOG OF HOLE						
	1 rom	-	To	in Feet	Color and Type of Material Encountered						
-	0	7	15		Caliche						
	1.5	~	541		Red shale #28						
-	54.1	•	580		Water sand - Hole full water						
	580		1338		Red shale						
	-										
		-									
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	**	* ==			L S Elev 3573 DF						
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Section 7. REMARKS AND ADDITIONAL INFORMATION

White west	. word 4	e 25	oveerst	from Oil	Conservation	Commiccion	files at	Holder	M M
THUS WELL	radora 18	s an	excerpr	Irom Ull	Conservation	Commission	riies ar	HODDS.	N - 11.

Location: '0.37.3.212434

Owner: W. K. Byrom

J. W. COOPER #3

Record of Cusing: 8 5/8" - 1338'

Rotary

660' FNL - 1550' FEL

the undersigned neceby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Driller	

Elevation: -- 3063 Tye

INSTRUCTION. This form should be executed in triplicate, preferably typewritten, and submitted to be appropriate district office of the State Figureer. All ons, except Section 5, shall be answered as completely and accurate possible when any well is drilled, repaired or deepenen. . nen this form is used as a plugging record, only Section 1(a) and Section . need be completed.

 		Thickness	Color and Type of Material Enco	ountered
t rom	10	in Feet	Color and Type of material Effect	
0 _	20		Caliche	
20 _	541		Red shale	#29 .
<u>54</u> 1	602		Water sand - hole full water	
607	1030		Red shale	
£ <b>0</b> 30	10 <u>50</u>		Water sand - hole full water	·
1050 = 1	1339		Red shale	
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			L S Elev 3573  Depth to K Tro 20	
			Depth to KTrc_20 Elev of KTrc_3553	
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Section 7. REMARKS AND ADDITIONAL INFORMATION

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This well	secord is	an excerpt	from Oil	Conservation	Commission	files at	hobbs	N M

Location: 20.37.3.221344 Elevation: 3573' DF. Owner: Backl Oil Co.

State #1

Record or stasing: 8 5/8"

Cable

660' FIL 990' FEL

the undersign a hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Driller	

INSTRUCTIO is. This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Lorencer. All ons, except Section 5, shall be answered as completely and accurat possible when any well is drilled, repaired or deepened. Then this form is used as a plugging record, only Section 1(a) and Section 1. need be completed.

Section 6. LOG OF HOLE									
Depth	n. Feet	Thickness	Color and Type of Material Encountered						
From	10	in Feet	Cotol and Type of Material Encountered						
	100		Sand, caliche						
100	210		Sand gravel	#30					
210	1050		Red bed, red rock, shells						
1050	1061		Sand, shell						
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Section 7. REMARKS AND ADDITIONAL INFORMATION

This well record is an excerpt from Oil Conservation Commission files at Hobbs, N.M.

Location: 20.37.3.31100

Owner: Tenneco Oil Co.

Elten Weir Com. Record of Casing: 10 3/4" - 255'

Rotary

2310 ' FSL + 330 ' FWL

The undersigned hereby	certifies that,	to the best o	f his knowledge	and belief,	the foregoing is a	true and correct	record of the above
described hole.							

<u></u>		
	Driller	

Elevation: 3560' TTH

Section 6, LOG OF HOLE

•	- i cet	Thickness	Color and Type of Material Encountered						
Lion	10	in Feet							
()	20	<del></del>	Caliche						
20	28		Sand	u ~ 1					
28	45		Sandshow water	#31					
45	960		Red bed, red rock, shale						
960	1010	· <del></del>	Sand						
1010	1045		Sand hole full water						
_									
Water -	781 - 35	1							
	1201 <b>- 940</b>	ŧ	R 2 Pla7						
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Section 7. REMARKS AND ADDITIONAL INFORMATION

This well	record	ls	an	excerpt	from	011	Conservation	${\tt Commission}$	files	at	Hobbs,	и.и.
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location: 10.37.3.33300 Elevation: 3559' GL

 $\begin{array}{cccc} \text{Cwner:} & W, & \text{E. Byrom} \\ & \text{F. W. Cooper} \end{array}$ "\\" #1

Record of asing: 16" - 130'

Cable

330' FSL 330' FWL

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hold

<b></b>	
Driller	

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ン      -         	ALVX (		ATUM-LOV. THOSES	S 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	37 E33.34131	T. 3. HALKER (	Sw4 SE4 NW4	3545.10	
AIQUE NUMBER	IS 259000010429:USE	٠,)	STOCK WELL WETH	7 IN. CSG & WIN	WINDMILL.				
DATE	ATEX LEVEL		HATER LEVE	0 2 T III	 	0 1 1 1 1 1 1	WATER LEVEL	DATE	WATER LEVEL
29 1976		0 0 1 2 7 1 9 9 1 9 9 1 9 1 9 1 9 1 9 1 9 1 9 1	10 (6) 10 (7) 10 (7) 10 (7) 10 (7)	型 選	45 00   46 00   60 00   61 00	49K. 10 1963		17.375 JAN. 14 1971	13.098

# ILLEGIBLE

## SECTION 4

Township 20 South, Range 37 East

FORMATION SASIN NAME LOCATION ONNER ALTITUDE OF ALVM TATUM-LOVHOSSS 20 S 37 E04.44411 UNKNOWN SEYSEY 3552.30  IS 25000013128:UNUSED SRO WELL WITH 8 5/8 IN. CSG, OPEN HOLE.  HATER LEVEL DATE WATER LEVEL DATE W		AL - 1 - 00 00		11 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0   0   0   0   0   0   0   0   0   0	1	45412417 OV 1100000 110000000000000000000000000000	1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- F - F - F - F - F - F - F - F - F - F
FORMATION SASIN NAME LOCATION OWNER ONNER DATE LOCATION OWNER ALTITODE OF ALVM TATUM-LOVHOSSS 20 S 37 E04.44411 UNKNOWN SE SE SE SE 3552.30  IS 256000013128:UNUSED SRO WELL WITH 8 5/6 IN. CSG, OPEN HOLE.  WATER LEVEL DATE WATER LEVEL DATE WATER LEVEL DATE WATER LEVEL DATE WATER LEVEL DATE	3 1		#34	2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			20.30	. 13 1967	201 • 40	1 195
FORMATION 948IN NAME LOCATION OWNER ALTITUDE D ALVM TATUM-LOY,-H0558 20 S 37 E04,44411 UNKNOWN SEXSEX 3552,30  IS 259000013128:UNUSED SRO WELL WITH 8 5/8 IN. CSG, OPEN HOLE.	WATER LEVEL			1 6 8	1 S P P P P P P P P P P P P P P P P P P	1 1 1 U D D D D D D D D D D D D D D D D D D	EPTHR CHVOC		! !	
FORMATION BASIN NAME LOCATION OWNER OWNER OF SETTINGS ALTITUDE OF ALVM TATUM-LOVH0555 20 S 37 E04.44411 UNKNOWN SETTINGS 3552.30					0000		(X)		IS 259000013128	UNIQUE NUMBER
RORMATION SAGES SOLUTION COCATION COCATION OWNERS	30.	3552,30		ORKHUNN SE X		ю Ю		TATUM-L	•	r i
	0 M P T	ALTITUDE	! !	1 0 E 2 III X I I I I I I I I I I I I I I I I		100P	; ; ; ; ; ; ;			COUNTY

UNIQUE NUMBER IS 255000013231:ABD. DOMESTIC WELL WITH a 578 IN. CSG & SUBM. PUMP

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# ILLEGIBLE

			Section 6. LOG OF HOLE	
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Section 7. REMARKS AND ADDITIONAL INFORMATION

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H. E. Laughlin: #1

Respond of Casing: 13"

- 212'

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1980' Flo 1980' FWL

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•			Section 6. LOG OF HOLE	
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;	49		Fresh water sand	
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Section 7. REMARKS AND ADDITIONAL INFORMATION

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toration:	0.37.4.22100	Elevation: 3654' GL
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The analogous society certities that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above de mod la le

Driller	

112.11 Us 1101. This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office a 16 2014 for over All ons, except Section 5, shall be answered as completely and accurate a possible when any well is with the process of deepened, when this form is used as a plugging record, only Section 1(a) and Section meed be completed.

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# ILLEGIBLE

-			Section 6	LOG OF HOLE			
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### Section 7. REMARKS AND ADDITIONAL INFORMATION

This well record is an excerpt from Oil Conservation Commission files at Hobbs, N.M.

Location: 20.37.4.42000

Elevation: 3553 GI.

Owner: W. K. Byrom

Humble Laughlin Battery 2 #2

Record of Casing: 16"

- 190'

Rotary

1980' FSL - 660' FEL

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole

Driller	

SECTIONS 9 AND 10

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Section 6. LOG OF HOLE Depth in Feet Thickness Color and Type of Material Encountered in Feet From To 0 18 Cellar, substructure Sand, gravel 18 145 #43 205 145 Red bed

### Section 7. REMARKS AND ADDITIONAL INFORMATION

This well record is an excerpt from Oil Conservation Commission files at Hobbs, N.M.

Location: 20,37.9.21000 Elevation: 3557' DF

Owner: Amerada Hess Corp.

V. Laughlin #3

V. Laughlin #3

Record of Casing: 12½" - 181

Rotary

660' FNL - 1980' FEL

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Driller

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# STATE ENGINEER OFFICE WELL RECORD

### Section 1. GENERAL INFORMATION

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File	. No	L-10,150			-			Location No  W45E4			

Depth	in Feet	Thickness	Color and Type of Material Encountered
From	То	in Feet	Cotol and Type of Material Encountered
0	4	4	Top Soil
4	15	11	Caliche
15	30	15	White Clay
30	40	10	Soft Water Sand
40	46	6	Red Bed
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Section 7. REMARKS AND ADDITIONAL INFORMATION

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Engineer. All ons, except Section 5, shall be answered as completely and accurately drilled, repaired or deepens in this form is used as a plugging record, only Section 1(a) and Section

possible when any well is I be completed.

Section 6. LOG OF HOLE

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Section 7. REMARKS AND ADDITIONAL INFORMATION

This well record is an excerpt from Oil Conservation Commission files at Hobbs, N.M.

Location: 20.37.10.11000 Elevation: 3544' DF

Owner: Texaco Inc.

E. H. B. Phillips #1

Record of Casing: 9 5/8" - 1330'

660' FNL - 660' FWL

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Driller

INSTRUCTIONS: This for should be executed in triplicate, preferably typewritten, and submitted to be appropriate district office of the State Engineer. A. ions, except Section 5, shall be answered as completely and accurate possible when any well is drilled repaired or deepener. When this form is used as a plugging record, only Section 1(a) and Section and Section and Section and Section and Section and Section are submitted to be appropriate district office of the State Engineer. A. drilled repaired or deepened. When this form is used as a plugging record, only Section 1(a) and Section need be completed.

## State of New Mexico

Energy, Minerals and Natural Resources Department RN OIL CONSERVATION DIVISION CONSERVATION C

P.O. Box 2088 Santa Fe, NM 87501

### APPLICATION FOR SURFACE WASTE DISPOSAL FACILITY (Refer to OCD Guidelines for assurance in completing the application.)

ī.	Type: Produced Water Drilling Muds Treating Fluids Solids Other								
II.	OPERATOR: _ 3 & 6 Landfarm Inc.								
	ADDRESS: 30m 55 Monument, MM 38265								
	CONTACT PERSON: Jimmie T. Scoter PHONE: 505-397-2045								
III.	LOCATION: Sil /4 NE /4 Section 3 Township 20 Range 37 E  Submit large scale topographic map showing exact location.								
IV,	is this an expansion of an existing facility? $\square$ Yes $\square$ No								
V.	Attach the name and address of the landowner of the disposal facility site and landowners of record within one-fill of the site.								
VI.	Attach description of the facility with a diagram indicating location of fences, pits, dikes, and tanks on the facility								
VII.	Attach detailed engineering designs with diagrams prepared in accordance with Division guidelines is construction/installation of the following: pits or ponds: leak-detection systems; aerations systems: 2007 evaporation (spray) systems; waste treating systems and security systems.								
TH.	Attach a contingency plan for reporting and clean-up of spills or releases.								
IX.	Attach a routine inspection and maintenance plan to ensure permit compliance.								
X.	Attach a closure pian.								
XI <del>t</del>	Attach geological/hydrological evidence demonstrating that disposal of oil field wastes will not adversely impact water.								
XII.	Attach proof that the notice requirements of OCD Rule 711 have been met. (Commercial facilities only.)								
KIII.	Attach a contingency plan in the event of a release of H.S.								
NV.	Attach such other information as is necessary to demonstrate compliance with any other OCD rules, regulations and orders.								
XV.	CERTIFICATION								
	I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.								
	Name: Tidle V. Seav Tide: Agent/Consultant								
	Signature: Sala, January Date: October 4, 1991								
	DISTRIBUTION: Original and one copy to Santa Fe with one copy to appropriate Division District Office.								

### APPLICATION FOR SURFACE WASTE DISPOSAL FACILITY

- I. Type: Solids Oil or Salt water contaminated soils from production facilities only.
- II. OPERATOR: C & C Landfarm Inc.
  ADDRESC: Box 55 Menument. NM 38263
  CONTACT PERSON: Jimmie T. Cooper
  PHONE: 505-397-2045
- III. LOCATION: SW 1/4 of the NE 1/4 of Section 3, Township 20, Range 37 East, Lea Co., NM.
  - IV. IS THIS AN EXPANSION OF AN EXISTING FACILITY? No. this is a new facility.
    - V. LANDOWNER OF FACILITY SITE
      Jimmie T. Cooper
      P.O. Box 55
      Monument, NM 88265

LANDOWNERS OF RECORD WITHIN 1/2 MILE State of New Mexico State Land Office P.O. Box 1148 Santa Fe, NM 87504

> S & W Cattle Co. 8900 South County Rd. 58 Monument, NM 88265

J.R. Williams, et al P.O. Box 215 Monument, NM 88265

A.C. Doyall P.O. Box 188 Monument, NM 88265

### VI. DIAGRAM (attached)

- (A) Excavate area as needed down to top of redbed approximately 10 to 12 feet. Use overburden to build burms around site to prevent and restrict rain run off and drainage to facility.
- (B) Fence around all sides, with chain link fence edition to County Road 18.
- (C) Gate with cattle guard at entrance. Open during daylight hours only.
- (D) I monitor wells on North, South, East, and West sides.
- (E) Signs posted with restrictions and permit no.

Also, any additional rule or regulation at time of closure will be adhered to.

XI. Geographically, the site is situated near the western boundary of the southern extension of the High Plains in Southeastern New Mexico. The site in question is a 40 acre tract located in Unit G, Section 3, Township 20, Range 37 E, Lea Co., NM.

The site which is bordered by County road 58 on the east, has a gradual surface slope to the west. To the SE of this site in Unit Lettter O is a large pit with the redbed exposed. Redbed is a layer of relatively impermeable clays, red to reddish brown in color, underlying the fresh water aquifer in SE New Mexico ranging in thickness up to 1200 ft.

C & C Landfarm Inc. is located on or near the redbed layer. A series of test wells were drilled to define the redbed and check for fresh water.

### TEST WELL LOGS

- #1 Located 100 yds. N of NW corner 0-1 ft. Top Soil 1-18 ft. Caliche, Rock 18-20 ft. Redbed All formations dry.
- #2 Located 125 ft. N of the south line on the extreme west edge.

  0-1 1/2 ft. Top Soil
  1 1/2-16 ft. Caliche, Rock
  16-18 ft. Redbed
  All formations dry.
- #3 Located 100 yds. E of the west line on the south side.
  0-1 ft. Top Soil
  1-15 ft. Caliche, Rock
  15-17 ft. Redbed
  All formations dry.
- #4 Located 50 yds. W of the east line on the south border.
  0-1 ft. Top Soil
  1-13 ft. Caliche, Rock
  13-16 ft. Redbed
  Ail formations dry.
- #5 Located 150 yds. W of east line on the north side.
  0-1 ft. Top Soil

(F) Any other improvement as needed or required by CCD.

### VII. DRAWING OF MONITOR WELL (attached)

Excavate land area down to redbed, dispose of contaminated soil in 5 in. lifts and till or plow there is a fill days as needed to encurs assign the classical so soil can be cleaned up by natural remediation according to government standards. Have soil tested for TPH and BTEX before adding new lift as required.

### TIE TOUTINGSYOU PLAN (NY)

There will be no liquids at facility. Any soil accidentally spilled at facility will be picked up with front end loader and deposited within landfill. No material will be accepted without documentation.

### IX. ROUTINE INSPECTION AND MAINTENANCE PLAN

- (1) Weekly inspection of monitor wells.
- (2) Road area around facility will be graded and kept free of oily dirt.
- (3) All loads will be documented and logged.
- (4) No liquids accepted.
- (5) No tank bottoms accepted.
- (5) Area will be posted with proper signs.
- (7) No dumping will be allowed unless facility is open.
- (8) May require letter from company showing waste has not been mixed with non-exempt waste.
- (9) All area properly fenced with locked gates.
- (10) Each lift will be tested for BTEX Method 602 and TPH Method 8015 EPA test requirements before adding new lift.

### X. CLOSURE PLAN

All overburden will be removed down to the redbed, averaging from 12 ft. on the east side, to 16 ft. on the west side.

all for of solids will start at redbed, when acea has been filled and tested to within 1 ft. of surface elavation, area will be backfilled with towed. Sound over and compacted. The mound oncyld prevent rain or water from standing or leaching into backfill.

the feature will be left in tact and monitor wells that in place for future monitoring.

Also, any additional rule or regulation at time of closure will be adhered to.

XI. Geographically, the site is situated near the western boundary of the southern extension of the High Plains in Southeastern New Mexico. The site in question is a 40 agreenced located in Unit C. Section 3, Township 20, Range 37 E. Lea Co., NM.

The site which is bordered by County road 58 on the east, has a gradual surface slope to the west. To the SE of this site in Unit Lettter O is a large pit with the redbed exposed. Redbed is a layer of relatively impermeable clays, red to reddish brown in color, underlying the fresh water aquifer in SE New Mexico ranging in thickness up to 1200 ft.

C & C Landfarm Inc. is located on or near the redbed layer. A series of test wells were drilled to define the redbed and check for fresh water.

### TEST WELL LOGS

- #1 Located 100 yds. N of NW corner 0-1 ft. Top Soil 1-18 ft. Caliche, Rock 18-20 ft. Redbed All formations dry.
- #2 Located 125 ft. N of the south line on the extreme west edge.
  0-1 1/2 ft. Top Soil
  1 1/2-16 ft. Caliche, Rock
  16-18 ft. Redbed
  All formations dry.
- #3 Located 100 yds. E of the west line on the south side.
  0-1 ft. Top Soil
  1-15 ft. Caliche, Rock
  15-17 ft. Redbed
  All formations dry.
- 44 Located 50 yds. W of the east line on the south border.
  6-1 ft. Top Soil
  1-13 ft. Caliche, Rock
  10-15 ft. Redbed
  All formations dry.
- 15 Located 150 yds. W of east line on the north side. O-1 ft. Top Soil

1-14 ft. Caliche, Rock 14-17 ft. Redbed All formations dry.

\* An area in the middle of the east edge of the property, was excavated with a backhow. Rock and caliche at 0-12 ft. Redbed was encountered at 12 ft.

The wells were drilled with rotary rig, no water was excountered, only caliche, rock, and sand down to redbed. The redbeds came in at 12 ft. on the east side down to 17 ft. on the west side. The five wells drilled were completed into the redbed and cased with 3 in. PVC pipe with 5 ft. of screen on bottom with the top 2 ft. cemented and capped. Wells to be secured with locks and used as monitor wells.

Researched State Engineers records and U.S.G.S. file, no fresh water was recorded or found within area of review. A physical inspection was made and a windmil! was found approximately 1 mile SW of the site, a sample was taken and analysis recorded for future use.

We feel this is one of the better sites for deposit of contaminated soil due to the thickness of redbeds, little or no fresh water in the area, a monitor system is in place for control of system. This system is in the middle of the oil and gas production and will serve a valuable environmental need, both regulatory and industrial.

- XII. PROOF OF OCD RULE 711 (attached)
- XIII. CONTINGENCY PLAN FOR RELEASE OF H2S (NA)

Open pit system should not have H2S. If encountered, OCD Rule 118 will be adhered to.

XIV. All State of New Mexico, Oil Conservation rules will be enforced as they pertain to this system.

Additional information to Application for Surface Waste Disposal.

RVANAM DIVISION ECE VED

1. The thickness of the redbeds varied from area to area 10 3 31 in Section 3. The information was taken from logs of producing oil wells in the area and lithology reports.

Chit	C	Top 20	îī.	Base	960	î۲.
	F	30	ft.		562	ft.
	В	14	ft.		880	ft.
	H	15	ft.		1350	ft,
	$\mathcal{A}$	30	ft.		1270	ĵτ.
	5	<b>‡</b> 0	ft.		1050	ft.

with the average thickness being 987 ft.

II. Groundwater in the area; Figure I is a copy of the State Engineer's water analysis and locations for this area, none were listed in Sect. 3. The windmill SSW of our proposed site appears to be located in Unit M of Sect. 3 approximately 3/4 mile from site; Figure II is a copy of analysis from S & W windmill. Figure III indicates water wells in the general area showing top and bottom of water formation and contour line indicating direction of flow, which is SE. Figure IV is a contour map of top of redbed, with slopes to the SSE. Figure V is a contour map of the surface for the surrounding area, the direction of slope is to the west.

The contour maps provided are information from the State Bureau of Mines, which shows any movement at our site would run SE along the redbed surface and west along the top of ground.

If the State feels it is necessary, additional monitor wells can be installed or a redbed barrier constructed on the SW portion of our site to prevent any contaminate from moving.

III. Also provided are the mail receipts from registered letters.

Any additional information needed, please call (505)392-2236.

Eddie V. Seay

Pagh Consulting

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### WATER ANALYSIS REPORT

Company : S&W CATTLE CO
Address : HOBBS, NEW MEXICO
Lease : SECT 3 T20 R37
Wall : UNIT M
Sample Pt. : WINDMILL Date : 10/29/91 Date Sampled : 10/28/91 Analysis No. : 876

	ANALYSIS		mg/L		* meq/L
1.		GATIVE			
3. 4. 5.	Total Dissolved Solids Suspended Solids	000	2245.2		
6. 7.	Dissolved Oxygen Dissolved CO2			•	:
8. 9.	Oil In Water Phenolphthalein Alkalini	ity (CaCO3)			·
10.	Methyl Orange Alkalinity	7 (CaCO3)	291.0		
11.	Bicarbonate	HCO3	355.0	HCO3	5.8
12.	Chloride	Cl	599.1	Cl	16.9
13.	Sulfate	SO4	575.0	S04	12.0
14.	Calcium	Ca	153.5	Ca	7.7
15.	Magnesium	Mg	66.1	Mg	5.4
16.	Sodium (calculated)	Na	496.4	Ná	21.6
17.	Iron	Fe	0.0		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		655.6		

### PROBABLE MINERAL COMPOSITION

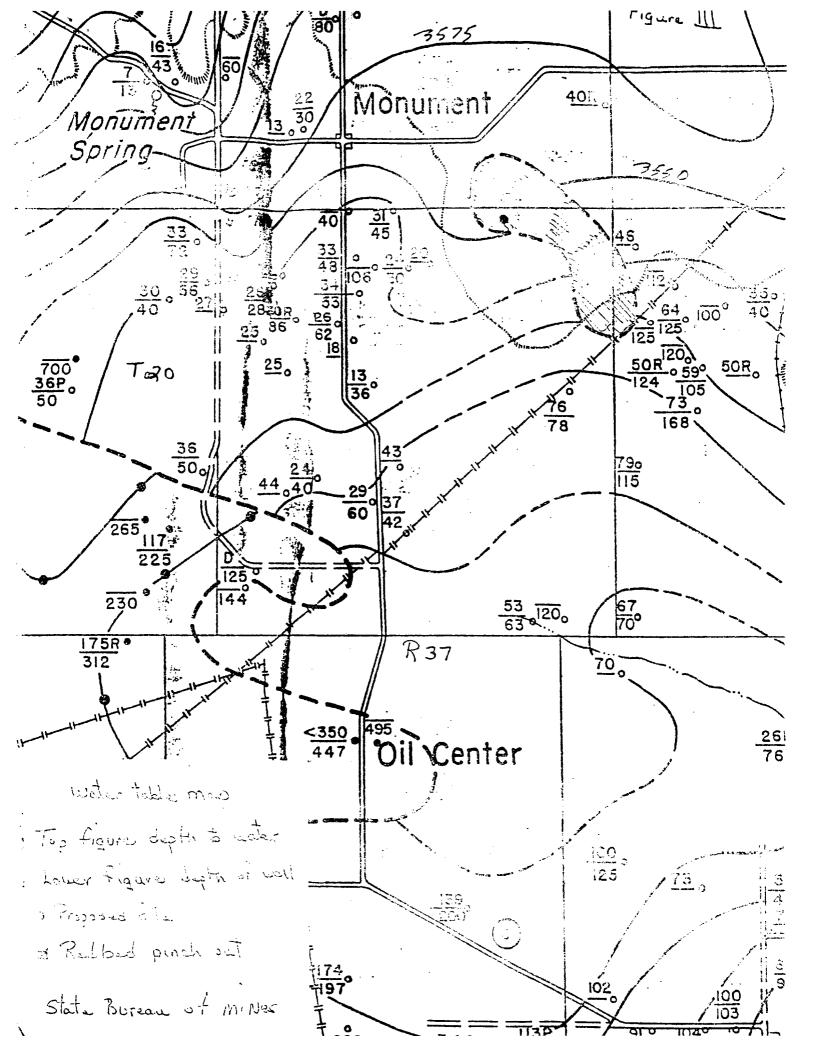
*milli equivalents per Liter	Compound Equiv wt X meg/L = mg	3/
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Saturation Values Dist. Water 20 C	Mg\$04 50.2 5.4 32 MgCl2 47.6	27
Caco3 1.3 mg/L Caso: : 1820 1990 mg/L Baso4 2.4 mg/L	Na2SO4 71.0 4.7 3:	31 Sr

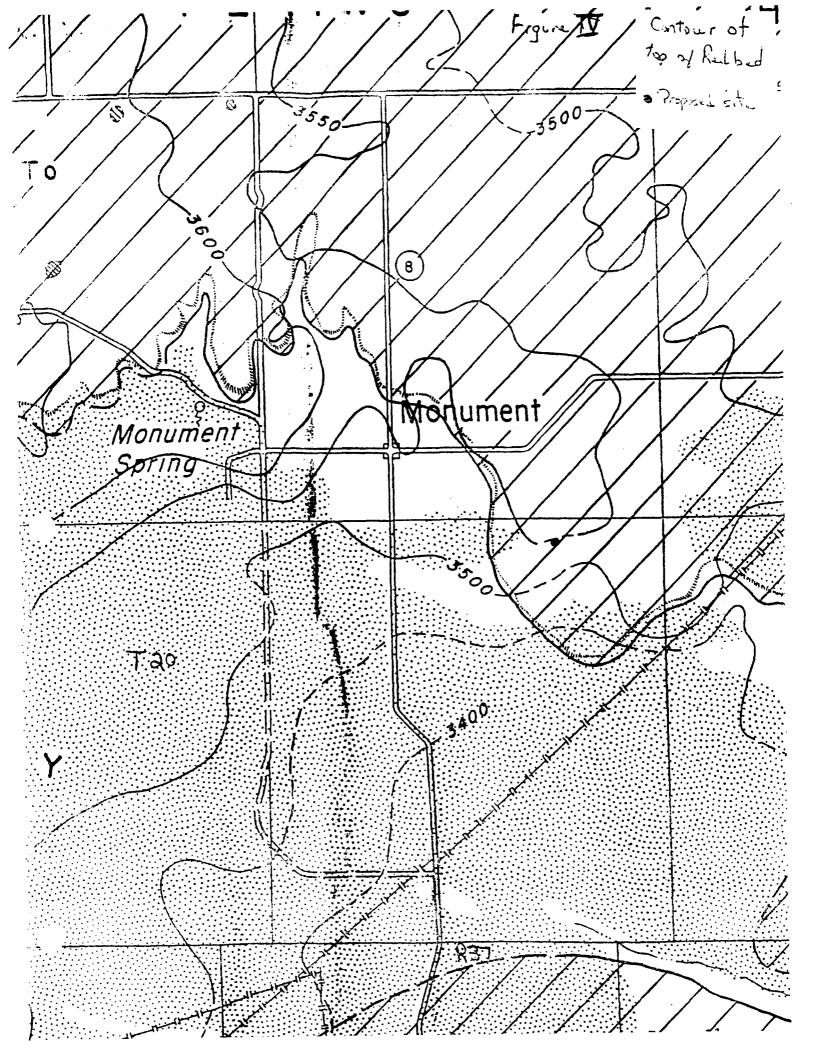
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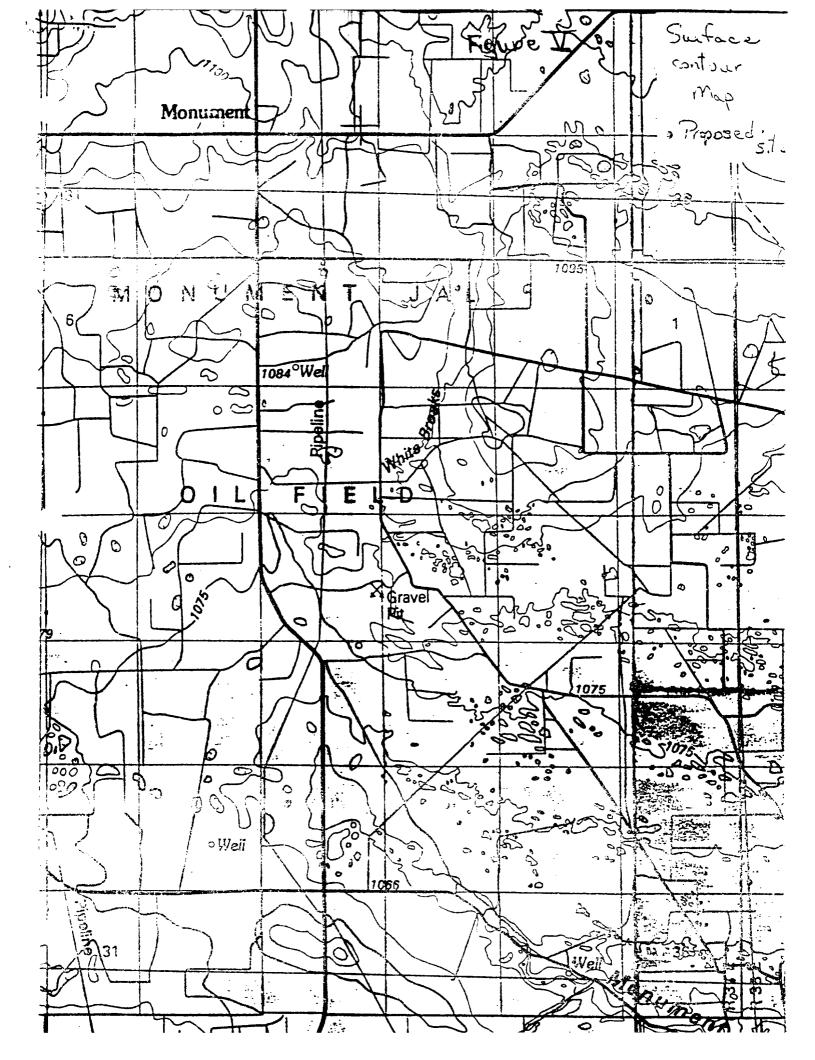
Petrolite Cilfield Chemicals Group

Respectfully submitted, ROZANNE JOHNSON

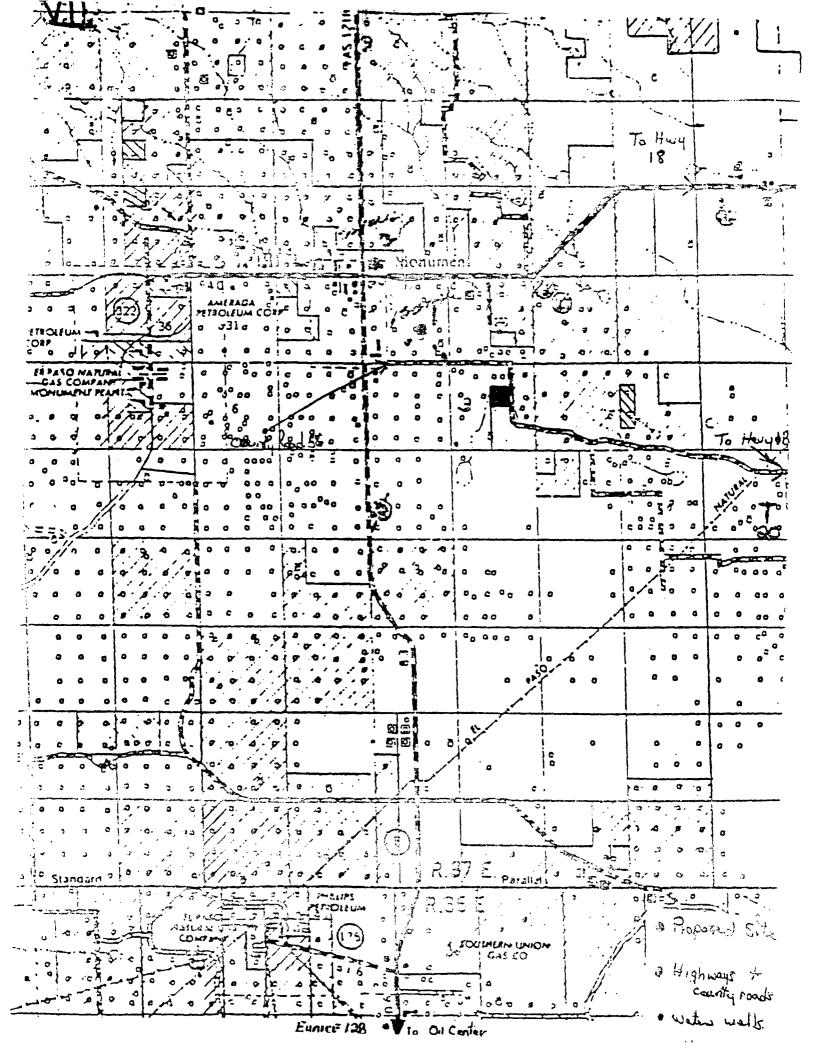
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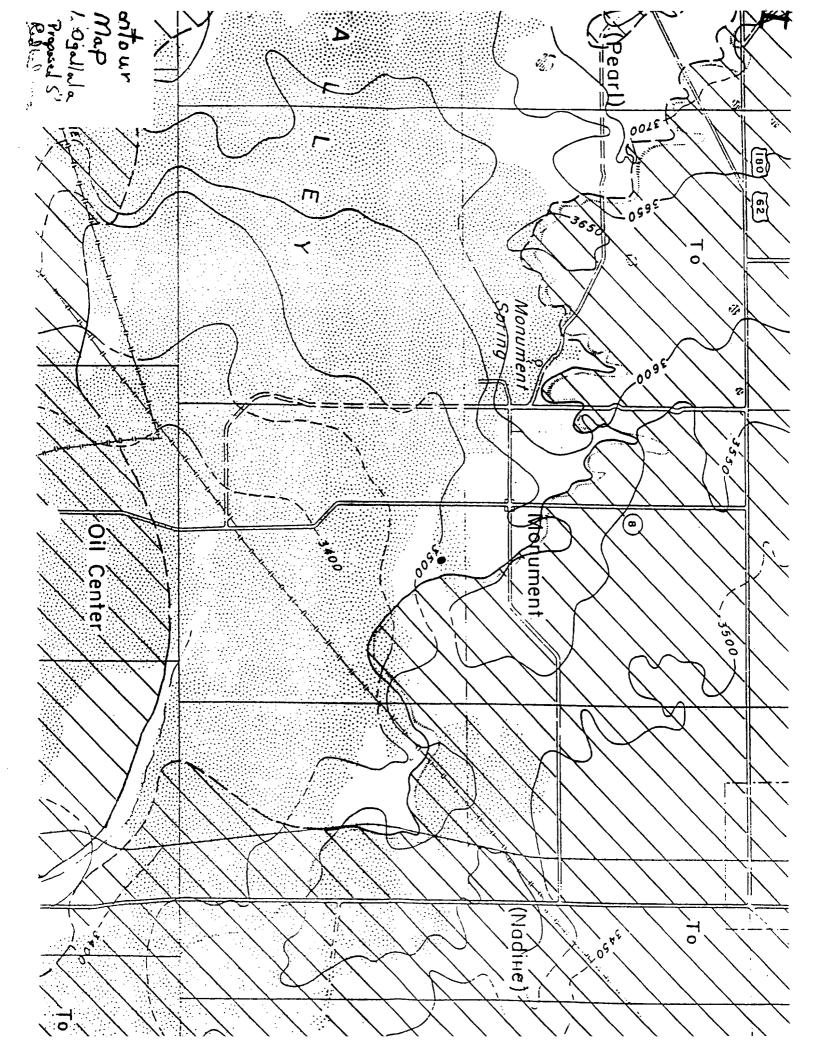
Test well - Monter Wall

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Back fill

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Hole size 63 "



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XII

C & C Landfarm Inc.

Jimmie T. Cooper P.O. Box 55 Monument, NM 88265
505-397-2045

October 1, 1991

Dear Sir:

Pursuant to Rule 711 of the Oil Conservation Commission. State of New Mexico, notice is hereby given that Jimmie T. Cooper, owner and operator of C & C Landfarm Inc., will be filing an application for a surface waste disposal facility located at SW 1/4 of the NE 1/4 of Section 3. Township 20, Range 37E. Lea Co., NM on deeded land. The facility will be for the disposal of contaminated soils only from oil and gas production. No produced waters or tank bottoms will be allowed. This disposal will allow a safe place for the natural occurance of remediation of the soil.

If there are any questions please contact:

Mr. Roger Anderson State of New Mexico Oil Conservation Division P.O. Box 2088 Santa Fe., NM 87501 505-827-5384

Thank You.

Eddie W. Seay

Peak Consulting Service

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DOMESTIC RETURN RECEIPT

#### NOTICE OF PUBLICATION

#### STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Oil Conservation Division Regulations, the following application to construct and operate a commercial surface waste disposal facility has been submitted for approval to the Director of the Oil Conservation Division, State Land Office Building, P.O. Box 2088, Santa Fe, New Mexico 87504-2088, Telephone (505) 827-5800:

C & C Landfarm Inc., Eddie W. Seay, Agent, P.O. Box 55, Monument, New Mexico 88265, has submitted an application to construct and operate a commercial landfarm facility for remediation of hydrocarbon contaminated soils. The proposed location of the facility is the SW/4 NE/4, Section 3, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico. facility is proposed to consist of a land management area where solids containing "non-hazardous" contaminants will be spread on the ground surface in six inch lifts or less and stirred to enhance biodegradation periodically contaminants. Groundwater most likely to be affected by any accidental discharges at the surface is not known to be present in the area of one-half mile from the boundaries of the facility. The facility is underlain by redbeds ranging in thickness from 430 to 1200 feet.

Any interested person may obtain further information from the Oil Conservation Division and may submit written comments to the Director of the Oil Conservation Division at the address given above. The application may be viewed at the above address between 8:00 a.m. and 5:00 p.m., Monday through Friday. Prior to ruling on any proposed permit or its modification, the Director of the Oil Conservation Division shall allow at least thirty (30) days after the date of publication of this notice during which comments may be submitted to him.

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 18th day of November, 1991.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY, Director

SEAL





### ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEDICO 87504 (505) 827-5800

February 21, 1992

## CERTIFIED MAIL RETURN RECEIPT NO. P-670-683-494

Mr. Jimmie T. Cooper C & C Landfarm Inc. Box 55 Monument, New Mexico 88265

RE: Landfarm Request, C & C Landfarm Inc. Lea County, New Mexico

Dear Mr. Cooper:

The Oil Conservation Division (OCD) has received and is in the process of reviewing the above referenced application for an oil field related solids landfarm located in the SW/4 NE/4, Section 3, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico. The following comments and requests for additional information are based on review of the application, dated October 4, 1991, and inspection of the proposed facility on February 11, 1992 by representatives of the OCD and C & C Landfarm Inc. In order for the review process to continue the OCD requires the following information:

1. In your surface disposal application you propose to construct a pit by excavating down to the top of the redbed (about 10 to 12 feet) and using the overburden (caliche) to build berms around the site. The OCD is concerned with the possibility of contaminants migrating off of your property along the surface of the redbed. The OCD requires a detailed description of how C & C plans to prevent the migration of contaminants down gradient along the redbed surface. If there are any modifications or additions to the original application, place submit detailed descriptions and diagrams. Include the dimensions (3-D) of the proposed facility (pit) along with a cross-sectional diagram.

A CONTRACTOR OF THE PROPERTY O

Mr. Jimmie T. Cooper February 21, 1992 Page 2

- 2. Constuction of your present monitor wells does meet the current OCD standards and recommendation for monitor well construction. If any monitor wells are constructed in the future please submit drilling and completion plans for OCD approval prior to conducting operations.
- 3. The OCD has stringent requirements for the operation of all OCD regulated landfarms.

  A commitment to the following conditions is required prior to OCD approval of commercial landfarms:
  - a. All soils received at the facility will be spread and disked within 72 hours of receipt.
  - b. Solids will be spread on the surface in six inch lifts or less.
  - c. Solids will be disked a minimum of one time every two weeks (biweekly) to enhance biodegradation of contaminants.
  - d. No solids will be spread on previously spread solids until a laboratory measurement of Total Petroleum Hydrocarbons (TPH) in the previous lift is less than 100 ppm and the sum of all aromatic hydrocarbons (BTEX) is less than 50 ppm, and benzene is less than 10 ppm. Comprehensive records of the laboratory analyses and the sampling locations will be maintained at the facility. Authorization from the OCD will be obtained prior to application of successive lifts.
  - e. Only solids that are non-hazardous by RCRA Subtitle C or by characteristic testing will be accepted at the facility. Solids from operations not currently exempt under RCAA Subtitle C or mixed exempt/non-exempt solids will be tested for appropriate hazardous constituents. Test results must be submitted to the OCD along with a request to receive the non-exempt solids, and a written OCD approval (case specific) must be obtained prior to disposal. Any non-oilfield wastes which are RCRA Subtitle C exempt will be accepted on a case-by-case basis and with OCD approval.
  - f. Comprehensive records of all material disposed of at the facility will be maintained at the facility. The records for each load will include: 1) the origin, 2) analysis for hazardous constituents if required, 3) transporter.

Mr. Jimmie T. Cooper February 21, 1992 Page 3

- g. OCD approval must be obtained prior to the addition of any substances to enhance biodegradation of the soils landfarmed (ie. chemical additives, manure, nutrients, bugs, ect.).
- h. No free liquids or soils with free liquids will be accepted at the facility.
- 4. The OCD is concerned about the impact of disposal facilities on private residences. Please submit a map showing all private residences within one mile of the proposed facility. Include the name and land status of the resident.

Submission of the above requested information will allow the review process to continue. If you have any questions please do not hesitate to contact me at (505) 827-5884.

Sincerely,

Kathy M. Brown

Geologist

cc: Jerry Sexton, OCD Hobbs Office Chris Eustice, OCD Hobbs Office Mike Pierce, Peak Consulting

M. Brown

# PEAK

CONSULTING SERVICES
ENVIRONMENTAL,
GEOLOGICAL & REGULATORY
SPECIALISTS



P.O BOX 636 HOBBS, NEW MEXICO 88240 OFFICE (505) 392-1915

March 2, 1992

Kathy M. Brown Oil Conservation Division P.O. Box 2088 Santa Fe. New Mexico 87504-2088

> Re: Resconse to letter dated February 21, 1992 C & C Landfarm Inc.

Dear Ms. Brown:

This letter is in response to the Oil Conservation Divisions' requests and concerns regarding C & C Landfarm Inc.s' application. Please find enclosed the information you require:

1. C & C Landfarm Inc. proposes to install a redbed dike on the south, west, and north edges of the property to prevent any migration of fluids from the property. This dike will consist of a trench approximately 2 - 3 feet wide. This trench will be deep enough to penetrate the redbed interval to a depth of approximately 2 feet. The trench will then be backfilled and compacted with redbed material from the working pit. (Fig. 1)

This dike will be situated between the property line and the monitor wells previously installed. (Fig. 1)

The pit will be excavated to approximately I foot above the top of the redbed. (Fig. 1)

2. C & C Landfarm Inc. will seek OCD approval before any additional monitor wells are drilled.

OCD Response February 28. 1992 Page 2

- C & C Landfarm Inc. acknowledges :tems A thru H of part three of the letter dated February 21, 1992, and agrees to comply with all conditions.
- 4. Figure 2 is a map showing all private residences within one mile of the facility. At the present time only one residence is within one mile. This residence is owned by Mr. A.C. Doyall, and he was provided with a copy of the original application by C & C Landfarm Inc..

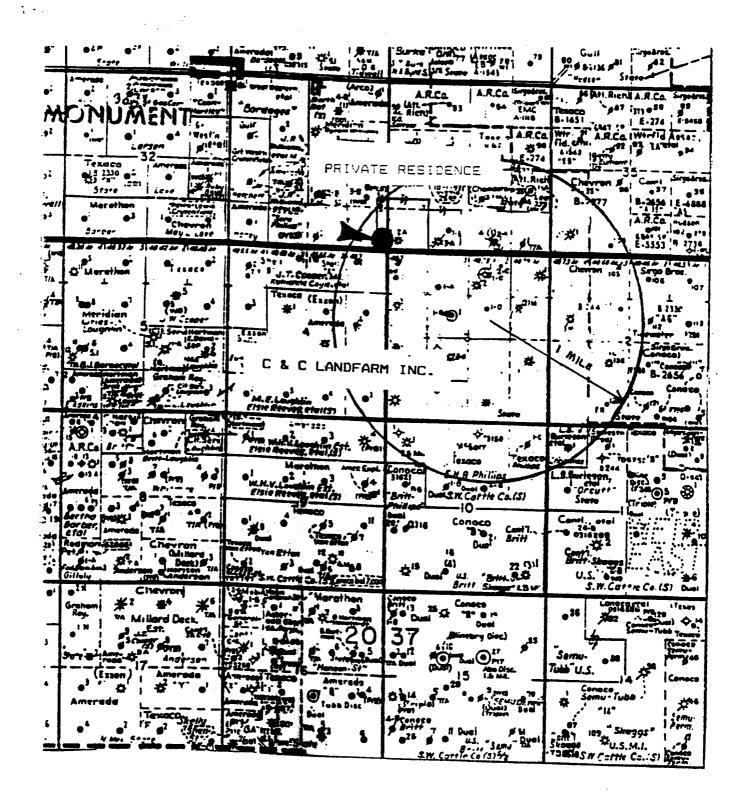
The pit occupies approximately 2 acres at this time. C & C Landfarm Inc. request that the entire 40 acre tract be permitted for landfarming. This way the pit can be expanded as needed.

C & C Landfarm Inc. and Peak Consulting Services appreciates the time and effort that the Oil Conservation Division has invested in this project. We are committed to provide a quality facility that the Oil Industry can depend on and have confidence in. If we can be of further assistance, please lets us know.

Sincerely,

Michael L. Pierce

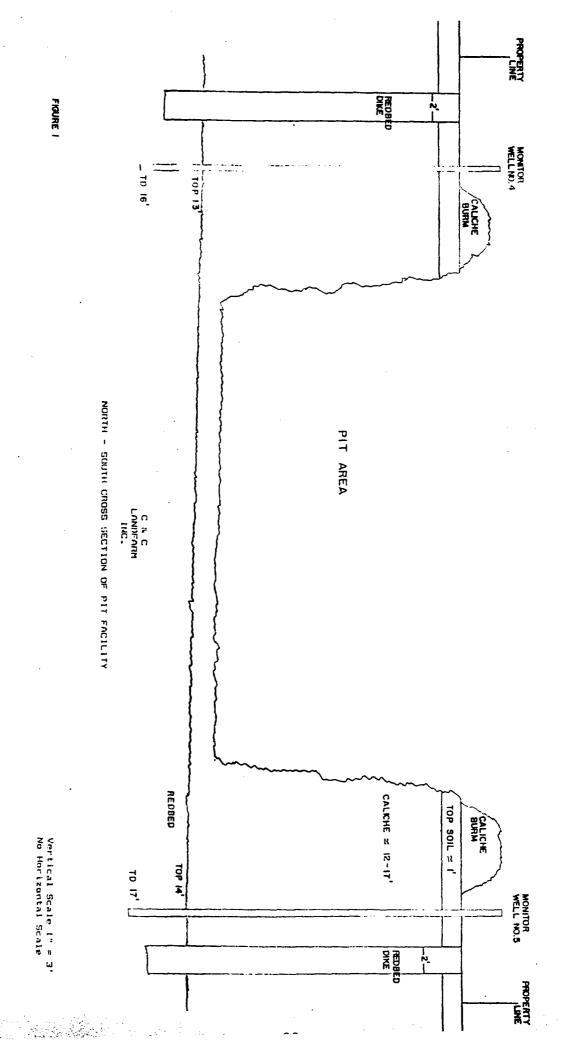
Peak Consulting Services



C & C LANDFARM INC.

LOCATION MAP OF PRIVATE RESIDENCES WITHIN ONE MILE OF THE FACILITY

Figure 2



#### STATE OF NEW MEXICO



#### ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

**OIL CONSERVATION DIVISION** 



BRUCE KING GOVERNOR

April 3, 1992

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87504 (505) 827-5800

CERTIFIED MAIL
RETURN RECEIPT NO. P-670-683-576

Mr. Walter C. Laughlin 4139 E. Laughlin Road Casa Grande, Arizona 85222

RE: C & C Landfarm Inc. Application

Dear Mr. Laughlin:

The Oil Conservation Division (OCD) has received your December 20, 1991 protest to the C & C Landfarm Inc. application. The OCD is is the state agency which permits commercial surface disposal facilities.

The process that the OCD uses to review surface disposal applications is comprehensive and ongoing. The applicant submits the initial application, it is thoroughly reviewed, and if necessary additional information and commitments are requested to satisfy specific OCD requirements. After all of the required information is submitted and evaluated an ultimate determination is made as to whether or not the facility can be operated in a manner which is consistent and in compliance with the regulations of the Division.

In determining whether a specific facility is approvable the OCD must insure that there will be sufficient protection of ground water, human health, and the environment. The OCD cannot deny an application solely on the basis that the use is incompatible with surrounding land uses or local zoning requirements. The OCD has no jurisdiction or authority to enforce compliance with those regulations.

The OCD incorporated all letters of protest into review of the initial C & C Landfarm application. Upon completing review of the application the OCD requested additional information and commitments from C & C Landfarm. The OCD has received and reviewed C & C Landfarm's response dated March 2, 1992. The application at this time is administratively approvable since it meets all of the technical requirements to protect ground water, human

Mr. Walter C. Laughlin April 3, 1992 Page 2

health, and the environment. Both the original application and supplemental materials are on file at the OCD Santa Fe Office. These records are open for public inspection from 8:00 a.m. to 4:00 p.m., Monday through Friday.

The OCD is giving all protestors the opportunity to evaluate the application and respond with substantive technical information. Active participation by informed neighboring landowners can be very useful to the Division to insure that the facility is permitted with appropriate operational requirements. As previously stated, the OCD cannot consider land use or zoning requirements when evaluating surface disposal applications.

Please submit all comments to the OCD within 30 days from receipt of this letter. If you have any questions please do not hesitate to contact me at (505) 827-5884.

Sincerely,

Kathy M. Brown
Kathy M. Brown

Geologist

xc: Chris Eustice, OCD Hobbs Office

Bob Stovall, General Counsel

Jimmie T. Cooper, C & C Landfarm Inc.

Mike Pierce, Peak Consulting

SENDER: Complete items 1 sider 2 for additional services. Complete items 3, self 46 & b. Print your same and delesse on the reverse of this form so the return this card to you. Attach this form to the front of the mailpiece, or on the back idoes not permit.	if space 1. Addressee's Address
<ul> <li>Write "Return Receipt Requested" on the mailpiece below the art</li> <li>The Return Receipt Fee will provide you the signature of the pers</li> </ul>	
to and the date of delivery.	Consult postmaster for fee.
3. Article Addressed to: Mr. Walter C. Laughlin	4a. Article Number P-670-683-576  4b. Service Type Insured
4139 E. Laughlin Rd Casa Grande, Anizona	Registered Insured Cortified COD Express Mail Return Receipt f
watter Lanahli	7. Date of Delivery
5. Signature (Addressee)	8. Addressee's Address (Only if request and fee is paid)
6. Signature (Agent)	• Company of the second

#### STATE OF NEW MEXICO



#### ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

#### **OIL CONSERVATION DIVISION**



BRUCE KING GOVERNOR

May 20, 1992

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE. NEW MEXICO 87504 (505) 827-5800

CERTIFIED MAIL
RETURN RECEIPT NO. P-670-683-594

Mr. Walter C. Laughlin 4139 E. Laughlin Road Casa Grande, Arizona 85222

RE: C & C Landfarm Inc. Application

Dear Mr. Laughlin:

The Oil Conservation Division (OCD) permits commercial surface disposal facilities which receive oil field related waste. The C & C Landfarm Inc. proposed commercial surface disposal facility has been determined to be approvable subject to the attached conditions. The application and supplemental information submitted are in compliance with all Division rules and regulations, and are open for public inspection at the OCD Santa Fe Office.

You filed an objection to the application of C & C Landfarm Inc. If you still object to the application and wish to present technical testimony at a hearing in Santa Fe, please submit a request for hearing within 20 days of date of this letter or by June 9, 1992. Your request should include a concise statement of your objection or concern and a summary of the evidence you will present at hearing. If the Director determines that intervenors such as yourself have significant additional information to offer, the matter will be set for hearing. The OCD cannot consider land use or zoning requirements when evaluating surface disposal applications.

If no request for hearing is received by June 9, 1992, then the application will be administratively approved. If you have any questions please do not hesitate to contact me at (505) 827-5884.

Sincerely,

Kathy M. Brown

Geologist

Attachment

xc: Chris Eustice, OCD Hobbs Office
Jimmie T. Cooper, C & C Landfarm Inc.
Mike Pierce, Peak Consulting

# ATTACHMENT (May 20, 1992)

# C & C LANDFARM INC. APPLICATION OCD CONDITIONS OF APPROVAL

- 1. All soils received at the facility will be spread and disked within 72 hours of receipt.
- 2. Solids will be spread on the surface in six inch lifts or less.
- 3. Solids will be disked a minimum of one time every two weeks (biweekly) to enhance biodegradation of contaminants.
- 4. No solids will be spread on previously spread solids until a laboratory measurement of Total Petroleum Hydrocarbons (TPH) in the previous lift is less than 100 ppm and the sum of all aromatic hydrocarbons (BTEX) is less than 50 ppm, and benzene is less than 10 ppm. Comprehensive records of the laboratory analyses and the sampling locations will be maintained at the facility. Authorization from the OCD will be obtained prior to application of successive lifts.
- 5. Only solids that are non-hazardous by RCRA Subtitle C or by characteristic testing will be accepted at the facility. Solids from operations not currently exempt under RCRA Subtitle C or mixed exempt/non-exempt solids will be tested for appropriate hazardous constituents. Test results must be submitted to the OCD along with a request to receive the non-exempt solids, and a written OCD approval (case specific) must be obtained prior to disposal. Any non-oilfield wastes which are RCRA Subtitle C exempt will be accepted on a case-by-case basis and with OCD approval.
- 6. Comprehensive records of all material disposed of at the facility will be maintained at the facility. The records for each load will include: 1) the origin, 2) analysis for hazardous constituents if required, 3) transporter.
- 7. OCD approval must be obtained prior to the addition of any substances to enhance biodegradation of the soils landfarmed (ie. chemical additives, manure, nutrients, bugs, ect.).
- 8. No free liquids or soils with free liquids will be accepted at the facility.
- 9. If any monitor wells are constructed in the future the drilling and completion plans will be submitted for OCD approval prior to conducting operations.
- 10. A redbed dike will be installed on the south, west, and north edges of the property as proposed in the C & C crrespondence dated March 2, 1992.

# STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 10507 ORDER NO. R-9769

APPLICATION OF C & C L'ANDFARM, INC. FOR A COMMERCIAL SURFACE WASTE DISPOSAL FACILITY, LEA COUNTY, NEW MEXICO

#### ORDER OF THE DIVISION

#### BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on Tuesday, September 1, 1992, at Santa Fe, New Mexico, before Examiner Michael E. Stogner in Docket No. 27-92.

NOW, on this <u>16th</u> day of November, 1992 the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises,

#### **FINDS THAT:**

- (1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) Sections 70-2-12.B(21) and (22), N.M.S.A. (1978) Compilation, also known as the New Mexico Oil and Gas Act, authorizes the New Mexico Oil Conservation Division (Division) to regulate the disposition of non-domestic wastes resulting from various oil and gas activities and operations and to protect public health and the environment.
- (3) The applicant, C & C Landfarm, Inc., (C & C) originally filed its application, pursuant to General Rule 711 with the Division on October 8, 1991 for authorization to construct and operate a commercial "landfarm" facility for the remediation of non-hazardous hydrocarbon contaminated soils utilizing an enhanced biodegradation process on a site located in the SW/4 NE/4 (Unit G) of Section 3, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico, which is located

approximately two miles southeast of Monument, New Mexico. The term "non-hazardous" in this matter is synonymous with the terminology and usage in the Resource Conservation and Recovery Act (RCRA) Subtitle C regulations.

- (4) This application, subsequent to review by the Division, has been administratively determined to be approveable and this hearing was scheduled to allow interested parties the opportunity to present technical evidence why this application should not be approved pursuant to the applicable rules of the Division.
- (5) Within the required time frame and in accordance with Division rules, five parties of interest filed written objections to the proposed facility:
  - a) Walter C. Laughlin 4139 E. Laughlin Road Casa Grande, Arizona 85222
  - c) Elsie M. Reeves 3902 W. Keim Drive Phoenix, Arizona 85019
- b) Larry N. Henry
  500 E. Scharbauer
  Hobbs, New Mexico 88240
- d) W. T. Stradley, President S-W Cattle Company P.O. Box 1799 Hobbs, New Mexico 88241
- e) Ken Marsh
  Controlled Recovery, Inc.
  P.O. Box 369
  Hobbs, New Mexico 88241
- (6) At the time of the hearing Elsie M. Reeves and W. Trent Stradley entered appearances through counsel in objection to this matter.
- (7) Also at the hearing, all previous correspondence, letters, applications from the applicant, notices and other such pertinent material prepared by the Division, interested parties, other state and federal agencies and the applicant were made part of the record in this case.
- (8) The proposed landfarm is to be located on a forty-acre tract of land, as described in Finding Paragraph No. 3, which is bordered by Lea County Road No. 58 on the east. C & C proposes to excavate on the property as needed down to the top of the "redbed", which is a thick layer of relatively impermeable clays. Oilfield contaminated soils will be trucked to the site and broadcast within the excavated site(s) in six-inch lifts; these soils will be tilled or plowed to ensure proper aeration and bio-

remediation to proper governmental standards. New lifts will be added in the above-described method until an excavated area has been filled and properly tested to within one foot of the surrounding surface elevation, the area will then be backfilled with topsoil, mound over and compacted to prevent rainfall from standing or leaching into backfill. All should be constructed, operated and maintained in accordance with applicable NMOCD rules and standards.

- (9) There is a need for such solids disposal facilities in Southeastern New Mexico to provide environmentally safe and cost effective means of disposing of such solid wastes in connection with oil and gas operations, and approval of a properly designed facility will help to prevent illegal dumping of solid material in a manner which could endanger the environment.
- (10) Applicant appeared at the hearing and presented testimony about the design and operational standards and established a <u>prima facie</u> showing that the facility could be designed and operated so as to protect fresh water supplies and not constitute an unreasonable harm to human health and the environment if standards for such operation are met and followed.
- (11) Testimony presented in this matter indicates that the proposed facility can be constructed and operated in a manner that will not cause contamination of underground fresh water resources, will not leach-out and migrate onto off-setting properties, can be operated and maintained in a safe manner and will not cause waste.
- (12) "Conditions of Approval" should be adopted by this order which will assure safe operations and provide an adequate monitoring system to detect any leaching process or movement of contaminants that could cause the pollution of nearby underground fresh water supplies.

#### IT IS THEREFORE ORDERED THAT:

(1) The applicant, C&C Landfarm, Inc., is hereby authorized to construct and operate a commercial "landfarm" facility for the remediation of non-hazardous hydrocarbon contaminated soils utilizing an enhanced biodegradation process on a site located in the SW/4 NE/4 (Unit G) of Section 2, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico.

PROVIDED HOWEVER THAT the proposed facility shall be constructed and operated in accordance with the permit conditions attached hereto as Exhibit "A" which are incorporated herein and made a part of this order, and in accordance with such

additional conditions and requirements as may be directed by the Division Director, and shall be operated and maintained in such a manner as to preclude spills, fires, limit emissions and protect persons, livestock and the environment.

PROVIDED FURTHER THAT, prior to initiating operations, the facility shall be inspected by a representative of the Hobbs District Office in order to determine the adequacy of fences, gates and cattle guards necessary to preclude livestock and unauthorized persons from entering and/or utilizing said facility, and also to determine the adequacy of dikes and berms to assure safe facility operations.

- (2) Prior to commencing operations on said facility, the applicant shall submit, to the Santa Fe office of the Division, a surety or cash bond pursuant to General Rule 711, in the amount of \$25,000 in a form approved by the Division.
- (3) The Director of the Division shall be authorized to administratively grant approval for the expansion or modification of the proposed disposal facility.
- (4) Authority for operation of the "landfarm" facility shall be transferrable only upon written application and approval by the Division Director.
- (5) Authority for operation of the "landfarm" facility shall be suspended or rescinded whenever such suspension or rescission should appear necessary to protect human health or property, to protect fresh water supplies from contamination, to prevent waste, or for non-compliance with the terms and conditions of this order or Division Rules and Regulations.
- (6) The permit granted by this order shall become effective only upon acceptance and certification by the applicant.
- (7) The Division shall have the authority to administratively change any condition of this permit to protect fresh water, human health and the environment. Applicant may request a hearing upon any change which materially affects the operation of the facility.
- (8) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

Case No. 10507 Order No. R-9769 Page No. 5

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY

Director

SEAL

# Exhibit "A" Case No. 10507 Order No. R-9769

# C & C LANDFARM, INC. APPLICATION OCD CONDITIONS OF APPROVAL

#### LANDFARM OPERATIONS

- 1. Disposal will only occur when an attendant is on duty. The facility will be secured when no attendant is present.
- 2. The facility will be fenced and have a sign at the entrance. The sign will be legible from at least fifty (50) feet and contain the following information: a) name of the facility, b) location by section, township and range, and c) emergency phone number.
- 3. A redbed dike will be installed on the south, west and north edges of the property as proposed in C & C's correspondence dated March 2, 1992.
- 4. All contaminated soils received at the facility will be spread and disked within 72 hours of receipt.
- 5. Soils will be spread on the surface in six-inch lifts or less.
- 6. Soils will be disked a minimum of one time every two weeks (bi-weekly) to enhance biodegradation of contaminants.
- 7. Successive lifts of contaminated soils will not be spread until a laboratory measurement of Total Petroleum Hydrocarbons (TPH) in the previous lifts is less than 100 parts per million (ppm), and the sum of all aromatic hydrocarbons (BTEX) is less than 50 ppm, and the benzene is less than 10 ppm. Comprehensive records of the laboratory analysis and the sampling locations will be maintained at the facility. Authorization from the OCD will be obtained prior to application of successive lifts.
- 8. Only oilfield wastes which are exempt from Federal Resource Conservation and Recovery Act (RCRA), (42 U.S.C. §§6921-6939b), Subtitle C regulations (40 C.F.R. Parts 260-272) will be accepted at the facility. Solids from operations not currently exempt under RCRA Subtitle C or mixed exempt/non-exempt solids will be tested for appropriate hazardous constituents. Test results may be submitted to the OCD along with a request to receive non-exempt solids, and a written OCD approval (case specific) must be obtained prior to disposal. Any

non-oilfield wastes which are RCRA Subtitle C exempt or are non-hazardous by characteristic testing will only be accepted on a case-by-case basis and with prior OCD approval. Comprehensive records of all laboratory analyses and sample locations will be maintained by the operator.

9. Moisture will be added as necessary to enhance biodegradation and to control blowing dust. There will be no ponding, pooling or run-off of water allowed. Any ponding of precipitation will be removed within seventy-two hours of discovery.

#### **CLOSURE**

When the facility is to be closed, no new material will be accepted. Existing soils will be remediated until they meet the OCD standards in effect at the time of closure. The area will then be reseeded with natural grasses and allowed to return to its natural state. Closure will be pursuant to all OCD requirements in effect at the time of the closure.

#### STATE OF NEW MEXICO



## ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

#### OIL CONSERVATION DIVISION



BRUCE KING GOVERNOR

ANITA LOCKWOOD CABINET SECRETARY

January 6, 1993

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87504 (505) 827-5800

CERTIFIED MAIL
RETURN RECEIPT NO. P-667-241-935

Mr. Jimmie T. Cooper C & C Landfarm Inc. Box 55 Monument, New Mexico 88265

RE:

C & C Landfarm Inc.

Oil Conservation Commission Hearing

Eddy County, New Mexico

Dear Mr. Cooper:

The New Mexico Oil Conservation Division (OCD) has reviewed both the Division Order issued November 16, 1992 for C & C Landfarm, Inc., and the letter dated November 20, 1992 from Peak Consulting Services on behalf of C & C Landfarm, Inc. Based on review of these documents and on the current OCD requirements for commercial landfarm facilities, the OCD recommends that the attached conditions be placed on the proposed facility if the Oil Conservation Commission (OCC) deems it appropriate to approve the permit.

If you have any questions, please do not hesitate to contact me at (505) 827-5884.

Sincerely,

Kathy M. Brown

Geologist

Attachment

xc: Mike Williams, OCD Artesia Office

# ATTACHMENT OCD 711 PERMIT RECOMMENDATIONS C & C LANDFARM, INC.

(January 6, 1993)

#### LANDFARM OPERATION

- 1. Remediation of contaminated soils will occur only on the native ground surface. The caliche pit present on the facility will not be used for the disposal, storage or remediation of any materials without the case-by-case approval of the OCD.
- 2. No disposal or remediation of contaminated soils will occur within one-hundred (100) feet of your property boundary.
- 3. Disposal will only occur when an attendant is on duty. The facility will be secured when no attendant is present.
- 4. The facility will be fenced and have a sign at the entrance. The sign will be legible from at least fifty (50) feet and contain the following information: a) name of the facility, b) location by section, township and range, and c) emergency phone number.
- 5. An adequate berm will be constructed and maintained to prevent runoff and runon for that portion of the facility containing contaminated soils.
- 6. All contaminated soils received at the facility will be spread and disked within 72 hours of receipt.
- 7. Soils will be spread on the surface in six inch lifts or less.
- 8. Soils will be disked a minimum of one time every two weeks (biweekly) to enhance biodegradation of contaminants.
- 9. Successive lifts of contaminated soils will not be spread until a laboratory measurement of Total Petroleum Hydrocarbons (TPH) in the previous lift is less than 100 parts per million (ppm), and the sum of all aromatic hydrocarbons (BTEX) is less than 50 ppm, and the benzene is less than 10 ppm. Comprehensive records of the laboratory analyses and the sampling locations will be maintained at the facility. Authorization from the OCD will be obtained prior to application of successive lifts.
- 10. Only oilfield wastes which are exempt from the RCRA Subtitle C regulations or non-hazardous by characteristic testing will be accepted at the facility. Solids from operations not currently exempt under RCRA Subtitle C or mixed exempt/non-exempt solids will be tested for appropriate hazardous constituents. Test results must be submitted to the OCD along with a request to receive the non-exempt solids, and a written OCD approval

Dags -17-

(case specific) must be obtained prior to disposal. Any non-oilfield wastes which are RCRA Subtitle C exempt or are non-hazardous by characteristic testing will only be accepted on a case-by-case basis and with prior OCD approval. Comprehensive records of all laboratory analyses and sample locations will be maintained by the operator.

- 11. Moisture will be added as necessary to enhance bioremediation and to control blowing dust. There will be no ponding, pooling or run-off of water allowed. Any ponding of precipitation will be removed within seventy-two (72) hours of discovery.
- 12. Enhanced bio-remediation through the application of microbes (bugs) and/or fertilizers will only be permitted after prior approval from the OCD. Request for application of microbes must include the location of the area designated for the bio-remediation program, composition of additives, and the method, amount and frequency of application.
- 13. No free liquids or soils with free liquids will be accepted at the facility.
- 14. Comprehensive records of all material disposed of at the facility will be maintained at the facility. The records for each load will include: 1) the origin, 2) date received 3) quantity, 4) Exempt or non-exempt status and analysis for hazardous constituents if required, 5) transporter, and 6) exact cell location and any addition of microbes, moisture, fertilizers, etc.
- 15. The monitor wells will be inspected for the presence of fluids on a quarterly basis on the same schedule as the treatment zone monitoring. If fluids are discovered the OCD will be notified immediately.

### TREATMENT ZONE MONITORING

- 1. One (1) background soil sample will be taken from the center portion of the landfarm two (2) feet below the native ground surface. The sample will be analyzed for total petroleum hydrocarbons (TPH), general chemistry, and heavy metals using approved EPA methods.
- 2. A treatment zone not to exceed three (3) feet beneath the land farm will be monitored. A minimum of one random soil sample will be taken from each individual cell, with no cell being larger than five (5) acres, six (6) months after the first contaminated soils are received in the cell and then quarterly thereafter. The sample will be taken at two to three (2-3) feet below the native ground surface.
- 3. The soil samples will be analyzed using approved EPA methods for TPH and BTEX quarterly, and for general chemistry and heavy metals annually.
- 4. After obtaining the soil samples the boreholes will be filled with an impermeable material such as bentonite cement.

#### REPORTING

- 1. Analytical results from the treatment zone monitoring will be submitted to the OCD Santa Fe Office within thirty (30) days of receipt from the laboratory.
- 2. The OCD will be notified of any break, spill, blow out, or fire or any other circumstance that could constitute a hazard or contamination in accordance with OCD Rule 116.

#### BOND

Pursuant to OCD Rule 711 a surety or cash bond in the amount of \$25,000, in a form approved by the Division, is required prior to commencing construction of the commercial surface disposal facility.

#### **CLOSURE**

The operator will notify the Division of cessation of operations. Upon cessation of disposal operations for six (6) consecutive months, the operator will complete cleanup of constructed facilities and restoration of the facility site within the following six (6) months, unless an extension for time is granted by the Director. When the facility is to be closed no new material will be accepted. Existing soils will be remediated until they meet the OCD standards in effect at the time of closure. The area will then be reseeded with natural grasses and allowed to return to its natural state. Closure will be pursuant to all OCD requirements in effect at the time of closure, and any other applicable state and/or federal regulations.

Before the

Bubrittea By:

GROUND WATER SECTION Environmental Improvement Division Health and Environment Department Santa Fe, N.M. 87503 Phone: (505) 827-2900

Summary of Discharge Plan

May 31, 1990

DP number: 619

Facility name:

Hearing Date:

RHINO TANK AND LINE TESTING

Alternate name:

Type of facility: HYDROCARSON CLEANUP-SCIL DISPOSAL AREA

Means of discharge: LAND APPLICATION

County:

EID District 4

T20S, R38E, Sec. 14.122

Location:

8 MILES SOUTH OF HOBBS

Nearest city: NADINE

Responsible person:

STEVE

DYER

Contact or consultant person:

Title:

OWNER

P.O. BOX 2327

Address: City, zip:

HOBBS

NM 88240-

Phone:

505-397-1848

The Ground Water Section staff reviewer is MARK MILLER. Application was received 04/28/89 and Public Notice published 05/24/89. The plan was approved 05/07/90 and expires 05/07/95.

(Application for renewal should be submitted in ample time before expiration.)

# Monitoring Requirements summary

No. of monitoring reports required annually: Monitoring reports are due no later than May 31, February 28, November 30, and August 31 of each year.

Sampling	Annual	# of	27 
required	freq.	sites	Comments, description
Water levels:	0	0	
Disch. vols:	0	0	SEE ATTACHED MONITORING SUMMARY
Major ions:	0	0	
Heavy metals:	0	0	*** ***
N Species:	0	0	
Organics:	0	0	
Other:	0	ŋ	

If this space is checked, monitoring requirements are summarized or explained in more detail on the attached sheet. Any inadvertent omission from this summary does not relieve the discharger of responsibility for compliance with that requirement. Send monitoring reports to the address at top, "Attention: MARK MILLER, re: DP-619".

#### RHINO MONITORING REQUIREMENTS (CONTINUED)

( )

Record Keeping: quarterly reports are due by February 28, May 31, August 31, and November 30 each year.

Record the date, volume, and source of contaminated soils.

Record the dates when soils are tilled. (Soil tilling is required no less frequently than every 10 days.)

Testing Methods: The following test methods must be followed in all soil testing performed to meet the monitoring requirements listed above.

#### Field Headspace Vapor Method

- 1. Fill a 16 ounce or larger glass jar half full of soil.
- 2. Seal top with clean aluminum foil.
- 3. Ensure sample is at 60 to 80 degrees Farenheit.
- 4. Allow hydrocarbon vapors to develop in jar for 5-10 minutes.
- 5. Pierce the aluminum foil with the Gastech Model 1238 Hydrocarbon Surveyor probe, and read the peak measurement.
- 6. A reading of 50 ppm or greater indicates that further remediation is macessary.

#### Laboratory TPH Method

- 1. Total Petroleum Mydrocarbon (TPH) samples should be collected in all an glass jars with teflon lined lids as provided by a last.
- 2. Samples should be cooled on ice after collection.
- 3. Samples should be laboratory tested using EPA method 418.1 or equivalent.

#### RHINO TANK AND LINE TESTING

1

#### HYDROCARBON CONTAMINATED SOIL DISPOSAL AREA (DP-619)

#### MONITORING SCHEDULE

Annual Soil Testing: due by November 30 each year.

: # 1

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4 samples (1 per acre) collected at a depth of 3 feet in the native soil must be tested for headspace vapors and total petroleum hydrocarbons (TH).

Monitor Well Testing: due by November 30 each year.

The east side monitor well should be inspected annually for the presence of water. If water is present, depth to water must be reported and a sample must be tested for: benzene, toluene, ethylbenzene, xylene, TPM, and total dissolved solids (TDS).

Soil Test Plots: quarterly progress reports due by February 28, May 31, August 31, and November 30 each year.

- 1. Testing must begin no later than August 1990 and the first progress report must be received by August 31, 1990.
- 2. Two small plots should be kept apart from other soils: one plot of gasoline contaminated soil and one of diesel contaminated soil.
- 3. A sample from each plot should be initially tested for TPH and headspace vapors
- 4. A sample from each plot should be tested at least monthly for headspace vapors.
- 5. When headspace vapor readings fall below 50 ppm, a final TPH test should be run. If TPH is above 100 ppm. TPH tests should continue until this value is reached.
- 6. The entire testing procedure should be repeated at least once for both gasoline and diesel contaminated soils to confirm the results.

## State of New Mexico

Energy, Minerals and Natural Resources Department OIL CONSERVATION DIVISION

P.O. Box 2088 Santa Fe, NM 87501

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### APPLICATION FOR SURFACE WASTE DISPOSAL FACILITY

	(Refer to OCD Guidelines for assistance in completing the application.)
I.	Type: Produced Water Drilling Muds Treating Fluids Solids Other
II.	OPERATOR: C & C Landfarm Inc.
	ADDRESS: Box 55 Monument, NM 88265
	CONTACT PERSON: Jimmie T. Cooper PHONE: 505-397-2045
Ш.	LOCATION: SW /4 NE /4 Section 3 Township 20 Range 37 E  Submit large scale topographic map showing exact location.
IV.	is this an expansion of an existing facility? $\square$ Yes $\boxtimes$ No
<b>V</b> .	Attach the name and address of the landowner of the disposal facility site and landowners of record within one-hi of the site.
٧ĭ.	Attach description of the facility with a diagram indicating location of fences, pits, dikes, and tanks on the faci
<b>√11.</b>	Attach detailed engineering designs with diagrams prepared in accordance with Division guidelines construction/installation of the following: pits or ponds; leak-detection systems; aerations sytems; en evaporation (spray) systems; waste treating systems and security systems.
III.	Attach a contingency plan for reporting and clean-up of spills or releases.
IX.	Attach a routine inspection and maintenance plan to ensure permit compliance.
X.	Attach a closure plan.
XI.	Attach geological/hydrological evidence demonstrating that disposal of oil field wastes will not adversely impa-water.
XII.	Attach proof that the notice requirements of OCD Rule 711 have been met. (Commercial facilities only.)
CIII.	Attach a contingency plan in the event of a release of H <sub>2</sub> S.
IV.	Attach such other information as is necessary to demonstrate compliance with any other OCD rules, regulations orders.
XV.	CERTIFICATION
	I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
	Name: <u>Eddie W. Seav</u> Title: <u>Agent/Consultant</u>
	Signature: Edd. 10 dea. Date:
	DISTRIBUTION: Original and one copy to Santa Fe with one copy to appropriate Division District Office.

#### APPLICATION FOR SURFACE WASTE DISPOSAL FACILITY

- I. Type: Solids Oil or Salt water contaminated soils from production facilities only.
- OPERATOR: C & C Landfarm Inc.
  ADDRESS: Box 55 Monument, NM 88265
  CONTACT PERSON: Jimmie T. Cooper
  PHONE: 505-397-2045
- III. LOCATION: SW 1/4 of the NE 1/4 of Section 3. Township 20, Range 37 East, Lea Co., NM.
  - IV. IS THIS AN EXPANSION OF AN EXISTING FACILITY? No, this is a new facility.
  - V. LANDOWNER OF FACILITY SITE
    Jimmie T. Cooper
    P.O. Box 55
    Monument, NM 88265

LANDOWNERS OF RECORD WITHIN 1/2 MILE State of New Mexico State Land Office P.O. Box 1148 Santa Fe, NM 87504

> S & W Cattle Co. 8900 South County Rd. 58 Monument, NM 88265

J.R. Williams, et al P.O. Box 215 Monument, NM 88265

A.C. Doyall P.O. Box 188 Monument, NM 88265

#### VI. DIAGRAM (attached)

- (A) Excavate area as needed down to top of redbed approximately 10 to 12 feet. Use overburden to build burms around site to prevent and restrict rain run off and drainage to facility.
- (B) Fence around all sides, with chain link fence adjacent to County Road 58.
- (C) Gate with cattle guard at entrance. Open during daylight hours only.
- (D) 5 monitor wells on North, South, East, and West sides.
- (E) Signs posted with restrictions and permit no.

(F) Any other improvement as needed or required by OCD.

#### VII. DRAWING OF MONITOR WELL (attached)

Excavate land area down to redbed, dispose of contaminated soil in 6 in. lifts and till or plow every 30 to 60 days as needed to ensure proper aeriation so soil can be cleaned up by natural remediation according to government standards. Have soil tested for TPH and BTEX before adding new lift as required.

#### VII. CONTINGENCY PLAN (NA)

There will be no liquids at facility. Any soil accidentally spilled at facility will be picked up with front end loader and deposited within landfill. No material will be accepted without documentation.

#### IX. ROUTINE INSPECTION AND MAINTENANCE PLAN

- (1) Weekly inspection of monitor wells.
- (2) Road area around facility will be graded and kept free of oily dirt.
- (3) All loads will be documented and logged.
- (4) No liquids accepted.
- (5) No tank bottoms accepted.
- (6) Area will be posted with proper signs.
- (7) No dumping will be allowed unless facility is open.
- (8) May require letter from company showing waste has not been mixed with non-exempt waste.
- (9) All area properly fenced with locked gates.
- (10) Each lift will be tested for BTEX Method 602 and TPH Method 8015 EPA test requirements before adding new lift.

#### X. CLOSURE PLAN

All overburden will be removed down to the redbed, averaging from 12 ft. on the east side, to 16 ft. on the west side.

Disposal of solids will start at redbed, when area has been filled and tested to within 1 ft. of surface elevation, area will be backfilled with top soil, mound over and compacted. The mound should prevent rain or water from standing or leaching into backfill.

All fences will be left in tact and monitor wells left in place for future monitoring.

Also, any additional rule or regulation at time of closure will be adhered to.

XI. Geographically, the site is situated near the western boundary of the southern extension of the High Plains in Southeastern New Mexico. The site in question is a 40 acre tract located in Unit G, Section 3, Township 20, Range 37 E, Lea Co., NM.

The site which is bordered by County road 58 on the east, has a gradual surface slope to the west. To the SE of this site in Unit Lettter O is a large pit with the redbed exposed. Redbed is a layer of relatively impermeable clays, red to reddish brown in color, underlying the fresh water aquifer in SE New Mexico ranging in thickness up to 1200 ft.

C & C Landfarm Inc. is located on or near the redbed layer. A series of test wells were drilled to define the redbed and check for fresh water.

# TEST WELL LOGS

#1 Located 100 yds. N of NW corner 0-1 ft. Top Soil 1-18 ft. Caliche, Rock 18-20 ft. Redbed All formations dry.

#2 Located 125 ft. N of the south line on the extreme west edge.

0-1 1/2 ft. Top Soil
1 1/2-16 ft. Caliche, Rock
16-18 ft. Redbed
All formations dry.

#3 Located 100 yds. E of the west line on the south side.
0-1 ft. Top Soil
1-15 ft. Caliche, Rock
15-17 ft. Redbed
All formations dry.

#4 Located 50 yds. W of the east line on the south border.
0-1 ft. Top Soil
1-13 ft. Caliche, Rock
13-16 ft. Redbed
All formations dry.

#5 Located 150 yds. W of east line on the north side.
0-1 ft. Top Soil / 7

1-14 ft. Caliche, Rock 14-17 ft. Redbed All formations dry.

\* An area in the middle of the east edge of the property, was excavated with a backhow. Rock and caliche at 0-12 ft. Redbed was encountered at 12 ft.

The wells were drilled with rotary rig, no water was excountered, only caliche, rock, and sand down to redbed. The redbeds came in at 12 ft. on the east side, down to 17 ft. on the west side. The five wells drilled were completed into the redbed and cased with 3 in. PVC pipe with 5 ft. of screen on bottom with the top 2 ft. cemented and capped. Wells to be secured with locks and used as monitor wells.

Researched State Engineers records and U.S.G.S. file, no fresh water was recorded or found within area of review. A physical inspection was made and a windmill was found approximately 1 mile SW of the site, a sample was taken and analysis recorded for future use.

We feel this is one of the better sites for deposit of contaminated soil due to the thickness of redbeds, little or no fresh water in the area, a monitor system is in place for control of system. This system is in the middle of the oil and gas production and will serve a valuable environmental need, both regulatory and industrial.

- XII. PROOF OF OCD RULE 711 (attached)
- XIII. CONTINGENCY PLAN FOR RELEASE OF H2S (NA)

Open pit system should not have H2S. If encountered, OCD Rule 118 will be adhered to.

XIV. All State of New Mexico, Oil Conservation rules will be enforced as they pertain to this system.

C & C LANDFARM INC. Additional information to Application for Surface Waste Disposal.

I. The thickness of the redbeds varied from area to area in Section 3. The information was taken from logs of producing oil wells in the area and lithology reports.

Unit C	Top	20	ft.	Base	960	ft.
F		30	ft.		562	ft.
В		14	ft.		880	ft.
H		15	ft.		1350	ft.
М		30	ft.		1270	ft.
L		40	ft.		1050	ft.

with the average thickness being 987 ft.

II. Groundwater in the area; Figure I is a copy of the State Engineer's water analysis and locations for this area, none were listed in Sect. 3. The windmill SSW of our proposed site appears to be located in Unit M of Sect. 3 approximately 3/4 mile from site; Figure II is a copy of analysis from S & W windmill. Figure III indicates water wells in the general area showing top and bottom of water formation and contour line indicating direction of flow, which is SE. Figure IV is a contour map of top of redbed, with slopes to the SSE. Figure V is a contour map of the surface for the surrounding area, the direction of slope is to the west.

The contour maps provided are information from the State Bureau of Mines, which shows any movement at our site would run SE along the redbed surface and west along the top of ground.

If the State feels it is necessary, additional monitor wells can be installed or a redbed barrier constructed on the SW portion of our site to prevent any contaminate from moving.

III. Also provided are the mail receipts from registered letters.

Any additional information needed, please call (505)392-2236.

Eddie W. Seay Peak Consulting

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27	205	36E	26	24344	2/08/85	150	1798	68F	TOG		
28									104	be	
29	205	34E	26	24443	11/08/79	182	1875		TOG	,	
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33	205	275	nα	11114	04/02/54	450	0400				
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34					04/22/55	425	2090		GAL	L	
	205	3/5	U <b>4</b>	11114	09/09/58	325	1670		GAL	L	
36				554554							
37				221321	04/22/55	51	758		GAL	L	
				221321	09/09/58	47	708		GAL	L	
39				221321	07/14/77	106	1070		GAL	<u>L</u>	
40				221321	10/25/79	214	1506	65F	QAL	L	
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42										- <b>-</b>	
43	205	37E	05	222144	11/29/79	258	1611		TOG	L	
44				222144	9/26/84	314	1729		TOG	Ī	
45		_					and the second			-	
46	205	37E	07	24331	11/09/79	1268	4232		TOG	L	
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5.5											
<b>5</b> 57					21 - 5420%	386800 ES A ES A E	and the second of the second o				

# WATER ANALYSIS REPORT

Company : \$ & W CATTLE CO Date : 10/29/91
Address : HOBBS, NEW MEXICO Date Sampled : 10/28/91
Lease : SECT 3 T20 R37 Analysis No. : 876
Well : UNIT M
Sample Pt. : WINDMILL

	ANALYSIS		mg/L		* meq/L
1. 2.	pH 7.1 H2S NEGATI	VE			
3.	Specific Gravity 1.000	. • •			
4.	Total Dissolved Solids		2245.2		
5. 6.	Suspended Solids Dissolved Oxygen				
7.	Dissolved CO2				
8.	Oil In Water				
9.	Phenolphthalein Alkalinity (	(CaCO3)			
10.	Methyl Orange Alkalinity (Ca	(CO3)	291.0		
11.	Bicarbonate	HCO3	355.0	HCO3	5.8
12.	Chloride	Cl	599.1	Cl	16.9
13.	Sulfate	SO4	575.0	SO4	12.0
14.	Calcium	Ca	153.5	Ca	7.7
15.		Mg	66.1	Mg	5.4
16.	Sodium (calculated)	Na	496.4	Na	21.6
17.	Iron	Fe	0.0		
18.	Barium	Ba	0.0		
19.		sr	0.0		
20.	Total Hardness (CaCO3)		655.6		

#### PROBABLE MINERAL COMPOSITION -----

*milli equivalents per Liter	Compound Equiv wt X meq/L = mg,
8 *Ca < *HCO3 6 > 5 *Mg> *SO4 12	Ca(HCO3)2 81.0 5.8 472 CaSO4 68.1 1.8 125 CaCl2 55.5 Mg(HCO3)2 73.2
22 *Na> *Cl   17   ++ Saturation Values Dist. Water 20 C	MgSO4 60.2 5.4 327 MgCl2 47.6 NaHCO3 84.0
CaCO3 13 mg/L CaSO4 * 2H2O 2090 mg/L BaSO4 2.4 mg/L	Na2SO4 71.0 4.7 331 NaCl 58.4 16.9 988

REMARKS: EDDIE SEAY

Petrolite Oilfield Chemicals Group

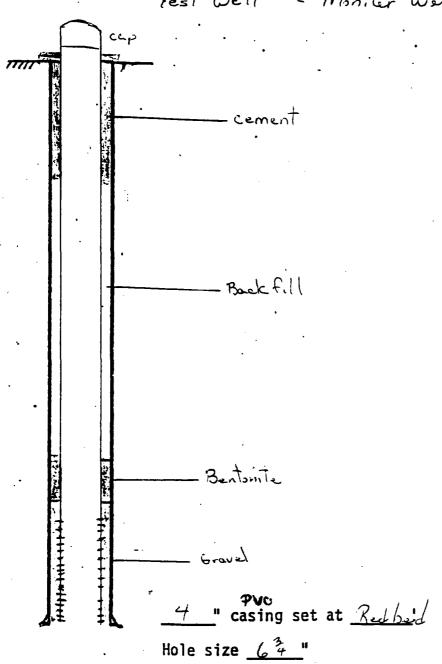
Respectfully submitted, ROZANNE JOHNSON

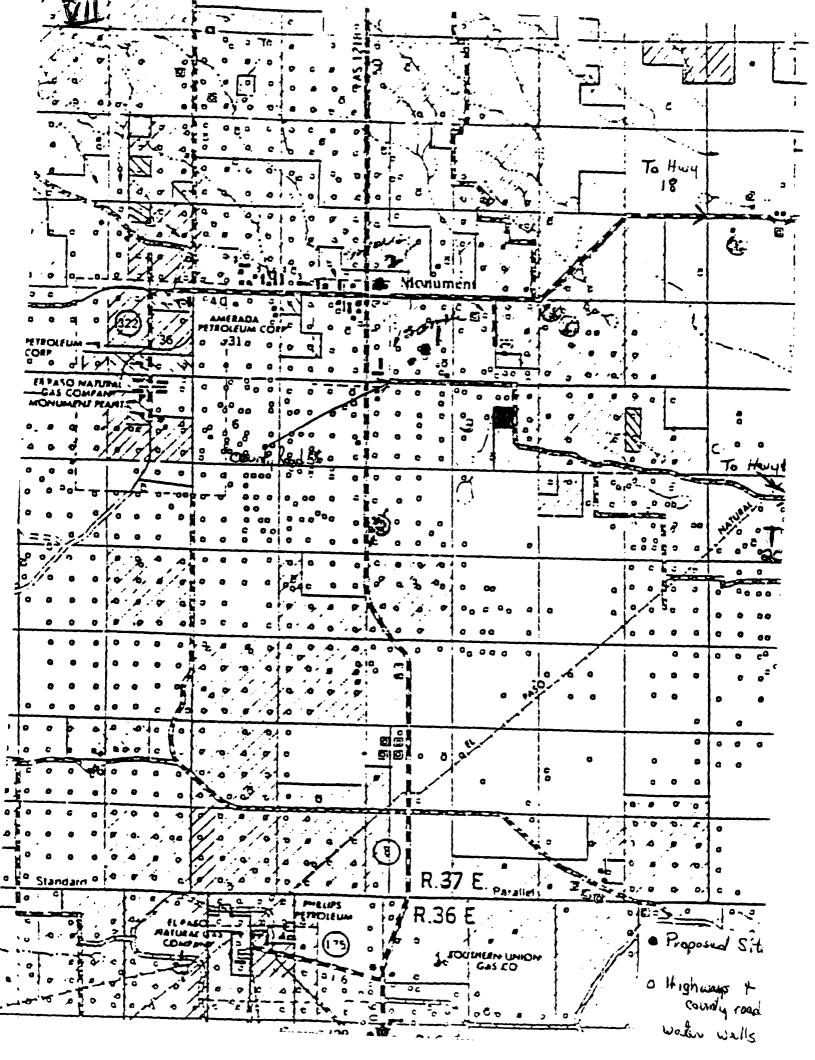
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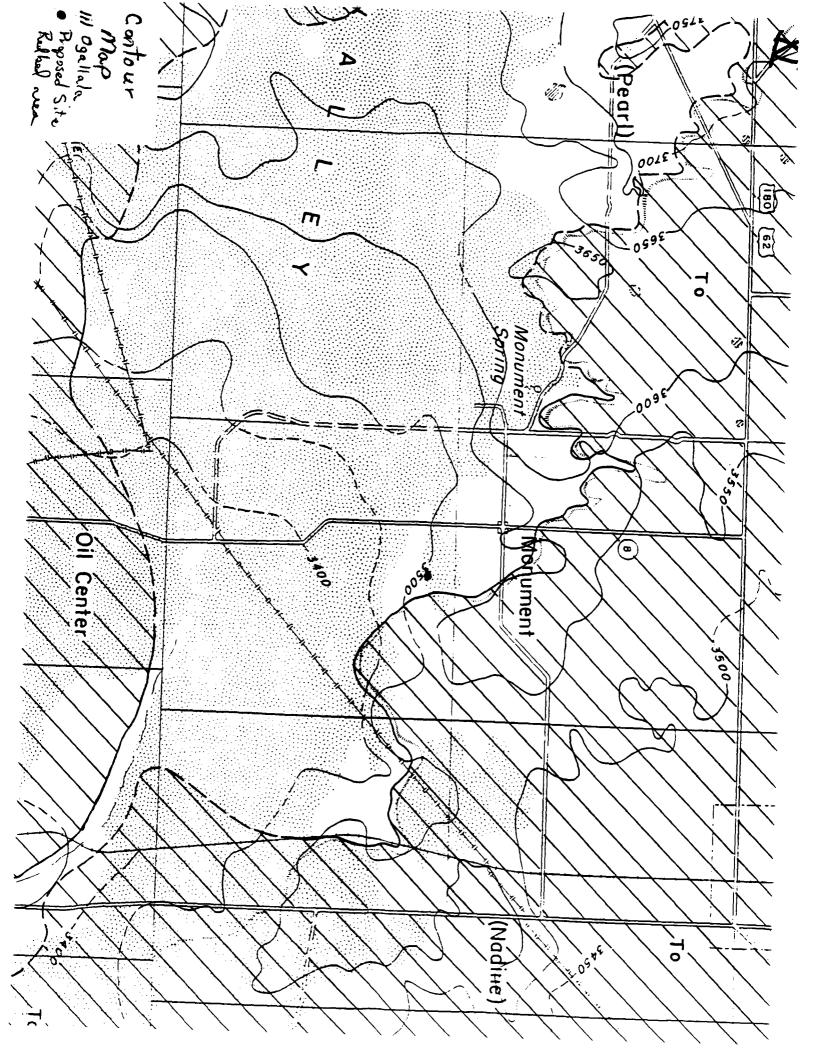
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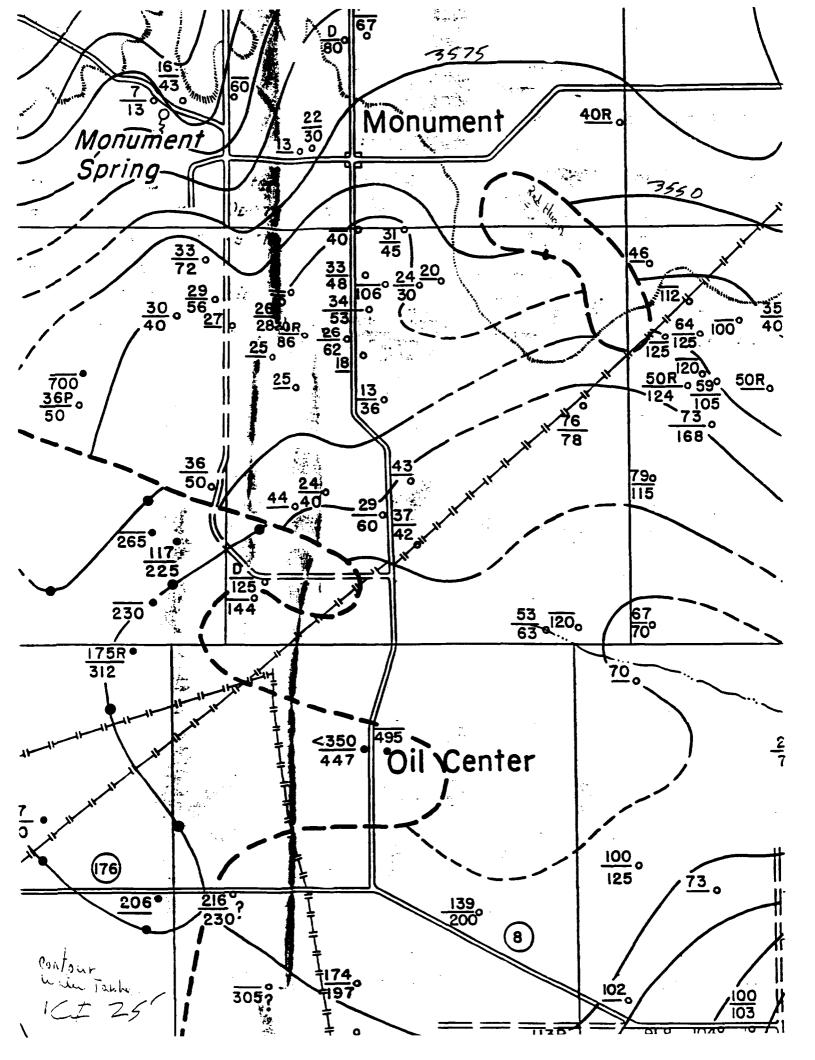
VII.

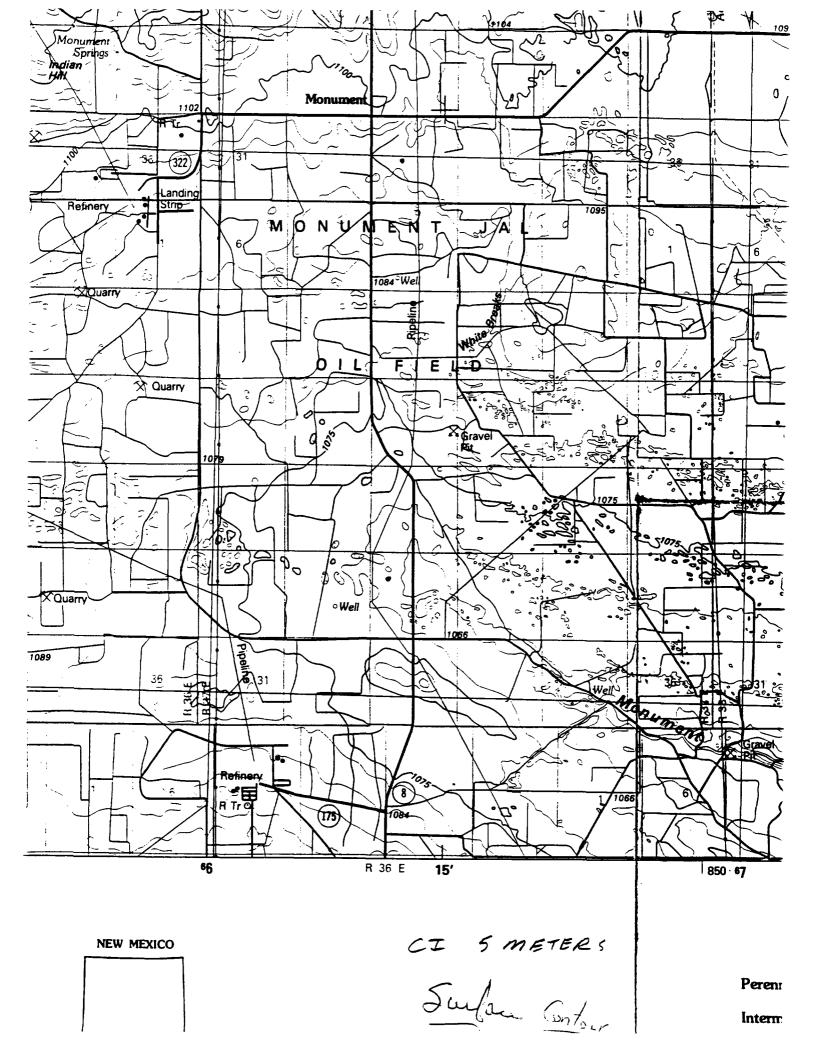
Test well - Moniter well











October 1, 1991

Mr. A.C. Doyall P.O. Box 188 Monument NM 88265

#### Dear Sir:

Pursuant to Rule 711 of the Oil Conservation Commission. State of New Mexico, notice is hereby given that Jimmie T. Cooper, owner and operator of C & C Landfarm Inc., will be filing an application for a surface waste disposal facility located at SW 1/4 of the NE 1/4 of Section 3, Township 20, Range 37E, Lea Co., NM on deeded land. The facility will be for the disposal of contaminated soils only from oil and gas production. No produced waters or tank bottoms will be allowed. This disposal will allow a safe place for the natural occurance of remediation of the soil.

If there are any questions please contact:

Mr. Roger Anderson State of New Mexico Oil Conservation Division P.O. Box 2088 Santa Fe. NM 87501 505-827-5884

Thank You.

Eddie W.Seay Peak Consulting Service

Palace Lance

October 1, 1991

Mr. J.R. Williams, et al P.O. Box 215 Monument NM 88265

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Pursuant to Rule 711 of the Oil Conservation Commission, State of New Mexico, notice is hereby given that Jimmie T. Cooper, owner and operator of C & C Landfarm Inc., will be filing an application for a surface waste disposal facility located at SW 1/4 of the NE 1/4 of Section 3, Township 20, Range 37E, Lea Co., NM on deeded land. The facility will be for the disposal of contaminated soils only from oil and gas production. No produced waters or tank bottoms will be allowed. This disposal will allow a safe place for the natural occurance of remediation of the soil.

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Mr. Roger Anderson State of New Mexico Oil Conservation Division P.O. Box 2088 Santa Fe, NM 87501 505-827-5884

Thank You.

Eddie W.Seay

Peak Consulting Service

Pharma - ---

October 1, 1991

S & W Cattle Co. 8900 South County Road 58 Monument NM 88265

Dear Sir:

Pursuant to Rule 711 of the Oil Conservation Commission, State of New Mexico, notice is hereby given that Jimmie T. Cooper, owner and operator of C & C Landfarm Inc., will be filing an application for a surface waste disposal facility located at SW 1/4 of the NE 1/4 of Section 3, Township 20, Range 37E, Lea Co., NM on deeded land. The facility will be for the disposal of contaminated soils only from oil and gas production. No produced waters or tank bottoms will be allowed. This disposal will allow a safe place for the natural occurance of remediation of the soil.

If there are any questions please contact:

Mr. Roger Anderson State of New Mexico Oil Conservation Division P.O. Box 2088 Santa Fe, NM 87501 505-827-5884

Thank You.

Eddie W.Seay

Peak Consulting Service

Edding Lang

October 1, 1991

Mr. Jimmie T. Cooper, Landowner P.O. Box 55
Monument NM 88265

Dear Sir:

Pursuant to Rule 711 of the Oil Conservation Commission, State of New Mexico, notice is hereby given that Jimmie T. Cooper, owner and operator of C & C Landfarm Inc., will be filing an application for a surface waste disposal facility located at SW 1/4 of the NE 1/4 of Section 3, Township 20, Range 37E, Lea Co., NM on deeded land. The facility will be for the disposal of contaminated soils only from oil and gas production. No produced waters or tank bottoms will be allowed. This disposal will allow a safe place for the natural occurance of remediation of the soil.

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Mr. Roger Anderson State of New Mexico Oil Conservation Division P.O. Box 2088 Santa Fe, NM 87501 505-827-5884

Thank You.

Today 1 - chan

Eddie W.Seay Peak Consulting Service

October 1, 1991

Commissioner of Public Lands State of New Mexico NM State Land Office P.O. Box 1148 Santa Fe, NM 87504

Dear Sir:

Pursuant to Rule 711 of the Oil Conservation Commission, State of New Mexico, notice is hereby given that Jimmie T. Cooper, owner and operator of C & C Landfarm Inc., will be filing an application for a surface waste disposal facility located at SW 1/4 of the NE 1/4 of Section 3, Township 20. Range 37E, Lea Co., NM on deeded land. The facility will be for the disposal of contaminated soils only from oil and gas production. No produced waters or tank bottoms will be allowed. This disposal will allow a safe place for the natural occurance of remediation of the soil.

If there are any questions please contact:

Mr. Roger Anderson State of New Mexico Oil Conservation Division P.O. Box 2088 Santa Fe, NM 87501 505-827-5884

Thank You.

Eddie W.Seay Peak Consulting Service

DOMESTIC RETURN RECEI	PS Form 3811. Anr 1989 +US.G.PO. 1989-238-815	DOMESTIC RETURN RECEIPT P	'S Form 3811, Apr. 1989 +U.S.G.P.O. 1989-238-815
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		g de The Secretary for the Secretary of	6. Sign fure → Agent //
or requested and fee paid)	5. Signaturo - Addressee	8. Addressee's Address (ONLY if )	S. Signature - Addresses
	FE. Nu	Always obtain signature of addressee or agent and DATE DELIVERED.	
☐ Express Mail ☐ Return Receipt for Merchandise	P.O. Box 1148		
Type of Service:	te of New Mex	Type of Service:	# X
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ress. 2. Restricted Delivery (Extra charge)	1. A Show to whom delivered, date, and addresse's address. 2. A Restricted Delivery.	ress. 2. Restricted Delivery	1. 🛭 Show to whom delivered, date, and addressee's address. (Extra charge)
ide. Failure to do this will prevent this can but the name of the person delivered to an are available. Consult postmaster for fee	Put your address in the "RETURN TO" Space on the reverse side. Fallure to do this will prevent this car. from being returned to you. The return receipt fee will provide you the name of the person delivered to and the determine the following services are available. Consult postmaster for fee and chack by lest for additional service(s) requested.	ide. Failure to do this will prevent this card to the name of the person delivered to and are available. Consult postmaster for fees	Put address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from a returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and these box lest for additional services required.
ervices are desired, and complete item	<b>661</b> .	2 when additional services are desired, and complete items	SENDER: Complete items 1 and 2 when additional a 3 and 4.
DOMESTIC RETURN REC	PS Form 3811, Apr. 1989	DOMESTIC RETURN RECEIPT	PS Form 3811, Apr. 1989 +us.a.r.o. 1989-238-818
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Express Mail Return Receipt for Merchandis			
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services are desired, and complete it	SENDER: Complete items 1 and 2 when additional services are desired, and complete it	when additional services are desired, and complete items	SENDER: Complete items 1 and 2 when additional

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# STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION FORE THE

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

'ASE NO. 10507' ORDER NO. R-9769

APPLICATION OF C & C LANDFARM, INC. FOR A COMMERCIAL SURFACE WASTE DISPOSAL FACILITY, LEA COUNTY, NEW MEXICO

# ORDER OF THE DIVISION Came your as

BY THE <del>DIVISION</del>:

9:00 Thurst phur. 25 1993

This cause came on for hearing at 8:15 a.m. on Tuesday, September 1, 1992, at Santa Fe, New Mexico, before Examiner Michael E. Stogner in Docket No. 27-92.

NOW, on this day of November, 1992 the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises,

# **FINDS THAT:**

- Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- Sections 70-2-12.B(21) and (22), N.M.S.A. (1978) Compilation, also known as the New Mexico Oil and Gas Act, authorizes the New Mexico Oil Conservation Division (Division) to regulate the disposition of non-domestic wastes resulting from various oil and gas activities and operations and to protect public health and the environment.
- The applicant, C & C Landfarm, Inc., (C & C) originally filed its application, pursuant to General Rule 711 with the Division on October 8, 1991 for authorization to construct and operate a commercial "landfarm" facility for the remediation of non-hazardous hydrocarbon contaminated soils utilizing an enhanced biodegradation process on a site located in the SW/4 NE/4 (Unit G) of Section 3, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico, which is located

approximately two miles southeast of Monument, New Mexico. The term "non-hazardous" in this matter is synonymous with the terminology and usage in the Resource Conservation and Recovery Act (RCRA) Subtitle C regulations.

- (4) This application, subsequent to review by the Division, has been administratively determined to be approveable and this hearing was scheduled to allow interested parties the opportunity to present technical evidence why this application should not be approved pursuant to the applicable rules of the Division.
- (5) Within the required time frame and in accordance with Division rules, five parties of interest filed written objections to the proposed facility:
  - a) Walter C. Laughlin4139 E. Laughlin RoadCasa Grande, Arizona 85222
  - c) Elsie M. Reeves 3902 W. Keim Drive Phoenix, Arizona 85019
- b) Larry N. Henry 500 E. Scharbauer Hobbs, New Mexico 88240
- d) W. T. Stradley, President S-W Cattle Company P.O. Box 1799 Hobbs, New Mexico 88241
- e) Ken Marsh
  Controlled Recovery, Inc.
  P.O. Box 369
  Hobbs, New Mexico 88241
- (6) At the time of the hearing Elsie M. Reeves and W. Trent Stradley entered appearances through counsel in objection to this matter.
- (7) Also at the hearing, all previous correspondence, letters, applications from the applicant, notices and other such pertinent material prepared by the Division, interested parties, other state and federal agencies and the applicant were made part of the record in this case.
- (8) The proposed landfarm is to be located on a forty-acre tract of land, as described in Finding Paragraph No. 3, which is bordered by Lea County Road No. 58 on the east. C & C proposes to excavate on the property as needed down to the top of the "redbed", which is a thick layer of relatively impermeable clays. Oilfield contaminated soils will be trucked to the site and broadcast within the excavated site(s) in six-inch lifts; these soils will be tilled or plowed to ensure proper aeration and bio-

remediation to proper governmental standards. New lifts will be added in the above-described method until an excavated area has been filled and properly tested to within one foot of the surrounding surface elevation, the area will then be backfilled with topsoil, mound over and compacted to prevent rainfall from standing or leaching into backfill. All should be constructed, operated and maintained in accordance with applicable NMOCD rules and standards.

- (9) There is a need for such solids disposal facilities in Southeastern New Mexico to provide environmentally safe and cost effective means of disposing of such solid wastes in connection with oil and gas operations, and approval of a properly designed facility will help to prevent illegal dumping of solid material in a manner which could endanger the environment.
- (10) Applicant appeared at the hearing and presented testimony about the design and operational standards and established a <u>prima facie</u> showing that the facility could be designed and operated so as to protect fresh water supplies and not constitute an unreasonable harm to human health and the environment if standards for such operation are met and followed.
- (11) Testimony presented in this matter indicates that the proposed facility can be constructed and operated in a manner that will not cause contamination of underground fresh water resources, will not leach-out and migrate onto off-setting properties, can be operated and maintained in a safe manner and will not cause waste.
- (12) "Conditions of Approval" should be adopted by this order which will assure safe operations and provide an adequate monitoring system to detect any leaching process or movement of contaminants that could cause the pollution of nearby underground fresh water supplies.

#### IT IS THEREFORE ORDERED THAT:

(1) The applicant, C & C Landfarm, Inc., is hereby authorized to construct and operate a commercial "landfarm" facility for the remediation of non-hazardous hydrocarbon contaminated soils utilizing an enhanced biodegradation process on a site located in the SW/4 NE/4 (Unit G) of Section 2, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico.

PROVIDED HOWEVER THAT the proposed facility shall be constructed and operated in accordance with the permit conditions attached hereto as Exhibit "A" which are incorporated herein and made a part of this order, and in accordance with such

additional conditions and requirements as may be directed by the Division Director, and shall be operated and maintained in such a manner as to preclude spills, fires, limit emissions and protect persons, livestock and the environment.

PROVIDED FURTHER THAT, prior to initiating operations, the facility shall be inspected by a representative of the Hobbs District Office in order to determine the adequacy of fences, gates and cattle guards necessary to preclude livestock and unauthorized persons from entering and/or utilizing said facility, and also to determine the adequacy of dikes and berms to assure safe facility operations.

- (2) Prior to commencing operations on said facility, the applicant shall submit, to the Santa Fe office of the Division, a surety or cash bond pursuant to General Rule 711, in the amount of \$25,000 in a form approved by the Division.
- (3) The Director of the Division shall be authorized to administratively grant approval for the expansion or modification of the proposed disposal facility.
- (4) Authority for operation of the "landfarm" facility shall be transferrable only upon written application and approval by the Division Director.
- (5) Authority for operation of the "landfarm" facility shall be suspended or rescinded whenever such suspension or rescission should appear necessary to protect human health or property, to protect fresh water supplies from contamination, to prevent waste, or for non-compliance with the terms and conditions of this order or Division Rules and Regulations.
- (6) The permit granted by this order shall become effective only upon acceptance and certification by the applicant.
- (7) The Division shall have the authority to administratively change any condition of this permit to protect fresh water, human health and the environment. Applicant may request a hearing upon any change which materially affects the operation of the facility.
- (8) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

WILLIAM J. LEMAY Director

SEAL

Exhibit "A"
Case No. 10507
Order No. R-9769

# C & C LANDFARM, INC. APPLICATION OCD CONDITIONS OF APPROVAL

# **LANDFARM OPERATIONS**

- 1. Disposal will only occur when an attendant is on duty. The facility will be secured when no attendant is present.
- 2. The facility will be fenced and have a sign at the entrance. The sign will be legible from at least fifty (50) feet and contain the following information: a) name of the facility, b) location by section, township and range, and c) emergency phone number.
- 3. A redbed dike will be installed on the south, west and north edges of the property as proposed in C & C's correspondence dated March 2, 1992.
- 4. All contaminated soils received at the facility will be spread and disked within 72 hours of receipt.
- 5. Soils will be spread on the surface in six-inch lifts or less.
- 6. Soils will be disked a minimum of one time every two weeks (bi-weekly) to enhance biodegradation of contaminants.
- 7. Successive lifts of contaminated soils will not be spread until a laboratory measurement of Total Petroleum Hydrocarbons (TPH) in the previous lifts is less than 100 parts per million (ppm), and the sum of all aromatic hydrocarbons (BTEX) is less than 50 ppm, and the benzene is less than 10 ppm. Comprehensive records of the laboratory analysis and the sampling locations will be maintained at the facility. Authorization from the OCD will be obtained prior to application of successive lifts.
- 8. Only oilfield wastes which are exempt from Federal Resource Conservation and Recovery Act (RCRA), (42 U.S.C. §§6921-6939b), Subtitle C regulations (40 C.F.R. Parts 260-272) will be accepted at the facility. Solids from operations not currently exempt under RCRA Subtitle C or mixed exempt/non-exempt solids will be tested for appropriate hazardous constituents. Test results may be submitted to the OCD along with a request to receive non-exempt solids, and a written OCD approval (case specific) must be obtained prior to disposal. Any

non-oilfield wastes which are RCRA Subtitle C exempt or are non-hazardous by characteristic testing will only be accepted on a case-by-case basis and with prior OCD approval. Comprehensive records of all laboratory analyses and sample locations will be maintained by the operator.

9. Moisture will be added as necessary to enhance biodegradation and to control blowing dust. There will be no ponding, pooling or run-off of water allowed. Any ponding of precipitation will be removed within seventy-two hours of discovery.

## **CLOSURE**

When the facility is to be closed, no new material will be accepted. Existing soils will be remediated until they meet the OCD standards in effect at the time of closure. The area will then be reseeded with natural grasses and allowed to return to its natural state. Closure will be pursuant to all OCD requirements in effect at the time of the closure.

#### STATE OF NEW MEXICO



# ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

#### **OIL CONSERVATION DIVISION**



BRUCE KING GOVERNOR

ANITA LOCKWOOD CABINET SECRETARY

January 6, 1993

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87504 (505) 827-5800

CERTIFIED MAIL
RETURN RECEIPT NO. P-667-241-935

Mr. Jimmie T. Cooper C & C Landfarm Inc. Box 55 Monument, New Mexico 88265

RE: C & C Landfarm Inc.

Oil Conservation Commission Hearing

**Eddy County, New Mexico** 

Dear Mr. Cooper:

The New Mexico Oil Conservation Division (OCD) has reviewed both the Division Order issued November 16, 1992 for C & C Landfarm, Inc., and the letter dated November 20, 1992 from Peak Consulting Services on behalf of C & C Landfarm, Inc. Based on review of these documents and on the current OCD requirements for commercial landfarm facilities, the OCD recommends that the attached conditions be placed on the proposed facility if the Oil Conservation Commission (OCC) deems it appropriate to approve the permit.

If you have any questions, please do not hesitate to contact me at (505) 827-5884.

Sincerely.

Kathy M. Brown

Geologist

Attachment

xc: Mike Williams, OCD Artesia Office

# **REPORTING**

- 1. Analytical results from the treatment zone monitoring will be submitted to the OCD Santa Fe Office within thirty (30) days of receipt from the laboratory.
- 2. The OCD will be notified of any break, spill, blow out, or fire or any other circumstance that could constitute a hazard or contamination in accordance with OCD Rule 116.

### **BOND**

Pursuant to OCD Rule 711 a surety or cash bond in the amount of \$25,000, in a form approved by the Division, is required prior to commencing construction of the commercial surface disposal facility.

#### **CLOSURE**

The operator will notify the Division of cessation of operations. Upon cessation of disposal operations for six (6) consecutive months, the operator will complete cleanup of constructed facilities and restoration of the facility site within the following six (6) months, unless an extension for time is granted by the Director. When the facility is to be closed no new material will be accepted. Existing soils will be remediated until they meet the OCD standards in effect at the time of closure. The area will then be reseeded with natural grasses and allowed to return to its natural state. Closure will be pursuant to all OCD requirements in effect at the time of closure, and any other applicable state and/or federal regulations.

# ATTACHMENT OCD 711 PERMIT RECOMMENDATIONS C & C LANDFARM, INC.

(January 6, 1993)

#### LANDFARM OPERATION

- 1. Remediation of contaminated soils will occur only on the native ground surface. The caliche pit present on the facility will not be used for the disposal, storage or remediation of any materials without the case-by-case approval of the OCD.
- 2. No disposal or remediation of contaminated soils will occur within one-hundred (100) feet of your property boundary.
- 3. Disposal will only occur when an attendant is on duty. The facility will be secured when no attendant is present.
- 4. The facility will be fenced and have a sign at the entrance. The sign will be legible from at least fifty (50) feet and contain the following information: a) name of the facility, b) location by section, township and range, and c) emergency phone number.
- 5. An adequate berm will be constructed and maintained to prevent runoff and runon for that portion of the facility containing contaminated soils.
- 6. All contaminated soils received at the facility will be spread and disked within 72 hours of receipt.
- 7. Soils will be spread on the surface in six inch lifts or less.
- 8. Soils will be disked a minimum of one time every two weeks (biweekly) to enhance biodegradation of contaminants.
- 9. Successive lifts of contaminated soils will not be spread until a laboratory measurement of Total Petroleum Hydrocarbons (TPH) in the previous lift is less than 100 parts per million (ppm), and the sum of all aromatic hydrocarbons (BTEX) is less than 50 ppm, and the benzene is less than 10 ppm. Comprehensive records of the laboratory analyses and the sampling locations will be maintained at the facility. Authorization from the OCD will be obtained prior to application of successive lifts.
- 10. Only oilfield wastes which are exempt from the RCRA Subtitle C regulations or non-hazardous by characteristic testing will be accepted at the facility. Solids from operations not currently exempt under RCRA Subtitle C or mixed exempt/non-exempt solids will be tested for appropriate hazardous constituents. Test results must be submitted to the OCD along with a request to receive the non-exempt solids, and a written OCD approval

(case specific) must be obtained prior to disposal. Any non-oilfield wastes which are RCRA Subtitle C exempt or are non-hazardous by characteristic testing will only be accepted on a case-by-case basis and with prior OCD approval. Comprehensive records of all laboratory analyses and sample locations will be maintained by the operator.

- 11. Moisture will be added as necessary to enhance bioremediation and to control blowing dust. There will be no ponding, pooling or run-off of water allowed. Any ponding of precipitation will be removed within seventy-two (72) hours of discovery.
- 12. Enhanced bio-remediation through the application of microbes (bugs) and/or fertilizers will only be permitted after prior approval from the OCD. Request for application of microbes must include the location of the area designated for the bio-remediation program, composition of additives, and the method, amount and frequency of application.
- 13. No free liquids or soils with free liquids will be accepted at the facility.
- 14. Comprehensive records of all material disposed of at the facility will be maintained at the facility. The records for each load will include: 1) the origin, 2) date received 3) quantity, 4) Exempt or non-exempt status and analysis for hazardous constituents if required, 5) transporter, and 6) exact cell location and any addition of microbes, moisture, fertilizers, etc.
- 15. The monitor wells will be inspected for the presence of fluids on a quarterly basis on the same schedule as the treatment zone monitoring. If fluids are discovered the OCD will be notified immediately.

#### TREATMENT ZONE MONITORING

- 1. One (1) background soil sample will be taken from the center portion of the landfarm two (2) feet below the native ground surface. The sample will be analyzed for total petroleum hydrocarbons (TPH), general chemistry, and heavy metals using approved EPA methods.
- 2. A treatment zone not to exceed three (3) feet beneath the land farm will be monitored. A minimum of one random soil sample will be taken from each individual cell, with no cell being larger than five (5) acres, six (6) months after the first contaminated soils are received in the cell and then quarterly thereafter. The sample will be taken at two to three (2-3) feet below the native ground surface.
- 3. The soil samples will be analyzed using approved EPA methods for TPH and BTEX quarterly, and for general chemistry and heavy metals annually.
- 4. After obtaining the soil samples the boreholes will be filled with an impermeable material such as bentonite cement.