

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

RECEIVED

FORM C-108
Revised 4-1-98

JAN 20 2003

APPLICATION FOR AUTHORIZATION TO INJECT OIL CONSERVATION
DIVISION

I. PURPOSE: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ Yes ☐ No

II. OPERATOR: Apache Corporation

ADDRESS: 6120 S. Yale Ave., Suite 1500 Tulsa, OK 74136

CONTACT PARTY: Kevin Mayes PHONE: (918)491-4972

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☐ Yes ☒ No
If yes, give the Division order number authorizing the project: _____

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

*X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).

*XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Kevin Mayes TITLE: Sr. Staff Reservoir Engineer

SIGNATURE: *Kevin Mayes* DATE: 1/16/03

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

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

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

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

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

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

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

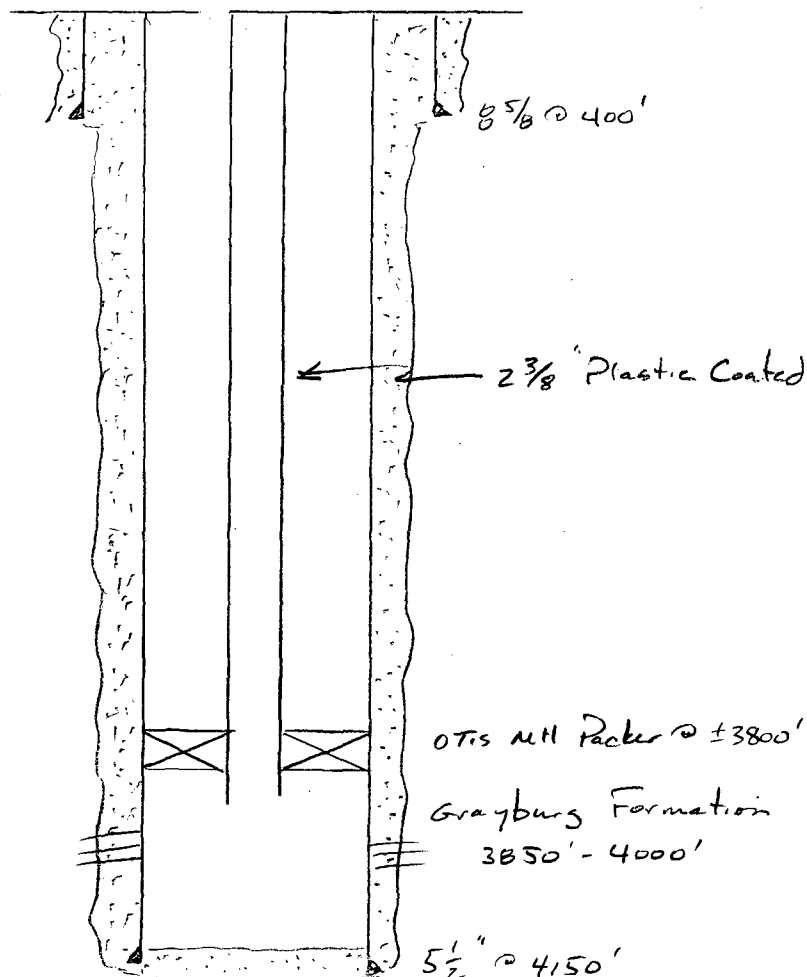
NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

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

INJECTION WELL DATA SHEET

OPERATOR: Apache CorporationWELL NAME & NUMBER: New well to be permitted as the Southland Royalty A #15

WELL LOCATION: 2460' FSL, 990' FEL N/A 4 21South 37East
 FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: 12 1/4 Casing Size: 8 5/8Cemented with: 325 sx. or ft³Top of Cement: Surface Method Determined: Circ.Intermediate CasingHole Size: Casing Size: Cemented with: sx. or ft³Top of Cement: Method Determined: Production CasingHole Size: 7 7/8 Casing Size: 5 1/2Cemented with: 825 sx. or ft³Top of Cement: Surface Method Determined: Circ.Total Depth: 4,150'Injection Interval3,850 feet to 4,000'(Perforated) or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 2 3/8 Lining Material: Plastic

Type of Packer: Otis MH

Packer Setting Depth: 3,800'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? X Yes No

If no, for what purpose was the well originally drilled? _____

2. Name of the Injection Formation: Grayburg

3. Name of Field or Pool (if applicable): Penrose-Skelly

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Underlying = San Andres ($\pm 4,000'$)

Overlying = Penrose ($\pm 3,300'$)

WARREN UNIT (BLINEBRY/TUBB) WI

CONDOR
LG HILL

6028

NORTHEAST DRINKARD UNIT (APACHE OPERATED)

HENDRIX
HAWK FED B 4
1
6000SDX RESOURCES
EXXON FEE
1
7100HENDRIX
EC HILL
1
6050

Zia Energy

MIRAGE ENER
GULF-HILL
6027APACHE
GULF-HILL
3381.15
32
85.49
11+18P.L.T.4
7450
MIRAGE ENER
GULF-HILL
5
7250APACHE
GULF-HILL
31APACHE
STHLND
48APACHE
STHLND
4450APACHE
HAWK A
4
6778APACHE
STHLND ROY
3
6775APACHE
STHLND ROY
37+88P.L.T.APACHE
STHLND ROY
36+56P.L.T.APACHE
STHLND ROY
6750APACHE
HAWK A
5
6800APACHE
HAWK B 1
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6782APACHE
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8482APACHE
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7200APACHE
HAWK A 9
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6710APACHE
HAWK B 1
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7200APACHE
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7200APACHE
HAWK B 1
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6690APACHE
HAWK B 1
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6707APACHE
HAWK B 1
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6735APACHE
HAWK B 1
1
6780APACHE
HAWK B 1
1
6780103
6010106
6922109
6025112
6020129
6980130
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6910125
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6910

— AOR —

1/3
WILL JONES 1/30/03

Southland Royalty A #15			2460S	990E					4	21S	37E						
API	WELLNAME	Operator	NS	EW	Dist	UL2	UL2	Sec	Tsp	Rge	OGRD	TVD	LT	WT	OrigTarget		Comp_Stat
30-025-06401	GULF HILL #001	Apache	1980S	1980E	1100	J	J	4	21S	37E	873	5974	P	O	GRAYBURG		ACTIVE
30-025-06402	GULF HILL #002	MIRAGE	3300S	1980W	2457	F	14	4	21S	37E	14995	6027	P	O	BLINEBRY		ACTIVE
30-025-06403	GULF HILL #003	Apache	3300S	1980E	1298	O	15	4	21S	37E	873	6005	P	G	BLINEBRY/ RECLASS OIL TO GAS		ACTIVE
30-025-29472	GULF HILL #005	MIRAGE	1650S	2310W	2139	K	K	4	21S	37E	14995		P	O	BLINEBRY		ACTIVE
30-025-35493	GULF HILL #006	Apache	3168S	1650E	967	O	15	4	21S	37E	873	4450	S	O	GRAYBURG		ACTIVE
30-025-06394	HILL #001	ZIA	3300N	1730E	2189	J	10	4	21S	37E	25616	6394	P	O	GRAYBURG		ACTIVE
30-025-28671	LIVINGSTON #014	Apache	3500S	367W	1709	E	13	3	21S	37E	873	7745	P	O	WANTZ ABO		ACTIVE
30-025-35224	LIVINGSTON #015	Apache	3196S	426E	927	P	16	4	21S	37E	873	4482	S	O	SAN ANDRES		ACTIVE
30-025-35226	LIVINGSTON #017	Apache	990S	990W	2466	U	M	3	21S	37E	873	4455	S	O	SAN ANDRES		ACTIVE
30-025-35341	LIVINGSTON #019	Apache	3630N	810E	1740	I	9	4	21S	37E	873	4450	P	O	SAN ANDRES		ACTIVE
30-025-26990	NORTHEAST DRINKARD UNIT	Apache (INT well)	3330N	467E	2097	9	9	4	21S	37E	873	8156	P	I	BLINEBRY TUBB DRK/CONVERTED		ACTIVE
30-025-34431	NORTHEAST DRINKARD UNIT	Apache	2562S	1330W	2322	K	K	3	21S	37E	873	6870	S	O	BLINEBRY/DRINKARD		ACTIVE
30-025-34738	NORTHEAST DRINKARD UNIT	Apache	3810S	200E	1564	P	16	4	21S	37E	873	6900	P	O	BLINEBRY/DRINKARD		ACTIVE
30-025-06516	NORTHEAST DRINKARD UNIT	Apache	660S	330W	2232	U	M	3	21S	37E	873	6690	P	O	DRINKARD		ACTIVE
30-025-34433	NORTHEAST DRINKARD UNIT	Apache	1400S	1350W	2568	S	K	3	21S	37E	873	6850	P	O	BLINEBRY/DRINKARD		ACTIVE
30-025-06396	SOUTHLAND ROYALTY A #004	Apache	660S	660E	1830	X	P	4	21S	37E	873	4570	P	O	GRAYBURG		ACTIVE
30-025-06397	SOUTHLAND ROYALTY A #005	Apache	1980S	660E	582	I	I	4	21S	37E	873	6756	P	O	DRINKARD		ACTIVE
30-025-20069	SOUTHLAND ROYALTY A #008	Apache	660S	1980E	2054	O	O	4	21S	37E	873	6703	P	O	DRINKARD		ACTIVE
30-025-35350	SOUTHLAND ROYALTY A #009	Apache	1980S	330E	816	I	I	4	21S	37E	873	4450	P	O	GRAYBURG		ACTIVE
30-025-35373	TEXACO #001	ZIA	1730S	660W	1804	T	L	3	21S	37E	25616	4422	P	O	SAN ANDRES		ACTIVE

30-025-06398 NEDU 203 ✓ (TOC 4255' BY TEMP Survey) Inactive

Southland Royalty A #13 ✓ OK

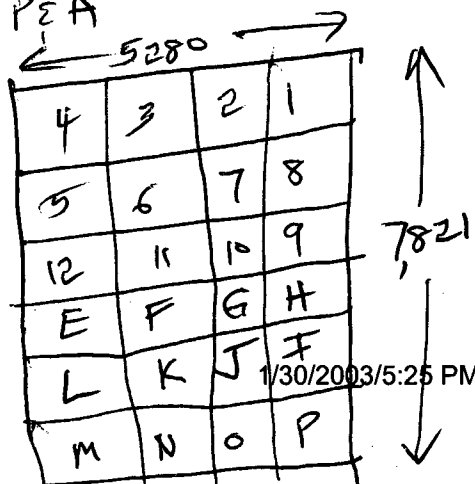
NEDU 301 ✓

inactive

GULF HILL #4 ✓ P&A 7/19/74

NEDU 201 ✓ inactive

NEDU 205 ✓ P&A



2 P&A

3 INACTIVE

20 ACTIVE

1 INT WELL (ACTIVE)

26 TOTAL

SECTION 4 (F&S Surface)

2/3

Southland Royalty A #15															
API	WELL NAME	CREAG	CO	Formation	2002Pool	POOL ID	Last	Days02	Gas02	Oil02	Wat02	Gas01	Oil01	Wat01	Gas00
30-025-06401	GULF HILL #001	40	1	GRAYBURG	PENROSE SKELLY;GRAYBURG	50350	08-2002	212	5588	833	3841	11204	4304	11896	15126
30-025-06402	GULF HILL #002	40	1	Blinebry	BLINEBRY OIL AND GAS (OIL)	6660	09-2002	273	2818	372	1219	4276	509	1643	3917
30-025-06403	GULF HILL #003	80	1	Blinebry	BLINEBRY OIL & GAS (PRO GAS)	72480	08-2002	242	11626	222	257	20479	704	1583	34183
30-025-29472	GULF HILL #005	40	1	Blinebry	BLINEBRY OIL AND GAS (OIL)	6660	09-2002	273	8455	559	1828	8390	766	2466	10208
30-025-35493	GULF HILL #006	40	1	GRAYBURG	PENROSE SKELLY;GRAYBURG	50350	08-2002	243	14396	4744	13667	17568	8717	21016	0
30-025-06394	HILL #001	40	1	GRAYBURG	PENROSE SKELLY;GRAYBURG	50350	09-2002	274	2230	1462	1298	2498	1506	4480	8125
30-025-28671	LIVINGSTON #014	40	1	GRAYBURG	PENROSE SKELLY;GRAYBURG	50350	08-2002	243	30560	5909	1400	60290	18619	4915	46552
30-025-35224	LIVINGSTON #015	40	1	GRAYBURG	PENROSE SKELLY;GRAYBURG	50350	08-2002	242	21824	6128	5160	63298	16283	9820	2090
30-025-35226	LIVINGSTON #017	40	1	GRAYBURG	PENROSE SKELLY;GRAYBURG	50350	08-2002	241	15939	3651	11613	39174	11273	21222	0
30-025-35341	LIVINGSTON #019	40	1	GRAYBURG	PENROSE SKELLY;GRAYBURG	50350	08-2002	239	18025	7026	4475	33149	15673	9057	0
30-025-26990	NORTHEAST DRINKARD UNIT	0	0	BLINEBRY-	EUNICE;BLI-TU-DR, NORTH	22900	08-2002	0	0	0	0	0	0	0	0
30-025-34431	NORTHEAST DRINKARD UNIT	40	1	BLINEBRY-	EUNICE;BLI-TU-DR, NORTH	22900	08-2002	242	32121	2822	636	65996	5236	997	100371
30-025-34738	NORTHEAST DRINKARD UNIT	40	1	BLINEBRY-	EUNICE;BLI-TU-DR, NORTH	22900	08-2002	231	29075	4355	9300	50716	10431	24410	32622
30-025-06516	NORTHEAST DRINKARD UNIT	40	1	BLINEBRY-	EUNICE;BLI-TU-DR, NORTH	22900	08-2002	243	9279	1984	812	26423	4289	2086	31440
30-025-34433	NORTHEAST DRINKARD UNIT	40	1	BLINEBRY-	EUNICE;BLI-TU-DR, NORTH	22900	08-2002	243	29588	317	1632	55686	1051	6872	54407
30-025-06396	SOUTHLAND ROYALTY A #004	40	1	GRAYBURG	PENROSE SKELLY;GRAYBURG	50350	08-2002	241	10790	1232	8865	17360	4295	14665	3113
30-025-06397	SOUTHLAND ROYALTY A #005	80	2	Blinebry	BLINEBRY OIL AND GAS (OIL)	6660	08-2002	238	12866	1064	588	24396	2075	2227	30116
30-025-20069	SOUTHLAND ROYALTY A #008	120	3	Drinkard	DRINKARD	19190	08-2002	242	15207	872	193	28595	1502	417	37112
30-025-35350	SOUTHLAND ROYALTY A #009	40	1	GRAYBURG	PENROSE SKELLY;GRAYBURG	50350	08-2002	240	27821	2919	4812	48103	8681	4365	0
30-025-35373	TEXACO #001	40	1	GRAYBURG	PENROSE SKELLY;GRAYBURG	50350	09-2002	274	26972	6876	5150	38835	10177	10945	0

3/3

Southland Royalty A #15							
API	WELL NAME	Oil00	Wat00	PropNum	WatInj02	WatInj01	WatInj00
30-025-06401	GULF HILL #001	1075	1897	23510	0	0	0
30-025-06402	GULF HILL #002	544	505	7966	0	0	0
30-025-06403	GULF HILL #003	388	643	23510	0	0	0
30-025-29472	GULF HILL #005	711	3400	7966	0	0	0
30-025-35493	GULF HILL #006	0	0	23510	0	0	0
30-025-06394	HILL #001	462	0	26985	0	0	0
30-025-28671	LIVINGSTON #014	15474	5058	23108	0	0	0
30-025-35224	LIVINGSTON #015	0	10716	23108	0	0	0
30-025-35226	LIVINGSTON #017	0	0	23108	0	0	0
30-025-35341	LIVINGSTON #019	0	0	23108	0	0	0
30-025-26990	NORTHEAST DRINKARD UNIT	0	0	22503	13222	133078	72904
30-025-34431	NORTHEAST DRINKARD UNIT	13413	4156	22503	0	0	0
30-025-34738	NORTHEAST DRINKARD UNIT	12932	14560	22503	0	0	0
30-025-06516	NORTHEAST DRINKARD UNIT	5436	6858	22503	0	0	0
30-025-34433	NORTHEAST DRINKARD UNIT	938	5687	22503	0	0	0
30-025-06396	SOUTHLAND ROYALTY A #004	762	2012	23112	0	0	0
30-025-06397	SOUTHLAND ROYALTY A #005	2038	532	23112	0	0	0
30-025-20069	SOUTHLAND ROYALTY A #008	1180	503	23112	0	0	0
30-025-35350	SOUTHLAND ROYALTY A #009	0	0	23112	0	0	0
30-025-35373	TEXACO #001	0	0	27170	0	0	0

CMD :
OG5SECT

ONGARD
INQUIRE LAND BY SECTION

01/30/03 15:58:05
OGOWVJ -TPIU
PAGE NO: 1

Sec : 04 Twp : 21S Rng : 37E Section Type : NORMAL

12 40.00 Fee owned	4 37.85 	5 40.00 	11 40.00 Mixed Non State P A	3 37.87 	6 40.00 	10 40.00 Fee owned P C P A	2 37.89 	7 40.00 	1 37.91 Mixed Non State U U A A A A P A	8 40.00 	9 40.00
13 40.00 Fee owned			14 40.00 Fee owned P			15 40.00 Fee owned P A			16 40.00 Fee owned U A A		

PF01 HELP
PF07 BKWD

PF02
PF08 FWD

PF03 EXIT
PF09 PRINT

PF04 GoTo
PF10 SDIV

PF05
PF11

PF06
PF12

CMD :
OG5SECT

ONGARD
INQUIRE LAND BY SECTION

01/30/03 15:59:17
OGOWVJ -TPIU
PAGE NO: 2

Sec : 04 Twp : 21S Rng : 37E Section Type : NORMAL

L 40.00 Federal owned	K 40.00 Fee owned P	J 40.00 Fee owned P	I 40.00 Fee owned P A
M 40.00 Fee owned A A	N 40.00 Fee owned P A	O 40.00 Fee owned P A	P 40.00 Fee owned P A

PF01 HELP
PF07 BKWD

PF02
PF08 FWD

PF03 EXIT
PF09 PRINT

PF04 GoTo
PF10 SDIV

PF05
PF11

PF06
PF12

CMD :
OG5SEC2

ONGARD
INQUIRE REMARKS OF LAND BY SECTION

01/30/03 15:55:38
OGOWVJ -TPIU
PAGE NO: 1

Sec : 4 Twp : 21S Rng : 37E Section Type : NORMAL

OIL and GAS					
U Lot/	Qtr	L	SRF SUB	ACTIVE	REMARKS
S L Trct	Qtr	W	ACREAGE	OWNER	LEASE # (may show restrictions codes)
A 1		N	37.91	FE FD	
A 8		N	40.00	FE FE	
A 9		N	40.00	FE FE	
B 10		N	40.00	FE FE	
B 2		N	37.89	FE FE	
B 7		N	40.00	FE FE	
C 11		N	40.00	FE FE	
C 3		N	37.87	FE FD	
C 6		N	40.00	FE FD	
D 12		N	40.00	FE FE	
D 4		N	37.85	FE FE	

M0002: This is the first page

PF01 HELP	PF02 PREV	PF03 EXIT	PF04 GoTo	PF05	PF06
PF07 BKWD	PF08 FWD	PF09 PRINT	PF10 SDIV	PF11	PF12

CMD :
OG5SEC2

ONGARD
INQUIRE REMARKS OF LAND BY SECTION

01/30/03 15:57:04
OGOWVJ -TPIJ
PAGE NO: 2

Sec : 4 Twp : 21S Rng : 37E Section Type : NORMAL

OIL and GAS					
U Lot/ S L Tret	Qtr	L	SRF SUB W ACREAGE OWNER	ACTIVE L ASE #	REMARKS (may show restrictions codes)
D 5		N	40.00 FE FE		
E 13		N	40.00 FE FE		
F 14		N	40.00 FE FE		
G 15		N	40.00 FE FE		
H 16		N	40.00 FE FE		
I	NE4SE4	N	40.00 FE FE		
J	NW4SE4	N	40.00 FE FE		
K	NE4SW4	N	40.00 FE FE		
L	NW4SW4	N	40.00 FE FD		
M	SW4SW4	N	40.00 FE FE		
N	SE4SW4	N	40.00 FE FE		

PF01 HELP	PF02 PREV	PF03 EXIT	PF04 GoTo	PF05	PF06
PF07 BKWD	PF08 FWD	PF09 PRINT	PF10 SDIV	PF11	PF12

CMD :
OG5SEC2

ONGARD
INQUIRE REMARKS OF LAND BY SECTION

01/30/03 15:57:07
OGOWVJ -TPIU
PAGE NO: 3

Sec : 4 Twp : 21S Rng : 37E

Section Type : NORMAL

OIL and GAS					REMARKS
U Lot/	Qtr	L	SRF SUB	ACTIVE	
S L Trct	Qtr	W	ACREAGE	OWNER	LEASE # (may show restrictions codes)
O	SW4SE4	N	40.00	FE FE	
P	SE4SE4	N	40.00	FE FE	

M0001: This is the last page

PF01 HELP	PF02 PREV	PF03 EXIT	PF04 GoTo	PF05	PF06
PF07 BKWD	PF08 FWD	PF09 PRINT	PF10 SDIV	PF11	PF12

30-025-35768

Completed 5/23/02
Pamela Kelly - Grayburg (50350)

(APACHE DATA)

								CONSTRUCTION											
OPERATOR NAME	LEASE NAME	WELL NUM	LOCATION	FOOTAGE	CURRENT STATUS	COMP DATE	DRILLER TD	SURFACE CASING					PROD CASING / LINER					COMPLETION	
								SIZE	DEPTH	SX	TOC	METHOD	SIZE	DEPTH	SX	TOC	METHOD	TYPE	INTERVAL
APACHE CORP	GULF HILL	1	4 21S 37E	1980 FSL 1980 FEL	ACTIVE - OIL	20001217	5974	8 5/8	2933	600	1490	+	5 1/2	5934	350	3491	+	PERF	3897-4019
ZIA ENERGY INC	HILL	1	4 21S 37E	3300 FNL 1730 FEL	ACTIVE - OIL	20010103	6394	9 5/8	2935	200	2303	+	5 1/2	6394	800	810	+	PERF	3896-3958
APACHE CORP	SOUTHLAND ROYALTY 'A'	13	4 21S 37E	330 FSL 1980 FEL	ACTIVE - OIL	20020602	4200	8 5/8	409	300	SURF	+	5 1/2	4200	1150	SURF	+	PERF	3996-4014
APACHE CORP	LIVINGSTON	14	3 21S 37E	3500 FSL 367 FWL	ACTIVE - OIL	20000813	7745	8 5/8	2470	1425	SURF	+	5 1/2	7745	1295	SURF	+	PERF	3845-3946
APACHE CORP	LIVINGSTON	15	4 21S 37E	3196 FSL 426 FEL	ACTIVE - OIL	20010213	4482	8 5/8	1235	460	128	+	5 1/2	4482	850	SURF	+	PERF	3870-3995
APACHE CORP	LIVINGSTON	17	3 21S 37E	990 FSL 990 FWL	ACTIVE - OIL	20010208	4455	8 5/8	1242	460	135	+	5 1/2	4455	1025	SURF	+	PERF	3887-4026
APACHE CORP	LIVINGSTON	19	4 21S 37E	3630 FNL 810 FEL	ACTIVE - OIL	20010313	4450	8 5/8	1197	460	90	+	5 1/2	4450	875	SURF	+	PERF	3852-3980
MIRAGE ENERGY INC	GULF-HILL	2	4 21S 37E	3300 FSL 1980 FWL	ACTIVE - OIL	19860816	6027	8 5/8	2951	2100	SURF	+	5 1/2	6009	600	1821	+	PERF	5740-5866
APACHE CORP	NORTHEAST DRINKARD UNIT	202	4 21S 37E	3330 FNL 467 FEL	ACTIVE - INJ	19890830	8156	9 5/8	3500		SURF	CIRC	7	8153		SURF	CIRC	PERF	5637-7747
APACHE CORP	NORTHEAST (DRINKARD) UNIT	233	3 21S 37E	2562 FSL 1330 FWL	ACTIVE - OIL	19990130	6870	8 5/8	1285	410	299	+	5 1/2	6870		SURF	+	PERF	5602-6542
APACHE CORP	NORTHEAST (DRINKARD) UNIT	234	4 21S 37E	3810 FSL 200 FEL	ACTIVE - OIL	20000213	6900	8 5/8	1275	460	168	+	5 1/2	6900		SURF	+	PERF	5623-6692
APACHE CORP	GULF-HILL	3	4 21S 37E	3300 FSL 1980 FEL	ACTIVE - GAS	19560514	6010	8 5/8	2924	2300	SURF	+	5 1/2	5900		1014	+	PERF	5740-5836
APACHE CORP	NORTHEAST DRINKARD UNIT	301	3 21S 37E	1980 FSL 660 FWL	INACTIVE - OIL	19890105	6690	8 5/8	2972		110	TEMP	5 1/2	6620		2620	TEMP	PERF	5742-6690
APACHE CORP	NORTHEAST (DRINKARD) UNIT	331	3 21S 37E	1400 FSL 1350 FWL	ACTIVE - OIL	19981213	6865	8 5/8	1328	410		+	5 1/2	6865	1450	SURF	+	PERF	5624-6730
SUMMIT ENERGY INC	GULF-HILL	4	4 21S 37E	1980 FSL 1980 FWL	7/19/14 P&A	19670413	7450	10 3/4	2940	1344		+	x	7429	900	3856	+	P&A	SEE ATTACHED
APACHE CORP	SOUTHLAND ROYALTY 'A'	4	4 21S 37E	660 FSL 660 FEL	ACTIVE - OIL	20001217	6750	8 5/8	2905	375	2003	+	5 1/2	6748	1075	SURF	CIRC	PERF	3891-4007
MIRAGE ENERGY INC	GULF-HILL	5	4 21S 37E	1650 FSL 2310 FWL	ACTIVE - OIL	19860907	7250	8 5/8	1287	700	SURF	+	5 1/2	7248		SURF	+	PERF	5641-5913
APACHE CORP	SOUTHLAND ROYALTY A	5	4 21S 37E	1980 FSL 660 FEL	ACTIVE - OIL	19540416	6756	8 5/8	2993	300	2271	+	5 1/2	6755		2890	TEMP	PERF	5702-6652
APACHE CORP	GULF HILL	6	4 21S 37E	3168 FSL 1650 FEL	ACTIVE - OIL	20010609	4450	8 5/8	1278	460	171	+	5 1/2	4450	925	SURF	+	PERF	3906-4054
APACHE CORP	SOUTHLAND ROYALTY CO A	8	4 21S 37E	660 FSL 1980 FEL	ACTIVE - OIL	19630509	6703	9 5/8	1347	580	SURF	+	7	6703		1941	+	PERF	5837-6649
APACHE CORP	SOUTHLAND ROYALTY 'A'	9	4 21S 37E	1980 FSL 330 FEL	ACTIVE - OIL	20010321	4450	8 5/8	1197	460	90	+	5 1/2	4450	1025	SURF	+	PERF	3883-4002
APACHE CORP	NORTHEAST DRINKARD UNIT	201	4 21S 37E	4620 FSL 560 FEL	INACTIVE - OIL	19620101	6750	9 5/8	308		SURF	CIRC	*	6745		2200	TEMP	PERF	5837-6604
APACHE CORP	NORTHEAST DRINKARD UNIT	203	4 21S 37E	3200 FSL 660 FEL	INACTIVE - OIL	19530301	7436	8 5/8	3151		SURF	CIRC	5 1/2	7435		4255	TEMP	PERF	5772-7388
APACHE CORP	NORTHEAST DRINKARD UNIT	205	3 21S 37E	3300 FSL 660 FWL	P&A	19611201	6730	9 5/8	271		SURF	CIRC	*	6726		2400	TEMP	P&A	SEE ATTACHED
APACHE CORP	NORTHEAST DRINKARD UNIT	302	3 21S 37E	660 FSL 330 FWL	ACTIVE - OIL	19520201	6690	8 5/8	3152		SURF	CIRC	5 1/2	6689		755	CIRC/TOL	PERF	5638-6658
ZIA ENERGY INC	TEXACO	1	3 21S 37E	1700 FSL 660 FWL	ACTIVE - OIL	20010429	4422	8 5/8	1215	631	SURF	+	5 1/2	4418	1090	SURF	+	PERF	3864-3994

* = 3 STRINGS OF 2 7/8, x = 4 STRINGS OF 2 7/8

+ = CALCULATED W/ 25% EXCESS

* = 3 STRINGS OF 2 7/8, x = 4 STRINGS OF 2 7/8
+ = CALCULATED W/ 25% EXCESS

30-025-06399
30-025-06398
7 7/8 #06 / 5 1/2" CSG

350 = X + 200 SX
all not in our Database

TEMP SURF TOC / 810' AWAY

NORTHEAST DRINKARD UNIT No. 205W

LEA COUNTY, NEW MEXICO

PROPOSED
CONFIGURATION

9 7/8" @ 271'

BAD CSG BETWEEN
600 AND 800'

BLINEBRY AND
DRINKARD STRINGS
P&A'D.

TUBB STRING
PRODUCING
4800D+118MCFD
FROM T II-III.

NEW T STRING PERFS

BLINEBRY II - TUBB I
±5700 - ±6150'
5714 6145
-AND-

DRINKARD I-III
±6500 - ±6700'
6508 6637

3 STRINGS 2 7/8"
@ ± 6725'

TD @ 6730'

ORIGINAL PERFS

BLINEBRY I-III
PERFS: 5618-5839
(ABAN'D)

TUBB II-III
PERFS: 6133-6363
(SQZ'D)

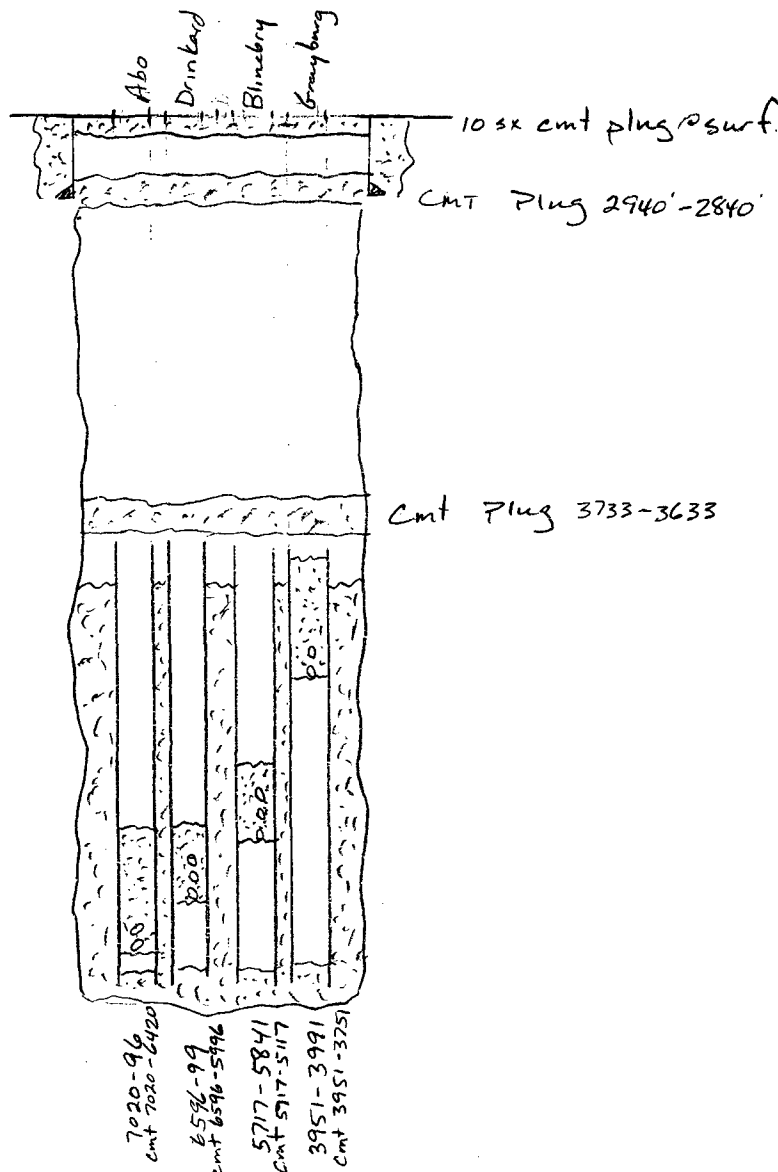
DRINKARD I-II
PERFS: 6519-6635
(ABAN'D)

V31
12/88
Gm 5/94

P&A
~~INJECTION~~ WELL DATA SHEET

OPERATOR: Summit EnergyWELL NAME & NUMBER: Gulf Hill # 4

WELL LOCATION: 1980 FSL, 1980 FWL S 4 21 S 37 E
 FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATICWELL CONSTRUCTION DATASurface Casing

Hole Size: assumed 12 1/2 Casing Size: 10 3/4" 2940'
 Cemented with: 1344 sx. or _____ ft³
 Top of Cement: Surface Method Determined: calculated

Intermediate Casing

Hole Size: _____ Casing Size: _____
 Cemented with: _____ sx. or _____ ft³
 Top of Cement: _____ Method Determined: _____

Production Casing

Hole Size: assumed 8 7/8 Casing Size: 4 strings of 2 7/8
 Cemented with: 900 sx. or _____ ft³
 Top of Cement: 3856 Method Determined: _____
 Total Depth: 7429

Injection Interval

_____ feet to _____

(Perforated or Open Hole; indicate which)

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-85

5a. Indicate Type of Lease
State ☐ Fee ☒

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.)

1. <input checked="" type="checkbox"/> OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER	7. Unit Agreement Name
2. Name of Operator Summit Energy, Inc.	8. Farm or Lease Name Gulf Hill
3. Address of Operator 112 North First, Artesia, N.M. 88210	9. Well No. 4
4. Location of Well UNIT LETTER <u>S</u> <u>1980</u> FEET FROM THE <u>West</u> LINE AND <u>1980</u> FEET FROM <u>South</u> LINE, SECTION <u>4</u> TOWNSHIP <u>21S</u> RANGE <u>37E</u> NMPM.	10. Field and Pool, or Wildcat Drinkard - Blinebry Wantz Abo
11. Elevation (Show whether DF, RT, GR, etc.) 3476 GR	12. County Lea

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data
NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐
TEMPORARILY ABANDON ☐
PULL OR ALTER CASING ☐
OTHER ☐

PLUG AND ABANDON ☐
CHANGE PLANS ☐
OTHER ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐
COMMENCE DRILLING OPNS. ☐
CASING TEST AND CEMENT JOBS ☐
OTHER ☐

ALTERING CASING ☐
PLUG AND ABANDONMENT ☒

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1703.

A 600' Cement Plug was spotted over Wantz Abo Perfs, from 7020 back to 6420.

A 600' Cement Plug was spotted over Drinkard Perfs, from 6596 back to 5996.

A 600' Cement Plug was spotted over Blinebry Perfs, from 5717 back to 5117.

A 200' Cement Plug was spotted over perfs from 3951 back to 3751.

A 100' Cement Plug was spotted over 2 7/8" Tubing Stubs from 3733 back to 3633.

A 100' Cement Plug was spotted in and out of 10 3/4" casing from 2940 back to 2840.

A 10 sack cement plug was spotted on surface with dry hole marker.

Location is cleared and ready for inspection.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Paul White

TITLE Division Engineer

DATE 7-19-74

APPROVED BY _____
CONDITIONS OF APPROVAL, IF ANY:

TITLE _____

DATE FEB 7 1975

**ATTACHMENT FOR FORM C-108
SOUTHLAND ROYALTY LEASE
MISCELLANEOUS DATA**

VII. PROPOSED OPERATION

- | | |
|-------------------------------|--|
| 1. Average Injection Rate | 500 BWPD |
| Maximum Injection Rate | 1000 BWPD |
| 2. Closed Injection System | |
| 3. Average Injection Pressure | 500 psi |
| Maximum Injection Pressure | 716 psi (approximate)
(will not exceed 0.2 psi/ft to top perforation) |
| 4. Source Water | Grayburg Re-injected Produced Water |

**VIII. GEOLOGICAL DATA ON THE INJECTION ZONE & UNDERGROUND DRINKING WATER
PENROSE-SKELLY GRAYBURG FIELD**

The zone being targeted for water injection is the Grayburg Dolomite at depths from 3,737' – 4,002' in the well Southland Royalty No. 9, Section 4, 21S, 37E. The Grayburg is a sequence of well consolidated dolomite strata of Permian Guadalupe age. Six percent porosity cut off is use to determine net pay as porosity less than six percent is considered impermeable at the existing and proposed reservoir pressure and reservoir fluid regimes. Net pay isopach maps show the areal extent of the targeted interval. Impermeable shale deposits exist above and below the targeted interval thus defining the permeable limits of the reservoir. The reservoir has a water-oil contact defining its north & east edge. All injected fluids should remain in the reservoir with the exception of cycling to the surface through wellbores.

Based on communications with the New Mexico State Engineer's Roswell office and OCD Hobbs office there appears to be no fresh water wells within the area of review. The only strata referred to as potentially fresh was the Ogallala at a maximum depth of $\pm 300'$. There are no known fresh water strata underlying the Grayburg.

IX. STIMULATION PROGRAM

Acidize injection interval with +/- 3000 gals 15% HCL

XI. There are no Fresh Water Wells

LEGAL NOTICE

NOTICE OF APPLICATION FOR FLUID INJECTION WELL PERMIT

**APACHE CORPORATION
6120 S. Yale Ave., Suite 1500
Tulsa, OK 74136
ATTN: Kevin Mayes
(918) 491-4900**

has applied to the State of New Mexico, Oil Conservation Division, Santa Fe, New Mexico, for a permit to inject fluid into a formation that is productive of oil or gas. The application proposes to inject fluid in the Grayburg formation in the Penrose-Skelly Field. The proposed injection well is located 2460' FSL and 990' FEL of Section 4, Township 21 South, Range 37 East. Fluid will be injected into strata correlative to subsurface depth interval from Penrose at 3,850 feet to San Andres at 4,000 feet with an expected maximum injection rate of 1,000 barrels of water per day and a maximum surface injection pressure of 700 psi.

Interested parties must file objections or requests for hearing with the State of New Mexico, Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3466, within 15 days of publication.

TWO WARREN PLACE, SUITE 1500 / 6120 SOUTH YALE / TULSA, OK 74136-4224



[918] 491-4900
FAX: [918] 491-4853
FAX: [918] 491-4854

January 16, 2003

Bank of America
Trustee of Millard Deck Estate
P.O. Box 270
Midland, TX 79702
c/o Mr. Tim Wolters

RE: Southland Royalty Lease
Sec. 4-T21S-R37E
Lea County, NM

To Whom It May Concern:

Attached is Apache Corporation's application requesting approval to inject water, for the referenced project.

Apache Corporation will be handling this application administratively. Any objections to the application should be filed with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505 within fifteen (15) days.

If you have any questions regarding this application, please contact me at (918) 491-4972.

Very truly yours,

APACHE CORPORATION


Kevin Mayes
Sr. Staff Reservoir Engineer

KM:sa

Enclosures



TWO WARREN PLACE, SUITE 1500 / 6120 SOUTH YALE / TULSA, OK 74136-4224

[918] 491-4900
FAX: [918] 491-4853
FAX: [918] 491-4854

January 16, 2003

Zia Energy
1234 W. Broadway Place
Hobbs, NM 88240

RE: Southland Royalty Lease
Sec. 4-T21S-R37E
Lea County, NM

To Whom It May Concern:

Attached is Apache Corporation's application requesting approval to inject water, for the referenced project.

Apache Corporation will be handling this application administratively. Any objections to the application should be filed with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505 within fifteen (15) days.

If you have any questions regarding this application, please contact me at (918) 491-4972.

Very truly yours,

APACHE CORPORATION

A handwritten signature in black ink that reads "Kevin Mayes". The signature is fluid and cursive, with the first name "Kevin" and last name "Mayes" clearly distinguishable.

Kevin Mayes
Sr. Staff Reservoir Engineer

KM:sa

Enclosures



TWO WARREN PLACE, SUITE 1500 / 6120 SOUTH YALE / TULSA, OK 74136-4224

[918] 491-4900
FAX: [918] 491-4853
FAX: [918] 491-4854

January 16, 2003

Mirage Energy Inc.
P.O. Box 551
Lovington, NM 88260

RE: Southland Royalty Lease
Sec. 4-T21S-R37E
Lea County, NM

To Whom It May Concern:

Attached is Apache Corporation's application requesting approval to inject water, for the referenced project.

Apache Corporation will be handling this application administratively. Any objections to the application should be filed with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505 within fifteen (15) days.

If you have any questions regarding this application, please contact me at (918) 491-4972.

Very truly yours,

APACHE CORPORATION

A handwritten signature in cursive script that reads "Kevin Mayes".

Kevin Mayes
Sr. Staff Reservoir Engineer

KM:sa

Enclosures

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

BANK OF AMERICA
TRUSTEE OF MILLARD DECK ESTATE
P.O. BOX 270
MIDLAND, TX 79702
C/O MR. TIM WALTERS

2. Article Number (Copy from service label)

7000 1530 0005 0986 3252

PS Form 3811, July 1999

Domestic Return Receipt

102595-00-M-0952

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery

C. Signature

X

☐ Agent
☐ AddresseeD. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail ☐ Express Mail
☒ Registered ☒ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

ZIA ENERGY
1234 W. BROADWAY PLACE
HOBBBS, NM 88240

2. Article Number (Copy from service label)

7000 1530 0005 0986 3269

PS Form 3811, July 1999

Domestic Return Receipt

102595-00-M-0952

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery

C. Signature

X

☐ Agent
☐ AddresseeD. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail ☐ Express Mail
☒ Registered ☒ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

MIRAGE ENERGY
P.O. BOX 551
LOVING TON, NM 88260

2. Article Number (Copy from service label)

7000 1530 0005 0986 3276

PS Form 3811, July 1999

Domestic Return Receipt

102595-00-M-0952

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery

C. Signature

X

☐ Agent
☐ AddresseeD. Is delivery address different from item 1? ☐ YesIf YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail ☐ Express Mail
☒ Registered ☒ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes