2R - 28

GENERAL CORRESPONDENCE

YEAR(S):
1996

TELEPHONE
(505) 748-3311

EASYLINK
62905278

REFINING COMPANY

501 EAST MAIN STREET • P. O. BOX 159
ARTESIA, NEW MEXICO 88211-0159

FAX
(505) 746-6410 ACCTG
(505) 746-6155 EXEC
(505) 748-9077 ENGR
(505) 746-4438 P / L

February 26, 1996

Mr. Roger Anderson
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, NM 87505

Dear Mr. Anderson:

Since November 1994 Navajo Refining Company, Pipeline Division, has performed five (5) Toxic Characteristic Leaching Procedures (TCLP) on soils contaminated by crude oil spilled from our pipeline gathering system east of Artesia, New Mexico (see Exhibit A). This system contains approximately 700 miles of pipeline. These tests cover nine different leak sites throughout our gathering system and are representative of the crude oil carries by this system. The purpose of this letter is to request that Navajo Refining Company, Pipeline Division be allowed to rely upon these tests to satisfy the TCLP requirement for leaks occurring in this gathering system during the calendar year 1996.

I have enclosed copies of the five (5) TCLP results for your inspection. A summary of these tests are as follows:

LOCATION	#	*DATE*	*REMARKS*
Bad Luck	2	10/27/94	Composite Sample-not hazardous
Barber	3	10/28/94	Composite Sample-not hazardous
Beeson Station	1	12/20/94	Composite Sample-not hazardous
East Cedar Lake	7	10/25/95	Composite Sample-not hazardous
Composite of Yates, Burton Flats, Phillips, East, and West Cedar Lake			Composite Sample-not hazardous

Navajo Refining Company feels that using these representative tests will serve the intent of the regulations as well as being cost effective. Should any condition present itself during the year that would drastically change the composition of our crude oil, we will notify the OCD immediately and take the appropriate action at that time.

If you should require any additional information or if I may be of assistance, please call me.

Sincerely,

Jim G. Townsend

Manager of Transportation

Exhibit A

Map of Navajo Refining Gathering System

(One Page)

Exhibit B

TCLP Results
Bad Luck Leak Site

(Three Pages)

KWBES

K. W. Brown Environmental Services
A Division of AMEC Environmental Services, Inc.
501 Graham Road, College Station, TX 77845
Telephone: (409) 690-9280, Fax: (409) 690-7310

November 9, 1994

Mr. Jim Townsend
Navajo Refining Company
501 East Main Street
P.O. Drawer 159
Artesia, New Mexico 88210

RE: Navajo (Bad Luck) - Artesia New Mexico

Dear Mr. Townsend:

This letter is intended to provide an update regarding the extent of contamination at the referenced property. On October 27, 1994, K. W. Brown Environmental Services performed an assessment of the excavation at Navajo's Bad Luck site. The assessment consisted of visual inspection of the open excavation and stockpile soils and composite sampling of these soils in accordance with the procedures discussed with the Artesia office of the New Mexico Oil Conservation Division (OCD) . The sampling techniques and constituent analysis also incorporated the procedures outlined in OCD's "Guidelines For Remediation of Leaks, Spills, and Releases, August 13, 1993."

The sampling locations for the stockpile samples (BAD 1 and 2) and excavation samples (BAD 3 through 7) are presented in Table 1 and are illustrated in the attached Figure 1.

Table 1. Analytical Results of Composite Soil Samples taken at Bad Luck site.

Sample ID	Lab ID	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethylbenzene (ug/Kg)	p,m-Xylenes (ug/Kg)	o-Xylenes (ug/Kg)	TRPH (mg/Kg)	TRPH DET LIMIT (mg/Kg)
BAD - 1	0694G01990	ND	52.7	46.5	108.0	49.3	17500	250
BAD - 2	0694G01991	4.79	96.1	70.9	181.0	82.2	19900	625
BAD - 3	0694G01992	12.9	125.0	62.9	127.0	54.4	10900	250
BAD - 4	0694G01993	42.9	290.0	138.0	259.0	113.0	20800	250
BAD - 5	0694G01994	ND	5.72	3.5	10.2	5.22	1730	25
BAD - 6	0694G01995	ND	ND	ND	ND	ND	40	10
BAD - 7	0694G01996	ND	ND	ND	ND	ND	16	10

BAD-7 is a duplicate of BAD-6.

The pipeline leak resulted in the release of crude oil to the surrounding soils. These impacted soils were subsequently evaluated for RCRA toxicity characterization leaching procedure (TCLP) analysis for volatiles, semivolatiles, and metals, and reactivity, corrosivity and ignitability to determine if the impacted soils were characteristically hazardous. The sample designated as BAD -1 was selected for hazardous waste evaluation due to the relatively

consistent total recoverable petroleum hydrocarbon (TRPH) documented for the stockpile soils.

Table 2. TCLP results for BAD -1 composite sample.

Analyte	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
TCLP Volatiles			
Benzene	0.041	0.025	0.5
Carbon Tetrachloride	ND	0.025	0.5
Chlorobezene	ND	0.025	100
Chloroform	ND	0.025	6.0
1,2 - Dichloroethane	ND	0.025	0.5
1,1 - Dichloroethylene	ND	0.025	0.7
Methyl ethyl ketone	ND	0.050	200
Tetrachloroethylene	ND	0.050	0.7
Trichloroethylene	ND	0.050	0.5
Vinyl Chloride	ND	0.050	0.2
TCLP Semivolatiles			
o-Cresol	ND	0.01	200
m,p-Cresol	ND	0.01	200
1,4-Dichlorobenzene	ND	0.01	7.5
2,4-Dinitrotoluene	ND	0.01	0.13
Hexachlorobenzene	ND	0.01	0.13
Hexachloro-1,3-butadiene	ND	0.01	0.5
Hexachloroethane	ND	0.01	3.0
Nitrobenzene	ND	0.01	2.0
Pentachlorophenol	ND	0.03	100
Pyridine	ND	0.01	5.0
2,4,5-Trichlorophenol	ND	0.01	400
2,4,6-Trichlorophenol	ND	0.01	2.0
TCLP Trace Metals			
Arsenic	ND	0.2	5.0
Barium	ND	0.5	100
Cadmium	ND	0.05	1.0
Chromium	ND	0.05	5.0
Lead	ND	0.2	5.0
Mercury	ND	0.002	0.2
Selenium	ND	0.2	1.0
Silver	ND	0.1	5.0
Reactivity			
Reactivity - Cyanide	ND	250	250
Reactivity - Sulfide	ND	250	500
pH (s.u.)		7.6	2.0<pH<12.5
Flash Point (°F)		>140	must exceed 140

Mr. Jim Townsend
Navajo Refining Company
November 9, 1994

The results of these analysis indicate that the impacted soils are **not** characteristically hazardous and may be remediated in accordance with the referenced OCD guidelines. A formal assessment report will be submitted to Navajo Refining by November 23, 1994. The report will further document sampling procedures/analytical methodology, discuss action levels, potential receptors and recommended remedial technology.

If you have any questions concerning this matter, please contact me at (409) 690-9280 in our College Station office.

Respectfully,

W. R. Cullen, P.E.
Engineering Group Manager

WRC/seh
Enclosure
File:
via Fax and US Mail

Exhibit C

TCLP Results
Barber Leak Site

(Three Pages)

KWBES
K.W. Brown Environmental Services
A Division of AMEC Environmental Services, Inc.
501 Graham Road, College Station, TX 77845
Telephone: (409) 690-9280, Fax: (409) 690-7310

November 15, 1994

Mr. Jim Townsend
Navajo Refining Company
501 East Main Street
P.O. Drawer 159
Artesia, New Mexico 88210

RE: Navajo (Barber) - Artesia New Mexico

Dear Mr. Townsend:

The following letter is forwarded to Navajo Refining Company to provide preliminary information regarding the Navajo Barber site. On October 27 and 28, 1994, K. W. Brown Environmental Services performed an assessment of the excavation at Navajo's Barber site. The assessment consisted of visual inspection of the open excavation and stockpile soils and composite sampling of these soils in accordance with the procedures discussed with the Artesia office of the New Mexico Oil Conservation Division (OCD) on October 26, 1994.

The sampling locations for the stockpile samples and excavation samples are presented in Table 1 and are illustrated in the attached Figure 1.

Table 1. Analytical results of composite soil samples taken at the Barber site.

Sample ID	Lab ID	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethylbenzene (ug/Kg)	p,m-Xylenes (ug/Kg)	o-Xylenes (ug/Kg)	TRPH (mg/Kg)	TRPH DET LMT (mg/Kg)
BAR - 1	0694G01997	< 25	< 25	< 25	< 25	< 25	71	10
BAR - 2	0694G01998	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	15	10
BAR - 3	0694G01999	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	ND	10
BAR - 4	0694G02000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	ND	10
BAR - 5	0694G02001	< 49	< 49	< 49	95	92	627	25
BAR - 6	0694G02002	< 5	< 5	14	87	105	654	25
BAR - 7	0694G02003	< 1.0	1.8	4.2	34.2	17.1	829	25
BAR - 8	0694G02004	< 19500	20900	< 19500	42600	< 19500	8510	250
BAR - 9	0694G02005	12700	131000	29100	135000	59800	20600	250
BAR - 10	0694G02006	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	196	10
BAR - 11	0694G02007	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	185	10
BAR - 12	0694G02008	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	230	10
BAR - 13	0694G02009	8420	81800	29100	101000	48800	15100	250
BAR - 14	0694G02010	32200	183000	52200	166000	79400	32000	500
BAR - 15	0694G02011	< 48	< 48	< 484	1020	1030	1990	25
BAR - 16	0694G02012	< 1.0	1.6	< 1.0	2.8	< 1.0	212	25
BAR - 17	0694G02013	< 60	111	<861	777	850	1430	25
BAR - 18	0694G02014	16300	141000	38000	150000	91000	20400	250
BAR - 19	0694G02015	< 18600	58400	< 18600	96200	38200	13500	250
BAR - 20	0694G02016	19400	183000	39200	204000	100000	22700	250
BAR - 21	0694G02017	< 18800	20400	< 18800	38600	19700	8460	250
BAR - 22	0694G02018	< 19000	152000	35100	168000	88400	20600	250

A significant disparity in indicator parameter TRPH levels was noted for the stockpile soils. As a result, the composite samples from the stockpile soils were subsampled and again composited for analysis. The subsamples were taken from sample designations BAR-8, 9, 13, 14, 18, 19, 20, 21, and 22. This sample was evaluated for RCRA toxicity characteristic leaching procedure (TCLP) analysis for volatiles, semivolatiles, and metals, and reactivity, corrosivity and ignitability to determine if the impacted soils were characteristically hazardous. The results of the analysis are presented in Table 2.

Table 2. TCLP results for the composite sample of BAR- 8, 9, 13, 14, 18, 19, 20, 21, and 22.

Analyte	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
TCLP Volatiles			
Benzene	ND	0.005	0.5
Carbon Tetrachloride	ND	0.005	0.5
Chlorobezene	ND	0.005	100
Chloroform	ND	0.005	6.0
1,2 - Dichloroethane	ND	0.005	0.5
1,1 - Dichloroethylene	ND	0.005	0.7
Methyl ethyl ketone	ND	0.010	200
Tetrachloroethylene	ND	0.005	0.7
Trichloroethylene	ND	0.005	0.5
Vinyl Chloride	ND	0.005	0.2
TCLP Semivolatiles			
o-Cresol	ND	0.01	200
m,p-Cresol	ND	0.01	200
1,4-Dichlorobenzene	ND	0.01	7.5
2,4-Dinitrotoluene	ND	0.01	0.13
Hexachlorobenzene	ND	0.01	0.13
Hexachloro-1,3-butadiene	ND	0.01	0.5
Hexachloroethane	ND	0.01	3.0
Nitrobenzene	ND	0.01	2.0
Pentachlorophenol	ND	0.025	100
Pyridine	ND	0.01	5.0
2,4,5-Trichlorophenol	ND	0.01	400
2,4,6-Trichlorophenol	ND	0.01	2.0
TCLP Trace Metals			
Arsenic	ND	0.2	5.0
Barium	ND	0.5	100
Cadmium	ND	0.05	1.0
Chromium	ND	0.05	5.0
Lead	ND	0.2	5.0
Mercury	ND	0.002	0.2
Selenium	ND	0.2	1.0
Silver	ND	0.1	5.0

Table 2. (cont.) TCLP results for the composite sample of BAR- 8, 9, 13, 14, 18, 19, 20, 21, and 22.

Reactivity			
Reactivity - Cyanide	ND	250	250
Reactivity - Sulfide	ND	250	500
pH (s.u.)	7.6		2.0<pH<12.5
Flash Point (°F)	>140°		<140° is hazardous

The results of these analyses indicate that the impacted soils are **not** characteristically hazardous and may be remediated in accordance with OCD guidelines. A formal assessment report will be submitted to Navajo Refining by November 23, 1994. The report will further document sampling procedures and analytical methodology, discuss action levels, potential receptors, and recommended remedial technology.

If you have any questions concerning this matter, please contact me at (409) 690-9280 in our College Station office.

Respectfully,

Ronald Shirin for

W. R. Cullen, P.E.
Engineering Group Manager

WRC/seh
Enclosure
via Fax and US Mail

Exhibit D

TCLP Results
Beeson Station Leak Site

(Three Pages)

KWBES

K. W. Brown Environmental Services
A Division of AMEC Environmental Services, Inc.
501 Graham Road, College Station, TX 77845
Telephone: (409) 690-9380, Fax: (409) 690-7310

December 30, 1994

Mr. Jim Townsend
Navajo Refining Company
501 East Main Street
P.O. Drawer 159
Artesia, New Mexico 88210

RE: Navajo (Beeson Station) - Loco Hills - New Mexico

Dear Mr. Townsend:

On December 19 and 20, 1994, K. W. Brown Environmental Services (KWBES) performed an assessment of the excavation and stockpile soils at Navajo's Beeson Station. The assessment consisted of visual inspection of the open excavation and advancement of several exploratory borings in the immediate vicinity of the spill. In addition, composite samples were collected from the stockpile soils in accordance with the procedures discussed with personnel from the Artesia office of the New Mexico Oil Conservation Division (OCD). The sampling techniques and constituent analysis also incorporated the procedures outlined in OCD's "Guidelines For Remediation Of Leaks, Spills, and Releases", August 13, 1993. This letter is intended to provide an update regarding the classification of the impacted soils at the referenced property.

The spill resulted in the release of crude oil to the near surface soils. The majority of these soils (estimated to be approximately 1,000 cubic yards) were excavated and placed on polyethylene sheeting within the bermed area near the spill. These impacted soils were subsequently evaluated for RCRA toxicity characterization leaching procedure (TCLP) analysis for volatiles, metals, and reactivity, corrosivity and ignitability (RCI) to determine if the impacted soils were characteristically hazardous. Two composite samples designated as BEE 9 and 10 were obtained from the stockpile and submitted to the laboratory for classification purposes. These two samples were subsequently composited in the laboratory to obtain a representative sample for analysis. The results of the analysis are presented in Table 1.

The results of these analysis indicate that the impacted soils are not characteristically hazardous and may be remediated in accordance with the referenced OCD guidelines. A formal assessment report will be submitted to Navajo Refining by January 13, 1995. The report will further document sampling procedures/analytical methodology, delineate the extent of contamination that may be attributed to the spill, discuss action levels, potential receptors, and recommended remedial technology.

Mr. Jim Townsend
Navajo Refining Company
December 30. 1994

Table 1. Analytical results for composite sample of BEE 9 and 10.

Analyte	Concentration (mg/L)	Detection Limit (mg/L)	Regulatory Limit (mg/L)
Benzene	ND	0.005	0.5
Carbon tetrachloride	ND	0.005	0.5
Chlorobezene	ND	0.005	100
Chloroform	ND	0.005	6.0
1,2 - Dichloroethane	ND	0.005	0.5
1,1 - Dichloroethylene	ND	0.005	0.7
Methyl ethyl ketone	ND	0.010	200
Tetrachloroethylene	ND	0.005	0.7
Trichloroethylene	ND	0.005	0.5
Vinyl chloridc	ND	0.005	0.2
Arsenic	ND	0.2	5.0
Barium	1.7	0.5	100
Cadmium	ND	0.05	1.0
Chromium	ND	0.05	5.0
Lead	ND	0.2	5.0
Mercury	ND	0.002	0.2
Selenium	ND	0.2	1.0
Silver	ND	0.1	5.0
Reactivity - Cyanide	ND	50	250
Reactivity - Sulfide	ND	50	500
pH (s.u.)	7.6		2.0<pH<12.5
Flash Point (F)	>140		must exceed 140

If you have any questions concerning this matter, please contact me at our College Station office. (409) 690-9280.

Respectfully,

W. R. Cullen

W. R. Cullen, Jr., P.E.
Engineering Group Manager

WRC:dr
File: 622094004-110
via US Mail

Exhibit E

TCLP Results
East Cedar Lake Leak Site
and
Composite Sample of Yates, Burton Flats, Phillips, East and West Cedar Lake, and Marbob BKU Leak Sites

(Three Pages)

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240
PHONE (505) 326-4669 • 118 S. COMMERCIAL AVE. • FARMINGTON, NM 87401

TPH/BTEX ANALYSIS REPORT

Company: SES, Inc.
Address: P.O. Box 1613
City, State: Hobbs, NM 88241

Date: 11/13/95
Lab #: H2255

Project Name: Navajo Pipeline
Location: Eddy County, NM
Sampled by: DB Date: 10/25/95 Time: various
Analyzed by: MI Date: 10/26-30/95 Time: various
Sample Type: Soil Sample Condition: Intact Units: ppm

Samp #	Field Code	TRPHC	BENZENE	TOLUENE	ETHYL BENZENE	PARA-XYLENE	META-XYLENE	ORTHO-XYLENE
1	Composite - 6	39,077	1.386	4.492	4.165	0.826	1.959	1.236
2	Cedar Lake E. 529	69,071	2.526	8.420	5.215	1.400	2.799	1.916
	QC Recovery	385	0.808	0.805	0.919	0.871	0.906	0.874
	QC Spike	375	0.872	0.852	0.856	0.844	0.854	0.844
	Accuracy	102.6%	93 %	94 %	107 %	103 %	106 %	104 %
	Air Blank	***	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Methods - GAS CHROMOTOGRAPHY; INFRARED SPECTROSCOPY
- EPA SW-846; 8020, 418.1, 3510, 3540 or 3550

Mitch Irvin

Mitch Irvin

11/13/95
Date

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240
PHONE (505) 326-4669 • 118 S. COMMERCIAL AVE. • FARMINGTON, NM 87401

TCLP ANALYSIS REPORT

Company:	SES, Inc.	Date:	11/20/95
Address:	P.O. Box 1613	Lab #:	H2255-1
City, State:	Hobbs, NM 88241		
Project Name:	Navajo Pipeline		
Location:	Eddy County, NM		
Sampled by:	DB	Date:	10/25/95
Sample Type:	Soil	Sample Condition:	Intact
		Units:	ppm
Sample ID:	Composite - 6 Sites		

TCLP ORGANICS

PARAMETER	RESULT	EPA LIMIT
Pyridine	<0.002	5.00
o-Cresol	<0.002	200
m,p-Cresol	<0.004	200
Hexachloroethane	<0.002	3.00
Nitrobenzene	<0.002	2.00
Hexachloro-1,3-butadiene	<0.002	0.500
2,4,6-Trichlorophenol	<0.002	2.00
2,4,5-Trichlorophenol	<0.002	400
2,4-Dinitrotoluene	<0.002	0.130
Hexachlorobenzene	<0.002	0.130
Pentachlorophenol	<0.002	100
Vinyl chloride	<0.002	0.20
1,1-Dichloroethylene	<0.002	0.70
Methyl ethyl ketone	<0.002	200
Chloroform	0.016	6.00
1,2-Dichloroethane	<0.002	0.50
Benzene	0.015	0.50
Carbon tetrachloride	<0.002	0.50
Trichloroethylene	<0.002	0.50
Tetrachloroethylene	<0.002	0.70
Chlorobenzene	<0.002	100
1,4-Dichlorobenzene	<0.002	7.50

TCLP INORGANICS (Leachate)

PARAMETER	RESULT	EPA LIMIT
Silver	<0.1	5.0
Arsenic	<0.1	5.0
Barium	0.9	100.0
Cadmium	<0.1	1.0
Chromium	<0.1	5.0
Mercury	<0.002	0.2
Lead	<0.1	5.0
Selenium	<0.1	1.0

METHODS: TCLP ORGANICS - EPA 8260/8270
METHODS: TCLP INORGANICS (Leachate) - EPA 1311/7000

Mitch Irvin

Mitch Irvin

11/20/95

Date

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240
PHONE (505) 326-4669 • 118 S. COMMERCIAL AVE. • FARMINGTON, NM 87401

TCLP ANALYSIS REPORT

Company:	SES, Inc.	Date:	11/20/95
Address:	P.O. Box 1613	Lab #:	H2255-2
City, State:	Hobbs, NM 88241		
Project Name:	Navajo Pipeline		
Location:	Eddy County, NM		
Sampled by:	DB	Date:	10/25/95
Sample Type:	Soil	Sample Condition:	Intact
		Units:	ppm
Sample ID:	Cedar Lake - East - 529		

TCLP ORGANICS

PARAMETER	RESULT	EPA LIMIT
Pyridine	<0.002	5.00
o-Cresol	<0.002	200
m,p-Cresol	<0.004	200
Hexachloroethane	<0.002	3.00
Nitrobenzene	<0.002	2.00
Hexachloro-1,3-butadiene	<0.002	0.500
2,4,6-Trichlorophenol	<0.002	2.00
2,4,5-Trichlorophenol	<0.002	400
2,4-Dinitrotoluene	<0.002	0.130
Hexachlorobenzene	<0.002	0.130
Pentachlorophenol	<0.002	100
Vinyl chloride	<0.002	0.20
1,1-Dichloroethylene	<0.002	0.70
Methyl ethyl ketone	<0.002	200
Chloroform	0.011	6.00
1,2-Dichloroethane	<0.002	0.50
Benzene	0.115	0.50
Carbon tetrachloride	<0.002	0.50
Trichloroethylene	<0.002	0.50
Tetrachloroethylene	<0.002	0.70
Chlorobenzene	<0.002	100
1,4-Dichlorobenzene	<0.002	7.50

TCLP INORGANICS (Leachate)

PARAMETER	RESULT	EPA LIMIT
Silver	<0.1	5.0
Arsenic	<0.1	5.0
Barium	0.8	100.0
Cadmium	<0.1	1.0
Chromium	<0.1	5.0
Mercury	<0.002	0.2
Lead	<0.1	5.0
Selenium	<0.1	1.0

METHODS: TCLP ORGANICS - EPA 8260/8270
METHODS: TCLP INORGANICS (Leachate) - EPA 1311/7000

Mitch Irvin

11/20/95
Date

R-26-E R-27-E R-28-E R-29-E R-30-E R-31-E R-32-E R-33-E

T-16-S

T-17-S

T-18-S

T-19-S

T-20-S

PECOS

TO YATES AND BURKE ROYLTY

WEST HENSHAW STATION

NORTH SQ. LAKE STA.

WEST SQ. LAKE STA.

EAST SQ. LAKE STA.

MALJAMAR PARK

LEEKER

MALJAMAR STATION

MCA4

MCA1

MCA3

PBC LINE

MITCHELL STATION

DOUBLE MITCHELL LINE

Sec 20 unit G

Sec. 21 unit B

BROWN

BEESON STATION

RED LAKE STA.

EMPIRE

JOHNSTON STA

BARNSDALL STATION

Sec 23 unit O

HILLS

LOCO

PBC LINE

BEESON DISCHARGE

EAST ATOKA

WEST ATOKA

AMACO

ABO

NORTH STA.

ARTESIA

WINDMILL STA.

Sec 8 unit M

KINCAID

WATSON

Sec 29 unit F

RANCH HOUSE

ARTESIA STATION

TNM LOCO HILLS LACT

PECOS RIVER

TURKEY TRACT

SANTA NINO

MILLMAN STATION

Sec 3 unit J

SALT LAKE

BARBER STA.

DOS HERMANOS

LAKE MCMILLAN RESERVOIR

BRANTLEY RESERVOIR

DAM

PECOS RIVER

AVALON RESERVOIR

LUSK LACT

1	Beeson	S3 T18S	R30E
2	Bad Luck	S12 T18S	R27E
3	Barber	S20 T20S	R30E
4	Yates S.L.H.U	S29 T18S	R29E
5	Burton Flats	S3 T19S	R28E
6	Phillips Leak	S8 T18S	R28E
7	Cedar Lake East	S21 T17S	R31E
8	Cedar Lake west	S20 T17S	R31E
9	Marbob BKU	S23 T17S	R29E

7 8 9 10 11 12