9.30.05 Call JB & Don Head. Give verbal OK. They start when move rig

SUNDOWN ENERGY, LP

INITIAL C-141 AND WORK PLAN

FOSTER RANCH #1 WELL/BATTERY RELEASE

PROJECT REF: SUN-05-001

UL-A (NE¼ OF THE NE¼) OF SECTION 6 T19S R39E

LATITUDE: N32° 41.697'   LONGITUDE: 103° 04.622'

~3.0 MILES EAST (BEARING 92°) OF HOBBS

LEA COUNTY, NEW MEXICO

September 28, 2005

API# 30025 27260000

PREPARED FOR SUNDOWN ENERGY, LP BY:

Ocotillo ENVIRONMENTAL

414 N. Turner, P.O. Box 1816, Hobbs, New Mexico 88241

(505) 393-6371; Fax (505) 393-6374

RP# 1341

Table of Contents

ATTACHMENTS

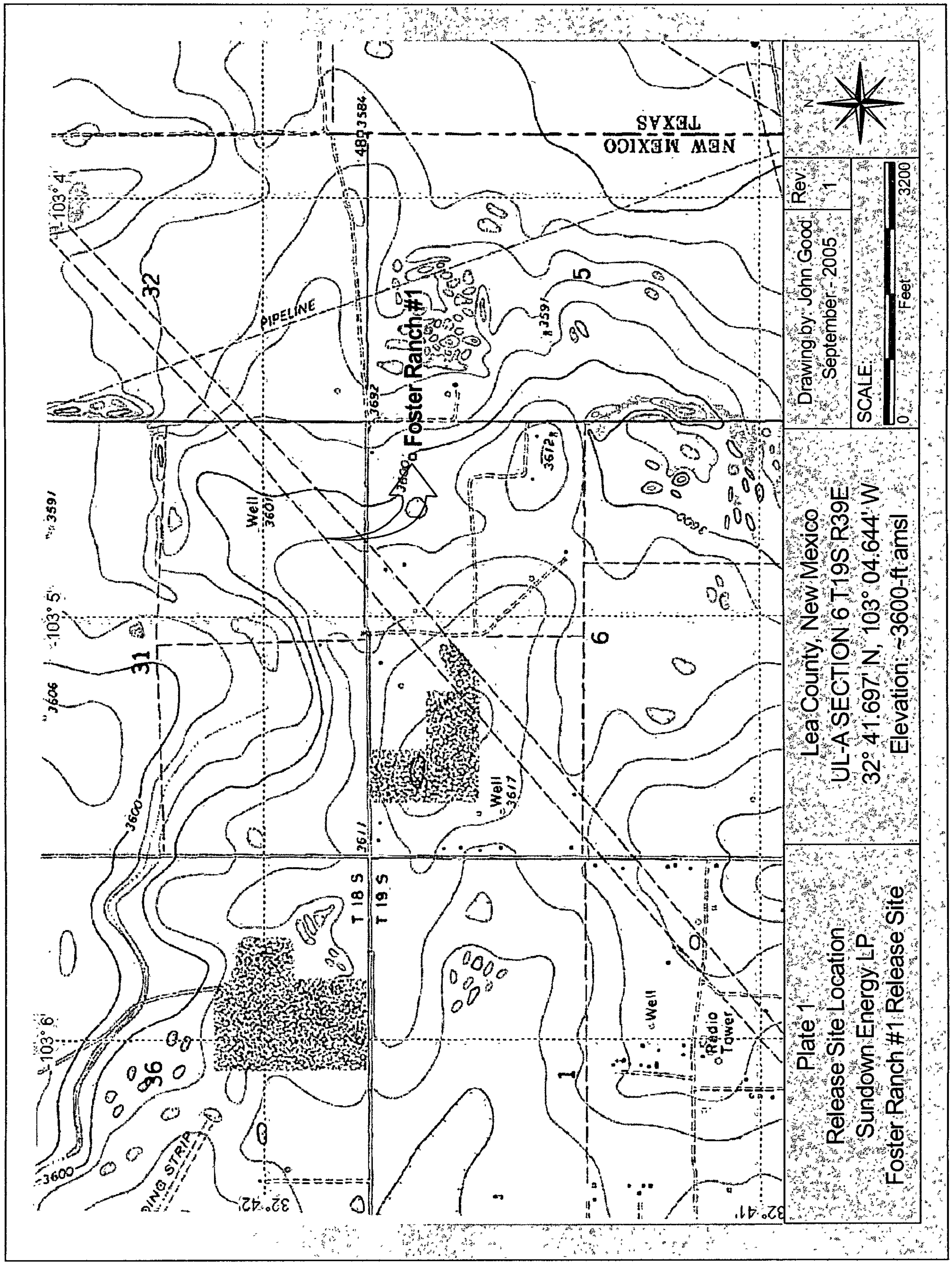


Plate 1
Release Site Location
Sundown Energy LP
Foster Ranch #1 Release Site
Lea County, New Mexico
UL-A SECTION 6 T19S R39E
32° 41.697' N, 103° 04.644' W
Elevation: ~3600-ft amsl
Drawing by: John Good
September 2005
Rev.
1
SCALE
0
Feet
3200
N
NEW MEXICO
TEXAS
Foster Ranch #1
PIPELINE
Well
Radio Tower
T 18 S
T 19 S
32
31
36
5
6
1
103° 4'
103° 5'
103° 6'
32° 42'
32° 41'

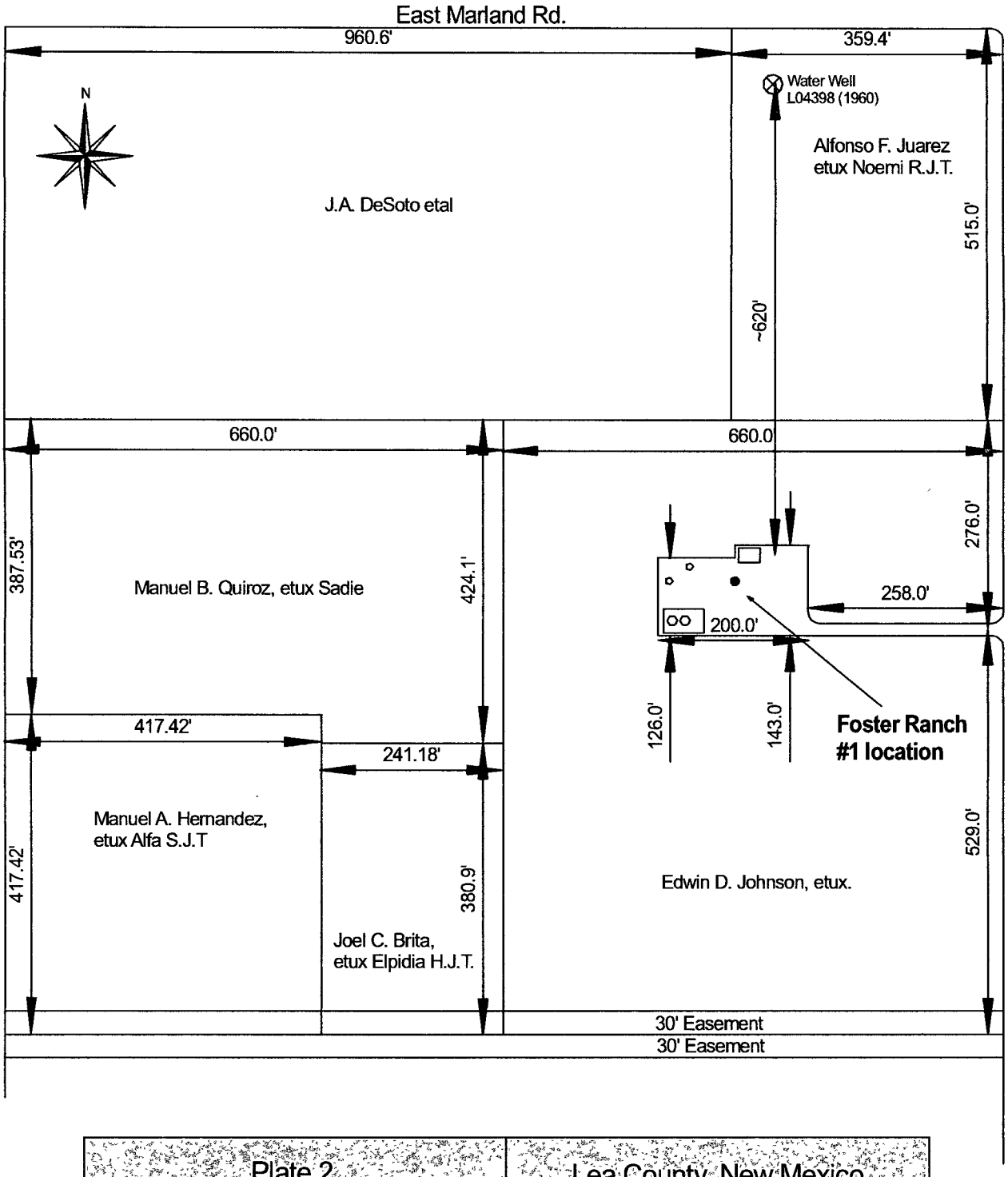


Plate 2 Release Area Ownership Plat Sundown Energy LP Foster Ranch #1 Release Site	Lea County, New Mexico UL-A SECTION 6 T19S R39E 32° 41.697' N, 103° 04.644' W Elevation: ~3600-ft amsl

Drawing by: John Good September - 2005

Original Drilling Pit
Heater/Treaters
Wellhead
Unlined Fluids Pit
98'
143'
Contaminated Pad Surface
Historical NGL Release
Fence
200'
Battery
126'
Access Road
Plate 3
Release Site Detail
Sundown Energy LP
Foster Ranch #1 Release Site
Lea County, New Mexico
UL-A SECTION 6 T19S R39E
32° 41.697' N, 103° 04.644' W
Elevation: ~3600-ft amsl
Drawing by: John Good
September - 2005
Rev. 1
SCALE:
0
100
Feet
N

SUNDOWN ENERGY LP	Incident Date: NA	NMOCD Notified: NA

SITE: Foster Ranch #1		Assigned Site Reference:	SUN-05-001
Company:	Sundown Energy LP		
Street Address:			
Mailing Address:	P.O. Box 277		
City, State, Zip:	Wickett, TX 79788		
Representative:	Don Heald, Production Foreman		
Representative Telephone:	432-208-7254		
Telephone:	432-943-8770		
Fluid Volume Released (bbl): > 5	Volume Recovered (bbl): ~ 0	Net Release: > 5	

>25 bbl: Notify NMOCD verbally within 24 hours and submit C-141 within 15 days.

5-25 bbl: Submit Form C-141 within 15 days. (Also applies to unauthorized release of >50 mcf Natural Gas).

Leak, Spill, or Pit (LSP) Name:	Foster Ranch #1
Source of Contamination:	Produced fluids from well workover
Land Owner, i.e. BLM, ST, Fee, Other:	Edwin D. Johnson
LSP Dimensions:	(see Site Diagram)
LSP Area	~ 2000 -ft^2
Location of Reference Point (RP):	
Location distance and direction from RP:	
Latitude: North	32deg 41.697'
Longitude: West	103deg 04.622'
Elevation above mean sea level (amsl):	3600 feet 1097 meters
Distance from North Section Line (feet):	665
Distance from East Section Line (feet):	340
Location - Unit Letter and 1/4 1/4:	UL- A NE - 1/4 of NE - 1/4
Location - Section	6
Location - Township	19S
Location - Range	39E
Surface water body within 1000' radius of site:	0
Surface water body within 1000' radius of site:	0
Domestic water wells within 1000' radius of site:	1
Domestic water wells within 1000' radius of site:	0
Agricultural water wells within 1000' radius of site:	0
Agricultural water wells within 1000' radius of site:	0
Public water supply wells within 1000' radius of site:	0
Public water supply wells within 1000' radius of site:	0
Depth (feet) from land surface to Ground Water (DG): >	116
Depth (feet) of lowest contamination (DC):	15
Depth (feet) to Ground Water (DG - DC = DtGW):	> 101

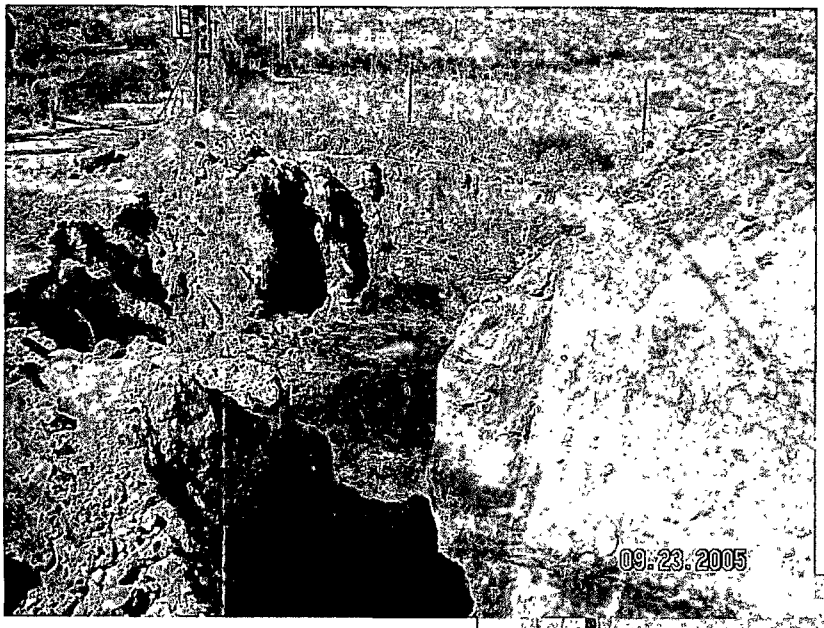
1. Ground Water	2. Wellhead Protection Area	3. Distance to Surface Water
If Depth to GW <50-feet: 20 points	If <1000' from water source, or, <200' from private domestic water source: 20 points	<200 horizontal feet: 20 points
If Depth to GW 50 to 100-feet: 10 points		200-1000 horizontal feet: 10 points
If Depth to GW >100-feet: 0 points	If >1000' from water source, or, >200' from private domestic water source: 0 points	>1000 horizontal feet: 0 points
Ground Water Score: 0	Wellhead Protection Score: 20	Surface Water Score: 0

Site Ranking (1 + 2 + 3):	**20**

Total Site Ranking Score and Acceptable Concentrations

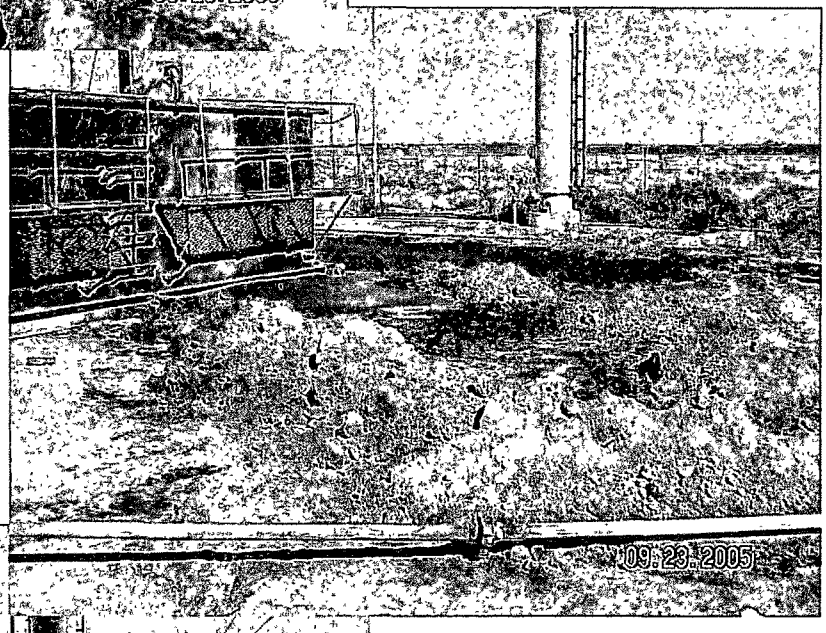
Parameter	**20 or >**	10	0
Benzene[1]	**10-ppm**	10-ppm	10-ppm
BTEX[1]	**50-ppm**	50-ppm	50-ppm
TPH	**100-ppm**	1000-ppm	5000-ppm

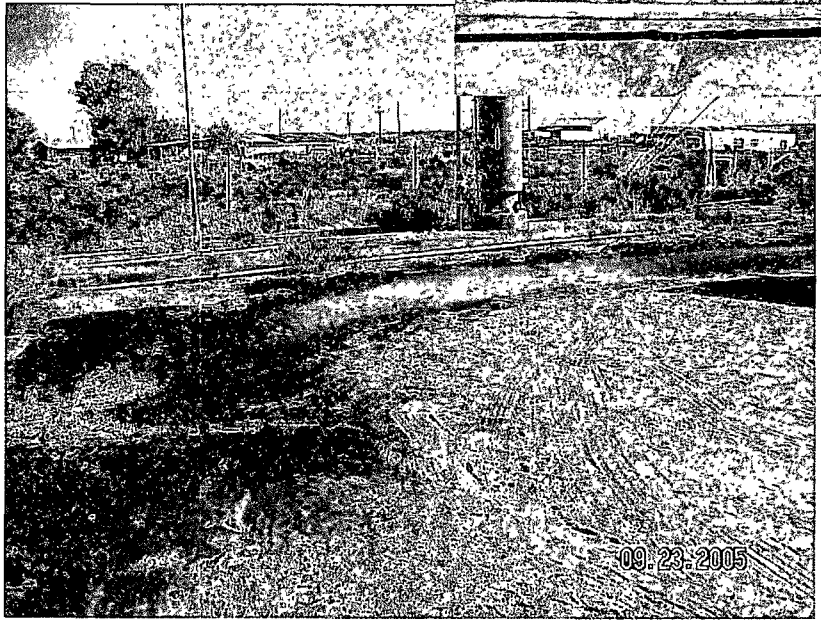
[1] *100-ppm field VOC headspace measurement may be substituted for lab analysis*



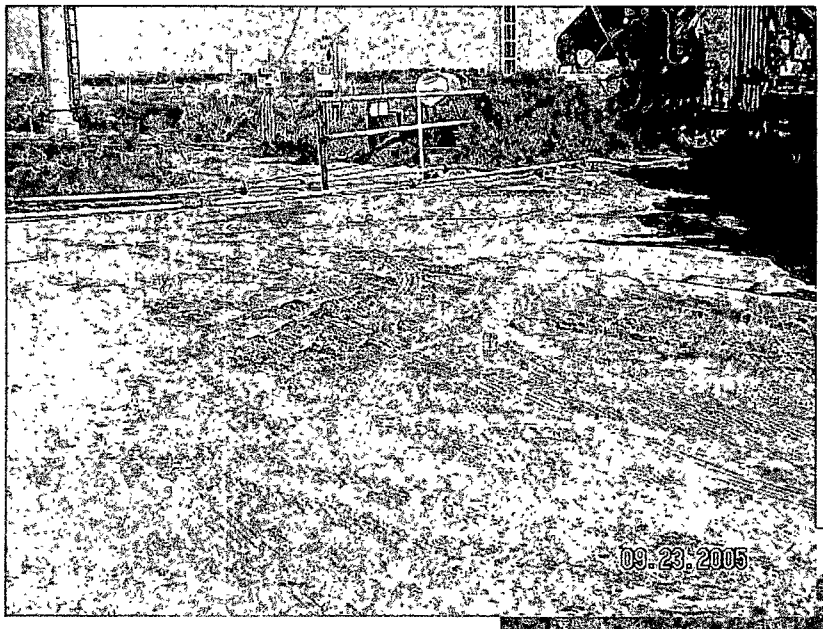
Unlined pit north of well head

Pad surface contamination



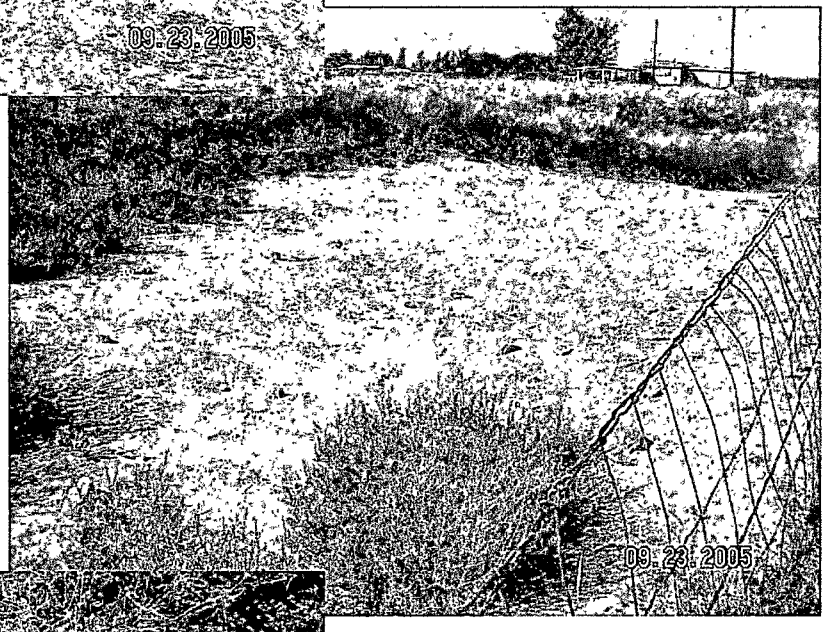


NW corner of location - - surface contamination



Pad surface contamination

Historical NGL release outside of fence on south boundary of location.



Abandoned water well on Alfonso Juarez property north of location (within 1000-ft)

1.0 Introduction and Background

This report addresses a production well work-over release into an unlined fluid receiving pit at the Sundown Energy's Foster Ranch #1 Production Well/Battery site. Fluids were released into the pit prior to notification by NMOCD that this practice was unacceptable. The total release volume is unknown, however, assumed to be >5-bbl. RELEASE INTO AN UNLINED, PIT UNAUTHO SIZE

This release site is located on deeded land (Edwin D. Johnson) in Unit Letter A, (NE¼ of the NE¼), Section 6, T19S, R39E. . The GPS coordinates are: Latitude: N32° 41.697'; Longitude: 103° 04.622'. A location map, plat reproduction of UL-A (showing ownership) and a site detail drawing are included as Plates 1-3 in the Attachments.

2.0 Site Description

2.1 Geological Description

The United States Geological Survey (USGS) Ground-Water Report 6, "Geology and Ground-Water Conditions in Southern Lea County, New Mexico," A. Nicholson and A. Clebsch, 1961, describes the near surface geology of southern Lea County as "an intergrade of the Quaternary Alluvium (QA) sediments, i.e., fine to medium sand, with the mostly eroded Cenozoic Ogallala (CO) formation. Typically, the QA and CO formations in the area are capped by a thick interbed of caliche and generally overlain by sandy soil." The release site is located in the High Plains (Llano Estacado) physiographic subdivision, described by Nicholson & Clebsch as a predominantly flat area (with gradual slope to the southeast) underlain by a hard caliche surface that is generally covered by sandy topsoil. The thickness of the topsoil ranges from 2-15 feet in most areas of the High Plains subdivision.

2.2 Ecological Description

The area is typical of the Upper Chihuahuan Desert Biome consisting primarily of hummocky sand hills covered with Harvard Shin Oak (*Querqus harvardi*) interspersed with Honey Mesquite (*Prosopis glandulosa*) along with typical desert grasses, flowering annuals and flowering perennials. Mammals represented, include Orrd's and Merriam's Kangaroo Rat, Deer Mouse, White Throated Wood Rat, Cottontail Rabbit, Black Tailed Jackrabbit, Mule Deer, Bobcat, Red Fox and Coyote. Reptiles, Amphibians, and Birds are numerous and typical of area. A survey of Listed, Threatened, or Endangered species was not conducted.

2.3 Area Ground Water

Based on information obtained from the New Mexico State Engineer online database, the average depth to water (26 recorded wells) in Section 6, T19S, R39E is 75-ft below ground surface (bgs). The minimum recorded depth to ground water (51-ft bgs) is for Well # L04398, located in the NE quadrant of UL-A of Section 6 (~620-ft north of the release pit based on GPS demarcation). The records of this well indicate that it was drilled in 1960 and completed to a total depth of 70-ft bgs.

This abandoned water well was measured for water depth on 9-27-05, yielding a total well depth of 115-ft bgs and it was dry to the bottom.

2.4 Area Water Wells

The New Mexico State Engineer online database indicates only the L04398 water well on the Juarez property north of the release site. As stated in 2.3, this well is abandoned with a dry depth of 115-ft bgs. An investigation of the property indicates that there must be an operating water well on this property. A new pressure tank and control unit was installed in October-2004, and all outside faucets were functioning. The location of the recently installed water well was not ascertained, however, the horizontal distance to the release location must be less than 1000-ft.

2.5 Area Surface Water Features

No surface water bodies exist within 1000 horizontal feet of the site.

3.0 Contaminant and Size of Area

The primary contaminant is produced water with some associated crude oil. The release is the result of produced fluids from the work-over project running from the wellhead to an un-lined pit ~50-ft north of the wellhead. Runoff to the unlined pit ceased after the company was notified by NMOCD that this was an illegal practice in New Mexico. The unlined pit is approximately 20' X 30' X 10' deep. Exact measurements of the affected surface areas were not obtained due to the ongoing work of the pulling unit. Some produced fluids have been spilled on the pad surface in and around the working area. These areas will be remediated in conjunction with the pit. The estimated total surface area of the affected area(s) is approximately 2000-ft^2 (See Plate 3).

The produced water and minor portion of associated crude oil with this release are considered RCRA Exempt oilfield waste. No evidence of other contaminants was observed.

4.0 Vertical Extent of Contamination

The vertical contamination (TPH, BTEX and Chlorides) extent beneath the fluids pit will be determined during the excavation phase of the remediation process. Based on the sandy nature of the excavated soil onsite and the depth of the pit, the vertical contamination extent is projected to be 15-ft to 20-ft bgs.

5.0 NMOCD Site Ranking

Contaminant delineation and remedial work done at this site indicate that the chemical parameters of the soil and the physical parameters of the ground water were characterized consistent with the characterization and remediation/abatement goals and objectives set forth in the following New Mexico Oil Conservation Division (NMOCD) publications:

- *Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)*
- *Unlined Surface Impoundment Closure Guidelines (February 1993)*

Acceptable thresholds for contaminants/constituents of concern (CoCs), i.e., TPH^{8015m}, Benzene, and the mass sum of Benzene, Toluene, Ethyl Benzene, and total Xylenes (BTEX^{8260}), was determined based on the NMOCD Ranking Criteria as follows:

- *Depth to Ground water, i.e., distance from the lower most acceptable concentration to the ground water.*
- *Wellhead Protection Area, i.e., distance from fresh water supply wells.*
- *Distance to Surface Water Body, i.e., horizontal distance to all down gradient surface water bodies.*

Based on the proximity of the site to area water wells, surface water bodies, and depth to ground water from the lower most contamination, the NMOCD ranking score for the site is 20 points with the soil remedial goals highlighted in the Site Ranking table presented below.

NMOCD Site Ranking Table

1. Ground Water	2. Wellhead Protection	3. Distance to Surface Water
Depth to GW <50 feet: 20 points	If <1000' from water source, or; <200' from private domestic water source: 20 points	<200 horizontal feet: 20 points
Depth to GW 50 to 99 feet: 10 points		200-1000 horizontal feet: 10 points
Depth to GW >100 feet: 0 points	If >1000' from water source, or; >200' from private domestic water source: 0 points	>1000 horizontal feet: 0 points
Ground Water Score = 0	Wellhead Protection Score= 20	Surface Water Score= 0
Site Rank (1+2+3) = 0 + 20 + 0 = 0 points		
Total Site Ranking Score and Acceptable Remedial Goal Concentrations		
Parameter	20+	10	0
Benzene	10 ppm	10 ppm	10 ppm
BTEX	50 ppm	50 ppm	50 ppm
TPH	100 ppm	1000 ppm	5000 ppm

6.0 Remediation Action Plan

The contaminated pit and the affected well pad surface areas will be excavated vertically and laterally sufficient to achieve contaminant levels below the remedial action levels (100-ppm TPH; 50-ppm BTEX; 10-ppm Benzene; 250-ppm Chlorides).

In addition to the areas immediately impacted by the current well work-over project, a historical release area immediately south of the southern battery boundary fence will also be remediated. It appears that a gas line running parallel to the southern fence lost integrity sometime in the past and sprayed NGL on an approximate 200-ft^2 area beyond the fence line. This area will be excavated to a depth sufficient to achieve a chloride level below 250-ppm.

All excavated areas will be backfilled with clean soil and covered with clean caliche where necessary. Excavated contaminated soil will be removed and transported to a licensed disposal facility approved for the acceptance of high chloride containing waste materials.

Closure confirmation samples of excavation bottoms and sidewalls will be obtained prior to backfill. All samples will be carried to Cardinal Laboratories, Hobbs, NM under Chain of Custody.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
Distric III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

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

Form C-141
Revised June 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form.

Release Notification and Corrective Action

OPERATOR ☑ Initial Report ☐ Final Report

Name of Company	**Sundown Energy LP**	Contact	**Don Heald, Production Foreman**
Address	**P.O. Box 277** **Wickett, TX 79788**	Telephone No.	**432-208-7254**
Facility Name	**Foster Ranch #1**	Facility Type	**Production Well and Battery**

Surface Owner **Edwin D. Johnson**	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from North Line	Feet from East Line	Longitude-W	Latitude-N	County
A	**6**	**19S**	**39E**	**665**	**340**	**103deg 04.622'**	**32deg 41.697'**	**Lea**

NATURE OF RELEASE

Type of Release **Produced Water + Crude Oil component**	Volume of Release **greater than 5 bbl**	Volume Recovered **0 bbl**
Source of Release **Produced fluids from well workover**	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? ☐ YES ☑ NO ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ YES ☑ NO	If YES, Volume Impacting the Watercourse **NA**	

If a Watercourse was Impacted, Describe Fully*

Describe Cause of Problem and Remedial Action Taken. *
Well workover fluids released to unlined pit. Practice was stopped, free fluids removed by vacuum truck. Portable tank was obtained for on-site fluid storage.

Describe Area Affected and Cleanup Action Taken. *
20' X 30' X 10' deep unlined pit + well pad surface around wellhead area. Ocotillo Environmental contracted for site remediation upon completion of well workover.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations

Signature:	**OIL CONSERVATION DIVISION**
Printed Name: **Don Heald**	Approved by District Supervisor:
Title: **Production Foreman**	Approval Date: / Expiration Date:
E-Mail Address:	Conditions of Approval: ☐ Attached
Date: **9/28/2005** Phone: **432-208-7254**	

Ocotillo ENVIRONMENTAL