

MERIT ENERGY CORPORATION

INITIAL C-141 AND WORK PLAN WB-94 INJECTION LINE RELEASE

PROJECT REF: MER-WB94-041305

UL-B (NW ¼ OF THE NE¼) OF SECTION 10 T17S R31E
LATITUDE: N32° 51.291' LONGITUDE: 103° 51.328'
~8 MILES NORTHEAST (BEARING 70°) OF LOCO HILLS
EDDY COUNTY, NEW MEXICO

April 15, 2005

PREPARED FOR MERIT ENERGY CORPORATION BY:

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APPROVED

REC 4/15/05
VIA E-MAIL

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1.0 Introduction and Background

This report addresses the produced water release that occurred immediately south of the Merit Energy WB #94 Injection Well site. The release is the result of a 1" crack in the 2" fiberglass injection line buried ~10-ft deep at this location. The duration of the leak is presumed to about 3-days, as a pressure drop problem was noted at the pumping station on Monday, April 11. The release reached the surface and was discovered during the evening of April 13, 2005. The total release volume is unknown, however, a volume greater than 25-bbl flowed onto the pasture area south of the well pad once the release reached the surface.

This release site is located on BLM land in Unit Letter B, (NW¼ of the NE¼), Section 10, T17S, R31E. . The GPS coordinates are: Latitude: N32° 51.291' Longitude: 103° 51.328'. A location map, topographical map of the site and a site detail diagram are included as Plates 1-3 in the Attachments.

2.0 Site Description

2.1 Geological Description

This area of Eddy County is notable for its predominant and extensive red sand dune surface structure with dramatic variations in elevation and contour. The sand dunes area is underlain by a thick layer of caliche at depths ranging from a few feet to greater than 25-ft.

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 (*Quercus 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

There is no groundwater of record in the area according to information obtained from the New Mexico State Engineer online database.

2.4 Area Water Wells

There are no recorded or observed water wells within 1000 horizontal feet of the site.

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. The injection line release affected the immediate area of the leak to a depth greater than 15-ft and a ~9,000-ft² surface flow path extending ~300-ft south of the release location (see Plate 3).

The produced water and minor portion of crude oil associated 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 extent beneath the injection line leak is greater than 15-ft based on visual observations on 4/14/05. Vertical extent within the surface flow path is presumed to be less than 2-ft. Vertical contamination depths will be confirmed during the remediation process. Laboratory analytical samples will be collected and submitted to confirm that hydrocarbon contaminant action levels have been achieved.

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 (BTEX⁸²⁶⁰), 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

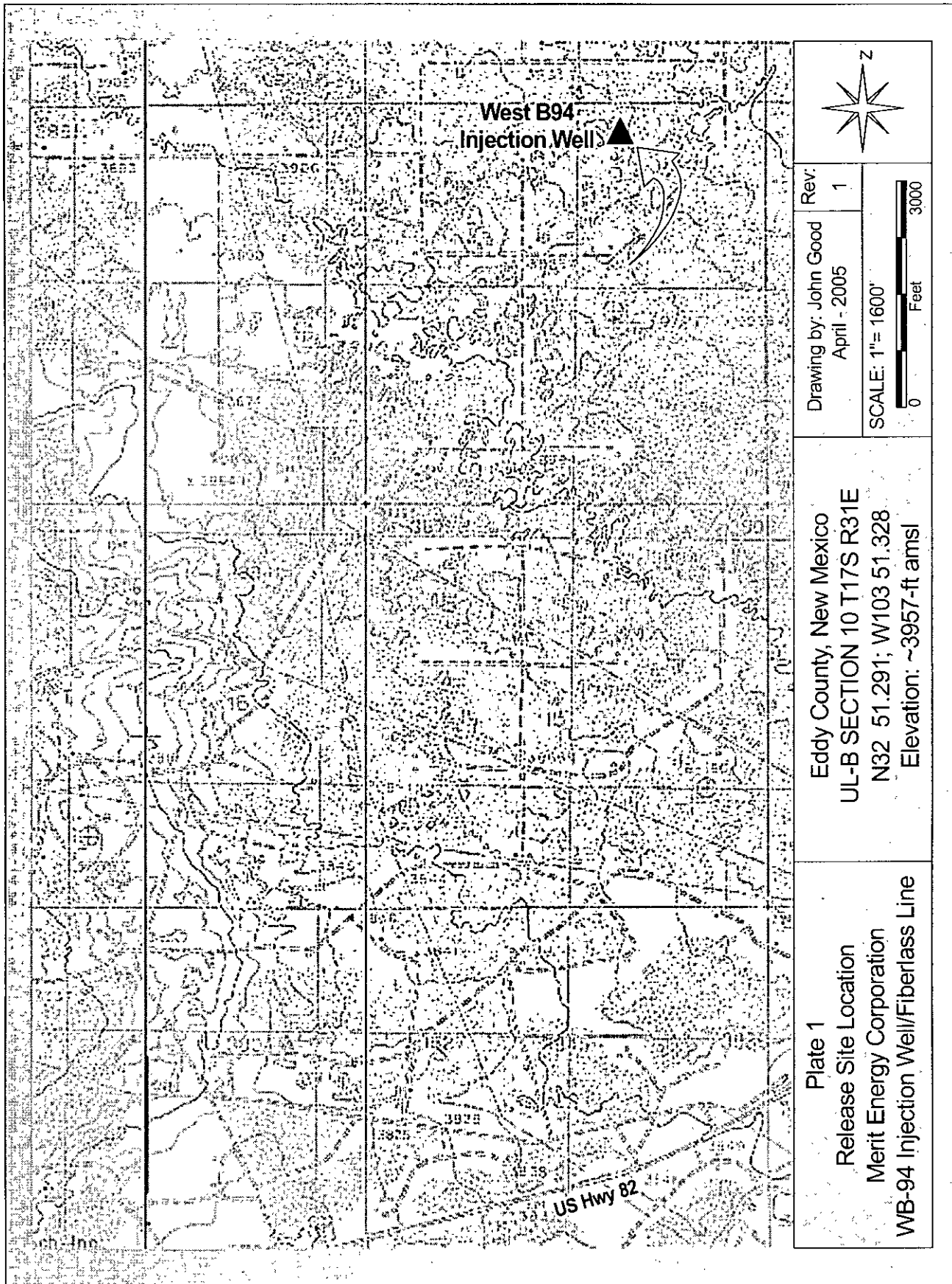
1. GROUND WATER		2. WELLHEAD PROTECTION	3. DISTANCE TO SURFACE WATER
DEPTH TO GW <50 FEET: 20 POINTS		IF <1000' FROM WATER SOURCE, OR; <200' FROM PRIVATE DOMESTIC WATER SOURCE: 20 POINTS	<200 HORIZONTAL FEET: 20 POINTS
DEPTH TO GW 50 TO 99 FEET: 10 POINTS			200-1000 HORIZONTAL FEET: 10 POINTS
DEPTH TO 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 = 0	SURFACE WATER SCORE = 0
SITE RANK (1+2+3) = 0 + 0 + 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

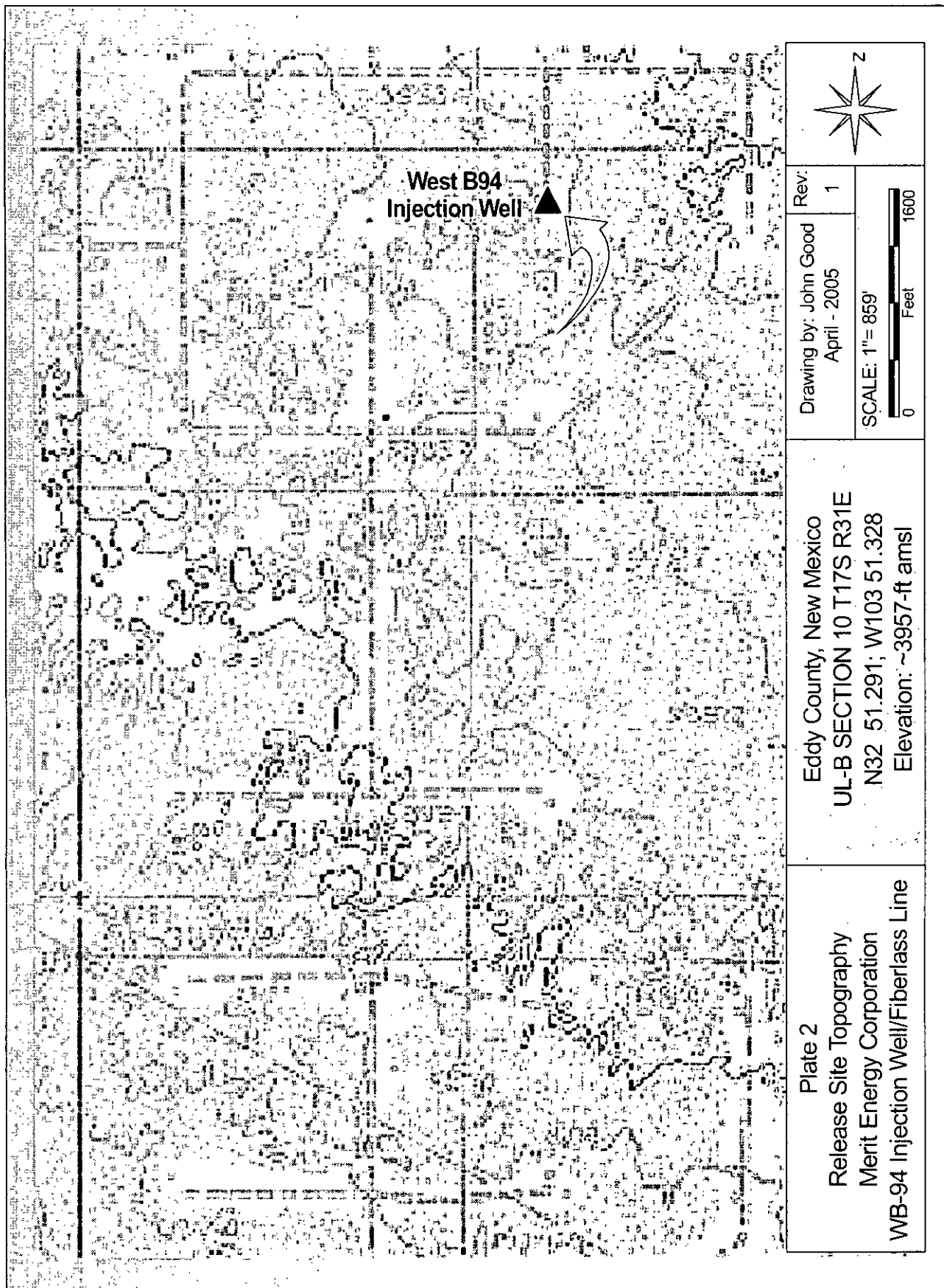
6.0 Remediation Action Plan

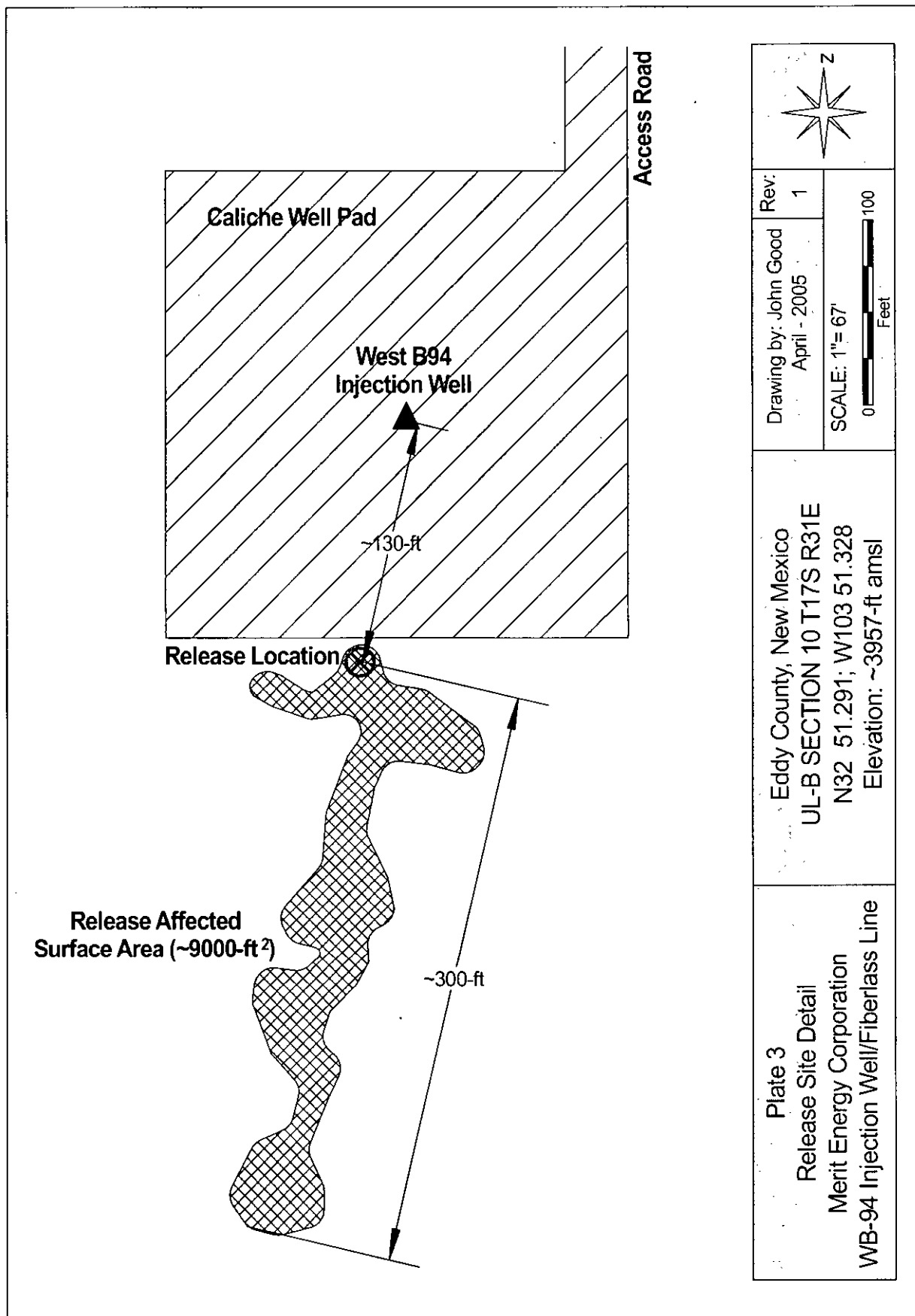
The contaminated soil in the areas of the injection line release and the surface flow path will be excavated to necessary depth and stockpiled on the caliche well pad. Clean sand for blending and final cover will be obtained from beneath the contaminated zone of the surface flow path. The stockpiled contaminated soil will be blended to achieve contaminant levels below the remedial action levels (5000-ppm TPH; 50-ppm BTEX; 10-ppm Benzene). The excavation(s) will be backfilled with the blended sand, and then a final 3-ft cover of clean sand will be placed to provide an adequate root zone. The surface damaged pasture area will be seeded with BLM #2 seed mix (semi-arid, sandy soils). The site will be periodically evaluated for vegetative re-establishment and re-seeded as necessary.

ATTACHMENTS

Plate 1: Site Location Map	7
Plate 2: Site Topography Map	8
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Release Photographs	12







District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Avenue, Artesia, NM 88210

District 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

Form C-141

Revised June 10, 2003

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

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	Merit Energy Corporation		Contact	Gene Brookshire
Address	P.O. Box 69	Loco Hills, NM 88255	Telephone No.	505-420-5497
Facility Name	West B-94 Injection Well		Facility Type	Injection Well/2" Fiberglass Injection Line

Surface Owner	BLM	Mineral Owner	BLM	Lease No.
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from North Line	Feet from East Line	Longitude-W	Latitude-N	County
B	10	17S	31E	440	1980	103deg 51.328'	32deg 51.291'	Eddy

NATURE OF RELEASE

Type of Release Produced Water w/ Hydrocarbon component	Volume of Release 25 bbl	Volume Recovered 0 bbl
Source of Release 2" Fiberglass Injection Line	Date and Hour of Occurrence Unknown	Date and Hour of Discovery 4/13/05 8:30 PM
Was Immediate Notice Given? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> Not Required	If YES, To Whom? Mike Bratcher, NMOCD-Artesia	
By Whom? John Good	Date and Hour 4/14/05 4:15 PM	
Was a Watercourse Reached? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	If YES, Volume Impacting the Watercourse NA	

If a Watercourse was Impacted, Describe Fully*

Describe Cause of Problem and Remedial Action Taken. *

2' fiberglass injection line (130' south of well WB94) lost partial integrity at unknown prior time. Produced water release approximately 10-ft underground reached surface on 4/13/05. Line was excavated and repaired on 4/14/05. EZ Oilfield Services contracted for remediation of site.

Describe Area Affected and Cleanup Action Taken. *

Approximate 300' X 30' produced water flowpath extending south from the well pad location. Deep contamination (>15-ft) at the release source point.

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:	John Good	
Title:	Consultant/Project Manager	
E-Mail Address:	jcgood4614@aol.com	
Date:	4/15/2005	Phone: 505-631-3277
Approved by District Supervisor:		<input type="checkbox"/> Attached
Approval Date:	Expiration Date:	
Conditions of Approval:		

Merit Energy Corporation		Incident Date: 4/13/05 NMOCD Notified: 4/14/05	
SITE: West B-94 Injection Well		Assigned Site Reference: WB94-041305	
Company: Merit Energy Corporation			
Street Address:			
Mailing Address: P.O. Box 69			
City, State, Zip: Loco Hills, NM 88255			
Representative: Gene Brookshire			
Representative Telephone: 505-420-5497			
Telephone:			
Fluid Volume Released (bbl): > 25		Volume Recovered (bbl): ~ 0	
Net Release: > 25			
<p>>25 bbl: Notify NMOCD verbally within 24 hours and submit C-141 within 15 days.</p> <p>5-25 bbl: Submit Form C-141 within 15 days. (Also applies to unauthorized release of >50 mcf Natural Gas).</p>			
Leak, Spill, or Pit (LSP) Name:		West B-94 Injection Well	
Source of Contamination:		2" Fiberglass Injection Line	
Land Owner, i.e. BLM, ST, Fee, Other:		BLM	
LSP Dimensions:		300' X 30'	
LSP Area		~ 9000 -ft ²	
Location of Reference Point (RP):			
Location distance and direction from RP:			
Latitude: North		32deg 51.291'	
Longitude: West		103deg 51.328'	
Elevation above mean sea level (amsl):		3957 feet 1206 meters	
Distance from North Section Line (feet):		440	
Distance from East Section Line (feet):		1980	
Location - Unit Letter and 1/4 1/4:		UL- B NW - 1/4 of NE - 1/4	
Location - Section		10	
Location - Township		17S	
Location - Range		31E	
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:		0	
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):		> 250	
Depth (feet) of lowest contamination (DC):		20	
Depth (feet) to Ground Water (DG - DC = DTGW):		> 230	
1. Ground Water		2. Wellhead Protection Area	
If Depth to GW <50-feet: 20 points		If <1000' from water source, or, <200' from private domestic water source: 20 points	
If Depth to GW 50 to 100-feet: 10 points		If >1000' from water source, or, >200' from private domestic water source: 0 points	
If Depth to GW >100-feet: 0 points			
Ground Water Score: 0		Wellhead Protection Score: 0	
Site Ranking (1 + 2 + 3): 0		Surface Water Score: 0	
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



Surface contamination in immediate area of the injection line release

Obvious hydrocarbon contamination beneath the line leak



Surface flow path from southern terminus looking north toward WB94 well pad.