District I XXX
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

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

Form C-141
Revised October 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

X Initial Report ☐ Final Report

Name of Company SOUTHWEST ROYALTIES, INC.	Contact DAWN M. HOWARD
Address 6 DESTA DR, ST 2100, MIDLAND, TX 79705	Telephone No. 432/688-3267
Facility Name FARNSWORTH FEDERAL B #5	Facility Type OIL WELL

Surface Owner VARIOUS -SEE ATTACHED	Mineral Owner	Lease No. LC030180B

LOCATION OF RELEASE

API # 30025119620000

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
L	7	26S	37E	1980	S	660	W	LEA

Latitude_____ Longitude_____

UTR 190'

NATURE OF RELEASE

Type of Release OIL	Volume of Release Unknown	Volume Recovered 125 (well) 145 (bttry)
Source of Release Well blow out at well head, tanks overflowed & small leaks in tanks	Date and Hour of Occurrence 8/23/06 11:30 A.M. CT	Date and Hour of Discovery 8/23/06 11:30 A.M. CT
Was Immediate Notice Given? X Yes ☐ No ☐ Not Required	If YES, To Whom? PAT'S VOICEMAIL 505/390-0720 EXT 109	
By Whom? DAWN HOWARD	Date and Hour 8/23/06 11:30 A.M. CT	
Was a Watercourse Reached? ☐ Yes x No	If YES, Volume Impacting the Watercourse.	

OCT 2006 Received Hobbs OCD

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

The well does not produce daily, but builds up enough pressure to flow up the backside. A pocket of gas or an air bubble may have caused the connection to blow off the well at the wellhead. The tanks were also full and overflowed and were found to have small leaks. There were actually two areas of contamination being 1) approximately 2 to 4 acres of over spay from the wellhead and 2) the battery –on the pad, overdrive area and extending into the pasture.

Describe Area Affected and Cleanup Action Taken.*

The well was brought under control by choke installation. All free standing oil was vacuumed up (125 BF at the well site and 145 BF at the battery). All fluid in tanks drained. Highlander Environmental was contacted and is currently on location assessing damages, taking samples and will be providing their recommended remedial actions. Clean up will strictly adhere to NMOCD Guidelines for Remediation of Leaks, Spills and Releases.

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: Dawn M. Howard	Approved by District Supervisor: Chris Williams
Title: Operations Assistant	Approval Date: 1/16/08 Expiration Date: 4/16/08
E-mail Address: dhoward@claytonwilliams.com	Conditions of Approval: Med final report & C Attached ☐
Date: 8/24/06 Phone: 432/688-3267	

* Attach Additional Sheets If Necessary

RP# 1078

RP# 1725

SITE INFORMATION

Type of Report: ASSESSMENT AND WORK PLAN

General Site Information:	
Site:	Farnsworth Federal B #5 and Farnsworth Federal B Tank Battery
Company:	Southwest Royalties, Inc.
Well Location:	Section 7, T26S, R37E, Unit Letter L
Tank Battery Location:	Section 7, T26S, R37E, Unit Letter L
Lease Number:	LC 030180B
County:	Lea
Spill Area GPS:	32.05586, 103.20828
Surface Owner:	El Paso
Mineral Owner:	-
Directions:	At Jal, New Mexico, intersection of 3 Rd. Street and Hwy. 128, go 6.1 miles (south) on
	3rd. Street, Turn left (east) into lease road and go 1.5 miles to Y, at Y turn left (south) and
	go 1.4 miles to tank battery on right side or 1 6 miles to well #5 on left side

Release Data:	
Date Released:	8/23/2006
Type Release:	oil
Source of Contamination:	well blowout at well #5 and tank battery tank overflowed
Fluid Released:	unknown
Fluids Recovered:	125 barrels (well) and 145 barrels (tank battery)

Official Communication:			
Name:	Dawn M. Howard		Ike Tavarez
Company:	Southwest Royalties, Inc.		Highlander Environmental Corp.
Address:	6 Desta Dr., St 2100		1910 N. Big Spring
P.O. Box			
City:	Midland, Texas, 79705		Midland, Texas
Phone number:	(432) 688-3267		(432) 682- 4559
Fax:	(432) 688-3250		(432) 682- 3946
Email:	dhoward@claytonwilliams.com		itavarez@hec-enviro.com

Ranking Criteria

Depth to Groundwater:	*Ranking Score*	*Site Data*
<50 ft	20	
50-99 ft	10	
>100 ft.	0	*Greater 100'*

WellHead Protection:	*Ranking Score*	*Site Data*
Water Source <1,000 ft , Private <200 ft.	*20*	*None*
Water Source >1,000 ft., Private >200 ft.	*0*	*None*

Surface Body of Water:	*Ranking Score*	*Site Data*
<200 ft.	*20*	*None*
200 ft - 1,000 ft.	*10*	*None*
>1,000 ft.	*0*	*None*

Total Ranking Score:	10

Acceptable Soil RRAL (mg/kg)		
Benzene	*Total BTEX*	*TPH*
10	50	5,000

Highlander Environmental Corp.

Midland, Texas

October 11, 2006

Mr. Larry Johnson
Environmental Engineer Specialist
Oil Conservation Division- District I
1625 N. French Drive
Hobbs, New Mexico 88240

RE: Assessment and Work Plan for the Southwest Royalties, Inc., Farnsworth Federal B #5 Well, Unit Letter L, Section 7, Township 26 South, Range 37 East, Lea County, New Mexico.

Dear Mr. Johnson:

Highlander Environmental Corp. (Highlander) was contacted by Southwest Royalties, Inc. (Southwest) to assess and to remediate the soil impact from a well blow out that occurred at the Farnsworth Federal B #5 Well and the Farnsworth Federal Tank Battery, located in Unit Letter L, Section 7, Township 26 South, Range 37 East, Lea County, New Mexico. The well site coordinates are N 32.05586°, W 103.20828°. The State of New Mexico C-141 (Initial) is included in Appendix C. The well and the tank battery location are shown on Figure 1.

Background

On August 23, 2006, the well apparently pressured up and the fluids flowed up the backside of the well. A gas pocket or air bubbles may have caused the connection to blow off the wellhead. At the time of the release, the oil tanks at the tank battery were full and the tanks overflowed. The volume released at the well and the tank battery was unknown. An estimated 125 barrels of oil was recovered at the well and 145 barrels at the tank battery.

The release at the well impacted an area estimated at 2 to 4 acres with the majority of the impact being overspray. At the tank battery, oil was observed on the pad, drive area and out into the pasture. The impacted areas are further discussed in the Assessment and Sample Results Section of the report. The spill locations are shown on Figures 2 and 3.

Groundwater and Regulatory

The spill areas are located in Section 7, Township 26 South, Range 37 East. The USGS data base reported a depth to water at 196' in Section 7, Township 26 South, Range 37 East. The State of New Mexico Well Reports did not show any water wells in Section 7. However, there were water wells shown in Sections 29 and 35, Township 25 South, Range 37 East with average groundwater depths of approximately 219' to 185' below surface. In addition, published data, from the Geology and Groundwater Conditions in Southern New Mexico, shows wells in Section 2, 12 and 14, Township 26 South, Range 37 East with reported depths of 103', 102' and 100', respectively. The State of New Mexico Well Reports, USGS report and published reports are included in Appendix A.

A risk-based evaluation was performed for the Site in accordance with the NMOCD Guidelines for Remediation of Leaks, Spills and Releases, dated August 13, 1993. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene and xylene). Based on the regional groundwater data, the proposed RRAL for TPH is 5,000 mg/kg.

Assessment and Sample Results

Well #5

On August 24 2006, Highlander personnel inspected and sampled the spill areas. At Well #5, the majority of the surface staining was due to overspray northeast of the well. The impacted area where fluids accumulated north of the well measured approximately 85' x 180'. The impacted areas are shown on Figure 2. A total of four (4) auger holes were installed in this area to assess the impacted soils. Soil samples were analyzed for Total Petroleum Hydrocarbon (TPH) by method modified 8015 DRO/GRO and chloride by EPA method 300.0. Selected samples were analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX) by EPA method 8021B. The sample results are presented in Table 1. The laboratory reports are included in Appendix B.

On August 25, 2006, Highlander personnel applied a Micro-blaze product to the overspray area. The treatment was applied to the vegetation to wash oil residue from the foliage. This area will be inspected for further applications and growth of the vegetation.

Referring to Table 1, the hydrocarbon impact to the soils appears to be shallow. AH-2, AH-3 and AH-4 exceeded the TPH RRAL of 5,000 mg/kg at 0-1', however, the deeper samples at 1-1.5' were all below the RRAL. The BTEX concentrations did not exceed the RRAL. Chloride concentrations were elevated in the shallow soil samples at 0-1' ranging from 1,480 mg/kg to 8,510 mg/kg. The area of AH-3 did show a deeper

impact to a depth of 2.0' below surface, with a chloride concentration decreasing from 12,100 mg/kg at 1.0' below surface to <5.0 mg/kg at 3.0' below surface.

Tank Battery

On August 25, 2006, Highlander personnel inspected and sampled the spill areas. The area north of the tanks did show oil staining where the tanks overflowed. The impacted area inside the facility fence line measured approximately 45' x 90'. The impacted area in the drive area measured approximately 20' x 150' and the area off the facility pad measured approximately 20' x 60'. The impacted areas are shown on Figure 3. A total of five (5) auger holes were installed in the impacted area to assess the soils. Soil samples were analyzed for Total Petroleum Hydrocarbon (TPH) by method modified 8015 DRO/GRO and chloride by EPA method 300.0. Selected samples were analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX) by EPA method 8021B. The sample results are presented in Table 1. The laboratory reports are included in Appendix B.

Referring to Table 3, AH-1, AH-3 and AH-4 exceeded the TPH RRAL at 0-1'. The TPH exceeded the RRAL to approximately 3.0' in the area of AH-2. BTEX concentrations did not exceed the RRAL. The chloride detected in the auger holes did not show a significant impact to the Site. The chlorides in the shallow soils 0-1' ranged from 369 mg/kg to 523 mg/kg. The deeper samples showed a declining chloride with depth, with the exception of AH-3 where the chloride concentration remained the consistent approximately 500 mg/kg.

Work Plan

Well #5

The hydrocarbon impact at the Site is limited to the shallow soils at 0-1' below surface. Chloride concentrations were elevated to depths ranging from 1'-3' below surface. To properly remediate the impacted area, the soils with levels exceeding the RRAL for TPH and elevated chloride will be removed and hauled to Sundance Services for disposal. Once removed, the area will be backfilled with clean fill material. In addition, the overspray areas will me monitored for growth or for additional Micro-Blaze treatments.

Tank Battery

The hydrocarbon impact in the area is limited to 1'-3' below surface. Based on the results, the chloride concentrations do not appear to an environmental concern. The areas exceeding the TPH RRAL at 1-3' will be excavated and blended below the RRAL. Confirmation samples will be collected from the remediated soils (stockpile) for evaluation. Once below the RRAL, the soil will either be placed back into the excavation or used as dike material at the facility.

Once completed, the results of the remedial activities, along with recommendations for further investigation or remediation, if any, will be submitted to the NMOCD. If you require any additional information or have any questions or comments, please call.

Highlander Environmental Corp.

Ike Tavarez, P.G.
Project Manager/Senior Geologist

cc: Mat Sweic - SWR
Dawn Howard

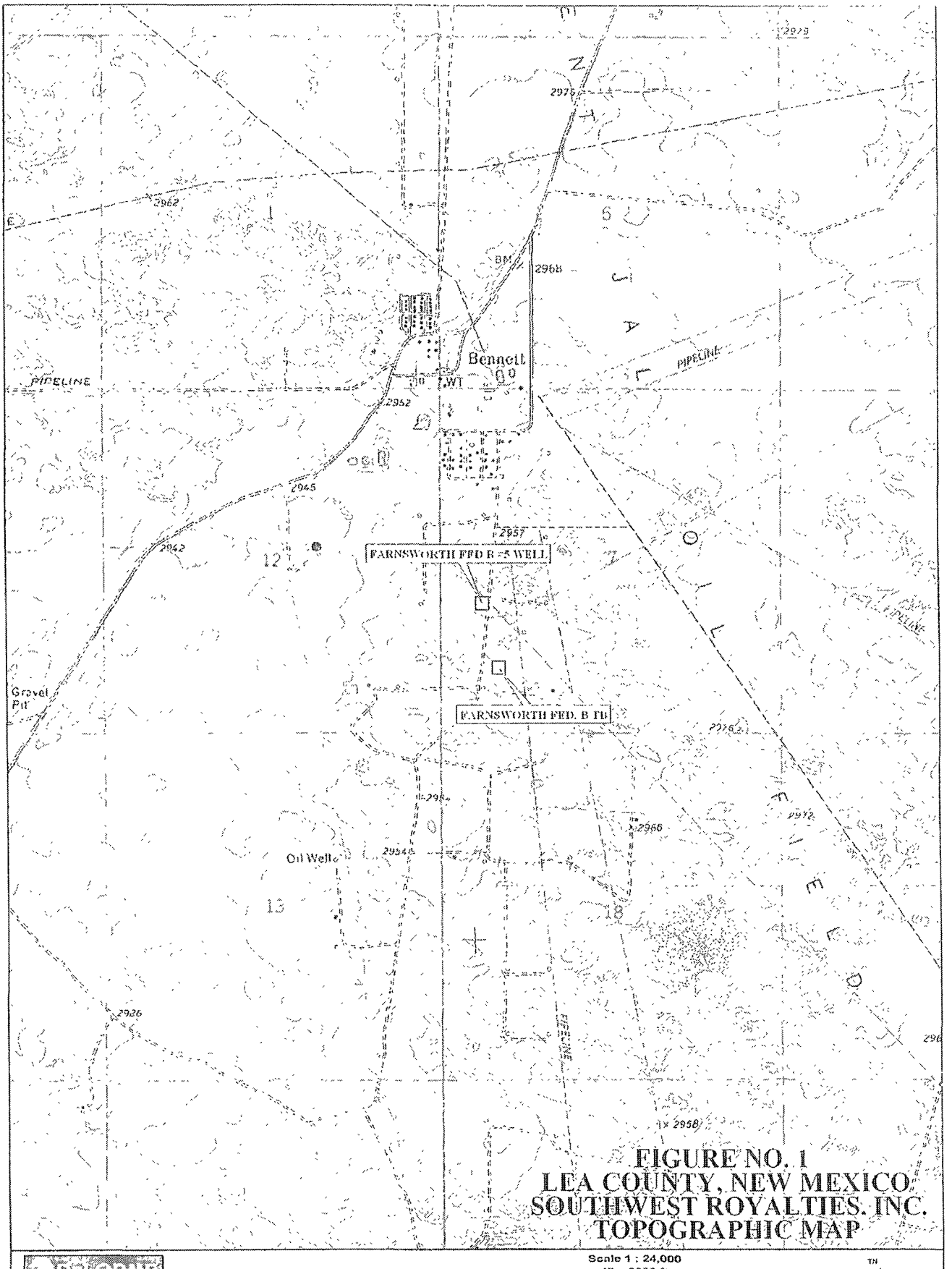


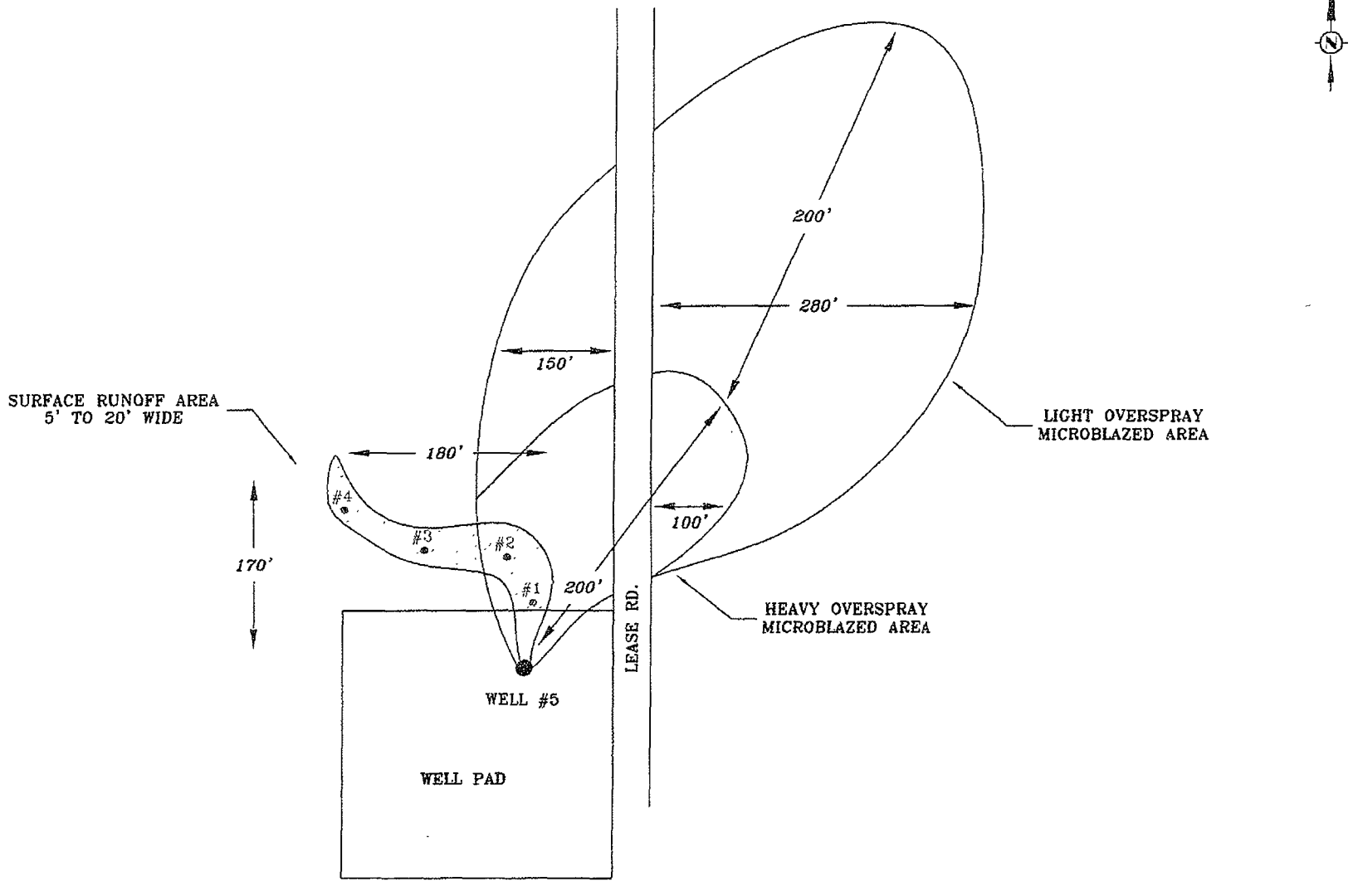
FIGURE NO. 1
LEA COUNTY, NEW MEXICO
SOUTHWEST ROYALTIES, INC.
TOPOGRAPHIC MAP

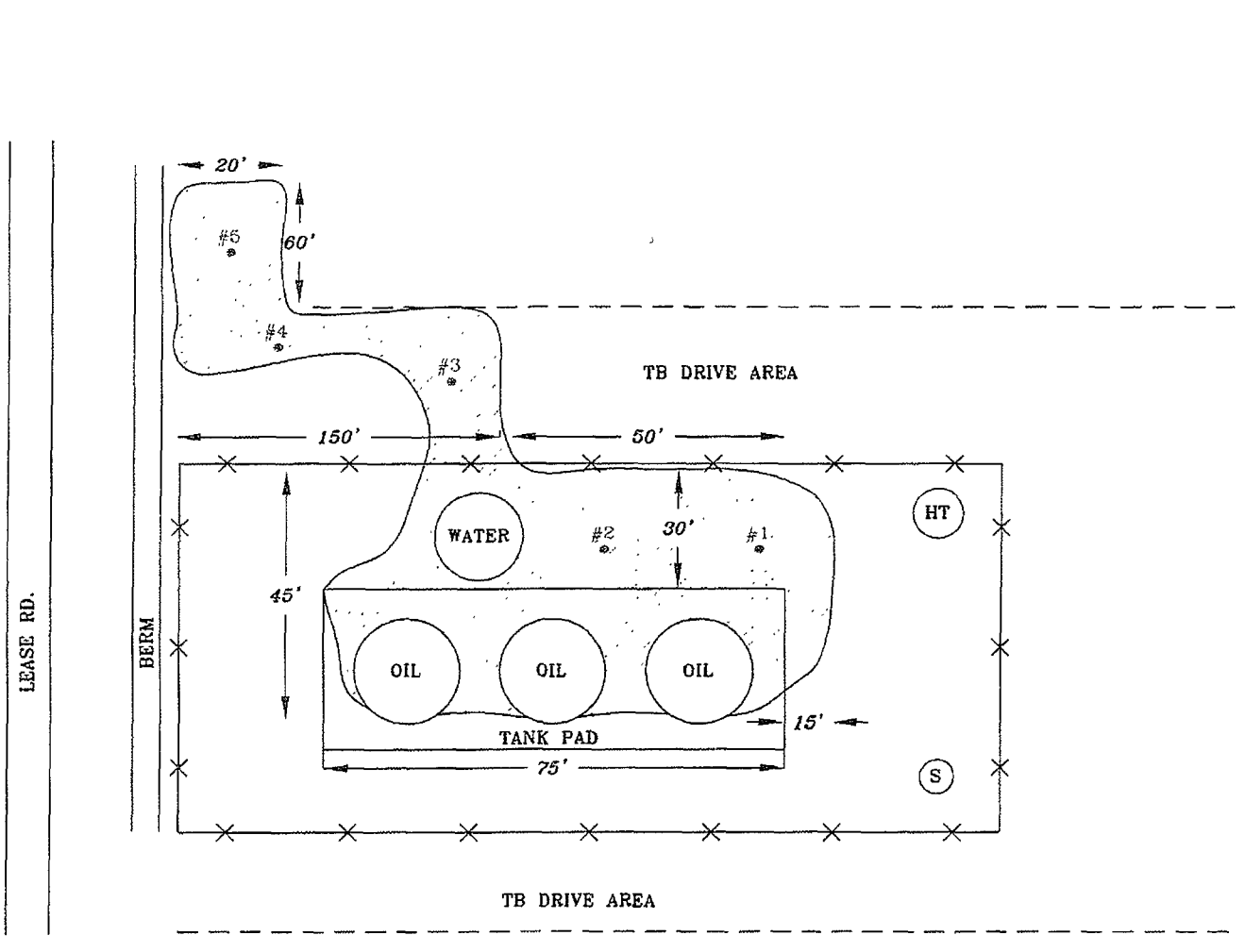
DELORME

www.delorme.com

Scale 1 : 24,000
1" = 2000 ft

TN
MN
8.6°E


200'
280'
150'
SURFACE RUNOFF AREA
5' TO 20' WIDE
LIGHT OVERSPRAY
MICROBLAZED AREA
180'
#4
#3
#2
#1
100'
170'
200'
LEASE RD.
HEAVY OVERSPRAY
MICROBLAZED AREA
WELL #5
WELL PAD
LIGHT OVERSPRAY
HEAVY OVERSPRAY
SPILL AREA
SAMPLE LOCATIONS
NOT TO SCALE
FIGURE NO. 2
LEA COUNTY, NEW MEXICO
SOUTHWEST ROYALTIES, INC.
FARNSWORTH FED. B #5 WELL
DATE: 10/9/06
DWN. BY: JJ
FILE: C:\ACAD\2724 FARNSWORTH FED. B #5
HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS



SPILL AREA

SAMPLE LOCATIONS

NOT TO SCALE

FIGURE NO. 3

LEA COUNTY, NEW MEXICO

SOUTHWEST ROYALTIES, INC.
FARNSWORTH FED. B TB

DATE: 10/9/06

DWN. BY: JJ

FILE: C:\CWA\2724 FARNSWORTH FED. B

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

Table 1
Southwest Royalties, Inc.
Farnsworth Federal B #5
Lea County, New Mexico

Sample ID	Date Sampled	Sample Depth (ft)	TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (m/p) (mg/kg)	Xylene (o) (mg/kg)	Chloride (mg/kg)
			C6-C12	C12-C28	C28-C35	Total						
AH-1	8/24/2006	0-1.0	205	1,270	178	1,650	<0.05	0 059	0 114	0.289	0 113	2540
	8/24/2006	1-1.5	<50	973.0	277	1,250	<0.025	<0.025	<0.025	<0.025	<0.025	273
AH-2	8/24/2006	0-1.0'	4,810	18,300	1,550	**24,700**	0.205	1.58	1.26	3.28	1.46	6,890
	8/24/2006	1-1.5	<50	466.0	155	621	<0.025	<0.025	<0.025	<0 025	<0 025	406
AH-3	8/24/2006	0-1 0'	1,970	6,650	665	**9,280**	0.113	0.992	0 724	1.92	0.808	8,510
	8/24/2006	1-1.5	<10	<10	<10	<10	<0.025	<0.025	<0 025	<0.025	<0.025	12,100
	8/24/2006	2-2.5	-	-	-	-	-	-	-	-	-	3,200
	8/24/2006	3-3.5	-	-	-	-	-	-	-	-	-	<5
AH-4	8/24/2006	0-1.0'	5,960	21,100	1,670	**28,700**	0.225	1.83	1.30	3.63	1.31	1,480
	8/24/2006	1-1.5	<50	475.0	129	604	<0.025	<0.025	<0.025	<0.025	<0.025	8 34

(-) Not Analyzed

Table 2
Southwest Royalties, Inc.
Farnsworth Federal B Tank Battery
Lea County, New Mexico

Sample ID	Date Sampled	Sample Depth (ft)	TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (m/p) (mg/kg)	Xylene (o) (mg/kg)	Chloride (mg/kg)
			C6-C12	C12-C28	C28-C35	Total						
AH-1	8/25 2006	0-1.0	379	12,300	1,910	**14,600**	<0.025	0.079	0 0839	0.365	0.103	429
	8/25/2006	1-1 5	<10	239	78.3	317	<0.025	<0.025	<0.025	<0.025	<0.025	62
	8/25/2006	2-2.5	<50	1,040.0	285	1,320						40
	8/25/2006	3-3.5										43.8
AH-2	8/25/2006	0-1 0'	1,590	19,100	3,160	**23,800**	0.0435	0.589	0.371	1.76	0.45	408
	8/25/2006	1-1.5	160 0	16,900	3,400	**20,500**	-	-	-	-	-	176
	8/25/2006	2-2.5	163.0	6,330	1,300	**7,790**	-	-	-	-	-	81.9
	8/25/2006	4-4.5	<50	530	243	773	<0.025	<0.025	<0.025	<0.025	<0.025	26
	8/25/2006	5-5.5	-	-	-	-	-	-	-	-	-	41
AH-3	8/25/2006	0-1 0'	50.9	4,220	1,010	**5,280**	<0.025	<0 025	<0.025	0.0463	<0.025	523
	8/25/2006	1-1.5	<10	<10	<10	<10	<0.025	<0.025	<0.025	<0.025	<0.025	541
	8/25/2006	2-2.5	-	-	-	-	-	-	-	-	-	508
AH-4	8/25/2006	0-1.0'	3,540	10,300	963	**14,800**	0.762	3.94	2 55	9.05	2.04	369
	8/25/2006	1-1.5	<10	208	73	281	<0.025	<0.025	<0 025	<0.025	<0.025	36.3
	8/25/2006	2-2.5	-	-	-	-	-	-	-	-	-	45.5
AH-5	8/25/2006	0-1.0'	560.0	1,460	108	2,130	0.340	2.09	1.49	3.08	1.17	244
	8/25/2006	1-1.5	<10	<10	<10	<10	<0.025	<0.025	<0.025	<0.025	<0.025	47.5
	8.25/2006	2-2.5	-	-	-	-	-	-	-	-	-	197

(-) Not Analyzed

Southwest Royalties
Farnsworth Fed #5
Average Depth to Groundwater (ft)

25 South 36 East

6 295	5	4	3	2	1
7	8	9	10 180	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

25 South 37 East

6	5	4	3	2	1 60
7	8	9	10 59	11	12
18 51	17 62	16	15	14	13 73 81
19 44 62	20 65 34	21	22 26	23	24 255
30	29 219	28	27	26 75	25 55
31	32	33 86	34	35 185	36

25 South 38 East

6 60	5	4
7	8	9 95 88
18 58	17	16
19 69	20 78	21 37
30	29 51	28
31	32	33

26 South 36 East

6	5	4	3	2	1
7	8	9 175 177	10	11	12
18 220	17	16	15	14	13
19 198	20	21	22	23 151	24
30	29	28	27	26	25
31	32	33	34	35	36

26 South 37 East

6	5	4	3	2 100 103	1
7 SITE 196	8	9 85	10	11	12 97 102
18	17	16	15	14 109 95	13
19 185	20	21	22	23	24
30	29 80	28	27 120	26	25
31	32	33	34	35	36

26 South 38 East

6	5	4
7	8	9
18	17	16
19	20	21
30	29	28
31	32	33

88 New Mexico State Engineers Well Reports

105 USGS Well Reports

90 Geology and Groundwater Conditions in Southern Lea, County, NM (Report 6)