



Highlander Environmental Corp.

Midland, Texas

October 11, 2006

RP # 1074

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.

Application pPACO 62858447

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 be monitored for growth or for additional Micro-Blaze treatments.

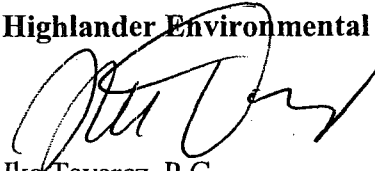
Tank Battery

The hydrocarbon impact in the area is limited to 1'-3' below surface. Based on the results, the chloride concentrations do not appear to be 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.



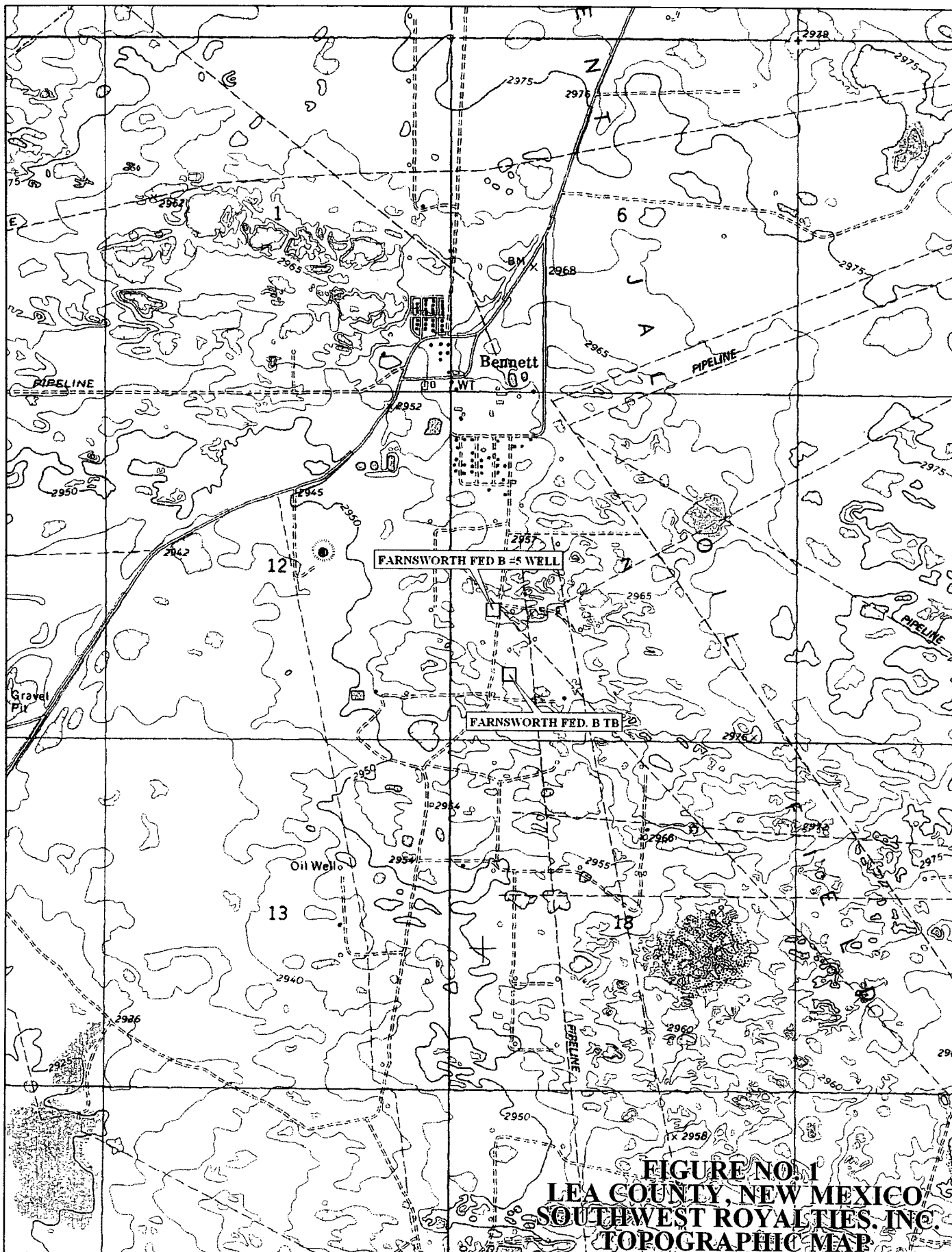
Ike Tavaréz, P.G.

Project Manager/Senior Geologist

cc: Mat Sweic - SWR
Dawn Howard

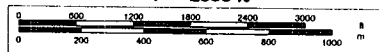


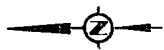
FIGURES



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www.delorme.com

Scale 1 : 24,000
1" = 2000 ft





LEA COUNTY, NEW MEXICO

**SOUTHWEST ROYALTIES, INC.
FARNSWORTH FED. B #5 WELL**

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS





DATE: 10/9/06

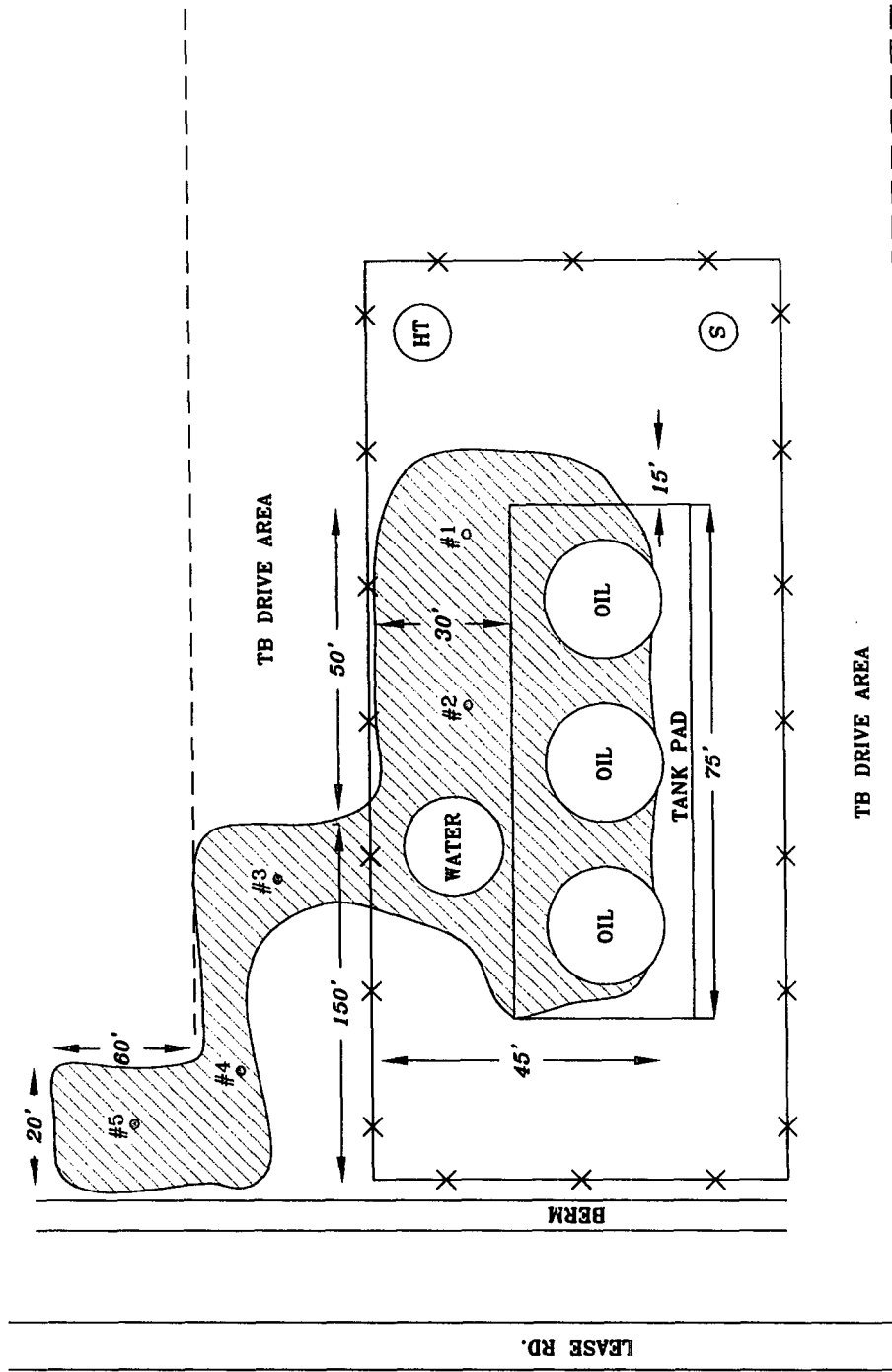
DOWN. BY:

808

FILE:
C:\CML\2724
F:\MSOFT\MATH\FED. 8 /

NOT TO SCALE

-  LIGHT OVERSPRAY
 HEAVY OVERSPRAY
 SPILL AREA
 SAMPLE LOCATIONS



SPILL AREA
SAMPLE LOCATIONS

FIGURE NO. 3

DATE:	10/9/06
DWN. BY:	JJ
FILE:	C:\GAS\3724
	FARNSWORTH FED. B TB
LEA COUNTY, NEW MEXICO	
SOUTHWEST ROYALTIES, INC.	
FARNSWORTH FED. B TB	
HIGHLANDER ENVIRONMENTAL CORP.	
MIDLAND, TEXAS	

NOT TO SCALE

TABLES

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)	Ethylbenzene (mg/kg)	Xylene (m/p) (mg/kg)	Xylene (o) (mg/kg)	Chloride (mg/kg)
			C6-C12	C12-C28	C28-C35						
AH-1	8/24/2006	0-1.0'	205	1,270	178	<0.05	0.059	0.114	0.289	0.113	2540
	8/24/2006	1-1.5	<50	973.0	277	<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	0.205	1.58	1.26	3.28	1.46	6,890
	8/24/2006	1-1.5	<50	466.0	155	<0.025	<0.025	<0.025	<0.025	<0.025	406
AH-3	8/24/2006	0-1.0'	1,970	6,650	665	0.113	0.992	0.724	1.92	0.808	8,510
	8/24/2006	1-1.5	<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	0.225	1.83	1.30	3.63	1.31	1,480
	8/24/2006	1-1.5	<50	475.0	129	<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)	Ethylbenzene (mg/kg)	Xylene (m/p) (mg/kg)	Xylene (o) (mg/kg)	Chloride (mg/kg)
			C6-C12	C12-C28	C28-C35						
AH-1	8/25/2006	0-1.0'	379	12,300	1,910	<0.025	0.079	0.0839	0.365	0.103	429
	8/25/2006	1-1.5'	<10	239	78.3	<0.025	<0.025	<0.025	<0.025	<0.025	62
	8/25/2006	2-2.5'	<50	1,040.0	285						40
	8/25/2006	3-3.5'									43.8
AH-2	8/25/2006	0-1.0'	1,590	19,100	3,160	0.0435	0.589	0.371	1.76	0.45	408
	8/25/2006	1-1.5'	160.0	16,900	3,400	-	-	-	-	-	176
	8/25/2006	2-2.5'	163.0	6,330	1,300	-	-	-	-	-	81.9
	8/25/2006	4-4.5'	<50	530	243	<0.025	<0.025	<0.025	<0.025	<0.025	26
AH-3	8/25/2006	5-5.5'	-	-	-	-	-	-	-	-	41
	8/25/2006	0-1.0'	50.9	4,220	1,010	<0.025	<0.025	<0.025	0.0463	<0.025	523
	8/25/2006	1-1.5'	<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	0.762	3.94	2.55	9.05	2.04	369
	8/25/2006	1-1.5'	<10	208	73	<0.025	<0.025	<0.025	<0.025	<0.025	36.3
	8/25/2006	2-2.5'	-	-	-	-	-	-	-	-	45.5
	8/25/2006										
AH-5	8/25/2006	0-1.0'	560.0	1,460	108	0.340	2.09	1.49	3.08	1.17	244
	8/25/2006	1-1.5'	<10	<10	<10	<0.025	<0.025	<0.025	<0.025	<0.025	47.5
	8/25/2006	2-2.5'	-	-	-	-	-	-	-	-	197
	8/25/2006										

(-) Not Analyzed

APPENDIX A

Groundwater Data

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

25 South			36 East		
6	295	5	4	3	2
7		8	9	10	11
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
7		8	9	10	11
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			38 East		
6		5	4		
7		8	9		
18	17	16			
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

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

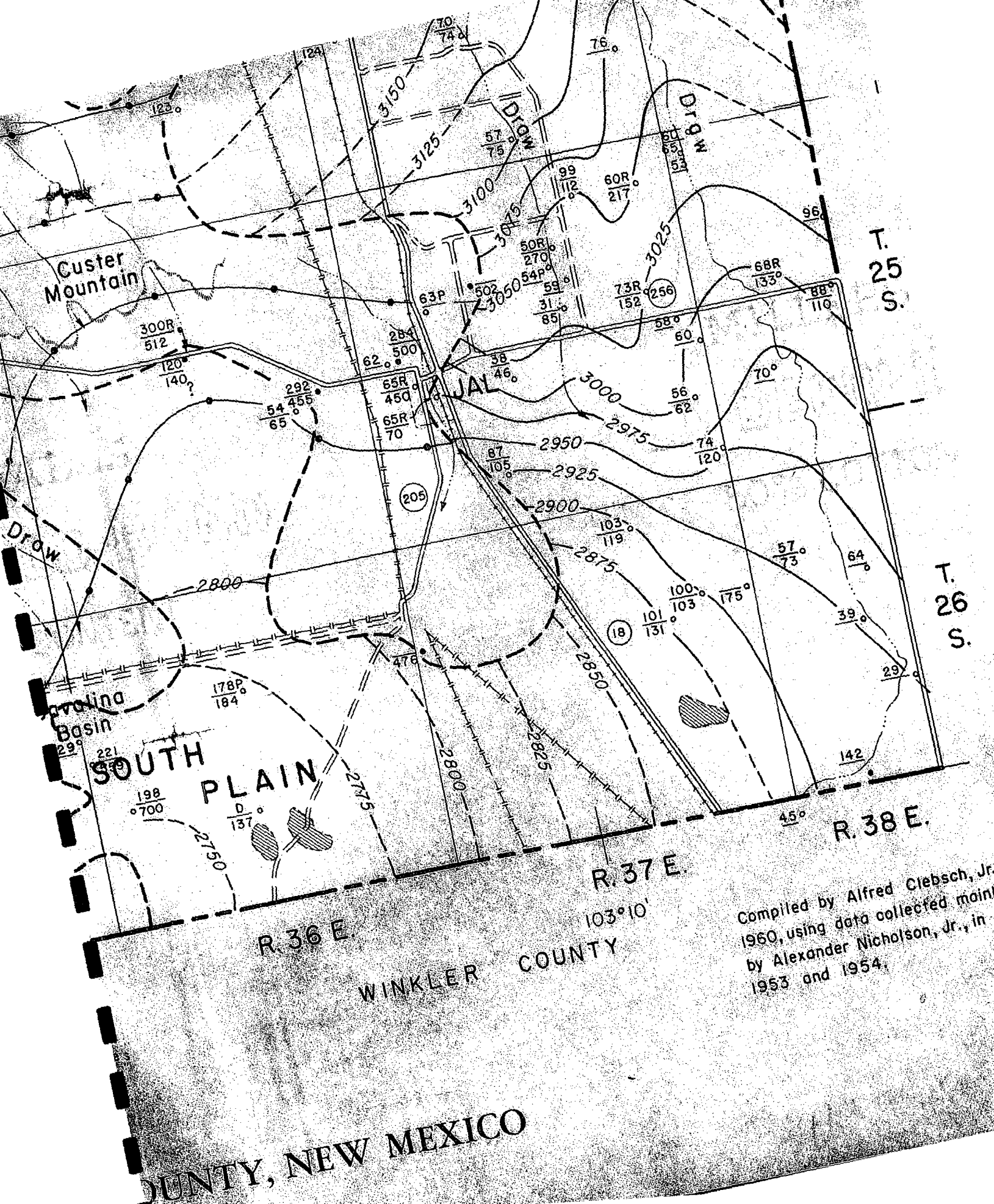
26 South			37 East		
6		5	4	3	2
7		8	9	10	11
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

26 South			38 East		
6		5	4		
7		8	9		
18	17	16			
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

88 New Mexico State Engineers Well Reports

105 USGS Well Reports

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



Compiled by Alfred Clebsch, Jr.
1960, using data collected mainly
by Alexander Nicholson, Jr., in
1953 and 1954.

TABLE 6. RECORDS OF WELLS IN SOUTHERN LEA COUNTY, N. MEX. (continued)

Location No.	Owner	Aquifer	Depth of well (feet)	Water level		Date measured	Year completed	Surface diameter of wells	Method of lift	Use of water	Remarks
				Depth below land surface (feet)	Altitude of well (feet)						
25.38.19.342	Pure Oil Co.	To(?)	133	68	3,061	1952	—	—	—	In	Dollarhide Gasoline Plant well 2.
21.121	Tom Linebury	To	110	87.7	3,103	2-12-53	—	7	Lw	S	—
29.131	—	Qal	—	69.9	3,040	2-15-53	—	6	Lw	N	—
26.32.21.322	Battle Ax Ranch	Tr(?)	253	180	3,140	7-23-54	—	—	Li	D,S	—
26.33.3.444	W. D. Dinwiddie	Qal	180	102.8	3,315	7-23-54	—	6	N	N	—
3.444a	do.	Qal	—	—	3,315	—	—	6(?)	Lw	S	Chemical analysis in table 8. Located 50 feet west of 26.33.3.444.
9.443	—	Qal(?)	—	106.6	3,280	7-26-54	—	—	Lw	S	—
22.433	Battle Ax Ranch	Qal	200(?)	79.7	3,270	7-26-54	—	6	Lw	S	—
26.34.6.213	—	Tr	360	141.9	3,330	7-23-54	—	8	Lw	S	—
26.35.13.222	—	Qal	—	229.1	2,990	12-12-58	—	7	Lw	S	Chemical analysis in table 8.
26.36.9.440	Frank Anthneys	Qal	184M	177.8	2,940	12-12-58	—	7	Lw	D,S	MWP
18.311	City of Jal	Qal	559	220.8	2,981	3-17-60	1960	24	Te(?)	P	Yield 453 gpm. Gravel packed. WBZ 275-300, 400-465, 500-530 feet.
19.233	do.	Qal	700	198.0	2,950	—	1960	24	Te(?)	P	Yield 408 gpm. Gravel packed. WBZ 270-290, 400-480, 550-600, 670-680 feet.
21.443	—	—	137(?)	Dry	2,900	12-11-58	—	11	N	N	—
26.37.2.133	Clyde Cooper	Qal(?)	119	103.4	3,000	2-16-53	1937	8	Lw	S	—
7.331	EPNG	Tr	476	—	2,960	—	1937	8 1/2	Te	In,D	Jal Plant 1, well 1.
12.314	—	Qal	—	102.3	3,010	2-16-53	—	9 1/2	N	N	—
12.331	—	Qal	103 ± M	99.9	3,000	2-17-53	—	3	N	N	—
12.441	Humble Oil Co.	Qal	175	—	—	—	1944	—	—	—	Cased shothole.
14.122	—	Qal	131M	100.6	2,985	2-17-53	—	3	N	N	WBZ 125-150 feet. EY 68 gpm.
26.38.7.244	Tom Linebury	Qal	73	57.1	3,000	2-24-53	—	8 1/2	N	N	Cased shothole.
8.444	do.	Qal	66	64.5	3,000	2-24-53	—	6 1/2	Lw	S	—
17.414	do.	Qal	—	39.4	2,975	2-24-53	—	5 1/2	Lw	S	—
21.344	do.	Qal	—	29.0	2,955	2-13-53	—	3	N	N	—
32.141	do.	Tr(?)	—	142.4	2,950	2-13-53	—	26	N	N	Cased shothole.

TABLE 7. RECORDS OF SELECTED WELLS IN TEXAS ADJACENT TO SOUTHERN LEA COUNTY, N. MEX.
 Explanations of symbols are included in the headnotes of Table 6.

Location No.	Owner	Aquifer	Depth of well (feet)	Altitude of well (feet)	Water level			Year completed	Surface diam. of wells	Method of lift	Use of water	Remarks
					Depth below land surface (feet)	Date measured						
Gaines County Tex.												
A-12.25.341	—	To	50(?)	3,545	40.8	12-9-53	—	6	Lw	N	—	—
A-28.3.413	Greenwood	—	—	3,485	35.1	12-9-53	—	—	Lw	S	—	—
Andrews County, Tex.												
A-29.17.320	H. O. Sims	To(?)	82	3,510	79.4	7-28-40	—	—	Lw	S	—	—
A-39.4.420	do.	To	81	3,478	72.4	10-9-53	—	6½	Lw	S	—	—
A-39.14.111	Humble Oil Co.	—	215	3,410	Dry	—	—	—	—	—	—	—
A-40.16.330	M. L. Goins	To	80	3,305	74.1	10-15-53	—	—	Lw	D,S	—	—
Winkler County, Tex.												
C-22.6	Tom Linebury	Qal	—	2,940	45.0	2-13-53	—	6	N	N	—	—

Water
ResourcesNational Water Information
System: Web InterfaceData Category:
Ground WaterGeographic Area:
New Mexico

GO

Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

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Save file of selected sites to local disk for future upload

USGS 320104103120301 26S.37E.19.433143

Available data for this site

Ground-water: Field measurements



GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°01'04", Longitude 103°12'03" NAD27

Land-surface elevation 2,941.40 feet above sea level NGVD29

The depth of the well is 500 feet below land surface.

This well is completed in the SANTA ROSA SANDSTONE (231SNRS) local
aquifer.

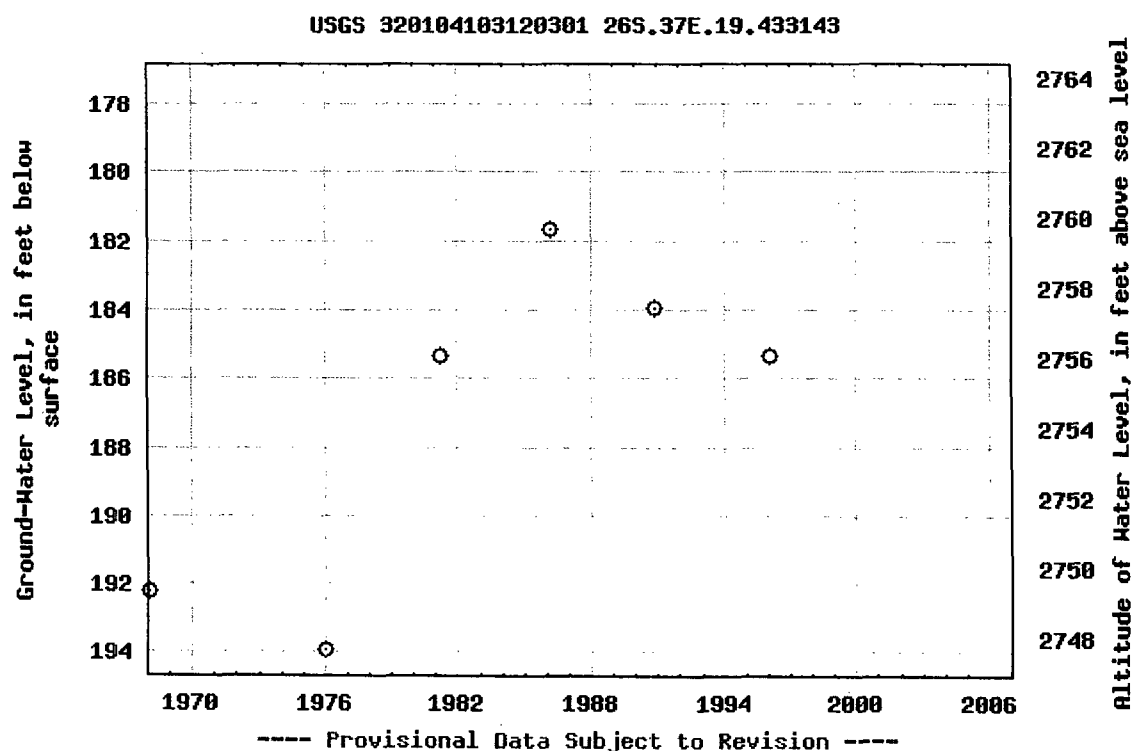
Output formats

Table of data

Tab-separated data

Graph of data

Reselect period



Water
Resources

National Water Information
System: Web Interface

Data Category:
Ground Water

Geographic Area:
New Mexico

GO

Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

site_no list = • 320251103071401

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USGS 320251103071401 26S.37E.12.33243

Available data for this site

Ground-water: Field measurements



GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°02'51", Longitude 103°07'14" NAD27

Land-surface elevation 3,004.20 feet above sea level NGVD29

The depth of the well is 160 feet below land surface.

This well is completed in the ALLUVIUM, BOLSON DEPOSITS AND
OTHER SURFACE DEPOSITS (110AVMB) local aquifer.

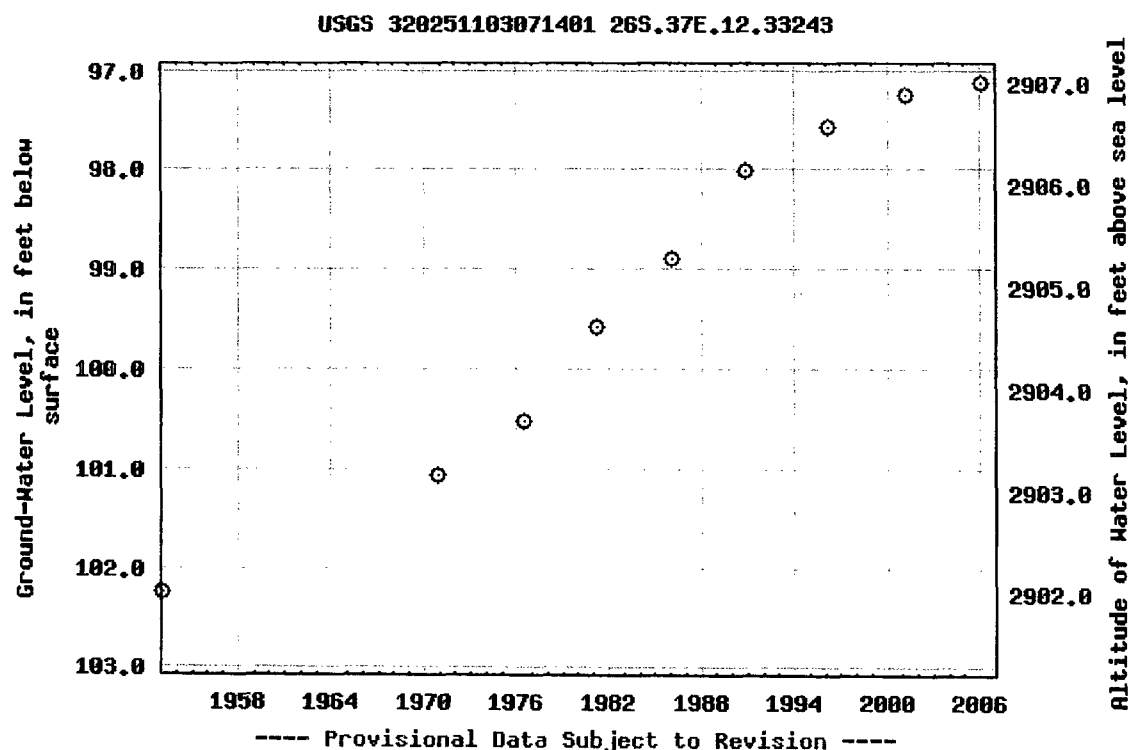
Output formats

Table of data

Tab-separated data

Graph of data

Reselect period



Water
ResourcesNational Water Information
System: Web InterfaceData Category:
Ground WaterGeographic Area:
New Mexico

GO

Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

site_no list = • 320259103122201

[Save file of selected sites](#) to local disk for future upload

USGS 320259103122201 26S.37E.07.314424

Available data for this site

Ground-water: Field measurements



GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°02'59", Longitude 103°12'22" NAD27

Land-surface elevation 2,956.40 feet above sea level NGVD29

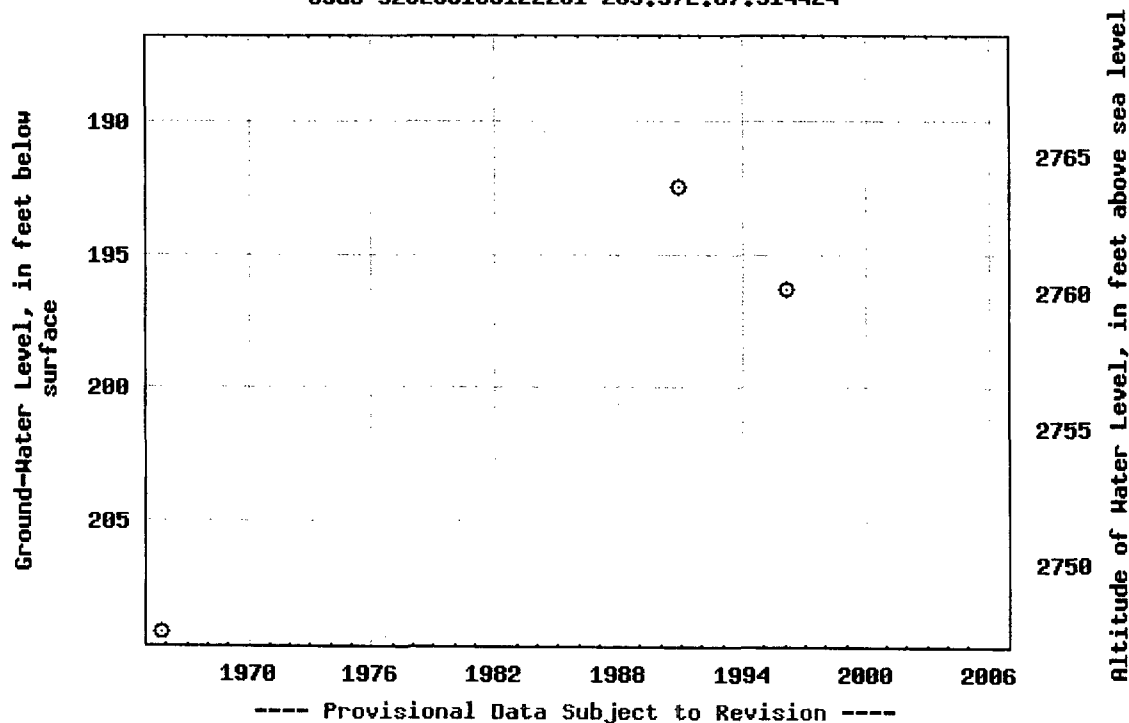
The depth of the well is 470 feet below land surface.

This well is completed in the SANTA ROSA SANDSTONE (231SNRS) local
aquifer.

Output formats

[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

USGS 320259103122201 26S.37E.07.314424



Water
ResourcesNational Water Information
System: Web InterfaceData Category:
Ground WaterGeographic Area:
New Mexico

GO

Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

site_no list = • 320042103103901

Save file of selected sites to local disk for future upload

USGS 320042103103901 26S.37E.29.24230

Available data for this site

Ground-water: Field measurements



GO

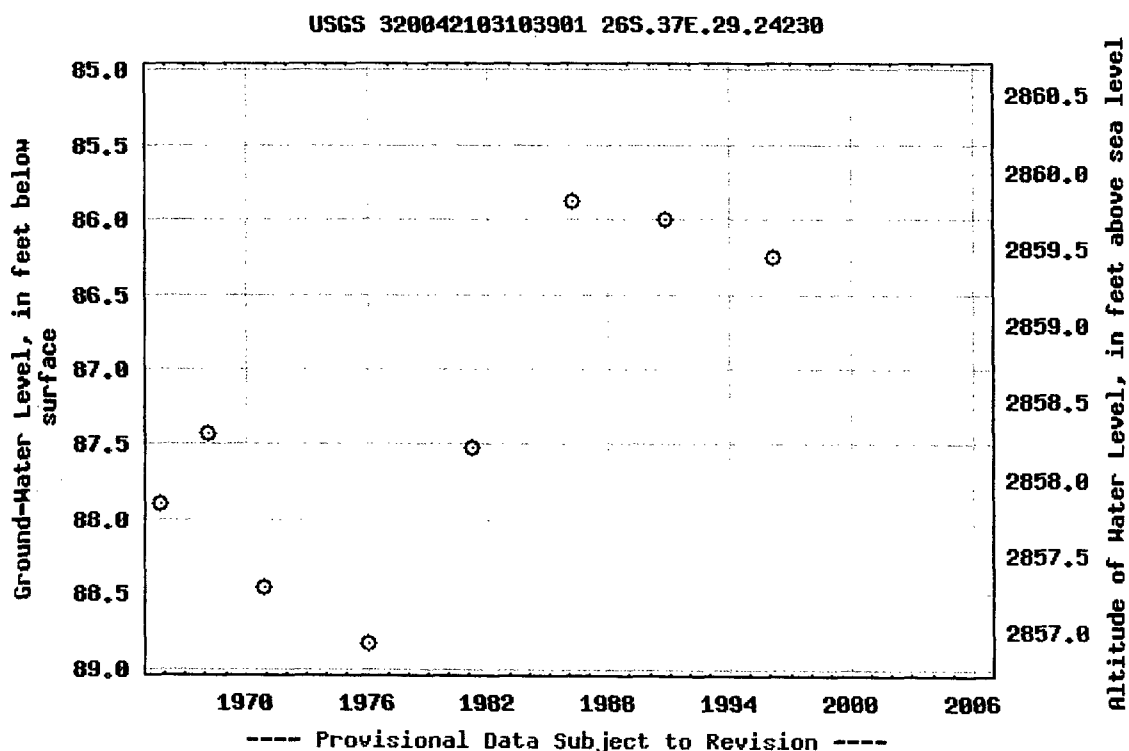
Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°00'42", Longitude 103°10'39" NAD27

Land-surface elevation 2,945.70 feet above sea level NGVD29

The depth of the well is 115 feet below land surface.

This well is completed in the ALLUVIUM, BOLSON DEPOSITS AND
OTHER SURFACE DEPOSITS (110AVMB) local aquifer.**Output formats**[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

Water
ResourcesNational Water Information
System: Web InterfaceData Category:
Ground WaterGeographic Area:
New Mexico

GO

Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

site_no list = • 320046103085101

[Save file of selected sites](#) to local disk for future upload

USGS 320046103085101 26S.37E.27.23212

Available data for this site

Ground-water: Field measurements



GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°00'46", Longitude 103°08'51" NAD27

Land-surface elevation 2,982.20 feet above sea level NGVD29

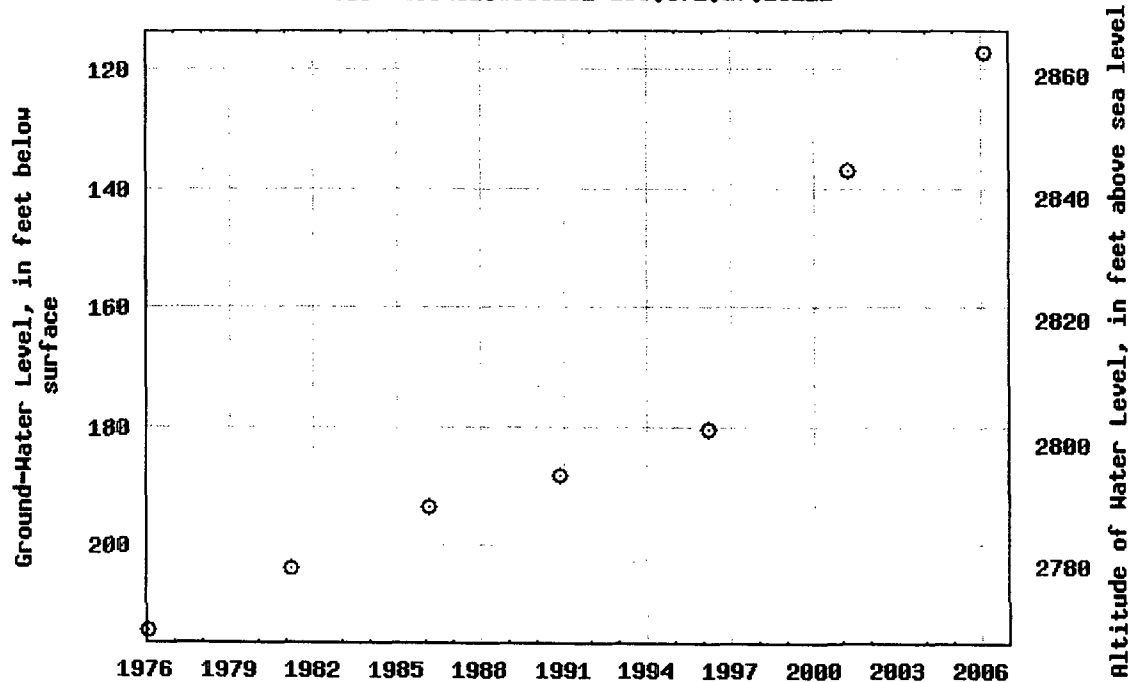
The depth of the well is 525 feet below land surface.

This well is completed in the SANTA ROSA SANDSTONE (231SNRS) local
aquifer.

Output formats

[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

USGS 320046103085101 26S.37E.27.23212



---- Provisional Data Subject to Revision ----

Water
ResourcesNational Water Information
System: Web InterfaceData Category:
Ground WaterGeographic Area:
New Mexico

GO

Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

site_no list = • 320303103100901

[Save file of selected sites](#) to local disk for future upload

USGS 320303103100901 26S.37E.09.32411A

Available data for this site

Ground-water: Field measurements



GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°03'03", Longitude 103°10'09" NAD27

Land-surface elevation 2,969.60 feet above sea level NGVD29

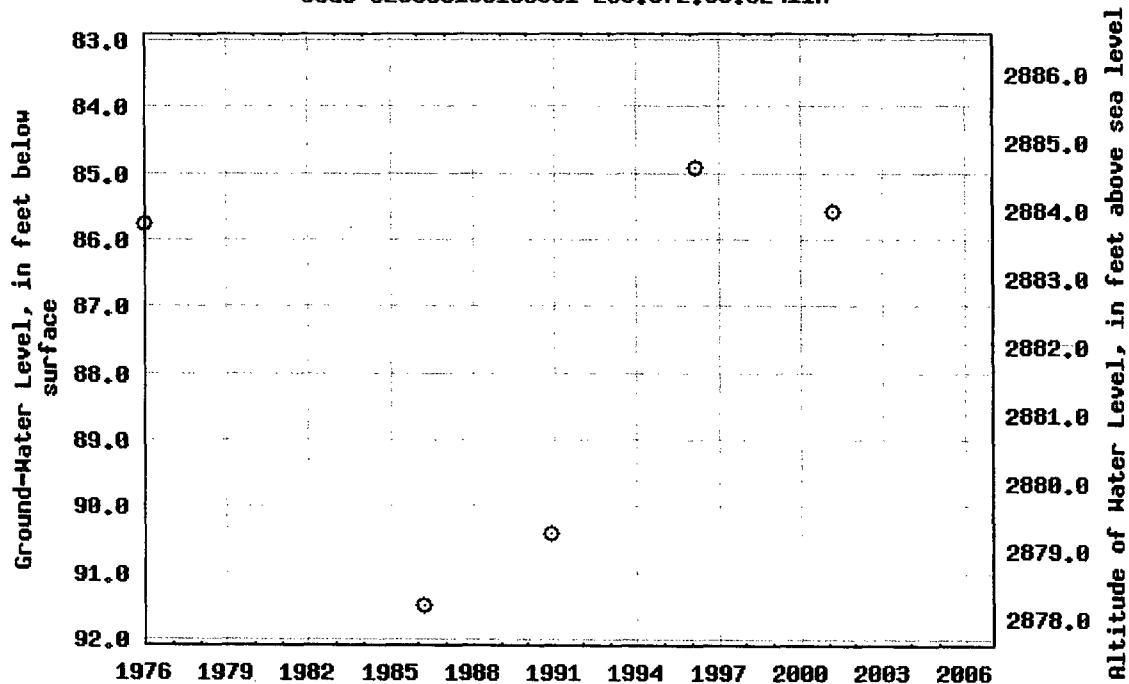
The depth of the well is 140 feet below land surface.

This well is completed in the ALLUVIUM, BOLSON DEPOSITS AND
OTHER SURFACE DEPOSITS (110AVMB) local aquifer.

Output formats

[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

USGS 320303103100901 26S.37E.09.32411A



---- Provisional Data Subject to Revision ----

Water
ResourcesNational Water Information
System: Web InterfaceData Category:
Ground WaterGeographic Area:
New Mexico

GO

Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

site_no list = • 320401103082901

[Save file of selected sites](#) to local disk for future upload

USGS 320401103082901 26S.37E.02.311124

Available data for this site

Ground-water: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

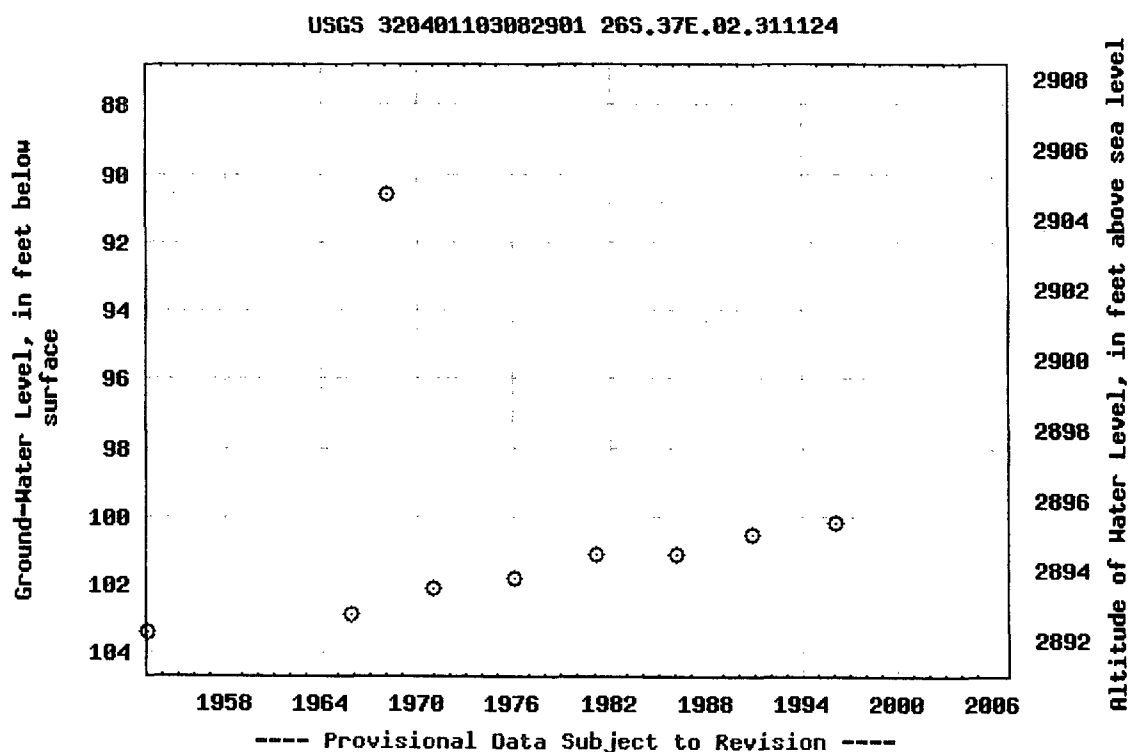
Latitude 32°04'01", Longitude 103°08'29" NAD27

Land-surface elevation 2,995.40 feet above sea level NGVD29

The depth of the well is 119 feet below land surface.

This well is completed in the ALLUVIUM, BOLSON DEPOSITS AND
OTHER SURFACE DEPOSITS (110AVMB) local aquifer.

Output formats

[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

Water
ResourcesNational Water Information
System: Web InterfaceData Category:
Ground WaterGeographic Area:
New Mexico

GO

Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

site_no list = • 320149103134201

[Save file of selected sites](#) to local disk for future upload

USGS 320149103134201 26S.36E.23.222322

Available data for this site

Ground-water: Field measurements



GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

Latitude 32°01'49", Longitude 103°13'42" NAD27

Land-surface elevation 2,925.80 feet above sea level NGVD29

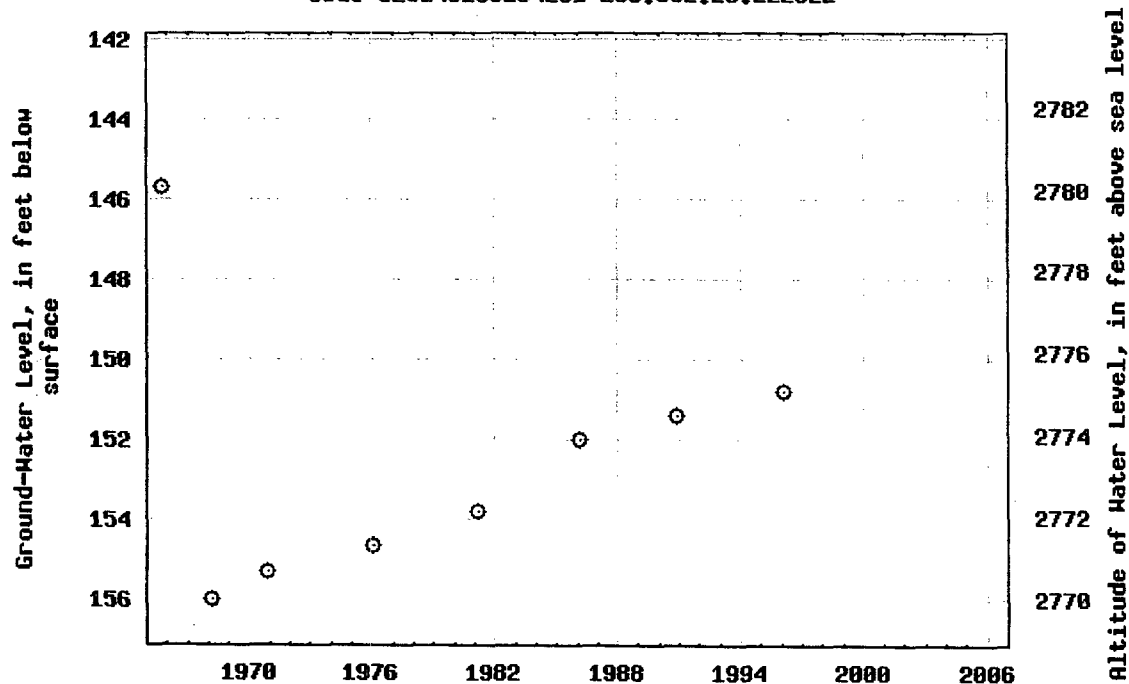
The depth of the well is 200 feet below land surface.

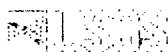
This well is completed in the ALLUVIUM, BOLSON DEPOSITS AND
OTHER SURFACE DEPOSITS (110AVMB) local aquifer.

Output formats

[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

USGS 320149103134201 26S.36E.23.222322



Water
ResourcesNational Water Information
System: Web InterfaceData Category:
Ground WaterGeographic Area:
New Mexico

GO

Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

site_no list = • 320251103154201

[Save file of selected sites](#) to local disk for future upload

USGS 320251103154201 26S.36E.09.44421B

Available data for this site

Ground-water: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

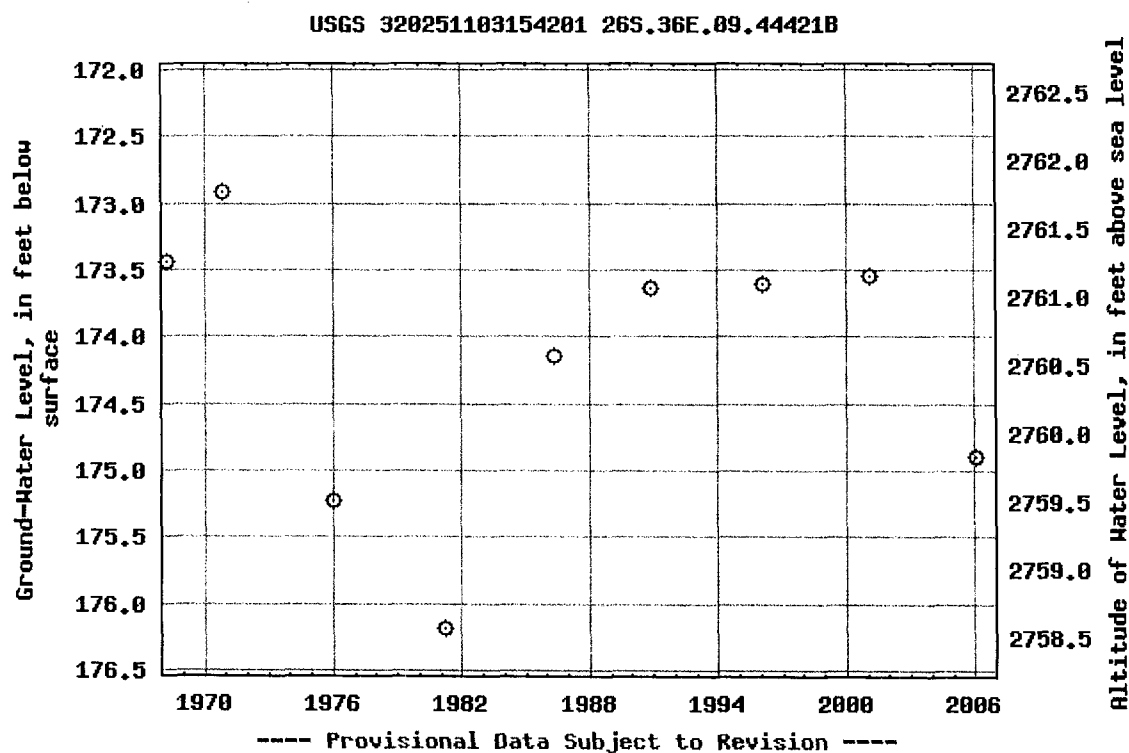
Latitude 32°02'51", Longitude 103°15'42" NAD27

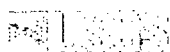
Land-surface elevation 2,934.70 feet above sea level NGVD29

The depth of the well is 200 feet below land surface.

This well is completed in the ALLUVIUM, BOLSON DEPOSITS AND
OTHER SURFACE DEPOSITS (110AVMB) local aquifer.

Output formats

[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

Water
ResourcesNational Water Information
System: Web InterfaceData Category:
Ground WaterGeographic Area:
New Mexico

GO

Ground-water levels for New Mexico

Search Results -- 1 sites found

Search Criteria

site_no list = • 320510103101301

Save file of selected sites to local disk for future upload

USGS 320510103101301 25S.37E.33.11444

Available data for this site

Ground-water: Field measurements

GO

Lea County, New Mexico

Hydrologic Unit Code 13070007

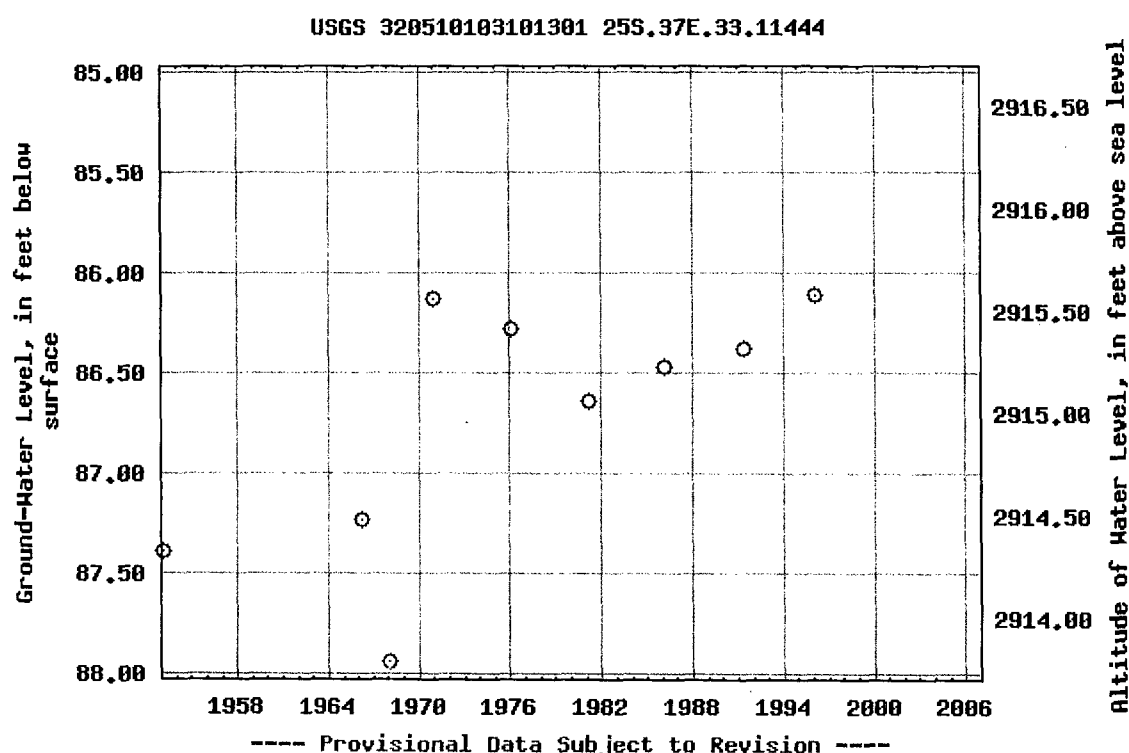
Latitude 32°05'10", Longitude 103°10'13" NAD27

Land-surface elevation 3,001.70 feet above sea level NGVD29

The depth of the well is 105 feet below land surface.

This well is completed in the ALLUVIUM, BOLSON DEPOSITS AND
OTHER SURFACE DEPOSITS (110AVMB) local aquifer.

Output formats

[Table of data](#)[Tab-separated data](#)[Graph of data](#)[Reselect period](#)

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 26S Range: 37E Sections:

NAD27 X: Y: Zone: ☐ Search Radius:

County: ☐ Basin: ☐ Number: Suffix:

Owner Name: (First) (Last) ☐ Non-Domestic ☐ Domestic
☒ All

POD / Surface Data Report

Avg Depth to Water Report

Water Column Report

Clear Form

iWATERS Menu

Help

AVERAGE DEPTH OF WATER REPORT 08/28/2006

Bsn Tws Rng Sec Zone X Y Wells (Depth Water in Feet)
Min Max Avg

No Records found, try again

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 25S Range: 37E Sections:

NAD27 X: Y: Zone: Search Radius:

County:  Basin:  Number:  Suffix: 

Owner Name: (First) _____ (Last) _____ ☐ Non-Domestic ☐ Domestic
☒ All

POD / Surface Data Report

Avg Depth to Water Report

Water Column Report

Clear Form

iWATERS Menu

Help.

AVERAGE DEPTH OF WATER REPORT 08/28/2006

(Depth Water in Feet)

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	25S	37E	19				9	27	63	44
CP	25S	37E	20				6	23	60	34
CP	25S	37E	29				5	187	250	219
CP	25S	37E	35				1	185	185	185

Record Count: 21

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 26S Range: 36E Sections:

NAD27 X: Y: Zone:  Search Radius:

County:  Basin:  Number: Suffix:

Owner Name: (First) (Last) ☐ Non-Domestic ☐ Domestic
☒ All

POD / Surface Data Report

Avg Depth to Water Report

Water Column Report

Clear Form

WATERS Menu

Help

AVERAGE DEPTH OF WATER REPORT 08/28/2006

Bsn Tws Rng Sec Zone X Y Wells (Depth Water in Feet)
Min Max Avg

No Records found, try again

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 25S Range: 36E Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

Owner Name: (First) (Last) ☐ Non-Domestic ☐ Domestic
☒ All

POD Surface Data Report

Avg Depth to Water Report

Water Column Report

Clear Form

iWATERS Menu

Help

AVERAGE DEPTH OF WATER REPORT 08/28/2006

Bsn Tws Rng Sec Zone X Y Wells (Depth Water in Feet)
Min Max Avg

No Records found, try again

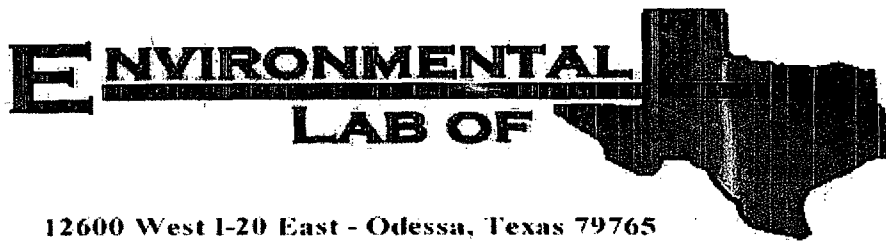
APPENDIX B

Analytical Reports

Analytical Report

Farnsworth Fed. B #5

8/31/2006



Analytical Report

Prepared for:

Ike Tavarez

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Clayton Williams/SWR/ Farnsworth Fed. B #5

Project Number: 2724

Location: Lea Co., NM

Lab Order Number: 6H28009

Report Date: 08/31/06

Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/ Farnsworth Fed. B #5
Project Number: 2724
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH-1 0-1'	6H28009-01	Solid	08/24/06 00:00	08-28-2006 15:55
AH-1 1-1.5'	6H28009-02	Solid	08/24/06 00:00	08-28-2006 15:55
AH-2 0-1'	6H28009-03	Solid	08/24/06 00:00	08-28-2006 15:55
AH-2 1-1.5'	6H28009-04	Solid	08/24/06 00:00	08-28-2006 15:55
AH-3 0-1'	6H28009-05	Solid	08/24/06 00:00	08-28-2006 15:55
AH-3 1-1.5'	6H28009-06	Solid	08/24/06 00:00	08-28-2006 15:55
AH-3 2-2.5'	6H28009-07	Solid	08/24/06 00:00	08-28-2006 15:55
AH-3 3-3.5'	6H28009-08	Solid	08/24/06 00:00	08-28-2006 15:55
AH-4 0-1'	6H28009-09	Solid	08/24/06 00:00	08-28-2006 15:55
AH-4 1-1.5'	6H28009-10	Solid	08/24/06 00:00	08-28-2006 15:55

Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/ Farnsworth Fed. B #5
Project Number: 2724
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-1 0-1' (6H28009-01) Solid									
Benzene	ND	0.0500	mg/kg dry	50	EH63004	08/29/06	08/29/06	EPA 8021B	
Toluene	0.0590	0.0500	"	"	"	"	"	"	
Ethylbenzene	0.114	0.0500	"	"	"	"	"	"	
Xylene (p/m)	0.289	0.0500	"	"	"	"	"	"	
Xylene (o)	0.113	0.0500	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		111 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	80-120		"	"	"	"	
Carbon Ranges C6-C12	205	50.0	mg/kg dry	5	EH63001	08/29/06	08/29/06	EPA 8015M	
Carbon Ranges C12-C28	1270	50.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	178	50.0	"	"	"	"	"	"	
Total Hydrocarbons	1650	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		18.6 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		16.5 %	70-130		"	"	"	"	S-06
AH-1 1-1.5' (6H28009-02) Solid									
Benzene	ND	0.0250	mg/kg dry	25	EH63004	08/29/06	08/29/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		108 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	80-120		"	"	"	"	
Carbon Ranges C6-C12	ND	50.0	mg/kg dry	5	EH63001	08/29/06	08/29/06	EPA 8015M	
Carbon Ranges C12-C28	973	50.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	277	50.0	"	"	"	"	"	"	
Total Hydrocarbons	1250	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		19.9 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		15.9 %	70-130		"	"	"	"	S-06
AH-2 0-1' (6H28009-03) Solid									
Benzene	0.205	0.0250	mg/kg dry	25	EH63004	08/29/06	08/30/06	EPA 8021B	
Toluene	1.58	0.0250	"	"	"	"	"	"	
Ethylbenzene	1.26	0.0250	"	"	"	"	"	"	
Xylene (p/m)	3.28	0.0250	"	"	"	"	"	"	
Xylene (o)	1.46	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		179 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		244 %	80-120		"	"	"	"	S-04
Carbon Ranges C6-C12	4810	50.0	mg/kg dry	5	EH63001	08/29/06	08/29/06	EPA 8015M	

Environmental Lab of Texas

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Page 2 of 13

Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/ Farnsworth Fed. B #5
Project Number: 2724
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-2 0-1' (6H28009-03) Solid									
Carbon Ranges C12-C28	18300	50.0	mg/kg dry	5	EH63001	08/29/06	08/29/06	EPA 8015M	
Carbon Ranges C28-C35	1550	50.0	"	"	"	"	"	"	
Total Hydrocarbons	24700	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		34.4 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		18.3 %	70-130		"	"	"	"	S-06
AH-2 1-1.5' (6H28009-04) Solid									
Benzene	ND	0.0250	mg/kg dry	25	EH63004	08/29/06	08/29/06	EPA 8021B	
Toluene	J [0.0104]	0.0250	"	"	"	"	"	"	J
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	J [0.0218]	0.0250	"	"	"	"	"	"	J
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		114 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	80-120		"	"	"	"	
Carbon Ranges C6-C12	J [23.3]	50.0	mg/kg dry	5	EH63001	08/29/06	08/29/06	EPA 8015M	J
Carbon Ranges C12-C28	466	50.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	155	50.0	"	"	"	"	"	"	
Total Hydrocarbons	621	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		18.2 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		16.5 %	70-130		"	"	"	"	S-06
AH-3 0-1' (6H28009-05) Solid									
Benzene	0.113	0.0250	mg/kg dry	25	EH63004	08/29/06	08/30/06	EPA 8021B	
Toluene	0.992	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.724	0.0250	"	"	"	"	"	"	
Xylene (p/m)	1.92	0.0250	"	"	"	"	"	"	
Xylene (o)	0.808	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		162 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		217 %	80-120		"	"	"	"	S-04
Carbon Ranges C6-C12	1970	50.0	mg/kg dry	5	EH63001	08/29/06	08/29/06	EPA 8015M	
Carbon Ranges C12-C28	6650	50.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	665	50.0	"	"	"	"	"	"	
Total Hydrocarbons	9280	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		25.4 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		17.6 %	70-130		"	"	"	"	S-06

Environmental Lab of Texas

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/ Farnsworth Fed. B #5
Project Number: 2724
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-3 1-1.5' (6H28009-06) Solid									
Benzene	ND	0.0250	mg/kg dry	25	EH63004	08/29/06	08/29/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		84.2 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		86.2 %	80-120		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EH63001	08/29/06	08/29/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		104 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		89.0 %	70-130		"	"	"	"	
AH-4 0-1' (6H28009-09) Solid									
Benzene	0.225	0.0250	mg/kg dry	25	EH63004	08/29/06	08/30/06	EPA 8021B	
Toluene	1.83	0.0250	"	"	"	"	"	"	
Ethylbenzene	1.30	0.0250	"	"	"	"	"	"	
Xylene (p/m)	3.63	0.0250	"	"	"	"	"	"	
Xylene (o)	1.31	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		220 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		227 %	80-120		"	"	"	"	S-04
Carbon Ranges C6-C12	5960	50.0	mg/kg dry	5	EH63001	08/29/06	08/29/06	EPA 8015M	
Carbon Ranges C12-C28	21100	50.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	1670	50.0	"	"	"	"	"	"	
Total Hydrocarbons	28700	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		39.2 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		19.1 %	70-130		"	"	"	"	S-06
AH-4 1-1.5' (6H28009-10) Solid									
Benzene	ND	0.0250	mg/kg dry	25	EH63004	08/29/06	08/30/06	EPA 8021B	
Toluene	J [0.0101]	0.0250	"	"	"	"	"	"	J
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	J [0.0222]	0.0250	"	"	"	"	"	"	J
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		103 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.2 %	80-120		"	"	"	"	
Carbon Ranges C6-C12	J [19.5]	50.0	mg/kg dry	5	EH63001	08/29/06	08/29/06	EPA 8015M	J

Environmental Lab of Texas

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/ Farnsworth Fed. B #5
Project Number: 2724
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-4 1-1.5' (6H28009-10) Solid									
Carbon Ranges C12-C28	475	50.0	mg/kg dry	5	EH63001	08/29/06	08/29/06	EPA 8015M	
Carbon Ranges C28-C35	129	50.0	"	"	"	"	"	"	
Total Hydrocarbons	604	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		16.1 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		16.4 %	70-130		"	"	"	"	S-06

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/ Farnsworth Fed. B #5
Project Number: 2724
Project Manager: Ike Tavarez

Fax: (432) 682-3946

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-1 0-1' (6H28009-01) Solid									
Chloride	2540	50.0	mg/kg	100	EH63020	08/30/06	08/30/06	EPA 300.0	
% Moisture	2.5	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	
AH-1 1-1.5' (6H28009-02) Solid									
Chloride	273	10.0	mg/kg	20	EH63020	08/30/06	08/30/06	EPA 300.0	
% Moisture	3.8	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	
AH-2 0-1' (6H28009-03) Solid									
Chloride	6890	100	mg/kg	200	EH63020	08/30/06	08/30/06	EPA 300.0	
% Moisture	5.5	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	
AH-2 1-1.5' (6H28009-04) Solid									
Chloride	406	10.0	mg/kg	20	EH63020	08/30/06	08/30/06	EPA 300.0	
% Moisture	0.3	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	
AH-3 0-1' (6H28009-05) Solid									
Chloride	8510	200	mg/kg	400	EH63020	08/30/06	08/30/06	EPA 300.0	
% Moisture	4.0	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	
AH-3 1-1.5' (6H28009-06) Solid									
Chloride	12100	200	mg/kg	400	EH63020	08/30/06	08/30/06	EPA 300.0	
% Moisture	4.6	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	
AH-3 2-2.5' (6H28009-07) Solid									
Chloride	3200	50.0	mg/kg	100	EH63020	08/30/06	08/30/06	EPA 300.0	
AH-3 3-3.5' (6H28009-08) Solid									
Chloride	J [4.22]	5.00	mg/kg	10	EH63020	08/30/06	08/30/06	EPA 300.0	J
AH-4 0-1' (6H28009-09) Solid									
Chloride	1480	20.0	mg/kg	40	EH63020	08/30/06	08/30/06	EPA 300.0	
% Moisture	3.5	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	

Environmental Lab of Texas

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/ Farnsworth Fed. B #5
Project Number: 2724
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-4 1-1.5' (6H28009-10) Solid									
Chloride	8.34	5.00	mg/kg	10	EH63020	08/30/06	08/30/06	EPA 300.0	
% Moisture	0.3	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	

Environmental Lab of Texas

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/ Farnsworth Fed. B #5
Project Number: 2724
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EH63001 - Solvent Extraction (GC)

Blank (EH63001-BLK1)

Prepared & Analyzed: 08/29/06

Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10.0	"							
Total Hydrocarbons	ND	10.0	"							
Surrogate: 1-Chlorooctane	45.4		mg/kg	50.0		90.8	70-130			
Surrogate: 1-Chlorooctadecane	38.8		"	50.0		77.6	70-130			

LCS (EH63001-BS1)

Prepared & Analyzed: 08/29/06

Carbon Ranges C6-C12	486	10.0	mg/kg wet	500		97.2	75-125			
Carbon Ranges C12-C28	441	10.0	"	500		88.2	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Total Hydrocarbons	927	10.0	"	1000		92.7	75-125			
Surrogate: 1-Chlorooctane	50.9		mg/kg	50.0		102	70-130			
Surrogate: 1-Chlorooctadecane	37.5		"	50.0		75.0	70-130			

Calibration Check (EH63001-CCV1)

Prepared: 08/29/06 Analyzed: 08/30/06

Carbon Ranges C6-C12	203		mg/kg	250		81.2	80-120			
Carbon Ranges C12-C28	246		"	250		98.4	80-120			
Total Hydrocarbons	449		"	500		89.8	80-120			
Surrogate: 1-Chlorooctane	52.2		"	50.0		104	70-130			
Surrogate: 1-Chlorooctadecane	44.0		"	50.0		88.0	70-130			

Matrix Spike (EH63001-MS1)

Source: 6H28009-06

Prepared: 08/29/06 Analyzed: 08/30/06

Carbon Ranges C6-C12	539	10.0	mg/kg dry	524	ND	103	75-125			
Carbon Ranges C12-C28	489	10.0	"	524	ND	93.3	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125			
Total Hydrocarbons	1030	10.0	"	1050	ND	98.1	75-125			
Surrogate: 1-Chlorooctane	62.2		mg/kg	50.0		124	70-130			
Surrogate: 1-Chlorooctadecane	53.4		"	50.0		107	70-130			

Environmental Lab of Texas

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Page 8 of 13

Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/ Farnsworth Fed. B #5
Project Number: 2724
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EH63001 - Solvent Extraction (GC)

Matrix Spike Dup (EH63001-MSD1)

Source: 6H28009-06

Prepared: 08/29/06 Analyzed: 08/30/06

Carbon Ranges C6-C12	530	10.0	mg/kg dry	524	ND	101	75-125	1.68	20	
Carbon Ranges C12-C28	489	10.0	"	524	ND	93.3	75-125	0.00	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20	
Total Hydrocarbons	1020	10.0	"	1050	ND	97.1	75-125	0.976	20	
Surrogate: 1-Chlorooctane	59.6		mg/kg	50.0		119	70-130			
Surrogate: 1-Chlorooctadecane	45.7		"	50.0		91.4	70-130			

Batch EH63004 - EPA 5030C (GC)

Blank (EH63004-BLK1)

Prepared & Analyzed: 08/29/06

Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	44.0		ug/kg	40.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	36.1		"	40.0		90.2	80-120			

LCS (EH63004-BS1)

Prepared & Analyzed: 08/29/06

Benzene	1.40	0.0250	mg/kg wet	1.25		112	80-120			
Toluene	1.48	0.0250	"	1.25		118	80-120			
Ethylbenzene	1.20	0.0250	"	1.25		96.0	80-120			
Xylene (p/m)	2.95	0.0250	"	2.50		118	80-120			
Xylene (o)	1.35	0.0250	"	1.25		108	80-120			
Surrogate: a,a,a-Trifluorotoluene	47.1		ug/kg	40.0		118	80-120			
Surrogate: 4-Bromofluorobenzene	43.2		"	40.0		108	80-120			

Environmental Lab of Texas

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/ Farnsworth Fed. B #5
Project Number: 2724
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch EH63004 - EPA 5030C (GC)

Calibration Check (EH63004-CCV1)

Prepared: 08/29/06 Analyzed: 08/30/06

Benzene	46.9		ug/kg	50.0		93.8	80-120			
Toluene	50.9		"	50.0		102	80-120			
Ethylbenzene	55.2		"	50.0		110	80-120			
Xylene (p/m)	112		"	100		112	80-120			
Xylene (o)	54.7		"	50.0		109	80-120			
Surrogate: a,a,a-Trifluorotoluene	45.3		"	40.0		113	80-120			
Surrogate: 4-Bromofluorobenzene	44.8		"	40.0		112	80-120			

Matrix Spike (EH63004-MS1)

Source: 6H28010-02

Prepared: 08/29/06 Analyzed: 08/30/06

Benzene	1.24	0.0250	mg/kg dry	1.27	ND	97.6	80-120			
Toluene	1.36	0.0250	"	1.27	ND	107	80-120			
Ethylbenzene	1.27	0.0250	"	1.27	ND	100	80-120			
Xylene (p/m)	2.93	0.0250	"	2.54	ND	115	80-120			
Xylene (o)	1.34	0.0250	"	1.27	ND	106	80-120			
Surrogate: a,a,a-Trifluorotoluene	40.5		ug/kg	40.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	43.9		"	40.0		110	80-120			

Matrix Spike Dup (EH63004-MSD1)

Source: 6H28010-02

Prepared: 08/29/06 Analyzed: 08/30/06

Benzene	1.17	0.0250	mg/kg dry	1.27	ND	92.1	80-120	5.80	20	
Toluene	1.29	0.0250	"	1.27	ND	102	80-120	4.78	20	
Ethylbenzene	1.25	0.0250	"	1.27	ND	98.4	80-120	1.61	20	
Xylene (p/m)	2.74	0.0250	"	2.54	ND	108	80-120	6.28	20	
Xylene (o)	1.36	0.0250	"	1.27	ND	107	80-120	0.939	20	
Surrogate: a,a,a-Trifluorotoluene	33.5		ug/kg	40.0		83.8	80-120			
Surrogate: 4-Bromofluorobenzene	37.9		"	40.0		94.8	80-120			

Environmental Lab of Texas

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/ Farnsworth Fed. B #5
Project Number: 2724
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch EH63005 - General Preparation (Prep)									
Blank (EH63005-BLK1)									
					Prepared: 08/29/06 Analyzed: 08/30/06				
% Moisture	ND	0.1	%						
Duplicate (EH63005-DUP1)									
Source: 6H28009-01					Prepared: 08/29/06 Analyzed: 08/30/06				
% Moisture	2.1	0.1	%		2.5		17.4	20	
Duplicate (EH63005-DUP2)									
Source: 6H28010-17					Prepared: 08/29/06 Analyzed: 08/30/06				
% Moisture	9.5	0.1	%		9.2		3.21	20	
Duplicate (EH63005-DUP3)									
Source: 6H29004-03					Prepared: 08/29/06 Analyzed: 08/30/06				
% Moisture	8.8	0.1	%		7.3		18.6	20	
Batch EH63020 - Water Extraction									
Blank (EH63020-BLK1)									
					Prepared & Analyzed: 08/30/06				
Chloride	ND	0.500	mg/kg						
LCS (EH63020-BS1)									
					Prepared & Analyzed: 08/30/06				
Chloride	10.5	0.500	mg/kg	10.0		105	80-120		
Calibration Check (EH63020-CCV1)									
					Prepared & Analyzed: 08/30/06				
Chloride	9.95		mg/L	10.0		99.5	80-120		
Duplicate (EH63020-DUP1)									
Source: 6H28009-02					Prepared & Analyzed: 08/30/06				
Chloride	247	10.0	mg/kg		273		10.0	20	
Duplicate (EH63020-DUP2)									
Source: 6H28010-01					Prepared & Analyzed: 08/30/06				
Chloride	371	10.0	mg/kg		429		14.5	20	

Environmental Lab of Texas

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/ Farnsworth Fed. B #5
Project Number: 2724
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EH63020 - Water Extraction

Matrix Spike (EH63020-MS1)

Source: 6H28009-02

Prepared & Analyzed: 08/30/06

Chloride	462	10.0	mg/kg	200	273	94.5	80-120
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Matrix Spike (EH63020-MS2)

Source: 6H28010-01

Prepared & Analyzed: 08/30/06

Chloride	662	10.0	mg/kg	200	429	116	80-120
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Environmental Lab of Texas

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/ Farnsworth Fed. B #5
Project Number: 2724
Project Manager: Ike Tavaraz

Fax: (432) 682-3946

Notes and Definitions

S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:

Raland K. Tuttle

Date:

8/31/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

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If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

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HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559

Fax (432) 682-3946

CLIENT NAME:	Southwest Katon Williams
SITE MANAGER:	KC Cavalz

PROJECT NO.: 724	PROJECT NAME: SWR / Farm with Fed. R
------------------	--------------------------------------

Lab. E. M.
SAMPLE IDENTIFICATION

[illegible]

DATE	TIME	LOCATION	DEPTH	WIND	WAVE	SEA	TEMP	WIND	WAVE	SEA	TEMP
10-2	8/24/66	S	-AH-1	0-1							
10-2		S	-AH-1	1-1.5'							
10-3		S	-AH-2	0-1							
10-4		S	-AH-2	1-1.5'							
10-5		S	-AH-3	0-1							
10-6		S	-AH-3	1-1.5'							
10-7		S	-AH-3	2-2.5'							
10-8		S	-AH-3	3-3.5'							
10-9		S	-AH-4	0-1							
10-10		S	-AH-4	1-1.5'							

RELINQUISHED BY: (Signature) <u>[Signature]</u>	Date: <u>8/28/06</u>	RECEIVED BY: (Signature) _____	Date: _____
	Time: <u>3:55</u>		Time: _____
RELINQUISHED BY: (Signature) _____	Date: _____	RECEIVED BY: (Signature) _____	Date: _____
	Time: _____		Time: _____
RELINQUISHED BY: (Signature) _____	Date: _____	RECEIVED BY: (Signature) _____	Date: _____
	Time: _____		Time: _____
RECEIVING LABORATORY: <u>EA</u>		RECEIVED BY: (Signature) <u>yaare mmy</u>	
ADDRESS: _____		DATE: <u>08-28-06</u> TIME: <u>1555</u>	
STATE: _____	ZIP: _____		
CITY: _____	PHONE: _____		
CONTACT: _____			

HEMARRHOIDS:

MATRIX:	W-Water	A-Air	SD-Solid
	S-Soil	SL-Sludge	O-Other

3.47

4oz glass one w/ labels no seeds 4.00

Blanca still out all week	- Labretzer	<i>MS 1083</i>	Return original copy to Highlander Environmental Corp.	- Project Manager retains pink copy Accounting reserves Gold copy.
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Kolt Harrison

Environmental Lab of Texas
Variance/ Corrective Action Report- Sample Log-In

Client: Highlander Environmental
Date/ Time: 08-28-06 @ 1555
Lab ID #: 6 H28009
Initials: JMM

Sample Receipt Checklist

				Client Initials	
#1	Temperature of container/ cooler?	<u>Yes</u>	No	<u>4.0</u> °C	
#2	Shipping container in good condition?	<u>Yes</u>	No		
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>Not Present</u>	
#4	Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	<u>Not Present</u>	
#5	Chain of Custody present?	<u>Yes</u>	No		
#6	Sample instructions complete of Chain of Custody?	<u>Yes</u>	No		
#7	Chain of Custody signed when relinquished/ received?	<u>Yes</u>	No		
#8	Chain of Custody agrees with sample label(s)?	<u>Yes</u>	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<u>Yes</u>	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<u>Yes</u>	No		
#11	Containers supplied by ELOT?	<u>Yes</u>	No		
#12	Samples in proper container/ bottle?	<u>Yes</u>	No	See Below	
#13	Samples properly preserved?	<u>Yes</u>	No	See Below	
#14	Sample bottles intact?	<u>Yes</u>	No		
#15	Preservations documented on Chain of Custody?	<u>Yes</u>	No		
#16	Containers documented on Chain of Custody?	<u>Yes</u>	No		
#17	Sufficient sample amount for indicated test(s)?	<u>Yes</u>	No	See Below	
#18	All samples received within sufficient hold time?	<u>Yes</u>	No	See Below	
#19	VOC samples have zero headspace?	<u>Yes</u>	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

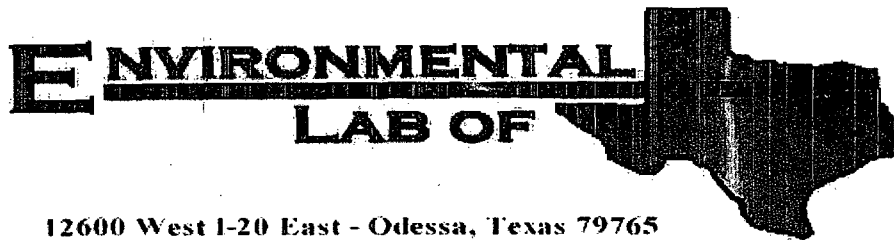
Regarding: _____

Corrective Action Taken: _____

- Check all that Apply:
- ☐ See attached e-mail/ fax
 - ☐ Client understands and would like to proceed with analysis
 - ☐ Cooling process had begun shortly after sampling event

Analytical Report

Farnsworth Fed. B Tank Battery
8/31/2006



12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Ike Tavarez

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Clayton Williams/SWR/Farnsworth Fed. B TB

Project Number: 2724

Location: Lea Co., NM

Lab Order Number: 6H28010

Report Date: 08/31/06

Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/Farnsworth Fed. B TB
Project Number: 2724
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH-1 0-1'	6H28010-01	Soil	08/25/06 00:00	08-28-2006 15:55
AH-1 1-1.5'	6H28010-02	Soil	08/25/06 00:00	08-28-2006 15:55
AH-1 2-2.5'	6H28010-03	Soil	08/25/06 00:00	08-28-2006 15:55
AH-1 3-3.5'	6H28010-04	Soil	08/25/06 00:00	08-28-2006 15:55
AH-2 0-1'	6H28010-05	Soil	08/25/06 00:00	08-28-2006 15:55
AH-2 1-1.5'	6H28010-06	Soil	08/25/06 00:00	08-28-2006 15:55
AH-2 2-2.5'	6H28010-07	Soil	08/25/06 00:00	08-28-2006 15:55
AH-2 4-4.5'	6H28010-08	Soil	08/25/06 00:00	08-28-2006 15:55
AH-2 5-5.5'	6H28010-09	Soil	08/25/06 00:00	08-28-2006 15:55
AH-3 0-1'	6H28010-10	Soil	08/25/06 00:00	08-28-2006 15:55
AH-3 1-1.5'	6H28010-11	Soil	08/25/06 00:00	08-28-2006 15:55
AH-3 2-2.5'	6H28010-12	Soil	08/25/06 00:00	08-28-2006 15:55
AH-4 0-1'	6H28010-13	Soil	08/25/06 00:00	08-28-2006 15:55
AH-4 1-1.5'	6H28010-14	Soil	08/25/06 00:00	08-28-2006 15:55
AH-4 2-2.5'	6H28010-15	Soil	08/25/06 00:00	08-28-2006 15:55
AH-5 0-1'	6H28010-16	Soil	08/25/06 00:00	08-28-2006 15:55
AH-5 1-1.5'	6H28010-17	Soil	08/25/06 00:00	08-28-2006 15:55
AH-5 2-2.5'	6H28010-18	Soil	08/25/06 00:00	08-28-2006 15:55

Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/Farnsworth Fed. B TB
Project Number: 2724
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-1 0-1' (6H28010-01) Soil									
Benzene	J [0.0113]	0.0250	mg/kg dry	25	EH63004	08/29/06	08/30/06	EPA 8021B	J
Toluene	0.0790	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.0839	0.0250	"	"	"	"	"	"	
Xylene (p/m)	0.365	0.0250	"	"	"	"	"	"	
Xylene (o)	0.103	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		101 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.2 %	80-120		"	"	"	"	
Carbon Ranges C6-C12	379	50.0	mg/kg dry	5	EH63001	08/29/06	08/29/06	EPA 8015M	
Carbon Ranges C12-C28	12300	50.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	1910	50.0	"	"	"	"	"	"	
Total Hydrocarbons	14600	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		17.8 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		17.1 %	70-130		"	"	"	"	S-06
AH-1 1-1.5' (6H28010-02) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH63004	08/29/06	08/30/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		99.8 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	80-120		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EH63001	08/29/06	08/29/06	EPA 8015M	
Carbon Ranges C12-C28	239	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	78.3	10.0	"	"	"	"	"	"	
Total Hydrocarbons	317	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		100 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		86.6 %	70-130		"	"	"	"	
AH-1 2-2.5' (6H28010-03) Soil									
Carbon Ranges C6-C12	ND	50.0	mg/kg dry	5	EH63001	08/29/06	08/29/06	EPA 8015M	
Carbon Ranges C12-C28	1040	50.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	285	50.0	"	"	"	"	"	"	
Total Hydrocarbons	1320	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		17.0 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		16.2 %	70-130		"	"	"	"	S-06

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/Farnsworth Fed. B TB
Project Number: 2724
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-2 0-1' (6H28010-05) Soil									
Benzene	0.0435	0.0250	mg/kg dry	25	EH63004	08/29/06	08/30/06	EPA 8021B	
Toluene	0.589	0.0250	"	"	"	"	"	"	
Ethylbenzene	0.371	0.0250	"	"	"	"	"	"	
Xylene (p/m)	1.76	0.0250	"	"	"	"	"	"	
Xylene (o)	0.450	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		128 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		126 %	80-120		"	"	"	"	S-04
Carbon Ranges C6-C12	1590	100	mg/kg dry	10	EH63001	08/29/06	08/29/06	EPA 8015M	
Carbon Ranges C12-C28	19100	100	"	"	"	"	"	"	
Carbon Ranges C28-C35	3160	100	"	"	"	"	"	"	
Total Hydrocarbons	23800	100	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		10.4 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		9.48 %	70-130		"	"	"	"	S-06
AH-2 1-1.5' (6H28010-06) Soil									
Carbon Ranges C6-C12	160	100	mg/kg dry	10	EH63001	08/29/06	08/29/06	EPA 8015M	
Carbon Ranges C12-C28	16900	100	"	"	"	"	"	"	
Carbon Ranges C28-C35	3400	100	"	"	"	"	"	"	
Total Hydrocarbons	20500	100	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		17.5 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		16.9 %	70-130		"	"	"	"	S-06
AH-2 2-2.5' (6H28010-07) Soil									
Carbon Ranges C6-C12	163	100	mg/kg dry	10	EH63001	08/29/06	08/29/06	EPA 8015M	
Carbon Ranges C12-C28	6330	100	"	"	"	"	"	"	
Carbon Ranges C28-C35	1300	100	"	"	"	"	"	"	
Total Hydrocarbons	7790	100	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		17.6 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		17.8 %	70-130		"	"	"	"	S-06

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/Farnsworth Fed. B TB
Project Number: 2724
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-2 4-4.5' (6H28010-08) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH63004	08/29/06	08/29/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		105 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	80-120		"	"	"	"	
Carbon Ranges C6-C12	ND	50.0	mg/kg dry	5	EH63001	08/29/06	08/29/06	EPA 8015M	
Carbon Ranges C12-C28	530	50.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	243	50.0	"	"	"	"	"	"	
Total Hydrocarbons	773	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		17.6 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		16.8 %	70-130		"	"	"	"	S-06
AH-3 0-1' (6H28010-10) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH63004	08/29/06	08/29/06	EPA 8021B	
Toluene	J [0.0177]	0.0250	"	"	"	"	"	"	J
Ethylbenzene	J [0.0189]	0.0250	"	"	"	"	"	"	J
Xylene (p/m)	0.0463	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		99.5 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.5 %	80-120		"	"	"	"	
Carbon Ranges C6-C12	50.9	50.0	mg/kg dry	5	EH63001	08/29/06	08/29/06	EPA 8015M	
Carbon Ranges C12-C28	4220	50.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	1010	50.0	"	"	"	"	"	"	
Total Hydrocarbons	5280	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		17.3 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		16.9 %	70-130		"	"	"	"	S-06
AH-3 1-1.5' (6H28010-11) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH63004	08/29/06	08/30/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		93.5 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.0 %	80-120		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EH63001	08/29/06	08/30/06	EPA 8015M.	

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/Farnsworth Fed. B TB
Project Number: 2724
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-3 1-1.5' (6H28010-11) Soil									
Carbon Ranges C12-C28	ND	10.0	mg/kg dry	1	EH63001	08/29/06	08/30/06	EPA 8015M	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		106 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		90.8 %	70-130		"	"	"	"	
AH-4 0-1' (6H28010-13) Soil									
Benzene	0.762	0.0250	mg/kg dry	25	EH63004	08/29/06	08/30/06	EPA 8021B	
Toluene	3.94	0.0250	"	"	"	"	"	"	
Ethylbenzene	2.55	0.0250	"	"	"	"	"	"	
Xylene (p/m)	9.05	0.0250	"	"	"	"	"	"	
Xylene (o)	2.04	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		398 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		300 %	80-120		"	"	"	"	S-04
Carbon Ranges C6-C12	3540	50.0	mg/kg dry	5	EH63001	08/29/06	08/29/06	EPA 8015M	
Carbon Ranges C12-C28	10300	50.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	963	50.0	"	"	"	"	"	"	
Total Hydrocarbons	14800	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		30.0 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		18.9 %	70-130		"	"	"	"	S-06
AH-4 1-1.5' (6H28010-14) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH63004	08/29/06	08/30/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		102 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		89.2 %	80-120		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EH63001	08/29/06	08/29/06	EPA 8015M	
Carbon Ranges C12-C28	208	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	73.0	10.0	"	"	"	"	"	"	
Total Hydrocarbons	281	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		103 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		89.2 %	70-130		"	"	"	"	

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/Farnsworth Fed. B TB
Project Number: 2724
Project Manager: Ike Tavaréz

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Organics by GC
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-5 0-1' (6H28010-16) Soil									
Benzene	0.340	0.0250	mg/kg dry	25	EH63004	08/29/06	08/30/06	EPA 8021B	
Toluene	2.09	0.0250	"	"	"	"	"	"	
Ethylbenzene	1.49	0.0250	"	"	"	"	"	"	
Xylene (p/m)	3.08	0.0250	"	"	"	"	"	"	
Xylene (o)	1.17	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		288 %	80-120		"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		214 %	80-120		"	"	"	"	S-04
Carbon Ranges C6-C12	560	50.0	mg/kg dry	5	EH63002	08/29/06	08/30/06	EPA 8015M	
Carbon Ranges C12-C28	1460	50.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	108	50.0	"	"	"	"	"	"	
Total Hydrocarbons	2130	50.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		20.4 %	70-130		"	"	"	"	S-06
Surrogate: 1-Chlorooctadecane		17.7 %	70-130		"	"	"	"	S-06
AH-5 1-1.5' (6H28010-17) Soil									
Benzene	ND	0.0250	mg/kg dry	25	EH63004	08/29/06	08/30/06	EPA 8021B	
Toluene	ND	0.0250	"	"	"	"	"	"	
Ethylbenzene	ND	0.0250	"	"	"	"	"	"	
Xylene (p/m)	ND	0.0250	"	"	"	"	"	"	
Xylene (o)	ND	0.0250	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		103 %	80-120		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	80-120		"	"	"	"	
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	EH63002	08/29/06	08/30/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	"	"	"	"	"	"	
Carbon Ranges C28-C35	ND	10.0	"	"	"	"	"	"	
Total Hydrocarbons	ND	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		99.2 %	70-130		"	"	"	"	
Surrogate: 1-Chlorooctadecane		87.0 %	70-130		"	"	"	"	

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/Farnsworth Fed. B TB
Project Number: 2724
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-1 0-1' (6H28010-01) Soil									
Chloride	429	10.0	mg/kg	20	EH63020	08/30/06	08/30/06	EPA 300.0	
% Moisture	4.9	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	
AH-1 1-1.5' (6H28010-02) Soil									
Chloride	62.1	5.00	mg/kg	10	EH63020	08/30/06	08/30/06	EPA 300.0	
% Moisture	1.7	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	
AH-1 2-2.5' (6H28010-03) Soil									
Chloride	39.8	5.00	mg/kg	10	EH63020	08/30/06	08/30/06	EPA 300.0	
% Moisture	2.6	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	
AH-1 3-3.5' (6H28010-04) Soil									
Chloride	43.8	5.00	mg/kg	10	EH63020	08/30/06	08/30/06	EPA 300.0	
AH-2 0-1' (6H28010-05) Soil									
Chloride	408	10.0	mg/kg	20	EH63020	08/30/06	08/30/06	EPA 300.0	
% Moisture	5.5	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	
AH-2 1-1.5' (6H28010-06) Soil									
Chloride	176	5.00	mg/kg	10	EH63020	08/30/06	08/30/06	EPA 300.0	
% Moisture	9.9	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	
AH-2 2-2.5' (6H28010-07) Soil									
Chloride	81.9	5.00	mg/kg	10	EH63020	08/30/06	08/30/06	EPA 300.0	
% Moisture	10.8	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	
AH-2 4-4.5' (6H28010-08) Soil									
Chloride	26.0	5.00	mg/kg	10	EH63020	08/30/06	08/30/06	EPA 300.0	
% Moisture	5.7	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/Farnsworth Fed. B TB
Project Number: 2724
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-2 5-5.5' (6H28010-09) Soil									
Chloride	41.0	5.00	mg/kg	10	EH63020	08/30/06	08/30/06	EPA 300.0	
AH-3 0-1' (6H28010-10) Soil									
Chloride	523	10.0	mg/kg	20	EH63020	08/30/06	08/30/06	EPA 300.0	
% Moisture	1.5	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	
AH-3 1-1.5' (6H28010-11) Soil									
Chloride	541	10.0	mg/kg	20	EH63021	08/30/06	08/30/06	EPA 300.0	
% Moisture	2.8	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	
AH-3 2-2.5' (6H28010-12) Soil									
Chloride	508	10.0	mg/kg	20	EH63021	08/30/06	08/30/06	EPA 300.0	
AH-4 0-1' (6H28010-13) Soil									
Chloride	369	10.0	mg/kg	20	EH63021	08/30/06	08/30/06	EPA 300.0	
% Moisture	3.4	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	
AH-4 1-1.5' (6H28010-14) Soil									
Chloride	36.3	5.00	mg/kg	10	EH63021	08/30/06	08/30/06	EPA 300.0	
% Moisture	7.2	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	
AH-4 2-2.5' (6H28010-15) Soil									
Chloride	45.5	5.00	mg/kg	10	EH63021	08/30/06	08/30/06	EPA 300.0	
AH-5 0-1' (6H28010-16) Soil									
Chloride	244	10.0	mg/kg	20	EH63021	08/30/06	08/30/06	EPA 300.0	
% Moisture	9.8	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	
AH-5 1-1.5' (6H28010-17) Soil									
Chloride	47.5	5.00	mg/kg	10	EH63021	08/30/06	08/30/06	EPA 300.0	
% Moisture	9.2	0.1	%	1	EH63005	08/29/06	08/30/06	% calculation	

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Highlander Environmental Corp.
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Midland TX, 79705

Project: Clayton Williams/SWR/Farnsworth Fed. B TB
Project Number: 2724
Project Manager: Ike Tavaraz

Fax: (432) 682-3946

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-5 2-2.5' (6H28010-18) Soil									
Chloride	197	10.0	mg/kg	20	EH63021	08/30/06	08/30/06	EPA 300.0	

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Highlander Environmental Corp.
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Project Number: 2724
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EH63001 - Solvent Extraction (GC)

Blank (EH63001-BLK1)

Prepared & Analyzed: 08/29/06

Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10.0	"							
Total Hydrocarbons	ND	10.0	"							
Surrogate: 1-Chlorooctane	45.4		mg/kg	50.0		90.8	70-130			
Surrogate: 1-Chlorooctadecane	38.8		"	50.0		77.6	70-130			

LCS (EH63001-BS1)

Prepared & Analyzed: 08/29/06

Carbon Ranges C6-C12	486	10.0	mg/kg wet	500		97.2	75-125			
Carbon Ranges C12-C28	441	10.0	"	500		88.2	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Total Hydrocarbons	927	10.0	"	1000		92.7	75-125			
Surrogate: 1-Chlorooctane	50.9		mg/kg	50.0		102	70-130			
Surrogate: 1-Chlorooctadecane	37.5		"	50.0		75.0	70-130			

Calibration Check (EH63001-CCV1)

Prepared: 08/29/06 Analyzed: 08/30/06

Carbon Ranges C6-C12	203		mg/kg	250		81.2	80-120			
Carbon Ranges C12-C28	246		"	250		98.4	80-120			
Total Hydrocarbons	449		"	500		89.8	80-120			
Surrogate: 1-Chlorooctane	52.2		"	50.0		104	70-130			
Surrogate: 1-Chlorooctadecane	44.0		"	50.0		88.0	70-130			

Matrix Spike (EH63001-MS1)

Source: 6H28009-06

Prepared: 08/29/06 Analyzed: 08/30/06

Carbon Ranges C6-C12	539	10.0	mg/kg dry	524	ND	103	75-125			
Carbon Ranges C12-C28	489	10.0	"	524	ND	93.3	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125			
Total Hydrocarbons	1030	10.0	"	1050	ND	98.1	75-125			
Surrogate: 1-Chlorooctane	62.2		mg/kg	50.0		124	70-130			
Surrogate: 1-Chlorooctadecane	53.4		"	50.0		107	70-130			

Environmental Lab of Texas

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/Farnsworth Fed. B TB
Project Number: 2724
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EH63001 - Solvent Extraction (GC)

Matrix Spike Dup (EH63001-MSD1)

Source: 6H28009-06

Prepared: 08/29/06

Analyzed: 08/30/06

Carbon Ranges C6-C12	530	10.0	mg/kg dry	524	ND	101	75-125	1.68	20	
Carbon Ranges C12-C28	489	10.0	"	524	ND	93.3	75-125	0.00	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00	ND		75-125		20	
Total Hydrocarbons	1020	10.0	"	1050	ND	97.1	75-125	0.976	20	
Surrogate: 1-Chlorooctane	59.6		mg/kg	50.0		119	70-130			
Surrogate: 1-Chlorooctadecane	45.7		"	50.0		91.4	70-130			

Batch EH63002 - Solvent Extraction (GC)

Blank (EH63002-BLK1)

Prepared: 08/29/06

Analyzed: 08/30/06

Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	"							
Carbon Ranges C28-C35	ND	10.0	"							
Total Hydrocarbons	ND	10.0	"							
Surrogate: 1-Chlorooctane	47.5		mg/kg	50.0		95.0	70-130			
Surrogate: 1-Chlorooctadecane	41.5		"	50.0		83.0	70-130			

LCS (EH63002-BS1)

Prepared: 08/29/06

Analyzed: 08/30/06

Carbon Ranges C6-C12	585	10.0	mg/kg wet	500		117	75-125			
Carbon Ranges C12-C28	498	10.0	"	500		99.6	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00			75-125			
Total Hydrocarbons	1080	10.0	"	1000		108	75-125			
Surrogate: 1-Chlorooctane	59.4		mg/kg	50.0		119	70-130			
Surrogate: 1-Chlorooctadecane	49.5		"	50.0		99.0	70-130			

Calibration Check (EH63002-CCV1)

Prepared: 08/29/06

Analyzed: 08/30/06

Carbon Ranges C6-C12	204		mg/kg	250		81.6	80-120			
Carbon Ranges C12-C28	215		"	250		86.0	80-120			
Total Hydrocarbons	419		"	500		83.8	80-120			
Surrogate: 1-Chlorooctane	55.3		"	50.0		111	70-130			
Surrogate: 1-Chlorooctadecane	45.8		"	50.0		91.6	70-130			

Environmental Lab of Texas

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/Farnsworth Fed. B TB
Project Number: 2724
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EH63002 - Solvent Extraction (GC)

Matrix Spike (EH63002-MS1)		Source: 6H29004-01		Prepared: 08/29/06		Analyzed: 08/30/06				
Carbon Ranges C6-C12	643	10.0	mg/kg dry	614	ND	105	75-125			
Carbon Ranges C12-C28	563	10.0	"	614	25.9	87.5	75-125			
Carbon Ranges C28-C35	ND	10.0	"	0.00	4.53		75-125			
Total Hydrocarbons	1210	10.0	"	1230	25.9	96.3	75-125			
Surrogate: 1-Chlorooctane	59.3		mg/kg	50.0		119	70-130			
Surrogate: 1-Chlorooctadecane	45.9		"	50.0		91.8	70-130			

Matrix Spike Dup (EH63002-MSD1)		Source: 6H29004-01		Prepared: 08/29/06		Analyzed: 08/30/06				
Carbon Ranges C6-C12	647	10.0	mg/kg dry	614	ND	105	75-125	0.620	20	
Carbon Ranges C12-C28	581	10.0	"	614	25.9	90.4	75-125	3.15	20	
Carbon Ranges C28-C35	ND	10.0	"	0.00	4.53		75-125		20	
Total Hydrocarbons	1230	10.0	"	1230	25.9	97.9	75-125	1.64	20	
Surrogate: 1-Chlorooctane	60.3		mg/kg	50.0		121	70-130			
Surrogate: 1-Chlorooctadecane	47.7		"	50.0		95.4	70-130			

Batch EH63004 - EPA 5030C (GC)

Blank (EH63004-BLK1)				Prepared & Analyzed: 08/29/06						
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	"							
Ethylbenzene	ND	0.0250	"							
Xylene (p/m)	ND	0.0250	"							
Xylene (o)	ND	0.0250	"							
Surrogate: a,a,a-Trifluorotoluene	44.0		ug/kg	40.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	36.1		"	40.0		90.2	80-120			

LCS (EH63004-BS1)				Prepared & Analyzed: 08/29/06						
Benzene	1.40	0.0250	mg/kg wet	1.25		112	80-120			
Toluene	1.48	0.0250	"	1.25		118	80-120			
Ethylbenzene	1.20	0.0250	"	1.25		96.0	80-120			
Xylene (p/m)	2.95	0.0250	"	2.50		118	80-120			
Xylene (o)	1.35	0.0250	"	1.25		108	80-120			
Surrogate: a,a,a-Trifluorotoluene	47.1		ug/kg	40.0		118	80-120			
Surrogate: 4-Bromofluorobenzene	43.2		"	40.0		108	80-120			

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/Farnsworth Fed. B TB
Project Number: 2724
Project Manager: Ike Tavaraz

Fax: (432) 682-3946

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch EH63004 - EPA 5030C (GC)

Calibration Check (EH63004-CCV1)

Prepared: 08/29/06 Analyzed: 08/30/06

Benzene	46.9		ug/kg	50.0		93.8	80-120			
Toluene	50.9		"	50.0		102	80-120			
Ethylbenzene	55.2		"	50.0		110	80-120			
Xylene (p/m)	112		"	100		112	80-120			
Xylene (o)	54.7		"	50.0		109	80-120			
Surrogate: a,a,a-Trifluorotoluene	45.3		"	40.0		113	80-120			
Surrogate: 4-Bromofluorobenzene	44.8		"	40.0		112	80-120			

Matrix Spike (EH63004-MS1)

Source: 6H28010-02

Prepared: 08/29/06 Analyzed: 08/30/06

Benzene	1.24	0.0250	mg/kg dry	1.27	ND	97.6	80-120			
Toluene	1.36	0.0250	"	1.27	ND	107	80-120			
Ethylbenzene	1.27	0.0250	"	1.27	ND	100	80-120			
Xylene (p/m)	2.93	0.0250	"	2.54	ND	115	80-120			
Xylene (o)	1.34	0.0250	"	1.27	ND	106	80-120			
Surrogate: a,a,a-Trifluorotoluene	40.5		ug/kg	40.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	43.9		"	40.0		110	80-120			

Matrix Spike Dup (EH63004-MSD1)

Source: 6H28010-02

Prepared: 08/29/06 Analyzed: 08/30/06

Benzene	1.17	0.0250	mg/kg dry	1.27	ND	92.1	80-120	5.80	20	
Toluene	1.29	0.0250	"	1.27	ND	102	80-120	4.78	20	
Ethylbenzene	1.25	0.0250	"	1.27	ND	98.4	80-120	1.61	20	
Xylene (p/m)	2.74	0.0250	"	2.54	ND	108	80-120	6.28	20	
Xylene (o)	1.36	0.0250	"	1.27	ND	107	80-120	0.939	20	
Surrogate: a,a,a-Trifluorotoluene	33.5		ug/kg	40.0		83.8	80-120			
Surrogate: 4-Bromofluorobenzene	37.9		"	40.0		94.8	80-120			

Environmental Lab of Texas

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/Farnsworth Fed. B TB
Project Number: 2724
Project Manager: Ike Tavarez

Fax: (432) 682-3946

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH63005 - General Preparation (Prep)										
Blank (EH63005-BLK1) Prepared: 08/29/06 Analyzed: 08/30/06										
% Moisture	ND	0.1	%							
Duplicate (EH63005-DUP1) Source: 6H28009-01 Prepared: 08/29/06 Analyzed: 08/30/06										
% Moisture	2.1	0.1	%		2.5			17.4	20	
Duplicate (EH63005-DUP2) Source: 6H28010-17 Prepared: 08/29/06 Analyzed: 08/30/06										
% Moisture	9.5	0.1	%		9.2			3.21	20	
Duplicate (EH63005-DUP3) Source: 6H29004-03 Prepared: 08/29/06 Analyzed: 08/30/06										
% Moisture	8.8	0.1	%		7.3			18.6	20	
Batch EH63020 - Water Extraction										
Blank (EH63020-BLK1) Prepared & Analyzed: 08/30/06										
Chloride	ND	0.500	mg/kg							
LCS (EH63020-BS1) Prepared & Analyzed: 08/30/06										
Chloride	10.5	0.500	mg/kg	10.0		105	80-120			
Calibration Check (EH63020-CCV1) Prepared & Analyzed: 08/30/06										
Chloride	9.95		mg/L	10.0		99.5	80-120			
Duplicate (EH63020-DUP1) Source: 6H28009-02 Prepared & Analyzed: 08/30/06										
Chloride	247	10.0	mg/kg		273			10.0	20	
Duplicate (EH63020-DUP2) Source: 6H28010-01 Prepared & Analyzed: 08/30/06										
Chloride	371	10.0	mg/kg		429			14.5	20	

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/Farnsworth Fed. B TB
Project Number: 2724
Project Manager: Ike Tavaréz

Fax: (432) 682-3946

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH63020 - Water Extraction										
Matrix Spike (EH63020-MS1)		Source: 6H28009-02		Prepared & Analyzed: 08/30/06						
Chloride	462	10.0	mg/kg	200	273	94.5	80-120			
Matrix Spike (EH63020-MS2)		Source: 6H28010-01		Prepared & Analyzed: 08/30/06						
Chloride	662	10.0	mg/kg	200	429	116	80-120			
Batch EH63021 - Water Extraction										
Blank (EH63021-BLK1)		Prepared & Analyzed: 08/30/06								
Chloride	ND	0.500	mg/kg							
LCS (EH63021-BS1)		Prepared & Analyzed: 08/30/06								
Chloride	11.0	0.500	mg/kg	10.0		110	80-120			
Calibration Check (EH63021-CCV1)		Prepared & Analyzed: 08/30/06								
Chloride	10.1		mg/L	10.0		101	80-120			
Duplicate (EH63021-DUP1)		Source: 6H28010-11		Prepared & Analyzed: 08/30/06						
Chloride	553	10.0	mg/kg		541			2.19	20	
Duplicate (EH63021-DUP2)		Source: 6H28012-04		Prepared & Analyzed: 08/30/06						
Chloride	3.95	5.00	mg/kg		4.51			13.2	20	J
Matrix Spike (EH63021-MS1)		Source: 6H28010-11		Prepared & Analyzed: 08/30/06						
Chloride	787	10.0	mg/kg	200	541	123	80-120			S-07
Matrix Spike (EH63021-MS2)		Source: 6H28012-04		Prepared & Analyzed: 08/30/06						
Chloride	105	5.00	mg/kg	100	4.51	100	80-120			

Environmental Lab of Texas

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Highlander Environmental Corp.
1910 N. Big Spring St.
Midland TX, 79705

Project: Clayton Williams/SWR/Farnsworth Fed. B TB
Project Number: 2724
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Notes and Definitions

S-07 Recovery outside Laboratory historical or method prescribed limits.

S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.

S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:

Raland K. Tuttle

Date:

8/31/2006

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer

Jeanne Mc Murrey, Inorg. Tech Director
LaTasha Cornish, Chemist
Sandra Sanchez, Lab Tech.

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

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Environmental Lab of Texas
Variance/ Corrective Action Report- Sample Log-In

Client: Highlander Env.
Date/ Time: 08-28-06 @ ISSS
Lab ID #: 6H28010
Initials: Jmm

Sample Receipt Checklist

				Client Initials	
#1	Temperature of container/ cooler?	<u>(Yes)</u>	No	4.0 °C	
#2	Shipping container in good condition?	<u>(Yes)</u>	No		
#3	Custody Seals intact on shipping container/ cooler?	<u>Yes</u>	No	<u>(Not Present)</u>	
#4	Custody Seals intact on sample bottles/ container?	<u>Yes</u>	No	<u>(Not Present)</u>	
#5	Chain of Custody present?	<u>(Yes)</u>	No		
#6	Sample instructions complete of Chain of Custody?	<u>(Yes)</u>	No		
#7	Chain of Custody signed when relinquished/ received?	<u>(Yes)</u>	No		
#8	Chain of Custody agrees with sample label(s)?	<u>(Yes)</u>	No	ID written on Cont./ Lid	
#9	Container label(s) legible and intact?	<u>(Yes)</u>	No	Not Applicable	
#10	Sample matrix/ properties agree with Chain of Custody?	<u>(Yes)</u>	No		
#11	Containers supplied by EL0T?	<u>(Yes)</u>	No		
#12	Samples in proper container/ bottle?	<u>(Yes)</u>	No	See Below	
#13	Samples properly preserved?	<u>(Yes)</u>	No	See Below	
#14	Sample bottles intact?	<u>(Yes)</u>	No		
#15	Preservations documented on Chain of Custody?	<u>(Yes)</u>	No		
#16	Containers documented on Chain of Custody?	<u>(Yes)</u>	No		
#17	Sufficient sample amount for indicated test(s)?	<u>(Yes)</u>	No	See Below	
#18	All samples received within sufficient hold time?	<u>(Yes)</u>	No	See Below	
#19	VOC samples have zero headspace?	<u>(Yes)</u>	No	Not Applicable	

Variance Documentation

Contact: _____ Contacted by: _____ Date/ Time: _____

Regarding: _____

Corrective Action Taken:

Check all that Apply:

- ☐ See attached e-mail/ fax
☐ Client understands and would like to proceed with analysis
☐ Cooling process had begun shortly after sampling event

APPENDIX C

NMOCD Form C-141

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

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 _____

NATURE OF RELEASE

Type of Release	OIL	Volume of Release	Unknown	Volume Recovered	125 (well)+145 (btry)
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 <input type="checkbox"/> No <input type="checkbox"/> 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?	<input type="checkbox"/> Yes x No	If YES, Volume Impacting the Watercourse.			

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 spray 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:	
Title: Operations Assistant	Approval Date:	Expiration Date:	
E-mail Address: dhoward@claytonwilliams.com	Conditions of Approval:		Attached <input type="checkbox"/>
Date: 8/24/06	Phone: 432/688-3267		

* Attach Additional Sheets If Necessary

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 Tavaréz
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

