Highlander Environmental Corp.

Midland, Texas

February 27, 2006

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

RE: Work Plan for the Pogo Producing Company (Arch Petroleum), West Dollarhide Devonian Unit, Well #113, Section 4, Township 25 South, Range 38 East, Unit C, (Flow-line Spill Located in Section 33, Township 24 South, Range 38 East), Lea County, New Mexico.

Dear Mr. Johnson:

Highlander Environmental Corp. (Highlander) was contacted by Pogo Producing Company (Pogo) to assess a spill from a pumping well located on the West Dollarhide Devonian Unit, located in Section 4, Township 25 South, Range 38 East, Lea County, New Mexico (Site). The spill site coordinates are N 32° 10' 07.7", W 103° 04' 08.5". The State of New Mexico C-141 (Initial) is shown in Appendix C. The Site is shown on Figure 1.

Background

According to the State of New Mexico C-141 report, the spill occurred on January 15, 2006, from a hole in a flow-line located in the pasture. The spill is located in Section 33, Township 24 South, Range 38 East. The volume of the released was not determined and the recovered volume was measured at 15 barrels of oil and water.

Groundwater and Regulatory

The New Mexico State Engineer's Office database did not show any wells in Section 33, Township 24 South, Range 38 East. The USGS database showed wells in Section 19, 30 and 31 with reported water depths of 56', 68' and 97', respectively. Two wells were reported east of the Site in Andrews County, Texas with a reported depth of 106' and 114' below surface. The closest well in Andrews County, with a reported depth of 106', is located approximately 1.0 mile east of the Site. Based on the relative site elevation, the depth to groundwater for the Site is greater than 50' below surface. The New Mexico State Engineer well reports, USGS reports and TWDB reports are shown in Appendix B. A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (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

API # 30025123580000
incident - nPAC0606854285

1910 N. Big Spring • Midland, Texas 79705 • (432) 682-4559 • Fax (432) 682-3946

application - pPAC0606854449

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 upon the depth to groundwater, the proposed RRAL for TPH is 1,000 mg/kg.

Spill Assessment and Results

On January 24, 2006, Highlander personnel inspected and sampled the spill area. The spill area measured approximately 60' x 60'. A total of five (5) auger holes (AH-1, AH-2, AH-3, AH-4 and AH-5) were installed using a stainless steel hand auger to assess the impacted soils. Due to a dense caliche formation, samples could not be collected below 1.0' to 2.0'. Soil samples were collected and placed into laboratory supplied containers and delivered to laboratory under chain-of-custody control for TPH analysis by EPA method 8015 modified, BTEX by EPA method 8021B and chloride by EPA method 300.0. Copies of laboratory analyses and chain-of-custody documentation are included in Appendix B. The auger hole locations are shown on Figure 2. The results of the sampling are summarized in Table 1.

Referring to Table 1, the TPH concentrations exceeded the RRAL in all AH-1, AH-2 AH-4 and AH-5 at 0-0.5'. The vertical extents were only defined in AH-1 and AH-4 at a depth of 1.0' below surface. One of the three samples selected for BTEX exceeded the RRAL. The chloride concentrations ranged from 292 mg/kg (AH-2, 0-0.5') to 4,550 mg/kg (AH-4, 0-0.5') and the chlorides were not delineated in any of the auger holes.

Work Plan

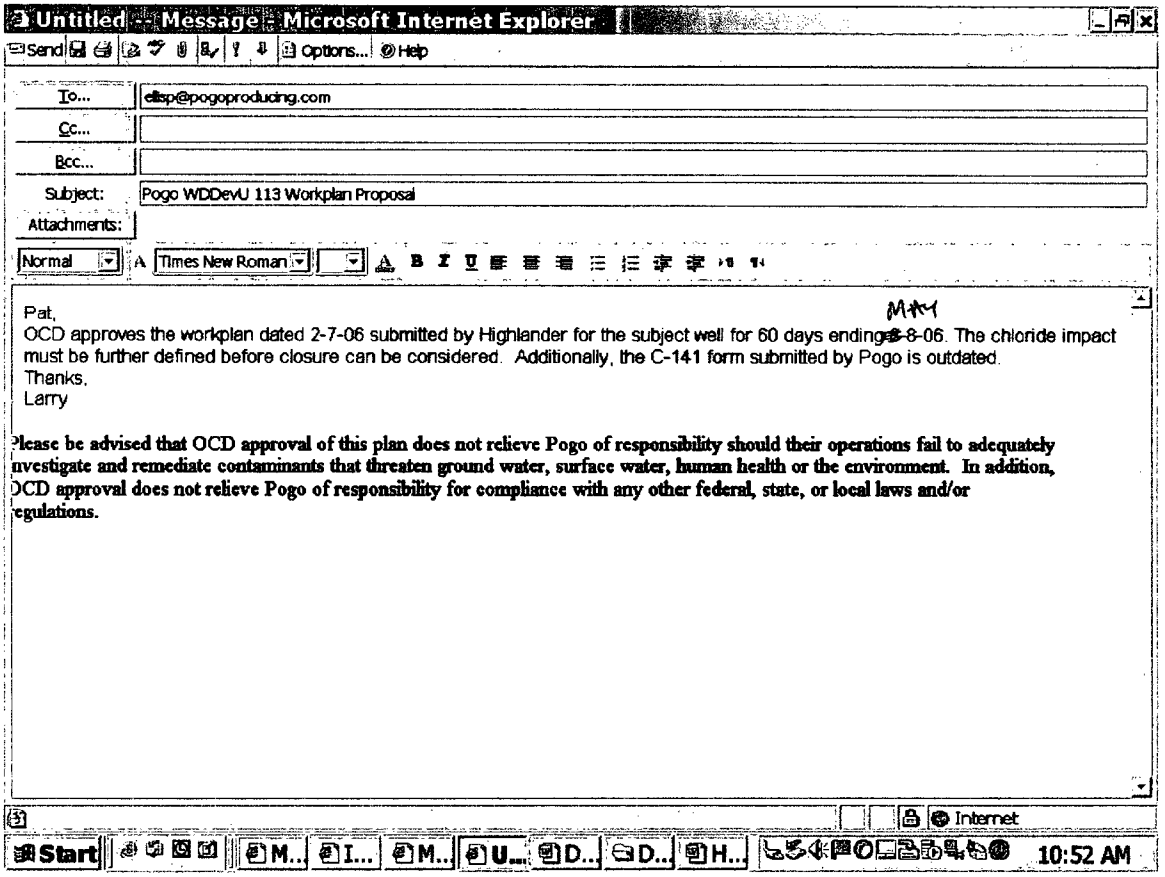
Highlander personnel will supervise the excavation of the spill area. The area will be excavated to a depth of 2.0'to 3.0' below surface (below the root zone), and the excavated soil will be transported to proper disposal. The bottom of the excavation will be sampled for analysis of TPH, BTEX and chloride. If necessary, test trenches will be installed in the bottom of the excavation to further define the extents of the chloride impact. The soil samples will be placed into laboratory supplied containers and delivered to a laboratory under chain-of-custody control for analysis.

Once completed, the results of the assessment, 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: Don Riggs – Pogo Producing
Pat Ellis - Pogo Producing


Untitled - Message - Microsoft Internet Explorer
Send
Options...
Help
To...
elisp@pogoproducing.com
Cc...
Bcc...
Subject:
Pogo WDDevU 113 Workplan Proposal
Attachments:
Normal
Times New Roman
Pat,
MAY
OCD approves the workplan dated 2-7-06 submitted by Highlander for the subject well for 60 days ending 8-8-06. The chloride impact must be further defined before closure can be considered. Additionally, the C-141 form submitted by Pogo is outdated.
Thanks,
Larry
Please be advised that OCD approval of this plan does not relieve Pogo of responsibility should their operations fail to adequately investigate and remediate contaminants that threaten ground water, surface water, human health or the environment. In addition, OCD approval does not relieve Pogo of responsibility for compliance with any other federal, state, or local laws and/or regulations.
Internet
Start
10:52 AM

SITE INFORMATION

Report Type: WORK PLAN

APPROVED 3.806 FOR 90 DAYS

General Site Information:

Site:	**West Dollarhide Devonian Unit, Well #113 (Flow-line spill)**
Company:	**Pogo Producing Company (Arch Petroleum)**
Well Location:	**Section 4, T25S, R38E**
Spill Location:	**Section 33, T24S, R38E**
Unit Letter:	Unit P - (spill area) , Unit C - (Well #113)
Lease Number:	300-00705-00
County:	Lea
Spill GPS:	32° 10' 07.7", 103° 04' 08.5"
Surface Owner:	George Willis
Mineral Owner:	State
Directions:	From Jal, New Mexico - Intersection of 18 and 128, go 6.3 miles east on Hwy 128,
	turn left (north) on lease road, go 3.0 miles and turn right (east), go 0.7 miles and turn
	right (north) at T, go 0.1 miles onto well pad, spill located 100' south of pad.

Release Data:

Date Released:	1/15/2006
Type Release:	Oil and water
Source of Contamination:	Flow line leak
Fluid Released:	Not Determined
Fluids Recovered:	15

Official Communication:

Name:	Pat Ellis	Don Riggs	Ike Tavarez
Company:	Pogo Producing Company	Pogo Producing Company	Highlander Environmental Corp.
Address:	300 N. Marienfeld St.	5 Greenway Plaza, Suite 2700	1910 N. Big Spring
P.O. Box	Box 10340		
City:	Midland Texas, 79701-7340	Houston, Texas 77046	Midland, Texas
Phone number:	(432) 685-8100	(713) 297-5045	(432) 692- 4559
Email:	EllisP@pogoproducing.com	riggsd@pogoproducing.com	itavarez@hec-enviro.com

Ranking Criteria

Depth to Groundwater:	***Ranking Score***	***Site Data***
<50 ft	20	
50-99 ft	**10**	
>100 ft.	0	*Average Depth >100 BS*
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***	
Surface Body of Water:	***Ranking Score***	***Site Data***
<200 ft.	*20*	*None*
200 ft - 1,000 ft.	10	*None*
>1,000 ft.	**0**	
Total Ranking Score:	**10**	

Acceptable Soil RRAL (mg/kg)		
Benzene	*Total BTEX*	*TPH*
10	**50**	**1,000**

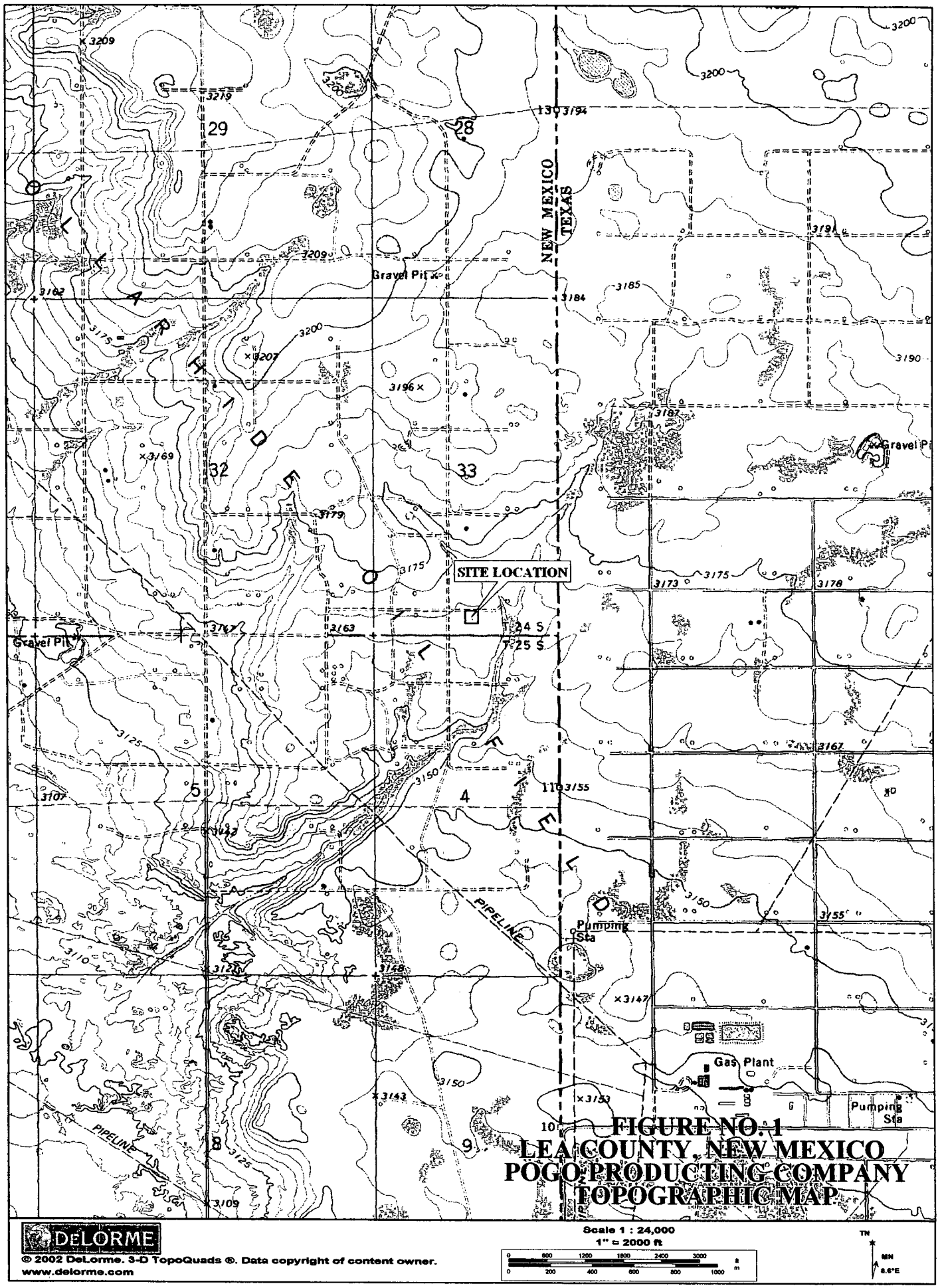


FIGURE NO. 1
LEA COUNTY, NEW MEXICO
POGO PRODUCING COMPANY
TOPOGRAPHIC MAP

Scale 1 : 24,000
1" = 2000 ft

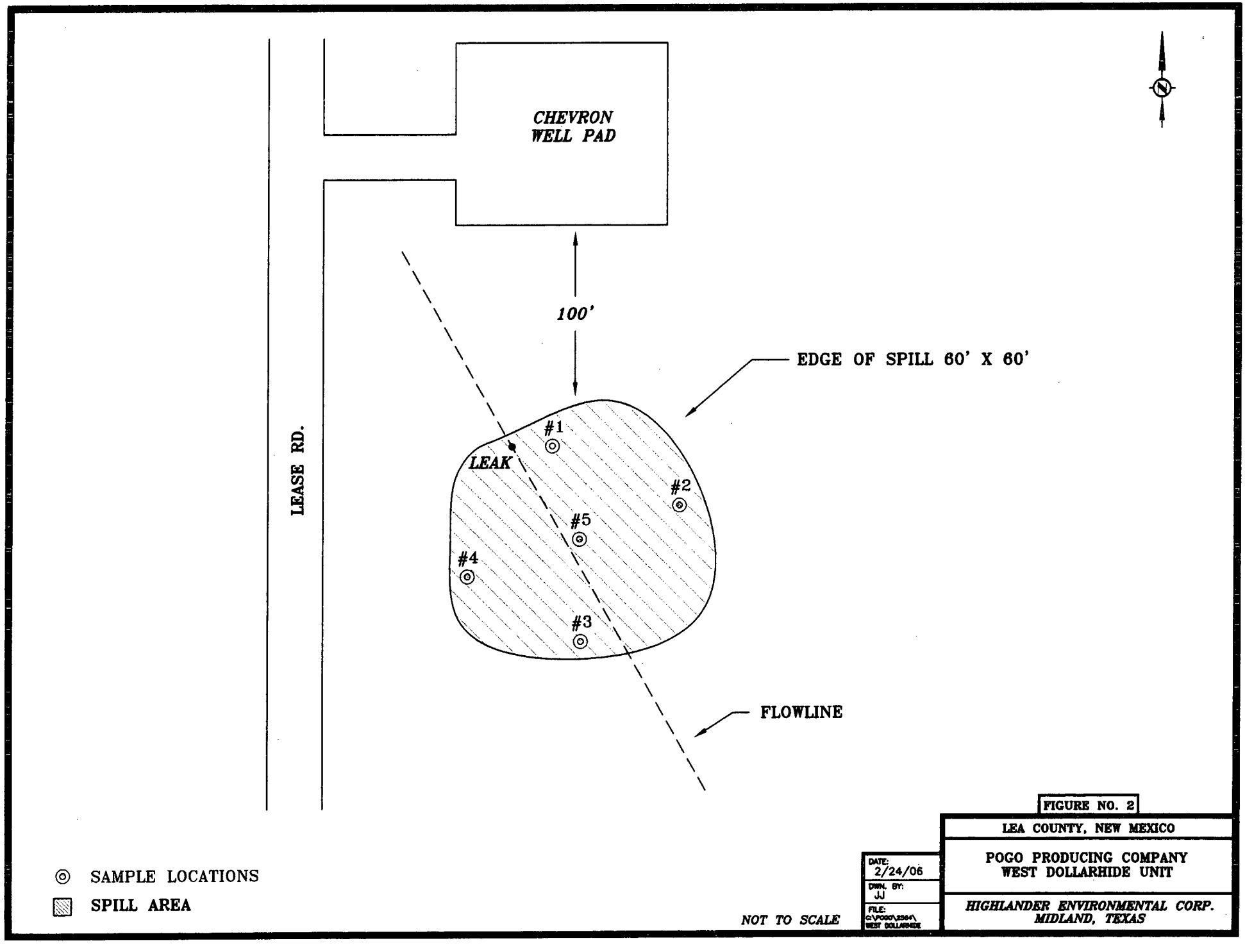

CHEVRON
WELL PAD
100'
EDGE OF SPILL 60' X 60'
LEASE RD.
LEAK
#1
#2
#3
#4
#5
FLOWLINE
SAMPLE LOCATIONS
SPILL AREA
NOT TO SCALE
FIGURE NO. 2
LEA COUNTY, NEW MEXICO
POGO PRODUCING COMPANY
WEST DOLLARHIDE UNIT
HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS
DATE: 2/24/06
DWN. BY: JJ
FILE: C:\POGO\2364\WEST DOLLARHIDE

Table 1
Pogo Producng Company
West Dollarhide - Flowline Leak
Lea County, New Mexico

Sample ID	Date Sampled	Sample Depth (ft)	TPH (mg/kg)			Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Chloride (mg/kg)
			C6-C12	C12-C35	Total					
AH-1	1/24/2006	0-0.5	4,140	6,660	**10,800**	**12.1**	65.3	30.2	96.4	3,520
AH-1	1/24/2006	0.5-1.0	119	310	429	-	-	-	-	2,120
AH-1	1/24/2006	1.5-2.0	73.8	175	249	-	-	-	-	2,210
AH-1	1/24/2006	2-2.5	-	-	-	-	-	-	-	2,730
AH-2	1/24/2006	0-0.5	16,000	28,000	**44,000**	-	-	-	-	292
AH-2	1/24/2006	1.0	1,550	2,740	**4,290**	-	-	-	-	2,900
AH-3	1/24/2006	0-0.5	<10	129	129	<0.05	0.123	0.068	0.278	3,290
AH-3	1/24/2006	1.0	<10	29.8	29.8	-	-	-	-	3,670
AH-4	1/24/2006	0-0.5	192	1,890	**2,080**	0.357	1.32	0.49	1.64	4,550
AH-4	1/24/2006	1.0	19.5	250	270	-	-	-	-	3,870
AH-5	1/24/2006	0-0.5	2,290	5,060	**7,350**	-	-	-	-	2,000
AH-5	1/24/2006	1.0	2,700	7,520	**10,200**	-	-	-	-	3,150

(-) Not Analyzed

APPENDIX A

Depth to Groundwater Data Reports

Water Well - Average Depth to Groundwater

Pogo - West Dollarhide Unit, Lea County, New Mexico

23 South 37 East

6	5	4	3	2	1
7	8	9	10	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

23 South 38 East

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

Andrews County, Texas

24 South 37 East

6	5 **111**	4	3	2	1
7 **119**	8	9	10 **120**	11	12
18	17	16 **67**	15	14 **64**	13
19	20	21 **69**	22	23	24
30	29	28	27	26	25
31	32	33	34 **55**	35	36

24 South 38 East

6	5	4			
7	8	9			
18	17	16			
19 **56**	20	21			
30 **68** **30**	29	28		**114**	
31 **97**	32	33 **SITE**	**106**		

25 South 37 East

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

25 South 38 East

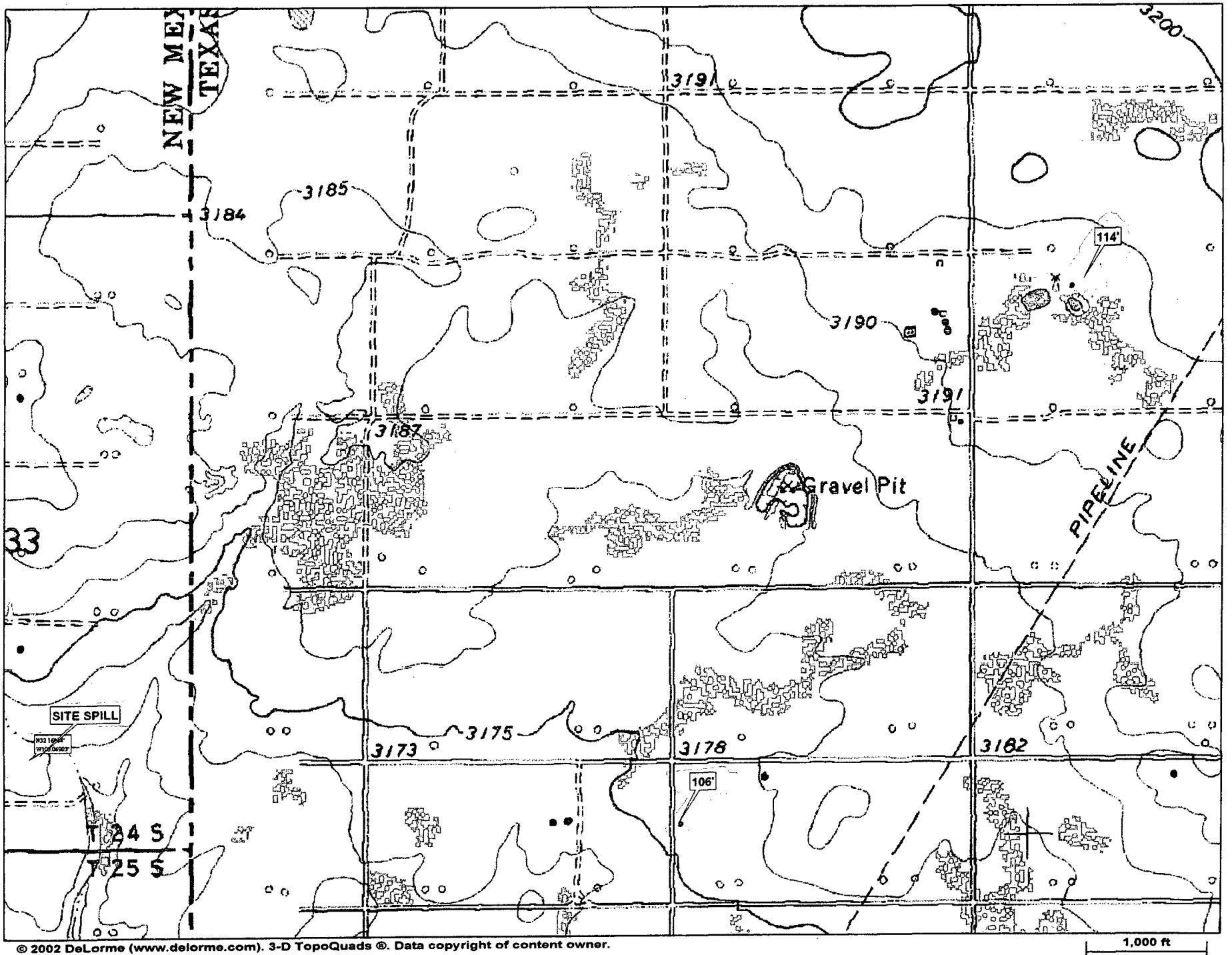
6 **60**	5	4			
7	8	9 **95** **88**			
18 **58**	17	16			
19 **69**	20 **78**	21 **87**			
30	29 **51**	28			
31	32	33			

150 Average depth to groundwater (ft) - New Mexico State Engineer Well Reports

56 Groundwater Depth (ft) - Geology and Groundwater Conditions in Southern Lea County, New Mexico (Report 6)

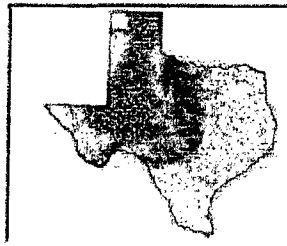
89 USGS

100 TWDB



Scale: 1 : 12,800 Map Rotation: 0° Magnetic Declination: 8.6°E

TWDB.WIID
Water Well Data



Zoom Move Select

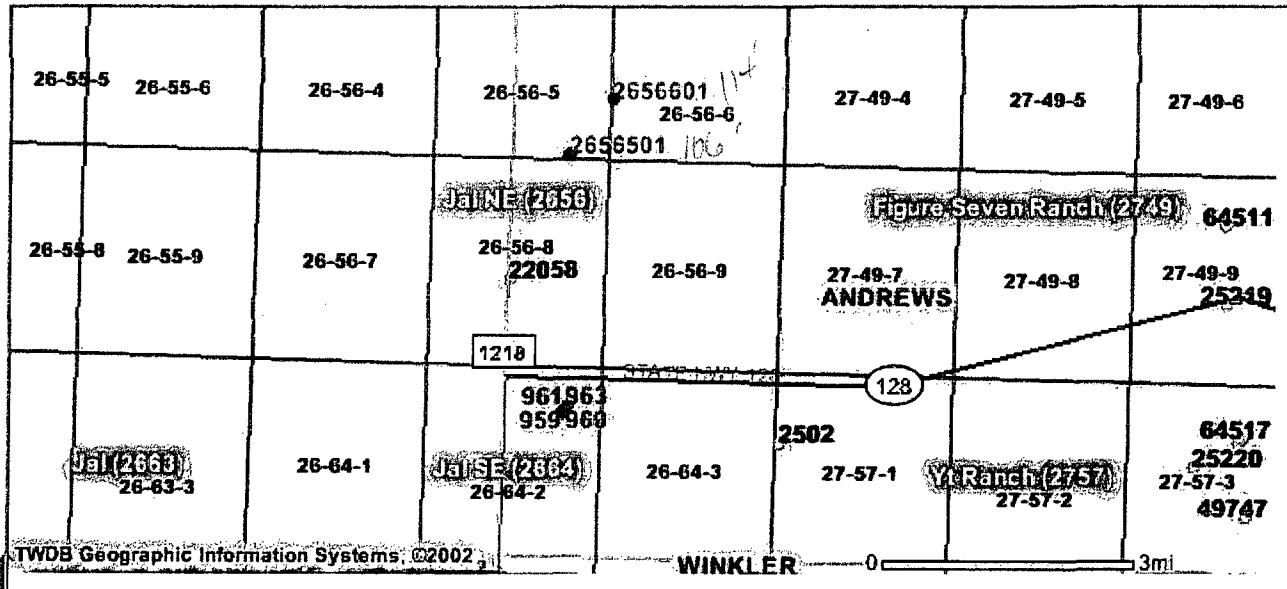
[Layers]

Visible Active

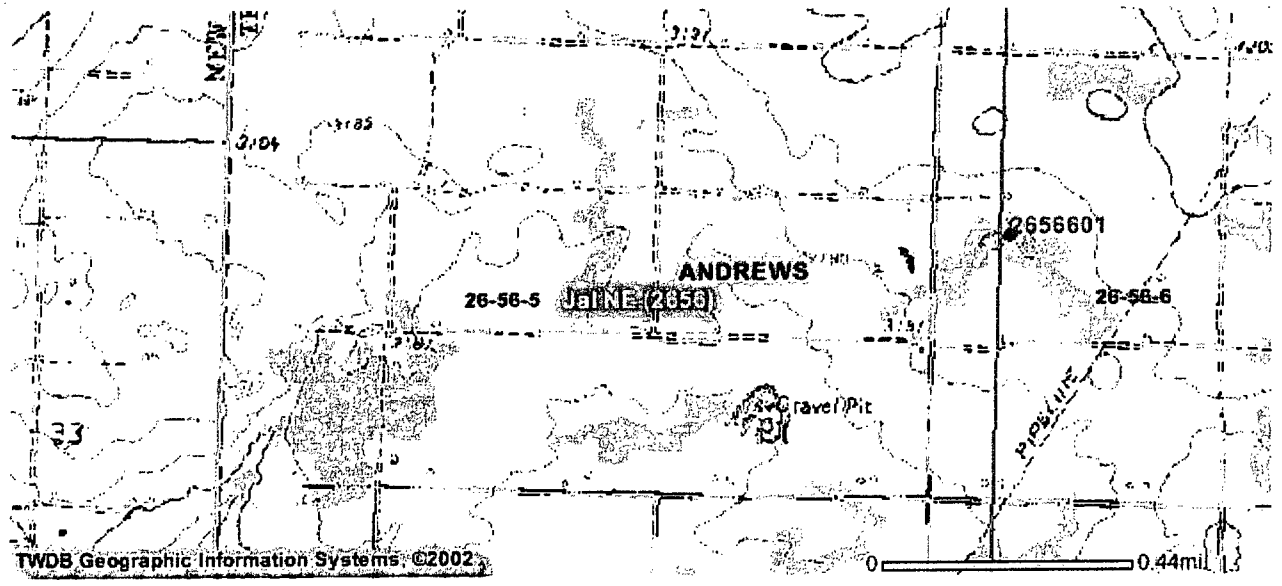
- TWDB Groundwater Data
- Submitted Driller's Reports
- Submitted Drillers Reports - D.I.M.s
- Major Aquifers
- Minor Aquifers
- State Hwy
- FM & RM Roads
- Other State Roads
- Interstate Hwy
- US Hwy
- 7.5' USGS Grid
- 2.5' State Grid

Wells in TWDB Groundwater Database - ANDREWS County

Help | Active Tool Pan



Counties is now the Active Layer


ANDREWS
26-56-5
Jet NE (2350)
2656601
26-56-6
Gravel Pit
Pipeline
33
TWDB Geographic Information Systems, ©2002
0
0.44mi

WATER LEVEL PUBLICATION REPORT
COUNTY - Andrews

WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

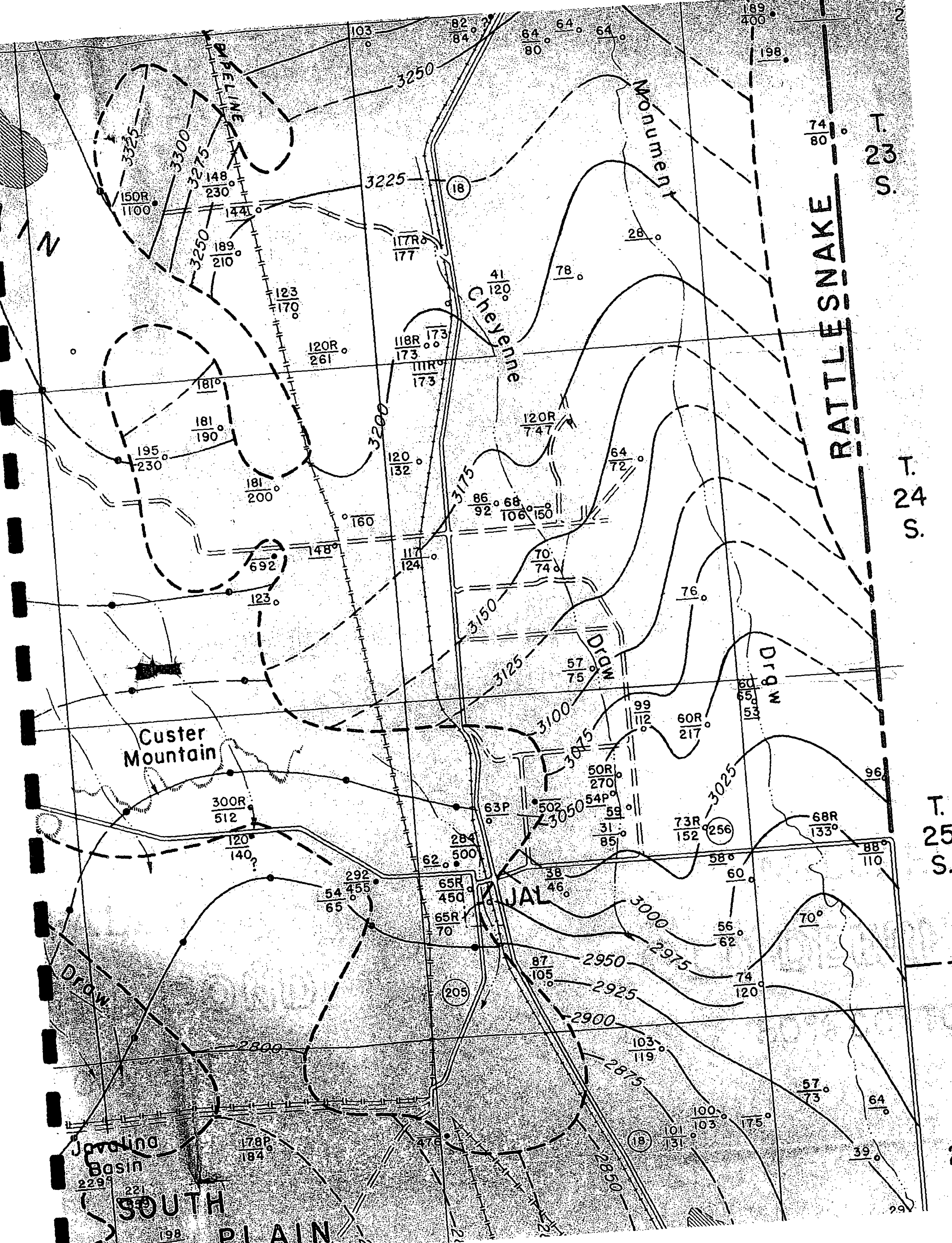
STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
26 40 601	1210GLL		3495	12/03/1974	-71.82P		3423
				11/04/1975	-69.39	11.33	3426
				11/02/1976	-69.91	-0.52	3425
				11/08/1977	-79.10P		3416
				10/31/1978	-69.76	0.15	3425
				11/15/1979	-70.28	-0.52	3425
				01/19/1981	-70.99	-0.71	3424
				01/11/1983	-68.88	2.11	3426
				01/15/1985	-68.22	0.66	3427
				01/16/1988	-70.39	-2.17	3425
				01/12/1989	-76.05P		3419
				01/13/1990	-76.29	-5.90	3419
				01/08/1991	-68.65	7.64	3426
				01/16/1992			
				01/13/1993	-80.03P		3415
				11/05/1993	-67.40	1.25	3428
				10/20/1994	-69.90	-2.50	3425
				12/06/1995	-67.43	2.47	3428
				12/19/1996	-67.30P		3428
				12/10/1997	-67.32	0.11	3428
26 40 901	1210GLL		3439	11/15/1979	-39.92		3399
				01/20/1982	-40.29P		3399
				01/10/1984	-41.16P		3398
				01/20/1986	-37.85	2.07	3401
				02/21/1987	-36.66	1.19	3402
				01/16/1988			
				01/12/1989			
				01/13/1990	-31.33	5.33	3408
				01/08/1991			
				01/16/1992			
				11/05/1993			
				10/17/1994			
26 56 501	1210GLL		3178	12/06/1979	-106.60		3071

P WATER LEVEL AFFECTED BY PUMPAGE OR RECHARGE AT THIS OR NEARBY WELL(S)
Q ACCURACY OF MEASUREMENT IS QUESTIONABLE

WATER LEVEL MEASUREMENTS IN FEET ABOVE OR BELOW (-) LAND SURFACE

STATE WELL NUMBER	AQUIFER CODE	WELL DEPTH	ELEVATION OF LAND SURFACE	DATE OF VISIT OR MEASUREMENT	DEPTH TO WATER FROM LAND SURFACE	CHANGE IN LEVEL SINCE LAST STATIC MEASUREMENT	ELEVATION OF WATER LEVEL
26 56 601	1210GLL		3194	12/06/1979	-112.87		3081
				01/19/1981	-114.18	-1.31	3080
				01/11/1983	-111.82	2.36	3082
				01/10/1984	-114.15	-2.33	3080
				01/15/1985	-109.78	4.37	3084
				02/21/1987			
				01/17/1988	-113.72P		3080
				01/12/1989	-112.14P		3082
				01/17/1990	-111.23	-1.45	3083
				01/14/1991	-112.36	-1.13	3082
				01/18/1992	-111.89	0.47	3082
				11/03/1993	-110.60	1.29	3083
				10/18/1994	-109.90	0.70	3084
				12/06/1995			
				12/18/1996			
				12/10/1997	-114.48	-4.58	3080
27 28 901	1210GLL	61	3145	07/31/1958	-56.80		3088
				01/21/1959	-53.21	3.59	3092
				01/15/1960	-53.10	0.11	3092
				11/29/1960	-53.25	-0.15	3092
				12/05/1961	-53.14	0.11	3092
				12/05/1962	-53.33	-0.19	3092
				12/03/1963	-53.12	0.21	3092
				12/02/1964	-53.09	0.03	3092
				12/03/1965	-53.41	-0.32	3092
				12/06/1966	-53.59	-0.18	3091
				11/27/1967	-54.30	-0.71	3091
				12/06/1968	-56.75	-2.45	3088
				12/09/1969	-55.44	1.31	3090
				12/09/1970	-53.20	2.24	3092
				01/05/1972	-53.50	-0.30	3092
				01/16/1973	-53.36	0.14	3092
				12/08/1973	-53.50	-0.14	3092
				12/03/1974	-53.62	-0.12	3091
				11/04/1975	-53.64	-0.02	3091

P WATER LEVEL AFFECTED BY PUMPAGE OR RECHARGE AT THIS OR NEARBY WELL(S)
Q ACCURACY OF MEASUREMENT IS QUESTIONABLE



PIPELINE
3250
3225
3200
3175
3150
3125
3100
3075
3050
3025
3000
2975
2950
2925
2900
2875
2850
2800
Monument
Cheyenne
Draw
Draw
RATTLESNAKE
T. 23 S.
T. 24 S.
T. 25 S.
Custer Mountain
JAL
Draw
Javalina Basin
SOUTH
PLAIN

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

Location No.	Owner	Aquifer	Depth of well (feet)	Altitude of well (feet)	Water level: Depth below land surface (feet)	Water level: Date measured	Year completed	Surface diameter of wells	Method of lift	Use of water	Remarks
24.34.35.122	do.	Tr	258M	3,410	223.9	3-29-53	—	6	Lw	S	—
24.35.30.341	do.	Tr	150±M	3,320	139.6	11-27-53	—	6	Lw	S	—
24.36.3.111	—	To	—	3,400	181.1	3-12-53	—	7½	N	N	—
3.333	Charles Whitten	To(?)	190±M	3,390	181.1	3-12-53	—	11½	N	N	—
9.133	do.	To	230	3,395	195.0	3- 6-53	1948	7	N	N	—
13.314	Humble Oil Co.	To	160	—	—	—	1941	—	—	—	WBZ sand, 138-158 feet. EY 10 gpm.
24.36.15.222	Canmex Oil Co.	To	200	3,370	181.3	3-12-53	1937	7	Lw	D	—
22.220	Continental Oil Co.	Tr	692	3,340	—	—	—	8¼	Li	D	A. H. Meyers "A" well 1. Intake set at about 475 feet. Maximum yield 6 gpm.
23.222	—	To	—	3,345	147.9	3- 6-53	—	6¼	Lw	I	Measurement made inside pipe column.
27.221	J. R. Wilson	To	—	3,320	122.9	3- 6-53	—	10	N	N	—
24.37.5.111	EPNG	To	173	3,275	111	9- 8-52	1952	10¾	Te	In,D	Jal Plant 4, well 6.
7.431	Fowler Hair	To	132M	3,300	119.9	3- 6-53	—	6¼	N	N	—
10.123	Trinity Production Co.	Tr	747	3,260	120	2- -53	1953	—	Li	In	EY 42 gpm. Chemical analysis in table 8.
14.211	Fowler Hair	To(?)	72M	3,205	64.5	3- 3-53	—	5	N	N	—
24.37.16.342	—	To	106M	3,235	67.7	3-11-53	—	9	N	N	—
16.423	Humble Oil Co.	To	150	3,240	—	—	1951	6⅝	Te	D	Fowler-Ellenburger Camp well 1. WBZ 90-150 feet.
17.422	Fowler Hair	To	92M	3,260	86.5	3- 4-53	—	7½	N	N	—
19.234	—	To	124M	3,290	117.4	3- 5-53	—	10	Lw	S	—
21.444	Dollarhide Water Co.	To	74M	3,210	69.6	3- 2-53	—	7½	N	N	—
25.322	Fowler Hair	To	—	3,136	76.1	3- 3-53	—	6½	Lw	D,S	—
34.320	Plains Production Co.	To	75±M	3,160	56.8	3- 2-53	—	12	N	N	—
25.33.20.443	—	Tr	—	3,395	200-250	8-18-58	—	6	Lw	D,S	—
31.244	Nick Ritz	Tr	320	3,400	257.5	7-26-54	—	8	Lw	S	—
25.34.1.132	Madera Ranch	Tr	300+	3,385	231.0	4-15-53	—	6	N	N	—
25.34.15.242	—	Tr	168	3,335	164.9	7-23-54	—	10	Lw	S	—
25.35.10.223	Georgia Bryant	To	83M	3,180	76.9	4- 2-53	—	9	Lw	S	—
21.122	—	Tr	—	3,230	173.3	4- 2-53	—	8½	N	N	—
25.36.10.313	W. D. Dinwiddie	Tr	512	3,130	300	—	—	—	Lw	S	—
15.111	do.	Tr(?)	140	3,125	120.2	3- -53	1951	—	N	N	—
23.234	—	Qal	65M	3,070	53.7	3-31-53	—	6½	Lw	S	—
24.112	Humble Oil Co.	Tr	455	3,115	292.4	4-15-53	—	—	N	N	—
25.37.1.340	Pure Oil Co.	To	217	3,108	60	—	—	20	Te	In,D	—
2.332	Richmond Drilling Co.	To	112M	3,140	98.8	3-29-53	—	7	Lw	D	—
9.333	Stanolind Oil Co.	Tr	502	3,140	—	—	1938	—	Lw	D	WBZ 470-502 feet.
10.412	EPNG	To	270	3,120	50	12-20-49	1949	12	Te	In,D	Jal Plant 3, well 2.
10.433	M. B. Owens	To	—	3,100	54.3	2-26-53	—	7½	Lw	S	MWP
13.312a	City of Jal	To	152	3,080	73	6- -54	1954	12	Te	P	New city well. EY 750 gpm. Chemical analysis in table 8.
25.37.15.221	J. M. Owens	To	—	3,100	59.2	2-26-53	—	—	Ti	In	EY 30 gpm. PR.
15.223	Sun Oil Co.	To	—	3,090	—	—	—	—	Lw	D	Chemical analysis in table 8.
15.411	—	Qal	85M	3,070	31.1	2-26-53	—	6½	N	N	—
17.114	—	Qal	—	3,105	62.8	3- 5-53	—	—	Lw	S	MWP
19.211	—	To	—	3,088	62.3	5-30-55	—	6	Je	D	—
19.221	City of Jal	Tr	500	3,110	284.0	11-11-54	1948	10	N	N	Chemical analysis in table 8.
19.240	do.	Tr	450	3,040	65	1942	—	—	—	—	Old public-supply well. WBZ 70-450 feet. EY (1942) 50 gpm. Chemical analysis in table 8.
20.310	do.	Qal	70	3,035	65	1-18-42	—	6×6 ft.	—	—	Dug. WBZ "clayey sand" 65-70 feet. EY 50 gpm. Chemical analysis in table 8.
25.37.20.413	EPNG	Tr	419	—	—	—	—	10¾	Je	In,D	Jal General Camp well 1.
21.411	G. B. Hadfield	To	46M	3,050	38.2	2-12-53	—	6	Lw	S	EY 1 gpm.
24.211	—	To	—	3,071	58.4	2-12-53	—	6	N	N	—
24.422	—	To	—	3,050	60.2	2-12-53	—	8	N	N	—
25.411	—	To	62M	3,055	56.4	2-12-53	—	6	N	N	—
33.114	Olsen Oil Co.	Qal	105	3,000	87.4	2-16-53	—	12	N	N	—
36.244	—	To	120	3,035	74.2	2-13-53	—	10	N	N	—
25.38.6.122	Fowler Hair	To	65M	3,100	60.5	3- 3-53	—	6½	Lw	S	—
6.134	—	To	—	3,095	53.1	2-25-53	—	3	N	N	Cased shothole.
9.343	—	To	—	3,130	95.7	2-25-53	—	6½	Lw	D,S	EY 30 gpm.

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

Location No.	Owner	Aquifer	Depth of well (feet)	Altitude of well (feet)	Water level: Depth below land surface (feet)	Water level: Date measured	Year completed	Surface diameter of wells	Method of lift	Use of water	Remarks
25.38.19.342	Pure Oil Co.	To(?)	133	3,061	68	1952	—	—	—	In	Dollarhide Gasoline Plant well 2.
21.121	Tom Linebury	To	110	3,103	87.7	2-12-53	—	7	Lw	S	—
29.131	—	Qal	—	3,040	69.9	2-15-53	—	6	Lw	N	—
26.32.21.322	Battle Ax Ranch	Tr(?)	253	3,140	180	7-23-54	—	—	Li	D,S	—
26.33.3.444	W. D. Dinwiddie	Qal	180	3,315	102.8	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(?)	—	3,280	106.6	7-26-54	—	—	Lw	S	—
22.433	Battle Ax Ranch	Qal	200(?)	3,270	79.7	7-26-54	—	6	Lw	S	—
26.34.6.213	—	Tr	360	3,330	141.9	7-23-54	—	8	Lw	S	—
26.35.13.222	—	Qal	—	2,990	229.1	12-12-58	—	7	Lw	S	Chemical analysis in table 8.
26.36.9.440	Frank Antheys	Qal	184M	2,940	177.8	12-12-58	—	7	Lw	D,S	MWP
18.311	City of Jal	Qal	559	2,981	220.8	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	2,950	198.0	—	1960	24	Te(?)	P	Yield 408 gpm. Gravel packed. WBZ 270-280, 400-480, 550-600, 670-680 feet.
21.443	—	—	137(?)	2,900	Dry	12-11-58	—	11	N	N	—
26.37.2.133	Clyde Cooper	Qal(?)	119	3,000	103.4	2-16-53	1937	8	Lw	S	—
7.331	EPNG	Tr	476	2,960	—	—	1937	8⅝	Te	In,D	Jal Plant 1, well 1.
12.314	—	Qal	—	3,010	102.3	2-16-53	—	9½	N	N	—
12.331	—	Qal	103 + M	3,000	99.9	2-17-53	—	3	N	N	Cased shothole.
12.441	Humble Oil Co.	Qal	175	—	—	—	1944	—	—	—	WBZ 125-150 feet. EY 68 gpm.
14.122	—	Qal	131M	2,985	100.6	2-17-53	—	3	N	N	Cased shothole.
26.38.7.244	Tom Linebury	Qal	73	3,000	57.1	2-24-53	—	8½	N	N	—
8.444	do.	Qal	66	3,000	64.5	2-24-53	—	6½	Lw	S	—
17.414	do.	Qal	—	2,975	39.4	2-24-53	—	5½	Lw	S	—
21.344	do.	Qal	—	2,955	29.0	2-13-53	—	3	N	N	Cased shothole.
32.141	do.	Tr(?)	—	2,950	142.4	2-13-53	—	26	N	N	—

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: Depth below land surface (feet)	Water level: Date measured	Year completed	Surface diameter of wells	Method of lift	Use of water	Remarks
					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	—

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 25S Range: 38E 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 02/17/2006

								(Depth Water in Feet)		
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	25S	38E	20				3	75	80	78

Record Count: 3

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 02/17/2006

								(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: 25S Range: 38E 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 02/20/2006

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet) Min	Max	Avg
CP	25S	38E	20				3	75	80	78

Record Count: 3

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 24S Range: 38E 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 02/20/2006

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet) Min	Max	Avg
L	24S	38E	23				1	30	30	30

Record Count: 1

Water Resources

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 = • 321055103062101

Save file of selected sites to local disk for future upload

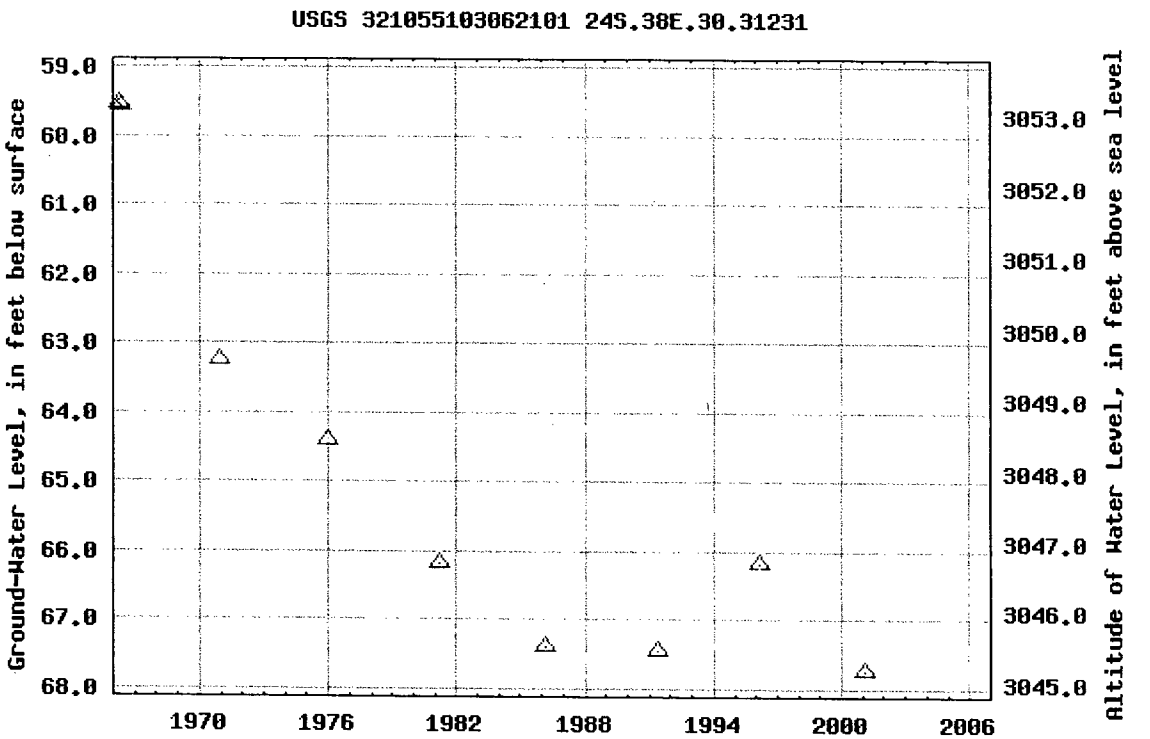
USGS 321055103062101 24S.38E.30.31231

Available data for this site Ground-water: Levels | GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°10'55", Longitude 103°06'21" NAD27
Land-surface elevation 3,112.80 feet above sea level NGVD29
The depth of the well is 96 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



Breaks in the plot represent a gap of at least one calendar year between two consecutive points.

Water Resources

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 = • 321000103061901

Save file of selected sites to local disk for future upload

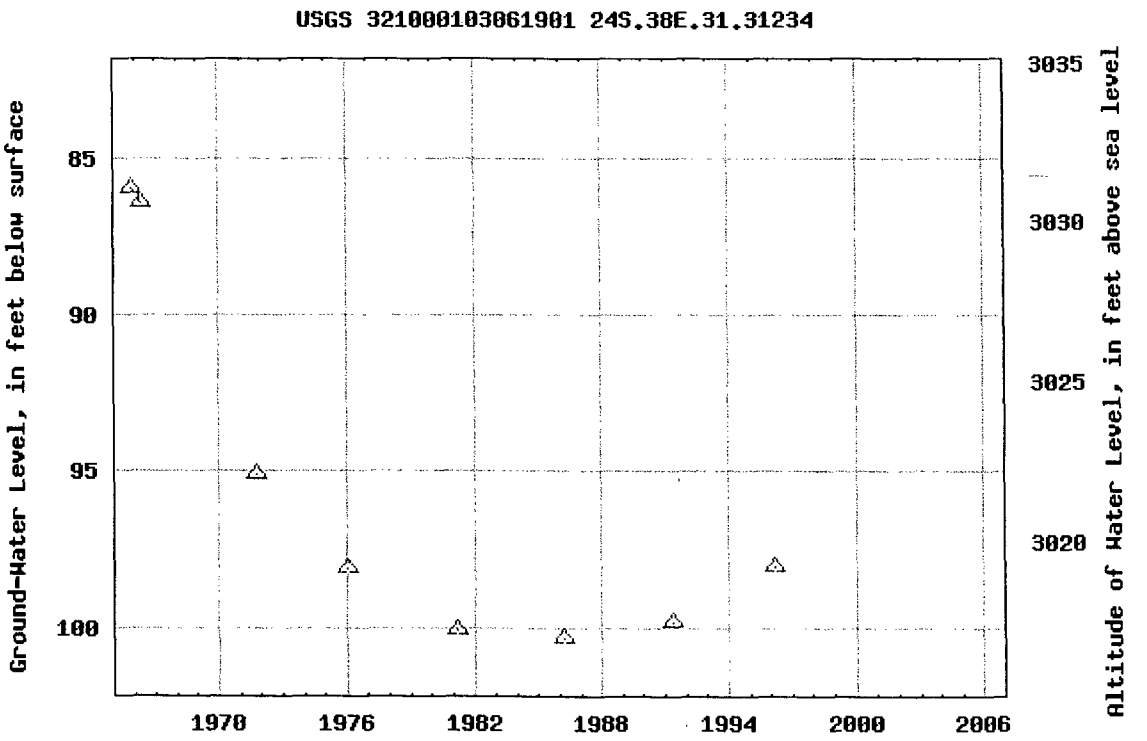
USGS 321000103061901 24S.38E.31.31234

Available data for this site Ground-water: Levels GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°10'00", Longitude 103°06'19" NAD27
Land-surface elevation 3,117.10 feet above sea level NGVD29
The depth of the well is 120 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



Breaks in the plot represent a gap of at least one calendar year between two consecutive points.

Water Resources

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 = • 321003103085201

Save file of selected sites to local disk for future upload

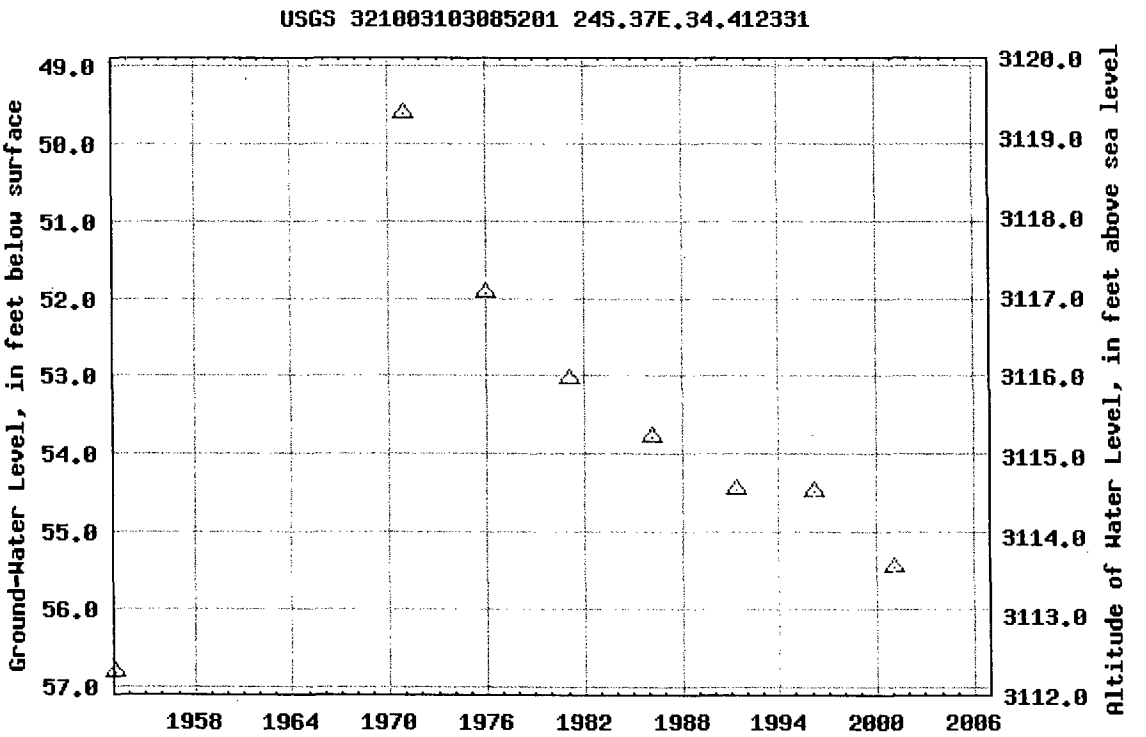
USGS 321003103085201 24S.37E.34.412331

Available data for this site Ground-water: Levels GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°10'03", Longitude 103°08'52" NAD27
Land-surface elevation 3,169.00 feet above sea level NGVD29
The depth of the well is 75 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



Breaks in the plot represent a gap of at least one calendar year between two consecutive points.

Water Resources

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 = • 321145103061701

Save file of selected sites to local disk for future upload

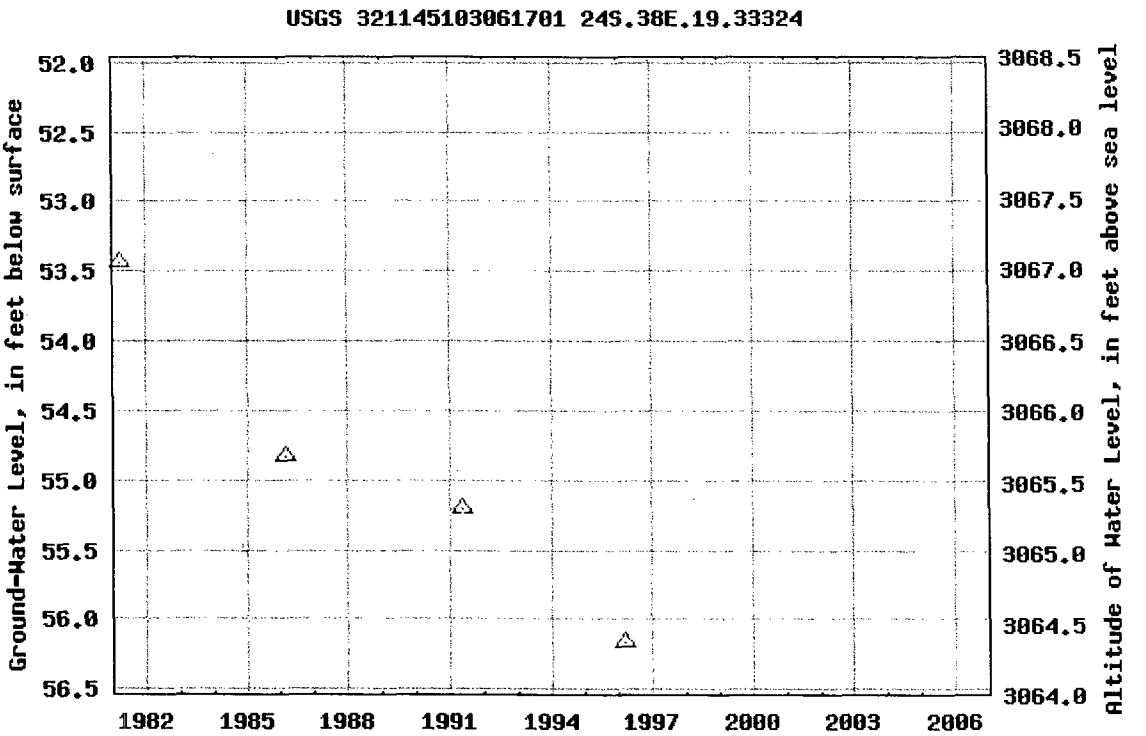
USGS 321145103061701 24S.38E.19.33324

Available data for this site Ground-water: Levels | GO

Lea County, New Mexico
Hydrologic Unit Code
Latitude 32°11'45", Longitude 103°06'17" NAD27
Land-surface elevation 3,120.50 feet above sea level NGVD29
The depth of the well is 100 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



Breaks in the plot represent a gap of at least one calendar year between two consecutive points.

USGS

Water Resources

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 = • 320800103040501

Save file of selected sites to local disk for future upload

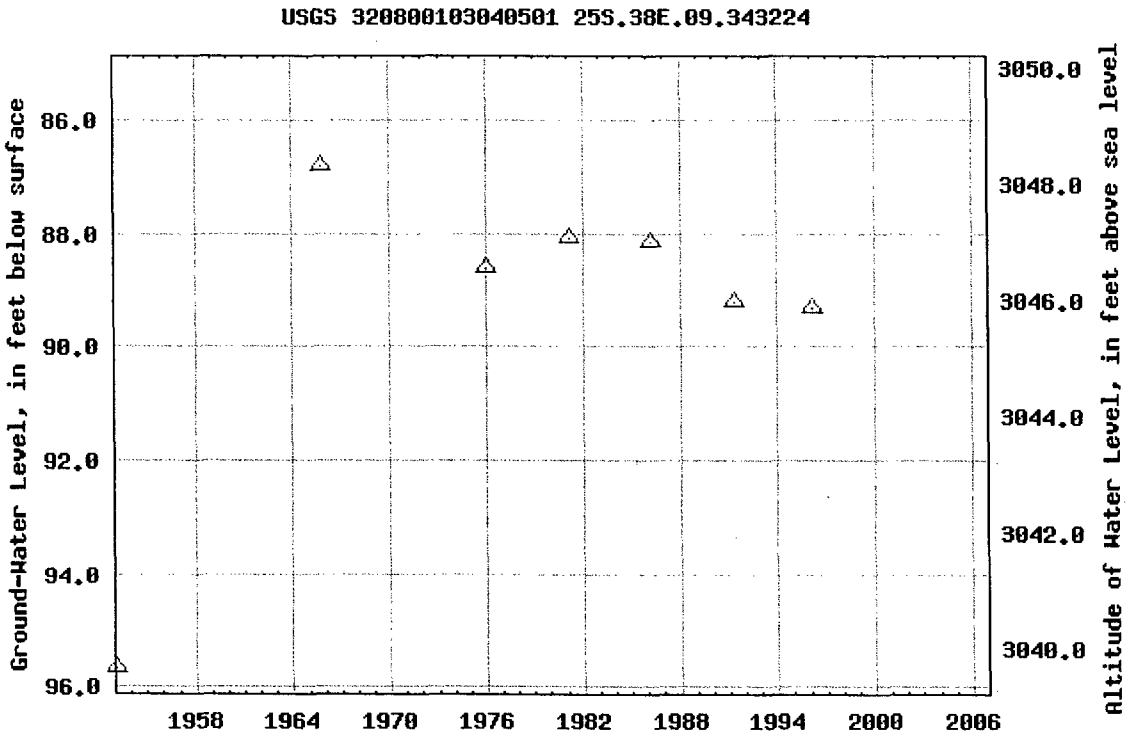
USGS 320800103040501 25S.38E.09.343224

Available data for this site Ground-water: Levels GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°08'00", Longitude 103°04'05" NAD27
Land-surface elevation 3,135.20 feet above sea level NGVD29
The depth of the well is 100 feet below land surface.
This well is completed in the OGALLALA FORMATION (121OGLL) local aquifer.

Output formats

- Table of data
- Tab-separated data
- Graph of data
- Reselect period



Breaks in the plot represent a gap of at least one calendar year between two consecutive points.

Water Resources

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 = • 320730103114801

Save file of selected sites to local disk for future upload

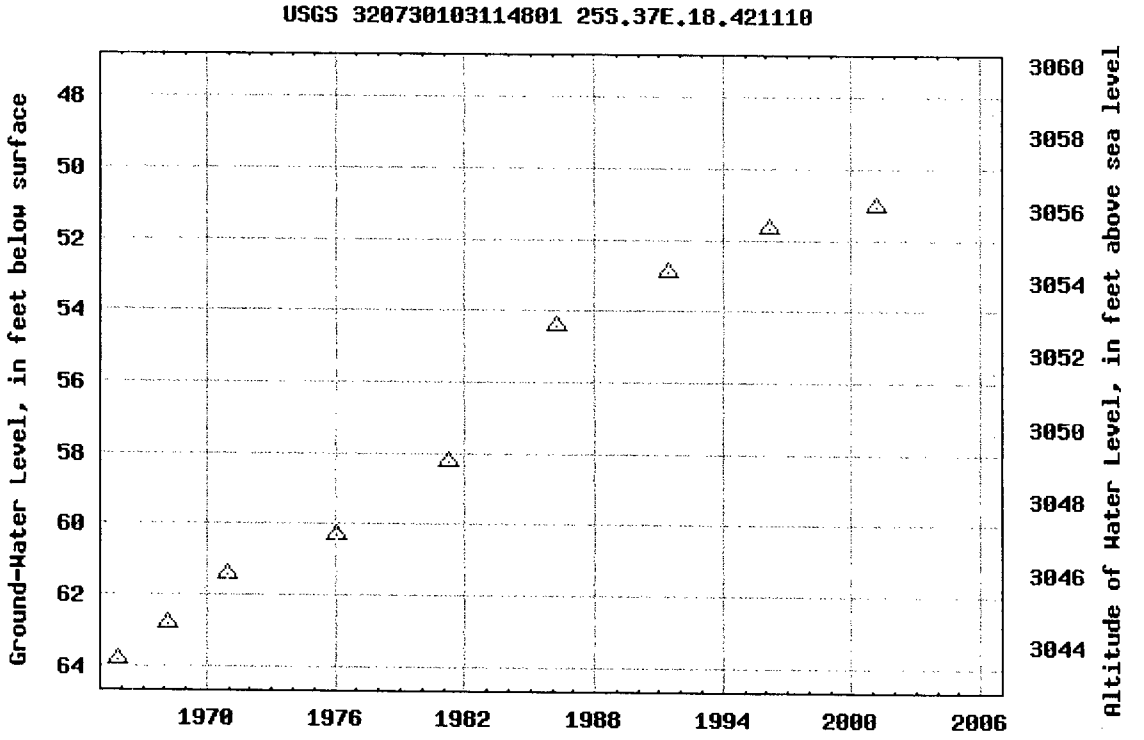
USGS 320730103114801 25S.37E.18.421110

Available data for this site Ground-water: Levels GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°07'30", Longitude 103°11'48" NAD27
Land-surface elevation 3,107.20 feet above sea level NGVD29
The depth of the well is 100 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



Breaks in the plot represent a gap of at least one calendar year between two consecutive points.

Water Resources

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 = • 320729103053201

Save file of selected sites to local disk for future upload

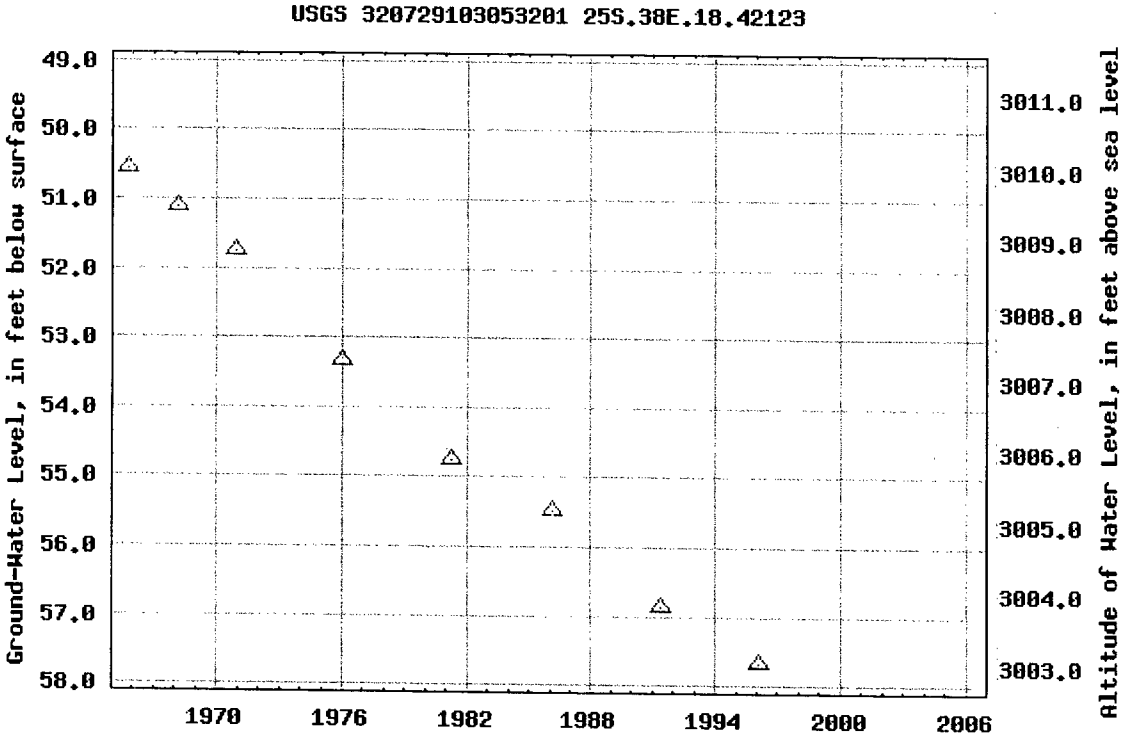
USGS 320729103053201 25S.38E.18.42123

Available data for this site Ground-water: Levels GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°07'29", Longitude 103°05'32" NAD27
Land-surface elevation 3,060.60 feet above sea level NGVD29
The depth of the well is 120 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



Breaks in the plot represent a gap of at least one calendar year between two consecutive points.

Water Resources

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 = • 320703103035501

Save file of selected sites to local disk for future upload

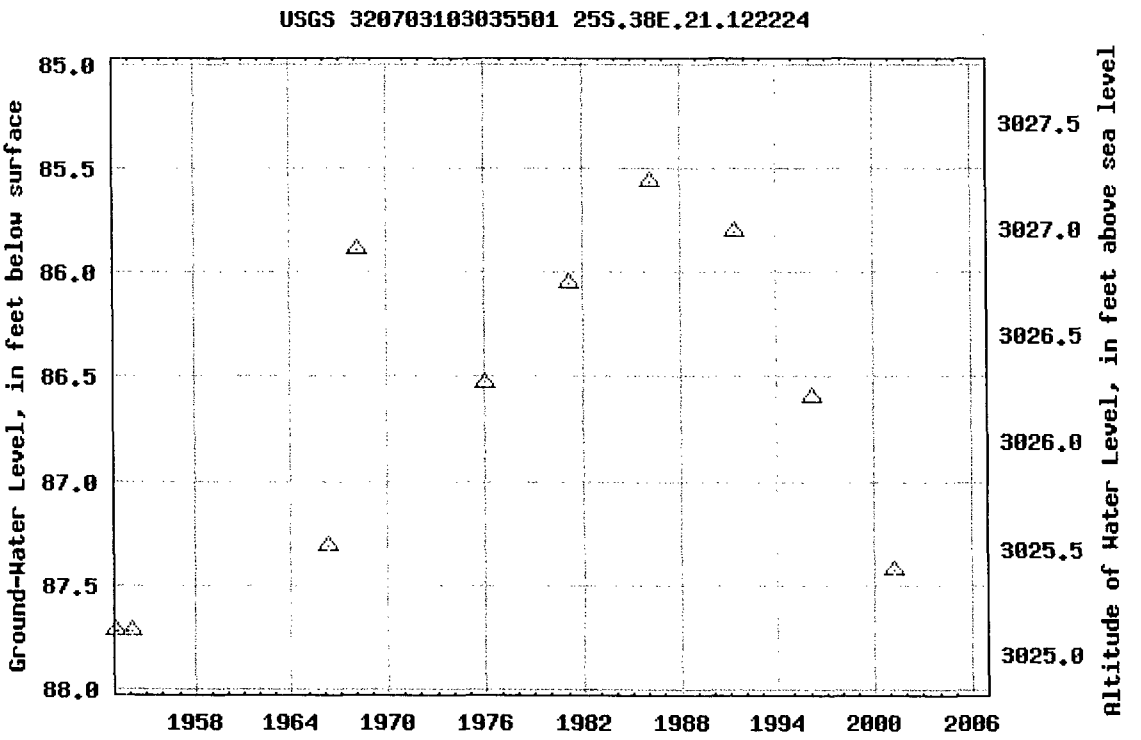
USGS 320703103035501 25S.38E.21.122224

Available data for this site Ground-water: Levels | GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°07'03", Longitude 103°03'55" NAD27
Land-surface elevation 3,112.80 feet above sea level NGVD29
The depth of the well is 110 feet below land surface.
This well is completed in the OGALLALA FORMATION (121OGLL) local aquifer.

Output formats

- Table of data
- Tab-separated data
- Graph of data
- Reselect period



Breaks in the plot represent a gap of at least one calendar year between two consecutive points.

USGS

Water Resources

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 = • 320639103071301

Save file of selected sites to local disk for future upload

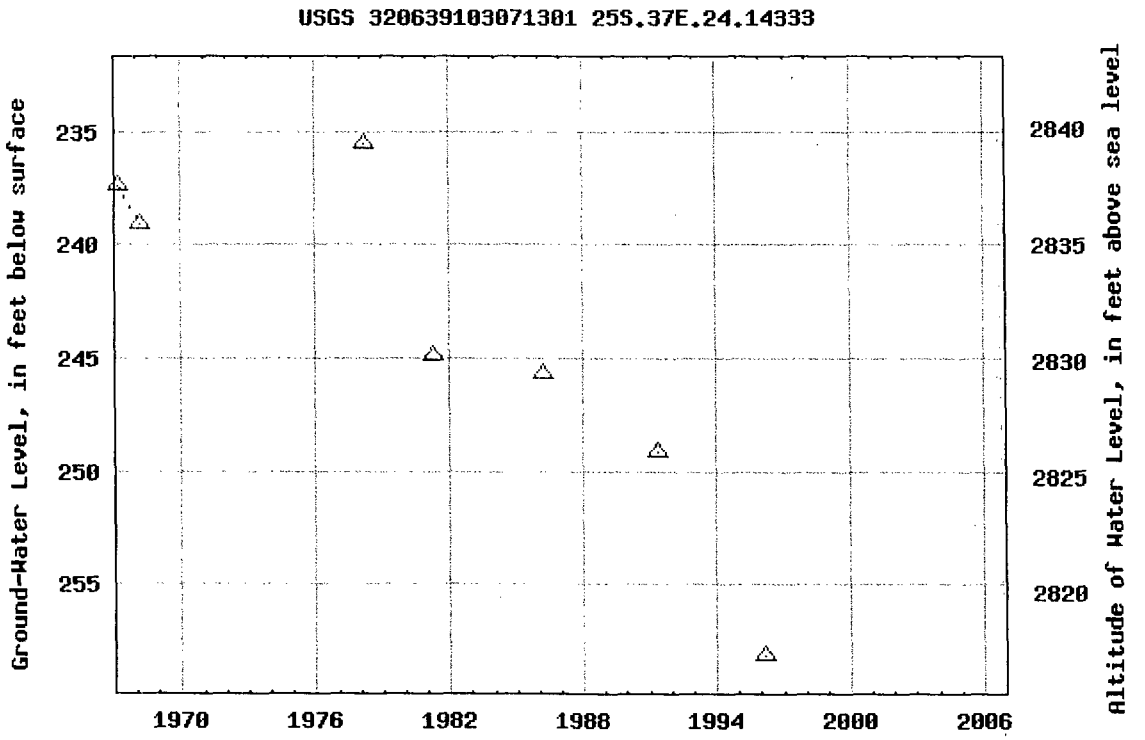
USGS 320639103071301 25S.37E.24.14333

Available data for this site Ground-water: Levels GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°06'39", Longitude 103°07'13" NAD27
Land-surface elevation 3,075.10 feet above sea level NGVD29
The depth of the well is 901 feet below land surface.
This well is completed in the RUSTLER FORMATION (312RSLR) local aquifer.

Output formats

- Table of data
- Tab-separated data
- Graph of data
- Reselect period



Breaks in the plot represent a gap of at least one calendar year between two consecutive points.

USGS

Water Resources

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 = • 320634103083901

Save file of selected sites to local disk for future upload

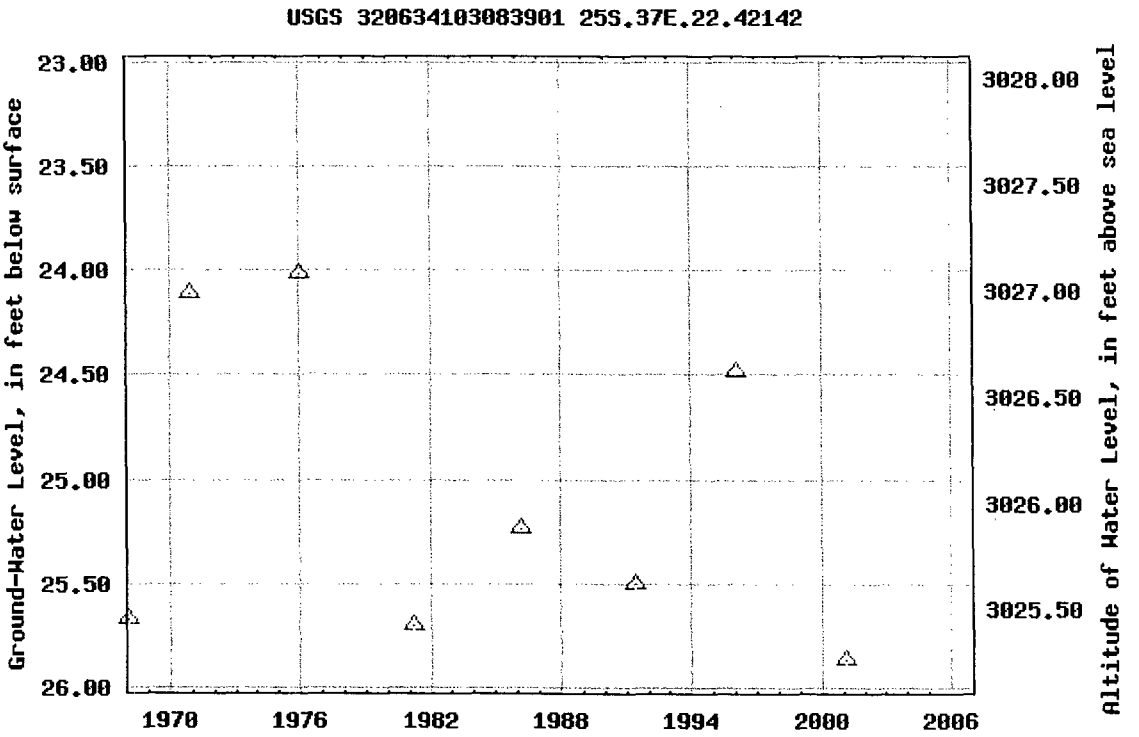
USGS 320634103083901 25S.37E.22.42142

Available data for this site Ground-water: Levels GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°06'34", Longitude 103°08'39" NAD27
Land-surface elevation 3,051.10 feet above sea level NGVD29
The depth of the well is 42 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



Breaks in the plot represent a gap of at least one calendar year between two consecutive points.

Water Resources

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 = • 320605103044701

Save file of selected sites to local disk for future upload

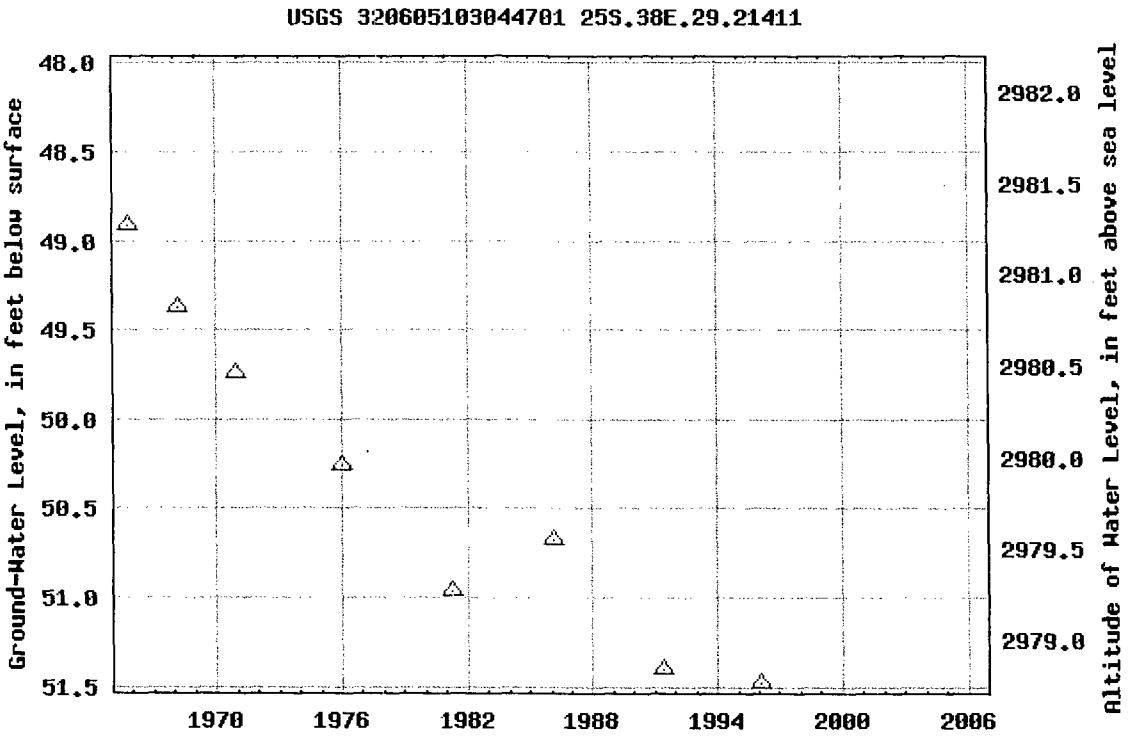
USGS 320605103044701 25S.38E.29.21411

Available data for this site Ground-water: Levels GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°06'05", Longitude 103°04'47" NAD27
Land-surface elevation 3,030.20 feet above sea level NGVD29
The depth of the well is 110 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



Breaks in the plot represent a gap of at least one calendar year between two consecutive points.

Water Resources

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 = • 320550103081001

Save file of selected sites to local disk for future upload

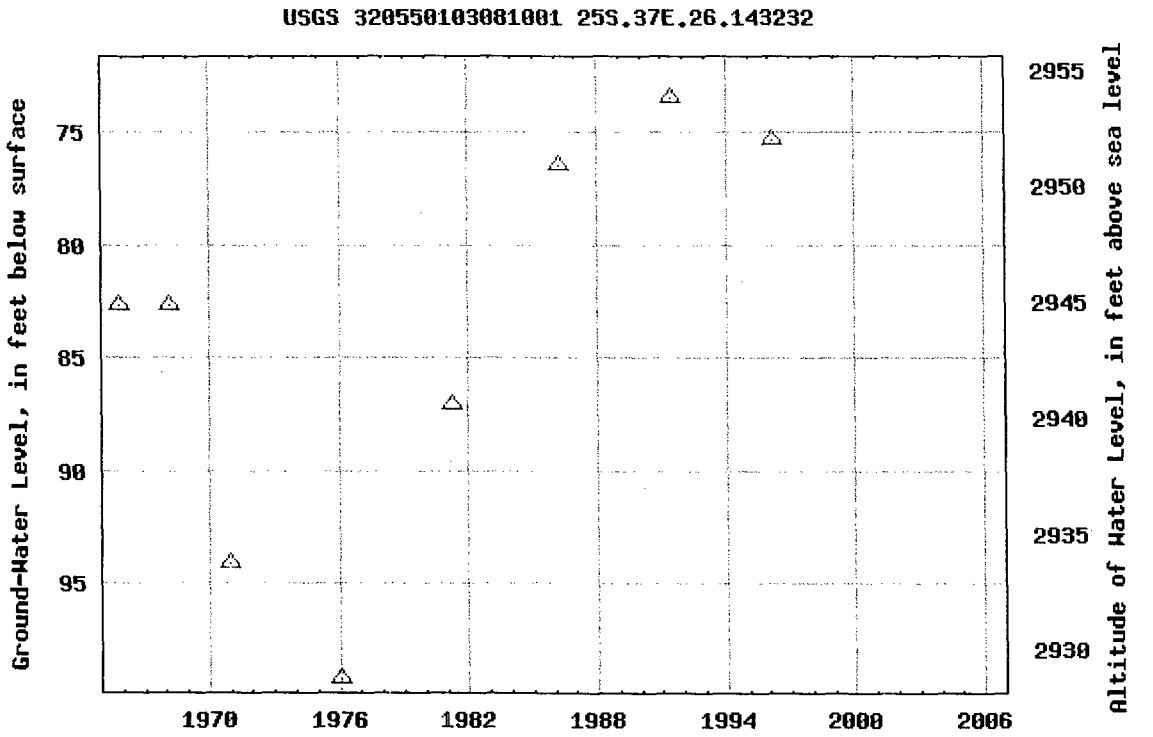
USGS 320550103081001 25S.37E.26.143232

Available data for this site Ground-water: Levels GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°05'50", Longitude 103°08'10" NAD27
Land-surface elevation 3,027.60 feet above sea level NGVD29
The depth of the well is 106 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



Breaks in the plot represent a gap of at least one calendar year between two consecutive points.

Water Resources

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 = • 320547103065702

Save file of selected sites to local disk for future upload

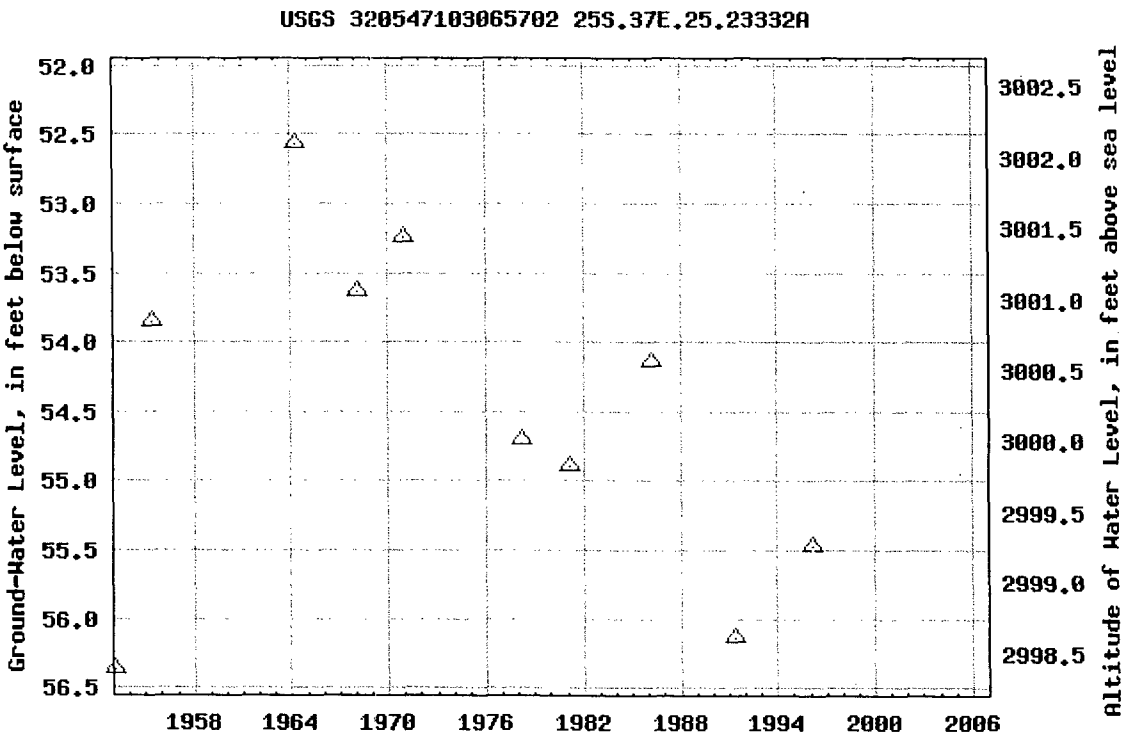
USGS 320547103065702 25S.37E.25.23332A

Available data for this site Ground-water: Levels GO

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°05'47", Longitude 103°06'57" NAD27
Land-surface elevation 3,054.70 feet above sea level NGVD29
The depth of the well is 62 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



Breaks in the plot represent a gap of at least one calendar year between two consecutive points.

APPENDIX B

Analytical Report

ENVIRONMENTAL LAB OF

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: Pogo/ West Dollarhide Flowline Leak

Project Number: 2564

Location: Lea County, NM

Lab Order Number: 6A25007

Report Date: 02/01/06

Highlander Environmental Corp.	Project: Pogo/ West Dollarhide Flowline Leak	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2564	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	02/01/06 10:17

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH-1 0-0.5'	6A25007-01	Soil	01/24/06 00:00	01/24/06 17:20
AH-1 0.5-1.0'	6A25007-02	Soil	01/24/06 00:00	01/24/06 17:20
AH-1 1.5-2.0'	6A25007-03	Soil	01/24/06 00:00	01/24/06 17:20
AH-1 2.0-2.5'	6A25007-04	Soil	01/24/06 00:00	01/24/06 17:20
AH-2 0-0.5'	6A25007-05	Soil	01/24/06 00:00	01/24/06 17:20
AH-2 1.0'	6A25007-06	Soil	01/24/06 00:00	01/24/06 17:20
AH-3 0-0.5'	6A25007-07	Soil	01/24/06 00:00	01/24/06 17:20
AH-3 1.0'	6A25007-08	Soil	01/24/06 00:00	01/24/06 17:20
AH-4 0-0.5'	6A25007-09	Soil	01/24/06 00:00	01/24/06 17:20
AH-4 1.0'	6A25007-10	Soil	01/24/06 00:00	01/24/06 17:20
AH-5 0-0.5'	6A25007-11	Soil	01/24/06 00:00	01/24/06 17:20
AH-5 1.0'	6A25007-12	Soil	01/24/06 00:00	01/24/06 17:20

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Pogo/ West Dollarhide Flowline Leak	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2564	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	02/01/06 10:17

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-1 0-0.5' (6A25007-01) Soil									
Gasoline Range Organics C6-C12	**4140**	10.0	mg/kg dry	1	EA62514	01/25/06	01/27/06	EPA 8015M	
Diesel Range Organics >C12-C35	**6660**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**10800**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*144 %*	*70-130*		"	"	"	"	*S-04*
Surrogate: 1-Chlorooctadecane		*112 %*	*70-130*		"	"	"	"	
AH-1 0.5-1.0' (6A25007-02) Soil									
Gasoline Range Organics C6-C12	**119**	10.0	mg/kg dry	1	EA62514	01/25/06	01/27/06	EPA 8015M	
Diesel Range Organics >C12-C35	**310**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**429**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*137 %*	*70-130*		"	"	"	"	*S-04*
Surrogate: 1-Chlorooctadecane		*129 %*	*70-130*		"	"	"	"	
AH-1 1.5-2.0' (6A25007-03) Soil									
Gasoline Range Organics C6-C12	**73.8**	10.0	mg/kg dry	1	EA62514	01/25/06	01/27/06	EPA 8015M	
Diesel Range Organics >C12-C35	**175**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**249**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*131 %*	*70-130*		"	"	"	"	*S-04*
Surrogate: 1-Chlorooctadecane		*122 %*	*70-130*		"	"	"	"	
AH-2 0-0.5' (6A25007-05) Soil									
Gasoline Range Organics C6-C12	**16000**	100	mg/kg dry	10	EA62514	01/25/06	01/30/06	EPA 8015M	
Diesel Range Organics >C12-C35	**28000**	100	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**44000**	100	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*32.2 %*	*70-130*		"	"	"	"	*S-06*
Surrogate: 1-Chlorooctadecane		*31.4 %*	*70-130*		"	"	"	"	*S-06*
AH-2 1.0' (6A25007-06) Soil									
Gasoline Range Organics C6-C12	**1550**	10.0	mg/kg dry	1	EA62514	01/25/06	01/27/06	EPA 8015M	
Diesel Range Organics >C12-C35	**2740**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**4290**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*144 %*	*70-130*		"	"	"	"	*S-04*
Surrogate: 1-Chlorooctadecane		*144 %*	*70-130*		"	"	"	"	*S-04*

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Pogo/ West Dollarhide Flowline Leak	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2564	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	02/01/06 10:17

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-3 0-0.5' (6A25007-07) Soil									
Gasoline Range Organics C6-C12	**J [9.44]**	10.0	mg/kg dry	1	EA62514	01/25/06	01/27/06	EPA 8015M	J
Diesel Range Organics >C12-C35	**129**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**129**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*129 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*119 %*	*70-130*		"	"	"	"	
AH-3 1.0' (6A25007-08) Soil									
Gasoline Range Organics C6-C12	**ND**	10.0	mg/kg dry	1	EA62514	01/25/06	01/27/06	EPA 8015M	
Diesel Range Organics >C12-C35	**29.8**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**29.8**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*130 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*119 %*	*70-130*		"	"	"	"	
AH-4 0-0.5' (6A25007-09) Soil									
Gasoline Range Organics C6-C12	**192**	10.0	mg/kg dry	1	EA62514	01/25/06	01/27/06	EPA 8015M	
Diesel Range Organics >C12-C35	**1890**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**2080**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*131 %*	*70-130*		"	"	"	"	*S-04*
Surrogate: 1-Chlorooctadecane		*138 %*	*70-130*		"	"	"	"	*S-04*
AH-4 1.0' (6A25007-10) Soil									
Gasoline Range Organics C6-C12	**19.5**	10.0	mg/kg dry	1	EA62514	01/25/06	01/27/06	EPA 8015M	
Diesel Range Organics >C12-C35	**250**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**270**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*130 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*123 %*	*70-130*		"	"	"	"	
AH-5 0-0.5' (6A25007-11) Soil									
Gasoline Range Organics C6-C12	**2290**	10.0	mg/kg dry	1	EA62514	01/25/06	01/27/06	EPA 8015M	
Diesel Range Organics >C12-C35	**5060**	10.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**7350**	10.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*171 %*	*70-130*		"	"	"	"	*S-04*
Surrogate: 1-Chlorooctadecane		*153 %*	*70-130*		"	"	"	"	*S-04*

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Pogo/ West Dollarhide Flowline Leak	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2564	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	02/01/06 10:17

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-5 1.0' (6A25007-12) Soil									
Gasoline Range Organics C6-C12	**2700**	20.0	mg/kg dry	2	EA62514	01/25/06	01/27/06	EPA 8015M	
Diesel Range Organics >C12-C35	**7520**	20.0	"	"	"	"	"	"	
Total Hydrocarbon C6-C35	**10200**	20.0	"	"	"	"	"	"	
Surrogate: 1-Chlorooctane		*77.6 %*	*70-130*		"	"	"	"	
Surrogate: 1-Chlorooctadecane		*63.2 %*	*70-130*		"	"	"	"	*S-06*

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Pogo/ West Dollarhide Flowline Leak	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2564	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	02/01/06 10:17

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-1 0-0.5' (6A25007-01) Soil									
Chloride	**3520**	50.0	mg/kg	100	EA62605	01/26/06	01/26/06	EPA 300.0	
% Moisture	**12.1**	0.1	%	1	EA62603	01/25/06	01/26/06	% calculation	
AH-1 0.5-1.0' (6A25007-02) Soil									
Chloride	**2120**	50.0	mg/kg	100	EA62605	01/26/06	01/26/06	EPA 300.0	
% Moisture	**13.5**	0.1	%	1	EA62603	01/25/06	01/26/06	% calculation	
AH-1 1.5-2.0' (6A25007-03) Soil									
Chloride	**2210**	50.0	mg/kg	100	EA62605	01/26/06	01/26/06	EPA 300.0	
% Moisture	**14.6**	0.1	%	1	EA62603	01/25/06	01/26/06	% calculation	
AH-1 2.0-2.5' (6A25007-04) Soil									
Chloride	**2730**	50.0	mg/kg	100	EA62605	01/26/06	01/26/06	EPA 300.0	
AH-2 0-0.5' (6A25007-05) Soil									
Chloride	**292**	10.0	mg/kg	20	EA62605	01/26/06	01/26/06	EPA 300.0	
% Moisture	**10.3**	0.1	%	1	EA62603	01/25/06	01/26/06	% calculation	
AH-2 1.0' (6A25007-06) Soil									
Chloride	**2900**	50.0	mg/kg	100	EA62605	01/26/06	01/26/06	EPA 300.0	
% Moisture	**14.3**	0.1	%	1	EA62603	01/25/06	01/26/06	% calculation	
AH-3 0-0.5' (6A25007-07) Soil									
Chloride	**3290**	50.0	mg/kg	100	EA62605	01/26/06	01/26/06	EPA 300.0	
% Moisture	**11.0**	0.1	%	1	EA62603	01/25/06	01/26/06	% calculation	
AH-3 1.0' (6A25007-08) Soil									
Chloride	**3670**	50.0	mg/kg	100	EA62605	01/26/06	01/26/06	EPA 300.0	
% Moisture	**12.2**	0.1	%	1	EA62603	01/25/06	01/26/06	% calculation	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Pogo/ West Dollarhide Flowline Leak	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2564	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	02/01/06 10:17

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-4 0-0.5' (6A25007-09) Soil									
Chloride	**4550**	100	mg/kg	200	EA62605	01/26/06	01/26/06	EPA 300.0	
% Moisture	**13.7**	0.1	%	1	EA62603	01/25/06	01/26/06	% calculation	
AH-4 1.0' (6A25007-10) Soil									
Chloride	**3870**	100	mg/kg	200	EA62605	01/26/06	01/26/06	EPA 300.0	
% Moisture	**15.7**	0.1	%	1	EA62603	01/25/06	01/26/06	% calculation	
AH-5 0-0.5' (6A25007-11) Soil									
Chloride	**2000**	50.0	mg/kg	100	EA62605	01/26/06	01/26/06	EPA 300.0	
% Moisture	**10.9**	0.1	%	1	EA62603	01/25/06	01/26/06	% calculation	
AH-5 1.0' (6A25007-12) Soil									
Chloride	**3150**	50.0	mg/kg	100	EA62605	01/26/06	01/26/06	EPA 300.0	
% Moisture	**12.8**	0.1	%	1	EA62603	01/25/06	01/26/06	% calculation	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Pogo/ West Dollarhide Flowline Leak	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 2564	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	02/01/06 10:17

Volatile Organic Compounds by EPA Method 8260B

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-1 0-0.5' (6A25007-01) Soil									
Benzene	**12100**	1000	ug/kg dry	1000	EA62609	01/26/06	01/28/06	EPA 8260B	
Toluene	**65300**	1000	"	"	"	"	"	"	
Ethylbenzene	**30200**	1000	"	"	"	"	"	"	
Xylene (p/m)	**63200**	1000	"	"	"	"	"	"	
Xylene (o)	**33200**	1000	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*112 %*	*70-139*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*110 %*	*52-149*		"	"	"	"	
Surrogate: Toluene-d8		*99.8 %*	*76-125*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*109 %*	*66-145*		"	"	"	"	
AH-3 0-0.5' (6A25007-07) Soil									
Benzene	**J [33.9]**	50.0	ug/kg dry	50	EA62609	01/26/06	01/28/06	EPA 8260B	J
Toluene	**123**	50.0	"	"	"	"	"	"	
Ethylbenzene	**68.8**	50.0	"	"	"	"	"	"	
Xylene (p/m)	**170**	50.0	"	"	"	"	"	"	
Xylene (o)	**108**	50.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*123 %*	*70-139*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*102 %*	*52-149*		"	"	"	"	
Surrogate: Toluene-d8		*99.4 %*	*76-125*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*108 %*	*66-145*		"	"	"	"	
AH-4 0-0.5' (6A25007-09) Soil									
Benzene	**357**	25.0	ug/kg dry	25	EA62609	01/26/06	01/28/06	EPA 8260B	
Toluene	**1320**	25.0	"	"	"	"	"	"	
Ethylbenzene	**490**	25.0	"	"	"	"	"	"	
Xylene (p/m)	**1040**	25.0	"	"	"	"	"	"	
Xylene (o)	**602**	25.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*124 %*	*70-139*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*106 %*	*52-149*		"	"	"	"	
Surrogate: Toluene-d8		*97.0 %*	*76-125*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*112 %*	*66-145*		"	"	"	"	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

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 EA62514 - Solvent Extraction (GC)										
Blank (EA62514-BLK1)				Prepared: 01/25/06 Analyzed: 01/27/06						
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	"							
Total Hydrocarbon C6-C35	ND	10.0	"							
Surrogate: 1-Chlorooctane	*54.8*		*mg/kg*	*50.0*		*110*	*70-130*			
Surrogate: 1-Chlorooctadecane	*48.9*		*"*	*50.0*		*97.8*	*70-130*			
LCS (EA62514-BS1)				Prepared: 01/25/06 Analyzed: 01/27/06						
Gasoline Range Organics C6-C12	484	10.0	mg/kg wet	500		96.8	75-125			
Diesel Range Organics >C12-C35	592	10.0	"	500		118	75-125			
Total Hydrocarbon C6-C35	1080	10.0	"	1000		108	75-125			
Surrogate: 1-Chlorooctane	*57.2*		*mg/kg*	*50.0*		*114*	*70-130*			
Surrogate: 1-Chlorooctadecane	*49.1*		*"*	*50.0*		*98.2*	*70-130*			
Calibration Check (EA62514-CCV1)				Prepared: 01/25/06 Analyzed: 01/27/06						
Gasoline Range Organics C6-C12	496		mg/kg	500		99.2	80-120			
Diesel Range Organics >C12-C35	537		"	500		107	80-120			
Total Hydrocarbon C6-C35	1030		"	1000		103	80-120			
Surrogate: 1-Chlorooctane	*62.1*		*"*	*50.0*		*124*	*70-130*			
Surrogate: 1-Chlorooctadecane	*50.9*		*"*	*50.0*		*102*	*70-130*			
Matrix Spike (EA62514-MS1)	**Source: 6A25011-01**			Prepared: 01/25/06 Analyzed: 01/27/06						
Gasoline Range Organics C6-C12	647	10.0	mg/kg dry	628	7.79	102	75-125			
Diesel Range Organics >C12-C35	784	10.0	"	628	153	100	75-125			
Total Hydrocarbon C6-C35	1430	10.0	"	1260	153	101	75-125			
Surrogate: 1-Chlorooctane	*62.7*		*mg/kg*	*50.0*		*125*	*70-130*			
Surrogate: 1-Chlorooctadecane	*54.8*		*"*	*50.0*		*110*	*70-130*			
Matrix Spike Dup (EA62514-MSD1)	**Source: 6A25011-01**			Prepared: 01/25/06 Analyzed: 01/27/06						
Gasoline Range Organics C6-C12	646	10.0	mg/kg dry	628	7.79	102	75-125	0.155	20	
Diesel Range Organics >C12-C35	778	10.0	"	628	153	99.5	75-125	0.768	20	
Total Hydrocarbon C6-C35	1420	10.0	"	1260	153	101	75-125	0.702	20	
Surrogate: 1-Chlorooctane	*62.4*		*mg/kg*	*50.0*		*125*	*70-130*			
Surrogate: 1-Chlorooctadecane	*54.7*		*"*	*50.0*		*109*	*70-130*			

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 EA62603 - General Preparation (Prep)										
Blank (EA62603-BLK1)				Prepared & Analyzed: 01/26/06						
% Solids	100		%							
Duplicate (EA62603-DUP1)	**Source: 6A25001-01**			Prepared & Analyzed: 01/26/06						
% Solids	98.4		%		98.4			0.00	20	
Duplicate (EA62603-DUP2)	**Source: 6A25007-06**			Prepared & Analyzed: 01/26/06						
% Solids	85.5		%		85.7			0.234	20	
Batch EA62605 - Water Extraction										
Blank (EA62605-BLK1)				Prepared & Analyzed: 01/26/06						
Chloride	ND	0.500	mg/kg							
LCS (EA62605-BS1)				Prepared & Analyzed: 01/26/06						
Chloride	8.36		mg/L	10.0		83.6	80-120			
Calibration Check (EA62605-CCV1)				Prepared & Analyzed: 01/26/06						
Chloride	8.21		mg/L	10.0		82.1	80-120			
Duplicate (EA62605-DUP1)	**Source: 6A25005-03**			Prepared & Analyzed: 01/26/06						
Chloride	906	20.0	mg/kg		951			4.85	20	

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA62609 - EPA 5030C (GCMS)										
Blank (EA62609-BLK1)				Prepared: 01/26/06 Analyzed: 01/28/06						
Benzene	ND	25.0	ug/kg wet							
Toluene	ND	25.0	"							
Ethylbenzene	ND	25.0	"							
Xylene (p/m)	ND	25.0	"							
Xylene (o)	ND	25.0	"							
Surrogate: Dibromofluoromethane	*58.4*		*ug/kg*	*50.0*		*117*	*70-139*			
Surrogate: 1,2-Dichloroethane-d4	*48.2*		*"*	*50.0*		*96.4*	*52-149*			
Surrogate: Toluene-d8	*49.4*		*"*	*50.0*		*98.8*	*76-125*			
Surrogate: 4-Bromofluorobenzene	*51.7*		*"*	*50.0*		*103*	*66-145*			
LCS (EA62609-BS1)				Prepared: 01/26/06 Analyzed: 01/28/06						
Benzene	1290	25.0	ug/kg wet	1250		103	70-130			
Toluene	1310	25.0	"	1250		105	70-130			
Ethylbenzene	1270	25.0	"	1250		102	70-130			
Xylene (p/m)	2530	25.0	"	2500		101	70-130			
Xylene (o)	1310	25.0	"	1250		105	70-130			
Surrogate: Dibromofluoromethane	*60.9*		*ug/kg*	*50.0*		*122*	*70-139*			
Surrogate: 1,2-Dichloroethane-d4	*52.2*		*"*	*50.0*		*104*	*52-149*			
Surrogate: Toluene-d8	*50.5*		*"*	*50.0*		*101*	*76-125*			
Surrogate: 4-Bromofluorobenzene	*51.1*		*"*	*50.0*		*102*	*66-145*			
Calibration Check (EA62609-CCV1)				Prepared: 01/26/06 Analyzed: 01/28/06						
Toluene	52.5		ug/kg	50.0		105	70-130			
Ethylbenzene	51.6		"	50.0		103	70-130			
Surrogate: Dibromofluoromethane	*54.9*		*"*	*50.0*		*110*	*70-139*			
Surrogate: 1,2-Dichloroethane-d4	*48.2*		*"*	*50.0*		*96.4*	*52-149*			
Surrogate: Toluene-d8	*48.2*		*"*	*50.0*		*96.4*	*76-125*			
Surrogate: 4-Bromofluorobenzene	*51.6*		*"*	*50.0*		*103*	*66-145*			

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA62609 - EPA 5030C (GCMS)										
Matrix Spike (EA62609-MS1)	**Source: 6A25015-01**			Prepared: 01/26/06 Analyzed: 01/30/06						
Benzene	1350	25.0	ug/kg dry	1350	ND	100	70-130			
Toluene	1370	25.0	"	1350	ND	101	70-130			
Ethylbenzene	1270	25.0	"	1350	ND	94.1	70-130			
Xylene (p/m)	2550	25.0	"	2700	ND	94.4	70-130			
Xylene (o)	1310	25.0	"	1350	ND	97.0	70-130			
Surrogate: Dibromofluoromethane	*59.9*		*ug/kg*	*50.0*		*120*	*70-139*			
Surrogate: 1,2-Dichloroethane-d4	*51.0*		*"*	*50.0*		*102*	*52-149*			
Surrogate: Toluene-d8	*50.7*		*"*	*50.0*		*101*	*76-125*			
Surrogate: 4-Bromofluorobenzene	*52.9*		*"*	*50.0*		*106*	*66-145*			
Matrix Spike Dup (EA62609-MSD1)	**Source: 6A25015-01**			Prepared: 01/26/06 Analyzed: 01/30/06						
Benzene	1420	25.0	ug/kg dry	1350	ND	105	70-130	4.88	20	
Toluene	1430	25.0	"	1350	ND	106	70-130	4.83	20	
Ethylbenzene	1370	25.0	"	1350	ND	101	70-130	7.07	20	
Xylene (p/m)	2770	25.0	"	2700	ND	103	70-130	8.71	20	
Xylene (o)	1440	25.0	"	1350	ND	107	70-130	9.80	20	
Surrogate: Dibromofluoromethane	*63.0*		*ug/kg*	*50.0*		*126*	*70-139*			
Surrogate: 1,2-Dichloroethane-d4	*53.2*		*"*	*50.0*		*106*	*52-149*			
Surrogate: Toluene-d8	*51.4*		*"*	*50.0*		*103*	*76-125*			
Surrogate: 4-Bromofluorobenzene	*54.5*		*"*	*50.0*		*109*	*66-145*			

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: 2/1/2006

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.

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559 Fax (432) 682-3946

CLIENT NAME: P060 SITE MANAGER: Ike Tavarez

PROJECT NO.: 2564 PROJECT NAME: P060 / West Dollarhide Flowline Leak

Lea County, NM

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH TX1005 / 418.1 / MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC-MS Vol. 8240/8260/624	GC-MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 608/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
425207																													
-01	11/24/06		S		X	AH-1 (0-0.5')	1				X		X		X											X			
-02			S		X	AH-1 (0.5'-1.0')	1				X				X											X			
-03			S		X	AH-1 (1.5'-2.0')	1				X				X											X			
-04			S		X	AH-1 (2.0'-2.5')	1				X															X			
-05			S		X	AH-2 (0-0.5')	1				X				X											X			
-06			S		X	AH-2 (1.0')	1				X				X											X			
-07			S		X	AH-3 (0-0.5')	1				X		X		X											X			
-08			S		X	AH-3 (1.0')	1				X				X											X			
-09			S		X	AH-4 (0-0.5')	1				X		X		X											X			
-10			S		X	AH-4 (1.0')	1				X				X											X			

RELINQUISHED BY: (Signature) Date: 11-24-06 Time: 5:20 RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Sign) Ray Tayk Date: 11/24/06 Time: 3:00

SAMPLE SHIPPED BY: (Circle) FEDEX HUS AIRBILL #: HAND DELIVERED UPS OTHER:

RECEIVING LABORATORY: ELT RECEIVED BY: (Signature)

ADDRESS: CITY: Odessa STATE: TX ZIP: CONTACT: PHONE: DATE: 11/24/06 TIME: 5:20

HIGHLANDER CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS: label 4.0°C

Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559 Fax (432) 682-3946

CLIENT NAME: P060 SITE MANAGER: Ike Tavarez

PROJECT NO.: 2564 PROJECT NAME: P060 / West Dollarhide Flowline Leak

Lea County, NM

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	ANALYSIS REQUEST (Circle or Specify Method No.): 8021/5030	MTBE 8020/602	TPH 418.1 / 8015 Mod. / TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 608/808	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
0425004																													
-4	1/24/06		S		X	AH-5 (0-0.5')	1				X				X											X			
12	1/24/06		S		X	AH-5 (1.0')	1				X				X											X			

RELINQUISHED BY: (Signature) Date: 1-24-06 Time: 5:20 RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Sign) Date: Time:

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS AIRBILL #
HAND DELIVERED UPS OTHER:

RECEIVING LABORATORY: ELT RECEIVED BY: (Signature)
ADDRESS:
CITY: Odessa STATE: TX ZIP:
CONTACT: PHONE: DATE: 1/24/06 TIME: 5:20

HIGHLANDER CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

MATRIX: W–Water A–Air SD–Solid (S–Soil) SL–Sludge O–Other

REMARKS: label 4.0°C

Please Fill out all copies – Laboratory retains yellow copy – Return original copy to Highlander Environmental Corp. – Project Manager retains pink copy – Accounting receives Gold copy.

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

Client: Highlander

Date/Time: 11/24/06 5:20

Order #: 6A25009

Initials: CK

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	4.0 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

Variance Documentation:

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

Regarding:

Corrective Action Taken:

APPENDIX C

New Mexico Oil Conservation Division
Form C-141

District I - (505) 393-6161
P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 South First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

State of New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-141
Originated 2/13/97

Submit 2 copies to Appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action
OPERATOR
☑ Initial Report ☐ Final Report

Name: ARCH Pet. INC	Contact: GARY WELLS
Address:	Telephone No.: 432-631-0134
Facility Name: West Dollarhide Drinkard Unit	Facility Type: Pumping Well
Surface Owner: George Willis	Mineral Owner: STATE API# 3002512358000	Lease No.: 300-00705-00

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
C	04	25-S	38-E	667	NORTH	781	E	LEA NM.

NATURE OF RELEASE

Type of Release: Oil & S/W	Volume of Release: N/A	Volume Recovered: 15 BBLS
Source of Release: Flow line Leak	Date and Hour of Occurrence: 1/15/06	Date and Hour of Discovery: 1/15/06 3:30 PM
Was Immediate Notice Given? ☐ Yes ☑ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☑ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully. (Attach Additional Sheets If Necessary)

Describe Cause of Problem and Remedial Action Taken. (Attach Additional Sheets If Necessary) GPS - 32° - 10 - 17 N
103° - 04 - 16 W

Flow line Leak - Shut well Repair Flowline - PU. FL off Ground

Describe Area Affected and Cleanup Action Taken. (Attach Additional Sheets If Necessary)

P.U FL off Ground Fence around Leak. Will turn over to our HES man for Plan of Action to Clean up Leak.

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 poses 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: Gary Wells	OIL CONSERVATION DIVISION
Printed Name: GARY WELLS	Approved by District Supervisor:
Title: PROD. FOREMAN	Approval Date: / Expiration Date:
Date: 1/16/05 Phone: 432-631-0134	Conditions of Approval: / Attached ☐