GW - 20

REPORTS

YEAR(S):

2004

COMPREHENSIVE GROUNDWATER REPORT
MALJAMAR GAS PLANT
MALJAMAR, NEW MEXICO

Prepared for

ConocoPhillips

600 North Dairy Ashford
Threadneedle Office
Houston, TX 77079

Prepared by

MAXIM
TECHNOLOGIES INC®

10601 Lomas Blvd. NE, Suite 106
Albuquerque, NM 87112

March 1, 2004

ConocoPhillips

Neal Goates
Site Manager
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March 1, 2004

Mr. Wayne Price
Oil Conservation Division
NM Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87504

**RE: Comprehensive Groundwater Report
Maljamar Gas Plant, Maljamar, New Mexico**

Dear Mr. Price:

Pursuant to our January 26, 2004 meeting, please find attached one copy of the above referenced report for you review and concurrence. The report chronologically presents all work performed to date at the Maljamar Gas Plant relative to groundwater impacts, and presents the proposed path forward as discussed during the January 26, 2004 meeting.

If you have any questions or comments, please contact either myself at the number above or Clyde Yancey with Maxim at 505-237-8440. We would appreciate your earliest review of this document.

Sincerely,

Neal Goates

Neal Goates
Site Manager
Risk Management and Remediation
ConocoPhillips

cc: w/attachment
Joyce Miley, ConocoPhillips, Houston, TX
Suzanne Holland, ConocoPhillips, Houston, TX
Chris Williams, NMOCD, Hobbs, NM
Clyde Yancey, Maxim, Albuquerque, NM
Greg Pope, Maxim, Midland, TX

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March 1, 2004

Mr. Wayne Price
Oil Conservation Division
NM Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87504

Re: Comprehensive Groundwater Report
Maljamar Gas Plant, Maljamar, New Mexico
Maxim Project No. 3690074

Dear Mr. Price:

On behalf of ConocoPhillips, Inc. (CoP), Maxim Technologies, Inc. (Maxim) is submitting this letter report to summarize all work to date concerning groundwater conditions underlying the Maljamar Gas Plant (previously owned by CoP but now owned by Frontier Energy). The gas plant is located in Lea County, New Mexico [Sec 21, T17S, R32E; Figure 1]. This report includes a summary of previous reports and presents new information in describing current site conditions. From this comprehensive report, Maxim proposes a path forward plan to expand the recovery of condensate and increase the understanding of groundwater conditions in the vicinity of the gas plant.

BACKGROUND

The following chronology provides a summary of reports that Maxim has, on behalf of CoP, submitted to the New Mexico Oil Conservation Division (NMOCD). A compilation of all monitoring well construction and groundwater quality data are presented in Tables 1 and 2, respectively. Well locations are shown on Figure 1.

8/8/2000 Subsurface Investigation Report

A subsurface investigation was conducted to assess the potential for impacts to the subsurface underlying two bermed areas where condensate was historically stored and a 15-barrel condensate release occurred February 13, 2000. The assessment consisted of drilling, collecting and describing soil samples for field screening and laboratory analysis of 12 soil borings. Groundwater was encountered at approximately 93 feet below ground surface (fbgs). One monitoring well (MW-1) was drilled to a depth of 97 fbgs (Table 1 and Appendix A). The following day after well installation, groundwater rose to 77 fbgs. Groundwater quality results are presented in Table 2.

The following conclusions were presented in the report:

- Data indicated that the soil excavation performed by CoP most likely captured the 15 barrels of condensate released in February 2000.
- All soil borings that encountered contamination within and around Areas 1 and 2 contained clean soil material prior to encountering groundwater.
- Impacts from the historical release are limited to the eastern half of Area 1 and the western half of Area 2.
- Groundwater is most likely under confined conditions.
- Groundwater contamination was encountered southeast (most likely downgradient of Areas 1 and 2). However, no definitive source term can be identified within Areas 1 and 2 because no contaminate was tracked from surface to groundwater.

7/20/2001 Interim Investigation Groundwater Report

A groundwater investigation was initiated to define groundwater impacts at CoP's Maljamar Gas Plant. Five monitoring wells were installed (MW-4, 5, 7, 8 and 9; Table 1 and Appendix A). Based on results from the first 3 wells (MW-1, 2, and 3; Table 1 and Appendix A), it was thought groundwater flow was to the southwest. However, with the installation of the additional wells, groundwater was determined to flow toward the south-southeast. Groundwater gradient appeared to increase to the west of the gas plant indicating the possible presence of recharge source west or northwest of the plant. All wells exhibited the presence of hydrocarbon (Table 2).

11/11/2002 Interim Groundwater Investigation Report

The intent of the groundwater investigation was to further delineate the groundwater flow system to the north, northeast, east, southeast, south, and southwest of the Maljamar Gas Plant and refine the conceptual hydrogeologic model of the area around the gas plant. Six additional temporary monitor wells (MW-15, 16, 17, 18, 19, and 20) were installed (Table 1 and Appendix A). Results of the investigation indicate:

- The calculated average groundwater gradient is 0.016 foot per foot.
- Water quality data from MW-10, 12, 14, 16, 18, and 20 indicated elevated chloride and total dissolved solids concentrations, suggesting additional density-driven stratification of fluids within the mound (Table 2).
- Relatively high specific conductance was observed in groundwater at MW-1, 12, 18 and 20. Interfaces of increasingly saline groundwater were observed in the water columns of MW-10, 11, 12, and 14.

- The potentiometric map generated from all September 2002 water level elevations indicated a well-defined groundwater mound with a relatively uniform gradient field that emanates radially away from a point source toward the north, east, and south. To the west, groundwater was not encountered during the March 2002 drilling program. It is thought the source of the groundwater mound is located within the area circumscribed by the 3,930-foot above mean sea level (MSL) equipotential line shown in Figure 2.

The following chronology provides a summary of reports not submitted to NMOCD until now. The full reports are found in Appendices B through D.

1/22/2003 Borehole Geophysical Investigation (Appendix B; with Logs on CD)

A borehole geophysical investigation was initiated to ascertain the subsurface stratigraphy to facilitate free condensate removal and any subsequent groundwater remediation efforts. The study indicated mapable units, exhibiting lateral and vertical correlation properties were underlying the gas plant. This information was also used to locate a skimmer pump well (SK-2) adjacent to MW-7, the monitoring well exhibiting the thickest column of free phase condensate.

3/11/2003 Surface Geophysical Investigation (Appendix C)

A magnetometer survey covering approximately 10 acres over the groundwater mound, that underlies the Maljamar Gas Plant, was performed to locate suspected abandoned wells in area. The survey resulted in an anomaly consistent with an abandoned metal-cased well. A smaller, high-resolution electromagnetic metal detection survey over the anomalous area indicated by the magnetic survey resulted in anomalies consistent with buried metallic flow lines (4). Excavation to a 12-foot depth found no abandoned well.

11/05/2003 Results of Maljamar Aquifer Test Analysis, Water Balance Development and Groundwater Modeling (Appendix D)

A pumping test was performed to gather hydrogeologic data from the uppermost-saturated zone, exhibiting both condensate and chloride impacts, in order to develop a remediation plan. The data were also used to develop a water balance for the uppermost aquifer and an interpretive groundwater flow model to aid in estimating the effects of pumping a proposed well to be sited near wells SK-1 and MW-7.

Aquifer testing and groundwater modeling results indicated a single well screened across both shallow sandstone units in the immediate vicinity of wells SK-1 and MW-7 will probably be capable of pumping approximately 1 to 2 gallons per minute (gpm). Modeling results show that pumping from a remedial extraction well at a rate of 1.0 gpm will result in a formational drawdown of approximately 17 feet. This pumping rate would generate a cone of depression with a radius of approximately 1,000 feet about the extraction well.

CONCEPTUAL MODEL

The following section describes a three-dimensional conceptual model of the subsurface geologic and hydrogeologic conditions present beneath the Maljamar Gas Plant (Figure 1) and the physical flow system of the two uppermost water-bearing sandstones underlying the Site. Maxim reviewed available pertinent data collected during the previous investigations of the Site including surface and subsurface geophysical logs, aquifer test data, boring logs, cross sections, and potentiometric maps to produce this conceptual model.

Previous groundwater investigations and sampling performed at the Site have revealed that groundwater occurs under confining conditions in the vicinity of the Site at approximately 70 to 95 fbgs within two sand units ranging in thickness from several feet to no more than 10 to 12 feet thick (Appendix A). At a depth of approximately 72 fbgs in the vicinity of wells SK-1 and MW-7 (Figure 1), an 11-foot-thick upper water-bearing sandstone layer overlies a 4-foot-thick shale layer, which in turn overlies a lower 13-foot-thick water-bearing sandstone layer. Generally, the overlying deposits consist of approximately 60 feet of light colored sands and sandy silts with occasional caliche interbeds, shale stringers and intermittent gravels representative of the Quaternary age alluvium/bolson fill, which are underlain by approximately 30 to 50 feet of green to grayish-green to dark green silty shales of the Triassic age Chinle Shale. The Tertiary-age Ogallala Formation outcrops in a prominent escarpment (Mescalero Ridge) approximately four miles to the northeast of the Site, where the Ogallala unconformably overlies the Chinle shales. The overlying interbedded shale units presumably confine the groundwater contained in the underlying water-bearing sandstone units. The borehole geophysics investigation run on all 19 two-inch monitor wells (Table 1) at the Site on March 11, 2003 (Appendix C) indicated that the subsurface stratigraphy is complex, consisting of irregular, interbedded sands, shales and silts deposited on an erosional surface. Figure 3 is included as a conceptual cross section depicting the subsurface conditions present at the Site.

The groundwater potentiometric surface in the immediate vicinity of the Site is mounded, with the center of the mound occurring west of the Site (Figure 2). In exploration borings completed approximately 1000 feet west, northwest, and southwest of the mound centroid, no water-bearing sand interval was encountered indicating the mound is truncated toward the west, which is most likely due to a subsurface stratigraphic pinch-out or fault. To the north, south and east of the mound centroid, groundwater occurs under unconfined conditions, demonstrating that further away from the mound recharge zone, confining pressures diminish. The upper water-bearing sandstone appears to contain groundwater in a saturated thickness of approximately 8 feet immediately south and southeast of the plant. This groundwater lens is covered by a layer of condensate with an apparent thickness of 4 feet (as observed in MW-7), indicating a possible total of as much as 12 feet of fluid in the upper 11-foot-thick water-bearing zone. Because the actual thickness of condensate in the upper sandstone is unknown, it is uncertain if fluids in this zone are confined or unconfined. Water levels in the lower water-bearing sandstone rise to approximately the same potentiometric level as in the upper sandstone, indicating that fluids contained in the lower water-bearing sandstone are confined.

In well SK-1, the lower fluid-bearing sandstone contains an apparent thickness of condensate of approximately 0.5 foot. Although the lateral extent of saturation in the shallow sandstone units is unknown, the mound is presumed to be continuous across its contoured extent.

The October 6, 2003, potentiometric data (Figure 2) show that groundwater elevations range from approximately 3,932 feet MSL in the mound centroid to approximately 3,900 feet MSL in the outlying wells located south and east of the Site. The average hydraulic gradient at the Site was calculated from this data set to be 0.0134 foot per foot, and the hydraulic gradient is shown to decrease radially from the approximate center of the mound in all directions except to the west.

Groundwater occurring in the vicinity of the Site is impacted with both free- and dissolved-phase hydrocarbon constituents with concentrations decreasing away from the mound centroid. The greatest thickness of condensate has been observed in well MW-7, with 4 feet measured during the most recent activities. The groundwater is also impacted by elevated chloride concentrations, which again decrease away from the center of the mound (Table 2).

CONCLUSIONS

On October 7 and 8, 2003, a constant-rate pumping test was conducted at the Maljamar Gas Plant to gather hydrogeologic data from the condensate- and chloride-impacted uppermost-saturated zone. The objective of aquifer testing was to develop site-specific values for aquifer characteristics including transmissivity, hydraulic conductivity, and storage coefficiency. These aquifer characteristics are necessary input parameters for the groundwater model and to design the most efficient remedial alternative. The objective of developing a water balance for the shallow aquifer was to help estimate the flux of water leaking from deeper hydrostratigraphic units and help determine the overall number of wells that may be necessary to deplete the observed groundwater mound in the shallow aquifer. The objective of groundwater modeling was to aid in assessing the potential effectiveness and limitations of the planned remediation well in drawing down the groundwater mound. The pumping test data was then used to develop a water balance for the uppermost aquifer and an interpretive groundwater flow model to aid in estimating the effects of pumping a well proposed for installation adjacent to well SK-1 (Figure 1). The pumping well is to be used to draw down the groundwater mound centered west of the Maljamar Gas Plant (Figure 2) in order to contain and extract both the condensate and chloride constituents in groundwater. The complete aquifer test report is included as Appendix D.

Well SK-1 was selected as the pumping well for the test and water level data were collected during the aquifer-testing period from both SK-1 and nearby observation well MW-7. These aquifer test data were compiled, imported into data analysis software and evaluated using standard curve matching and straight-line techniques.

Results of the water balance calculations (Appendix D) estimated a flux ranging from 1.3 to 8.0 gpm of water leaking into shallow sandstone units from underlying units. Modeling results show that pumping from a remedial extraction well at a rate of 1.0 gpm will result in a formational drawdown of approximately 17 feet. This pumping rate will generate a cone of depression of a radius of approximately 1000 feet about the extraction well (Figure 8 in Appendix D). Simulated formational drawdown is less than the drawdown that would be expected to occur in the actual pumping well. Aquifer testing and groundwater modeling results indicate that a single well screened across both shallow sandstone units at the location of well SK-1 will probably be capable of pumping approximately 1 to 2 gpm. A properly designed pumping well may be capable of pumping at a greater rate initially but would probably need to be valved back or pulsed once it has been operating for a while.

PROPOSED ACTION

Based on the results and conclusions of the aquifer testing, data analysis and groundwater modeling activities described above, Maxim proposes that a six-inch-diameter groundwater extraction well, screened across both groundwater-bearing sandstone units, be installed at the Site directly adjacent to existing wells MW-7 and SK-1. The new well shall be drilled a few feet below the base of the lowermost aquifer sandstone, creating a sump to allow for additional drawdown during pumping. Design of the well shall include a low water level cutoff switch to prevent pump damage should drawdown approach the pump intake depth, and a corresponding high water level switch to restart the pump when the groundwater levels have recovered. The pumping system design will also include a flow meter to accurately gauge the amount of fluids pumped from the well. Actual boring depth, length of screened interval and well completion parameters will be based on conditions observed in the field during drilling. A projected design of the proposed well is shown on Figure 4.

Prior to well pumping startup, a round of groundwater sampling and water level measurements is proposed for all Site groundwater monitoring wells. This task shall provide a baseline assessment of pre-pumping groundwater conditions and aid in determination of pumping effectiveness. Groundwater samples will be collected and submitted to an analytical laboratory for analyses of volatile organic compounds, semi-volatile organic compounds, major ions, total dissolved solids, and chloride.

Upon startup of well pumping, Maxim shall initiate a monitoring plan to include assessment of pumping effectiveness, maintenance of the pump system and disposal of the accumulated fluids. Water level measurements will be collected from wells adjacent to the pumping well on a weekly basis for a period of approximately four months or until a consistent equilibrium is achieved, and then monthly thereafter. Maintenance of the groundwater pumping system should be minimal and will be performed coincident with the water level measurement activities. Groundwater and condensate pumped from the well will be temporarily stored in an existing on-site storage tank and periodically transferred to the adjacent water flood system for re-injection. The maintenance of the pump system, monitoring of the storage tank levels, and transport and disposal of fluids will be coordinated through CoP's Southeastern New Mexico Business Unit for assistance and oversight.

After approximately two months of pumping system operation and water level data collection, Maxim will compile the data into the existing numerical model to assess pumping effectiveness and determine if the observed groundwater response agrees with the previous groundwater modeling results. Based on the results of this numerical model, adjustments to the pumping system can be initiated to increase pumping efficiency, if needed. A report of the numerical modeling results will be prepared and submitted to the NMOCD for review.

Upon completion of four months of system monitoring and numerical modeling evaluations, Maxim, on behalf of CoP, will propose a formal monitoring plan to the NMOCD. The plan will include a schedule for periodic Site monitoring, operation and maintenance of the system, and groundwater quality sampling to assess the effectiveness of the system.

If this work plan meets with your approval, Maxim, with CoP authorization will proceed to execute the proposed work. If you have any questions or require additional information, please contact Mr. Neal Goates of CoP at 832-379-6427 or Mr. Clyde Yancey at 505-237-8440.

Sincerely,

MAXIM TECHNOLOGIES, INC.

CLY for

Greg W. Pope
Hydrogeologist

Clyde L. Yancey

Clyde L. Yancey, P.G.
Senior Project Manager

Enclosures

Cc: Mr. Neal Goates, CoP
Mr. Chris Williams, New Mexico Oil Conservation Division – Hobbs, NM

REFERENCES

CoP C141 Report to the New Mexico Oil Conservation Division dated February 13, 2000.

Maxim Technologies, Inc. letter report entitled "Subsurface Investigation, Maljamar Gas Plant" to John E. Skopak, CoP, dated August 8, 2000.

Maxim Technologies, Inc. letter report entitled "Interim Groundwater Investigation Report for the CoP Maljamar Gas Plant, Maljamar, New Mexico" to Wayne Price, New Mexico Oil Conservation Division, dated July 20, 2001.

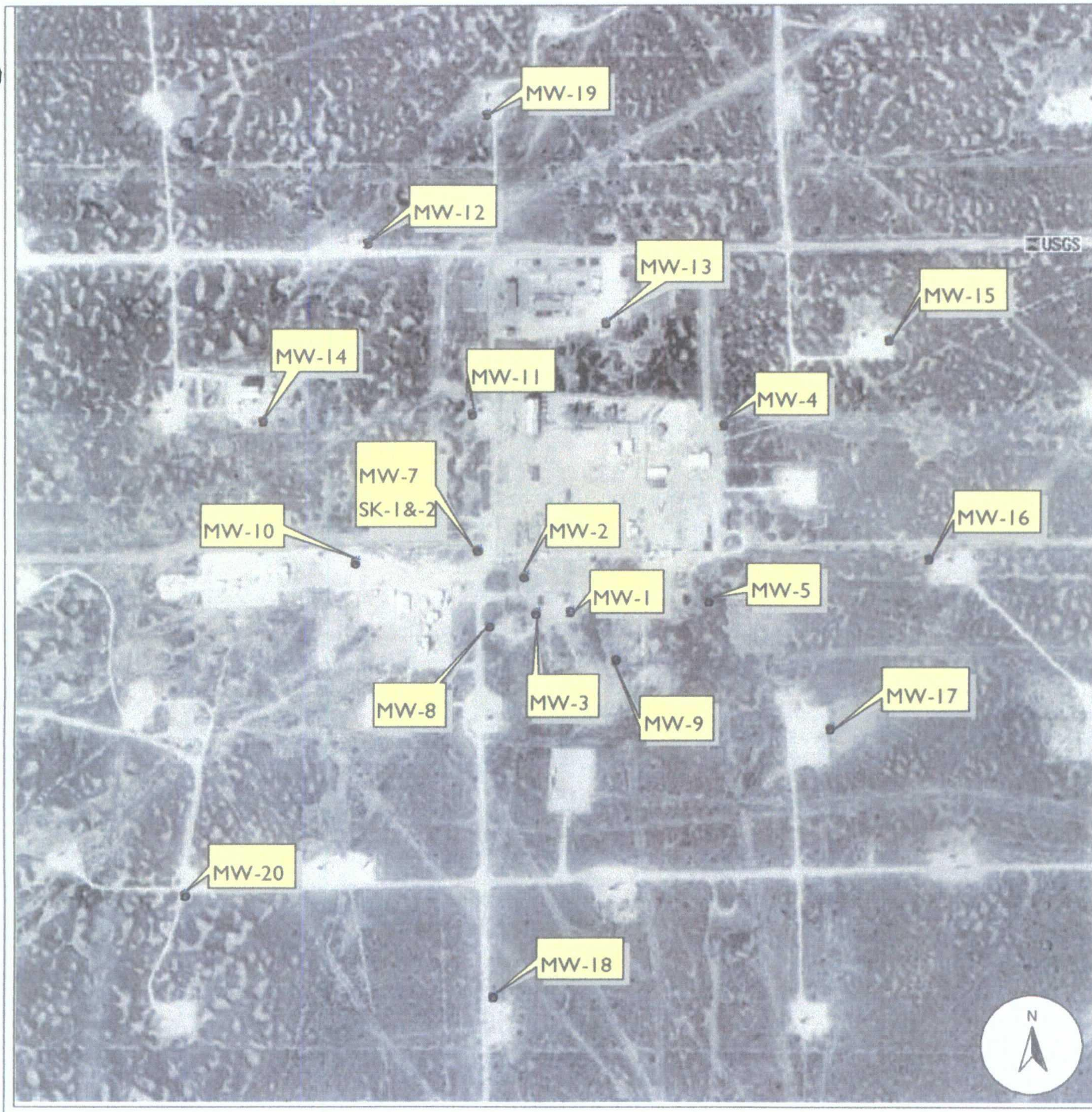
Maxim Technologies, Inc. letter report entitled "Interim Groundwater Investigation Report" to Wayne Price, New Mexico Oil Conservation Division, dated November 11, 2002.

Maxim Technologies, Inc. letter report entitled "Borehole Geophysical Investigation, Maljamar Gas Plant" to Neal Goates, CoP, dated January 22, 2003.

Sunbelt Geophysics report entitled "Geophysical Investigation near the Maljamar Gas Plant, Lea County, New Mexico" prepared for Maxim Technologies, Inc., dated March 2003.

Maxim Technologies, Inc. letter report entitled "Surface Geophysical Investigation near the Maljamar Gas Plant" to Neal Goates, CoP, dated March 11, 2003.

Maxim Technologies, Inc. report entitled "Results of Maljamar Aquifer Test Analysis, Water Balance Development, and Groundwater Modeling, Maljamar Gas Plant, Lea County, New Mexico," to Neal Goates, CoP, dated November 5, 2003.



SOURCES:
USGS, Dog Lake 7.5 Minute Quadrangle
(Provisional Edition, 1985)
USGS, Maljamar 7.5 Minute Quadrangle
(Provisional Edition, 1985)
Digital Orthophotos downloaded from Microsoft Terraserver, 2002.
Well locations surveyed by Basin Surveys, Hobbs, NM.

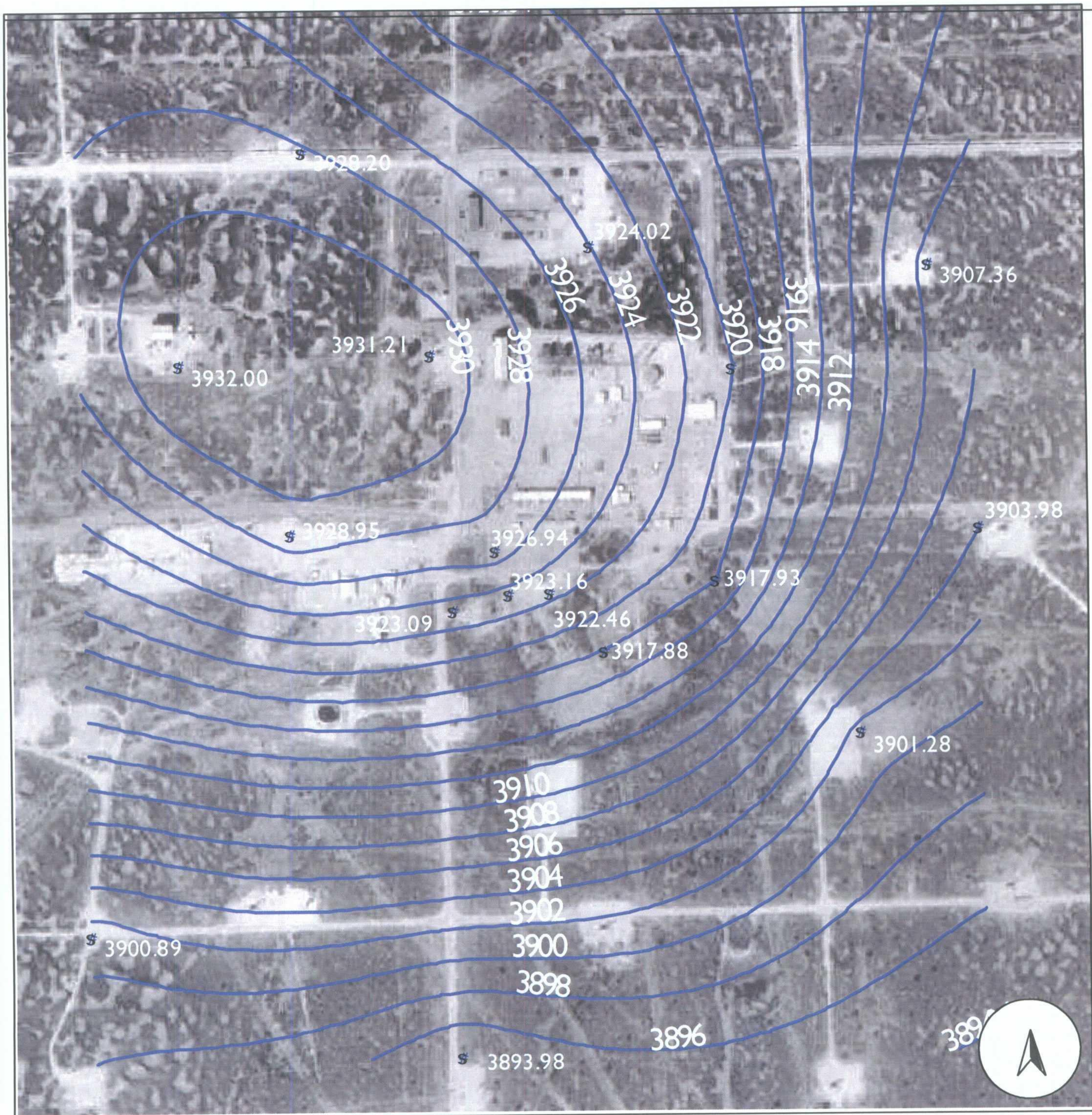
400 0 400 800 Feet

Maljamar Gas Plant
Comprehensive Goundwater Report
Conoco Road,
Maljamar, Lea County NM

MAXIM
TECHNOLOGIES INC
Project Number: 4640019

SITE MAP & WELL LOCATIONS

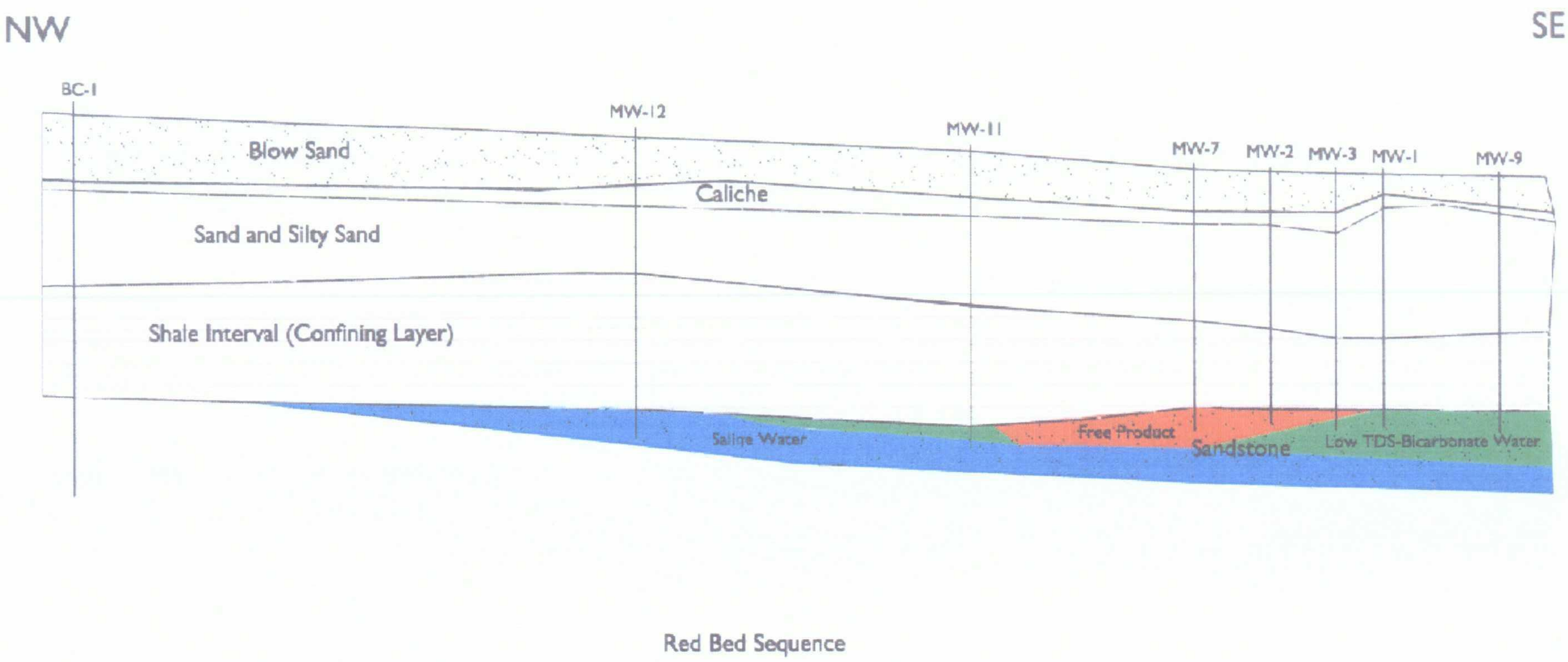
FIGURE 1



SOURCES:
USGS, Dog Lake 7.5 Minute Quadrangle
(Provisional Edition, 1985)
USGS, Maljamar 7.5 Minute Quadrangle
(Provisional Edition, 1985)
Digital Orthophotos downloaded from Microsoft Terraserver, 2002.
Groundwater elevation data measured by Maxim, October, 2003.

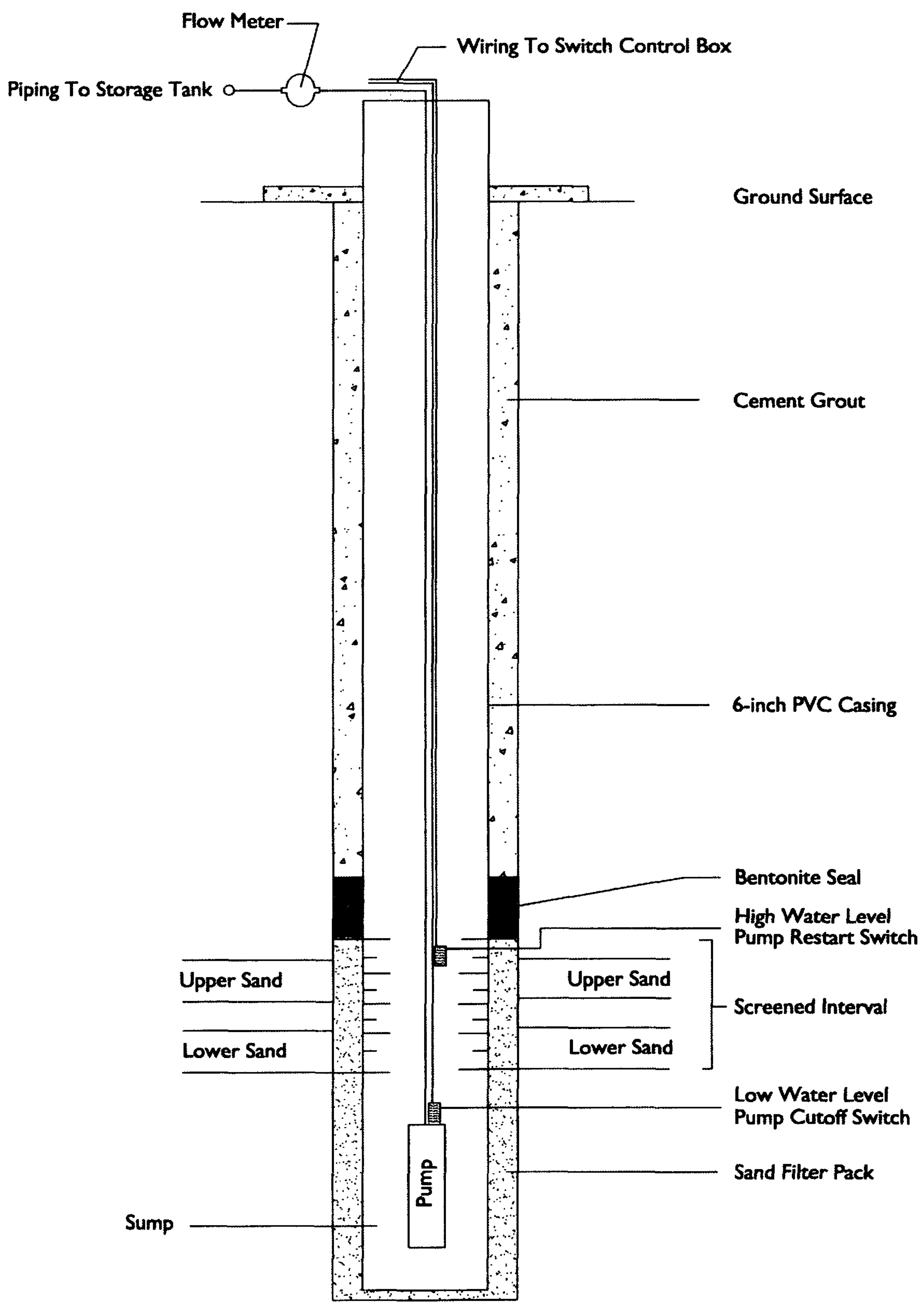
300 0 300 600 Feet

Maljamar Gas Plant Comprehensive Groundwater Report Conoco Road, Maljamar, Lea County NM	MAXIM TECHNOLOGIES INC Project Number: 4640019	
	CONTOURED GROUNDWATER ELEVATIONS OCTOBER 6, 2003	FIGURE 2



NO SCALE GIVEN

Maljamar Gas Plant Comprehensive Groundwater Report Conoco Road, Maljamar, Lea County, NM	MAXIM TECHNOLOGIES INC® Project Number: 4640019	
	CONCEPTUAL CROSS SECTION	FIGURE 3



NOT TO SCALE

Maljamar Gas Plant Comprehensive Groundwater Report Conoco Road, Maljamar, Lea County NM		MAXIM TECHNOLOGIES INC® Project Number: 4640019
	PUMPING WELL DESIGN	FIGURE 4

Table 1.

Maljamar Gas Plant
Groundwater Monitoring Well Construction Information

Well Name	Location Coordinates		Elevation	Depth				Screen	Casing	Install
	Northing	Easting	Top of Casing (fasl)	Total (fbgs)	Casing (fbgs)	Water (fbgs)	Condensate (fbgs)	Interval* (fbgs)	Diameter (inches)	Date
MW-1	32.81208	-103.77181	4002.24	97	0-72	77		72-92	2	6/21/00
MW-2	32.81250	-103.77244	4005.12	98	0-67	76.32		67-97	2	9/28/00
MW-3	32.81206	-103.77228	4001.94	98	0-68	76.94		68-98	2	9/28/00
MW-4	32.81425	-103.76967	4016.2	110	0-80	94.88		80-110	2	5/22/01
MW-5	32.81217	-103.76989	4009.42	100	0-70	90.2		70-100	2	5/22/01
MW-7	32.81281	-103.77308	4002.94	100	0-70	81.58	75.38	70-100	2	5/23/01
MW-8	32.81192	-103.77294	4000.72	100	0-70	76.1		70-100	2	5/23/01
MW-9	32.81150	-103.77119	4003.11	100	0-70	83.63		70-100	2	5/23/01
MW-10	32.81269	-103.77478	4000.47	97	0-74	73.39		74-94	2	12/5/01
MW-11	32.81442	-103.77314	4015.54	120	0-98	83.46		98-118	2	12/4/01
MW-12	32.81644	-103.77456	4022.71	120	0-99	94.39		99-119	2	12/4/01
MW-13	32.81547	-103.77128	4031.96	127	0-105	106.68		105-125	2	12/3/01
MW-14	32.81436	-103.77603	4006.98	120	0-80	75		80-100	2	3/20/02
MW-15	32.81523	-103.76737	4026.75	130	0-99	113.5		99-129	2	9/17/02
MW-16	32.81264	-103.76686	4017.74	130	0-98	113.5		98-128	2	9/17/02
MW-17	32.81066	-103.76825	3998.58	100	0-79	97.36		79-99	2	9/17/02
MW-18	32.80754	-103.77293	3980.46	110	0-87	85.91		87-107	2	9/17/02
MW-19	32.81796	-103.77289	4037.34	120	0-98	117.23		98-118	2	9/17/02
MW-20	32.80878	-103.77718	3976.92	120	0-80	75.9		80-100	2	9/18/02
SK-1	32.81278	-103.77312	4002.94	105	0-85	74.07		85-105	4	3/21/02
SK-2	32.81275	-10377312	4002.94	89.5	0-69	72.89		69-89	4	12/18/02

fbsl = feet above sea level
fbgs = below ground surface
* Screen slot size = 0.01 inches
Note: MW-6 was never established

Table 2.

Maljamar Gas Plant
Historical Analytical Results from Groundwater Monitor Wells
(values reported as mg/L)

Well Name	Sample Date	TPH GRO	Benzene	Toluene	Ethylbenzene	Xylenes	EDC	Naphthalene	Tetrachlorethane	Phenol	Arsenic	Lead	Barium	Sodium	Calcium	Chloride	TDS
MW-1	06/22/00	5.2	1.8	0.075	<0.05	<0.05										227	
MW-1	05/21/01		1.6		0.095	0.043	ND	ND	ND	0.017	0.16	0.082	1.2			0.055	
MW-2	05/21/01		30		0.63	0.67	1.1	0.016	ND	ND	0.051	0.017	1.3			0.024	
MW-3	05/21/01		35		0.71	0.29	ND	ND	ND	0.065	0.4	0.0075	0.89			0.053	
MW-4	05/21/01		0.31		0.084	0.045	ND	0.0086	ND	ND	0.23	0.23	5			0.062	
MW-5	05/21/01		0.11		1.8	2.2	ND	0.09	ND	ND	0.088	0.2	2			0.072	
MW-7	05/21/01		NS		NS	NS	NS	NS	NS	NS	NS	NS	NS			NS	
MW-8	05/21/01		38		1	0.35	ND	ND	ND	0.23	0.01	0.003	0.51			ND	
MW-9	05/21/01		0.059		0.25	0.2	ND	0.062	0.089		0.35	0.17	4.1			0.13	
MW1	09/18/01		NS	NS	NS	NS								NS	NS	NS	NS
MW-2	09/18/01		NS	NS	NS	NS								NS	NS	NS	NS
MW-3	09/18/01		NS	NS	NS	NS								NS	NS	NS	NS
MW-4	09/18/01		0.021	ND	0.063	0.051								83.2	532	455	954
MW-5	09/18/01		NS	NS	NS	NS								NS	NS	NS	NS
MW-7	09/18/01		NS	NS	NS	NS								NS	NS	NS	NS
MW-8	09/18/01		NS	NS	NS	NS								NS	NS	NS	NS
MW-9	09/18/01		ND	ND	0.0043	0.0062								142	79.5	163	741
MW-10	09/17/01		ND	0.0011	ND	0.0051								604	757	2800	5530
MW-11	09/18/01		ND	ND	ND	0.0041								50.2	439	977	1990
MW-12	09/17/01		ND	ND	ND	ND								27300	5930	64800	104000
MW-13	09/18/01		ND	ND	ND	0.0043								56.8	329	219	1080
MW-14	09/17/01		ND	0.0012	ND	0.0052								69.3	333	569	1960
MW-15	09/19/01		0.009	0.0043	0.0019	0.0036								54.4	241	180	708
MW-16	09/19/01		0.015	0.0096	0.0032	0.0055								93.2	293	376	1190
MW-17	09/19/01		0.011	0.0026	ND	ND								135	495	653	1820
MW-18	09/19/01		0.011	0.0022	0.0018	0.0039								3290	2360	13700	19900
MW-18 Dup	09/19/01		0.01	0.0015	0.0019	0.0034								3120	2350	12600	20300
MW-19	09/19/01		ND	ND	ND	ND								56.1	1370	140	645
MW-20	09/19/01		0.0012	ND	ND	0.0023								987	1470	6240	9990
WW-10175	09/19/01		ND	ND	ND	ND								148	185	467	1270

ND = not detected
NS = not sampled because of presence of free product.

APPENDIX A

Boring Logs

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-1

FIELD LOGGED BY: C. Maddox

ELEVATION: GROUND SURFACE (msl): 4002.74 (ft)

GROUNDWATER ELEVATION (msl): 3925.74 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 6.25 (in)

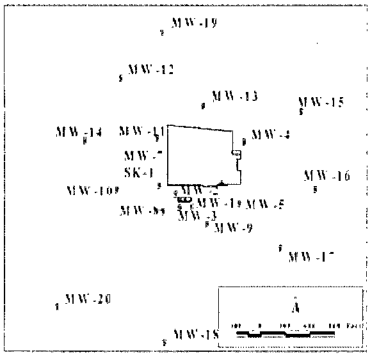
DRILLED BY: Harrison & Cooper

DATE/TIME: HOLE STARTED: 6/21/00

DATE/TIME: COMPLETED: 6/21/00

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4002.24

Static Water Level (feet below Top of Casing): 77

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
			SAND, silty, brownish-red							0
4000.0	1								6.0	
				SP						5
3995.0	2								8.0	
			SAND, silty, light pink							10
3990.0	3			SP					6.0	
			SAND, silty, brownish-red							15
3985.0	4								3.0	
				SP						20
3980.0	5								3.0	
			SAND, silty, light pink, intermixed with sandstone/coarse gravel							25
3975.0	6			SP					3.0	
		BENTONITE SEAL	SAND, silty, reddish-brown, little recovery from 40 to 42 feet bgs							30
3970.0	7								17.0	
										35

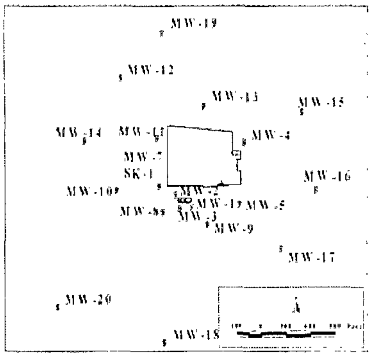
Boring Terminated at 97' bgs

Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-1

PROJECT NAME: Maxim #2690032	MONITORING WELL NO. MW-1
LOCATION: Maljamar Gas Plant, Lea County	FIELD LOGGED BY: C. Maddox
	ELEVATION: GROUND SURFACE (msl): 4002.74 (ft)
	GROUNDWATER ELEVATION (msl): 3925.74 (ft)
	DRILL TYPE: Truck Mounted Air Rotary
	BORE HOLE DIAMETER: 6.25 (in)
	DRILLED BY: Harrison & Cooper
	DATE/TIME: HOLE STARTED: 6/21/00
	DATE/TIME: COMPLETED: 6/21/00
	REMARKS: bgs=Below Ground Surface; ND=Not Detected, NS=No Sample; msl=mean sea level; FOG-First occurrence of groundwater; SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing	Type of Casing: PVC
Measuring Point Elevation (msl): 4002.24	Casing Diameter: 2 in.
Static Water Level (feet below Top of Casing): 77	Slot Size: 0.010 in
Well Development: Water Extraction Until Visibly Free of Sediment	
Well Cap: Locking Cap	

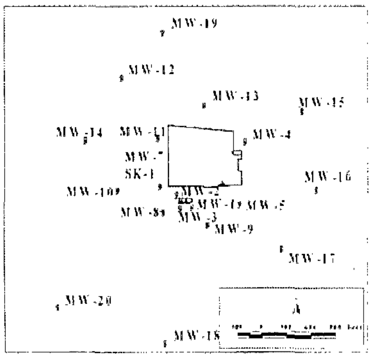
ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3965.0	8								15.0	
				SP						40
3960.0	9								5.0	
										45
3955.0										
			SAND, silty, medium brown - shovel samples obtained beyond 50 feet bgs every 10 feet							50
3950.0				SP						
										55
3945.0			SAND, silty, tannish-gray							
				SP						60
3940.0										
			SAND, silty, olive-brown, intermixed with small sandstone fragments and clayey, shaley material							65
3935.0										
										70

Boring Terminated at 97' bgs — Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-1

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-1
FIELD LOGGED BY: C. Maddox
ELEVATION: GROUND SURFACE (msl): 4002.74 (ft)
GROUNDWATER ELEVATION (msl): 3925.74 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 6.25 (in)
DRILLED BY: Harrison & Cooper
DATE/TIME: HOLE STARTED: 6/21/00
DATE/TIME: COMPLETED: 6/21/00
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4002.24
Static Water Level (feet below Top of Casing): 77
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap

Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3930.0		SAND PACK								
				SP						75
3925.0		6/22/00 SWL								
3920.0										80
3915.0										85
										90
3910.0		6/21/00 FOG	SAND with gravel, silty, medium brown	SP						95

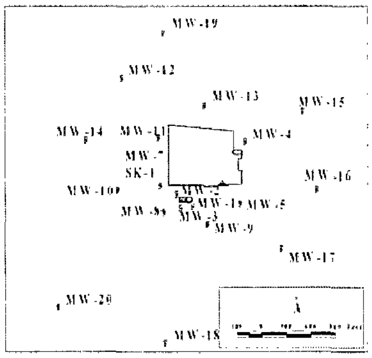
Boring Terminated at 97' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-2

FIELD LOGGED BY: C. Yancey

ELEVATION: GROUND SURFACE (msl): 4005.62 (ft)

GROUNDWATER ELEVATION (msl): 3923.47 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 6.25 (in)

DRILLED BY: Harrison & Cooper

DATE/TIME: HOLE STARTED: 9/28/00

DATE/TIME: COMPLETED: 9/28/00

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4005.12

Static Water Level (feet below Top of Casing): 76.32

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
4005.0			SAND, tan, fine grained, moderately sorted, no odor							0
4000.0	1			SP					1.8	5
3995.0			SAND, silty, tan, very fine grained, some clay, no odor							10
3990.0	2			SM					1.7	15
3985.0			SAND, silty, tan, moist, no odor							20
3980.0	3			SM					4.3	25
3975.0		BENTONITE SEAL	SILT, tan to gray, very fine grained							30
3970.0	4			ML					2.6	35

Boring Terminated at 98' bgs

Bulk Sampling

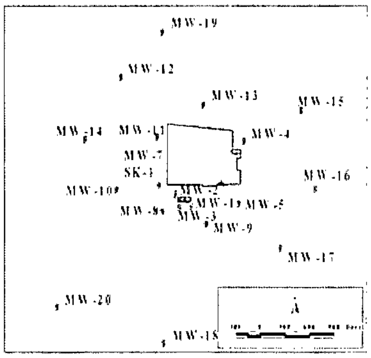
2690032	MAXIM TECHNOLOGIES INC®	EXPLORATORY BORING LOG	MW-2

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-2
FIELD LOGGED BY: C. Yancey
ELEVATION: GROUND SURFACE (msl): 4005.62 (ft)
GROUNDWATER ELEVATION (msl): 3923.47 (ft)
DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 6.25 (in)
DRILLED BY: Harrison & Cooper
DATE/TIME: HOLE STARTED: 9/28/00
DATE/TIME: COMPLETED: 9/28/00
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4005.12
Static Water Level (feet below Top of Casing): 76.32
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap

Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3965.0			SILT, gray, some very fine grained sand with shale, moist, no odor							40
3960.0	5			ML					2.4	45
3955.0			SILT, gray to light green, some sand, very fine grained, moist, no odor							50
3950.0	6			ML					1.5	55
3945.0		SAND PACK	Shale, silty, light green, moist, no odor							60
3940.0	7								2.4	65
3935.0			Shale, silty, dark green, moist, slight odor							70

Boring Terminated at 98' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-2

FIELD LOGGED BY: C. Yancey

ELEVATION: GROUND SURFACE (msl): 4005.62 (ft)

GROUNDWATER ELEVATION (msl): 3923.47 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 6.25 (in)

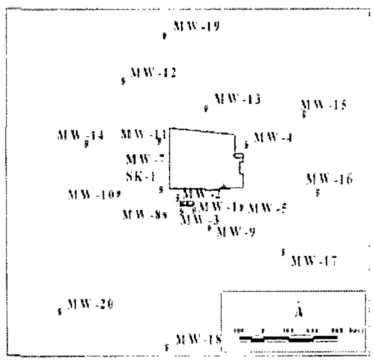
DRILLED BY: Harrison & Cooper

DATE/TIME: HOLE STARTED: 9/28/00

DATE/TIME: COMPLETED: 9/28/00

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4005.12

Static Water Level (feet below Top of Casing): 76.32

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
	8		slight odor						15	
3930.0		9/29/00 SWL	Shale, silty, light green, strong odor							75
	9								330	
3925.0		9/28/00 FOG	Shale, silty, light green with very fine grained sand, strong odor							80
3920.0	10								579	85
3915.0			SAND, silty, light green, very fine grained, strong odor							90
	11			SM					6.8	
3910.0										95

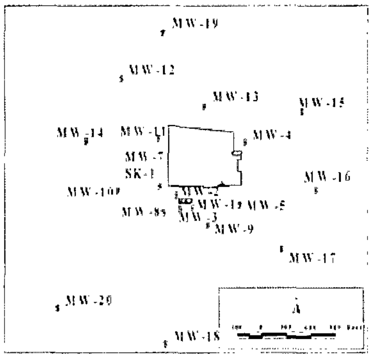
Boring Terminated at 98' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-3
FIELD LOGGED BY: C. Yancey
ELEVATION: GROUND SURFACE (msl): 4002.54 (ft)
GROUNDWATER ELEVATION (msl): 3921.33 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 6.25 (in)
DRILLED BY: Harrison & Cooper
DATE/TIME: HOLE STARTED: 9/28/00
DATE/TIME: COMPLETED: 9/28/00
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4001.94
Static Water Level (feet below Top of Casing): 76.94
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap

Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
										0
4000.0	1		SAND, red to tan, very fine grained to fine grained, dry, *no odor*	SP					1	5
3995.0										10
3990.0	2		SAND, red to tan, very fine grained to fine grained, dry, no odor, moist	SP					8.5	15
3985.0										20
3980.0	3		SAND, tan, very fine grained, well sorted, moist, no odor. minor silty clay content	SP					1.6	25
3975.0										30
3970.0	4	BENTONITE SEAL	SAND, silty, tan to brown, very fine grained, moist, no odor	SM					3	35

Boring Terminated at 98' bgs

Bulk Sampling

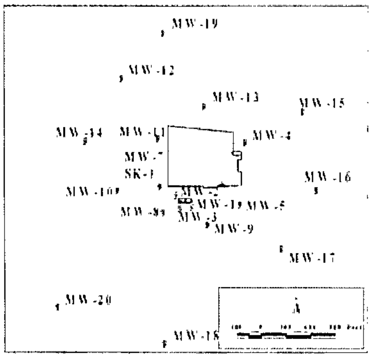
2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-3

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-3
FIELD LOGGED BY: C. Yancey
ELEVATION: GROUND SURFACE (msl): 4002.54 (ft)
GROUNDWATER ELEVATION (msl): 3921.33 (ft)
DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 6.25 (in)
DRILLED BY: Harrison & Cooper
DATE/TIME: HOLE STARTED: 9/28/00
DATE/TIME: COMPLETED: 9/28/00
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4001.94
Static Water Level (feet below Top of Casing): 76.94
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap

Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

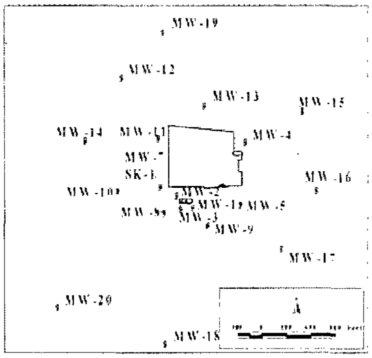
ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3965.0										
			SILT, gray, very fine grained, well cemented							40
3960.0										
	5			ML					3.7	45
3955.0										
			SAND, silty, light tan, very fine grained, tightly cemented							50
3950.0										
	6			SM					1.1	55
3945.0										
			CLAY/Shale, silty, light gray/green, very fine grained, tightly cemented, no odor							60
3940.0		SAND PACK								
	7			CL					2.0	65
3935.0										
			Shale, silty, light gray, moist, slight odor							70

Boring Terminated at 98' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-3
FIELD LOGGED BY: C. Yancey
ELEVATION: GROUND SURFACE (msl): 4002.54 (ft)
GROUNDWATER ELEVATION (msl): 3921.33 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 6.25 (in)
DRILLED BY: Harrison & Cooper
DATE/TIME: HOLE STARTED: 9/28/00
DATE/TIME: COMPLETED: 9/28/00
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4001.94
Static Water Level (feet below Top of Casing): 76.94
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3930.0			slight odor							
	8	9/29/00 SWL							15	75
3925.0										
			Shale, silty, light gray, moist, strong odor							80
3920.0		9/28/00 FOG								
	9								193	85
3915.0										
			SAND, silty, light green, very fine grained, odor							90
3910.0										
	10			SM					10.5	95
3905.0										

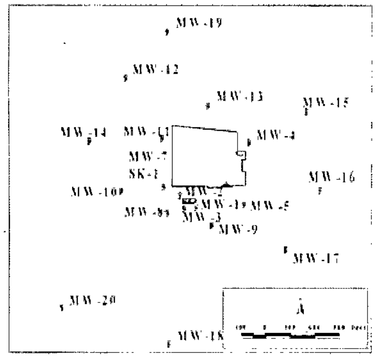
Boring Terminated at 98' bgs
Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-3

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-4
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 4016.70 (ft)
GROUNDWATER ELEVATION (msl): 3921.0 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 5/22/01
DATE/TIME: COMPLETED: 5/22/01
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4016.2
Static Water Level (feet below Top of Casing): 95.2
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
4015.0		GROUTED ANNULUS	SAND, red	SP						0
	1		CLAY, red	CL					7.1	5
4010.0	2		SAND with caliche	SP					1.4	
	3		SAND, red	SP					1.6	
4005.0	4								1.4	10
	5								2.2	
4000.0	6								2.3	15
3995.0	7		CLAY, red	CL					3.6	20
3990.0	8		SAND with clay interbedded, red	SC-SM					3.1	25
3985.0	9		CLAY with sand interbedded, red	CL					3.6	30
										35

Boring Terminated at 105' bgs

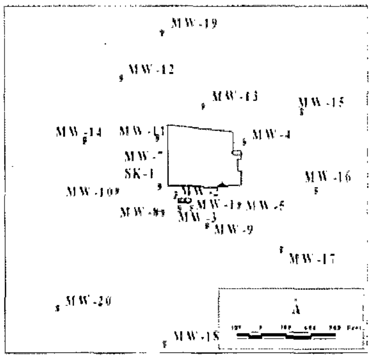
Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-4

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-4

FIELD LOGGED BY: F. Lichnovsky

ELEVATION: GROUND SURFACE (msl): 4016.70 (ft)

GROUNDWATER ELEVATION (msl): 3921.0 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 5/22/01

DATE/TIME: COMPLETED: 5/22/01

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4016.2

Static Water Level (feet below Top of Casing): 95.2

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

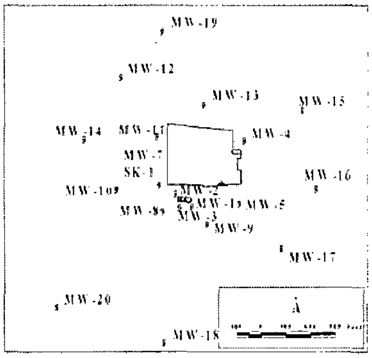
ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3980.0	10								3.6	
	11		SAND with clay interbedded, gray	SC					1.2	40
3975.0			CLAY with sand interbedded, red to gray							
	12								3.0	45
3970.0	13								4.4	50
3965.0	14								2.5	55
3960.0	15			CL					2.7	60
3955.0	16								2.4	65
3950.0	17								1.7	70
3945.0										

Boring Terminated at 105' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-4
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 4016.70 (ft)
GROUNDWATER ELEVATION (msl): 3921.0 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 5/22/01
DATE/TIME: COMPLETED: 5/22/01
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4016.2
Static Water Level (feet below Top of Casing): 95.2
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
	18								1.8	
			CLAY, sandy, light green to gray							75
3940.0	19								1.3	
3935.0		BENTONITE SEAL								80
				CL						85
3930.0		SAND PACK								
3925.0										90
3920.0		5/22/01 SWL								95
3915.0			Shale, green							100
										105

Boring Terminated at 105' bgs

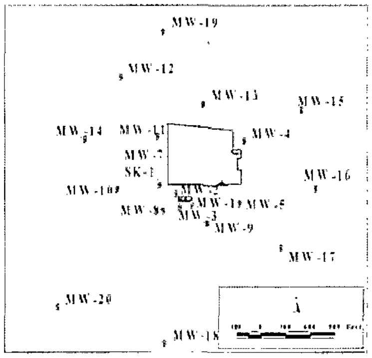
Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-4

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-5
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 4009.92 (ft)
GROUNDWATER ELEVATION (msl): 3919.04 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 5/22/01
DATE/TIME: COMPLETED: 5/22/01
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4009.42
Static Water Level (feet below Top of Casing): 90.38
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
			SAND, red							0
4005.0	1	GROUTED ANNULUS		SP					12.6	5
4000.0	2		SAND with gravel, red						2.0	10
	3								0.8	
3995.0				SP						15
	4								0.5	
3990.0										20
	5								2.2	
3985.0			SAND with shale stringers, red to gray, brown at 60 feet bgs, grayish-red at 65 feet bgs							25
	6								0.8	
3980.0										30
	7								3.0	
3975.0										35

Boring Terminated at 100' bgs

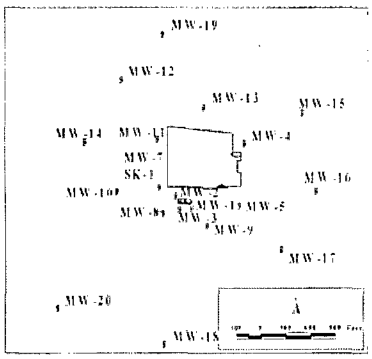
Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-5

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-5

FIELD LOGGED BY: F. Lichnovsky

ELEVATION: GROUND SURFACE (msl): 4009.92 (ft)

GROUNDWATER ELEVATION (msl): 3919.04 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 5/22/01

DATE/TIME: COMPLETED: 5/22/01

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4009.42

Static Water Level (feet below Top of Casing): 90.38

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
	8								6.9	
3970.0										40
	9								11.7	
3965.0										45
	10								10.4	
3960.0				SP						50
	11								1.7	
3955.0										55
	12								10	
3950.0										60
	13								2.2	
3945.0										65
	14								3.1	
3940.0										70

Boring Terminated at 100' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-5

FIELD LOGGED BY: F. Lichnovsky

ELEVATION: GROUND SURFACE (msl): 4009.92 (ft)

GROUNDWATER ELEVATION (msl): 3919.04 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

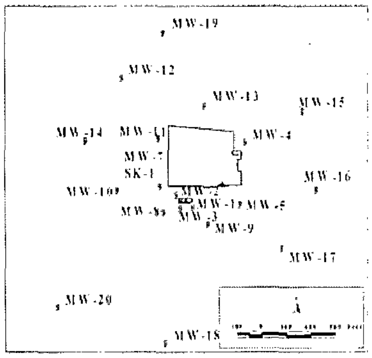
DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 5/22/01

DATE/TIME: COMPLETED: 5/22/01

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4009.42

Static Water Level (feet below Top of Casing): 90.38

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
	15								5.0	
3935.0		BENTONITE SEAL	CLAY, sandy, light green							75
	16			CL					1.4	
3930.0			SAND, light green							80
	17								0.9	
3925.0		SAND PACK								85
	18								0.5	
3920.0		5/22/01 SWL		SP						90
	19								3.8	
3915.0										95
	20								1.7	
3910.0										100

Boring Terminated at 100' bgs

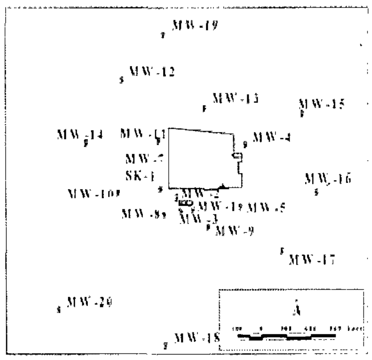
Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-5

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-7
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 4003.44 (ft)
GROUNDWATER ELEVATION (msl): (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 5/23/01
DATE/TIME: COMPLETED: 5/23/01
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4002.94
Static Water Level (feet below Top of Casing):
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
		GROUTED ANNULUS	SAND, light red to red							0
4000.0	1								1.6	5
3995.0	2								3.1	10
3990.0	3								1.7	15
				SP						
3985.0	4								0.9	20
3980.0	5								0.4	25
3975.0	6								4.6	30
			SAND, reddish-brown to reddish-gray							
3970.0	7								2.2	35

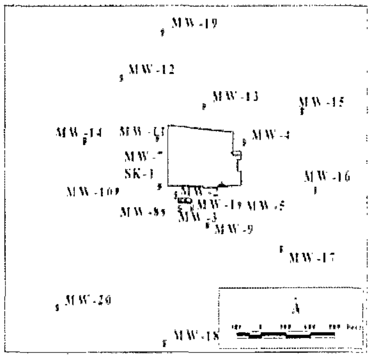
Boring Terminated at 100' bgs
Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-7

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-7
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 4003.44 (ft)
GROUNDWATER ELEVATION (msl): (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 5/23/01
DATE/TIME: COMPLETED: 5/23/01
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4002.94
Static Water Level (feet below Top of Casing):
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap

Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3965.0	8								1.7	40
3960.0	9			SP					4.3	45
3955.0	10								8.2	50
3950.0	11								1.7	55
3945.0	12		CLAY, sandy, light green	CL					10	60
3940.0	13		SAND, light green						2.2	65
3935.0	14			SP					3.1	70

Boring Terminated at 100' bgs

Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC.	EXPLORATORY BORING LOG	MW-7

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-7

FIELD LOGGED BY: F. Lichnovsky

ELEVATION: GROUND SURFACE (msl): 4003.44 (ft)

GROUNDWATER ELEVATION (msl): (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

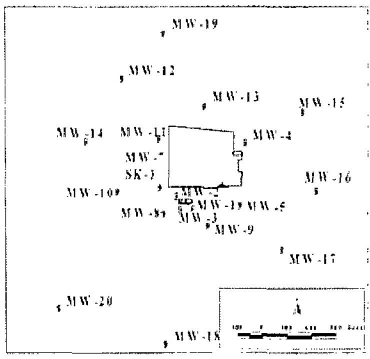
DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 5/23/01

DATE/TIME: COMPLETED: 5/23/01

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4002.94

Static Water Level (feet below Top of Casing):

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3930.0	15	BENTONITE SEAL							5.0	75
3925.0	16								1.4	80
3920.0	17	SAND PACK	CLAY, light green	CL					0.9	85
3915.0	18		SAND, light green						0.5	90
3910.0	19			SP					3.8	95
3905.0	20								1.7	100

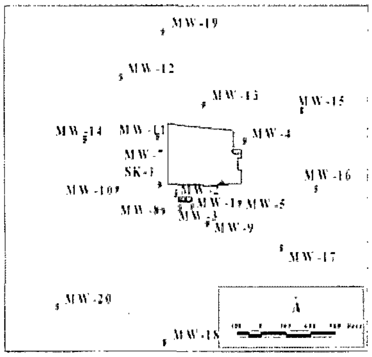
Boring Terminated at 100' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-8
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 4001.22 (ft)
GROUNDWATER ELEVATION (msl): 3924.0 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 5/23/01
DATE/TIME: COMPLETED: 5/23/01
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4000.72
Static Water Level (feet below Top of Casing): 77
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap

Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

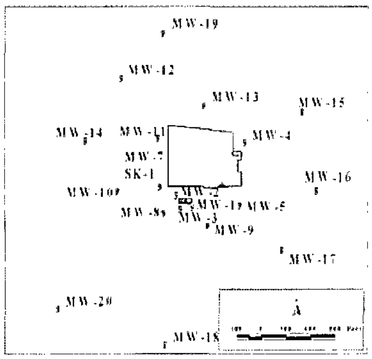
ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
										0
4000.0			SAND, red, conglomerates interbedded with depth							
	1								39.7	5
3995.0		GROUTED ANNULUS								
	2								4.6	10
3990.0										
	3								2.2	
3985.0										15
	4								2.9	
3980.0				SP						20
	5								9.4	
3975.0										25
	6								4.6	
3970.0										30
	7								1.5	35

Boring Terminated at 100' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-8
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 4001.22 (ft)
GROUNDWATER ELEVATION (msl): 3924.0 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 5/23/01
DATE/TIME: COMPLETED: 5/23/01
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4000.72
Static Water Level (feet below Top of Casing): 77
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3965.0	8								7.3	40
3960.0	9		SAND, reddish-brown, conglomerates interbedded with depth						0.8	45
3955.0	10								1.4	50
3950.0	11			SP					2.2	55
3945.0	12								7.5	60
3940.0	13								3.9	65
3935.0	14		SAND, light green, conglomerates interbedded with depth						8.3	70
3930.0				SP						

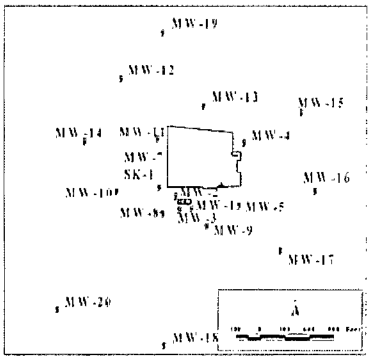
Boring Terminated at 100' bgs
Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-8

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-8

FIELD LOGGED BY: F. Lichnovsky

ELEVATION: GROUND SURFACE (msl): 4001.22 (ft)

GROUNDWATER ELEVATION (msl): 3924.0 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 5/23/01

DATE/TIME: COMPLETED: 5/23/01

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4000.72

Static Water Level (feet below Top of Casing): 77

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
	15	5/23/01 SWL							51.2	
3925.0			CLAY, sandy, light green	CL						75
	16	BENTONITE SEAL							68.3	
3920.0			SAND, light green							80
	17								123	
3915.0		SAND PACK								85
	18								102	
3910.0				SP						90
	19								32.7	
3905.0										95
	20								57.7	
										100

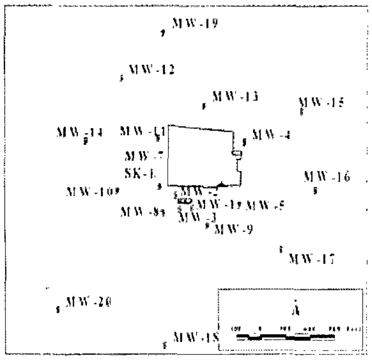
Boring Terminated at 100' bgs

Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-8

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-9
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 4003.61 (ft)
GROUNDWATER ELEVATION (msl): 3920.11 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 5/23/01
DATE/TIME: COMPLETED: 5/23/01
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4003.11
Static Water Level (feet below Top of Casing): 83
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
			SAND, red, interbedded clay lenses at 15 feet bgs and 42 feet bgs, reddish-brown							0
4000.0	1	GROUTED ANNULUS							0.8	5
3995.0	2								1.3	10
3990.0	3								0.8	15
3985.0	4								1.1	20
3980.0	5								0.2	25
3975.0	6								0.4	30
				SP						
3970.0	7								0.9	35

Boring Terminated at 100' bgs

Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-9

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-9

FIELD LOGGED BY: F. Lichnovsky

ELEVATION: GROUND SURFACE (msl): 4003.61 (ft)

GROUNDWATER ELEVATION (msl): 3920.11 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

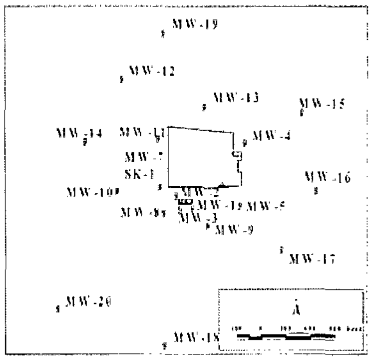
DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 5/23/01

DATE/TIME: COMPLETED: 5/23/01

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4003.11

Static Water Level (feet below Top of Casing): 83

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3965.0	8								1.1	40
3960.0	9								2.6	45
3955.0	10								1.8	50
3950.0	11								18.6	55
3945.0	12								20.3	60
3940.0	13		CLAY, sandy, light green	CL					20.3	65
3935.0	14		SAND, light green						11.2	70

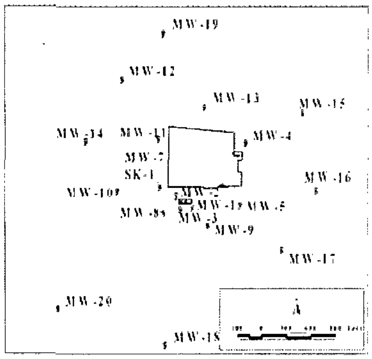
Boring Terminated at 100' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-9

FIELD LOGGED BY: F. Lichnovsky

ELEVATION: GROUND SURFACE (msl): 4003.61 (ft)

GROUNDWATER ELEVATION (msl): 3920.11 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 5/23/01

DATE/TIME: COMPLETED: 5/23/01

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4003.11

Static Water Level (feet below Top of Casing): 83

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

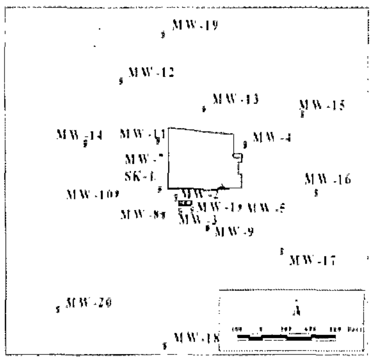
ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3930.0	15			SP					15.9	75
3925.0	16	BENTONITE SEAL							11	80
3920.0	17	5/23/01 SWL							14.1	85
		SAND PACK	SAND, light green to gray with conglomerates							
3915.0	18								13.3	90
3910.0	19			SP					12.1	95
3905.0	20								12.9	100

Boring Terminated at 100' bgs

Bulk Sampling

PROJECT NAME: Maxim #2007216
LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-10
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 3997.47 (ft)
GROUNDWATER ELEVATION (msl): 3927.08 (ft)
DRILL TYPE: Dry Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 12/5/01
DATE/TIME: COMPLETED: 12/5/01
REMARKS: BGS=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Stick Up
Measuring Point Elevation (msl): 4000.47
Static Water Level (feet below Top of Casing): 73.39
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

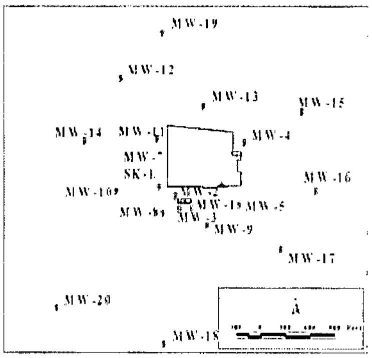
ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
										0
3995.0	1	GROUTED ANNULUS	Reddish orange SAND, loose blow sand						1.7	
				SP						5
3990.0	2								ND	
										10
3985.0	3								ND	
			Caliche, white to reddish							15
3980.0	4			SP					ND	
			Brownish red SAND							20
3975.0	5			SP					.8	
			Light green SAND							25
3970.0	6			SP					.6	
			Brownish gray SHALE							30
3965.0	7			CL					1.9	
										35

Boring Terminated at 3,900.47 msl.
Bulk Sampling

PROJECT NAME: Maxim #2007216

LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-10

FIELD LOGGED BY: F. Lichnovsky

ELEVATION: GROUND SURFACE (msl): 3997.47 (ft)

GROUNDWATER ELEVATION (msl): 3927.08 (ft)

DRILL TYPE: Dry Air Rotary

BORE HOLE DIAMETER: 5 (in)

DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 12/5/01

DATE/TIME: COMPLETED: 12/5/01

REMARKS: BGS=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Stick Up

Measuring Point Elevation (msl): 4000.47

Static Water Level (feet below Top of Casing): 73.39

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

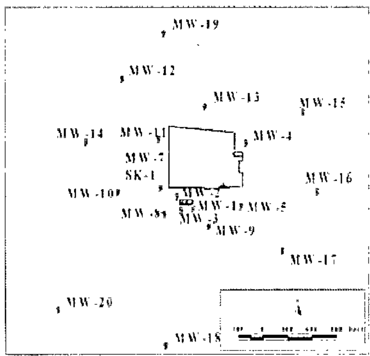
ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3960.0	8		Light green SAND	SP					1.1	40
3955.0	9		Light Gray SAND, cemented	SP					2.3	45
3950.0	10		Brownish purple SAND, cemented	SP					2.3	50
3945.0	11		Light green SAND	SP					.8	55
3940.0	12		Light green SAND with shale	SP					2.8	60
3935.0	13		Light Yellow green SAND	SP					1.1	65
3930.0	14	BENTONITE SEAL	Light gray sandy SHALE	CL					2.3	70
		12/10/01 - SWL	Light Yellow green SAND, cemented, with streaks							

Boring Terminated at 3,900.47 msl.

Bulk Sampling

PROJECT NAME: Maxim #2007216
LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-10
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 3997.47 (ft)
GROUNDWATER ELEVATION (msl): 3927.08 (ft)
DRILL TYPE: Dry Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 12/5/01
DATE/TIME: COMPLETED: 12/5/01
REMARKS: BGS=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Stick Up
Measuring Point Elevation (msl): 4000.47
Static Water Level (feet below Top of Casing): 73.39
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3925.0	15		cemented, with streaks	SP					1.0	
			Gray green sandy SHALE							75
3920.0	16			CL					.7	
			Light green SAND, well cemented, water bearing							80
3915.0	17								1.4	
		SAND PACK		SP						85
3910.0	18								1.3	
										90
3905.0	19								.8	
										95
	20								.3	

Boring Terminated at 3,900.47 msl.
Bulk Sampling

2007216	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-10

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-11

FIELD LOGGED BY: T.Tangen

ELEVATION: GROUND SURFACE (msl): 4011.54 (ft)

GROUNDWATER ELEVATION (msl): 3932.08 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

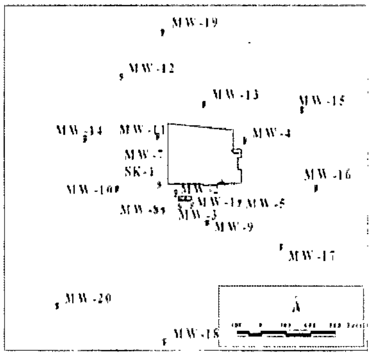
DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 12/4/01

DATE/TIME: COMPLETED: 12/4/01

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4015.54

Static Water Level (feet below Top of Casing): 83.46

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
										0
4010.0	1	GROUTED ANNULUS	SAND, silty, brown, dry						ND	
4005.0										5
	2			SP					ND	
4000.0										10
	3								0.1	
3995.0			Caliche with clay, sandy, brown, dry							15
	4								0.3	
3990.0										20
	5								0.5	
3985.0			SAND, brown, dry							25
	6								ND	
3980.0				SP						30
	7								0.9	
										35

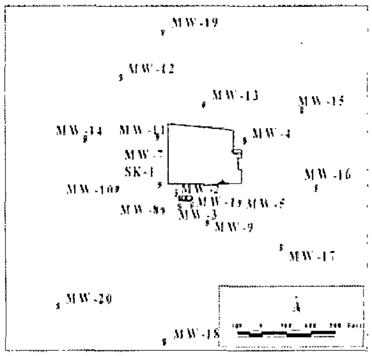
Boring Terminated at 120' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-11

FIELD LOGGED BY: T.Tangen

ELEVATION: GROUND SURFACE (msl): 4011.54 (ft)

GROUNDWATER ELEVATION (msl): 3932.08 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 12/4/01

DATE/TIME: COMPLETED: 12/4/01

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4015.54

Static Water Level (feet below Top of Casing): 83.46

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3975.0										
	8								0.2	
										40
3970.0										
	9								0.1	
										45
3965.0										
	10								ND	
										50
3960.0										
	11								0.5	
										55
3955.0			SAND, tan, dry	SP						
	12								0.4	
										60
3950.0			SAND, gray, dry							
	13								0.2	
										65
3945.0				SP						
	14								0.3	
										70
3940.0										

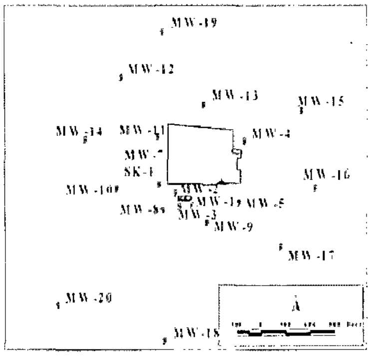
Boring Terminated at 120' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-11

FIELD LOGGED BY: T.Tangen

ELEVATION: GROUND SURFACE (msl): 4011.54 (ft)

GROUNDWATER ELEVATION (msl): 3932.08 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 12/4/01

DATE/TIME: COMPLETED: 12/4/01

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4015.54

Static Water Level (feet below Top of Casing): 83.46

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

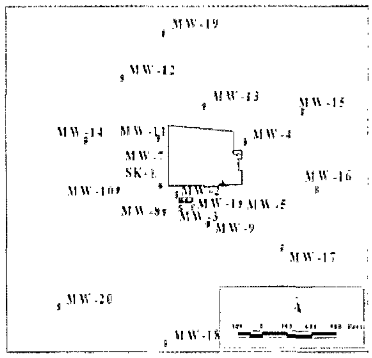
ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
	15								1.1	
			SAND, gray, moist							75
3935.0										
	16	12/10/01 - SWL							0.4	
3930.0										80
	17								1.0	
3925.0										85
	18			SP					0.4	
3920.0										90
	19	BENTONITE SEAL							2.2	
3915.0										95
	20								0.7	
		SAND PACK	CLAY, gray, moist							100
3910.0										
	21			CL					4.2	
			CLAY with sand, brown, moist							105
3905.0										

Boring Terminated at 120' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-11
FIELD LOGGED BY: T.Tangen
ELEVATION: GROUND SURFACE (msl): 4011.54 (ft)
GROUNDWATER ELEVATION (msl): 3932.08 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 12/4/01
DATE/TIME: COMPLETED: 12/4/01
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Type of Casing: PVC
Measuring Point Elevation (msl): 4015.54
Casing Diameter: 2 in.
Static Water Level (feet below Top of Casing): 83.46
Slot Size: 0.010 in
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
	22			CL					0.4	
			CLAY with sand, gray, moist							110
3900.0										
	23			CL					0.7	
			CLAY, brown, moist							115
3895.0										
	24			CL					ND	
										120

Boring Terminated at 120' bgs
Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-11

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-12

FIELD LOGGED BY: T.Tangen

ELEVATION: GROUND SURFACE (msl): 4019.71 (ft)

GROUNDWATER ELEVATION (msl): 3928.32 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

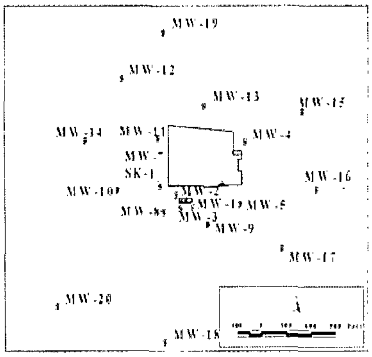
DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 12/4/01

DATE/TIME: COMPLETED: 12/4/01

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4022.71

Static Water Level (feet below Top of Casing): 94.39

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

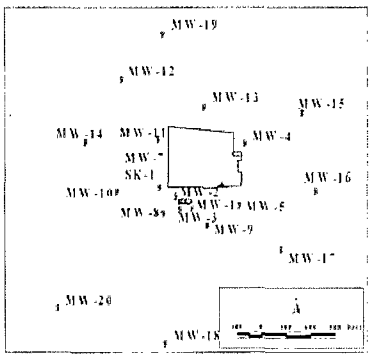
ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
			SAND, red, moist							0
	1								ND	
4015.0		GROUTED ANNULUS		SP						5
	2								ND	
			CLAY, red, moist							
4010.0				CL						10
			Caliche, moist to 15 feet bgs then dry							
	3								ND	
4005.0										15
	4								ND	
4000.0			SILT, sandy, brown to gray and tan, moist							20
	5								ND	
3995.0										25
	6								ND	
3990.0										30
	7								ND	
3985.0				ML						35
	8								ND	
3980.0										40

Boring Terminated at 120' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032	MONITORING WELL NO. MW-12
LOCATION: Maljamar Gas Plant, Lea County	FIELD LOGGED BY: T.Tangen
	ELEVATION: GROUND SURFACE (msl): 4019.71 (ft)
	GROUNDWATER ELEVATION (msl): 3928.32 (ft)
	DRILL TYPE: Truck Mounted Air Rotary
	BORE HOLE DIAMETER: 5 (in)
	DRILLED BY: Scarborough Drilling
	DATE/TIME: HOLE STARTED: 12/4/01
	DATE/TIME: COMPLETED: 12/4/01
	REMARKS: bgs=Below Ground Surface; ND=Not Detected, NS=No Sample; msl=mean sea level; FOG-First occurrence of groundwater; SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing	Type of Casing: PVC
Measuring Point Elevation (msl): 4022.71	Casing Diameter: 2 in.
Static Water Level (feet below Top of Casing): 94.39	Slot Size: 0.010 in
Well Development: Water Extraction Until Visibly Free of Sediment	
Well Cap: Locking Cap	

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3975.0	9								ND	45
3970.0	10								ND	50
3965.0	11								ND	55
3960.0	12		SAND with gravel, gray to light tan, dry						ND	60
3955.0	13								ND	65
3950.0	14			SP					ND	70
3945.0	15								ND	75
3940.0	16								ND	80

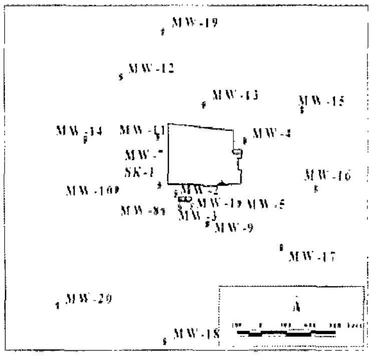
Boring Terminated at 120' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-12
FIELD LOGGED BY: T.Tangen
ELEVATION: GROUND SURFACE (msl): 4019.71 (ft)
GROUNDWATER ELEVATION (msl): 3928.32 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 12/4/01
DATE/TIME: COMPLETED: 12/4/01
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4022.71
Static Water Level (feet below Top of Casing): 94.39
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
	17								ND	
3935.0										85
	18								0.8	
3930.0										90
		12/10/01 - SWL	CLAY, silty, tan, moist	CL						
	19	BENTONITE SEAL	SAND, silty, brown, slightly moist to moist						3.2	
3925.0										95
	20			SP					0.1	
3920.0										100
	21								0.4	
3915.0		SAND PACK	SAND, silty, grayish-green with shale (chips) at 110 feet bgs to 115 feet bgs							105
	22								0.2	
3910.0										110
	23								1.5	
3905.0				SP						115
	24								0.8	
3900.0										120

Boring Terminated at 120' bgs

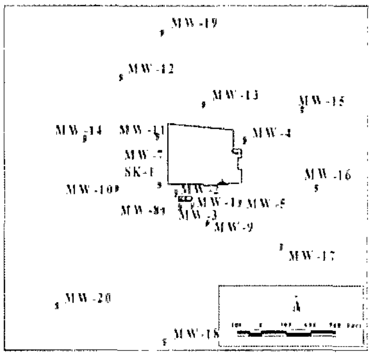
Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC.	EXPLORATORY BORING LOG	MW-12

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-13

FIELD LOGGED BY: A. Stewart

ELEVATION: GROUND SURFACE (msl): 4028.96 (ft)

GROUNDWATER ELEVATION (msl): 3925.28 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 12/3/01

DATE/TIME: COMPLETED: 12/3/01

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4031.96

Static Water Level (feet below Top of Casing): 106.68

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

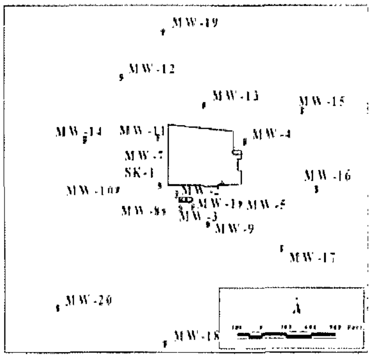
ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
		GROUTED ANNULUS	Caliche,soil							0
4025.0	1		SAND with caliche pebbles, very loose, red, dry	SP					0.7	5
4020.0										10
4015.0	2		SAND with gravel and large pebbles, white to pink	SP					0.7	15
4010.0										20
4005.0	3		SAND, pink, slightly damp						0.9	25
4000.0				SP						30
3995.0	4		SAND, reddish, slightly damp						0.3	35
3990.0				SP						40

Boring Terminated at 127' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-13
FIELD LOGGED BY: A. Stewart
ELEVATION: GROUND SURFACE (msl): 4028.96 (ft)
GROUNDWATER ELEVATION (msl): 3925.28 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 12/3/01
DATE/TIME: COMPLETED: 12/3/01
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4031.96
Static Water Level (feet below Top of Casing): 106.68
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3985.0	5								0.9	45
3980.0			SAND, reddish-brown to grayish, slightly damp	SP						50
			SAND, cemented, gray	SP						
3975.0	6		SAND, grayish, dry	SP					0.4	55
3970.0										60
3965.0	7		SAND, cemented, gray	SP					0.5	65
3960.0										70
3955.0	8		SAND, white, gray, dry	SP					0.4	75
3950.0										80
3945.0										85

Boring Terminated at 127' bgs

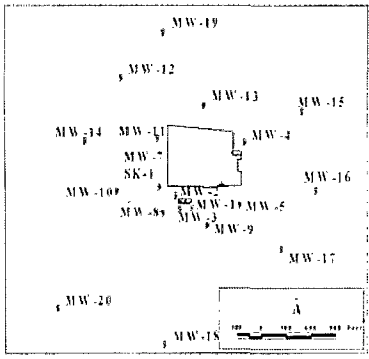
Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-13

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-13
FIELD LOGGED BY: A. Stewart
ELEVATION: GROUND SURFACE (msl): 4028.96 (ft)
GROUNDWATER ELEVATION (msl): 3925.28 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 12/3/01
DATE/TIME: COMPLETED: 12/3/01
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4031.96
Static Water Level (feet below Top of Casing): 106.68
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap

Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
	9		SAND, gray to greenish to white, dry	SP					0.7	
3940.0										90
			SAND, pale gray to green, fine grained, dry	SP						
3935.0	10	BENTONITE SEAL							0.6	95
3930.0										100
		12/10/01 - SWL								
3925.0	11	SAND PACK	Shale						0.5	105
3920.0										110
			SAND, silty, pale gray, slightly damp	SP						
3915.0	12		SAND, grayish-white, fine grained, slightly damp	SP/SM					1.3	115
3910.0										120
			SAND, wet	SP						
3905.0										125

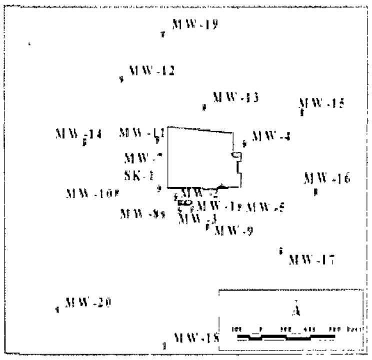
Boring Terminated at 127' bgs

Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC®	EXPLORATORY BORING LOG	MW-13

PROJECT NAME: Conoco Maljamar Gas Plant
LOCATION: Maljamar, Texas

LOCATION MAP



MONITORING WELL NO. MW-14
FIELD LOGGED BY: Anne Stewart
ELEVATION: GROUND SURFACE (msl): 4003.98 (ft)
GROUNDWATER ELEVATION (msl): 3998.98 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 6.25 (in)
DRILLED BY: Harrison & Cooper, Inc.
DATE/TIME: HOLE STARTED: 3/20/02
DATE/TIME: COMPLETED: 3/20/02
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4006.98
Static Water Level (feet below Top of Casing): 3931.98
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
		GROUTED ANNULUS	Daylighted, no recovery.							0
4000.0										5
3995.0			Red sand	SP					0.4	10
3990.0										15
3985.0		BENTONITE SEAL	Reddish-brown sand; fine grained.	SP					0.6	20
3980.0										25
3975.0			Gray sand; fine grained.	SP					0.2	30
3970.0			Sand; well cemented.	SP						35
3965.0										40

Total depth 120 feet
Bulk Sampling

2690015	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-14

PROJECT NAME: Conoco Maljamar Gas Plant

LOCATION: Maljamar, Texas

MONITORING WELL NO. MW-14

FIELD LOGGED BY: Anne Stewart

ELEVATION: GROUND SURFACE (msl): 4003.98 (ft)

GROUNDWATER ELEVATION (msl): 3998.98 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 6.25 (in)

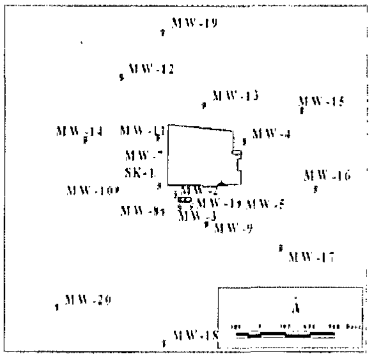
DRILLED BY: Harrison & Cooper, Inc.

DATE/TIME: HOLE STARTED: 3/20/02

DATE/TIME: COMPLETED: 3/20/02

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4006.98

Static Water Level (feet below Top of Casing): 3931.98

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
			Gray sand; fine grained, well cemented.						0.1	
3960.0										45
3955.0				SP					0.1	50
3950.0										55
3945.0										60
			Greenish-gray clayey fine sand.						0.1	
3940.0				SC						65
3935.0										70
			Greenish-gray clayey fine sand with some oxidized (red) spots.						0.0	
3930.0		SWL- 3/02		SC						75
3925.0										80

Total depth 120 feet

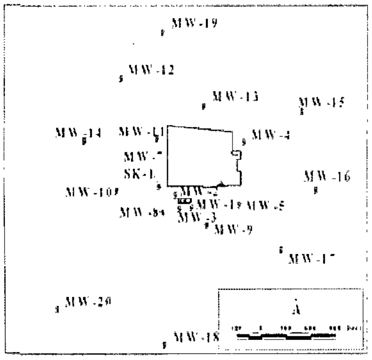
Bulk Sampling

2690015	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-14

PROJECT NAME: Conoco Maljamar Gas Plant
LOCATION: Maljamar, Texas

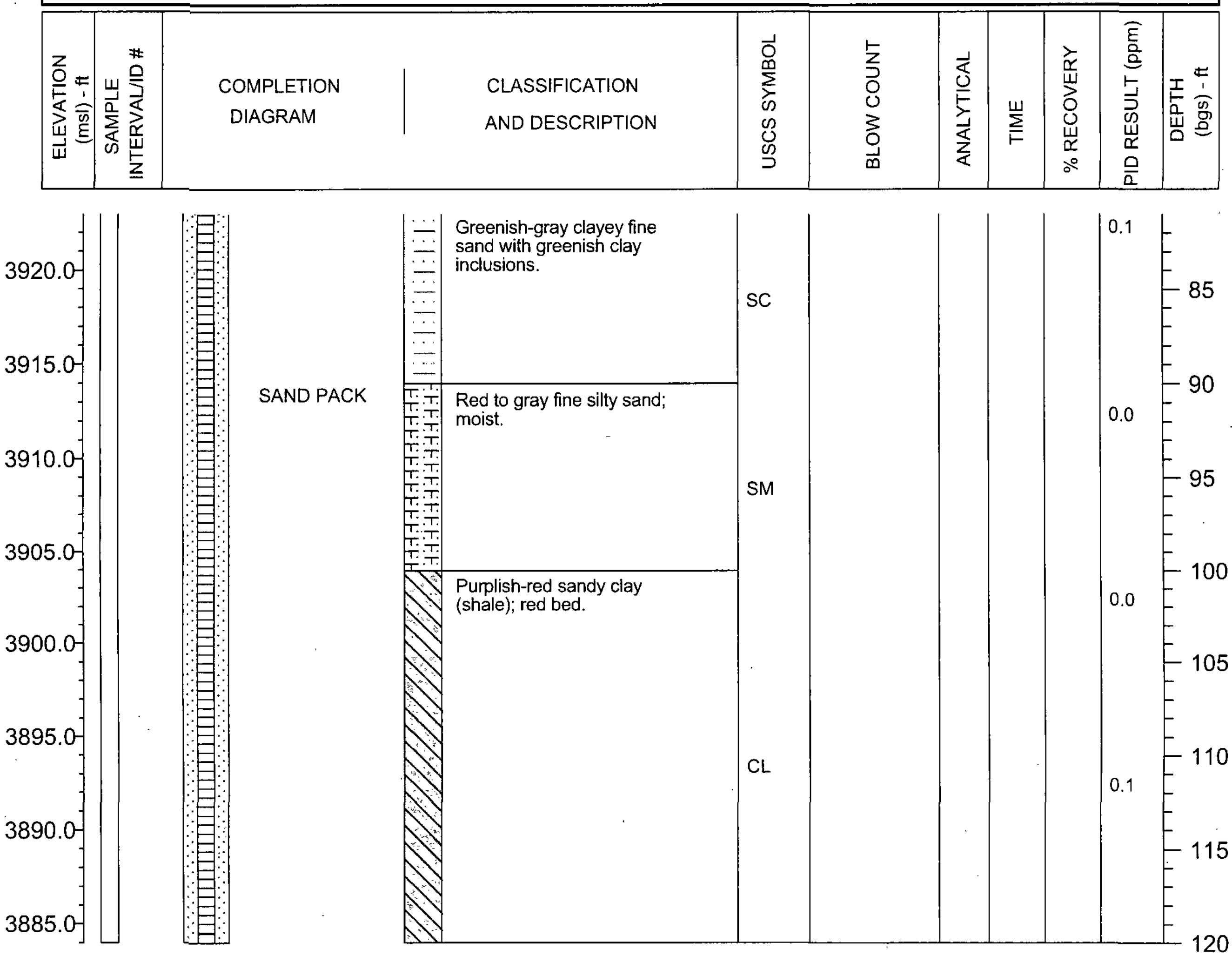
MONITORING WELL NO. MW-14
FIELD LOGGED BY: Anne Stewart
ELEVATION: GROUND SURFACE (msl): 4003.98 (ft)
GROUNDWATER ELEVATION (msl): 3998.98 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 6.25 (in)
DRILLED BY: Harrison & Cooper, Inc.
DATE/TIME: HOLE STARTED: 3/20/02
DATE/TIME: COMPLETED: 3/20/02
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4006.98
Static Water Level (feet below Top of Casing): 3931.98
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in



Total depth 120 feet

Bulk Sampling

2690015	MAXIM TECHNOLOGIES INC.	EXPLORATORY BORING LOG	MW-14

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-15

FIELD LOGGED BY: F. Lichnovsky

ELEVATION: GROUND SURFACE (msl): 4025.75 (ft)

GROUNDWATER ELEVATION (msl): 3907.90 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

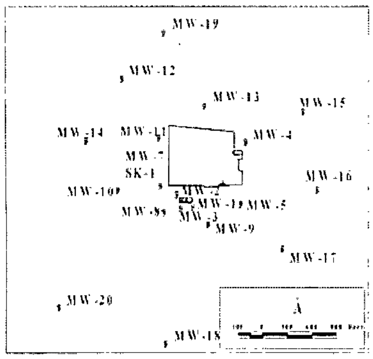
DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 9/17/02

DATE/TIME: COMPLETED: 9/17/02

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4026.75

Static Water Level (feet below Top of Casing): 118.85

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
4025.0			SAND, red							0
	1			SP					-	
4020.0		GROUTED ANNULUS	CLAY, red							5
	2			CL					4.7	
4015.0			Caliche and gravel, white							10
	3								5.6	
4010.0			SAND, light red							15
	4			SP					5.2	
4005.0			CLAY with sand, dark red							20
	5								6.6	
4000.0										25
	6								9.4	
3995.0										30
	7								7.3	
3990.0										35

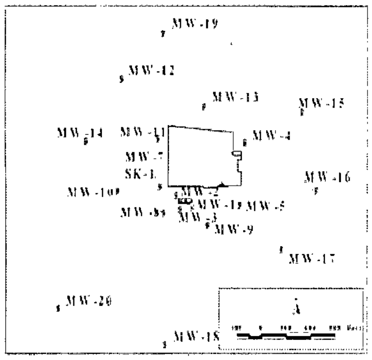
Boring Terminated at 130 bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-15

FIELD LOGGED BY: F. Lichnovsky

ELEVATION: GROUND SURFACE (msl): 4025.75 (ft)

GROUNDWATER ELEVATION (msl): 3907.90 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 9/17/02

DATE/TIME: COMPLETED: 9/17/02

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4026.75

Static Water Level (feet below Top of Casing): 118.85

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
	8								8.9	
3985.0				CL						40
	9								3.0	
3980.0										45
	10								3.1	
3975.0										50
	11								4.8	
3970.0										55
	12								5.8	
3965.0			Shale and sand, reddish-gray							60
	13								5.3	
3960.0										65
	14								4.1	
3955.0										70

Boring Terminated at 130 bgs

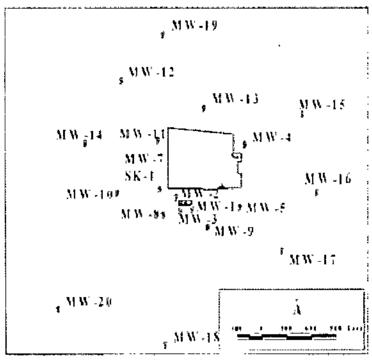
Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-15

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-15
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 4025.75 (ft)
GROUNDWATER ELEVATION (msl): 3907.90 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 9/17/02
DATE/TIME: COMPLETED: 9/17/02
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4026.75
Static Water Level (feet below Top of Casing): 118.85
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

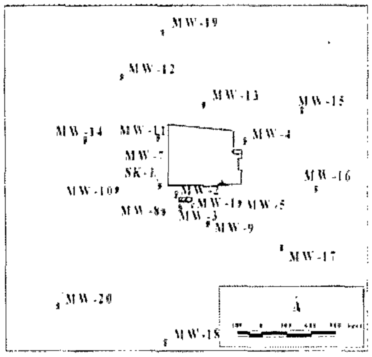
ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
	15								5.6	
3950.0										75
	16								6.0	
3945.0			SAND, reddish-gray							80
	17			SP					8.6	
3940.0			SAND, yellowish-brown							85
	18								5.8	
3935.0		BENTONITE SEAL								90
	19								3.4	
3930.0										95
	20			SP					4.6	
3925.0		SAND PACK								100
	21								3.1	
3920.0										105

Boring Terminated at 130 bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-15
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 4025.75 (ft)
GROUNDWATER ELEVATION (msl): 3907.90 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 9/17/02
DATE/TIME: COMPLETED: 9/17/02
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4026.75
Static Water Level (feet below Top of Casing): 118.85
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

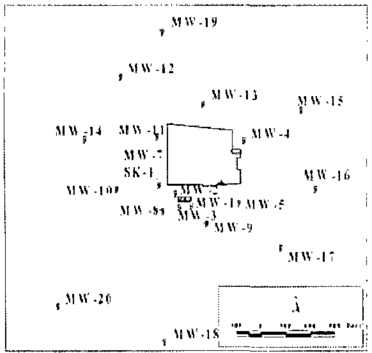
ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
	22								2.5	
3915.0										110
	23								1.2	
3910.0			CLAY with hard stringer, reddish-brown							115
	24	9/17/02 SWL		CL					0.7	
3905.0			Limestone, gray							120
	25								1.8	
3900.0			SAND, shaly, reddish-brown							125
	26			SP					3.1	
										130

Boring Terminated at 130 bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-16
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 4015.74 (ft)
GROUNDWATER ELEVATION (msl): 3904.17 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 9/17/02
DATE/TIME: COMPLETED: 9/17/02
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4017.74
Static Water Level (feet below Top of Casing): 113.57
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
4015.0	1	GROUTED ANNULUS	SAND, red	SP					5.6	0
4010.0	2		Shale, red						6.7	5
4005.0			Caliche and gravel, white							10
4000.0	3, 4		SAND, light red	SP					4.0, 4.6	15
3995.0	5		SAND and gravel, red	SP					3.3	20
3990.0	6		SAND, red	SP					4.4	25
3985.0	7		Shale, red						5.1	30
3980.0	8		Shale, dark red						4.1	35
3975.0	9		Shale and sand, red						2.4	40
										45

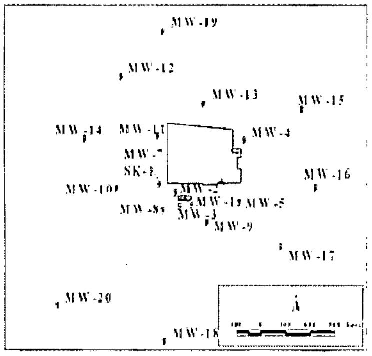
Boring Terminated at 130' bgs

Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC.	EXPLORATORY BORING LOG	MW-16

PROJECT NAME: Maxim #2690032	MONITORING WELL NO. MW-16
LOCATION: Maljamar Gas Plant, Lea County	FIELD LOGGED BY: F. Lichnovsky
	ELEVATION: GROUND SURFACE (msl): 4015.74 (ft)
	GROUNDWATER ELEVATION (msl): 3904.17 (ft)
	DRILL TYPE: Truck Mounted Air Rotary
	BORE HOLE DIAMETER: 5 (in)
	DRILLED BY: Scarborough Drilling
	DATE/TIME: HOLE STARTED: 9/17/02
	DATE/TIME: COMPLETED: 9/17/02
	REMARKS: bgs=Below Ground Surface; ND=Not Detected, NS=No Sample; msl=mean sea level; FOG-First occurrence of groundwater; SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4017.74

Static Water Level (feet below Top of Casing): 113.57

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3970.0			Shale, red							45
	10								3.9	
3965.0			Shale, red, and sand, reddish-gray							50
	11								2.1	
3960.0										55
	12								3.0	
3955.0			Shale, reddish-gray							60
	13								2.4	
3950.0										65
	14								4.4	
3945.0										70
	15								4.7	
3940.0										75
	16								1.9	
3935.0			SAND, yellow to tan	SP						80
	17		Shale, reddish-gray						3.4	
3930.0										85
	18								2.1	
										90

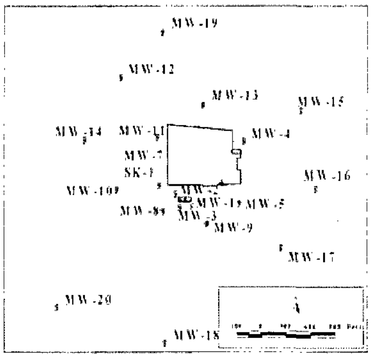
Boring Terminated at 130' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-16

FIELD LOGGED BY: F. Lichnovsky

ELEVATION: GROUND SURFACE (msl): 4015.74 (ft)

GROUNDWATER ELEVATION (msl): 3904.17 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 9/17/02

DATE/TIME: COMPLETED: 9/17/02

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4017.74

Static Water Level (feet below Top of Casing): 113.57

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3925.0		BENTONITE SEAL								90
	19		SAND, reddish-gray	SP					1.6	
3920.0										95
	20		SAND and shale, reddish-gray	SP					1.1	
3915.0		SAND PACK								100
	21		SAND, reddish-gray, hard	SP					1.7	
3910.0										105
	22		SAND, light reddish-gray, some limestone	SP					3.7	
3905.0										110
	23	9/17/02 SWL							0.8	
3900.0			Limestone, gray							115
	24		SAND, yellow to tan	SP					1.5	
3895.0			SAND with shale, brown							120
	25								2.7	
3890.0				SP						125
	26								0.5	
										130

Boring Terminated at 130' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-17

FIELD LOGGED BY: F. Lichnovsky

ELEVATION: GROUND SURFACE (msl): 3997.58 (ft)

GROUNDWATER ELEVATION (msl): 3897.58 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

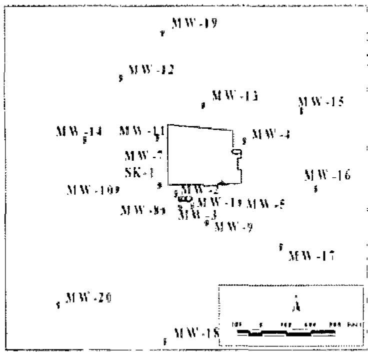
DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 9/17/02

DATE/TIME: COMPLETED: 9/17/02

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 3998.58

Static Water Level (feet below Top of Casing): 101

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
		GROUTED ANNULUS	SAND, red							0
3995.0	1			SP					9.1	
			Caliche, white, and sand, light red							5
3990.0	2								8.9	
			SAND, red							10
3985.0	3								6.2	
										15
3980.0	4			SP					8.9	
										20
3975.0	5								9.0	
			Shale, red							25
3970.0	6								6.2	
										30
3965.0	7								7.6	
										35

Boring Terminated at 100' bgs

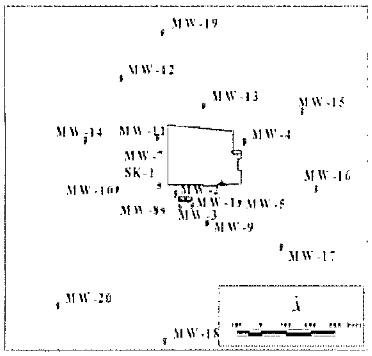
Bulk Sampling

2690032 | MAXIM TECHNOLOGIES INC | EXPLORATORY BORING LOG | MW-17

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-17
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 3997.58 (ft)
GROUNDWATER ELEVATION (msl): 3897.58 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 9/17/02
DATE/TIME: COMPLETED: 9/17/02
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 3998.58
Static Water Level (feet below Top of Casing): 101
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3960.0	8								10.7	
			Shale, reddish-brown							40
3955.0	9								6.6	
			SAND, light greenish-gray and Shale, dark red							45
3950.0	10			SP					8.8	
			SAND and Shale, light greenish-brown, hard stringers at 65 feet bgs							50
3945.0	11								8.4	
										55
3940.0	12								3.3	
				SP						60
3935.0	13								8.4	
										65
3930.0	14								4.1	
			Shale, red							70
			Shale and sand, light							

Boring Terminated at 100' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-17

FIELD LOGGED BY: F. Lichnovsky

ELEVATION: GROUND SURFACE (msl): 3997.58 (ft)

GROUNDWATER ELEVATION (msl): 3897.58 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

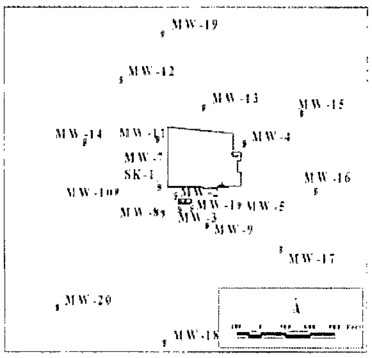
DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 9/17/02

DATE/TIME: COMPLETED: 9/17/02

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 3998.58

Static Water Level (feet below Top of Casing): 101

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3925.0	15	BENTONITE SEAL	greenish-brown						2.9	
										75
3920.0	16								2.5	
			Shale, yellow, and sand, light greenish-gray							80
3915.0	17								3.8	
			Shale, sandy, light greenish-gray							85
3910.0	18								3.3	
		SAND PACK	SAND and shale, light greenish-gray, damp							90
3905.0	19			SP					4.0	
										95
3900.0	20	9/17/02 SWL	Shale, light greenish-gray						2.3	
										100

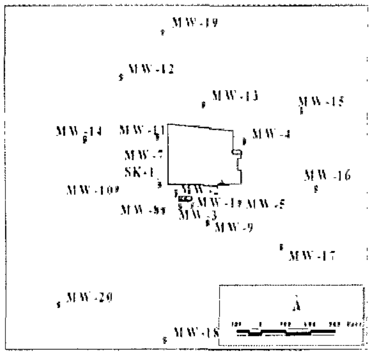
Boring Terminated at 100' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-18

FIELD LOGGED BY: F. Lichnovsky

ELEVATION: GROUND SURFACE (msl): 3977.46 (ft)

GROUNDWATER ELEVATION (msl): 3894.46 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 9/17/02

DATE/TIME: COMPLETED: 9/17/02

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 3980.46

Static Water Level (feet below Top of Casing): 86

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
		GROUTED ANNULUS								0
3975.0	1		SAND, red	SP					2.6	
			SAND, red, with gravel							5
3970.0	2								4.9	
										10
3965.0	3								5.6	
				SP						15
3960.0	4								5.2	
										20
3955.0	5								6.6	
			SAND and gravel, light red							25
3950.0	6			SP					5.6	
			SAND, light red and light gray							30
3945.0	7								4.0	
				SP						35
3940.0										

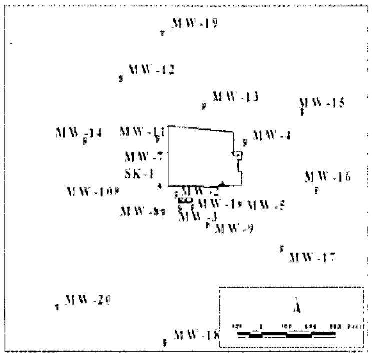
Boring Terminated at 110' bgs

Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-18

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-18
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 3977.46 (ft)
GROUNDWATER ELEVATION (msl): 3894.46 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 9/17/02
DATE/TIME: COMPLETED: 9/17/02
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 3980.46
Static Water Level (feet below Top of Casing): 86
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap

Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
	8								3.8	
										40
			Shale and sand, light gray, hard at 50 feet bgs							
3935.0	9								3.5	
										45
3930.0	10								1.5	
										50
3925.0	11								2.3	
										55
3920.0	12								2.0	
										60
			Shale, sandy, light yellow							
3915.0	13								1.6	
										65
3910.0	14								2.7	
										70
			Shale, sandy, light yellowish-green							
3905.0	15								2.5	
		BENTONITE								75

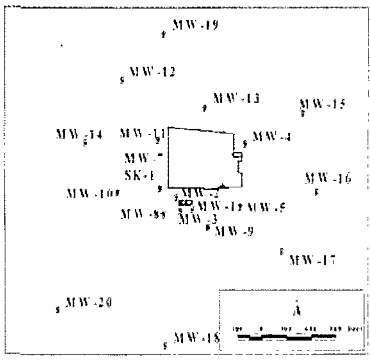
Boring Terminated at 110' bgs

Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-18

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-18
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 3977.46 (ft)
GROUNDWATER ELEVATION (msl): 3894.46 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 9/17/02
DATE/TIME: COMPLETED: 9/17/02
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 3980.46
Static Water Level (feet below Top of Casing): 86
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3900.0	16	SEAL							1.8	
										80
3895.0	17	9/17/02 SWL							0.6	
			Shale, calcareous, gray, hard							85
3890.0	18								0.5	
		SAND PACK	SAND, light yellowish-greeen, damp							90
3885.0	19								0.7	
				SP						95
3880.0	20		SAND, light yellowish-greeen, damp, hard	SP					0.5	
			Shale, red							100
3875.0	21								1.7	
										105
3870.0	22								1.5	
										110

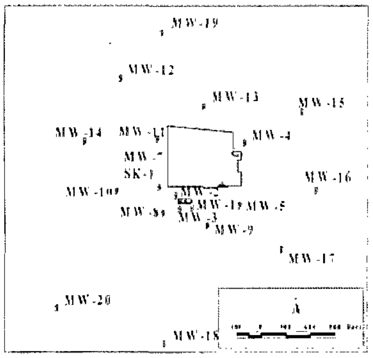
Boring Terminated at 110' bgs
Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-18

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-19
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 4035.34 (ft)
GROUNDWATER ELEVATION (msl): 3922.34 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 9/17/02
DATE/TIME: COMPLETED: 9/17/02
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4037.34
Static Water Level (feet below Top of Casing): 115
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap

Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
4035.0		GROUTED ANNULUS	SAND, red							0
	1			SP					1.3	
4030.0			Caliche, white, with sand, red							5
	2								1.0	
4025.0			SAND, light red							10
	3								2.4	
4020.0				SP						15
	4								1.5	
4015.0			Shale, red							20
	5								1.1	
4010.0										25
	6								1.0	
4005.0										30
	7								2.3	
4000.0			Shale and sand, red							35
	8								3.7	
3995.0										40

Boring Terminated at 120' bgs

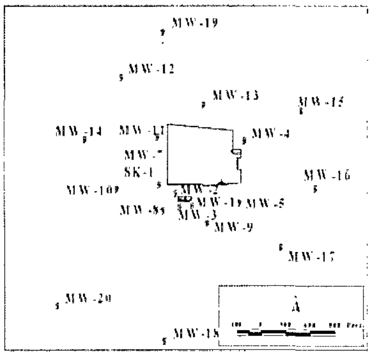
Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-19

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-19

FIELD LOGGED BY: F. Lichnovsky

ELEVATION: GROUND SURFACE (msl): 4035.34 (ft)

GROUNDWATER ELEVATION (msl): 3922.34 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 9/17/02

DATE/TIME: COMPLETED: 9/17/02

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4037.34

Static Water Level (feet below Top of Casing): 115

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3995.0	9		Shale and sand, reddish-brown						3.7	
3990.0	10								3.5	45
3985.0			Shale, gray							50
	11		Shale, dark reddish-purple						3.7	
3980.0	12								1.8	55
3975.0			Shale and gravel, reddish-purple							60
	13								2.8	
3970.0	14								1.9	65
3965.0	15								2.8	70
3960.0	16								1.8	75
3955.0										80

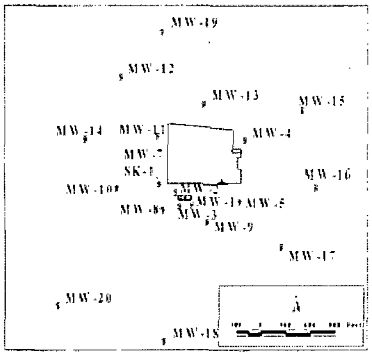
Boring Terminated at 120' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

MONITORING WELL NO. MW-19
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 4035.34 (ft)
GROUNDWATER ELEVATION (msl): 3922.34 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 9/17/02
DATE/TIME: COMPLETED: 9/17/02
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4037.34
Static Water Level (feet below Top of Casing): 115
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

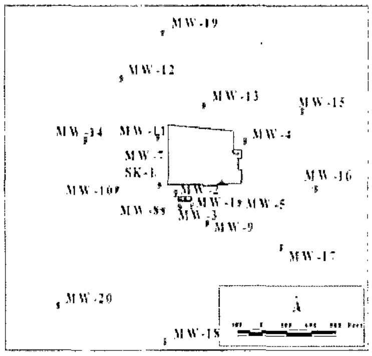
ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
	17		Shale and sand, reddish-purple						3.1	
3950.0	18		Shale and sand, light yellow						2.0	85
3945.0	19	BENTONITE SEAL							2.1	90
3940.0	20		SAND, light yellow	SP					2.6	95
3935.0	21	SAND PACK	SAND and shale, light yellow						2.3	100
3930.0	22		Shale, light green, hard						2.3	105
3925.0	23		Shale, light green						0.9	110
3920.0	24	9/17/02 SWL	Shale, light green, thin sand beds						0.7	115
										120

Boring Terminated at 120' bgs
Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-19

PROJECT NAME: Maxim #2690032
LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-20
FIELD LOGGED BY: F. Lichnovsky
ELEVATION: GROUND SURFACE (msl): 3975.42 (ft)
GROUNDWATER ELEVATION (msl): 3899.92 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 5 (in)
DRILLED BY: Scarborough Drilling
DATE/TIME: HOLE STARTED: 9/18/02
DATE/TIME: COMPLETED: 9/19/02
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 3976.92
Static Water Level (feet below Top of Casing): 77
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3975.0			SAND, red							0
	1			SP					0.6	
3970.0		GROUTED ANNULUS	Shale, red							5
	2		Caliche, white						2.2	
3965.0										10
	3								4.2	
3960.0			SAND, light red							15
	4			SP					2.5	
3955.0										20
	5								2.1	
3950.0										25
	6								1.9	
3945.0			Shale, red							30
	7								2.2	
3940.0										35
	8								2.4	
3935.0										40

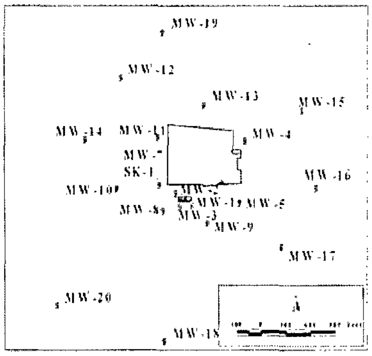
Boring Terminated at 120' bgs

Bulk Sampling

PROJECT NAME: Maxim #2690032

LOCATION: Maljamar Gas Plant, Lea County

LOCATION MAP



MONITORING WELL NO. MW-20

FIELD LOGGED BY: F. Lichnovsky

ELEVATION: GROUND SURFACE (msl): 3975.42 (ft)

GROUNDWATER ELEVATION (msl): 3899.92 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 5 (in)

DRILLED BY: Scarborough Drilling

DATE/TIME: HOLE STARTED: 9/18/02

DATE/TIME: COMPLETED: 9/19/02

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 3976.92

Static Water Level (feet below Top of Casing): 77

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3935.0										
	9								2.0	
3930.0			Shale, gray							45
	10								2.8	
3925.0										50
	11								2.4	
3920.0			Shale, gray, with light yellow sand							55
	12								2.1	
3915.0			Shale, light yellow							60
	13								3.1	
3910.0			Shale, light yellowish-green, sand, yellow							65
	14								2.6	
3905.0			Shale, gray to grayish-green							70
	15	BENTONITE SEAL							3.2	
3900.0			Shale, grayish-green							75
	16	9/17/02 SWL							1.5	
3895.0										80

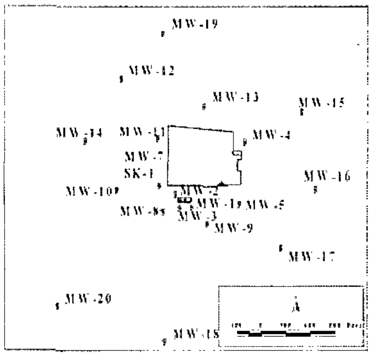
Boring Terminated at 120' bgs

Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-20

PROJECT NAME: Maxim #2690032	MONITORING WELL NO. MW-20
LOCATION: Maljamar Gas Plant, Lea County	FIELD LOGGED BY: F. Lichnovsky
	ELEVATION: GROUND SURFACE (msl): 3975.42 (ft)
	GROUNDWATER ELEVATION (msl): 3899.92 (ft)
	DRILL TYPE: Truck Mounted Air Rotary
	BORE HOLE DIAMETER: 5 (in)
	DRILLED BY: Scarborough Drilling
	DATE/TIME: HOLE STARTED: 9/18/02
	DATE/TIME: COMPLETED: 9/19/02
	REMARKS: bgs=Below Ground Surface; ND=Not Detected, NS=No Sample; msl=mean sea level; FOG-First occurrence of groundwater; SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing	Type of Casing: PVC
Measuring Point Elevation (msl): 3976.92	Casing Diameter: 2 in.
Static Water Level (feet below Top of Casing): 77	Slot Size: 0.010 in
Well Development: Water Extraction Until Visibly Free of Sediment	
Well Cap: Locking Cap	

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
	17	SAND PACK	Shale, gray, some thin layers of red shale						1.5	
3890.0			Shale, red							85
	18								1.4	
3885.0										90
	19								2.7	
3880.0										95
	20								1.7	
3875.0			Shale, purplish-red							100
	21								1.9	
3870.0										105
	22								1.7	
3865.0										110
	23								1.3	
3860.0										115
	24								0.9	
										120

Boring Terminated at 120' bgs

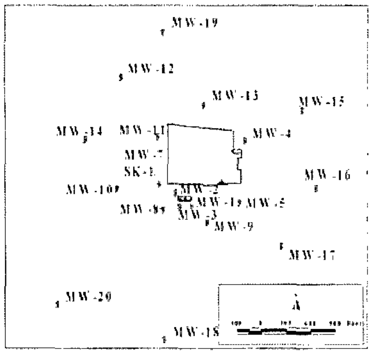
Bulk Sampling

2690032	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	MW-20

PROJECT NAME: Conoco Maljamar Gas Plant

LOCATION: Maljamar, Texas

LOCATION MAP



MONITORING WELL NO. SK-1

FIELD LOGGED BY: Anne Stewart

ELEVATION: GROUND SURFACE (msl): 4002.18 (ft)

GROUNDWATER ELEVATION (msl): 3928.11 (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 6.25 (in)

DRILLED BY: Harrison & Cooper, Inc.

DATE/TIME: HOLE STARTED: 3/21/01

DATE/TIME: COMPLETED: 3/21/01

REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing

Measuring Point Elevation (msl): 4005.18

Static Water Level (feet below Top of Casing): 3931.11

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

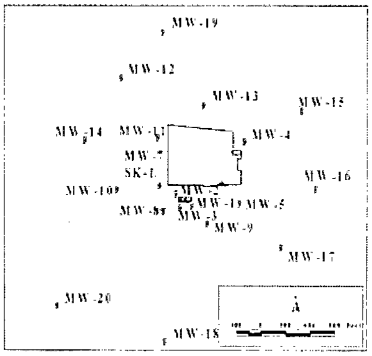
ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
4000.0	1	GROUTED ANNULUS	Daylighted, no recovery; reddish-brown dune sand.						NS	0
	2			SP					1.1	5
3995.0			Reddish-brown to tan sand; fine grained.	SP						
3990.0			Tan sand; fine grained.	SP						10
3985.0			Reddish-brown to tan sand; fine grained.	SP						15
3980.0		BENTONITE SEAL	Tan sand with caliche; fine grained sand							20
3975.0	3			SP					0.1	25
3970.0			Reddish sand with caliche.							30
	4								0.0	35

Total depth 105 feet

Bulk Sampling

PROJECT NAME: Conoco Maljamar Gas Plant
LOCATION: Maljamar, Texas

LOCATION MAP



MONITORING WELL NO. SK-1
FIELD LOGGED BY: Anne Stewart
ELEVATION: GROUND SURFACE (msl): 4002.18 (ft)
GROUNDWATER ELEVATION (msl): 3928.11 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 6.25 (in)
DRILLED BY: Harrison & Cooper, Inc.
DATE/TIME: HOLE STARTED: 3/21/01
DATE/TIME: COMPLETED: 3/21/01
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4005.18
Static Water Level (feet below Top of Casing): 3931.11
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3965.0										
				SP						40
3960.0										
	5								0.5	45
3955.0										
										50
3950.0			Reddish sand.	SP						
	6		Green clay stringer.	CL					0.1	55
3945.0										
										60
3940.0			Light green sand; fine grained.							
	7			SP					0.0	65
3935.0										
			Light green clayey sand; slightly damp.							70

Total depth 105 feet

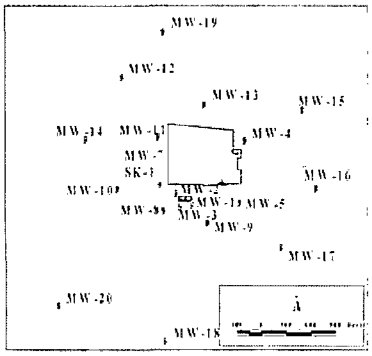
Bulk Sampling

2690015.100	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	SK-1

PROJECT NAME: Conoco Maljamar Gas Plant
LOCATION: Maljamar, Texas

MONITORING WELL NO. SK-1
FIELD LOGGED BY: Anne Stewart
ELEVATION: GROUND SURFACE (msl): 4002.18 (ft)
GROUNDWATER ELEVATION (msl): 3928.11 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 6.25 (in)
DRILLED BY: Harrison & Cooper, Inc.
DATE/TIME: HOLE STARTED: 3/21/01
DATE/TIME: COMPLETED: 3/21/01
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4005.18
Static Water Level (feet below Top of Casing): 3931.11
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

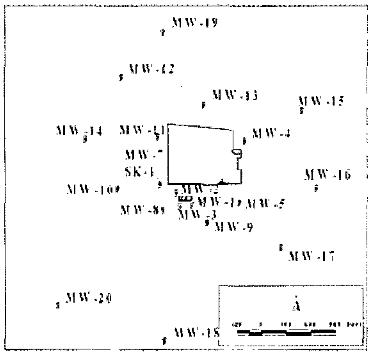
ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3930.0	8	SWL - 3/02	slightly damp.	SC					0.0	
3925.0	9		Light green clayey sand; slightly damp, well cemented.	SC					0.0	75
3920.0			Green sand; slightly damp, well cemented.							80
3915.0	10			SP					968	85
3910.0		SAND PACK	Green sand; saturated, well cemented.	SP						90
3905.0	11								184	95
3900.0	12		Green clay; some dry clasts.	CL					174	100
										105

Total depth 105 feet
Bulk Sampling

2690015.100	MAXIM TECHNOLOGIES INC.	EXPLORATORY BORING LOG	SK-1

PROJECT NAME: Conoco Maljamar Gas Plant
LOCATION: Maljamar, Texas

LOCATION MAP



MONITORING WELL NO. SK-2
FIELD LOGGED BY: Frank Lichnovsky
ELEVATION: GROUND SURFACE (msl): 4002.18 (ft)
GROUNDWATER ELEVATION (msl): 3929.29 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 8 (in)
DRILLED BY: John Scarborough Drilling
DATE/TIME: HOLE STARTED: 12/18/02
DATE/TIME: COMPLETED: 12/18/02
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4005.18
Static Water Level (feet below Top of Casing): 3931.11
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap

Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
	1	GROUTED ANNULUS	Sand and shale; red; moist.							0
4000.0										
3995.0	2		Red sand; fine-grained.							5
3990.0										10
3985.0	3		Red shale; sandy.							15
3980.0										20
3975.0										25
3970.0	4		Shale; reddish-gray with sand lenses.							30
3965.0	5		Gray shale.							35
3960.0										40
	6		Tan shale.							45

Total depth 90 feet

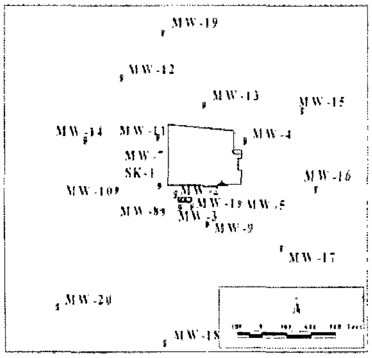
Bulk Sampling

2690015.100	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	SK-2

PROJECT NAME: Conoco Maljamar Gas Plant
LOCATION: Maljamar, Texas

MONITORING WELL NO. SK-2
FIELD LOGGED BY: Frank Lichnovsky
ELEVATION: GROUND SURFACE (msl): 4002.18 (ft)
GROUNDWATER ELEVATION (msl): 3929.29 (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 8 (in)
DRILLED BY: John Scarborough Drilling
DATE/TIME: HOLE STARTED: 12/18/02
DATE/TIME: COMPLETED: 12/18/02
REMARKS: bgs=Below Ground Surface
ND=Not Detected, NS=No Sample
msl=mean sea level
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl): Top of Casing
Measuring Point Elevation (msl): 4005.18
Static Water Level (feet below Top of Casing): 3931.11
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3955.0	7		Sand; tan-gray; shale stringers.							45
3950.0	8		Sand; light yellow-gray; hard stringer from 57 to 59 feet.							50
3945.0										55
3940.0	9		Shale; gray-green; moist with strong smell at 64 to 67 feet.							60
3935.0	10	BENTONITE SEAL SAND PACK	Shale; dark gray-green.							65
3930.0	11		Sand; light gray-green; strong odor at 70 to 71 feet; hard stringer at 72 to 74 feet.							70
3925.0	12		Green sand; fine grained; strong odor.							75
3920.0										80
3915.0	13		Green sand; hard; well cemented.							85
	14									90

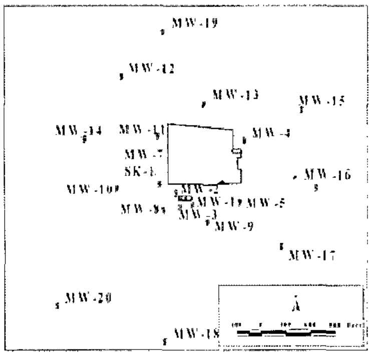
Total depth 90 feet

Bulk Sampling

2690015.100	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	SK-2

PROJECT NAME: Conoco Maljamar Gas Plant
LOCATION: Maljamar, New Mexico

LOCATION MAP



MONITORING WELL NO. B-1-C
FIELD LOGGED BY: Anne Stewart
ELEVATION: GROUND SURFACE (msl): 4019.5 (ft)
GROUNDWATER ELEVATION (msl): Not Recorded (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 6.25 (in)
DRILLED BY: Harrisoin & Cooper, Inc.
DATE/TIME: HOLE STARTED: 3/20/02
DATE/TIME: COMPLETED: 3/20/02
REMARKS: msl = mean sea level
bgs = below ground surface

FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl):
Measuring Point Elevation (msl):
Static Water Level (feet below Top of Casing):
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
4015.0 / 4010.0			Sand and soil; no recovery.	SP						0 / 5
4005.0 / 4000.0			Pink silty sand; fine grained, some caliche.	SM					0.6	10 / 15
3995.0 / 3990.0			Red silty fine sand.	SM					0.0	20 / 25
3985.0			Gray to green clay; well cemented.	CL					0.0	30 / 35

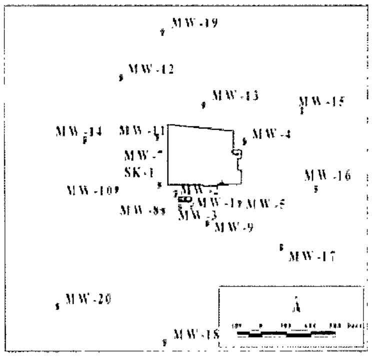
180 feet total depth

Bulk Sampling

PROJECT NAME: Conoco Maljamar Gas Plant

LOCATION: Maljamar, New Mexico

LOCATION MAP



MONITORING WELL NO. B-1-C

FIELD LOGGED BY: Anne Stewart

ELEVATION: GROUND SURFACE (msl): 4019.5 (ft)

GROUNDWATER ELEVATION (msl): Not Recorded (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 6.25 (in)

DRILLED BY: Harrisoin & Cooper, Inc.

DATE/TIME: HOLE STARTED: 3/20/02

DATE/TIME: COMPLETED: 3/20/02

REMARKS: msl = mean sea level
bgs = below ground surface

FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl):

Measuring Point Elevation (msl):

Static Water Level (feet below Top of Casing):

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
				CL						
3980.0			Gray clay; well cemented.	CL					0.2	40
3975.0										45
3970.0			Gray sandy clay; well cemented.	CL					0.0	50
3965.0										55
3960.0			Greenish-gray silty clay with some sand; well consolidated.	CL					0.3	60
3955.0										65
3950.0			Reddish sandy silt with some intact shale.	ML					0.3	70

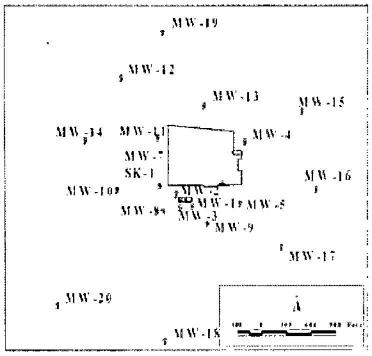
180 feet total depth

Bulk Sampling

PROJECT NAME: Conoco Maljamar Gas Plant
LOCATION: Maljamar, New Mexico

MONITORING WELL NO. B-1-C
FIELD LOGGED BY: Anne Stewart
ELEVATION: GROUND SURFACE (msl): 4019.5 (ft)
GROUNDWATER ELEVATION (msl): Not Recorded (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 6.25 (in)
DRILLED BY: Harrisoin & Cooper, Inc.
DATE/TIME: HOLE STARTED: 3/20/02
DATE/TIME: COMPLETED: 3/20/02
REMARKS: msl = mean sea level
bgs = below ground surface
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl):
Measuring Point Elevation (msl):
Static Water Level (feet below Top of Casing):
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

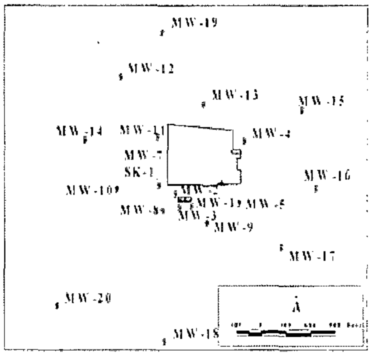
ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
			intact shale Greenish-gray sandy silt.	ML					0.3	
3945.0				ML						75
3940.0			Gray silty clay with sand.						1.2	80
3935.0				CL						85
			Clay lens.	CL						
3930.0			Gray silty clay with sand.	CL						90
			Gray silty sand.	SM					1.2	
3925.0			Gray shale with red oxidation spots; some sand.							95
3920.0			Red bed: red clay; dry (shale).						0.2	100
3915.0										105

180 feet total depth | Bulk Sampling

PROJECT NAME: Conoco Maljamar Gas Plant
LOCATION: Maljamar, New Mexico

MONITORING WELL NO. B-1-C
FIELD LOGGED BY: Anne Stewart
ELEVATION: GROUND SURFACE (msl): 4019.5 (ft)
GROUNDWATER ELEVATION (msl): Not Recorded (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 6.25 (in)
DRILLED BY: Harrisoin & Cooper, Inc.
DATE/TIME: HOLE STARTED: 3/20/02
DATE/TIME: COMPLETED: 3/20/02
REMARKS: msl = mean sea level
bgs = below ground surface
FOG-First occurrence of groundwater
SWL-Static Water Level

LOCATION MAP



WELL COMPLETION INFORMATION

Measuring Point Description (msl):
Measuring Point Elevation (msl):
Static Water Level (feet below Top of Casing):
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3910.0			Red shale with green/gray reduction zones towards 120 feet; dry.						0.4	110
3905.0										115
3900.0			Red shale; dry.						0.1	120
3895.0										125
3890.0									0.1	130
3885.0										135
3880.0			Gray shale.						0.4	140

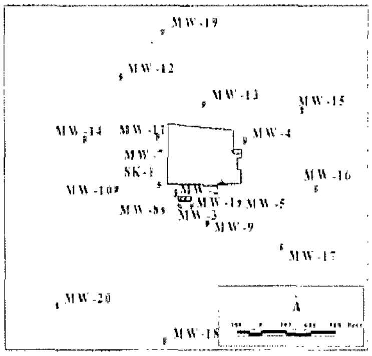
180 feet total depth

Bulk Sampling

2690015.100	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	B-1-C

PROJECT NAME: Conoco Maljamar Gas Plant
LOCATION: Maljamar, New Mexico

LOCATION MAP



MONITORING WELL NO. B-1-C
FIELD LOGGED BY: Anne Stewart
ELEVATION: GROUND SURFACE (msl): 4019.5 (ft)
GROUNDWATER ELEVATION (msl): Not Recorded (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 6.25 (in)
DRILLED BY: Harrisoin & Cooper, Inc.
DATE/TIME: HOLE STARTED: 3/20/02
DATE/TIME: COMPLETED: 3/20/02
REMARKS: msl = mean sea level
bgs = below ground surface
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl):
Measuring Point Elevation (msl):
Static Water Level (feet below Top of Casing):
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3875.0										145
3870.0			Red shale.						2.8	150
3865.0										155
3860.0			Gray shale, dry.						1.1	160
3855.0										165
3850.0										170
3845.0										175
3840.0										180

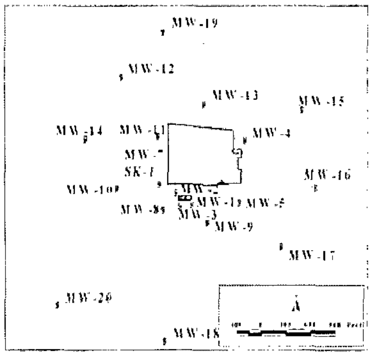
180 feet total depth

Bulk Sampling

PROJECT NAME: Conoco Maljamar Gas Plant

LOCATION: Maljamar, New Mexico

LOCATION MAP



MONITORING WELL NO. B-2-C

FIELD LOGGED BY: Anne Stewart

ELEVATION: GROUND SURFACE (msl): 3985.6 (ft)

GROUNDWATER ELEVATION (msl): Not Recorded (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 6.25 (in)

DRILLED BY: Harrisoin & Cooper, Inc.

DATE/TIME: HOLE STARTED: 3/22/02

DATE/TIME: COMPLETED: 3/22/02

REMARKS: msl = mean sea level
bgs = below ground surface
Stopped hole at 60 feet to see if hole would make water
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl):

Measuring Point Elevation (msl):

Static Water Level (feet below Top of Casing):

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3985.0			Daylighted, no recovery.	SP						0
3980.0			Red sand.	SP						5
3975.0			Caliche in red sand; dry.						1.2	10
3970.0										15
3965.0			Caliche in grayish-white sand; dry.						0.1	20
3960.0										25
3955.0			Light green to gray silty sand; dry.	SM					0.6	30
3950.0										35

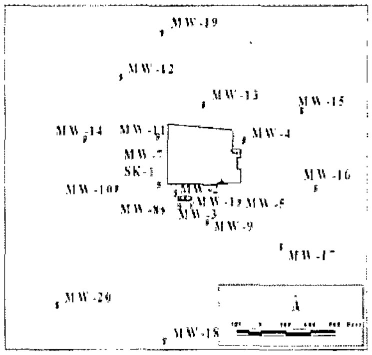
140 feet total depth

Bulk Sampling

PROJECT NAME: Conoco Maljamar Gas Plant

LOCATION: Maljamar, New Mexico

LOCATION MAP



MONITORING WELL NO. B-2-C

FIELD LOGGED BY: Anne Stewart

ELEVATION: GROUND SURFACE (msl): 3985.6 (ft)

GROUNDWATER ELEVATION (msl): Not Recorded (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 6.25 (in)

DRILLED BY: Harrisoin & Cooper, Inc.

DATE/TIME: HOLE STARTED: 3/22/02

DATE/TIME: COMPLETED: 3/22/02

REMARKS: msl = mean sea level
bgs = below ground surface
Stopped hole at 60 feet to see if hole would make water
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl):

Measuring Point Elevation (msl):

Static Water Level (feet below Top of Casing):

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
			Cemented (well consolidated zone).	SM					0.7 0.4	
			Green shale stringer.							
3945.0			Gray sand with much small gravel; dry.	SP					0.4	40
3940.0			Clayey gray sand; damp.	SC						45
3935.0			Reddish-purple sandy clay (red bed shale) grading to reddish-purple to brown clay with green clay clasts.	CL					0.7	50
3930.0										55
3925.0			Purplish-red clay (shale); red bed continuation; dry.						0.9	60
3920.0										65
3915.0									3.2	70

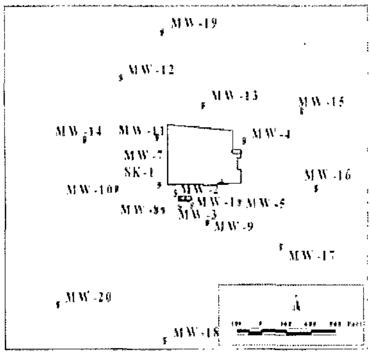
140 feet total depth

Bulk Sampling

2690015.100	MAXIM TECHNOLOGIES INC	EXPLORATORY BORING LOG	B-2-C

PROJECT NAME: Conoco Maljamar Gas Plant
LOCATION: Maljamar, New Mexico

LOCATION MAP



MONITORING WELL NO. B-2-C
FIELD LOGGED BY: Anne Stewart
ELEVATION: GROUND SURFACE (msl): 3985.6 (ft)
GROUNDWATER ELEVATION (msl): Not Recorded (ft)
DRILL TYPE: Truck Mounted Air Rotary
BORE HOLE DIAMETER: 6.25 (in)
DRILLED BY: Harrisoin & Cooper, Inc.
DATE/TIME: HOLE STARTED: 3/22/02
DATE/TIME: COMPLETED: 3/22/02
REMARKS: msl = mean sea level
bgs = below ground surface
Stopped hole at 60 feet to see if hole would make water
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl):
Measuring Point Elevation (msl):
Static Water Level (feet below Top of Casing):
Well Development: Water Extraction Until Visibly Free of Sediment
Well Cap: Locking Cap
Type of Casing: PVC
Casing Diameter: 2 in.
Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
				CL					3.2	
3910.0										75
3905.0										80
									0.7	
3900.0			Green silt stringer; dry.						0.5	85
				ML						
3895.0			Purplish-red clay (shale); red bed continuation; dry.	CL						90
			Green silty clay stringer; dry.						1.5	
3890.0										95
3885.0			Purplish-red clay (shale); red bed continuation; dry. Slight color change to brownish-red.							100
3880.0										105

140 feet total depth

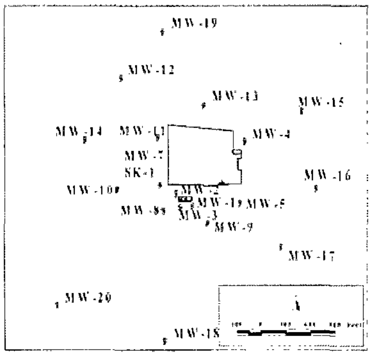
Bulk Sampling

2690015.100	MAXIM TECHNOLOGIES INC.	EXPLORATORY BORING LOG	B-2-C

PROJECT NAME: Conoco Maljamar Gas Plant

LOCATION: Maljamar, New Mexico

LOCATION MAP



MONITORING WELL NO. B-2-C

FIELD LOGGED BY: Anne Stewart

ELEVATION: GROUND SURFACE (msl): 3985.6 (ft)

GROUNDWATER ELEVATION (msl): Not Recorded (ft)

DRILL TYPE: Truck Mounted Air Rotary

BORE HOLE DIAMETER: 6.25 (in)

DRILLED BY: Harrisoin & Cooper, Inc.

DATE/TIME: HOLE STARTED: 3/22/02

DATE/TIME: COMPLETED: 3/22/02

REMARKS: msl = mean sea level
bgs = below ground surface
Stopped hole at 60 feet to see if hole would make water
FOG-First occurrence of groundwater
SWL-Static Water Level

WELL COMPLETION INFORMATION

Measuring Point Description (msl):

Measuring Point Elevation (msl):

Static Water Level (feet below Top of Casing):

Well Development: Water Extraction Until Visibly Free of Sediment

Well Cap: Locking Cap

Type of Casing: PVC

Casing Diameter: 2 in.

Slot Size: 0.010 in

ELEVATION (msl) - ft	SAMPLE INTERVAL/ID #	COMPLETION DIAGRAM	CLASSIFICATION AND DESCRIPTION	USCS SYMBOL	BLOW COUNT	ANALYTICAL	TIME	% RECOVERY	PID RESULT (ppm)	DEPTH (bgs) - ft
3875.0				CL					1.2	110
3870.0										115
3865.0			Gray silty clay (shale); dry.						0.7	120
3860.0				CL						125
3855.0									0.6	130
			Pinkish-gray sandy clay; well cemented (shale).							
3850.0				CL						135
										140

140 feet total depth

Bulk Sampling

APPENDIX B

Borehole Geophysical Investigation Report

MAXIM
TECHNOLOGIES INC®

10601 Lomas NE, Suite 106
Albuquerque, NM 87112
(505) 237-8440

January 22, 2003

Mr. Neal Goates
ConocoPhillips Inc.
Risk Management and Remediation
Threadneedle Office
P.O. Box 2197
Houston, TX 77252-2197

RE: Borehole Geophysical Investigation
Maljamar Gas Plant
Lea County, New Mexico
Maxim Project No. 3690001.100

Dear Mr. Goates:

Maxim Technologies, Inc. (Maxim) prepared this letter report for your review detailing the borehole geophysical investigation performed during November 6-8, 2002, at the Maljamar Gas Plant, Maljamar, New Mexico. The purpose of the borehole geophysical investigation was to ascertain the subsurface stratigraphy to facilitate free product removal and any subsequent groundwater remediation efforts.

BACKGROUND

Nineteen monitor wells (MW-1 through MW-5 and MW-7 through MW-20) have been installed at the Maljamar Gas Plant to define the extent of impacts to groundwater. Water levels indicate a groundwater mound to the west of the plant. Groundwater sampling has indicated the presence of free product, most likely a condensate, west and south of the gas plant. Difficulty was experienced in the mapping of hydrostratigraphic units underlying the gas plant site using only air rotary cuttings. Due to the competency of the shallow formations underlying the gas plant, neither split-spoon nor continuous coring techniques could be used for stratigraphic control. Therefore, it was determined that a borehole geophysical logging program would help in the interpretation of subsurface conditions.

The importance of stratigraphic control for this project focuses on the need for exact placement of monitor well screens for the removal of free product through use of skimmer pumps.

BOREHOLE GEOPHYSICAL INVESTIGATION

The borehole geophysical logging was performed from November 6 through 8, 2002. Maxim subcontracted the work to COLOG of Golden, Colorado. Each monitor well was logged with gamma, induced resistivity, temperature and conductivity. The logging tool was cleaned between each monitor well. Copies of each log are attached to this letter (Appendix A). Photos of the logging operations are contained in Appendix B.

RESULTS

The geophysical borehole logs indicated that mappable units, exhibiting lateral and vertical correlation properties were present underlying the gas plant. Based on information presented in the geophysical logs, a skimmer pump well was installed on December 18, 2002 (SK-2) adjacent to MW-7, the monitoring well exhibiting the thickest column of free phase product.

If you have any questions, please do not hesitate to call me at 505-237-8440.

Sincerely,

MAXIM THECHNOLOGIES, INC.

Clyde L. Yancey, P.G.
Senior Project Manager

Attachments

Cc: Joyce Miley, ConocoPhillips CGP, Houston, Texas
Mark Bishop, ConocoPhillips CGP, Hobbs, New Mexico

APPENDIX A

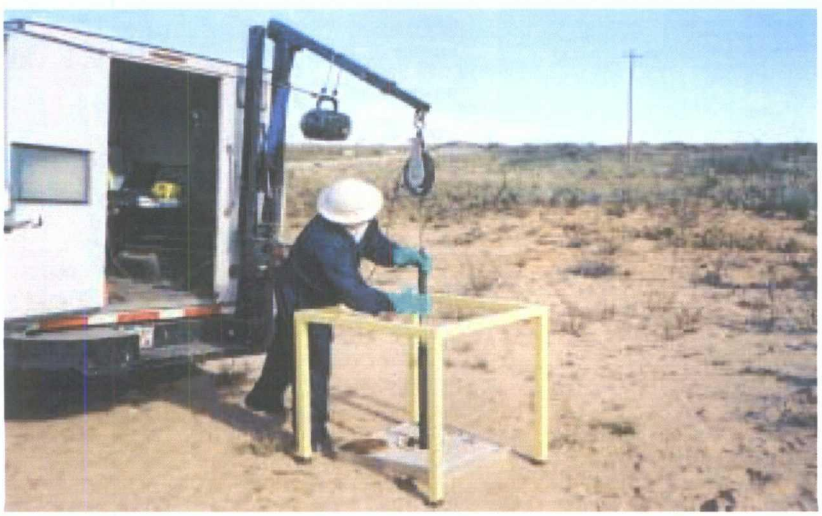
Colog Logs

(ON ATTACHED CD)

APPENDIX B

Site Photos

Photographs of Borehole Geophysical Logging Operations at Malmajar Gas Plant



APPENDIX C

Surface Geophysical Investigation Report

MAXIM
TECHNOLOGIES INC®

10601 Lomas NE, Suite 106
Albuquerque, NM 87112
(505) 237-8440
Fax (505) 237-8656

March 11, 2003

Mr. Neal Goates
ConocoPhillips Inc.
Threadneedle Office
600 North Dairy Ashford
Houston, TX 77079

RE: Surface Geophysical Investigation Near the Maljamar Gas Plant
Lea County, New Mexico
Maxim Project No. 3690048.100

Dear Neal:

Please find attached two copies of the above-referenced report for you use and review. The report was prepared by Sunbelt Geophysics of Albuquerque, New Mexico. The objective of the investigation was to possibly locate abandoned wells suspected as a possible source of a near-surface groundwater mound. The geophysical investigation was conducted between February 18 and 27, 2003, and consisted of a magnetometer survey covering approximately 10 acres over the groundwater mound. A smaller, high-resolution electromagnetic metal detection survey over an anomalous area indicated by the magnetic survey was also performed.

The survey resulted in an anomaly consistent with an abandoned metal-cased well and associated flow line at an approximate five-foot depth. The details and location of the anomaly are described in the attached report.

In order to investigate the anomaly, ConocoPhillips could choose to do the work in house or Maxim Technologies would be happy to provide a cost estimate. However the work is approached, care should be taken during investigation due to proximity of the anomaly to buried product lines. I would recommend excavating by hand rather than using equipment.

Sunbelt Geophysics will provide an electronic copy of this report for upload into EDMS. The geophysical software does not readily yield to .pdf transformation. If you should have any questions, please do not hesitate to call me.

Very truly yours,

MAXIM TECHNOLOGIES, INC.

Clyde L. Yancey
Project Manager

Enclosures

SUNBELT GEOPHYSICS P.O. Box 36404 Albuquerque, New Mexico 87176 (505) 922-1140

Geophysical Investigation near the Maljamar Gas Plant, Lea County, New Mexico

Prepared for:

MAXIM Technologies Inc.
10601 Lomas NE, Suite 106
Albuquerque, New Mexico 87112

David A. Hyndman
Sidney S. Brandwein

March 2003

Introduction

A geophysical investigation has been conducted near the Conoco Maljamar Gas Plant in Lea County, New Mexico. The objective of the investigation was to locate abandoned wells suspected as a possible source of a near-surface groundwater mound.

The investigation consisted of a magnetometer survey covering approximately 10 acres, with a smaller high-resolution electromagnetic metal detection survey over an anomalous area indicated by the magnetic survey.

The investigation was conducted between 18 February and 27 February 2003. Labor, instrumentation, and technical expertise for the survey were provided by Sunbelt Geophysics of Albuquerque. Guidance and oversight were provided by Maxim Technologies Inc. of Albuquerque and Midland.

Methodology

A survey grid was established covering the area containing the peak of the ground water mound as indicated by groundwater elevation contours developed by Maxim Technologies. The grid consisted of parallel north-south data acquisition traverses separated by 12.5 ft and was marked by wooden laths, stakes and plastic stemmed pin flags. The location of the survey grid is shown in Figure 1.

The magnetometer survey was conducted utilizing a Geometrics G-858 cesium vapor magnetometer. Magnetic data were acquired approximately every 2 ft along the north-south traverses with the magnetic sensor held approximately 8 ft above the ground. Data were stored in a data logger intrinsic to the magnetometer and transferred to a computer for processing. The MagMapper program (Geometrics Inc.) was used for basic data reduction.

The metal detection survey was conducted utilizing a Geonics EM-61 high precision metal locator. The EM-61 is a time domain electromagnetic instrument capable of detecting buried metal to a depth of approximately 10 ft. EM-61 data were acquired approximately every 0.6 ft along parallel east-west traverses separated by 5 ft. The EM-61 data were recorded on a data logger and transferred to a computer for processing and analysis. The DAT 61 program (Geonics Ltd.) was used for data reduction. The Geosoft Mapping and Processing System (Geosoft Inc.) was used to prepare images of both the magnetometer and EM-61 data.

Both of the instruments used during this investigation are shown in Figure 2.

Survey Results

The results of the magnetometer survey are presented in Figure 3. Surface features that generated a magnetic response are annotated on the figure. Most of the observed magnetic anomalies (deviations above and below green background) can be correlated to metallic lines. These lines are traced on the figure and include relic flow lines exposed at the surface, buried and marked LPG lines, and unmarked lines that are inferred from surface fixtures.

The only significant magnetic anomaly that cannot be directly correlated to the metallic lines or surface features is located in the southeast corner of the survey, and is marked "?". This is a very strong, positive magnetic peak, deviating greater that 6000 nT over background. This is the type of magnetic anomaly to be expected from a metal cased well.

The immediate area around this large magnetic anomaly was investigated with the EM-61 metal detector. The results from the EM-61 survey are shown in Figure 4, which also contains the magnetic contours from the previous figure.

The EM-61 data reveal two previously unknown buried metallic lines, in addition to the two lines inferred from nearby above ground fixtures. There are also markers for a fiberglass line in this area. The fiberglass line would not be detected by either the magnetometer or the EM-61.

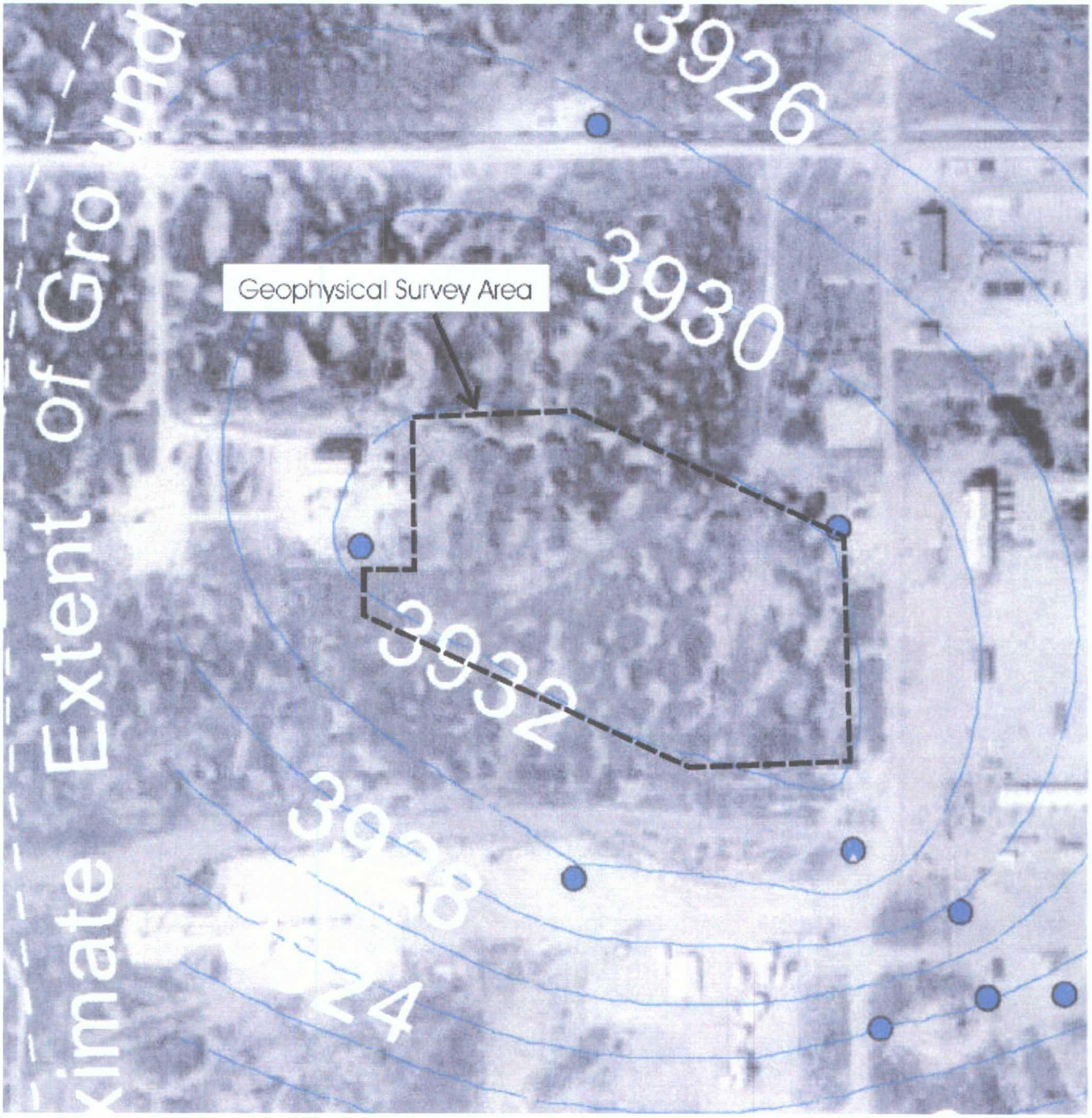
The depth of burial varies for the four metallic lines. The western most line is exposed at the surface in the south, but reaches approximately 3.0 ft deep in the north, under an encroaching sand dune. The two eastern most lines are at approximately the same depth of 1.8 ft. The magnetic anomaly, as shown by the contours, peaks immediately over the last line, which is at a somewhat greater depth of approximately 4.8 ft.

The magnetic anomaly was investigated further with a Schonstedt magnetic locator in order to determine the shape with greater spatial resolution than obtained with the 12.5 ft traverse spacing. The magnetic field strength was found to rise rapidly to an abrupt and localized peak. The magnitude (>6000 nT) and shape of this magnetic anomaly are very consistent with the expected response of a well casing. The depth of the line coincident with the magnetic anomaly suggests this line may have been covered over time by windblown sand.

Conclusions

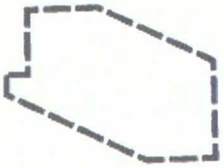
The geophysical investigation near the Maljamar Gas Plant has provided results consistent with an abandoned metal-cased well and associated flow line. The flow line is buried at a depth of approximately 4.8 ft. below the surface.

The position of the magnetic anomaly was marked with three wooden laths and surveyors' ribbon, and is shown in Figure 5.



Base from Maxim Technologies Inc.,
Water Level Elevation Contours, September 20, 2002

300 ft.



Geophysical Survey Area

Figure1. Conoco Maljamar Gas Plant
Location of Geophysical Survey

Geometrics G-858 Magnetometer

Geonics EM-61 Metal Detector

Figure 2. Geophysical Instruments

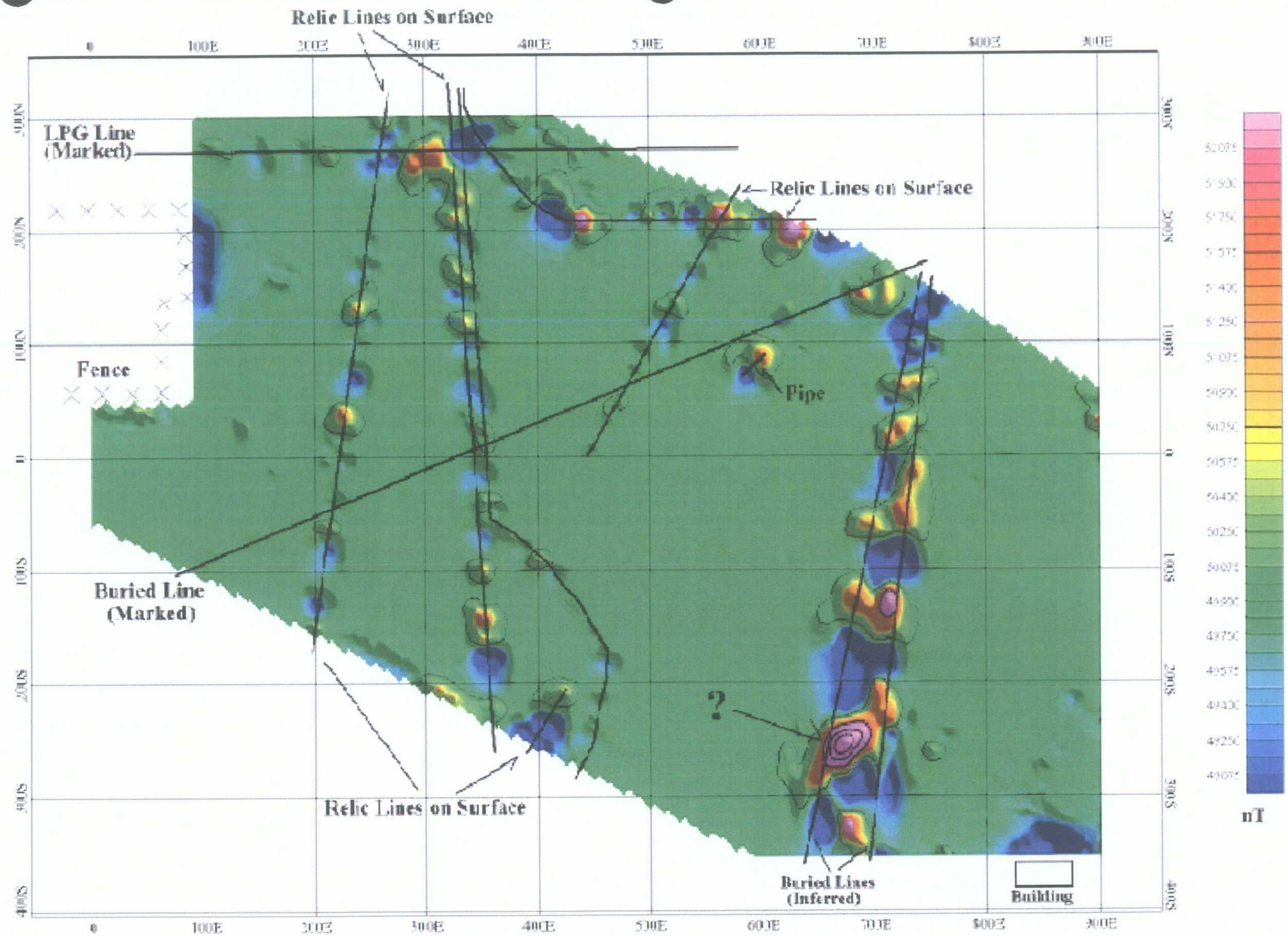


Figure 3. Conoco Maljamar Gas Plant

Total Magnetic Field Strength

Contours at 50000, 52000, 54000, 56000 nT

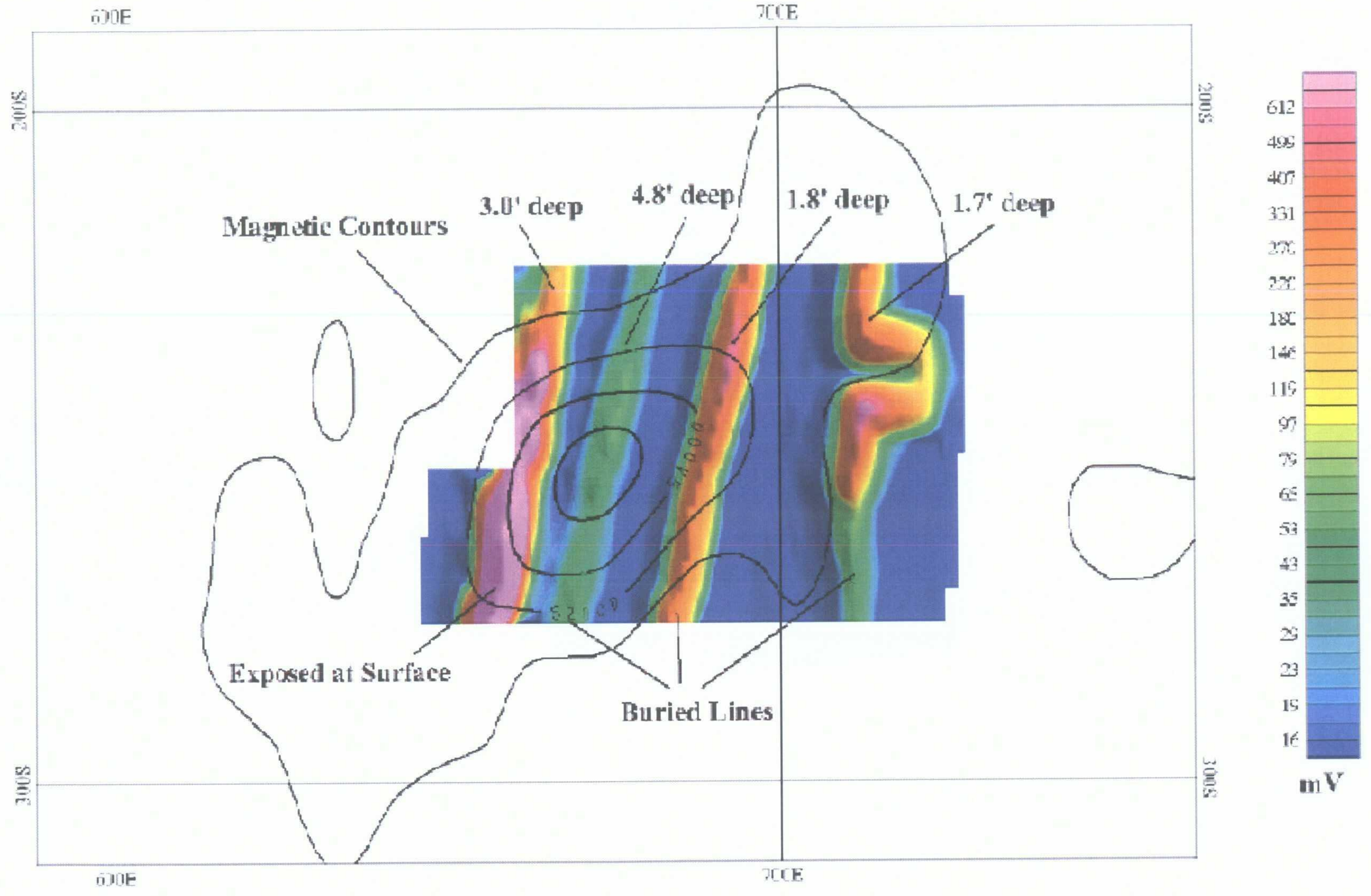


Figure 4. Conoco Maljamar Gas Plant
EM-61 Survey with Magnetic Contours
(50000, 52000, 54000, 56000 nT)

Facing North

Facing South

Figure 5. Position of Suspected Well

APPENDIX D

Results of Maljamar Aquifer Test Analysis, Water Balance Development and Groundwater Modeling

RESULTS OF MALJAMAR AQUIFER TEST ANALYSIS WATER BALANCE DEVELOPMENT AND GROUNDWATER MODELING MALJAMAR GAS PLANT LEA COUNTY, NEW MEXICO

Prepared for

ConocoPhillips

600 North Dairy Ashford
Threadneedle Office
Houston, TX 77079

Prepared by

MAXIM TECHNOLOGIES INC®

10601 Lomas NE, Suite 106
Albuquerque, NM 87112

November 5, 2003

TABLE OF CONTENT

FIGURES

TABLE

RESULTS OF MALJAMAR AQUIFER TEST ANALYSIS
WATER BALANCE DEVELOPMENT AND GROUNDWATER MODELING
MALJAMAR GAS PLANT, LEA COUNTY, NEW MEXICO

1.0 INTRODUCTION

On October 7 and 8, 2003, a constant-rate pumping test was conducted at the Maljamar Gas Plant, Lea County, New Mexico. The purpose of the pumping test was to gather hydrogeologic data from the uppermost saturated zone, exhibiting both condensate and chloride impacts, in order to develop a remediation plan. The pumping test data was used to develop a water balance for the uppermost aquifer and an interpretive groundwater flow model to aid in estimating the effects of pumping a proposed well to be sited near well SK-1 (Figure 1). The well is to be used to draw down the groundwater mound that is centered west of the Maljamar Gas Plant (Figure 2) in order to contain both the condensate and chloride constituents in groundwater. Methods and results of these tasks are described below.

2.0 BACKGROUND

In response to a condensate release at the Maljamar Gas Plant in 2000, a total of 19 two-inch monitor wells and 2 four-inch monitor wells have been constructed in and around the former ConocoPhillips gas processing facility (facility is now owned by Frontier Energy). As a result of the ongoing three-year investigation, the following conditions are know:

- Groundwater occurs under confining conditions in the immediate vicinity of the gas plant at approximately 95 feet below ground surface (fbgs) within two sand units ranging in thickness from several feet to no more than 10 to 12 feet thick.

- The groundwater potentiometric surface is mounded, with the center of the mound occurring west of the gas plant site.

- West of the mound centroid, the saturated interval is dry, most likely the result of a subsurface stratigraphic pinch-out or a fault.

- To the north, south and east the mound centroid, groundwater occurs under unconfined conditions, indicating that the further away from the mound recharge zone confining pressures diminish.

- The groundwater is impacted with both free- and dissolved-phase hydrocarbon, with concentrations decreasing away from the mound centroid.

- The groundwater is also impacted by elevated chloride concentrations, again, decreasing away from the center of the mound.

- It is likely that this unit was potentially unsaturated prior to the water flood short-circuit.
- Borehole geophysics were run on all 19 two-inch monitor wells, and it was shown that the subsurface stratigraphy is complex, consisting of irregular, interbedded sands, shales and silts deposited on an erosional surface.
- A surface geophysical investigation was performed across the center of the mound; however, no short-circuit pathways were discovered.
- Currently, a skimmer pump is operating with apparent minimal results in the area of the observed greatest accumulation of free phase product (condensate-like).
- In order to move forward efficiently, the following course of action was developed and approved:
  - Perform an aquifer test to determine hydraulic characteristics – completed and discussed herein.
  - Install one or more pumping wells in the center of the mound, and route produced water to the MCA water flood station oil/water separator, and re-inject the water and haul the product for off site disposal – to be completed.
  - If a significant cone of depression occurs, resulting in pooling of the free phase, the skimming operations could conceivably continue – to be completed.

3.0 OBJECTIVES

The objective of aquifer testing was to develop site-specific values for aquifer characteristics including transmissivity (T), hydraulic conductivity (K, which is calculated from T), and the storage coefficient (S). These aquifer characteristics are necessary input parameters for the groundwater model and to design the most efficient remedial alternative.

The objective of developing a water balance for the shallow aquifer was to help estimate the flux of water leaking from deeper hydrostratigraphic units and help determine the overall number of wells that may be necessary to deplete the observed groundwater mound in the shallow aquifer.

The objective of groundwater modeling was to aid in assessing the potential effectiveness and limitations of the planned remediation well in drawing down the groundwater mound.

4.0 AQUIFER TESTING AND ANALYSIS

On October 7, 2003, Well SK-1 was pumped at a constant rate (0.9 gallon per minute) for 10 hours and then allowed to recover for an additional 14 hours. Throughout this testing period, water level data were collected both from SK-1 and from a nearby observation well, MW-7. These aquifer test data were compiled, imported into AquiferWin32® software and analyzed using standard curve matching and straight-line techniques.

Drawdown and recovery data analyses are summarized below. Curve matches with analytical results are presented in Figures 3 through 6. Best fits for pumping conditions in both the pumping and observation wells were derived with the Hantush solution that solves for drawdown under confined conditions with leaky aquitard (Hantush, 1960). Recovery data were analyzed using the Theis recovery solution, which provided a good fit to SK-1 recovery data and a poor fit to MW-7 recovery data.

Table 1. Results of Aquifer Test Analyses

Well / Test	**Best Fit Solution**	**T (ft^2/d)**	**b (ft)**	**K (feet/day) (K = T/b)**	**S (dimension-less)**
SK-1 Pumping Figure 3	Hantush (Leaky with Storage, 1960)	1.96	13	0.15	0.004
SK-1 Recovery Figure 4	Theis (Recovery, 1946)	6.11	13	0.47	--
MW-7 Observation Figure 5	Hantush (Leaky with Storage, 1960)	4.13	17	0.24	0.05
MW-7 Recovery Figure 6	Theis (Recovery, 1946)	15.70	17	0.92	--

4.1 WATER BALANCE

A water balance was developed to help estimate the flux of water leaking into shallow sandstone units from underlying units. In this approach it was assumed that the groundwater mound is at steady state. In other words, the flux into shallow sandstones from underlying units is equal to the flow out of the sandstone at some unknown point and that there is no change in storage.

Darcy's Law states that:

$$Q = K\, i\, A$$

Where:

Q = groundwater flux
i = hydraulic gradient
A = cross sectional area

To estimate flux into the groundwater mound using Darcy's law, Maxim centered a circle about the approximate center of the mound and inscribed the circle about MW-16, yielding a radial distance of approximately 2200 feet. A value representing the perimeter of this circle was calculated and, noting that approximately half of the mound is truncated to the west, the perimeter was adjusted to half of the perimeter length. The resulting perimeter value of 6900 feet was multiplied by the combined saturated thickness of the two shallow sandstone units of 18 feet of saturated sandstone observed at MW-16, yielding an estimated cross-sectional area of 124,400 feet.

Using Darcy's Law, a range of hydraulic conductivity values in Table 1, a cross sectional area of 124,400 feet and a hydraulic gradient of 0.0134, Maxim calculated flux estimates ranging from 1.3 to 8.0 gallons per minute (gpm).

4.2 CONCEPTUAL MODEL

Maxim reviewed available data including boring logs, cross sections, and potentiometric maps of the Maljamar groundwater mound to produce a conceptual model of the physical flow system within the two uppermost water-bearing sandstones beneath the site.

The conceptual model assumes that the source of groundwater within the potentiometric mound observed in shallow sandstone units beneath the site is leakage of injected water-flood water occurring directly beneath the approximate center of the observed groundwater mound. It also assumes that leakage water contained in the sandstone units is confined by interbedded shale units. At wells SK-1 and MW-7, at approximately 72 fbgs, an 11-foot-thick upper water-bearing sandstone layer overlies a 4-foot-thick shale layer, which in turn overlies a lower 13-foot-thick water-bearing sandstone layer. The upper water-bearing sandstone appears to contain groundwater in a saturated thickness of approximately 8 feet. This groundwater lens is covered by a layer of condensate with an apparent thickness of 4 feet (as observed in MW-7), indicating a possible total of as much as 12 feet of fluid in the upper 11-foot-thick water-bearing zone. Because the actual thickness of condensate in the upper sandstone is unknown, it is uncertain if fluids in this zone are confined or unconfined. Water levels in the lower water-bearing sandstone rise to approximately the same potentiometric level as in the upper sandstone, indicating that fluids contained in the lower water-bearing sandstone are confined. In well SK-1, the lower fluid-bearing sandstone contains an apparent thickness of condensate of approximately 0.5 foot. Although the lateral extent of saturation in the shallow sandstone units is unknown, the mound is presumed to be continuous across its contoured extent (Figure 2).

From the October 2003 potentiometric data, the average hydraulic gradient at the site was calculated to be 0.0134 foot per foot. The hydraulic gradient decreases radially from the approximate center of the mound in all directions; however, exploration borings completed approximately 1000 feet west, northwest, and southwest of the approximate center of the mound were dry, indicating that the mound is truncated toward the west.

4.3 GROUNDWATER MODELING

Maxim developed the numerical groundwater model using the U.S. Geological Survey code MODFLOW. The following summarizes steps used to develop the groundwater flow model:

1. The conceptual model of the groundwater flow system was reviewed.

2. The numerical model was designed based on the conceptual model. Design elements included development of the model domain and finite-difference grid, selection of appropriate boundary conditions, and input of initial modeling parameters.

3. A steady-state version of the numerical model was run, results were examined, and input parameters were adjusted to yield the best overall match to the known hydraulic gradient field around the groundwater mound. The parameters that provided the best match were used in the final version of the steady-state model. The steady-state head distribution generated from this modeling step was used to represent initial conditions for the remedial pumping simulation.

4. Pumping of the proposed remedial well was modeled as a one-half-year (180 days) transient simulation. During successive model runs, the pumping rate and associated drawdown in the pumping well cell was adjusted until reasonable values for pumping rates and associated drawdown were generated.

4.3.1 Simplifying Assumptions

Maxim used the following simplifying assumptions in developing the groundwater flow model:

- The groundwater mound is initially at steady state.

- There are no other shallow pumping wells in the vicinity of the site. Pumping of the planned remediation well will be the only additional stress to the flow system.

- The source of the groundwater mound is a point source.

- Other groundwater inputs to and outflows from the flow system, such as diffuse aerial recharge and evapotranspiration, are insignificant sources of recharge to the groundwater mound and are ignored.

- The two shallow sandstone units are treated as a single hydrostratigraphic unit. The thickness of the water-bearing zone is assumed to be a constant 31 feet. This value was arrived at by combining the saturated thicknesses of the upper and lower water-bearing sandstone zones for a total of 21 feet and adding an additional 10 feet of saturated thickness upon examination of cross sections. The thickness of the water-bearing zone is assumed to be constant across the model domain.

- Homogeneous and isotropic conditions across the model domain are assumed with respect to the specific storage field (Ss) and the hydraulic conductivity (K) field (i.e., Kx = Ky = Kz).

4.3.2 Model Design

Maxim used Groundwater Vistas (Version 3.28, Environmental Simulations Inc., 2001) and MODFLOW (McDonald and Harbaugh, 1986) to develop a simple interpretive groundwater flow model of the Maljamar Gas Plant vicinity. MODFLOW uses a modular, block-centered finite-difference approach to simulate groundwater flow.

The model domain was selected to be large enough in area that simulated pumping would not be influenced by boundary effects. To refine the simulation of flux from the point source and pumping from the proposed remedial well, Maxim used a telescoping technique to construct the model grid. Row and column spacing was decreased from 100 feet at the model boundaries to 25 feet in that portion of the model domain that represents the source and proposed extraction well. The model grid (Figure 7) was constructed using a single confined (MODFLOW Type 3) layer, with 121 rows and 82 columns. The resulting model domain is 10,200 feet long, 6000 feet wide, and 31 feet thick. A single model layer was used to simulate groundwater flow in both of the two shallow-most water-bearing sandstone units.

The northern, southern, and eastern (Column 82) model margins are general head boundaries. Hydraulic conductivity values for these boundary cells were set to low values, and head values were set equal to the bottom elevation of the model so these boundary cells would behave as groundwater sinks but would not act as sources of groundwater to the model domain. The western margin is a no-flow boundary to simulate the unsaturated condition observed in areas west of the groundwater mound.

4.3.3 Limited Steady State Calibration

In steady state mode, the model was executed and parameters, particularly hydraulic conductivity and storage values, were adjusted until simulated heads, gradients, fluxes and the degree of mounding in the steady state simulation generally matched those observed at the site. The following is a summary of calibrated model parameters:

hydraulic conductivity	=	0.28 feet/day
specific storage	=	3×10^{-4}
specific yield	=	0.05
leakage into mound	=	2 gpm

4.3.4 Transient Simulations

Once a satisfactory steady state result was achieved, the proposed pumping well was simulated as a constant flux boundary at one gallon per minute into the model approximately 600 feet southeast of the point source. The model was run under transient conditions with a stress period of 180 days divided into 20 time steps using a time step multiplier of 1.2. Operation of the extraction well was simulated with a range of pumping rates between 0.5 and 3.0 gpm. The resulting cone-of-depression radius and the simulated drawdown were measured.

4.3.5 Model Results

Modeling results show that pumping from a remedial extraction well at a rate of 1.0 gpm will result in a formational drawdown of approximately 17 feet. This pumping rate will generate a cone of depression of a radius of approximately 1000 feet about the extraction well (Figure 8). Simulated formational drawdown is less than the drawdown that would be expected to occur in the actual pumping well.

5.0 DISCUSSION

Aquifer testing and groundwater modeling results indicate that a single well screened across both shallow sandstone units at the location of well SK-1 will probably be capable of pumping approximately 1 to 2 gpm. It is likely that a properly designed pumping well may be capable of pumping at a greater rate initially but would need to be valved back or pulsed once it has been operating for a while. It is proposed that a six-inch well diameter well, screened across both sandstone units be installed.

There is an unknown amount of error associated with several of the input parameters used in the groundwater modeling exercise that affect the estimated pumping rates and drawdown. The bottom line is this: if the pumping rate in the proposed well is less that the rate of groundwater leakage into the shallow sandstone units, additional wells will likely be necessary to deplete the groundwater mound. For this reason, we think that ultimately, additional pumping wells will be necessary to reduce the size of the currently observed groundwater mound.

Results of long-term pumping in the proposed remedial well will provide a much better idea of how the shallow flow system and the groundwater mound will respond to long-term aquifer stress and help determine if additional wells will necessary to reduce the size of the mound.

6.0 LIMITATIONS

Inherent in any modeling effort is a degree of uncertainty. In developing the groundwater model, we used several simplifying assumptions listed above. There is much uncertainty associated with several model inputs such as lateral stratigraphic anisotropy and boundaries. The model was designed as an interpretive tool to aid in remedial design. Although the model was able to simulate field measured flow conditions, a limited set of site-specific data was available regarding aquifer characteristics. Error associated with model predictions has not been quantified.

Once the proposed six-inch well is operational, data observed and recorded over time will be incorporated into the model to further refine model simulations. This will allow Maxim to calibrate the model to real-time data, thus greatly enhancing predictive simulations.

7.0 REFERENCES

Anderson, M. P. and Woessner, W. W. 1992. Applied Groundwater Modeling Simulation of Flow and Advective Transport. Academic Press Inc., San Diego CA.

Driscoll, F. 1986. Groundwater and Wells. Johnson Filtration Systems. St. Paul, Minn. Equation 9.1 on p. 213 used for correcting drawdown values derived from modeling.

McDonald, M. G. and A. W. Harbaugh. 1984. A modular three-dimensional finite-difference ground-water flow model. Prepared by USGS, Reston VA.

C:\Anne Technical\Maljamar\GIS\MGP10_03wle.apr \ View1 \ Layout2 - Figure 2

SOURCES:
USGS, Dog Lake 7.5 Minute Quadrangle
(Provisional Edition, 1985)
USGS, Maljamar 7.5 Minute Quadrangle
(Provisional Edition, 1985)
Digital Orthophotos downloaded from Microsoft Terraserver, 2002.
Well locations surveyed by Basin Surveys, Hobbs, NM.

400 0 400 800 Feet

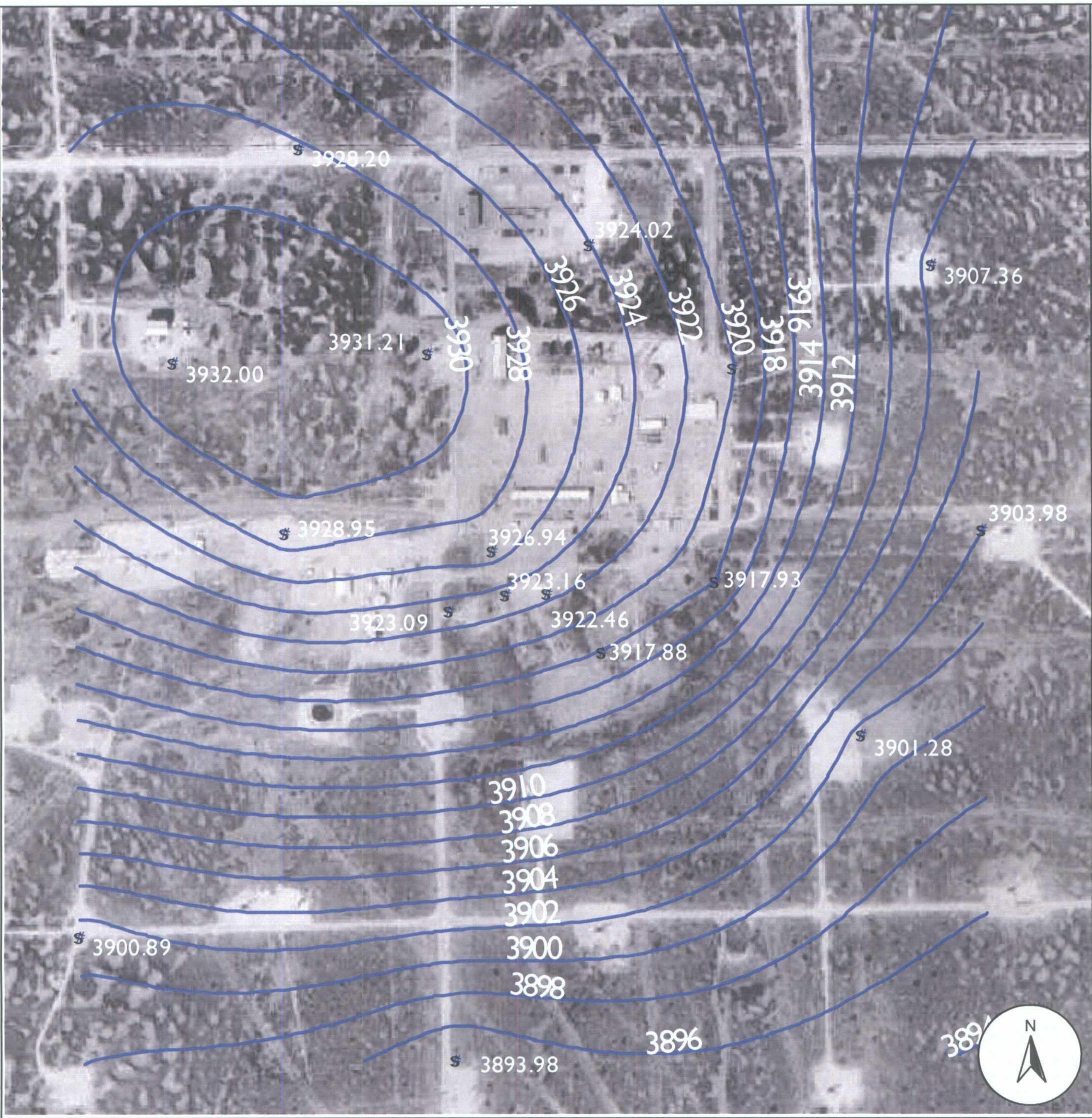
Maljamar Gas Plant
Groundwater Mound Investigation
Conoco Road,
Maljamar, Lea County NM

MAXIM TECHNOLOGIES INC
Project Number: 3690074.100

SITE MAP

FIGURE 1

C:\Anne Technical\Maljamar\GIS\MGP.apr \ View1 \ Layout



SOURCES:
USGS, Dog Lake 7.5 Minute Quadrangle
(Provisional Edition, 1985)
USGS, Maljamar 7.5 Minute Quadrangle
(Provisional Edition, 1985)
Digital Orthophotos downloaded from Microsoft Terraserver, 2002.
Groundwater elevation data measured by Maxim, October, 2003.

300 0 300 600 Feet

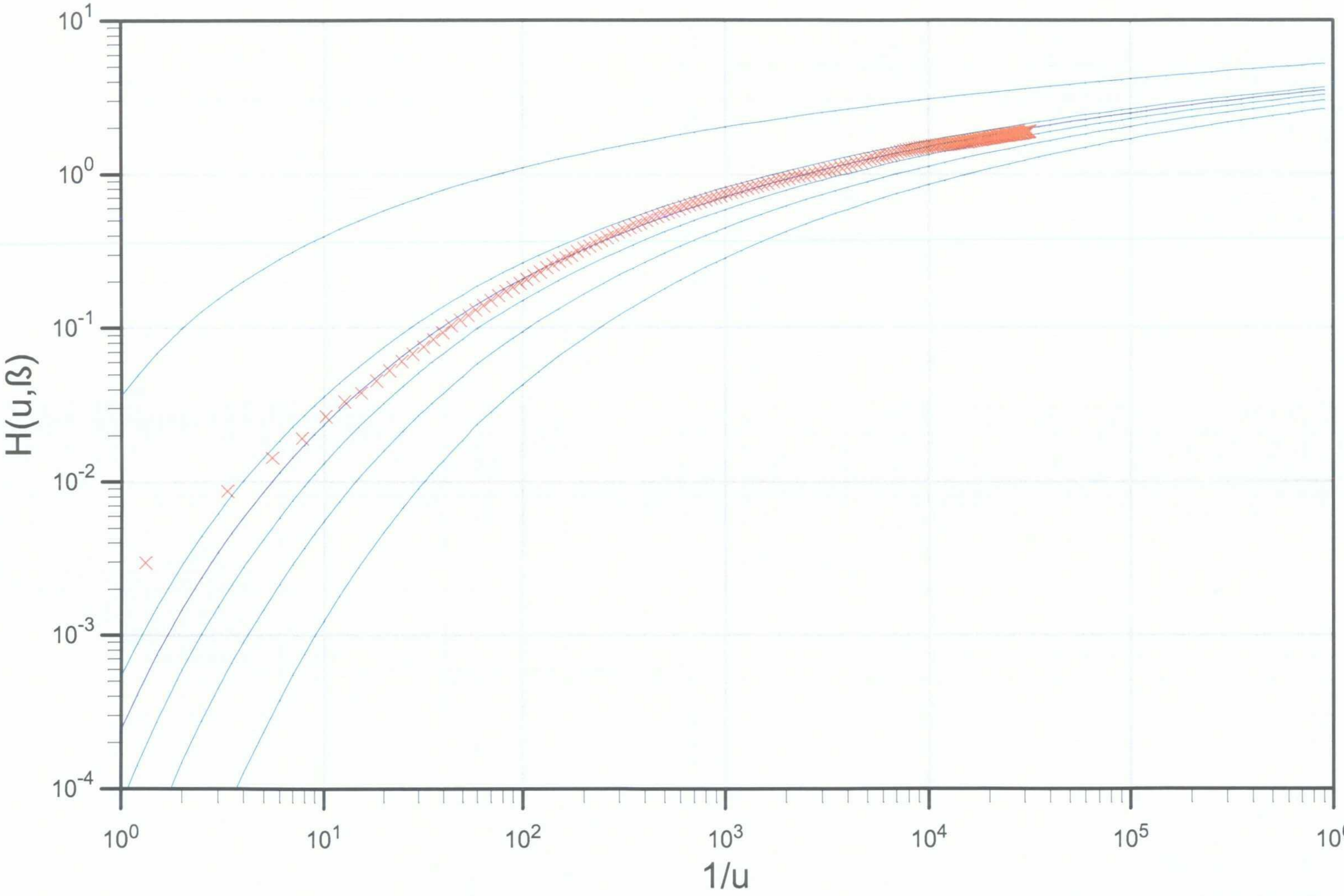
Maljamar Gas Plant
Groundwater Mound Investigation
Conoco Road,
Maljamar, Lea County NM

MAXIM
TECHNOLOGIES INC
Project Number: 3690074.100

CONTOURED GROUNDWATER ELEVATIONS
OCTOBER 6, 2003

FIGURE 2

Hantush

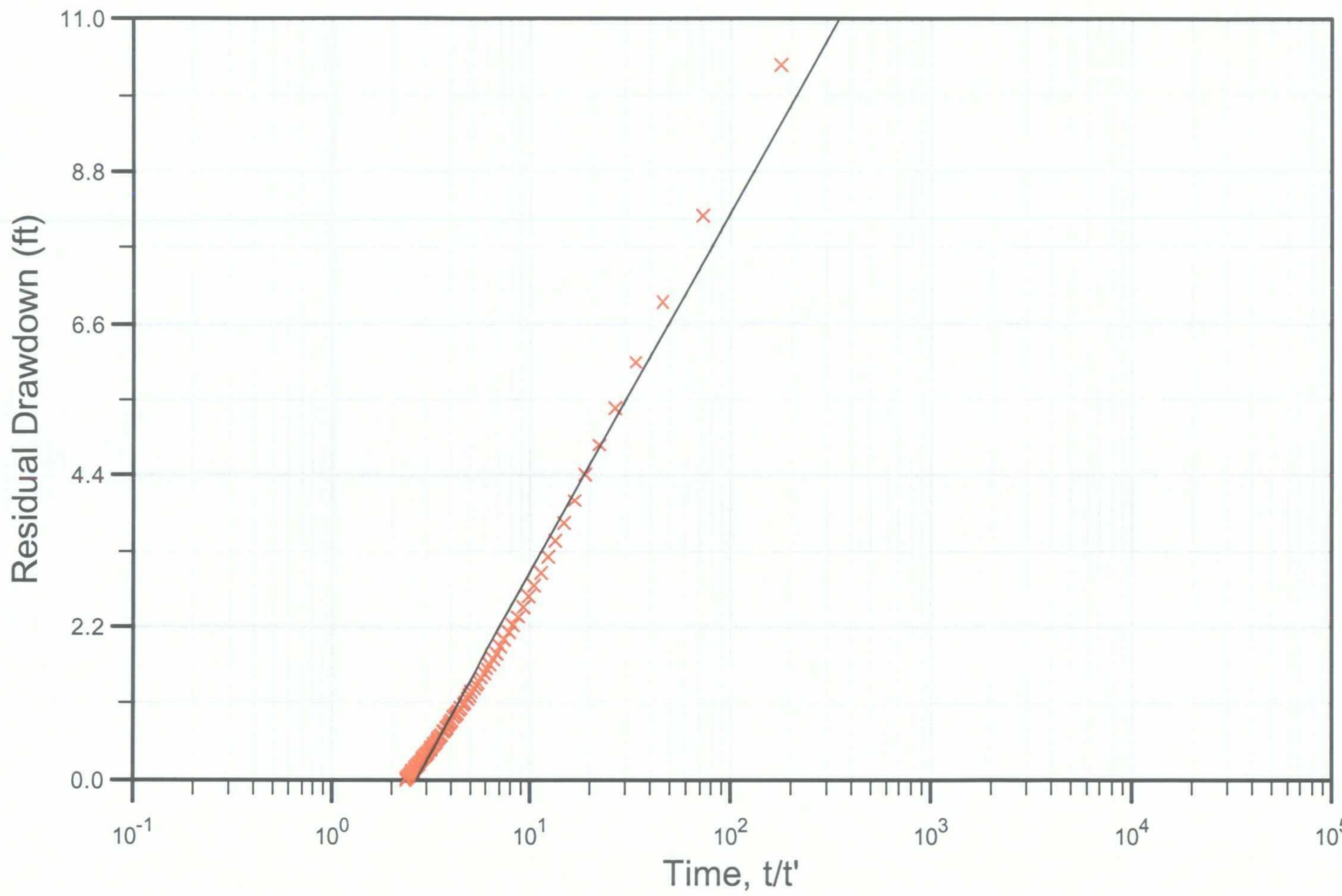


MAXIM TECHNOLOGIES INC

Pumping Rate 0.9 gal/min
Transmissivity 1.96 sq ft/d
Beta (ß) 6 dimensionless
Reference Hantush, 1960

Maljamar Gas Plant, Lea County, NM
Date 10/7/03
Job Number 3690074.100
Figure 3. Best Fit Curve to SK-1 Pumping Data

Theis Recovery

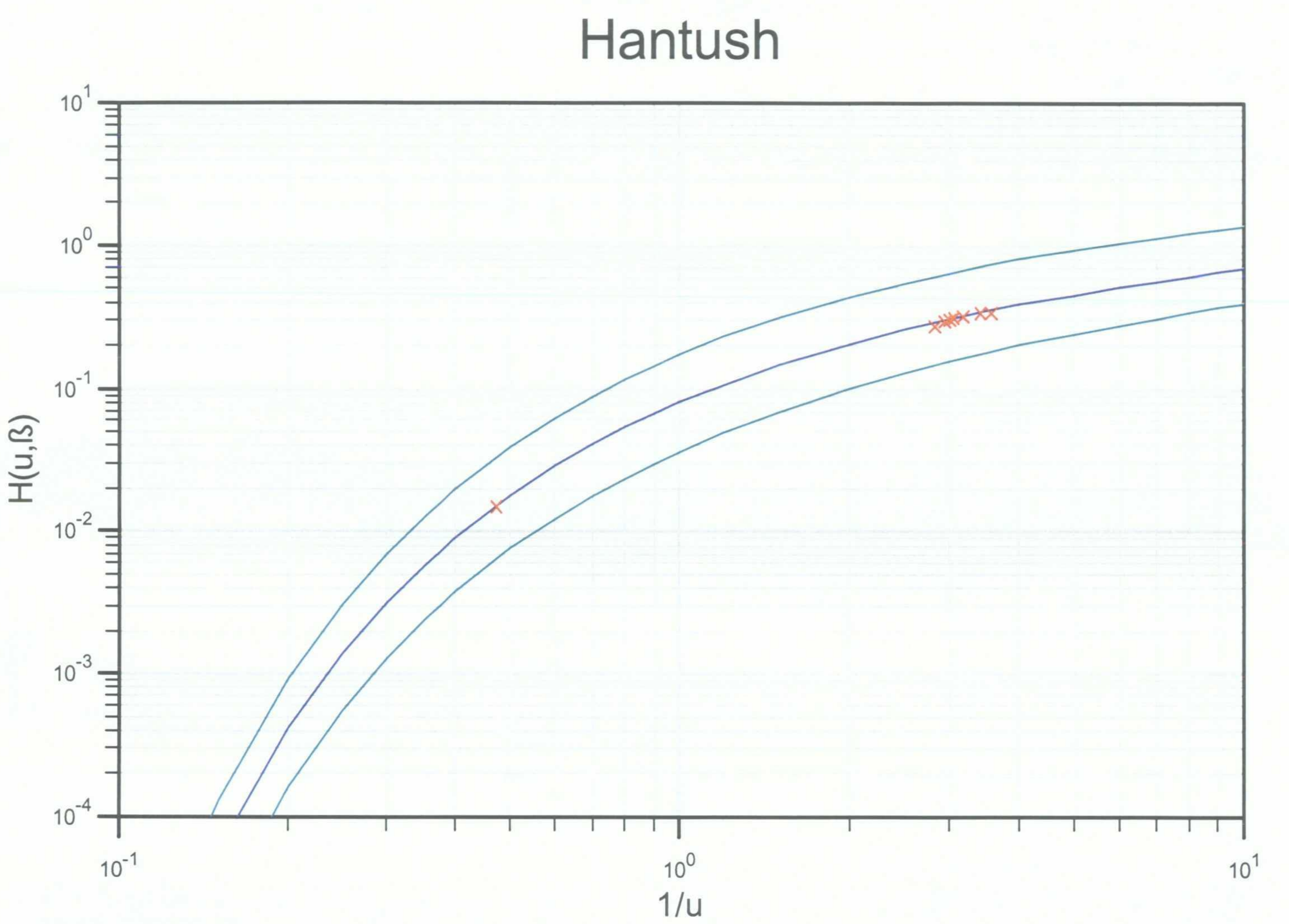


MAXIM TECHNOLOGIES INC®

Pumping Rate 0.9 gal/min
Transmissivity 6.11 sq ft/d

Reference Theis, 1946

Maljamar Gas Plant, Lea County, NM
Date 10/7/03
Job Number 3690074.100
Figure 4. Best Fit Curve to SK-1 Recovery Data

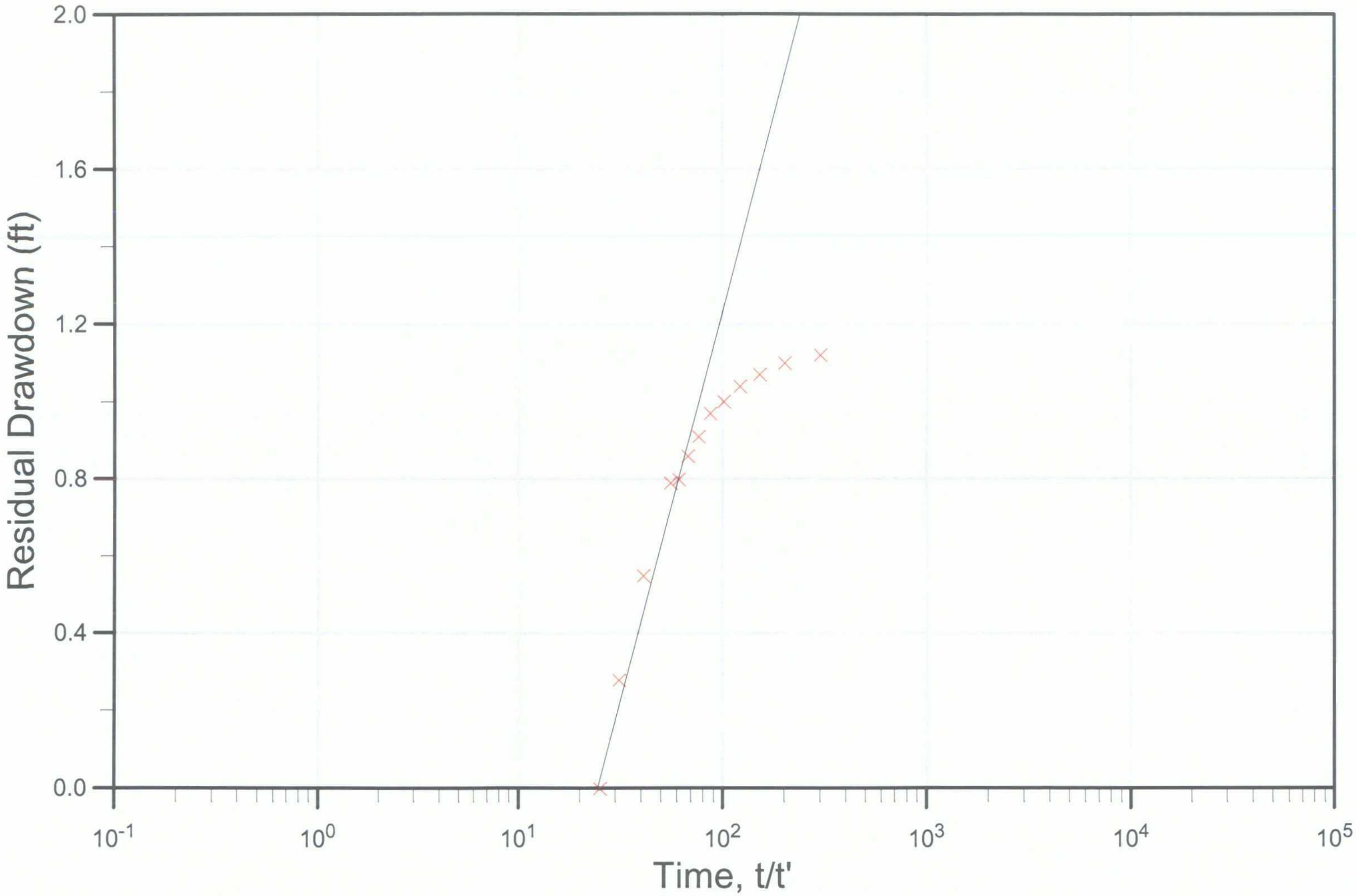


MAXIM TECHNOLOGIES INC®

Pumping Rate 0.9 gal/min
Transmissivity 4.13 sq ft/d
Beta (ß) 0.5 dimensionless
Reference Hantush, 1960

Maljamar Gas Plant, Lea County, NM
Date 10/7/03
Job Number 3690074.100
Figure 5. Best Fit Curve to MW-7 Pumping Observation Data

Theis Recovery

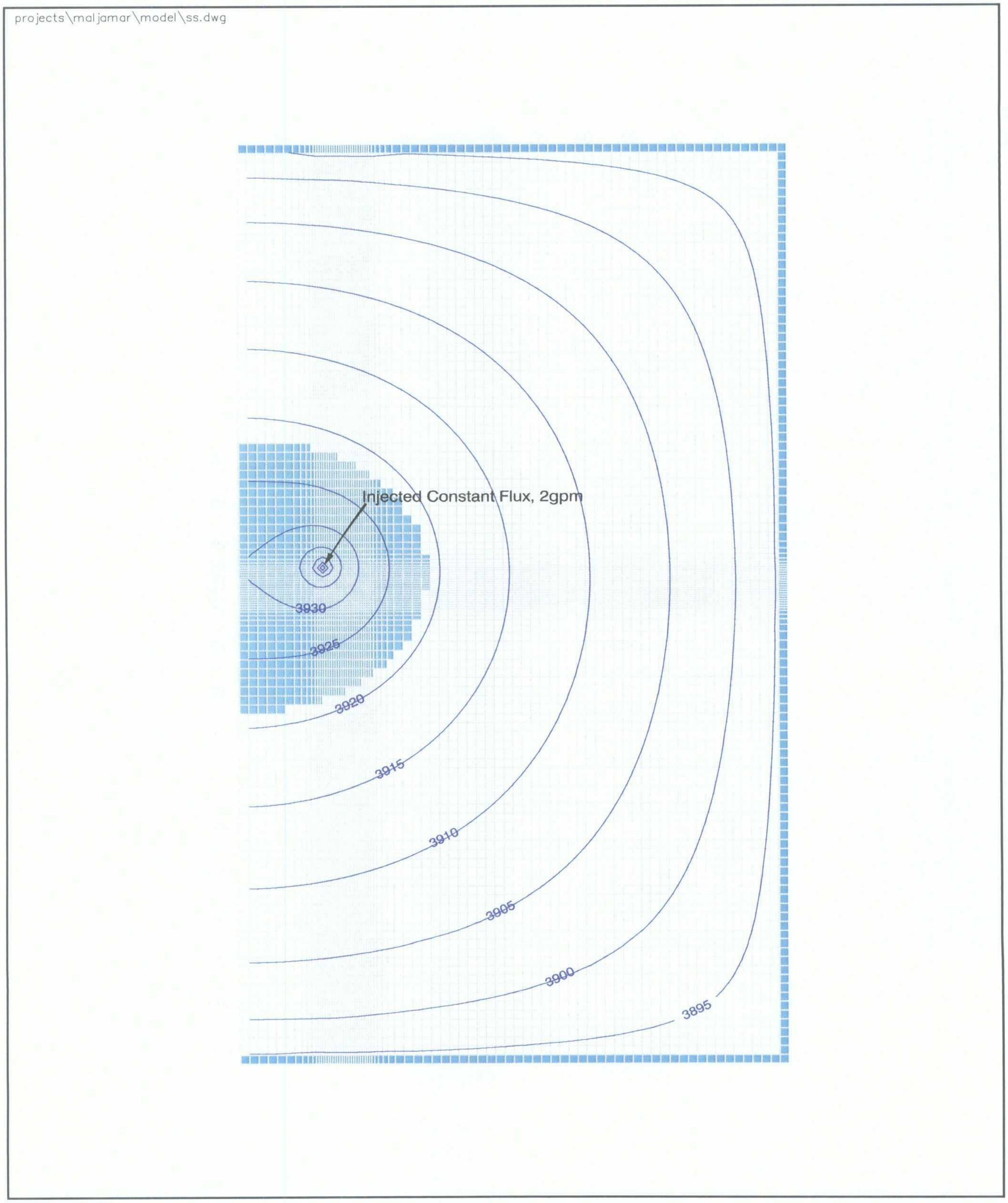


MAXIM TECHNOLOGIES INC®

Pumping Rate 0.9 gal/min
Transmissivity 15.70 sq ft/d

Reference Theis, 1946

Maljamar Gas Plant, Lea County, NM
Date 10/7/03
Job Number 3690074.100
Figure 6. Best Fit Curve to MW-7 Recovery Observation Data



November 2003

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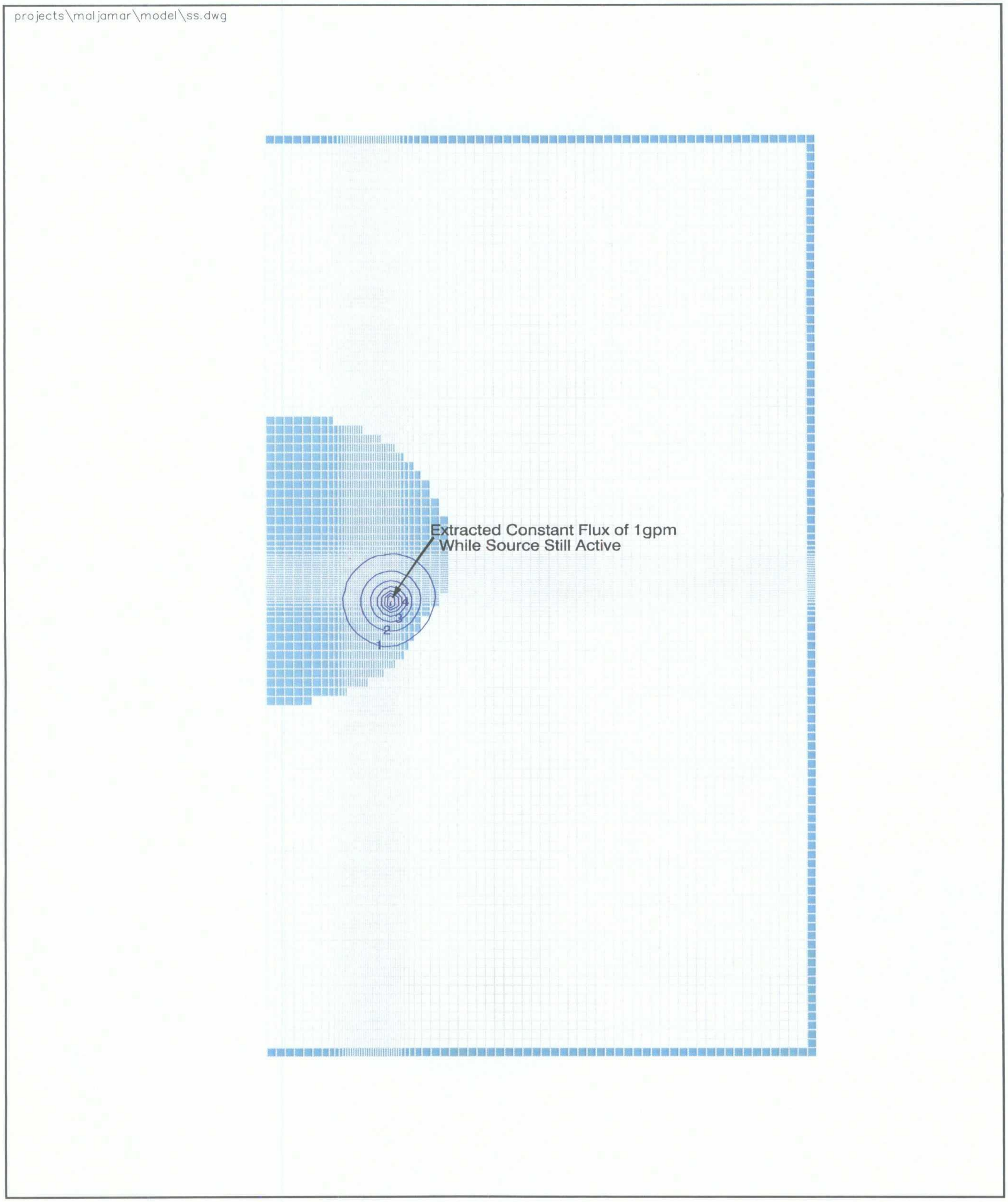
Extent of Simulated Unconfined Conditions
Extent of Simulated Confined Conditions
General Head Boundary
Constant Flux

Modeled Goundwater Model Grid
Maljamar Groundwater Model
Lea County, New Mexico
FIGURE 7



November 2003

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0 Feet 1500

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Extent of Simulated Unconfined Conditions
Extent of Simulated Confined Conditions
General Head Boundary
Constant Flux

Modeled Drawdown From Pumping for 180 Days
Maljamar Groundwater Model
Lea County, New Mexico
FIGURE 8