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M E M O

TO: James A. Briscoe
FROM: Robert J. Macer
DATE: October 12, 1993
RE: Organization of TEI/CSM/PBR/TDC/ADEQ Environmental Volumes.

Jim:

All environmental materials in hand dealing with TDC's Tombstone property have been organized into five volumes. In the front of each volume is a chronological listing of the contents. All of the materials have also been entered into a bibliographic database for purpose of ready access in finding specific materials. Since this compilation was a four-fold accumulation process, the materials are a bit spread out between each of volumes. Consequently, enclosed with this memo is a complete chronological listing of every item in all five volumes, and a listing of the <data type codes> used in the database.

Sincerely,



Robert J. Macer

RJM:rjm13.93
Enclosures

Data Type Codes Used in Database for Environmental Materials

action+ profile
analysis quotation
billing letter
carbon analysis
chain of custody
cover letter
cyanide analyses
cyanide literature
demand letter
draft letter
drilling contract
drilling intent notice
drilling invoice
drilling quote
drilling report
fax
fax letter
fax memo
fax note
field summary report
geochemical report
geohydrologic report
graph
groundwater permit
hearing transcript
impoundment pad map
lab analyses
land & water well map
leach pad analyses
letter
letter report
meeting notes
memo
monthly report
newspaper article
note
notes
notice of disposal
ore analysis
ore assay
pad neutralization log
permit proposal
phone notes
pond analyses
pond maps
pond sample analyses

press release
quality control plan
quarterly report
sample plan
self-monitoring report
site inspection report
slimes assays
tailings analysis
tailings pond analyses
tailings sample analysis
water & sediment assays
water analyses
water analysis report
water quality report
water report
water sample analysis
water well testing
weekly report letter
well driller report
well sampling log

- 08/23/75 <newspaper article> [8:17:3] Negri, Sam., Contamination threat closes one water well in Tombstone.
- 08/25/75 <newspaper article> [8:17:4] St. Cyr, Chuck., Sewage Danger Getting Worse In Tombstone.
- 12/28/83 <letter> [8:24:1-3] Lindeman, John E., Letter To: Lee, Robert G. Cyanide Spill of November 7, 1983.
- 01/10/84 <water sample analysis> [8:24:4-9] Smith & Smith.,
Water Quality Analysis for samples DWW #1, TWW #1-2, LWW #1, CWW #2-3.
- 01/23/84 <analysis quotation> [8:24:12] Amalfi, Rick., Laboratory Analysis Request and Fee Quotation.
- 01/23/84 <letter> [8:24:10-11] Devereaux, Stephen B., Letter To: Lee, Robert G.
Confirmation of discussions outlining sampling and monitoring program.
- 01/30/84 <letter> [8:24:13] Lindroos, Gary A., Letter To: Rendes, Andrew M. Implementation of water sampling program.
- 03/22/84 <water & sediment assays> [8:24:14-16] Amalfi, Frederick A., Water and Sediment Analysis.
- 03/22/84 <water analysis> [8:24:17-19] Amalfi, Frederick A., Water Analysis.
- 04/23/84 <cyanide analysis> [8:24:20-23] Amalfi, Frederick A., Cyanide Analysis.
- 05/24/84 <memo> [8:24:24] Lindroos, Gary A., Letter To: Schloss, Thomas. Cyanide Spill.
- 06/29/84 <water analysis> [8:24:125] Atkinson, Beth., Inorganic Chemical Analysis Reporting Form.
- 07/02/84 <cover letter> [8:24:25] Lindroos, Gary A., Letter To: Doughty, Allen.
Enclosure of water well and sediment samples for analysis.
- 07/24/84 <weekly report letter> [8:24:126-127] Lee, Bob G., Letter To: Martin, Eddie.
Report on TEI, Inc. well water samples for the week of July 16-22, 1984.
- 07/27/84 <cover letter> [8:24:26] Lindroos, Gary A., Letter To: Western Technology.
Enclosure of water well samples for analysis.
- 07/31/84 <cover letter> [8:24:27] Lindroos, Gary A., Letter To: Western Technology.
Enclosure of water well samples for analysis.
- 08/01/84 <weekly report letter> [8:24:128] Lee, Bob G., Letter To: Martin, Eddie.
Report on TEI, Inc. well water samples for the week of July 23-31, 1984.
- 08/31/84 <weekly report letter> [8:24:130] Lee, Bob G., Letter To: Martin, Eddie.
Report on TEI, Inc. well water samples for the week of August 25-31, 1984.
- 09/10/84 <weekly report letter> [8:24:131] Lee, Bob G., Letter To: Martin, Eddie.
Report on TEI, Inc. well water samples for the week of September 1-7, 1984.
- 09/17/84 <weekly report letter> [8:24:132] Lee, Bob G., Letter To: Martin, Eddie.
Report on TEI, Inc. well water samples for the week of September 8-14, 1984.
- 09/21/84 <weekly report letter> [8:24:133] Lee, Bob G., Letter To: Martin, Eddie.
Report on TEI, Inc. well water samples for the week of September 15-21, 1984.
- 09/28/84 <weekly report letter> [8:24:134] Lee, Bob G., Letter To: Martin, Eddie.
Report on TEI, Inc. well water samples for the week of September 22-28, 1984.
- 10/05/84 <weekly report letter> [8:24:135] Lee, Bob G., Letter To: Martin, Eddie.
Report on TEI, Inc. well water samples for the week of September 29 to October 5, 1984.
- 10/17/84 <water analysis> [8:24:136-137] Hoppe, Steven P., Laboratory Report - Water Sample Analysis.
- 10/19/84 <weekly report letter> [8:24:138] Lee, Bob G., Letter To: Martin, Eddie.
Report on TEI, Inc. well water samples for the week of October 14-19, 1984.
- 10/29/84 <weekly report letter> [8:24:139] Lee, Bob G., Letter To: Martin, Eddie.
Report on TEI, Inc. well water samples for the week of October 20-26, 1984.
- 11/09/84 <weekly report letter> [8:24:140] Lee, Bob G., Letter To: Martin, Eddie.
Report on TEI, Inc. well water samples for the week of November 3-9, 1984.
- 03/29/85 <memo> [8:17:5-6] Gordon, Arthur J., Letter To: Kennett, Roger.
Tombstone Exploration, Inc. (TEI) NOD.
- 09/05/85 <water sample analysis> [8:17:264] Smith & Smith., Water Quality Analysis - City of Tombstone Well #1.
- 09/05/85 <water sample analysis> [8:17:265] Smith & Smith., Water Quality Analysis - City of Tombstone Well #2.
- 09/05/85 <water sample analysis> [8:17:266] Smith & Smith., Water Quality Analysis - City of Tombstone Well #3.
- 09/08/85 <water well testing> [8:17:120] T.D.C., Log of Tests on TDC Wells #1 & #2 to Determine Amount of Cyanide Therein.
- 10/11/85 <water report> [8:25:79-118] Montano, Manuel T.,
Water Distribution System Analysis and Master Plan for the City of Tombstone, Arizona.
- 03/28/86 <letter> [8:24:28-29] Traywick, Ben T. and Gradillas, Alex., Letter To: Cochise Co. Health Dept.
The many headed Hydra monster "cyanide contamination" has reared its head.
- 04/28/86 <permit proposal> [8:17:9-33] Larson, Scott M., Tombstone Development Mining Operation Preliminary Permit Proposal.
- 05/08/86 <memo> [8:17:7-8] Gordon, Arthur J., Letter To: Kennett, Roger.
Tombstone Development Proposal for Permit Application.
- 06/02/86 <cover letter> [8:24:35] Columbus, Wm. L., Letter To: Escapule, Dustin.
Enclosure of two "Applications for Installation Permit" forms.
- 06/02/86 <letter> [8:24:30-31] Kennett, Roger., Letter To: Magini, Frank.
Contention Mine; Cochise Silver Mines, Site Inspection.

- 06/02/86 <site inspection report> [8:24:32-34] Kennett, Roger.,
Report of Site Inspection, Contention Mine (Tombstone); Cochise Silver Mines.
- 06/03/86 <letter> [8:24:36] Magini, Frank., Letter To: Kennett, Roger.
Response to your letter dated June 2, 1986. [Draft]
- 01/09/87 <groundwater permit> [8:17:98-118] Dover, Boyd., Groundwater Quality Protection Permit No. G-0011-02.
- 01/19/87 <well sampling log> [8:18:1-39] Lindroos, Gary A., Well Sampling Log Book - 1/19/87 thru 6/15/89.
- 01/27/87 <memo> [8:24:37] Lind, Audrey M., Letter To: Magini Contracting.
Cost to analyze water samples and required payment.
- 02/02/87 <cover letter> [8:24:38] Lindroos, Gary A., Letter To: Arizona Testing Lab.
Enclosure of well samples and "Self-Monitoring Form".
- 02/18/87 <self-monitoring report> [8:24:141-144] Drake, Robert J.,
Groundwater Quality Protection Permit Self-Monitoring Report Forms - Well and Tap Water.
- 03/12/87 <letter> [8:24:39] Kennett, Roger., Letter To: Lindroos, Gary A.
Cochise Silver Mines, Inc., Groundwater Quality Protection Permit No. G-0011-02.
- 03/25/87 <water sample analysis> [8:17:197-199] Davis, Thomas S., Laboratory Report - TEI Well #2.
- 03/27/87 <water sample analysis> [8:17:267-269] Davis, Thomas S., Laboratory Reports - City of Tombstone Well #1, 3/17 to 6/2, 1987.
- 04/01/87 <pond maps> [8:18:134-136,331] Graves, A. J., Maps of cyanide solution ponds showing sampling stations.
- 04/06/87 <self-monitoring report> [8:24:145-148] Drake, Robert J.,
Groundwater Quality Protection Permit Self-Monitoring Report Forms - Well and Tap Water.
- 04/28/87 <memo> [8:17:34] Rendes, Andrew., Letter To: Kennett, Roger.
Cochise Silver Mine Groundwater Quality Protection Permit No. G-0011-02.
- 05/01/87 <tailings analysis> [8:18:54-56] Lindroos, Gary A., Assay of Sandscreen Discharge - by Bottle Roll.
- 05/06/87 <cover letter> [8:24:40] Zimmerman, Jeffrey C., Letter To: Harper, Raymond. Enclosed Environmental Law Letter.
- 05/06/87 <letter> [8:24:41-52] Zimmerman, Jeffrey C., Letter To: Harper, Raymond. Arizona Environmental Quality Act.
- 05/11/87 <tailings sample analysis> [8:18:40] Drake, Robert J., Report of Laboratory Tests - Impoundment Tailings.
- 05/12/87 <letter> [8:17:35] Lindroos, Gary A., Letter To: Rendes, Andrew. Request to remove washed tailings.
- 05/15/87 <chain of custody> [8:24:149] Lindroos, Gary A., Chain of Custody - Water Samples.
- 05/18/87 <cyanide analyses> [8:24:166] Drake, Robert J., Report of Laboratory Tests - Cyanide Sludge Cake.
- 05/19/87 <cyanide analyses> [8:24:167] Drake, Robert J., Report of Laboratory Tests - Soil.
- 05/22/87 <self-monitoring report> [8:24:150-153] Hoppe, Steven P.,
Groundwater Quality Protection Permit Self-Monitoring Report Forms - Well and Tap Water.
- 05/26/87 <letter> [8:18:41] Lindroos, Gary A., Letter To: AZ Testing Lab.
Enclosure of 41 soil samples for total cyanide analysis.
- 05/29/87 <letter> [8:17:36-37] Curlett, James E., Letter To: Magini, Frank.
Request for further info and additional sampling and analysis.
- 06/03/87 <letter> [8:17:39] Lindroos, Gary A., Letter To: ADHS
Apology for being negligent in sampling for April 1987.
- 06/03/87 <memo> [8:17:38] Escapule, Dustin., Letter To: Lindroos, Gary A. Reprimand.
- 06/04/87 <slimes assays> [8:18:57] Lindroos, Gary A., Slimes Assays.
- 06/09/87 <letter> [8:17:40] Lindroos, Gary A., Letter To: Curlett, James E.
Explanation for missing April 1987 samples, and enclosure of requested additional samples.
- 06/09/87 <letter> [8:18:42] Lindroos, Gary A., Letter To: AZ Testing Lab.
Enclosure of 14 soil samples for mercury analysis.
- 06/09/87 <letter> [8:18:43] Lindroos, Gary A., Letter To: AZ Testing Lab.
Enclosure of 4 soil samples for total cyanide analysis.
- 06/12/87 <cyanide analyses> [8:24:168-169] Smith, Kathryn W., Laboratory analysis of solid impound samples.
- 06/12/87 <tailings sample analysis> [8:18:44] Drake, Robert J., Report of Laboratory Tests - Impoundment Tailings.
- 06/16/87 <self-monitoring report> [8:17:178-196] Smith & Smith.,
Groundwater Quality Protection Permit Self-Monitoring Report Forms - TEI Well #1 for 6/16/87 thru 1/12/89.
- 06/16/87 <self-monitoring report> [8:17:200-234] Smith & Smith.,
Groundwater Quality Protection Permit Self-Monitoring Report Forms - TEI Well #2 for 6/16/87 thru 1/12/89.
- 06/16/87 <self-monitoring report> [8:17:245-263] Smith & Smith.,
Groundwater Quality Protection Permit Self-Monitoring Report Forms - Tap Water in Lab for 6/16/87 thru 1/12/89.
- 06/16/87 <self-monitoring report> [8:17:270-289] Smith & Smith.,
Groundwater Quality Protection Permit Self-Monitoring Report Forms - City of Tombstone Well #1 for 6/16/87 thru 1/12/89.
- 06/18/87 <cyanide analyses> [8:24:170] Smith, Kathryn W., Laboratory analysis of pregnant solution.
- 06/18/87 <cyanide analyses> [8:24:171] Smith, Kathryn W., Laboratory analysis of solid impound samples.
- 06/18/87 <letter> [8:18:45] Lindroos, Gary A., Letter To: AZ Testing Lab.
Enclosure of 4 impound tailings samples for total cyanide analysis.
- 06/18/87 <tailings sample analysis> [8:18:46-48] Drake, Robert J., Report of Laboratory Tests - Impoundment Tailings.
- 06/18/87 <tailings sample analysis> [8:18:137] Drake, Robert J., Report of Laboratory Tests - Pregnant Solution Pond.

- 06/19/87 <letter> [8:17:41] Lindroos, Gary A., Letter To: Maston, James A.
Request for approval to remove washed tailings to Houghton Pad.
- 06/23/87 <tailings sample analysis> [8:18:49] Drake, Robert J., Report of Laboratory Tests - Impoundment Tailings.
- 06/24/87 <meeting notes> [8:24:55-60] Unknown Author., Notes from State Meeting 6/24/87.
- 06/24/87 <memo> [8:24:53-54] Lindroos, Gary A., Letter To: Escapule, Dustin.
ADHS Inspection (Inspectors: Mr. Andrew Rendes, Mr. John Best).
- 06/30/87 <self-monitoring report> [8:24:154-156] Lindroos, Gary A.,
Groundwater Quality Protection Permit Self-Monitoring Report Forms - Field Summary for April, May & June 1987.
- 07/01/87 <impoundment pad map> [8:24:61] Graves, A. J., Waste Containment Facilities.
- 07/01/87 <memo> [8:24:62] Rendes, Andrew M., Letter To: Maston, James A.
Site Visit to Cochise Silver Mines, Inc., Tombstone, Arizona.
- 07/02/87 <carbon analysis> [8:18:50] Smith, Kathryn W., Laboratory analysis of carbon for mercury content.
- 07/07/87 <memo> [8:17:42] Lindroos, Gary A., Letter To: Escapule, Dustin.
Extension of Impound Area and Materials Handling.
- 07/08/87 <letter> [8:17:43] Maston, James A., Letter To: Escapule, Dustin.
Confirmation of double liner for all pads, and cease order for any treatment to old tailings.
- 07/10/87 <letter> [8:17:44-45] Kennett, Roger., Letter To: Moyes, Jay I.
Cochise Silver Mines, Inc., Renewal of Permit No. G-0011-02.
- 07/10/87 <letter> [8:18:283-284] Kennett, Roger., Letter To: Moyes, Jay I.
Cochise Silver Mines, Inc., Renewal of Permit No. G-0011-02.
- 07/13/87 <lab analyses> [8:18:58-62,65-68] Lindroos, Gary A., Various analyses for cyanide of ore, slimes, tailings, and solution.
- 07/13/87 <letter> [8:18:51] Lindroos, Gary A., Letter To: AZ Testing Lab.
Enclosure of 4 ore samples for mercury analysis.
- 07/14/87 <ore analysis> [8:18:53] Smith, Kathryn W., Laboratory analysis of ore samples for mercury content.
- 07/17/87 <ore assay> [8:18:52] McLean, Claude E., Assay Certificate for mercury - ore samples.
- 07/22/87 <memo> [8:24:63] Lindroos, Gary A., Letter To: Escapule, Dustin. Inspection and Sampling by ADHS.
- 07/23/87 <letter> [8:17:46] Curlett, James E., Letter To: Lindroos, Gary A.
Enclosure of ADEQ results from February 23, 1987 sampling.
- 07/23/87 <letter> [8:23:315-316] Curlett, James E., Letter To: Lindroos, Gary A. Need to retest wells for mercury content.
- 07/24/87 <cover letter> [8:24:157] Lindroos, Gary A., Letter To: Arizona Testing Lab.
Enclosure of well and tap water samples for analysis.
- 07/29/87 <self-monitoring report> [8:24:160-163] Smith & Smith.,
Groundwater Quality Protection Permit Self-Monitoring Report Forms - Well and Tap Water.
- 07/29/87 <water analysis> [8:24:158] Drake, Robert J., Report of Laboratory Tests - Water Sample Analysis.
- 07/29/87 <water analysis> [8:24:164] Drake, Robert J., Report of Laboratory Tests - Water Sample Analysis.
- 08/03/87 <letter> [8:17:47] Maston, James A., Letter To: Escapule, Dustin.
Approval for construction of staking/impounding expansion area.
- 08/05/87 <letter> [8:17:48] Lindroos, Gary A., Letter To: Curlett, James E.
Resampling of wells and mercury contamination by laboratory.
- 08/05/87 <letter> [8:24:159-164] Lindroos, Gary A., Letter To: Curlett, James E.
Reference to your letter of July 23, 1987 - resampling of wells and tap water.
- 08/06/87 <self-monitoring report> [8:17:236-241] Smith & Smith.,
Groundwater Quality Protection Permit Self-Monitoring Report Forms - TEI Well #3 for 8/6/87 thru 1/18/88.
- 08/10/87 <letter> [8:17:49] Lindroos, Gary A., Letter To: Curlett, James E. Request to move washed tailings.
- 08/18/87 <letter> [8:24:64-65] Kennett, Roger., Letter To: Escapule, Dustin.
Cochise Silver Mines, Inc., Groundwater Quality Protection Permit No. G-0011-02.
- 08/18/87 <letter> [8:24:66] Lindroos, Gary A., Letter To: Curlett, James E.
Request for approval to remove washed tailings to Houghton Pad.
- 08/19/87 <memo> [8:17:50] Lindroos, Gary A., Letter To: Escapule, Dustin. Impound Tailings Samples.
- 08/19/87 <water analyses> [8:24:165] Smith & Smith., Laboratory Results of TEI well water 8/6-19/87.
- 08/24/87 <letter> [8:17:52] Lindroos, Gary A., Letter To: Curlett, James E. Second request to move washed tailings.
- 08/24/87 <memo> [8:17:51] Lindroos, Gary A., Letter To: Escapule, Dustin. Impound Tailings Samples.
- 08/26/87 <memo> [8:17:53] Lindroos, Gary A., Letter To: Escapule, Dustin. Visit from ADEQ (Mr. John Best).
- 09/17/87 <letter> [8:17:54] Lindroos, Gary A., Letter To: Curlett, James E. Third request to move washed tailings.
- 09/23/87 <letter> [8:17:55] Lindroos, Gary A., Letter To: Curlett, James E. Fourth request to move washed tailings.
- 09/29/87 <letter> [8:17:56] Lindroos, Gary A., Letter To: Curlett, James E. Fifth request to move washed tailings.
- 10/07/87 <letter> [8:17:57] Lindroos, Gary A., Letter To: Rampe, John. Sixth request to move washed tailings.
- 10/16/87 <letter> [8:17:58] Lindroos, Gary A., Letter To: Rampe, John. Seventh request to move washed tailings.
- 10/27/87 <letter> [8:17:59] Lindroos, Gary A., Letter To: Nixon, Perry. Eighth request to move washed tailings.
- 10/30/87 <letter> [8:24:67-69] Magini, Frank., Letter To: PBR Minerals Board. Irregularities at the Tombstone mine site.

- 11/03/87 <self-monitoring report> [8:18:63] Smith & Smith.,
Groundwater Quality Protection Permit Self-Monitoring Report Form - CSM Old Preg Pond.
- 11/04/87 <letter> [8:17:60] Lindroos, Gary A., Letter To: Nixon, Perry. Ninth request to move washed tailings.
- 11/05/87 <self-monitoring report> [8:18:64-65] Smith & Smith.,
Groundwater Quality Protection Permit Self-Monitoring Report Form - CSM Impound West.
- 11/10/87 <letter> [8:17:61] Lindroos, Gary A., Letter To: Rampe, John. Tenth request to move washed tailings.
- 11/10/87 <self-monitoring report> [8:18:138-250] Smith & Smith.,
Groundwater Quality Protection Permit Self-Monitoring Report Forms - Old Preg Pond from 11/10/87 thru 1/29/88.
- 12/15/87 <letter> [8:17:62] Maston, James A., Letter To: Lindroos, Gary A.
Reduction of free cyanide and mercury in well No. 2.
- 12/21/87 <memo> [8:17:63] Lindroos, Gary A., Letter To: Harper, Ray.
Reducing Mercury and Cyanide Concentrations in Well 2.
- 01/08/88 <pond analyses> [8:18:129-133] Lindroos, Gary A., Pond Clean-up log Book, 1/8/88 thru 7/25/88.
- 02/01/88 <tailings pond analyses> [8:18:69] Lindroos, Gary A., Cyanide analysis of various tailings pond station samples.
- 02/08/88 <letter report> [8:18:280-281] Lindroos, Gary A., Letter To: Nixon, Perry.
Results of well assays and pond clean-up.
- 02/16/88 <letter> [8:17:64] Kennett, Roger., Letter To: Moyes, Jay I.
Cochise Silver Mines, Inc., Groundwater Quality Protection Permit No. G-0011-02.
- 02/16/88 <letter> [8:18:70-71,285] Kennett, Roger., Letter To: Moyes, Jay I.
Cochise Silver Mines, Inc., Groundwater Quality Protection Permit No. G-0011-02.
- 02/19/88 <letter> [8:17:65] Moyes, Jay I., Letter To: Harper, Raymond.
Preparation of a revised version of the report assessing the cleanup operation.
- 02/19/88 <letter> [8:18:72,282] Moyes, Jay I., Letter To: Harper, Raymond.
Enclosure of letter dated February 16, 1988 from Roger Kennett.
- 03/02/88 <letter> [8:17:66-69] Escapule, Dustin., Letter To: Moyes, Jay.
Removal of contaminated materials form Old Preg Pond and Lined Pond.
- 03/02/88 <letter> [8:18:73-76,286-291] Escapule, Dustin., Letter To: Moyes, Jay.
Removal of contaminated materials form Old Preg Pond and Lined Pond.
- 03/04/88 <self-monitoring report> [8:18:261-279] Smith & Smith.,
Groundwater Quality Protection Permit Self-Monitoring Report Forms - Pad Expansion East & West, 3/4/88 thru 4/20/88.
- 03/07/88 <letter report> [8:18:292-293] Escapule, Dustin., Letter To: Moyes, Jay I. Cleanup Progress Report.
- 03/31/88 <letter report> [8:18:294-299] Lindroos, Gary A., Letter To: Nixon, Perry.
Assay results for TEI Wells, City of Tombstone Well, and Tap Water.
- 04/27/88 <memo> [8:24:71] Ashworth, J. Michael., Letter To: All Employees. Temporary Plant Closure.
- 04/27/88 <press release> [8:24:70] Ashworth, J. Michael.,
Press Release - PBR Minerals to begin final testing and closure of cleanup operation.
- 05/01/88 <letter> [8:24:72] Vineyard, William L., Letter To: PBR Minerals. Proposed Leach Operation.
- 05/05/88 <letter> [8:17:121] Lindroos, Gary A., Letter To: Western Technologies. Enclosure of well samples.
- 05/16/88 <self-monitoring report> [8:17:242] Smith & Smith.,
Groundwater Quality Protection Permit Self-Monitoring Report Form - TEI Well #6.
- 05/17/88 <memo> [8:24:73] Ashworth, J. Michael., Letter To: All Suppliers. Accounts Payable.
- 06/08/88 <letter> [8:24:74-106] Rouse, Jim V., Letter To: Ashworth, Mike.
Enclosure of items for your review and input.
- 06/09/88 <water sample analysis> [8:17:122-124] Western Technologies.,
Laboratory Report - TEI Wells #1 #2, and Tombstone City Well #1.
- 06/13/88 <letter> [8:24:107-114] Escapule, Dustin L., Letter To: Rouse, Jim V.
Enclosure of filled out "Notice of Disposal" application.
- 06/14/88 <letter> [8:24:116] Ashworth, J. Michael., Letter To: All Suppliers. Trade Payables.
- 06/14/88 <letter> [8:24:115] Smith, Kathryn W., Letter To: Lindroos, Gary A.
Contaminated sample (TEI well #3) in 1987.
- 06/15/88 <geochemical report> [8:24:172-196] Unknown Author., Geochemical Evaluation of Clay-Subliner Material. [Draft]
- 06/30/88 <sample plan> [8:23:1-16] DuBois, James F., Sample Plan for PBR Minerals, Inc. Site.
- 07/01/88 <geochemical report> [8:23:97-114] Unknown Author., Geochemical Evaluation of Clay-Subliner Material.
- 07/13/88 <notice of disposal> [8:24:117-123] Lindroos, Gary A., Notice of Disposal - Grand Central Leaching Facility.
- 07/14/88 <letter> [8:17:70] Thatcher, Bruce K., Letter To: Lindroos, Gary A. ADEQ site visit.
- 07/14/88 <letter> [8:18:77] Thatcher, Bruce K., Letter To: Lindroos, Gary A. ADEQ site visit.
- 08/03/88 <geochemical report> [8:24:197-223] Unknown Author., Geochemical Evaluation of Clay-Subliner Material.
- 08/10/88 <water analyses> [8:24:129] Lindroos, Gary A., Daily analyses of TEI, Inc. well water samples for 8/1-10/84.
- 09/01/88 <quality control plan> [8:24:224-290] Unknown Author.,
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- 09/14/88 <memo> [8:23:89] Thatcher, Bruce K., Letter To: Larson, Rob.
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- 09/21/88 <memo> [8:17:71-94] Thatcher, Bruce K., Letter To: Kennett, Roger.
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- 09/21/88 <memo> [8:18:78-106,302-325] Thatcher, Bruce K., Letter To: Kennett, Roger.
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- 09/29/88 <letter> [8:17:95-96] Kennett, Roger., Letter To: Moyes, Jay I.
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- 09/29/88 <letter> [8:18:107-108,300-301] Kennett, Roger., Letter To: Moyes, Jay I.
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- 10/03/88 <letter> [8:18:326-327] Ashworth, J. Michael., Letter To: Rouse, Jim.
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- 10/04/88 <water quality report> [8:17:125-129] Lindroos, Gary A., Letter To: ADEQ.
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- 10/07/88 <pond sample analyses> [8:18:109-115] Lindroos, Gary A., Pond Clean-up cyanide analyses, 10/7/88 thru 10/27/88.
- 10/13/88 <letter> [8:17:130-132] Rouse, Jim V., Letter To: Kennett, Roger.
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- 11/01/88 <memo> [8:18:116-126] Lindroos, Gary A., Letter To: Ashworth, Mike. Pond Clean-up (CN Testing).
- 11/06/88 <letter> [8:18:332-335] Moyes, Jay I., Letter To: Gessner, Richard A.
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- 11/18/88 <letter> [8:18:328-329] Kennett, Roger., Letter To: Rouse, Jim V.
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- 11/23/88 <memo> [8:18:330] Rouse, Jim V., Letter To: Ashworth, Mike.
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- 12/02/88 <cyanide analyses> [8:18:127] Lindroos, Gary A., Cyanide analyses of wells, pond, and tailings.
- 12/09/88 <pond analyses> [8:18:128] Lindroos, Gary A., Pond Clean-up cyanide analyses.
- 12/15/88 <hearing transcript> [8:23:17-24,26-57] Landsman, Paul H.,
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- 12/18/88 <note> [8:17:119] Baxter, LaVerne., Letter To: Ashworth, Mike. Enclosure of Wells #1 & #2 testing.
- 01/12/89 <water quality report> [8:17:133-136] Lindroos, Gary A., Letter To: ADEQ.
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- 01/20/89 <groundwater permit> [8:23:58-86] Miller, Ronald L.,
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- 01/20/89 <groundwater permit> [8:23:338-370] Miller, Ronald L.,
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- 01/23/89 <letter> [8:23:25] Kennett, Roger., Letter To: Hearing Participants.
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- 01/29/89 <well driller report> [8:18:336-344] Titan Drilling., Well Driller Report.
- 02/20/89 <leach pad analyses> [8:18:251-260] Lindroos, Gary A., Pad Neutralization Clean-up log Book, 2/20/89 thru 4/20/89.
- 02/20/89 <pad neutralization log> [8:23:203-208] Lindroos, Gary A., Pad 4 Neutralization Log, 2/20/89 thru 4/4/89.
- 02/23/89 <letter> [8:17:97] Ramirez, Carolyne., Letter To: Perotti, Joe.
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- 03/13/89 <letter report> [8:23:94-96] Poshard, R. Howard., Letter To: Lindroos, Gary. In-Place Density Tests, Tailings Pad.
- 03/30/89 <letter report> [8:23:91-93] Poshard, R. Howard., Letter To: Lindroos, Gary. Field Density Tests, Waste Disposal Pad.
- 04/07/89 <letter> [8:23:296] Ashworth, J. Michael., Letter To: ADEQ.
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- 04/20/89 <field summary report> [8:23:209-212] Lindroos, Gary A., Letter To: ADEQ.
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- 04/20/89 <letter> [8:23:90] Ashworth, J. Michael., Letter To: ADEQ.
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- 04/24/89 <memo> [8:24:124] Ashworth, J. Michael., Suspension of tailing leach operation.
- 05/01/89 <letter> [8:23:213] Lindroos, Gary A., Letter To: ADEQ. Results of pump test on TEI Well No. 2.
- 05/01/89 <quarterly report> [8:23:141-201] Lindroos, Gary A., Letter To: ADEQ.
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- 06/09/89 <self-monitoring report> [8:17:243-244] Hankins, S.,
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- 06/09/89 <self-monitoring report> [8:23:220-232] Hankins, S.,
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- 07/07/89 <memo> [8:23:305] Chen, Chiou-Lian., Letter To: Woodruff, David.
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- 07/13/89 <phone notes> [8:23:306] Davis, Gordon., From William Brett / Complaint.
- 07/15/89 <newspaper article> [8:23:307] Bagwell, Keith., Mercury is tainting 1 of Tombstone's 2 water wells.
- 07/18/89 <newspaper article> [8:23:308] Bagwell, Keith., Well might have had mercury for 7 months, officials tell Tombstone.
- 07/19/89 <memo> [8:23:309-314] Pulsifer, Doris., Letter To: Mayor & Council members.
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- 07/25/89 <letter report> [8:17:138-143] Rouse, Jim V., Letter To: Kennett, Roger.
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- 07/25/89 <letter report> [8:23:234-241] Rouse, Jim V., Letter To: Kennett, Roger.
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- 07/26/89 <field summary report> [8:23:214-219] Lindroos, Gary A., Letter To: ADEQ.
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- 07/26/89 <letter> [8:17:144] Lindroos, Gary A., Letter To: Rouse, Jim V. Water Well Monitoring.
- 07/26/89 <quarterly report> [8:23:121-140] Lindroos, Gary A., Letter To: ADEQ.
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- 07/26/89 <water quality report> [8:17:146-165] Lindroos, Gary A., Letter To: ADEQ.
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- 07/27/89 <phone notes> [8:23:317] Davis, Gordon.,
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- 07/28/89 <memo> [8:23:318] Woodruff, David H., Letter To: Maston, Jim.
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- 07/28/89 <memo> [8:23:319] Woodruff, David H., Letter To: Daniel, Debra.
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- 08/01/89 <geohydrologic report> [8:23:255-281] Rouse, Jim V.,
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- 08/01/89 <memo> [8:23:320-323] DuBois, James F., Letter To: Wiley, Bill.
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- 08/03/89 <self-monitoring report> [8:17:235] Hankins, S.,
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- 08/03/89 <self-monitoring report> [8:17:290] Hankins, S.,
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- 08/08/89 <memo> [8:23:233-241] Kennett, Roger., Letter To: Woodruff, Dave.
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- 08/09/89 <fax memo> [8:17:168-169] Rouse, Jim V., Letter To: Lindroos, Gary A. Protocol for Aquifer test.
- 08/16/89 <letter> [8:17:137] Vaught, Clark., Letter To: Lindroos, Gary A. Test pumping results as of 4-20-89.
- 08/16/89 <memo> [8:23:242-243] Rendes, Andrew M., Letter To: Woodruff, David. PBR Minerals, Inc. - Permit G-0020-02.
- 08/19/89 <letter report> [8:17:171-176] Rouse, Jim V., Letter To: Kennett, Roger.
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- 08/20/89 <fax memo> [8:17:170] Rouse, Jim V., Letter To: Lindroos, Gary A. Review Draft Aquifer Evaluation.
- 08/21/89 <fax> [8:17:166-167] Lindroos, Gary A., Letter To: Rouse, Jim V. Final Reading of TEI Well 2.
- 08/21/89 <land & water well map> [8:23:254A] Rouse, Jim V., Facility Location Map, Land Ownership, and Registered Water Wells.
- 08/21/89 <letter report> [8:23:244-254A] Rouse, Jim V., Letter To: Kennett, Roger.
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- 10/02/89 <memo> [8:23:283-285] DuBois, James F., Letter To: Woodruff, Dave.
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- 10/05/89 <memo> [8:23:87] Vandermark, Brad., Letter To: PBR Minerals.
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- 10/09/89 <fax memo> [8:17:177] Rouse, Jim V., Letter To: Lindroos, Gary A. 2 Additional Monitor Wells.
- 11/15/89 <letter> [8:23:324-337] DuBois, James F., Letter To: Perotti, Joe.
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- 01/17/90 <self-monitoring report> [8:23:286-289] American Analytical Lab.,
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- 01/23/90 <field summary report> [8:23:290-295] Lindroos, Gary A., Letter To: ADEQ.
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- 01/23/90 <quarterly report> [8:23:115-120] Lindroos, Gary A., Letter To: ADEQ.
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- 03/01/91 <notes> [8:23:377] Unknown Author., Notes on PBR Minerals compliance with ADEQ requirements.
- 03/20/91 <letter> [8:23:379-382] Smith, Russell A., Letter To: Ashworth, J. Michael.
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- 03/20/91 <memo> [8:23:378] Smith, Russell A., Letter To: Azizi, Reza.
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- 06/01/91 <letter> [8:23:391-393] Smith, Russell A., Letter To: Ashworth, J. Michael.
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- 05/05/92 <memo> [8:17:1-2] Waldrip Jr., Thomas E., Letter To: Briscoe, James A.
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- 07/09/92 <memo> [8:23:399] Engstrom, Bill., Letter To: Kennett, Roger. Phone conversation with Jim Briscoe.
- 07/09/92 <phone notes> [8:23:400-405] Engstrom, Bill., Phone conversation with Jim Briscoe.
- 08/05/92 <letter> [8:23:413-415] Bell, Donald., Letter To: Niedfelt, Jerry.
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- 08/05/92 <letter> [8:23:416-418] Bell, Donald., Letter To: Ashworth, J. Michael.
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- 08/11/92 <memo> [8:23:420] Fox, Edward Z., Letter To: Cunningham, Patrick.
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- 08/11/92 <memo> [8:23:419] Munson, Brian., Letter To: Cunningham, Patrick.
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- 12/08/92 <meeting notes> [8:25:1-5] Briscoe, James A.,
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- 12/10/92 <letter> [8:25:6] Niedfelt, Jerome., Letter To: Bell, Don.
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- 12/10/92 <notes> [8:25:7] Briscoe, James A., Preliminary Plan Items.
- 12/11/92 <letter> [8:25:8-12] Bell, Donald., Letter To: Niedfelt, Jerry.
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- 12/22/92 <letter> [8:25:13] Briscoe, James A., Letter To: MacKenzie, Douglas.
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- 12/22/92 <letter> [8:25:14-15] Briscoe, James A., Letter To: Niedfelt, Jerry.
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- 12/22/92 <letter> [8:25:16-21] Briscoe, James A., Letter To: Bell, Donald G.
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- 12/23/92 <fax letter> [8:25:22-28] Bell, Donald., Letter To: Briscoe, James A. Comments to letter dated December 22, 1992.
- 12/26/92 <letter report> [8:25:29-33] Briscoe, James A., Letter To: Bell, Donald G.
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- 01/03/93 <letter report> [8:25:34] Lindroos, Gary A., Letter To: Briscoe, James A.
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- 01/05/93 <letter> [8:25:62-67] Davis, Bruce S., Letter To: Well Owner.
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- 01/12/93 <water analysis report> [8:25:35-40] American Analytical Lab., Laboratory Analysis Reports - Well Water.

- 01/21/93 <letter> [8:25:55-58] Bell, Donald., Letter To: Niedfelt, Jerry.
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- 01/21/93 <letter report> [8:25:41-53] Briscoe, James A., Letter To: Bell, Donald G.
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- 01/26/93 <graph> [8:25:54] Lindroos, Gary A.(?), TEI Well No. 2 - Graph of Nitrates Level, 1/2-25/93.
- 01/29/93 <cover letter> [8:25:59-67] Hemming, Robert F., Letter To: Briscoe, James A.
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- 02/13/93 <drilling intent notice> [8:25:68-71] Niedfelt, Jerome., Notice of Intention to Drill Monitor/Piezometer Well. [Draft]
- 02/18/93 <letter> [8:25:72-77] Davis, Bruce S., Letter To: Well Owner.
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- 02/19/93 <cover letter> [8:25:78] Briscoe, James A., Letter To: Henderson, Steve.
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- 04/01/93 <letter report> [8:25:119-120] Briscoe, James A., Letter To: Bell, Donald G.
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- 04/22/93 <drilling quote> [8:25:121] Histed, Rich., Letter To: Niedfelt, Jerry.
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- 05/13/93 <letter> [8:25:122-123] Munson, Brian E., Letter To: Ashworth, J. Michael.
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- 06/11/93 <monthly report> [8:25:124-129] Briscoe, James A., Letter To: Bell, Donald G.
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- 06/30/93 <draft letter> [8:25:130-137] Bell, Donald., Letter To: Niedfelt, Jerry.
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- 07/08/93 <letter report> [8:25:138-189] Bell, Donald., Letter To: Niedfelt, Jerry.
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- 07/15/93 <demand letter> [8:25:190-213] Niedfelt, Jerome., Letter To: Gianetto, Bill.
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- 08/05/93 <drilling contract> [8:25:217-232] Histed, Rich., Letter To: Niedfelt, Jerry.
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- 08/05/93 <drilling quote> [8:25:216] Histed, Rich., Letter To: Niedfelt, Jerry.
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- 08/06/93 <action+ profile> [8:25:215] Briscoe, James A., Personal Contact Profile - Steve Henderson,
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- 08/06/93 <fax note> [8:25:214] Briscoe, James A., Letter To: Niedfelt, Jerry.
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- 08/16/93 <letter> [8:25:233-234] Briscoe, James A., Letter To: Niedfelt, Jerry.
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- 08/19/93 <drilling report> [8:25:235] Marolf, Walt W., Driller's Daily Drill Report - Hole No. TDC-1.
- 08/20/93 <drilling report> [8:25:236] Marolf, Walt W., Driller's Daily Drill Report - Hole No. TDC-1.
- 08/21/93 <drilling report> [8:25:237] Marolf, Walt W., Driller's Daily Drill Report - Hole No. TDC-1.
- 08/24/93 <letter> [8:25:238-239] Briscoe, James A., Letter To: Niedfelt, Jerry.
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- 08/30/93 <drilling invoice> [8:25:240-241] Histed, Rich., Letter To: Niedfelt, Jerry. Drilling Invoices No. 08-4056-3.
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JABA, Inc., Tucson, AZ.

Record #260 [8:25:54] <graph>

Lindroos, Gary A.(?) (01/26/93)

TEI Well No. 2 - Graph of Nitrates Level, 1/2-25/93.

For Tombstone Development Company, Grand Island, NE.

Record #262 [8:25:59-67] <cover letter>

Hemming, Robert F. (01/29/93) Letter To: Briscoe, James A.

Forwarding of 'Notice of Nonresponsibility' and 'Notice of Intention to Drill' approval from

Department of Water Resources.

USMX, Denver, CO.

Record #264 [8:25:68-71] <drilling intent notice>

Niedfelt, Jerome. (02/13/93)

Notice of Intention to Drill Monitor/Piezometer Well. [Draft]

Tombstone Development Company, Grand Island, NE.

Record #265 [8:25:72-77] <letter>

Davis, Bruce S. (02/18/93) Letter To: Well Owner.

Enclosure of annotated copy of the Notice of Intention to Drill Monitor Wells.

Arizona Department of Water Resources, Phoenix, AZ.

Record #266 [8:25:78] <cover letter>

Briscoe, James A. (02/19/93) Letter To: Henderson, Steve.

Return of Cella Barr Associates water distribution and master plan, City of Tombstone.

JABA, Inc., Tucson, AZ.

Record #268 [8:25:119-120] <letter report>

Briscoe, James A. (04/01/93) Letter To: Bell, Donald G.

Progress report on the Contention Mine area, Tombstone Mining District, Cochise County, Arizona.

JABA, Inc., Tucson, AZ.

Record #269 [8:25:121] <drilling quote>

Histed, Rich. (04/22/93) Letter To: Niedfelt, Jerry.

Drilling price quote for monitor water well.

Drilling Services Company, Chandler, AZ.

Record #270 [8:25:122-123] <letter>

Munson, Brian E. (05/13/93) Letter To: Ashworth, J. Michael.

PBR Minerals-Grand Central Leaching Facility; Groundwater Protection Permit No. G-0020-02;

Inventory Number 100334; Cochise County.

Arizona Department of Environmental Quality, Phoenix, AZ.

Record #271 [8:25:124-129] <monthly report>

Briscoe, James A. (06/11/93) Letter To: Bell, Donald G.

Monthly report for May, 1993 on the Contention Mine area, Tombstone Mining District, Cochise

County, Arizona prepared on behalf of the Tombstone Development Co., Inc., Grand Island, Nebraska.

JABA, Inc., Tucson, AZ.

Record #272 [8:25:130-137] <draft letter>

Bell, Donald. (06/30/93) Letter To: Niedfelt, Jerry.

Tombstone Development Company Inc. - Site Inspection; Inventory No. 102806; Cochise County. [Draft]

Arizona Department of Environmental Quality, Phoenix, AZ.

Record #273 [8:25:138-189] <letter report>

Bell, Donald. (07/08/93) Letter To: Niedfelt, Jerry.

Tombstone Development Company Inc. - Site Inspection and Technical Assistance meeting Summary;

Inventory No. 102806; Cochise County.

Arizona Department of Environmental Quality, Phoenix, AZ.

Record #274 [8:25:190-213] <demand letter>

Niedfelt, Jerome. (07/15/93) Letter To: Gianetto, Bill.

Removal of equipment purchased at the auction site on Tombstone Development property.

Tombstone Development Company, Grand Island, NE.

Record #278 [8:25:217-232] <drilling contract>
Histed, Rich. (08/05/93) Letter To: Niedfelt, Jerry.
Drilling Services Company, Offer of Drilling Services, Quotation No. 7683.
Drilling Services Company, Chandler, AZ.

Record #277 [8:25:216] <drilling quote>
Histed, Rich. (08/05/93) Letter To: Niedfelt, Jerry.
Drilling price quote for monitor water well.
Drilling Services Company, Chandler, AZ.

Record #276 [8:25:215] <action+ profile>
Briscoe, James A. (08/06/93)
Personal Contact Profile - Steve Henderson, Re: The County is ready to take gravel if we assay for cyanide.
JABA, Inc., Tucson, AZ.

Record #275 [8:25:214] <fax note>
Briscoe, James A. (08/06/93) Letter To: Niedfelt, Jerry.
Drilling Services contract being prepared for signature.
JABA, Inc., Tucson, AZ.

Record #279 [8:25:233-234] <letter>
Briscoe, James A. (08/16/93) Letter To: Niedfelt, Jerry.
Pulling Pump on PBR# 1 and authorization to start drilling Monitor Well TDC# 1.
JABA, Inc., Tucson, AZ.

Record #280 [8:25:235] <drilling report>
Marolf, Walt W. (08/19/93)
Driller's Daily Drill Report - Hole No. TDC-1.
Drilling Services Company, Chandler, AZ.

Record #281 [8:25:236] <drilling report>
Marolf, Walt W. (08/20/93)
Driller's Daily Drill Report - Hole No. TDC-1.
Drilling Services Company, Chandler, AZ.

Record #282 [8:25:237] <drilling report>
Marolf, Walt W. (08/21/93)
Driller's Daily Drill Report - Hole No. TDC-1.
Drilling Services Company, Chandler, AZ.

Record #283 [8:25:238-239] <letter>
Briscoe, James A. (08/24/93) Letter To: Niedfelt, Jerry.
Completion Monitor Well TDC #1, Pulling pump on Monitor Well PBR #1, Tombstone, AZ.
JABA, Inc., Tucson, AZ.

Record #284 [8:25:240-241] <drilling invoice>
Histed, Rich. (08/30/93) Letter To: Niedfelt, Jerry.
Drilling Invoices No. 08-4056-3.
Drilling Services Company, Chandler, AZ.

Record #285 [8:25:242-245] <billing letter>
Briscoe, James A. (10/01/93) Letter To: Niedfelt, Jerry.
Bills from Gary Lindroos, Arizona Registered Assayer and Steve Henderson.
JABA, Inc., Tucson, AZ.

1992

Dec. 8th, 1992

1:40 -

Meeting w/ DON Bell, Roger Kennett, Jerry Hiedselt,
A. Douglass Mackenzie, & JAB.
David Anderson - Hydrologist

Page 1 of 1

Roger Kennett.

Aquifer Protection Group
- Permitting

Ground Water
Protection Permit
Broken chain

DON Bell

Compliance Group.

Now need an APP.

Items to be accomplished - To be done
Today. To be followed by a letter from DM
itemizing these items.

Discharge by T&I - Well # 2
in 1984 - immediate rupture & nothing was done

↓
Colchise Silver - (Frank Magini - Dusty)

↓
PBR

Ground Water Protection Permit
started to do correction, did some
but didn't complete & didn't report.

They were to pump # 2 as much
as possible - but lack of power precluded
much pumping.

000001

Anecdotal from Roger Kenneth.

T. Schloss was aware of the leak but said "don't pay any attention to it - just go ahead."

JATB suggests they go after Tom Schloss.

Not clear how much contamination (cyanide) had taken place. But!!

The contamination was 100 ppm or less free cyanide. pumping & remained hi for a year to 2 years.

Megini PBR - removed cyanide tainted soil from around the containment shaft.

Beckemuhl Engineering from Lake wood Colorado did some hydro-geochem - but weren't paid so effort stopped.

What to do?

- determine gradient. (of H₂O)
- where did plume go.
- what is the geology

Step

1. Pump & test well

TE1 - 1, 2, 3

PBR - 1

Tomb. - 1

2. Existing leach pad testing.

a. Sample leach

b. Characterization of site

- Give written plan before proceeding.

Sample → make recommendations as how to dispose of any

Cyn. - in bottom of ponds.

APP - Rules - 1989

To close (or maintain)

should apply to APP,

• Temporary Closure

• Closure



should end up in a permit.

Dept of Health Serv.
Turner labs. in Tnc.

Submit drafts to Don Bell who
will pass along to Dave. (and Jerry
Neidfelt.)



We'll work toward an
inspection date for Dave &
Candy Rendes to visit & see
what sites are

Assay all primary drinking
water metals, inorganics.

Outside of permitting
- in Site Characterization.

5

JAB WILL

- Within 10 days will submit a preliminary plan as how we can work toward an APP
 - a. Sampling will be part of the plan
 - 1. Determine water level to define gradient or will additional wells be necessary.
 - 2. Take samples ASAP
 - Generation
 - Start H₂O level
 - H₂O samples
 - Turner lab + work around
 - 3. Dept of Water Resources Drill permit for USMX drilling.
 - b. Visit ~~from~~ from ADEQ Dave & Andy Rencles sometime after 1st of year.

FILE TDC

Tombstone Development Company

P.O. BOX 1445

TELEPHONE 308/382-7480

GRAND ISLAND, NEBRASKA 68802

December 10th, 1992

Arizona Department of Environmental Quality
3033 North Central Avenue
Phoenix, Arizona 85012

received
12/13/92 JRB

Attention: Don Bell

Dear Sir:

I wish to thank you at this time for the time you took to meet with me along with Mr. Douglas McKenzie and Mr. Jim Briscoe on December 8th, 1992.

I feel we had a very productive meeting and will take necessary steps to correct areas in which Tombstone Development Company is deficient on behalf of PBR Minerals.

As requested at the meeting, Jaba, Inc. of Tucson will give you a written preliminary plan of action which we propose to accomplish in the near future.

Briefly, this will include taking water level measurements in 4 wells drilled on the site: Namely,

Tombstone Well No. 1
TEI Water Wells No. 1, 2 and 3.
PBR Water Well No. 1

They will then proceed to obtain water samples from these wells for the determination of water purity. They will also inspect the Grand Central Leaching Facility to monitor its integrity.

This plan should be presented to you on or before December 21st,

Very truly yours,

Jerome Niedfelt
Tombstone Development Company
By: Jerome Niedfelt, President

JN/ap

cc: Jaba, Inc.

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Preliminary Plan Items

12-10-92

1. Sample Wells - PBR-1, TEI 1-3 &

Trimb. 1.

- Static depth to H₂O
- Water for free cyanide & EPA metals - inorganic

2. Clean & tidy site

a. Dispose of cyanide barrels in approved way

b. Flatten draw holes in pit bottom

c. Dress Roads

d. Clean woods

e. Pick up junk & dispose of

1. Old assay house

2. Butler Bldg area

3. Control Drainage

a. From pit periphery

b. Away from wildcat dump

c. In general away from draining off property - rather pond on property

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Tombstone Development Corp.
Remediation and Permitting
page 1

DRAFT COPY ONLY

received
12/13/92 JJJ

CERTIFIED MAIL
Return Receipt Requested

Date: December 11, 1992
Ref: WP92-

Tombstone Development Corporation
Mr. Jerry Niedfeldt
P.O.Box 1445
Grand Island, Nebraska 68803

RE: Tombstone Development Corporation; Contention Mine, Processing, and Milling Site, Tombstone, Cochise County, Arizona; Remediation of the Compliance Problems and the Environmental Permitting of this Site.

Dear Participants:

TECHNICAL ASSISTANCE MEETING SUMMARY

A meeting was held on Tuesday December 8, 1992, at 1:30 pm, in the offices of the Arizona Department of Environmental Quality at 3033 North Central Avenue. During this Technical Assistance Meeting the following items were agreed upon:

1. Jim Briscoe, of Jabba Inc. (the landowner's and the lessee's consultant), will develop a preliminary compliance plan which will begin to develop the identification of the compliance problems (or the absence of a compliance problem) and the remediation steps that will be required. Included in these plans will be the sampling of the wells on site (for The EPA Safe Drinking Water Standards for Inorganics), and in the general area (where possible), as soon as possible to assist in the characterizations of these concerns. **The plan will be submitted by December 22, 1992. The results of the testing will be submitted as the data becomes available.**
2. Douglas Mackenzie, of Valdez Gold Inc. (representing the present Lessee), will develop and submit, in conjunction with US Mining and Exploration (the company that will accomplish the drilling and testing), a general drilling plan with map. This plan shall indicate the precautions that the driller will use to prevent any pollution from the previous cyanide spill from the past

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Tombstone Development Corp,
Remediation and Permitting
page 2

pregnant solution pond, and the general area that the sampling will be conducted in. This plan will be submitted by December 22, 1992.

3. Roger Kennett and Dave Anderson will review the available ADEQ documents and provide a list of Departmental concerns for this site from the past inspections and submittals. An inspection of the site with a representative of the Southern Regional Office and any of the other principles that wish to be there, shall be planned and scheduled for January. The list and the schedule will be submitted by January 10, 1993.

4. Beginning with January 15, 1993, and on the 15th of every month thereafter, until the site is permitted, Tombstone Development company shall have caused a report to be submitted explaining the progress made on this site toward the remediation of the compliance problems and the permitting of the premises. This may be done through their designated consultant or by the owners themselves.

5. All items shall be submitted through:
Arizona Department Of Environmental Quality
Don Bell-#205
P.O. Box 600
Phoenix, Arizona 85001-0600
Telephone (602)207-4613
Fax:(602)207-4634

Attached is a list of the persons, including their addresses, that need to receive copies of each of these transactions. Please send these and indicate that these people have been copied in your transmittal. This will save a considerable amount of time.

Please do not hesitate to call myself or any of the principles involved.

Sincerely,

Donald G. Bell
Water Pollution Compliance Officer
Arizona Department of Environmental Quality

cc:
Attached List

B:\FBR\TA12892
DB:DB:db

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Tombstone Development Corp.
Remediation and Permitting
page 3

DISTRIBUTION LIST

Roger Kennett
Arizona Department of Environmental Quality
Aquifer Protection Permit Section-Mining
P.O. Box 600
Phoenix, Arizona 85001-0600
Phone (602)207-4696
FAX: (602)207-4674

Dave Anderson
Arizona Department of Environmental Quality
Aquifer Protection Permit Section-Hydrology
P.O. Box 600
Phoenix, Arizona 85001-0600
Phone (602)207-4669
FAX: (602)207-4674

Tombstone Development Corporation
Mr. Jerry Niedfeldt
P.O.Box 1445
Grand Island, Nebraska 68803
Phone:(308)-382-7480
Fax:(308)382-7482

Jim Briscoe-Registered Geologist
Jabba Inc.
2100 N.Wilmot Rd.
Tucson Az. 85712
Phone:(602)-721-1375
Fax:(602)298-6688

Douglas Mackenzie, P.E.
Vice President
Valdez Gold Inc.
Suite 200, 20 Adelaide St. E
Toronto, Ontario M5C 2T6
Phone (416)867-1100
Fax: (416)867-1109

Jay Skardon
Assistant Attorney General-Arizona
1275 W. Washington
Phoenix Arizona 85007
Phone (602)542-1610

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Tombstone Development Corp.
Remediation and Permitting
page 4

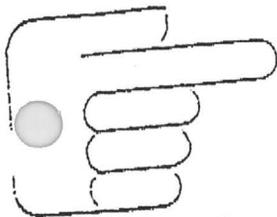
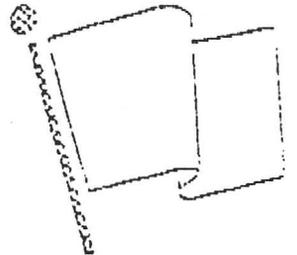
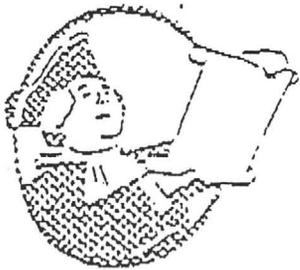
Donald Bell
Arizona Department of Environmental Quality
Water Pollution Compliance Unit-#205
P.O. Box 600
Phoenix, Arizona 85001-0600
Phone (602)207-4613
FAX: (602)207-4634 (or 2218)

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ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER POLLUTION COMPLIANCE UNIT
3033 North Central Avenue, 3rd Floor
Phoenix, Arizona 85012

GENERAL INFORMATION
(602) 207-2300
ADEQ TOLL FREE (1-800-234-5677)



TO: Jim Basico
Fabba Inc
ROOM NUMBER: _____

PHONE NUMBER: 602-721-1375

FAX NUMBER: 602 298 6688

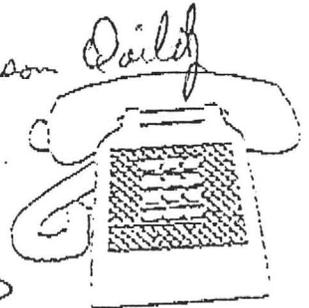
FROM: Don Bell - Az Dept Environ Policy

ROOM: 205

PHONE NUMBER: 602 207 4613

FAX NUMBER: (602) 207 - 4634

Number of Pages: 1
(Including this page)



Any problems with copy quality, please
call the person who sent the document.

000012



JABA INC.
2100 N. Wilmot Rd. #218
Tucson, AZ 85712
(602) 885-9141
(FAX) 721-2768

December 22, 1992

Mr. Douglas MacKenzie
President
Excellon Resources USA, Inc.
Suite 200-20 Adelaide St.E.
Toronto, On Canada M5C 2T6

Dear Douglas,

Re:Transmittal of the POA on the environmental work on the
Contention Lease.

I reviewed this verbally by phone with Don Bell and he seemed
pleased at the progress (he's been out with the fleu until
today), particularly with the potential early receipt of samples
from the wells.

I'm getting screened mylar intermediates from the blueprinters
today, and will do rough annotation of Exploration Area I & II,
as well as other parameters, & send them out as soon as I have
heard back from Don Bell, to be sure everything is covered..

I have again discussed this with Jim Knox, including reading him
the passage re. USMX drilling & he has no problem with it.

If you have any questions or comments, I'll be in the rest of
today and most if not all of tomorrow.

Best regards

A handwritten signature in cursive script, appearing to read "James A. Briscoe".

James A. Briscoe

000013





JABA INC.
2100 N. Wilmot Rd. #218
Tucson, AZ 85712

(602) 885-9141
(FAX) 721-2768

December 22, 1992

Mr. Jerry Niedfelt
President
Tombstone Development Company Inc.
P.O. Box 1445
Grand Island, NB USA 68802

Dear Jerry,

Re:Transmittal of Plan of Action letter to Don Bell of the Arizona Department of Environmental Quality, concerning the Contention Lease Area.

Transmitted herewith is the document requested by Don Bell during our meeting in Phoenix on December 8, 1993. I had several questions and clarifications I wanted to get from Don before finalizing this. He has been out with the flu until today, but he did return my calls about 11 this morning and I got all my questions answered.

Don seemed pleased that we would be getting water samples soon. I also discussed with him the cyanide barrels we had talked of crushing. He suggested we wait on that until after their inspection which he'd like to do in mid January. He feels we might have to gather various junk together and dispose of it in an approved dump site. He feels it might be more expensive to excavate improperly disposed of material than to do it right in the first place. He did however focus on drainage and I think it would be wise to proceed on cleanup & berms to channel water in proper directions. I think we're talking 2 days of equipment time for this minimal activity.

Both Tom Waldrip and I took an all day short course on the Aquifer Protection Permit process last Monday Dec. 14, at our cost of about \$700. It was extremely helpful, and was attended by numerous professionals of the major Arizona mining companies. The APP process is not scientifically difficult, but in practice is complex and therefore confusing and expensive to execute.

I have been doing everything possible in order to cut TDC's costs on this to a minimum. This includes using dependable and I think very reasonably paid people on site to do most of the legwork, so TDC doesn't have to incur the expense of multiple trips for me to go to Tombstone. I am still gathering costs of various items in order to make a cost estimate for the program. This at best will be a "guesstimate" as I can't completely predict everything that must be done and in fact the whole process is somewhat a "moving target". I will continue to make my best efforts to keep costs

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as low as possible, but it must be clearly understood that a significant (but unknown) amount of professional time must be spent in getting everything done properly. There is considerable liability to me if corners are cut in a way that would influence the integrity of the work. As I believe Don Bell told you, the penalties for filing false (or incomplete?) information include fines and imprisonment. As a Registered Professional Geologist and signator on any reports, I am held liable for their content. I will therefore be unwilling to cut costs so deeply that I run the risk of professional liability. If my fees and costs of the project are an insurmountable problem, I will withdraw from further work. Please consider this and advise me if you would like me to continue.

Very truly yours

A handwritten signature in cursive script, appearing to read "James A. Briscoe". The signature is written in dark ink and is positioned to the right of the typed name "James A. Briscoe".

James A. Briscoe

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JABA INC.
 2100 N. Wilmot Rd. #218
 Tucson, AZ 85712
 (602) 885-9141
 (FAX) 721-2768

James A. Briscoe
 5610 E. Sutler Lane
 Tucson, AZ 85712
 (602) 721-1375

Fax (602) 298-6688 (*2 after second ring)

Fax Cover Sheet

DATE 12/22/92 THIS IS PAGE 1 OF 6 SENDER Jim Briscoe
 TO Mr. Donald E. Bell COMPANY ADEQ
 FAX # (602) 207-4634 LOCATION (City/State) Phoenix AZ
 COMMENTS Transmittal is the POA.
Give me a call if you have any immediate
comments. Maps etc to follow
Jim Briscoe

CONFIDENTIALITY CAUTION

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JABA INC.
2100 N. Wilmot Rd. #218
Tucson, AZ 85712
(602) 885-9141
(FAX) 721-2768

December 22, 1992

Mr. Donald G. Bell
Water Pollution Compliance Officer
AZ Dept. Of Environmental Quality
Office Of Water Quality
3033 N. Central Avenue
Phoenix, AZ USA 85012

Dear Mr. Bell,

Re: Plan of Action (POA) for Preliminary Compliance Plan for the Tombstone Development Company (TDC) Patented Mining Claims in the Tombstone Mining District, Cochise County Arizona - In Particular That Portion of the Property Known as the Contention Lease.

PURPOSE

The following Plan of Action is the result of a Technical Assistance meeting held between Arizona Department of Environmental Quality (ADEQ) staff, Donald E. Bell, Roger Kennett and Dave Anderson; TDC represented by their president, Mr. Jerry Niedfelt; Lessor of the TDC properties Excellon Resources USA, Inc. (Excellon) Mr. A. Douglas MacKenzie its president, and TDC and Excellon's consultant JABA Inc. (JABA), by its president Registered Professional Geologist (RPG) James A. Briscoe. The meeting was held at the ADEQ offices in Phoenix, 3033 N. Central Ave, on December 8, 1992 at 1:30 pm. Mr. Briscoe was directed by Mr. Niedfelt to prepare this POA on behalf of TDC.

HISTORY

The Tombstone Mining District was discovered in 1877 and has been actively mined for at least 60 of the last 115 years. Significant production of silver, gold, copper, lead, zinc and manganese have been attained. Much of the production came before the turn of the century. About 1900 the productive claims were consolidated by the Development Company of America. In 1933 the Tombstone Development Company (TDC) was formed, became owner of the property initially consolidated by the Development Company of America and is the current owner of most of the past productive claims in the Tombstone Mining District.

In (approximately) 1971 and thru 1975 the Limited Partnership "1971 Minerals Limited" consolidated almost all of the mining waste dumps from the various mine shafts of TDC into a central heap leach pad, where they were leached with cyanide for a period of several years, and a recovery of an unknown amount of silver and gold was made. About 1975, '71 Minerals Limited relinquished the lease.



In 1978 Tombstone Exploration Incorporated (TEI) leased all of the TDC claims and opened the Contention Open Cut mine. This operation was one of the first to use agglomerated (cement) heap leaching. Inattention to proper mining practices resulted in an apparent leak in the Barren Solution Pond resulting in contamination of TEI Well # 2, south of the Barren Solution Pond. A variety of complex circumstances lead TEI to declare Chapter 7 bankruptcy in about 1986.

Magini Leasing and Contracting, the mining contractor for TEI appears to have taken over the lease on the Contention Pit in late 1986 or 1987. Magini apparently short of capital sold out to PBR Minerals sometime in 1987. PBR inherited the cyanide contamination problems left by TEI and spent (roughly) a reported 1.5 million dollars performing various cleanup tasks. This exceeded their projections by about 100% putting them into a cash bind. They brought in outside capital from Vancouver, Canada and became a subsidiary of Cowichan Resources. Cowichan continued with the groundwater monitoring required under PBR's Groundwater Quality Protection Permit (GWQPP). PBR-Cowichan continued with construction of a small (<3,000 TPD) agglomerated heap leach mine with re-usable heap pad, Merrill-Crowe (zinc powder) precipitation plant and dore' smelting plant. This facility operated for a brief period in the late summer and fall of 1989. Poor planning, lack of ore reserves and adequate financing resulted in PBR-Cowichan filing for Chapter 11 bankruptcy protection in the spring of 1990. Without capital, PBR-Cowichan failed to continue proper sampling and reporting to the ADEQ as required by their GWQPP. However, the last samples reported by PBR-Cowichan from TEI Well #2 indicated inorganic metals and cyanide were within GWQPP limits and nitrate was 11 ppm vs an allowable limit of 10ppm.

CURRENT ACTIVITY

In September of 1992 Excellon Resources under a Plan administered by the bankruptcy court took over the Contention area, under a new lease from TDC. Excellon Resources USA Inc. proposes to explore through their own effort or that of partners, the Contention Lease area from the surface to or just above the groundwater table (which stands approximately 500 feet below the surface) for the presence of a mineral ore body. If such an ore body is located, its tonnage, grade and metallurgical characteristics will be carefully measured to determine whether it can be economically mined. If the various studies show that an economically viable ore body is present, a mine and metallurgical plant will be designed and permitted. Mine construction will ensue. It is expected that the sequential exploration process will take about 2 years. If at any time during during the exploration process it is determined that chances for locating an ore body do not justify the risk, the exploration project will be abandoned and the lease turned back to the Tombstone Development Company.

At the current time, PBR-Cowichan (the Bankrupt) is in non-

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compliance with their GWQPP, triggering the statutory requirement for an APP for either closure or operation. Tombstone Development Company as the owner of the land is willing to work toward bringing the property back into compliance with the GWQPP by re-initiating groundwater sampling of TEI Wells # 1, 2, & 3, Tombstone City Well # 1 and PBR Well # 1. Further, they will establish with the ADEQ, a Plan Of Action (POA) to define an evaluation program to determine compliance problems or lack of compliance problems and to work toward an APP to: a. close the Facility(ies) on the Contention Lease, ~~if Excellon Resources fails to locate a minable ore body~~, or b. allow a mining operation of appropriate scope if Excellon Resources discovers a minable ore body. The purpose of this report is to define a POA to accomplish the above.

Currently, Excellon Resources has ~~a~~ joint venture agreement with USMX Inc. to start an exploration drilling program on a mineral target to the west of the Contention Open Pit in mid - January 1993. This exploration area is geologically separate (on the west side of the Contention - Tranquility Fault Zone) from the area of TEI Well #2 and the TEI, 71 Minerals Ltd. heap leach pads where cyanide contamination took place in 1985. USMX proposes to drill reverse circulation rotary holes at an angle of - 45 to -60 degrees with a length of 500 to 600 feet, and thus a vertical depth of less than 500 feet. The water table will not be intercepted. After completion the holes will be filled and capped according to Arizona Department of Water Resources (ADWR) regulations. Samples will be recovered from approximately 5 foot sample intervals, geologically logged and assayed. Some of these holes will be drilled through waste dump material, which will be sampled where possible, so the nature of the waste dump material can be determined.

PLAN OF ACTION (POA) TO DETERMINE COMPLIANCE

Priority One

- I. Test wells - TEI #s 1, 2, & 3, PBR # 1 and Tombstone City Well # 1, ASAP and periodically thereafter.
 - A. Static water level and
 1. Determine groundwater flow direction.
 - B. EPA Safe Drinking Water Standards for Inorganics and metals, including mercury.
 - C. Total and weak acid dissociable (WAD) cyanide.
 - D. Nitrate
 - E. pH and conductivity will be taken at the well head.
 - F. Report Results
 - G. *Future scheduling of sampling will be determined after initial sampling.*

STATUS / SCHEDULE A team has been assembled and equipment is being gathered to perform this task. There is no power to any of the above wells except Tombstone City Well # 1, so power will have to be supplied by a portable generator.

After the static water level has been determined, each well will be pumped for 12 hours and a 1 liter water sample taken. This sample will be packed in ice and delivered, with Chain of Custody Record, to American Analytical Laboratories, 3441 E.

000019

Milber St., Tucson AZ, 85714, Phn. (602)889-5787. Their turn around time is approximately 10 days.

Assuming no malfunctions in the generator, or well pumps that have been inactive for more that two years, static water level measurements and water sampling after pumping for 12 hrs, will begin Saturday Dec. 26, 1992. Samples should be collected by Monday Dec. 28, 1992. If mechanical or other problems are encountered, then further work will be done Jan. 2 & 3, 1993. Assuming no equipment problems in getting all samples by Dec. 28, 1992 analyses should be ready by the end of the week of Jan. 10, 1993.

Priority Two

II Locate and Identify Facilities by Number and Name

A. Prepare Maps

1. General Area Map at a scale of 1 : 24,000 (1" = 2,000'), which will show:
 - a. General Area of the Contention Lease Facility (composed of undifferentiated detailed Facilities)
 - b. Locations of wells TEI #1, 2 & 3, PBR #1 & Tombstone City #1.
 - c. Location of Area of Exploration I and II which will be the local of initial drilling by USMX Inc.
2. Detail Area Map at a scale of 1 : 2,400 (1"= 200')
 - a. Detail of Facilities locations identifying each Facility by number and name.
 - b. Locations of Wells TEI # 1, 2, & 3, PBR #1 & Tombstone City #1.
 - c. Location of Area of Exploration I and II which will be the local of initial drilling by USMX Inc.

STATUS / SCHEDULE Work on this has already started. Preliminary maps should be ready for mailing by Wednesday Dec. 28.

Priority Three

III. Evaluate Facilities for Compliance

A. Examine, evaluate and characterize each Facility

1. Determine boundary of each Facility, and display on 200 scale map.
2. Determine if Facility is in or out of compliance.
 - a. Characterization of Potential Discharge - Analysis of representative samples of Heap Leach, Waste Rock, & Tailings for :
 1. Total Metals
 2. Fluoride
 3. Total & weak acid dissociable cyanide
 4. EPA 1312 or Nevada Meteoric Water Mobility Test.
 5. ABA (acid - base accounting ie Acid Neutralization - Acid Generation.

*drainage solutions, concentrated
ingrains & slurries*

000020



6. Gross alpha particle activity.
3. Determine Points of Compliance (POC) for facilities not in compliance, and show on 200 scale map.
4. Apply BADCT (Best Available Demonstrated Control Technologies) where necessary.

STATUS / SCHEDULE No work has yet been accomplished. It is expected that this activity will be 50% complete by the end of the first quarter of 1993 (April 5, 1993), while the remainder should be complete by the end of the second quarter 1993 (July 6, 1993). *permit application*

- IV. Determine probability of APP going for Closure or for a new mine plant.
 1. Evaluate results of exploration.

STATUS / SCHEDULE This evaluation will be ongoing. Exploration may be advanced enough to make a preliminary determination by mid - January 1994. *As the extent of any pollution and the condition of the facility is determined, the decisions will be*

- V. Apply for and begin work on the appropriate APP. *made to close or operate existing facilities for a period of time.*

STATUS / SCHEDULE Assuming a fairly clean cut decision in IV., work can begin in the 1st quarter 1994.

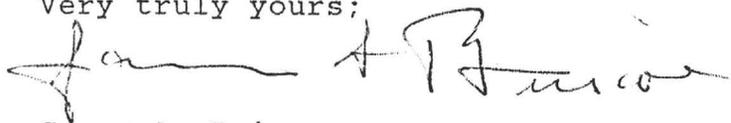
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A progress report shall be submitted by the 15th of every month on the preceeding months work starting with Janurary 15, 1993.

Bound with this report (final copy) for reference as an appendix is the August 3, 1988 document APPLICATION FOR A GROUNDWATER QUALITY PROTECTION PERMIT, prepared by Geochemical Engineering Inc. of Lakewood Colorado. Also attached are the GWQPP and all available previous sampling data. These data are thought at this time to accurately represent the physical parameters extent, at the time of their collection, of the Facility identified as "The Grand Central Leaching Facility" also commonly referred to as the "PBR" plant. Many of the data are currently applicable to the APP application process.

It is understood that the above is a dynamic working document that will be refined by both the ADEQ personnel and the property owner. Your comments are welcome.

Very truly yours;



James A. Briscoe,
President, JABA Inc.
RPG AZ & CA

000021



December 23, 1992

Jim Briscoe:

The following are my comments. I think they are pretty representative and mostly correct. APP Section may wish to change or modify some parts and they may wish to add to the list. But this is a reasonable start.

you may want to discuss some of these with me....

By all means proceed with the sampling.....

thanks,

Don bell
FAX 602-207-4634

SUGGESTIONS:

CURRENT ACTIVITIES

First Paragraph-

1. What is the plan that governs the actions that is administered by the Bankruptcy court. What provisions of that plan bear on the activities that will be involved in the environmental work or permitting that will be carried out in these actions.

2. What does it mean ^{no} that Excellon ^{yes} Resources "took over the Contention Area". Are they or is TDC responsible for the goings on out there. Be specific and describe in terms of past pollution, current existing pollution, or any pollution created in the future.

3. What terms of the new lease bear on the environmental activities of the site. What safeguards? How is liability described? ETC. Who is responsible for what?

4. "Just above the 500 foot water table"...
what about naturally perched water tables?
what about "potential pockets of pollution"?

4/15/93
In spite of abnormality
No, no perched water
who's been in there
45 holes drilled

5. Proper permits need to be applied for from the Dept. of Water Resources. If you have not already done this you may wish to contact Mike Ball(602-542-1581). You need to specify that these permits and the regulations governing these will be followed, i.e., R12-15-817 Mineral Exploration Wells- the proper paper work and after actions concerned. R12-15-802 specifies a licensed driller, holes greater than 100 feet, and filing a notice of intent, etc. A.R.S. 45-592 is the statute authority governing these actions.

000022

Paragraph #2

first sentence---PBR Minerals Inc. (permit holder).....

second sentence....just say just back into compliance with Arizona Statutes and rules....the GWPP is not a concern of TDC at this time. Back into compliance with the GWPP would be back into compliance with a permit that will be revoked. Unless the bankruptcy court can tell the Attorney General's office that there will not be a revocation, then there will be a revocation of the permit. There is no reason that there should not be that I am aware of at this time. By rule it cannot be transferred while in noncompliance. The permit never belonged to Cowitchin as it was never changed or we were never notified (same thing). This is going to be a timely process that will need consideration, public notice and several other things. At this point we haven't yet determined any simple way to accomplish alot of this part. In the mean time TDC is acting for their own interests to clean up the site and make the site economically sound. This type of action will be helpful in any public hearings that become necessary.

Paragraph #3

the drilling activities could intercept a perched water table or a pocket of pollution.....
all water & "pollution" will be blown out of the hole by the RA drilling process. The holes will be back filled & sealed by AZ law so no migration of H₂O has pollution.

PLAN OF ACTION

#I add---future scheduling of sampling will be determined after the initial sampling.

last paragraph---

??What will happen if the pumps do not work? How will you sample?

II.....addsome where mark the heap leach area, overburden or ore body dumps(where known) etc-----simply mark by printing the name in the general location of these facilities. Specific delineations can be carried out later as you have specified.

III. 2.a.....analysis should include the drainage solutions, sludges, and concentrated liquids.

000023

III Status/schedule...."This activity"= permit application?

IV Status and Schedule

add...As the extent of any pollution and the condition of the facility is determined, the decisions will be made to close or operate existing facilities for a period of time.

000024

received 2/ Rev:
1/8/93 JAS

December 23, 1992

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Don bell
FAX 602-207-4634

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000025

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000026

III Status/schedule...."This activity"= permit application?

IV Status and Schedule

add...As the extent of any pollution and the condition of the facility is determined, the decisions will be made to close or operate existing facilities for a period of time.

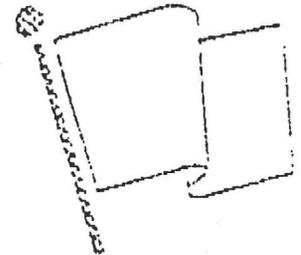
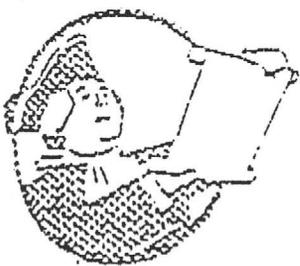
000027

Dec. 23, 1993

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

WATER POLLUTION COMPLIANCE UNIT
3033 North Central Avenue, 3rd Floor
Phoenix, Arizona 85012

GENERAL INFORMATION
(602) 207-2300
ADEQ TOLL FREE (1-800-234-5677)



TO: Jim Bausice Jobba Inc

ROOM NUMBER: _____

PHONE NUMBER: ⁶⁰²⁻²⁹⁸⁻⁶⁶⁸⁸
~~602-298-9141~~

FAX NUMBER: 602-721-2768

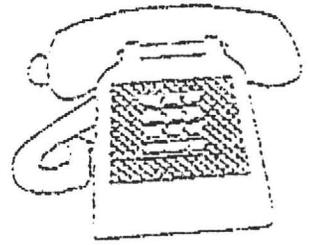
FROM: Don Beel ~~_____~~

ROOM: #205

PHONE NUMBER: 207-4613

FAX NUMBER: (602) 207-4634

Number of Pages: 4
(Including this page)



Any problems with copy quality, please
call the person who sent the document.

000028

December 26, 1992

Mr. Donald G. Bell
Water Pollution Compliance Officer
AZ Dept. Of Environmental Quality
Office Of Water Quality
3033 N. Central Avenue
Phoenix, AZ USA 85012

Dear Mr. Bell,

Re: Plan of Action (POA) for Preliminary Compliance Plan for the Tombstone Development Company (TDC) Patented Mining Claims in the Tombstone Mining District, Cochise County Arizona - In Particular That Portion of the Property Known as the Contention Lease.

PURPOSE

The following Plan of Action is the result of a Technical Assistance meeting held between Arizona Department of Environmental Quality (ADEQ) staff, Donald E. Bell, Roger Kennett and Dave Anderson; TDC represented by their president, Mr. Jerry Niedfelt; Lessor of the TDC properties Excellon Resources USA, Inc. (Excellon) Mr. A. Douglas MacKenzie its president, and TDC and Excellon's consultant JABA Inc. (JABA), by its president Registered Professional Geologist (RPG) James. A. Briscoe. The meeting was held at the ADEQ offices in Phoenix, 3033 N. Central Ave, on December 8, 1992 at 1:30 pm. Mr. Briscoe was directed by Mr. Niedfelt to prepare this POA on behalf of TDC.

HISTORY

The Tombstone Mining District was discovered in 1877 and has been actively mined for at least 60 of the last 115 years. Significant production of silver, gold, copper, lead, zinc and manganese have been attained. Much of the production came before the turn of the century. About 1900 the productive claims were were consolidated by the Development Company of America. In 1933 the Tombstone Development Company (TDC) was formed, became owner of the property initially consolidated by the Development Company of America and is the current owner of most of the past productive claims in the Tombstone Mining District.

In (approximately) 1971 and thru 1975 the Limited Partnership "1971 Minerals Limited" consolidated almost all of the mining waste dumps from the various mine shafts of TDC into a central heap leach pad, where they were leached with cyanide for a period of several years, and a recovery of an unknown amount of silver and gold was made. About 1975, '71 Minerals Limited relinquished the lease.

000029

In 1978 Tombstone Exploration Incorporated (TEI) leased all of the TDC claims and opened the Contention Open Cut mine. This operation was one of the first to use agglomerated (cement) heap leaching. Inattention to proper mining practices resulted in an apparent leak in the Barren Solution Pond resulting in contamination of TEI Well # 2, south of the Barren Solution Pond. A variety of complex circumstances lead TEI to declare Chapter 7 bankruptcy in about 1986.

Magini Leasing and Contracting, the mining contractor for TEI appears to have taken over the lease on the Contention Pit in late 1986 or 1987. Magini apparently short of capital sold out to PBR Minerals sometime in 1987. PBR inherited the cyanide contamination problems left by TEI and spent (roughly) a reported 1.5 million dollars performing various cleanup tasks. This exceeded their projections by about 100% putting them into a cash bind. They brought in outside capital from Vancouver, Canada and became a subsidiary of Cowichan Resources. Cowichan continued with the groundwater monitoring required under PBR's Groundwater Quality Protection Permit (GWQPP). PBR-Cowichan continued with construction of a small (<3,000 TPD) agglomerated heap leach mine with re-usable heap pad, Merrill-Crowe (zinc powder) precipitation plant and dore' smelting plant. This facility operated for a brief period in the late summer and fall of 1989. Poor planning, lack of ore reserves and adequate financing resulted in PBR-Cowichan filing for Chapter 11 bankruptcy protection in the spring of 1990. Without capital, PBR-Cowichan failed to continue proper sampling and reporting to the ADEQ as required by their GWQPP. However, the last samples reported by PBR-Cowichan from TEI Well #2 indicated inorganic metals and cyanide were within GWQPP limits and nitrate was 11 ppm vs an allowable limit of 10ppm.

CURRENT ACTIVITY

In September of 1992 Excellon Resources under a Plan administered by the bankruptcy court took over the Contention area, under a new lease from TDC. Excellon Resources USA Inc. proposes to explore through their own effort or that of partners, the Contention Lease area from the surface to or just above the groundwater table (which stands approximately 500 feet below the surface) for the presence of a mineral ore body. If such an ore body is located, its tonnage, grade and metallurgical characteristics will be carefully measured to determine whether it can be economically mined. If the various studies show that an economically viable ore body is present, a mine and metallurgical plant will be designed and permitted. Mine construction will ensue. It is expected that the sequential exploration process will take about 2 years. If at any time during during the exploration process it is determined that chances for locating an ore body do not justify the risk, the exploration project will be abandoned and the lease turned back to the Tombstone Development Company.

At the current time, PBR-Cowichan (the Bankrupt) is in non-

compliance with their GWQPP, triggering the statutory requirement for an APP for either closure or operation. Tombstone Development Company as the owner of the land is willing to work toward bringing the property back into compliance with the GWQPP by re-initiating groundwater sampling of TEI Wells # 1,2, & 3, Tombstone City Well # 1 and PBR Well # 1. Further, they will establish with ADEQ, a Plan Of Action (POA) to define an evaluation program to determine compliance problems or lack of compliance problems and to work toward an APP to: a. close the Facility(ies) on the Contention Lease; or b. allow a mining operation of appropriate scope if Excellon Resources discovers a minable ore body. The purpose of this report is to define a POA to accomplish the above.

Currently, Excellon Resources is negotiating a joint venture agreement with USMX Inc. to start an exploration drilling program on a mineral target to the west of the Contention Open Pit in mid - January 1993. This exploration area is geologically separate (on the west side of the Contention - Tranquility Fault Zone) from the area of TEI Well #2 and the TEI, 71 Minerals Ltd. heap leach pads where cyanide contamination took place in 1985. USMX proposes to drill reverse circulation rotary holes at an angle of - 45 to -60 degrees with a length of 500 to 600 feet, and thus a vertical depth of less than 500 feet. The water table will not be intercepted. After completion the holes will be filled and capped according to Arizona Department of Water Resources (ADWR) regulations. Samples will be recovered from approximately 5 foot sample intervals, geologically logged and assayed. Some of these holes will be drilled through waste dump material, which will be sampled where possible, so the nature of the waste dump material can be determined.

PLAN OF ACTION (POA) TO DETERMINE COMPLIANCE

Priority One

- I. Test wells - TEI #s 1,2, & 3, PBR # 1 and Tombstone City Well # 1, ASAP and periodically thereafter.
 - A. Static water level and
 1. Determine groundwater flow direction.
 - B. EPA Safe Drinking Water Standards for Inorganics and metals, including mercury.
 - C. Total and weak acid dissociable (WAD) cyanide.
 - D. Nitrate
 - E. pH and conductivity will be taken at the well head.
 - F. Report Results

STATUS / SCHEDULE A team has been assembled and equipment is being gathered to perform this task. There is no power to any of the above wells except Tombstone City Well # 1, so power will have to be supplied by a portable generator.

After the static water level has been determined, each well will be pumped for 12 hours and a 1 liter water sample taken. This sample will be packed in ice and delivered, with Chain of Custody Record, to American Analytical Laboratories, 3441 E. Milber St., Tucson AZ, 85714, Phn. (602)889-5787. Their turn

000031

around time is approximately 10 days.

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2. Determine if Facility is in or out of compliance.
 - a. Characterization of Potential Discharge - Analysis of representative samples of Heap Leach, Waste Rock, & Tailings for :
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 2. Fluoride
 3. Total & weak acid dissociable cyanide
 4. EPA 1312 or Nevada Meteoric Water Mobility Test.
 5. ABA (acid - base accounting ie Acid Neutralization - Acid Generation.
 6. Gross alpha particle activity.

000032

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4. Apply BADCT (Best Available Demonstrated Control Technologies) where necessary.

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1. Evaluate results of exploration.

STATUS / SCHEDULE This evaluation will be ongoing. Exploration may be advanced enough to make a preliminary determination by mid - January 1994.

V. Apply for and begin work on the appropriate APP.

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Very truly yours;

James A. Briscoe,
President, JABA Inc.
RPG AZ & CA

000033

1993

From :

PHONE No. :

Jan. 04 1993 9:06AM P01

Gary A. Lindroos
P. O. Box 1011
Tombstone, Arizona 85638

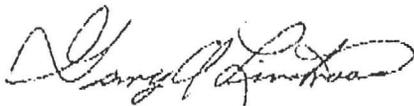
January 3, 1993

To: Mr. James Driscoe
5610 E. Sutler Lane
Tucson, Arizona 85712

Following are results of testing done on the TDC Wells on 2 January 1993 and 3 January 1993:

Sample Identification	Date	Time	pH	Conductivity	Depth to Water
TEI Well No. 1	1-2-93	0900	7.5	21	
TEI Well No. 2	1-2-93	0900	7.1	62	518 ft.
TEI Well No. 1	1-2-93	2100	7.7	22	
TEI Well No. 2	1-2-93	2100	7.3	59	517 ft.
TEI Well No. 3	1-3-93	0800	7.4	26	
TEI Well No. 3	1-3-93	2000	7.8	23	

Respectfully submitted,



Gary A. Lindroos

000034



LABORATORY ANALYSIS REPORT

Code: TOMDEV
 TOMBSTONE DEVELOPMENT CORP.
 MR. JAMES BRISCOE
 5610 E. SUTLER LANE
 TUCSON, AZ 85712-

SAMPLE INFORMATION
 Sample.: 013539-01
 Clnt Smp:
 Descript: WELL WATER
 Location: TEI WELL #1
 Samp D/T: 01/05/93 09:00
 Sampler.: G. LINDROOS
 Trans By: R. SMITH
 Recvd By: M. BOHARD
 Date Rcv: 01/05/93
 Date Rpt: 01/12/93

Analysis	MCL	Results	Date
6.3 ARSENIC		0.009	01/07/93
LE200.7 BERYLLIUM		<0.0001	01/11/93
CD200.7 CADMIUM		<0.0007	01/11/93
CR200.7 CHROMIUM		<0.003	01/11/93
* 4500 CN.I CYANIDE, AMENABLE/CHLORINATION		<0.007	01/08/93
335.2 CYANIDES, TOTAL		<0.007	01/08/93
PB200.7 LEAD		0.023	01/11/93
245.1 MERCURY		0.0004	01/07/93
353.2 NITRATE		2.06	01/12/93
270.3 SELENIUM		<0.005	01/08/93
AG200.7 SILVER		<0.001	01/11/93

* WEAK ACID DISSOCIABLE

Comments:

All units are MG/L unless otherwise specified.
 ND means analyte not detected.
 MDL is the Method Detection Limit.

Moran R
 Analyst(s)

000035



LABORATORY ANALYSIS REPORT

Code: TOMDEV
 TOMBSTONE DEVELOPMENT CORP.
 MR. JAMES BRISCOE
 5610 E. SUTLER LANE
 TUCSON, AZ 85712-

SAMPLE INFORMATION
 Sample..: 013539-02
 Clnt Smp:
 Descript: WELL WATER
 Location: TEI WELL #1
 Samp D/T: 01/05/93 21:00
 Sampler.: G. LINDROOS
 Trans By: R. SMITH
 Recvd By: M. BOHARD
 Date Rcv: 01/05/93
 Date Rpt: 01/12/93

Analysis	MCL	Results	Date
6.3 ARSENIC		0.009	01/07/93
DE200.7 BERYLLIUM		<0.0001	01/11/93
CD200.7 CADMIUM		<0.0007	01/11/93
CR200.7 CHROMIUM		0.004	01/11/93
* 4500 CN.I CYANIDE, AMENABLE/CHLORINATION		<0.007	01/08/93
335.2 CYANIDES, TOTAL		<0.007	01/08/93
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353.2 NITRATE		2.07	01/12/93
270.3 SELENIUM		<0.005	01/08/93
AG200.7 SILVER		<0.001	01/11/93

* WEAK ACID DISSOCIABLE

Comments:

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ND means analyte not detected.

DL is the Method Detection Limit.

Analyst(s)

000036



LABORATORY ANALYSIS REPORT

Code: TOMDEV
 TOMBSTONE DEVELOPMENT CORP.
 MR. JAMES BRISCOE
 5610 E. SUTLER LANE
 TUCSON, AZ 85712-

SAMPLE INFORMATION
 Sample...: 013539-03
 Clnt Smp:
 Descript: WELL WATER
 Location: TEI WELL #2
 Samp D/T: 01/05/93 09:00
 Sampler.: G. LINDROOS
 Trans By: R. SMITH
 Recvd By: M. BOHARD
 Date Rcv: 01/05/93
 Date Rpt: 01/12/93

Analysis	MCL	Results	Date
6.3 ARSENIC		<0.005	01/07/93
LE200.7 BERYLLIUM		<0.0001	01/11/93
CD200.7 CADMIUM		<0.0007	01/11/93
CR200.7 CHROMIUM		0.006	01/11/93
* 4500 CN.I CYANIDE, AMENABLE/CHLORINATION		0.008	01/08/93
335.2 CYANIDES, TOTAL		0.178	01/08/93
PB200.7 LEAD		<0.02	01/11/93
245.1 MERCURY		0.0032	01/07/93
353.2 NITRATE		79.4	01/12/93
270.3 SELENIUM		<0.005	01/08/93
AG200.7 SILVER		0.003	01/11/93

* WEAK ACID DISSOCIABLE

Comments:

All units are MG/L unless otherwise specified.
 ND means analyte not detected.
 MDL is the Method Detection Limit.

Morgan R

Analyst(s)

000037



LABORATORY ANALYSIS REPORT

Code: TOMDEV
 TOMBSTONE DEVELOPMENT CORP.
 MR. JAMES BRISCOE
 5610 E. SUTLER LANE
 TUCSON, AZ 85712-

SAMPLE INFORMATION
 Sample.: 013539-04
 Clnt Smp:
 Descript: WELL WATER
 Location: TEI WELL #2
 Samp D/T: 01/05/93 21:00
 Sampler.: G. LINDROOS
 Trans By: R. SMITH
 Recvd By: M. BOHARD
 Date Rcv: 01/05/93
 Date Rpt: 01/12/93

Analysis	MCL	Results	Date
6.3 ARSENIC		<0.005	01/07/93
LE200.7 BERYLLIUM		<0.0001	01/11/93
CD200.7 CADMIUM		<0.0007	01/11/93
CR200.7 CHROMIUM		0.003	01/11/93
* 4500 CN.I CYANIDE, AMENABLE/CHLORINATION		<0.007	01/08/93
335.2 CYANIDES, TOTAL		0.125	01/08/93
PB200.7 LEAD		<0.02	01/11/93
245.1 MERCURY		0.0016	01/07/93
353.2 NITRATE		64.6	01/12/93
270.3 SELENIUM		<0.005	01/08/93
AG200.7 SILVER		<0.001	01/11/93

* WEAK ACID DISSOCIABLE

Comments:

All units are MG/L unless otherwise specified.
 ND means analyte not detected.
 MDL is the Method Detection Limit.

MW *R*
 Analyst(s)

000038



LABORATORY ANALYSIS REPORT

Code: TOMDEV
 TOMBSTONE DEVELOPMENT CORP.
 MR. JAMES BRISCOE
 5610 E. SUTLER LANE
 TUCSON, AZ 85712-

SAMPLE INFORMATION
 Sample...: 013539-05
 Clnt Smp:
 Descript: WELL WATER
 Location: TEI WELL #3
 Samp D/T: 01/05/93 08:00
 Sampler.: G. LINDROOS
 Trans By: R. SMITH
 Recvd By: M. BOHARD
 Date Rcv: 01/05/93
 Date Rpt: 01/12/93

Analysis	MCL	Results	Date
As 0.3 ARSENIC		0.009	01/07/93
BeE200.7 BERYLLIUM		<0.0001	01/11/93
CD200.7 CADMIUM		<0.0007	01/11/93
CR200.7 CHROMIUM		0.005	01/11/93
* 4500 CN.I CYANIDE, AMENABLE/CHLORINATION		<0.007	01/08/93
335.2 CYANIDES, TOTAL		<0.007	01/08/93
PB200.7 LEAD		<0.02	01/11/93
245.1 MERCURY		<0.0002	01/07/93
353.2 NITRATE		13.6	01/12/93
270.3 SELENIUM		<0.005	01/08/93
AG200.7 SILVER		<0.001	01/11/93

* WEAK ACID DISSOCIABLE

Comments:

All units are MG/L unless otherwise specified.
 ND means analyte not detected.
 DL is the Method Detection Limit.

Analyst(s)

000039



LABORATORY ANALYSIS REPORT

Code: TOMDEV
 TOMBSTONE DEVELOPMENT CORP.
 MR. JAMES BRISCOE
 5610 E. SUTLER LANE
 TUCSON, AZ 85712-

SAMPLE INFORMATION
 Sample...: 013539-06
 Clnt Smp:
 Descript: WELL WATER
 Location: TEI WELL #3
 Samp D/T: 01/05/93 20:00
 Sampler.: G. LINDROOS
 Trans By: R. SMITH
 Recvd By: M. BOHARD
 Date Rcv: 01/05/93
 Date Rpt: 01/12/93

Analysis	MCL	Results	Date
5.3 ARSENIC		0.008	01/07/93
DE200.7 BERYLLIUM		<0.0001	01/11/93
CD200.7 CADMIUM		<0.0007	01/11/93
CR200.7 CHROMIUM		0.007	01/11/93
* 4500 CN.I CYANIDE, AMENABLE/CHLORINATION		<0.007	01/08/93
335.2 CYANIDES, TOTAL		<0.007	01/08/93
PB200.7 LEAD		<0.02	01/11/93
245.1 MERCURY		<0.0002	01/07/93
353.2 NITRATE		8.04	01/12/93
270.3 SELENIUM		<0.005	01/08/93
AG200.7 SILVER		<0.001	01/11/93

* WEAK ACID DISSOCIABLE

Comments:

All units are MG/L unless otherwise specified.
 ND means analyte not detected.
 MDL is the Method Detection Limit.

Analyst(s)

000040



JABA INC.
2100 N. Wilmot Rd. #218
Tucson, AZ 85712
(602) 885-9141
(FAX) 721-2768

January 21, 1993

Mr. Donald G. Bell
Water Pollution Compliance Officer
AZ Dept. Of Environmental Quality
Office Of Water Quality
3033 N. Central Avenue
Phoenix, AZ USA 85012

Dear Mr. Bell,

Re: Analytical results of the water samples taken from Tombstone Development Company Wells, TEI # 1, 2, & 3, Tombstone Mining District, Cochise Co., AZ.

Samples of the above referenced wells were taken by Mr. Gary Lindroos, Registered Assayer, AZ, on January 2 & 3, 1992. The samples were taken in appropriately prepared 1 liter bottles supplied by American Analytical Laboratories of Tucson. After collection they were packed in ice and then picked up by Mr. R. Smith and transported to Tucson, arriving on 1/05/93. All proper chain of custody papers have been kept on the samples.

Attempts to activate the pump on PBR Well # 1 were made over a week or so in late December 1992 without success. Either the pump has burned out or electrical shorts exist in the power line from the well head to the submersible pump. It appears that only pulling the string of pipe and the pump for repair would make it possible to reactivate this well.

The active wells were sampled in the following manner. Pumping was commenced and one sample taken after pumping for 15 minutes. The wells were then pumped for 12 hours and another sample taken. Both samples were then shipped for analysis as described above. The results on 6 pages are appended with this letter.

Examination of the results show that all pollutants including cyanide are within Numerical Aquifer Water Quality Standards (AWQS) for drinking water use defined as of 11/1/92 except for the following:

Mercury - well TEI #2 in sample # 1 was 0.0032 ppm or 0.0012 ppm above the MCL of 0.002 ppm. However in sample # 2 (after pumping for 12 hours) Hg was 0.0016 ppm or less than the 0.002 ppm MCL.
Nitrate - TEI# 2 showed 79.4 ppm in the 15 minute test and 64.6 ppm in the sample at the end of 12 hours. The MCL is 10 ppm.
TEI #3 showed 13.6 ppm for the 15 minute sample and 8.04 ppm or below the MCL for the sample taken at the end of 12 hrs.

000041

In TEI # 3 birds had apparently gained access to the well casing. It is likely that the high nitrate is due to bird guano. No such access for birds or animals was available in TEI # 2 so it is assumed the nitrate is from decomposed cyanide.

It is obvious from the substantial decrease of 14.8 ppm nitrate after pumping TEI # 2 for 12 hours, that continued pumping will quickly decrease the nitrate content below the MCL.

To mitigate the small amount of nitrate over the MCL in TEI # 2 we would propose the following: Pump TEI # 2 for 12 hours per day over the next 10 days. This intermittent pumping we think will impart a washing action in the ground water and act to "dislodge" any remaining nitrate and bring it to the surface. At the end of 10 days the well will be pumped for 48 hours. During 12 days of pumping, water samples will be taken every 12 hours and analyzed by Mr. Gary Lindroos on site to determine nitrate content using a Hach sampling kit. This will document the trend of nitrate content. At the end of the 48 hour pumping Gary Lindroos will take another sample using American Analytical Laboratories sampling bottles and analysis for the same element suite as the samples from Jan. 2 & 3, 1992 will be done. This should show definitively whether the nitrate level in TEI # 2 has been dissipated.

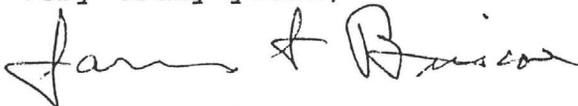
This program can start Saturday Jan. 23 and be completed with the formal well sample on the afternoon of Wed. Feb. 3, 1993. Results should be available by Monday Feb. 15, 1993.

To this time, only TEI #2 has water level measurements available. This well has a permanently installed water level measurement device. Measurements show that static water level was 518 feet. Conductivity and pH were taken with pocket meters as each water sample from each well was taken and data are shown on the accompanying report by Gary Lindroos.

For your interest and compairson purposes I am attaching analyses from TEI Well # 1 and 2 and Tombstone City Well # 1 taken 5/5/87.

We are still waiting data from the Tombstone City wells which we hope will be available next week - this will include static water levels. We will also be making arrangements to measure static water levels in wells TEI # 1 and # 3.

Very truly yours;



James A. Briscoe
DEB01/21/93

CC J. Niedfelt, A.D. MacKenzie, J.A. Knox

000042



LABORATORY ANALYSIS REPORT

Code: TOMDEV
 TOMBSTONE DEVELOPMENT CORP.
 MR. JAMES BRISCOE
 5610 E. SUTLER LANE
 TUCSON, AZ 85712-

SAMPLE INFORMATION
 Sample...: 013539-01
 Clnt Smp:
 Descript: WELL WATER
 Location: TEI WELL #1
 Samp D/T: 01/05/93 09:00
 Sampler.: G. LINDROOS
 Trans By: R. SMITH
 Recvd By: M. BOHARD
 Date Rcv: 01/05/93
 Date Rpt: 01/12/93

Analysis	MCL	Results	Date
6.3 ARSENIC		0.009	01/07/93
LE200.7 BERYLLIUM		<0.0001	01/11/93
CD200.7 CADMIUM		<0.0007	01/11/93
CR200.7 CHROMIUM		<0.003	01/11/93
* 4500 CN.I CYANIDE, AMENABLE/CHLORINATION		<0.007	01/08/93
335.2 CYANIDES, TOTAL		<0.007	01/08/93
PB200.7 LEAD		0.023	01/11/93
245.1 MERCURY		0.0004	01/07/93
353.2 NITRATE		2.06	01/12/93
270.3 SELENIUM		<0.005	01/08/93
AG200.7 SILVER		<0.001	01/11/93

* WEAK ACID DISSOCIABLE

Comments:

All units are MG/L unless otherwise specified.
 ND means analyte not detected.
 MDL is the Method Detection Limit.

M. Bohard *R*
 Analyst(s)

000043



LABORATORY ANALYSIS REPORT

Code: TOMDEV
 TOMBSTONE DEVELOPMENT CORP.
 MR. JAMES BRISCOE
 5610 E. SUTLER LANE
 TUCSON, AZ 85712-

SAMPLE INFORMATION
 Sample.: 013539-02
 Clnt Smp:
 Descript: WELL WATER
 Location: TEI WELL #1
 Samp D/T: 01/05/93 21:00
 Sampler.: G. LINDROOS
 Trans By: R. SMITH
 Recvd By: M. BOHARD
 Date Rcv: 01/05/93
 Date Rpt: 01/12/93

Analysis	MCL	Results	Date
6.3 ARSENIC		0.009	01/07/93
LE200.7 BERYLLIUM		<0.0001	01/11/93
CD200.7 CADMIUM		<0.0007	01/11/93
CR200.7 CHROMIUM		0.004	01/11/93
* 4500 CN.I CYANIDE, AMENABLE/CHLORINATION		<0.007	01/08/93
335.2 CYANIDES, TOTAL		<0.007	01/08/93
PB200.7 LEAD		<0.02	01/11/93
245.1 MERCURY		<0.0002	01/07/93
353.2 NITRATE		2.07	01/12/93
270.3 SELENIUM		<0.005	01/08/93
AG200.7 SILVER		<0.001	01/11/93

* WEAK ACID DISSOCIABLE

Comments:

All units are MG/L unless otherwise specified.
 ND means analyte not detected.
 DL is the Method Detection Limit.

Man *R*

Analyst(s)

000044



LABORATORY ANALYSIS REPORT

Code: TOMDEV
 TOMBSTONE DEVELOPMENT CORP.
 MR. JAMES BRISCOE
 5610 E. SUTLER LANE
 TUCSON, AZ 85712-

SAMPLE INFORMATION
 Sample...: 013539-03
 Clnt Smp:
 Descript: WELL WATER
 Location: TEI WELL #2
 Samp D/T: 01/05/93 09:00
 Sampler.: G. LINDROOS
 Trans By: R. SMITH
 Recvd By: M. BOHARD
 Date Rcv: 01/05/93
 Date Rpt: 01/12/93

Analysis	MCL	Results	Date
6.3 ARSENIC		<0.005	01/07/93
LE200.7 BERYLLIUM		<0.0001	01/11/93
CD200.7 CADMIUM		<0.0007	01/11/93
CR200.7 CHROMIUM		0.006	01/11/93
* 4500 CN.I CYANIDE, AMENABLE/CHLORINATION		0.008	01/08/93
335.2 CYANIDES, TOTAL		0.178	01/08/93
PB200.7 LEAD		<0.02	01/11/93
245.1 MERCURY		0.0032	01/07/93
353.2 NITRATE		79.4	01/12/93
270.3 SELENIUM		<0.005	01/08/93
AG200.7 SILVER		0.003	01/11/93

* WEAK ACID DISSOCIABLE

Comments:

All units are MG/L unless otherwise specified.
 ND means analyte not detected.
 IDL is the Method Detection Limit.

Analyst(s)

000045



LABORATORY ANALYSIS REPORT

Code: TOMDEV
 TOMBSTONE DEVELOPMENT CORP.
 MR. JAMES BRISCOE
 5610 E. SUTLER LANE
 TUCSON, AZ 85712-

SAMPLE INFORMATION
 Sample.: 013539-04
 Clnt Smp:
 Descript: WELL WATER
 Location: TEI WELL #2
 Samp D/T: 01/05/93 21:00
 Sampler.: G. LINDROOS
 Trans By: R. SMITH
 Recvd By: M. BOHARD
 Date Rcv: 01/05/93
 Date Rpt: 01/12/93

Analysis	MCL	Results	Date
6.3 ARSENIC		<0.005	01/07/93
LE200.7 BERYLLIUM		<0.0001	01/11/93
CD200.7 CADMIUM		<0.0007	01/11/93
CR200.7 CHROMIUM		0.003	01/11/93
* 4500 CN.I CYANIDE, AMENABLE/CHLORINATION		<0.007	01/08/93
335.2 CYANIDES, TOTAL		0.125	01/08/93
PB200.7 LEAD		<0.02	01/11/93
245.1 MERCURY		0.0016	01/07/93
353.2 NITRATE		64.6	01/12/93
270.3 SELENIUM		<0.005	01/08/93
AG200.7 SILVER		<0.001	01/11/93

* WEAK ACID DISSOCIABLE

Comments:

All units are MG/L unless otherwise specified.

ND means analyte not detected.

MDL is the Method Detection Limit.

Analyst(s)

000046



LABORATORY ANALYSIS REPORT

Code: TOMDEV
 TOMBSTONE DEVELOPMENT CORP.
 MR. JAMES BRISCOE
 5610 E. SUTLER LANE
 TUCSON, AZ 85712-

SAMPLE INFORMATION
 Sample.: 013539-05
 Clnt Smp:
 Descript: WELL WATER
 Location: TEI WELL #3
 Samp D/T: 01/05/93 08:00
 Sampler.: G. LINDROOS
 Trans By: R. SMITH
 Recvd By: M. BOHARD
 Date Rcv: 01/05/93
 Date Rpt: 01/12/93

Analysis	MCL	Results	Date
6.3 ARSENIC		0.009	01/07/93
DE200.7 BERYLLIUM		<0.0001	01/11/93
CD200.7 CADMIUM		<0.0007	01/11/93
CR200.7 CHROMIUM		0.005	01/11/93
* 4500 CN.I CYANIDE, AMENABLE/CHLORINATION		<0.007	01/08/93
335.2 CYANIDES, TOTAL		<0.007	01/08/93
PB200.7 LEAD		<0.02	01/11/93
245.1 MERCURY		<0.0002	01/07/93
353.2 NITRATE		13.6	01/12/93
270.3 SELENIUM		<0.005	01/08/93
AG200.7 SILVER		<0.001	01/11/93

* WEAK ACID DISSOCIABLE

Comments:

All units are MG/L unless otherwise specified.
 ND means analyte not detected.
 DL is the Method Detection Limit.

Analyst(s)

000047



LABORATORY ANALYSIS REPORT

Code: TOMDEV
 TOMBSTONE DEVELOPMENT CORP.
 MR. JAMES BRISCOE
 5610 E. SUTLER LANE
 TUCSON, AZ 85712-

SAMPLE INFORMATION
 Sample...: 013539-06
 Clnt Smp:
 Descript: WELL WATER
 Location: TEI WELL #3
 Samp D/T: 01/05/93 20:00
 Sampler.: G. LINDROOS
 Trans By: R. SMITH
 Recvd By: M. BOHARD
 Date Rcv: 01/05/93
 Date Rpt: 01/12/93

Analysis	MCL	Results	Date
6.3 ARSENIC		0.008	01/07/93
LE200.7 BERYLLIUM		<0.0001	01/11/93
CD200.7 CADMIUM		<0.0007	01/11/93
CR200.7 CHROMIUM		0.007	01/11/93
* 4500 CN.I CYANIDE, AMENABLE/CHLORINATION		<0.007	01/08/93
335.2 CYANIDES, TOTAL		<0.007	01/08/93
PB200.7 LEAD		<0.02	01/11/93
245.1 MERCURY		<0.0002	01/07/93
353.2 NITRATE		8.04	01/12/93
270.3 SELENIUM		<0.005	01/08/93
AG200.7 SILVER		<0.001	01/11/93

* WEAK ACID DISSOCIABLE

Comments:

All units are MG/L unless otherwise specified.
 ND means analyte not detected.
 DL is the Method Detection Limit.

Analyst(s)

000048

Gary A. Lindroos
P. O. Box 1011
Tombstone, Arizona 85638

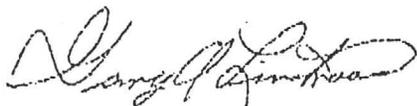
January 3, 1993

To: Mr. James Briscoe
5610 E. Suttler Lane
Tucson, Arizona 85712

Following are results of testing done on the TDC Wells on 2 January 1993 and 3 January 1993:

Sample Identification	Date	Time	pH	Conductivity	Depth to Water
TEI Well No. 1	1-2-93	0900	7.5	21	
TEI Well No. 2	1-2-93	0900	7.1	62	518 ft.
TEI Well No. 1	1-2-93	2100	7.7	22	
TEI Well No. 2	1-2-93	2100	7.3	59	517 ft.
TEI Well No. 3	1-3-93	0800	7.4	26	
TEI Well No. 3	1-3-93	2000	7.8	23	

Respectfully submitted,



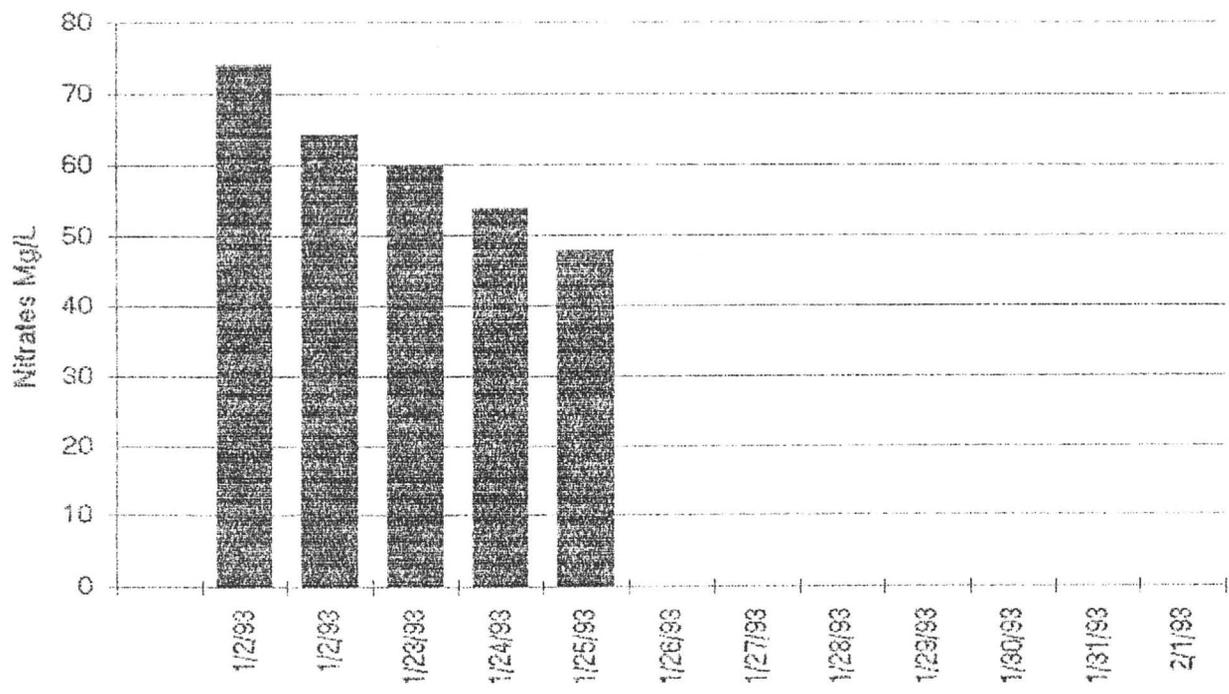
Gary A. Lindroos

000049

1/26/93

Tombstone Development Corporation

TEI Well No. 2



000054



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Fife Symington, Governor Edward Z. Fox, Director

CERTIFIED MAIL
Return Receipt Requested

January 21, 1993
REF#: WP-93-1092

Tombstone Development Corporation
Mr. Jerry Niedfeldt
P.O. Box 1445
Grand Island, Nebraska 68803

RE: Tombstone Development Corporation; Contention Mine, Processing, and Milling Site,
Tombstone, Cochise County, Arizona; Remediation of the Compliance Problems and the
Environmental Permitting of this Site

Dear Participants:

TECHNICAL ASSISTANCE MEETING SUMMARY

A meeting was held on Tuesday December 8, 1992, at 1:30 pm, in the offices of the Arizona Department of Environmental Quality at 3033 North Central Avenue. During this Technical Assistance Meeting the following items were agreed upon:

1. Jim Briscoe, of Jabba Inc. (the landowner's and the lessee's consultant), will develop a preliminary compliance plan which will identify of the compliance problems (or the absence of a compliance problem) and any remediation steps that will be required. Included in these plans will be the sampling of the wells on site and off site to determine compliance with the Safe Drinking Water Standards for Inorganics. **The plan will be submitted by January 30, 1993. The results of the testing will be submitted as the data becomes available.**
2. Douglas Mackenzie, of Valdez Gold Inc. (representing the present Lessee), will develop and submit, in conjunction with US Mining and Exploration (the company that will accomplish the drilling and testing), a general drilling plan with map. This plan shall indicate the precautions that the driller will use to prevent any pollution from the previous cyanide spill from the past pregnant solution pond, and the general area that the sampling will be conducted in. **This plan will be submitted by January 30, 1993.**
3. Roger Kennett and Dave Anderson will review the available ADEQ documents and provide a list of Departmental concerns for this site based on past inspections and submittals. An inspection of the site with a representative of the Southern Regional Office and any of the other principles that wish to be there, shall be planned and scheduled for a future time. **The list and the schedule will be submitted by February 20, 1993.**

000055

Mr. Niedfeldt
January 21, 1993
Page 2

4. Beginning with February 15, 1993, and on the 15th of every month thereafter, until the site is permitted, Tombstone Development company shall have caused a report to be submitted explaining the progress made on this site toward the remediation of the compliance problems and the permitting of the premises. This may be done through their designated consultant or by the owners themselves.

5. All items shall be submitted through:

Arizona Department Of Environmental Quality
Don Bell, Suite 205
P.O. Box 600
Phoenix, Arizona 85001-0600
Telephone: (602) 207-4613
Fax: (602) 207-4634

Attached is a list of the persons, including their addresses, that need to receive copies of each of these transactions. Please send these and indicate that these people have been copied in your transmittal. This will save a considerable amount of time.

Please do not hesitate to call myself or any of the principles involved.

Sincerely,



Donald G. Bell
Compliance Officer
Water Pollution Compliance Unit

DB:ps

cc: see attached

000056

Mr. Niedfeldt
January 21, 1993
Page 3

DISTRIBUTION LIST

Peggy Guichard-Watters, R. S.
Acting Manager, OWQ/Compliance
Arizona Department of Environmental Quality
P.O. Box 600
Phoenix, AZ 85001-0600
Phone: (602) 207-4617
Fax: (602) 207-4634

Roger Kennett
Aquifer Protection Permit Section/Mining
Arizona Department of Environmental Quality
P.O. Box 600
Phoenix, AZ 85001-0600
Phone: (602) 207-4696
Fax: (602) 207-4674

Dave Anderson
Aquifer Protection Permit Section-Hydrology
Arizona Department of Environmental Quality
P.O. Box 600
Phoenix, AZ 85001-0600
Phone: (602) 207-4669
Fax: (602) 207-4674

Tombstone Development Corporation
Mr. Jerry Niedfeldt
P. O. Box 1445
Grand Island, Nebraska 68803
Phone: (308) 382-7480
Fax: (308) 382-7482

Jim Briscoe, Registered Geologist
Jabba Inc.
2100 N. Wilmot Road
Tucson, AZ 85712
Phone: (602) 721-1375
Fax: (602) 298-6688

000057

Mr. Niedfeldt
January 21, 1993
Page 4

Douglas Mackenzie, P.E.
Vice President
Valdez Gold Inc.
Suite 200, 20 Adelaide St. E
Toronto, Ontario M5C 2T6
Phone: (416) 867-1100
Fax: (416) 867-1109

Jay Skardon
Assistant Attorney General of Arizona
1275 W. Washington
Phoenix, AZ 85007
Phone: (602) 542-1610

Donald Bell
Water Pollution Compliance Unit, Suite 205
Arizona Department of Environmental Quality
P.O. Box 600
Phoenix, AZ 85001-0600
Phone: (602) 207-4613
Fax: (602) 207-4634 (or 2218)

000058

USMX

January 29, 1993

Via FAX: 602-885-9141

James A. Brisco
JABA, Inc.
2100 N. Wilmot Rd., #218
Tucson, AZ 85712

RE: Tombstone Mining District, Cochise County, Arizona

Dear Jim:

Forwarded is a Notice of Nonresponsibility executed by USMX's drilling contractor which I understand you will provide to Mr. Niedfelt.

Also, forwarded is USMX's approved notice of intent from the Department of Water Resources. I understand that you will file a new notice in the name of Tombstone Development Corporation to cover the monitoring wells since they will be located in a different subdivision and will be completed as monitoring wells.

Sincerely,

USMX, INC.

Robert F. Hemming
Robert F. Hemming
Land Manager

RFH575/cap

NOTICE OF NONRESPONSIBILITY FOR LABOR OR MATERIALS FURNISHED TOMBSTONE PROJECT

Pursuant to Arizona Statutes, notice is hereby given that Tombstone Development Company, an Arizona Corporation (TDC) is the owner of the patented mining claims described in Exhibit "A" attached hereto with all improvements thereon. Such mining claims are now in the possession of and are being operated by USMX, Inc., a Delaware corporation, pursuant to Mineral Leases between TDC and Excellon Resources USA, Inc., an Arizona corporation (hereinafter referred to as "Lessee"), executed August 24, 1992 and January 1, 1993.

TDC is not in possession of or operating such mining claims, or any part thereof, and does not intend to work or operate such mining claims, or any part thereof, or purchase any supplies or materials therefore, during the term of the instruments described above. TDC will not be responsible for any labor performed on such mining claims, or for any supplies, services or materials furnished therefore, during such period. USMX, Inc. and/or Excellon Resources USA, Inc. shall indemnify and hold TDC harmless of and from any and all claims, demands or liabilities arising out of or in connection with the operations or activities of Lessee or Operator, hereunder. Lessee and Operator assumes full and sole responsibility for the operation and direction of the work done under the Mineral Leases on such mining claims, and no employee or agent furnished by Lessee or Operator shall under any circumstances be deemed an employee or agent of TDC.

Such mining claims are situated in Sections 11, 12, 13 and 14, T20S, R22E, G. & S.R.M., Cochise County, Arizona.

By execution hereof the Contractor agrees to hold harmless TDC and only to seek recourse against Lessee or Operator for non-payment of any and all funds for services provided by Contractor, and not against TDC, or its property shown by Exhibit A.

CONTRACTOR

Drilling Services Company

OPERATOR

USMX, INC.

By: Mark J. Schavenbroich
Mark J. Schavenbroich
District Manager

By: James A. Knox
James A. Knox, President

Dated: 1/15/93

Dated: 1/14/93

STATE OF Arizona)
)ss.
County of Maricopa)

On this 15th day of January, 1993, before me, Christine B. Skaggs, the undersigned Notary Public, personally appeared Mark T. Scharenbroich, personally know to me or proved to me on the basis of satisfactory evidence to be the person(s) who executed the within instrument as District Manager on behalf of the corporation therein named, and acknowledged to me that the corporation executed it.



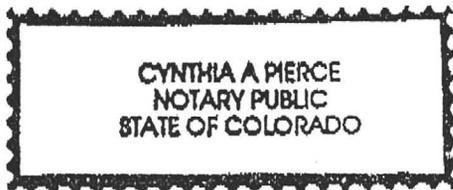
WITNESS my hand and official seal.

Christine B. Skaggs
Notary Public

My commission expires: 5/5/95

STATE OF COLORADO)
)ss.
County of Jefferson)

On this 14th day of January, 1993, before me, Cynthia A. Pierce, the undersigned Notary Public, personally appeared James A. Knox, personally know to me or proved to me on the basis of satisfactory evidence to be the person(s) who executed the within instrument as President on behalf of the corporation therein named, and acknowledged to me that the corporation executed it.



WITNESS my hand and official seal.

Cynthia A. Pierce
Notary Public

My commission expires: 8/19/93

ARIZONA DEPARTMENT OF WATER RESOURCES

15 South 15th Avenue, Phoenix, Arizona 85007
 Telephone (602) 542-1553
 Fax (602) 256-0506



FIFE SYMINGTON
 Governor

ELIZABETH ANN RIEKE
 Director

1/5/93

Re: Registration No. 55-537768
 File No. D(20-22)11d

Dear Well Owner:

Enclosed for your records is an annotated copy of the Notice of Intention to Drill a well which was recently filed with this Department. This is returned to you as evidence of compliance with A.R.S. §45-596. Your designated driller has been mailed, separately, a Well Drilling Card which he is required to have in his possession before commencing to drill the well.

Since this well is being drilled as a monitor well, or for cathodic protection, grounding, geotechnical or piezometer purposes, our standard driller report form is also being furnished to the driller which he is required to complete and return to the Department within 30 days after the completion of drilling. A Completion Report form is being furnished for monitor wells where pump equipment is authorized to be installed as part of this packet so that you may submit the report within 30 days after the installation of the pumping equipment on a monitor well as required by A.R.S. §45-600.

This well is authorized to be drilled for mineral exploration purposes. Because of this, no pump equipment may be installed. A Project Completion Report is being furnished you for each hole to be drilled. You are required to submit this Project Completion Report within 30 days after completion of drilling. Frequently, exploration wells are abandoned shortly after drilling. Therefore, pursuant to R12-15-816.B, a Notice of Intent to Abandon a Well is being furnished.

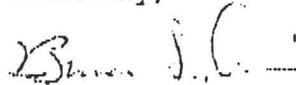
The Department of Water Resources requires you to obtain written permission before proceeding with the drilling in the event that you determine it necessary to change the location of the proposed well. A properly signed amended Drilling Card must be in the possession of the driller before drilling commences at a different location than originally authorized.

If in the course of drilling a new well, it is determined that the well needs to be abandoned, then a Well Abandonment Completion Report must be submitted per R12-15-816.F.

000062

For your future use, a Change of Well Information form is enclosed for your convenience. Per A.R.S. §45-593, the person to whom a well is registered shall notify this Department of a change of ownership of the well and/or information pertaining to the physical characteristics of the well, in order to keep the well registration file current and accurate.

Sincerely,



Bruce S. Davis
Chief, Operations Division

BSD:dl
Enclosures
DWR-55-50-9/90(Revised)

000063

REGISTRATION DIVISION
15 SOUTH 15TH AVENUE
PHOENIX, ARIZONA 85007

CHANGE OF WELL INFORMATION

Well Registration No. 55- 537768 File No. _____
(location)

I/We request the following well information be changed: _____

Date: _____ Signature of Current Well Owner _____

(DO NOT CUT THIS FORM IN HALF)

STATEMENT OF CHANGE OF WELL OWNERSHIP

I, _____, state that I am (no longer) the (new)
(please print)
owner of the well described below:

$\frac{1}{2}$ $\frac{1}{4}$ $\frac{1}{8}$; Section _____ Township _____ Range _____
10 acre 40 acre 160 acre

Well Registration No. 55- _____ File No. _____
(location)

PRINT Previous Owner's Name _____

PRINT New Owner's Name _____

Address _____

Address _____

City _____ State _____ Zip _____

City _____ State _____ Zip _____

Dated: _____ Signature of New Owner _____

NOTE: A.R.S. §45-593.C. requires that the Department be notified of change of well ownership and that the well owner is required to keep the Department's Well Registration records current and accurate. Well data and ownership changes must be submitted within thirty (30) days after changes take place.

SAVE THIS FORM TO REPORT FUTURE CHANGES IN OWNERSHIP, CHANGES IN ADDRESS, OR CHANGE IN WELL DATA SUCH AS PUMP CAPACITY, CORRECTION OF LEGAL DESCRIPTION, CHANGE OF WELL DRILLER AND AMENDING INFORMATION PREVIOUSLY FILED.

FILING FEE \$10.00

FILING FEE \$10.00

NOTICE OF INTENTION TO DRILL AND ABANDON EXPLORATION WELL(S)

Section 45-596, Arizona Revised Statutes, and Rule 12-15-817 provide: Prior to drilling one or more exploration wells, the well owner, or exploration firm shall file a Notice of Intention to Drill on a form provided by the Department.

WELL/LAND LOCATION

1. Township 20 NWS Range 22 EAW Section 11

In the case of a single well, list 10-acre subdivision.

1/4 1/4 SE 1/4
10 ACRE 40 ACRE 160 ACRE

2. County Cochise

3. USMX, INC.
Applicant Name

141 UNION BLVD., #100
Address

LAKWOOD, CO 80228
City State Zip

Dennis L. Lance
Name of Contact Person

Phone 303-985-4665

5. Owner of Well:
USMX, INC.
Name

141 UNION BLVD., #100
Address

LAKWOOD, CO 80228
City State Zip

6. Purpose of well(s) drilled pursuant to this Notice:
Mineral Exploration XX
Geotechnical _____
Cathodic Protection _____
Grounding _____

7. Number of wells 30
(See Condition 4 on reverse side)

8. Owner of Land of wellsite:
Tombstone Development Co.
Name

P.O. Box 1445
Address

Grand Island NE 68802
City State Zip

9. DESCRIPTION OF THE WELL:
Diameter 5.25 inches
Depth < 500 feet
Type of casing. If none, state:

None

10. Construction will start
January 6, 1993
Month Day Year

11. Drilling Firm:
Drilling Services Co.
Name

12030 E. Riggs Road
Address

Chandler, AZ 85249
City State Zip

52
DWR License Number

071734-004
ROC License Category

12. Period well will remain in use:
n/a months

DO NOT WRITE IN THIS SPACE
OFFICE RECORD
File No. D(20-22)11D
Filed 12-28-92 By ak
Input _____ By _____
DUPLICATE
Mailed 1-5-93 By ak
Registration 55- 537764
AMA/INA _____
W/S 1/1 S/B _____

13. Proposed method of abandonment of well(s) after project is completed: Abandoned in accordance with R 12-15-816. The uncased holes will be filled with cement grout from top 2 to 20 depth in uncased holes. The upper two feet will be backfilled.

14. Is the proposed wellsite within 100 feet of a septic tank system, sewage disposal area, landfill, hazardous waste facility or storage area of hazardous materials or a petroleum storage area and tanks? Yes _____ No XX

GENERAL INSTRUCTIONS

- 1. Fill out this form in DUPLICATE and send WITH \$10.00 FEE to 15 South 15th Avenue, Phoenix, AZ 85007.
- 2. For specific instructions, limitations and conditions, see the reverse side of this form.

I state that this Notice is filed in compliance with Rule A.A.C. R12-15-809 and R12-15-816(F), and is complete and correct to the best of my knowledge and belief and that I understand the conditions set forth on the reverse side of this form.

Date December 23, 1992

Dennis L. Lance
Signature of Applicant/Owner

000065

CONDITIONS

1. Construction and abandonment standards for all wells shall be in accordance with A.A.C. Rules R12-15-811 and Rules R12-15-816.
2. Drilling of well(s) shall be completed within one (1) year after the date of Notice.
3. Mineral exploration, geotechnical, cathodic protection or grounding holes of 100 feet of depth or less do not apply to these provisions and do not require filing. However, if water is encountered during the drilling of these well(s), then the well(s) must be properly abandoned in accordance with Condition 1 above.
4. More than one well may be drilled under a single notice for mineral exploration and geotechnical wells so long as they are located within a single section.
5. A Project Completion Report and WELL ABANDONMENT COMPLETION REPORT must be filed for each mineral exploration hole within thirty (30) days of completion of drilling. A Well Driller Report for each hole drilled, must be filed by the driller within thirty (30) days of completion of drilling for geotechnical, cathodic protection and grounding.
6. The location of mineral exploration and geotechnical wells may be limited to the section, township and range. However, a complete legal description may be provided at the option of the well owner.
7. Pump equipment may not be installed on wells drilled for mineral exploration, geotechnical, cathodic protection or grounding purposes.
8. Special construction standards required pursuant to R12-15-821: _____

9. To abandon a well in the course of drilling, the drilling contractor shall not remove the drilling rig from the well site, otherwise, a Notice of Intent to Abandon a Well must be filed prior to abandonment, and abandonment shall not commence until Department authority has been issued or, if during the course of drilling a well the Driller or owner elects to discontinue drilling and proceed with the abandonment of the well. The filing of a Well Abandonment Completion Report shall be filed within 30 days of abandonment, in accordance with R12-15-816.F.

000066

ARIZONA DEPARTMENT OF WATER RESOURCES

15 South 15th Avenue
Phoenix, Arizona 85007

PROJECT COMPLETION REPORT FOR MINERAL EXPLORATION DRILLING

This report must be prepared by the owner in all detail for each hole drilled and filed with the Department within 30 days following completion of the well drilling project.

1. Owner Name: _____

Address: _____
Street City State Zip

2. Lessee or Operator Name: _____

Address: _____
Street City State Zip

3. Driller Name: _____

Address: _____
Street City State Zip

4. Location: _____ N/S _____ E/W _____ 1/4 _____ 1/4 _____ 1/4
Township Range Section 10-Acre 40-Acre 160-Acre

WELL REGISTRATION NO. 55- _____ (REQUIRED)

DESCRIPTION OF WELL

5. Type of Casing (if installed): _____

6. Abandonment method and material used if abandoned: _____

Was well abandoned in the course of drilling pursuant to R12-15-816, F.? Yes _____ No _____

7. Date of period drilled: From: _____ To: _____

LOG OF WELL

Unconsolidated Formation

Consolidated Formation
Depth to water in feet below land surface: _____
(if encountered or detected)

I state that this report is filed in compliance with A.R.S. §45-600 and is complete and correct to the best of my knowledge and belief.

DO NOT WRITE IN THIS SPACE OFFICE RECORD	
Registration No.	55-537768
Received _____	By _____
Entered _____	By _____
File No.	D(20-22)11d

Owner/Lessee's Signature _____ Date _____

000067

~ 2/13/93

NOTICE OF INTENTION TO DRILL MONITOR/PIEZOMETER WELL

Section § 45-596, Arizona Revised Statutes provide: Prior to drilling a monitor or piezometer well, a Notice of Intention to Drill shall be filed with the Department on a prescribed form.

1. WELL LOCATION:

T. 205 N/S | R. 225 E/W | 12
Township | Range | Section

10 Acre Subdivision

1/4 NW 1/4 SW 1/4
10 ACRE | 40 ACRE | 160 ACRE

2. Position location of the well on the land:

Latitude 31 0 42.23 "

Longitude 110 0 03.26 "

3. County: Cochise

4. Owner of the land of wellsite:

Tombstone Development Co.
Name
P.O. Box 1445
Address
Grand Island NB 68802
City State Zip

5. Lessee of the land of wellsite:

Excaltion USA Inc
Name
Suite 200-20 Adelaide St E
Address
TORONTO ON Canada M5C
City State Zip 576

6. Owner of well:

Tombstone Development Co.
Name
P.O. Box 1445
Address
Grand Island, NB 68805
City State Zip

7. Consulting Firm: JABA INC.

Contact Person: JIM BRISCOE

Phone: (602) 721-1375

8. Purpose of well drilled pursuant to this notice

Monitor

Piezometer

9. If for deepening or modifying, Well Registration Number

55- _____

10. Construction will start:

Feb. 22 93
Month Day Year

11. Period well will remain in

use 5 Months/Years

12. For monitoring wells, is pump equipment to be installed?

Yes No

(a) If yes, design pump capacity _____

(b) What use will be made of the water testing only

13. Drilling firm:

Lane Environmental
Name
9002 S. Hardy Dr. SUCS. INC
Address
Tempe AZ 85284
City State Zip

DWR License No. 473

A-04
ROC Category

14. Will this proposed well pump Colorado River water? Yes No

15. Is the proposed wellsite within 100 feet of a septic tank system, sewage disposal area, landfill, hazardous waste facility, storage area of hazardous material or petroleum storage areas and tanks?

Yes No

DO NOT WRITE IN THIS SPACE
OFFICE RECORD
File No. _____
Filed _____ By _____
Input _____ By _____
DUPLICATE
Mailed _____ By _____
Registration 55- _____
AMA/INA _____
W/S _____ S/B _____

16. Proposed method of abandonment of well after project is completed: bentonite pellets from bottom to 50 feet above water level, then cuttings, then 3' concrete plug to surface

17. Is this well to monitor existing contamination? Potential contamination Please explain: determine whether or not Nitrate exists in the ground water at the well site

- 1. Fill out this form in DUPLICATE and send WITH \$10.00 FEE to 15 South 15th Avenue, Phoenix, AZ 85007.
- 2. For specific instructions, limitations and conditions, see the reverse side of this form.
- 3. Must be signed by land owner or lessee.
- 4. Section §45-596(D), provides that the Director shall determine that all information required on form has been submitted. If not, the person filing will be notified and the drilling, deepening, or modification of the well may not proceed.

I state that Notice is filed in compliance with Section § 45-596 and is complete and correct to the best of my knowledge and belief and that I understand the conditions set forth on the reverse side of this form.

000068

Date

Signature of Land Owner or Lessee

3. If construction plans have been coordinated with Arizona Department of Environmental Quality, who is the agency contact? Don Bell &

If construction plans have been coordinated with Arizona Department of Water Resources, Hydrology/Water Quality Division, who is the division contact? Mike Ball, David Anderson

19. WELL CONSTRUCTION PLAN

a) Drilling method (mud rotary, hollow-stem auger, etc.) air rotary

b) Borehole diameters: NOMINAL 10 inches from 0 feet to 20 feet.
NOMINAL 16 inches from 20 feet to 600' feet.

c) Casing materials (PVC, steel, hollow-stem auger, etc.)
material Steel diameter 8" inches from 0 feet to 10 feet
material _____ diameter _____ inches from _____ feet to _____ feet

d) Method of sealing at reductions NONE

e) Annular seal materials (cement, grout, etc.); method of placement (tremied, circulated)
material _____ method _____ from _____ feet to _____ feet
material _____ method _____ from _____ feet to _____ feet

f) Filter packs (state material):
material _____ from _____ feet to _____ feet
material _____ from _____ feet to _____ feet

g) Perforations or screen specifications:
type _____ from _____ feet to _____ feet
type _____ from _____ feet to _____ feet

h) Method of well development (bail, air lift, surge) _____

i) Will surface or conductor casing extend above grade: Yes No 2'

20. Include detailed construction diagram showing expected water depth in feet below land surface, and details of vault, if specified.

CONDITIONS

- I. Construction and abandonment standards for all wells shall be in accordance with A.A.C. R12-15-811 and R12-15-816.
- II. Drilling of the well shall be completed within one (1) year after the date of Notice.
- III. A Well Driller Report, is required within 30 days of completion of drilling. A completion Report, is required to be filed with the Department within 30 days after installation of pump equipment for monitor wells.
- IV. Pump equipment may not be installed on a well drilled for piezometer purposes. If a monitor well is pumped, pumping is limited to the maximum amount required for monitor purposes, but in no case may exceed 35 gallons per minute and an annual volume of 10 acre feet total.
- V. A.A.C. Rule R12-15-811.H.2, requires that: "A monitor well shall be identified as such on the vault cover or at the top of the steel casing. Identification information will include well registration number."
- VI. If the proposed well is located near the Colorado River and if the proposed well may pump Colorado River Water, proof must be submitted with this notice that the applicant has the legal right to use Colorado River Water. Alternately, evidence needs to be submitted that supports the contention that Colorado River water will not be withdrawn by the well. Persons near the Colorado River may wish to contact the Colorado River Management Division, Department of Water Resources at (602) 542-1960 to determine those Townships and Ranges which will be affected by these requirements or with questions regarding the proof of right.
- VII. Special construction standards required pursuant to A.A.C. Rule R12-15-821: _____

FILING FEE \$10.00

FILING FEE \$10.00

NOTICE OF INTENTION TO DRILL MONITOR/PIEZOMETER WELL

Section § 45-596, Arizona Revised Statutes provide: Prior to drilling a monitor or piezometer well, a Notice of Intention to Drill shall be filed with the Department on a prescribed form.

1. WELL LOCATION:
T. 20S N/S | R. 22E E/W | 1A
Township | Range | Section
10 Acre Subdivision
SE 1/4 SE 1/4 SE 1/4
10 ACRE 40 ACRE 160 ACRE

2. Position location of the well on the land:
Latitude 31 0 42.23 "
Longitude 110 0 03.26 "
3. County: Cochise

4. Owner of the land of wellsite:
Tombstone Development Co.
Name
P.O. Box 1445,
Address
Grand Island NB 68802
City State Zip

5. Lessee of the land of wellsite:
Excellon USA Inc
Name
Suite 200-20 Adelaide St
Address
Toronto ON Canada M5C
City State Zip 276

6. Owner of well:
Tombstone Development Co
Name
P.O. Box 1445
Address
Grand Island, NB 68803
City State Zip

7. Consulting Firm: JABA Inc.
Contact Person: Jim Briscoe
Phone: (602) 721-1375
8. Purpose of well drilled pursuant to this notice
Monitor
Piezometer _____
9. If for deepening or modifying, Well Registration Number
55- _____

10. Construction will start:
Feb. 22 73
Month Day Year
11. Period well will remain in use 5 Months/Years
12. For monitoring wells, is pump equipment to be installed?
Yes _____ No
(a) If yes, design pump capacity _____
(b) What use will be made of the water: testing only
13. Drilling firm:
Lane Environmental
Name Lane Env. Inc
9002 S. Hardy Dr.
Address
Tempe AZ 85284
City State Zip
DWR License No. 473
A-04
ROC Category

DO NOT WRITE IN THIS SPACE
OFFICE RECORD
File No. _____
Filed _____ By _____
Input _____ By _____
DUPLICATE
Mailed _____ By _____
Registration 55- _____
AMA/INA _____
W/S _____ S/B _____

14. Will this proposed well pump Colorado River water? Yes _____ No
(See condition VI on reverse)
15. Is the proposed wellsite within 100 feet of a septic tank system, sewage disposal area, landfill, hazardous waste facility, storage area of hazardous material or petroleum storage areas and tanks?
Yes _____ No

16. Proposed method of abandonment of well after project is completed: bentonite pellets from bottom to 50 feet above water level, then cuttings, then 20' cement plug to surface
17. Is this well to monitor existing contamination? Potential contamination Please explain: determine whether or not Nitrate exists in the ground water at the well site

GENERAL INSTRUCTIONS

- 1. Fill out this form in DUPLICATE and send WITH \$10.00 FEE to 15 South 15th Avenue, Phoenix, AZ 85007.
 - 2. For specific instructions, limitations and conditions, see the reverse side of this form.
 - 3. Must be signed by land owner or lessee.
- Section §45-596(D), provides that the Director shall determine that all information required on form has been submitted. If not, the person filing will be notified and the drilling, deepening, or modification of the well may not proceed.

I state that Notice is filed in compliance with Section § 45-596 and is complete and correct to the best of my knowledge and belief and that I understand the conditions set forth on the reverse side of this form.

000070

Date

Signature of Land Owner or Lessee

18. If construction plans have been coordinated with Arizona Department of Environmental Quality, who is the agency contact? Don Bell &
- If construction plans have been coordinated with Arizona Department of Water Resources, Hydrology/Water Quality Division, who is the division contact? Mike Bell, David Anderson
19. WELL CONSTRUCTION PLAN
- a) Drilling method (mud rotary, hollow-stem auger, etc.) air rotary
- b) Borehole diameters: Nominal 10 inches from 0 feet to 20 feet.
Nominal 6 inches from 20 feet to 600' feet.
- c) Casing materials (PVC, steel, hollow-stem auger, etc.)
 material Steel diameter 8" inches from 0 feet to 10 feet
 material _____ diameter _____ inches from _____ feet to _____ feet
- d) Method of sealing at reductions NONE
- e) Annular seal materials (cement, grout, etc.); method of placement (tremied, circulated)
 material _____ method _____ from _____ feet to _____ feet
 material _____ method _____ from _____ feet to _____ feet
- f) Filter packs (state material):
 material _____ from _____ feet to _____ feet
 material _____ from _____ feet to _____ feet
- g) Perforations or screen specifications:
 type _____ from _____ feet to _____ feet
 type _____ from _____ feet to _____ feet
- h) Method of well development (bail, air lift, surge) _____
- i) Will surface or conductor casing extend above grade: Yes No 2'
20. Include detailed construction diagram showing expected water depth in feet below land surface, and details of vault, if specified.

CONDITIONS

- I. Construction and abandonment standards for all wells shall be in accordance with A.A.C. R12-15-811 and R12-15-816.
- II. Drilling of the well shall be completed within one (1) year after the date of Notice.
- III. A Well Driller Report, is required within 30 days of completion of drilling. A completion Report, is required to be filed with the Department within 30 days after installation of pump equipment for monitor wells.
- IV. Pump equipment may not be installed on a well drilled for piezometer purposes. If a monitor well is pumped, pumping is limited to the maximum amount required for monitor purposes, but in no case may exceed 35 gallons per minute and an annual volume of 10 acre feet total.
- V. A.A.C. Rule R12-15-811.H.2, requires that: "A monitor well shall be identified as such on the vault cover or at the top of the steel casing. Identification information will include well registration number."
- VI. If the proposed well is located near the Colorado River and if the proposed well may pump Colorado River Water, proof must be submitted with this notice that the applicant has the legal right to use Colorado River Water. Alternately, evidence needs to be submitted that supports the contention that Colorado River water will not be withdrawn by the well. Persons near the Colorado River may wish to contact the Colorado River Management Division, Department of Water Resources at (602) 542-1960 to determine those Townships and Ranges which will be affected by these requirements or with questions regarding the proof of right.
- VII. Special construction standards required pursuant to A.A.C. Rule R12-15-821: _____

2/18/93

ARIZONA DEPARTMENT OF WATER RESOURCES

15 South 15th Avenue, Phoenix, Arizona 85007
Telephone (602) 542-1553
Fax (602) 256-0506



received
2/25/93 JAB

FIFE SYMINGTON
Governor

ELIZABETH ANN RIEKE
Director

Re: Registration No. 55-538214 538215

File No. D(20-22)11ddd D(20-22)12cba

Dear Well Owner:

Enclosed for your records is an annotated copy of the Notice of Intention to Drill a well which was recently filed with this Department. This is returned to you as evidence of compliance with A.R.S. §45-596. Your designated driller has been mailed, separately, a Well Drilling Card which he is required to have in his possession before commencing to drill the well.

Since this well is being drilled as a monitor well, or for cathodic protection, grounding, geotechnical or piezometer purposes, our standard driller report form is also being furnished to the driller which he is required to complete and return to the Department within 30 days after the completion of drilling. A Completion Report form is being furnished for monitor wells where pump equipment is authorized to be installed as part of this packet so that you may submit the report within 30 days after the installation of the pumping equipment on a monitor well as required by A.R.S. §45-600.

This well is authorized to be drilled for mineral exploration purposes. Because of this, no pump equipment may be installed. A Project Completion Report is being furnished you for each hole to be drilled. You are required to submit this Project Completion Report within 30 days after completion of drilling. Frequently, exploration wells are abandoned shortly after drilling. Therefore, pursuant to R12-15-816.B, a Notice of Intent to Abandon a Well is being furnished.

The Department of Water Resources requires you to obtain written permission before proceeding with the drilling in the event that you determine it necessary to change the location of the proposed well. A properly signed amended Drilling Card must be in the possession of the driller before drilling commences at a different location than originally authorized.

If in the course of drilling a new well, it is determined that the well needs to be abandoned, then a Well Abandonment Completion Report must be submitted per R12-15-816.F.

000072

For your future use, a Change of Well Information form is enclosed for your convenience. Per A.R.S. §45-593, the person to whom a well is registered shall notify this Department of a change of ownership of the well and/or information pertaining to the physical characteristics of the well, in order to keep the well registration file current and accurate.



Sincerely,

Bruce S. Davis
Chief, Operations Division

BSD:dl
Enclosures
DWR-55-50-9/90(Revised)

000073

NOTICE OF INTENTION TO DRILL MONITOR/PIEZOMETER WELL

14

Section § 45-596, Arizona Revised Statutes provide: Prior to drilling a monitor or piezometer well, a Notice of Intention to Drill shall be filed with the Department on a prescribed form.

1. WELL LOCATION:

T. 20S N/S | R. 22E E/W | 12
Township | Range | Section

10 Acre Subdivision

NE 1/4 | NW 1/4 | SW 1/4
10 ACRE | 40 ACRE | 160 ACRE

2. Position location of the well on the land:

Latitude 31 0 42.20"

Longitude 110 0 03.37"

3. County: Cochise

4. Owner of the land of wellsite:

Tombstone Development Co.
Name
P.O. Box 1445,
Address
Grand Island NB 68802
City State Zip

5. Lessee of the land of wellsite:

Excellon USA Inc.
Name
Suite 200-20 Adams Road
Address
Tombstone ON CORNER MSC
City State Zip 276

6. Owner of well:

Tombstone Development Co.
Name
P.O. Box 1445
Address
Grand Island, NB 68805
City State Zip

7. Consulting Firm: JABA Inc.

Contact Person: Jim Briscoe

Phone: (602) 721-1375

8. Purpose of well drilled pursuant to this notice

Monitor

Piezometer

9. If for deepening or modifying, Well Registration Number

55- _____

10. Construction will start:

Feb. 22 73
Month Day Year

11. Period well will remain in

use 5 Months/Years

12. For monitoring wells, is pump equipment to be installed?

Yes No

(a) If yes, design pump capacity _____

(b) What use will be made of the water tasting only

13. Drilling firm:

Lane Environmental
Name Lane Environmental
9002 S. Hardy Dr.
Address
Tempe AZ 85284
City State Zip

DWR License No. 473

A-04

ROC Category

14. Will this proposed well pump Colorado River water? Yes No

15. Is the proposed wellsite within 100 feet of a septic tank system, sewage disposal area, landfill, hazardous waste facility, storage area of hazardous material or petroleum storage areas and tanks?

Yes No

DO NOT WRITE IN THIS SPACE
OFFICE RECORD
File No. D(20-22) 126 BA
Filed 2-17-93 By sk
Input _____ By _____
DUPLICATE
Mailed 2-18-93 By sk
Registration 55- 538214
AMA/INA _____
W/S 11 S/B _____

16. Proposed method of abandonment of well after project is completed: bentonite pellets from bottom to 50 feet above water level, then cuttings, then 20' cement plug to surface

17. Is this well to monitor existing contamination? Potential contamination Please explain: determine whether or not nitrate exists in the ground water at the well site

- 1. Fill out this form in DUPLICATE and send WITH \$10.00 FEE to 15 South 15th Avenue, Phoenix, AZ 85007.
- 2. For specific instructions, limitations and conditions, see the reverse side of this form.
- 3. Must be signed by land owner or lessee.
- 4. Section 45-596(D), provides that the Director shall determine that all information required on form has been submitted. If not, the person filing will be notified and the drilling, deepening, or modification of the well may not proceed.

I state that Notice is filed in compliance with Section § 45-596 and is complete and correct to the best of my knowledge and belief and that I understand the conditions set forth on the reverse side of this form.

Feb 13, 1993
Date

Jerome Niedfelt Pres.
Signature of Land Owner or Lessee

FEB 17 1993
OPERATIONS DIV.

000074

18. If construction plans have been coordinated with Arizona Department of Environmental Quality, who is the agency contact? Don Bell &
 If construction plans have been coordinated with Arizona Department of Water Resources, Hydrology/Water Quality Division, who is the division contact? Mike Bell, David Anderson

19. WELL CONSTRUCTION PLAN

- a) Drilling method (mud rotary, hollow-stem auger, etc.) Air rotary
 b) Borehole diameters: Nominal 10 inches from 0 feet to 20 feet.
Nominal 16 inches from 20 feet to 600' feet.
 c) Casing materials (PVC, steel, hollow-stem auger, etc.)
 material Steel diameter 8" inches from 0 feet to 20 feet
 material _____ diameter _____ inches from _____ feet to _____ feet
 d) Method of sealing at reductions ~~None~~ Cement
 e) Annular seal materials (cement, grout, etc.); method of placement (tremied, circulated)
 material _____ method _____ from _____ feet to _____ feet
 material _____ method _____ from _____ feet to _____ feet
 f) Filter packs (state material):
 material _____ from _____ feet to _____ feet
 material _____ from _____ feet to _____ feet
 g) Perforations or screen specifications:
 type _____ from _____ feet to _____ feet
 type _____ from _____ feet to _____ feet
 h) Method of well development (bail, air lift, surge) Will not be developed at this time
 i) Will surface or conductor casing extend above grade: Yes No 2'

20. Include detailed construction diagram showing expected water depth in feet below land surface, and details of vault, if specified.

CONDITIONS

- I. Construction and abandonment standards for all wells shall be in accordance with A.A.C. R12-15-811 and R12-15-816.
- II. Drilling of the well shall be completed within one (1) year after the date of Notice.
- III. A Well Driller Report, is required within 30 days of completion of drilling. A completion Report, is required to be filed with the Department within 30 days after installation of pump equipment for monitor wells.
- IV. Pump equipment may not be installed on a well drilled for piezometer purposes. If a monitor well is pumped, pumping is limited to the maximum amount required for monitor purposes, but in no case may exceed 35 gallons per minute and an annual volume of 10 acre feet total.
- V. A.A.C. Rule R12-15-811.H.2, requires that: "A monitor well shall be identified as such on the vault cover or at the top of the steel casing. Identification information will include well registration number."
- VI. If the proposed well is located near the Colorado River and if the proposed well may pump Colorado River Water, proof must be submitted with this notice that the applicant has the legal right to use Colorado River Water. Alternately, evidence needs to be submitted that supports the contention that Colorado River water will not be withdrawn by the well. Persons near the Colorado River may wish to contact the Colorado River Management Division, Department of Water Resources at (602) 542-1960 to determine those Townships and Ranges which will be affected by these requirements or with questions regarding the proof of right.
- VII. Special construction standards required pursuant to A.A.C. Rule R12-15-821: _____

NOTICE OF INTENTION TO DRILL MONITOR/PIEZOMETER WELL

Section § 45-596, Arizona Revised Statutes provide: Prior to drilling a monitor or piezometer well, a Notice of Intention to Drill shall be filed with the Department on a prescribed form.

1. WELL LOCATION:
T. 205 N/S | R. 22E E/W | 11 Section
10 Acre Subdivision
SE 1/4 SE 1/4 SWE 1/4
10 ACRE 40 ACRE 160 ACRE

2. Position location of the well on the land:
Latitude 31 0 42.23"
Longitude 110 0 03.26"
3. County: Cochise

4. Owner of the land of wellsite:
Tombstone Development Co.
Name P.O. Box 1445
Address Grand Island NB 68002
City State Zip

5. Lessee of the land of wellsite:
Excellon USA Inc
Name Suite 200-20 Adelaide St
Address Toronto ON Canada M5C
City State Zip 276

6. Owner of well:
Tombstone Development Co.
Name P.O. Box 1445
Address Grand Island, NB 68005
City State Zip

7. Consulting Firm: JABA INC.
Contact Person: JIM BRISCOE
Phone: (602) 721-1375

8. Purpose of well drilled pursuant to this notice
Monitor
Piezometer _____
9. If for deepening or modifying, Well Registration Number 55- _____

10. Construction will start:
Feb. 22 73
Month Day Year

11. Period well will remain in use 5 Months/Years
12. For monitoring wells, is pump equipment to be installed?
Yes _____ No
(a) If yes, design pump capacity _____
(b) What use will be made of the water testing only

13. Drilling firm:
Lane Environmental
Name Lane Environmental SUCS. INC
Address 9002 S. Hardy Dr.
City Tempe AZ 85284
State Zip
DWR License No. 473
A-04
ROC Category

DO NOT WRITE IN THIS SPACE
OFFICE RECORD
File No. D(20-22)11000
Filed 2-17-93 By [initials]
Input _____ By _____
DUPLICATE
Mailed 2-18-93 By [initials]
Registration 55- 538214
AMA/INA _____
W/S 11 S/B _____

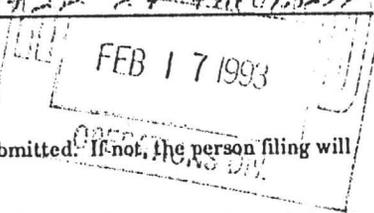
14. Will this proposed well pump Colorado River water? Yes _____ No
(See condition VI on reverse)

15. Is the proposed wellsite within 100 feet of a septic tank system, sewage disposal area, landfill, hazardous waste facility, storage area of hazardous material or petroleum storage areas and tanks?
Yes _____ No

16. Proposed method of abandonment of well after project is completed: bentonite pellets from bottom to 50 feet above water level, then cuttings, then 20' cement plug to surface
17. Is this well to monitor existing contamination? Potential contamination Please explain: determine whether or not nitrate exists in the ground water at this well site

GENERAL INSTRUCTIONS

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- 3. Must be signed by land owner or lessee.
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I state that Notice is filed in compliance with Section § 45-596 and is complete and correct to the best of my knowledge and belief and that I understand the conditions set forth on the reverse side of this form.

Feb. 13, 1993
Date

Jerome Niedtner Pres.
Signature of Land Owner or Lessee

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Nominal 6 inches from 20 feet to 600' feet.

c) Casing materials (PVC, steel, hollow-stem auger, etc.)

material Steel diameter 8" inches from 0 feet to 20 feet

material _____ diameter _____ inches from _____ feet to _____ feet

d) Method of sealing at reductions None Cement

e) Annular seal materials (cement, grout, etc.); method of placement (tremied, circulated)

material _____ method _____ from _____ feet to _____ feet

material _____ method _____ from _____ feet to _____ feet

f) Filter packs (state material):

material _____ from _____ feet to _____ feet

material _____ from _____ feet to _____ feet

g) Perforations or screen specifications:

type _____ from _____ feet to _____ feet

type _____ from _____ feet to _____ feet

h) Method of well development (bail, air lift, surge) will not be developed at this time

i) Will surface or conductor casing extend above grade: Yes No 2'

20. Include detailed construction diagram showing expected water depth in feet below land surface, and details of vault, if specified.

CONDITIONS

I. Construction and abandonment standards for all wells shall be in accordance with A.A.C. R12-15-811 and R12-15-816.

II. Drilling of the well shall be completed within one (1) year after the date of Notice.

III. A Well Driller Report, is required within 30 days of completion of drilling. A completion Report, is required to be filed with the Department within 30 days after installation of pump equipment for monitor wells.

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VII. Special construction standards required pursuant to A.A.C. Rule R12-15-821: _____

FILE

Tombstone D & V. Co



JABA INC.
2100 N. Wilmot Rd. #218
Tucson, AZ 85712
(602) 885-9141
(FAX) 721-2768

February 19, 1993

Mr. Steve Henderson
Director Of Public Works
Tombstone, City Of
East Allen Street
Tombstone, AZ USA

85638

Dear Steve,

Re:Return of Cella Barr Associates water distribution and master
plan, City of Tombstone

Returned with this note is your copy of the above referenced
report. We have copied it and entered it into our note book
collection of data pertaining to the Tombstone area. If it
should ever be destroyed or lost, we would be happy to provide
you another copy from our archives.

Thank you for your loan of this material.

Very truly yours;

A handwritten signature in cursive script, appearing to read "James A. Briscoe".

James A. Briscoe
SH 02/19/93

COPY

000078

WATER DISTRIBUTION SYSTEM ANALYSIS
AND MASTER PLAN
FOR THE CITY OF
TOMBSTONE, ARIZONA

October 11, 1985
Revised January 6, 1987
CBA File No. 60157-01-10
F0391, EHB-17

CELLA BARR ASSOCIATES
2075 North Sixth Avenue
Tucson, Arizona 85705

COPYRIGHT 1987 CELLA BARR ASSOCIATES

RECEIVED JAN 12 1987



000079

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II. EXISTING EQUIPMENT INVENTORY.....	2
III. SYSTEM DEMANDS AND DEFICIENCIES.....	3
IV. RECOMMENDED SYSTEM IMPROVEMENTS.....	4

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Figure 2	Tombstone Water System Zone Boundary Map
Figure 3	Site Layouts for Well and Storage Facilities
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Sheet 2	Well No. 2
Sheet 3	Well No. 3
Sheet 4	City Tank
Sheet 5	Proposed 300,000 Gallon Tank
Sheet 6	1 M.G. Concrete Reservoir

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Appendix A	Data Tabulation for the Existing Equipment Inventory
Appendix B	Fire Flow Requirements
Appendix C	Results of the Computer Modelled Distribution System Analysis
Appendix D	Estimated Construction Costs for Recommended System Improvements

INTRODUCTION

The existing facilities which produce, pump, store, and distribute water to the City of Tombstone are of widely varying age and condition. Some components of the water system were constructed in the 1880's and are still in use. Many additions and improvements have been made to the system during the past 100 years. While the system is generally capable of delivering adequate quantities of potable water for domestic use and limited fire flows, there are some deficiencies which can and should be remedied. Additional improvements can be made to provide better overall system reliability and increased fire flows at selected areas of the town.

The purpose of this report is to characterize and inventory the existing water supply facilities; identify and detail system deficiencies; and, describe the improvements which have been developed for the system.

EXISTING EQUIPMENT INVENTORY

Water is supplied to the storage and distribution system by three drilled wells located within the city and seven artesian springs, located 25 miles to the south in the Huachuca Mountains, via a historic seven-inch diameter rolled steel pipe aqueduct. The wells are from 10 to 40 years old, the spring catchments and aqueduct are over 100 years old. The total estimated rate of supply from the wells is currently 800 gallons per minute (gpm). The rate of supply from the springs has averaged approximately 725 gpm in the past, although the current rate of supply is unknown.

Considerable water storage is provided by a 1.1 million gallon concrete reservoir, located south of the city, which is filled by the aqueduct from the springs. In addition, a ground level storage tank of 100,000-gallon capacity is located on a hill at the south edge of the city and a total of three smaller (25,000 gallons each) storage tanks are located at two of the well sites.

The vast majority of the system's service area is located within a single pressure zone. The low pressure boundary is roughly at the 4,600 foot elevation contour, to the south of the city, and the high pressure boundary is roughly at the 4,495 foot elevation contour, generally north of the city. These boundaries are established by the system highwater as defined by the elevation of the 100,000 gallon storage tank (mean water surface elevation = 4689). Services in the extreme northwest portion of the service area are located below the 4,495 foot elevation contour and pressures at these services are moderated by means of pressure-reducing valves. Refer to Figure 1 for a schematic map of the system and Figure 2 for a map delineating the zone boundaries.

Water is delivered to the system from the 100,000-gallon storage tank by gravity flow (no pressurization is required due to the elevation of the tank). Water is delivered from the smaller well site tanks by means of booster pumps.

The distribution system consists of piping of various materials, sizes, condition and age. The central portion of the city contains primarily older steel pipe of two-, three-, and five-inch diameters. Some six-inch diameter asbestos cement (AC) pipe has more recently been installed in this area (in Fremont Street, Bruce Street and North Street). Other portions of the distribution system (primarily to the north, east and west) have been installed more recently and consist of mostly six-inch diameter AC pipe.

Specific data for the water supply system (wells, booster pumps and storage tanks) have been collected and are tabulated in Appendix A of this report.

SYSTEM DEMANDS AND DEFICIENCIES

Current demand on the system has been estimated at 600,000 gallons per peak day and 250,000 gallons per average day.

The existing distribution system in the business district of the city is inadequate from the standpoint of fire protection. This represents a significant risk to the economic health of the community and comprises a major system deficiency. Insufficient "looping" of the pipe network, the existing small diameter piping and undersized fire hydrants are the specific problems. Available fire flow is insufficient in most locations within the central section of the city, for the same reasons as for the business district. Required and available fire flows for a number of locations are tabulated in the appendix to this report.

The absence of functional chlorination facilities represents another system deficiency. The 100,000-gallon storage tank is equipped with a chlorinator, however, the feed line is improperly installed. Another chlorinator is located at the valve vault in the seven-inch line from the large reservoir. However, this unit is not in service. No other storage facilities (or wells) are equipped with chlorination equipment.

The general deterioration and disrepair of the system limits its utility and efficiency and should be corrected. Specific deficiencies include:

The pumps, piping and valves in the valve vault in the seven-inch line from the reservoir are completely dilapidated and non-functional, now submerged in several feet of water;

The 100,000-gallon storage tank and appurtenances are in a state of general disrepair;

The booster pump at well site #3 is improperly sized for the system and produces excessive (and potentially damaging) pressures;

The valve vaults at the pressure reducing stations are in need of replacement and are improperly covered;

A backflow prevention device is not installed on the potable water line at the sewage treatment plant.

RECOMMENDED SYSTEM IMPROVEMENTS

A master plan for system improvements has been developed to achieve the following goals:

1. Improve fire flow capability for the central business district;
2. Improve bacteriological water quality;
3. Reduce operating and maintenance expenses and improve system reliability.

The improvement in fire flow to the central business district can be accomplished through augmentation and expansion of the existing water supply piping in the area, construction of additional water storage facilities and installation of larger fire hydrants. Specifically, the improvements are as follows:

1. Construct new distribution piping -

<u>Location</u>	<u>Pipe Size (in.)</u>	<u>Length (ft.)</u>
Existing 100,000 gallon storage tank site to existing five-inch line at Allen and Sixth Street	12	2,350
Toughnut Street from Second Street to Sixth Street	12	1,510
Second Street from Toughnut Street to Allen Street	8	300
Third Street from Toughnut Street to Allen Street	8	300
Fourth Street from Toughnut Street to Allen Street	8	300
Amm Street from Allen Street to Fremont Street	6	350
Sixth Street from North Street to Allen Street	6	2,300

2. Construct new 300,000 gallon storage tank at site of existing 100,000 gallon tank. (See Figure 3, Sheet 5.)
3. Install new fire hydrants (in conjunction with new piping) at appropriate locations within the central business district. Approximately 12 new hydrants (capable of discharging high fire flow rates) should be installed.

The expansion and refurbishment of the chlorination facilities for the water system is recommended. These improvements will improve the quality of the water delivered and reduce the risk of disease from water-borne pathogens. Specifically, the following improvements to the chlorination facilities are recommended:

1. Install chlorinator at the 1 MG reservoir;
2. Re-install chlorine injection line deeper within the 100,000 gallon storage tank and generally refurbish the chlorinator and housing facilities;
3. Install chlorination facilities at each of the three supply wells.

Improved system reliability and a reduction in future operating and maintenance expenses can be accomplished through implementation of the following system improvements:

1. Replace booster pump at Well #3 with a properly specified unit.
2. Install automatic controls for the natural gas-powered engine at Well #2.
3. Repair or replace the valve vault at the two pressure reducing stations.
4. Refurbish the 100,000 gallon storage tank and appurtenances (install screen cover, install safety climber, repaint tank, install overflow pipe, refurbish chlorination shed).
5. Refurbish valve vault in the seven-inch line from the 1 MG reservoir. Booster pump should be replaced, valves and connection piping should also be replaced. Install new meter.
6. Install a target on 1 MG reservoir to permit water level readings from city.
7. Attempt to reactivate seven-inch line to 100,000 gallon storage tank from 1 MG reservoir.
8. Repair roof panels on 1 MG reservoir.

9. Install a backflow prevention device at the sewage treatment plant water service.

Implementation of the system improvements described above will dramatically improve the ability of the City of Tombstone's water system to provide safe, potable water for domestic use as well as provide water in sufficient quantities for fire protection of the central business district.

FIGURE 1 IS LOCATED IN THE
MAP POCKET INSIDE THE BACK
COVER OF THIS REPORT

000087

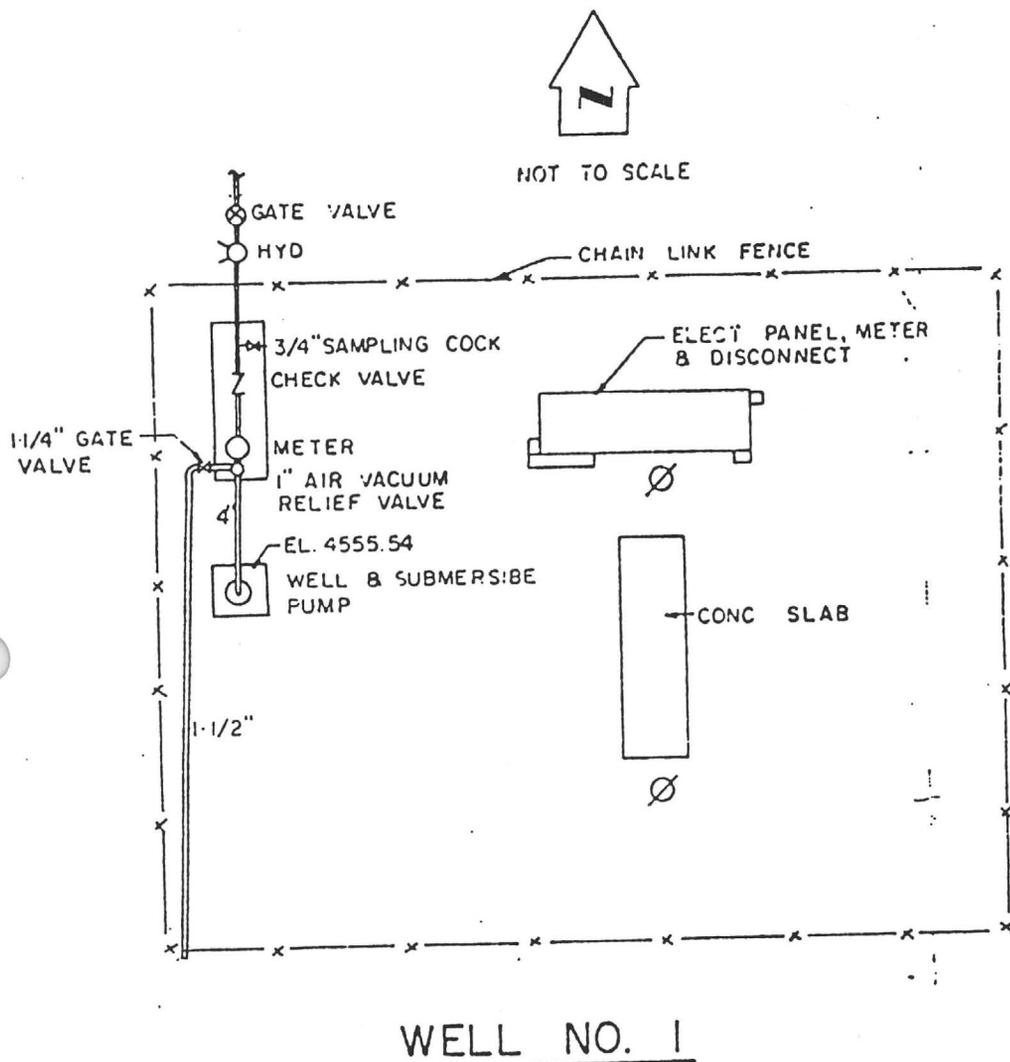
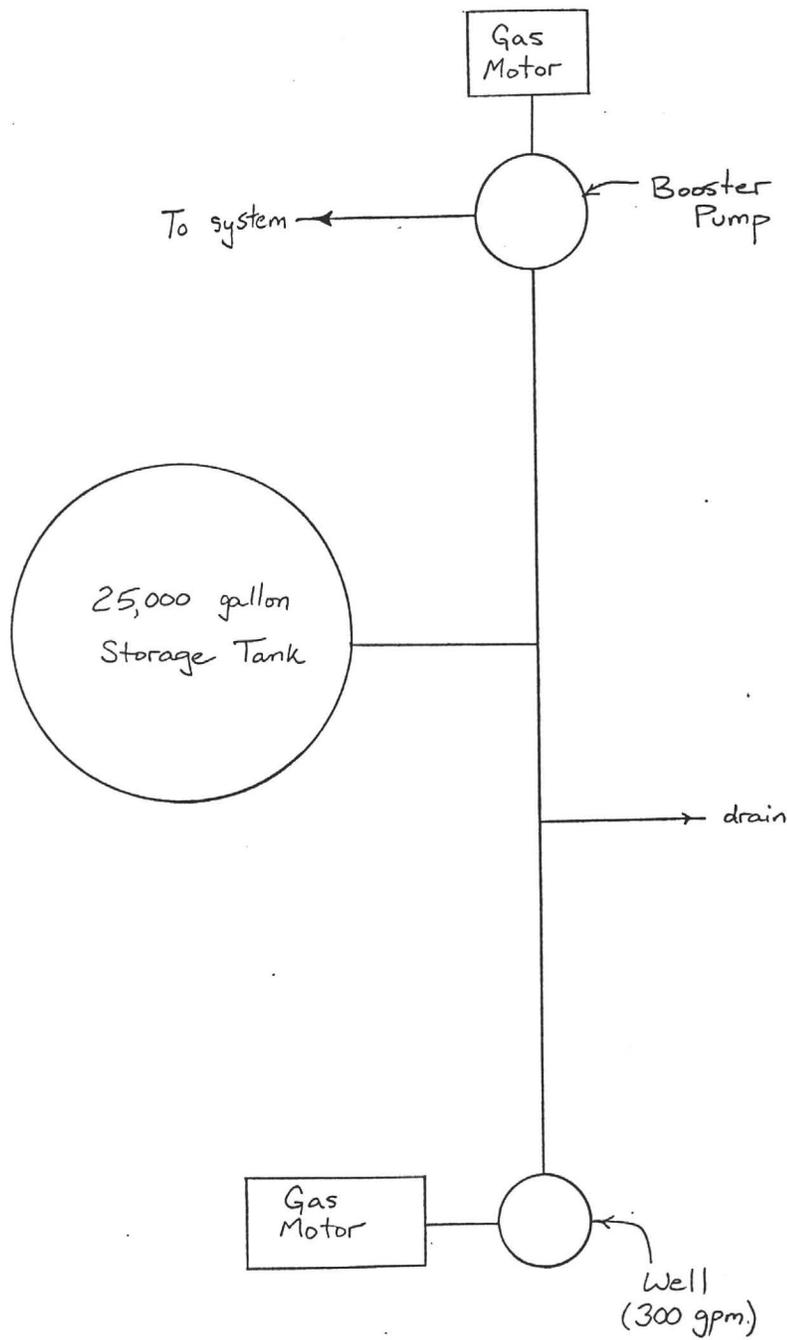


FIGURE 3
SHEET 1 OF 6

22381 10 SHEETS 3 SQUARE
22382 100 SHEETS 3 SQUARE
22383 100 SHEETS 3 SQUARE
NATIONAL
MFG. CO.



WELL # 2
NTS

FIGURE 3
SHEET 2 OF 6

000090

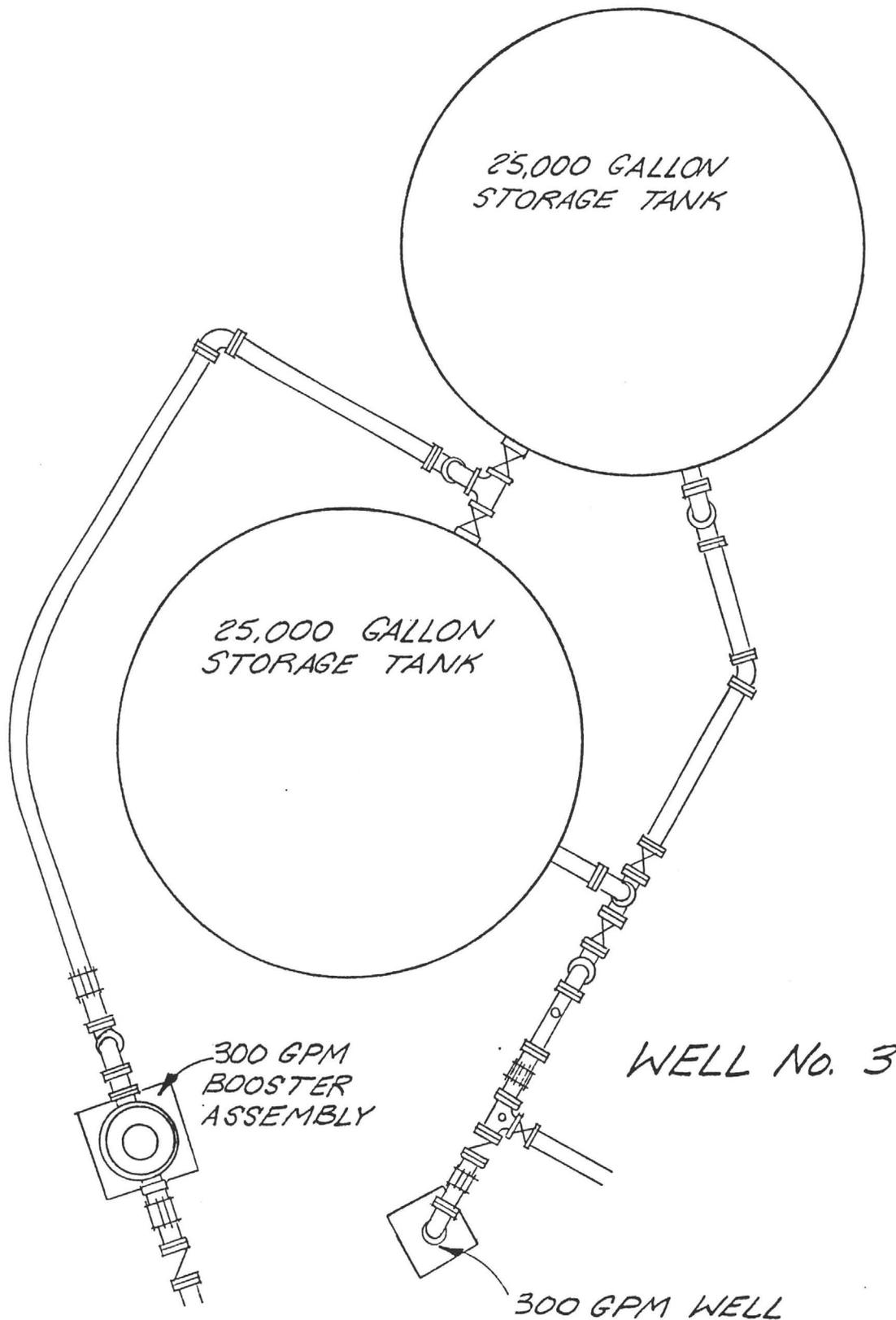
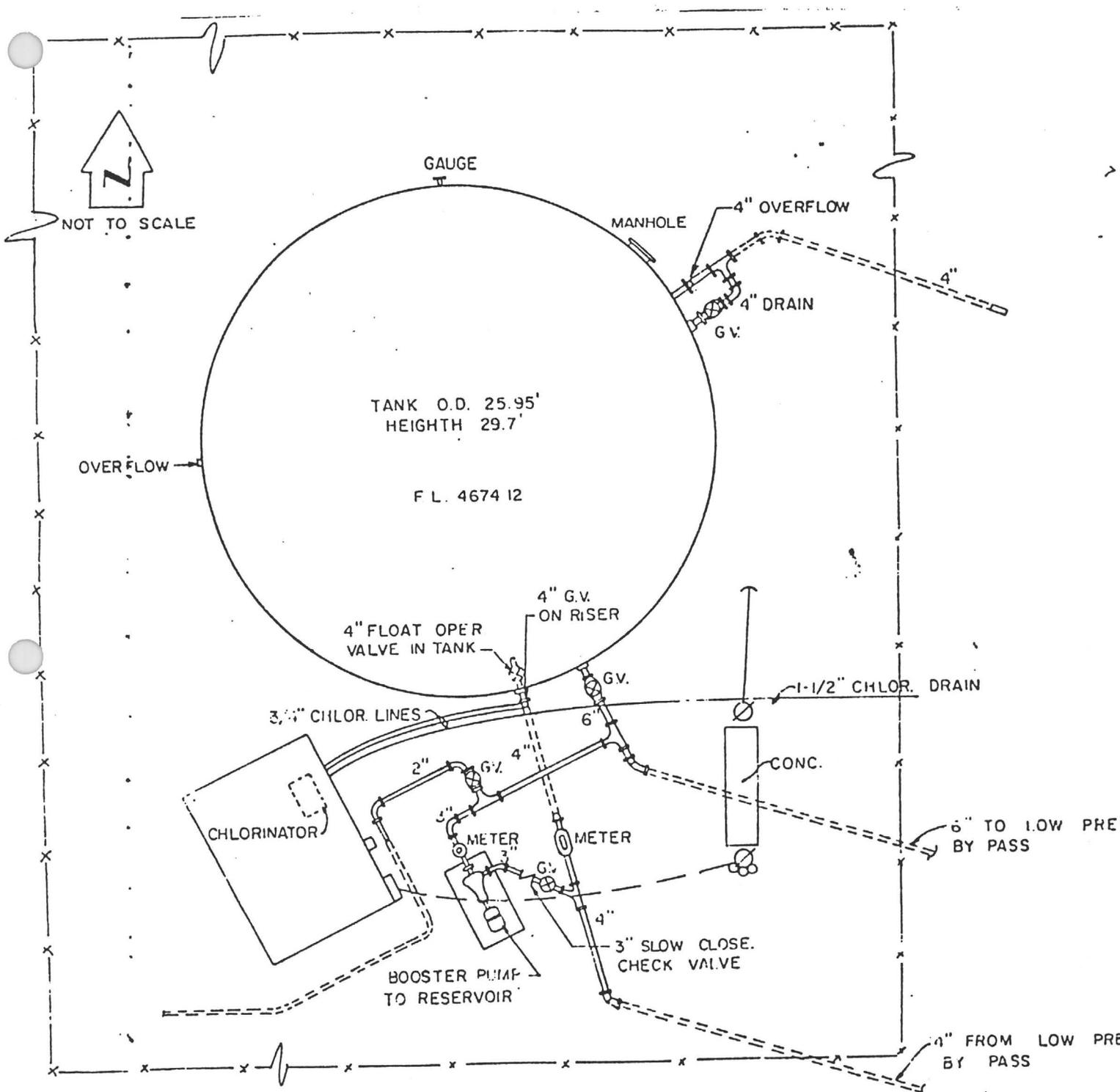
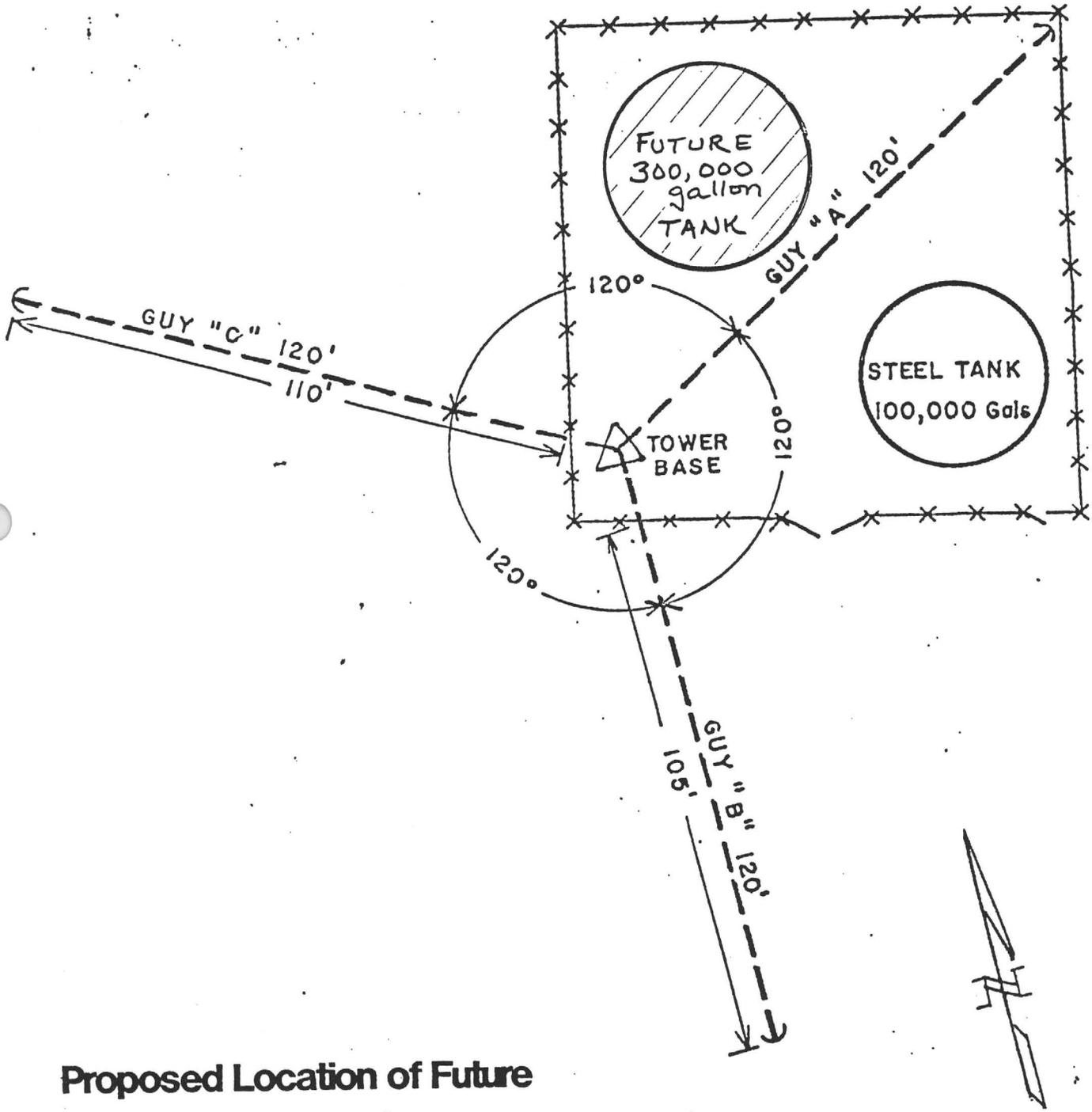


FIGURE 3
SHEET 3 OF 6

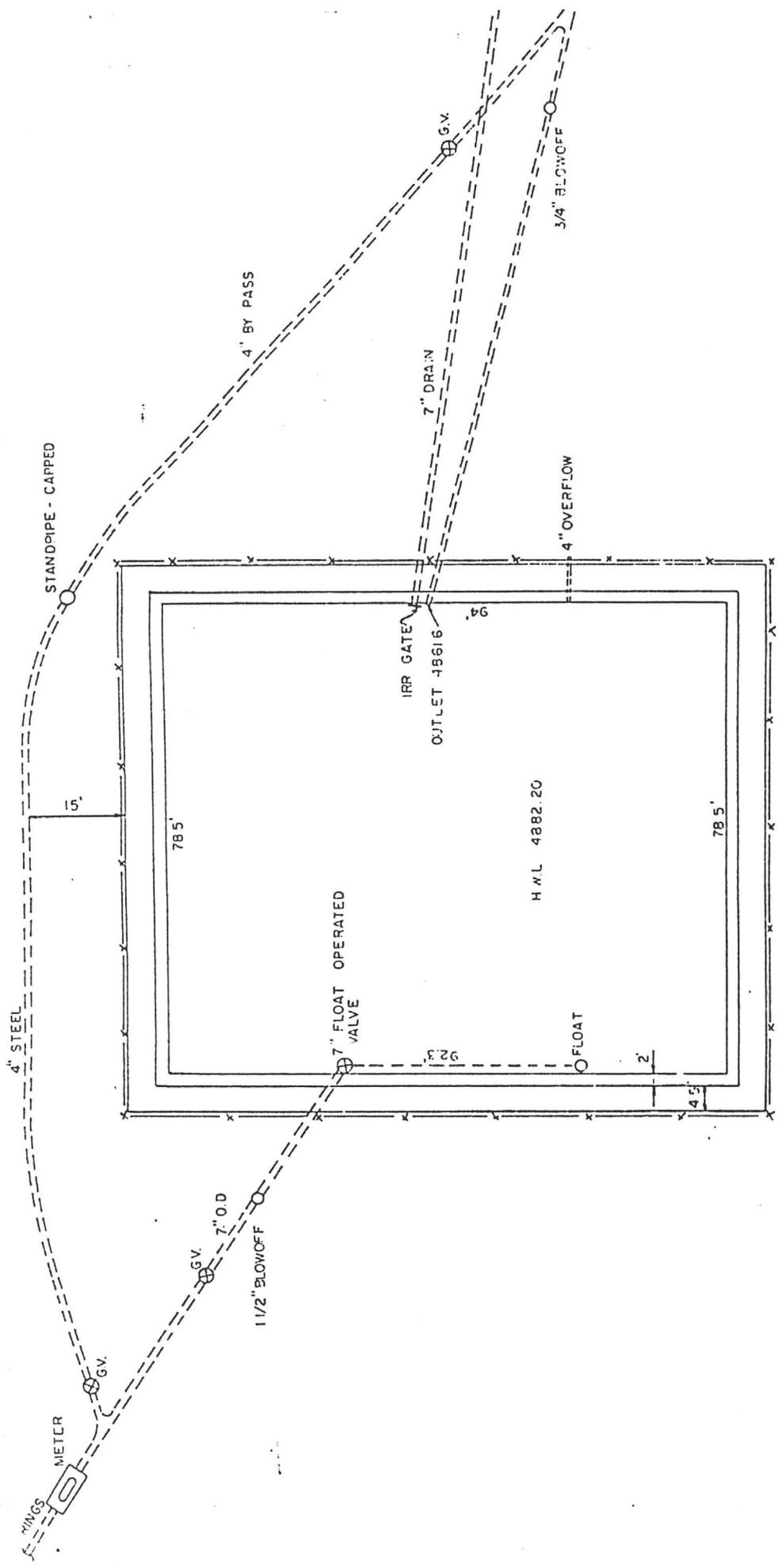


CITY TANK



**Proposed Location of Future
300,000 gallon Storage Tank**

FIGURE 3 SCALE: 1" = 30'
 By: T.P.
 12/27/77
 SHEET 5 OF 6
 000093



I.M.G. CONCRETE RESERVOIR

APPENDIX A

000095

Project Tombstone Water

Date September 27, 1985

Job No. 60157-01-10

Compiled By DRV, EHB

SOURCE OF SUPPLY

Well #1

Location Allen St. E. of 6th St. Sec 11 T20S R22E

Date Drilled 1941 Discharge Elevation 4556 Source _____

Depth of Hole 612 feet Depth of Casing _____

Type of Casing Steel Diameter of Casing 4"

Perforations Unknown

Drilling Method NA Well Construction NA

Pump Setting 511 feet Static WL (1969) 430 feet

Pumping WL (1969) 490 feet Pumping Rate 225 gpm

Specific Yield 3.75 gpm/ft.

POWER AND PUMPING EQUIPMENT

Motor Type Franklin Electric, Subm. RPM _____ H.P. 60

Voltage 480 Phase 3 Cycles 60 Amperes _____

Serial Number 00968 Model Number 2870015000

Frame _____ Discharge Head Type --

Discharge _____ Shaft -- Shaft Tubing -- Column --

Suction Pipe -- Air Tubing _____ Lubrication --

Pump Manufacturer _____ Pump Type Subm. Turbine

Size _____ Stages _____ TDH _____ Capacity _____

Serial Number 314047 Impeller _____ Curve Number _____

Project Tombstone Water

Date September 27, 1985

Job No. 60157-01-10

Compiled By DRV, EHB

SOURCE OF SUPPLY

Well #2

Location Camino San Rafael Sec 1 T20S R22E

Date Drilled 1967 Discharge Elevation 4425 Source _____

Depth of Hole 600 feet Depth of Casing 352-486-600

Type of Casing Steel Diameter of Casing 12" - 10" - 6"

Perforations 3/8" x 6" 4 per foot - torch cut, 276' - 590'

Drilling Method NA Well Construction NA

Pump Setting 465 feet Static WL (1967) 276 feet

Pumping WL (1967) 338 feet Pumping Rate 300 gpm

Specific Yield 4.8 gpm/ft.

POWER AND PUMPING EQUIPMENT

Motor Type Gas - Waukesha RPM 1760 H.P. 90

Voltage -- Phase -- Cycles -- Amperes --

Serial Number 2BL90 Model Number _____

Frame _____ Discharge Head Type Amarillo, gear

Discharge _____ Shaft -- Shaft Tubing -- Column --

Suction Pipe _____ Air Tubing 445 feet Lubrication _____

Pump Manufacturer Layne & Bowler Pump Type Vertical Turbine

Size 8" Stages 23 TDH _____ Capacity _____

Serial Number 59000L Impeller _____ Curve Number _____

Project Tombstone Water

Date September 27, 1985

Job No. 60157-01-10

Compiled By DRV, EHB

PUMPING EQUIPMENT

Booster Station Well 2 Booster

Location Camino San Rafael Sec 1, T20S, R22E

Pump No. 1 Type 3 Stage

Manufacturer Floway Model JOL Size 8

Capacity 450 GPM TDH 610 feet

Driver Waukesha Gas HP 40

Rotating Speed 3,500 RPM Voltage ----

Pump No. _____ Type _____

Manufacturer _____ Model _____

Capacity _____ TDH _____

Driver _____ HP _____

Rotating Speed _____ Voltage _____

Emergency Power _____

Remarks:

Project Tombstone Water

Date September 27, 1985

Job No. 60157-01-10

Compiled By DRV, EHB

STORAGE RESERVOIRS AND TANKS

Name Well 2

Location Camino San Rafael Sec 1 T20S R22E

Type Ground Level Date Constructed _____

Construction Welded Steel

Capacity 25,000 gallons Dimensions 20 feet dia., 12-foot ht.

Base Elevation _____ Overall Height _____ Overflow Elevation _____

Height to Bottom _____ Operating Head Range _____

Inlet Piping _____ Outlet Piping _____ Riser Piping _____

Overflow Piping _____ Drain _____ Water Source _____

Level Control _____

Optional Equipment _____

Date Last Inspected _____ Cathodic Protection _____

Painting System: Interior _____ Exterior _____

Date Last Painted _____

Remarks:, piping:

Project Tombstone Water

Date September 27, 1985

Job No. 60157-01-10

Compiled By DRV, EHB

SOURCE OF SUPPLY

Well #3

Location North Drive Sec 1 T20S R22E

Date Drilled 1976 Discharge Elevation 4520 Source

Depth of Hole 890 feet Depth of Casing 600'

Type of Casing P.E. Steel Diameter of Casing 12"

Perforations 3/16" x 3" 12 per foot, 340' - 590'

Drilling Method NA Well Construction NA

Pump Setting 550 feet Static WL (1976) 333 feet

Pumping WL (1976) 520 feet Pumping Rate 210 gpm (300)

Specific Yield 1.60 gpm/ft.

POWER AND PUMPING EQUIPMENT

Motor Type Franklin Sumbersible RPM 3515 H.P. 60

Voltage 460 Phase 3 Cycles 60 Amperes --

Serial Number 76-120-84 Model Number

Frame Discharge Head Type

Discharge Shaft -- Shaft Tubing -- Column --

Suction Pipe -- Air Tubing -- Lubrication --

Pump Manufacturer Floway Pump Type Subm. Turbine

Size 8" Stages 7 TDH 564 Capacity 300 gpm

Serial Number Impeller Curve Number BLKL

Project Tombstone Water

Date September 27, 1985

Job No. 60157-01-10

Compiled By DRV, EHB

PUMPING EQUIPMENT

Booster Station Well 3 Booster

Location North Drive Sec 1, T20S, R22E

Pump No. 1 Type 8 Stage Centrifugal

Manufacturer Gilbert Model 77-736 (5-1/4" impeller)

Capacity 300 GPM TDH 580 feet

Driver Newman Electric HP 60

Rotating Speed 3,500 RPM Voltage 480

Pump No. _____ Type _____

Manufacturer _____ Model _____

Capacity _____ TDH _____

Driver _____ HP _____

Rotating Speed _____ Voltage _____

Emergency Power _____

Remarks:

Project Tombstone Water

Date September 27, 1985

Job No. 60157-01-10

Compiled By DRV, EHB

STORAGE RESERVOIRS AND TANKS

Name Well 3

Location North Drive Sec 1 T20S R22E

Type Ground Level Date Constructed _____

Construction Welded Steel

Capacity 2 @ 25,000 gallons Dimensions 20 feet dia., 12-foot ht.

Base Elevation _____ Overall Height 12 feet Overflow Elevation _____

Height to Bottom _____ Operating Head Range _____

Inlet Piping _____ Outlet Piping _____ Riser Piping _____

Overflow Piping _____ Drain _____ Water Source _____

Level Control _____

Optional Equipment _____

Date Last Inspected _____ Cathodic Protection _____

Painting System: Interior _____ Exterior _____

Date Last Painted _____

Remarks:, piping:

Project Tombstone Water

Date September 27, 1985

Job No. 60157-01-10

Compiled By DRV, EHB

STORAGE RESERVOIRS AND TANKS

Name City Tank

Location SE 1/4, Sec 11, T20S, R22E

Type Ground Level Date Constructed _____

Construction Welded Steel

Capacity 100,000 gallons Dimensions 25.95-ft. dia., 12-foot ht.

Base Elevation 4,674 Overall Height 29.7 ft Overflow Elevation _____

Height to Bottom _____ Operating Head Range _____

Inlet Piping 4" & 6" Outlet Piping 6" Riser Piping _____

Overflow Piping 4" dia. Drain 4" dia. Water Source _____

Level Control _____

Optional Equipment _____

Date Last Inspected _____ Cathodic Protection _____

Painting System: Interior _____ Exterior _____

Date Last Painted _____

Remarks:, piping:

Project Tombstone Water

Date September 27, 1985

Job No. 60157-01-10

Compiled By DRV, EHB

STORAGE RESERVOIRS AND TANKS

Name Reservoir

Location NE 1/4, Sec 14, T20S, R22E

Type Ground Level Date Constructed _____

Construction Reinforced Concrete

Capacity 1.1 million gallons Dimensions 78' x 93' x 20'

Base Elevation 4,861 Overall Height 20' Overflow Elevation 4,882

Height to Bottom _____ Operating Head Range _____

Inlet Piping 7" Outlet Piping 7" Riser Piping _____

Overflow Piping 4" Drain 7" Water Source artesian springs

Level Control _____

Optional Equipment _____

Date Last Inspected _____ Cathodic Protection _____

Painting System: Interior _____ Exterior _____

Date Last Painted _____

Remarks: , piping:

APPENDIX B

<u>Location</u>	<u>Fire Flow Requirements Available Fire Flow (gpm)</u>	<u>ISO Required Fire Flow (gpm)</u>
Hwy 80 at Mobile Home Pk	600	1,000
Hwy 80 at Lookout Lodge	550	1,000
Fitch and 4th	550	1,000
Fremont and 4th	500	1,750
Allen and 6th	500	2,250
Fremont and 6th	500	2,500
North St. behind School	650	1,250
Ria Ho Rd and San Rafael	250	750
Fremont and 7th	500	2,250

000105

APPENDIX C

000106

RESULTS OF COMPUTER MODELLED DISTRIBUTION SYSTEM ANALYSIS

The following data represents the results of one "run" which simulated a fire flow of 2,500 gpm at Allen and 2nd Street (Node No. 54). Other domestic maximum day demands were also distributed throughout the remaining service area. The resulting flows in each pipe and pressures at each node are shown on Sheets 5 thru 8. The residual pressure at the fire flow location is 49 psi, other system pressure ranged from 39 to 111 psi. A pipe flow velocity of 6 feet per second occurs in the 12 inch main (Pipe No. 82) from the tank and peak flow velocity of 12 feet per second occurs in the 8 inch pipe for one block approaching the hydrants.

Numerous additional model runs were made by CBA simulating various pipe size and fire flow combinations. These computer runs were used to locate and confirm areas needing new distribution pipe improvements.

A key map identifying the location of pipes and nodes referred to in the attached output has not been included with this report.

000107

FIRE FLOW ANALYSIS FOR CITY OF TOMBSTONE WATER DISTRIBUTION SYSTEM
 CRA JOB NO. 60157-01-10
 JULY 1985

FLOW RATES ARE EXPRESSED IN GPM AND PRESSURE IN PSIG

PIPE NUMBER	LENGTH (FEET)	DIAMETER (INCHES)	ROUGHNESS	MINOR LOSS	PUMP CHARACTERISTICS			CONNECTING NODES	
1	640.00	6.0000	120.00	0.00	0.00	0.00	0.00	0	1
2	2600.00	3.0000	70.00	0.00	0.00	0.00	0.00	1	2
3	660.00	3.0000	70.00	0.00	0.00	0.00	0.00	2	3
4	500.00	4.0000	120.00	0.00	0.00	0.00	0.00	3	4
5	620.00	6.0000	120.00	0.00	0.00	0.00	0.00	4	5
6	320.00	4.0000	120.00	0.00	0.00	0.00	0.00	5	6
7	2150.00	6.0000	120.00	0.00	0.00	0.00	0.00	6	7
8	1950.00	6.0000	120.00	0.00	0.00	0.00	0.00	7	8
9	1420.00	6.0000	120.00	0.00	0.00	0.00	0.00	8	9
THERE IS A CHECK VALVE IN LINE NUMBER 9									
10	2450.00	6.0000	120.00	0.00	0.00	0.00	0.00	9	10
11	410.00	6.0000	120.00	0.00	0.00	0.00	0.00	10	11
12	960.00	8.0000	120.00	0.00	0.00	0.00	0.00	7	11
13	2070.00	6.0000	120.00	0.00	0.00	0.00	0.00	7	12
14	510.00	6.0000	120.00	0.00	0.00	0.00	0.00	12	13
15	1170.00	6.0000	120.00	0.00	0.00	0.00	0.00	13	14
16	360.00	6.3000	120.00	0.00	0.00	0.00	0.00	14	15
17	380.00	6.3000	120.00	0.00	0.00	0.00	0.00	15	16
18	1100.00	6.0000	120.00	0.00	0.00	0.00	0.00	15	18
19	370.00	6.0000	120.00	0.00	0.00	0.00	0.00	14	24
20	370.00	3.0000	70.00	0.00	0.00	0.00	0.00	24	25
21	400.00	3.0000	70.00	0.00	0.00	0.00	0.00	25	26
22	380.00	3.0000	70.00	0.00	0.00	0.00	0.00	25	26
23	320.00	6.0000	120.00	0.00	0.00	0.00	0.00	26	27
24	370.00	6.0000	120.00	0.00	0.00	0.00	0.00	21	27
25	400.00	6.0000	120.00	0.00	0.00	0.00	0.00	22	28
26	380.00	3.0000	70.00	0.00	0.00	0.00	0.00	22	28
27	350.00	3.0000	70.00	0.00	0.00	0.00	0.00	21	24
28	380.00	6.3000	130.00	0.00	0.00	0.00	0.00	26	27
29	660.00	6.3000	130.00	0.00	0.00	0.00	0.00	27	28
30	320.00	6.3000	120.00	0.00	0.00	0.00	0.00	28	29
31	440.00	6.3000	120.00	0.00	0.00	0.00	0.00	29	30
32	1100.00	3.3000	70.00	0.00	0.00	0.00	0.00	30	31
33	1070.00	4.0000	120.00	0.00	0.00	0.00	0.00	31	32
34	720.00	4.0000	100.00	0.00	0.00	0.00	0.00	32	33
35	810.00	3.0000	70.00	0.00	0.00	0.00	0.00	32	34
36	1350.00	6.0000	120.00	0.00	0.00	0.00	0.00	33	35
37	230.00	6.7000	120.00	0.00	0.00	0.00	0.00	35	36
38	380.00	6.3000	120.00	0.00	0.00	0.00	0.00	36	37
39	350.00	6.5000	120.00	0.00	0.00	0.00	0.00	36	37
40	360.00	6.3000	120.00	0.00	0.00	0.00	0.00	37	38
41	1100.00	6.0000	120.00	0.00	0.00	0.00	0.00	38	39
42	710.00	3.0000	70.00	0.00	0.00	0.00	0.00	39	40
43	430.00	6.0000	120.00	0.00	0.00	0.00	0.00	39	40
44	710.00	3.0000	70.00	0.00	0.00	0.00	0.00	35	40
45	360.00	6.0000	120.00	0.00	0.00	0.00	0.00	37	38
46	710.00	3.0000	70.00	0.00	0.00	0.00	0.00	38	40
47	360.00	6.0000	120.00	0.00	0.00	0.00	0.00	40	41
48	360.00	3.0000	70.00	0.00	0.00	0.00	0.00	40	41
49	330.00	3.0000	70.00	0.00	0.00	0.00	0.00	36	41

50	380.00	2.0000	65.00	0.00	0.00	0.00	0.00	41	42
51	370.00	4.0000	90.00	0.00	0.00	0.00	0.00	35	42
52	360.00	4.0000	100.00	0.00	0.00	0.00	0.00	42	43
53	360.00	2.0000	65.00	0.00	0.00	0.00	0.00	42	43
54	320.00	6.0000	120.00	0.00	0.00	0.00	0.00	33	43
55	380.00	6.0000	120.00	0.00	0.00	0.00	0.00	43	44
56	360.00	3.0000	70.00	0.00	0.00	0.00	0.00	44	45
57	370.00	6.0000	120.00	0.00	0.00	0.00	0.00	44	45
58	380.00	6.0000	120.00	0.00	0.00	0.00	0.00	40	53
59	450.00	6.0000	120.00	0.00	0.00	0.00	0.00	52	53
60	660.00	6.0000	120.00	0.00	0.00	0.00	0.00	47	52
61	360.00	6.1000	65.00	0.00	0.00	0.00	0.00	46	47
62	330.00	6.0000	120.00	0.00	0.00	0.00	0.00	44	46
63	50.00	2.0000	65.00	0.00	0.00	0.00	0.00	45	46
64	40.00	6.0000	120.00	0.00	0.00	0.00	0.00	47	48
65	250.00	6.0000	120.00	0.00	0.00	0.00	0.00	48	49
66	30.00	6.0000	120.00	0.00	0.00	0.00	0.00	49	50
67	230.00	2.0000	65.00	0.00	0.00	0.00	0.00	47	50
68	660.00	6.0000	120.00	0.00	0.00	0.00	0.00	50	51
69	270.00	6.0000	120.00	0.00	0.00	0.00	0.00	51	52
70	350.00	5.0000	80.00	0.00	0.00	0.00	0.00	52	54
71	350.00	5.0000	80.00	0.00	0.00	0.00	0.00	54	55
72	350.00	5.0000	80.00	0.00	0.00	0.00	0.00	55	56
73	450.00	5.0000	80.00	0.00	0.00	0.00	0.00	18	56
74	450.00	5.0000	80.00	0.00	0.00	0.00	0.00	19	50
75	500.00	5.0000	80.00	0.00	0.00	0.00	0.00	18	19
76	940.00	5.0000	80.00	0.00	0.00	0.00	0.00	17	19
77	450.00	7.0000	110.00	0.00	0.00	0.00	0.00	15	17
78	1820.00	6.0000	120.00	0.00	0.00	0.00	0.00	4	17
79	520.00	6.0000	120.00	0.00	0.00	0.00	0.00	5	16
80	530.00	4.0000	100.00	0.00	0.00	0.00	0.00	6	16
81	1900.00	7.0000	110.00	0.00	0.00	0.00	0.00	1	17
82	1970.00	12.0000	130.00	0.00	0.00	0.00	0.00	9	19
83	290.00	5.0000	80.00	0.00	0.00	0.00	0.00	19	57
84	350.00	12.0000	130.00	0.00	0.00	0.00	0.00	57	56
85	430.00	12.0000	130.00	0.00	0.00	0.00	0.00	59	60
86	130.00	6.0000	120.00	0.00	0.00	0.00	0.00	60	61
87	370.00	2.0000	60.00	0.00	0.00	0.00	0.00	61	63
88	300.00	6.0000	120.00	0.00	0.00	0.00	0.00	63	64
89	250.00	6.0000	120.00	0.00	0.00	0.00	0.00	62	65
90	350.00	12.0000	130.00	0.00	0.00	0.00	0.00	60	62
91	370.00	4.0000	120.00	0.00	0.00	0.00	0.00	51	62
92	340.00	6.0000	120.00	0.00	0.00	0.00	0.00	51	65
93	4250.00	4.0000	120.00	0.00	0.00	0.00	0.00	7	9
94	1570.00	6.0000	120.00	0.00	0.00	0.00	0.00	17	50
95	380.00	12.0000	130.00	0.00	0.00	0.00	0.00	16	58
96	380.00	12.0000	130.00	0.00	0.00	0.00	0.00	57	58
97	450.00	6.0500	130.00	0.00	0.00	0.00	0.00	19	21
98	360.00	8.0000	130.00	0.00	0.00	0.00	0.00	56	59
99	360.00	8.0000	130.00	0.00	0.00	0.00	0.00	55	60
100	300.00	8.0000	130.00	0.00	0.00	0.00	0.00	54	62

JUNCTION NUMBER	FLOWRATE	PIPE NUMBERS	ELEVATION	PATH FROM PREVIOUS JUNCTION
1	0.000	-1 2 81		4625.000 1
2	1.000	-2 3		4600.000 2
3	4.000	-3 4		4585.000 3

4	5,000	-4	5	78	4577,000	4
5	2,000	-5	6	79	4577,000	5
6	3,000	-6	7	80	4575,000	6
7	8,000	-7	8	13 14 93	4495,000	7
8	0,000	-8	-9	10	4525,000	8
9	0,000	-10	11	-93	4425,000	10
10	-300,000	-11	12		4425,000	11
11	3,000	-12	-13		4450,000	12
12	0,000	-14	15	94	4490,000	-13 14
13	7,000	-15	16	41	4542,000	15
14	2,000	-16	17	20	4548,000	16
15	4,000	-17	18	19 77	4575,000	17
16	5,000	-18	-79	80	4572,000	18
17	4,000	76	-77	-78 -81	4575,000	-18 77
18	1,000	75	-76	95 97	4556,000	76
19	5,000	73	74	-75 83	4545,000	75
20	4,000	23	42	43 -74	4540,000	74
21	4,000	-23	24	28 -77	4548,000	23
22	4,000	-24	25	27	4553,000	24
23	4,000	-19	-25	26	4560,000	25
24	3,000	-20	21	-26	4545,000	26
25	2,000	-21	22	-27	4540,000	21
26	4,000	-22	-28	29	4535,000	22
27	1,000	-29	30	-41	4520,000	29
28	1,000	-30	31	-42	4525,000	30
29	2,000	-31	32	40 44	4502,000	31
30	1,000	-32	33	-94	4475,000	32
31	12,000	-33	34		4450,000	33
32	12,000	-34	35		4455,000	34
33	5,000	-35	36	37 54		

					4505.000	35
34	12.000	-36			4450.000	36
35	2.000	-37	38	51	4502.000	-36 37
36	7.000	-38	39	49	4502.000	38
37	5.000	-39	-40	46	4505.000	39
38	5.000	45	-46	47	4528.000	46
39	6.000	-43	-44	-45	4532.000	45
40	4.000	-47	48	58	4522.000	-45 47
41	4.000	-48	-49	50	4515.000	48
42	4.000	-50	-51	52	4510.000	50
43	3.000	-53	-54	55	4502.000	53
44	2.000	-55	56	57	4505.000	55
45	3.000	-56	63		4490.000	56
46	3.000	61	-62	-63	4490.000	63
47	5.000	60	-61	64	4497.000	61
48	5.000	-64	65		4497.000	64
49	4.000	-65	66		4500.000	65
50	4.000	-66	-67	68	4500.000	66
51	4.000	-68	69	91	4517.000	68
52	4.000	59	-69	-69	4517.000	69
53	3.000	-52	-57	-58	4512.000	59
54	2504.000	-70	71	100	4525.000	-59 70
55	2.000	-71	72	99	4530.000	71
56	2.000	-72	-73	98	4535.000	72
57	2.000	-83	84	96	4547.000	-73 83
58	0.000	-82	-95	-96	4540.000	96
59	3.000	-84	85	-98	4540.000	-96 84
60	3.000	-85	86	90	4533.000	85
61	2.000	-86	87		4533.000	86
62	2.000	89	-90	-91	4536.000	-86 90

63	1.000	-87 88 -89	4526.000	89
64	2.000	-88	4515.000	88
65	2.000	-92	4515.000	-88 -89 -91 92

LOOP NUMBER	PIPE NUMBERS									
1	2	3	4	78	-81					
2	-6	79	-80							
3	77	-78	5	79	-18					
4	-7	80	-18	-17	-16	-15	-14			
5	41	30	31	32	-94	15				
6	19	26	-20	17						
7	-21	-26	-25	27						
8	-22	-27	-24	28						
9	-23	42	-30	-29	-28					
10	-31	-42	43	-44						
11	-40	44	-45	-46						
12	39	46	47	48	-49					
13	-48	58	-52	-50						
14	38	49	50	-51						
15	-32	40	-39	-38	-37	-35	-34	-33		
16	47	51	53	-54						
17	52	-57	-55	-53						
18	-56	62	-63							
19	57	-59	-60	-61	-62					
20	-43	-74	73	-72	-71	-70	59	-58	-47	45
21	-19	77	76	97	24	25				
22	82	-93	-76	-81	-1					
23	69	70	100	-91						
24	60	-69	-68	-67						
25	-64	67	-66	-65						
26	86	87	-89	-90						
27	-11	-93	13	-12						
28	-8	93	-10							
29	16	20	21	22	29	-41				
30	-75	95	-96	-83						
31	23	-97	75	74						
32	-73	83	84	-98						
33	72	98	85	-99						
34	71	99	90	-100						

PATH NUMBER	ENERGY DIFFERENCE	PIPE NUMBERS								
1	169.000	1	2	3	4	5	6	7	8	-9

THESE ARE THE RESULTS FOR TRIAL NUMBER 5

PIPE NUMBER	FLOWRATE	HEAD LOSS	PUMP HEAD	MINORLOSS	VELOCITY	HL/1000
1	306.960	6.177	0.000	0.000	3.403	9.652
2	13.784	4.355	0.000	0.000	0.426	2.444
3	12.784	1.403	0.000	0.000	0.580	2.126
4	8.784	0.007	0.000	0.000	0.100	0.013
5	0.143	0.000	0.000	0.000	0.007	0.000
6	-43.594	-0.167	0.000	0.000	-0.722	-0.523
7	-89.059	-2.098	0.000	0.000	-1.011	-0.974
8	-76.501	-1.436	0.000	0.000	-0.968	-0.736

THE CHECK VALVE IN LINE NUMBER 9 IS CLOSED

10	-77.974	-1.869	0.000	0.000	-0.885	-0.763
11	-148.261	-1.300	0.000	0.000	-1.909	-3.170
12	131.739	0.476	0.000	0.000	0.841	0.496
13	-128.739	-3.996	0.000	0.000	-1.461	-1.931
14	198.466	2.195	0.000	0.000	2.252	4.304
15	111.140	1.721	0.000	0.000	1.261	1.471
16	-80.386	-0.229	0.000	0.000	-0.827	-0.636
17	-99.265	-0.357	0.000	0.000	-1.022	-0.941
18	-79.202	-0.864	0.000	0.000	-0.899	-0.785
19	180.765	1.739	0.000	0.000	2.051	3.620
20	16.879	1.316	0.000	0.000	0.766	3.557
21	17.947	1.594	0.000	0.000	0.815	3.985
22	17.395	1.429	0.000	0.000	0.789	3.761
23	-246.727	-2.061	0.000	0.000	-2.799	-6.440
24	-168.249	-1.173	0.000	0.000	-1.907	-3.169
25	-173.697	-1.345	0.000	0.000	-1.971	-3.362
26	3.068	0.057	0.000	0.000	0.139	0.151
27	1.448	0.014	0.000	0.000	0.066	0.038
28	26.776	0.027	0.000	0.000	0.276	0.072
29	40.171	0.055	0.000	0.000	0.413	0.152
30	223.697	1.755	0.000	0.000	2.302	4.236
31	214.353	1.722	0.000	0.000	2.206	3.914
32	-30.336	-7.286	0.000	0.000	-1.138	-6.623
33	55.989	0.442	0.000	0.000	0.635	0.413
34	44.989	1.921	0.000	0.000	1.123	2.668
35	31.989	9.415	0.000	0.000	1.452	11.623
36	12.000	0.032	0.000	0.000	0.136	0.024
37	-136.477	-0.415	0.000	0.000	-1.242	-1.257
38	-183.551	-1.231	0.000	0.000	-1.992	-3.240
39	-217.337	-1.207	0.000	0.000	-2.101	-3.448
40	232.699	1.440	0.000	0.000	2.395	4.557
41	184.526	4.137	0.000	0.000	2.094	3.761
42	-8.344	-0.685	0.000	0.000	-0.372	-0.965
43	204.328	1.953	0.000	0.000	2.318	4.542
44	9.990	0.956	0.000	0.000	0.453	1.347
45	-208.319	-1.695	0.000	0.000	-2.364	-4.708
46	10.662	1.023	0.000	0.000	0.470	1.441
47	213.681	1.776	0.000	0.000	2.425	4.935
48	-8.394	-0.351	0.000	0.000	-0.381	-0.976
49	16.786	1.232	0.000	0.000	0.762	3.521
50	4.692	0.923	0.000	0.000	0.448	2.429
51	55.075	0.921	0.000	0.000	1.063	2.490
52	52.760	1.345	0.000	0.000	1.347	3.736
53	2.706	0.357	0.000	0.000	0.276	0.991
54	151.466	0.835	0.000	0.000	1.719	2.609
55	151.172	0.989	0.000	0.000	1.715	2.600
56	10.033	0.407	0.000	0.000	0.455	1.357
57	4.324	0.001	0.000	0.000	0.049	0.004
58	218.075	1.947	0.000	0.000	2.474	5.124
59	-272.159	-3.476	0.000	0.000	-3.088	-7.724
60	67.299	0.383	0.000	0.000	0.764	0.581
61	138.848	2.424	0.000	0.000	1.524	6.378
62	134.815	0.694	0.000	0.000	1.530	2.103
63	7.033	0.290	0.000	0.000	0.718	5.809
64	44.490	0.021	0.000	0.000	0.732	0.537
65	59.490	0.116	0.000	0.000	0.675	0.462
66	55.490	0.012	0.000	0.000	0.630	0.406
67	2.059	0.149	0.000	0.000	0.710	0.597
68	53.849	0.251	0.000	0.000	0.608	0.380

69	-24.221	-0.024	0.000	0.000	-0.275	-0.028
70	309.237	17.634	0.000	0.000	5.053	50.382
71	-328.888	-19.765	0.000	0.000	-5.374	-56.477
72	-141.838	-4.163	0.000	0.000	-2.317	-11.895
73	113.054	3.517	0.000	0.000	1.847	7.815
74	-46.743	-0.695	0.000	0.000	-0.764	-1.523
75	103.173	3.299	0.000	0.000	1.684	6.598
76	87.989	4.618	0.000	0.000	1.438	4.913
77	-204.828	-1.139	0.000	0.000	-1.707	-2.530
78	3.641	0.005	0.000	0.000	0.041	0.003
79	61.737	0.257	0.000	0.000	0.700	0.495
80	22.465	0.407	0.000	0.000	0.574	0.769
81	293.176	9.340	0.000	0.000	2.444	4.916
82	2124.515	20.169	0.000	0.000	6.026	10.238
83	31.862	0.217	0.000	0.000	0.501	0.749
84	2028.939	3.290	0.000	0.000	5.755	9.401
85	1995.155	3.919	0.000	0.000	5.659	9.114
86	9.813	0.002	0.000	0.000	0.111	0.016
87	7.813	2.612	0.000	0.000	0.798	7.059
88	2.000	0.000	0.000	0.000	0.023	0.001
89	-4.813	-0.001	0.000	0.000	-0.053	-0.004
90	1793.292	2.618	0.000	0.000	5.087	7.480
91	69.770	0.730	0.000	0.000	0.792	0.621
92	2.000	0.000	0.000	0.000	0.023	0.001
93	-90.285	-3.252	0.000	0.000	-1.024	-1.001
94	87.625	1.759	0.000	0.000	0.791	0.941
95	-125.438	-0.021	0.000	0.000	-0.356	-0.054
96	-1999.077	-3.476	0.000	0.000	-5.671	-9.147
97	109.254	0.553	0.000	0.000	1.240	1.228
98	-30.784	-0.009	0.000	0.000	-0.196	-0.029
99	-189.050	-0.251	0.000	0.000	-1.207	-0.835
100	-1865.876	-17.393	0.000	0.000	-11.909	-57.992

JUNCTION NUMBER	ELEVATION	PERFORF	GRADE LINE
1	4625.000	25.057	4682.823
2	4600.000	33.136	4676.468
3	4585.000	39.028	4675.065
4	4577.000	42.492	4675.058
5	4577.000	42.492	4675.058
6	4575.000	43.431	4675.225
7	4495.000	79.007	4677.323
8	4575.000	66.629	4678.759
9	4425.000	110.772	4680.628
10	4425.000	111.335	4681.927
11	4410.000	100.295	4681.451
12	4490.000	80.279	4675.760
13	4542.000	57.000	4673.539
14	4548.000	54.500	4673.768
15	4575.000	42.934	4674.126
16	4572.000	44.629	4674.989
17	4375.000	43.448	4675.264
18	4556.000	49.680	4670.646
19	4545.000	53.017	4667.347
20	4540.000	55.481	4668.032
21	4548.000	52.907	4670.093
22	4553.000	51.249	4671.266
23	4560.000	48.798	4672.611
24	4545.000	55.273	4672.553
25	4540.000	56.749	4670.959
26	4535.000	58.296	4669.530

27	4520.000	64.773	4669.175
28	4525.000	62.019	4668.120
29	4502.000	71.239	4666.398
30	4475.000	86.096	4673.683
31	4450.000	96.738	4673.242
32	4455.000	93.739	4671.320
33	4505.000	67.992	4661.906
34	4450.000	91.812	4661.873
35	4502.000	69.472	4662.320
36	4502.000	70.006	4663.551
37	4505.000	69.229	4664.758
38	4528.000	58.819	4663.735
39	4532.000	57.820	4665.430
40	4522.000	60.649	4661.959
41	4515.000	63.834	4662.310
42	4510.000	65.601	4661.387
43	4502.000	68.913	4661.030
44	4505.000	67.185	4660.043
45	4490.000	73.509	4659.635
46	4490.000	73.383	4659.345
47	4497.000	69.299	4656.921
48	4497.000	69.290	4656.900
49	4500.000	67.940	4656.784
50	4500.000	67.935	4656.777
51	4517.000	60.459	4656.521
52	4517.000	60.469	4656.545
53	4512.000	64.142	4660.020
54	4526.000	48.928	4638.911
55	4530.000	55.760	4658.676
56	4535.000	55.397	4662.839
57	4547.000	51.627	4666.139
58	4540.000	56.166	4669.610
59	4540.000	53.234	4662.849
60	4533.000	54.570	4658.930
61	4533.000	54.569	4658.928
62	4526.000	56.468	4656.312
63	4526.000	56.469	4656.313
64	4515.000	61.235	4656.313
65	4515.000	61.335	4656.541

THE AVERAGE (ABSOLUTE) CHANGE IN FLOWRATE FROM THE PREVIOUS TRIAL = 0.77950

APPENDIX D

000116

CELLA BARR ASSOCIATES

Project Name: Tombstone Water System Date Prepared: October 11, 1985
 _____ Engineer: EH Burgess
 Project No. 60157-01-10 Owner/Developer: City of Tombstone
 WP Code: F0391, EHB-17 (1) _____

PRELIMINARY COST ESTIMATE

ITEM NO.	ESTIMATED QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED COST
1.	3,860	LF	12" AC pipe*	\$ 27.50	\$ 106,150.00
2.	900	LF	8" AC pipe	\$ 20.00	\$ 18,000.00
3.	2,650	LF	6" AC pipe	\$ 18.00	\$ 47,700.00
4.	12	Ea.	Fire hydrants	\$ 1,500.00	\$ 18,000.00
5.	1	Ea.	300,000 gallon storage tank	\$125,000.00	\$ 125,000.00
6.	4	Ea.	Chlorination facilities	\$ 5,000.00	\$ 20,000.00
7.	1	Ea.	Booster pump (reservoir)	\$ 15,000.00	\$ 15,000.00
8.	1	Ea.	Booster pump (Well #3)	\$ 30,000.00	\$ 30,000.00
9.	1	Ea.	Automatic Controls (Well #2)	\$ 9,000.00	\$ 9,000.00
10.	2	Ea.	Repair valve vaults	\$ 2,500.00	\$ 5,000.00

*Cost of new pipe installation is partially dependent upon the trenching techniques which can be employed. If difficult trenching (requiring the use of explosives) is encountered, the cost will be much higher than if installation can be accomplished with standard trenching techniques. The cost shown above for this item has been adjusted to include difficult trenching for roughly one-third of the total length. If more or less difficult trenching is encountered, the cost will be higher or lower than this figure. Soil borings should be taken prior to bidding of this work to establish the level of trenching difficulty.

000117

CELLA BARR ASSOCIATES

Project Name: Tombstone Water System Date Prepared: October 11, 1985
 Engineer: EH Burgess
 Project No. 60157-01-10 Owner/Developer: City of Tombstone
 WP Code: F0391, EHB-17 (2)

PRELIMINARY COST ESTIMATE

ITEM NO.	ESTIMATED QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	ESTIMATED COST
11.	1	Ea.	Reservoir target	\$ <u>2,500.00</u>	\$ <u>2,500.00</u>
12.	1	LS	Reservoir roof repair	\$ <u>500.00</u>	\$ <u>500.00</u>
13.	1	Ea.	Backflow prevention valve	\$ <u>1,500.00</u>	\$ <u>1,500.00</u>
14.	1	LS	Refurbishment of valve vault between storage tank & reservoir	\$ <u>25,000.00</u>	\$ <u>25,000.00</u>
Subtotal - Construction Costs					\$ <u>423,350.00</u>
Engineering & Contingencies @ 15%					\$ <u>63,500.00</u>
Total Costs for Improvements					\$ <u>486,850.00</u>

000118



JABA INC.
 2100 N. Wilmot Rd. #218
 Tucson, AZ 85712
 (602) 885-9141
 (FAX) 721-2768

FAX TRANSMITTAL

of pages 2

TO: Jerry Niedt FROM: J.A. BRISCOE
 CO: Tombstone Der JABA, INC.
 DATE: 4/7/93 PHONE: (602) 721-1375
 FAX # (308) 382-7482 FAX # (602) 298-6688 *2
 COMMENTS _____

April 1, 1993

Mr. Donald G. Bell
 Water Pollution Compliance Officer
 AZ Dept. Of Environmental Quality
 Office Of Water Quality
 3033 N. Central Avenue
 Phoenix, AZ USA 85012

Dear Mr. Bell,

Re: Progress report on the Contention Mine area, Tombstone Mining District, Cochise County, Arizona

Drilling by USMX Inc. commenced in the Contention Open Pit area, on the west side of the Pit on January 19, 1993. Drilling continued with one interruption for a personnel break of four days and was completed February 24, 1993. Seven holes were vertical and to a maximum depth of 400 feet. The remainder of the holes were inclined at angles of 80, 70, 60 and 45 degrees from the horizontal. The maximum length of these holes was also 400 feet with a vertical depth of less than 400 feet. None of these holes encountered the permanent water table that lies at approximately 500 feet below the land surface, nor perched water tables. All holes were back filled and capped as per Arizona Department of Water Resources regulations. The appended map shows the locations of these holes.

After an approximate break of three weeks, drilling was commenced again on about March 18, 1993, and will be completed about the end of the first week of April, 1993. No details are yet available about this drilling. However all holes are being abandoned per regulation.

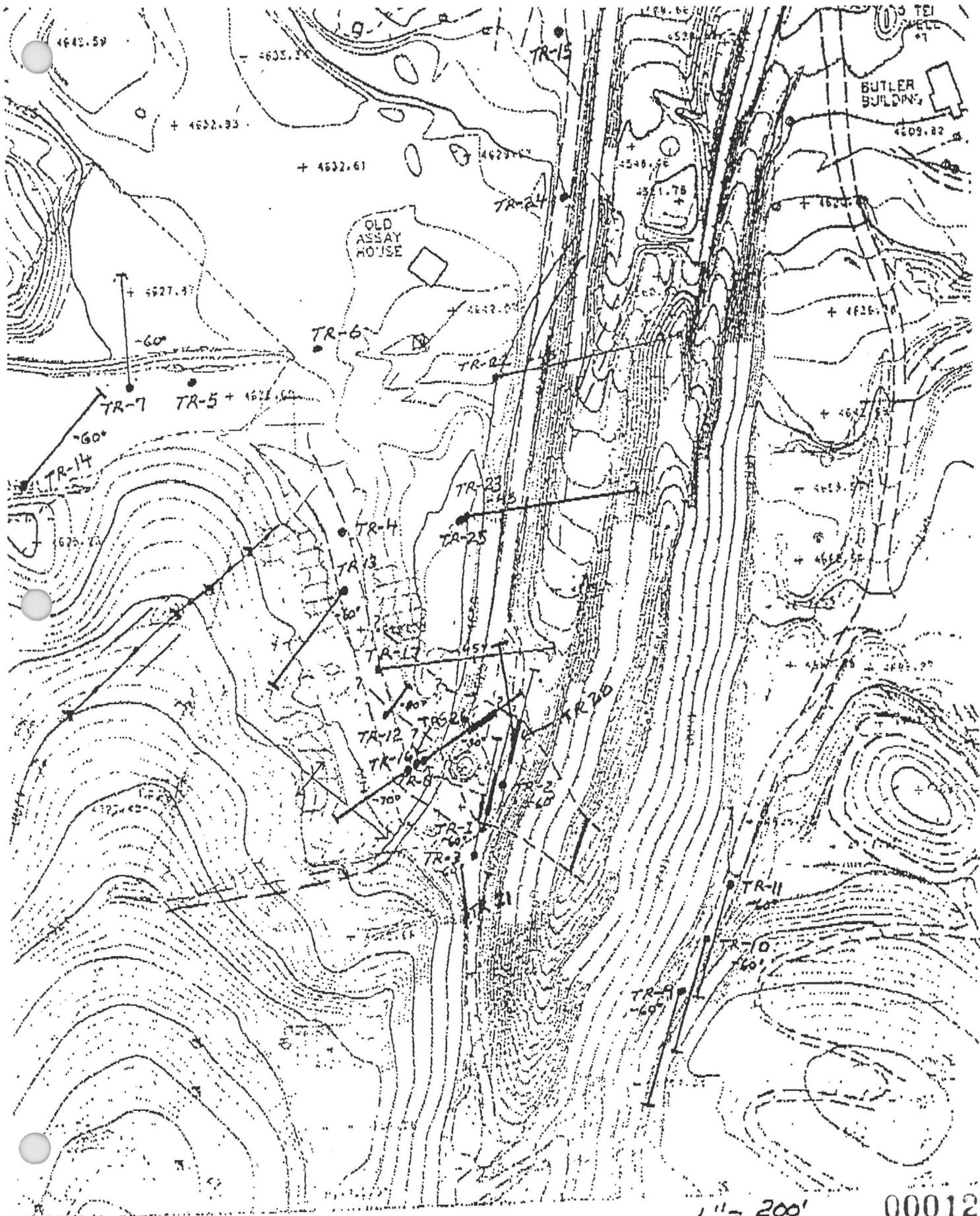
Two water monitor well sites have been chosen with the help of David Anderson of the ADEQ, and permitted. These wells will be drilled to a depth of 600 feet and capped until monitoring is started. Drilling on these wells will probably start next week and take about two days per well.

Reporting which is currently behind projected schedule should be caught up by mid April.

Very truly yours

James A. Briscoe

000119



1" = 200' 000120

Grid	+	Building	□	Concrete	----
		Trailer	==	Cattle Guard	—

Drilling Services Company

Becker Drills

United Divisions of Layne-Western Company, Inc.

12030 East Riggs Road
Chandler, Arizona 85249
(602) 895-9336 Fax: (602) 895-9536

11465 North Highway 2, P.O. Box 587
Commerce City, Colorado 80037
(303) 286-7776 Fax: (303) 289-7819

Mr. Jerry Neidfelt
Tombstone Development Corp.
FAX (308) 382-7482

April 22, 1993

Dear Mr. Neidfelt:

Pursuant to our phone conversation of 4-21-93 here are some estimates as to the costs to place 600 feet of casing in the hole we drilled on your Tombstone, Arizona property. The below listed prices are utilized in this estimate:

Sch 40 mild steel casing, 4"	\$7.00/foot
Type 304 SST screen, 0.20" slot	\$27.80/foot
Sch 80 PVC casing, 4"	\$3.50/foot
Sch 80 PVC screen 4"	\$4.80/foot

In speaking with my people here, the best method to install either type of casing would involve reaming the hole to at least a six inch diameter. With the steel casing we would attempt to install it open hole. If this was not successful we would then install washover casing, place the steel casing and then extract the washover. With the PVC, we would ream to six inches, install washover and then place the casing.

It appears to me that the PVC is the way to go because ultimately the methods of placement would most likely be the same. Your cost savings would be in materials. The estimate below indicates what I believe represents the outside costs to be for the above described work.

Activity	Rate/Duration	Cost
Reaming hole to 6"	6 hrs. @ \$150/hr.	\$900.00
Install washover	4 hrs. @ \$150/hr.	\$600.00
Install PVC	4 hrs. @ \$150/hr.	\$600.00
Retreive Washover	2 hrs. @ \$150/hr.	\$300.00
560' 4" PVC+15%	\$4.00/foot	\$2,240.00
40' PVC screen+15%	\$5.50/foot	\$220.00
TOTAL	---	\$4,860.00

Please let me know what you decide. Sincerely,

R. Histed
Rich Histed

000121

cc: J. Briscoe
T. Waldrip
DSC

Becker

6/11/93
to Rick



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Fife Symington, Governor Edward Z. Fox, Director

REF: WP-93-1321
DATE: May 13, 1993

J. Michael Ashworth, President
PBR Minerals, Inc.
PO Box 370
Tombstone, Arizona 85638

Re: PBR Minerals-Grand Central Leaching Facility; Groundwater Protection Permit No. G-0020-02;
Inventory Number 100334; Cochise County.

Dear Mr. Ashworth:

On January 20, 1989, Groundwater Protection Permit No. G-0020-20 was issued to PBR Minerals, Inc. for the purposes of operating the Grand Central Leaching Facility and to perform hydrologic investigations and necessary corrective actions relating to groundwater contamination which occurred as a result of the operation of a previous leaching facility at the Contention Mine site. PBR Minerals, Inc. did not fully comply with the terms and conditions of the permit. Based on the Department's review of this facility's file, it has been determined that PBR Minerals, Inc. has violated the following provisions:

STATUTORY/REGULATORY CITATION:

VIOLATION:

Arizona Revised Statute § 49-141.6.

Caused an environmental nuisance by polluting and contaminating domestic waters.

Arizona Revised Statute § 49-263.A.3.

Failed to monitor, sample and report as required by the permit.

Arizona Administrative Code R18-9-103.B.1.

Failed to comply with the terms and conditions of Groundwater Protection Permit Number G-0020-20.

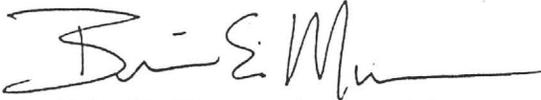
In accordance with the Arizona Administrative Code R18-9-121.F.1., due to the non-compliance with the conditions of Groundwater Protection Permit Number G-0020-02 and the apparent inability to correct this non-compliance, this letter is notification that the Director of ADEQ intends to revoke the permit. A public notice will be Published in a paper of general distribution in the area in which the facility resides, allowing for 30 days during which the public may comment on the proposed action. Please be informed that once revoked, any operation of a discharging facility requires that an Aquifer Protection Permit be issued prior to commencing operation.

received stamp with date 5/25/93 and signature

PBR Minerals, Inc.
GWPP Revocation
May 10, 1993
page 2

If you have any questions concerning this matter, please contact Don Bell of the Water Pollution Compliance Unit at (602)207-4613.

Sincerely,



Brian E. Munson, Assistant Director
Office of Water Quality
Arizona Department of Environmental Quality

BEM:DGB:arv

cc:
Roger Kennett, Plan Review and Permits
Al Roesler, Manager, Mining APP Unit
Andy Rendes, Southern Regional Office
Don Bell, Water Pollution Compliance Unit
Jerry Niedfeldt, President, Tombstone Development Company



000123



JABA INC.
2100 N. Wilmot Rd. #218
Tucson, AZ 85712
(602) 885-9141
(FAX) 721-2768

June 11, 1993

Mr. Donald G. Bell
Water Pollution Compliance Officer
AZ Dept. Of Environmental Quality
Office Of Water Quality
3033 N. Central Avenue
Phoenix, AZ USA 85012

Dear Mr. Bell,

Re: Monthly report for May, 1993 on the Contention Mine area, Tombstone Mining District, Cochise Co., Arizona - prepared on behalf of the Tombstone Development Co., Inc., Grand Island, Nebraska.

The primary activity on the Contention Mine area during the month was exploration drilling by USMX Inc. of Denver Colorado. USMX on the first of May decided to join as a formal joint venture partner of Excellon Resources US Inc. the lease holder and Valdez Gold Inc. (see attached news release).

Starting in early January of 1993, USMX acted to test mineralization in the Tombstone area on a month by month basis. Joining in a Joint Venture with Excellon / Valdez in May for a minimum 3 month period is indicative of encouraging results from the previous work.

Excellon had prepared a computer model of the Contention Mine and surrounding area including the southeastern portion of the town of Tombstone. This model, known as a digital elevation model (DEM) can be displayed in a variety of formats and viewed from any angle. For this report, a typical topographic map was constructed and is shown in Figures 1, 2, and 3. Though the topography is available with 5 foot contour intervals, only the 25 foot contours are shown in these figures, so cultural features would stand out. All wells and exploration holes as of 4/15/93 were surveyed and plotted accurately on the map views, showing collar position as well as true bottom hole location in plan. Figure 4 is a north - south crosssectional view showing all exploration drill holes, current monitor wells including Tombstone City Well #1, anticipated monitor wells MW #1, and #2 and the mean water level plotted from TEI # 2.

As can be seen from Figure 4, all exploration drill holes are above the water table. These holes have been backfilled and plugged according to Arizona regulation. Samples of all cuttings

000124

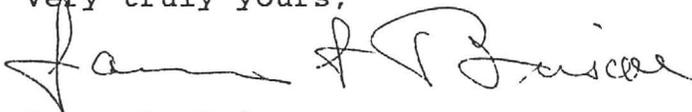
have been retained for further analysis, including surface intervals where dump material was cut. No perched water has been encountered.

Monitor wells #1 and #2 were spudded. After a 20 foot surface casing was cemented in, Monitor Well # 1 encountered broken and caving ground at about 80 feet, and was temporarily abandoned until a casing program could be designed and material acquired. Surface casing could not be placed because of caving conditions at Monitor Well # 2 and the site was abandoned. Monitor Well #3 was sited 900 feet east and due south of Monitor Well #1. After setting the 20 feet of surface casing, caving conditions were encountered in this well also. It too was temporarily abandoned.

PVC casing and screen has been designed for Monitor Wells # 1 and #3, and drilling them to 600 feet and casing is planned for the last half of June, or as soon as a rig is available. Sampling of the water table will begin after well completion.

It is anticipated that the drilling program in the Contention area may define an ore body. Thus an APP for operation may be required. It is understood that the permit issued to PBR Minerals Inc. is in noncompliance, and an APP for closure is required. Both will be started on by mid June.

Very truly yours;



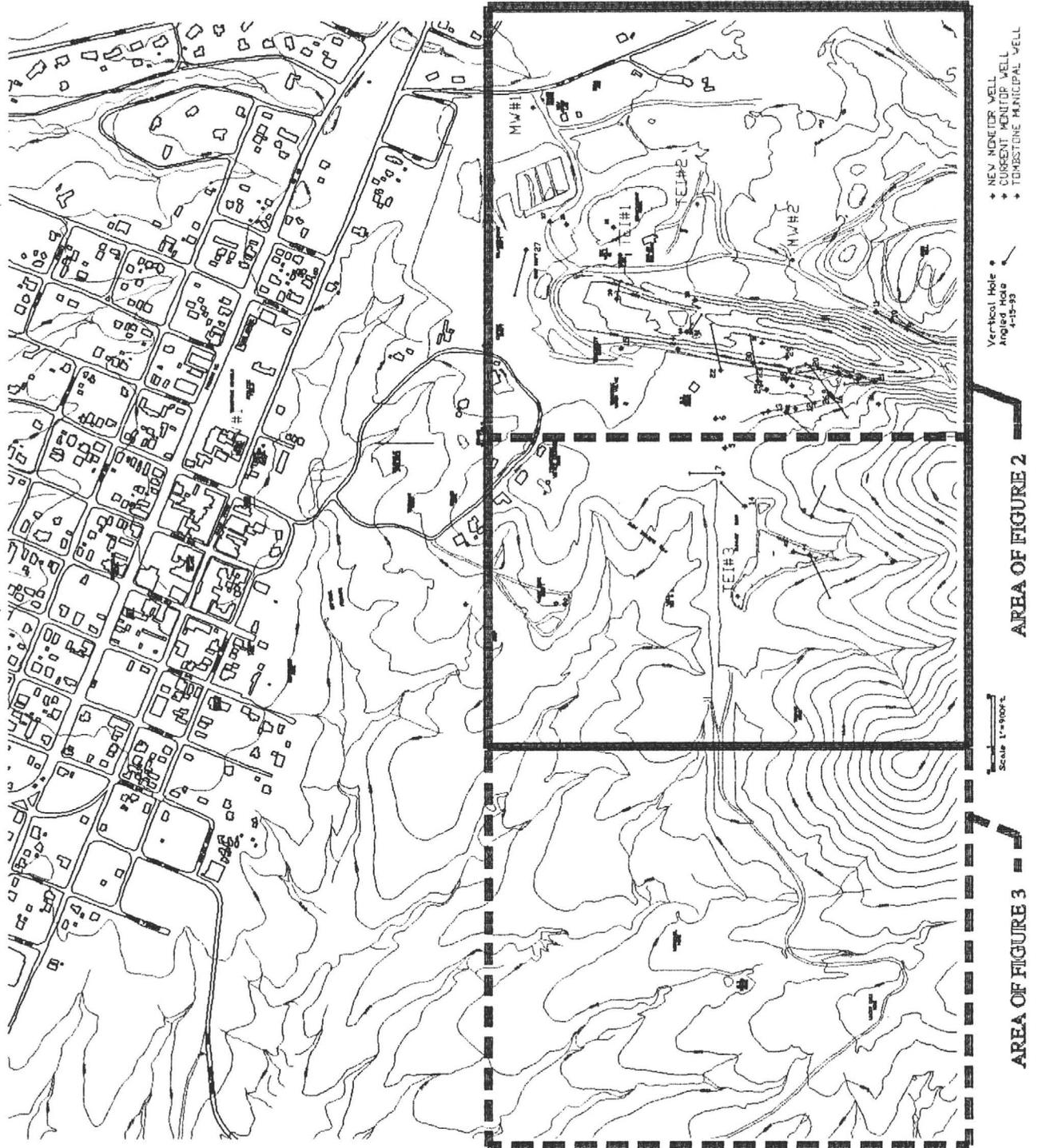
James A. Briscoe
Registered Geologist

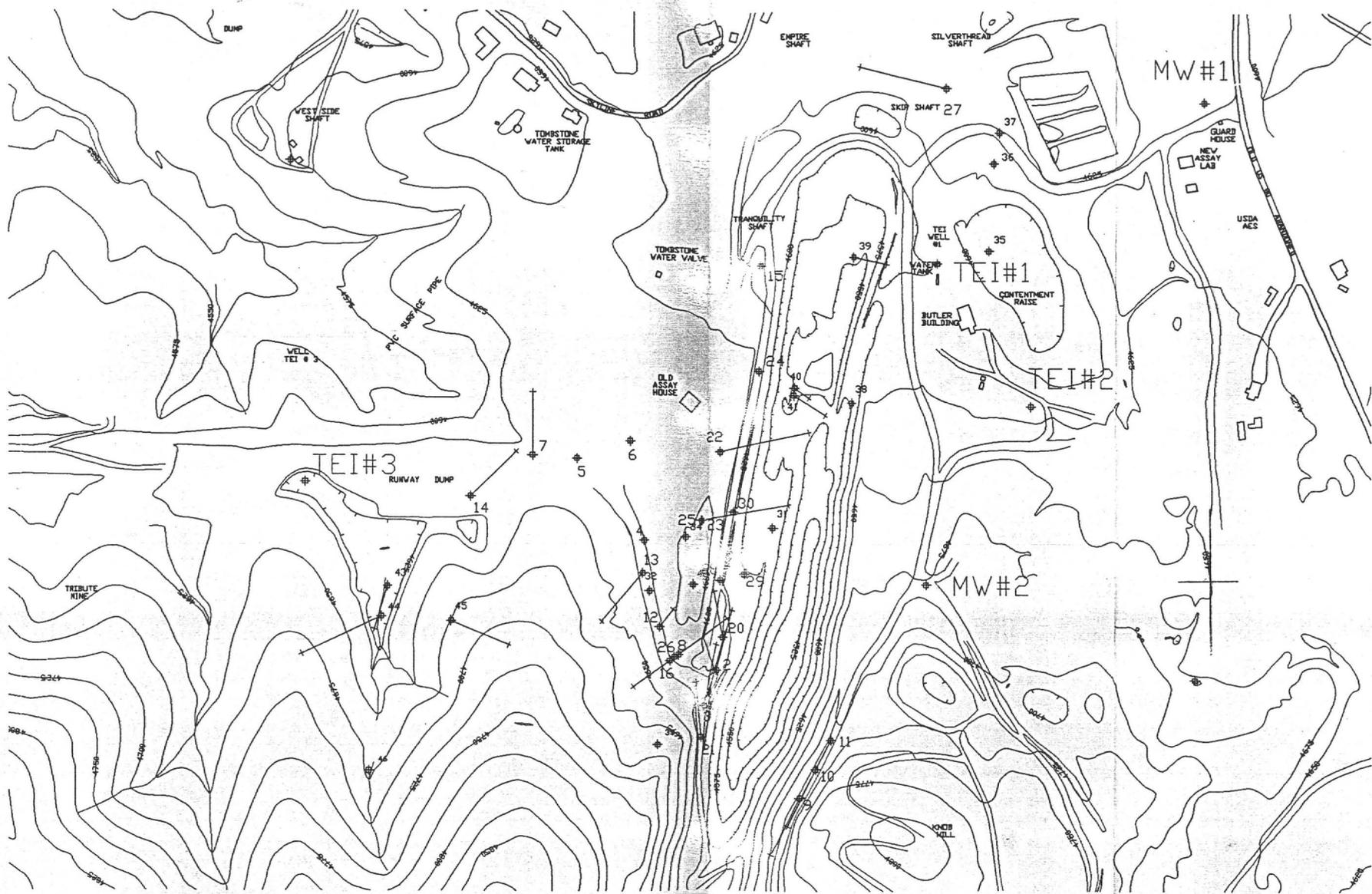
DGB06/01/93

cc: Jerry Niedfelt, Pres., Tombstone Development Co.
A. Douglas MacKenzie, Pres., Excellon Resources USA Inc.
James Knox, Pres., USMX Inc.

000125

FIGURE 1



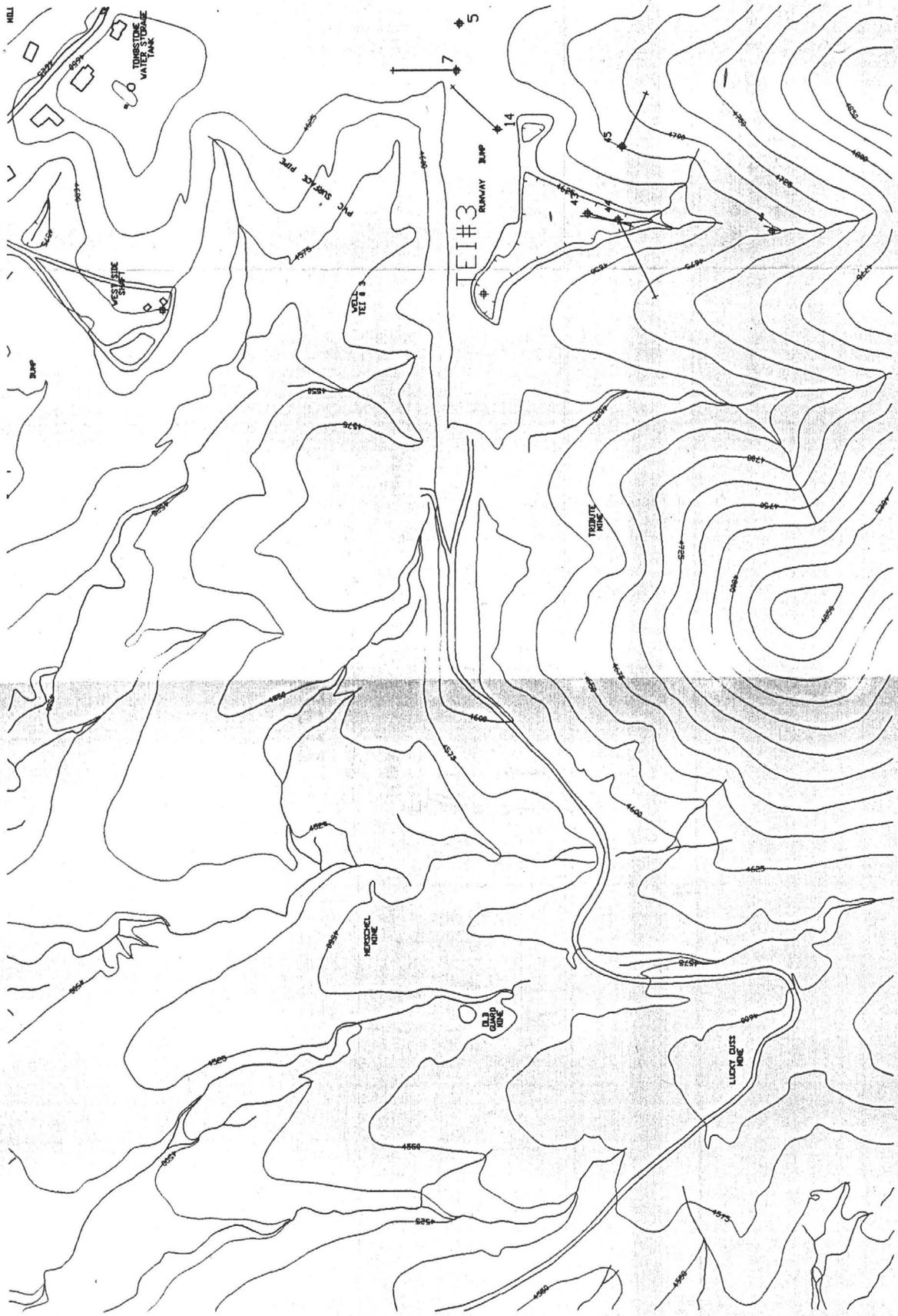


000127

Scale 1"=300ft.

FIGURE 2

- ✦ NEW MONITOR WELL
- ✦ CURRENT MONITOR WELL
- ✦ TOMBSTONE MUNICIPAL WELL



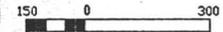
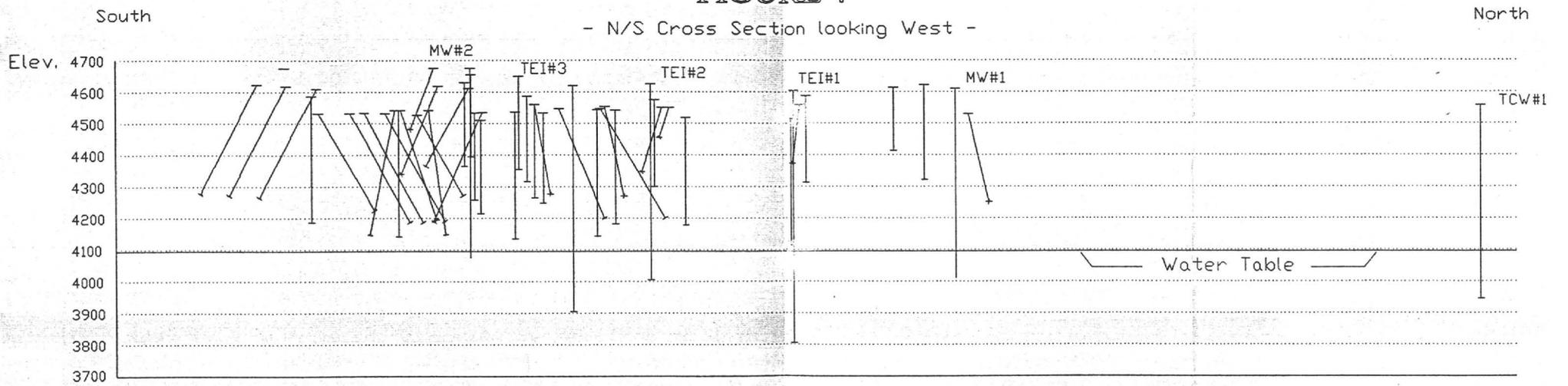
- ◆ NEW MONITOR WELL
- ◆ CURRENT MONITOR WELL
- ◆ TOMBSTONE MUNICIPAL WELL

FIGURE 3

Scale 1"=300ft.

FIGURE 4

- N/S Cross Section looking West -



Vertical & Horizontal Scale 1"=300 ft.
4-15-93

000129

June 30, 1993

Jeff Ende, Thanks for the call this morning. Please review this and review this with Dave Anderson, and with Ed Pond too, please.

PLEASE make your comments in BOLD CAPITALS. That way I can integrate the rest of the comments and put them back into the master.. Thanks for the help and welcome aboard!

Don Bell-WQPD/DGB-4613

Draft Copy

CERTIFIED MAIL
Return Receipt Requested

Date: June 30, 1993
REF: WP923

Jerry Neidfeldt, President
Tombstone Development Co.
P.O.Box 1445
Grand Island, Nebraska 68803

RE: Tombstone Development Company Inc.-Site Inspection; Inventory
No. 102806; Cochise County.

Dear Mr. Niedfeldt:

TECHNICAL ASSISTANCE MEETING SUMMARY

The Arizona Department of Environmental Quality ("ADEQ"), conducted an inspection on June 22, 1993 at the Tombstone Development Company Mine Site ("Facility"), near Tombstone, Arizona. During the facility inspection, violations of the Arizona Revised Statutes (A.R.S.) and Arizona Administrative Code (A.A.C.) were observed.

I. MONITORING AND SAMPLING

A.R.S. 49-263 The Facility shall establish that the previously permitted Mining and leaching sites are environmentally safe.

CORRECTIVE ACTION

1. Within 90 days of the receipt of this letter, a sampling line shall be established across the old heap leach site in areas that

*I believe he means the
old preg & barren ponds*

000130

Tombstone Development Company, Inc.
Technical assistance letter
page 2

① EPA 1312 testing ppt
synthetic New Mining
② ASP / ANP acid form
ppt. / Acid Neutral. PA

showed the higher signs of contamination from previous sampling. The depth of the sampling shall be established by on-site investigation of cross sections of the soils present. Photographs of these profiles shall be submitted to indicate the reasoning of the choices made. A sufficient number of samples to indicate the condition of the area shall be collected. The samples shall be tested for cyanide, arsenic, copper, pH, and total Nitrogen content.

what is returned for Cu

2. Within 90 days of the receipt of this letter, a pre-approved sampling plan shall be developed and completed to indicate that the old washed pile of tailings is safe. The samples shall be tested for cyanide, arsenic, copper, pH, and total Nitrogen content.

3. Within 60 days of the receipt of this letter, monitor wells shall be drilled which will establish the flow gradient of the underground water, the character of the water in the previously polluted areas, and the presence of pollutants for any future mining operations known at this time. These monitoring wells shall be developed to become a part of the Facilities future monitoring and testing procedures. The samples shall be tested for total coliform, cyanide, arsenic, copper, pH, and total Nitrogen content. Once the Aquifer has been characterized, the facility shall develop a regular monitoring and reporting scheme for ADEQ review and approval. This schedule shall be carried out on the regular basis specified until the permits are completed.

4. Following the development and testing of these wells, a comprehensive report shall be developed, within 30 days, correlating the sites monitor wells and the outside well data. This report shall indicate the character and condition of the Aquifer and any pollution that may have been caused at the site or any adjacent locations. This evaluation shall establish the existing conditions prior to the start of any new activity. A compliance schedule describing any remediation necessary shall be developed and presented with this report.

5. Within 60 days of the receipt of this letter, a watershed control map shall be developed to indicate the runoff controls at the site. These controls shall be consistent with the Aquifer Protection Permit (APP) Needs as they are known at this time. An operations and maintenance manual shall be developed to describe the necessary maintenance required to keep the watershed controls in proper operating condition. This map and the corresponding O and M Manual shall be updated as facilities are changed at the site.

We need to identify any pollution that may be coming out of shaft or down hole we may not be responsible for.

000131

II. PERMITS

Within 30 days the facility shall contact Don Bell of ADEQ's Water pollution Compliance Staff to arrange for pre application meetings for the following Permits:

1. NPDES permit-Clean Water Act Section 402.
2. Aquifer Protection Permit- A.A.C. Title 18, Chapter 9.
3. UST Closure Permits- A.R.S. § 49-1008
4. Solid Waste Closure Permits-A.R.S. § 49-762

III. SAMPLE ASSAY LABORATORY SITES

A.A.C. R18-8-261 and R18-8-262. Laboratory chemicals and process chemicals shall be handled, stored, transported and disposed of in a proper manner consistent with the above Arizona Revised Environmental Statutes and Title 27 of the Arizona Mining Statutes.

CORRECTIVE ACTION

Laboratory and process chemicals kept on site shall be stored in properly vented rooms under lock and key. Chemicals which are out of date or which are no longer desired, shall be disposed of in the properly described manner, with a proper manifest to a properly designated disposal area.

IV. UNDERGROUND STORAGE TANKS (UST) SITES

A.R.S. 49-1002 Petroleum product storage tanks located on site have not been properly registered with the State of Arizona and have not been properly constructed, and not properly installed, according to the requirements of the State.

CORRECTIVE ACTION

Within 30 days of receipt of this letter, the petroleum products contained in the tanks shall be characterized by a state approved vendor and disposed of in the proper manor for the products located in each of the tanks. These actions shall be properly manifested while being carried out. Disposal shall be at an approved facility.

Within 30 days the Facility will make arrangements for a pre-permit application meeting with the ADEQ UST Section to develop the necessary closure requirements and remediation. Remediation shall include both above and below ground remediation.

Tombstone Development Company, Inc.
Technical assistance letter
page 4

V. SOLID WASTE SITES

A.A.C. R18-8-702 (proposed rule). Waste tires were observed piled in an unregistered landfill at the Facility.

CORRECTIVE ACTIONS:

Within 90 days of receipt of this letter, the facility will contact the ADEQ solid Waste Unit and file with the Director the required one time notice of commencement of burial of mining industry off road tires as required by the above rule (copy of proposed rule is attached). A.A.C. R18-8-701.5. defines "Mining industry off road motor vehicle waste tires" as an off road waste tire which is greater than three feet in outside diameter which was used in mining. This notification will identify the location of the burial cell. Since the burial cells shall become a part of the Aquifer Protection Permit (APP), I am requesting that these engineering APP requirements be completed and reviewed by APP Technical Review before complete burial is carried out. Tires which do not fit the description of a waste mining tire shall be deposited in a proper off-site Waste Tire Collection Site (WTCS).

ATTACHMENTS:

Copy of Proposed Chapter 8, Waste Tires, Article 7.
Directory of Arizona Waste Tire Collection Sites.

A.R.S. § 49-762 The landfill was not registered with the Department as of October 1, 1992, as per part K of A.R.S. 49-762. The Facility is therefore deemed to be a new facility. As a new facility, according to A.R.S. 762.B., the Facility is required to have a facility plan prior to closure.

CORRECTIVE ACTION: Attached is a set of guidelines for closure of the landfill. Within thirty (30) days, the facility will contact Dan Zeller of the Solid Waste Unit (602-207-4118) and develop a closure plan to accommodate the solid Waste Unit, and which will meet the requirements of the APP Application which will later be submitted. At a minimum, a description of events shall be included

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Tombstone Development Company, Inc.
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with the APP applications. This closure plan will be submitted and approved by ADEQ prior to any action on site.

Before instigation of action to cover and cap the area, the Attorney General's Office shall be contacted to determine the disposition of the evidence in their case concerning the domestic dumping which occurred on the site. Contact Investigator Andy Rubalcava of the Attorney General's Office at 602-542-4853.

Within 90 days the Facility will research and develop a waste stream guideline which will describe how to provide the proper disposal of items that have been left on site. These items (both solid waste and hazardous waste) include but are not limited to:

Empty Cyanide Barrels
Waste Plastic pipe and liner materials
Residues and sludges left in the heap leach area.
Cyanide Contaminated materials not leached or washed on site.
Laboratory and process chemicals
Septic wastes contaminated with laboratory chemicals. No
OTHERS?

ATTACHMENTS:

Waste Management Landfill Closure Guidelines-1992
Copy of the Solid Waste Statutes-Chapter 4.

VI. COMPLIANCE SCHEDULES

Within 90 days the Facility shall develop a compliance schedule that will describe the completion of all the items needed to complete the remediation of the site. This schedule shall include:

1. A monitoring and reporting schedule for the active portions of the facility.
2. A schedule for the permitting activities that are known as of the schedule delivery date. The Facility shall be responsible for the time for their participation and not for the Departments reviews.
3. A schedule for the planned cleanup and remediation actions to be carried out.

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Tombstone Development Company, Inc.
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4. The schedules shall describe the development and time elements needed to plan and execute each of the compliance items through completion and inspection.

FACILITY is required to submit documentation of compliance with each of the referenced rules by the date specified for each.

In addition, FACILITY has agreed to enter into a Consent Order, with a compliance schedule, for those violations which cannot be addressed within Thirty (30) calendar days of the date of the technical assistance meeting. ADEQ will contact FACILITY when a draft of the order has been completed and a meeting will be scheduled at that time.

Please be advised that the violations listed above, which FACILITY agreed to resolve in thirty (30) calendar days, must be addressed within that time frame. Any violations which are not addressed within that time frame, will be incorporated into the Consent Order.

ADEQ is accountable to the citizens of Arizona and mandated by law to ensure that facilities are in compliance with all applicable statutes and rules. ADEQ must be assured that compliance has been achieved. Therefore, any submittal required by this letter must include the following statement and must be signed by a person authorized to act on behalf of the company or empowered to make decisions on behalf of the company to certify to the ADEQ their knowledge of and accountability for the submittal:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you require further assistance, please contact me at (602) 207
****.

Sincerely,

Compliance Officer
Water Pollution Compliance Unit
Office of Water Quality

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Tombstone Development Company, Inc.
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page 7

DGB:arv

CC:

Al Roesler, Manager, Mining APP Unit
Jeff Emde, Mining APP Unit
Ron Frey, Manager, WPCU
Peggy Guichard-Watters, Manager, OWQ Compliance Section
Dave Anderson, PRP, APP Hydrology
Roger Kennett, PRP, APP section
Cochise County Health Department

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Tombstone Development Company, Inc.
Technical assistance letter
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DISTRIBUTION LIST

Jerry Neidfeldt, President
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Grand Island, Nebraska 68803

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Excellon Resources Inc.
c/o Jabba Inc.
2100 N. Wilmot
Tucson, Arizona 85712
(602)721-1375

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ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

Fife Symington, Governor Edward Z. Fox, Director

CERTIFIED MAIL
Return Receipt Requested

Date: July 8, 1993
REF: WP923

Jerry Neidfeldt, President
Tombstone Development Co.
P.O.Box 1445
Grand Island, Nebraska 68803

RE: Tombstone Development Company Inc.-Site Inspection and Technical Assistance Meeting Summary; Inventory No. 102806; Cochise County.

Dear Mr. Niedfeldt:

TECHNICAL ASSISTANCE MEETING SUMMARY

The Arizona Department of Environmental Quality ("ADEQ"), conducted an inspection on June 22, 1993 at the Tombstone Development Company Mine Site ("Facility"), near Tombstone, Arizona. During the facility inspection, violations of the Arizona Revised Statutes (A.R.S.) and Arizona Administrative Code (A.A.C.) were observed.

I. MONITORING AND SAMPLING

A.R.S. § 49-263 The Facility shall establish that the previously permitted mining and leaching sites are environmentally safe.

CORRECTIVE ACTION

Within ninety (90) days of receipt of this letter, the following actions shall be carried out:

1. A sampling line shall be established across the old pregnant and barren solution pond site in areas that showed the higher signs of contamination from previous sampling. The depth of the sampling shall be established by on-site investigation of cross sections of the soils present. Photographs of these profiles shall be submitted to indicate the reasoning of the choices made. A sufficient number of samples to

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indicate the condition of the area shall be collected. The samples shall be tested for the items listed in the attached Exhibit A.

2. A pre-approved sampling plan shall be developed and completed to indicate that the old washed pile of tailings is environmentally safe. The samples shall be tested for the items listed in the attached exhibit A.

3. Monitor wells shall be drilled which will establish the flow gradient of the underground water, the character of the water in the previously polluted areas, and the presence of pollutants for any future mining operations known at this time. These monitoring wells shall be developed to become a part of the Facilities future monitoring and testing procedures. The samples shall be tested for the items listed in the attached Exhibit A. Once the Aquifer has been characterized, the facility shall develop a regular monitoring and reporting scheme for ADEQ review and approval. This schedule shall be carried out on the regular basis specified until the permits are completed.

4. Following the development and testing of these wells, a comprehensive report shall be developed, within 30 days, correlating the sites monitor wells and the outside well data. This report shall indicate the character and condition of the Aquifer and any pollution that may have been caused at the site or any adjacent locations. This evaluation shall establish the existing conditions prior to the start of any new activity. A compliance schedule describing any remediation necessary shall be developed and presented with this report.

5. Within 60 days of the receipt of this letter, a watershed control map shall be developed to indicate the runoff controls at the site. These controls shall be consistent with the Aquifer Protection Permit (APP) Needs as they are known at this time. An Operations and Maintenance ("O & M") manual shall be developed to describe the necessary maintenance required to keep the watershed controls in proper operating condition. This map and the corresponding O & M Manual shall be updated as facilities are changed at the site.

II. PERMITS

Within 30 days the facility shall contact Don Bell of ADEQ's Water Pollution Compliance Staff to arrange for pre application meetings for the following Permits:

1. NPDES Permit-Clean Water Act Section 402.
2. Aquifer Protection Permit- A.A.C. Title 18, Chapter 9.
3. UST Closure Permits-A.R.S. § 49-1008
4. Solid Waste Closure Permits-A.R.S. § 49-762

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III. SAMPLE ASSAY LABORATORY SITES

A.A.C. R18-8-261 and R18-8-262. Laboratory chemicals and process chemicals shall be handled, stored, transported and disposed of in a proper manner consistent with the above Arizona Revised Environmental Statutes and Title 27 of the Arizona Mining Statutes.

CORRECTIVE ACTION

Laboratory and process chemicals kept on site shall be stored in properly vented rooms under lock and key. Chemicals which are out of date or which are no longer desired, shall be disposed of in the properly described manner, with a proper manifest to a properly designated disposal area.

IV. UNDERGROUND STORAGE TANKS (UST) SITES

A.R.S. § 49-1002 Petroleum product storage tanks located on site have not been properly registered with the State of Arizona and have not been properly constructed or installed according to the requirements of the state.

CORRECTIVE ACTION

Within 30 days of receipt of this letter, the petroleum products contained in the tanks shall be characterized by a state approved vendor and disposed of in the proper manor for the products located in each of the tanks. These actions shall be properly manifested while being carried out. Disposal shall be at an approved facility.

Within 30 days the Facility will make arrangements for a pre-permit application meeting with the ADEQ UST Section to develop the necessary closure requirements and remediation. Remediation shall include both above and below ground remediation.

V. SOLID WASTE SITES

A.A.C. R18-8-702 (proposed rule). Waste tires were observed piled in an unregistered landfill at the Facility.

CORRECTIVE ACTIONS:

Within 90 days of receipt of this letter, the facility will contact the ADEQ Solid Waste Unit and file with the Director the required one time notice of commencement of burial of mining industry off road tires as required by the above rule (copy of proposed rule is attached). A.A.C. R18-8-701.5. defines "Mining

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Tombstone Development Company, Inc.
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industry off road motor vehicle waste tires" as an off road waste tire which is greater than three feet in outside diameter which was used in mining. This notification will identify the location of the burial cell. Since the burial cells shall become a part of the Aquifer Protection Permit (APP), I am requesting that these engineering APP requirements be completed and reviewed by APP Technical Review before complete burial is carried out. Tires which do not fit the description of a waste mining tire shall be deposited in a proper Waste Tire Collection Site (WTCS).

ATTACHMENTS:

Copy of Proposed Chapter 8, Waste Tires, Article 7.
Directory of Arizona Waste Tire Collection Sites.

A.R.S. § 49-762 The landfill was not registered with the Department as of October 1, 1992, as per part K of A.R.S. 49-762. The Facility is therefore deemed to be a new facility. As a new facility according to A.R.S. 762.B., the Facility is required to have a facility plan prior to operation, and or closure.

CORRECTIVE ACTION: Attached is a set of guidelines for closure of the landfill. Within thirty (30) days, the facility will contact Dan Zeller of the Solid Waste Unit (602-207-4118) and develop a closure plan to accommodate the solid Waste Unit, and which will meet the requirements of the APP Application which will later be submitted. At a minimum, a description of events shall be included with the APP applications. This closure plan will be submitted and approved by ADEQ prior to any action on site.

Before instigation of action to cover and cap the area, the Attorney General's Office shall be contacted to determine the disposition of the evidence in their case concerning the domestic dumping which occurred on the site. Contact Investigator Andy Rubalcava of the Attorney General's Office at 602-542-4853.

Old equipment, containers, and other materials not contained in landfills shall be consolidated in centralized equipment or materials yards in a manner which will not be or become an environmental nuisance. Buildings and facilities which are conducive to rodent and insect infestation problems shall be remediated.

Within (90) days the Facility will research and develop a waste stream guideline which will describe how to provide the proper disposal of items that have been left on site. These items (both solid waste and hazardous waste) include but are not limited to:

- Empty cyanide barrels
- Waste plastic pipe and liner materials
- Residues and sludges left in the heap leach area.
- Cyanide contaminated materials not leached or washed on site.
- Laboratory and process chemicals
- Septic wastes contaminated with laboratory chemicals.
- Used or contaminated petroleum products
- Old equipment and used containers.
- Building materials no longer useful to the facility.

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Tombstone Development Company, Inc.
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This waste stream information shall be left in the O & M Manuals as guidelines for future operators of the property.

ATTACHMENTS:
Waste Management Landfill Closure Guidelines-1992
Copy of the Solid Waste Statutes-Chapter 4.

VI. COMPLIANCE SCHEDULES

Within ninety (90) days the Facility shall develop a compliance schedule that will describe the completion of all the items needed to complete the remediation of the site. This schedule shall include at a minimum:

1. A monitoring and reporting schedule for the active portions of the facility.
2. A schedule for the permitting activities that are known as of the schedule delivery date. The Facility shall be responsible for the time for their participation and not for the Departments reviews.
3. A schedule for the planned cleanup and remediation actions to be carried out.
4. The schedules shall describe the development, and time elements needed, to plan and execute each of the compliance items through completion and inspection.

The Facility is required to submit documentation of compliance with each of the referenced rules by the date specified for each.

Please be advised that the violations listed above, which the Facility agreed to resolve, must be addressed within that time frame. Any violations which are not addressed within that time frame, will be incorporated into a Consent Order.

ADEQ is accountable to the citizens of Arizona and mandated by law to ensure that facilities are in compliance with all applicable statutes and rules. ADEQ must be assured that compliance has been achieved. Therefore, any submittal required by this letter must include the following statement and must be signed by a person authorized to act on behalf of the company or empowered to make decisions on behalf of the company to certify to the ADEQ their knowledge of and accountability for the submittal:

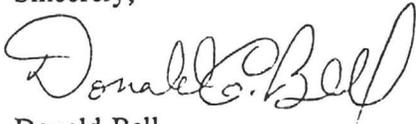
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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Tombstone Development Company, Inc.
Technical assistance letter
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If you require further assistance, please contact me at (602) 207 4613.

Sincerely,



Donald Bell
Compliance Officer
Water Pollution Compliance Unit
Office of Water Quality

DGB:arv
B:\TOMBSTON\TA.30

cc:

Peggy Guichard-Watters, Manager, OWQ Compliance Section
Andy Rendes, Southern Regional Office
Dave Anderson, APP Hydrology Unit

Jeff Ende, Mining APP
Dave Zeller, OWP, Solid Waste Section
Jim Brisco, Jabba, Inc.
Roger Kennett, PRP, APP section
Cochise County Health Department
Andy Rubalcava, Investigator, Attorney General's office.

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Tombstone Development Company, Inc.
Technical assistance letter
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DISTRIBUTION LIST

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Tombstone Development Company
 Technical assistance letter
 Exhibit A - Required Samples

Old Heap Leach and Old Washed Tailings

EPA 1312 (1)	AGP / ANP (2)	Ag (Silver)
As (Arsenic)	Ba (Barium)	Be (Beryllium)
Cd (Cadmium)	Cr (Chromium)	Cu (Copper)
Hg (Mercury)	Ni (Nickel)	Pb (Lead)
Se (Selenium)	Sb (Antimony)	Tl (Thallium)
Zn (Zinc)	Total Cyanide	WAD Cyanide

- (1) Synthetic Precipitation Leaching Procedure
 (2) Acid Generating Potential / Acid Neutralization Potential

Monitor Wells

Note: All monitor well metals should be analyzed as Total metals (e.g. total Silver, total Arsenic, etc.)

TKN (1)	Total petroleum hydrocarbons (2)	Alkalinity, Total
Alkalinity, Phenol	Chloride	Conductivity
Fluoride	Hardness	NO ₂ /NO ₃ , Total
pH	Sulfate	TDS (3)
Ag (Silver)	As (Arsenic)	Ba (Barium)
Be (Beryllium)	Cd (Cadmium)	Ca (Calcium)
Cr (Chromium)	Cu (Copper)	Fe (Iron)
K (Potassium)	Hg (Mercury)	Mg (Magnesium)
Mn (Manganese)	Na (Sodium)	Ni (Nickel)
Pb (Lead)	Se (Selenium)	Sb (Antimony)
Tl (Thallium)	Zn (Zinc)	Total Cyanide
WAD Cyanide		

- (1) Total Kjeldahl Nitrogen
 (2) BLS 181
 (3) Total dissolved solids



ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF WASTE PROGRAMS
SOLID WASTE UNIT
3033 N. CENTRAL AVENUE, 6TH FLOOR
PHOENIX, AZ 85012
(602) 207-4133

WASTE MANAGEMENT LANDFILL CLOSURE GUIDELINES - 1992

- I. Introduction. These guidelines present step by step procedures necessary to protect human health and the environment at a landfill which has stopped accepting waste. This is achieved by implementing processes to minimize formation and release of leachate and explosive gases, and by providing post-closure monitoring and maintenance requirements to protect against damages caused by age and by deterioration as a result of environmental conditions. Facilities which will stop receiving waste by October 9, 1993 shall follow the requirements outlined in these guidelines. Facilities which will stop receiving waste after October 9, 1993, shall also follow the closure requirements of the federal Subtitle D program in Title 40 of the Code of Federal Regulations Part 258 (40 CFR 258).

An existing landfill shall submit two copies of the closure/post-closure plan to ADEQ for review and approval. One copy will go to the Solid Waste Unit and the other copy will go to the Aquifer Protection Permit (APP) Unit. The plan shall be submitted at least ninety (90) days prior to the time in which waste will no longer be accepted. The ADEQ Solid Waste Unit will conduct a closure inspection after the closure plan has been approved to validate that all planned closure activities have been completed. After the closure construction has been satisfactorily completed, ADEQ will list the facility on the Arizona Directory of Closed Solid Waste Landfills. Existing facilities must also contact ADEQ's, Office of Water Quality, APP Unit for information on an APP.

Closure activities shall begin in accordance with an approved closure plan, no later than 30 days after final receipt of waste at each landfill. Closure shall be completed within 180 days. The closure and post-closure plan cost analysis shall be updated annually to reflect the true costs of closure activities.

- II. Aquifer Protection Permit. The owner or operator of an existing solid landfill facility shall obtain an APP from the Office of Water Quality unless all the following requirements are met:
- A. The solid waste landfill stops receiving waste prior to October 9, 1993;
 - B. The solid waste landfill receives less than twenty (20) tons of solid waste on an annual average; and,
 - C. There is no evidence of existing groundwater contamination¹.
- III. Restrictive Covenants. Beginning October 9, 1993, the owner or operator of a new or existing solid waste landfill shall record an instrument imposing a restrictive covenant on the disposal area of the facility in the county recorder's office in the county in which the solid waste landfill is located. The

¹See Attachment I.



covenant shall state that the land has been used as a solid waste landfill and that the property owners, their agents or employees or any of their heirs, successors, lessees or assignees must not engage in filling, grading, excavating, drilling, or mining the property during the operating life of the solid waste landfill. These activities may occur after closure if provided for in the approved facility closure or post-closure plan, or approved of by ADEQ. ADEQ may waive the restrictive covenant prescribed by this section if the land is federal land or if contracts that exist between the landowner and the licensee on October 9, 1993 are not renegotiable. ADEQ will consider factors such as the original design, type of operation, material deposited, energy recovery from methane gas and stage of decomposition of the disposal area. The owner or operator shall provide a certified copy of the recorded restrictive covenant after approval of the facility plan but before beginning operation of the facility.

IV. Financial Assurance Requirements. Beginning April 9, 1994, all existing and proposed solid waste facilities may not be operated unless financial responsibility has been demonstrated for closure, post-closure care, and any necessary corrective action as a result of known releases from the facility². The following financial assurance mechanisms may be used for financial responsibility:

- A. Surety Bond
- B. Certificate of Deposit
- C. Trust Fund with Pay-In-Period
- D. Letter of Credit
- E. Insurance Policy
- F. Certificate of Self-Insurance
- G. Certificate With The State Treasurer
- H. Evidence of Ability to Meet Corporate Financial Test
- I. Evidence of Ability to Meet Local Government Financial Test
- J. Evidence of Ability to Meet Corporate Guarantee Test
- K. Evidence of Ability to Meet Local Government Guarantee Test
- L. Evidence of Ability to Meet the Political Subdivision Financial Test
- M. Multiple Financial Assurance Mechanisms
- N. Additional financial mechanisms which may be acceptable to ADEQ.

V. Closure and Post-Closure Plans. The closure plan shall address the following:

- A. Site Conditions. The site conditions shall include the following:
 - 1. Site Maps of the facility detailing:
 - a. Site location;
 - b. Property boundaries;
 - c. Site acreage;
 - d. Limits of filling operations;

²Rules shall be adopted by October 1, 1993, indicating the type and terms and conditions of the financial assurance mechanisms to be required as part of the facility plan.

- e. Access barriers (berms, fences and gates);
- f. Local topography; *
- g. Site drainage;
- h. Local drainage patterns; *
- i. 100-year floodplains; *
- j. Prevailing winds;
- k. Structures; *
- l. Surrounding land use; *
- m. Geology regional; *
- n. Geology of vadose zone;
- o. Soil classifications;
- p. Groundwater depth and gradients;
- q. Groundwater quality;
- r. Groundwater wells; *
- s. Roads; and
- t. Utilities.

* on-site and within 1/4 mile of site

2. A discussion of site conditions detailing:

- a. Discharge control technologies (liners, leachate collection, gas collection);
- b. Site type (trench, cell, area);
- c. Filling procedures used;
- d. Number of employees;
- e. Annual and monthly average precipitation and evaporation rates;
- f. Local vegetation;
- g. Daily cover (type and amounts used);
- h. Compaction (equipment used);
- i. Typical slopes of working faces; and
- j. Thickness of disposal cells.

B. Waste Characterization. The waste characterization portion of the closure plan shall include the following:

- 1. A listing of the volume, physical and chemical characteristics of total waste accepted and disposed of at the facility.
- 2. A separate listing of wastes such as industrial wastes, septage, contaminated soils, asbestos wastes, tires, medical wastes and hazardous materials accepted at the facility.
- 3. A compliance history of the facility.
- 4. A discussion of landfill security, waste screening and waste separation practices.

Waste types and volumes may be identified by conducting a review of landfill records and receipts or by conducting a survey of local industry sources and contacting past landfill operators. If no waste characterization data is available or submitted with the closure plan then the ADEQ Solid Waste Unit may require a laboratory analysis of waste sampled from the landfill.

C. Closure Activities. The closure activities section of the Closure Plan shall include information for a detailed description of the methods, procedures, and processes to close each unit or cell of the solid waste facility.

1. Final Cover - A properly designed final cover prevents precipitation and other water from infiltrating into the underlying solid waste and causing leachate formation. The slope of the final cover shall be greater than 2% and less than 20% to provide the proper drainage.
 - a. Infiltration Layer - This layer shall consist of a minimum 18 inches earthen material with a permeability less than the cell liner or at a minimum of 1×10^{-6} cm/sec. The infiltration layer shall have a compaction greater than 90% of maximum dry density, which will not allow run-off or surface water to enter the underlying waste, but will allow for soil gas venting. Include in the closure plan, the thickness, porosity, permeability, compaction, water holding capacity and the material to be used in the infiltration layer.
 - b. Erosion Layer - This layer shall consist of a minimum 6 inches of earthen material which is revegetated with drought tolerant and low maintenance plant growth. Include in the closure plan, the thickness, final slope, and material used, as well as the type of vegetation, root depths, and water and fertilizer requirements in the erosion layer.
2. Site Drainage - Include details on the slopes, diversions, run-off, run-on and detention/retention ponds.
3. Equipment and structure removal and decontamination;
4. Include a plan for removal of any remaining waste inventory.
5. Installation and placement of monitoring devices - groundwater, soil and air (this does not apply to landfills exempt from an APP permit);
6. Testing procedures for monitoring devices and contamination levels (this does not apply to landfills exempt from an APP permit);
7. Cost of Closure Activities - The owner or operator of the solid waste facility shall develop written site-specific cost estimates for closure activities to determine the amount of financial assurance required under the post-closure plan approval;
8. Schedule for closure activities to be completed; and
9. Closure Certification - The owner or operator of the solid waste facility shall submit a certification verifying that closure of each landfill unit or cell has been completed in accordance with the approved closure plan. The certification shall be based on a review completed by an independent engineering contractor or in-house engineer, with a current Arizona registration.

D. Post-Closure Activities. The post-closure plan shall include a description of the routine maintenance and monitoring activities to prevent and detect any releases which may occur from the facility to the environment. Post-closure activities must be done for 30 years. Include an outline on methods to collect and control formation of leachate and explosive gases. Groundwater and explosive gas monitoring shall also be an integral part of the post-closure plan. The number, placement and construction details of the monitoring wells is dependent on the waste and site characteristics of the facility.

At a minimum, the following will need to be addressed in the post-closure plan:

1. A schedule for maintenance and frequency of monitoring activities.
2. A schedule for maintenance for the final cover of the facility, including, vegetation seeding, irrigation, and fertilization.
3. A schedule for maintenance on collection and drainage systems.
4. Responsible parties for all post-closure activities, including, name, address and telephone number.
5. Predicted future site access controls and land uses.
6. A cost estimate to complete post-closure activities.

-- END --

REVISED:
NOVEMBER 27, 1992
MDG:SEC:md



ATTACHMENT I

ADEQ's APP Hydrology Unit determines if there is evidence of existing groundwater contamination. Therefore it is in the best interest of the owner or operator of a landfill to provide all applicable information to ADEQ. The following list is an example of the type of information which should be included in the closure plan by facilities requesting to be exempt from an APP:

Hydrologic Information

- Depth to groundwater at the facility
- Direction of groundwater flow and information used to determine flow direction.
- List of all groundwater wells within a one-mile radius of the facility along with construction and ownership information, and use. If no wells are located within a one-mile radius, list all wells within three mile radius. If no wells are available with a three-mile radius, list the nearest well and the nearest downgradient well.
- Any water quality investigations conducted for the facility or water quality data from wells in the vicinity.
- Floodplain information and surface water quality, if applicable. Submit a map and emphasize the location of the floodplain with respect to the landfill.
- Annual precipitation information

Geologic Information

- Soil type
- Any soil boring information developed for the facility
- Percolation tests
- Subsurface lithology
- Any other applicable information which might be helpful to the APP Unit.

Landfill Construction

- Cap
- Liner
- Leachate collection system
- Any other applicable information which might be helpful to the APP Unit.

Landfill History

- Years operated
- Amount of wastes disposed
- Type of wastes disposed
- Communities served
- All records should be submitted or summarized.

ADEQ Staff Hydrologist

- Review submitted data.
- Verify hydrologic and geologic information.



Waste Management Landfill Closure Guidelines - 1992.....

- Check Solid Waste files for inspection reports and compliance actions. If referred from the Solid Waste Unit, summary and/or data should be included when submitted to APP Section.
- Check ADEQ water quality data base.
- Check for in-house reports: Preliminary Assessment, Site Investigation, Federal or State Superfund reports, etc.

If insufficient information is available, the facility may be requested to do additional work, such as:

- Trenching into the landfill to do waste analysis, soil moisture, leachate analysis and predict impacts to groundwater using a model approach (i.e., HELP model).
- Install groundwater monitor wells and sample groundwater to determine impacts on aquifer.





ARIZONA REVISED STATUTES
SOLID WASTE MANAGEMENT ACT AS OF 1992

SOLID WASTE MANAGEMENT
Ch. 4

§ 49-701

ARTICLE 1. GENERAL PROVISIONS

§ 49-701. Definitions

In this chapter, unless the context otherwise requires:

1. "County" means:
 - (a) The board of supervisors in the context of the exercise of powers or duties.
 - (b) The unincorporated areas in the context of area of jurisdiction.
2. "Facility plan" means any design or operating plan for a solid waste facility or group of solid waste facilities.
3. "Household hazardous waste" means solid waste as defined in 40 Code of Federal Regulations section 261.2 as adopted on July 1, 1991 that is derived from households and is categorically exempt pursuant to 40 Code of Federal Regulations section 261.4.(B)(1) as adopted on July 1, 1991.
4. "Inert Material" means material that is biologically inert or is insoluble in water and will not decompose or leach substances to water, including uncontaminated broken concrete, brick, rock, gravel, sand and soil.
5. "Management Agency" means any person responsible for the day to day operation, maintenance and management of a particular public facility or group of public facilities.
6. "Medical waste" means any solid waste which is generated in the diagnosis, treatment or immunization of a human being or animal or in any research relating to that diagnosis, treatment or immunization, or in the production or testing of biologicals, but not including hazardous waste as defined in section 49-921.
7. "On site" means the same or geographically continuous property that may be divided by public or private right-of-way if the entrance and exist between the properties is at a crossroads intersection and access is by crossing the right-of-way and not by traveling along the right-of-way. Noncontiguous properties that are owned by the same person and connected by a right-of-way that is controlled by that person and to which the public does not have access are deemed on site property. Noncontiguous properties that are owned or operated by the same person regardless of right-of-way control are also deemed on site property.
8. "Person" means any public or private corporation, company, partnership, firm, association or society of persons, the federal government and any of its departments or agencies, this state or any of its agencies, departments, political subdivisions, counties, towns or municipal corporations, as well as a natural person.
9. "Process" or "processing" means the reduction, separation, recovery, conversion or recycling of solid waste.



10. "Public facility" means any site owned and operated or utilized by any person and open to the general public for resource conservation or recovery or for the collection, source separation, storage, transportation, transfer, processing, treatment or disposal of solid waste. Public facility includes a public solid waste landfill.
11. "Salvaging" means the removal of solid waste from a solid waste facility with the permission and in accordance with rules or ordinances of the management agency for purposes of productive reuse.
12. "Scavenging" means the unauthorized removal of solid waste from a solid waste facility.
13. "Solid waste" means any garbage, trash, rubbish, refuse, sludge from a waste treatment plant, water supply treatment plant or pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material but not including domestic sewage or hazardous wastes.
14. "Solid waste facility" means any site owned, operated or utilized by any person for the collection, source separation, storage, transportation, transfer, processing, treatment or disposal of solid waste or household hazardous waste but does not include the following:
 - (a) A site which solid waste that was generated on site is stored in containers or tanks for ninety days or less.
 - (b) A transfer facility.
 - (c) A site that stores, receives, source separates or reduces recyclable solid waste, including paper, glass, wood, cardboard, household textiles, scrap metal, plastic, tree trimmings, aluminum, steel or other recyclable material that have no significant adverse effect on the environment.
 - (d) An agricultural site where sludge from a wastewater treatment facility is applied to the land as a fertilizer or beneficial soil amendment.
15. "Solid waste landfill" means a facility at which solid waste is placed in or on land for the purposes of long-term storage or disposal. Solid waste landfill does not include a land application unit, surface impoundment, injection well, area containing ash from the combustion of coal, compost pile or agricultural on-site disposal area covered under section 49-766.
16. "Solid waste management" means the systematic administration of activities which provide for the collection, source separation, storage, transportation, transfer, processing, treatment or disposal of solid waste in a manner that protect public health and safety and the environment and prevents and abates public nuisances.
17. "Solid waste management plan" means the plan which is adopted pursuant to section 49-721 and which provides guidelines for the collection, source separation, storage, transportation, processing, treatment, reclamation and disposal of solid waste in a manner that protects public health and safety and the environment and prevents and abates public nuisances.



18. "Transfer facility" means a site that is owned, operated or used by any person for the rehandling or storage for ninety days or less of solid waste that was generated off site for the purpose of transporting that solid waste. Transfer facility does not include a site identified in paragraph 15, subdivision (c) of this section. 1992

§ 49-702. Authorization to accept funds or grants

The department, counties and incorporated cities and towns may accept and expend any funds granted to them or otherwise made available by the federal government, any political subdivision of this state, any agency or branch of the federal or state government, or any private agency in order to carry out the purposes of this chapter. 1986

§ 49-703. Joint operation

- A. The department may cooperate with, coordinate or enter into agreements and memoranda of understanding with appropriate federal, state, political subdivision and tribal governments, and with other appropriate persons, both public and private, in carrying out its duties and promoting its objectives under this chapter.
- B. Each county, city or town may exercise authority to jointly own or operate, with any other person, any public facility within this state and also may enter into cooperative agreements as necessary and appropriate for the operation of any public facility.
- C. Each county, city or town may, either alone or in combination with any other county, city or town, contract with any person to provide any service required or authorized by this chapter. 1986

§ 49-704. Applicability of chapter to local regulations and services

This chapter does not prevent any county, city or town from adopting and enforcing any ordinance, resolution or other policy relating to solid waste regulation or solid waste services if such policy is otherwise authorized by statute or charter and is not in conflict with this chapter or any rule or regulation adopted pursuant to this chapter. 1986

§ 49-705. Integration of solid waste programs

The director shall integrate all of the programs authorized in this chapter and those other programs regulating solid waste management that are administered by the department for purposes of administration and enforcement and shall avoid duplication and dual permitting to the maximum extent practicable. 1991

ARTICLE 2. PLANNING AND ASSISTANCE

§ 49-721. statewide solid waste management plan

The department shall prepare and keep current a statewide solid waste management plan which establishes standards for solid waste facilities in cooperation with facility owners or operators, local governments and management agencies. The department shall notify solid waste management agencies and facility owners or operators of proposed changes to the plan at least three months prior to submission of the plan to the director for adoption. The department shall update and readopt the plan as determined necessary by the director. 1991

§ 49-722. Planning and technical assistance

- A. The department may provide technical and planning assistance as appropriate to solid waste facility owners or operators and management agencies, including the training of personnel.
- B. Each county, city or town may render technical assistance as appropriate to the state, counties, municipalities, local agencies, local health officers, private industries and others in the planning and operation of solid waste facilities. 1991

§ 49-723. Research and development

- A. The department may initiate, conduct and support research, development and demonstration projects and programs directed toward improving solid waste management, resource conservation and resource recovery methods, techniques, systems and facilities, or for preventing or mitigating the adverse effects of environmental pollution if the projects and programs do not duplicate those of other states or the United states.
- B. Each county, city or town may conduct studies and investigations regarding new or improved methods of solid waste management and coordinate the studies with other agencies. 1986

§ 49-724. Distribution of appropriated funds to local governments

The department shall develop criteria in consultation with local governments for the distribution of funds appropriated to county, city or town management agencies or their designated representatives, if funds have been appropriated for this purpose. 1986

ARTICLE 3. SOLID WASTE SERVICES

§ 49-741. Local public facilities for solid waste management

Each county, city or town shall:



1. Provide or contract for public facilities at such intervals and as conveniently as the governing body deems necessary for the safe and sanitary disposal of solid waste generated within its jurisdiction.
2. Comply with regulations adopted by the director in the administration of solid waste management programs. 1986

§ 49-742. User fees

User fees may be established or waived by a county, city or town to cover all or part of the cost of development, construction, operation, administration and financing of solid waste management activities. 1986

§ 49-743. Commercial permits

Each county, city or town may require that persons using public facilities provided by it obtain permits if determined necessary for the purpose of regulating, identifying and determining specific categories of waste and waste haulers. 1986

§ 49-744. Salvaging

A management agency may permit salvaging, but such salvaging shall be supervised and strictly controlled. Each county, city or town may regulate salvaging of solid waste at any public facility it provides. 1986

§ 49-745. Ownership of solid waste

Solid waste offered or set out for collection, transportation, storage, disposal or recovery becomes, on acceptance by a management agency or solid waste facility, the sole property of the accepting management agency or solid waste facility. 1991

§ 49-746. Private enterprise recycling and solid waste management

- A. A municipality of this state, with a population exceeding sixty thousand, shall not prohibit or unreasonably restrain a private enterprise from delivering commercial or industrial recycling services or commercial or industrial solid waste management services within or to the municipality.
- B. The municipality shall prescribe rules for the delivery of recycling services and commercial or industrial solid waste management services that promote availability of these services and promote competition in the delivery of these services.



- C. It shall not be presumed to be an unreasonable restraint for a municipality to have limited the number of commercial or industrial solid waste management service companies to one company for each sixty thousand or fewer persons in order to facilitate the regulation of solid waste collection pursuant to § 49-765 provided that at least seven companies are permitted under such an ordinance. 1988

§ 49-747. Annual registration of solid waste landfills; fees; disposition of revenue

- A. All solid waste landfills shall be registered annually with the department.
- B. The director shall establish a procedure for mailing registration forms each year to the owners of all solid waste landfills. The registration is valid for one year from the date of registration.
- C. At the time of registration the owner of a solid waste landfill shall pay to the department an annual fee for each site registered which is determined according to the population that the landfill serves based on the following schedule:
1. For solid waste landfills that serve fewer than ten thousand people, five hundred dollars.
 2. For solid waste landfills that serve at least ten thousand people but less than twenty-five thousand people, seven hundred fifty dollars.
 3. For solid waste landfills that serve at least twenty-five thousand people but less than fifty thousand people, one thousand dollars.
 4. For solid waste landfills that serve at least fifty thousand people but less than one thousand people, two thousand dollars.
 5. For solid waste landfills that serve at least one hundred thousand people but less than two hundred thousand people, three thousand dollars.
 6. For solid waste landfills that serve two hundred thousand people or more, five thousand dollars.
 7. Private rubbish landfills open to the public that accept demolition waste shall pay a flat fee of one thousand five hundred dollars.
 8. Private landfills closed to the public that accept nonhazardous waste shall pay a flat fee of one thousand five hundred dollars.
- D. All monies collected pursuant to this section shall be deposited in the water quality assurance revolving fund established by section 49-282. The director may authorize the expenditure of monies from the Water Quality Assurance Revolving Fund to pay the reasonable and necessary costs of administering the registration program pursuant to section 49-282, subsection C, paragraph 6.



- E. The initial registration of solid waste landfills existing on July 1, 1990 shall be completed not later than December 31, 1990.

ARTICLE 4. REGULATION OF SOLID WASTE

§ 49-761. Department rules; standards for solid waste management; variances; cease and desist orders

A. The department shall:

1. Define and prescribe reasonably necessary rules regarding storage, collection, transportation, disposal and reclamation of garbage, trash, rubbish, manure and objectionable wastes. The rules shall prescribe minimum standards for storing, collecting, transporting, disposing and reclaiming the wastes and shall provide for inspecting premises, containers, processes, equipment and vehicles, and for abating as public nuisances any premises, containers, processes, equipment or vehicles which do not comply with the minimum standards.
2. Adopt such rules, facility plans submittal guidelines, standards and procedures regarding the collection, source separation, storage, transportation, transfer, processing, treatment and disposal of solid waste at solid waste facilities as are reasonably necessary to implement this chapter, to protect public health and safety and the environment and to prevent and abate public nuisances.
3. By January 1, 1994, adopt rules to define biohazardous medical waste and to regulate biohazardous medical waste and medical sharps to include:
 - (a) A definition for biohazardous waste which includes wastes that contain material which is likely to transmit etiologic agents which have been shown to cause or contribute to increased human morbidity or mortality of epidemiologic significance. The department of environmental quality shall consult with the department of health services in making this determination.
 - (b) Reasonable necessary rules regarding the storage, collection, transportation, treatment and disposal of biohazardous waste and medical sharps, beginning with the placement by the generator of the waste in containers for the purpose of waste collection. In the case of self-hauling of waste by the generator, all storage facilities under the generator's control and all waste handling practices including storage, treatment and transportation shall be in accordance with these rules.
 - (c) Consideration of the quantity of medical sharps being generated.
4. By July 1, 1993, adopt rules for solid waste facilities that are not open to the public. In adoption of those rules, the department shall take into account the specific nature of the waste streams at those facilities.



5. Adopt rules for transfer facilities as necessary to protect the public health and safety and the environment and to prevent and abate public nuisances. The rules shall include:
 - (a) Facility notification to the department and best management practices for facilities that have a storage capacity of one hundred cubic yards of solid waste or less.
 - (b) Facility plan approval, financial assurance, public notice and best management practices for facilities that have a storage capacity of more than one hundred cubic yards of solid waste.
6. Adopt rules for the application of sludge, as defined in 40 code of federal regulations section 122.2, from a wastewater treatment facility, as defined in section 49-371, to agricultural land for use as fertilizer or beneficial soil amendment. In adopting those rules, the department shall consider other federal and state laws and rules in an effort to avoid practices or requirements that duplicate, are inconsistent with or will result in dual regulation with other rules and laws.
7. Adopt rules for facilities that store, receive, source separate or deduce recyclable solid waste for the purpose of transporting that waste to an off-site location. These rules shall include:
 - (a) Facility plan approval, financial assurance, public notice and best management practices solely for off-site collection facilities that have a storage capacity of more that one hundred cubic yards of recyclable solid waste.
 - (b) Facility plan approval, financial assurance, public notice and best management practices solely for on-site collection facilities that store recyclable material for more than one hundred eighty days.
 - (c) Best management practices for all sites that store or receive recyclable solid waste and that are not included in subdivisions (a) or (b) of this paragraph.

B. The department may:

1. Within ninety days of receipt of a written request for a variance from a solid waste facility, transfer facility or recycling facility owner or operator or management agency, grant a variance from solid waste management rules and standards if the department concludes that no violation of health standards will occur. The department may consider whether a public nuisance will result. If the request is denied, the department shall prepare and make available to the agency or facility owner or operator a written decision including relevant data and a technical analysis supporting the denial.
2. Issue an administrative cease and desist order against any person in violation of any rule adopted by the department as necessary to protect public health and safety and the environment and to prevent and abate public nuisances.
3. Adopt reasonably necessary rules regarding the storage, collection, transportation, treatment and disposal of nonbiohazardous medical waste beginning with the placement by the generator of the waste in containers for the purpose of waste collection. In the case of self-haulers of the waste by the



generator, all storage facilities under the generator's control and all waste handling practices including storage, treatment and transportation shall be in accordance with these rules.

4. Adopt reasonably necessary rules regarding the tracking of biohazardous waste and medical sharps. Reasonable and necessary rules shall recognize the quantity of medical sharps generated.
 5. Adopt rules which prescribe standards to be used in determining if recyclable solid wastes have a significant adverse effect on the environment.
- C. Incinerators which dispose of medical waste shall comply with chapter 3 of this title, rules adopted pursuant to chapter 3 of this title and permits issued pursuant to chapter 3 of this title.
- D. The department shall consult with the department of health services in adopting rules under subsection A, paragraph 3, subdivision (a). 1992

§ 49-762. Solid waste facility plan approval; exemption

- A. Until October 9, 1993, the department shall review and approve public facility plans which satisfy rules adopted by the director prior to authorizing the construction and operation of a new public facility. Existing facilities are subject to the rules adopted by the director pursuant to this article. The director shall grant temporary authorization to operate a new public facility if in the director's opinion the public facility is needed immediately and could not be properly planned in advance. The department shall approve or disapprove plans within ninety days of receipt of complete plans containing all required supporting documentation. If plans are rejected, the department shall make available to the proposed agency a complete written, detailed rationale for disapproval including recommendations for correcting unacceptable parts of the plans.
- B. Any substantial change to the design or operation of the public facility from the approved plans shall be approved by the director before implementation. A public facility shall also comply with the following:
1. The owner or operator of a public facility shall submit a notice of a proposed change to the director that describes the purpose and scope of the proposed change and whether it constitutes a substantial change to the design or operation of the public facility. If the director fails to respond within fifteen days, the change shall be deemed to be in accordance with the facility's approved public facility plan.
 2. If the director determines that the change is substantial, the director shall within fifteen days of receipt of the notice notify the owner or operator of the public facility and require submittal of an amended plan for approval. The director shall approve or disapprove the amended plan within ninety days of receipt of the amended plan.
- C. Any substantial change to the design or operation of a solid waste landfill from the approved plans shall be approved by the director before implementation. A solid waste landfill shall also comply with the following:



1. The owner or operator of a landfill shall submit a notice of a proposed change to the director that describes the purpose and scope of the proposed change and whether it constitutes a substantial change to the design or operation of the landfill. If the director fails to respond within thirty days, the change shall be deemed to be in accordance with the facility's approved landfill plan.
 2. If the director determines that the change is substantial, the director shall within thirty days of receipt of the notice, notify the owner or operator of the landfill and require submittal of a proposed change to an approved plan for approval and shall notify an effected city, town or county. The city, town or county shall within sixty days of receipt of the notice, notify the director whether the substantial change requested complies with applicable municipal or county zoning ordinances and regulations.
 3. If the director determines that the change is substantial, the director shall within thirty days of the determination give the following notice:
 - (a) Publication of the proposed substantial change in a daily or weekly newspaper of general circulation in the area of the landfill.
 - (b) Written notice of the proposed substantial change to property owners in the following areas:
 - (i) If the landfill is in an unincorporated area within a three-mile radius of the outer boundaries of the proposed substantial change unless the three-mile radius intersects a municipal corporate boundary. In such case, property owners inside the municipal corporate boundary within one thousand feet of the outer boundary of the proposed substantial change shall be notified as well as the property owners outside the municipal corporate boundary within the three-mile radius of the outer boundary of the proposed substantial change.
 - (ii) If the landfill is an incorporate area within a one thousand foot radius of the outer boundaries of the proposed substantial change.
 4. The director shall approve or disapprove the amended plan within ninety days of receipt of the amended plan. The director shall not approve a substantial change unless the city, town or unincorporated portion of a county in which a landfill is located notifies the director that the substantial change requested complies with applicable municipal or county zoning ordinances and regulations.
- D. The director may suspend, amend, withdraw, condition or revoke approval to operate a public facility if the director determines that the public facility is in violation of any rule adopted by authority of this chapter. Action taken by the director under this subsection shall conform with title 41, chapter 6.
- E. Beginning October 9, 1993, the department shall review and approve solid waste facility plans which satisfy financial assurance requirements prescribed in section 49-770, restrictive covenants for certain solid waste facilities as prescribed in section 49-771, location restriction requirements for certain solid waste disposal facilities as prescribed in section 49-772 and rules adopted by the director prior to authorizing the construction and operation of a new solid waste facility. Existing solid waste facilities that are not open



to the public are subject to the rules adopted pursuant to section 49-761, subsection A, paragraph 4. By January 1, 1994, existing solid waste facilities that are not open to the public shall submit a solid waste facility plan to the department for approval that satisfies rules adopted by the director. An existing solid waste facility that is not open to the public shall operate in compliance with its facility operating plan. The director shall grant temporary authorization to operate a new solid waste facility if in the director's opinion the solid waste facility is needed immediately and could not be properly planned in advance. An owner or operator of more than one solid waste facility that conducts similar activities with similar waste streams may prepare and implement a single plan that covers all of its facilities if it has received prior approval from the director and has complied with rules regarding single plans that are adopted by the director. The director, by rule, may exempt from facility plan approval requirements those solid waste facilities that are located in unincorporated areas and are used only for disposal by a single family residence located on the same property. The department shall approve or disapprove plans for new solid waste facilities within ninety days of receipt of completed plans containing all required supporting documentation. The department shall approve or disapprove plans for existing solid waste facilities within one hundred eighty days of receipt of a complete plan that contains all of the required supporting documentation. An existing solid waste facility may continue to operate while the department reviews the plan. Section 49-767, subsections F through I, do not apply to existing solid waste facilities that are not open to the public. If plans are rejected, the department shall make available to the owner or operator of the facility a complete written, detailed rationale for disapproval including recommendations for correcting unacceptable parts of the plans.

- F. Any substantial change to the design or operation of the solid waste facility from the approved plans shall be approved by the director before implementation. A solid waste facility shall also comply with the following:
1. The owner or operator of a solid waste facility shall submit a notice of a proposed change to the director that describes the purpose and scope of the proposed change and whether it constitutes a substantial change to the design or operation of the solid waste facility. If the director fails to respond within fifteen days, the change shall be deemed to be in accordance with the facility's approved solid waste facility plans.
 2. If the director determines that the change is substantial, the director shall within fifteen days of receipt of the notice, notify the owner or operator of the solid waste facility and require submittal of an amended plan for approval. The director shall approve or disapprove the amended plan within ninety days of receipt of the amended plan.
- G. The director may suspend, amend, withdraw, condition or revoke approval to operate a solid waste facility if the director determines that the facility is in violation of any rule adopted by authority of this chapter. Action taken by the director under this subsection shall conform with title 41, chapter 6.
- H. The following operations are exempt from the provisions of this article unless the operations involve materials that are required to have a special waste facility plan approval pursuant to section 49-857.
1. Reclamation of land through the introduction of landscaping rubble or inert material.

2. Mining industry off road waste tires that are greater than three feet outside diameter and are buried at the site and rock, leach material, tailings and slag produced and maintained at the site of the mining or metallurgical operation.
 3. Agricultural on-site disposal as provided in section 49-766.
 4. Storage, treatment or disposal of inert material.
 5. Application of effluent as defined in section 45-101.
 6. Application or release of return flows from irrigated agriculture.
 7. Use, storage, treatment or disposal of by-products of regulated agricultural activities as defined in section 49-201 that are subject to best management practices under section 49-247 or by-products of livestock, range livestock and poultry, as defined in section 3-1201, or pesticide container regulated pursuant to title 3, chapter 2, article 6.
 8. Household hazardous waste collection events held at a temporary site for a period not to exceed six days in any calendar quarter.
- I. Beginning January 1, 1993, the director shall collect from the applicant a reasonable fee based on the department's reasonable direct cost not to include indirect cost for the processing, review, approval or denial of the plan, to be reviewed on an annual basis.. The director may amend an existing rule or adopt a new rule to establish criteria for those costs. That rule making is exempt from title 41, chapter 6 except that the director shall provide for reasonable notice and hearing.
- J. Except for solid waste facilities that submitted notice required by law for solid waste facilities that were not open to the public on September 21, 1991, solid waste facilities that are not open to the public on the effective date of this act shall submit to the director by October 31, 1992 a notice that contains the following information:
1. Facility name and mailing address.
 2. Legal description by township, range and section, and county assessor's book, map and parcel number.
 3. Description of waste storage and treatment equipment, and methods of waste management, including types and volumes of waste handled and time the waste remains on site.
 4. Description of waste disposal practices including measures taken to protect the environment and to protect the public health.
- K. Notices required by law for solid waste facilities that were not open to the public on September 1991, shall be deemed to be adequate, unless the solid waste facility is otherwise notified by the director by October 1, 1992.

- L. A solid waste facility that does not submit a notice as prescribed by subsection I of this section shall be deemed a new facility and shall comply with section 49-767 relating to solid waste plans and site approval. 1992

§ 49-763. Inspections

- A. Until January 1, 1993, the department may conduct such inspections of public facilities, premises and equipment as are necessary. The department shall give the management agency the opportunity to have its representatives accompany the inspector.
- B. Beginning January 1, 1993, the department may conduct such inspections of solid waste facilities, premises and equipment as are necessary. The department shall give the management agency or the owner or the operator of the facility opportunity to have its representative accompany the inspector. Within thirty days after the date of the inspection, the department shall provide to the facility owner or operator a copy of any inspection report produced as a result of an inspection of that facility that occurs as prescribed by this section. 1991

§ 49-764. Orders; monitoring; pollution control devices

- A. Until January 1, 1993, if the department determines that a public facility is a health, safety or environmental hazard, it may require the installation of necessary monitoring and pollution devices. Before implementing any such action the department must develop and make available to the management agency relevant data and technical analyses which show substantial evidence of the need to improvements.
- B. Except as otherwise provided in sections 49-422 and title 49, chapter 3, article 3, beginning January 1, 1993, the director may require by order the installation of necessary monitoring and pollution control devices at a solid waste facility if the requirements of subsection C of this section have met.
- C. Before issuing an order pursuant to subsection B of this section, the director shall determine in writing that all of the following conditions are met:
1. The solid waste facility may adversely affect public health or the environment.
 2. A monitoring, sampling or quantification method or a pollution control device is technically feasible for the subject contaminant and the solid waste disposal facility.
 3. An adequate scientific basis for the monitoring, sampling or quantification method or the pollution control device exists.
 4. The monitoring, sampling or quantification method is reasonably accurate or the pollution control device is reasonably effective.

- 5: The cost of the method or device is reasonable in light of the use to be made of the date or the device.
6. The director has considered the relative cost and the relative accuracy or effectiveness of any alternative method or device that may be reasonable under the circumstances. 1991

§ 49-765. Local regulation of solid waste collection

Each county, city or town may establish regulations for private collection of solid waste within its area of jurisdiction, including standards for equipment, hours of operation, license fees and insurance requirements as necessary and hours of operation, license fees and insurance requirements as necessary and appropriate to operate a solid waste collection program. Ordinances or regulations authorized by this section and § 49-704 shall be equal to or more stringent than the provisions of this chapter and rules and regulations adopted by the department under this chapter. If authorized by statute, each county, city or town may provide for criminal and civil penalties for violation of such ordinances or regulations provided that such penalties do not exceed the penalties authorized by this chapter. 1986

§ 49-766. Agricultural on site disposal area; plan and permit

- A. A person engaged in farming or ranching on at least one hundred sixty acres in an unincorporated area may apply either alone or with not more than three other such persons on adjoining property to the board of supervisors to establish an agricultural on-site disposal area on the property for the disposal of solid waste generated on the property.
- B. The board of supervisors shall establish a solid waste disposal plan and permit consistent with good public health practices for each person specified in subsection A. The director shall be notified by the board of supervisors of the issuance of such permits and the location of disposal sites. Permits shall be issued for a period of two years or for shorter time periods as determined by the board of supervisors. 1986

§ 49-767. Solid waste facilities; permission; notice of site to property owners; hearing; exemption

- A. Any agency or political subdivision of this state which is required to select or is selecting a possible permanent site for a solid waste facility required to obtain approval pursuant to section 49-762 shall not select a site without obtaining approval of the city or town if the proposed permanent site is located within such city or town or the approval of the county in which the proposed permanent site is located if the proposed permanent site is located in the unincorporated area of the county.
- B. Any solid waste facility required to obtain approval pursuant to section 49-762 shall not be issued a permit pursuant to section 49-241, subsection A, receive a plan approval pursuant to section 49-762, or be placed on any site if any of the following apply.

1. An irrigation grandfathered right created pursuant to title 45, chapter 2, article 5 is appurtenant to all or any part of the site.
 2. Any part of that facility is within one-half mile of a one hundred year floodplain that has one hundred year flows in excess of twenty-five thousand cubic feet per second, as determined by the federal emergency management agency.
- C. Subsection B, paragraph 2 of this section does not apply to a site used solely for any of the following:
1. Reclamation of land through the introduction of landscaping rubble or inert material.
 2. Material produced in connection with a mining or mineral processing operation.
 3. Agricultural on-site disposal as provided in section 49-766.
 4. Solid waste transfer, recycling or any other use which does not involve permanent storage, treatment or disposal of solid waste.
 5. Industrial on-site solid waste storage, treatment or disposal if the facility is not open to the general public and is in existence on September 27, 1990.
 6. Receipt of solid waste for application to agricultural land as fertilizer or other beneficial soil amendment.
- D. An agency or political subdivision of this state which is required to select or which is selecting or permitting a possible permanent site for any solid waste facility required to obtain approval pursuant to section 49-767 shall post a notice in accordance with requirements specified by the department at the affected property so that the notices are visible from the public rights-of-way and shall send written notice of the selection of the possible permanent site by first class mail to property owners in the following areas:
1. If the proposed permanent site is in an unincorporated area, within a three mile radius of the outer boundaries of the proposed permanent site unless the three mile radius intersects a municipal corporate boundary. In such a case, property owners inside the municipal corporate boundary within one thousand feet of the outer boundary of the proposed permanent site shall be notified as well as those property owners outside the municipal corporate boundary within the three mile radius of the outer boundary of the proposed permanent site.
 2. If the proposed permanent site is in an incorporated area, within a one thousand foot radius of the outer boundaries of the proposed permanent site.
- E. The notice required by subsection D of this section shall be mailed to each owner of real property as shown on the list of property owners furnished by the county assessor, and the department of revenue. Within fifteen days after a request for such a list, the county assessor and the department of revenue shall

furnish to the agency or political subdivision a written list stating the name and address of each owner in the areas specified in subsection D of this section.

- F. Before a political subdivision makes a final decision on a possible permanent site for a facility specified in subsection A of this section, the political subdivision shall hold a public hearing in the general vicinity of the proposed permanent site, at which interested persons may appear and present their views. The political subdivision shall give notice of the hearing, to include all of the following:
1. Publication of notice in a daily or weekly newspaper of general circulation in the area of the proposed permanent site published once each week, beginning at least two weeks before the hearing.
 2. Mailed notice as provided in subsection D of this section sent at least two weeks before the hearing.
 3. Posted notice as provided in subsection D of this section that shall include information on the time and location of the public hearing and a list of those permits that are required in order to operate that proposed solid waste facility.
 4. Mailed notice at least two weeks before the hearing to the governing body of any city, town or unincorporated portion of a county that is located within a one-mile radius of the outer boundaries of the proposed solid waste landfill.
- G. Any agency or political subdivision that is holding a hearing that may result in the approval of or permit for the siting of a solid waste landfill shall mail notice at least two weeks before the hearing to the governing body of any city, town or unincorporated portion of a county that is located within a one-mile radius of the outer boundaries of the proposed solid waste landfill.
- H. Before any agency of this state grants a final permit for a facility specified in subsection A or D of this section, the agency shall:
1. If the applicant is a political subdivision, require the applicant to certify that a public hearing concerning a possible permanent site selection for the facility has been held in the general vicinity of the proposed permanent site, at which interested persons were allowed to appear and present their views.
 2. Hold a public hearing at least thirty days before a final decision concerning the permanent site, if such a hearing is warranted by the public interest, to be held in the general vicinity of the proposed permanent site, at which interested persons may appear and present their views. If such a hearing is held the agency shall send written notice of the selection of the possible permanent site as provided in subsection D of this section.
- I. This section shall not be construed to apply to any facility which receives funding under section 201 of the federal clean water act, as amended (P.L. 97-117).

1992

§ 49-768. Civil penalties

A person who violates a provision of a rule, material permit condition or requirement for approval relating to medical waste is subject to a civil penalty of not more than ten thousand dollars for each day for each violation. The attorney general, at the request of the director, shall file an act in the superior court in the county in which the violation occurred or in a county in which the department maintains an office to recover civil penalties provided for in this section. 1990

§ 49-769. Agency Orders; appeal

Any final agency order issued pursuant to this article is subject to title 12, chapter 7, article 6. 1991

§ 49-770. Financial assurance requirements for solid waste facilities

- A. Beginning April 9, 1994, a solid waste facility may not be operated unless financial responsibility has been demonstrated for the costs of closure, postclosure care, if necessary, and any corrective action as a result of known releases from the facility. By April 9, 1994, existing solid waste facilities shall modify and submit existing facility plans to the department to demonstrate the financial responsibility required by this section. A solid waste facility in operation before April 9, 1994 may continue to operate while the department reviews the modified plan. A demonstration of financial responsibility made for a solid waste facility under chapter 2, article 3 shall suffice, in whole or in part, for any demonstration of financial responsibility prescribed by this section. A demonstration of financial assurance or competence required under this section or under chapter 2, article 3, for a solid waste facility shall not be required prior to completion of construction but shall be required before the department issues approval to operate.
- B. By October 1, 1993, the director shall adopt rules indicating the types of financial assurance mechanisms to be required as part of a facility plan and the content terms and conditions of each financial mechanism, including circumstances under which the department may take action on the financial assurance mechanism for facility closure, postclosure care if necessary and corrective action for known releases. The financial assurance mechanisms shall include the following:
1. Surety bond.
 2. Certificate of deposit.
 3. Trust fund with pay-in-period.
 4. Letter of credit.
 5. Insurance policy.
 6. Certificate of self-insurance.

7. Deposit with the state treasurer.
 8. Evidence of ability to meet corporate financial test.
 9. Evidence of ability to meet local government financial test.
 10. Evidence of ability to meet corporate guarantee test.
 11. Evidence of ability to meet local government guarantee test.
 12. Evidence of ability to meet the political subdivision financial test.
 13. Multiple financial assurance mechanisms.
 14. Additional financial assurance mechanisms that may be acceptable to the director.
- C. By October 1, 1993, the director shall adopt rules establishing a political subdivision financial test. The rules establishing the political subdivision financial test shall require the director to consider the entity's bond rating, income stream, assets, liabilities and assessed valuation of taxable property.
- D. The terms and conditions adopted by the director for each financial assurance mechanism shall provide:
1. The amount in current dollars equal to the cost of hiring a third party to complete site closure and, if necessary, continued postclosure monitoring and maintenance consistent with the plan and any factor to be applied for inflation. Amounts shall be updated annually for landfills and every three years for all other solid waste facilities to adjust for inflation or as necessary to reflect increased costs resulting from changes to the facility plan or facility conditions.
 2. The period after closure for which financial assurance is required.
- E. The approved financial assurance mechanism shall not be released unless the plan specified closure and postclosure requirements have been completed or unless new financial assurance has been submitted by a new owner or operator of the solid waste facility and approved by the director. The owner or operator of the solid waste facility:
1. Shall receive any accrued interest on financial assurance instruments retained by the department.
 2. May request a reduction in financial assurance requirements on completion of closure or portions of postclosure monitoring and maintenance that are approved by the director.
 3. Shall justify any reduction in closure or postclosure cost estimates in the facility plan.
 4. Shall assure that the period of coverage of the financial assurance instrument exceeds by a minimum of ninety days the applicable one or three year time period required in subsection D.

5. Shall be released from closure or postclosure financial responsibility on certification by a registered professional engineer or other environmental professional deemed acceptable by the director that the specific activities of closure or postclosure have been completed in accordance with the approved facility plan and placed in the operating record of the facility plan. 1992

§ 49-771. Restrictive covenants for solid waste landfills

- A. Beginning October 9, 1993, the director may grant approval for operation of a solid waste landfill only if a restrictive covenant has been placed on the disposal area of the facility. An existing solid waste landfill shall comply with this section by October 9, 1993. The director and all of the owners of the tract of land on which the solid waste landfill is located shall execute the restrictive covenant.
- B. The owner or operator of the solid waste landfill shall record the instrument imposing the restrictive covenant in the county recorder's office in the county in which the solid waste landfill is located. The owner or operator shall provide a certified copy of the recorded restrictive covenant after approval of the facility plan but before beginning operation of the facility.
- C. The restrictive covenant shall state that the land described in the covenant has been or will be used as a solid waste landfill and that the property owners, their agents or employees or any of their heirs, successors, lessees or assignees shall not engage in filling, grading, excavating, drilling or mining the property during the operating life of the solid waste landfill, or after closure without the approval of the director unless provided for in the approved facility closure or postclosure plan. In making this determination the director shall consider factors such as the original design, type of operation, material deposited, energy recovery from methane gas and stage of decomposition of the disposal area.
- D. The director may waive the restrictive covenant prescribed by this section if the land is federal land or if contracts that exist between the landowner and the licensee on October 9, 1993 are not renegotiable.

§ 49-772. Location restrictions for solid waste landfills; definitions

- A. Beginning October 9, 1993, owners and operators of new and existing solid waste landfills that are located within ten thousand feet of any airport runway end used by turbojet aircraft or within five thousand feet of any airport runway end used by only piston-type aircraft shall demonstrate in the facility plan that the facility is designed and operated so that it does not pose a bird hazard to aircraft. Owners and operators of solid waste landfills that are located within a five mile radius of any airport runway end used by turbojet or piston-type aircraft shall notify the affected airport and the federal aviation administration.
- B. In addition to siting requirements established pursuant to section 49-767, beginning October 9, 1993, owners and operators of new and existing solid waste landfills that are located in a one hundred-year floodplain shall demonstrate in the facility plan that the facility will not restrict the flow of the one

hundred-year flood, reduce the temporary water storage capacity of the floodplain or result in a washout of solid waste so as to pose a hazard to human health and the environment.

- C. Beginning October 9, 1993, owners and operators of new solid waste landfills shall not be located in wetlands, unless the owner or operator can demonstrate all of the following:
1. A practicable alternative site that does not involve wetlands is not available.
 2. The construction and operation of the solid waste landfill does not cause, contribute to, jeopardize or violate any applicable state water quality standard, toxic effluent standard or prohibition, endangered or threatened species or critical habitat.
 3. The construction and operation of the facility do not cause or contribute to significant degradation of wetlands.
 4. To the extent required under section 404 of the clean water act or applicable state wetland laws, steps have been taken to attempt to achieve no net loss of wetlands as defined in acreage and function by first avoiding impacts to wetlands to the maximum extent practicable pursuant to paragraph I of this subsection and offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions.
- D. Beginning October 9, 1993, owners and operators of new solid waste landfills shall not be located:
1. Within two hundred feet of a fault that has had displacement in holocene time unless the owner or operator can demonstrate in the facility plan that an alternative setback distance of less than two hundred feet will prevent damage to the structural integrity of the facility and will protect public health and the environment.
 2. In seismic impact zones unless the owner or operator can demonstrate in the facility plan that all containment structures, including liners, leachate collection systems and surface water control systems, are designed to resist the maximum horizontal acceleration in lithified earth material for the site.
- E. Beginning October 9, 1993, owners and operators of new and existing solid waste landfills that are located in an unstable area shall demonstrate in the facility plan that engineering measures have been incorporated into the facility design to ensure that the integrity of the structural components of the facility will not be disrupted, including at a minimum an analysis of the following:
1. On-site or local soil conditions that may result in significant differential settling.
 2. On-site or local geologic or geomorphologic features.
 3. On-site or local man-made surface or subsurface features or events.

F. For purposes of this section, unless the context otherwise requires:

1. "Airport" means a public use airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.
2. "Bird hazard" means an increase in the likelihood of bird and aircraft collisions that may cause damage to the aircraft or injuries to its occupants.
3. "Displacement" means the relative movement of any two sides of a fault measured in any direction.
4. "Fault" means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.
5. "Floodplain" means the areas adjoining the channel of a watercourse including areas where drainage is or may be restricted by man-made structures that have been or may be covered partially or wholly by floodwaters from the one hundred-year flood.
6. "Holocene" means the most recent epoch of the quaternary period, extending from the end of the pleistocene epoch to the present.
7. "Karst terranes" means areas where karst topography with its characteristic surface and subterranean features is developed as a result of dissolution of limestone, dolomite or other soluble rock. Characteristic physiographic features present in karst terranes include sinkholes, sinking streams, caves, large springs and blind valleys.
8. "Lithified earth material" means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by loose sediments. Lithified earth material does not include man-made materials such as fill, concrete and asphalt or unconsolidated earth materials, soil or regolith lying at or near the earth surface.
9. "Maximum horizontal acceleration in lithified earth material" means the maximum expected horizontal acceleration depicted on a seismic hazard map, with a ninety per cent or greater probability that the acceleration will not be exceeded in two hundred fifty years, or the maximum expected horizontal acceleration based on a site specific seismic risk assessment.
10. "One hundred-year flood" or "base flood" means a flood that has a one per cent chance of being equalled or exceeded in a one-year period, based on criteria established by the director of the department of water resources.
11. "Poor foundation conditions" means those areas where features exist that indicate that a natural or human-induced event may result in inadequate foundation support for the structural components of a solid waste disposal facility.

12. "Seismic impact zone" means an area with a ten per cent or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth's gravitational pull, will exceed 0.10g in two hundred fifty years.
13. "Structural components" means liners, leached collection systems, final covers, run-on or run-off systems, flood control components and any other components used in the construction and operation of the solid waste disposal facility that are necessary for protection of public health and the environment.
14. "Unstable area" means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Unstable areas may include poor foundation conditions, areas susceptible to mass movements and karst terranes.
15. "Washout" means the carrying away of solid waste by surface water runoff.
16. "Wetlands" means those areas that are defined in 40 code of federal regulations section 232.2092

ARTICLE 5. ENFORCEMENT

§ 49-781. Compliance orders; appeal: enforcement

- A. If the director determines that a person is in violation of any provision of article 3 or 4 of this chapter, a rule adopted pursuant to article 4 of this chapter or any condition of a solid waste facility plan approval issued pursuant to this chapter or is creating an imminent and substantial endangerment to the public health or the environment, the director may issue an order requiring compliance immediately or within a specified period of time.
- B. A compliance order shall state with reasonable specificity the nature of the violation, a time for compliance if applicable and the right to a hearing.
- C. A compliance order shall be transmitted to the alleged violator by certified mail, return receipt requested, or by hand delivery.
- D. At the request of the director, the attorney general may file an action in superior court to enforce orders issued pursuant to this section after the order becomes final.

1992

§ 49-782. Actions on approval to operate

- A. The director may suspend, amend, withdraw, condition or revoke an approval to operate a solid waste facility if the director determines that the facility is in violation of any rule adopted pursuant to this chapter.

- B. The suspension, amendment, withdrawal, conditions or revocation of an approval to operate a solid waste facility shall comply with title 41, chapter 6. 1992

§ 49-783. Injunctive relief: civil penalties: costs

- A. If the director has reason to believe that a person is in violation of any provision of articles 3 or 4 of this chapter, a rule adopted pursuant to article 4 of this chapter, any condition of an approved solid waste facility plan issued pursuant to article 4 of this chapter or that a person is creating an imminent and substantial endangerment to the public health or the environment, the director through the attorney general may request a temporary restraining order, a preliminary injunction, a permanent injunction or any other relief necessary to protect the public health or the environment, without regard to whether the person has requested a hearing.
- B. A person who violates any provision of articles 3 or 4 of this chapter, a rule adopted pursuant to article 4 of this chapter, an order issued pursuant to this article or an approved solid waste facility plan issued pursuant to chapter 4 is subject to a civil penalty of not more than one thousand dollars for each day not to exceed fifteen thousand dollars for each violation. At the request of the director, the attorney general shall file an action in superior court to recover civil penalties as prescribed by this section. 1992

§ 49-784. Venue

An action filed pursuant to sections 49-781, 49-782 or 49-783 shall be brought in the superior court for the county in which the alleged violation occurred or in which the department maintains an office. 1992

49-785. Agency orders; appeal

- A. An order issued by the director pursuant to this chapter shall become final unless an appeal is made pursuant to title 41, chapter 6 within thirty days of receipt of the order.
- B. a final agency order issued pursuant to this article is subject to judicial review pursuant to title 12, chapter 7, article 6. 1992

ARTICLE 6. VIOLATIONS AND PENALTIES

§ 49-791. Violations; classification; civil penalties

- A. Until October 1, 1993, a person shall not:
1. Practice open burning at a public facility without a variance approval issued by the board.

2. Scavenge at a public facility.
 3. Damage or destroy signs posted at a public facility.
 4. Dump solid waste on public or private land in violation of the provisions of this chapter or any rule or regulation promulgated under this chapter.
- B. A violation of subsection A of this section is a class 2 misdemeanor.
- C. Until October 1, 1993, in addition to the penalties prescribed by subsection B of this section or section 13-1603, subsection 13-1603, a person who violates this section or section 13-1306 shall be subject to a civil penalty in the amount as prescribed by section 49-783.
- D. Beginning October 1, 1993, a person shall not:
1. Practice open burning at a solid waste facility without a variance approval issued by the director.
 2. Scavenge at a solid waste facility.
 3. Damage or destroy signs posted a solid waste facility.
 4. Dump solid waste on public or private land in violation of the provision of this chapter or any rule adopted under this chapter.
 5. Dispose of solid waste in violation of sections 49-761 and 49-762 or any rule adopted pursuant to those sections.
 6. Operate a solid waste facility in a manner inconsistent with the solid wastew facility plan after it has been approved or any rule adopted pursuant to article 4 of this chapter.
- E. A violation of subsection D of this section is a class 2 misdemeanor.
- F. In addition to the penalties prescribed by subsection E of this section or section 13-1603, subsection B, a person who violates this section or section 13-1603 shall be subject to a civil penalty in an amount prescribed by section 49-783.

1992

---END---

CHAPTER 8

~~BURIAL OF MINING INDUSTRY OFF ROAD MOTOR VEHICLE~~ WASTE TIRES

ARTICLE ~~17~~

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CHAPTER 8. DEPARTMENT OF ENVIRONMENTAL QUALITY

WASTE MANAGEMENT RULES

ARTICLE 7. ~~BURIAL OF MINING INDUSTRY OFF ROAD MOTOR~~

~~VEHICLE WASTE TIRES~~

R18-8-701. Definitions

In addition to the definitions provided in A.R.S. § 44-1301, the following definitions apply in this Article:

1. "Aquifer protection permit" means an aquifer protection permit as provided for in A.R.S. § 49-241 et al.

2. "Burial cell" means an area of earthen materials where mining industry off road motor vehicle waste tires are placed in or on the land for burial. A burial cell may consist of an entire overburden pile, waste rock pile, tailings impoundment or leach area.

3. "Mining" means activities dedicated to the exploration, extraction, beneficiation and processing, including smelting and refining, of metallic ores.

4. "Mining facility" means any land, building, installation, structure, equipment, device, conveyance, area, or source dedicated to mining.

5. "Mining industry off road motor vehicle waste tire" means an off road waste tire which is greater than three feet in outside diameter which was used in mining.

6. "Operator" means a person who owns all or part of a mining facility, or who leases, operates, or controls such

facility, a person responsible for the overall operation of the mining facility, a management agency, or an authorized representative.

7. "Person" means a person as defined by A.R.S. § 49-201(21).

Changes made for reasons described in III.B.1 and III.C.5.

R18-8-702. Burial of mining industry off road waste tire

A. ~~For a period of not more than five years from the effective date of this Article,~~ Mining industry off-road motor vehicle waste tires may be disposed of by burial ~~for a period of not more than five years from the effective date of this Article.~~

B. ~~No later than 24 hours after commencement of~~ ~~At least 50 days prior to~~ burial of any mining industry off road motor vehicle waste tires, the operator of the mining facility shall file with the Director a one-time notice of ~~commencement of burial of~~ ~~intent to bury~~ mining industry off road motor vehicle waste tires and a map of the mining facility which clearly identifies the location and dimensions of the burial cell or cells and the estimated number of mining industry off road motor vehicle waste tires which will be buried in each cell. Each burial cell shall be identified to the Department using an alphabetical or numeric identifier. ~~If a new burial cell not previously included in the notice is utilized, the mine operator shall submit an additional notice to the Department within 24 hours after commencement of burial in that burial cell.~~

2 C. Burial of mining industry off road motor vehicle waste
3 tires shall occur only in areas which are, or will be, included in
4 the aquifer protection permit issued for the mining facility by the
5 Department. ~~These areas shall be limited to overburden piles,
6 waste rock piles and tailings impoundments. A burial cell may
7 consist of an entire overburden pile, waste rock pile or tailings
8 impoundment.~~ Burial of mining industry off-road motor vehicle
9 waste tires shall occur in leach areas only where an aquifer
10 protection permit has been issued by the Department covering that
leach area.

11 D. No changes.

12 E. Mining industry off road motor vehicle waste tires may be
13 buried at the mining facility only if the tires are waste generated
14 at that mining facility or another mining facility of the same
15 owner ~~and operator.~~

16 Changes made for the reasons described in III.C.1,, through
17 III.C.7.

18 R18-8-703. Cover requirements

19 A. The operator shall cover all mining industry off road
20 motor vehicle waste tires buried pursuant to this Article with a
21 minimum of six inches of earthen material within 50 days of
22 placement, or sooner if necessary, to prevent vector breeding or
23 fire.

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2 B. The operator shall place final cover over the off road
3 motor vehicle waste tires within 180 days after placement of the
4 last tire which will be buried in a cell. The final cover shall
5 consist of earthen material which is at least three feet deep ~~and~~
6 ~~or which is in compliance~~ complies with the requirements of ~~an~~ the
7 aquifer protection permit ~~which includes~~ for the area where the
8 burial cell is located.

8 C. No changes.

9 *Changes made for reasons described in III.D.1. through III.D.3.*

10 R18-8-704. No changes.

11 R18-8-705. Burial cell closure certification

12 Within ~~180~~ 30 days after placement of final cover in
13 accordance with R18-8-703.B ~~the last mining industry off-road motor~~
14 ~~vehicle waste tire in a burial cell~~, the mining facility operator
15 shall file with the Director a burial cell closure certification.
16 The mining facility operator shall certify that no more tires will
17 be buried in the burial cell. A registered professional engineer
18 shall certify that cover material has been placed in accordance
19 with the cover requirements of R18-8-705.

20 *Changes are made for the reasons described in III.E.1. through*
21 *III.E.3.*

R18-8-706 No changes.

2 R18-8-707. Maintenance of records

3 ~~For at least three years after the burial cell closure~~
4 ~~certification is filed with the Department. The~~ mining facility
5 operator shall maintain, at the mining facility, records which
6 document the number ~~and location~~ of tires buried in each cell ~~for~~
7 ~~at least three years after the burial closure certification is~~
8 ~~filed with the Department for all cells.~~

9 Changes made for reasons described in III.F.1. through III.F.3.

10 R18-8-708. No changes.

INFORMATIVE SUMMARY

The Arizona Department of Environmental Quality proposes to adopt rules pursuant to A.R.S. § 44-1304(F) and Laws 1992, Chapter 300, Section 17, which mandates that the director adopt rules prescribing permissible methods of disposal of mining industry off road motor vehicle waste tires greater than three feet in diameter. The rules, A.A.C. Title 18, Chapter 8, Article 7, Burial of Mining Industry Off Road Motor Vehicle Waste Tires, provide, for a period of five years, for burial of metallic ore mining off road motor vehicle waste tires at the mining facility where the waste tires are generated. The rules contain definitions and govern where at the facility mining industry off road motor vehicle waste tires may be buried and enumerate cover requirements. The rules provide for notification of the Director of the intent to bury tires at the mining facility, maintenance of records, annual reports to and inspections by the Department and burial closure certification. The rules also state under what circumstances mining waste tires may be stored at the mining facility.

DIRECTORY OF ARIZONA
WASTE TIRE COLLECTION SITES (WTCS)
&
WASTE TIRE PROCESSING FACILITIES (WTPF)

APRIL, 1993

PREPARED BY:

THE
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF WASTE PROGRAMS
SOLID WASTE UNIT
3033 NORTH CENTRAL AVENUE, 6TH FLOOR
PHOENIX, ARIZONA 85012
(602) 207-4133

000184

Any additions, corrections, or changes
in this directory MUST be submitted on the attached form and mailed to:

THE
ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
OFFICE OF WASTE PROGRAMS
SOLID WASTE UNIT
ATTN: MICHELLE DIAZ, SECRETARY
3033 NORTH CENTRAL AVENUE, 6TH FLOOR
PHOENIX, ARIZONA 85012

000185

Window 1

ARIZONA SOLID WASTE DISPOSAL FACILITY
DATA SCREEN

RECORD NUMBER:

FACILITY NAME:
FACILITY TYPE:

CONTACT NAME:
COUNTY:

OPERATOR:
ADDRESS:
CITY: ZIP:
PHONE:

LAND OWNER:
ADDRESS: ZIP:
CITY: ZIP:
PHONE:

DIRECTIONS TO SITE:

TOWNSHIP: RANGE: SECTION: 1/4 1/4 1/4

LAST INSPECTION

000186

FACILITY NAME, TYPE AND COUNTY LAST INSPECTION DATE	OPERATOR'S NAME ADDRESS AND PHONE NUMBER	LAND OWNER'S NAME, ADDRESS AND PHONE NUMBER	DIRECTIONS, LOCATION, TOWNSHIP, RANGE, SECTION, QUARTER SECTIONS
ADAMSVILLE LF WTCS WTCS PINAL 03/26/92	PINAL CO. SW DEPT. P.O. BOX 1747 FLORENCE 85232 (602) 868-6680	PINAL COUNTY P.O. BOX 1746 FLORENCE 85232 (602) 868-6680	ALONG HWY 287 2 MILES WEST OF FLORENCE - 12370 E. 287 T 5S , R 9E , Sec. 9 1/4:
APACHE REGIONAL LF WTCS APACHE	BLUE HILLS ENVIRONMENTAL P.O. BOX 175 ST. JOHNS 85936 (602) 337-4364	APACHE COUNTY P.O. BOX 175 ST. JOHNS 85936 (602) 337-4664	2 ML NORTH ON ST. JOHNS HWY US 666 T 13N, R 29E, Sec. 18 1/4:
AZ PORTLAND CEMENT WTPF PIMA	AZ PORTLAND CEMENT P.O. BOX 338 RILLITO 85654 (602) 622-3503	CA PORTLAND CEMENT CO. 2025 E. FINANCIAL WAY GLENORA, CA 91740 (818) 852-6200	11115 N. CASA GRANDE HWY, RILLITO, AZ W. ON I-10 EXIT AVERA T 12S, R 12E, Sec. 6 1/4:
BUCKHEAD MESA WTCS WTCS GILA 05/22/92	GILA COUNTY P.O. BOX 2297 PAYSON 85547 (602) 474-8105	GILA COUNTY 1400 E. ASH GLOBE 85501 (602) 474-8105	10 ML. NO. OF PAYSON ON HW 87, EA. LF SIGN, GO 1 MILE T 11N, R 9E , Sec. 2 1/4:
CAMP VERDE LF WTCS WTCS YAVAPAI	JOHN WHITE 610 DOUGLAS AVE PRESCOTT 86301 (602) 445-6698	US DEPT. OF AG/FOREST SVC HC 64, BOX 240 RIMROCK 86335 (602) 567-4501	3 MIL E. OF CAMP VERDE ON NO. SIDE OF GENERAL CROOK TRAIL HWY, T 13N, R 5E , Sec. 10 1/4: NE
CERBAT LANDFILL WTCS WTCS MOHAVE	GAMBI DISPOSAL INC. P.O. BOX 568 FRENCH CAMP, CA 95231 (209) 465-0840	MOHAVE COUNTY 3675 E. ANDY DEVINE AVE. KINMAN 86401 (602) 757-0910	11 MI. NW OF KINGMAN, OFF HWY 93 ALONG MINERAL PARK ROAD T 23N, R 18W, Sec. 35 1/4: SW
COCHISE COUNTY WTCS WTCS COCHISE 01/30/92	COCHISE COUNTY DEQ 619 MELODY LANE BISBEE 85063 (602) 432-9579	COCHISE COUNTY P.O. BOX 225 BISBEE 85603 (602) 432-9479	3/5 ML. EAST OF STATE HW 666 ON SOUTH SIDE OF THOMPSON RD. T 20S, R 26E, Sec. 10 1/4:
COCONINO CO. WTCS WTCS COCONINO 04/29/92	COCONINO COUNTY HWY DEPT. 5600 E. COMMERCE FLAGSTAFF 86004 (602) 526-2735	COCONINO COUNTY 5600 E. COMMERCE FLAGSTAFF 86004 (602) 526-2735	5701 E. PENSTOCK, FLAGSTAFF T 21N, R 8E , Sec. 5 1/4:
COLINA TIRE RECOVERY WTPF PINAL	COLINALS TIRE RECOVERY 2310 S. 5TH ST. COOLIDGE 85228 (602) 723-7840	COLINAS TIRE RECOVERY 2310 S. 5TH ST. COOLIDGE 85228 (602) 723-7840	HWY 87 SO. TO COOLIDGE 8 MI. RT ON 5TH ST. 1/3 ML WE. FROM HWY 87 T 5S , R 8E , Sec. 34 1/4:

FACILITY NAME, TYPE AND COUNTY LAST INSPECTION DATE	OPERATOR'S NAME ADDRESS AND PHONE NUMBER	LAND OWNER'S NAME, ADDRESS AND PHONE NUMBER	DIRECTIONS, LOCATION, TOWNSHIP, RANGE, SECTION, QUARTER SECTIONS
FRANCONIA TECH. WTPF MOHAVE	FRANCONIA TECH. 505 S. MADISON DRIVE TEMPE 85281 (602) 894-1286	FRANCONIA TECH. 505 S. MADISON DRIVE TEMPE 85281 (602) 894-1286	US 40 TO FRANCONIA RD. INTERCHANGE; NEAR TOPEKA & SANTA T 16N, R 19N, Sec. 8 1/4:
GRAHAM CO. SAFFORD WTCS GRAHAM	GRAHAM CO. 800 MAIN ST. SAFFORD 85546 (602) 428-1962	CITY OF SAFFORD 717 MAIN ST. SAFFORD 85546 (602) 428-2762	8TH AVE., 3 ML NO. OF SAFFORD T 6S, R 26E, Sec. 30 1/4:
INA WTCS WTCS PIMA 03/05/92	PIMA COUNTY 130 W. CONGRESS, 2ND FL. TUCSON 85701 (602) 740-3555	PIMA COUNTY 130 W. CONGRESS, 2ND FL. TUCSON 85701 (602) 740-3555	MILES WEST OF HW I-10 ON INA ROAD T 13S, R 12E, Sec. 1 1/4: NW
LA PAZ CO. WTCS WTCS LA PAZ	LA PAZ COUNTY 602 11TH ST./P.O. BOX BP PARKER 85344 (602) 677-3326	LA PAZ COUNTY 602 11TH ST./P.O. BOX BP PARKER 85344 (602) 667-3326	20 ML NO. OF QUARTZSITE, 2 MILES PAST 128 ON HWY 95 T 7N, R 19W, Sec. 13 1/4:
LOMA LINDA WTCS WTCS GREENLEE	GREENLEE COUNTY P.O. BOX 908 CLIFTON, AZ 85533 (602) 865-4762	GREENLEE COUNTY P.O. BOX 908 CLIFTON, AZ 85533 (602) 865-4762	1.5 ML EA. OF US HW 666 ON WARDS CANYON ROAD T 5S, R 30S, Sec. 15 1/4:
LONE PINE WTCS WTCS NAVAJO	NAVAJO COUNTY P.O. BOX 668 HOLBROOK 86025 (602) 524-6161	US FOREST SERVICE RR3, BOX B-50 LAKESIDE 85929 (602) 368-5111	6.9 ML. NORTH OF US HW 60 ON AZ HWY 77, WEST 1.7 ML ON LONE PINE T 11N, R 21, Sec. 12 1/4:
MOHAVE VALLEY LF WTCS MOHAVE	MESA DISPOSAL, INC. P.O. BOX 1133 BULLHEAD CITY 86430 (602) 758-3485	MOHAVE COUNTY 3675 E. ANDY DEVINE AVE. KINMAN 86401 (602) 757-0910	4 MI. EAST OF HWY 95 ALONG EL RODEO ROAD T 19N, R 21W, Sec. 21 1/4:
NW REGIONAL LF WTCS WTCS MARICOPA 05/08/92	MARICOPA CO. SW DEPT. 2901 W. DURANGO ST. PHOENIX 85009 (602) 506-7060	MARICOPA COUNTY 2901 W. DURANGO ST. PHOENIX 85009 (602) 506-7060	19401 W. DEER VALLEY RD. T 6N, R 2W, Sec. 20 1/4:
PEN-ROB LF WTCS WTCS NAVAJO	PEN-ROB, INC. 4592 E. MAIN, P.O.DRW. G JOSEPH CITY 86032 (602) 288-3605	PEN-ROB, INC. 4592 E. MAIN, P.O. DRW. G JOSEPH CITY 86032 (602) 288-3605	EAST SIDE OF PORTER AVE., 3 ML NO. OF HW I-40 IN JOSEPH CITY T 19N, R 19E, Sec. 33 1/4:

FACILITY NAME, TYPE AND COUNTY LAST INSPECTION DATE	OPERATOR'S NAME ADDRESS AND PHONE NUMBER	LAND OWNER'S NAME, ADDRESS AND PHONE NUMBER	DIRECTIONS, LOCATION, TOWNSHIP, RANGE, SECTION, QUARTER SECTIONS
RIO RICO LF WTCS WTCS SANTA CRUZ	SANTA CRUZ CO. PUBLIC WRK P.O. BOX 818 NOGALES 85628 (602) 281-4695	RIO RICO PROPERTIES 1410 RIO RICO DR. RIO RICO 85621 (602) 281-8451	W ON FRONTAGE ROAD, 1 MI N OF PECK CANYON RD INTERCHANGE ON HWY T 22S, R 13E, Sec. 16 1/4:
ROLL LF WTCS WTCS YUMA	YUMA CO. PUBLIC WORKS 2703 AVENUE B YUMA 85364 (602) 329-2300	US BUREAU OF RECLAMATION 3151 WINSOR YUMA 85364 (602) 726-6300	AVE 38E & CO. 3RD ST.; EA. 2 MI ON OLD HWY 80 TO AVE 38 E., GO T 7S, R 17W, Sec. 34 1/4:
BAKER SOUTHWEST WTPF MARICOPA 07/14/92	BAKER SOUTHWEST 11400 E. PECOS ROAD QUEEN CREEK 85242 (602) 981-3006	NB & I TIRE RECYCLING 11400 E. PECOS ROAD QUEEN CREEK 85242 (602) 981-3006	11400 E. PECOS ROAD LOCATED IN MESA T 1S, R 7E, Sec. 36 1/4:
RUSSLE GULCH WTCS WTCS GILA	GILA COUNTY P.O. BOX 2297 PAYSON 85547 (602) 474-8105	GILA COUNTY 1400 E. ASH GLOBE 85501 (602) 474-8105	1.6 ML. WEST OF US HWY 60 ON RUSSLE ROAD T 1N, R 15E, Sec. 27 1/4:
SOUTHWEST TIRE REC.INC. WTPF LA PAZ	DON DAVIS P.O. BOX 2217 POSTON, AZ 85271 (602) 669-6424	SCOTT DAVIS P.O. BOX 1100 LAGUNA PARKER, AZ 85344 (602) 669-2665	5 MI. NORTH OF MCVAY RD. ON HWY 72 MI. PAST MI. POST 40 T 4N, R 15W, Sec. 6 1/4:
YAVAPAI CO. REG. LF WTCS YAVAPAI	YAVAPAI CO., PUBLIC WORKS 25 E. GURLEY PRESCOTT 86301 (602) 771-3188	CITY OF PRESCOTT 211 S. CORTEZ ST. PRESCOTT 86302 (602) 445-3500	2800 SUNDG RANCH RD., 3 ML NW OF PRESCOTT ON NE SIDE OF US HWY 89 T 14N, R 2W, Sec. 24 1/4:
			T, R, Sec. 1/4:
			T, R, Sec. 1/4:
			T, R, Sec. 1/4:

000189

Tombstone Development Company

P.O. BOX 1445

TELEPHONE 308/382-7480

GRAND ISLAND, NEBRASKA 68802

July 15th, 1993

Bisbee Salvage and Equipment Company
P. O. Box 4517
Bisbee, Arizona 85603

Attention: Bill Gianetto

Dear Bill:

I have been wanting to thank you for sending us a list of equipment that you purchased at the auction site on Tombstone Development property. Frank and I enjoyed the visit with you in Tombstone and want to thank you again for making the trip there to meet with us.

I mentioned during this meeting that it has become necessary for removal of this equipment, but I did not know at that time the schedule we would have to meet. We have now been informed by the Department of Environmental Quality that all this excess equipment must be removed within 90 days, starting July 15th, 1993.

Please understand that this is not a requirement of Tombstone Development Company, but of the Department of Environmental Quality.

We therefore must request that we live within this time frame since financial penalty can be assessed for failure to do so.

Received
7/21/93



Very truly yours,

Jerome Niedfelt

Tombstone Development Company
By: Jerome Niedfelt, President

JN/ap

000190

AUCTION

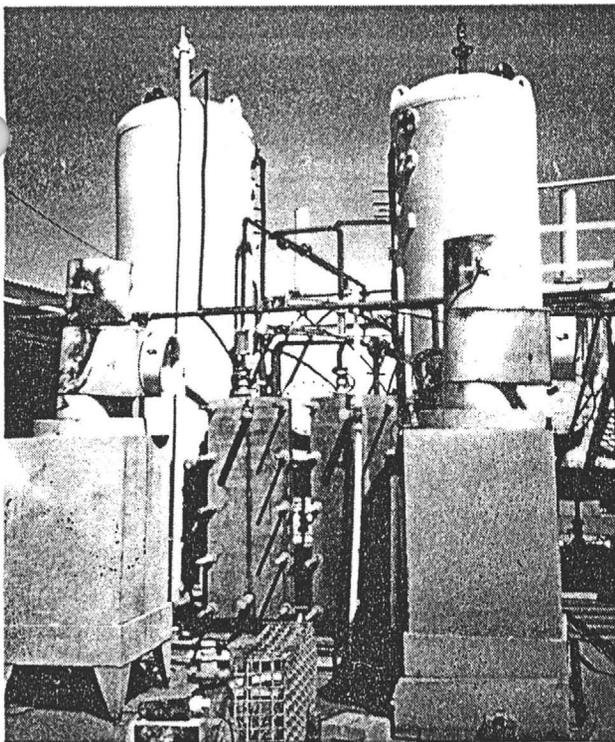
SILVER AND GOLD PROCESSING EQUIPMENT

COWACHIN MINES, LTD. has commissioned HENDRIX & ASSOCIATES AUCTIONS to sell at AUCTION their surplus inventory of SILVER AND GOLD PROCESSING EQUIPMENT. Equipment has been properly maintained and was in use at time Cowachin Mines opted to change their processing method.

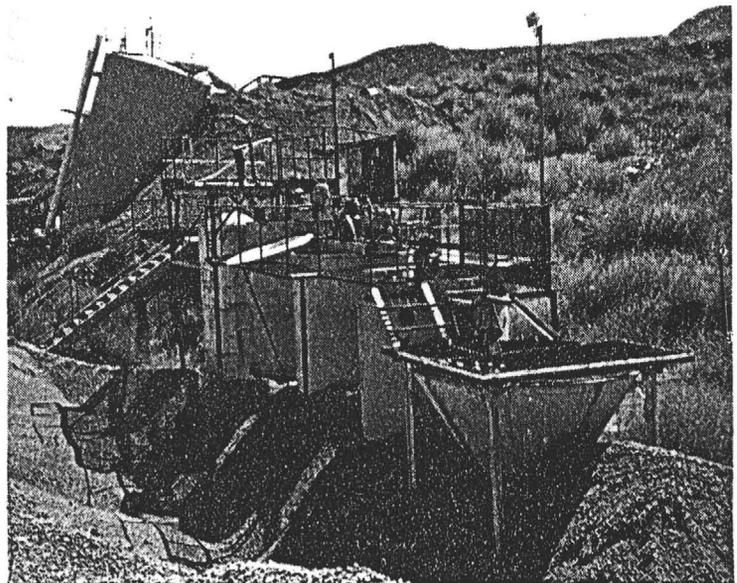
10:04 A.M., THURSDAY, DECEMBER 8, 1988

In HISTORIC TOMBSTONE, ARIZONA

(Half Mile Southeast of the City of Tombstone on the Old Bisbee Highway off Allen Street)



Carbon Stripper



Carbon In Pulp/Carbon In Leach System

INSPECTION DAYS:
DECEMBER 6 AND 7

TERMS OF PAYMENT: Cash, Cashier's Check, Business Check if accompanied by Bank Letter..All sales are final. Equipment is sold AS-IS, WHERE-IS with no warranty or guarantees implied or stated.

HENDRIX & ASSOCIATES, INC.

• AUCTIONEERS • APPRAISERS • LIQUIDATORS • CONSULTANTS

RON HENDRIX, (806) 794-9649, 5518 77th St., Lubbock, Texas 79424, TX Lic. # 6040

FOR INFORMATION: P.O. Box 370, Tombstone, Arizona, 85638, (602) 457-2282 or FAX (602) 457-3020

000191

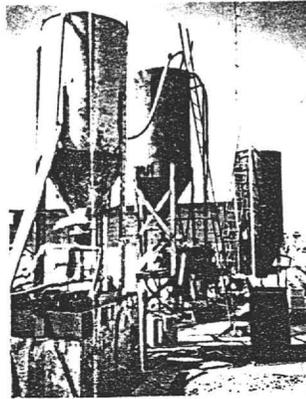
AUCTION INCLUDES:

- Clear Water Carbon Adsorption System: (6) 2-Ton Pressurized Towers, Rated Flow is 700-800 GPM: One 2-Ton Open Tower
- Carbon In Pulp/Carbon in Leach System: (3) 7'x9' Agitating Tanks with Lightnin Agitation and Fully Equipped with Sandpiper Transfer Pumps, Air Lines and Screens
- 20,000 Lbs. of West States 521G Carbon (Bagged)
- Carbon Stripper: (2) One-Ton Stripping Vessels Equipped with (2) Sioux D-1000 Instant Hot Water Heaters (1,000,000 BTUH) and (2) Transfer Super Chargers plus 800-Gal. Preg and 800-Gal. Barren Tanks, 10 HP Viking Positive Displacement Pump, Stainless Steel Valves And Flanges
- Zinc Precip Feeder
- Filter Press (30 Sw. Ft.) with 2 HP Teel Pump and Venturi Vacuum System also with 2 HP Teel Pump Carbon Acid Wash Tank
- Heat Reactivators
- Holding Tank
- Carbon Transfer Equipment
- 1 x 24" Trommel w/Gear Reducer and 10 HP Motor
- Atkins Twin 48" Classifier (Sand Screw w/Electrical and 75 HP Elec. Motor and Catwalk
- Feeder: 15-Ton Bin w/Grizzly, Underflow Belt w/10 HP Motor and Gear Reducer, 18 x 100 Conveyor with Belts and Pulleys
- 3 Settling Tanks, Two 20,000-Gal and One 12,000-Gal.
- Bolt Bin and Contents
- 12 Gate Valves
- 12 Butterfly Valves
- Jaeger Pump, 6" x 6"
- Centrifugal Pump w/Motor
- Go-man Repp Pump, 3" x 3"
- Worthington Pump, 4" x 3"
- Denver 3" x 3" Rubber Lined Pump w Westinghouse 20 HP Motor
- ITT 1 1/4" x 2" Pump w/2 HP Motor
- UMI 1 1/4" x 1" Centrifugal Pump w/ 2 HP Motor
- Jet 1" x 3/4" Pump w/ 1/2 HP Motor
- 3 4 x 3/4" Centrifugal Pump, 3/4 HP Motor
- Morse 87 to 1 Gear Reducer, Model 103K
- Krebbs Cyclone Separator, Model 202, 8" x 6" Rated
- Gardner-Denver Compressor, 250 CFM
- Jaeger Pump w/10 HP Motor
- Pump w/15 HP Motor
- G.E. 25 HP Electric Motor
- U.S. 7 1/2 HP Electric Motor
- 4 Assorted Electric Motors
- U.S. 40 HP Electric Motor
- U.S. 30 HP Motor
- Pallets of Electrical Switch Boxes
- Assorted Flanges and Fittings
- (5) Gate Valves, 6X
- (3) Gate Valves, 3X
- Pinch Valves

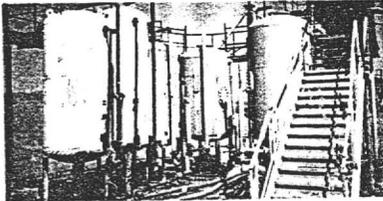
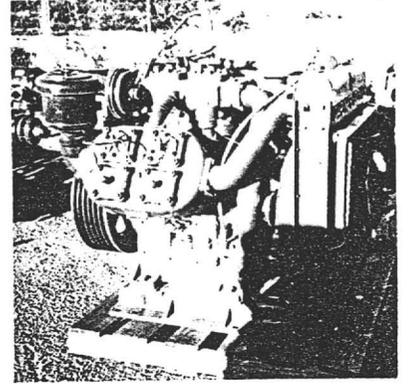
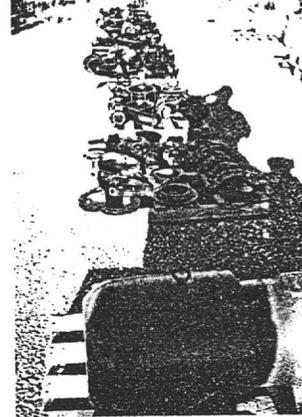
- (4) Plug Valves
- 6" Check Valves
- 4" Cross T
- Assorted Victrualic Fittings and Clamps
- Ingersoll-Rand 5" x 3" Pump w/15 HP Electric Motor
- Door-Oliver 6" x 4" Rubber Lined Pump
- Falk Gear Reducer, 48 to 1
- U.S. 7 1/2 HP Elec. Motor, 3-Ph. 440 Electric Motor, 10 HP
- G.E. 50 HP Electric Motor
- Wilfley 6" x 10" Sand Pump
- Dorrco Pump, Double Daiphram, 10" x 6" w/Electric Motor
- Spool of S/S Wire, Approx. 3000'
- Assorted Pump Parts
- Bauer Hydra-Sieve, Mod. 552F
- Denver SRL 3" x 3" Sand Pump w/ 10 HP Electric Motor
- Assorted Valves
- 2KW DC Generator
- Allen Sherman Pump
- Krebb Cyclones
- 50 HP U.S. Electric Motor w/6" x 4" Rubber Lined Vaceal Pump

- 4" x 6" Vaceal Pump w/30 HP Motor
- 3" x 3" Dual Pump w/7 1/2 HP Delco Motor
- 60" Thickner Unit w/Winn Smith Gear Reducer
- Assorted Hoses & Pulleys
- 60" Eriz Screen
- 48" Swelo Screen
- 7 1/2 HP Submergible Mud Pump
- 30 HP Self Priming Pump
- Misc. Iron and PVC
- 900-Gal. Mixing Tank w/Catwalk and Accessories
- Other Items

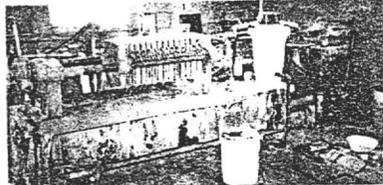
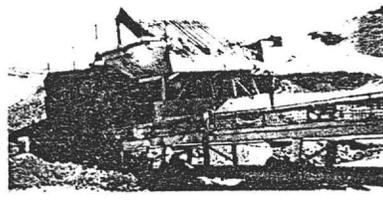
Whether you are a small or medium size operation — there will be something for you at this sale. Must see to appreciate. Please call us if you would like to come see the equipment before the designated inspection days. Our personnel will be happy to answer any and all questions. Phone: (602) 457-2282 or FAX (602) 457-3020, Tombstone, Arizona



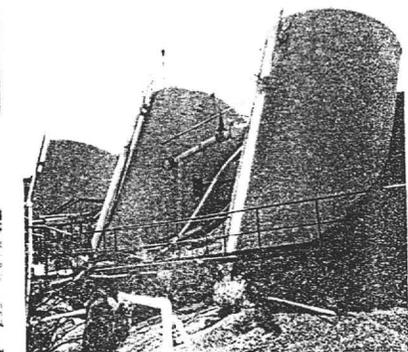
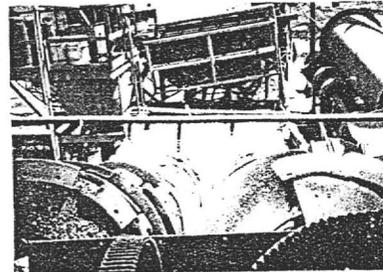
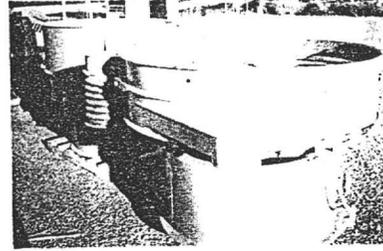
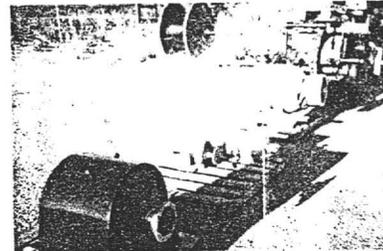
Carbon Acid Wash



Clear Water Carbon Adsorption System



Zinc Precip Feeder and Filter Press



Settling Tanks

000192

AUCTION

SILVER AND GOLD PROCESSING EQUIPMENT



AUCTION STARTS AT 10:04 A.M.
THURS., DEC. 8, 1988

Tombstone, Arizona

Half-Mile SE of City at PBR Minerals
(Old Bisbee Hwy. off Allen St.)

FOR INFORMATION:
(602) 457-2282 or FAX (602) 457-3020
Tombstone, Arizona

AIRLINES (Serving Tucson, Arizona)

American 1-800-433-7300
Delta 1-800-221-1212
Braniff 1-800 BRANIFF
Eastern 1-800-327-8376
American West 1-800-247-5692
Aero Mex 1-800-237-6639

RENT-A-CAR (Serving Tucson, Arizona)

Avis 1-800-331-1212
Budget 1-800-527-0700
Hertz 1-800-654-3131

LODGING (Tombstone, Arizona)

Lookout Lodge
(Best Western) 602-457-2223
Tombstone Motel 602-457-3478
Lariat Motel 602-457-2272
Adobe Lodge 602-457-3641

Return Address:
P.O. BOX 5133
LUBBOCK, TEXAS 79417

AUCTION

Silver & Gold Processing Equipment

Starting at 10:04 A.M. On
THURSDAY, DECEMBER 8, 1988

IN HISTORIC
TOMBSTONE, ARIZONA
Half-Mile Southeast of the City at PBR
Minerals (Old Bisbee Highway off
Allen St.)

INSPECTION DAYS:
DECEMBER 6 AND 7, 1988

000193

THANKS FOR ATTENDING

PLEASE PAY THE CASHIER BEFORE LEAVING

000194

TOMBSTONE, ARIZONA

<u>Lot #</u>	<u>Description</u>	<u>Price</u>
1	Bolt bin and Contents	\$
2	4 Gate Valves	4x \$
3	2 Butterfly Valves	2x \$
4	Jaeger Pump 6''x 6''	\$
5	Centrifigal Pump with Motor	\$
6	Gormann Rupp Pump 3''x 3''	\$
7	Worthington Pump 4''x 3''	\$
8	3''x 3'' Denver Pump w/Westinghouse 20HP motr	\$
9	ITT 1 1/4''X 2'' Pump w/2 HP Motor	\$
10	UMI 1 1/4''x 1''Centrifigal pump w/2 HP Motr	\$
11	Jet 1''x 3/4'' Pump/1/2 HP Motor	\$
12	3/4 X 3/4 Centrifigal Pump w/3/4 HP Motor	\$
13	Morse 87 to 1 gear reducer Model 1.03K	\$
14	Krebs Cyclone Seperator Md.202 8x6 rated	\$
15	Krebs Cyclone Seperator Md.202 8x6 rated	\$
16	Krebs Cyclone Seperator Md.202 8x6 rated	\$
17	Krebs Cyclone Seperator Md.202 8x6 rated	\$
18	Gardner-Denver Compressor 250CFM	\$
19	Jaeger Pump w/ 10HP Motor	\$
20	Pump w/ 15 HP Motor	\$

21	Mud Pump		\$
22	GE 25 HP Electric Motor		\$
23	US 7 1/2 HP Electric Motor		\$
24	4 Assorted Electric Motors		\$
25	US 40 HP Electric Motor		\$
26	US 30 HP Electric Motor		\$
27	Pallet of Electric Switch Boxes		\$
28	Pallet of Electric Switch Boxes		\$
29	Pallet of Assorted Flanges and Switches		\$
30	6 Gate Valves	6x	\$
31	3 Gate Valves	3x	\$
32	Pinch Valve		\$
33	Assorted Elbows and Tees		\$
34	4 Plug Valves	4x	\$
35	6'' Check Valve		\$
36	4'' Cross Tee		\$
37	Assorted Fittings		\$
38	Assorted Victaulic Fittings and Clamps		\$
39	Ingersol-Rand 5x3 Pump w/15 HP Electric Mtr.		\$
40	Dorr-Oliver 6x4 Rubberlined Pump		\$
41	Falk Gear Reducer 48 to 1		\$
42	US 7 1/2 HP Elec. Mtr. 3 Phase 440 Metric		\$
43	Electric Motor 10 HP		\$
44	GE 50 HP Electric Motor		\$
45	Wilfly 6 x 10 Sand Pump		\$
46	Dorrco Double Diaphragm 10X6 Pump w/elec mtr.		\$
47	Spool of Stainless Steel Wire approx, 3000'		\$

000198

48	Assorted Pump Parts	\$
49	Bauer Hydra-sieve Model 552F	\$
50	Denver SRL 3X3 Sand Pump w/ 10HP Elec. Motor	\$
51	Pallet of Assorted Valves	\$
52	2 KW DC Generator	\$
53	Allen Sherman Pump	\$
54	Misc Vacuum Pump	\$
55	Misc VOID	\$
56	Misc	\$
57	Misc	\$
58	Misc	\$
59	Misc	\$
60	Misc	\$
61	Misc	\$
62	Misc	\$
63	Misc	\$
64	Misc	\$
65	Misc	\$
66	Misc	\$
67	Misc	\$
68	Misc	\$
69	Misc	\$
70	Misc	\$
71	Misc	\$

72	Misc	VOID	\$
73	Misc		\$
74	Misc		\$
75	60 ' Thickner Unit		\$
76	15 Ton Bin Feeder w/10HP Mtr./Clevnd Gear Red		\$
77	100 ' Belt w/Motor and Gear Reducer		\$
78	4 X 16 Trommel w/Gear Reducer & 10 HP Motor		\$
79	Twin 48'' Atkins Sandscrew w/75HP Mtr/Catwalk		\$
80	US 50HP Elec Mtr.w/6x4 Vacseal Pump-Rubber Lnd		\$
81	Clear Water Carbon Adsorbtion Unit (6) 2-Ton Pressure Towers, (1) 2-Ton Open Tower, Catwalk		\$
81A	and 75 HP Century Pump (3X4), and Electrical		\$
82	2- 20,000 gallon and 1- 12,000 gallon Settling Tanks w/ (4) 3/4 X 3/4 Transfer Pumps		\$
83	Carbon in Pulp/ Carbon in Leach Unit-includes (3) 7 X 9 Agitation Tanks w/Lightnin Agitators 3''Stainless Steel Sandpiper Pump, 2''Transfer Pump, (1) Cone Hopper w/Electrical and Catwalk		\$
84	4 X 6 Vacseal Pump w/30HP Motor		\$
85	Small Pump		\$
86	8,000 Pounds of West States 521G Carbon 8000x		\$
87	3 X3 Dual Prime Pump w/7 1/2HP Delco Motor		\$
88	Misc		\$
89	Screens		\$
90	Screens		\$

91	1 Ton Carbon Heat Pressure Stripper w/ D-1000 1,000,000 BTU Hr. Sioux Instant Hot Water Heat- er, Tranter Super Charger, Stainless Steel Valves and Fittings, (1) 1-Ton Carbon Stripping Vessel, (1) 800 gallon Strip Solution Tank, (1) 400 Gallon Strip Solution Tank, (1) Viking Positive Replacement Pump	\$
92	1 Ton Carbon Heat Pressure Stripper w/ D-1000 1,000,000 BTU Hr. Sioux Instant Hot Water Heat- er, Tranter Super Charger, Stainless Steel Valves and Fittings, (1) 1-Ton Carbon Stripping Vessel, (1) 800 gallon Strip Solution Tank, (1) 400 Gallon Strip Solution Tank, (1) Viking Positive Replacement Pump	\$
93	Precipitation Unit	\$
94	Acid Wash Unit	\$
95	Heat Reactivator w/ Feeder and Storage Tank and Transfer Pump and Tank	\$
96	Pallet of Hose	\$
97	12,000 Pounds of West States 521G Carbon	\$

LOT
1

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description Bolt Bin + Contents

Price _____
Thank You

LOT
4

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 6" X 6" JAEGER Pump

Price _____
Thank You

LOT
2

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 4 - gate VALVES

Price 4X
Thank You

LOT
5

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description Pump w/ motor

Price _____
Thank You

LOT
3

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 2 - Butterfly VALVES

Price 2X
Thank You

LOT
6

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 3" X 3" GORMAN REPT
Pump

Price _____
Thank You

000200

LOT
7

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 4" X 3" WORTHINGTON
PUMP

Price _____
Thank You



LOT
10

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 1 1/4" X 1" CENTRIFUGAL UMI PUMP
with 2HP motor

Price _____
Thank You



LOT
8

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 3" X 3" Rubber LINED DENVER
PUMP w/ 20HP westinghouse motor

Price _____
Thank You



LOT
11

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 1" X 3/4" JET PUMP
with 1/2 HP motor

Price _____
Thank You



LOT
9

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 1 1/4" X 2" CENTRIFUGAL ITT
PUMP w/ 2HP motor

Price _____
Thank You



LOT
12

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 3/4" X 3/4" CENTRIFUGAL Pump with
3/4 HP motor

Price _____
Thank You



000201

LOT
13

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description MORSE GEAR REDUCER
MD 103K Ratio 87 to 1

Price _____
Thank You

LOT
16

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description Krebs Cyclone Separator
Model 202 Rated 8" x 6"

Price _____
Thank You

LOT
14

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description Krebs Cyclone Separator
Model 202 Rated 8" x 6"

Price _____
Thank You

LOT
17

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description Krebs Cyclone Separator
Model 202 Rated 8" x 6"

Price _____
Thank You

LOT
15

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description Krebs Cyclone Separator
Model 202 Rated 8" x 6"

Price _____
Thank You

LOT
18

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description GARDNER DAWG
Compressor 250 CFM

Price _____
Thank You

000202

LOT: 19

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER:

Description: JAEGER PUMP w/ 10 HP Motor

Price: _____ Thank You

LOT: 22

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER:

Description: GE 25 HP Electric Motor

Price: _____ Thank You

LOT: 20

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER:

Description: Pump with 15 HP Motor

Price: _____ Thank You

LOT: 23

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER:

Description: U.S. 7 1/2 HP Electric Motor

Price: _____ Thank You

LOT: 21

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER:

Description: Mud Pump

Price: _____ Thank You

LOT: 24

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER:

Description: 4 Assorted Electric Motors

Price: _____ Thank You

000203

LOT
25

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description US 40HP ELECTRIC MOTOR

Price

Thank You

LOT
28

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 1- PALLET of ELECTRICAL
Switch Boxes

Price

Thank You

LOT
26

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description US 30HP ELECTRIC MOTOR

Price

Thank You

LOT
29

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description Pallet of Assorted
FLANGES & FITTINGS

Price

Thank You

LOT
27

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 1 PALLET of ELECTRICAL
Switch Boxes

Price

Thank You

LOT
30

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 6 GATE VALVES

Price

6X

Thank You

000204

LOT
31

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 3 - gate VALVES

Price 3X
Thank You

LOT
34

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 4 - PLUG VALVES

Price 4X
Thank You

LOT
32

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description PINCH VALVE

Price _____
Thank You

LOT
35

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 6" CHECK VALVE

Price _____
Thank You

LOT
33

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description LOT of ASSORTED Elbows +
Tees

Price _____
Thank You

LOT
36

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 4" CROSS T

Price _____
Thank You

000205

LOT
37

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description LOT of ASSORTED Fittings

Price _____
Thank You

LOT
40

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description DORR-OLIVER
6" X 4" Rubber lined PUMP

Price _____
Thank You

LOT
38

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description LOT of Assorted
Victolic Fittings + Clamps

Price _____
Thank You

LOT
41

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description FAIR GEAR REDUCER
Ratio 48 to 1

Price _____
Thank You

LOT
39

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description JINGERSOL RABD 5" X 3" PUMP
With 15HP ELECTRIC Motor

Price _____
Thank You

LOT
42

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description U.S. 7 1/2 HP ELECTRIC Motor

Price _____
Thank You

000206

LOT
43

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 10HP ELECTRIC MOTOR

Price _____
Thank You

LOT
46

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description PORCO 10" X 6"
Double / Diaphragm Pump for water

Price _____
Thank You

LOT
44

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description G.E. 50HP ELECTRIC MOTOR

Price _____
Thank You

LOT
47

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 3000' spool of
S/S WIRE

Price _____
Thank You

LOT
45

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description WIFLEY 6" X 10"
SAND PUMP

Price _____
Thank You

LOT
48

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description LOT of Assorted
Pump PARTS

Price _____
Thank You

000207

LOT
49

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description BAUER HYDRA-SIEVE
Md 552 F

Price

Thank You



LOT
52

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 2 KW DC GENERATOR

Price

Thank You



LOT
50

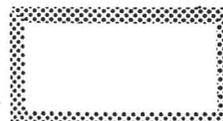
HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description DENVER SRL 3" X 3"
SAND Pump (with 10 HP ELECTRIC motor)

Price

Thank You



LOT
53

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description ALLEN SHERMAN
PUMP

Price

Thank You



LOT
51

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description Power of Assorted
VALVES

Price

Thank You



LOT
54

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description VACUUM Pump

Price

Thank You



000208



HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424



Description

LOTS 55-74 VOID

Price

Thank You



HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424



Description

60' Thickener Unit

Price

Thank You



HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424



Description

" GOTO HILL "

Price

Thank You



HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424



Description

Price

Thank You



HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424



Description

Price

Thank You



HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424



Description

Price

Thank You



000209

LOT
76

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 15 Ton Bin Feeder w 10HP motor
Cleveland Gear Reducer

Price

Thank You



LOT
79

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description Twin 48" Atkins Sand screw
w/75HP motor / CATWALK

Price

Thank You



LOT
77

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 100' Belt w/motor & gear
Reducer

Price

Thank You



LOT
80

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description US 50HP ELEC MOTOR W
6X4 VACSEAL Pump (rubber lined)

Price

Thank You



LOT
78

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 4X16 Trommel w/gear
Reducer & 10HP motor

Price

Thank You



LOT
81

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description Clear Water Adsorption Unit (6)
2 Ton Pressure Towers, (1) 2 Ton Open Tower
CATWALK

Price

Thank You



000210

LOT
81A

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 75 HP Century Pump (3x4)
And Electrical

Price _____
Thank You

LOT
84

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 4 X 6 VAC SPAL Pump
W/ 30 HP MOTOR

Price _____
Thank You

LOT
82

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 2 - 20,000 Gallon And 1 - 12,000
Gallon Settling Tanks (4) 3/4 x 3/4 Transfer
Pumps

Price _____
Thank You

LOT
85

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description Small Pump

Price _____
Thank You

LOT
83

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description CARBON IN Pulp / CARBON IN leach Unit
Includes (3) 7x9 Agitation Tanks w/ Lightnin
Agitators, SS sanding pump, 2" Transfer
pump, Cone Hopper, Electrical, CATWALKS

Price _____
Thank You

LOT
86

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 8000 # of West States 521G
CARBON

Price 8000 X
Thank You

000211

LOT
87

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 3X3 Dual Prime Pump w/
7/2 HP Delco motor

Price

Thank You

BUYER

LOT
90

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description Screens

Price

Thank You

BUYER

LOT
88

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description Misc

Price

Thank You

BUYER

LOT
91

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 1 Ton Carbon Heat Pressure
stripper (complete)

Price

Thank You

BUYER

LOT
89

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description Screens

Price

Thank You

BUYER

LOT
92

HENDRIX & ASSOCIATES
AUCTIONEERS • LIQUIDATORS
(806) 794-9649
5518 77th St. Lubbock, TX 79424

BUYER

Description 1 Ton Carbon Heat Pressure
stripper (complete)

Price

Thank You

BUYER

000212

LOT 93 HENDRIX & ASSOCIATES AUCTIONEERS • LIQUIDATORS (806) 794-9649 5518 77th St. Lubbock, TX 79424 BUYER

Description Precip unit

Price Thank You

LOT 96 HENDRIX & ASSOCIATES AUCTIONEERS • LIQUIDATORS (806) 794-9649 5518 77th St. Lubbock, TX 79424 BUYER

Description Pallet of HOSE

Price Thank You

LOT 94 HENDRIX & ASSOCIATES AUCTIONEERS • LIQUIDATORS (806) 794-9649 5518 77th St. Lubbock, TX 79424 BUYER

Description Acid wash unit

Price Thank You

LOT 97 HENDRIX & ASSOCIATES AUCTIONEERS • LIQUIDATORS (806) 794-9649 5518 77th St. Lubbock, TX 79424 BUYER

Description 12,000 # WEST STATES 5216 CARBON

Price 12,000 X Thank You

LOT 95 HENDRIX & ASSOCIATES AUCTIONEERS • LIQUIDATORS (806) 794-9649 5518 77th St. Lubbock, TX 79424 BUYER

Description HEAT REACTIVATOR W/Feeder AND STORAGE TANK & Transfer Pump AND TANK

Price Thank You

LOT 1-97 HENDRIX & ASSOCIATES AUCTIONEERS • LIQUIDATORS (806) 794-9649 5518 77th St. Lubbock, TX 79424 BUYER 7-

Description Bulk bid, lot 1-97 PAID IN full 12-7-00

Price CK# 1538 \$25,000.00 Thank You

SOLD TO: BISBEE MINING & EQUIP. Bill Gianetti

000213

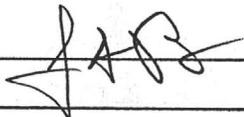


JABA INC.
 2100 N. Wilmot Rd. #218
 Tucson, AZ 85712
 (602) 885-9141
 (FAX) 721-2768

James A. Briscoe
 5610 E. Sutler Lane
 Tucson, AZ 85712
 (602) 721-1375

Fax (602) 298-6688 (*2 after second ring)

Fax Cover Sheet

DATE 8/6/93 THIS IS PAGE 1 OF 1 SENDER Jim Briscoe
 TO Jerry Niedfelt COMPANY TDC
 FAX # (308) 382-7482 LOCATION (City/State) Grand Island NB
 COMMENTS I talked again w/ Rich Histed
of Drilling Services yesterday.
He promised a contract for your sig.
today. 

CONFIDENTIALITY CAUTION

000214

This message is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged and confidential. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and return the original message to us at the above address at our cost.



JABA Inc.
PERSONAL CONTACT PROFILE

Mr.:Mr.

First:Steve Init: Last:Henderson

Title:Director Of Public Works

Dear:Steve

Company:Tombstone, City Of

Bus. Phone:1(602)457-3415,,,159

Address1:East Allen Street

FAX Phone : WifeMary

Address2:

HomePHONE :1(602)457-3579,,,159

City:Tombstone

Executive:James A. Briscoe

State:AZ

Zip:85638

Country:USA(Jody-Dter.)

Code:Vendor(JesseeGrassman)

User 8:

Type:Drilling/Equip.Operation

User 9:

ID Number:

User 10:

Capital:

User 11:

Deficit:

User 12:

User 6:

User 13:

User 7:

User 14:

Notes

Thursday 08/05/1993 5:54 PM JAB

The County is ready to take gravel if we assay it for cyanide. They're concerned about potential for Cn deeper within the pile. thus we, ll dig as deeply as possible into the pile on the south end (where we've agreed to take it from - they're satisfied with that) and along the leading edge of that pile & have Gary Lindroos do a Hatch test on it. Assuming its ok, we'll send it in to a certified lab for their analysis. The Co will take samples from the same area 1:& do physical analysis on it. As a formality they have to send it out for bid - but they're satisfied with the price & its unlikely that anyone else can meet both the specs and the price. The bid procedure will take about 10 days from the time we get clear CN analyses. They will then start hauling. Steve will use the City front end loader in exchange for gravel at the agreed rate.

Rev. scrap pick up w/ Jesse -- J. Neidfelt agreed he could have the profit from any scrap for picking it up. The only requirement that if any of the material is still good for its original purpose, they must check with me before it can be sold and TDC has the option of retaining it or selling for their own account.

The old PVC will be picked up on his hourly rate, and deposited where ever Gary Harrison Cochise Co. Solid Waste Management designates.

Tuesday 08/03/1993 12:17 PM JAB

Discussed the Following:

1. OK to fill the small holes around the Mine Tour decline with large cement boulders per our discussion.
2. Jerry N. gave OK to use City crews to manicure & prune desert vegetation along gulch in the mine tour area per our discussion, so that law enforcement can see whats going on in that area. SH wants to check with surface owner - he'll have the city personely check lot boundries & get the name & phone

000215



Drilling Services Company

A Division of Layne-Weatern Company, Inc.

12030 East Riggs Road • Chandler, Arizona 85249 • (602) 895-9336

Mr. Jerry Neidfelt
Tombstone Development Corp.
FAX # (308) 382-7482

August 5, 1993

Dear Mr. Neidfelt:

Per Mr. Briscoe's request, I am sending you a contract to perform the drilling, construction and development of two (2) monitoring wells at the Tombstone property.

I have revised the prices upward to reflect our increased costs involved in this program particularly with respect to the highly fractured ground encountered in our earlier efforts. DSC will provide materials on a invoice cost plus 15% and appropriate taxes basis. Below is a revised cost estimate to complete the project. Prices used are approximate based on available data. Prices of materials may vary.

only need me now & P. 300 hrs. I think there will be a problem with the project PER TC 8/16/93 there will be no charges except for...

Activity	Rate/Duration	Cost
Drilling 600' x 5.5" hole	\$6.25/foot	\$3,750.00
Installing PVC casing	4 hrs. @ \$190/hr	\$760.00
560' 4" PVC blank	\$4.00/foot	\$2,240.00
40' 4" PVC screen	\$5.50/foot	\$220.00
Total		\$6,970.00

I realize that some of the holes have been drilled to a certain depth and the drilling cost would be adjusted to reflect this. Only the charge of \$150.00 per hour for re entering the hole would apply.

Please let me know what you decide.

Sincerely,
Richard C. Histed
Richard C. Histed
Branch Manager

received
8/11/93

REVIEWED
J.A.B.
8/13/93



REVERSE CIRCULATION ROTARY DRILLING SERVICES

000216

TO

Mr. Jerry Neldfelt

FOR

Tombstone Development Corp.
FAX (308) 382-7482

(Hereinafter referred to as Client)

FROM

DRILLING SERVICES COMPANY
Division of Layne-Western Company, Inc.

12030 EAST RIGGS ROAD
CHANDLER, ARIZONA 85249
(602) 895-9336

(Hereinafter referred to as Contractor)

000217

Drilling Services Company
Offer of Drilling Services
Quotation No. 7883
Date:8-8-93

IN CONSIDERATION OF THE MUTUAL PROMISES, CONDITIONS AND AGREEMENTS HEREIN CONTAINED AND THE SPECIFICATIONS, SPECIAL PROVISIONS SET FORTH IN SCHEDULES "A" THROUGH "G" ATTACHED HERETO AND MADE A PART HEREOF, CONTRACTOR OFFERS TO UNDERTAKE THE WORK ON A CONTRACT BASIS:

1. THE CONTRACTOR PROMISES AND AGREES:

- 1.1 To furnish equipment as per Schedule "A" attached.
- 1.2 To furnish personnel as per Schedule "B" attached.
- 1.3 To provide a board and room allowance for the personnel furnished by the Contractor.
- 1.4 To provide parts, supplies, materials, fuels, lubricants, etc. pertinent to the efficient performance of this undertaking, excepting casing, cement, drilling mud, additives, rotary and down-the-hole hammer bits.
- 1.5 To procure, at the request of the Client and/or Client's representative, casing, cement, drilling mud, additives, rotary, down-the-hole-hammer bits and such other additional supplies, materials, personnel and equipment as may be necessary for the efficient operation and completion of the drilling assignment. Compensation for the procurement of such additional supplies, materials, personnel and equipment shall be at the rates set forth in Schedule "G" attached.
- 1.6 To leave the drill site free of all debris resulting from the work performed by the Contractor excepting drill cuttings.
- 1.7 To conduct all operations hereunder in full compliance of all rules and regulations adopted by any legal government ordinance whether Federal, State, Municipal or City.
- 1.8 To prepare a daily drill log (Schedule "C") summarizing in detail the days activities including consumable and chargeable items. One copy of the daily drill log will be provided the Client and/or the Client's representative on a daily basis.

Drilling Services Company
Offer of Drilling Services
Quotation No. 7883
Date: 8-5-93

- 1.9 To provide and maintain insurance coverage with an insurance company or companies authorized to do business in the State where the work is to be performed and satisfactory to the Client, insurance coverage of the kind and in the amounts set forth in Schedule "D". Contractor will, if requested to do so by the Client, procure from the company or companies writing said insurance a certificate or certificates satisfactory to the Client that said insurance is in full force and effective and that the same shall not be cancelled or materially changed without ten (10) days prior written notice to the Client.
- 1.10 To operate the Contractor's equipment on a single shift basis up to ten (10) hours per day, on a ten (10) days on, four (4) days off schedule, or at some other schedule mutually agreeable to Contractor and Client.
- 1.11 To commence drilling operations as scheduling and rig availability permits and to diligently continue the work until it is completed or until the assignment is terminated as hereinafter provided.
- 1.12 To render an invoice for services performed within five (5) days after the end of the month or alternately within ten (10) days of the conclusion or termination of the assignment, if such assignment is commenced and concluded within a calendar month.
- 1.13 To conduct drilling and sampling operations in accordance with the procedures detailed on Schedule "E".

2. THE CLIENT PROMISES AND AGREES:

- 2.1 It is recognized that the Client has superior knowledge of the location of the work, the access routes to the location of the work, surface and sub-surface conditions, weather patterns, etc. and Client is obligated to advise Contractor of all or any of the conditions that may affect Contractor's performance of this undertaking. Additionally, prior to the commencement of drilling at the drilling location named

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herein, the Client shall have determined and marked the locations of the bore holes and shall have made provisions for right-of-way, reasonable maintained access roads, sound locations, adequate in size and capable of properly supporting the drill unit. The Client shall procure all entry permits and hold harmless the Contractor for claims of trespass or damage to property required in carrying out the work contemplated by the Client hereunder, except where Contractor is negligent or has violated the Client's specific written instructions. The Client will provide a bulldozer and/or some other suitable machine and/or vehicle to provide towing and other assistance as may be required for the satisfactory performance of the undertaking.

- 2.2 The Client shall be responsible for all underground utilities, the plugging of bore holes and the refurbishing of the ground surface as may be required.
- 2.3 That should it direct, in writing, the Contractor to furnish supplies, materials, personnel and equipment other than those items specifically furnished by Contractor in Schedules "A" and "B" of this quotation, the Client will reimburse Contractor for those items as detailed in Schedule "G" attached.
- 2.4 The Client agrees to pay Contractor for the mobilization and demobilization of personnel and equipment, for services provided and for materials supplied at the rates as detailed in Schedule "G" herein upon receipt of the Contractor's invoice.
- 2.5 The Client shall be responsible for the handling transporting, and safekeeping of the geological samples and will provide all sample bags and/or containers for the storage of the samples.
- 2.6 That the information detailed on Schedule "F" hereto reasonably and adequately describes the conditions of the work to be undertaken.

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3. OTHER SPECIAL CONSIDERATIONS:

- 3.1 Contractor's invoices for services provided are net, due and payable upon receipt. Invoices unpaid thirty (30) days after date of the invoice will be subject to a delinquency charge of one and one half percent per month (18 percent per annum).
- 3.2 All the information and data obtained by reason of, or in connection with, the work shall be the exclusive property of the Client. The Contractor will keep all such information and data strictly confidential and will not divulge or use, or permit its employees to divulge or use any information or data so obtained.
- 3.3 All risk and damage to Contractor's tools, machinery, appliances or equipment shall be at all times borne and assumed by the Contractor unless Client expressly agrees to reimburse Contractor for such loss or damage.
- 3.4 It is specifically understood that the Contractor is not the agent of the Client and is not authorized to act for or on behalf of the Client or to bind the Client in any manner whatsoever, and that this agreement shall never be construed as creating a joint venture or other relationship whereby either party hereto shall be held for the acts either of omission or commission of the other party hereunder. Contractor agrees that the services provided herein will be performed as an independent Contractor. The exclusive direction, management and control of the employees of Contractor and of the work to be done under the provisions of this contract shall always reside in Contractor.
- 3.5 That neither party to this agreement shall be liable for any loss or damage caused by reason of strikes, accidents, acts of God, action of the elements, or of any other caused beyond its control.

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- 3.6 That this assignment is based upon Contractor performing this assignment with his regular drill crew and under a non-union operation. Should local unions require Contractor or its employees to join their local union against Contractor's will, this agreement shall terminate and shall be open for renegotiation.
- 3.7 It is fully understood and agreed that none of the requirements of this contract shall be considered as waived and/or modified unless the same is done in writing, and then only by the persons executing this contract, or other duly authorized agent or representative of the party.
- 3.8 Contractor may employ other Contractors to perform the work detailed in Schedule "F" provided that the Contractor obtains written consent from the Client.
- 3.9 This agreement shall continue in force until the drilling assignment is completed or until cancelled by either party hereto, such cancellation to be effective by giving written notice (by mail or telegram) to the other party at the addresses given herein not less than three (3) calendar days prior to date of termination; **PROVIDED HOWEVER**, upon the breach of any substantial provision of this agreement, the party not guilty of such breach, may if it elects, cancel this agreement without the written notice provided for above. In the event of termination under this provision, the Client shall compensate Contractor in accordance with the schedule of compensation as detailed in Schedule "G" herein.
- 3.10 This agreement will be governed by and construed in accordance with the laws of the State of Arizona
- 3.11 This offer of drilling services is valid for acceptance through September 15, 1993. After this date, the honoring of this quotation would be subject to the availability of personnel and equipment and any extension of this offer would be entirely discretionary by the Contractor.

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The foregoing offer of drilling services is made by:

**DRILLING SERVICES COMPANY
DIVISION OF LAYNE-WESTERN CO., INC.**

By: Richard C. Histed

Title: District Manager

The foregoing offer of drilling services is accepted by:

By: _____

Title: _____

Date of Acceptance _____

Compensation Plan Selected: _____

Drilling Services Company
 Offer of Drilling Services
 Quotation No. 7883
 Date: 8-5-93

SCHEDULE "A"

SCHEDULE OF EQUIPMENT TO BE SUPPLIED

ITEM	QTY	DESCRIPTION OF EQUIPMENT
1.	1	Cyclone Model TH-80 mounted on a diesel powered carrier. The drill unit is equipped with air compressors delivering 750 CFM free air at 350 PSI, a reverse circulation system for drilling with dual-tube drill pipe and hydraulically controlled water injection system.
2.	600	Feet of 4 1/2 inch O.D. by 2 1/4 inch I.D. dual-tube drill pipe.
3.	1	Pickup truck.
4.	1	Cyclone assembly complete with discharge hose.
5.	1	Drill bit subs and adapters for tricone and/or down-the-hole hammer drilling up to a hole diameter of 5 1/4 inch.
6.	1	Mission SD-5 Silverdrill Hammer. 1 car hammer
7.	1	Three-tiered Jones-type splitter.
8.	1	Combination pipe, service and water truck.
9.	1	Rotary Wet Splitter.

SCHEDULE "B"

SCHEDULE OF PERSONNEL TO BE FURNISHED

DRILLER (S) 1
 DRILL HELPER (S) 1
 SAMPLE HANDLER 1

Drilling Services Company
Offer of Drilling Services

SCHEDULE "C"
DAILY DRILL LOG

DSE DRILLING SERVICES INC.		DRILLERS DAILY DRILL REPORT			DRILLING INFORMATION AND DRILLING STATISTICS						
ACCOUNTING FOR DAILY ACTIVITY		DISTRIBUTION OF DAILY AHD/PM SHIFT HOURS			Client _____ Date _____ 198__						
EMPLOYEE'S NAME	TOTAL HOURS	ITEM	DESCRIPTION OF ITEM	HOURS	S DAY	P AFTER	F FRONT	T	Drilling Location	Job No.	FORMATION: overburden, sand, gravel, clay, shale, sandstone, limestone, water, etc. (describe briefly)
DRILLER		1.	Mark & Drive in hole		FROM	TO	ITEM #				
DRILLER		2.	Drill a hole to the left		3:30 AM to 7:30 AM						
DRILLER		3.	Set down the motor		7:30 AM to 8:30 AM						
DRILLER		4.	Set up the motor		8:30 AM to 9:30 AM						
DRILLER		5.	Drill surface casing		9:30 AM to 10:30 AM						
DRILLER		6.	Mark location of hole		10:30 AM to 11:30 AM						
DRILLER		7.	Drilling & sampling (includes)		11:30 AM to 12:30 PM						
DRILLER		8.	Drilling & sampling (includes)		12:30 PM to 1:30 PM						
DRILLER		9.	Drilling (includes)		1:30 PM to 2:30 PM						
DRILLER		10.	Reaming		2:30 PM to 3:30 PM						
DRILLER		11.	Reaming into hole		3:30 PM to 4:30 PM						
DRILLER		12.	Pulling out of hole		4:30 PM to 5:30 PM						
DRILLER		13.	Set up the motor		5:30 PM to 6:30 PM						
DRILLER		14.	Drilling out stabilized hole		6:30 PM to 7:30 PM						
DRILLER		15.	Water hauled		7:30 PM to 8:30 PM						
DRILLER		16.	Water sets		8:30 PM to 9:30 PM						
DRILLER		17.	Water sets delay		9:30 PM to 10:30 PM						
DRILLER		18.	Repair & service equipment		10:30 PM to 11:30 PM						
DRILLER		19.	Logging operation		11:30 PM to 12:30 AM						
DRILLER		20.	Standby with crew		12:30 AM to 1:30 AM						
DRILLER		21.	Standby with crew		1:30 AM to 2:30 AM						
DRILLER		22.	Standby with crew		2:30 AM to 3:30 AM						
DRILLER		23.	Standby with crew		3:30 AM to 4:30 AM						
DRILLER		24.	Standby with crew		4:30 AM to 5:30 AM						
DRILLER		25.	Standby with crew		5:30 AM to 6:30 AM						
DRILLER		26.	Standby with crew		6:30 AM to 7:30 AM						
DRILLER		27.	Standby with crew		7:30 AM to 8:30 AM						
DRILLER		28.	Standby with crew		8:30 AM to 9:30 AM						
DRILLER		29.	Standby with crew		9:30 AM to 10:30 AM						
DRILLER		30.	Standby with crew		10:30 AM to 11:30 AM						
DRILLER		31.	Standby with crew		11:30 AM to 12:30 PM						
DRILLER		32.	Standby with crew		12:30 PM to 1:30 PM						
DRILLER		33.	Standby with crew		1:30 PM to 2:30 PM						
DRILLER		34.	Standby with crew		2:30 PM to 3:30 PM						
DRILLER		35.	Standby with crew		3:30 PM to 4:30 PM						
DRILLER		36.	Standby with crew		4:30 PM to 5:30 PM						
DRILLER		37.	Standby with crew		5:30 PM to 6:30 PM						
DRILLER		38.	Standby with crew		6:30 PM to 7:30 PM						
DRILLER		39.	Standby with crew		7:30 PM to 8:30 PM						
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DRILLER		44.	Standby with crew		12:30 AM to 1:30 AM						
DRILLER		45.	Standby with crew		1:30 AM to 2:30 AM						
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DRILLER		62.	Standby with crew		6:30 PM to 7:30 PM						
DRILLER		63.	Standby with crew		7:30 PM to 8:30 PM						
DRILLER		64.	Standby with crew		8:30 PM to 9:30 PM						
DRILLER		65.	Standby with crew		9:30 PM to 10:30 PM						
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DRILLER		76.	Standby with crew		8:30 AM to 9:30 AM						
DRILLER		77.	Standby with crew		9:30 AM to 10:30 AM						
DRILLER		78.	Standby with crew		10:30 AM to 11:30 AM						
DRILLER		79.	Standby with crew		11:30 AM to 12:30 PM						
DRILLER		80.	Standby with crew		12:30 PM to 1:30 PM						
DRILLER		81.	Standby with crew		1:30 PM to 2:30 PM						
DRILLER		82.	Standby with crew		2:30 PM to 3:30 PM						
DRILLER		83.	Standby with crew		3:30 PM to 4:30 PM						
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DRILLER		90.	Standby with crew		10:30 PM to 11:30 PM						
DRILLER		91.	Standby with crew		11:30 PM to 12:30 AM						
DRILLER		92.	Standby with crew		12:30 AM to 1:30 AM						
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DRILLER		96.	Standby with crew		4:30 AM to 5:30 AM						
DRILLER		97.	Standby with crew		5:30 AM to 6:30 AM						
DRILLER		98.	Standby with crew		6:30 AM to 7:30 AM						
DRILLER		99.	Standby with crew		7:30 AM to 8:30 AM						
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DRILLER		120.	Standby with crew		4:30 AM to 5:30 AM						
DRILLER		121.	Standby with crew		5:30 AM to 6:30 AM						
DRILLER		122.	Standby with crew		6:30 AM to 7:30 AM						
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DRILLER		126.	Standby with crew		10:30 AM to 11:30 AM						
DRILLER		127.	Standby with crew		11:30 AM to 12:30 PM						
DRILLER		128.	Standby with crew		12:30 PM to 1:30 PM						
DRILLER											

ACORD. CERTIFICATE OF INSURANCE

ISSUE DATE (MM/DD/YY)

PRODUCER

Frank B. Hall & Co. of Mo., Inc.
100 North Broadway, Boatmen's Tower
St. Louis, Mo. 63102
(314) 231-0100

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

COMPANIES AFFORDING COVERAGE

- COMPANY LETTER A HARTFORD INSURANCE
- COMPANY LETTER B
- COMPANY LETTER C
- COMPANY LETTER D
- COMPANY LETTER E

INSURED

DRILLING SERVICES CO.
A DIV. OF LAYNE-WESTERN COMPANY, INC.
12030 E. RIGGS ROAD
CHANDLER, AZ 85249

2151.00

COVERAGES

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS
A X	GENERAL LIABILITY COMMERCIAL GENERAL LIABILITY CLAIMS MADE X OCCUR. OWNER'S & CONTRACTOR'S PROT. X CONTRACTUAL	84 CSE D58804E 84 JSE D58803E	5/01/92	5/01/93	GENERAL AGGREGATE \$5,000,000 PRODUCTS-COMP/OP AGG. \$2,000,000 PERSONAL & ADV. INJURY \$2,000,000 EACH OCCURRENCE \$2,000,000 FIRE DAMAGE (Any one fire) \$ 250,000 MED. EXPENSE (Any one person) \$ 5,000
A X	AUTOMOBILE LIABILITY ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS X HIRED AUTOS X NON-OWNED AUTOS GARAGE LIABILITY	84CSED58805E 84CSED58806E TX	5/01/92	5/01/93	COMBINGO SINGLE LIMIT \$2,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE \$
	EXCESS LIABILITY UMBRELLA FORM OTHER THAN UMBRELLA FORM				EACH OCCURRENCE \$ AGGREGATE \$
	WORKER'S COMPENSATION AND EMPLOYERS' LIABILITY				STATUTORY LIMITS EACH ACCIDENT \$ DISEASE-POLICY LIMIT \$ DISEASE-EACH EMPLOYEE \$
	OTHER				

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIAL ITEMS

CERTIFICATE HOLDER

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

[Signature] AAC

Drilling Services Company
Offer of Drilling Services
Quotation No. 7683
Date: 8-5-93

SCHEDULE "E"

PROPOSED METHOD OF DRILLING AND SAMPLING

The reverse circulation rotary method (RCR) will be employed utilizing double wall drill pipe, full bore tricone and/or button bits and reverse circulation air flow to drill and sample the formation. Should it be necessary and/or desirable to drill the hard formations with a down-the-hole hammer drill, the double wall drill pipe, interchange sub and down-the-hole hammer drill would be utilized. With either method, the reverse circulation system would be employed to recover the geological sample up through the center of the double wall pipe and the sample will be discharged at the surface via a cyclone directly onto a Contractor supplied three tiered Jones splitter. Should the sample be in a completely dry state and/or in a sticky condition, water may be injected into the air flow, on an intermittent or continuous basis, to assist in the recovery of the sample. Surface casing may be employed as required to stabilize any alluvial fill that may be present at the top of the hole.

SCHEDULE "F"

INFORMATION RELATIVE TO THE WORK TO BE UNDERTAKEN

1. Location of the Work: Tombstone, Arizona
2. Formation to be Drilled: Bisbee group sediments. (Siltstones and shales.)
3. Hole Size and Angle:

The bore holes shall be drilled a minimum diameter of 4 7/8 inches to a maximum diameter of 5 1/4 inches. The bore holes shall be drilled vertically and cased.

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4. **Hole Depth:**

The bore holes shall be drilled to a maximum of 500 feet.

Should down-the-hole conditions be such as to preclude the drilling of the bore hole to the desired maximum depth, the driller, in consultation with the Client and/or Client's representative, would jointly decide the maximum safe depth and their decision would be binding upon the Contractor and the Client.

5. **Scope and Purpose of this Undertaking:**

Approximately 1,200 feet of exploratory drilling.

6. **Sampling Interval:**

After setting of the blowout preventer and/or surface casing, drilling would proceed to provide geologic samples in increments of five (5) feet.

SCHEDULE "G"

COMPENSATION SCHEDULE

1. **Mobilization & Demobilization:**

For the supply of equipment and the furnishing of personnel, there will be a one time charge of \$500.00

2. **Travel Time:**

The first one (1) hour of daily travel time from the nearest available source of accommodation and fuel supply is included in the compensation plans set forth herein. However, daily travel in excess of one (1) hour per day per shift would be chargeable at the hourly rate of forty five dollars (\$45.00).

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3. **Drilling Services:**

The job site drilling and ancillary services will be provided at one of the following plans. Prior to the commencement of drilling operations, Client will have the option of selecting the plan best suited for their requirement and the Contractor will perform the drilling and ancillary services in accordance with the plan selected for the drilling program.

FOOTAGE RATE:

For all footage drilled calculated from the surface of the bore hole to the depth penetrated by the drill bit utilizing an FCR tricone or a standard downhole hammer/interchange assembly, the footage charge would be at the following rate:

\$6.25 per foot

Time consumed setting casing, including all activities to do so, would be charged at the hourly rate of:

190
\$190.00 per hour

Time consumed for hole abandonment, setting surface casing, water haulage, move between holes, etc. will be charged at the hourly rate of:

\$150.00 per hour

4. **Breakdown and Servicing Equipment Time:**

No charge for down time would apply for the time consumed repairing Contractor supplied equipment. Breakdown is defined as that breakage occurring above the ground.

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5. **Compensation for Abandoned and/or Broken Drill Pipe and/or Drill Tools:**

In the event that Contractor would be required to drill without water injection, or through old mine workings (shafts, stopes and drifts) which results in stuck and/or broken drill pipe and tools, Contractor will exert his best effort to extract the stuck and/or broken drill pipe and tools for a period of thirty two (32) hours. At the end of that period, should recovery not be achieved, the drill pipe and/or drill tools would be considered lost and/or abandoned and Contractor would be entitled to receive payment according to the following Schedule:

Within the first 10,000 feet of drilling at seventy five (75) per cent of the replacement cost. Thereafter, liability would be decreased by five (5) per cent for each increment of 1,000 feet drilled.

The current replacement cost of the drill pipe and drill tools F.O.B. Job site are:

- Dual wall drill pipe 20 feet lengths \$1,600
- Interchange Sub \$899
- Regular Bit Sub \$584
- Mission SD-3 Silverdrill Hammer \$5,040

6. **Compensation for Extracting Stuck and/or Broken Drill Pipe and/or Drill Tools, etc.:**

Hours consumed in the recovery and/or attempted recovery of drill pipe and/or drill tools, etc. on any one bore hole would be chargeable at an hourly rate of \$100.00 for the first eight (8) hours and at an hourly rate of \$150.00 for all hours consumed after the first eight (8) hours. The maximum chargeable on any one bore hole would be thirty two (32) hours.

$(8 \times 100) + (24 \times 150) = 5,200$

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7. Standby Time:

Hours consumed per shift on a standby basis at the convenience and/or request of the Client will be chargeable at the following rates:

- a. With drill crew @ \$150.00 per hour
- b. Without drill crew @ \$110.00 per hour (Provided the drilling supervisor and/or crew driller is notified at least eight (8) hours in advance that standby will be required.)

All standby charges would be limited to eight (8) hours per shift in any one day.

8. Providing Drill Bits, Additional Supplies, Equipment, Personnel, etc.:

The contractor will, at the request of the Client, provide drilling bits, drilling mud, casing, drilling additives, cement, supplies, equipment, etc., and engage subcontractors, and provide such additional services as may be required at Contractor's cost, plus fifteen (15) percent handling.

The following is the approximate cost of bits:

Tricone Bit	\$680.00
Hammer Bit	\$400.00
Hollow Hammer Bit	\$700.00

Drilling Services Company

A Division of Lyons-Western Company, Inc.

12000 East Riggs Road - Chandler, Arizona 85249 - (602) 895-9336

FAX TRANSMITTAL FORM

DATE: 8/11/93

TO: Mr. Jim Briscoe

NUMBER: _____

FROM: Rich Histed

NUMBER: (602) 895-9336 OFFICE PHONE

(602) 895-9336 FAX NUMBER

NO. PAGES: _____
(Including Cover Page)

COMMENTS: _____

Please Call If There Is A Problem With Your Copy.



REVERSE CIRCULATION ROTARY DRILLING SERVICES

000232

FILE Proj file
Tombstone



JABA INC.
2100 N. Wilmot Rd. #218
Tucson, AZ 85712
(602) 885-9141
(FAX) 721-2768

August 16, 1993

Mr. Jerry Niedfelt
President
Tombstone Development Company Inc.
P.O. Box 1445
Grand Island, NB USA 68802

Dear Jerry,

Re: Pulling Pump on PBR# 1 and authorization to start drilling
Monitor Well TDC# 1.

Steve Henderson has told me he would charge \$50 per hour for pulling the pump and replacing it in PBR # 1. Parts or errand running would be charged at \$25. He thinks it will take 10 to 12 hours of rig time, but won't guarantee anything. His standby while getting the pump repaired, ordering a new one etc would be nothing as he can simply quit and go home. This sounds considerably more economic than the \$190 per hour charged by Drilling Services to do the same work. Further they would charge stand by for time waiting for parts. If you agree, I would like us to go ahead ASAP to see if we can get PBR # 1 completed. However, I want to point out this would be a deal between TDC and Steve Henderson, and he is in no way an associate, employee or subcontractor of JABA Inc. Thus JABA Inc. would take no responsibility for his insurance nor work.

I have also as of last week received a copy of the contract from Drilling Services. In spite of promises to immediately fax me a copy, Rich Histed only did this after I called him. I understand you have had your copy for a while. I have reviewed the contract and it looks fine. I called Rich to find out whether there would be any change in the quote, as the ADEQ will allow us to drill one hole at a time. He said there wouldn't except for additional move and demove charges.

Rich has a drill rig ready to start work this Wednesday if he can find the PVC necessary for casing. If you will sign the contract this afternoon, perhaps we can have the well in by this weekend.

000233

⊕ 12:30 pm
Tue. TIME
8/16/93

317

Jesse Grassman is apparently making good headway in collecting scrap off the property. I will be down on the property tomorrow to do sampling on the pregnant and barren solution ponds per the ADEQ as well as sampling the waste heaps to the south for cyanide in cooperation with the county people. Gary Lindroos worked on cleaning up the laboratory and taking an inventory of chemicals per the ADEQ request, yesterday.

Very truly yours;

James A. Briscoe
JN09/16/93

000234



DRILLER'S DAILY DRILL REPORT

PERSONNEL EMPLOYED	EMPLOYEE'S NAMES	TOTAL HOURS
DRILLER	WALT MARSH	9.0
HELPER		
HELPER	T. EVANS	9.0
HELPER	R. CASTIGLEA	9.0
HELPER		

EQUIPMENT EMPLOYED	DESCRIPTION	UNIT NO.
Drill unit		413
Flatbed truck		
Water truck		230
Pickup truck		196
Fuel trailer		
Mud pump		
Comp/booster		
Light Plant		
Welder		
Hammer drill		

ACCOUNTING FOR DAILY ACTIVITY		
ITEM	DESCRIPTION OF ITEM	HOURS
1.	MOB/DEMOb: <input checked="" type="checkbox"/> travel.	4.0
2.	Daily travel to the field.	.5
3.	Set blowout preventer.	
4.	Set surface casing.	
5.	Pull surface casing.	
6.	Move between holes.	
7.	Drilling & sampling (tricone).	
8.	Drilling & sampling (hammer).	1.5
9.	Drilling (diamond coring).	
10.	Reaming.	
11.	Running into hole.	
12.	Pulling out of hole.	
13.	Hole stabilization.	
14.	Drilling out stabilized hole.	
15.	Water haulage.	.5
16.	Water tests.	
17.	Weather delay.	
18.	Repair & service equipment.	
19.	Logging operations.	
20.	Standby with crew.	
21.	Standby without crew.	
22.	Working on stuck pipe.	
23.	Parting inspection	.5
24.	Load PVC	.5
25.	Set up for Reaming	1.5
26.	Run Pipe in Hole to 225'	1.0
27.		
TOTAL		9.0

BRIEF EXPLANATION OF MAINT. HRS. (give unit no.)
all out to Specimen Prof

GENERAL REMARKS:

DISTRIBUTION OF DAILY AND/OR SHIFT HOURS		
FROM	TO	ITEM #
7:00 AM to 7:30 AM		
7:30 AM to 8:00 AM		
8:00 AM to 8:30 AM		
8:30 AM to 9:00 AM		
9:00 AM to 9:30 AM		23
9:30 AM to 10:00 AM		24
10:00 AM to 10:30 AM		
10:30 AM to 11:00 AM		
11:00 AM to 11:30 AM		1
11:30 AM to 12:00 N		
12:00 N to 12:30 PM		
12:30 PM to 1:00 PM		
1:00 PM to 1:30 PM		
1:30 PM to 2:00 PM		15
2:00 PM to 2:30 PM		25
2:30 PM to 3:00 PM		
3:00 PM to 3:30 PM		26
3:30 PM to 4:00 PM		
4:00 PM to 4:30 PM		8
4:30 PM to 5:00 PM		
5:00 PM to 5:30 PM		2
5:30 PM to 6:00 PM		
6:00 PM to 6:30 PM		
6:30 PM to 7:00 PM		
7:00 PM to 7:30 PM		
7:30 PM to 8:00 PM		
8:00 PM to 8:30 PM		
8:30 PM to 9:00 PM		
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3:30 AM to 4:00 AM		
4:00 AM to 4:30 AM		
4:30 AM to 5:00 AM		
5:00 AM to 5:30 AM		
5:30 AM to 6:00 AM		
6:00 AM to 6:30 AM		
6:30 AM to 7:00 AM		

DRILLING INFORMATION AND DRILLING STATISTICS

Client TOMBSTONE DEVELOPMENT CORP Date 5/19 1993
 Drilling Location: TOMBSTONE AZ Job No. 1056

Hole No.	Ft/Meters Casing set OR Recovered This Hole	Previous Shift Ft/Meters Drilled This Hole	Ft/Meters Drilled This Hole Today	Total of All Ft/Meters Drilled This Hole	Total Ft/Meters Chargeable Today This Shift	FORMATION: overburden, sand, gravel, clay, shale, sandstone, limestone, water, etc. (describe briefly).
TDC-1	0	225'	255'	290'	55'	11' drill from 180-225' BRIDGE 70, 120' 2' drill from 180-225' if SCOTT only drilled to 180'

TOTAL FT. AND/OR METERS CHARGEABLE TODAY 55'

CHARGEABLE SERVICES		DRILLING SUPPLIES SUPPLIED / CONSUMED	
MOB & DEMOB: Total miles <u>4.0</u> and/or _____ hours	RECORD ALL DRILLING SUPPLIES CONSUMED	CHECK OFF NON-CHARGEABLE ITEMS (NC)	
DAILY Travel time to & from job: _____ hours	DRILLING SUPPLIES	DRILLING BIT RECORD	
Stand by: day <input type="checkbox"/> with crew _____ hours	NC QTY. DESCRIPTION	Make	Type Size Serial No.
without crew _____ hours	1 GEL		
REFER TO CONTRACT OR JOB SHEET & COMBINE ALL APPLICABLE CHARGEABLE HOURS (ITEM DESCRIPTION) AND REPORT AS:	5 gal PETROLUKE		
Tricone/button bit drilling: _____ hours	1000 gal of WATER		
Rotary down the hole hammer drilling: _____ hours			
Diamond drilling: _____ hours			

Other chargeable hours 26 1.0 hours
 record separately: _____ hours

TOTAL CHARGEABLE HOURS THIS SHIFT AND/OR THIS DAY: 9.0 hours

DRILLER/SUPERVISOR REMARKS & APPROVAL: *Walter W. Marsh*

CLIENT'S REMARKS: *[Signature]*

ALL APPLICABLE HOURS, FOOTAGE & SUPPLIES CONSUMED ARE CHARGEABLE AS SHOWN UNLESS OTHERWISE NOTED ABOVE.

CLIENT'S APPROVAL OF CHARGES: _____ Date _____

CLIENT'S COPY

000235



DRILLER'S DAILY DRILL REPORT

EMPLOYEE'S NAMES	TOTAL HOURS
DRILLER/WALT MURPHY	11.5
HELPER	
HELPER T. EVANS	10.5
HELPER R. CASTILGUA	10.5
HELPER	

DESCRIPTION	UNIT NO.
Drill unit	413
Flatbed truck	
Water truck	230
Pickup truck	186
Fuel trailer	
Mud pump	
Comp/booster	
Light Plant	
Welder	
Hammer drill	

ACCOUNTING FOR DAILY ACTIVITY

ITEM	DESCRIPTION OF ITEM	HOURS
1.	Mob: <input type="checkbox"/> Demob: <input type="checkbox"/> travel.	
2.	Daily travel to the field.	1.2
3.	Set blowout preventer.	
4.	Set surface casing.	
5.	Pull surface casing.	
6.	Move between holes.	
7.	Drilling & sampling (tricone).	
8.	Drilling & sampling (hammer).	7.5
9.	Drilling (diamond coring).	
10.	Reaming.	
11.	Running into hole.	1.5
12.	Pulling out of hole.	1.0
13.	Hole stabilization.	
14.	Drilling out stabilized hole.	
15.	Water haulage.	
16.	Water tests.	
17.	Weather delay.	
18.	Repair & service equipment.	1.0
19.	Logging operations.	
20.	Standby with crew.	
21.	Standby without crew.	
22.	Working on stuck pipe.	
23.	Service Hammer	0.5
24.		
25.		
26.		
27.		
TOTAL		11.5

BRIEF EXPLANATION OF MAINT. HRS. (give unit no.)

0 Reg. make on shift for Hypo 500
Special Bit

GENERAL REMARKS:

180 ft clay to 365
Footing sediment 435 equal type 440
Clay range 485-490 W to 500'

DISTRIBUTION OF DAILY AND/OR SHIFT HOURS

S	DAY	H	AFT'N	F	NIGHT	FROM	TO	ITEM #
<input checked="" type="checkbox"/>						7:00 AM	7:30 AM	18
						7:30 AM	8:00 AM	
						8:00 AM	8:30 AM	8
						8:30 AM	9:00 AM	
						9:00 AM	9:30 AM	12
						9:30 AM	10:00 AM	
						10:00 AM	10:30 AM	
						10:30 AM	11:00 AM	8
						11:00 AM	11:30 AM	
						11:30 AM	12:00 N	
						12:00 N	12:30 PM	
						12:30 PM	1:00 PM	
						1:00 PM	1:30 PM	12
						1:30 PM	2:00 PM	23
						2:00 PM	2:30 PM	11
						2:30 PM	3:00 PM	
						3:00 PM	3:30 PM	
						3:30 PM	4:00 PM	8
						4:00 PM	4:30 PM	
						4:30 PM	5:00 PM	
						5:00 PM	5:30 PM	18
						5:30 PM	6:00 PM	2
						6:00 PM	6:30 PM	
						6:30 PM	7:00 PM	
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						12:30 AM	1:00 AM	
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						1:30 AM	2:00 AM	
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						2:30 AM	3:00 AM	
						3:00 AM	3:30 AM	
						3:30 AM	4:00 AM	
						4:00 AM	4:30 AM	
						4:30 AM	5:00 AM	
						5:00 AM	5:30 AM	
						5:30 AM	6:00 AM	
						6:00 AM	6:30 AM	
						6:30 AM	7:00 AM	2

DRILLING INFORMATION AND DRILLING STATISTICS

Client TARBSTONE DEVELOPING CORP. Date 8/20 1978

Drilling Location: TARBSTONE A2 Job No. 1056

Hole No.	Ft/Meters Casing set OR Recovered This Hole	Previous Shift Ft/Meters Drilled This Hole	Ft/Meters Drilled This Shift Today	Total of All Ft/Meters Drilled This Hole	Total Ft/Meters Chargeable Today This Shift	FORMATION: overburden, sand, gravel, clay, shale, sandstone, limestone, water, etc. (describe briefly).
TDC-1	0	280	260	540	260	

TOTAL FT. AND/OR METERS CHARGEABLE TODAY 260

CHARGEABLE SERVICES
 MOB & DEMOB: Total miles _____ and/or _____ hours
 DAILY Travel time to & from job: _____ hours
 Stand by: day with crew _____ hours
 without crew _____ hours

DRILLING SUPPLIES SUPPLIED/CONSUMED
 RECORD ALL DRILLING SUPPLIES CONSUMED
 CHECK OFF NON-CHARGEABLE ITEMS (NC)

NC	QTY.	DESCRIPTION	Make	Type	Size	Serial No.

REFER TO CONTRACT OR JOB SHEET & COMBINE ALL APPLICABLE CHARGEABLE HOURS (ITEM DESCRIPTION) AND REPORT AS:
 Tricone/button bit drilling: _____ hours
 Rotary down the hole hammer drilling: _____ hours
 Diamond drilling: _____ hours

Other chargeable hours _____ hours
 record separately: _____ hours
TOTAL CHARGEABLE HOURS THIS SHIFT AND/OR THIS DAY: _____ hours

DRILLER/SUPERVISOR REMARKS & APPROVAL: Walter W. Murphy

CLIENT'S REMARKS: _____

ALL APPLICABLE HOURS, FOOTAGE & SUPPLIES CONSUMED ARE CHARGEABLE AS SHOWN UNLESS OTHERWISE NOTED ABOVE.
 CLIENT'S APPROVAL OF CHARGES: _____ Date _____

CLIENT'S COPY

000236



DRILLERS DAILY DRILL REPORT

ACCOUNTING FOR DAILY ACTIVITY

EMPLOYEE'S NAMES	TOTAL HOURS
DRILLER <i>WALT MARSH</i>	10.5
HELPER	
HELPER <i>T EVANS</i>	10.0
HELPER <i>R. CARTER</i>	10.0
HELPER	
<i>JACK SUMNER</i>	

DESCRIPTION	UNIT NO.
Drill unit	413
Flatbed truck	
Water truck	230
Pickup truck	196
Fuel trailer	
Mud pump	
Comp/booster	
Light Plant	
Welder	
Hammer drill	

ITEM	DESCRIPTION OF ITEM	HOURS
1.	Mob: <input checked="" type="checkbox"/> Demob: <input type="checkbox"/> travel.	2.0
2.	Daily travel to the field.	0.5
3.	Set blowout preventer.	
4.	Set surface casing.	
5.	Pull surface casing.	
6.	Move between holes.	
7.	Drilling & sampling (tricone).	
8.	Drilling & sampling (hammer).	1.5
9.	Drilling (diamond coring).	
10.	Reaming.	
11.	Running into hole.	
12.	Pulling out of hole. <i>E. Run PVC</i>	2.0
13.	Hole stabilization.	
14.	Drilling out stabilized hole.	
15.	Water haulage.	
16.	Water tests.	
17.	Weather delay.	
18.	Repair & service equipment.	1.5
19.	Logging operations.	
20.	Standby with crew.	
21.	Standby without crew.	
22.	Working on stuck pipe.	
23.	<i>C.R. Hole clean</i>	1.5
24.	<i>Run 4" PVC sch 20 600'</i>	1.0
25.	<i>Run 1" in hole</i>	1.0
26.	<i>Developing hole</i>	1.5
27.	<i>Roll 1"</i>	1.0
TOTAL		10.5

BRIEF EXPLANATION OF MAINT. HRS. (give unit no.)

GENERAL REMARKS: *540-550 Red clay, 550-565 yellow clay, 565-570 Red clay, 570-575 Y. clay, 575-600 Fractured*

DISTRIBUTION OF DAILY AND/OR SHIFT HOURS

S	DAY	H	AFT'N	F	NIGHT	T
<input checked="" type="checkbox"/>						

FROM	TO	ITEM #
7:00 AM to 7:30 AM		15
7:30 AM to 8:00 AM		
8:00 AM to 8:30 AM		8
8:30 AM to 9:00 AM		
9:00 AM to 9:30 AM		23
9:30 AM to 10:00 AM		
10:00 AM to 10:30 AM		
10:30 AM to 11:00 AM		12
11:00 AM to 11:30 AM		
11:30 AM to 12:00 N		
12:00 N to 12:30 PM		24
12:30 PM to 1:00 PM		
1:00 PM to 1:30 PM		25
1:30 PM to 2:00 PM		
2:00 PM to 2:30 PM		29
2:30 PM to 3:00 PM		
3:00 PM to 3:30 PM		
3:30 PM to 4:00 PM		
4:00 PM to 4:30 PM		11
4:30 PM to 5:00 PM		
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3:30 AM to 4:00 AM		
4:00 AM to 4:30 AM		
4:30 AM to 5:00 AM		
5:00 AM to 5:30 AM		
5:30 AM to 6:00 AM		
6:00 AM to 6:30 AM		
6:30 AM to 7:00 AM		

DRILLING INFORMATION AND DRILLING STATISTICS

Client TOMBSTONE DEVELOPING CORP. Date 8/21 1993

Drilling Location: POARSTONE AZ Job No. 1056

Hole No.	Ft/Meters Casing set OR Recovered This Hole	Ft/Meters Previous Shift Drilled This Hole	Ft/Meters Drilled This Shift Today	Total of All Ft/Meters Drilled This Hole	Total Ft/Meters Chargeable Today This Shift	FORMATION: overburden, sand, gravel, clay, shale, sandstone, limestone, water, etc. (describe briefly).
TDC-1	540'	20'	600'	600'		600' SD

TOTAL FT. AND/OR METERS CHARGEABLE TODAY 60'

CHARGEABLE SERVICES

MOB & DEMOB Total miles _____ and/or 2.0 hours
 DAILY Travel time to & from job: _____ hours
 Stand by: day with crew _____ hours
 without crew _____ hours

REFER TO CONTRACT OR JOB SHEET & COMBINE ALL APPLICABLE CHARGEABLE HOURS (ITEM DESCRIPTION) AND REPORT AS:

Tricone/button bit drilling: _____ hours
 Rotary down the hole hammer drilling: _____ hours
 Diamond drilling: _____ hours

Other chargeable hours #12, #23, #24, #25 4.5 hours
 record separately: #26, #27 1.5 hours

DRILLER/SUPERVISOR REMARKS & APPROVAL: *Walter W. Marsh*

CLIENT'S REMARKS: *Walter W. Marsh*

ALL APPLICABLE HOURS, FOOTAGE & SUPPLIES CONSUMED ARE CHARGEABLE AS SHOWN UNLESS OTHERWISE NOTED ABOVE.

CLIENT'S APPROVAL OF CHARGES: _____ Date _____

DRILLING SUPPLIES SUPPLIED/CONSUMED

RECORD ALL DRILLING SUPPLIES CONSUMED CHECK OFF NON-CHARGEABLE ITEMS (NC)

DRILLING SUPPLIES		DRILLING BIT RECORD				
NC	QTY.	DESCRIPTION	Make	Type	Size	Serial No.

TOTAL CHARGEABLE HOURS THIS SHIFT AND/OR THIS DAY: 20 Total hours

CLIENT'S COPY

000237



JABA INC.
2100 N. Wilmot Rd. #218
Tucson, AZ 85712
(602) 885-9141
(FAX) 721-2768

FAX TRANSMITTAL # of Pages 2
TO: Don. G Bell FROM: J.A. BRISCOE
CO: AZ DEQ JABA, INC.
DATE: 8/27/93 PHONE: (602) 721-1375
FAX # (602) 207-4634 FAX # (602) 298-6688 *2
COMMENTS _____

August 24, 1993

Mr. Jerry Niedfelt
President
Tombstone Development Company Inc.
P.O. Box 1445
Grand Island, NB USA 68802

Dear Jerry,

Re: Completion Monitor Well TDC #1, Pulling pump on Monitor Well PBR #1, Tombstone, AZ.

Monitor Well TDC #1 was reentered Friday morning 8/20/93 and drilled from 225 to about 525 feet. It was my understanding as well as the drillers that the hole had been abandoned at 180 feet. Regardless either there was a cavity or it was drilled deeper than was reported. The section was mudded up and gave no further problems.

The hole was completed to 600 feet the next day, Saturday 8/21/93. At about 575 to the bottom at 600 feet a strong broken zone was encountered with caving conditions. This is probably the Tranquility fault. The driller didn't think he would be able to case to the bottom because of the cave, but the casing did go in ok.

Screens in the casing are set at 600 to 580 and 540 to 520. Water was encountered at about 485 feet. The well was developed and estimated to produce from 590 feet at about 35 gpm. It is currently capped and locked.

You expressed an interest in supplying a submersible pump for the well. The casing is 4.5" ID and the pump should be capable of pumping at least 10 gpm from 600 feet. It is important that we move as rapidly as possible to complete the well. Would you please advise as to the availability of your pump. Steve Henderson is figuring parts and costs to complete the well which I will forward as soon as it is available. Steve will install the pump and related equipment as well as a depth measuring system at his hourly rate of \$50/ hr rig time and \$25/ hr non rig time for his services.

PBR #1 has had the pump, wiring, production pipe and depth measuring pipe pulled by Steve Henderson. It took about 3 hours, and no problems were experienced. Steve is getting the pump tested now. He feels that at least some of the galvanized production pipe should be replaced. Further the PVC used for the depth testing mechanism was improperly glued together and should be replaced. He is getting costs together, and hopefully will

⊗

JUN 24 1993

EXCELLENCE
COMMUNICATIONS
CORPORATION

... have them within a few days. If the pump is burned out, we will need a replacement which perhaps you can supply. PBR # 1 well is about 800 feet deep and the pump was set, Steve estimates, at about 780 feet. Again a pump rate of 10 gpm for testing is adequate.

Back hoe cuts requested by the ADEQ are under way and will be completed this week. We are doing a tradeout with the City for crushed rock at our standard exchange.

The Million Dollar Stope filling is completed and looks good. I'll send along a photograph later.

Very truly yours;



James A. Briscoe
JN08/24/93
cc A.D. Mackenzie, Excellon
Don Bell ADEQ

000239

⊗



#7.503/1500
drilled not done
when completion
charges

NEW REMIT TO:
FILE # 91090
P.O. BOX 97908
INGLEWOOD, CA 90397-7908

INVOICE

Drilling Services Company

PLEASE SHOW INVOICE
NUMBER ON REMITTANCE

A Division of
LAYNE-WESTERN COMPANY, INC.
REVERSE CIRCULATION ROTARY DRILLING
12030 East Riggs Road • Chandler, Arizona 85249 • (602) 895-9336

Sold To	TOMBSTONE DEVELOPMENT	Date	AUGUST 30, 1993
	BOX 1445	Cust. Order	TOMBSTONE
	GRAND ISLAND, NE 68802	Our Order	34-1056
Attention:	Mr. Jerry Neidfelt	Our Inv. No.	08-4056-3

TERMS NET DAYS

	UNIT: 33-4130-34			
	WORK PERIOD: 8/19/93 THRU 8/21/93			
1)	Mobilization	Lump Sum		\$500.00
2)	Daily Travel Time	Hrs. @	per Hr. =	
3)	Job Site Drilling Services			
	a	375 Feet Drilled @	\$6.25 per Ft. =	\$2,343.75
	b	Hrs. Moving @	\$150.00 per Hr. =	
	c	5.0 Hrs. Other @	\$150.00 per Hr. =	\$750.00
	d	1.0 Freight for PVC @	\$76.14 per Hr. =	\$76.14
	e	4.0 Hrs. Setting Casing	\$190.00 per Hr. =	\$760.00
4)	Materials Furnished			
	540.0 Ft of Sch80 PVC	@	\$4.11 EA =	\$2,219.40
	20.0 Ft of Sch80 PVC	@	\$7.00 EA =	\$140.00
	40.0 Ft of Sch80 PVC Screen	@	\$5.58 EA =	\$223.20
	1.0 Bottom Cap	@	\$16.33 EA =	\$16.33
	1.0 Bucket of Petrolube	@	\$71.00 EA =	\$71.00
	1.0 Bag of Bentonite	@	\$8.17 EA =	\$8.17
	EA.	@	EA =	
	Percentage:	15.0 % on	\$2,678.10	\$401.72
	Taxable Sales:		\$2,678.10	Total Sales: \$7,509.71
	Tax Rate:	5.50 %		Tax: \$147.30
				Invoice Amount: \$7,657.01

Payment expected within _____ days after the date of this invoice. Layne-Western may institute a late payment charge at a rate of _____ percent per annum for all payments not made on or before the due date.

received
9/2/93

REVIEWED
J.A.B.
9/2/93

000240



JABA INC.
2100 N. Wilmot Rd. #218
Tucson, AZ 85712
(602) 885-9141
(FAX) 721-2768

October 1, 1993

Mr. Jerry Niedfelt
President
Tombstone Development Company Inc.
P.O. Box 1445
Grand Island, NB USA 68802

Dear Jerry,

Re: Bills from Gary Lindroos, Arizona Registered Assayer and Steve Henderson.

Transmitted with this note are the bills from Gary Lindroos and Steve Henderson, referenced above. Gary has been cleaning and taking inventory of the assay lab as required by the ADEQ. He has also been sampling and assaying for free cyanide trenches in the PBR - Cowichan tails, and the TEI tails also as required by the ADEQ.

Steve Henderson's bill is for pulling the pipe and pump on PBR # 1 which we have to get re-installed per the ADEQ, and for a weeks worth of back hoe trenching which allowed the cyanide sampling Gary did.

I am in the process of preparing a progress report for the ADEQ on the above and will forward a copy on to you on completion.

Gary is due \$1,905 for his work and that of his wife who assisted.

Steve is due \$836.83 for his labor and diesel fuel.

I would appreciate it if you would pay each of them directly.

Very truly yours:

A handwritten signature in cursive script, appearing to read "James A. Briscoe".

James A. Briscoe
JN10/01/93
Attached bills

000242



GARY A. LINDROOS
P. O. Box 1011
Tombstone, Arizona 85638

TIME SHEET

24-Sep-93

Pay Rate: \$35.00 per hour

Date	Hours	Accum	Description of Work Accomplished
8/14/93	4		Clean-up Lab Building, Start Inventory
8/22/93	3.5		Clean-up Lab Building, Inventory
8/29/93	5		Sample Tailings Pad, Assay for Free CN Work on Lab Clean-up
Total Hours		12.5	
9/4/93	6.5		Sample Trenches, Analysed Samples for CN
			Sample Trenches, Sorted old PBR Files
9/11/93	9		Sample Trenches, Analyzed Samples for CN
9/12/93	6		
Total Hours		34	
9/18/93	9		Sample Trenches, Analysed Samples for CN
Total Hours		43	

000243



NAOMI R. LINDROOS
P. O. Box 1011
Tombstone, Arizona 85638

TIME SHEET

24-Sep-93

Pay Rate: \$7.50 per hour

Date	Hours	Accum	Description of Work Accomplished
8/22/93	3.5		Assist in Inventory and Clean-up
8/29/93	5		Assist in Sampling Tailings Pads, Clean glassware, sample prep and lab clean-up
Total Hours		8.5	
9/4/93	6.5		Sample Trenches 3, 4, 5. Assist in assays. Prepared samples for bottle roll. Assisted in Assay of samples. Clean-up in lab.
9/12/93	6		sample prep and clean-up.
Total Hours		21	
9/18/93	9		Prepared samples for assay. Clean-up glassware
Total Hours		30	

000244



THE CIRCLE K CORPORATION
PURCHASE RECEIPT

ITEM Gas (Diesel) DATE Sept. 15, 93
 AMOUNT OF PURCHASE \$ 17.00 (13.10/14 gal)
 MANAGERS INITIAL [Signature]
 THANK YOU FOR YOUR PATRONAGE

8/1/91

CK103

Sept. 26, 1993

P.O. T. D.C.
 Mr. Jerry Niedfeldt
 P.O. Box 1445
 Grand Island, Ne. 68802

Aug 15 - Pulling pump
 4 hrs @ \$50⁰⁰ per hr 200⁰⁰

Sept. 11-16 Backhoe work
 Sept 11- 11 hrs Sept 14 - 4 hrs
 Sept 12 12 hrs Sept 15 - 4 hrs.
 Sept 13 4 hrs Sept 16 5 hrs.
 Total of 40 hrs @ \$15⁰⁰ per hr \$600⁰⁰

Diesel 9-12-93 19⁸³
 Diesel 9-15-93 19.00

Total \$836.83

From - Steve Henderson
 P.O. Box 641
 Tombstone Az 85638

received
 9/27/93

REVIEWED
 J.A.B.

OK for payment

CK103

THANK YOU FOR YOUR PATRONAGE

8/1/91

ITEM Diesel DATE 9-12-93
 AMOUNT OF PURCHASE \$ 19.83
 MANAGERS INITIAL _____

THE CIRCLE K CORPORATION
PURCHASE RECEIPT

000245





Southwestern Exploration Associates

COUNTY NOTEBOOK RESEARCH SYSTEM

4500 E. Speedway, Suite 14
Tucson, Arizona 85712
(602) 795-6097

CONSULTING SERVICES IN:

- literature research
- mineral exploration
- geothermal exploration
- geophysical exploration
- multispectral aerial photography
- space imagery search and retrieval
- image enhancement and processing
- remote sensing and interpretation
- environmental studies

VOL. 1

GENERAL ARTICLES

COUNTY NOTEBOOK INVENTORY LIST

Volume 1: County Summary Material

1. Mining District index map with USGS quadrangle overlay
2. County bibliography list with explanations
3. Target listing
4. Listing of all deposits with current exploration status
5. Map indexes to various commodities and a generalized land status map
6. County report by State Bureau of Mines
7. Information on industrial mineral occurrences within the county
8. General articles filed alphabetically, preceded by bibliography list
9. Metal price list

Volume 2: Thesis Material

1. Index map of available theses
2. Theses arranged alphabetically by author

Volume 3: U.S.G.S. Reduced Topographic Sheets

1. Reduced A.M.S. sheets
2. Reduced 7½ and 15 minute quad sheets with list of mines located on each quad sheet

Volume 4: U.S.G.S. Geologic, Geophysical, Geochemical and Open File Maps

1. Index to maps in Volume 4
2. Geologic maps
3. Geophysical maps
4. Geochemical maps
5. Photo index maps

Volume 5: Mining District Notebooks

1. Mining district summary sheet
2. Mint records, mineral resources material, Weed's Copper Handbook (colored sheets separate these sections)
3. Mining district articles listed alphabetically
4. Bibliography
5. Mine summary sheets with geologic data
6. Land status