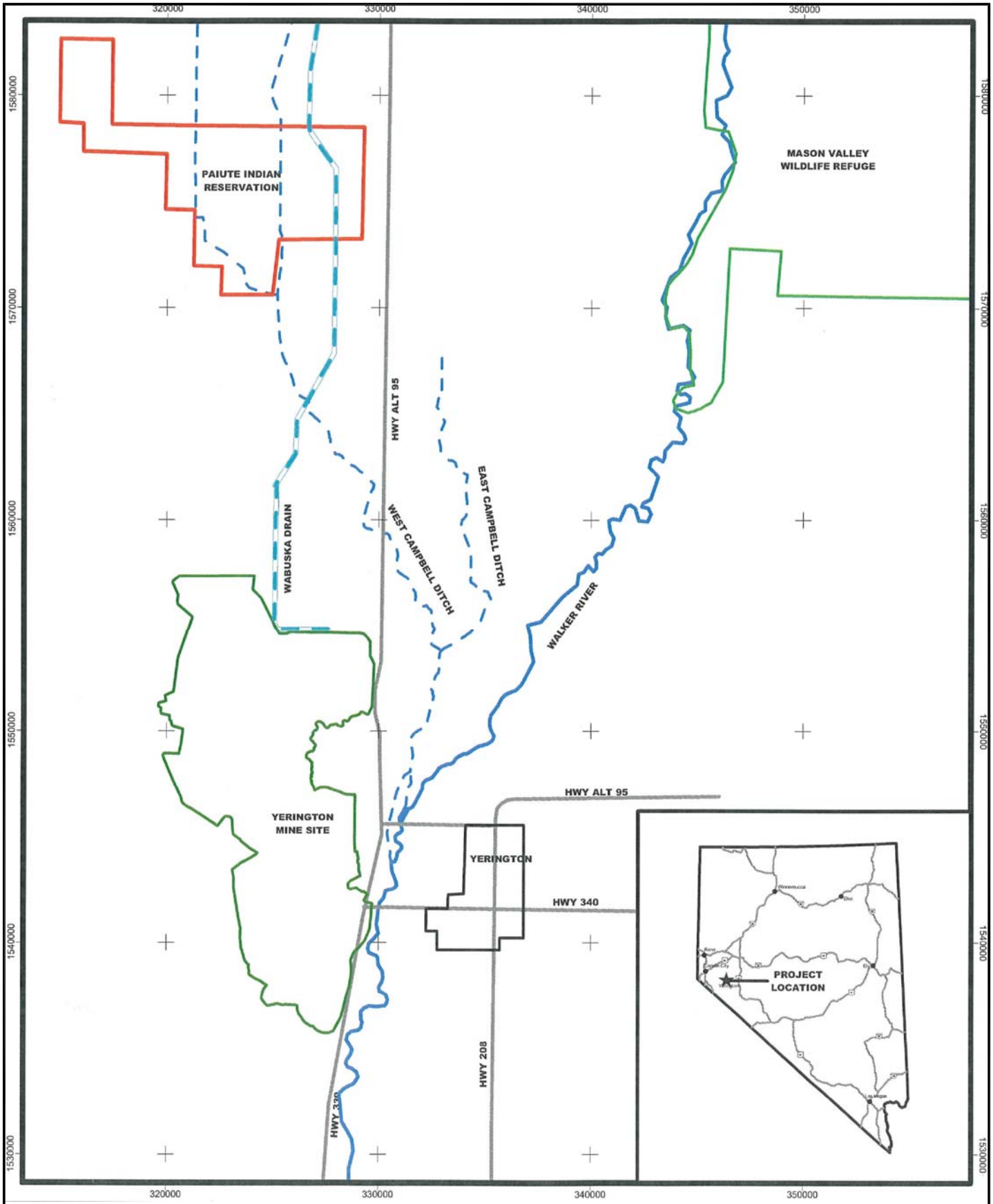
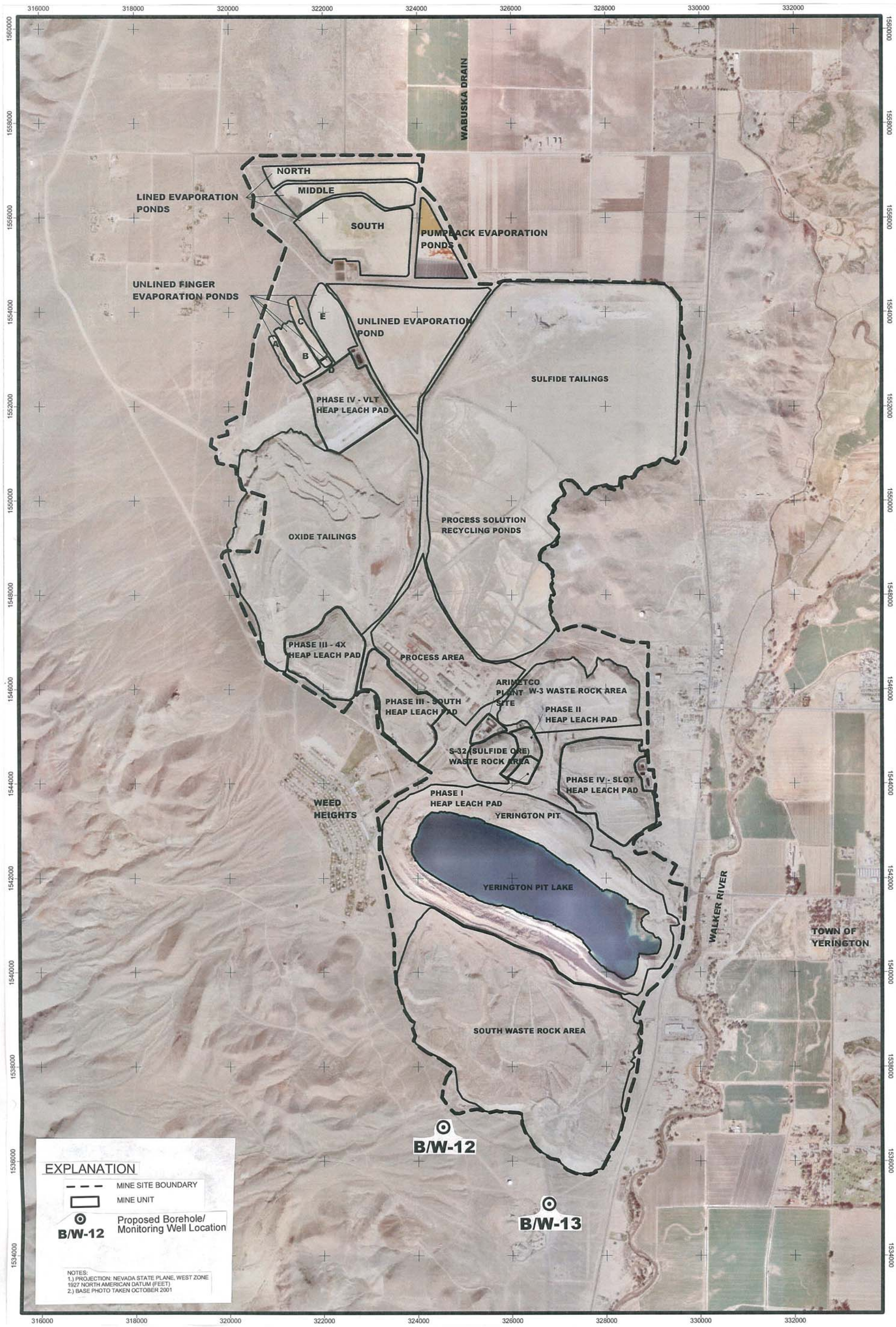


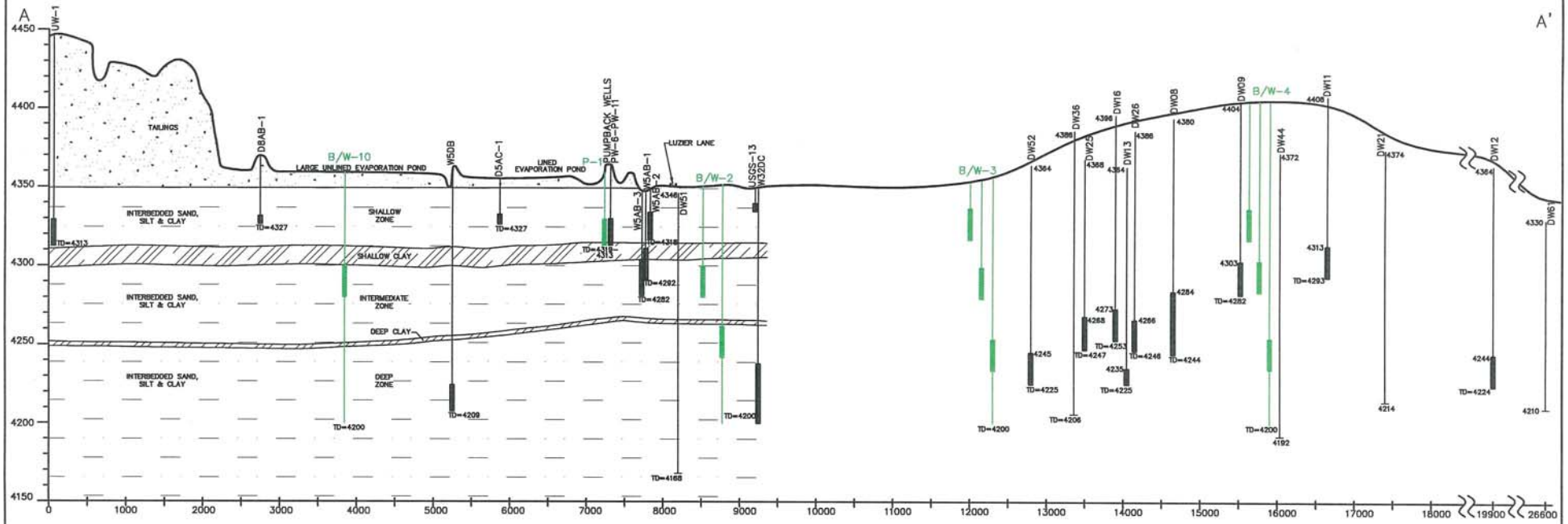
Notes:
Projection: Nevada State Plane, West Zone
1927 North American Datum (Feet)

DATE:	PROJECT NUMBER:	SCALE:		
Jan. 2005	21243	0 3000 6000 SCALE IN FEET	Atlantic Richfield Company	**Figure 1**
BROWN AND CALDWELL Carson City, Nevada				**Site Location**

Carson City Cad: P:\ARCO\21243\Groundwater Conditions\CAD\January 2005\F21243001.dwg (1=1) 01/13/2005 10:56:04 RJJ



DATE:	PROJECT NUMBER:	SCALE:		
Jan. 2005	21243	0 1000 2000 SCALE IN FEET	Atlantic Richfield Company	**Figure 2** **Surface Mine Units and Proposed Background Monitor Well Locations (South of Mine Site)**
BROWN AND CALDWELL Carson City, Nevada				



LEGEND

TAILINGS

CLAY

INTERBEDDED SAND, SILT & CLAY

B/W-2 — WELL ID

APPROXIMATE SCREEN INTERVAL

APPROXIMATE DEPTH OF STRATIGRAPHIC BORING

NOTES:

1) DOMESTIC WELL LOCATIONS AND ELEVATIONS ARE APPROXIMATE. DOMESTIC WELL LOCATIONS WERE BASED ON GPS SURVEYING AND GROUND SURFACE ELEVATIONS WERE APPROXIMATED FROM AERIAL PHOTOGRAPHY OVERLAID ON TOPOGRAPHIC MAPS.

2) PROPOSED WELL LOCATIONS AND SCREEN INTERVALS ARE APPROXIMATE AND WILL BE MODIFIED BASED ON FIELD FINDINGS DURING DRILLING.

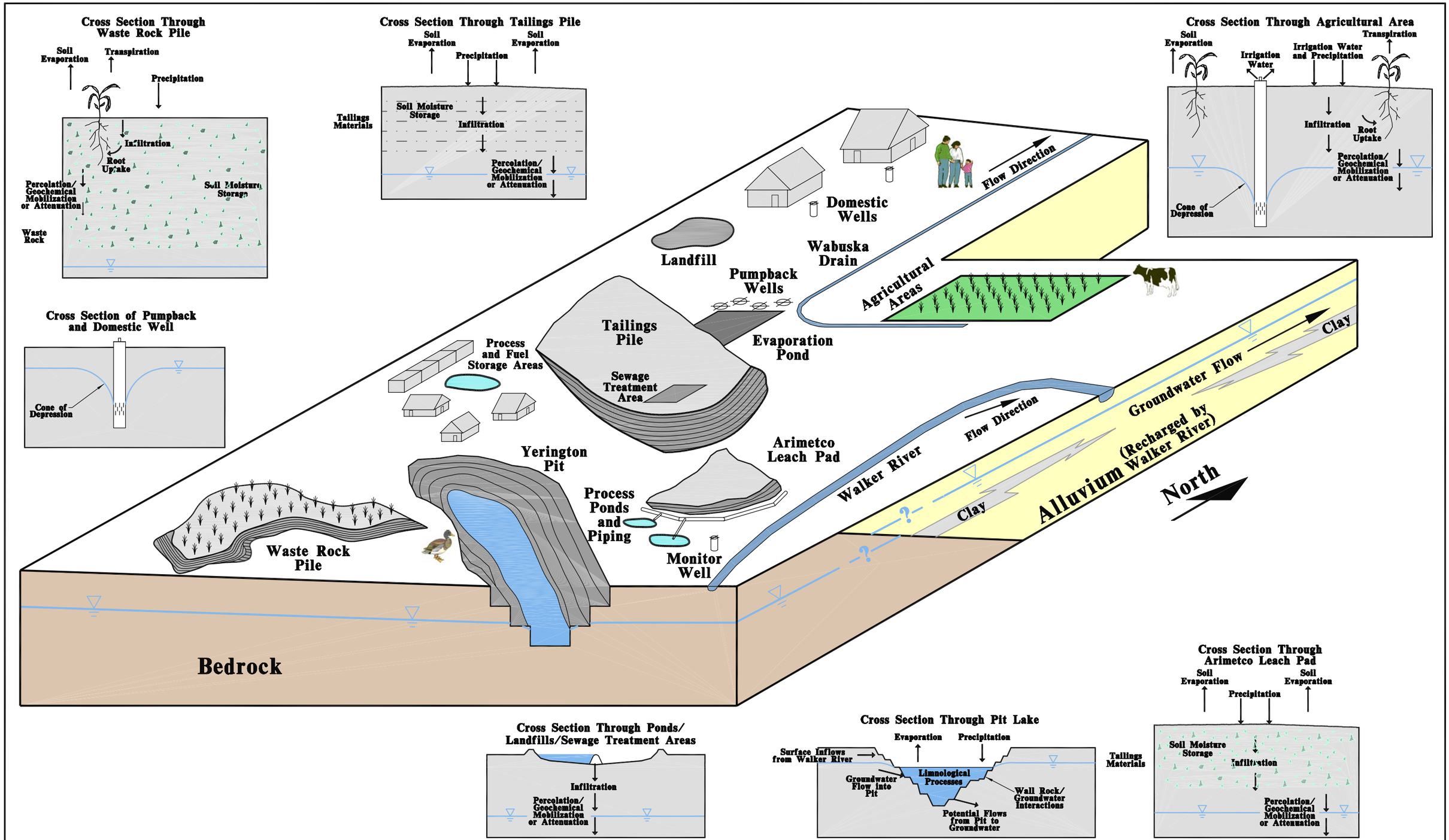
3) ONSITE CROSS SECTION DEVELOPED BY ATLANTIC RICHFIELD COMPANY; OFFSITE CROSS SECTION DEVELOPED BY SECOR.

0 600 1200

SCALE IN FEET

SECOR 14998 W. 6th Avenue, Suite 800 Golden, Colorado (303) 278-7878	PREPARED FOR: ATLANTIC RICHFIELD COMPANY YERINGTON MINE SITE YERINGTON, NEVADA	LITHOLOGIC CROSS SECTION FROM WELL UW-1 THROUGH DW61 SHOWING SELECT NEW MONITOR WELLS		FIGURE: 3
	JOB NUMBER: / DRAWN BY: ARA	CHECKED BY: GSD	APPROVED BY: GSD	DATE: 1/5/02

YERINGTON-XSC



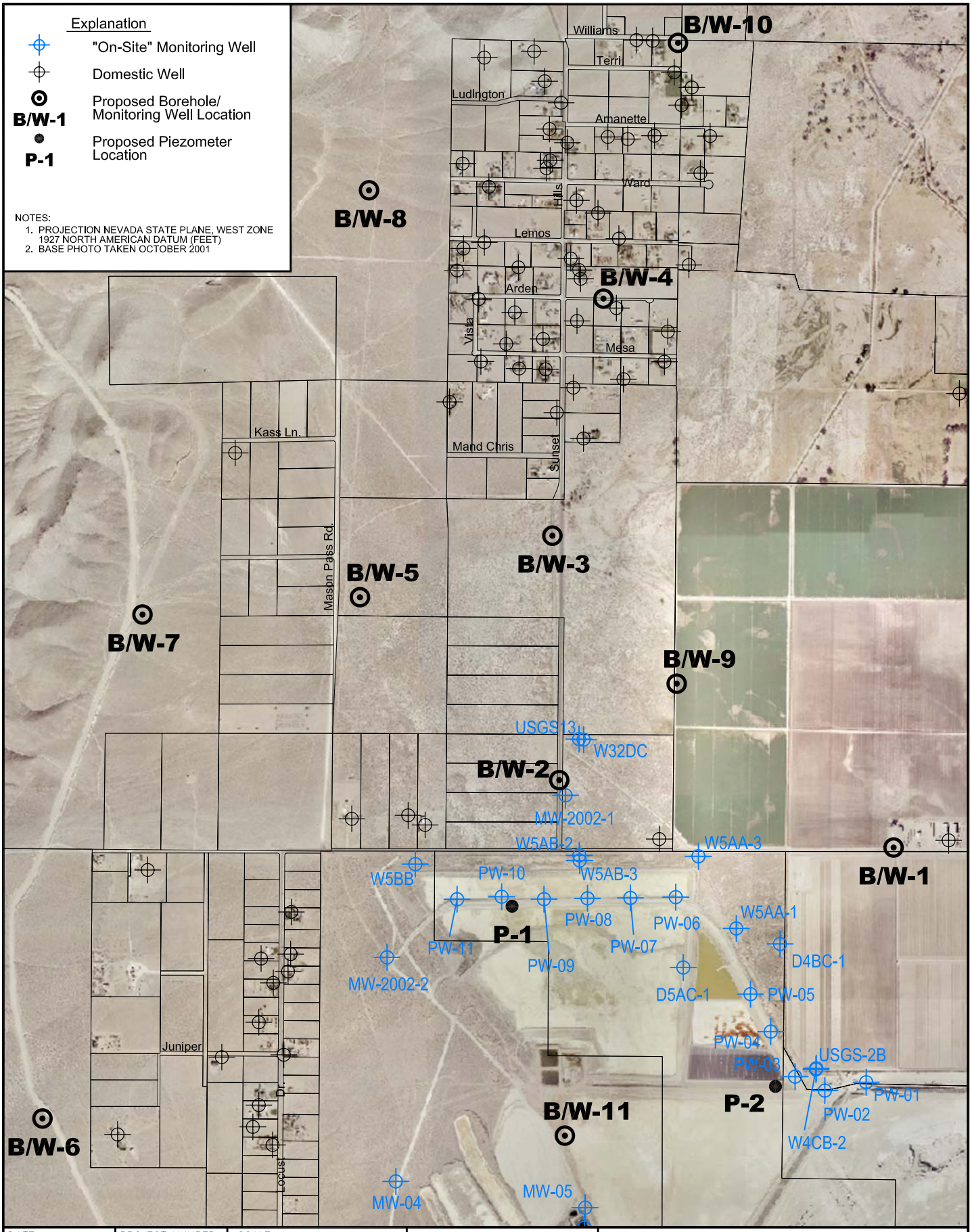
BROWN AND CALDWELL
Carson City, Nevada

DATE: January 2005
CLIENT: Atlantic Richfield Company
PROJECT NUMBER: 21243

Figure 4

Site Conceptual Hydrogeologic Model

Carson City Cad: P:\ARCO\21243\Groundwater Conditions\CAD\January 2005\F21243004.dwg (1=1) 01/13/2005 08:04:49 RJJ



DATE:	PROJECT NUMBER:	SCALE:		
Jan. 2005	21243	0 750 1500 SCALE IN FEET	Atlantic Richfield Company	**Figure 5**
BROWN AND CALDWELL Carson City, Nevada				**Proposed Borehole/Monitor Well and Piezometer Locations**

Carson City Cad: P:\ARCO\21243\Groundwater Conditions\CAD\January 2005\F21243005.dwg (1=1) 01/13/2005 09:38:19 RJJ

Table 1. Domestic Well Information for the Sunset Hills Area

General Area - Station ID [1]	Location Address	NAD 27 W NV		Total Uranium Apr 04	Total Uranium Spt 04	Well Log Number	Total Depth	Screen Top	Screen Bottom	Screen Length	Diameter
		State Plane Y	State Plane X	(ug/L)	(ug/L)	NA	(ft)	(ft)	(ft)	(ft)	(in)
DW-65	264 Sunset Hills Dr	1,569,391.17	321,912.76	10.7	11.1		220.0				
DW-01	23 Mand Chris Dr	1,561,910.64	321,382.32				200.0				
DW-12	268 Sunset Hills Dr	1,569,397.70	322,603.97	8.25	9.8	55089	186.0	120	140	20	6.62
DW-44	34 E. Ward Ln	1,565,202.99	324,387.37		53.4	36010	180.0				
DW-31	191 Sunset Hills Dr	1,566,264.19	322,590.09	15	19.6	64859	220.0	135	180	45	8.62
DW-83	26 Williams Ln	1,566,805.65	323,966.72		11.8		160.0				
DW-36	125 Sunset Hills Dr	1,562,922.64	322,318.32	18.4	29.8		180.0				
DW-57	277 Sunset Hills Dr	1,570,136.30	321,548.76		**37.0**		147.0				
DW-21	17 Williams Ln	1,566,752.24	323,649.32		12.4		160.0				
DW-06	27 E. Lemos Ln	1,564,144.07	324,254.35	11.3	12.5	38309	150.0	130	150	20	6.62
DW-35	17 W. Lemos	1,564,425.41	321,892.96	11.3	13.5		201.0				
DW-13	24B E. Mesa Dr	1,563,373.25	324,011.08	**90.7**		67351	139.0	119	139	20	6.62
DW-52	120 Sunset Hills Dr	1,562,124.32	322,756.25	3.19	3.75	26693	139.0	119	139	20	6.62
DW-24	10 E. Mesa Dr	1,563,104.55	322,961.86				140.0				
DW-88	5 Vista Dr.	1,563,672.19	321,513.46		**33.1**		178.0	158	178	20	
DW-05	133 Sunset Hills Dr	1,563,288.81	322,569.35	**56.1**	**58.1**		150.0				
DW-40	12 E. Lemos Ln	1,564,410.07	323,164.85	11.5	14.2	59260	140.0	130	140	10	6.62
DW-62	9 W. Mesa Dr	1,563,131.95	322,022.32	29.9	**39.5**	29346	148.0	127	147	20	6.62
DW-08	148 Sunset Hills Dr	1,563,982.90	323,003.56	**40.2**		5608	150.0	110	150	40	10
DW-67	17 Amanette Way	1,565,597.32	323,548.27	8.39	8.29	39638	150.0	130	150	20	6
DW-26	3 E. Arden Dr	1,563,460.19	322,682.21	27.7	**50.8**	71630	140.0	120	140	20	6
DW-03	6 E. Lemos Ln	1,564,742.70	323,205.30	15	15.6		145.0				
DW-04	26 Mand Chris Dr	1,562,546.82	321,210.05	23.6	6.3	22350	145.0	124	144	20	6.62
DW-25	15 E. Mesa Dr	1,562,823.17	323,498.34	**47.6**		36183	121.0	100	120	20	6.62

Table 1. Domestic Well Information for the Sunset Hills Area - Continued

General Area - Station ID [1]	Location Address	NAD 27 W NV		Total Uranium Apr 04	Total Uranium Spt 04	Well Log Number	Total Depth	Screen Top	Screen Bottom	Screen Length	Diameter
		State Plane Y	State Plane X	(ug/L)	(ug/L)	NA	(ft)	(ft)	(ft)	(ft)	(in)
DW-22	25 Amanette Way	1,565,636.36	323,857.53	13.4	15.1	47206	140.0	100	140	40	6.62
DW-23	30 Amanette Way	1,565,989.32	324,170.64	**46.6**	**40.8**	16514	118.0				10.62
DW-16	10 W. Mesa Dr	1,563,231.64	322,144.33	**44.9**	**56.9**	26691	143.0	123	143	20	6.62
DW-66	11 Amanette Way	1,565,621.84	323,318.40	11.6	11.0	39955	140.0	116	136	20	6.62
DW-42	21 W. Lemos Ln	1,564,318.87	321,370.85	19.4	22.8	28567	160.0				6.62
DW-09	166 Sunset Hills Dr	1,564,889.73	322,955.81	16.6	17.0	23009	121.5	100.5	120.5	20	10.62
DW-07	148 Sunset Hills Dr	1,564,084.27	322,986.36	27.9	**32.5**	3794	110.0	60	110	50	6
DW-28	179 Sunset Hills Dr	1,565,713.87	322,645.09	20.8	23.9		120.0				
DW-30	173 Sunset Hills Dr	1,565,351.07	322,652.54	16.9	19.2	16375	117.0	100	117	17	6
DW-11	185 Sunset Hills Dr	1,566,017.06	322,778.38	12.4	12.1	20069	115.0	95	115	20	6.62
DW-34	26 W. Ward Ln	1,565,167.19	321,406.54		25.5		125.0				
DW-48	37 Amanette Way	1,565,617.06	324,218.96	**108**	**109.0**						
DW-33	9 E. Arden Dr	1,563,644.64	323,416.48		16.6						
DW-02	11 Arden Dr	1,563,579.32	321,962.12	**45.7**	**50.3**						
DW-68	12 Arden Dr	1,564,150.64	322,285.86	21	26.2						
DW-27	19 Arden Dr	1,563,777.45	321,793.91	**32**	**43.1**						
DW-46	22 Arden Dr	1,564,064.59	321,296.36	**31.7**	33.7						
DW-96	32 E. Lemos Ln	1,564,588.61	323,922.58		**46.9**						
DW-89	16 E. Lemos Ln	1,564,457.09	323,361.70		29.9		150.0				
DW-87	20 W. Lemos Ln										
DW-20	16 Luddington Ave	1,566,538.52	321,891.93	15.9	17.0						
DW-14	15 W. Mesa Dr	1,563,027.16	321,851.79	29	**40.0**						
DW-45	9 E. Mesa Dr	1,563,009.90	323,690.78	**42.2**							

Table 1. Domestic Well Information for the Sunset Hills Area - Continued

General Area - Station ID [1]	Location Address	NAD 27 W NV		Total Uranium Apr 04	Total Uranium Spt 04	Well Log Number	Total Depth	Screen Top	Screen Bottom	Screen Length	Diameter
		State Plane Y	State Plane X	(ug/L)	(ug/L)	NA	(ft)	(ft)	(ft)	(ft)	(in)
DW-85	16 E. Mesa Dr	1,563,103.95	323,582.18								
DW-99	18 Robin Rd	1,567,600.99	323,244.52		8.4		105.0	85	105	20	6
DW-32	113 Sunset Hills Dr	1,563,495.89	322,961.31		5.2		180.0				
DW-37	124 Sunset Hills Dr	1,562,726.25	322,919.95	8.4	8.95						
DW-86	139 Sunset Hills	1,563,542.74	322,529.44		**74.5**		120.0				
DW-90	145 Sunset Hills Dr.	1,563,885.99	322,284.18		**59.3**						
DW-10	154 Sunset Hills Dr	1,564,207.83	322,533.50	**37.4**	**37.4**						
DW-97	163 Sunset Hills Dr.	1,564,915.47	322,374.09		19.8		116.0				6
DW-29	171 Sunset Hills Dr	1,565,260.32	322,609.60	16.6	19.7		120.0				
DW-18	180 Sunset Hills Dr	1,565,540.56	322,570.15	20.4	21.0						
DW-50	197 Sunset Hills Dr	1,566,594.84	322,186.61	19.2	23.3						
DW-98	12 Terri Ln	1,566,528.46	322,970.22		13.3		140.0	120	140	20	
DW-19	24 Terri Lane	1,566,731.37	323,825.53	22.5	**31.5**						
DW-70	27 Terri Ln	1,566,193.19	324,288.75	**44.6**	**47.7**						
DW-41	19 W. Ward Ln	1,565,032.36	321,664.20	31	**37.7**						
DW-95	11 E. Ward Ln	1,565,012.53	323,178.05		10.2						
DW-93	18 E. Ward Ln	1,565,196.77	323,313.27		13.1						
DW-94	23 E. Ward Ln	1,564,976.57	323,558.86		27.0						

[1] Well locations surveyed using Garmin eTrex, handheld GPS unit March 8-9, 2004; May 4-5, 2004; Sept 13-15, 2004

[2] Ground surface elevations were estimated using aerial photography illustrating the well locations overlain with USGS topographic maps for the Site.

Table 2. Domestic Well Information for the Luzier and Locust Lane Areas

General Area - Station ID [1]	Location Address	NAD 27 W NV		Total Uranium Apr 04	Total Uranium Spt 04	Well Log Number	Total Depth	Screen Top	Screen Bottom	Screen Length	Diameter	Estimated Ground Surface Elevation [2]	Estimated Total Depth Elevation	Estimated Top of Screen Elevation
		State Plane Y	State Plane X	(ug/L)	(ug/L)	NA	(ft)	(ft)	(ft)	(ft)	(in)	(ft)	(ft)	(ft)
WDW019	21 Luzier Ln	1,557,484.37	326,973.67		**113.0**	78925	365	50	365	315	16	4,356	3,991	4,306
DW-73	15 Pine St	1,554,124.39	317,662.81	11.9	13.9	62472	390	200	260	60	6.62	4,522	4,132	4,322
DW-51	40 Luzier Ln	1,557,499.11	323,630.41		8.28		178					4,346	4,168	
DW-76	65 Locust Dr	1,554,462.92	319,293.24	21.5	23.2	67353	199	159	199	40	6.62	4,370	4,171	4,211
DW-78	68 Luzier Ln	1,557,370.44	320,388.42		23.2		160					4,368	4,208	
DW-77	69 Locust Dr	1,554,211.73	319,224.43	23.5	28.2		240					4,464	4,224	
DW-71	95 Kass Ln	1,562,080.35	319,115.04	24.3	**34.9**	91042	233	213	233	20	6.62	4,470	4,237	4,257
DW-72	91 Luzier Ln	1,557,046.57	317,532.41	**45.3**	**44.6**	42790	239	219	239	20	6.62	4,478	4,239	4,259
DW-39	30 Locust Dr	1,556,170.90	319,373.81	17.4	17.2	34158	155	135	155	20	6.62	4,410	4,255	4,275
DW-75	34 Locust Dr	1,556,006.59	319,630.76	17.8	20.1	35936	160	140	160	20	6.62	4,415	4,255	4,275
DW-63	47 Locust Dr	1,555,385.71	319,015.64	24.2	22.8	25113	147	127	147	20	8.62	4,430	4,283	4,303
DW-38	54 Locust Dr	1,555,008.70	319,294.98	**40.1**	**43.3**	27548	150	130	150	20	8.62	4,434	4,284	4,304
DW-64	35 Locust Dr	1,555,838.15	319,173.29	19.9	20.4		120					4,415	4,295	
DW-47	18 Locust Dr	1,556,657.87	319,380.85	18.1	18.7	9010	108	85	108	23	6.62	4,406	4,298	4,321
DW-49	75 Locust Dr	1,553,967.37	319,164.87	20.4	27.3		152					4,465	4,313	
DW-92	101 Kass Ln				NS		250							
DW-15	15 Juniper Way	1,555,016.95	318,865.54	22	22.3									
DW-91	14 Locust Dr	1,557,296.29	319,313.10		NS		160							
DW-74	27 Locust Dr	1,556,155.18	319,319.28	19.2	19.0									
WDW018	60 Luzier Ln	1,557,662.40	320,927.07	**30.5**	**30.2**							4,356		
DW-54	64 Luzier Ln	1,557,773.72	320,730.57	26.2	26.2									
WDW017	72 Luzier Ln	1,557,733.30	320,079.60	16.7	18.5									

[1] Well locations surveyed using Garmin eTrex, handheld GPS unit March 8-9, 2004; May 4-5, 2004; Sept 13-15, 2004

[2] Ground surface elevations were estimated using aerial photography illustrating the well locations overlain with USGS topographic maps for the Site.

Table 3. Proposed Stratigraphic Borehole, Monitor Well and Piezometer Locations

Well Identification	Rationale	Approach	Shallow	Intermediate	Deep
B/W-1	Assess shallow groundwater beneath irrigation area immediately north of the Mine Site.	Drill borehole to 200 feet bgs (@ 4,150 ft amsl); visually log stratigraphy; collect/archive soil core; collect depth-discrete ground water samples for measurement/analysis of selected parameters (see Table 4); construct monitor well with 20-foot screen in "shallow" aquifer; defer construction of separate and adjacent monitor wells with 20-foot screens in "intermediate" and "shallow" zones to Phase II; develop wells and collect ground water samples for measurement/analysis of selected parameters (see Table 5); survey wells.	X	X	X
B/W-2	Assess ground water flow and solute transport pathways between existing monitor well locations.	Drill borehole to 150 feet bgs (i.e., @ 4,200 ft amsl); visually log stratigraphy; collect/archive soil core; collect/archive soil core; collect depth-discrete ground water samples for measurement/analysis of selected parameters (see Table 4); construct monitor well with 20-foot screen in "deep" aquifer; construct a separate and adjacent monitor well with a 20-foot screen in "intermediate" zone; develop wells and collect ground water samples for measurement/analysis of selected parameters (see Table 5); survey wells.	W5AB2	X	X
B/W-3	Assess ground water flow and solute transport pathways between existing monitor well and domestic well locations.	Drill borehole to 150 feet bgs (i.e., @ 4,200 ft amsl); visually log stratigraphy; collect/archive soil core; collect depth-discrete ground water samples for measurement/analysis of selected parameters (see Table 4); construct monitor well with 20-foot screen in "deep" aquifer; construct separate and adjacent monitor wells with 20-foot screens in "intermediate" and "shallow" zones; develop wells and collect ground water samples for measurement/analysis of selected parameters (see Table 5); survey wells.	X	X	X
B/W-4	Assess ground water flow and solute transport pathways in the area of domestic wells with elevated uranium concentrations.	Drill borehole to 200 feet bgs (i.e., @4,200 ft amsl); visually log stratigraphy; collect/archive soil core; collect depth-discrete ground water samples for measurement/analysis of selected parameters (see Table 4); construct monitor well with 20-foot screen in "deep" aquifer; construct separate and adjacent monitor wells with 20-foot screens in "intermediate" and "shallow" zones; develop wells and collect ground water samples for measurement/analysis of selected parameters (see Table 5); survey wells.	X	X	X
B/W-5	Assess zones in a "background" area potentially upgradient of domestic wells with elevated uranium concentrations.	Drill borehole to 150 feet bgs (i.e., @ 4,200 ft amsl); visually log stratigraphy; collect/archive soil core; collect depth-discrete ground water samples for measurement/analysis of selected parameters (see Table 4); construct monitor well with 20-foot screen in "deep" aquifer; construct separate and adjacent monitor wells with 20-foot screens in "intermediate" and "shallow" zones; develop wells and collect ground water samples for measurement/analysis of selected parameters (see Table 5); survey wells.	X	X	X
B/W-6	Assess zones in a "background" area.	Drill borehole to 240 feet bgs (i.e., @ 4,236 ft amsl); visually log stratigraphy; collect/archive soil core; collect depth-discrete ground water samples for measurement/analysis of selected parameters (see Table 4); construct monitor well with 20-foot screen in "deep" aquifer; construct separate and adjacent monitor wells with 20-foot screens in "intermediate" and "shallow" zones; develop wells and collect ground water samples for measurement/analysis of selected parameters (see Table 5); survey wells.	X	X	X
B/W-7	Assess zones in a "background" area potentially upgradient of domestic wells with elevated uranium concentrations.	Drill borehole to 200 feet bgs; visually log stratigraphy; collect/archive soil core; collect depth-discrete ground water samples for measurement/analysis of selected parameters (see Table 4); construct monitor well with 20-foot screen in "deep" aquifer; construct separate and adjacent monitor wells with 20-foot screens in "intermediate" and "shallow" zones; develop wells and collect ground water samples for measurement/analysis of selected parameters (see Table 5); survey wells.	X	X	X

Table 3. Proposed Stratigraphic Borehole, Monitor Well and Piezometer Locations - Continued					
Well Identification	**Rationale**	**Approach**	**Shallow**	**Intermediate**	**Deep**
B/W-8	Assess ground water flow and solute transport pathways between the MacArthur Mine and Sunset Hills areas.	Drill borehole to 200 feet bgs; visually log stratigraphy; collect/archive soil core; collect depth-discrete ground water samples for measurement/analysis of selected parameters (see Table 4); construct monitor well with 20-foot screen in "deep" aquifer; construct separate and adjacent monitor wells with 20-foot screens in "intermediate" and "shallow" zones; develop wells and collect ground water samples for measurement/analysis of selected parameters (see Table 5); survey wells.	X	X	X
B/W-9	Assess ground water flow and solute transport pathways beneath the irrigation areas.	Drill borehole to 150 feet bgs (i.e., @ 4,200 ft amsl); visually log stratigraphy; collect/archive soil core; collect depth-discrete ground water samples for measurement/analysis of selected parameters (see Table 4); construct monitor well with 20-foot screen in "deep" aquifer; construct separate and adjacent monitor wells with 20-foot screens in "intermediate" and "shallow" zones; develop wells and collect ground water samples for measurement/analysis of selected parameters (see Table 5; survey wells.	X	X	X
B/W-10	Assess ground water flow and solute transport pathways in the area of domestic wells with elevated uranium concentrations.	Drill borehole to 200 feet bgs (i.e., @4,200 ft amsl); visually log stratigraphy; collect/archive soil core; collect depth-discrete ground water samples for measurement/analysis of selected parameters (see Table 4); construct monitor well with 20-foot screen in "deep" aquifer; construct separate and adjacent monitor wells with 20-foot screens in "intermediate" and "shallow" zones; develop wells and collect ground water samples for measurement/analysis of selected parameters (see Table 5); survey wells.	X	X	X
B/W-11	Assess ground water flow and solute transport pathways down-gradient of MW-05.	Drill borehole to 200 feet bgs (i.e., @ 4,200 ft amsl); visually log stratigraphy; collect/archive soil core; collect depth-discrete ground water samples for measurement/analysis of selected parameters (see Table 4); construct monitor well with 20-foot screen in "deep" aquifer; construct separate and adjacent monitor wells with 20-foot screens in "intermediate" and "shallow" zones; develop wells and collect ground water samples for measurement/analysis of selected parameters (see Table 5); survey wells.	MW-05	X	Subsequent Phase (as needed)
B/W-12	Background south of the Mine Site	Drill borehole to 200 feet bgs or until bedrock is encountered; visually log stratigraphy; collect/archive soil core; collect depth-discrete ground water samples for measurement/analysis of selected parameters (see Table 4); construct monitor well with 20-foot screen in "shallow" aquifer; develop well and collect ground water samples for measurement/analysis of selected parameters (see Table 5); survey wells.	X	Subsequent Phase (as needed)	Subsequent Phase (as needed)
B/W-13	Background south of the Mine Site	Drill borehole to 200 feet bgs or until bedrock is encountered; visually log stratigraphy; collect/archive soil core; collect depth-discrete ground water samples for measurement/analysis of selected parameters (see Table 4); construct monitor well with 20-foot screen in "shallow" aquifer; develop well and collect ground water samples for measurement/analysis of selected parameters (see Table 5); survey wells.	X	Subsequent Phase (as needed)	Subsequent Phase (as needed)
P-1	Evaluate area of pumping influence around pumpback well PW-10 (relatively low pumping rate).	Drill borehole to equivalent depth of pumpback well; visually log stratigraphy; construct piezometer with screen interval that matches the pumpback well; install pressure transducer and data logger to collect continuous groundwater elevation data.	X	NA	NA

Table 3. Proposed Stratigraphic Borehole, Monitor Well and Piezometer Locations - Continued					
Well Identification	**Rationale**	**Approach**	**Shallow**	**Intermediate**	**Deep**
P-2	Evaluate area of pumping influence around pumpback well PW-3 (relatively high pumping rate).	Drill borehole to equivalent depth of pumpback well; visually log stratigraphy; construct piezometer with screen interval that matches the pumpback well; install pressure transducer and data logger to collect continuous groundwater elevation data.	X	NA	NA

Table 4. Proposed Field and Analytical Laboratory Parameter List				
Measurement / Parameter	**Field / Laboratory**	**Method**	**Measurement / Detection Limit**	**Units**
pH	Field Meter	EPA 150.1, Meter	0.1	Standard Units
Conductivity	Field Meter	EPA 120.1, Meter	1	uS/cm
Temperature	Field Meter	Standard Methods 212, Thermomemter	0.1	°Centigrade
Dissolved Oxygen	Field Meter	EPA 360.1, Probe	0.1	mg/L
ORP	Field Meter	SM 2580 B	1	mV
Iron (Total)	Hach Field Water Analysis Kit	Hach Method 8008 (FerroVer Method)	0.02 - 3.0	mg/L
Iron (Ferrous)	Hach Field Water Analysis Kit	Hach Method 8146 (1, 10 Phenanthroline Method)	0.02 - 3.0	mg/L
Sulfate	Hach Field Water Analysis Kit	Hach Method 8051 (SulfaVer 4 Method)	2	mg/L
Nitrate	Hach Field Water Analysis Kit	Hach Method 10020 (Chromotropic Acid Method)	0.2	mg/L
Alkalinity as $CaCO_3$	Hach Field Water Analysis Kit	Hach Method 8203 (Phenolphthalein Method)	10	mg/L
Uranium (total and dissolved)	Laboratory	EPA 200.8 ICP-MS	0.01	mg/L
Arsenic (total and dissolved)	Laboratory	EPA 200.8 ICP-MS	0.001	mg/L
Total Organic Carbon	Laboratory	EPA 415.1 (combustion/oxidation)	2.0	mg/L

Table 5. Proposed Analyte List

Parameter or Analyte	Standard [1]	Phase	Method	Method Detection Limit	Units
Alkalinity (Total as $CaCO_3$)	---	Total	SM 2320 B, Titrimetric	1.0	mg/L (as $CaCO_3$)
Aluminum	0.05 - 0.2	Total & Dissolved	EPA 200.7 ICP-OES	0.05	mg/L
Arsenic	0.05	Total & Dissolved	EPA 200.8 ICP-MS	0.001	mg/L
Barium	2	Total & Dissolved	EPA 200.8 ICP-MS	0.001	mg/L
Beryllium	0.004	Total & Dissolved	EPA 200.8 ICP-MS	0.001	mg/L
Bicarbonate (as $CaCO_3$)	---	Total	SM 2320 B	1.0	mg/L (as $CaCO_3$)
Boron	---	Total & Dissolved	EPA 200.7 ICP-OES	0.01	mg/L
Cadmium	0.005	Total & Dissolved	EPA 200.8 ICP-MS	0.001	mg/L
Calcium	---	Total & Dissolved	EPA 200.7 ICP-OES	0.1	mg/L
Chloride	250 - 400	Total	EPA 300.0 Ion Chromotography	0.5	mg/L
Cobalt	---	Total & Dissolved	EPA 200.8 ICP-MS	0.0005	mg/L
Copper	1.3	Total & Dissolved	EPA 200.8 ICP-MS	0.001	mg/L
Fluoride	4	Total	EPA 300.0 Ion Chromotography	0.1	mg/L
Gross Alpha/Beta	15/50	Total & Dissolved	EPA 900.0	1.0/2.0	pCi/L
Iron	0.3 - 0.6	Total & Dissolved	EPA 200.7 ICP-OES	0.05	mg/L
Magnesium	125 - 150	Total & Dissolved	EPA 200.7 ICP-OES	0.1	mg/L
Manganese	0.05 - 0.10	Total & Dissolved	EPA 200.8 ICP-MS	0.0005	mg/L
Nickel	0.1	Total & Dissolved	EPA 200.8 ICP-MS	0.001	mg/L
Nitrate (NO3 + NO2 as N)	10	Total	EPA 300.0 Ion Chromotography	0.05	mg/L as N
pH	---	Total	EPA 150.1 (SM 4500 H + B)	1 to 14	pH Units
Phosphorus	---	Total	EPA 365.3	0.05	mg/L
Potassium	---	Total & Dissolved	EPA 200.7 ICP-OES	0.5	mg/L
Radium 226	5	Total & Dissolved	EPA 903.0	0.2	pCi/L
Radium 228	---	Total & Dissolved	EPA 904.0	1.0	pCi/L
Sodium	---	Total & Dissolved	EPA 200.7 ICP-OES	0.1	mg/L
Strontium	---	Total & Dissolved	EPA 200.7 ICP-OES	0.5	mg/L
Sulfate	250 - 500	Total	EPA 300.0 Ion Chromotography	0.2	mg/L
Thorium 232	---	Total & Dissolved	EPA 200.8 ICP-MS	0.001	mg/L
Total Dissolved Solids	500 - 1000	Total & Dissolved	EPA 160.1 (SM 2450 C)	10	mg/L
Uranium	0.03	Total & Dissolved	EPA 200.8 ICP-MS	0.0003	mg/L
Vanadium	---	Total & Dissolved	EPA 200.8 ICP-MS	0.001	mg/L
Zinc	5	Total & Dissolved	EPA 200.8 ICP-MS	0.001	mg/L

Notes:

(1) Standard is for reference purposes only.

ICP-MS Inductively Coupled Plasma-Mass Spectrometry

ICP-OES Inductively Coupled Plasma - Optical Emission Spectrometry