HYDRO GEO CHEM, INC.
Environmental Science & Technology

August 29, 2002

Mr. Harold Roberts
International Uranium Corporation
1050 17th Street
Independence Plaza, Suite 950
Denver, Colorado 80265

Dear Harold,

This letter report provides a brief description of temporary perched zone well installation at the White Mesa site during July 2002. A total of 8 new temporary wells, and a potential replacement for existing well MW-4, were installed. The approximate locations of the new wells, and the installation procedures, were generally as described in the work plan (Hydro Geo Chem, Inc [HGC], 2002a)[1], with a few exceptions as described below. Figure 1 is a map showing the approximate locations of the new wells.

Well installation procedures were similar to those used previously at the site for the construction of other temporary perched zone wells (HGC, 2002b)[2]. As before, drilling and construction were performed by Bayles Exploration, Inc., and borings logged by Mr. Lawrence Casebolt under contract to International Uranium Corporation (IUSA). HGC personnel provided much of the oversight, and Mr. Loren Morton of the Utah Department of Environmental Quality (UDEQ) was on-site during installation of many of the wells. Well construction schematics based on information generated by Mr. Casebolt and by HGC are provided in Figures 2 through 10.

As shown, the construction of wells TW4-12, TW4-13, TW4-14, and MW-4A (Figures 2 through 4 and Figure 10) is very similar to that of previous temporary wells (TW4-1 through TW4-11) at the site. Wells installed adjacent to tailings cell #2 (TW4-15, TW4-16, and TW4-17) and the abandoned and former leach fields (TW4-18 and TW4-19), as shown in Figures 5 through 9, were additionally provided with a filter pack and a bore annular seal. The filter pack, consisting of pea gravel, was added to the annular space to a depth of at least a few feet above the top of the

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[1] Hydro Geo Chem, Inc. 2002a. Work Plan for Installation of 8 New Temporary Monitoring Wells and a Replacement for MW-4 White Mesa Uranium Mill. Blanding, Utah.

[2] Hydro Geo Chem, Inc. 2002b. May 8, 2002 Letter to Michelle Rehmann, International Uranium Corporation.

G:\718000\CORRESP\020827hr.wpd

screened interval, and was followed by a bentonite seal a few feet in thickness. Portland cement grout was then pumped into the annular space until it reached the surface.

An alternate construction method for wells installed adjacent to tailings cell #2 (wells TW4-15, TW4-16, and TW4-17) was employed, in that an 8-inch diameter PVC surface casing was grouted to a depth of approximately 50 ft below land surface (bls) prior to drilling to the total depth. In each case, a large diameter (12¼-inch) boring was drilled to a depth of approximately 50 ft bls, the 8-inch diameter casing installed, a few gallons of grout pumped into the boring, the casing immediately lifted by approximately 1 foot, then dropped back to ensure a good basal seal. The annular space was then grouted to the surface, and allowed to stand for at least 5 days prior to continuing the construction. A 6¾-inch diameter boring was then installed to total depth, the 4-inch diameter well casing and screen installed, then the installation was completed with a filter pack and bore seal.

All borings installed at this time were advanced into the Brushy Basin. If a boring was drilled more than a few feet below the contact, the boring was backfilled with bentonite to a depth at or just below the contact prior to installation of the well casing.

All wells were drilled with air rotary using foam when needed to enhance circulation. In most cases, the addition of foam was required to maintain proper circulation once a boring was advanced into a zone bearing sufficient water to interfere with cuttings retrieval. If such a zone was not encountered, foam was not generally needed as, for example, at TW4-13 and TW4-14. Fluids brought to the surface during drilling were diverted to plastic-lined pits installed adjacent to the borings. Cuttings were logged at 2½-foot intervals and samples from each interval stored in labeled plastic Ziplock® bags and labeled plastic cuttings-storage boxes. Two-inch diameter core recovered from MW-4A was stored in labeled cardboard core boxes. Copies of lithologic logs for all borings and the core log for MW-4A are provided in Appendix A. Elevations were based on the results of a survey performed under contract to IUSA.

MW-4A was drilled with rotary to a depth of approximately 92½ ft bls. This procedure was employed to avoid coring through the friable, cherty, conglomeratic zone encountered in most of the temporary wells, and which ruined several core bits when drilling the first two temporary wells TW4-1 and TW4-2 (IUSA and HGC, 2000)[3]. This change in procedure was approved by Mr. Loren Morton during an on-site meeting between himself, HGC, IUSA, and Bayles Exploration, prior to drilling MW-4A. After coring to 125 ft bls and establishing the depth of the Brushy Basin contact at approximately 100 ft bls, the boring was reamed using a 6¾-inch diameter bit to approximately

[3] International Uranium (USA) Corporation and Hydro Geo Chem, Inc. 2000. Investigation of Elevated Chloroform Concentrations in Perched Groundwater at the White Mesa Uranium Mill Near Blanding, Utah.

105 ft bls, backfilled with bentonite to approximately 103 ft bls, and completed as a temporary well (Figure 10).

During drilling of MW-4A, a zone bearing sufficient water to interfere with cuttings removal using only air was not encountered until approximately 80 feet bls, when foam was added to maintain proper circulation. This depth is within the depth interval at which a conglomeratic zone was logged. Beneath the conglomeratic zone materials, interbedded shales and sandstones logged to a depth of approximately 90 feet bls were underlain by a well-sorted, limonitic quartz sandstone to a depth of approximately 96½ feet bls as described in the attached coring log (Appendix A).

Depth to water in the boring immediately after reaming and just prior to casing installation was measured at 82.2 feet bls. Fifty-two minutes later, after the casing had been installed, the depth to water was measured at 70.4 feet below the top of the casing (btoc). This represents a change in water level of approximately 10 feet (allowing for casing stickup) in less than an hour, indicating an average flow rate into the well bore of approximately 0.35 gallons per minute.

Please call me in Tucson if you have any questions or comments.

Sincerely,

Stewart Smith
Senior Hydrogeologist

Attachments

ATTACHMENTS

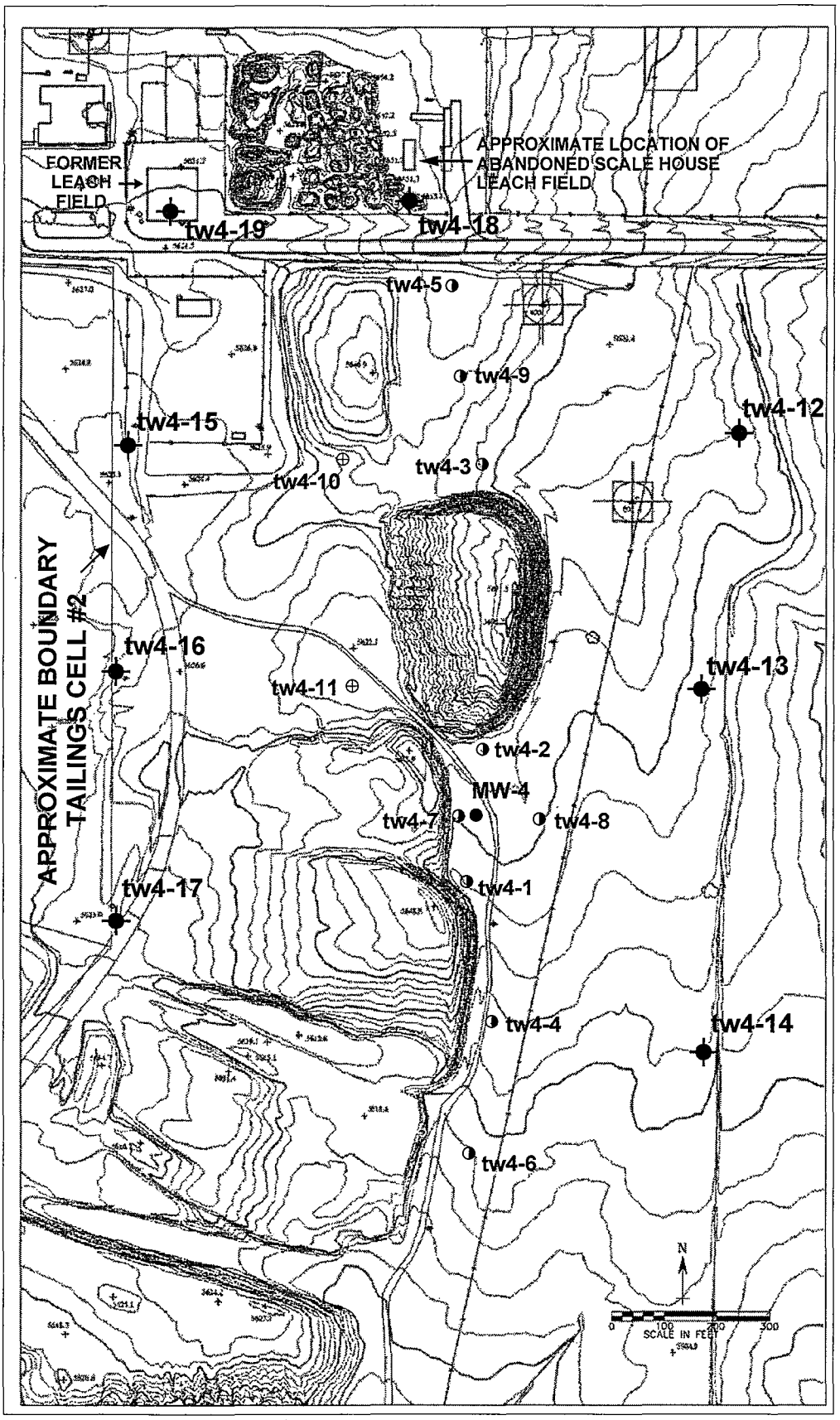
FIGURES

1 New and Existing Temporary Perched Monitoring Well Locations (new well locations are approximate)
2 TW1-12 Well Construction Schematic
3 TW1-13 Well Construction Schematic
4 TW1-14 Well Construction Schematic
5 TW1-15 Well Construction Schematic
6 TW1-16 Well Construction Schematic
7 TW1-17 Well Construction Schematic
8 TW1-18 Well Construction Schematic
9 TW1-19 Well Construction Schematic
10 MW-4A Well Construction Schematic

APPENDIX

A Lithologic Logs

FIGURES



EXPLANATION

tw4-2
◑ temporary perched monitoring well

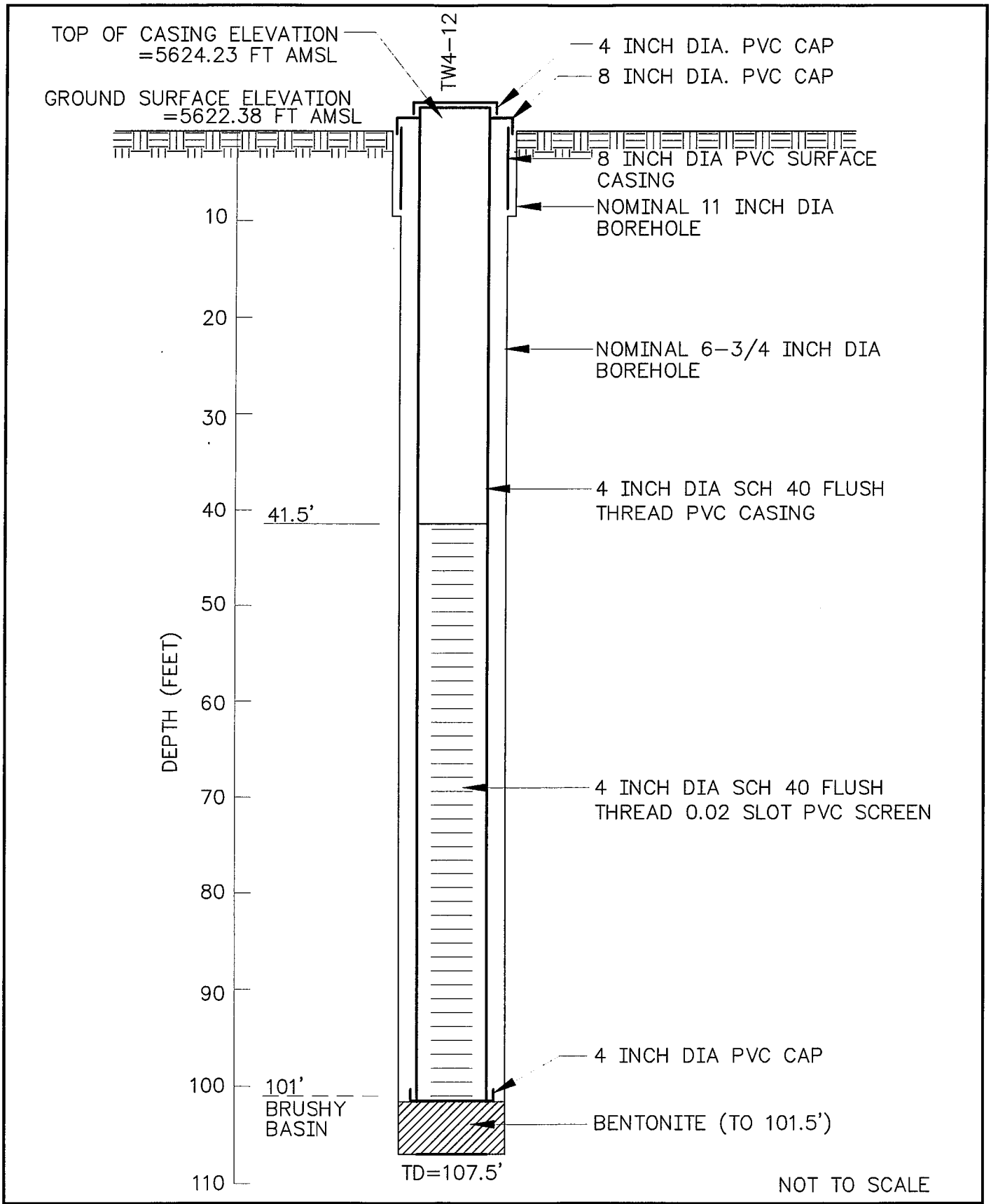
MW-4
● perched monitoring well

tw4-11
⊕ temporary perched monitoring well installed 12/01

tw4-17
✦ new temporary perched well (installed 07/02, location approximate)

NEW AND EXISTING
TEMPORARY PERCHED MONITORING
WELL LOCATIONS
(new well locations are approximate)

APPROVED	DATE	REFERENCE	FIGURE
		h:/718000/figures/well0702	1



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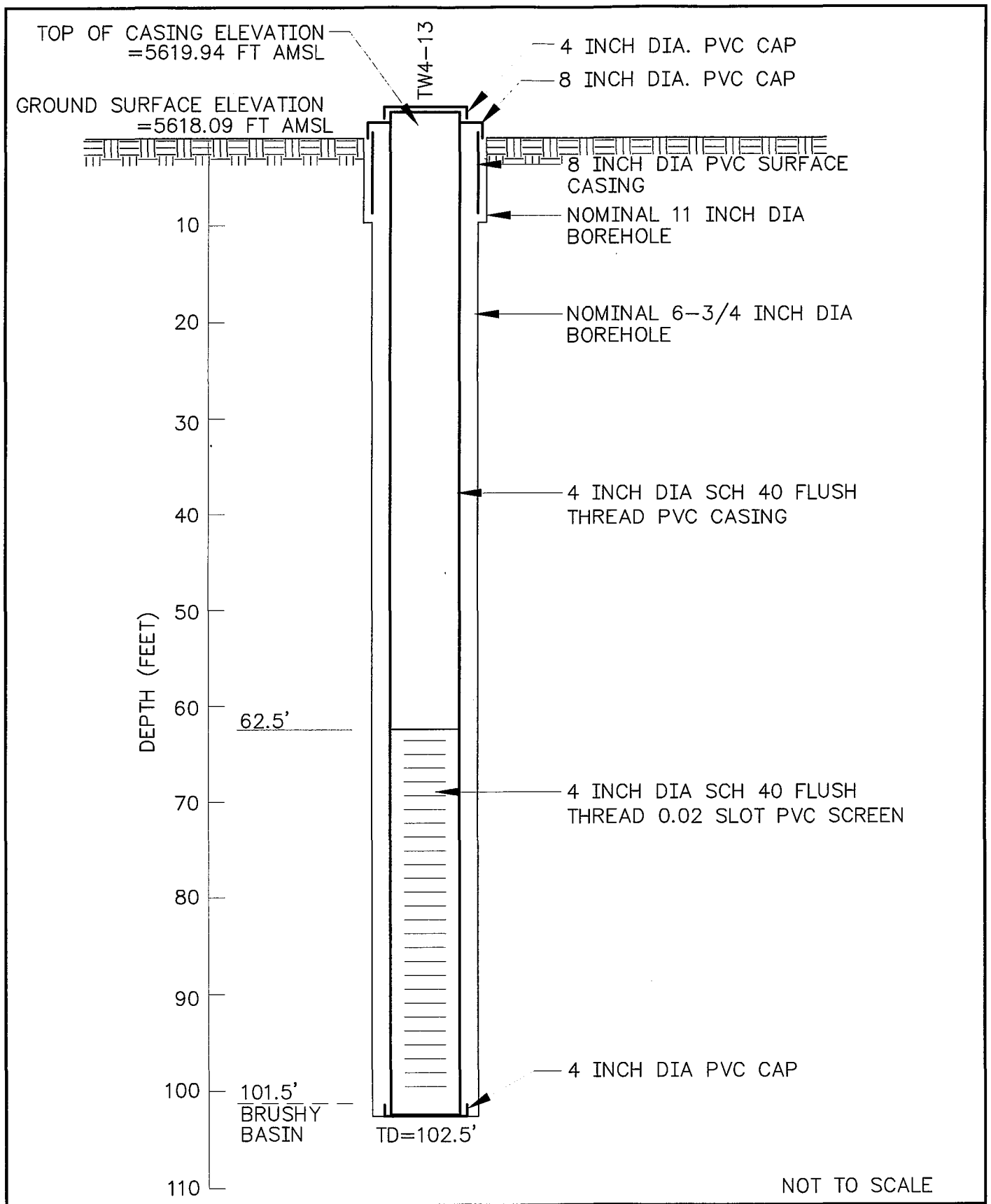
TW4-12
WELL CONSTRUCTION SCHEMATIC

Approved	Date	Revised	Date	Reference:	FIG.
SS	8/30/02			7180203A	2



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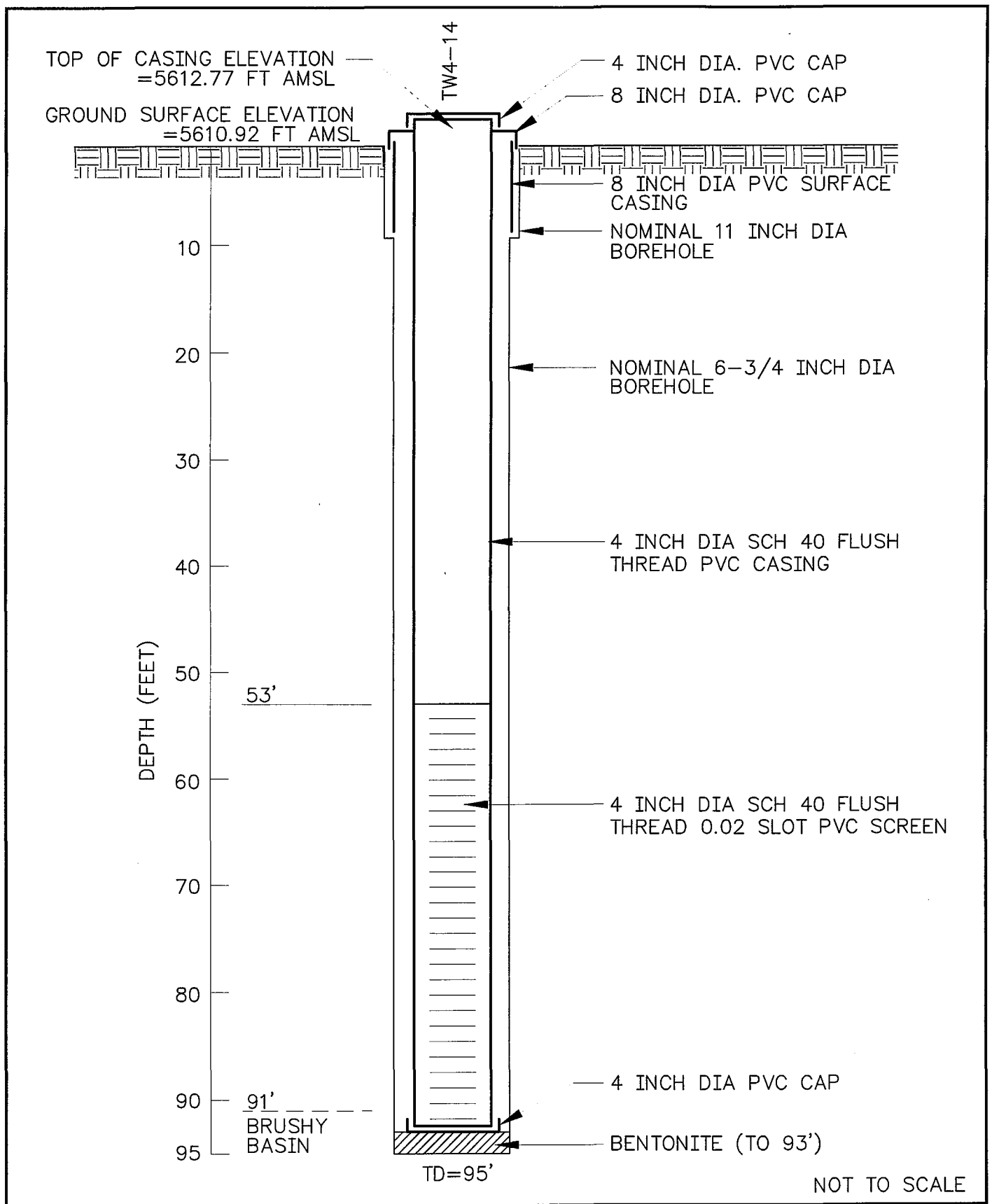
TW4-13
WELL CONSTRUCTION SCHEMATIC

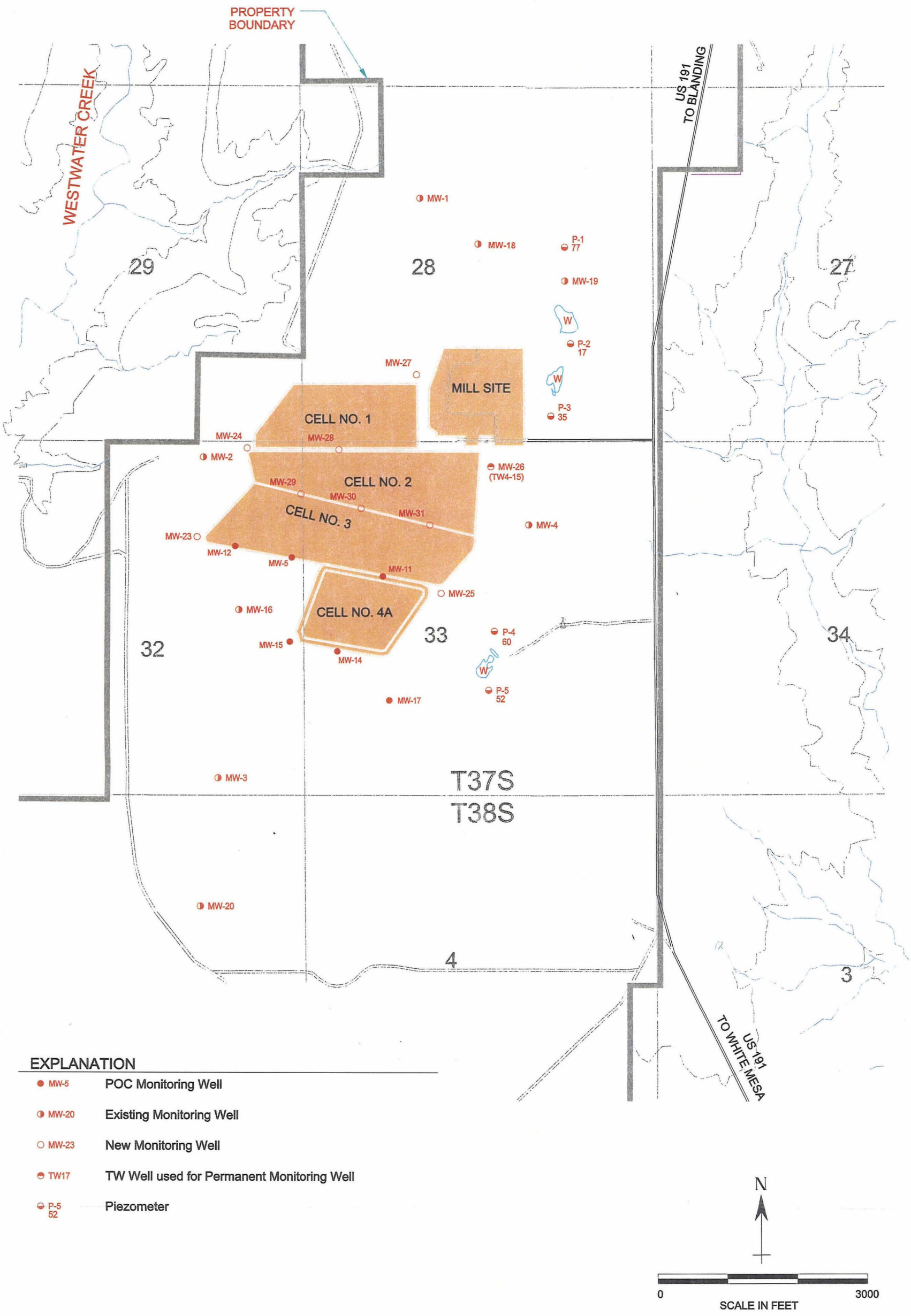
Approved	Date	Revised	Date	Reference:	FIG.
SS	8/30/02			7180202A	3



HYDRO GEO CHEM, INC.

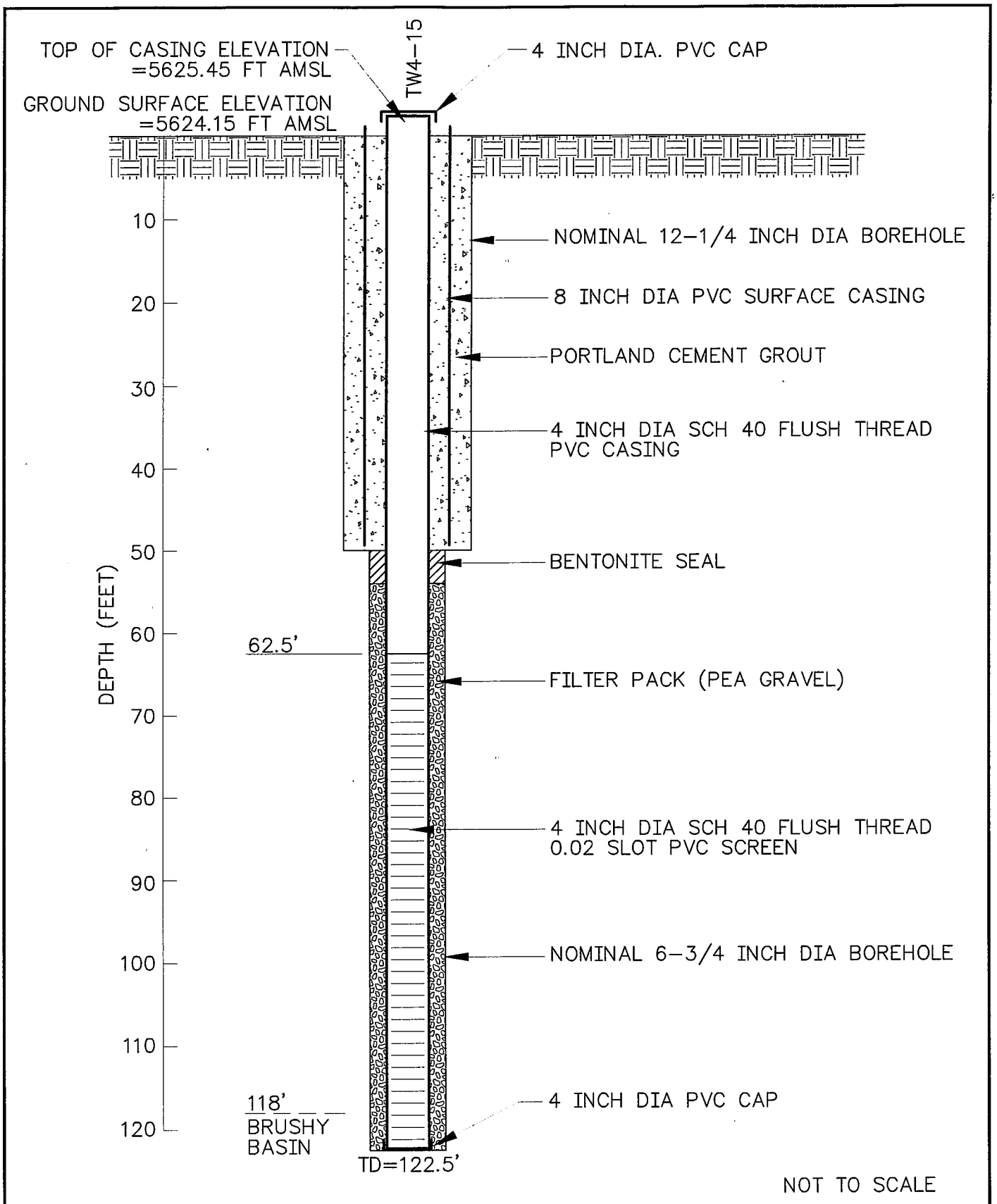
TW4-14
WELL CONSTRUCTION SCHEMATIC

Approved	Date	Revised	Date	Reference:	FIG.
SS	8/30/02			7180201A	4



International Uranium (USA) Corporation

Project	WHITE MESA MILL
REVISIONS	County: / State: UT
Date / By	Location:
	Figure 2 Propsed Groundwater Permit Monitoring Points
	Scale: as shown / Date: AUGUST, 2003 / figure 2.dwg
	Author: HRR / Drafted By: BM



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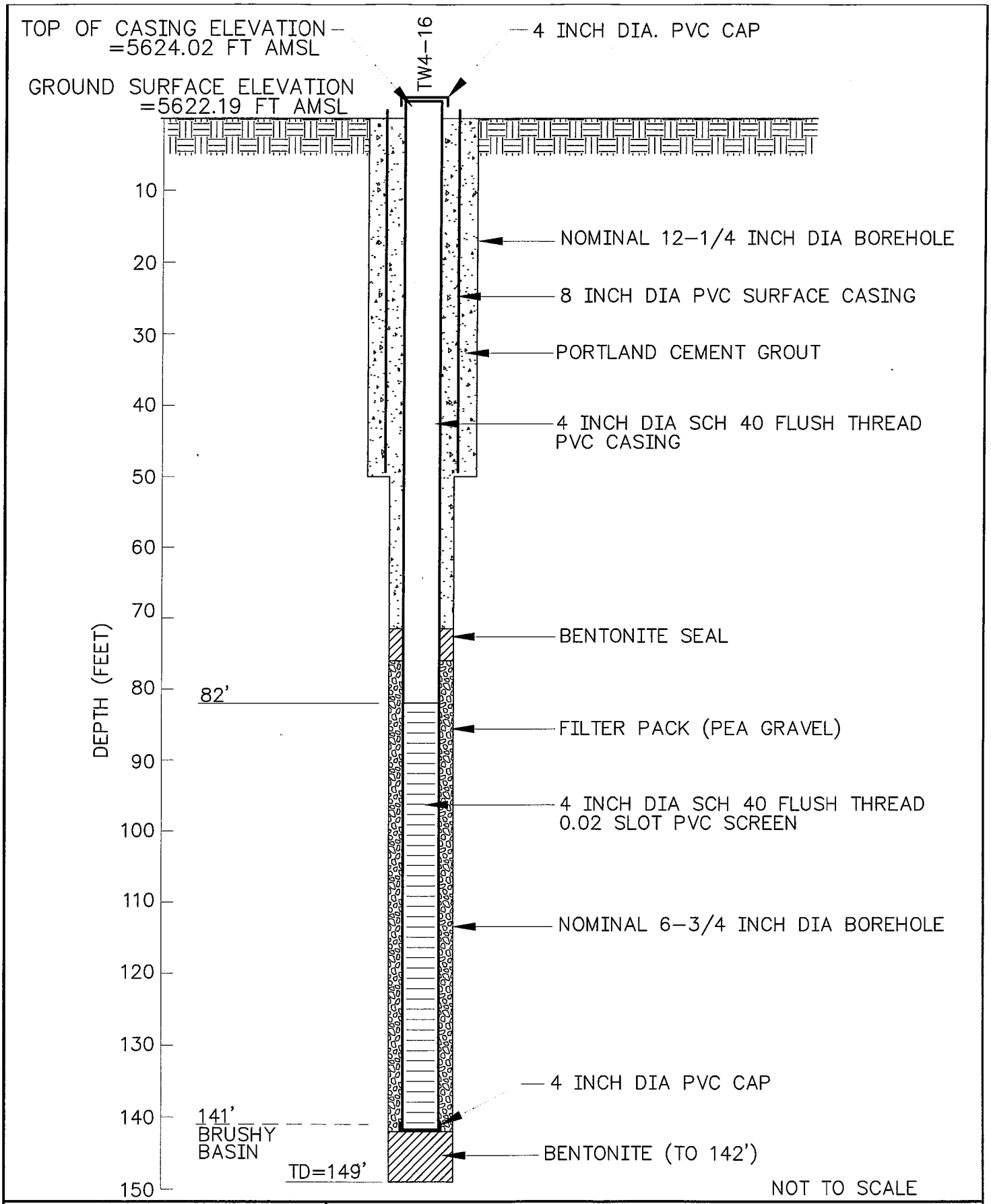
TW4-15
WELL CONSTRUCTION SCHEMATIC

Approved	Date	Revised	Date	Reference:	FIG.
SS	8/30/02			7180204A	5



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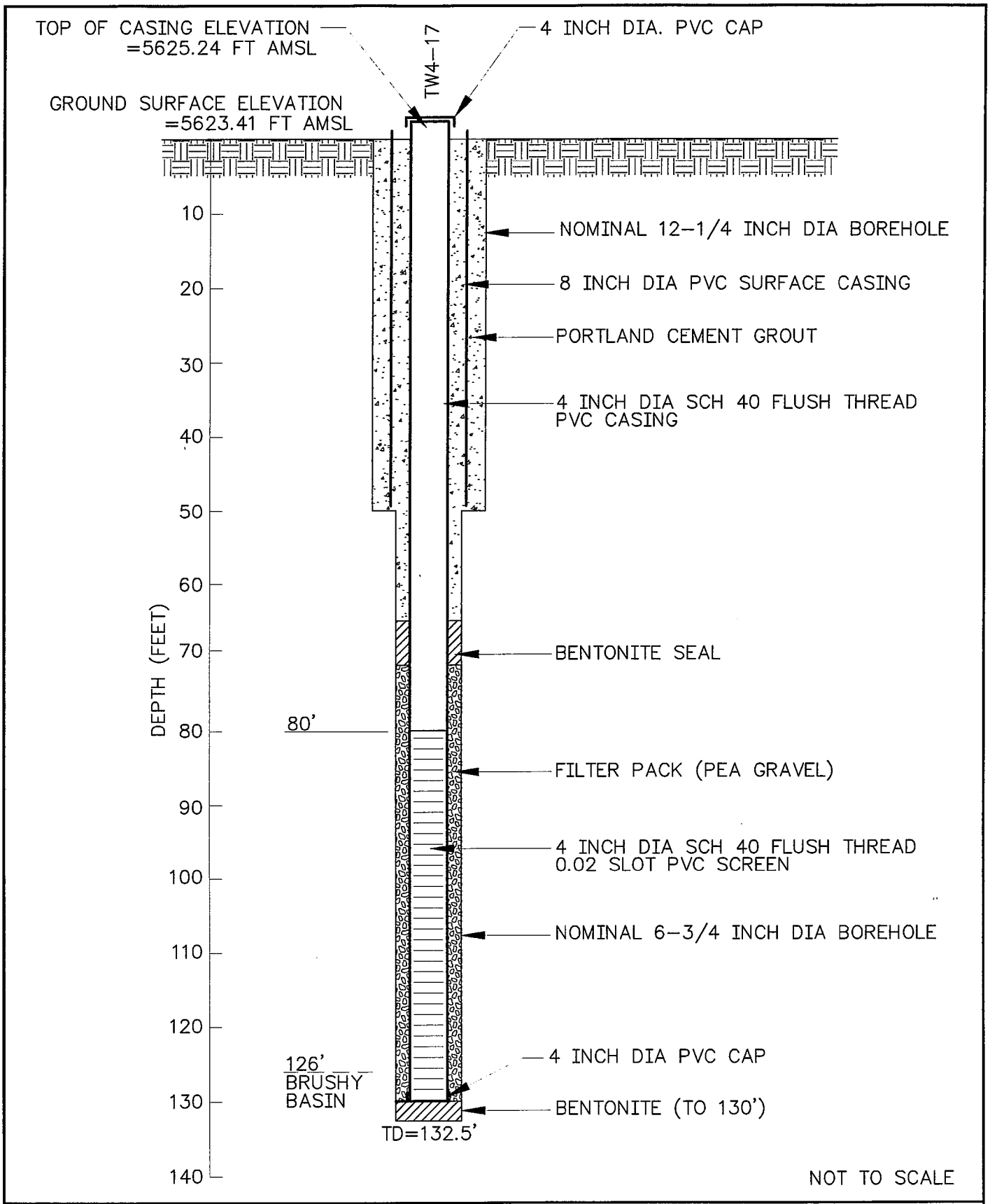
TW4-16
WELL CONSTRUCTION SCHEMATIC

Approved	Date	Revised	Date	Reference:	FIG.
SS	8/30/02			7180205A	6



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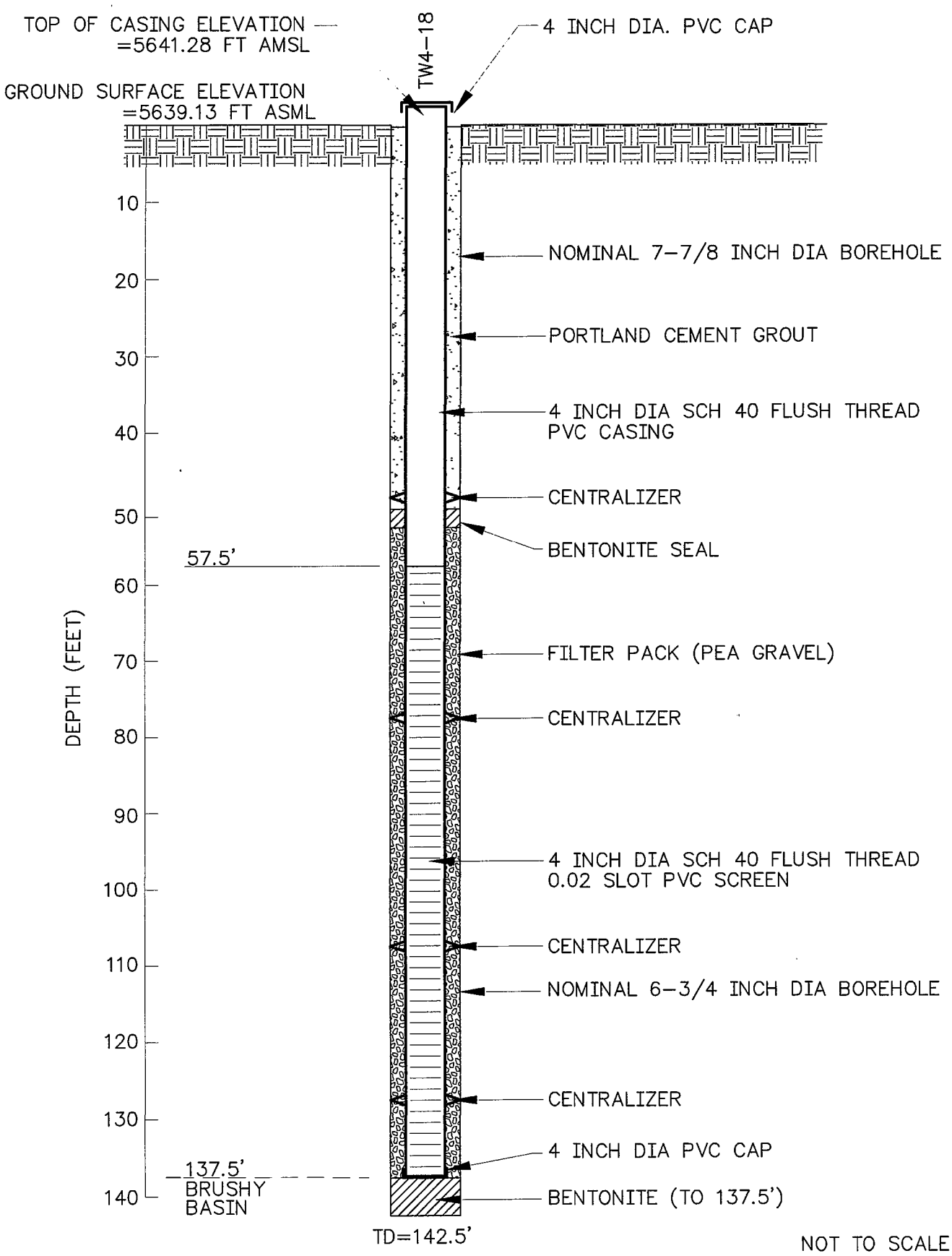
TW4-17
WELL CONSTRUCTION SCHEMATIC

Approved	Date	Revised	Date	Reference:	FIG.
SS	8/30/02			7180206A	7



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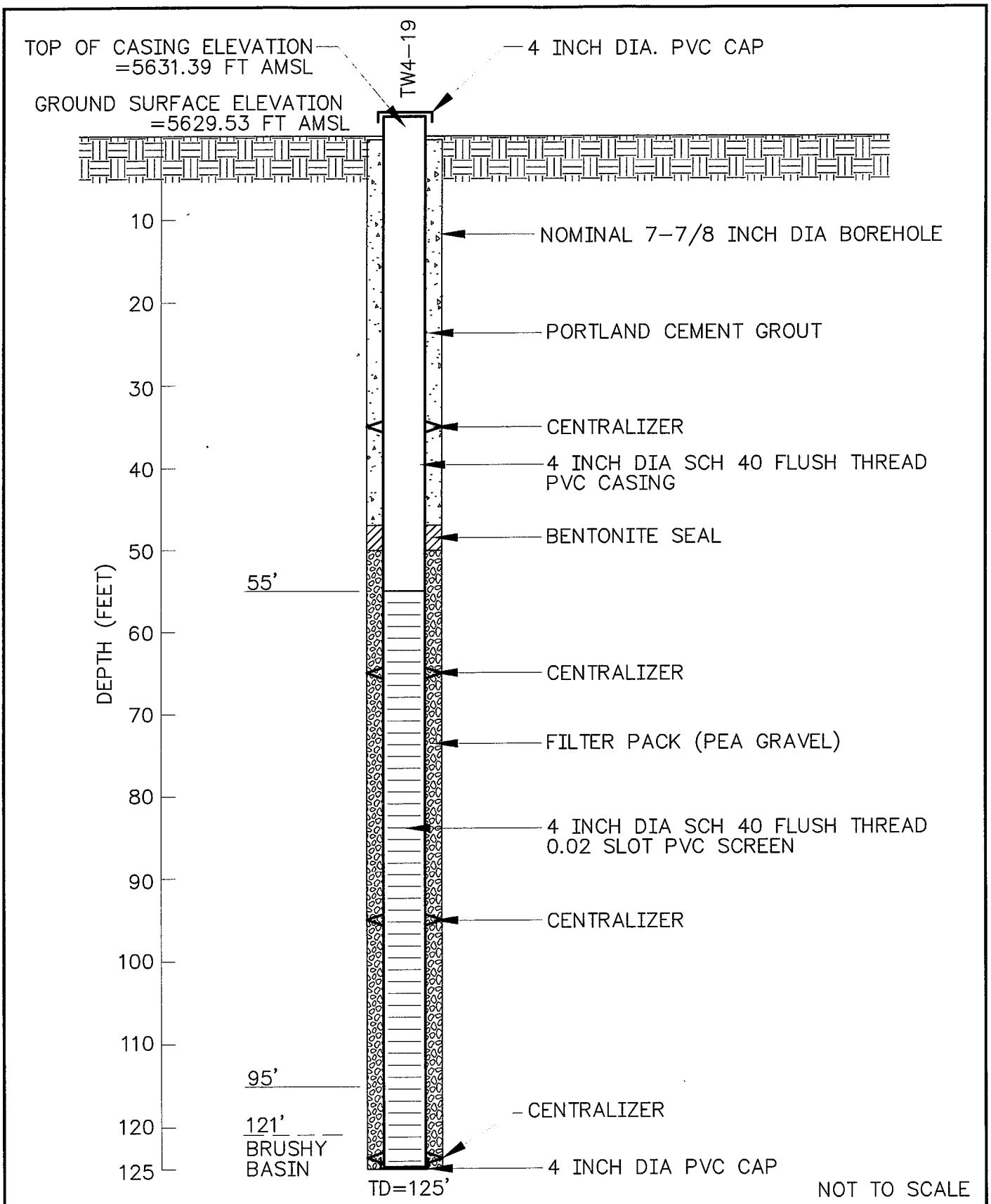
TW4-18
WELL CONSTRUCTION SCHEMATIC

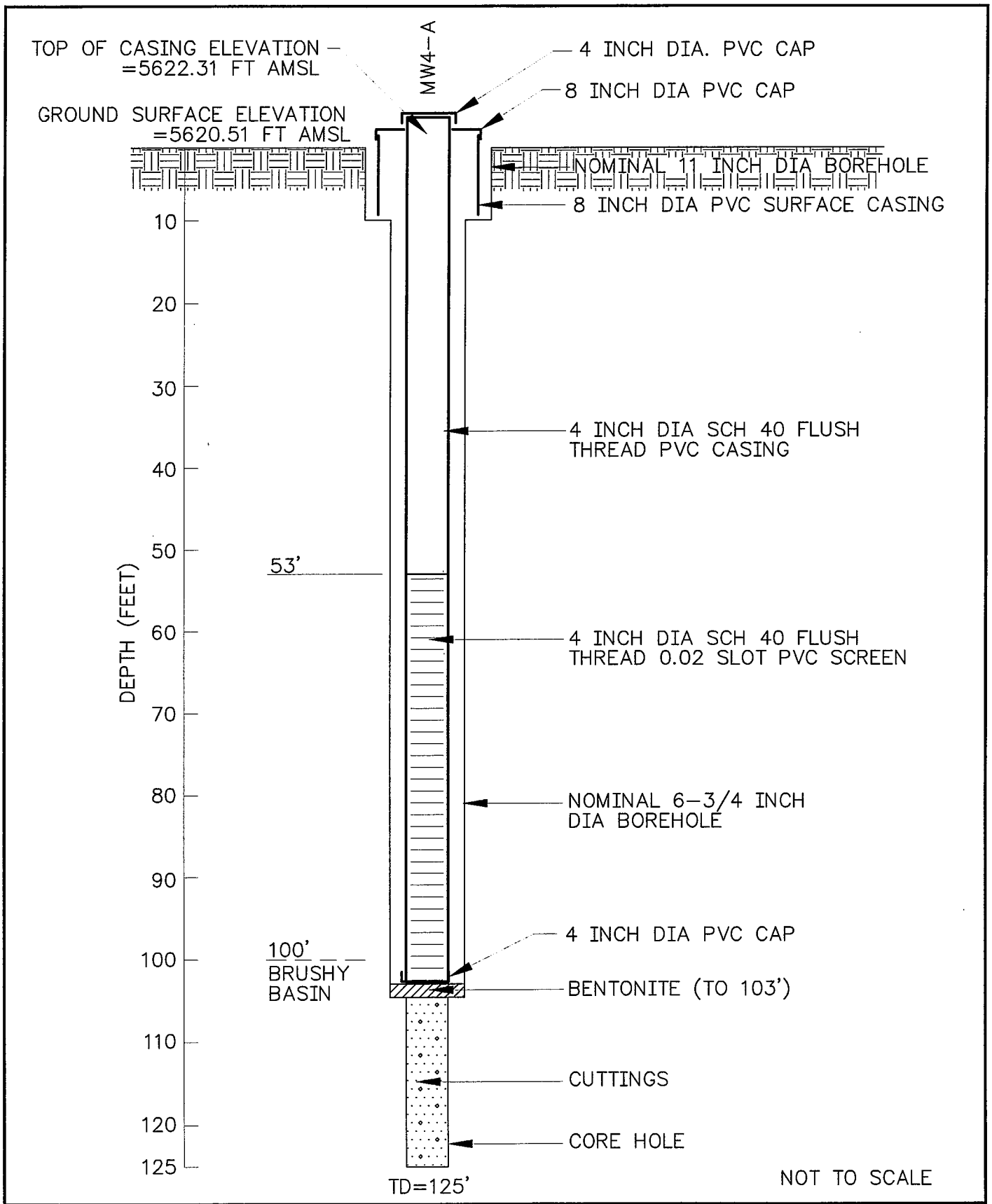
Approved	Date	Revised	Date	Reference:	FIG.
SS	8/30/02			7180207A	8



HYDRO GEO CHEM, INC.

TW4-19
WELL CONSTRUCTION SCHEMATIC

Approved	Date	Revised	Date	Reference:	FIG.
SS	8/30/02			7180208A	9



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MW4-A
WELL CONSTRUCTION SCHEMATIC

Approved	Date	Revised	Date	Reference:	FIG.
SS	8/30/02			7180209A	10

APPENDIX A

LITHOLOGIC LOGS

Core Log of Well No. MW4-A

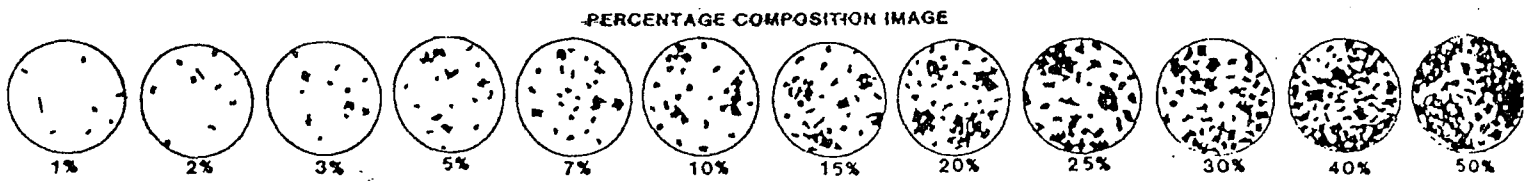
Depth	Description
92.5 - 96.6	Top of core Quartz sandstone, fine grained, tan, well sorted, limonite coating on near horizontal partings, possible bedding planes, approx 2 - 3 inches apart. (oxidized), redox boundary at 96.6 feet.
96.6 - 100.0	Very fine grained quartz sandstone / siltstone, very light gray-green, shale parting at 97.4 feet, pyritic dendrite at 99.8 feet.
100.0 - 100.8	100.0 feet, upper contact, Brushy Basin Fm., low angle, quartz sandstone with limonite / hematite stain.
100.8 - 101.0	Silty shale, gray/green.
101.0 - 102.1	Silty shale, red/brown.
102.1 - 102.5	Siltstone / shale, purple-red, purple-gray green.
102.5 - 104.0	Sandy shale, purple-red to gray-green, near horizontal clay parting at 103.0 feet and at 104.0 feet.
104.0 - 106.5	Quartz sandstone, light green, fine to medium grained,sub-rounded, clay parting at 105.5 feet.
106.5 - 107.0	Quartz sandstone, very light gray-green, numerous pyrite blebs.
107.0 - 108.0	Quartz sandstone / conglomerate, white, fine to very coarse grained, with chert pebbles and fragments. Sharp basal contact.
108.0 - 112.7	Silty shale, gray-green, mottled, shale partings at 108.2, 108.8, 109.3, 109.6, 110.0, 110.2, 110.8, 111.0,.112.0 feet.
112.7 - 116.7	Quartz sandstone, gray, fine grained, some horizontal shale partings.
116.7 - 121.3	Quartz sandstone, light gray-green, mottled, with light gray bleached spots.
121.3 - 125.0	Shale, mottled, red-purple-brown to green. End of core.

Date 7-1-2002 Geologist L. Carlson Drilling Co. Bayles Exploration Hole No. TW4-12
Property White Mesa Mill Project _____ Unit No. _____ Sec. _____ Twp. _____ Rge. _____
County San Juan State Utah Location _____ Elev. _____

PAGE 1 OF 1
T.D. PROBE _____
T.D. DRILL 107.5
FLUID LEVEL 43.3 below casing

Depth	Sample Taken	Graphic Log	Alteration	Gamma Anomaly	Breccia Pipe	Lithology	Color of Wet Sample	Grain Size	Sorting	Angularity	Cement Matrix	Iron Oxide	Pyrite Amount	Pyrite Habit	Pyrite Alter.	Metallic	Non-Metallic	React.-10% HCL	Carbon Amount	Carbon Type	Remarks
0																					
2.5						Sltst	rdbn	vf										S			Surface Soil
5.0						Sltst	rdbn	vf										S			
7.5						Sltst	rdbn	vf										S			
10.0						Sltst	rdbn	vf										S			
12.5						Sltst	rdbn-ltn	vf										S			
15.0						Sltst	rdbn	vf										VS			
17.5						Sltst	pktn	vf										VS			
20.0						Slty Sh	ywgybn	vf										VS			
22.5						Slty Sh	ywgybn	vf										VS			
25.0						Sndy Sltst	ltbn	f	m	p	sa							m			
27.5						Qtz Ss, Sltst	bn	vf	f	p	sa							W			
30.0						Sndy Sltst	bn	vf	f	p	sa							N			
32.5						Qtz Ss	tn	vf	m	p	sa							N			Ct. Top of Dakota Fm @ 31.0 feet
35.0						Qtz Ss	tn	f	m	p	sa		H					N			hematite coating of quartz grains
37.5						Qtz Ss	tn	f	m	p	sa							N			
40.0						Qtz Ss	pktn		m	p	sa		H					N			
42.5						Qtz Ss	tn	f	m		sa		H					N			
45.0						Qtz Ss, Sh	gy-pprd	f	m		sa		H					N			
47.5						Qtz Ss,	vltgy	f	f		sa							N			
50.0						Qtz Ss,	vltgy	f	f		sa							N			
52.5						Qtz Ss	vltgy	f	f		sa							N			
55.0						Qtz Ss	vltgy	f	f		sa							N			
57.5						Qtz Ss	ltgy-vdkgy	vf	f	f	sa							N	3%	I	carbonaceous material
60.0						Qtz Ss	vltgy-ltbn	vf	m	p	sa		L					N	Tr	I	" "
62.5						Qtz Ss	ltgy-blk	vf	m	p	sa							N	50%	I	" "
65.0						Qtz Ss, Cgl	dkgy-blk	vf	vcr	p	a							N	50%	I	abund. white to dkgray chert frag.
67.5						Qtz Ss	vltgy-blk	vf	m	f	sa			Tr				N			
70.0						Qtz Ss	dkgy-blk	vf	m	f	sa			Tr				N			disseminated pyrite
72.5						Cgl, Qtz Ss	gy	m	vcr	p	a			1%				N			" " multicolored chert frags.
75.0						Cgl, Qtz Ss	gy	m	vcr	p	a			Tr				N			" " " "
77.5						Cgl, Qtz Ss	gy	m	vcr	p	a							N			chert frags
80.0						Qtz Ss, Cgl	gy	m	vcr	p	sa							N			chert frags
82.5						Cgl, Qtz Ss	gy	m	vcr	p	sa			Tr				N			chert frags
85.0						Cgl, Qtz Ss	gy	m	vcr	p	a							N			" "
87.5						Cgl, Qtz Ss	gy	m	vcr	p	a							N			" "
90.0						Cgl, Qtz Ss	gy	m	vcr	p	a			Tr				N			" "
92.5						Qtz Ss, Cgl	vltgy	vf	vcr	p	a			Tr				N			" "
95.0						Qtz Ss,	vltgy-wh	vf	cr	f	sa			1%				N			disseminated & massive pyrite, chert frag.
97.5						Qtz Ss, Cgl	wh	vf	cr	f	sa							N			
100.0						Qtz Ss	wh	vf	f	m	sa			Tr				N			
102.5						Qtz Ss, Sltst	ywbn-ppbr	vf-f	f	f	sa							N			Upper Brushy Basin Fm. contact @ 101.0 feet.
105.0						Qtz Ss, Sh	wh-ltgn	vf	f	f	sa							W			
107.5						Qtz Ss, Sh	wh-ltgn ppbn	vf-f	f	p	sa			Tr				W			

PERCENTAGE COMPOSITION IMAGE

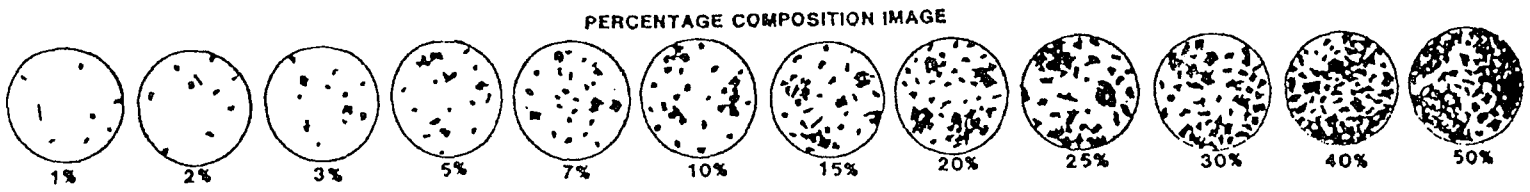


Date 7-1-02 Geologist L. Casebolt Drilling Co. Bayles Exploration Co Hole No. TW4-13
Property White Mesa Mill Project MW4 Unit No. ____ Sec. ____ Twp. ____ Rge. ____
County San Juan State Utah Location ____ Elev. ____

PAGE 1 OF 1
T.D. PROBE 102.5
T.D. DRILL 102.5
FLUID LEVEL ____

DEPTH	SAMPLE TAKEN	GRAPHIC LOG	ALTERATION	GAMMA ANOMALY	BRECCIA PIPE	LITHOLOGY	COLOR OF WET SAMPLE	GRAIN SIZE	SORTING	ANGULARITY	CEMENT MATRIX	IRON OXIDE	PYRITE AMOUNT	PYRITE HABIT	PYRITE ALTER.	METALLIC	NON-METALLIC	REACT.-10% HCL	CARBON AMOUNT	CARBON TYPE	REMARKS
0																					
2.5						Slty Sh	dk rdbn	vf										W			Soil
5.0						Slty sh	rdbn-pk	vf										S			
7.5						Slty sh	rdbn-pk	vf										VS			
10.0						Slty Sh	rdbn	vf										VS			
15						Slty sh	rdbn-ywbn	vf										S			
20						Sh	ywgybn	vf				tr						S			Noteable color change sparse hematite
25						Sh, Qtz Ss	ywgybn	f	p	sa								S			
30						Sh, Qtz Ss	ywgybn	f m	p	sa								S			
35						Sh, Qtz Ss	ywgybn	f m	p	sa								S			
5.0						Slty Sh	ywgybn	vf										S			
27.5						Slty sh	ywgybn	vf										S			
30.0						Slty sh	ywgybn	vf										W			
32.5						Qtz Ss	ortn	f m	m	sa		tr						N			Upper Dakota Fm. contact @ 30.0' limonite coating
35.0						Qtz Ss	ortn	f m	p	sa		tr						N			
37.5						Qtz Ss	tn	f m	f	sa		tr						N			
40.0						Qtz Ss	lt tn	f	f	sa								N			
42.5						Qtz Ss	tn	m	f	sa								N			
45.0						Qtz Ss	tn	f	f	sa								N			
47.5						Qtz Ss, Sh	tn-gy	vf	p	p	sa							N			
50.0						Qtz Ss	wh	vf	f	m	sr							N			Clean sandstone
52.5						Qtz Ss	lt tn	vf	f	m	sr							N			
55.0						Qtz Ss	lt tn	vf	f	m	sr							VW			
57.5						Qtz Ss	ywtn	vf	f	f	sa							W			
60.0						Sh, Sltst	dkgy-blk	vf										N	5%		abund. carbonaceous material
62.5						Qtz Ss	ltgy	f m	m	sr			tr					N	1%		sparse carbon material, trace pyrite
65.0						Qtz Ss	ltgy	m	w	r								N	<1%		
67.5						Qtz Ss	ltgy	f m	m	r								N	<1%		
70.0						Qtz Ss, Sh	ltgy		m	r								N	<1%		
72.5						Qtz Ss	lt tn	vf f	m	r								N			
75.0						Qtz. Ss.	lttn-ltgn	f m	m	sr								N			some gray chert fragments
77.5						Qtz Ss	lttn	m-cr	f	sa								W			multi colored chert frag.
80.0						Sh, Qtz Ss	ltgygn	f vcr	p	sa			1%					S			pyrite, multi colored chert f[illegible]
82.5						Sh, Qtz Ss	ltgygn-wh	vf										N			some chert fragments
85.0						Sltst	ltgygn-wh	vf										N			
87.5						Sltst	ltgygn	vf										N			
90.0						Sltst	ltgygn	vf										N			
92.5						Sltst	ltgygn	vf										N			
95.0						Sltst	ltgygn	vf										N			
97.5						Qtz Ss	ltgy-wh	m f		sr			3%					N			abund. pyrite fragments
100.0						Qtz Ss	ltgy-wh	m f		sr			1%					S			Some pyrite fragments
102.5						Sh, Qtz Ss	gn-wh	m f		sr			1%					N			Upper contact Brushy Basin Fm. @ 101.5'; some pyrite, occurs as cubes and granular

PERCENTAGE COMPOSITION IMAGE

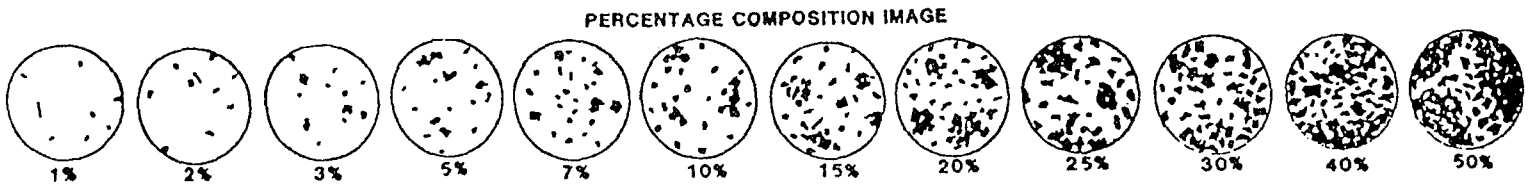


Date 7-2-2002 Geologist L. Casebolt Drilling Co. Bayles Exploration Hole No. TW4-14
Property White Mesa Mill Project MW4 Unit No. ____ Sec. ____ Twp. ____ Rge. ____
County San Juan State Utah Location ____ Elev. ____

PAGE 1 OF 1
T.D. PROBE ____
T.D. DRILL 95.0
FLUID LEVEL ____

DEPTH	SAMPLE TAKEN	GRAPHIC LOG	ALTERATION	GAMMA ANOMALY	BRECCIA PIPE	LITHOLOGY	COLOR OF WET SAMPLE	GRAIN SIZE	SORTING	ANGULARITY	CEMENT MATRIX	IRON OXIDE	PYRITE AMOUNT	PYRITE HABIT	PYRITE ALTER.	METALLIC	NON-METALLIC	REACT.-10% HCL	CARBON AMOUNT	CARBON TYPE	REMARKS
0																					
2.5						Sndy Sltst. qtz	lt rd br-or	vf	p	sa								S			Surface soil.
5.0						sndy Sh-qtz	lt pk-wh	vf	p	sa								VS			trace of plant fragment:
7.5						Sh-sltysh	wh-pk	vf	p	sa								VS			
10.0						Sndy sh	ywgybn	vf-f	p	a		tr						VS			limonite/hematite coating on qtz grains
12.5						Slty Sh	ywgybn	vf	p	sa		tr						S			
15.0						slty Sh	ywzgybn	vf	p	sa		tr						W			hematite coating on qtz.
17.5						slty Sh	ywgybn	vf	p	sa								N			
20.0						sltySh-qtz Ss	lt gy-or bn	vf-f	p	sa		tr.						N			Contact upper Dakota Fm. @ approx. 18.0 feet.
22.5						Qtz Ss	tn	f-m	f	sr		tr.						N			Clean sandstone
25.0						Qtz Ss	tn	m	g	sr		tr.						N			
27.5						Qtz Ss	lt tn	m	g	sr		tr.						N			
30.0						Qtz Ss	lt tn	m-cr	f	sr								N			
32.5						Qtz Ss.	lt tn	f-cr	f	sr								N			
35.0						Qtz SS	lt tn	m-cr	f	sr		tr.						N			
37.5						Qtz SS	tn	m-vcr	p	sa								N			hematite coating on sand grains, white chert frag.
40.0						Qtz SS-cgl	vlt tn	vf-cr	p	sa		3%						N			lt-dk gy quartz fragments.
42.5						Qtz SS	lt tn	f-cr	f	sa		1%						N			
45.0						Qtz SS	vlt tn	f	w	sr								N			very clean sandstone
47.5						Qtz SS	lt tn	f	w	sr								N			" " "
50.0						Qtz Ss.	lt pk tn	vf-m	f	sr								N			
52.5						Qtz SS	lt pk tn	m-cr	f	sr								N			sparce chert frag.
55.0						Qtz Ss.	lt tn	m	f	r								N			
57.5						Qtz Ss.	lt tn	m	w	r								N			very clean sandstone
60.0						Qtz Ss-Cgl	lt tn	vf-m	p	sa								N			dk gy to wh chert & qtz frag.
62.5						Qtz Ss	lt pk tn	f-m	f	sa								N			
65.0						Qtz Ss.	lt pk tn	f	w	sr								N			
67.5						Qtz Ss.	lt tn	f	w	sr								N			
70.0						Qtz Ss	lt gy tn	f-m	f	sa								N			
72.5						Qtz Ss-Cgl	gy tn-wh	f-vcr	p	sa								N			20% chert & quartz fragments - multi color
75.0						Qtz Ss-Cgl	gy tn-wh	m-vcr	p	sa								N			20% chert & quartz fragments.
77.5						Qtz Ss-Cgl	tn	m-cr	p	sr								N			
80.0						Qtz Ss-Cgl	multicolor	m-vcr	p	sa								N			50% grit (wh-rd-blk chert frag.)
82.5						Qtz Ss	lt tn	m	w	r								N			clean sandstone
85.0						Qtz Ss	lt tn	m	f	sr								N			2% dk gy quartz frag.
87.5						Qtz Ss	lt tn	f-m	f	r								N			
90.0						Qtz Ss-Cgl.	lt gy tn	f-vcr	p	sr								S			tr., lt gn shale
92.5						Sh-Qtz Ss	lt gy gn	vf-f	p	sa								N			Upper cont. Brushy Basin Fm @ 91.0 feet.
95.0						Slty Sh	lt gn	vf										N			
TD.																					

PERCENTAGE COMPOSITION IMAGE

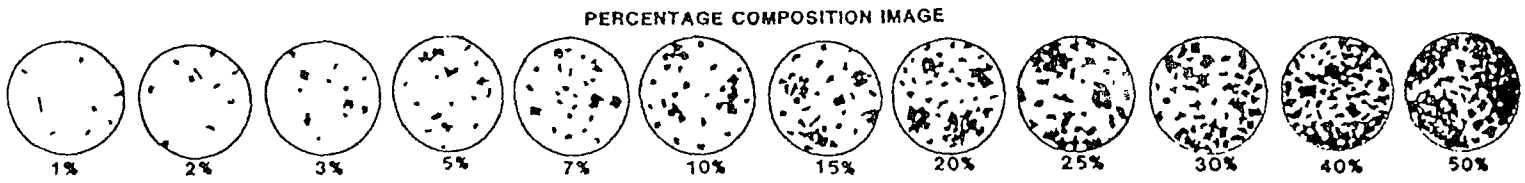


Date 7-2-2002 Geologist L. Caseboit Drilling Co. Bayles Exploration Co Hole No. TW4-15
Property White mesa Mill Project MW4 Unit No. ____ Sec. ____ Twp. ____ Rge. ____
County San Juan State Utah Location ____ Elev. ____

PAGE 1 OF 1
T.D. PROBE ____
T.D. DRILL 122.5
FLUID LEVEL ____
REMARKS 12¼" bit to 50.0 ft. 6¾" bit 50 to T.D.

Depth	Sample Taken	Graphic Log	Alteration	Gamma Anomaly	Breccia Pipe	Lithology	Color of Wet Sample	Grain Size	Sorting	Angularity	Cement Matrix	Iron Oxide	Pyrite Amount	Pyrite Habit	Pyrite Alter.	Metallic	Non-Metallic	React.-10% HCL	Carbon Amount	Carbon Type	Remarks
0																					
2.5						Qtz Ss,	tn bn	vf	f	f	sa								S		Surface Soil.
5.0						Sh, Qtz Ss	dk bn	vf	m	p	sa								VS		
7.5						Slty Sh	lt rd bn	vf	f										S		
10.0						Slty Sh	lt rd bn												S		
12.5						Slty Sh	lt rd bn												S		
15.0						Slty Sh,	yw gy bn												VS		
17.5						Slty Sh	yw gy bn												VS		
20.0						Slty Sh	yw gy bn												S		
22.5						Sh	yw gy bn												N		
25.0						Sh	yw gy bn												W		
27.5						Sndy Sh	yw gy bn	vf	m	p	sa								N		
30.0						Qtz Ss, Sh	or bn	f	m	f	sa								N		Upper contact Dakota Fm @ 28.0 feet.
32.5						Qtz Ss	or bn	m	cr	p	a		L						N		limonite, chert frags.
35.0						Qtz Ss	or bn	m	cr	p	a								N		
37.5						Qtz Ss, Sh	gy	m	cr	p	a								N		
40.0						Qtz Ss	tn	f	m	f	sa								N		
42.5						Qtz Ss, Sh	yw tn-ltgy	f	m	f	sa								N		
45.0						Qtz Ss	tn		f	f	sa								N		
47.5						Qtz Ss	tn		f	f	sr								N		
50.0						Qtz Ss	tn-ltgy		f	f	sr								N		
52.5						Qtz Ss	tn-dkgy	vf	f	p	sa								N		
55.0						Qtz Ss, Cgl	tn	vf	cr	p	sa								N		multi colored chert frags
57.5						Qtz Ss, Cgl	lt pk tn	m	vcr	p	sa								N		" " " "
60.0						Qtz Ss	lt pk tn	m	vcr	p	sa								N		
62.5						Qtz Ss	lt tn	f	m	f	sa								N		
65.0						Qtz Ss	lt tn	m	cr	f	sr								N		
67.5						Qtz Ss	lt tn		m	w	r								N		
70.0						Qtz Ss	lt tn		f	w	r								N		
72.5						Qtz Ss	lt tn	f	m	w	r								N		
75.0						Qtz Ss	lt tn	vf	m	p	sa								N		
77.5						Qtz Ss, Cgl	vlt tn	vf	m	p	sa								N		brown chert fragments.
80.0						Qtz Ss Cgl	white	f	m	m	sr								N		
82.5						Qtz Ss Cgl	lt tn-ltgy	f	m	m	sr		TR						N		disseminated pyrite
85.0						Qtz Ss, Sh	vltgy-ltgn	vf	f	f	sa								N		
87.5						Qtz Ss, Sh	vltgy-ltgn	vf	f	f	sa		Tr						N		
90.0						Qtz Ss, Sh	vltgy-ltgn	vf	f	f	sa		Tr						N		
92.5						Qtz Ss, Sh	vltgy-ltgn	vf	f	f	sa		1%						N		
95.0						Qtz Ss, Sh	wh-ltgn	vf	f	f	sa		Tr						N		
97.5						Qtz Ss, Sh	wh-ltgn	vf	f	f	sa		tr						N		
100.0						Qtz Ss, Sh	wh-ltgn	vf	m	f	sa		Tr						N		
102.5						Qtz Ss, Sh	wh-ltgn	f	m	f	sr								N		
105.0						Qtz Ss	wh	f	m	f	sr								N		
107.5						Qtz Ss	wh	f	m	f	sr								N		
110.0						Qtz Ss, Cgl	vltgn	f	ver	p	sa								N		gray-brown chert fragments.
112.5						Qtz Ss	wh-ltgn	vf	f	f	sa								N		
115.0						Qtz Ss	wh-ltgn	vf	f	f	sa								N		
117.5						Qtz Ss, Sh	wh-ltgn	vf	m	p	sr		Tr						N		
120.0						Sh, Qtz Ss	gn-wh	vf	m	p	sr								N		Upper contact Brushy Basin Fm. @ 118.0 feet
122.5						Sh,	gn-pp bn												N		
T.D.																					

PERCENTAGE COMPOSITION IMAGE

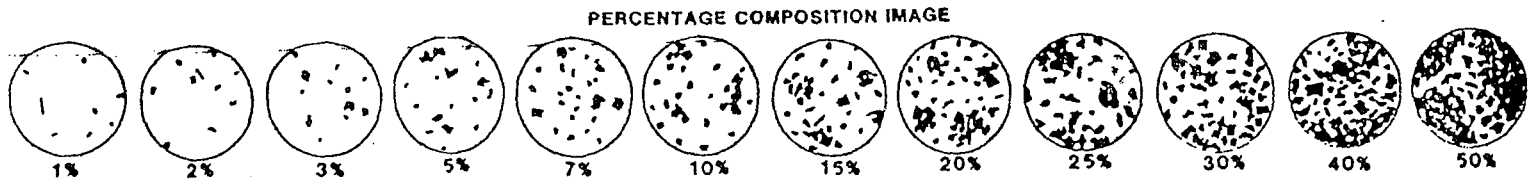


Date 7-2-2002 Geologist L. Casebolt Drilling Co. Bayles Exploration Hole No. TW4-16
Property White Mesa Mill Project ~~TW4~~ Unit No. ____ Sec. ____ Twp. ____ Rge. ____
County San Juan State Utah Location ____ Elev. ____

PAGE 1 OF 2
T.D. PROBE 149.0
T.D. DRILL 147.5
FLUID LEVEL 97.5
REMARKS 12¼" bit to 50' 6¾" bit 50'-147.5

Depth	Sample Taken	Graphic Log	Alteration	Gamma Anomaly	Breccia Pipe	Lithology	Color of Wet Sample	Grain Size	Sorting	Angularity	Cement Matrix	Iron Oxide	Pyrite Amount	Pyrite Habit	Pyrite Alter.	Metallic	Non-Metallic	React.-10% HCL	Carbon Amount	Carbon Type	Remarks
0																					
2.5						Sh, Sltst.	ywgybn											VS			Surface soil.
5.0						Qtz Ss	ltpkor	vf	f	p	sa							S			
7.5						Sltst, Sh	ltrdbn											S			
10.0						Sh, Sltst	ywgybn											VS			some chert frag.
12.5						Sh	ywgybn											VS			
15.0						Sh	ltgytn											VS			
17.5						Sndy Sh	ltgytn	vf	f	p	sa							VS			
20.0						Sh	ywgybn											VS			
22.5						Sh	ywgybn											VS			gypsum crystals (selenite)
25.0						Sh	ywgybn											VS			very abund gyp xls.
27.5						Sh	ywgybn											S			" " " "
30.0						Sh	ywgybn											M			" " " "
32.5						Sh	ywgybn											m			" " " "
35.0						Qtz Ss, Sh	ywgybn	vf	f	f	sa							S			Upper contact Dakota Fm. @ 33.0 feet
37.5						Qtz Ss	ltywbn	vf	f	f	sa							W			
40.0						Qtz Ss	lt bn		vf	p	sa							W			
42.5						Qtz Ss	ltywbn	f	m	p	sa							N			
45.0						Qtz Ss	lttnbn	f	m	f	sr	L						N			some limonite coating.
47.5						Qtz Ss	tn		m	m	sr	L						N			
50.0						Qtz Ss	tn	f	m	f	sr							W			
52.5						Qtz Ss	tn		f	f	sa							N			
55.0						Qtz Ss	tn		f	f	sa							N			
57.5						Qtz Ss	tn		f	f	sa							N			
60.0						Qtz Ss	tn	vf	f	p	sa							N			
62.5						Sndy Sh	gybn	f	m	p	sa							W			gypsum crystals as selenite
65.0						Qtz Ss	gybn	f	m	f	sa							N			some chert frag. as sand grains
67.5						Qtz Ss, Sh	ltgytn	vf	f	m	sr							N			
70.0						Qtz Ss	tn		f	w	r							N			
72.5						Qtz Ss	gy	vf	f	m	sr							N	½	I	
75.0						Qtz Ss, Cgl	lt bn	f	vcr	p	sa							N			white to dk gray chert fragments
77.5						Qtz Ss, Cgl	ltgytn	f	cr	p	sa							N			" " " " " "
80.0						Qtz Ss, Sh, Cgl	ltgytn	f	m	p	sa							N			
82.5						Qtz Ss, Cgl	tn	m	vcr	p	a							N			chert fragments, white to bn to rd
85.0						Qtz Ss, Cgl	tn	m	vcr	p	a							N			multicolored chert frags.
87.5						Qtz Ss, Cgl	tn	m	vcr	p	sa							N			multicolored chert frags wh-or-blk
90.0						Qtz Ss, Cgl	vlttn	vf	m	p	sr							N			
92.5						Qtz Ss	vlttn	vf	f	f	sr							N			Clean sandstone
95.0						Qtz Ss	vlt tn-wh	vf	f	w	sa							N			
97.5						Qtz Ss, Cgl	multicolor	m	vcr	p	a		2%					N			pyrite disseminated around sand grains, chert
100.0						Qtz Ss, Sh, Cgl	multicolor	vf	vcr	p	a							N			frag.
102.5						Qtz Ss	wh	f	m	m	sr							N			Clean white sandstone.
105.0						Qtz Ss	wh-vltgn	f	m	m	sr							N			
107.5						Qtz Ss	wh-vltgn	f	m	m	sr							N			
110.0						Qtz Ss	wh-vltgn	f	m	f	sr		Tr					N			
112.5						Qtz Ss, Sh, Cgl	wh-vltgn	f	m	f	sr		Tr					N			
115.0						Qtz Ss, Sh, Cgl	bn-ltgn	f	m	f	sr		Tr					N			
117.5						Qtz Ss, Sh, Cgl	tn-ltgn	f	m	f	sr							N			
120.0						Qtz Ss, Sh, Cgl	wh-ltgn	vf	vcr	p	sr							N			
122.5						Qtz Ss, Sh	wh-ltgn		f	f	sr							N			
125.0						Qtz Ss, Cgl	wh-gy	f	vcr	p	sr							N			

PERCENTAGE COMPOSITION IMAGE

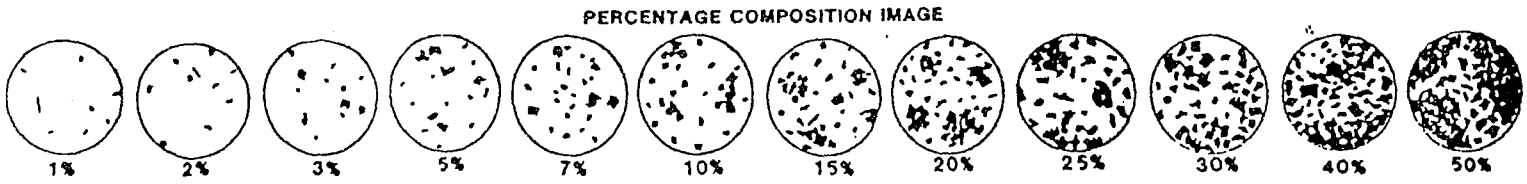


Date 7-2-02 Geologist L. Casebolt Drilling Co. Bayles Exploration Hole No. TW4-17
Property White Mesa Mill Project TW4 Unit No. ____ Sec. ____ Twp. ____ Rge. ____
County San Juan State Utah Location ____ Elev. ____

PAGE 1 OF 2
T.D. PROBE 132.9
T.D. DRILL 132.5
FLUID LEVEL 115.5
REMARKS 12¼" bit to 52.5; 6¾" 52.5 to T.D.

Depth	Sample Taken	Graphic Log	Alteration	Gamma Anomaly	Breccia Pipe	Lithology	Color of Wet Sample	Grain Size	Sorting	Angularity	Cement Matrix	Iron Oxide	Pyrite Amount	Pyrite Habit	Pyrite Alter.	Metallic	Non-Metallic	React.-10% HCL	Carbon Amount	Carbon Type	Remarks
0																					
2.5						Qtz Ss, caliche	wh-tn bn	f	cr	p	sa								VS		caliche, surface soil
5.0						Qtz Ss, caliche	wh-tn	f	m	p	sa								VS		caliche, surface soil
7.5						Sltst, Sh	ltrdbn	vf	f	f	sa								VS		
10.0						Sltst	ltrdbn	vf	f	f	sa								S		
12.5						Sltst.	ltpkrd												S		
15.0						Slty Sh	ltpkbn												S		
17.5						Slty Sh	ltpkbn-ltywgy												VS		
20.0						Sh	ywgybn												VS		
22.5						Sh	ywgybn												VS		
25.0						Sh	ywgybn												S		
27.5						Sh	ywgybn												S		gypsum crystals as selenite
30.0						Sh	ywgybn												S		abund. gypsum crystals.
32.5						Sh	ywgybn												W		" " "
35.0						Sh	ywgybn												W		
37.5						Sh	ywgybn												W		
40.0						Slty Sh	ywgybn					L							VW		Limonite
42.5						Slty Sh, Qtz Ss	ywgybn	vf	f	p	sr	L							VW		Contact Dakota Fm approx 42.0 ft.
45.0						Qtz Ss, Sh	ltortn	f	m	p	sr								N		
47.5						Qtz Ss	ltortn	f	m	p	sa								N		
50.0						Qtz Ss	ltgytn	f	m	p	sa	L							N		
52.5						Qtz Ss	tn	f	m	f	sr	L							N		
55.0						Qtz Ss	tn		f	f	sr	L							N		
57.5						Qtz Ss	tn	vf	f	f	sr								N		
60.0						Qtz Ss	tn	vf	f	p	sa								N		
62.5						Qtz Ss	tn	f	m	f	sr								N		
65.0						Qtz Ss	vlttn	f	m	f	sa								N		
67.5						Qtz Ss	vlttn	f	m	f	sr								N		
70.0						Qtz Ss, Sh	vlttn-vltgn	f	m	f	sr								M		
72.5						Qtz Ss	lttn	m	cr	f	sr								N		some ltgy chert grains
75.0						Qtz Ss	vlttn	f	m	m	sr								N		
77.5						Qtz Ss	lttn	f	m	m	sr								N		gray to tn chert fragments.
80.0						Qtz Ss Cgl	lttn	m	vcr	m	sr								N		multi chert fragments
82.5						Qtz Ss	lttn	f	m	f	sr								N		
85.0						Qtz Ss Cgl	lttn	f	vcr	f	sr								S		multi color chert fragments
87.5						Sh	ltgn												N		
90.0						Qtz Ss	lttn		f	m	sr								N		clean sandstone
92.5						Qtz Ss	lttn	vf	f	m	sr								N		
95.0						Qtz Ss	wh		vf	f	sr								N		
97.5						Sh, Qtz Ss	wh-vltgy		vf	m	sr								N		
100.0						Qtz Ss, Sh	vltgy		vf	m	sr								N		
102.5						Qtz Ss	wh	f	m	m	sr								N		clean sandstone
105.0						Qtz Ss, Cgl	wh-gy	f	m	m	sr		tr						N		chert fragments
107.5						Qtz Ss, Cgl	wh-gybn	m	cr	f	sr		tr						N		" "
110.0						Qtz Ss	wh		m	w	r								N		
112.5						Qtz Ss, Cgl	wh-ltgy	f	cr	p	sr								N		
115.0						Qtz Ss, Cgl	wh-multicolor	f	cr	p	sr								N		multicolor chert frag.
117.5						Qtz Ss, Cgl	ltgy-multicolor	m	cr	f	sr								N		" " " "
120.0						Qtz Ss, Cgl	ltgy	m	cr	f	sr								N		" " " "
122.5						Qtz Ss, Cgl	ltgy-wh	m	cr	f	sr								N		" " " "
125.0						Qtz Ss, Cgl	wh	f	m	f	sr								N		" " " "

PERCENTAGE COMPOSITION IMAGE

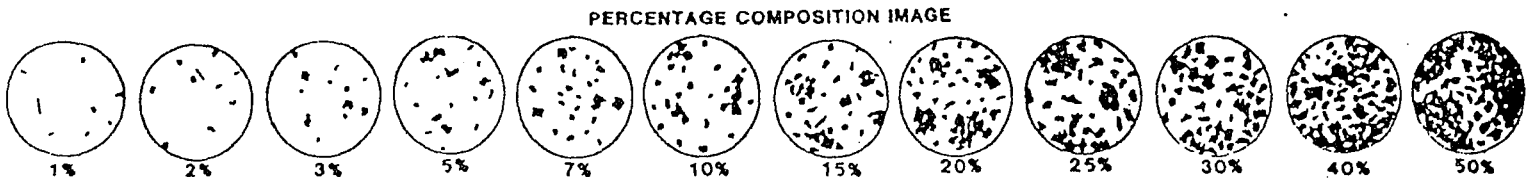


Date 7-2-2002 Geologist L. Casebolt Drilling Co. Bayles Exploration Hole No. TW4-16
Property White Mesa Mill Project MW4 Unit No. ____ Sec. ____ Twp. ____ Rge. ____
County San Juan State Utah Location ____ Elev. ____

PAGE 2 OF 2
T.D. PROBE 149.0
T.D. DRILL 147.5
FLUID LEVEL ____

DEPTH	SAMPLE TAKEN	GRAPHIC LOG	ALTERATION	GAMMA ANOMALY	BRECCIA PIPE	LITHOLOGY	COLOR OF WET SAMPLE	GRAIN SIZE	SORTING	ANGULARITY	CEMENT MATRIX	IRON OXIDE	PYRITE AMOUNT	PYRITE HABIT	PYRITE ALTER.	METALLIC	NON-METALLIC	REACT.-10% HCL	CARBON AMOUNT	CARBON TYPE	REMARKS
125.0																					
127.5						Qtz Ss, Cgl	wh-multi color	f cr	f	sa							N				multi color chert fragments
130.0						Qtz Ss, Cgl	wh-multi color	m	p	sa							N				" " " "
132.5						Qtz Ss, Cgl	wh-multi color	m	p	sa							N				" " " "
135.0						Qtz Ss, Cgl.	wh. f	vcr	p	sa							N				" " " "
137.5						Qtz Ss	wh vf	f	f	sr							N				
140.0						Qtz Ss	wh	f	f	sr							N				
142.5						Sh, Qtz Ss	wh-gn	f	f	sr							N				Upper Contact Brush Basin Fm. @ 141.0 feet
145.0						Sh	gn										N				clean shale
147.5						Sh	gn-rdgybn										N				clean shale
T.D.																					

PERCENTAGE COMPOSITION IMAGE

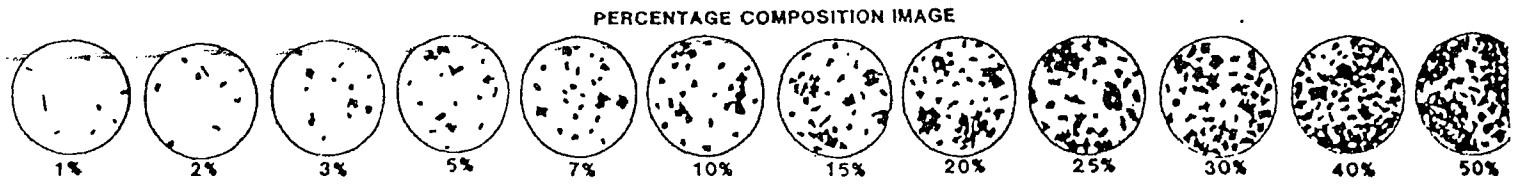


Date 7-2-2002 Geologist L. Casebolt Drilling Co. Bayles Exploration Hole No. TW4-17
Property White Mesa Mill Project MW4 Unit No. ____ Sec. ____ Twp. ____ Rge. ____
County San Juan State Utah Location ____ Elev. ____

PAGE 2 OF 2
T.D. PROBE 132.9
T.D. DRILL 132.5
FLUID LEVEL 115.5

DEPTH	SAMPLE TAKEN	GRAPHIC LOG	ALTERATION	GAMMA ANOMALY	BRECCIA PIPE	LITHOLOGY	COLOR OF WET SAMPLE	GRAIN SIZE	SORTING	ANGULARITY	CEMENT MATRIX	IRON OXIDE	PYRITE AMOUNT	PYRITE HABIT	PYRITE ALTER.	METALLIC	NON-METALLIC	REACT.-10% HCL	CARBON AMOUNT	CARBON TYPE	REMARKS
125.0						Sh, Qtz Ss, Cgl	gn-wh	m	var	p	sr										Upper Brushy Basin Ct @ 126.0 feet
127.5						sh	gn-pp bn														clean shale
130.0						sh	gn-pp bn														clean shale
132.5																					
T.D.																					

PERCENTAGE COMPOSITION IMAGE



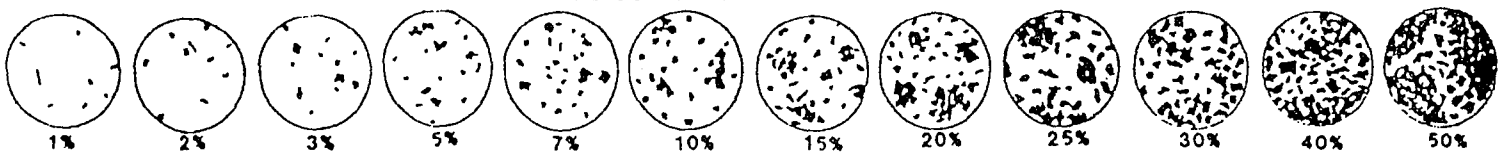
Date 7-8-2002 Geologist L. Casebolt Drilling Co. Bayis Exploration Hole No. TW4-18
Property White Mesa Mill Project MW4 Unit No. ____ Sec. ____ Twp. ____ Rge. ____
County San Juan State Utah Location ____ Elev. ____

PAGE 1 OF 2
T.D. PROBE ____
T.D. DRILL 142.5
FLUID LEVEL 62 Feet

REMARKS 7 7/8" bit, collar to T.D.

Depth	Sample Taken	Graphic Log	Alteration	Gamma Anomaly	Breccia Pipe	Lithology	Color of Wet Sample	Grain Size	Sorting	Angularity	Cement Matrix	Iron Oxide	Pyrite Amount	Pyrite Habit	Pyrite Alter.	Metallic	Non-Metallic	React.-10% HCL	Carbon Amount	Carbon Type	Remarks
0																					
2.5						Sltst	rdbn	vf										S			Surface soils
5.0						Sltst	rdbn	vf										VS			
7.5						Sltst	rdbn-ltpkbn	vf										VS			
10.0						Sh	ltpktn											VS			
12.5						Sh	ltgytn											S			
15.0						Sh	ygy											S			
17.5						Slty Sh	ygy	vf										S			
20.0						Slty Sh	ygy	vf										VS			
22.5						Slty Sh	ygy	vf										M			
25.0						Slty Sh	ygy	vf										VS			
27.5						Slty Sh	ygy	vf										VS			gypsum as selenite crystals
30.0						Qtz Ss, Sltst	ygybn	vf f	p	sa								VS			
32.5						Sltst	orbn					L						VS			limonite
35.0						Sltst	orbn					L						S			limonite
37.5						Sltsh	orbn					L						N			limonite
40.0						Sltst, Qtz Ss	orbn	m cr	p	sa		L/H						N			limonite/hematite, Upper Dakota Fm contact @ 39.5'
42.5						Qtz Ss	orbn	m cr	p	sa		L						N			limonite coating qtz grains
45.0						Qtz Ss	orbn	m cr	f	sr								N			" " " "
47.5						Qtz Ss	orbn	m cr	f	sa								N			" " " "
50.0						Qtz Ss	orbn	f m	f	sa								N			" " " "
52.5						Qtz Ss	tn	m	f	sr								N			
55.0						Qtz Ss	tn	m	m	sr								VW			
57.5						Qtz Ss	tn f	m	f	sr								VW			
60.0						Qtz Ss, Sh	tn, ltgy f	m	f	sa								N			
62.5						Qtz Ss	tn vf	f	f	sa								N			
65.0						Qtz Ss	tn vf	f	f	sa								N			
67.5						Sltst	dkgy-blk vf	f	p	sa								N	30%	I	abund carbon frag.
70.0						Sltst, Qtz Ss	dkgy-blk f	m	p	sa								N	30%	I	" " "
72.5						Qtz Ss.	dkgytn	m	m	sr								N	2%	I	
75.0						Qtz Ss, Cgl	dkgybn	vcr	p	sr								N			chert, quartz frag. & pebbles
77.5						Qtz Ss	dktn f	m	m	sr								N			
80.0						Qtz Ss	dktn f	m	m	r								N			
82.5						Qtz Ss, Sh	tn-ltgygn f	m	f	sr								N			
85.0						Sh	ltgygn											N			
87.5						Sh	ltgygn											N			
90.0						Sh, Qtz Ss	ltgygn-ltortn	vf	m	sr								N			
92.5						Qtz Ss	lttn vf	f	m	sr								N			
95.0						Qtz Ss, Cgl, Sh	lttn-gygn f	m	p	sa								N			
97.5						Sltst	ltgygn	vf										N			
100.0						Sltst, Qtz Ss	ltgygn vf	f	m	sa								N			
102.5						Sltst, Qtz Ss	ltgygn-lttn vf	f	f	sa								N			
105.0						Qtz Ss	lttn	f	m	sa								N			
107.5						Qtz Ss	lttn	f	f	sa								N			
110.0						Qtz Ss	lttn	f	f	sa								N			
112.5						Qtz Ss	lttn f	m	f	sr								N			
115.0						Qtz Ss	lttn f	m	f	sr								N			
117.5																					no cuttings from this interval
120.0																					
122.5																					
125.0						Qtz Ss	lttn	m	m	sa								N			

PERCENTAGE COMPOSITION IMAGE

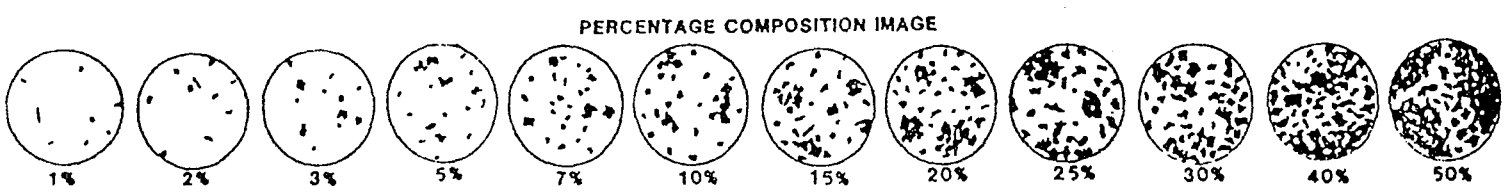


Date 7-8-2002 Geologist L.C. Isebolt Drilling Co. Bayles Exploration Co. Hole No. TW4-18
Property White Mesa Mill Project TW4 Unit No. ____ Sec. ____ Twp. ____ Rge. ____
County San Juan State Ut. Location ____ Elev. ____

PAGE 1 OF 2
T.D. PROBE ____
T.D. DRILL 142.5
FLUID LEVEL 62 Feet

DEPTH	SAMPLE TAKEN	GRAPHIC LOG	ALTERATION	GAMMA ANOMALY	BRECCIA PIPE	LITHOLOGY	COLOR OF WET SAMPLE	GRAIN SIZE	SORTING	ANGULARITY	CEMENT MATRIX	IRON OXIDE	PYRITE AMOUNT	PYRITE HABIT	PYRITE ALTER.	METALLIC	NON-METALLIC	REACT.-10% HCL	CARBON AMOUNT	CARBON TYPE	REMARKS
125.0																					
127.5						Qtz Ss, Sltst	lt bn - lt gn	f	m	f	sr							N			
130.0						Qtz Ss	lt bn	f	m	p	sr							N			
132.5						Qtz Ss	lt bn	f	m	f	sr							N			
135.0						Qtz Ss	lt tn	f	m	p	sr							N			
137.5						Qtz Ss, Sh	lt tn - pp bn	f	m	p	sr							N			Upper Brushy Basin Fm. contact @ 137.5'
140.0						Sh	pp bn - gn											N			
142.5						Sh	pp bn											N			
T.D.																					

PERCENTAGE COMPOSITION IMAGE

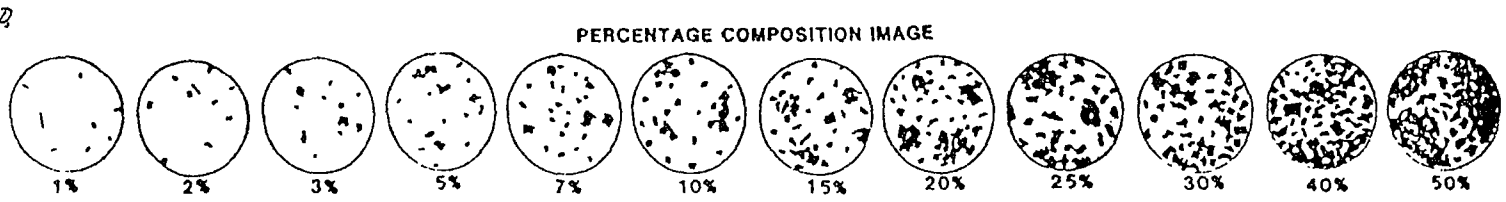


Date 7-9-02 Geologist L'Asebolt Drilling Co. Bayles Exploration Hole No. TW4-19
Property White Mesa Mill Project TW4 Unit No. ____ Sec. ____ Twp. ____ Rge. ____
County San Juan State Utah Location Next to office complex. Elev. ____

PAGE 1 OF 1
T.D. PROBE ____
T.D. DRILL 125.0
FLUID LEVEL ____

Depth	Sample Taken	Graphic Log	Alteration	Gamma Anomaly	Breccia Pipe	Lithology	Color of Wet Sample	Grain Size	Sorting	Angularity	Cement Matrix	Iron Oxide	Pyrite Amount	Pyrite Habit	Pyrite Alter.	Metallic	Non-Metallic	React.-10% HCL	Carbon Amount	Carbon Type	Remarks
0.0																					
2.5						Slty Sh	ltvr bn	vf										S			Soil
5.0						Slty Sh	lt pk tn	vf										VS			
7.5						Sh	lt pi tn	vf										VS			
10.0						Sh	lt t	vf										S			
12.5						Slty Sh	lt yg	vf										S			sparse qtz grain.
15.0						Qtz Ss-Sltst	yw-ybn	f	p	sa		tr						S			limonite and hematite coating on qtz grains
17.5						Slty Sh	gybn	vf										N			
20.0						Slty Sh	gybn	vf										N			
22.5						Qtz Ss Sltst	lt or-bn	f-m	f	sa		1%						N			Upper Dakota Fm. Ct. @ approx 21.0 ft. limonite coating
25.0						Qtz Ss	lt or bn	m	f	sa		1%						N			limonite coating on qtz grains
27.5						Qtz Ss	lt or bn	m	f	sa		1%						N			
30.0						Qtz Ss	lt tn	m	cr	f	sa							N			
32.5						Qtz Ss	lt tn	f	m	f	sr							N			
35.0						Qtz Ss	lt tn	f	f	sr								N			
37.5						Qtz Ss	lt pk tn	f	m	sr								N			
40.0						Qtz Ss	lt tn	vf	f	p	sa							N			
42.5						Qtz Ss	lt pk tn	vf	f	m	sa							N			clean sandstone
45.0						Qtz Ss	lt pk tn	vf	f	m	sa							N			
47.5						Qtz Ss-Sh	tn-wh	m	vcr	p	sa							N			
50.0						Qtz Ss-Sh	lt tn lt gy	f	cr	p	sa							N			
52.5						Qtz Ss-	lt pk tn	f	m	w	sr							N			Clean sandstone
55.0						Qtz Ss	lt pk tn	f	m	m	sr							N			
57.5						Qtz Ss	lt pk tn		m	w	sr							N			
60.0						Qtz Ss	vlt pk tn	f	m	m	sr							N			
62.5						Qtz Ss	vlt pk wh	f	m	m	sr							N			
65.0						Qtz Ss	vlt pk wh	f	m	m	sr							N			
67.5						Qtz Ss	wh	f	m	f	sa							N			
70.0						Qtz Ss, Cgl	lt tn	f	vcr	p	sa	tr						W			multi color chert & qtz frag.
72.5						Qtz Ss, Cgl	tn	f	vcr	p	sa	tr						W			hematite coating on qtz & chert frag.
75.0						Qtz Ss, Cgl	tn	f	vcr	p	sa	tr						W			
77.5						Sh	lt blgy											N			
80.0						Qtz Ss	vlt tn	vf	f	f	sa							N			
82.5						Qtz Ss, Sh	vlt tn-lt gy-gn	vf	f	f	sa							N			
85.0						Sh-Qtz Ss	lt blgy-lt tn		f	f	sa							N			
87.5						Sh	lt gy-lt pp bn	vf										N			Mottled shale frags.
90.0						Sh	lt gy-lt pp bn	vf										N			" " "
92.5						Qtz Ss	vlt gy	vf	f	f	sa							N			
95.0						Qtz Ss, Sh	lt tn-lt gy	vf	f	f	sa							N			
97.5						Qtz Ss, Sh	lt tn-lt gy	vf	f	f	sa							N			
100.0						Qtz Ss, Cgl	lt gy-wh	f	cr	p	sa	tr						N			
102.5						Qtz Ss, Cgl, Sh	lt gy	m	cr	f	sa	tr						N			
105.0						Qtz Ss, Cgl	vlt gy-or bn	m	cr	f	sa	tr						W			
107.5						Qtz Ss	lt pk tn		m	m	sr	tr						N			
110.0						Qtz Ss, Sltst	lt tn-lt gy		m	m	sa							N			
112.5						Qtz Ss	lt gy		f	f	sr							N			
115.0						Qtz Ss	wh-lt gy	vf	f	f	sa							N			
117.5						Qtz Ss, Sh	wh-lt gy	vf	f	f	sa							N			
120.0						Qtz Ss Cgl	wh-lt gy-or	f	vcr	p	sa							N			
122.5						Sh, Qtz Ss	pp rd bn, gy-wh		m	f	sa							N			Upper Brushy Basin Fm. Ct @ approx 121.0 feet
125.0						Sh	pp rd bn-gy gn											N			
TD																					

PERCENTAGE COMPOSITION IMAGE



Date 7-11-02 Geologist L. Casebolt Drilling Co. Bayles Exploration Co. Hole No. MW4-A
Property White Mesa Mill Project MW4 Unit No. ____ Sec. ____ Twp. ____ Rge. ____
County San Juan State Utah Location ____ Elev. ____

PAGE 1 OF 1
T.D. PROBE ____
T.D. DRILL 125.0
FLUID LEVEL ____

Depth	Sample Taken	Graphic Log	Alteration	Gamma Anomaly	Breccia Pipe	Lithology	Color of Wet Sample	Grain Size	Sorting	Angularity	Cement Matrix	Iron Oxide	Pyrite Amount	Pyrite Habit	Pyrite Alter.	Metallic	Non-Metallic	React.-10% HCL	Carbon Amount	Carbon Type	Remarks
0.0																					REMARKS 6 3/4" bit 9.5-core pt
2.5						Sltst	ltgray											W			Surface soil
5.0						Sltst, Sh	rdbn-wh											VS			
7.5						Sltst, Sh	rdbn-wh											VS			
10.0						Sltst, Sh	ltorbn											S			
12.5						Sh, Cgl	ywgybn											S			dk chert fragments gypsum crystals
15.0						Sh	ywgybn											S			abund selenite (gypsum) crystals
17.5						Sh	ywgybn											S			" " " "
20.0						Sh	ywgybn											W			Very large frags of selenite
22.5						Sh, Qtz Ss	ywgybn	vf	f	p	sa							W			" " " "
25.0						Sh	ywgybn											N			" " " "
27.5						Sh, Sltst	ywgybn											N			
30.0						Sh, Sltst	ywgybn											N			
32.5						Qtz Ss	ywbn	vf	f	p	sa		L					N			Upper Dakota Fm Contact @ 30.0 feet
35.0						Qtz Ss	gybn		m	f	sa		L					N			
37.5						Qtz Ss	tnbn	m	cr	p	sa							N			
40.0						Qtz Ss	gytn	m	cr	p	sa							N			
42.5						Qtz Ss	tn	vf	f	f	sr							N			
45.0						Qtz Ss	tn	vf	f	f	sr							W			
47.5						Qtz Ss	tn		vf	m	sr							W			
50.0						Qtz Ss	lttn		f	w	sr							N			
52.5						Qtz Ss	lttn-wh		f	w	sr							N			
55.0						Qtz Ss, Sh	lttn-blk	f	m	f	sr							N	tr	I	carbonaceous shale partings
57.5						Qtz Ss, Sh	lttn-ltgy	f	m	f	sr							N			shale partings
60.0						Qtz Ss	lttn	f	cr	f	sr							N			
62.5						Qtz Ss, Cgl	lttn	f	m	f	sr							N			chert fragments
65.0						Qtz Ss, Cgl	lttn	f	m	f	sr							N			" "
67.5						Qtz Ss	tn	f	m	m	sr							W			clean sandstone
70.0						Qtz Ss	tn	vf	f	f	sr							N			" "
72.5						Qtz Ss	tn	vf	f	m	sr							N			" "
75.0						Qtz Ss	tn	vf	f	w	sr							N			" "
77.5						Qtz Ss, Cgl	tn	f	cr	p	sr							N			chert fragments.
80.0						Qtz Ss, Sh	tn-ltgn	vf	f	p	sr							N			
82.5						Sltst, Cgl	ywtn-gy		vf	p								N			chert pebbles & fragments.
85.0						Qtz Ss, Sh	wh-ltgn	vf	f	f	sr		H					N			
87.5						Qtz Ss, Sh	wh-ltgn	vf	f	f	sr		H					N			
90.0						Sh, Qtz Ss	ltgn-wh	vf	f	f	sr							N			
92.5						Qtz Ss	wh		f	w	sr							W			
95.0						Qtz Ss	wh		f	w	sr							W			Core point, began coring from 92.5 feet to T.D.
97.5						Qtz Ss	lttn	vf	f	m	sr							S			
100.0						Qtz Ss	tn	f	m	f	sr		H					S			Upper Contact-Brushy Basin Fm. @ 100.0 ft.
102.5						Qtz Ss, Sh	wh-ltgn	f	m	f	sr							W			
105.0						Qtz Ss, Sh	wh-gn-ppbn	f	m	f	sr							W			abundant selenite crystals.
107.5						Qtz Ss, Sh	lttn-gn	vf	f	f	sr							W			" " "
110.0						Qtz Ss, Sh	lttn-gn	vf	f	f	sr							W			
112.5						Sh, Qtz Ss	gn-tn	vf	f	m	sr							N			
115.0						Sh, Qtz Ss	tn-gn	vf	f	f	sr							W			
117.5						Sh, Qtz Ss	ywbn-ltgn	vf	f	f	sr							W			
120.0						Sh, Qtz Ss	ywbn-ltgn	vf	f	p	sr							W			
122.5						Qtz Ss, Sh	ywbn	f	m	f	sr							N			abundant selenite crystals
125.0 T.D.						Sh	ywbn-pp											N			

NOTE: CORE INTERVAL IN THIS WELL 92.5-125.0 T.D

PERCENTAGE COMPOSITION IMAGE