

RECORD OF SUBSURFACE EXPLORATION

PHILIP SERVICES CORP.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # BH- 3

Well # MW-1

Page 1 of 2

Project Name PNM HAMPTON 4M

Project Number 18839 Phase 6000

Project Location HAMPTON 4M

Elevation

Borehole Location SE Corner of Wellpad on hill

GWL Depth 38.85' BGS

Logged By CM CHANCE

Drilled By K Padilla

Date/Time Started 10/29/97

Date/Time Completed 10/29/97

Well Logged By CM CHANCE

Personnel On-Site D CHARLEY

Contractors On-Site

Client Personnel On-Site

Drilling Method 4 1/4 ID HSA

Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recover (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM			Drilling Conditions & Blow Counts
							BZ	BH	S	
0										
5										
10										
15										
20	1	18-20	10	Lt Gray/Br weathered SANDSTONE Poorly cemented, F-med sand, v. dense, dry			0			91-1241 hr
25	2	22-25	12	Br weathered SANDSTONE, Poorly cemented, v. F-sand, v. dense, dry			0			91-1351 hr
30	3	28-30	8	Lt Gray weathered SANDSTONE Fairly cemented, F-med sand, v. dense, dry			0			48/5-1418 hr
35	4	33-35	6	AA						0/1
40	5	38-40	4	Lt Gray weathered SANDSTONE, Poorly cemented, F-med sand, dense, wet						9/1 hr

Comments:

Location is ~20' above well pad. Will drill to 20' before sampling.
GW @ 38.85' BGS. Will drill 5' more & install well.

Geologist Signature

CM Chance

10/31/97\DRILLOG.XLS

EXHIBIT
PNM 52

RECORD OF SUBSURFACE EXPLORATION

PHILIP SERVICES CORP.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # BH-3

Well # MW-1

Page 2 of 2

Project Name PNM HAMPTON 4M

Project Number 18839 Phase 6000

Project Location HAMPTON 4M

Elevation _____

Borehole Location _____

GWL Depth 38.85'

Logged By CM CHANCE

Drilled By K Padilla

Date/Time Started 10/29/97

Date/Time Completed 10/29/97

Well Logged By CM CHANCE

Personnel On-Site D CHARLEY

Contractors On-Site _____

Client Personnel On-Site _____

Drilling Method 4 1/4 ID HSA

Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recover (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM			Drilling Conditions & Blow Counts
							BZ	BH	S	
40										
45										
50										
55										
60										
65										
70										
75										
80										

Comments:

Geologist Signature

CM Chance

MONITOR WELL INSTALLATION FORM

Philip Services Corp.

4000 Monroe Rd.

Farmington, NM 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # 3
Well # MW-1
Page 1 of 1

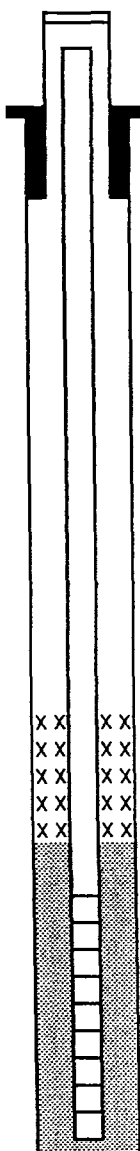
Project Name PNM HAMPTON 4M
Project Numb 18839 Phase 6000
Site Location HAMPTON 4M

Elevation _____
Well Location _____
GWL Depth 38.85' BGS
Installed By K PADILLA

On-Site Geologist C CHANCE
Personnel On-Site D CHARLEY
Contractors On-Site _____
Client Personnel On-Site _____

Date/Time Started 10/29/97
Date/Time Complete 10/29/97

Depths in Reference to Ground Surface		
Item	Material	Depth (feet)
Top of Protective Casing		3.1
Bottom of Protective Casing		1.9
Top of Permanent Borehole Casing		NA
Bottom of Permanent Borehole Casing		NA
Top of Concrete		NA
Bottom of Concrete		NA
Top of Grout		0
Bottom of Grout		23.5
Top of Well Riser	30' 2" x 10'	+3
Bottom of Well Riser	PVC riser	28.5
Top of Well Screen	15' 2" x 10'	28.5
Bottom of Well Screen	0.015 slot	43.5
Top of Peltonite Seal	hole plug	23.5
Bottom of Peltonite Seal		25.5
Top of Gravel Pack	10-20 silica	25.5
Bottom of Gravel Pack	SAND	43.5
Top of Natural Cave-In		43.5
Bottom of Natural Cave-In		43.8
Top of Groundwater		38.8
Total Depth of Borehole		43.8



Top of Protective Casing NA +3.1'

Top of Riser (survey elev.) +3

Ground Surface 0

Top of Seal 23.5

Top of Gravel Pack 25.5

Top of Screen 28.5

Bottom of Screen 43.5

Bottom of Borehole 43.8

Comments Set well @ 43.5' BGS. Hydrate seal w/ 10 gal potable water.
Padlock & locking wellcap on well. Well completed

Geologist Signature Cory Chance

ENVIROTECH INC.

FIELD BORING LOG

MW-2

TEST BORING NO. TB #1	MONITOR WELL NO. MW-1	PROJECT NO. 93108-02	PROJECT NAME: PNM GAS SERVICES	SHEET: OF:
MFG. DESIGNATION OF DRILL: MOBIL DRILL B-61			PROJECT LOCATION: HAMPTON #4M	
TYPE OF BIT: AUGER DRILLING			SURFACE ELEVATION OF TB OR MW: 45 FT.	TOTAL DEPTH OF HOLE: 45 FT.
DATE	STARTED: 12/16/96	COMPLETED: 12/16/96	DRILLING Co.: ENVIROTECH INC.	
COMPLETION TYPE: COMPLETED AS MONITOR WELL			ENGINEER: AL CHAHARUNG	GROUNDWATER DEPTH 1045 TIME 27.8'
			CREW: MS./BL.	1110 27.75'

SURFACE CONDITIONS:

GRADED YELLOW SILTY SAND

DIST FROM SURF.	SAMPLE TYPE	SAMPLE NO.	QW READ IN PPM	BLOWS PER 6 IN.	USCS	LOG OF MATERIAL/COMMENTS
1					SM	LIGHT BROW SILTY SAND, SLIGHTLY MOIST, MEDIUM-HARD, NO HYDROCARBON ODOR
3						
4						
10					SM	SAME AS ABOVE PLUS STRONG H.C. ODOR (ASSESSMENT FROM SURFACE CUTTING, VISUAL)
6						@ 12' DARK BROWN STREAK OF SILT TO CLAYEY SAND.
7						
8						@ 16' ANOTHER STREAK (THIN LAYER) OF SILTY SAND, DARK BROWN + STRONG H.C. ODOR
20					SM	STRONG H.C. ODOR, VISUAL
2						LIGHT GRAY TO GREENISH GRAY SILTY TO CLAYEY SAND, WET, HARD, STRONG H.C. ODOR (COULD BE PRODUCT SATURATED SOIL).
3						
1					V	GROUND WATER TABLE (COLLECTED WATER SAMPLE FOR PTEK(8020) AND TPH(8015). N 2" PAGUET OBSERVED IN THE BAILER
30					SM	SAME AS ABOVE
10						
1						
10						
10						
1					SM	SAME AS ABOVE
1						
1					SM	SAME AS ABOVE. REMOVED CENTER BT RODS TO OBSERVE GROUND WATER.

@ 1045: G.W. @ 27.8'

@ 1110: G.W. @ 1110'

COMPLETED AS GROUNDWATER

BORLOG DOC-1/93

ENVIROTECH Inc.

5798 US HWY. 64, FARMINGTON, NM 87401
(505) 632-0615

PIT No: _____
C.O.C #: _____

FIELD REPORT: REMEDIATION FACILITY CLOSURE VERIFICATION

JOB No: _____
PAGE No: _____ of _____

FACILITY LOCATION: PNM Hampton #4M

DATE STARTED: 12/16/96

SOURCE LOCATION: _____

DATE FINISHED: _____

SOURCE LOCATION: _____

SOURCE LOCATION: _____

FACILITY CLASSIFICATION: _____

PIT TYPE: _____

ENVIRONMENTAL
SPECIALIST: _____

SOIL REMEDIATION: QUANTITY: _____ # OF COMP. SAMPLES: _____

DIMENSIONS: _____

VISIBLE OBSERVATIONS: _____

SAMPLING PLAN: _____

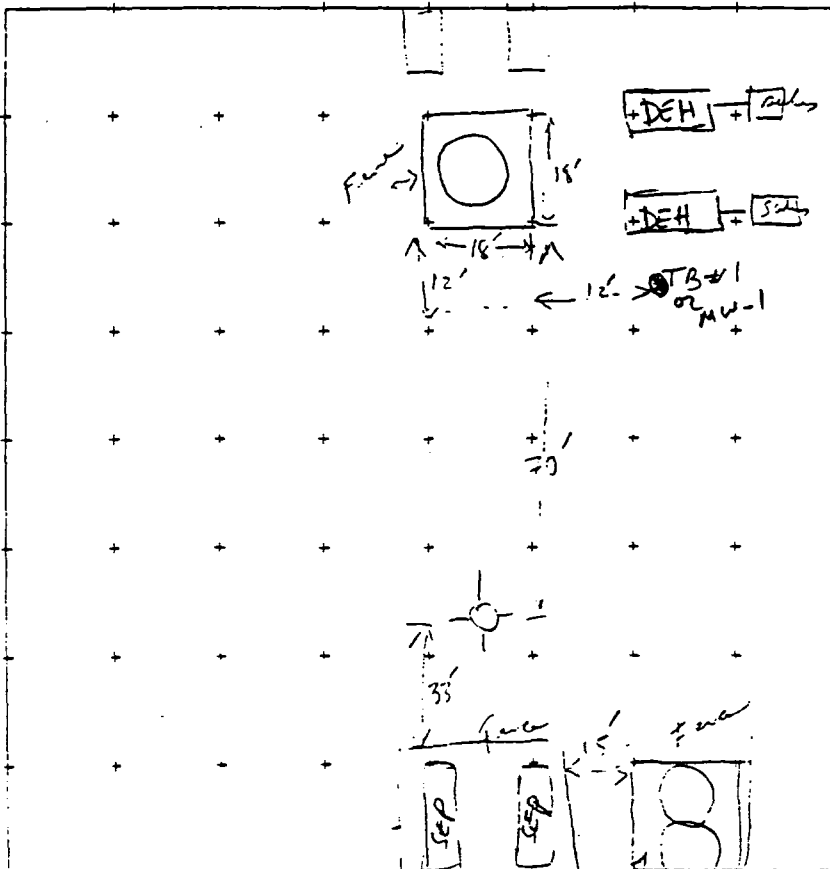
FIELD NOTES & REMARKS: FACILITY CENTER LOCATED APPROX _____ YARDS _____ FROM WELLHEAD.

DEPTH TO GROUNDWATER: _____
NEAREST WATER SOURCE/TYPE: _____
NEAREST SURFACE WATER: _____
MAX TPH FEP NMOC: _____

NO. OF 5-POINT
COMPOSITE SAMPLES:
RANGE--#
0-300=1
301-400=2
401-1000=3
1000=5

FACILITY DIAGRAM

GRID SCALE: 20

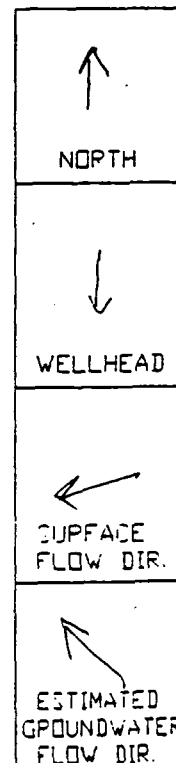


OVM RESULTS

SAMPLE ID:	FIELD HEADSPACE PID (ppm)

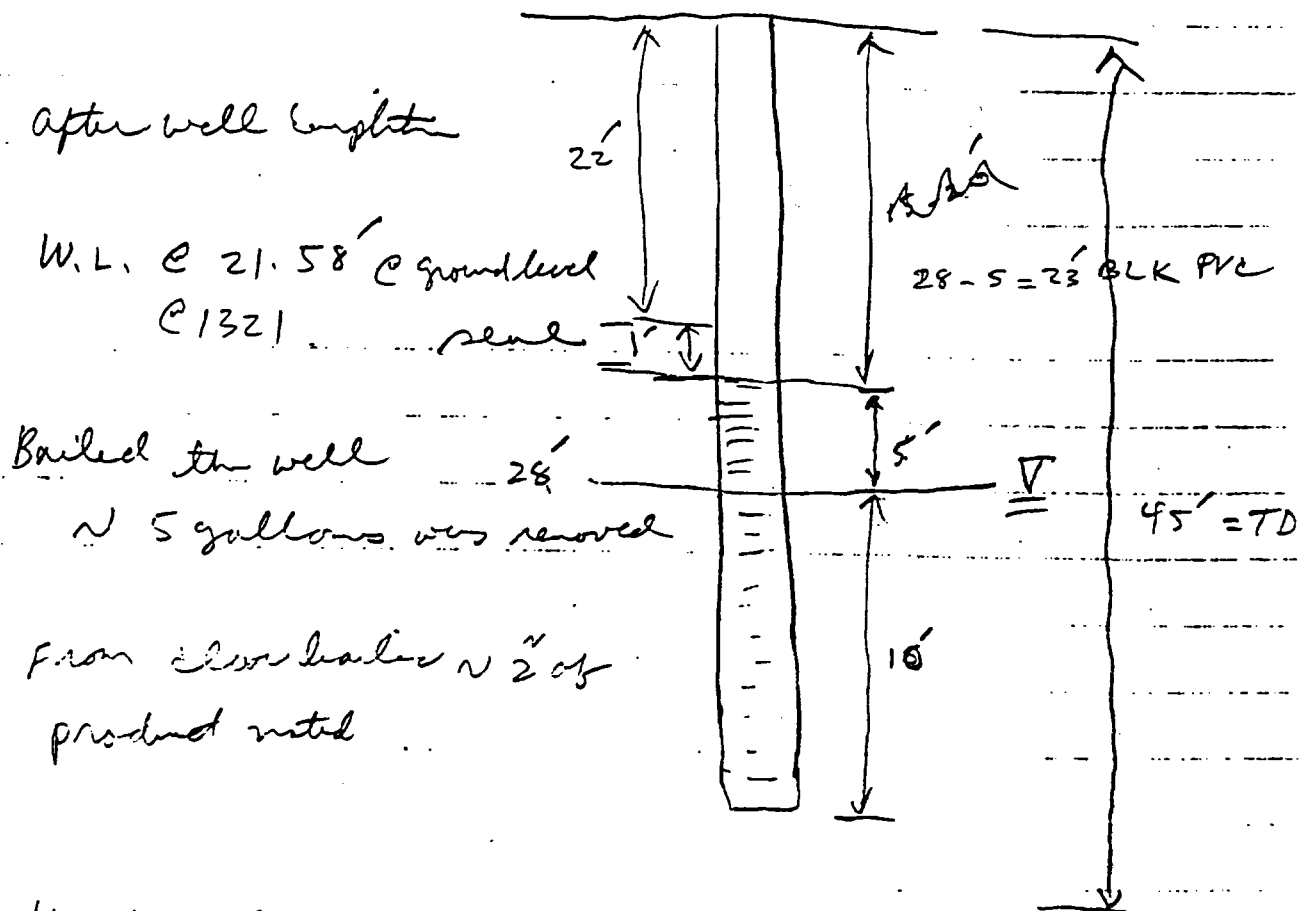
LAB RESULTS

SAMPLE ID:	ANALYSIS REQUESTED:	RESULTS PPM:



PNM Gas service
Hampton #4M

12/16/96



Used 5 SKS OF SILICA SANDS
1 SK OF BENTONITE GEL

BACKFILL W/ CLEAN SOIL

BAILED THE WELL ALSO.

BORING LOG

Page 1 of 2

LOCATION MAP:

SITE ID: Hampton UM LOCATION ID: MW-3
 SITE COORDINATES (ft.):
 N _____ E _____
 GROUND ELEVATION (ft. MSL): _____
 STATE: _____ COUNTY: _____
 DRILLING METHOD: Hollow Stem
 DRILLING CONTR.: Envirotech
 DATE STARTED: 1/31/97 DATE COMPLETED: 1/31/97
 FIELD REP.: _____
 COMMENTS: _____

1/4 1/4 SE 1/4 SW 1/4 S 13 T 30 N R 11 W

LOCATION DESCRIPTION: _____

DEPTH	WELL CONST.	LITH.	SAMPLE						LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WEI. COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC	BLOW- COUNT	NUMBER OR PID READING	
0									0-5' Sand med-course slightly clayey moist lt Brown
5								0.0 PPM	5-6' Clay layer wet olive Brown
									6-7' Clay dark color slightly sand moderate sorted
									7'-13' sand med-course sc clayey moist yellowish orange
10								0.0 PPM	13' Sand med-course mod sorted moist
									14'-15' Sandstone layer - yellowish orange clayey moist
15									15'-18' sand clayey medium course yellowish orange moist mod - well sorted
								3.0 PPM? Could be Beck ground	18'-19' Sand clayey Dark color Dark grey mod. sorted moist
20									19'-20' Sand clayey course poorly sorted orange brown moist
								42.0 PPM @ 24.5'	20'- Sand clay med-course mod sorted orange brown moist
25									24.5' Sand clayey med-course mod sorted very moist
									25' - wet Ground Water

Grout
5% Bentonite
Mix2.5' Bentonite
Plug HydratedBlack
2" PVC

10/12 Sand Pack

BORING LOG
(Continued)

Page 2 of 2

LOCATION ID: MW-3

[illegible]

Hampton #4m MW #4

BORING LOG

Page 1 of 1

LOCATION MAP:

SITE ID: Hampton #4m LOCATION ID: _____
 SITE COORDINATES (ft.):
 N _____ E _____
 GROUND ELEVATION (ft. MSL): _____
 STATE: N.M. COUNTY: SAN JUAN
 DRILLING METHOD: Hollow Stem
 DRILLING CONTR.: Enviro Tech
 DATE STARTED: 1-31-97 DATE COMPLETED: _____
 FIELD REP.: _____
 COMMENTS: _____

1/4 1/4 SE 1/4 SW 1/4 S 13 T 30N R 11W

LOCATION DESCRIPTION:

DEPTH	WELL CONST.	LITH.	SAMPLE					NUMBER OR PID READING	LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC	BLOW-COUNT		
0									2' weathered sandstone
									3' sand yellowish orange
									5' sand yellowish orange some silt SM
5								Ø	5' 600 lbs pressure on drill hard drilling
								Ø	10' Fine consolidated sand weathered sandstone SM yellowish orange
10									11' hard drilling to 10' after 10' pressure 150 lbs. fine sand yellowish-orange moderately sorted sand
15									13' Clay
									14' sand poorly sorted yellowish-orange SC slight trace of clay
20								31.3 ppm	17' color change more of a orangish color
								1447 ppm	18' clay Olive/GRY
25								669	20' clay Olive/GRY SC
								477	23' poorly sorted clay moist DARK GRY

BORING LOG
(Continued)Page 2 of
LOCATION ID:

DEPTH H	WELL CONST.	LITH.	SAMPLE						LITHOLOGIC DESCRIPTION (LITH., USCS, GRAIN SIZE PROPORTIONS, WET COLOR, RNDG., SORT., CONSOL., DIST. FEATURES)
			USCS	FROM	TO	% REC	BLOW- COUNT	NUMBER OR PID READING	
27'		OH						80.7	H ₂ O GRY color, moist clay
28'									Hand layer clay GRY color 700/lb CH to drill thru
29'									
30'									GRY color clay OH high plasticity Organic silts
31'									900/lb press. hand drilling
35'									GRY Clay OH high plasticity hand drilling stopped drilling
									Set 20' slotted screen (sand to 13.2' Bentnick 10.2' grout to surface)

RECORD OF SUBSURFACE EXPLORATION

PHILIP SERVICES CORP.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # BH-2

Well # MW5

Page 1 of 1

Project Name PNM HAMPTON 4M

Project Number 18839 Phase 6000

Project Location HAMPTON 4M

Elevation _____

Borehole Location N. of Wellend in Wash

GWL Depth 13.9 BGS

Logged By CM CHANCE

Drilled By K Padilla

Date/Time Started 10/29/97

Date/Time Completed 10/29/97

Well Logged By CM CHANCE

Personnel On-Site D CHARLEY

Contractors On-Site _____

Client Personnel On-Site _____

Drilling Method 4 1/4 ID HSA

Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recover (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM			Drilling Conditions & Blow Counts
							BZ	BH	S/H	
0										
5	1	5-7	20	Br silty SAND, F-med sand, tr vf sand, loose, dry			0		93	
10	2	10-12	24	Br clayey SAND, vf-f sand, loose, dry			0		1242	
				Blk clayey SAND, F-med sand, grades to sandy clay					1010	
15										
20										
25										
30										
35										
40										

Comments: GW @ 13.9' BGS. Will install monitor well. Contamination begins @ ~ 11' BGS.

Geologist Signature

CM Chance

MONITOR WELL INSTALLATION FORM

Philip Services Corp.

4000 Monroe Rd.

Farmington, NM 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # 2

Well # MW-5

Page 1 of 1

Project Name PNM HAMPTON 4M

Project Numb 18839 Phase 6000

Site Location HAMPTON 4M

Elevation _____

Well Location _____

GWL Depth ~13.9'

Installed By K PADILLA

On-Site Geologist C CHANCE

Personnel On-Site D CHARLEY

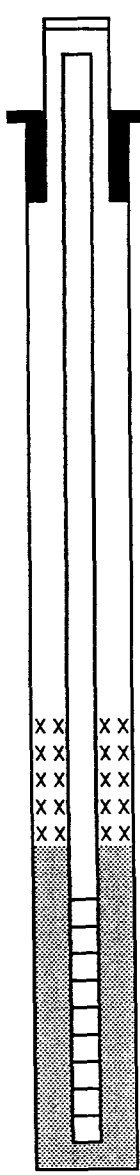
Contractors On-Site _____

Client Personnel On-Site _____

Date/Time Started 10/29/97

Date/Time Complete 10/29/97

Depths in Reference to Ground Surface		
Item	Material	Depth (feet)
Top of Protective Casing		NA
Bottom of Protective Casing		NA
Top of Permanent Borehole Casing		NA
Bottom of Permanent Borehole Casing		NA
Top of Concrete		NA
Bottom of Concrete		NA
Top of Grout		NA
Bottom of Grout		NA
Top of Well Riser	1-10' x 2"	23.5
Bottom of Well Riser	PVC	6.5
Top of Well Screen	1-10' x 2"	6.5
Bottom of Well Screen	0.01 slot	16.5
Top of Peltonite Seal	Hole Plug	0
Bottom of Peltonite Seal		4.5
Top of Gravel Pack	10-20 silica	4.5
Bottom of Gravel Pack	SAND	16.5
Top of Natural Cave-In		16.5
Bottom of Natural Cave-In		16.5
Top of Groundwater		13.9
Total Depth of Borehole		16.5



Top of Protective Casing NA

Top of Riser (survey elev.) 23.5'

Ground Surface 0

Top of Seal 0

Top of Gravel Pack 4.5

Top of Screen 6.5

Bottom of Screen 16.5

Bottom of Borehole 16.5

Comments Set well @ 16.5' BGS. Hydrated seal w/ 5 gal potable water.
Locking well cap + padlock on well. (Not completed)

Geologist Signature Cory Chance

MONITOR WELL INSTALLATION FORM

Philip Services Corp.

4000 Monroe Rd.

Farmington, NM 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # BH4
Well # MW6
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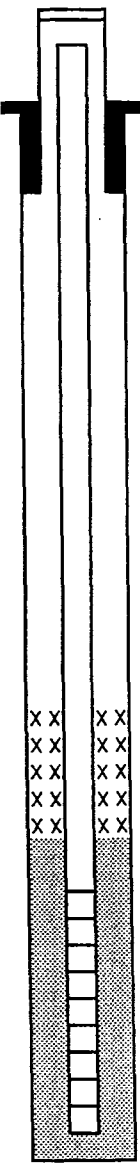
Project Name PNM HAMPTON 4M
Project Numb 18839 Phase 6000
Site Location HAMPTON 4M

Elevation _____
Well Location W. of MW2
GWL Depth ~26' BGS
Installed By K PADILLA

On-Site Geologist C CHANCE
Personnel On-Site D CHARLEY
Contractors On-Site _____
Client Personnel On-Site _____

Date/Time Started 10/20/97
Date/Time Complete 10/20/97

Depths in Reference to Ground Surface		
Item	Material	Depth (feet)
Top of Protective Casing		NA
Bottom of Protective Casing		NA
Top of Permanent Borehole Casing		NA
Bottom of Permanent Borehole Casing		NA
Top of Concrete		NA
Bottom of Concrete		NA
Top of Grout		2
Bottom of Grout		8
Top of Well Riser	15' 4" x 10'	+3
Bottom of Well Riser	PVC riser	12
Top of Well Screen	20' 4" x 10'	12
Bottom of Well Screen	0.01 slot	32
Top of Peltonite Seal	Hot	8
Bottom of Peltonite Seal	plug	10
Top of Gravel Pack	10-20 silica	10
Bottom of Gravel Pack	SAND	32
Top of Natural Cave-In		32
Bottom of Natural Cave-In		33
Top of Groundwater		26
Total Depth of Borehole		33



Top of Protective Casing NA

Top of Riser (survey elev.) +3

Ground Surface 0

Top of Seal 8.0

Top of Gravel Pack 10.0

Top of Screen 12.0

Bottom of Screen 32.0

Bottom of Borehole 33.0

Comments Set well @ 32' BGS (~1' of sluff). Padlock & locking well cap on well. (Not completed)

Geologist Signature Cong Chance

RECORD OF SUBSURFACE EXPLORATION

PHILIP SERVICES CORP.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # BH- 4
Well # MW6
Page 1 of 1

Project Name PNM HAMPTON 4M
Project Number 18839 Phase 6000
Project Location HAMPTON 4M

Elevation _____
Borehole Location W. of MW2
GWL Depth ~26' BGS
Logged By CM CHANCE
Drilled By K Padilla
Date/Time Started 10/30/97
Date/Time Completed 10/30/97

Well Logged By CM CHANCE
Personnel On-Site D CHARLEY
Contractors On-Site _____
Client Personnel On-Site _____
Drilling Method 6 1/4 ID HSA
Air Monitoring Method PID

Depth (feet)	Sample Number	Sample Interval	Sample Type & Recover (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM			Drilling Conditions & Blow Counts
							BZ	BH	SHS	
0										
5										
10	1	10-12	NA	Fill to ~11'						
				off wh weathered SANDSTONE, poorly cemented, v-f sand, dry						-PID by PNM
15	2	14.5-16.5	NA	Br/Reddish br SAND, F-med sand, v dense, dry						-PID by PNM
20	3	18-20	10	Lt Br/Gry weathered SANDSTONE poorly cemented, F-med sand, tr coarse, dry, odor		0			235 227	-V. hard @ 18' -Dring. easier @ 23'
25	4	23-25	16	Lt Br/Gry clayey SAND, F-med sand, tr coarse, dense, wet, grades to coarse		0			226 103	-Saturated w/ hydrocarbon
30	5	28-30	12	Br clayey SAND, med-coarse, dense, saturated Gry SAND, coarse, well sorted, dense, saturated		0			120 NA	
35				TOB 33'						
40										

Comments: Encountered product @ ~24' BGS. Set well @ 33' BGS. GW @ ~26'

Geologist Signature

CM Chance

RECORD OF SUBSURFACE EXPLORATION

PHILIP SERVICES CORP.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # BH-5A
Well # MW-7
Page 1 of

Project Name PNM HAMPTON 4M
Project Number 18929 Phase 1001
Project Location HAMPTON 4M

Elevation
Borehole Location Wash N. of SITE
GWL Depth ~16' BGS
Logged By CM CHANCE
Drilled By K Padilla
Date/Time Started 12/11/97
Date/Time Completed 12/11/97

Well Logged By CM CHANCE
Personnel On-Site D CHARLEY, P Archuleta
Contractors On-Site
Client Personnel On-Site M. Sikelianey, M. Gorman
Drilling Method 4 1/4 ID HSA
Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM BZ BH S			Drilling Conditions & Blow Counts
0										
5										
10	1	9-11	12	Br silty SAND, vF-f sand, loose, dry, + gypsum						
	2	11-13	14	AA						
15	3	13-15	14	Br silty SAND, vF-f sand, wet, loose, grades to Black Sand					290	
				TOB 17.5						
20										
25										
30										
35										
40										

Comments:

GW @ ~16' BGS. Will set 2" well

Geologist Signature

CM Chance

MONITOR WELL INSTALLATION FORM

Philip Services Corp.

4000 Monroe Rd.

Farmington, NM 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # BH-5A
Well # MW-7
Page 1 of 1

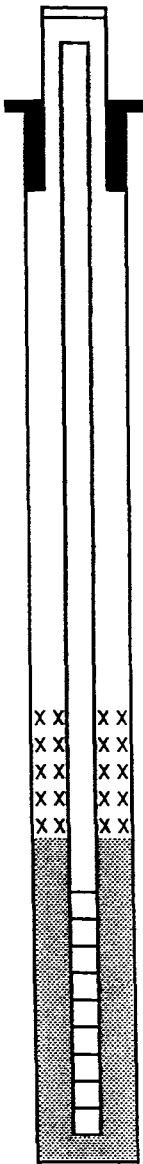
Project Name PNM Hampton 4M
Project Number 18929 Phase 100/77
Site Location Hampton 4M

Elevation _____
Well Location Wash N. of site
GWL Depth ~16' BGS
Installed By K PADILLA

On-Site Geologist C CHANCE
Personnel On-Site D Charley, P Archuleta
Contractors On-Site _____
Client Personnel On-Site M. Sikelianny, M. Gannon

Date/Time Started 12/11/97
Date/Time Complete 12/11/97

Depths in Reference to Ground Surface		
Item	Material	Depth (feet)
Top of Protective Casing		+3.1
Bottom of Protective Casing		1.9
Top of Permanent Borehole Casing		NA
Bottom of Permanent Borehole Casing		NA
Top of Concrete		NA
Bottom of Concrete		NA
Top of Grout		NA
Bottom of Grout		NA
Top of Well Riser		+3'
Bottom of Well Riser		12.5
Top of Well Screen		12.5
Bottom of Well Screen		17.5
Top of Peltonite Seal		0
Bottom of Peltonite Seal		10.5
Top of Gravel Pack		10.5
Bottom of Gravel Pack		17.5
Top of Natural Cave-In		17.5
Bottom of Natural Cave-In		17.5
Top of Groundwater		~16'
Total Depth of Borehole		17.5



Top of Protective Casing +3.1'
Top of Riser (survey elev.) +3'
Ground Surface 0

Top of Seal 0

Top of Gravel Pack 10.5

Top of Screen 12.5

Bottom of Screen 17.5
Bottom of Borehole 17.5

Comments Well completed with above Ground well vault.
Bentonite seal hydrated w/ 10 gal potable water
Geologist Signature C. Chance

RECORD OF SUBSURFACE EXPLORATION

PHILIP SERVICES CORP.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # BH-6
Well # MW8
Page 1 of 1

Project Name PNM HAMPTON 4M
Project Number 18929 Phase 1001
Project Location HAMPTON 4M

Elevation _____
Borehole Location Center of Site
GWL Depth ~20' BGS
Logged By CM CHANCE
Drilled By K Padilla
Date/Time Started 12/11/97
Date/Time Completed 12/11/97

Well Logged By CM CHANCE
Personnel On-Site D CHARLEY, P Archuleta
Contractors On-Site _____
Client Personnel On-Site M. Siskel, M. Bannan
Drilling Method 4 1/4 ID HSA
Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM			Drilling Conditions & Blow Counts
							BZ	BH	S/H	
0										
5										
10	1	10-12	18	Br/Gry mottled CLAY, dry, stiff, low-med plastic						2 1/4 - 1507h
15	2	14-16	24	Redish Br silty SAND, F-med sand, dense, sl moist						305 38 - 1520h
	3	16-18	24	Gry/Redish Br clayey SAND, vf-f sand, sl moist, med dens						206 42 - 1530h
	4	18-19	12	Gry/Redish Br CLAY, dry, low plastic, interbedded siltstone						112 34 - 1538h
20	5	20-21	12	Gry silty SAND, vf-f sand, moist, med dense						241 - 1544h
	6	22-23	4	Gry silty CLAY, stiff, high plastic, dry						0 - 1550
25				TOBAS'						
30										
35										
40										

Comments:

Note: Sample #6 may have only been sluff. Only 4" of recovery
Will set 2" well @ 25' BGS

Geologist Signature

CM Chance

MONITOR WELL INSTALLATION FORM

Philip Services Corp.

4000 Monroe Rd.

Farmington, NM 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # BH6

Well # MW8

Page of

Project Name PNM Hampton 4M
 Project Number 18929 Phase 1006.77
 Site Location Hampton 4m

Elevation

Well Location Center of Site

GWL Depth ~20' BGS

Installed By K PADILLA

On-Site Geologist C CHANCE
 Personnel On-Site D Charley, P. Archuleta
 Contractors On-Site
 Client Personnel On-Site M. Siskiewicz, M. Banner

Date/Time Started 12/11/97

Date/Time Complete 12/11/97

Depths in Reference to Ground Surface		
Item	Material	Depth (feet)
Top of Protective Casing		+3"
Bottom of Protective Casing		9"
Top of Permanent Borehole Casing		NA
Bottom of Permanent Borehole Casing		NA
Top of Concrete		NA
Bottom of Concrete		NA
Top of Grout		NA
Bottom of Grout		NA
Top of Well Riser		0
Bottom of Well Riser		10
Top of Well Screen		10
Bottom of Well Screen		25
Top of Peltonite Seal		0
Bottom of Peltonite Seal		8
Top of Gravel Pack		8
Bottom of Gravel Pack		25
Top of Natural Cave-In		25
Bottom of Natural Cave-In		25
Top of Groundwater		~20'
Total Depth of Borehole		25

Top of Protective Casing +3''

Top of Riser (survey elev.) 0

Ground Surface 0

Top of Seal 0

Top of Gravel Pack 8

Top of Screen 10

Bottom of Screen 25

Bottom of Borehole 25

Comments Well completed as surface mount. Locking well cap
& padlock placed on well. Seal hydrated w/ 5gal potable water.

Geologist Signature C. Chance

RECORD OF SUBSURFACE EXPLORATION

PHILIP SERVICES CORP.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # BH-5
Well # NA
Page 1 of 1

Project Name PNM HAMPTON 4M
Project Number 18929 Phase 1001
Project Location HAMPTON 4M

Elevation _____
Borehole Location Wash N. of SHP
GWL Depth NA
Logged By CM CHANCE
Drilled By K Padilla
Date/Time Started 12/11/97
Date/Time Completed 12/11/97

Well Logged By CM CHANCE
Personnel On-Site D CHARLEY, P Archuleta
Contractors On-Site _____
Client Personnel On-Site M. S. Kojan, M. G. Gannon
Drilling Method 4 1/4 ID HSA
Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM		Drilling Conditions & Blow Counts	
							BZ	BH		
0										
5										
10	1	10-12	14	Br silty SAND, v-f sand, dry, loose					0/0-1112h	
15	2	14-15	12	AA Br/Gry SILTSTONE, hard, dry tr gypsum parting					0/0-1125h	
20	3	19-21	14	Gnn-DK Gnn CLAY, low plastic, dry, v. stiff, (tr moisture in sluff)					0/0-1140h	
25	4	24-26	14	Gry silty CLAY, dry non plastic, v. stiff TDB 26'					0/0-1200h	
30										
35										
40										

Comments: Did not encounter GW. Hit moist zone @ ~19-21' BGS.
No well set.

Geologist Signature

CM Chance

RECORD OF SUBSURFACE EXPLORATION

PHILIP SERVICES CORP.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

borehole # BH- 1

Well #

Page 1 of 1

Project Name PNM HAMPTON 4M

Project Number 18839 Phase 6000

Project Location HAMPTON 4M

Elevation

Borehole Location IN WASH N. of Well pad

GWL Depth ~7.6' BGS

Logged By CM CHANCE

Drilled By K Padilla

Date/Time Started 10/29/97

Date/Time Completed 10/29/97

Well Logged By CM CHANCE

Personnel On-Site D CHARLEY

Contractors On-Site

Client Personnel On-Site

Drilling Method 4 1/4 ID HSA

Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recover (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM			Drilling Conditions & Blow Counts
							BZ	BH	S/H	
0										
5	1	3-5	24	Br clayey SAND, vf-f sand, loose, moist BIR silty SAND, vf-f sand, loose, moist			0	274 1264	0930 hr	
10				TOB 8'						GW @ 7.6' BGS
15										
20										
25										
30										
35										
40										

Comments:

Hit contamination @ ~5' BGS. BH hole plugged to surface
No well installed.

Geologist Signature

Cam Chance

RECORD OF SUBSURFACE EXPLORATION

PHILIP SERVICES CORP.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # BH-1-511

Well # MW 9

Page 1 of 1

Project Number 19584 Phase 6000.77

Project Name Burlington Resources Hampton 4M

Project Location Hampton 4M

Elevation

Borehole Location LTR: S: T: R: S. of Production 17

GWL Depth 22.7' BGS

Drilled By K. PADILLA

Well Logged By C. CHANCE

Date Started 5/11/98

Date Completed 5/11/98

Drilling Method 4 1/4 ID HSA

Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM			Drilling Conditions & Blow Counts
							BZ	BH	SH	
0										
5	1	5-7	24	Lt Br clayey SAND, F-med sand, tr coarse, loose, dry			0	0	0	0905h
10	2	10-12	18	Lt Br silty SAND, med-coarse sand, loose, dry			0	0	0	0911
15	3	15-17	18	Br sandy CLAY, med VF sand, low plastic, stiff, dry			0	0	0	0918h
20	4	20-	12	Br clayey SAND, VF-F sand, dense, moist			0	0	0	0925h
25	5	25-	6	Gry weathered SANDSTONE med sand, poorly cemented, tndy moist			0	0	0	0939
30	6	30-32	24	Gry SAND, coarse, well sorted v dense, SATURATED			0	0	NA	0952
35				TDB 33.5						
40										

Comments:

GW @ 22.7' @ 0952h. GW @ 22.7 after setting 10 min. Will set well
@ ~ 33' BGS

Geologist Signature

Cog Chance

MONITOR WELL INSTALLATION FORM

Philip Services Corp.
4000 Monroe Rd.
Farmington, NM 87401
(505) 328-2282 FAX (505) 328-2388

Borehole # BH1-511
Well # MW9
Page 1 of 1

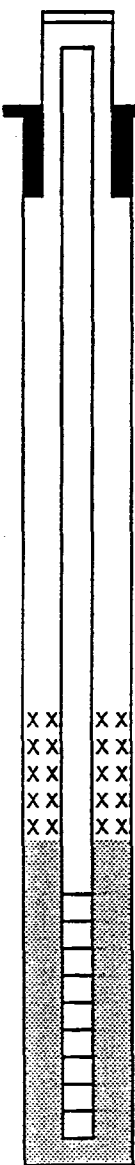
Project Name BR HAMPTON 4M
Project Number 19584 Phase 6000
Site Location Hampton 4M

Elevation _____
Well Location S. of Production 17
GWL Depth 22.7
Installed By K PADILLA

On-Site Geologist C CHANCE
Personnel On-Site _____
Contractors On-Site _____
Client Personnel On-Site ED Hasley

Date/Time Started 5/11/98
Date/Time Completed 5/11/98

Depths in Reference to Ground Surface		
Item	Material	Depth (feet)
Top of Protective Casing		0
Bottom of Protective Casing		1
Top of Permanent Borehole Casing		NA
Bottom of Permanent Borehole Casing		NA
Top of Concrete		0
Bottom of Concrete		1
Top of Grout		1
Bottom of Grout		13
Top of Well Riser		30
Bottom of Well Riser		18
Top of Well Screen		18
Bottom of Well Screen		33
Top of Peltonite Seal		13
Bottom of Peltonite Seal		15
Top of Gravel Pack		15
Bottom of Gravel Pack		33
Top of Natural Cave-In		33
Bottom of Natural Cave-In		33.5
Top of Groundwater		22.7
Total Depth of Borehole		33.5



Top of Protective Casing 0

Top of Riser (survey elev.) -3

Ground Surface 0

Top of Seal 13

Top of Gravel Pack 15

Top of Screen 18

Bottom of Screen 33

Bottom of Borehole 33.5

Comments Set well @ 33' BGS. Seal hydrated w/ 10 gal potable water. Set as Flush mount w/ locking well cap + padlock

Geologist Signature Cory Chance

RECORD OF SUBSURFACE EXPLORATION

PHILIP SERVICES CORP.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388



Borehole # BH-2511

Well # MW10

Page 1 of 1

Project Number 19584 Phase 6000.77

Project Name Burlington Resources Hampton 4M

Project Location Hampton 4M

Elevation _____

Borehole Location LTR: S: T: R: S. of Dehy

GWL Depth 24.7'

Drilled By K. PADILLA

Well Logged By C. CHANCE

Date Started 5/11/98

Date Completed 5/11/98

Drilling Method 4 1/4 ID HSA

Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: PPM BZ BH S/H5			Drilling Conditions & Blow Counts
0										
5	1	5-7	24	Br silty SAND, f-med sand, abnt silt, loose, dry			0	0	0	1212h
10	2	10-12	12	Br silty SAND, f-med sand, tr coarse, med silt, dense, dry			0	0	0	1218h
15	3	15-16	8	Reddish Br/Gry SAND, med-coarse, sand, med silt, tr cementation, dense, dry			0	0	5/33	1228h
20	4	20-21	8	Reddish br/gry clayey SAND, f- med sand, dense, dry			0	0	39/43	1235h
25	5	25-26	4	Gray SAND, med-coarse, well sorted, v. dense, saturated			0	220	5/66	1245h
	6	26-27	5	Gray silty CLAY, v stiff, nonplastic, dr AA					5/66	Hard d-125 1307h
30				TOB 27'						
35										
40										

Comments:

GW @ 24.7' after setting 10 min. Will set well @ 27'.

Geologist Signature

Cory Chance

MONITOR WELL INSTALLATION FORM

Philip Services Corp.
4000 Monroe Rd.
Farmington, NM 87401
(505) 328-2262 FAX (505) 328-2388

Borehole # BH2-511
Well # MW10
Page 1 of 1

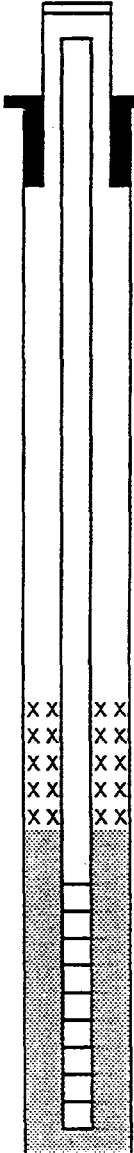
Project Name BR HAMPTON 4M
Project Number 19584 Phase 5000
Site Location Hampton 4M

On-Site Geologist C CHANCE
Personnel On-Site _____
Contractors On-Site _____
Client Personnel On-Site ED Hasley

Elevation _____
Well Location S. of Dohy
GWL Depth 24.7
Installed By K PADILLA

Date/Time Started 5/11/98
Date/Time Completed 5/11/98

Depths in Reference to Ground Surface		
Item	Material	Depth (feet)
Top of Protective Casing		0
Bottom of Protective Casing		1
Top of Permanent Borehole Casing		NA
Bottom of Permanent Borehole Casing		NA
Top of Concrete		0
Bottom of Concrete		1
Top of Grout		1
Bottom of Grout		11
Top of Well Riser		.3
Bottom of Well Riser		17
Top of Well Screen		17
Bottom of Well Screen		27
Top of Peltonite Seal		11
Bottom of Peltonite Seal		13.6
Top of Gravel Pack		13.6
Bottom of Gravel Pack		27
Top of Natural Cave-In		27
Bottom of Natural Cave-In		27
Top of Groundwater		24.7
Total Depth of Borehole		27



Top of Protective Casing 0

Top of Riser (survey elev.) .3

Ground Surface 0

Top of Seal 11

Top of Gravel Pack 13.6

Top of Screen 17

Bottom of Screen 27

Bottom of Borehole 27

Comments Well set @ 27' BGS. Seal hydrated w/ 10 gal potable water
Well set w/ Flush mount valve, well capped padlock

Geologist Signature

C. Chance

RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Borehole # TPW-01
Well # _____
Page _____ of _____

Project Name HAMPTON 4m
Project Number 17877 Phase LOG
Project Location AZTEC

Elevation _____
Borehole Location South West of Site
GWL Depth 22.45
Logged By S. Pope
Drilled By K. Padilla
Date/Time Started 0845 6/15/97
Date/Time Completed 1015 6/15/97

Well Logged By S. Pope
Personnel On-Site D. Chenier
Contractors On-Site _____
Client Personnel On-Site _____
Drilling Method HSA 4 1/4 ID
Air Monitoring Method WID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery Interval	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (Feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
							BZ	BH	S	
0										
5	1	5 7	24	Brown Sand, Med CO grained, trace sand stone frags, Soft Moist			0	0	0	Loose Fill
10	2	10 11.5	18	SAA			0	0	0	
15	3	15 17	8	Brown-Grey SAND, Med CO grained trace clay Very hard some cementation Moist			0	0	0	Sanction @ 15'
20	4	20 22	12	Dark Grey Sand trace clay, cemented Med CO grained, Very Dense, Moist	21		0	0	0	Refused @ 21' w/spoon
25	5	25 27	10	Greenish Grey SAND, Med-CO grained Very hard, Wet @ Bottom Spoon	36 I					Refusal @ 8" on spoon
30	6	30 32	24	Gray SAND COARSE Grain well Sorted, Hard, Saturated						Refusal @ 8"
35				TOB 30'						
40										

Comments: 1015 Set 7" w/10 screen in hole Pulled back 5' w/LL Prior to trap well INST
732 22.45 @ Sample point

Geologist Signature

MONITORING WELL INSTALLATION RECORD

Philip Environmental Services Corp.
4000 Marvaz Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Borehole # TPW-01
Well # _____
Page _____ of _____

Project Name HAMILTON 4M

Project Number 18777 Phase 6001

Project Location ATEC

On-Site Geologist S. POPE

Personnel On-Site D. Crowley

Contractors On-Site _____

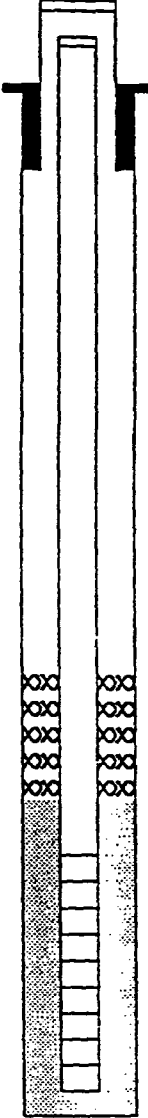
Client Personnel On-Site _____

Elevation _____
Well Location North West Side of Site
GWL Depth 22.45
Installed By K. Padilla

Date/Time Started 1015 6/5/97

Date/Time Completed 1035 6/5/97

Depths in Reference to Ground Surface		
Item	Material	Depth
Top of Protective Casing		—
Bottom of Protective Casing		—
Top of Permanent Borehole Casing		—
Bottom of Permanent Borehole Casing		—
Top of Concrete		—
Bottom of Concrete		—
Top of Grout		—
Bottom of Grout		—
Top of Well Fiser		1.4
Bottom of Well Fiser		19.1
Top of Well Screen		19.1
Bottom of Well Screen		29.5
Top of Peltonite Seal		—
Bottom of Peltonite Seal		—
Top of Gravel Pack		—
Bottom of Gravel Pack		—
Top of Natural Cave-In		—
Bottom of Natural Cave-In		—
Top of Groundwater		22.45
Total Depth of Borehole		30.0



Top of Protective Casing —

Top of Riser 4

Ground Surface —

Top of Seal N/A

Top of Gravel Pack N/A

Top of Screen 19.1

Bottom of Screen 29.5

Bottom of Borehole 30

Comments: 1015 INSTALLED 2" TEMP WELL W/10' SCREEN. WATER CAME UP TO 22.45
Collect SAMPLE @ 1035 w/ Clean Noddy. Back Filled Borehole TO w/ Hole Plug

Geologist Signature

S. Pope

RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2262 FAX (505) 326-2388

Borehole # TPW-02
Well # TPW-07
Page 1 of 1

Project Name HAMPTON 4m
Project Number 17877 Phase 6001
Project Location ATEL

Elevation _____
Borehole Location Midway North Entry Site
GWL Depth 23.95
Logged By S. Pope
Drilled By K. Padilla
Date/Time Started 1145 6/5/97
Date/Time Completed 1300 6/5/97

Well Logged By S. Pope
Personal On-Site D. Chaudhry
Contractors On-Site _____
Client Personnel On-Site _____
Drilling Method HSA 4 1/4 ID
Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
							BZ	BH	S	
0										
5	1	5 7	24	Brown SAND Med-LO grained, Some Clay Moist, Loose			0	0	0	Fill
10	2	10 12	12	Lt Brown SAND Med LO GRAINED Very dense possibly cemented. Trace Moisture			0	0	0	Refusal 1"
15	3	15 17	12	SAT Lt Brown - Yellow DE Brown Clay, Very Stiff, trace moisture, Calcium cry shells in voids,		15.5	0	0	13	Refusal @ 1'
20	4	20 22	12	Brown SAND, Some clay med-LO grained, Hard, trace Moisture,		18.0	0	0	89	Refusal @ 1'
25	5	25 27	20	Gray Med LO grained SAND very hard, Saturated to 26' Gray Silty Clay, Very Dense trace fine sand, moist	23.0	23.95	0	0	187	Refusal @ 22" HS = 851
30				TOB 25		21.0	0	0	141	
35										
40										

Comments: Water came up to 23.38 After sitting 10 mins Drill to 27' INSTALL TPTD WELL
Water level coming up slowly will pull Augers and leave well in. Move to next location

Geologist Signature

S. T. Pope

MONITORING WELL INSTALLATION RECORD

Philip Environmental Services Corp.
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Borehole # _____
Well # TPW-02
Page _____ of _____

Project Name HAMPTON 4M

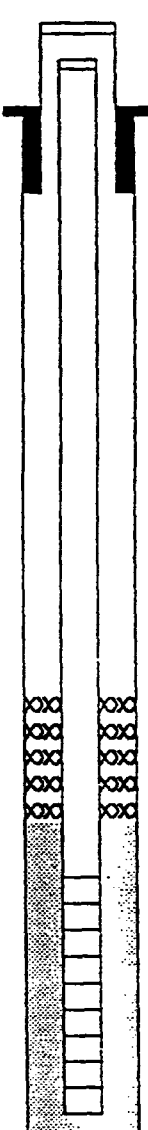
Project Number 17877 Phase GOOD
Project Location AZTEL, NM

Elevation _____
Well Location MIDWAY NORTH END OF SITE
GWL Depth 23.38
Installed By K. PADILLA

On-Site Geologist S. Pope
Personnel On-Site D. Charley
Contractors On-Site 0
Client Personnel On-Site _____

Date/Time Started 1300 6/5/97
Date/Time Completed 1400 6/5/97

Depths in Reference to Ground Surface		
Item	Material	Depth
Top of Protective Casing		—
Bottom of Protective Casing		—
Top of Permanent Borehole Casing		—
Bottom of Permanent Borehole Casing		—
Top of Concrete		—
Bottom of Concrete		—
Top of Grout		—
Bottom of Grout		—
Top of Well Riser		+3.0
Bottom of Well Riser		14.6
Top of Well Screen		14.6
Bottom of Well Screen		25
Top of Peltonite Seal		—
Bottom of Peltonite Seal		—
Top of Gravel Pack		—
Bottom of Gravel Pack		—
Top of Natural Cave-In	SubG.	14.6
Bottom of Natural Cave-In		25
Top of Groundwater		~23.38
Total Depth of Borehole		250



Top of Protective Casing —

Top of Riser +3.0

Ground Surface —

Top of Seal —

Top of Gravel Pack —

Top of Screen 14.6

Bottom of Screen 25

Bottom of Borehole 25

Comments: Product Thickness @ 1555 = 39 FEET
6/6/97 Product Thickness = 96 FEET, 6/9/97 Product Thickness = 2.98 FEET
Geologist Signature [Signature]

RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.
4000 Morvae Road
Farmington, New Mexico 87401
(506) 326-2262 FAX (506) 326-2388

Borehole # TPW-03
Well # _____
Page _____ of _____

Project Name HAMPTON 4M
Project Number 17877 Phase 6001
Project Location ATEC, NM

Elevation _____
Borehole Location NORTH EAST SIDE OF SITE
GWL Depth NOT ENCOUNTERED
Logged By S. POPE
Drilled By K. PADILLA
Date/Time Started 1415 6/5/97
Date/Time Completed 15:50 6/5/97

Well Logged By S. POPE
Personnel On-Site D. Charley
Contractors On-Site _____
Client Personnel On-Site _____
Drilling Method HSA 4 1/4 ID
Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
							BZ	BH	S	
0										
5	1	5 7	6	Brown SAND MED- CO Grained Very hard, trace Moisture Some Consolidation			0	0	0	Refusal @ 6" 1430
10	2	10 12	18	Lt Brown- Redish Brown SAND. Med- CO Grained, trace silt, Some Oxidizing, trace Moisture			0	0	0	Refusal @ 18" 1437
15	3	15 17	12	Gray SAND FINE MED Grained w/ Some CLAY (Shale) very hard - Consolidated trace moisture		15	0	0	0	Refusal @ 12" 1450
20	4	20 21	6	SAA Very hard			0	0	0	Refusal @ 6" 1502
25	5	25 27	12"	Gray-DK GRAY SLTY SAND STONE Consolidated, trace Clay, Trace Moisture VERY HARD			0	0	0	Refusal @ 12" 1520
30				TOR - 25						
35										
40										

Comments: NO EVIDENCE OF MOISTURE @ THIS LOCATION WILL NOT DRILL DEEPER
Pull-out and Grout

Geologist Signature

Scott Pope

RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Borehole # _____
Well # TPW-04
Page _____ of _____

Project Name HAMPTON 4 ML
Project Number 17877 Phase 6001
Project Location ARTILL, NM

Elevation _____
Borehole Location _____
GWL Depth 200 / 19.0 After Setting
Logged By S. POPE
Drilled By K. PADILLA
Date/Time Started 1610 6/5/97 / 0830 6/6/97
Date/Time Completed 1645 6/5/97 / 0930 6/6/97

Well Logged By S. POPE
Personnel On-Site D. Chumley
Contractors On-Site _____
Client Personnel On-Site _____
Drilling Method HSA 4/1/1D
Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (Grain)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
							BZ	BH	S	
0										
5	1	5 7	10	Brown - Lt Brown SAND Med-Co grain Very hard SOME CEMENTATION exists Trace Moisture.			0	0	0	Refusal @ 10" 1621
10	2	10 12	10	SAP trace CLAY, Mostly Coarse Grained			0	0	0	Refusal @ 10" 1625
15	3	15 17	12"	SAP			6	0	0	Refusal @ 12" 1638 - STOP FOR DAY
20	4	20 22	18	GRAY SAND w/ SOME CLAY, Med-Co grain d w/ SOME CEMENTATION Hard, WET		20	0	0	15	Head space = 33 ppm Refusal @ 18" No odor on sample 0845
25	5	25 27	10	GRAY SILT CLAYey SAND, Fine- Very Fine grained somewhat cemented Very hard, Trace Moisture		25	0	0	0	Refusal @ 10" OUT OF WATER will RETWELL IN AND PULL BACK TO 19" 0919
30				TOB-25						
35										
40										

Comments: AFTER INSTALLING WELL LETTING SIT 10-15 MIN WATER @ 27.5 L/LIT LET SIT
AND MOVE TO NEXT LOCATION

Geologist Signature [Signature]

MONITORING WELL INSTALLATION RECORD

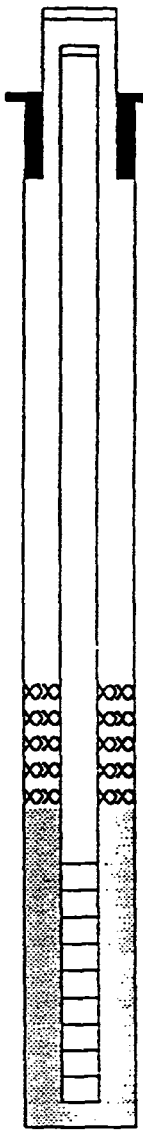
Philip Environmental Services Corp.
4000 Marvée Road
Farmington, New Mexico 87401
(506) 326-2262 FAX (506) 326-2388

Borehole # TPW-04
Well # TPW-04
Page 1 of 1

Project Name HAMPTON 4/M
Project Number 18777 Phase 6001
Project Location ATEL, NM
On-Site Geologist S. Pope
Personnel On-Site D. Cheeky
Contractors On-Site
Client Personnel On-Site

Elevation
Well Location Middle of SITE
GWL Depth 19.0
Installed By R. PACHECO
Date/Time Started 0920 6/6/97
Date/Time Completed 0945 6/16/97

Depths in Reference to Ground Surface		
Item	Material	Depth
Top of Protective Casing		—
Bottom of Protective Casing		—
Top of Permanent Borehole Casing		—
Bottom of Permanent Borehole Casing		—
Top of Concrete		—
Bottom of Concrete		—
Top of Grout		—
Bottom of Grout		—
Top of Well Riser		+1.0
Bottom of Well Riser		14.6
Top of Well Screen		14.6
Bottom of Well Screen		25
Top of Peltonite Seal		
Bottom of Peltonite Seal		
Top of Gravel Pack		—
Bottom of Gravel Pack		—
Top of Natural Cave-In		14.6
Bottom of Natural Cave-In		25
Top of Groundwater		19.0
Total Depth of Borehole		25



Top of Protective Casing —

Top of Riser +1.0

Ground Surface —

Top of Seal —

Top of Gravel Pack —

Top of Screen 14.6

Bottom of Screen 25.0

Bottom of Borehole 25.0

Comments: WEL = 19.0 FLBG'S PRIOR TO SAMPLING @ 1150

Geologist Signature

S. T. Pope

RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.

4000 Monroe Road

Farmington, New Mexico 87401

(505) 326-2282 FAX (505) 326-2388

Borehole #

TPW-06

Well #

TPW-05

Page

of

Project Name

HAMPTON 4m

Project Number

17877

Phase

6001

Project Location

ATEL, NM

Well Logged By

S. POPE

Personnel On-Site

D. Charley

Contractors On-Site

Client Personnel On-Site

Drilling Method

HSA 4 1/4 ID

Air Monitoring Method

PID

Elevation

Borehole Location SE CORNER OF SITE

GWL Depth

15.0

Logged By

S. POPE

Drilled By

KPADULA

Date/Time Started

1000 6/6/97

Date/Time Completed

1110 6/6/97

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery Efficiency	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
							BZ	BH	S	
0										
5	1	5 7	10	BROWN-TAN SAND WITH SILT ANCHOR, Med-Co Grained, some oxi stains, hard, Trace Moisture			0	0	0	REFUSAL @ 10" 1025
10	2	10 12	12	SAA			0	0	20	Refusal @ 12" 1035 No Hydrocarbon odor
15	3	15 17	12	SAA, Trace Clay, WET No Free Water			0	3	470	REFUSAL @ 12" Strong HC odor No Detectable Water In hole,
20	4	20 21	24	GRAY SAND Med-Co Grained, trace Silt Hard, SATURATED, Trace Gravel		20	0	0	3	Refusal @ 20 WL 17.45 (1110)
25				GRAY, CLAY/Shale, very hard, trace fine sand visible bedding planes, Trace Moisture.		21.5				1210 WL 14.75 SAMPLE @ 1215 No Free phase
30				TOB-20						
35										
40										

Comments:

Geologist Signature

[Signature]

MONITORING WELL INSTALLATION RECORD

Philip Environmental Services Corp.
4000 Mervee Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Borehole #
Well # TPW-05
Page 1 of 1

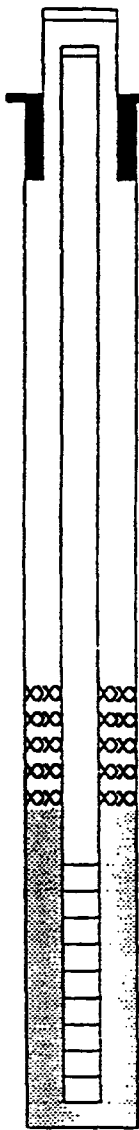
Project Name HAMPTON U/M
Project Number 17871 Phase 6001
Project Location ATEL NM

Elevation
Well Location S. EAST CORNER OF SITE
GWL Depth 14.75
Installed By K. PADDILIA

On-Site Geologist S. POPE
Personnel On-Site D. Charley
Contractors On-Site
Client Personnel On-Site

Date/Time Started 1110 6/6/97
Date/Time Completed 1130 6/6/97

Depths in Reference to Ground Surface		
Item	Material	Depth
Top of Protective Casing		
Bottom of Protective Casing		
Top of Permanent Borehole Casing		
Bottom of Permanent Borehole Casing		
Top of Concrete		
Bottom of Concrete		
Top of Grout		
Bottom of Grout		
Top of Well Fiser		+4
Bottom of Well Fiser		9.6
Top of Well Screen		10.6 9.6
Bottom of Well Screen		20
Top of Peltonite Seal		
Bottom of Peltonite Seal		
Top of Gravel Pack		
Bottom of Gravel Pack		
Top of Natural Cave-In		14
Bottom of Natural Cave-In		20
Top of Groundwater		14.75
Total Depth of Borehole		20



Top of Protective Casing —

Top of Fiser +4

Ground Surface —

Top of Seal —

Top of Gravel Pack —

Top of Screen 9.6

Bottom of Screen 20

Bottom of Borehole 20

Comments: 14.75 WL Pair TO SAMPLING @ 1210. SAMPLED @ 1215

Geologist Signature

S. T. Pope

RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.
4000 Monroe Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Borehole #
Well # TPW-06
Page of

Project Name HAMPTON 4m
Project Number 17877 Phase 6001
Project Location HTEC, NM

Elevation _____
Borehole Location _____
GWL Depth 15.0 RGS
Logged By S. Pope
Drilled By R. PADILLA
Date/Time Started 1345 6/6/97
Date/Time Completed 1505 6/6/97

Well Logged By S. Pope
Personnel On-Site D. Cherry
Contractors On-Site _____
Client Personnel On-Site _____
Drilling Method HSA 4 1/2" ID
Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
							BZ	BH	S	
0										
5										
	1	5 7	16"	BROWN SAND Med Grained, trace clay, very hard some cementation MOIST.			0	0	0	Refusal @ 16" 1351
10										
	2	10 12	15"	SAP GRAY SAND w/ 10% clay, Fine Med Grained, Moist, Very Hard		11.5	0	0	0	Refusal at 18"
15										
	3	15 17	16"	Brown - Reddish Brown SAND w/ Some Clay, Med-Co SAND, Hard, Moist Wet.		15.5	0	0	61	Refusal @ 14" Not Black coloration to bottom 4" of Soil Collected Sample No Free WATER
20										
	4	20 22	18"	Greenish-Green Clay/Shale, Trace Fine SAND, Hard, Trace Moisture		20	0	0	0	Refusal @ 18"
25										
	5	25 27	10"	SAP.			0	0	0	Refusal @ 28" 1505
30				TOB-25						
35										
40										

Comments: NO WATER Between 20-25 will Backfill to 20 w/ 1/2" pipe. Put screen in
Pulling to 14 to see if water will accumulate. Put well in @ 1520 full casing

Geologist Signature

John T. Pope

MONITORING WELL INSTALLATION RECORD

Philip Environmental Services Corp.
4000 Marvée Road
Farmington, New Mexico 87401
(505) 326-2282 FAX (505) 326-2388

Borehole # _____
Well # TR-06
Page _____ of _____

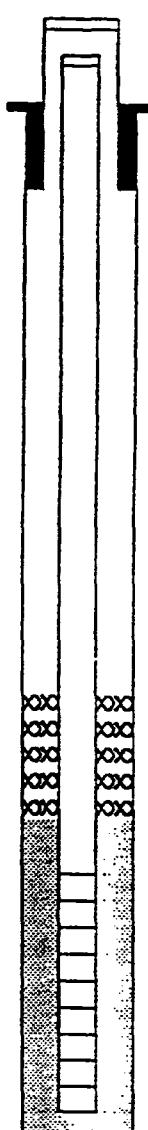
Project Name HANPTON 4M
Project Number 17877 Phase 6001
Project Location _____

Elevation _____
Well Location _____
GWL Depth 15.0
Installed By K. P. LUNA

On-Site Geologist S. R. R.
Personnel On-Site D. Charley
Contractors On-Site _____
Client Personnel On-Site _____

Date/Time Started 6/6/97 1505
Date/Time Completed 6/6/97 1525

Depths in Reference to Ground Surface		
Item	Material	Depth
Top of Protective Casing		—
Bottom of Protective Casing		—
Top of Permanent Borehole Casing		—
Bottom of Permanent Borehole Casing		—
Top of Concrete		—
Bottom of Concrete		—
Top of Grout		—
Bottom of Grout		—
Top of Well Riser		.4
Bottom of Well Riser		9.6
Top of Well Screen		9.6
Bottom of Well Screen		20
Top of Peltonite Seal		—
Bottom of Peltonite Seal		—
Top of Gravel Pack		—
Bottom of Gravel Pack		—
Top of Natural Cave-In		9.6
Bottom of Natural Cave-In		20
Top of Groundwater		15
Total Depth of Borehole		25



Top of Protective Casing —

Top of Riser .4

Ground Surface —

Top of Seal —

Top of Gravel Pack —

Top of Screen 9.4

Bottom of Screen 20

Bottom of Borehole 25

Comments: W/L = 15.0 @ 1710 PRIOR TO SAMPLING. HOLE PLUGGED
BOREHOLE TO 20 BEFORE INSTALLING SCREEN

Geologist Signature

S. T. P.

RECORD OF SUBSURFACE EXPLORATION

Philip Environmental Services Corp.
4000 Menree Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Borehole # _____
Well # TPW-07
Page _____ of _____

Project Name HAMILTON 4M
Project Number 17877 Phase WATER LOG
Project Location ARIZONA

Elevation _____
Borehole Location TANK AREA
GWL Depth 15'
Logged By S. POPE
Drilled By K. PADILLA
Date/Time Started 1540 6/6/97
Date/Time Completed 1620 6/6/97

Well Logged By S. POPE
Personnel On-Site D. Clancy
Contractors On-Site _____
Client Personnel On-Site _____

Drilling Method HSA 4 1/4 ID
Air Monitoring Method PID

Depth (Feet)	Sample Number	Sample Interval	Sample Type & Recovery (Inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU			Drilling Conditions & Blow Counts
							BZ	BH	S	
0										
5	1	5 7	7"	BROWN SAND Med-Co Grained Very Hard, Trace Moisture. Some Consolidation.			0	0	0	Refusal @ 7" 1553
10	7	10 12	12"	SAA			0	0	0	Refusal @ 12"
15	3	15 17	12"	SAA trace Sand, Wet		15'	0	13	948	REFUSAL @ 12" Head Space = 1175 ppm
20	4	20 22	14"	GRAY SAND COARSE Grained, trace clay Very hard, Saturated Gray CLAY/Shale, Trace Fine Sand and SILT Very hard, Trace Moisture		20 21	0 0	0 0	3 0	Refusal @ 12" 1620 Will put well into 20-10 screen for WATER SAMPLE
25				TOB-20						
30										
35										
40										

Comments: 10.90

Geologist Signature

Sean T. Pope

Philip Environmental Services Corp.
4000 Marvue Road
Farmington, New Mexico 87401
(505) 326-2262 FAX (505) 326-2388

Project Name Hampers 2/4

Project Number 12577 Phase
Project Location A-264 N/A

On-Site Geologist S. Pope
 Personnel On-Site _____
 Contractors On-Site _____
 Client Personnel On-Site _____

Elevation _____
Well Location TANK AREA
GWL Depth 14.6
Installed By K. SADDULA

Date/Time Started 1620 6/16/97
Date/Time Completed 1645 6/16/97

Depths in Reference to Ground Surface		
Item	Material	Depth
Top of Protective Casing		—
Bottom of Protective Casing		—
Top of Permanent Borehole Casing		—
Bottom of Permanent Borehole Casing		—
Top of Concrete		—
Bottom of Concrete		—
Top of Grout		—
Bottom of Grout		—
Top of Well Riser		+ 4
Bottom of Well Riser		9.6
Top of Well Screen		9.6
Bottom of Well Screen		20
Top of Peltonite Seal		—
Bottom of Peltonite Seal		—
Top of Gravel Pack		—
Bottom of Gravel Pack		—
Top of Natural Cave-In		9.6
Bottom of Natural Cave-In		20
Top of Groundwater		14.6
Total Depth of Borehole		20

Item	Material	Depth
Top of Protective Casing		—
Bottom of Protective Casing		—
Top of Permanent Borehole Casing		—
Bottom of Permanent Borehole Casing		—
Top of Concrete		—
Bottom of Concrete		—
Top of Grout		—
Bottom of Grout		—
Top of Well Riser		+ 4
Bottom of Well Riser		9.6
Top of Well Screen		9.6
Bottom of Well Screen		20
Top of Peltonite Seal		—
Bottom of Peltonite Seal		—
Top of Gravel Pack		—
Bottom of Gravel Pack		—
Top of Natural Cave-In		9.6
Bottom of Natural Cave-In		20
Top of Groundwater		14.6
Total Depth of Borehole		20

Comments: WL price to SAMUELING 14.6 @ 1738

Geologist Signature