WELL DEVELOPMENT RECORD

LOGO

ACME CONSULTING
1234 Anystreet
Somewhere, Someplace
Telephone: 534 123 4567
Fax: 534 321 4567

PROJECT		WELL NUMBER
gINT Example		**MW-01**
JOB NUMBER	LOCATION	RECORDED BY
123-5555-99	**Sites A & C**	**M. Aqueous**
AIR TEMPERATURE	WEATHER	SUBCONTRACTOR
low 70's °F	**Intermittent rain, cool**	**ABC Well Developers**

METHOD

HAND PUMP
SUBMERSIBLE PUMP
BAILER **X**
OTHER **X**

DATE OF DEVELOPMENT **5/1/02 (Initial Development)**

DEVELOPMENT CRITERIA

Minimum three well volumes or until discharge is clear and water characteristics have stabilized.

REMARKS

Water level too low for submersible pump.

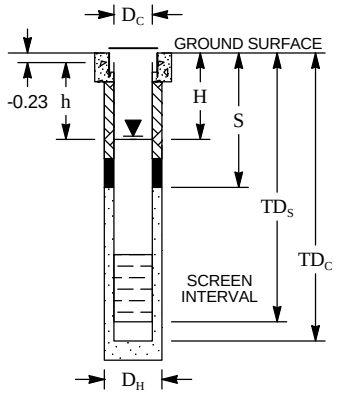
HOLE DIAMETER D_H = **10.0**

CASING DIAMETER
- INSIDE D_CID = **4.0**
- OUTSIDE D_COD = **4.5**

DEPTH TO:
- WATER h = **95.59**
- BASE OF SEAL S = **88.7**
- BASE OF SCREEN TD_S = **101.0**
- BASE OF SUMP TD_C = **101.0**

ESTIMATED FILTER PACK POROSITY P = **0.25**

Diameters in (inches) : Depths in (feet)



PURGE VOLUME CALCULATION

CASING VOLUME

$V_C = \pi \left(\frac{D_CID}{24}\right)^2 (TD_C - H) = 3.14 \left(\frac{4.0}{24}\right)^2 (101.0 - 95.8)$

$= \mathbf{0.45\ ft^3}$

FILTER PACK PORE VOLUME

$V_F = \pi \left[\left(\frac{D_H}{24}\right)^2 - \left(\frac{D_COD}{24}\right)^2\right] (TD_s - (S \text{ or } H))*(P)$

$= \mathbf{0.56\ ft^3}$

TOTAL WELL VOLUME

$V_T = V_C + V_F =$ **$1.02\ ft^3 \times 7.48\ gal/ft^3 = 7.6\ gal$**

(* If S > H, use S; If S < H, use H)

DEVELOPMENT LOG					CUMULATIVE TOTAL REMOVED		WATER CHARACTERISTICS				COMMENTS
DATE	TIME		METHOD	WATER REMOVED (GAL)	GAL	WELL VOLUMES	pH	CONDUCTIVITY (mmhos/cm)	TURBIDITY (NTU)	TEMPERATURE (°F)	
	BEGIN	FINISH									
5/1/02	**11:15**	**11:30**	**SU**	**0**	**0**	**0.00**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	
5/1/02	**11:30**	**11:35**	**B**	**3**	**3**	**0.39**	**n.r.**	**n.r.**	**n.r.**	**n.r.**	**Bailed dry.**
5/1/02	**11:35**	**11:55**		**0**	**3**	**0.39**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**Recharge**
5/1/02	**11:55**	**12:05**	**SU**	**0**	**3**	**0.39**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	
5/1/02	**12:05**	**12:10**	**B**	**2**	**5**	**0.66**	**6.9**	**1.56**	**>1000**	**70.5**	**Bailed**
5/1/02	**12:10**	**12:30**		**0**	**5**	**0.66**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**Surged**
5/1/02	**12:30**	**12:32**	**B**	**2**	**7**	**0.92**	**7.1**	**2.59**	**>1000**	**72.5**	**Bailed**
5/1/02	**12:32**	**12:55**		**0**	**7**	**0.92**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	
5/1/02	**12:55**	**12:58**	**B**	**3**	**10**	**1.32**	**7.1**	**2.58**	**>1000**	**74.1**	**Bailed**

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gINT Example		**MW-01**
JOB NUMBER	LOCATION	RECORDED BY
123-5555-99	**Sites A & C**	**M. Aqueous**
AIR TEMPERATURE	WEATHER	SUBCONTRACTOR
mid 50's °F	**Cool and calm**	**ABC Well Developers**

METHOD

HAND PUMP
SUBMERSIBLE PUMP
BAILER **X**
OTHER **X**

DATE OF DEVELOPMENT **12/31/02 (Redevelopment)**

DEVELOPMENT CRITERIA

Minimum three well volumes or until discharge is clear and water characteristics have stabilized.

REMARKS

Water level too low for submersible pump.
Well redeveloped because of sediment in bottom of well blocking portion of well screen.

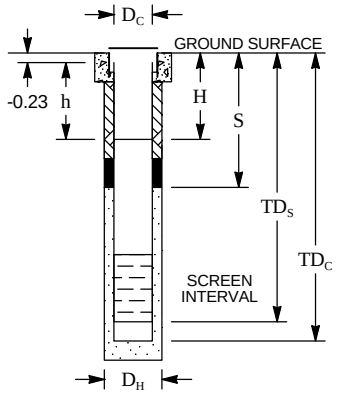
HOLE DIAMETER D_H = **10.0**

CASING DIAMETER
- INSIDE D_CID = **4.0**
- OUTSIDE D_COD = **4.5**

DEPTH TO:
- WATER h = **97.20**
- BASE OF SEAL S = **88.7**
- BASE OF SCREEN TD_S = **101.0**
- BASE OF SUMP TD_C = **101.0**

ESTIMATED FILTER PACK POROSITY P = **0.25**

Diameters in (inches) : Depths in (feet)



PURGE VOLUME CALCULATION

CASING VOLUME

$$V_C = \pi \left(\frac{D_CID}{24}\right)^2 (TD_C - H) = 3.14\left(\frac{4.0}{24}\right)^2 (101.0 - 97.4)$$

$$= \mathbf{0.31\ ft^3}$$

FILTER PACK PORE VOLUME

$$V_F = \pi \left[\left(\frac{D_H}{24}\right)^2 - \left(\frac{D_COD}{24}\right)^2\right] (TD_s - (S \text{ or } H))*(P)$$

$$= \mathbf{0.39\ ft^3}$$

TOTAL WELL VOLUME

$V_T = V_C + V_F =$ **0.70 ft³ x 7.48 gal/ft³ = 5.2 gal**

(* If S > H, use S; If S < H, use H)

DEVELOPMENT LOG					CUMULATIVE TOTAL REMOVED		WATER CHARACTERISTICS				COMMENTS
DATE	TIME		METHOD	WATER REMOVED (GAL)	GAL	WELL VOLUMES	pH	CONDUCTIVITY (mmhos/cm)	TURBIDITY (NTU)	TEMPERATURE (°F)	
	BEGIN	FINISH									
12/31/02	**23:15**	**23:30**	**SU**	**0**	**0**	**0.00**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	
12/31/02	**23:30**	**23:35**	**B**	**3**	**3**	**0.57**	**n.r.**	**n.r.**	**n.r.**	**n.r.**	**Bailed dry.**
12/31/02	**23:35**	**23:55**		**0**	**3**	**0.57**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**Recharge**
12/31/02	**23:55**	**00:05**	**SU**	**0**	**3**	**0.57**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	
1/1/03	**00:05**	**00:10**	**B**	**2**	**5**	**0.95**	**6.9**	**1.56**	**>1000**	**70.5**	**Bailed**
1/1/03	**00:10**	**00:30**		**0**	**5**	**0.95**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	**Surged**
1/1/03	**00:30**	**00:32**	**B**	**2**	**7**	**1.34**	**7.1**	**2.59**	**>1000**	**72.5**	**Bailed**
1/1/03	**00:32**	**00:55**		**0**	**7**	**1.34**	**n.a.**	**n.a.**	**n.a.**	**n.a.**	
1/1/03	**00:55**	**00:58**	**B**	**3**	**10**	**1.91**	**7.1**	**2.58**	**>1000**	**74.1**	**Bailed**