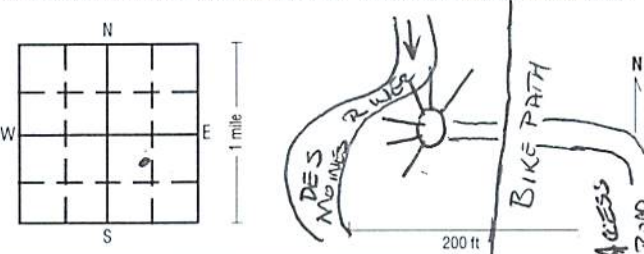


Site identification
 WELL DES MOINES SPYLOVILLE
 Property Owner WATER WORKS Other ID WELL 1
 Address 2201 GEORGE FLAGG PKWY
 Tenant DES MOINES, IOWA
 Well Depth 59 ft Date completed 11 / 11 / 10

Location County POLK
1/2 mi. ^N and 5/8 mi. ^E of intersection of NW 54th and NW 26th
NW 1/4 of the NW 1/4 of the SE 1/4 of Sec 8 TWP 79N RNG 24 ^E _W
 GPS Coordinates (NAD83 datum only) decimal degrees:
 _____ N. Latitude _____ W. Longitude.
 Show exact location of well in section grid with a dot (•). Sketch map of well location on property.

 upland hillside valley level surface Elevation (if known) 803.6

Formation log

From	To	Color	Hardness	Formation description
0	9	BROWN	FIRM	CLAYEY SILT
9	19	BROWN	LOOSE	SAND
19	29	GRAY	LOOSE	SAND & GRAVEL
29	39	GRAY	LOOSE	S&G, TO 1"
39	44	GRAY	LOOSE	S&G, TO 1"
44	49	GRAY	LOOSE	S&G, TO 1"; 3" SILTY CLAY
49	54	GRAY	LOOSE	S&G, TO 3" cobbles
54	59	BROWN GRAY	LOOSE	SILTY SAND & GRAVEL
59		GRAY	HARD	SHALE

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Remarks (including depth of lost drilling fluids, materials, or tools)

Well use

<input type="checkbox"/> Domestic	<input type="checkbox"/> Heat pump	<input type="checkbox"/> Commercial
<input type="checkbox"/> Livestock	<input checked="" type="checkbox"/> Municipal	<input type="checkbox"/> Monitoring
<input type="checkbox"/> Test well	<input type="checkbox"/> Public supply	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Irrigation	

Drill method rotary auger cable other CHISSON
Hole size
198 inch from 0 ft to 58 ft hole size continued _____ inch from _____ ft to _____ ft
 _____ inch from _____ ft to _____ ft

Record all depth measurements from ground level (GL). Use (+) for above GL measurements.

Casing Drive shoe (yes / no) Pitless adapter (yes / no)

Size (ID/OD)	Type / Wt	Depth top	Depth bottom	Amount (length)
<u>156/198</u>	<u>CONCRETE</u> <u>12,160</u>	<u>-53</u>	<u>-58</u>	<u>5'</u>
<u>156/192</u>	<u>10,250</u>	<u>+8.4</u>	<u>-53</u>	<u>61.4</u>

Perforated or slotted casing? (yes no
 Perforated / slotted from _____ ft to _____ ft
 Perforated / slotted from _____ ft to _____ ft

Casing grouted? (yes no Placement method _____

Type	Depth top	Depth bottom	Amount (vol/wt)
<u>CEMENT GROUT</u>	<u>0</u>	<u>-7</u>	
<u>REINFORTE SURG</u>	<u>-7</u>	<u>-52</u>	

Well screen? (yes no 6 LATERALS, 1055' TOTAL

Diameter	Slot size	Depth top	Depth bottom	Length	Material
<u>12.75</u>	<u>0.030</u>	<u>45.7</u>			
	<u>0.150</u>		<u>46.7</u>	<u>995</u>	<u>304 S.S</u>

ENDS
 Bottom capped (yes no with S.S. PLATE
 Seals / Packers (yes no kind _____ depth _____ ft
 Gravel packed (yes no from _____ ft to _____ ft
 type _____ amount _____

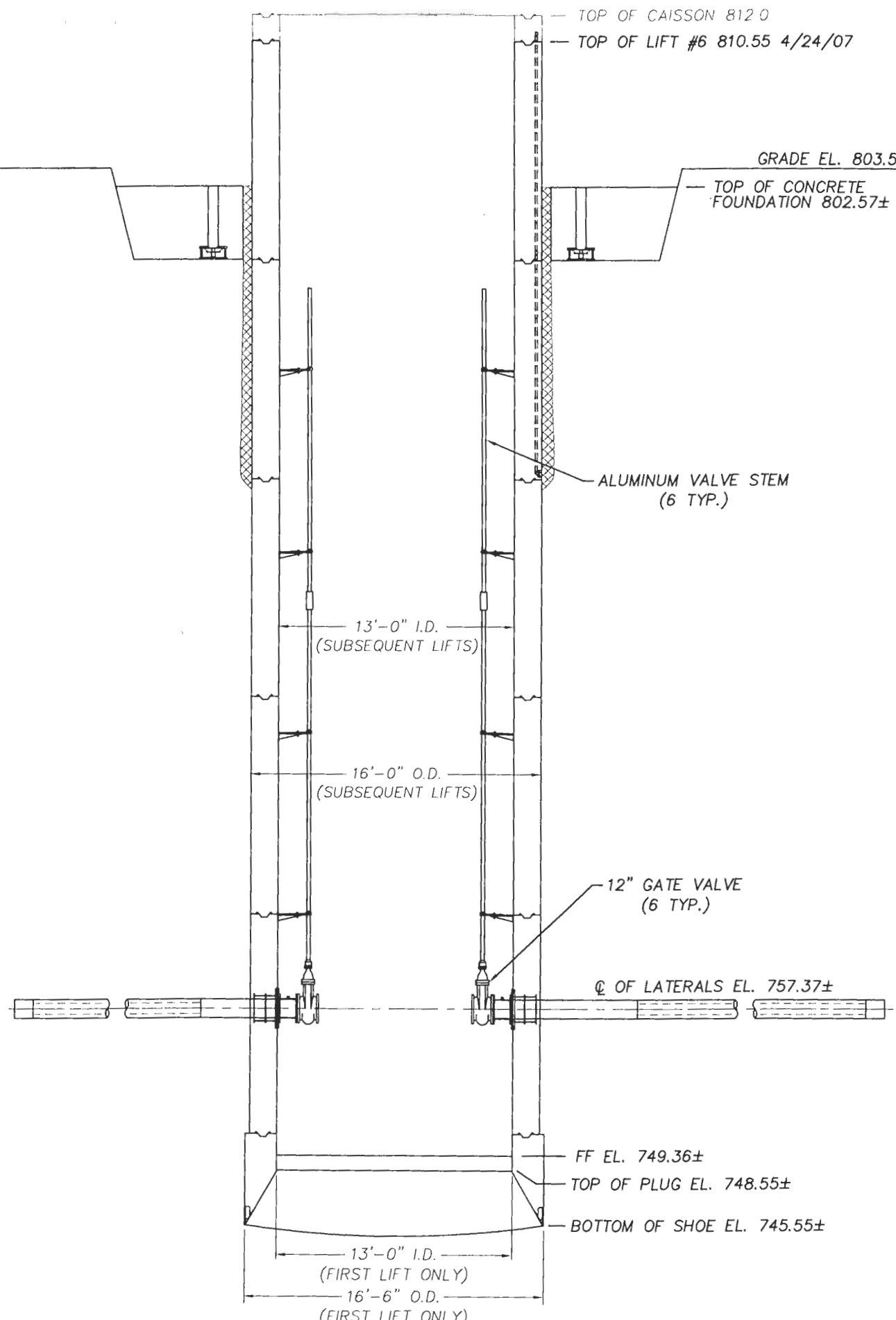
Well developed? (yes no
 Explain GETTED, SURGED, RAW HIDED, FLUSHED
 (pumped, airlifted, bailed) for WEEKS hrs at 1000 GPM

Pump installed? (yes no Date _____ / _____ / _____
 Installer's name C.L. CARROLL STARTED NOV 2010
 Type of pump V. TURBINE Depth to intake _____ ft
 Pump diameter 20" Rated capacity 6300 GPM

Water information Aquifer: sand / gravel limestone sandstone
 Main water-supply zone from 9 ft to 59 ft seepage well
 Static water level 13.5' ft (below / above) GL; tape airline E-line estimate
 Pumping water level 33.7 ft below GL; tape airline E-line estimate
 At yield of 6300 GPM; orifice volumetric estimate for 96 hours
 Measurements taken at _____ (AM / PM) Date 2 / 6 / 08

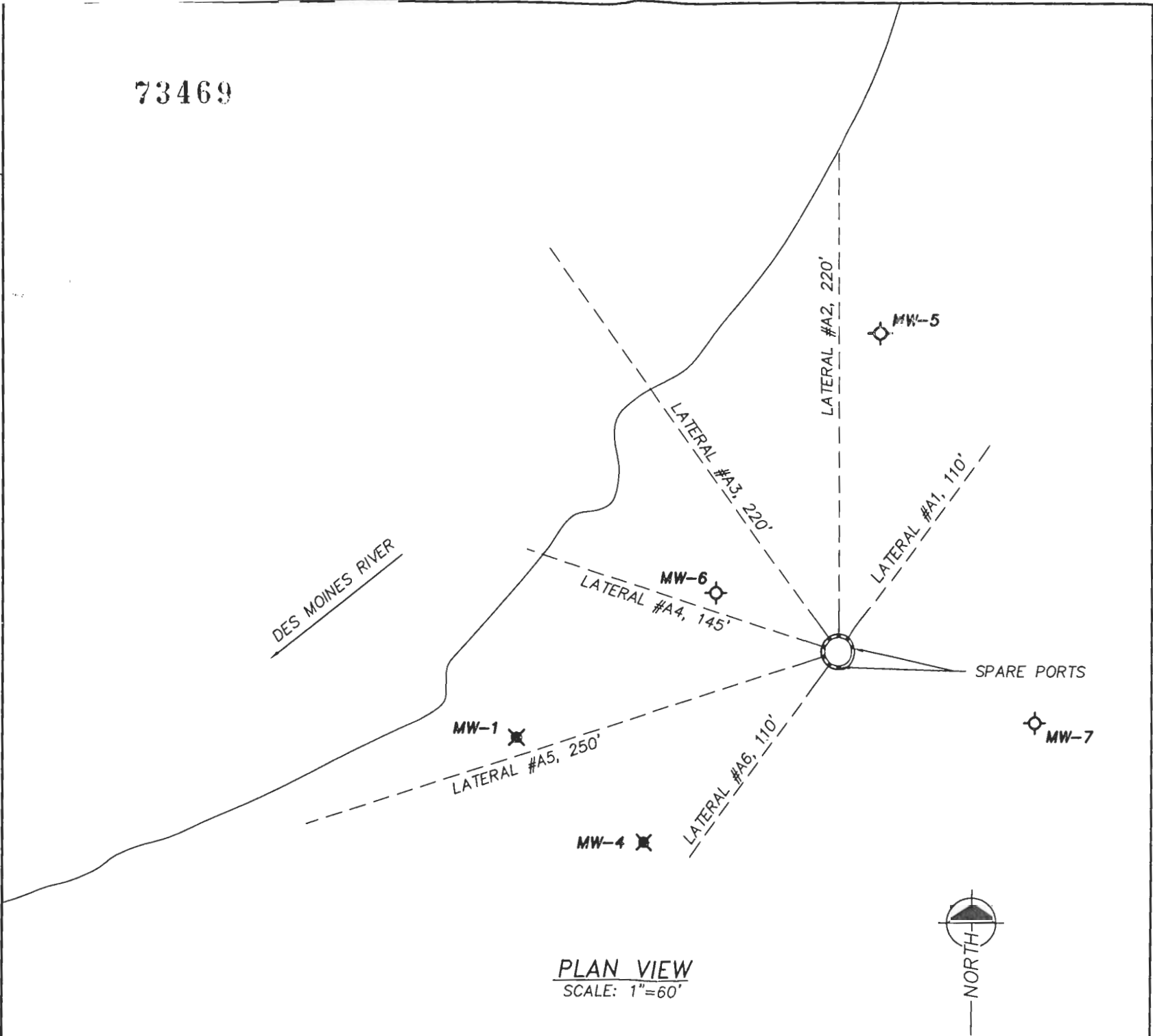
Water quality test? (yes no Date tested 2 / 19 / 08
 Tested by KEYSTONE LABS; NEWTON, IOWA

Contractor RANNEY COLLECTOR WELLS
 Address COLUMBUS, OHIO
 Driller [Signature] Certification no. _____



VERTICAL SECTION THRU CAISSON
SCALE: N.T.S.

73469



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 By _____

6360 HUNTLEY ROAD
 COLUMBUS, OHIO 43229
 (614) 888-6263 / FAX (614) 888-9208

PLAN & SECTION VIEW OF COLLECTOR WELL #1		
SAYLORVILLE WTP RADIAL COLLECTOR WELLS DES MOINES, IOWA		
FILE NAME: 106-291-14	DATE: 1/10/08	FIGURE 2
PROJECT #: 106-291	SCALE: AS NOTED	