

**WATER WELL RECORD Form WWC-5**

Original Record  Correction  Change in Well Use

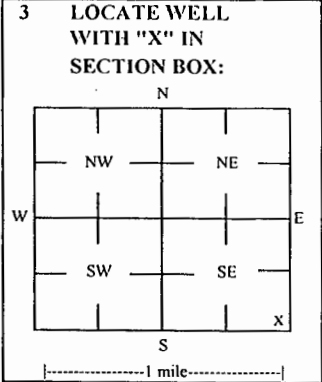
Division of Water Resources App. No.

Well ID

**MW11**

<b>1 LOCATION OF WATER WELL:</b> County Crawford	Fraction NE ¼ SE ¼ SE ¼ SE ¼	Section Number 6	Township Number T 29 S	Range Number R 25 <input checked="" type="checkbox"/> E <input type="checkbox"/> W
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<b>2 WELL OWNER: Last Name:</b> Business: Arma Express (Hale Petroleum Co) Address: 306 S Crawford City Frontenac State: KS ZIP: 66763	First: Street or Rural Address where well is located (if unknown, distance and direction from nearest town or intersection): If at owner's address, check here: <input type="checkbox"/> 201 N West, Arma, KS
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**4 DEPTH OF COMPLETED WELL:** 11.5 ft  
 Depth(s) Groundwater Encountered: 1) \_\_\_\_\_ ft  
 2) \_\_\_\_\_ ft 3) \_\_\_\_\_ ft, or 4)  Dry Well  
**WELL'S STATIC WATER LEVEL:** 1.03 ft.  
 below land surface, measured on (mo-day-yr) 8/26/2019  
 above land surface, measured on (mo-day-yr) \_\_\_\_\_  
 Pump test data: Well water was \_\_\_\_\_ ft  
 after \_\_\_\_\_ hours pumping \_\_\_\_\_ gpm  
 Water well was \_\_\_\_\_ ft  
 after \_\_\_\_\_ hours pumping \_\_\_\_\_ gpm  
 Estimated Yield: \_\_\_\_\_ gpm  
 Bore Hole Diameter: 7.25 in to \_\_\_\_\_ ft, and  
 \_\_\_\_\_ in to \_\_\_\_\_ ft

**5 Latitude:** 37.54454 (decimal degrees)  
**Longitude:** 94.70513 (decimal degrees)  
 Horizontal Datum:  WGS 84  NAD 83  NAD 27  
 Source for Latitude/Longitude:  
 GPS (unit make/model: \_\_\_\_\_)  
 (WAAS enabled?  Yes  No)  
 Land Survey  Topographic Map  
 Online Mapper

**6 Elevation:** 1009.33 ft  Ground Level  TOC  
 Source:  Land Survey  GPS  Topographic Map  
 Other \_\_\_\_\_

**7 WELL WATER TO BE USED AS:**

1 Domestic: <input type="checkbox"/> Household <input type="checkbox"/> Lawn & Garden <input type="checkbox"/> Livestock 2 Irrigation 3 Feedlot 4 Industrial	5 <input type="checkbox"/> Public Water Supply: well ID 6 <input type="checkbox"/> Dewatering: how many wells? 7 <input type="checkbox"/> Aquifer Recharge: well ID 8 <input checked="" type="checkbox"/> Monitoring: well ID MW11 9 Environmental Remediation: well ID <input type="checkbox"/> Air Sparge <input type="checkbox"/> Soil Vapor Extractor <input type="checkbox"/> Recovery <input type="checkbox"/> Injection	10 <input type="checkbox"/> Oil Field Water Supply: lease 11 Test Hole: well ID <input type="checkbox"/> Cased <input type="checkbox"/> Uncased <input type="checkbox"/> Geotechnical 12 Geothermal: How many bores? a) Closed Loop <input type="checkbox"/> Horizontal <input type="checkbox"/> Vertical b) Open Loop <input type="checkbox"/> Surface Discharge <input type="checkbox"/> Inj. of Water <input type="checkbox"/> Other (specify): _____
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Was a chemical/bacteriological sample submitted to KDHE?  Yes  No If yes, date sample was submitted: \_\_\_\_\_  
 Water well disinfected?  Yes  No

**8 TYPE OF CASING USED:**  Steel  PVC  Other \_\_\_\_\_ CASING JOINTS:  Glued  Clamped  Welded  Threaded  
 Casing diameter 2 in. to 3 ft, Diameter \_\_\_\_\_ in. to \_\_\_\_\_ ft, Diameter \_\_\_\_\_ in. to \_\_\_\_\_ ft,  
 Casing height above land surface -0.25 in. Weight \_\_\_\_\_ lbs./ft. Well thickness or gauge No \_\_\_\_\_  
**TYPE OF SCREEN OR PERFORATION MATERIAL:**  
 Steel  Stainless Steel  Fiberglass  PVC  Other (Specify) \_\_\_\_\_  
 Brass  Galvanized Steel  Concrete tile  None used (open hole)  
**SCREEN OR PERFORATION OPENINGS ARE:**  
 Continuous Slot  Mill Slot  Gauze Wrapped  Torch Cut  Drilled Holes  Other (Specify) \_\_\_\_\_  
 Louvered Shutter  Key Punched  Wire Wrapped  Saw Cut  None (Open Hole)  
**SCREEN-PERFORATED INTERVALS:** From 3 ft. to 11.5 ft, From \_\_\_\_\_ ft. to \_\_\_\_\_ ft, From \_\_\_\_\_ ft. to \_\_\_\_\_ ft,  
**GRAVEL PACK INTERVALS:** From 2 ft. to 11.5 ft, From \_\_\_\_\_ ft. to \_\_\_\_\_ ft, From \_\_\_\_\_ ft. to \_\_\_\_\_ ft,

**9 GROUT MATERIAL:**  Neat cement  Cement grout  Bentonite  Other Concrete: 0-0.7'  
 Grout intervals: From 0.7 ft. to 2 ft, From \_\_\_\_\_ ft. to \_\_\_\_\_ ft, From \_\_\_\_\_ ft. to \_\_\_\_\_ ft,

**Nearest source of possible contamination:**

<input type="checkbox"/> Septic Tank	<input type="checkbox"/> Lateral Lines	<input type="checkbox"/> Pit Privy	<input type="checkbox"/> Livestock Pens	<input type="checkbox"/> Insecticide Storage
<input type="checkbox"/> Sewer Lines	<input type="checkbox"/> Cess Pool	<input type="checkbox"/> Sewage Lagoon	<input checked="" type="checkbox"/> Fuel Storage	<input type="checkbox"/> Abandoned Water Well
<input type="checkbox"/> Watertight Sewer Lines	<input type="checkbox"/> Seepage Pit	<input type="checkbox"/> Feedyard	<input type="checkbox"/> Fertilizer Storage	<input type="checkbox"/> Oil Well / Gas Well

Other (Specify) \_\_\_\_\_  
 Direction from well? SE Distance from well? ~70 ft

10 FROM	TO	LITHOLOGIC LOG	FROM	TO	LITHO. LOG (cont.) or PLUGGING INTERVALS
0	0.4	Topsoil			
0.4	6	Silty clay			
6	10.5	Shale/mudstone			
10.5	11.5	Limestone			

Notes: KDHE ID: Arma Express; U3-019-13581  
 Target of monitoring well is shallow groundwater, <20' of grout was installed at the direction of KDHE.

**11 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION:** This water well was  constructed,  reconstructed, or  plugged under my jurisdiction and was completed on (mo-day-yr) 8/12/19 and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's License No. 757 This Water Well Record was completed on (mo-day-yr) 9/9/19 under the business name of Larsen & Associates, Inc. Signature \_\_\_\_\_

# DENNIS L HANDKE

1820 NW 59th Terrace  
TOPEKA, KANSAS 66618  
785-286-4047 Home

Jess Chapman  
Larsen & Associates  
1311 E. 25<sup>th</sup> Street, Suite B  
Lawrence, Kansas, 66046

August 27, 2019

RE: Monitor Well Elevation Survey  
102 E. Washington St., Arma, Kansas

Proj. 19-00CC  
Arma Express  
U3-019-13581

Bench Mark: Square cut on SW corner of concrete school speed zone light base at SW Corner of property.  
Elev: 1010.33      North 539.46      West 5250.32      (from SE Cor. Sec. 5-29-25E)

MW-10	rim	1009.88	North	676.08	NW1/4,SW1/4,SW1/4,SW1/4
	top pipe	1009.52	West	5221.00	Lat= 37.54469 Long = 94.70484
MW-11	rim	1009.58	North	625.80	NE1/4,SE1/4,SE1/4,SE1/4 (Sec. 6-29-25E)
	top pipe	1009.33	West	5306.54	Lat= 37.54454 Long = 94.70513

Lat & Long derived from Arma 7.5 quad map. WGS84.

Elevation established from existing project.

If you have any questions, please feel free to call me. Thank you for the opportunity to be of service to you.

*August 27, 2019*  
Dennis L Handke RLS  
LS-788



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NOTE: Figures exhibited within this report are only to be used within the context of this report. Placement of property lines, wells, structures, and road is based on the available information from county appraiser maps, surveys, site visits, and/or previous vendor reports and should be considered approximate.

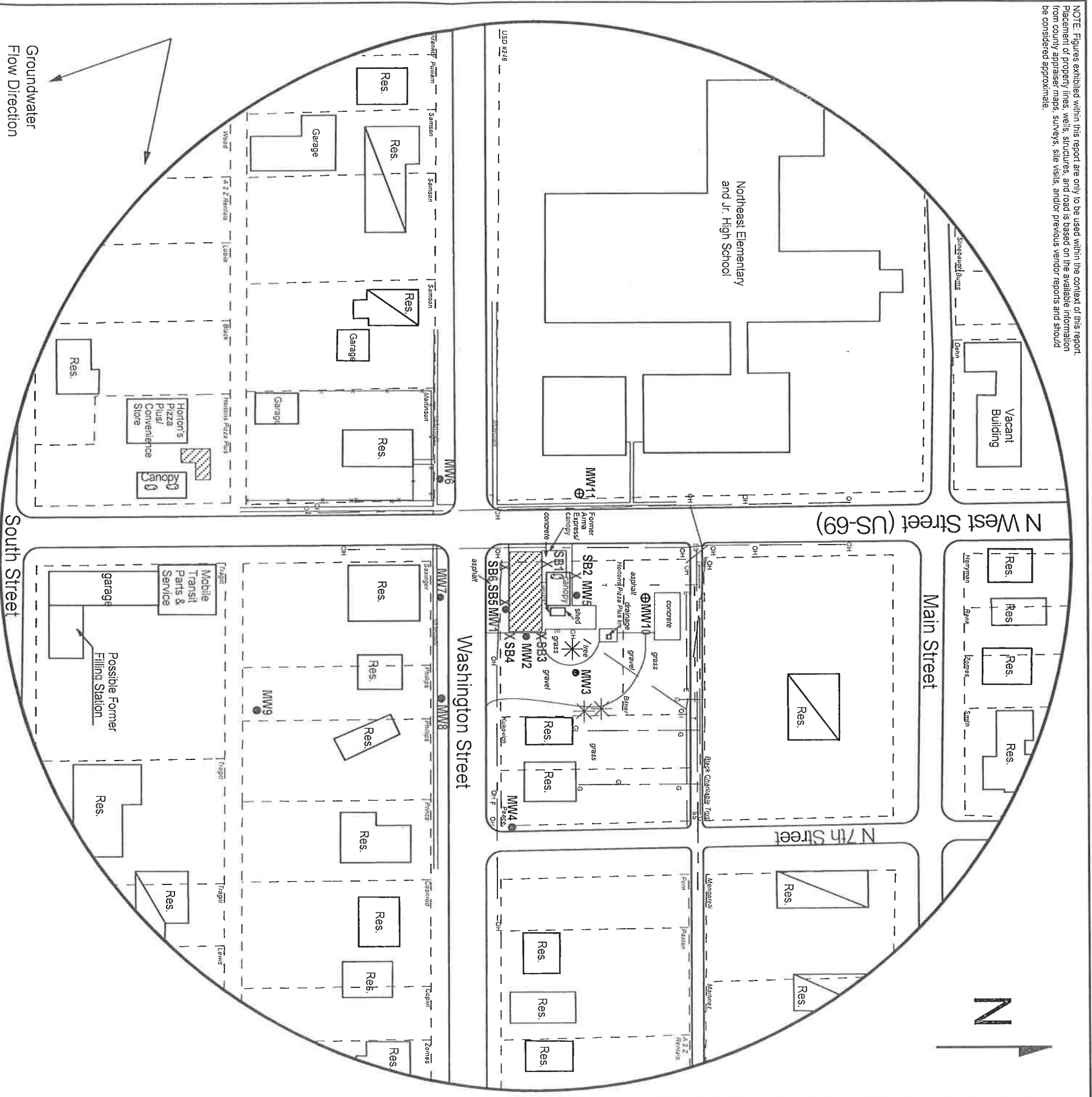



FIGURE 2.2 - 500 FT RADIUS AREA BASE MAP


  
**Larsen**
  
 & ASSOCIATES, INC.

1311 E 25th St., Suite B      (785) 841-8707 office  
 Lawrence, KS 66046      (785) 865-4282 fax

**PROJECT:**  
 Arma Express  
 101 E. Washington  
 Arma, KS  
 KDHE ID: U3-019-13581  
 Date: 8/26/19

**LEGEND**

- Approximate Location of Active UST Basin and Pump Stands
- Building with Basement
- Approximate Location of Property Line
- Monitoring Well
- Monitoring Well (Installed 8/12/19)
- Soil Boring (Drilled 1/23/19)
- Fire Hydrant
- Electric Lines (1.5 - 3 ft BGS)
- Gas Lines (1.5 - 3 ft BGS)
- Overhead Lines (25 - 40 ft high)
- Sanitary Sewer (2 - 6 ft BGS)
- Telephone Lines (2 - 6 ft BGS)

NOTE: Location of product lines is unknown.  
 NOTE: Utility depths, heights and locations are approximate.

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