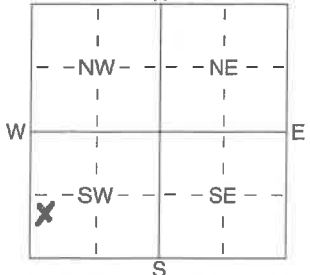


1 LOCATION OF WATER WELL: Fraction **NW 1/4 SW 1/4 SW 1/4** Section Number **20** Township Number **T 13 S** Range Number **R 22 EW**  
 County: **Johnson**

Distance and direction from nearest town or city street address of well if located within city?  
**Southwest Army Ammunition Plant southwest of De Soto**

2 WATER WELL OWNER: **Koch Sulfur Products**  
 RR#, St. Address, Box #: **411 E. 37th Street North** Board of Agriculture, Division of Water Resources  
 City, State, ZIP Code: **Wichita, KS 67220** Application Number:

3 LOCATE WELL'S LOCATION WITH AN "X" IN SECTION BOX:  
  
 4 DEPTH OF COMPLETED WELL **85.2** ft. ELEVATION: .....  
 Depth(s) Groundwater Encountered 1 ..... ft. 2 ..... ft. 3 ..... ft.  
 WELL'S STATIC WATER LEVEL **65.50** ft. below land surface measured on mo/day/yr **5-11-04**  
 Pump test data: Well water was ..... ft. after ..... hours pumping ..... gpm  
 Est. Yield ..... gpm: Well water was ..... ft. after ..... hours pumping ..... gpm  
 WELL WATER TO BE USED AS: 5 Public water supply 8 Air conditioning 11 Injection well  
 1 Domestic 3 Feedlot 6 Oil field water supply 9 Dewatering 12 Other (Specify below)  
 2 Irrigation 4 Industrial 7 Domestic (lawn & garden) 10 Monitoring well  
 Was a chemical/bacteriological sample submitted to Department? Yes ..... No **X** ..... ; If yes, mo/day/yr sample was submitted  
 Water Well Disinfected? Yes **No**

5 TYPE OF BLANK CASING USED:  
 1 Steel 3 RMP (SR) 5 Wrought iron 8 Concrete tile CASING JOINTS: Glued ..... Clamped .....  
 2 PVC 4 ABS 6 Asbestos-Cement 9 Other (specify below) Welded .....  
 7 Fiberglass Threaded **✓**  
 Blank casing diameter **2** in. to **75.2** ft., Dia ..... in. to ..... ft., Dia ..... in. to ..... ft.  
 Casing height above land surface **32** in., weight ..... lbs./ft. Wall thickness or gauge No. **Sch 40**  
 TYPE OF SCREEN OR PERFORATION MATERIAL:  
 1 Steel 3 Stainless Steel 5 Fiberglass 7 RMP (SR) 10 Asbestos-Cement  
 2 Brass 4 Galvanized Steel 6 Concrete tile 9 ABS 11 Other (Specify) .....  
 12 None used (open hole)  
 SCREEN OR PERFORATION OPENINGS ARE:  
 1 Continuous slot 2 Louvered shutter 3 Mill slot **010** 4 Key punched 5 Gauzed wrapped 6 Wire wrapped 7 Torch cut 8 Saw cut 9 Drilled holes 11 None (open hole) 10 Other (specify) ..... ft.  
 SCREEN-PERFORATED INTERVALS: From **75.2** ft. to **85.2** ft., From ..... ft. to ..... ft.  
 GRAVEL PACK INTERVALS: From **72.8** ft. to **85.2** ft., From ..... ft. to ..... ft.

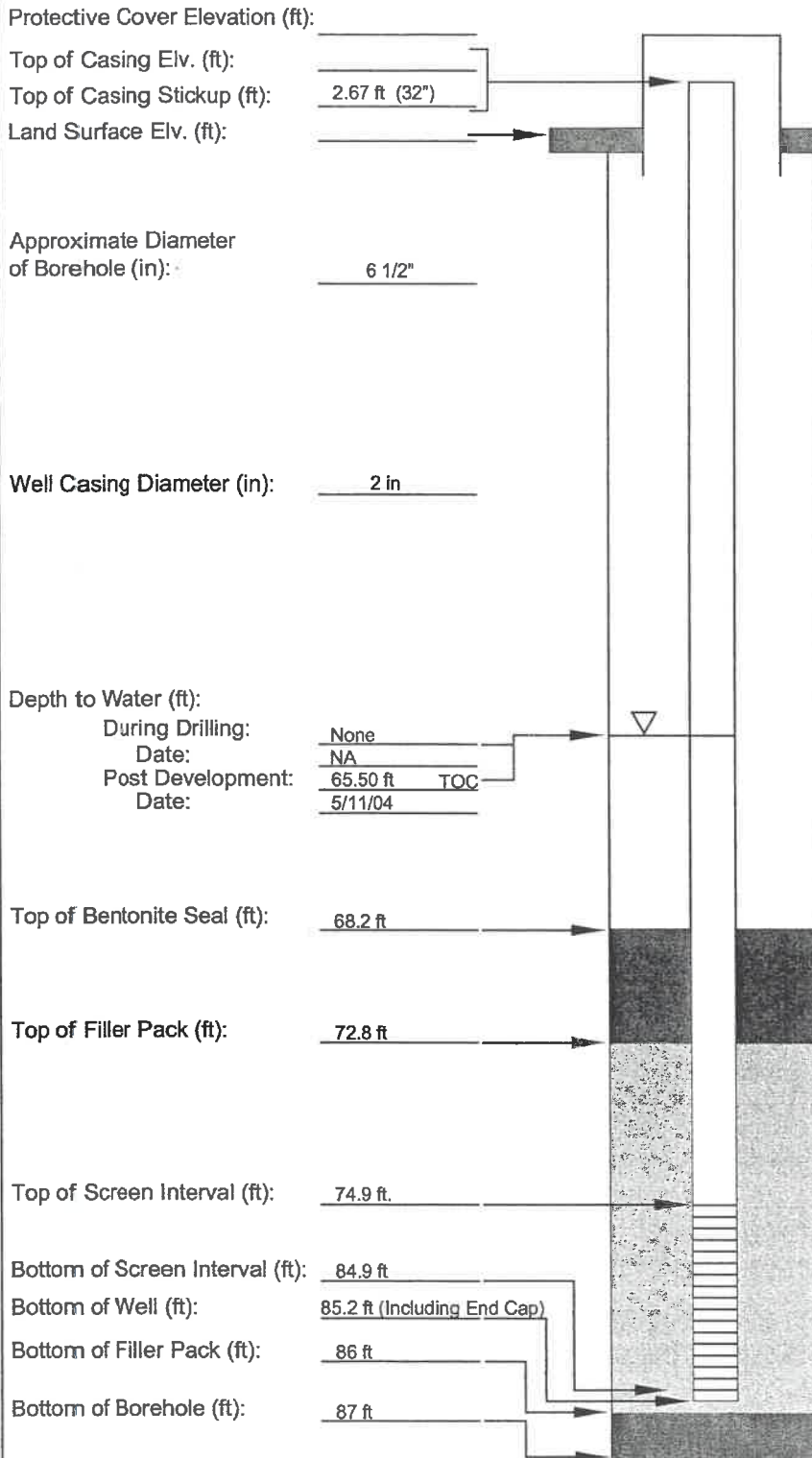
6 GROUT MATERIAL: 1 Neat cement 2 Cement grout 3 Bentonite 4 Other .....  
 Grout Intervals: From **0** ft. to **68.2** ft., From **68.2** ft. to **72.8** ft., From ..... ft. to ..... ft.  
 What is the nearest source of possible contamination:  
 1 Septic tank 4 Lateral lines 7 Pit privy 10 Livestock pens 14 Abandoned water well  
 2 Sewer lines 5 Cess pool 8 Sewage lagoon 11 Fuel storage 15 Oil well/Gas well  
 3 Watertight sewer lines 6 Seepage pit 9 Feedyard 12 Fertilizer storage 13 Insecticide storage 16 Other (specify below) **Rainwater**  
 Direction from well? **999** How many feet? **999**

FROM	TO	LITHOLOGIC LOG	FROM	TO	PLUGGING INTERVALS
			0	15	Cement cap
			15	68.2	Neat cement
			68.2	72.8	Bentonite chips
			72.8	85.2	10/20 sand

7 CONTRACTOR'S OR LANDOWNER'S CERTIFICATION: This water well was **(1)** constructed, (2) reconstructed, or (3) plugged under my jurisdiction and was completed on (mo/day/year) **4/28/04** and this record is true to the best of my knowledge and belief. Kansas Water Well Contractor's Licence No **6665** This Water Well Record was completed on (mo/day/yr) **5/13/04** under the business name of **Mattwell Environmental** by (signature) **Steve Eyll**

# MONITORING WELL CONSTRUCTION

Project:	Koch - DeSoto, Kansas	Well Number:	DG-6
Location:	Sunflower Army Ammunition Plant, South Acid Area	Site Location:	
Client:	Koch Industries	Installation Date:	4/26/04
Subcontractor:	Pratt Well Drilling	Northing:	
Driller:	Mac McCaskey	Easting:	
Shaw Field Representative:	Rick Ellis	NAD:	NGVD:



Protective Casing:	
Type:	Steel
Dimensions (in):	4" x 4"
Length (ft):	5 ft.
Guard Post:	NA

Ground Seal (Surface Pad):	
Dimensions:	2' x 2'
Type:	Concrete

Annular Space Seal:	
Type:	Bentonite-Cement Grout
Installation:	Gravity <u>Tremie</u> Pumped

Bentonite Seal:	
Manufacturer:	Baroid
Type:	Pellets <u>Holeplug</u> Slurry
Installation:	6-in lifts One Section <u>Gravity</u> Tremie Pumped
Hydration time (hrs):	>2 Hrs.

Filler Pack Material:	
Manufacturer:	Oglebay-Norton
Product Name:	Colorado Silica Sand
Size:	10/20
Volume Added (ft <sup>3</sup> ):	
Installation:	<u>Gravity</u> Tremie

Well Casing:	
Manufacturer:	Aurora Tile/ Horizon Envir.
Type:	Sch. 40 PVC
Diameter (in):	2"

Well Screening Casing:	
Manufacturer:	Aurora Tile/ Horizon Envir.
Type:	Sch. 40 PVC
Slot Size (in):	0.010 % Open
Slot Type:	Continuous <u>Factory slot</u> wrap

Sump/ <u>End Cap</u> :	~3"
Backfill Material:	Fall Back (~1')



NOT TO SCALE



**Shaw**® SHAW Environmental, Inc.

# BORING LOGS

PROJECT NUMBER: 103353	PROJECT NAME: KOCH INDUSTRIES DeSoto, Kansas		
BORING NUMBER: DG-6	COORDINATES:	DATE: 4/23/04	
ELEVATION:	GWL: Depth <sup>65.50 ft</sup> BTOC	Date 5/11/04	DATE STARTED: 4/23/04
ENGINEER/GEOLOGIST: Rick Ellis	Depth	Date	DATE COMPLETED: 4/26/04
DRILLING METHODS:	Air Hammer w/ 6 1/2" Bit		PAGE: 1 OF 4

DEPTH ( FT )	LITHOLOGIC DESCRIPTION	REMARKS
0		
1		
2		
3		
4		
5	Brown sandy clay w/ gravel, fill, slightly moist, plastic	
6		
7		
8		PID= 0.0ppm
9		
10	Brown sandy clay w/ gravel, fill, slightly moist, plastic	10ft @ 10:54
11	Bedrock @ 11ft	
12		
13		
14		
15	Limestone, gray, micritic, angular cuttings, dry	
16		
17		
18		
19		
20	Shale, gray to dark gray, soft, dry	
21		
22		
23		
24		
25	Silty shale/ shaley siltstone w/ lime, gray to dark gray, hard, dry	Does not desolve in water like the shale

Drilling Contractor: Pratt Well Service  
 Drilling Equipment: Failing SD300 w/air  
 Driller: Mac McCaskey



SHAW Environmental, Inc.

# BORING LOGS

PROJECT NUMBER:	103353	PROJECT NAME:	KOCH INDUSTRIES DeSoto, Kansas		
BORING NUMBER:	DG-6	COORDINATES:	DATE:	4/23/04	
ELEVATION:		GWL: Depth	65.50 ft BTOC	Date	5/11/04
ENGINEER/GEOLOGIST:	Rick Ellis	Depth	Date	DATE COMPLETED:	4/26/04
DRILLING METHODS:	Air Hammer w/ 6 1/2" Bit			PAGE:	2 OF 4

DEPTH ( FT )	LITHOLOGIC DESCRIPTION	REMARKS
25	Silty shale/ shaley siltstone w/ lime, gray to dark gray, hard, dry	Does not desolve in water like the shale
26		
27		
28		
29		
30	Shale, gray to dark gray, slightly moist	30ft @ 11:15am
31		
32		
33		
34		
35	Dark grayish brown limestone w/ trace shale, dry	
36		
37		
38		
39		
40	Dark grayish brown limestone w/ some shale, dry	40ft. @11:22am
41		
42		
43		
44		
45	Limestone, gray, micritic, trace shale, dry	
46		
47		
48		
49		
50	Limestone, gray, micritic, dry	

Drilling Contractor: Pratt Well Service  
 Drilling Equipment: Failing SD300 w/ air  
 Driller: Mac McCaskey



# BORING LOGS

SHAW Environmental, Inc.

PROJECT NUMBER: 103353	PROJECT NAME: KOCH INDUSTRIES DeSoto, Kansas
BORING NUMBER: DG-6	COORDINATES: _____ DATE: 4/23/04
ELEVATION: _____	GWL: Depth <sup>65.50 ft</sup> BTOC Date 5/11/04 DATE STARTED: 4/23/04
ENGINEER/GEOLOGIST: Rick Ellis	Depth _____ Date _____ DATE COMPLETED: 4/26/04
DRILLING METHODS: Air Hammer w/ 6 1/2" Bit	PAGE: 3 OF 4

DEPTH ( FT )	LITHOLOGIC DESCRIPTION	REMARKS
50	Limestone, gray, micritic, dry	
51		
52		
53		
54		
55	Limestone, very light gray, dry	55ft @ 11:31
56		
57		
58		
59		
60	Limestone, grayish brown, some shale, dry	Began drilling again on 4/26/04 @ 14:42
61		
62		
63		
64		
65	Limestone, trace shale, gray, dry	
66		
67		
68		
69		
70	Limestone, gray, micritic, dry	
71		
72		
73		
74		
75	Limestone, gray to light gray, dry	Cuttings mostly powder- hard to describe

Drilling Contractor: Pratt Well Service  
 Drilling Equipment: Failing SD300 w/air  
 Driller: Mac McCaskey



SHAW Environmental, Inc.

# BORING LOGS

PROJECT NUMBER:	103353	PROJECT NAME:	KOCH INDUSTRIES DeSoto, Kansas	
BORING NUMBER:	DG-6	COORDINATES:	DATE:	4/23/04
ELEVATION:		GWL: Depth	67.50 ft BTOC	Date 5/11/04
ENGINEER/GEOLOGIST:	Rick Ellis	Depth	Date	DATE COMPLETED: 4/26/04
DRILLING METHODS:	Air Hammer w/ 6 1/2" Bit			PAGE: 4 OF 4

DEPTH ( FT )	LITHOLOGIC DESCRIPTION	REMARKS
75	Limestone, gray to light gray, dry	Cuttings mostly powder - hard to describe
76		
77		
78		
79		
80	Limestone, gray, dry	
81		
82		
83		
84		
85	Shale, gray to dark gray, dry	
86		
87	TD == 87ft	

Drilling Contractor: Pratt Well Service  
Drilling Equipment: Failing SD300 w/air  
Driller: Mac McCaskey