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Mo Oil & Gas Council

FORM OGC-3I

STATE OF MISSOURI
MISSOURI DEPARTMENT OF NATURAL RESOURCES
GEOLOGICAL SURVEY PROGRAM

INJECTION WELL PERMIT APPLICATION

(TO DRILL, DEEPEN, PLUG BACK, OR CONVERT AN EXISTING WELL)

NOTE ▶ Permit approval **for drilling only, not injection**. Approval or denial for injection determined after Mechanical Integrity Test results reviewed and official notification given.

☑ APPLICATION TO DRILL ☐ DEEPEN ☐ PLUG BACK ☐ FOR AN OIL WELL ☐ OR GAS WELL

NAME OF COMPANY OR OPERATOR		DATE	
Kansas Resource Exploration & Development, LLC		10/10/2012	
ADDRESS	CITY	STATE	ZIP CODE
9393 W 110th Street, Suite 500	Overland Park	KS	66210

DESCRIPTION OF WELL AND LEASE

NAME OF LEASE	WELL NUMBER	ELEVATION (GROUND
Belton Unit	RW-91	1102'

WELL LOCATION (GIVE FOOTAGE FROM SECTION LINES)
3133' ft. from ☐ North ☑ South section line 2367 ft. from ☑ East ☐ West section line

WELL LOCATION	LATITUDE	LONGITUDE	COUNTY
Sec. 16 Township 46 North Range 33 ☐ East ☑ West	N38 48' 38.732"	W94 34' 31.679"	Cass 037

NEAREST DISTANCE FROM PROPOSED LOCATION TO PROPERTY OR LEASE LINE 346 FEET

DISTANCE FROM PROPOSED LOCATION TO NEAREST DRILLING, COMPLETED OR APPLIED – FOR WELL ON THE SAME LEASE 10 FEET SPECIAL PROJECT

PROPOSED DEPTH	ROTARY OR CABLE TOOLS	DRILLING CONTRACTOR, NAME AND ADDRESS	APPROX. DATE WORK WILL START
650 feet elev. 452'	Rotary	Utah Oil, LLC	11/01/2012

NUMBER OF ACRES IN LEASE: 560

NUMBER OF WELLS ON LEASE INCLUDING THIS WELL, COMPLETED IN OR DRILLING TO THIS RESERVOIR 124

NUMBER OF ABANDONED WELLS ON LEASE 0

IF LEASE PURCHASED WITH ONE OR MORE WELLS DRILLED, FROM WHOM PURCHASED?
NAME DE Exploration
ADDRESS 4595 Highway K33, Wellsville, KS 66092

NO. OF WELLS: PRODUCING 71; INJECTION 44; INACTIVE 8; ABANDONED 0

STATUS OF BOND	☐ SINGLE WELL AMOUNT $ ____	☑ BLANKET BOND AMOUNT $ 160,000	☑ ON FILE ☐ ATTACHED

REMARKS: (IF THIS IS AN APPLICATION TO DEEPEN OR PLUG BACK, BRIEFLY DESCRIBE WORK TO BE DONE, GIVING PRESENT PRODUCING/INJECTION ZONE AND EXPECTED NEW INJECTION ZONE; USE BACK OF FORM IF NEEDED)

PROPOSED CASING PROGRAM				APPROVED CASING – TO BE FILLED IN BY STATE GEOLOGIST			
AMOUNT	SIZE	WT/FT	CEM.	AMOUNT	SIZE	WT/FT	CEM.
20'	7"	14	8 sks	20'	7"	14	Full Length
650'	2 7/8"	6.5	100 sks	650'	2 7/8"	6.5	

I, the Undersigned, state that I am the COO of the KREd (Company), and that I am authorized by said company to make this report, and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct, and complete to the best of my knowledge.

SIGNATURE: DK

DATE: 10/10/12

PERMIT NUMBER: 21173

APPROVED DATE: 12-20-12

APPROVED BY: Joseph A. Millman

☒ DRILLER'S LOG REQUIRED
☒ CORE ANALYSIS REQUIRED IF RUN
☐ SAMPLES REQUIRED
☒ SAMPLES NOT REQUIRED
☐ WATER SAMPLES REQUIRED AT ____
☒ E-LOGS REQUIRED IF RUN
☒ DRILL SYSTEM TEST INFO REQUIRED IF RUN

NOTE ▶ THIS PERMIT NOT TRANSFERABLE TO ANY OTHER PERSON OR TO ANY OTHER LOCATION. APPROVAL OF THIS PERMIT BY THE OIL AND GAS COUNCIL DOES NOT CONSTITUTE ENDORSEMENT OF THE GEOLOGIC MERITS OF THE PROPOSED WELL NOR ENDORSEMENT OF THE QUALIFICATIONS OF THE PERMITTEE

P/M ~230' below TD
P/M ~250' el.

MO 780-0212 (6-06) REMIT TWO (2) COPIES TO: GEOLOGICAL SURVEY PROGRAM, PO BOX 250, ROLLA, MO 65402 573/ 368-2143.

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ONE (1) COPY WILL BE RETURNED.

I, Leech of the Utah (Company), confirm that an approved drilling permit has been obtained by the owner of this well. Council approval of this permit will be shown on this form by presence of a permit number and signature of authorized council representative.

DRILLER'S SIGNATURE	DATE
B. Leech	10/9/12

PROPOSED OPERATIONS DATA

PROPOSED AVERAGE DAILY INJECTION,	PRESSURE 300 PSIG, RATE .035 BPD/(GPM) VOLUME 50 (BBL)/GAL
APPROVED AVERAGE DAILY INJECTION, (TO BE FILLED IN BY STATE GEOLOGIST)	PRESSURE 300 PSIG, RATE .035 BPD/GPM, VOLUME 50 BBL/GAL
PROPOSED MAXIMUM DAILY INJECTION,	PRESSURE 300 PSIG, RATE .035 BPD/(GPM) VOLUME 50 (BBL)/GAL
APPROVED MAXIMUM DAILY INJECTION, (TO BE FILLED IN BY STATE GEOLOGIST)	PRESSURE 300 PSIG, RATE .035 BPD/GPM, VOLUME 50 BBL/GAL

ESTIMATED FRACTURE PRESSURE GRADIENT OF INJECTION ZONE 0.43 PSI/FOOT

DESCRIBE THE SOURCE OF THE INJECTION FLUID Squirrel sandstone produced water and rural water

NOTE ▶ SUBMIT AN APPROPRIATE ANALYSIS OF THE INJECTION FLUID. (SUBMIT ON SEPARATE SHEET)

DESCRIBE THE COMPATIBILITY OF THE PROPOSED INJECTION FLUID WITH THAT OF THE RECEIVING FORMATIONS, INCLUDIUNG TOTAL DISSOLVED SOLIDS COMPARISONS

We have been using these injection fluids since the waterflood began with no issues. The formations respond to injection fluids. The injection fluids consist of recycled formation water and fresh water.

GIVE AN ACCURATE DESCRIPTION OF THE INJECTION ZONE INCLUDING LITHOLOGIC DESCRIPTIONS, GEOLOGIC NAME, THICKNESS, DEPTH, POROSITY, AND PERMEABILITY.

The upper, middle, and lower Squirrel Sandstone depth ranges from 500-600 feet with an average thickness of 90 feet. The upper Squirrel is generally 30 feet thick with 21% average porosity and 172 millidarcy's average permeability. The middle Squirrel is generally 20 feet thick with 22% average porosity and 1,000 millidarcy's average permeability. The lower Squirrel is generally 40 feet thick with 20.5% average porosity and 593 millidarcy's average permeability.

GIVE AN ACCURATE DESCRIPTION OF THE CONFINING ZONES INCLUDING LITHOLOGIC DESCRIPTION, GEOLOGIC NAME, THICKNESS, DEPTH, POROSITY, AND PERMEABILITY.

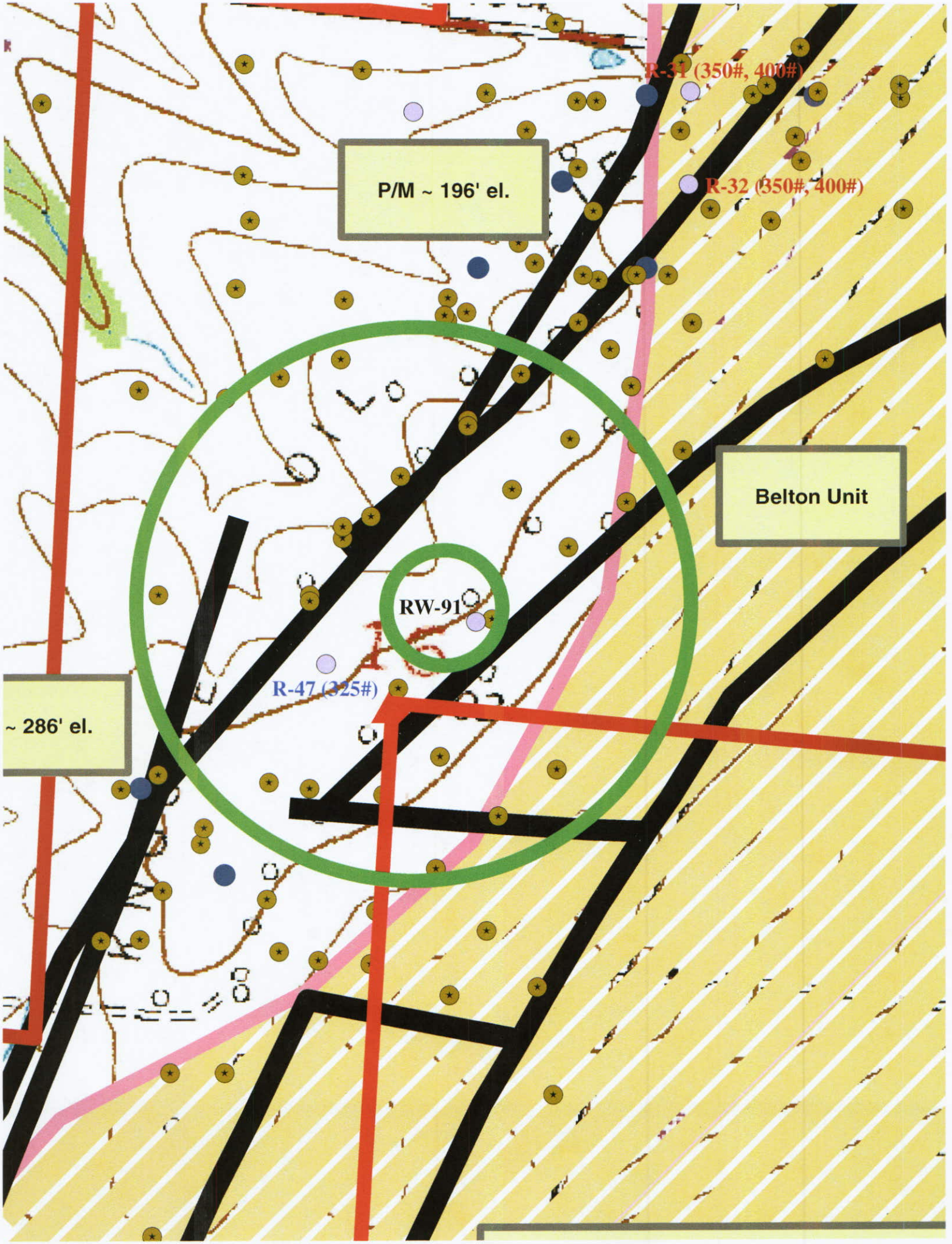
The confining layers of the Squirrel Sandstone consist of the the Fort Scott group above the sandstone and the Verdigris formation below the sandstone. The Fort Scott contains two prominent shales, the Blackwater Creek and the Excello, as well as the Blackjack Creek limestone that has a total thickness of 30-50 feet. The Verdigris formation consists of the the Ardmore limestone member and the Oakley shale with a total thickness of 20-40 feet. The zones are impermeable at less than 3% porosity.

SUBMIT ALL AVAILABLE LOGGING AND TESTING DATA ON THE WELL

GIVE A DETAILED DESCRIPTION OF ANY WELL NEEDING CORRECTIVE ACTION THAT PENETRATES THE INJECTION ZONE IN THE AREA OF REVIEW (1/2 MILE RADIUS AROUND WELL). INCLUDE THE REASON FOR AND PROPOSED CORRECTIVE ACTION.

No corrective action needed.

REMIT TWO (2) COPIES TO: GEOLOGICAL SURVEY PROGRAM, PO BOX 250, ROLLA, MO 65402 573/ 368-2143.
ONE (1) COPY WILL BE RETURNED.


R-31 (350#, 400#)
R-32 (350#, 400#)
P/M ~ 196' el.
Belton Unit
RW-91
R-47 (325#)
~ 286' el.

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STATE OF MISSOURI
MISSOURI DEPARTMENT OF NATURAL RESOURCES
GEOLOGICAL SURVEY PROGRAM

INJECTION WELL LOCATION PLAT

FORM OGC-41

OWNER'S NAME
Kansas Resource Exploration & Development, LLC (K.R.E.D)

LEASE NAME
Belton Unit RW-91

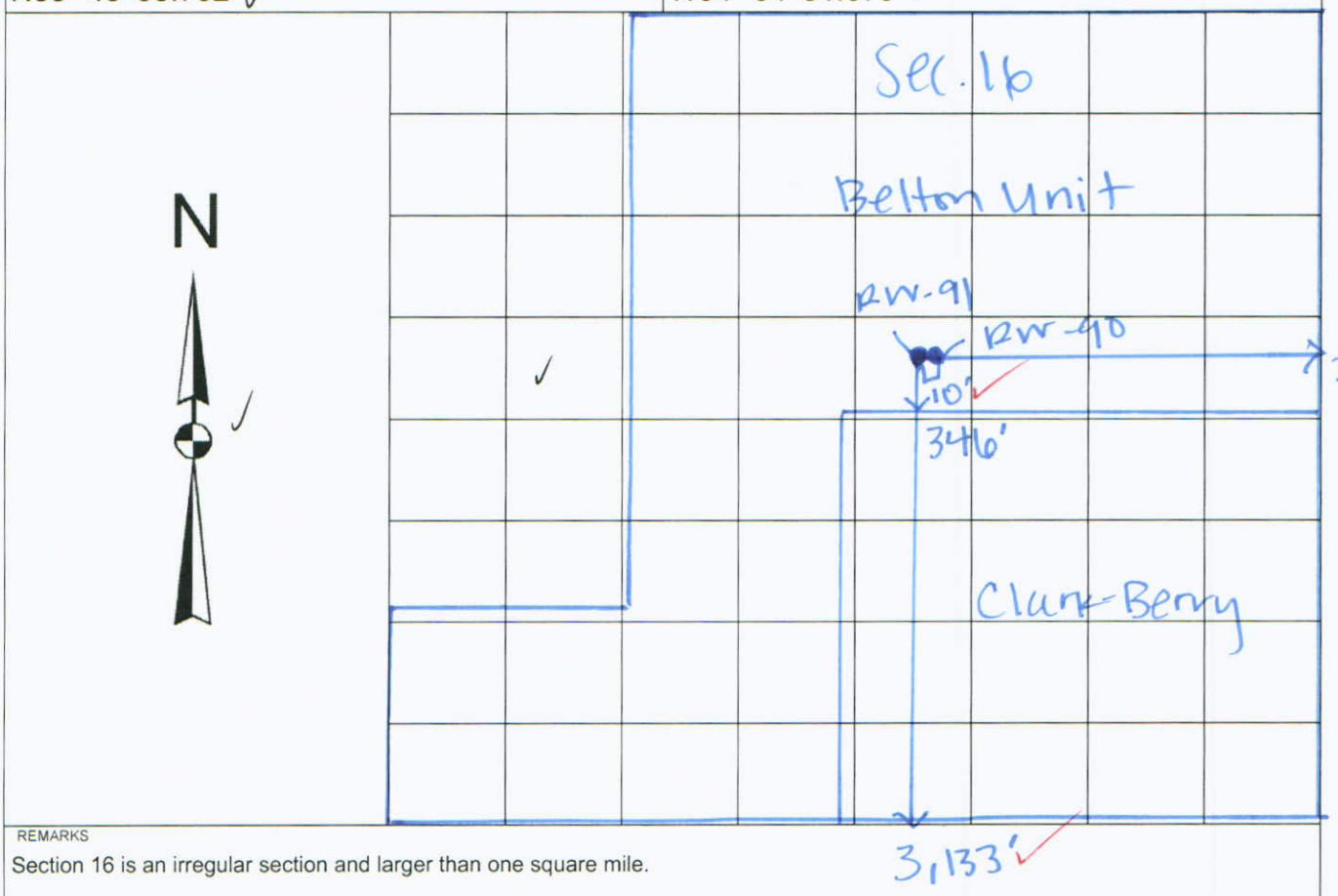
COUNTY
Cass

WELL LOCATION (GIVE FOOTAGE FROM SECTION LINES)
3133 ft. from ☐ North ☑ South section line 2367 ft. from ☑ East ☐ West section line

WELL LOCATION
Sec. 16 Township 46 North Range 33 ☐ East ☑ West

LATITUDE
N38° 48' 38.732"

LONGITUDE
W94° 34' 31.679"



REMARKS
Section 16 is an irregular section and larger than one square mile.

Plat Map Scale - 1 Square = 682.25 feet

INSTRUCTIONS

On the above plat, show distance of the proposed well from the two nearest section lines, the nearest lease line, and from the nearest well on the same lease completed in or drilling to the same reservoir. Do not confuse survey lines with lease lines. See rule 10 CSR 50-2.030 for survey requirements. Lease lines must be marked.

This is to certify that I have executed a survey to accurately locate oil and gas wells in accordance with 10 CSR 50-2.030 and that the results are correctly shown on the above plat.

REGISTERED LAND SURVEY

NUMBER

Missouri Department of Natural Resources
Geographic Information Systems

Check Location

Select a coordinate format, enter a pair of coordinates in the boxes below it, and then press the SUBMIT button. Please be patient while your information is retrieved. Your coordinates will be converted to the other formats, the information on the right-hand side of the page will be filled in based on your coordinates, and a map will be generated. NOTE: All coordinates must use the North American Datum of 1983 (NAD83).

Submit

○ Universal Transverse Mercator [Zone 15 North]

Easting
363211.21543397405 meters
Northing
4296955.495747611 meters

○ Decimal Degrees

Latitude
38.810758888888884 °
Longitude
-94.57546638888888 °

◉ Degrees, Minutes and Seconds

Latitude Degrees
38 °
Latitude Minutes
48 '
Latitude Seconds
38.732 "
Longitude Degrees
-94 °
Longitude Minutes
34 '
Longitude Seconds
31.679 "

Metadata

- Interstate Highways
- US Highways
- State Highways
- Railroad
- Major and Minor Roads
- County Boundary
- Lakes
- Major Rivers
- Rivers and Streams
- Missouri River
- Mississippi River
- Municipal

UTM Zone 15N [Easting, Northing]	[363211.2, 4296955.4] meters
Decimal Degrees [Lat, Lon]	[38.810758°, -94.575467°]
Deg, Min, Sec [Lat, Lon]	[38° 48' 38.7", -94° 34' 31.6"]
County Name	Cass
County FIPS Code	037
Legal Description	Section 16 T46N R33W
Municipality	NO VALUE
House District	123
Senate District	31
Congressional District	5
MoDNR Region	Kansas City Regional Office
USGS 1:24,000 Quadrangle	Belton [38094-G5]
8 Digit Watershed	10300101 [Lower Missouri-Crooked]
10 Digit Watershed	1030010101 [Blue River]
12 Digit Watershed	103001010104 [Camp Branch-Blue River]
Special Well Drilling Area	Area 2
Ecological Drainage Unit	Central Plains/Blackwater/Lamine
Level III Ecoregion	Central Irregular Plains
Query Time	11.156 s

Rows with red text indicate that the input location is too close to a boundary to produce reliable results.

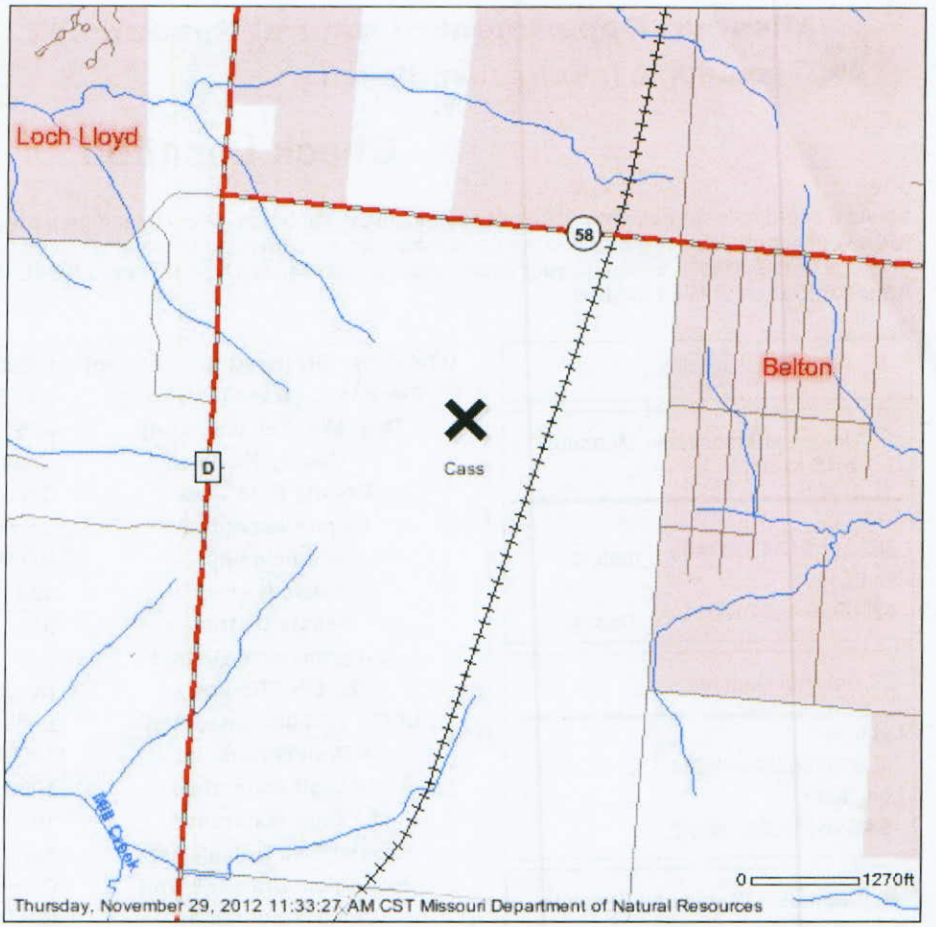
NOTE: A result of 'NO VALUE' is usually an indication that no data was found for the location. For example, not every point in Missouri will lie within a municipal boundary, so some will result in a 'NO VALUE'. If 'County Name' results in 'NO VALUE', your point probably lies outside the state.

Well ID: #005390
Elev. 1069'
$\frac{PP}{M}$: 229' elev. PP_c-M: 345'

Well ID: #026255 in lease
PP_c: 535' TD

1102 - 535 - 345
$\Rightarrow \frac{PP}{M}$ ~222' elev.

Legend
- Interstate Highways
- US Highways
- State Highways
- Railroad
- Major and Minor Roads
- County Boundary
- Lakes
- Major Rivers
- Rivers and Streams
- Missouri River
- Mississippi River
- Municipal



View Scale 1:24,000

DISCLAIMER: Although this map has been compiled by the Missouri Department of Natural Resources, no warranty, expressed or implied, is made by the department as to the data and related materials. The act of distribution shall not constitute any such warranty, and no responsibility is assumed by the department in the use of these data or related materials.

Missouri Department of Natural Resources

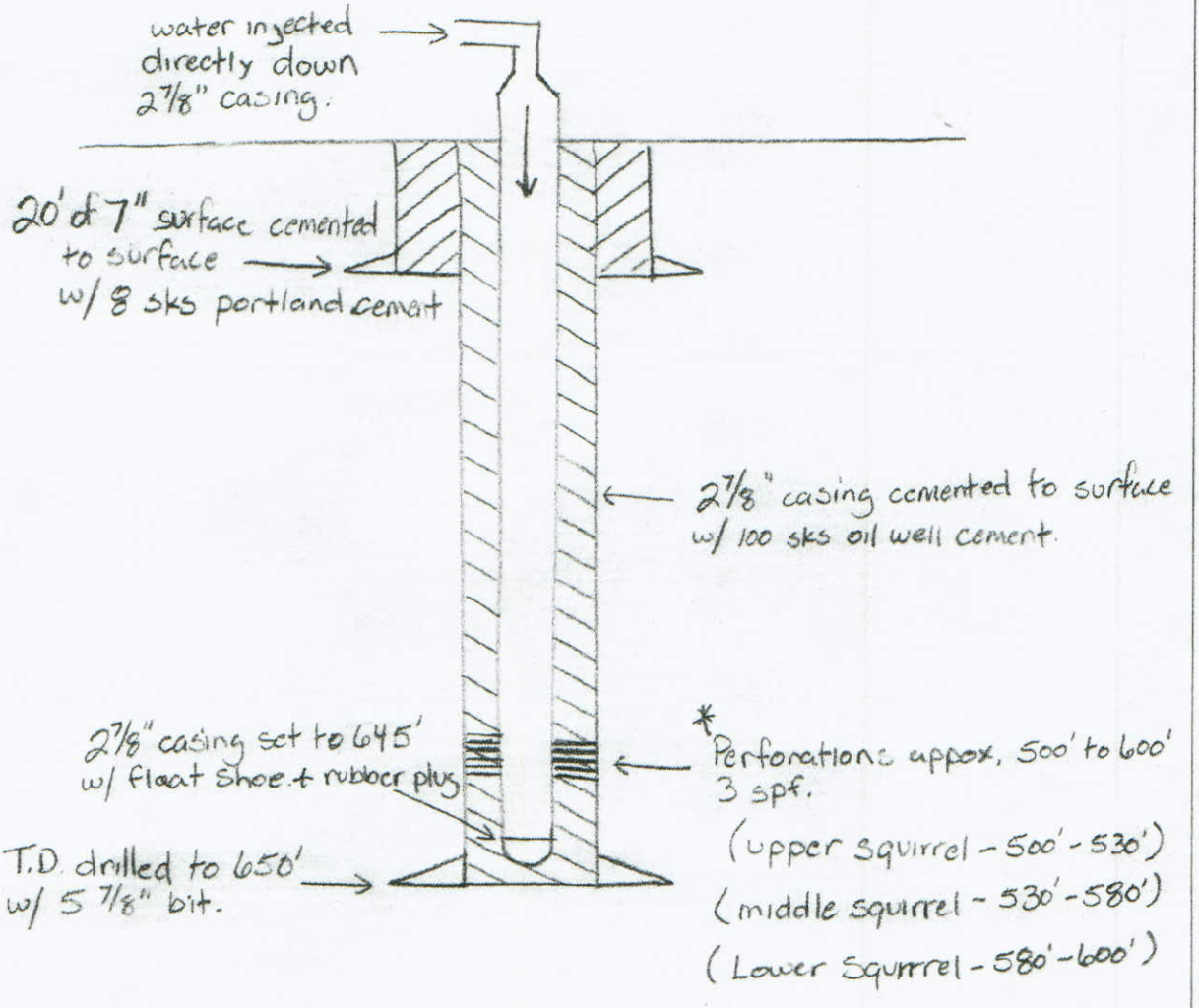
P.O. Box 176, Jefferson City, MO 65102
800-361-4827 / 573-751-3443
E-mail: contact@dnr.mo.gov

STATE OF MISSOURI
MISSOURI DEPARTMENT OF NATURAL RESOURCES
GEOLOGICAL SURVEY PROGRAM

INJECTION WELL SCHEMATIC

OGC-11

COUNTY	PERMIT NUMBER	OPERATOR	WELL NUMBER
Cass		Kansas Resource Exploration & Development	RW-91



* Upper, middle and lower Squirrel sections confined by Shale and Limestone.

INSTRUCTIONS ON THE ABOVE SPACE DRAW A NEAT, ACCURATE SCHEMATIC DIAGRAM OF THE APPLICANT INJECTION WELL, INCUDING THE FOLLOWING: CONFIGURATION OF WELLHEAD, TOTAL DEPTH OR PLUG BACK TOTAL DEPTH, DEPTH OF ALL INJECTION OR DISPOSAL INTERVALS, AND THEIR FORMATION NAMES, LITHOLOGY OF ALL FORMATIONS PENETRATED, DEPTHS OF THE TOPS AND BOTTOMS OF ALL CASING AND TUBING, SIZE AND GRADE OF ALL CASING AND TUBING, AND THE TYPE AND DEPTH OF PACKER, DEPTH, LOCATION, AND TYPE OF ALL CEMENT, DEPTH OF ALL PERFORATIONS AND SQUEEZE JOBS, AND GEOLOGIC NAME AND DEPTH TO BOTTOM OF ALL UNDERGROUND SOURCES OF DRINKING WATER WHICH MAY BE AFFECTED BY THE INJECTION. USE BACK IF ADDITIONAL SPACE IS NEEDED, OR ATTACH SHEET.

REMIT TWO (2) COPIES TO: GEOLOGICAL SURVEY PROGRAM, PO BOX 250, ROLLA, MO 65402 (573) 368-2143.
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Well Schematic, Continued

The surface casing is 7" in diameter and is new, limited service grade pipe. The 7" is drifted and tested to 7,000 lbs. and weighs at least 17 lbs. per foot. The surface casing will be set to a minimum depth of 20 feet and extend 6 inches above the surface. Approximately 8 sacks of Portland cement will be circulated to surface and will secure the well and ensure the contents of the well bore are sealed off from sources of drinking water. The production casing used is 2 7/8" EUE upset, drifted and tested to 7,000 lbs. No tubing will be ran in the injection wells, the injection fluid will be injected directly down the 2 7/8" casing. The total depth of the well will be approximately 650 feet drilled with a 5 5/8" bit. A 2 7/8" flapper type float shoe will be set at the base of the 2 7/8" casing pipe (645 feet) with centralizers installed to center the casing inside the well bore for better cement bonding. The 2 7/8" casing will be cemented from 650 feet to surface using a 2 7/8" rubber plug for displacing the cement. Approximately 100 sacks of high-grade Oil Well cement will be used to cement all wells. This cement will ensure that no contents of the pipe will leave the well bore. The top of the 2 7/8" casing will extend approximately one foot above ground level. After the cement has cured and effectively bonded to the 2 7/8" casing, perforations will be made in the Squirrel Sandstone formation from approximately 500-600 feet, depending on where the oil sand is present at this particular location. Wells will be shot with 3 perforations per foot where the squirrel sandstone oil reservoir is present and capable of water injection. No water sources are present at this depth and will not be affected by these perforations or the injection. The relevant sources of drinking water are located less than 20 feet below surface. The 7" surface pipe and durable Portland cement ensures these water sources will remain free from contamination from drilling and injection activity. Other sources of potential usable water may be present, however not always potable, in the Pennsylvanian and Mississippian formations located approximately 150 feet or deeper below the base of the Squirrel Sandstone.

The lithology of all formations penetrated by the wellbore are as follows:

Formation	Total Depth (feet)
Soil	0 – 2
Clay	2 – 6
Lime	6 – 28
Shale	28 – 49
Lime	49 – 64
Shale	64 – 69
Red Bed	69 – 78
Shale	78 – 82

Lime	82 – 87	
Shale	87 – 105	
Gray Sand	105 – 124	
Shale	124 – 128	
Lime	128 – 130	
Shale	130 – 147	
Lime	147 – 177	
Shale (Slate 183 – 184)	177 – 186	
Lime	186 – 204	
Shale (Slate 207 – 208)	204 – 209	
Lime	209 – 211	
Shale	211 – 214	
Lime "Hertha"	214 – 220	**Top Pawnee Limestone**
Shale	220 – 259	
Lime	259 – 260	
Gray Sand "Knobtown"	260 – 262	
Shale	262 – 324	
Gray Sand	324 – 329	
Shale	329 – 358	
Gray Sand	358 – 362	**Base Pawnee Limestone**
Shale	362 – 399	**Top Labette Shale**
Lime	399 – 401	
Shale	401 – 404	
Lime	404 – 406	
Shale (Slate 411 – 412)	406 – 417	
Lime	417 – 424	
Shale	424 – 427	
Gray Sand	427 – 431	**Base Labette Shale**

Shale	431 – 443	**Top Fort Scott**
Lime	443 – 448	**BlackJack Creek Limestone**
Shale (Slate 452 – 453)	448 – 469	**Summit Coal**
Gray Sand	469 – 471	**Base Fort Scott**
Sdy. Shale	471 – 501	
Very laminated Sand	501 – 502	**Top - Squirrel Sandstone**
Sandy Lime	502 – 503	
Slightly lamin. Sand	503 – 504	
Sandy Lime	504 – 505	
Solid Sand	505 – 506.5	
Shale	506.5 – 507	
Slightly lamin. Sand	507 – 507.5	
Sandy Shale	507.5 – 509.5	
Solid Sand	509.5 – 510.5	
Sandy Lime	510.5 – 511.5	
Solid Sand	511.5 – 515.5	
Sandy Lime	515.5 – 518	
Solid Sand	518 – 520	
Sandy Lime	520 – 521	
Solid Sand	521 – 525	
Sandy Lime	525 – 526	
Laminated Sand	526 – 527	
Sandy Shale	527 – 528.5	
Sandy Lime	528.5 – 530	
Solid Sand	530 – 533	
Sandy Lime	533 – 534	
Sandy Shale	534 – 535	
Slightly laminated Sand	535 – 536.5	

Sandy Lime	536.5 – 538	
Solid Sand	538 – 539	
Lime and Shells	539 – 541	
Sand lamin. w/ Sandy Lime	541 – 542	
Lime and Shells	542 – 543	
Solid Sand	543 – 544.5	
Sandy Lime and Shells	544.5 – 547.5	
Sand and Shells	547.5 – 548.5	
Lime and Shells	548.5 – 552	
Solid Sand	552 – 553	
Lime and Shells	553 – 555.5	
Sand and Shells	555.5 – 559.5	
Lime and Shells	559.5 – 563.5	
Solid Sand	563.5 – 582.5	
Slightly laminated	582.5 – 583.5	
Shale and Shells	583.5 – 587.5	
Solid Sand	587.5 – 590.5	
Sand and Shells	590.5 – 591.5	
Solid Sand	591.5 – 593	
Lime	593 – 593.5	
Very laminated Sand	593.5 – 596	**Base – Squirrel Sandstone**
Shale (Slate 610 – 611)	596 – 616	**Top – Verdigris**
Lime	616 – 617	**Ardmore Limestone**
Shale (Slate 621 – 622)	617 – 650	**Oakley Shale**

Belton Unit, Cass County, Missouri

Re: Closure Pressure

Attached is a reproduction from "*Production Operations, Vol. 2*" by Allen and Roberts describing the fracturing pressures in a reservoir.

The fracture propagation pressure is approximately the same as the closure pressure, although slightly higher. This difference is less significant in low pressure reservoirs such as the ones in the Cherokee Basin, consequently, they are considered to be the same. The fracture propagation pressure is the same as the instantaneous shut-in pressure (ISIP) experienced upon cessation of a hydraulic fracture treatment. The ISIP from a fracture procedure is the surface pressure measurement. Bottom-hole ISIP must be calculated by adding the surface ISIP and the product of the depth to mid-perforations (feet) and the pressure gradient of the fluid in the wellbore (psi/foot). For fresh water the fluid gradient is 0.434 psi/foot. Since the fluid in fracture operations is more dense than fresh water most engineers estimate the bottom-hole ISIP with a higher gradient. The state of Oklahoma uses a gradient of 0.50 psi/foot.

Utilizing ISIP's experienced at Belton, and a fresh water gradient of 0.434, the calculated bottom-hole ISIPs are:

WELL	DEPTH TO MID-PERF	ISIP (Surface)	ISIP (Perfs)
R32	626	400	672
R32	585	350	604
R31	600	400	660
R31	552	350	640
R47	620	325	594
AD20	536	400	633
AD20	582.5	400	653
AD9-2	610	400	665
AD9-2	507	400	620
AD16-2	544	400	636

The fracture propagation pressure is the pressure in which the aperture of the existing fractures can begin to be opened. An increase in injection rate is noted at this point on injection step-rate tests. At injection pressures at, or slightly above, the ISIP, the fractures in the immediate vicinity of the wellbore (inches) may be affected but not into the reservoir significantly. In actual injection operations of a waterflood at ISIP, fractures wouldn't be created beyond the region adjacent to the wellbore because of; 1) fluid leak-off into the formation, 2) the injection of a low viscosity fluid, and 3) the extremely low injection rates - far less than what is necessary to create a fracture.

minimum stress at the borehole, and must also overcome the tensile strength of the rock. This can be expressed as follows:

$$(P_i)_v = 3\,\bar{\sigma}_{h_2} - \bar{\sigma}_{h_1} + S_h + P \qquad (5)$$

where:

$(P_i)_v$ = borehole pressure required to initiate vertical fracture
$\bar{\sigma}_{h_1}$ = maximum principal horizontal matrix stress
$\bar{\sigma}_{h_2}$ = minimum principal horizontal matrix stress
S_h = horizontal tensile strength of rock
P = formation pore pressure

Penetrating Fluid Reduces Breakdown Pressure—A penetrating fluid increases the area over which pressurized fluid contacts the formation and can reduce the pressure necessary to initiate fracturing.

Laboratory and theoretical work by Fairhurst and Haimson[21] provides a basis for estimation of the magnitude of reduction in openhole. Generally reduction may be on the order of 25 to 40% in openhole.

Perforation Density and Orientation—Recent laboratory work in cased hole shows that breakdown or frac initiation pressure is affected by the number and arrangement of perforations.[25]

The existence of casing and the arrangement of perforations have little effect on created fracture orientation, but breakdown pressure is reduced by increased number of perforations. The practice of perforating with all shots in a vertical line on one side of the casing, Figure 8-6 significantly increases breakdown pressure if the perforations happen to be oriented 90° to the azimuth of the vertical fracture plane. Orientation of perforations does not affect azimuth of the vertical fracture however.

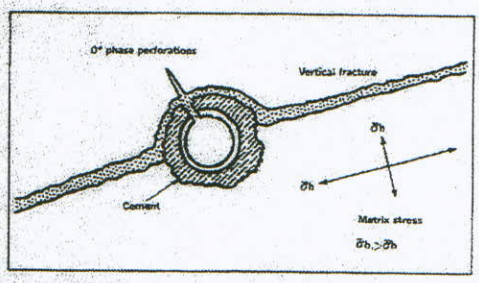

FIG. 8-6—*Orientation of perforation vs. least horizontal matrix stress. Condition resulting in highest breakdown pressure.*

Fracture Propagation

Once the fracture has been created and invaded by pressured fluid, the stress concentration near the wellbore is reduced, and the hydraulic pressure required to extend the fracture must merely overcome the component of the undisturbed stress field normal to the plane of the fracture.

Measuring Propagation Pressure and Frac Gradient—The fracture propagation pressure (and frac gradient) can be obtained during the fracing operation by recording the wellhead pressure immediately after the pumps are shut down following injection into the fracture (Figure 8-7). Since the frac gradient is increased by increased pore pressure, this measurement should be made before the pore pressure is significantly raised by the injected frac fluid.

Wellhead instantaneous shut-in pressure, corrected to the hole bottom by adding the hydrostatic pressure of the wellbore fluid column, is the *fracture propagation pressure. Fracture gradient* is the fracture propagation pressure divided by the formation depth.

Measuring Rock Matrix Stress—The minimum horizontal rock matrix stress is then:

$\bar{\sigma}_{h_1}$ = propagation pressure − pore pressure

This stress is of particular interest because it is the stress which propping agents must withstand in order to hold the fracture open. In actual practice pore pressure can be equated to static reservoir pressure provided fracture propagation pressure is measured before significant frac fluid is injected to raise the pore pressure level near the wellbore.

It should be noted that proppant in the critical area near the wellbore is subjected to more stress than that further away due to lower pore pressure near the wellbore in the producing process, Figure 8-8. This effect may be significant at high drawdown pressures.

Fracture Orientation

Fracture Propagates Perpendicular to Smallest Stress—Rocks fracture in a plane perpendicular to

Belton Unit, Cass County, Missouri

Re: Injection Volumes

Injection volumes are determined by using analogy from previous squirrel sandstone water floods that contain similar reservoir characteristics. In the case of the Belton Unit we plan to inject 1 barrel of water for every 1 net foot of oil bearing sandstone. (assuming this rate does not exceed the maximum approved injection pressure) Depending on the duration and impact of the surrounding wells some injection wells may ultimately inject 3 barrels of water for every 1 net foot of oil bearing sandstone.

Due to the permeability variance of the reservoir we typically will not exceed 15' of perforations per injection well.

Example;

Year 1

15' perforations x 1 bbl/ft = 15 BPD injection rate

Year 2

15' perforations x 2 bbls/ft = 30 BPD injection rate

Year 3

15' perforations x 3 bbls/ft = 45 BPD injection rate

We typically do not exceed 3 bbls/ft injection rate, which is why we are requesting only 50 BPD rate.

AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

In the grid below, place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other - specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion of information, detailing the cement, casing, and subsurface casing information.

LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Belton Unit	R-1	569 FROM (N)(S) SEC LINE 2412 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	619'	O	04/08/1999	04/13/1999	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-2	1489 FROM (N)(S) SEC LINE 1624 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	600'	O	06/04/1999	06/10/1999	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-3	1436 FROM (N)(S) SEC LINE 2423 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	665'	O	02/29/2000	03/02/0200	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-4	3832 FROM (N)(S) SEC LINE 2073 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	680'	O	03/02/2000	03/07/2000	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-5	168 FROM (N)(S) SEC LINE 2406 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	639'	O	04/23/2000	04/25/2000	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-6	171 FROM (N)(S) SEC LINE 2890 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	608'	O	04/27/2000	04/28/2000	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-7	571 FROM (N)(S) SEC LINE 2901 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	646'	O	05/01/2000	05/02/2000	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-8	1023 FROM (N)(S) SEC LINE 2894 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	655'	O	05/05/2000	05/08/2000	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-9	1008 FROM (N)(S) SEC LINE 2418 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	651'	O	05/03/2000	05/05/2000	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump

AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

In the grid below, place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other - specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion of information, detailing the cement, casing, and subsurface casing information.

LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Belton Unit	R-10	1005 FROM (N)(S) SEC LINE 1980 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	627'	O	05/15/2000	05/16/2000	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-11	567 FROM (N)(S) SEC LINE 1968 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	626'	O	05/10/2000	05/12/2000	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-12	162 FROM (N)(S) SEC LINE 1957 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	642'	O	05/16/2000	05/18/2000	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-13	1449 FROM (N)(S) SEC LINE 1983 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	620'	O	05/22/2000	05/24/2000	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-14	174 FROM (N)(S) SEC LINE 3330 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	637'	O	09/17/2001	09/19/2001	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-15	573 FROM (N)(S) SEC LINE 3335 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	621'	O	12/15/2000	12/20/2000	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-16	3730 FROM (N)(S) SEC LINE 2548 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	652.5'	O	10/13/2003	10/15/2003	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-17	3670 FROM (N)(S) SEC LINE 1671 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	686'	O	01/29/2004	01/30/2004	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-18	2810 FROM (N)(S) SEC LINE 1637 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	914.5'	O	01/07/2004	01/09/2004	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump

MO 780-1136 (02-11)

AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

In the grid below, place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other - specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion of information, detailing the cement, casing, and subsurface casing information.

LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Belton Unit	R-19	4132 FROM (N)(S) SEC LINE 2070 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	621.5'	O	02/12/2004	02/13/2004	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-20	4260 FROM (N)(S) SEC LINE 2045 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	661'	O	01/18/2008	01/22/2008	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-21	3160 FROM (N)(S) SEC LINE 2045 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	635'	O	01/14/2008	01/16/2008	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-22	3160 FROM (N)(S) SEC LINE 1605 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	660'	O	12/04/2008	N/A	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-23	3320 FROM (N)(S) SEC LINE 2925 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	660'	O	U	N/A	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-24	3320 FROM (N)(S) SEC LINE 2485 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	658'	O	01/25/2008	N/A	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	R-25	3320 FROM (N)(S) SEC LINE 2045 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	660'	O	U	N/A	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	RI-1	368 FROM (N)(S) SEC LINE 2164 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	623'	Plugged	07/26/2000	08/31/2000	4 1/2" casing cemented to surface Plugged 6/27/18 - squeezed cement 623 to surface
Belton Unit	RI-2	795 FROM (N)(S) SEC LINE 2653 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	627'	I	U	U	4 1/2" casing cemented to surface

MO 780-1136 (02-11)

AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

In the grid below, place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other - specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion of information, detailing the cement, casing, and subsurface casing information.

LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Belton Unit	RI-3	1217 FROM (N)(S) SEC LINE 2675 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	635'	I	U	U	4 1/2" casing cemented to surface
Belton Unit	RI-4	1377 FROM (N)(S) SEC LINE 2202 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	641'	I	08/25/2000	08/29/2000	4 1/2" casing cemented to surface
Belton Unit	RI-5	790 FROM (N)(S) SEC LINE 2196 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	637'	I	U	U	4 1/2" casing cemented to surface
Belton Unit	RI-6	367 FROM (N)(S) SEC LINE 2187 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	644'	Plugged	U	U	4 1/2" casing cemented to surface Plugged 6/27/12 - Squeezed cement 644' to surface
Belton Unit	WSW-1	843 FROM (N)(S) SEC LINE 3529 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	891'	W	04/16/2001	04/14/2001	
Belton Unit	C-18	110 FROM (N)(S) SEC LINE 4241 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	571'	Plugged	U	U	Squeezed
Belton Unit	RW-7	374 FROM (N)(S) SEC LINE 3115 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	638'	Plugged I	02/10/2004	02/11/2004	4 1/2" casing cemented to surface Plugged 6/27/12 - Squeezed cement 638' to surface
Belton Unit	RW-8	3048 FROM (N)(S) SEC LINE 2714 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	641.5'	I	02/12/2004	02/13/2004	4 1/2" casing cemented to surface
Belton Unit	RW-9	3505 FROM (N)(S) SEC LINE 2770 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	647.5'	I	01/13/2004	01/15/2004	4 1/2" casing cemented to surface

AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

In the grid below, place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other - specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion of information, detailing the cement, casing, and subsurface casing information.

LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Belton Unit	RW-10	3055 FROM (N)(S) SEC LINE 2255 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	678'	I	02/02/2004	02/03/2004	4 1/2" casing cemented to surface
Belton Unit	RW-11	3471 FROM (N)(S) SEC LINE 2383 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	652'	I	02/04/2004	02/06/2004	4 1/2" casing cemented to surface
Belton Unit	RW-13	3453 FROM (N)(S) SEC LINE 1872 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	697'	I	02/06/2004	02/09/2004	4 1/2" casing cemented to surface
Belton Unit	RW-15	3980 FROM (N)(S) SEC LINE 2265 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	660'	I	11/26/2008	N/A	4 1/2" casing cemented to surface
Belton Unit	RW-16	3980 FROM (N)(S) SEC LINE 1825 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	660'	I	12/02/2008	N/A	4 1/2" casing cemented to surface
Belton Unit	RW-19	3540 FROM (N)(S) SEC LINE 1825 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	661'	I	12/08/2008	N/A	4 1/2" casing cemented to surface
Belton Unit	AD-1	220 FROM (N)(S) SEC LINE 2420 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	615'	O	12/03/2007	01/04/2008	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	AD-2	220 FROM (N)(S) SEC LINE 2000 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	657'	O	12/06/2007	12/10/2007	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	AD-3	212 FROM (N)(S) SEC LINE 3806 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	637'	O	08/31/1987	U	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump

AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

In the grid below, place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other - specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion of information, detailing the cement, casing, and subsurface casing information.

LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Belton Unit	AD-4	220 FROM (N)(S) SEC LINE 4255 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D.	666'	O	07/14/1987	07/16/1987	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	AD-5	220 FROM (N)(S) SEC LINE 4716 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	679'	O	06/21/1987	06/25/1987	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	AD-6	204 FROM (N)(S) SEC LINE 5186 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	708'	O	01/31/2008	02/19/2008	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	AD-7	654 FROM (N)(S) SEC LINE 2984 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	630'	O	12/12/2007	12/14/2007	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	AD-8	630 FROM (N)(S) SEC LINE 3401 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	622'	O	05/14/1999	05/27/1999	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	AD-9	644 FROM (N)(S) SEC LINE 3835 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	662'	Plugged	08/25/1987	U 1987	4 1/2" casing cemented to surface Squeezed cement into formation to surface on 04/04/2012
Belton Unit	AD-10	662 FROM (N)(S) SEC LINE 4239 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	659'	O	05/25/1987	07/21/1987	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	AD-11	621 FROM (N)(S) SEC LINE 4785 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	665'	Plugged	U 1987	U 1987	4 1/2" casing cemented to surface Squeezed cement into formation to surface on 03/19/2012
Belton Unit	AD-12	1210 FROM (N)(S) SEC LINE 3807 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	710'	O	01/23/2008	02/26/2008	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump

AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

In the grid below, place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other - specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion of information, detailing the cement, casing, and subsurface casing information.

LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Belton Unit	AD-13	1100 FROM (N)(S) SEC LINE 2420 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D.	700'	Plugged	12/21/2007	N/A	Cemented from bottom to top on 12/27/2007
Belton Unit	AD-14	1067 FROM (N)(S) SEC LINE 3405 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	609'	O	04/21/1999	05/13/1999	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	AD-15	1210 FROM (N)(S) SEC LINE 3807 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	617'	O	11/13/1989	11/14/1989	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	AD-16	1100 FROM (N)(S) SEC LINE 4225 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	666'	Plugged	07/23/1987	U-1987	4 1/2" casing cemented to surface Squeezed cement into formation to surface on 04/04/2012
Belton Unit	AD-17	1105 FROM (N)(S) SEC LINE 4657 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	647'	O	U	U	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	AD-18	1100 FROM (N)(S) SEC LINE 300 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	676.5'	O	01/02/2008	02/26/2008	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	AD-21	1535 FROM (N)(S) SEC LINE 3809 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	656'	O	09/11/2003	09/12/2003	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	AD-22	1539 FROM (N)(S) SEC LINE 4212 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	650'	O	06/13/1999	06/18/1999	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	AD-23	1541 FROM (N)(S) SEC LINE 4644 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	644'	O	09/09/2003	09/11/2003	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump

AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

In the grid below, place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other - specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion of information, detailing the cement, casing, and subsurface casing information.

LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Belton Unit	AD-24	1540 FROM (N)(S) SEC LINE 300 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D.	672.5	O	12/27/2007	02/06/2008	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	AD-28	1979 FROM (N)(S) SEC LINE 4193 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	629'	O	07/08/1999	07/14/1999	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	AD-29	1972 FROM (N)(S) SEC LINE 4627 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	625'	O	06/18/1999	07/07/1999	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	ADI-18	1757 FROM (N)(S) SEC LINE 4003 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	651.5'	I	10/09/2003	10/10/2003	4 1/2" casing cemented to surface
Belton Unit	ADI-19	1754 FROM (N)(S) SEC LINE 4421 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	654.5'	I	10/07/2003	10/08/2003	4 1/2" casing cemented to surface
Belton Unit	ADI-24	1354 FROM (N)(S) SEC LINE 3631 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	662'	I	09/16/2003	09/17/2003	4 1/2" casing cemented to surface
Belton Unit	ADI-25	1352 FROM (N)(S) SEC LINE 3965 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	651.5'	I	09/12/2003	09/15/2003	4 1/2" casing cemented to surface
Belton Unit	ADI-26	1337 FROM (N)(S) SEC LINE 4453 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	650.5'	I	09/17/2003	09/19/2003	4 1/2" casing cemented to surface
Belton Unit	ADI-27	1320 FROM (N)(S) SEC LINE 520 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	674.1'	I	01/04/2008	04/16/2008	4 1/2" casing cemented to surface

AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

In the grid below, place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other - specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion of information, detailing the cement, casing, and subsurface casing information.

LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Belton Unit	ADI-30	880 FROM (N)(S) SEC LINE 2200 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D.	627.7'	I	12/19/2007	04/16/2008	4 1/2" casing cemented to surface
Belton Unit	ADI-31	860 FROM (N)(S) SEC LINE 3613 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	633'	I	05/27/1999	06/04/1999	4 1/2" casing cemented to surface
Belton Unit	ADI-32	871 FROM (N)(S) SEC LINE 4034 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	649'	I	U	U	4 1/2" casing cemented to surface
Belton Unit	ADI-33	881 FROM (N)(S) SEC LINE 4454 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	642'	I	U	U	4 1/2" casing cemented to surface
Belton Unit	ADI-34	879 FROM (N)(S) SEC LINE 4896 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	663	I	U	U	4 1/2" casing cemented to surface
Belton Unit	ADI-37	440 FROM (N)(S) SEC LINE 2200 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	618.2	I	12/13/2007	04/16/2008	4 1/2" casing cemented to surface
Belton Unit	ADI-38	440 FROM (N)(S) SEC LINE 1760 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	668.9'	I	12/17/2007	04/16/2008	4 1/2" casing cemented to surface
Belton Unit	ADI-39	441 FROM (N)(S) SEC LINE 4055 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	631'	I	U	U	4 1/2" casing cemented to surface
Belton Unit	ADI-40	441 FROM (N)(S) SEC LINE 4465 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	664'	I	U	U	4 1/2" casing cemented to surface

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AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

In the grid below, place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other - specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion of information, detailing the cement, casing, and subsurface casing information.

LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Belton Unit	ADI-41	442 FROM (N)(S) SEC LINE 4909 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D.	600' est	I	U	U	4 1/2" casing cemented to surface
Belton Unit	OH-1	2815 FROM (N)(S) SEC LINE 2404 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	600' est	O	U	U	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	OH-2	2204 FROM (N)(S) SEC LINE 3051 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	600' est	O	U	U	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	OH-3	1937 FROM (N)(S) SEC LINE 3408 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	600' est	O	U	U	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	OH-4	1390 FROM (N)(S) SEC LINE 2878 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	600' est	O	U	U	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	OH-5	833 FROM (N)(S) SEC LINE 3124 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	600' est	O	U	U	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Belton Unit	OH-6	919 FROM (N)(S) SEC LINE 3716 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	600' est	Plugged	U	U	Squeezed cement into formation to surface
Belton Unit	OH-7	753 FROM (N)(S) SEC LINE 3166 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	600' est	Plugged	U	U	Squeezed cement into formation to surface
Belton Unit	OH-8	138 FROM (N)(S) SEC LINE 3971 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	600 est	Plugged	U	U	Squeezed cement into formation to surface

AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

In the grid below, place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other - specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion of information, detailing the cement, casing, and subsurface casing information.

LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Belton Unit	OH-9	604 FROM (N)(S) SEC LINE 5229 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	600' est	Plugged	U	U	Squeezed cement into formation to surface
Belton Unit	UK-1	4530 FROM (N)(S) SEC LINE 1300 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	U	Plugged	U	U	4 1/2" casing cemented to surface Squeezed cement into formation to surface on 04/17/2012
Belton Unit	UK-2	4279 FROM (N)(S) SEC LINE 1976 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	U	Plugged	U	U	4 1/2" casing cemented to surface Squeezed cement into formation to surface on 04/17/2012
Belton Unit	UK-3	5353 FROM (N)(S) SEC LINE 1396 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	U	O	U	U	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Clark-Berry	CB-1	2840 FROM (N)(S) SEC LINE 2989 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	625'	O	03/22/1999	U	2 7/8" with 1" tubing and insert pump
Clark-Berry	CB-2	3276 FROM (N)(S) SEC LINE 3006 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	625'	O	U	U	2 7/8" with 1" tubing and insert pump
Clark-Berry	CB-3	3710 FROM (N)(S) SEC LINE 3022 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	625'	O	03/25/1999	03/30/1999	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Clark-Berry	CB-4	2818 FROM (N)(S) SEC LINE 3424 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	619'	O	03/30/1999	04/02/1999	4 1/2" casing cemented to surface 2 3/8" tubing 3/4" rods and insert pump
Clark-Berry	CBI-1	6050 FROM (N)(S) SEC LINE 6211 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	629'	I	03/22/1999	03/25/1999	4 1/2" casing cemented to surface

AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

In the grid below, place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other - specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion of information, detailing the cement, casing, and subsurface casing information.

LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Clark-Berry	CBI-2	3487 FROM (N)(S) SEC LINE 3233 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	634'	I	04/02/1999	04/07/1999	4 1/2" casing cemented to surface
		_____ FROM (N)(S) SEC LINE _____ FROM (E)(W) SEC LINE SEC. _____ T. _____ N.R. _____						
		_____ FROM (N)(S) SEC LINE _____ FROM (E)(W) SEC LINE SEC. _____ T. _____ N.R. _____						
		_____ FROM (N)(S) SEC LINE _____ FROM (E)(W) SEC LINE SEC. _____ T. _____ N.R. _____						
		_____ FROM (N)(S) SEC LINE _____ FROM (E)(W) SEC LINE SEC. _____ T. _____ N.R. _____						
		_____ FROM (N)(S) SEC LINE _____ FROM (E)(W) SEC LINE SEC. _____ T. _____ N.R. _____						
		_____ FROM (N)(S) SEC LINE _____ FROM (E)(W) SEC LINE SEC. _____ T. _____ N.R. _____						
		_____ FROM (N)(S) SEC LINE _____ FROM (E)(W) SEC LINE SEC. _____ T. _____ N.R. _____						

AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

In the grid below, place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other - specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion of information, detailing the cement, casing, and subsurface casing information.

LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Belton Unit	R-26	5100 FROM (N)(S) SEC LINE 3794 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	643'	Plugged	03/08/2012	Not Complete	Set 21 feet of 8 5/8" surface pipe Squeezed cement from 643' to surface to plug well on 04/17/2012
Belton Unit	R-27	4890 FROM (N)(S) SEC LINE 3818 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	700'	O	04/06/2012	↓	685' of 2 7/8" casing cemented to surface
Belton Unit	R-28	4451 FROM (N)(S) SEC LINE 3814 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	681'	O	04/10/2012	↓	656' of 2 7/8" casing cemented to surface
Belton Unit	R-29	4487 FROM (N)(S) SEC LINE 1676 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	750'	O	03/24/2012	05/10/2012	740' of 4 1/2" casing cemented to surface
Belton Unit	R-30	4863 FROM (N)(S) SEC LINE 1176 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	750'	O	03/23/2012	04/30/2012	697' of 4 1/2" casing cemented to surface
Belton Unit	R-31	5268 FROM (N)(S) SEC LINE 1700 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	750'	O	03/27/2012	04/27/2012	740' of 4 1/2" casing cemented to surface
Belton Unit	R-32	4894 FROM (N)(S) SEC LINE 1248 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	750'	O	03/14/2012	05/25/2012	743' of 4 1/2" casing cemented to surface
Belton Unit	R-33	4929 FROM (N)(S) SEC LINE 1248 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	700'	O	03/21/2012	05/10/2012	663' of 4 1/2" casing cemented to surface
Belton Unit	R-36	5333 FROM (N)(S) SEC LINE 1634 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	760'	O	04/02/2012	04/30/2012	733.5' of 4 1/2" casing cemented to surface

AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

In the grid below, place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other - specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion of information, detailing the cement, casing, and subsurface casing information.

LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Belton Unit	R-41	3260 FROM (N)(S) SEC LINE 3790 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	643'	O	06/12/2012	Not complete	' of 4 1/2" casing cemented to surface
Belton Unit	R-42	3285 FROM (N)(S) SEC LINE 3390 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	980'	O	06/06/2012	↓	687' of 4 1/2" casing cemented to surface
Belton Unit	R-43	3281 FROM (N)(S) SEC LINE 2971 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	770'	O	05/09/2012	05/30/2012	740' of 4 1/2" casing cemented to surface
Belton Unit	R-44	3300 FROM (N)(S) SEC LINE 2578 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	760'	O	05/11/2012	05/31/2012	727' of 4 1/2" casing cemented to surface
Belton Unit	R-47	2944 FROM (N)(S) SEC LINE 2583 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	760'	O	05/08/2012	06/01/2012	728' of 4 1/2" casing cemented to surface
Belton Unit	R-48	2948 FROM (N)(S) SEC LINE 2587 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D	770'	O	07/18/2012	Not complete	750' of 2 7/8" casing cemented to surface
Belton Unit	R-49	2971 FROM (N)(S) SEC LINE 2114 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	730'	O	06/30/2012	↓	718' of 2 7/8" casing cemented to surface
Belton Unit	R-51	4058 FROM (N)(S) SEC LINE 2518 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	730'	O	06/08/2012	↓	700' of 4 1/2" casing cemented to surface
		_____ FROM (N)(S) SEC LINE _____ FROM (E)(W) SEC LINE SEC. _____ T. _____ N.R. _____						

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AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

In the grid below, place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other - specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion of information, detailing the cement, casing, and subsurface casing information.

LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Belton Unit	RW-22	4765 FROM (N)(S) SEC LINE 1087 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	730'	I	06/01/2012	Not complete	696' of 2 7/8" casing cemented to surface
Belton Unit	RW-23	5128 FROM (N)(S) SEC LINE 1433 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	730'	I	05/22/2012	07/06/2012	691' of 2 7/8" casing cemented to surface
Belton Unit	RW-24	4787 FROM (N)(S) SEC LINE 1441 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	730'	I	05/30/2012	Not complete	565' of 2 7/8" casing cemented to surface
Belton Unit	RW-25	5119 FROM (N)(S) SEC LINE 1879 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	750'	I	05/18/2012	07/06/2012	711' of 2 7/8" casing cemented to surface
Belton Unit	RW-26	4698 FROM (N)(S) SEC LINE 1885 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	730'	I	05/23/2012	07/17/2012	692' of 2 7/8" casing cemented to surface
Belton Unit	RW-27	4698 FROM (N)(S) SEC LINE 2304 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	730'	I	05/29/2012	07/17/2012	682' of 2 7/8" casing cemented to surface
Belton Unit	RW-37	5126 FROM (N)(S) SEC LINE 3208 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	720'	I	05/14/2012	07/09/2012	695' of 2 7/8" casing cemented to surface
Belton Unit	RW-38	5120 FROM (N)(S) SEC LINE 3219 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	730'	I	07/03/2012	Not complete	687' of 2 7/8" casing cemented to surface
Belton Unit	RW-39	5117 FROM (N)(S) SEC LINE 2770 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	720'	I	05/16/2012	07/09/2012	686' of 2 7/8" casing cemented to surface

AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

In the grid below, place the descriptions of area of review wells (1/2 mile radius around well) of public record that penetrate the proposed injection zone. Complete the following: lease name, well number, location, owner, depth in feet, type of well (Oil = O, Gas = G, Water = W, Injection = I, Strat Test = S, Unknown = U, Other - specify), date spudded, date completed, and construction of the well. Give a brief but accurate description of the well's construction including all plugging and/or completion of information, detailing the cement, casing, and subsurface casing information.

LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Belton Unit	RW-48	5105 FROM (N)(S) SEC LINE 2705 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	730'	I	07/03/2012	Not complete	687' of 2 7/8" casing cemented to surface
Belton Unit	RW-43	4702 FROM (N)(S) SEC LINE 3175 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	700'	I	06/14/2012	07/17/2012	672' of 2 7/8" casing cemented to surface
Belton Unit	RW-44	4685 FROM (N)(S) SEC LINE 3185 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	730'	I	06/28/2012	Not complete	690' of 2 7/8" casing cemented to surface
Belton Unit	RW-45	4261 FROM (N)(S) SEC LINE 3173 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	730'	I	07/11/2012		684' of 2 7/8" casing cemented to surface
Belton Unit	RW-46	4245 FROM (N)(S) SEC LINE 3184 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	730'	I	07/13/2012		687' of 2 7/8" casing cemented to surface
Belton Unit	RW-47	4267 FROM (N)(S) SEC LINE 2713 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	730'	I	07/13/2012		689' of 2 7/8" casing cemented to surface
Belton Unit	RW-48	4248 FROM (N)(S) SEC LINE 2715 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	730'	I	07/13/2012		681' of 2 7/8" casing cemented to surface
Belton Unit	RW-49	4091 FROM (N)(S) SEC LINE 2712 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	730'	I	06/13/2012	07/17/2012	675' of 2 7/8" casing cemented to surface
Belton Unit	RW-50	4082 FROM (N)(S) SEC LINE 2724 FROM (E)(W) SEC LINE SEC. 16 T. 46 N.R. 33W	K.R.E.D.	730'	I	06/30/2012	Not complete	659' of 2 7/8" casing cemented to surface

AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

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LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Belton Unit	AD 9-2	663 FROM (N)(S) SEC LINE 1520 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D.	760'	O	03/30/2012	05/07/2012	741' of 4 1/2" casing cemented to surface
Belton Unit	AD11-2	600 FROM (N)(S) SEC LINE 534 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D.	750'	O	03/12/2012	04/27/2012	737' of 4 1/2" casing cemented to surface
Belton Unit	AD16-2	1159 FROM (N)(S) SEC LINE 1086 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D.	760'	O	03/28/2012	04/27/2012	739' of 4 1/2" casing cemented to surface
Belton Unit	AD-20	1520 FROM (N)(S) SEC LINE 1891 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	760'	O	03/29/2012	06/11/2012	740' of 4 1/2" casing cemented to surface
Belton Unit	AD-26	1985 FROM (N)(S) SEC LINE 1900 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	770'	O	04/05/2012	06/13/2012	745' of 4 1/2" casing cemented to surface
Belton Unit	AD-27	1985 FROM (N)(S) SEC LINE 1476 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D.	760'	O	03/30/2012	06/13/2012	741' of 4 1/2" casing cemented to surface
Belton Unit	AD-31	2396 FROM (N)(S) SEC LINE 2342 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D.	701'	O	04/12/2012	Not Complete	688' of 2 7/8" casing cemented to surface
Belton Unit	AD-32	2408 FROM (N)(S) SEC LINE 1896 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D.	760'	O	04/06/2012	06/28/2012	745' of 4 1/2" casing cemented to surface
Belton Unit	AD-33	2435 FROM (N)(S) SEC LINE 1476 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D.	760'	O	04/03/2012	07/04/2012	741' of 4 1/2" casing cemented to surface

AREA OF REVIEW WELLS (1/2 MILE RADIUS AROUND WELL) THAT PENETRATE THE INJECTION INTERVAL

INSTRUCTIONS

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LEASE	WELL NO.	LOCATION	OWNER	DEPTH	TYPE	DATE SPUDDED	DATE COMPLETED	CONSTRUCTION
Belton Unit	AD 3-2	2608 FROM (N)(S) SEC LINE 1514 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D.	770'	O	06/15/2012	Not complete	713' of 4 1/2" casing cemented to surface
Belton Unit	AD 4-2	2560 FROM (N)(S) SEC LINE 1125 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D.	770'	O	06/22/2012	↓	724' of 4 1/2" casing cemented to surface
Belton Unit	AD 5-2	186 FROM (N)(S) SEC LINE 640 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D.	770'	O	06/20/2012	↓	721' of 4 1/2" casing cemented to surface
Belton Unit	AD-34	2435 FROM (N)(S) SEC LINE 1076 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	700'	O	05/04/2012	07/09/2012	686' of 4 1/2" casing cemented to surface
Belton Unit	ADI-42	382 FROM (N)(S) SEC LINE 446 FROM (E)(W) SEC LINE SEC. 9 T. 46 N.R. 33W	K.R.E.D	730'	I	07/19/2012	Not complete	686' of 2 7/8" casing cemented to surface
		_____ FROM (N)(S) SEC LINE _____ FROM (E)(W) SEC LINE SEC. _____ T. _____ N.R. _____						
		_____ FROM (N)(S) SEC LINE _____ FROM (E)(W) SEC LINE SEC. _____ T. _____ N.R. _____						
		_____ FROM (N)(S) SEC LINE _____ FROM (E)(W) SEC LINE SEC. _____ T. _____ N.R. _____						
		_____ FROM (N)(S) SEC LINE _____ FROM (E)(W) SEC LINE SEC. _____ T. _____ N.R. _____						

MO 780-1136 (02-11)

RECEIVED SEP 18 2012

AFFIDAVIT OF PUBLICATION

(Space above for recording information)

STATE OF MISSOURI
COUNTY OF CASS ss.

I, Janis Anslinger, being duly sworn according to law, state that I am the Classified Ad Manager of the Cass County Democrat-Missourian, a weekly newspaper of general circulation in the County of Cass, State of Missouri, where located; which newspaper has been admitted to the Post Office as periodical class matter in the City of Harrisonville, Missouri, the city of publication; which newspaper has been published regularly and consecutively for a period of three years and has a list of bonafide subscribers, voluntarily engaged as such who have paid or agreed to pay a stated price for a subscription for a definite period of time, and that such newspaper has complied with the provisions of Section 493.050, Revised Statutes of Missouri 2000, and Section 59.310, Revised Statutes of Missouri 2000. The affixed notice appeared in said newspaper in the following consecutive issues:

1st Insertion: Vol. 132 No. 48, 14 day of Sept 20 12.

2nd Insertion: Vol. _____ No. _____, _____ day of _____ 20____.

3rd Insertion: Vol. _____ No. _____, _____ day of _____ 20____.

4th Insertion: Vol. _____ No. _____, _____ day of _____ 20____.

5th Insertion: Vol. _____ No. _____, _____ day of _____ 20____.

Janis Anslinger

Janis Anslinger, Classified Ad Manager

Subscribed and sworn to before me on this 14 day of Sept., 2012.

Julie M. Hicks

JULIE M. HICKS
Notary Public, Notary Seal
State of Missouri
Cass County
Commission # 09727108
My Commission Expires June 12, 2013

OK

PUBLIC NOTICE

Kansas Resource Exploration & Development, LLC, 9393 W 110th St., Ste. 500, Overland Park, KS, 66210, has applied for 2 injection well permits to be drilled to an approximate depth of 650 feet. Water will be injected into the Squirrel Sandstone formation for an Enhanced Oil Recovery Project at the following locations.

#RW-90 3,134' from S line/2,371' from E line, Section 16, Township 46N, Range 33W
#RW-91 3,133' from S line/2,367' from E line, Section 16, Township 46N, Range 33W

Written comments or requests for additional information regarding such wells should be directed within fifteen (15) days of this notice to the address below.

State Geologist
Missouri Oil & Gas Council
P.O. Box 250
Rolla, MO 65401
48-ltc

MISSOURI
Mechanical Integrity Test

RECEIVED
MAR 18 2013
Mo Oil & Gas Council

Test Date: 2/1/2013

Operator: Kansas Resources Exploration & Development, LLC
Address: 9393 W. 110th St. Ste. 500
Overland Park, Kansas 66210
Contact: Brad Kramer
Phone: 913-669-2253

Lease: Belton Unit *Well No.:* RW-91
County: Cass *Permit No.:* 21,173

TEST INFORMATION

Pressure [X] Radioactive Tracer Survey [ ] Temperature Survey [ ]

	Run #1	Run #2	Run #3	Run #4
Start Time:	12:15			
End Time:	12:45			
Length of Test:	30 min			
Initial Pressure (PSI):	550 #			
Ending Pressure (PSI):	550 #			
Pressure Change:	0 #			

Fluid Used For Test (water, nitrogen, CO2, etc.): Air

Perforations: Well Not Perfed Yet

Comments: X .433 =
Pressured Casing up to 550

The bottom of the tested zone is shut in with Rubber Plug at a depth of 690.5 feet.
In signing the form below, it is certified that the above indicated well was tested for mechanical integrity on the test date shown above.

Signature Robert Reed
Operator, Contact Person or Approved Agent

Contractor
Title

FOR INTERNAL USE ONLY

Results were: Satisfactory X Not Satisfactory ____ Computer Update: X
Remarks: ____
State Agent: SAUER Witnessed: Yes ____ No X
!! FILE WITH PERMIT !!