Kcc Dist 1 ANR Pipeline Company (Lic # 32953) CB-1 MP. 167.4
KCC API # 15-185-23580-0000 MP. 167.4 #1 GMO 5 Rev.
6-3-2009 NW-SW-SW-NW
3160' FSL 5230' FEL
Sec. 28 · T25S - R15W

BIG BEND GROUNDWATER MANAGEMENT DISTRICT NO. 5

125 S. Main Stafford, Kansas 67578 (620)234-5352 Fax (620)234-5718

10" surface casing @ 217'
TD = 317'

FORM CP-10
APPLICATION FOR PERMIT TO DRILL AND CONSTRUCT A CASED CATHODIC PROTECTION BOREHOLE
Referencing Kansas Corporation Commission Regulations K.A.R. 82-3-700 through K.A.R. 82-3-710

Permit Application Number CPB- 09-02

To the Big Bend Groundwater Management District No. 5:

Applicant ANR PIPELINE Co. / TRANSCANADA

Address 33854 STATE HWY "TT" GRAHAM MO. 64455
(P.O. Box or Street) (City) (State) (Zip Code)

Telephone 660 - 939-3239 (ATTN: CHARLES BUCY)
(Area Code) (Telephone)

Application to the Big Bend Groundwater Management District No. 5 for a permit to drill and construct a cathodic protection borehole in and through the Big Bend aquifer in the county of SF, State of Kansas, to the extent and in accordance with the following:

1. The location of the proposed cathodic protection borehole is in the SW quarter of the SW quarter of the NW quarter of Section 28, Township 25 south, Range 15 (west) / east and more particularly described as being near a point 3160' feet north and 5230' feet west of the apparent southeast corner of said section.
2. The proposed use of the cathodic protection borehole is to provide cathodic protection of the applicant's 24"/24" facility from electrochemical corrosion. (MAIN & LOOP PIPELINES)
3. The land surface elevation is 2025' feet above mean sea level and the method of measurement used was (a) ☐ surveyed, (b) ☑ topographic map, or (c) ☐ other _____.
4. The depth to surface or top of bedrock or shale is 197' feet below land surface (bls).
5. The depth to the water table of the fresh water aquifer is 7' feet bls.
6. Aquifer salinity as indicated by chloride concentration is <200 mg/L and was determined by: (a) ☐ published report, (b) ☐ test well data, or (c) ☒ other GMD 5
7. The total depth of the cathodic protection borehole is 317' feet bls.
8. A non metallic surface casing equipped with centralizers will be installed in the surface casing borehole when drilling has penetrated 217' feet bls, which is a minimum of 20 feet below bedrock or shale surface as listed in paragraph #4.
9. Casing centralizers will be installed on the surface casing beginning at the surface casing's total depth and at 40 feet intervals along the complete length of the surface casing at depths of 217, 177, 137, 97, 57, 17, ____, ____ feet bls.
10. The diameter of the surface casing borehole will be a minimum of six inches larger than the outside diameter of the surface casing. The diameter of the borehole containing the surface casing will be 16" inches and the outside diameter of the surface casing will 10" inches.

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STAFFORD Co.

11. The standard dimension ratio (SDR) of the surface casing calculated by dividing the surface casing's outside diameter (OD) of 10" inches by its minimum wall thickness (MWT) of .476 inches equals 21.

12. A pitless surface casing adapter will be installed in the surface casing 4' feet bls.

13. The annular space between the surface casing and the borehole will be grouted using: (a) ☐ cement, (b) ☑ neat cement, (c) ☐ bentonite clay grout, (d) ☐ bentonite cement, or (e) ☐ other _____ from a total surface casing depth of 0 feet bls to 217' feet bls.

14. The top of the surface casing will be fitted with a watertight cap and will: (a) ☐ terminate _____ feet above land surface, (b) ☐ terminate in a water resistant and structurally sound vault _____ feet bls or (c) ☑ be buried 3 feet bls.

15. The anodes will be installed beginning at a depth of 227 feet bls to a total depth of 317 feet bls.

16. Anode conductor (backfill) material will be installed beginning at a depth of 217' feet bls to a total depth of 317' feet bls.

17. An anode vent pipe will be installed and completed 3' feet above land surface.

18. A concrete base or pad will / will not be constructed around the above ground surface casing or vault.

19. Will the use of a drilling pit threaten to contaminate fresh and usable groundwater? ☐ Yes ☑ No. If Yes complete sections (a) and (b).

(a) The pit will be: (i) ☑ constructed so that the bottom and sides have a hydraulic conductivity no greater than 1 x 10^{-7} cm/sec., (ii) ☐ constructed above ground, or (iii) ☐ a portable above ground tank, and

(b) The applicant has submitted a surface pond application to the Director, Conservation Division, Kansas Corporation Commission. ☑ Yes ☐ No.

20. A construction plan is submitted with the application and shows or illustrates the information contained in paragraphs #4 through #18.

21. The cathodic protection borehole will be abandoned and plugged if it: (a) is not completed due to unforeseen circumstances, (b) either contaminates or threatens to contaminate a fresh water aquifer, (c) encounters uncontrollable artesian flow, (d) has exhausted its anodes and replacement anodes are not installed within one year, or (e) has not been used for one year and the applicant does not demonstrate intentions to use it.

22. The applicant understands and agrees to comply with K.A.R. 82-3-700 through 82-3-710. Further, the applicant may request an exception to these regulations pursuant to K.A.R. 82-3-100(b).

23. Dated at STAFFORD, Kansas, this 14TH day of MAY, 2009

ANR PIPELINE CO. / TRANSCANADA
(Applicant)

By Charles A. Bucy
(Signature)

Corrosion Specialist
(Title)

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APPLICANT DO NOT CONTINUE BELOW DOUBLE LINE

For Big Bend Groundwater Management District Use

1) Application received on 05 / 14 / 09.

2) Application review by: ORRIN FERIL

GIS SPECIALIST
(Title)

3) The application is hereby denied. The denial was based on the following findings:

4) The application meets or exceeds Cathodic Regulations K.A.R. 82-3-700 through K.A.R. 82-3-710 and is hereby approved by the Big Bend Groundwater Management District No. 5 this 19 day of May, 2009.

Sharon Falk, Mgr
Sharon Falk, Manager
Big Bend Groundwater Management District No. 5

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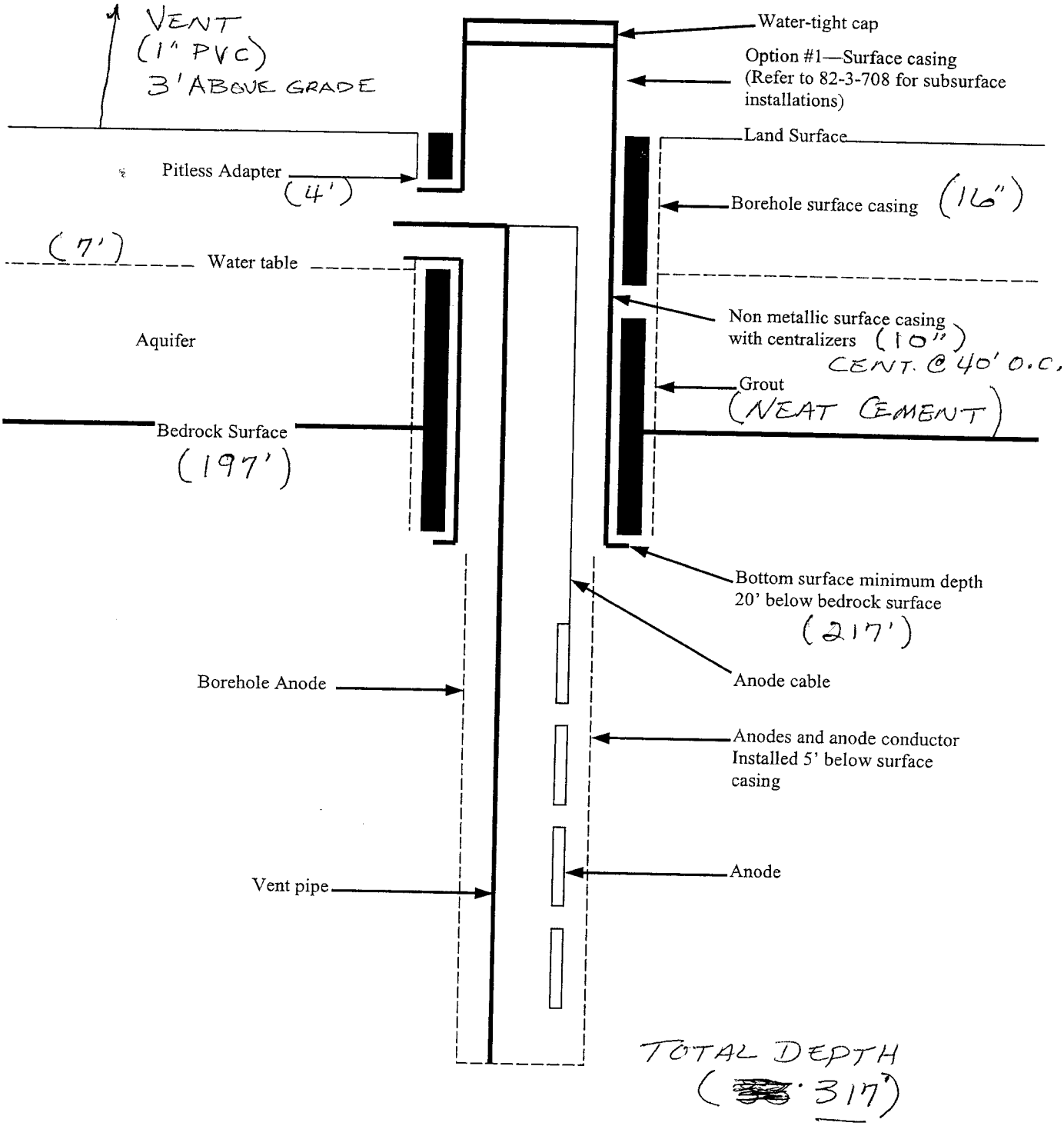
BIG BEND GROUNDWATER MANAGEMENT DISTRICT NO. 5

CATHODIC PROTECTION BOREHOLE ILLUSTRATION

Cased Borehole Construction Features

(Refer to K.A.R. 82-3-708 for specific standards)



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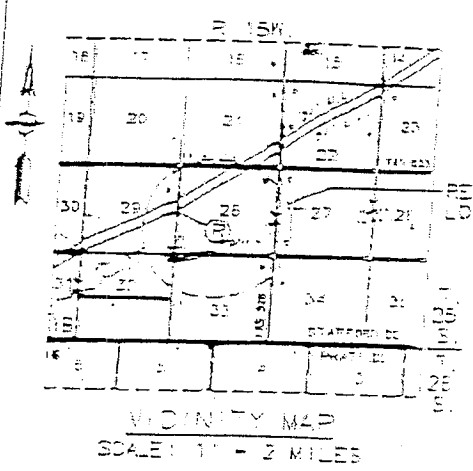
(EXHIBIT A)

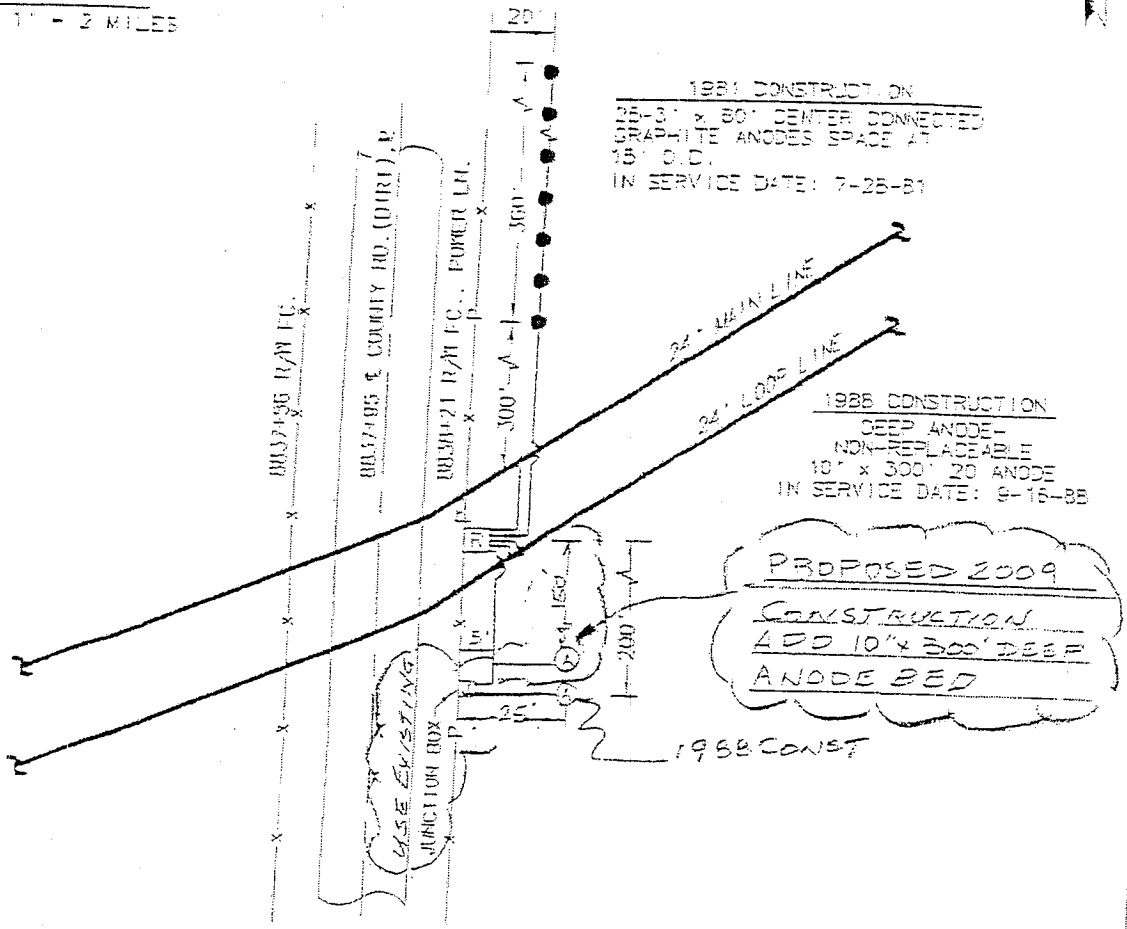
STAFFORD COUNTY, KANSAS

NW 1/4, SECTION 28, T. 25S., R. 15W.



VICINITY MAP
SCALE: 1" = 2 MILES

RECTIFIER: GOOD-ALL
MODEL NO.: DAYSE 30-50-NZ
SERIAL NO.: 7601771
LINE LIST: 100-03-2006
PROPERTY OWNER: LAWRENCE KLEISEN, ET UX
POWER CO.: MINNESDAH, RURAL ELEC. CO-OP
PRATT, KS
IN SERVICE DATE: 11-3-76



7-28-00	REDRAWN F/REV 1-5 SEE VOID SAME NO.	EH	EB	TS
DATE	REVISION	BY	CHK'D	APP'D

AS-BUILT

STA. REFERS TO: 24" MAIN LINE
TYP. ANODE INST.: D-A-17, 30 & 32
TYP. RECTIFIER: D-A-19
ALIGNMENT SHEET: 100-03-34

SCALE: NONE	
DWN. EH	DATE 7-28-00
CHECKED ELB	DATE 7-28-00
APPROV. TMS	DATE 8-3-00

RECTIFIER & GROUND BED LOCATION
24" M.L. & 24" L.L.
M.P. 167.4

ANR PIPELINE COMPANY
Detroit, Michigan

DWG. NO. C-K-A-67

ALDEN SECTION ST. JOSEPH AREA