ORIGINAL

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1
October 2008
Form Must Be Typed

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 32119
Name: Northern Natural Gas
Address 1: 1111 S 103RD STREET P.O. Box 3330
Address 2:
City: OMAHA State: NE Zip: 68124 +
Contact Person: Mike Kantack
Phone: (785) 632-7071
CONTRACTOR: License # KS791
Name: Giles Environmental Services
Wellsite Geologist: N/a
Purchaser:

Designate Type of Completion:
___ New Well ___ Re-Entry ___ Workover
___ Oil ___ SWD ___ SIOW
___ Gas ___ ENHR ___ SIGW
___ CM (Coal Bed Methane) ___ Temp. Abd.
___ Dry ✓ Other ___
(Core, WSW, Expl., Cathodic, etc.)

If Workover/Re-entry: Old Well Info as follows:
Operator:
Well Name:
Original Comp. Date: ___ Original Total Depth: ___
___ Deepening ___ Re-perf. ___ Conv. to Enhr. ___ Conv. to SWD
___ Plug Back: ___ Plug Back Total Depth
___ Commingled Docket No.:
___ Dual Completion Docket No.:
___ Other (SWD or Enhr.?) Docket No.:

11/8/09 — Spud Date or Recompletion Date
11/11/09 — Date Reached TD
11/12/09 — Completion Date or Recompletion Date

API No. 15 - 201-20009-00-00
Spot Description:
SW - NW - NW - Sec. 15 Twp. 5 S. R. 2 ☑ East ☐ West
990 Feet from ☑ North / ☐ South Line of Section
55 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☑ NE ☐ NW ☐ SE ☐ SW
County: Washington
Lease Name: Beatrice A Line MP 6.08 Well #: 1
Field Name:
Producing Formation:
Elevation: Ground: 1350' Kelly Bushing:
Total Depth: 400' Plug Back Total Depth: 100
Amount of Surface Pipe Set and Cemented at: 200 Feet
Multiple Stage Cementing Collar Used? ☐ Yes ☐ No
If yes, show depth set: Feet
If Alternate II completion, cement circulated from:
feet depth to: w/ sx cmt.

Alt 3 - Dtg - 1/26/10

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)
Chloride content: ppm Fluid volume: 110 bbls
Dewatering method used:
Location of fluid disposal if hauled offsite:
Operator Name: Kansas Pump Service
Lease Name: License No.:
Quarter SE Sec. 34 Twp. 13 S. R. 4 ☑ East ☐ West
County: Dickinson Docket No.:

INSTRUCTIONS: An original and two copies of this form shall be filed with the Kansas Corporation Commission, 130 S. Market - Room 2078, Wichita, Kansas 67202, within 120 days of the spud date, recompletion, workover or conversion of a well. Rule 82-3-130, 82-3-106 and 82-3-107 apply. Information of side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form (see rule 82-3-107 for confidentiality in excess of 12 months). One copy of all wireline logs and geologist well report shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Signature:
Title: Project Coordinator Date: 1/4/10
Subscribed and sworn to before me this 5 day of Jan, 20 10.
Notary Public: Alice Korb
Date Commission Expires: 5-4-13

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KCC Office Use ONLY
N Letter of Confidentiality Received
If Denied, Yes ☐ Date:
___ Wireline Log Received
___ Geologist Report Received
___ UIC Distribution

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Side Two

Operator Name: Northern Natural Gas Lease Name: Beatrice A Line MP 6.08 Well #:

Sec. 15' Twp. 5E S. R. 2 ☑ East ☐ West County: Washington

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed. Attach copy of all Electric Wireline Logs surveyed. Attach final geological well site report.

Drill Stem Tests Taken ☐ Yes ☐ No
(Attach Additional Sheets)

Samples Sent to Geological Survey ☐ Yes ☐ No

Cores Taken ☐ Yes ☐ No

Electric Log Run ☐ Yes ☐ No
(Submit Copy)

List All E. Logs Run:

☐ Log Formation (Top), Depth and Datum ☐ Sample

Name	Top	Datum

CASING RECORD ☐ New ☐ Used
Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
	16"	10"		200'	Neat	6.5yards	

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose: ___ Perforate ___ Protect Casing ___ Plug Back TD ___ Plug Off Zone	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record *(Amount and Kind of Material Used)*	Depth

TUBING RECORD: Size: Set At: Packer At: Liner Run: ☐ Yes ☐ No

Date of First, Resumed Production, SWD or Enhr. Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☐ Perf. ☐ Dually Comp. ☐ Commingled ☐ Other *(Specify)*	

Mail to: KCC - Conservation Division, 130 S. Market - Room 2078, Wichita, Kansas 67202

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Northern Natural Gas

Clifton, Kansas

0 – 6'	Clay with sandstone
6' – 8'	Sandstone
8' – 60'	Clay, grey, with sandstone lenses
60' – 62'	Sandstone
62' – 90'	Clay with pyrite crystals
90' – 110'	Shale, soft, grey
110' – 114'	Sandstone, hard
114' – 128'	Shale, grey
128' – 200'	Shale, grey, hard, limey
200' – 210'	Limestone, white
210' – 230'	Shale, red/brown
230' – 270'	Shale, grey, with gypsum layers
270' – 290'	Shale, grey
290' – 295'	Shale, red
295' – 400'	Shales, red, brown, and grey, with gypsum layers
0' – 200'	16" borehole with SDR21 10" PVC Casing, cemented with Portland grout.
200' – 400'	9-5/8" borehole.

Dry hole from 200' – 400'

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MESA

Malcom Baldrige National Quality Award
2006 Award Recipient

January 5, 2010

KCC - Conservation Division
Attn: Steve Bond
130 S. Market - Room 2078
Wichita, KS 67202-1286

Re: Well Completion Report - API – 15-201-2009-00-00

Mr. Bond,

Please find attached Well Completion Report for the above referenced permit..

If you have any questions or require additional information regarding this report, please contact me at:

Main: 918.384.6108
Cell: 918.764.5400
Office: 918.627.3188
Fax: 918.627.2676

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Thank you and best regards,

Mesa Products, Inc.
Mesa Corrosion Control

Robert Hogan
Project Coordinator

Enclosures

Mesa Products, Inc.
P.O. Box 52608, Tulsa, OK. 74152-0608
Phone / 918-627-3188 Fax / 918-627-2676
www.mesaproducts.com

INVOICE KANSAS PUMPING SERVICES, Inc. № 5374

Date 11-12 2009 T 10:00 / 10:45 M _____
11-13 2009

1868 UNION ROAD • CHAPMAN, KS 67431 • 785-479-7138 • 1-888-303-3619
SERVING CENTRAL KANSAS
Fax 918-627-2676

INSPECTION REPORT ON SEPTIC TANK

Name of Owner Messa Construction Control — PO Box 52608
Job Address _____ — Tulsa, OK 74152
_____ — 44th Street Hogan
Job #09-039
Phone # 918-764-5400

Instructions: Please inspect the interior of the tank to determine the following conditions and check the appropriate blank.

YES	NO	ITEMS TO BE EVALUATED
___	___	1. Lids intact, top of tank not damaged.
___	___	2. Inflow tee/baffle securely in place.
___	___	3. Outflow tee/baffle securely in place.
___	___	4. Interior walls and floor free from cracks, deterioration, or damage so that the tank is water tight.
___	___	5. Interior walls above water line hard and undamaged when probed with metal rod.
___	___	6. Liquid in tank is at normal operating level prior to pumping. If no, level was higher/lower than normal (circle one)
___	___	7. Filter Serviced Tank ___Single ___Two Stage
_____ gal.		8. Estimated capacity of tank ___Cement ___Poly ___Steel ___Fiberglass

Rt 09-039

County Washington	11-12-09	11-12-09	11-13-09	11-13-09
Depth of Tank	Truck 1	Truck 2	Truck 1	Truck 2
Dumped at:	1500 gal	2000 gal	600 gal	2000 gal
Charges				
Tank Cleaning 780 —	195 —	195 —	195 —	195 —
Dump Charge 300 —	75 —	75 —	75 —	75 —
Trip Charge 100 —	25 —	25 —	25	25
Service Charge	295 —	295 —	295 —	295 —
Treatment				
Tax				
Total 1180				

Water & Mud
8-13-4 DK

Amt Due

Operator Signature: _____
I affirm that the above conditions were examined on the date of service, and were accurately reported to me.

Jimmie Todd
Name of Pumper

_____
Customer Signature

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Invoice

Midwest Products, LLC
203 W North
Hanover, Kansas 66945

Date	Invoice #
11/24/2009	14665

Bill To 918-627-2676
MESA PRODUCTS
PO BOX 52608
TULSA, OK 74152
ATTN: ROBERT HOGAN *

P.O. No.	Terms	Project
	Due by 10th	

Quantity	Description	Rate	Amount
6.5	Ready Mix 11/11/09	250.00	1,625.00T
	Clay Co. Sales Tax	6.30%	102.38

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Thank you! Please include invoice number on check. A 1.5% finance fee is added to past due accounts.

Total $1,727.38

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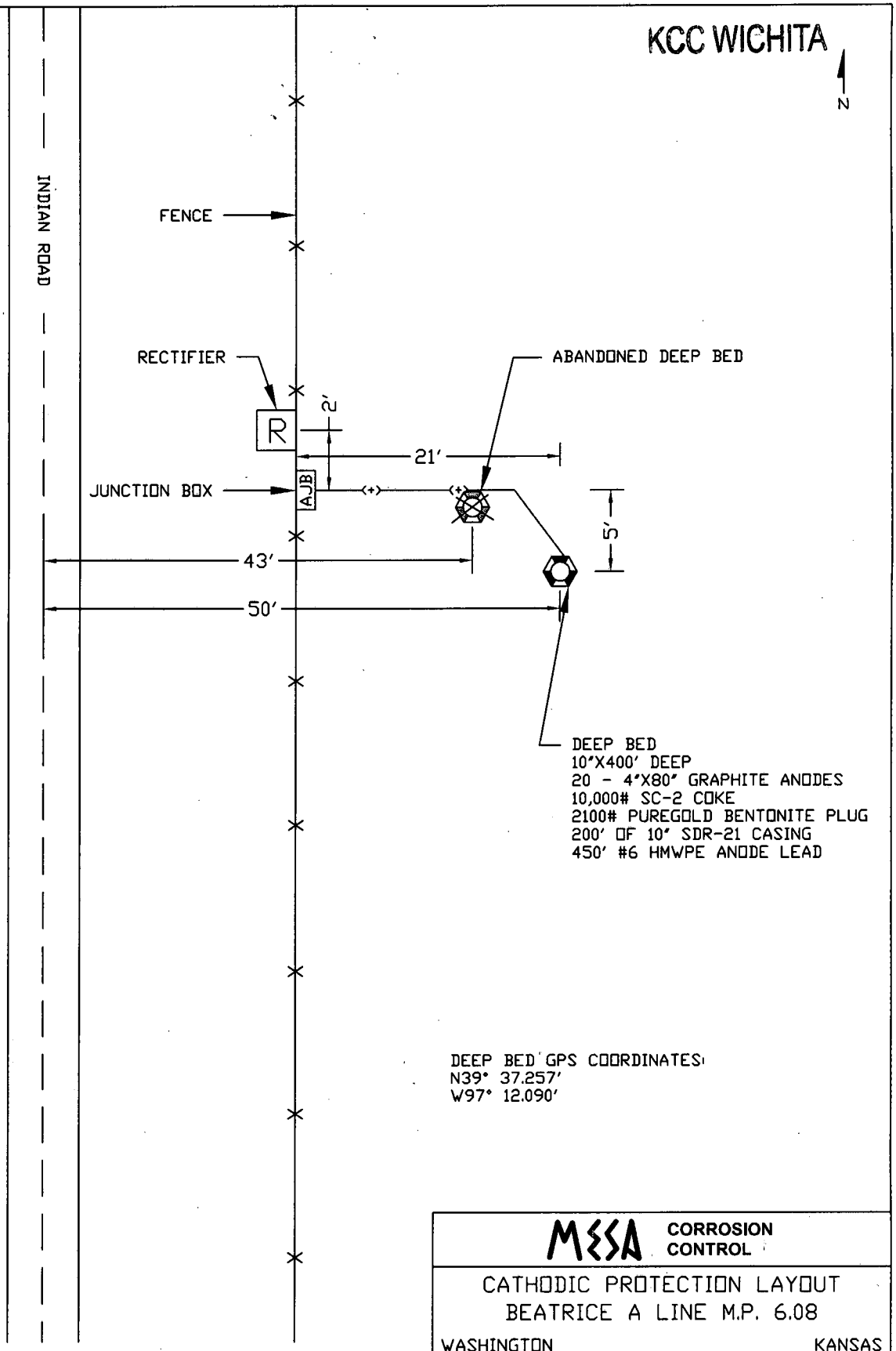

MESA CORROSION CONTROL

CATHODIC PROTECTION LAYOUT
BEATRICE A LINE M.P. 6.08

WASHINGTON KANSAS

DRAWN BY	TLN	SCALE	NONE	JOB NO.	09-039
CHECKED BY		CLIENT	NORTHERN NATURAL GAS		
PROJECT ENGINEER					
DATE ISSUED	12/15/09	DRAWING NO.	NNG-02180-0		0
DATE INSTALLED	11/13/09				

REVISION NUMBER	DRAWN BY	DATE REVISED	CHECKED BY	PROJECT ENGINEER	APPROVED BY

QF 4.10.9 CATHODIC PROTECTION IN-SERVICE REPORT

REV 2

MESA CORROSION CONTROL

1. JOB INFORMATION:

Client	NORTHERN NATURAL GAS			Section	15	QTR		Job Number	09-039
Facility	BEATRICE A LINE MP 6.08			Township	5	N	S	Calibrated Instrument	FLUKE 177
County	WASHINGTON	State	KS	Range	2	E	W	Serial No.	92840353
Legal Description				Land Owner				Phone	

2. RECTIFIER INFORMATION

DUAL UNIT ☐

Manufacturer	UNIVERSAL			Rectifier Id Number		New Installation	☑
Model No.	ASAI	Power Vendor	ROLLING HILLS ELECTRIC				
Serial No.	92517	Acct #		KWH Meter #	89086758	KWH Reading	59698
DC Volts	50	AC Volts	230	Max Coarse	3	Shunt Amp	50
DC Amps	50	AC Amps	15.3	Max Fine	6	Shunt mV	50
GPS COORDINATES	Latitude	N	39° 37.257'	Longitude	W	97° 12.090'	

3. GROUND BED INFORMATI

DRILL LOG ATTACHED ☐ EXISTING GROUND BED ☐

Anode Type	4"X80" GRAPHITE			Anode Lead	#6 HMWPE			Total Qty	450'
Horizontal	Length		Width		Typical Depth		Typical Centers		Qty
Vertical			Diameter	10"	Typical Depth	400'	Typical Centers	10'	Qty 20
Coke Backfill	SC-2		Qty	10000	Header Cable			Length	

4. PRE-ENERGIZED CHECK LIST:

#12 LEAD INSTALLED WITH NEGATIVE ☐

Potentials (Volts - Fixed Reference Cell Method)						Negative Resistance (Ohms)			
Positive	1.395		Negative	-0.432		Structure	-0.432		DC Volts

5. ENERGIZED INFORMATION:

NO AC POWER ☐

Coarse Tap Setting	1 of 3	AC Volts	230	DC Volts	8.22	DC Amps	36.80
Fine Tap Setting	3 of 6	AC Amps	15.30	DC mV	36.80	Structure PS	-0.593
Calculated Ground Bed Resistance		0.22	Calculated Rectifier Efficiency				8.60%

6. JUNCTION BOX INFORMATION

QF 4.10.17 FIELD DATA COLLECTION FORM ATTACHED ☐

Anode Junction Box				Positive Junction Box			Structure Junction Box		
Cir.	Amp	Cir.	Amp	Cir.	Desciption	Amp	Cir.	Desciption	Amp
1	0.80	11	1.60	1			1		
2	1.70	12	2.00	2			2		
3	2.10	13	0.90	3			3		
4	1.40	14	1.50	4			4		
5	1.60	15	0.40	5			5		
6	1.50	16	1.60	6			6		
7	1.20	17	0.40	7			7		
8	1.50	18	0.50	8			8		
9	1.50	19	0.70	9			9		
10	2.20	20	0.60	10			10		
		Total	25.70		Total			Total	

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REMARKS:

Technician/Foreman MIKE BISWELL Date 11/13/2009

QF 4.10.10 DEEP ANODE DRILLING LOG

REV 3

MESA CORROSION CONTROL

Job No. 09-039 PO/WO No. _____ Date 11/13/2009

Client NORTHERN NATURAL GAS **Drilling Co.:** **GILES ENVIRONMENTAL**

Location BEATRICE A LINE M.P. 6.08 GPS: Lat: 39° 37.257' Long: 97° 12.090'

Calibrated Instrument Used: FLUKE 177 S/N 92840353

Depth	Logging Volts: 12.99 Amps	Ohms	Geological Log	Depth	Logging Volts: Amps	Ohms	Geological Log	No.	Depth	No Coke	With Coke
5			0-6 CLAY W/ SANDSTONE	205				1	400	1.70	3.70
10			6-8 SANDSTONE	210	0.50	25.98	200-210 WHITE LIMESTONE	2	390	2.90	5.10
15				215				3	380	3.10	5.80
20				220	1.40	9.28		4	370	3.30	6.20
25				225				5	360	3.50	6.20
30				230	1.20	10.83	210-230 RED/BROWN	6	350	3.50	6.20
35				235			SHALE	7	340	3.30	6.20
40				240	1.40	9.28		8	330	2.60	6.20
45				245				9	320	2.40	6.20
50				250	2.60	5.00		10	310	2.70	5.90
55				255				11	300	2.80	5.90
60			8-60 GRAY CLAY W/	260	1.50	8.66		12	290	3.30	5.90
65			SANDSTONE LENSES	265				13	280	3.00	5.60
70			60-62 SANDSTONE	270	1.70	7.64	230-270 GRAY SHALE	14	270	1.70	4.90
75				275			W/ GYPSUM LAYERS	15	260	1.50	5.10
80				280	3.00	4.33		16	250	2.60	5.20
85				285				17	240	1.40	5.10
90			62-90 CLAY W/ PYRITE	290	3.30	3.94	270-290 GRAY SHALE	18	230	1.20	5.10
95			CRYSTALS	295			290-295 RED SHALE	19	220	1.40	4.20
100				300	2.80	4.64		20	210	0.50	3.30
105				305				21			
110			90-110 SOFT GRAY SHALE	310	2.70	4.81		22			
115			110-114 HARD SANDSTONE	315				23			
120				320	2.40	5.41		24			
125				325				25			
130			114-128 GRAY SHALE	330	2.60	5.00		26			
135				335				27			
140				340	3.30	3.94		28			
145				345				29			
150				350	3.50	3.71		30			
155				355				31			
160				360	3.60	3.61		32			
165				365				33			
170				370	3.30	3.94		34			
175				375				35			
180				380	3.10	4.19		36			
185				385				37			
190				390	2.90	4.48	295-400 RED GRAY AND	Volts			
195			128-200 GRAY HARD	395			BROWN SHALES W/	Amps		48.40	108.00
200			LIMEY SHALE	400	1.70	7.64	GYPSUM LAYERS	Ohms		0.98	0.98

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Hole Dia.:	10"	Total Depth:	400'	Casing Feet: 200'	Dia.: 10"	Type:	SDR-21
No. Anodes:	20	Size and Type:	4"X80" GRAPHITE	Anode Lead: 450'	Size: #6	Type:	HMWPE
Lbs. Coke:	10000	Coke Type:	SC-2	Top of Coke Column:	76'	Vent:	200'
Lbs. Plug	2100	Plug Type:	PUREGOLD BENTONITE	Top of Plug:	3'		