

MINIMUM ERROR OF CLOSURE 1/500

SOURCE OF ELEVATION Well No 1, C.K. McCullough, Elev 779

New Location
 Drill Deeper
 Abandonment

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS MAP IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY PARAGRAPH 6 OF THE RULES AND REGULATIONS OF THE OIL AND GAS SECTION OF THE MINING LAWS OF WEST VIRGINIA.

ISSUED JAN 9 1967 - Revised Permits Issued 5/23/67

Company Rudder Oil & Gas Co.
 Address Box 218, Parkersburg, W. Va.
 Farm Richard F. McCullough
 Tract 1 Acres 6 1/2 Lease No. _____
 Well (Farm) No. 1 Serial No. _____
 Elevation (Spirit Level) 785
 Quadrangle West Union SC
 County Doddridge District Central
 Engineer Parker E. Peters
 Engineer's Registration No. 180
 File No. _____ Drawing No. _____
 Date Apr. 15, 1964 Scale 1" = 30 P.

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

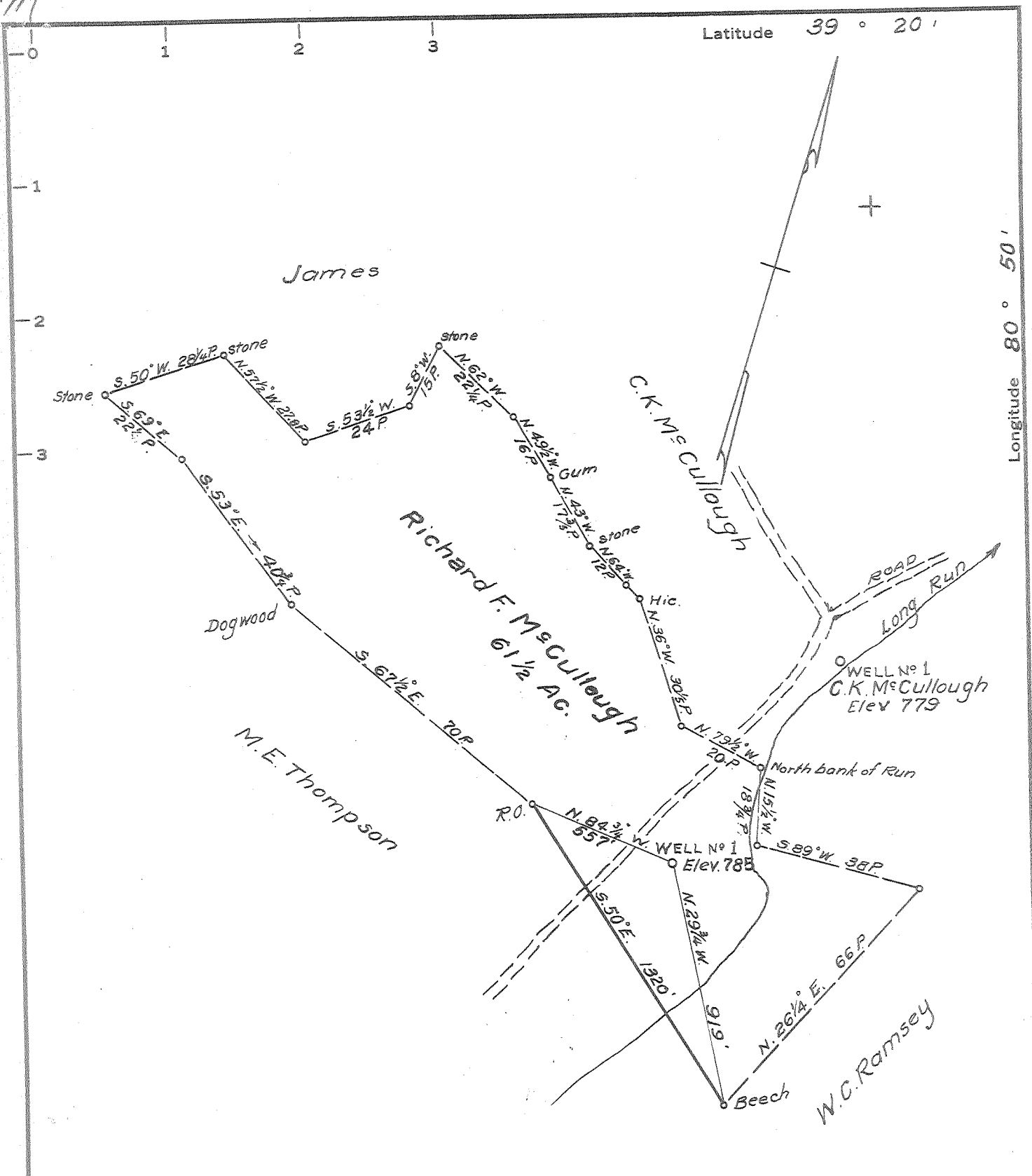
WELL LOCATION MAP

FILE NO. DDP-1125 P-Rev.

Plugging Cancelled 2-6-70

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.



MINIMUM ERROR OF CLOSURE 1/500

SOURCE OF ELEVATION Well No 1, C.K. McCullough, Elev 779

New Location Drill Deeper Abandonment I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS MAP IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY PARAGRAPH 6 OF THE RULES AND REGULATIONS OF THE OIL AND GAS SECTION OF THE MINING LAWS OF WEST VIRGINIA.

ISSUED JAN 9, 1967

Company Rudder Oil & Gas Co.
 Address Box 2118, Parkersburg, W. Va
 Farm Richard F. McCullough
 Tract 1 Acres 6 1/2 Lease No. _____
 Well (Farm) No. 1 Serial No. _____
 Elevation (Spirit Level) 785
 Quadrangle West Union SC
 County Doddridge District Central
 Engineer Parker E. Peters
 Engineer's Registration No. 485
 File No. _____ Drawing No. _____
 Date Apr. 15, 1964 Scale 1" = 30P.

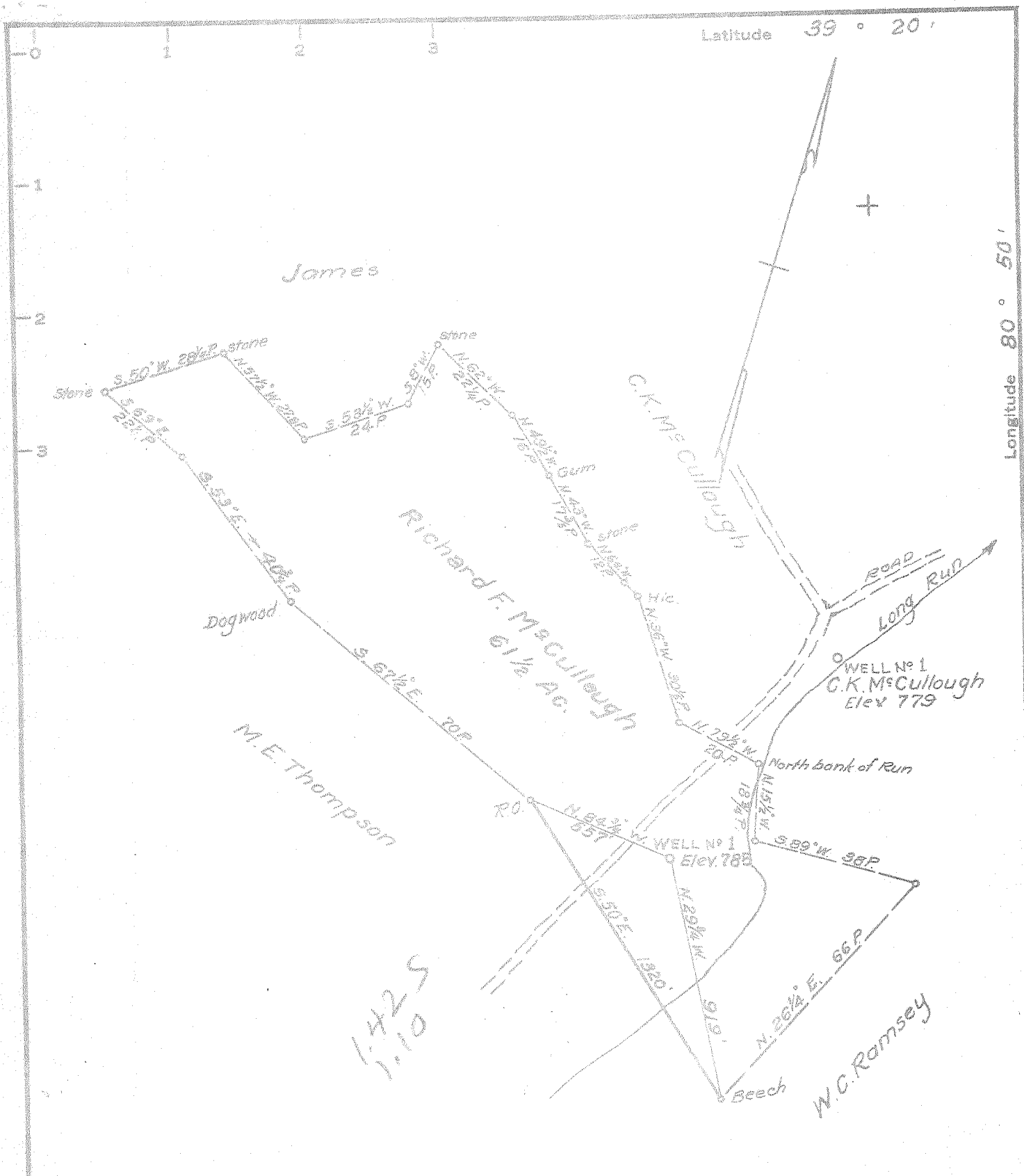
STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. DDO-1125 P

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.

- Denotes one inch spaces on border line of original tracing.

3/28/67



MINIMUM ERROR OF CLOSURE 1/500
 SOURCE OF ELEVATION Well No 1, C.K. McCullough, Elev 779

New Location
 Drill Deeper
 Abandonment I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS MAP IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY PARAGRAPH 6 OF THE RULES AND REGULATIONS OF THE OIL AND GAS SECTION OF THE MINING LAWS OF WEST VIRGINIA.

ISSUED JAN 1967

Company Rudder Oil & Gas Co.
 Address Box 518, Parkersburg, W. Va.
 Farm Richard F. McCullough
 Tract 1 Acres 6 1/2 Lease No. _____
 Well (Farm) No. 1 Serial No. _____
 Elevation (Spirit Level) 785
 Quadrangle West Union 5C
 County Doddridge District Central
 Engineer Parker E. Peters
 Engineer's Registration No. 485
 File No. _____ Drawing No. _____
 Date Apr. 15, 1964 Scale 1" = 30P.

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
 FILE NO. DDO-1125 P-Rev.

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.

— Denotes one inch spaces on border line of original tracing.

6-6-89



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION **5**

Rotary
Spudder
Cable Tools
Storage

Quadrangle West Union

Permit No. DOD-1125

WELL RECORD

Oil or Gas Well Both
(KIND)

Company Rudder Oil & Gas Company
Address Box 2118, Parkersburg, W. Va.
Farm Richard McCullough Acres 62
Location (waters) Long Run
Well No. 1 Elev. 785
District Central County Doddridge
The surface of tract is owned in fee by Richard McCullough
Address Greenwood, W. Va.
Mineral rights are owned by Richard McCullough
Address Greenwood, W. Va.
Drilling commenced May 13, 1964
Drilling completed June 6, 1964
Date Shot _____ From _____ To _____
With _____
Open Flow 6 /10ths Water in _____ 2 Inch
_____ /10ths Merc. in _____ Inch
Volume 103,00 Cu. Ft.
Rock Pressure _____ lbs. _____ hrs.
Oil show bbls., 1st 24 hrs.
WELL ACIDIZED _____

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			
13	17	17	
8 1/2	369		Size of
6 3/4	959		Depth set
6 1/2		1848	
3			Perf. top 1766
2		1766	Perf. bottom
Liners Used			Perf. top 1844
			Perf. bottom 1822

CASING CEMENTED 4 1/2 SIZE 1848 No. Ft. 6/8/64 Date
Lawson Cmtg Co. - 70 sks - 4 Lime 6 Ge

COAL WAS ENCOUNTERED AT none FEET _____ INCHES
_____ FEET _____ INCHES _____ FEET _____ INCHES
_____ FEET _____ INCHES _____ FEET _____ INCHES

WELL FRACTURED DOWELL - 6-11-64 - 80,000 gal. water, 75,000 # sand

RESULT AFTER TREATMENT 20 bbl oil & 1,000 M gas

ROCK PRESSURE AFTER TREATMENT 460 # in 48 hours

Fresh Water 35' Feet 350' Salt Water _____ Feet

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth	Remarks
<u>Driller's Log</u>							
Top soil		soft	0	8			
Grit		soft	8	17			
Slate		soft	17	40	water	@ 35'	
Sand		hard	40	60			
Lime		hard	60	70			
Rock	red	soft	70	102			
Slate		soft	102	115			
Rock	red	soft	115	120			
Slate		soft	120	130			
Rock	red	soft	130	145			
Slate		soft	145	195			
Rock	red	soft	195	245			
Slate		soft	245	258			
Sand		hard	258	316			
Slate		soft	316	353	water	@ 350'	
Rock	red	soft	353	360			
Slate (shells)		soft	360	417			
Lime		hard	417	438			
Slate (shells)		soft	438	530			
Rock	red	soft	530	542			
Slate (shells)		soft	542	592			
Rock	red	soft	592	600			
Slate (shells)		soft	600	620			
Rock	red	soft	620	635			
Slate (shells)		soft	635	650			



Formation	Color	Hard or Soft	Top 5	Bottom	Oil, Gas or Water	Depth Found	Remarks
Lime		hard	650	660			
Slate (shells)		soft	660	704			
Sand		hard	704	715			
Slate (shells)		soft	715	735			
Rock	red	soft	735	765			
Slate & Shells		soft	765	790			
Sand		hard	790	808			
Slate		soft	808	814			
Rock	pink	soft	814	830			
Slate (shells)		soft	830	874			
Sand		soft	874	894			
Slate		soft	894	908			
Rock	pink	soft	908	920			
Slate		soft	920	935			
Sand		hard	935	940			
Rock	pink	soft	940	945			
Slate		soft	945	1158			
Sand		hard	1158	1290			
Slate		soft	1290	1395			
Sand		hard	1395	1420			
Slate		soft	1420	1450			
Sand		hard	1450	1470			
Slate		soft	1470	1535			
Sand		hard	1535	1572	show oil	@ 1540'	
Slate		soft	1572	1580			
Sand		hard	1580	1614			
Slate		soft	1614	1616			
Lime		hard	1616	1635			
Slate		soft	1635	1655			
Big Lime		hard	1655	1716			
Sand		hard	1716	1775	show oil	@ 1734'	
Break	black	soft	1775	1790	show oil/gas	@ 1753'	
Sand		hard	1790	1817	show gas	@ 1770'	
Slate		soft	1817	1848	show gas	@ 1804-09'	7/10 W2"
					show gas	@ 1817'	17/10 W2"
							blew down to 6/10 W2"

Date July 22, 1964

APPROVED Rudder Oil & Gas Co., Owner
 By Neal Rudder
 (Title) President