

@YJW'; YcgmghYa g  
Cf][ ]bz`bY`df#g`i ýYbghj c  
&\$\$+">#&\$\$,



- when it has to be **right**

**Leica**  
*Geosystems*

# Cf][ ]bz`bY`df¶g`i yYbg hj c Gdfzj bU`j c VU

B Uj f\cj Ub f\U`dcgHj Ybf`dcX U`bU`df¶gbY`yM`yHUbXUfXcj " NUF]UXYb]U`@Y]W"; YcgmgHya g`g`bU`j myY^`j U`]mz YI Hfa bY`gdc U`]j f`U`g`cbY`fci cj Ub f`Hj`\_z UVmcXc`U`]bz gHfU`za dfUWtj bf\c`dfcghfYX]U`Cf][ ]bz`bY`df¶g`i yYbg hj c`@Y]W"; YcgmgHya g`gd`U`fcj bu\_f`yHUbXUfXm`B Uy]j`j c`z f`bUj f\i ^`\_UyX`X]Y` df¶g`i yYbg hj U`Hj`\_z UVmidYfZy`HbY`gdc`i dfUWtj U`g`J Uy]a`df¶ghfc`ca` DfYh`j yXmXcg]U`bYH`dcyUXcj Ub`j`\_cb`U`dfYgbcg "

DfY`U\`\_`j`VYf`j`cXbf`c`df¶g`i yYbg hj U`dfY`J UyY Ud`\_z WYz`@Y]W"; YcgmgHya g`XY`df¶g`i yYbg hj c`bU Hf`fcn`ybf`Wbcj f`U`j`\_cbcj f`g\_i d]bm`

## DfcZYg]cbz`bY



H]Yh`i`HfU`j`\_cbbf`dfcXi`\_hmigd`U`bU`j`my]Y`dcy]U` XUj`\_mbU`Xcg]U`bi`H`Y`bU`Ydy]Y`c`a`cYbf`c`j`g`YX`\_i` Dcg\_mhi`^`X`\_`Z`b`\_bcg`U`cXc`bcg`U`j`YI`Hfa`bca` dfcghfYX#`5`\_glU`nUf]UXYb]Y`dcy`cX#`Y`\_`X]gdcnM#` y\_z`U`bz`fUXb`W`X]Y`cj`"

## Nz`UXbf



DfcXi`\_hmia`U`cdhja`U`ncj`Ub`dca`Yf`W`bU#`\_cb` U`ghz`Y`gd`U`fcj`bU`f`df¶gbY`dcy]UXUj`\_mbU`cXc`bcg` U`c`dfcZYg]cbz`bU`fUXU`Nz`\_UXbz`fUXU`Y`j`cXbz`dfY` Ud`\_z WYz`\_XY`Y`dc`c`cj`z`dfYgbcg`" `a`a`XcgHh`bY` i`gdc\_c`j`z`"

## @Wbz`j`c`VU



H`h`fUXU`Y`nUa`YfUbz`bU`W`bi`">Y`i`f`Ybz`dfY`Y`XbcXi`W`f` a`YfU`g`f`c`m`\_XY`Y`dc`c`cj`z`dfYgbcg`%\$`a`a`XcgHj`i` !` ^`W`i`J`n`UXca`bU`b`h`i`W`bi`df¶g`i`yYbg hj`U`b]Y`g`\_`X]gdc` n`W`y]UXbY`bz`fUXbf`X]Y`m`"



# CVgU\

GhJhſſ m	04
DcX`cÿ_m	06
8fÿ]U_m·fſH bY”Ł	07
CXfUncj f·nf_UX`z	08
?i Zſ Ł_m	11
J hm _m	12
BUVſU _m	14
6Uhſſ]Y	15
DUa } cj f·a fX]z	16
C_i `z fY·U·cdh]_U·	16
@UhſdfY·8B5·	17
?z V`Y	18



# GhUhij m

?cbýhfí \_WU'U'Xfi \ a UhYf]z i žn'\_hoff\c 'Y'ghUhij j mfcVYb  
 a z \\'Uj b 'j d'mj 'bU'Y\c'ghUV]JH "Bc\migUhij i 'g' j mfcVYbf  
 n'XfYj Už' ]b£i ž'U'YVc'g'\_c'Ua ]bzH "UyX 'n'h W\hc'a UhYf]z'cj  
 a z ]b 'XcdUX'bU'ghUV]JH 'ghUhij i ž'XfYj Ybf'g' j yU'\_cj YfYbY'  
 bU'gHV]bY'y]Y.



## DfcZYg]cbz`bY

### ; GH&\$z'8fYj Yb 'ghUhij

Uy\_ 'XfYj Yb 'ghUhij 'g'c'cj b]Wt ž'dcdfi \a ]ž'dftg'i yYbglj ca ž  
 UfYhz W\U'g\_fi h\_Ua ]"8'\z'j chtbcg ž'bY\fctg\_f' hYb]Y'b' \ž'j nb]\_U^ WU  
 UVgcfVVWUj ]Vfz W\U'8 y\_Uj 'nVU'Ybca 'ghUj Y'%'\$W žj 'fcn'cyYbca  
 ghUj Y'a UI "'% \$W žj z\U'\*"(\_[ "

**CV"** . &- \* \* &

### ; GH&\$!- z'8fYj Yb 'ghUhij

Uy\_ 'XfYj Yb 'ghUhij 'g'dcdfi \a ]ž'UfYhz W\U'g\_fi h\_Ua ]ž'VYn'c'cj b]Wž  
 dftg'i yYbglj U"8'\z'j chtbcg ž'bY\fctg\_f' hYb]Y'b' \ž'j nb]\_U^ WU'UVgcfVVWU  
 j ]Vfz W\U'8 y\_Uj 'nVU'Ybca 'ghUj Y'%'\$W žj 'fcn'cyYbca 'ghUj Y  
 a UI "'% \$W žj z\U'\*"(\_[ "

**CV"** . - (+) &

### ; GH%&\$!- z'8fYj Yb 'ghUhij

Uy\_ 'XfYj Yb 'gUa cnUhj z fUWghUhij 'g'dcdfi \a ]ž'UfYhz W\U'g\_fi h\_Ua ]"  
 8'\z'j chtbcg ž'bY\fctg\_f' hYb]Y'b' \ž'j nb]\_U^ WU'UVgcfVVWUj ]!  
 j ]Vfz W\U'8 y\_Uj 'nVU'Ybca 'ghUj Y'%'\$W žj 'fcn'cyYbca 'ghUj Y  
 a UI "'% \$W žj z\U'\*"(\_[ "D5H9BHCJ 5Bv 'G5A CN5HJ à F 5B=9"  
**CV"** . \* \* + '\$%

### ; GH(\$z'8fYj Yb 'ghUhij

Uy\_ 'ghUhij 'g'dYj b a ]bc\Ua ]ž'j cXb 'dfY'Xc\_cbU' 'fcj ]bi 'fU DBŁ"  
 8'\z'j chtbcg ž'bY\fctg\_f' hYb]Y'b' \ž'j nb]\_U^ WU'UVgcfVVWU  
 j ]Vfz W\U'  
 8 y\_U'\*+\$W žj z\U'\*"\$\_[  
**CV"** . & , (&&)

### ; GH+%ž'ghUhij 'g'UXUdhffca

Uy\_ 'XfYj Yb 'ghUhij 'g'UXUdhffca 'bU'; GH+&'chc b 'XfY]U'\_bU  
 bchYVcc\_"

**CV"** . (+) ' ' %&



# GħUħejji m



## Nz\_`UXbf

; GH\$) ž-8fYj Yb ġħUħejji

U\\_\\_ ġħUħejji għej cXYcXc'b a 'cVU'ca 'dfY\\_ca d'Yhb+ 'cVXfUbi "J\cXb 'dfY'; DG'U'cXfUncj f'fUbc'm' 8 ġy\_Uj 'nVU'Ybca ġħUj Y-%\$+Wā žj 'fcnċċyYbca ġħUj Y a UI "%+\* Wā žj z\U) "\*\_[ "

**CV"** . . - & ( (

; GH\$) @ž-]b‡cj ġħUħejji

U\\_\\_ ġħUħejji għdcdfi \ca ž-UFYħz WJU'g\_fi h\_Ua ]" @UWħYy]U'UħYf bUħejji U'dfY'HDG'ncħejj m' 8 ġy\_Uj 'nVU'Ybca ġħUj Y-%\$ (Wā žj 'fcnċċyYbca ġħUj Y a UI "%+\* Wā žj z\U) "+\_[ "

**CfV"** . ) \* \* \$

## @UWħz j c VU

7HD%\$%ž-8fYj Yb ġħUħejji

U\\_\\_ ġħUħejji għdcdfi \ca ž-UFYħz WJU'g\_fi h\_Ua ]" @UWħYy]U'UħYf bUħejji U'dfY'HDG'ncħejj m' 8 ġy\_Uj 'nVU'Ybca ġħUj Y-%\$ (Wā žj 'fcnċċyYbca ġħUj Y a UI "%+\* Wā žj z\U) "+\_[ "

**CV"** . +&\* , %

7HD%\$' ž-]b‡cj ġħUħejji

U\\_\\_ ġħUħejji għdcdfi \ca ž-UFYħz WJU'g\_fi h\_Ua ]" @UWħYy]U'UħYf bUħejji U'dfY'bjj Y'U' b\_f' df tgħfc Yż-ġuġ fm'UħYf 8 ġy\_Uj 'nVU'Ybca ġħUj Y-%\$ (Wā žj 'fcnċċyYbca ġħUj Y a UI "%+\* Wā žj z\U) "+\_[ "

**CV"** . +&\* , %

## Df tgħi č-Ybgħi c

; GH( ž-CHUV])nz hcif ġħUħejji cj\_ W\ b' \ ! " dUj • \_

GHUV])ncj Ub]Y b' \ ġħUħejji i 'bU'\_n\_ca dcj fVX i "

**CV"** . . & & \$

; <H( ž-8fY]U\_ bU' ġħUħejji

5XUdhff bU a cbħaż-żf X]U' H7 DG&+ 'bU'j ľYh\_migħUħejji m'

**CV"** . + ( , %\*

; <H( , ž-8fY]U\_ bU' ġħUħejji

5XUdhff bU a cbħaż-żf X]U' H7 DG&+ 'bU'j ľYh\_migħUħejji m'

**CV"** . + ( , %\*

; GH+! ž-Dcgi j bz Nz\_`UX U

Nz\_`UX U'gc nUVc\_cj UhY b a ]\_c]Yg\_Ua ]žj \cXbf 'dfY j ľYh\_mXfi ! \migħUħejji cj\_i a cċy i Y'dfYgj b\_ghħejji i 'VYn'na cbħcj Ub]U'df tgħfc U"

**CV"** . + ) ! %

# DcX`cÿ\_m

## DfcZYg]cbz`bY

; 8: %&%ž'DcX`cÿ\_U'VYn'cdh]WY^c`cj b]W

J mgc\_c 'dfYgbz ž'VYn• XfÿVcj z 'dcX`cÿ\_U''=bXjj ]Xi z 'bY' h'ghcj Ubz ž i f YbZ 'dfY'HDG'g' dfYgbcg ci 'a YbY^U\_c'%"'DfYhc'Y'j \cXbz dfY'dfz Wz'\_XY'Y'dcÿUXcj Ubz 'j mgc\_z 'i \cj z 'dfYgbcg " Hcfnbz 'H \cg 'O%'žj z\U'+, \$'[ fUa cj "

CV" . \* \* + " \$()

; 8: %&%ž'DcX`cÿ\_U'g'cdh]Wci 'c`cj b]Wt

J mgc\_c 'dfYgbz ž'VYn• XfÿVcj z 'dcX`cÿ\_U''Cdh]Wz 'c`cj b]W'Y'fcI Vi ghbY^\_cbýhfi \_WYž'dfU\_h]W\_mY'ja]bi 'Y'dchfYYVi '\_U]Vfz WY'cdh c`cj b]W'dc U'g'W'Y^XcVmldci yj Ub]U'dcX`cÿ\_m"

Hcfnbz 'H \cg 'O%'žj z\U', \*\$'[ fUa cj "

CV" . \* \* + " \$+



## Nz\_`UXbf

; 8: %%d %ž'DcX`cÿ\_U'VYn'cdh]WY^c`cj b]W

J \cXbz 'dfY'nUf]UXYb]U'HDG'g'i '\cj ci 'dfYgbcg i 'j ]UWU\_c'%"' G\_fi h\_ma U'j Y\_ 'df]Ya Yfž' c'i a cÿ i 'Y'Ya bf'Xc'UXYb]Y U^df]dfz Wj 'fi \_Uj ]WUW Hcfnbz 'H \cg 'O%'žj z\U'+, \$'[ fUa cj "

CV" . \* +(, , ,

; 8: %&%ž'DcX`cÿ\_U'g'cdh]Wci 'c`cj b]Wt

DcX`cÿ\_U'U'cdh]Wz 'c`cj b]W'g'fcVi ghbY^\_cbýhfi \_WYž'j \cXbf dfY'X'\ 'dfz W'j '\_UyXca 'dfcgfYX#>Y']XYz'bU'dfY'; DG'U'Wb! hfcj Ub]Y'h'f' cj "

Hcfnbz 'H \cg 'O%'žj z\U'\*+\$'[ fUa cj "

CV" . \* \* + " \$,



GDF111-1



GDF122



CTB101

## @UWbz 'j c VU

7H6%\$%ž'DcX`cÿ\_U'VYn'cdh]WY^c`cj b]W

@UWbz 'dcX`cÿ\_U'bU'dci yjYj 'bcfa z 'bmW 'dcxa ]Yb\_UW " J \cXbz 'dfY'j yYh\_m U'\_f 'df'ghfc'Y'g'b#n\_ci 'i \cj ci 'dfYgbci g ci 'jYfbU'ZfVU" Hcfnbz 'H \cg 'O%'žj z\U'+, \$'[ fUa cj "

CV" . \* +&\*, ' -

## Df tg'i yYbgfj c

; < A \$\$+žA YfU 'j 'y\_mdftgfhfc'U

BU'f W'Y'U'dfYgbf'cXa YfUb]Yj 'y\_mdftgfhfc'U''üdYVj 'bY cnbU Ybf'dzga c 'dfYgbY'ncVfUni 'Y'j 'y\_i 'dc'ghfYX'HDG HDG' U'Y\_c\ UXi ž'U'YVc'\fUbc'i " >Y'dchfYVbf'Xc\_•d] 'Xfy]U\_ ; < H%-\* "J 'y\_U'Y'fYXi \_cj Ubz 'bU'j cXfcfj b• 'j nX]U'Ybcg "

CV" . \* \* + "%

; < H%-\* ž8fj]U\_ 'bU'a YfU 'j 'y\_mdftgfhfc'U

G'j 'bU'i W'ntfYb]Yj 'y\_ca Yfi ' ; < A \$\$+ 'bU'\_hcf•\_c j Y\_ 'dcX`c!

y\_i '@Y]W"

CV" . \* +&\*\$()



GHM007

GHT196

# 8fý]U\_mfl'H bY"Ł



DfcZYg]cbz`bY'Xfý]U\_mg• \_'X]gdcnW]g'cdh]W\_ci ž'U'Yvc  
'UgYfcj ci 'c'cj b]Wt i 'dfY'dfYgbf'bUgHuj Yb]Y'bU'VcX"  
C'cj b]W]HJ\_ a ' ýY'Vm'bUgHuj Ybz'dfYgbYj Yfh]z'bY'dc!  
X U'dfYgbY^chc bY^]VY'm'



SNLL121



GZR3



GZR103



GAD31

## DfcZYg]cbz`bY

**GB@@%&%ž'DfYgb 'Xfý]U\_g'UgYfcj ci 'c'cj b]Wt i**  
@UgYf'dcg\_nhi 'Y'XcVff'a cýbcgh'bUgHuj Yb]U'U^j 'dfcgfhYX‡  
gc'gb]yYbci 'j ]X]Hb bcg ci "A' ýY'Vm'nUVY'Yb 'Xc'bUX]fi 'U^nYb]!  
H "8cXzj Ub 'g'(I '55'U'\_U]W\_a ]'VUhff]Ua ]'DfYgbcg 'WbhfzWY  
\fUbc'U'Y'\$" a a ždfYgbcg 'c'cj b]W %"\$a a 'bU%' a "  
**CV" .'\* + ' %\***

**; NF 'ž'DfYgb 'Xfý]U\_g'cdh]W\_ci 'c'cj b]Wt i**  
CVgUJi 'Y'j Y a ]'dfYgb' 'cdh]W\_ 'c'cj b]W 'bU'dfYgbf'nUVWY'Yb]Y  
bU'VcX' 'DfYgbcg 'WbhfzWY'\fUbc'U'Y'\$" a a ždfYgbcg  
c'cj b]W \$" a a 'bU%' a "  
**CV" .(\* & , (\$**

## Nz\_`UXbf

**; NF %\$'ž'8fý]U\_g'cdh]W\_ci 'c'cj b]Wt i**  
Chc b 'Xfý]U\_g'\_fi \cj ci 'JY'ci 'dfY'dci ý]H'Y'bU'dcX'cý\_Y  
VYn'c'cj b]W" 'DfYgbcg 'WbhfzWY'\fUbc'U'Y%"\$a a ždfYgbcg  
c'cj b]W \$" a a 'bU%' a "  
**CV" .+&) ) \*\***

**; FH%((ž'8fý]U\_g'VU'cbYhca**  
>YXbcXi VK 'Xfý]U\_bU'dcX'cý\_i 'g'cdh]W\_ci 'c'cj b]Wt "J\cXbf  
dfY'\fUbc'g'VU'cbYhca "'DfYgbcg 'WbhfzWY'\fUbc'U%"\$a a "  
**CV" .'\* + '&%\***

**FH%((ž'8fý]U\_g) #, "nzj ]hca**  
>YXbcXi VK 'Xfý]U\_bU'dcX'cý\_i 'g'cdh]W\_ci 'c'cj b]Wt "'DfY  
df]Ua Y'bUgUXYb]Y'; DG'Ubhf'b' 'DfYgbcg 'WbhfzWY%"\$a a "  
**CV" .'\* + '&%\***

## Df tg'i ýYbgħj c

**; 58' %žF YXi \_VU'n'VU'cbYh 'bU'nzj ]h) #, "**  
DfY'df]Yj bYb]Y'; DG'Ubhf'bmbUj hm\_mU'Xfý]U\_mg'VU'cbYhca .  
**CV" .'\* + '&%+**

**; NG(ž<z\_`bU'i WmHb]Y'a YfU Uj ý\_mighfc'U**  
<z\_`dfY'i a ]YghbYb]Y'a YfU Uj ý\_mighfc'U'df]Ua c'dcX'dcX'cý\_i "DUGi  
'Y'bUj ýYh\_m@Y]W'dcX'cý\_m'l f Ybf'bU'dfYgbf'a YfUb]Y'  
j ýc\_'; DG'Ubhf'b'U'\fUbc'cj "G'jhY[fcj Ub a 'dzga ca  
XY'Yb a 'bU'a]ja YHFY"  
**CV" .'\* + '&()**

# ÜHÜbXÜfXbf \ fÜbc`m

## DfcZYg]cbz`bY

; DF %&%žCXfUncj \ fÜbc`g`Xfy]U\_ca

DfYgb \ cXfUncj \ fÜbc`g`Ubh]fYZYI bci \ dfUj ci ž i dYj bYb  
j \ \_cj cj ca \ Xfy]U\_i "8cXzj Ubf \ g`cXcVfUhY bci \ WY cj ci \ d`Uh ci "  
DfYgbcg \ WbhfzWY \ fÜbc`U %%\$a a ž a Ul \ XcgU\ g`F `Y' ) \$\$a "  
CV" . \* ( %\* %+

; DF %žCXfUncj \ fÜbc`

DfYgb \ cXfUncj \ fÜbc`g`Ubh]fYZYI bci \ dfUj ci \ J \ cXbf`bU  
i dYj bYb]Y j \ Xfy]U\_cWY'; D<`U'; D<` "

A Ul \ XcgU\ g`F `Y' ) \$\$a "

CV" . \* &, '\$

; D<%ž8fy]U\_ \ fÜbc`U

8fy]U\_ \ dfY`YXYb\cXfUncj \ fÜbc`'; DF %? \ hca i \ h`Xfy]U\_i \ a \ jY  
Vm \ dfYj bYbz'; NH( \ WY cj z \ d`Uh U"

CV" . \* &, &\$

; D<`ž8fy]U\_ \ fÜbc`U

8fy]U\_ \ dfY`h]cXfUncj f \ fÜbc`m; DF % \ Dcg\_nti \ Y`YI hffa bY`X` \.  
a YfUW \ j nXJU`Ybcg ž j \ UWU\_c ) (\$\$a \ g`F "

CV" . (\* \$, \$

; D<%DžDfYgb \ fÜbc`

DfYgbY gdfUVtj Ub \ fÜbc`dfY`dcy]UXUj \_i \ j mgc\_Y`dfYgbcg" "  
<fÜbc`Y`a \ JfbY`bU`cbYb \ UVmgU`dfYX]Y`c \ cXfUni \ n`dfYXbY^  
ghfUbmidcj fW \ j h a \ gU`nj myi \ Y`dfYgbcg \ a YfUb]U"  
DfYgbcg \ WbhfzWY \$" a ž a Ul \ XcgU\ g`F `Y' ) \$\$a "  
CV" . )) \ \* %



<fÜbc`m@Y]WY'; YcgmgħYa g`g \ g\_cbýhfi cj Ub \ bU`bU?  
j myj \ a cýb \ dfYgbcg " \ Dc`j \ fcVY`Y`\_UyX \ fÜbc`  
dfYa YfUb \ bU`cbhfci \ Y\c`dfYgbcg" \ 8c`dfYXU`U  
dcgh \ d]U`JU`h]Y \ fÜbc`mž \ hcf \ gd \ U \ dfYgbY`dcy]U!  
XUj \ mbU`dfYgbcg "



GPR121



GPH1P



GPR111



GPR113

## Nz\_`UXbf

; DF %&%žCXfUncj \ fÜbc`g`Xfy]U\_ca \ U`Hf ca

CXfUncj \ fÜbc`nUhUj Yb \ j \ Yfj Ybca \ dc`ma \ ffcj ca \ Xfy]U\_i "  
J Y \ \_z \ ]bhY \ fcj Ubz \ WY cj z \ d`Uh U`nUfi \ Y`XcVf \ j \ J]hY bcg "  
DfYgbcg \ WbhfzWY \$" a ž a Ul \ XcgU\ g`F `Y` &) \$\$a "

CV" . \* ( %\* %

; DF %&%ž< fÜbc`bU`a cb]hcfcj Ub]Y

< fÜbc`g`j Y \ a \ dfY`Ya Yfca \ dfY`X`f`nza Yfm`DfY`]byhU`z WY  
bU`A \ ž`U`YVc \ #, \ nzj \ J`h`J ghUj Ub \ J`hYfž \ hcf \ dfYXVwz XnU  
\_cbXYbnzWY \ bU`dcj fW \ fÜbc`U`A cýbcg \ Xc` \ dYb]U`cVU`i  
dfch \ XUj \ U`gbY \ A Ul \ XcgU\ g`F `Y` &) \$\$a "

CV" . +&\* \ &- )

; DF %&%žCXfUncj \ fÜbc`g`Xfy]U\_ca

CXfUncj \ fÜbc`i dYj bYb \ j \ Yfj Ybca \ dc`ma \ ffcj ca \ Xfy]U\_i "  
J \ cXb \ dfY` \ NH( \ WY cj \ d`Uh i "

DfYgbcg \ WbhfzWY \$" a ž a Ul \ XcgU\ g`F `Y` &) \$\$a "

CV" . (+) \ (- &

# üdYVWz`bY`\fUbc`m

## DfcZYg]cbz`bY

; FN(ž' \* \$š`< fUbc`  
J\cXbf`dfY`j yYh\_mUi hca Uhjncj Ubf`HDG`+`c\mgj` hm\_ci "  
J Y \_f`d`Ughcj f`h`c`Vfzb]\`fUbc```DfYgbcg `` 8 `VY`Yb]U`Y`\$") a a "  
7]Y`Yb]a`bU`ghfUbi`cnbU`Yb`y`hci`y`d\_ci`gU`Xz`Xcg]U`bi  
dfYgbcg ``Ydý]U`U\_c`&"a a "  
8cgU\`bU`5HF`fU`hca UhjWf`VY`Yb]Y`Y`\*\$\$a "  
**CV"** .\*\* - - , )

; FN%&&ž' \* \$š`< fUbc`  
J ngc\_c`j`\_cbb`\`fUbc``; N%&&i`a cÿ`i`Y`df]dc`Yb]Y`bU  
@Y]V`Ga`Ufhbhbh`bU`i`"  
DfYgbcg `` 8 `VY`Yb]U`Y`&"a a "8cgU\`bU`5HF`Y`\*\$\$a "

**CV"** .+)( . , (



GRZ4

GRZ101 &  
GAD103

## Nz\_`UXbf

; FN%\$%ž' \* \$š`A]b]\`fUbc`  
J\cXbf`dfY`\_fzh\_Y`5HF`Ud`\_zVY`J`n\`UXca`bU`a`U`f`fcna`Yfm  
\fUbc`Už` FN%\$%dcg\_nti`Y`j`mb]\_U`W`dfYgbcg`5HF`VY`Yb]U`%" a a "  
G`UXUdh`fca` ; 58%` a`y`Vm`\`fUbc`i`dYj`bYb`bU`j`y`h\_m  
j`hm\_m7DD%` )`A`U`"XcgU`g`]bZU`Yfj`Yb`a`U`VYn\fUbc`c`j`a  
X]U`ca`Yfca`98A`Y`&)`\$a`"  
**CV"** .\*( ( . &+

GRZ122 on  
GLS12 pole

CPR105

## @UVbz`j`c`VU

7DF %\$) ž`CVc`ghfUbb`\`fUbc`  
I b]\_z`hbm\fUbc`dcg\_nti`Y`VY`Yb]Y`bU`c`VcVW`ghfUbz`W`ž`c`VY  
g`bi`c`j`ci`\_cbý`hU`h`i`G`%(``nzj`j`hca`ž`j`cXbf`bU`i`dYj`bYb]Y  
j`hm\_m7DD%` )`A`U`"XcgU`g`]bZU`Yfj`Yb`a`U`VYn\fUbc`c`j`a  
X]U`ca`Yfca`98A`Y`&)`\$a`"  
**CV"** .+`%`(\*

; NA &, ž`F`YZYI`bz`ZCE]U

GUa`c`Yd]UWž`f`YZYI`bz`ZCE]U`g`fcna`Yfca`\*`\$`i`\*\$`a`a`"; ZCE]U`Y`i`f!  
Ybz`bU`a`YfUb]U`U`y`Xc`%)`\$a`g`]bZU`Yfj`Yb`a`98A`"6U`Yb]Y  
c`VgU\`i`Y`&\$`\_i`gcj`"9l`j`gh`^`U`^`ZCE]Y`g`fcna`Yfca`&`l`&`W`U`(`I`(`W`"  
**CV"** .+`%`&+

; NA &, ž`F`YZYI`bz`ZCE]U

GUa`c`Yd]UWž`f`YZYI`bz`ZCE]U`g`fcna`Yfca`\*`\$`i`\*\$`a`a`"; ZCE]U`Y`i`f!  
Ybz`bU`a`YfUb]U`U`y`Xc`%)`\$a`g`]bZU`Yfj`Yb`a`98A`"6U`Yb]Y  
c`VgU\`i`Y`&\$`\_i`gcj`"9l`j`gh`^`U`^`ZCE]Y`g`fcna`Yfca`&`l`&`W`U`(`I`(`W`"  
**CV"** .+`%`



# A ]b]\`fUbc`m

## DfcZYg]cbz`bY

; A D%\$%žA ]b]\`fUbc`cj z `gUXU

A ]b]\`fUbc`i dYj bYb`j`\_cj cj ca `Xfy]U\_i ``CVgU\i Y`\_fi \cj • `]VYi ž`cXcVYfUhY b`WY cj • d`Uh i ž`fch`U`dfYdfUj bf`d`nXfc`? cbýHUbHJ\fUbc`U`Y`ž`+") a a ž`a UI ``XcgU\`g`F`Y`&\$\$a " CV" .`\*( (%\*\* &

; A D%\$( žA ]b]\`fUbc`g`@`Xfy]U\_ca

A ]b]\`a cb]hfcj UW\fUbc`i dYj bYb`j`\_cj cj ca `Xfy]U\_i ``8cXz! j`Ubf`g`Xfy]U\_ca `h`Uf ``@`dfY`Zl`bf`i dYj bYb]Y``CZgYh\fUbc`U nzj ]gfcX`dc`c\mi W\mthYb]U`A UI ``XcgU\`g`F`Y`&\$\$a "

CV" .`\*( (%+\* &



GMP101

## Nz\_`UXbf

; A D%\$%žA ]b]\`fUbc`g`Xfy]U\_ca

A ]b]\`fUbc`i dYj bYb`j`dc`ma ffcj ca `Xfy]U\_i `g`%#(``nzj ]hca ``CVgU\i Y`\_fi \cj • `]VYi ž` @G%) `g`\_UXUVW`j`hm\_i`a UI ``% \$`W`? cbýHUbHJ\fUbc`U`Y`ž`+") a a ž`a UI ``XcgU\`g`F`Y`&\$\$a "

CV" .`\*( (%\* %

; A D%\$%žA ]b]\`fUbc`g`Xfy]U\_ca

A ]b]\`fUbc`i dYj bYb`j`dc`ma ffcj ca `Xfy]U\_i `g`%#(``nzj ]hca ``CVgU\i Y`\_fi \cj • `]VYi ž` @G%) `g`\_UXUVW`j`hm\_i`a UI ``% \$`W`? cbýHUbHJ\fUbc`U`Y`\$`a a ž`a UI ``XcgU\`g`F`Y`&\$\$a "

CV" .`\*( (&) ' (



GMP104



GMP111 &amp; GAD105

## Df`g`i ýYbgjh c

; 58%\$! žF YXi \_WU`bU` \* \$š`a ]b]\`fUbc`

FYXi \_WU`bU`i dYj bYb]Y` A D%\$%bU`j`hm\_i`g`VU`cbYhca ``Dcg\_mti`Y`fcj bU\_`j`y\_cj`cZgYh`U\_c`ýHUbXUfXbf\fUbc`m` CV" .`+((&\$`\*

; 58%\$! žF YXi \_WU`bU`a ]b]\`fUbc`g`%#(``nzj ]hca `bU`VU`cbYh

FYXi \_WU`bU`i dYj bYb]Y` A D%\$%bU`j`hm\_i`g`VU`cbYhca ``Dcg\_mti`Y`fcj bU\_`j`y\_cj`cZgYh`U\_c`ýHUbXUfXbf\fUbc`m` CV" .`+(('`\$`'



GMP111-0



GVP608

; A D%\$%žJ` hm\_U`bU`f` W`Y`a YfUb]Y`g\_fnh` W`VcXcj

Fcny`Yb]Y`dfY` A D%\$%d`CVgU\i Y`a ]b]\`fUbc`U` \$`W`UXUdhyff` bU`j`hm\_i`"I`a cý`i`Y`j`cýYb]Y\fUbc`cj`\$`(\$ž`+\$`U`%\$`\$`W`"

CV" .`+((&`&-

; A D%\$%žJ` hm\_U`bU`f` W`Y`a YfUb]Y`g\_fnh` W`VcXcj

Fcny`Yb]Y`dfY` A D%\$%d`\$`CVgU\i Y`a ]b]\`fUbc`U` \$`W`UXUdhyff` bU`j`hm\_i`"I`a cý`i`Y`j`cýYb]Y\fUbc`cj`\$`(\$ž`+\$`U`%\$`\$`W`"

CV" .`+(((-)

; J D\* \$, žD` nXfc

D`nXfc`bU` A D%\$%#` A D%\$%d`\$`a ]b]\`fUbc`cj`g`UXi`g`j`hm\_ci` ; @G%) "

CV" .`\*( (&`()

# ?i ZfLm



A Ugfj bY'\_i ZfLm@Y]VU'; YcgmgħYa g'cWfU i ^ Jzý  
\\cXbcħb dfghfc^dc Ug'dfYdfUj mż U'YVc' df]bz\c!  
Xbca 'dz XY''üd YV]Z'bY'hYgbYb]Y'VWfzb]cVgU\ \_i ZfLm  
gi VV 'U' jgh īnU' UyX VV dcXa ]Ybc\_"



GVP609



GDZ66

; JD\* \$- ž?i ZfLm bU'dfḡi yYbgħj c

?i ZfLm bU'Xj U'\fUbc'mfl DF %&%ż'; DF %%%ż'; FN( 'U'YVc'; D<%Dżż  
& Xfy]U\_mfl NF' ż'GB @@%&%ż'; NF %\$' 'U'YVc'; FH% ( żż&dcX'cȳ\_m  
fj yYh\_mħmdnżż; NH( 'VY cj z d'Uh U'U'; <A \$\$+ 'a YfU 'j y\_mighfc'U"  
**CV'' . \* \* + () %**

; JD\* & ž?i ZfLm dfY'; DG%&\$

?i ZfLm dfY'; DG Gmghfa '%&\$'; DG fbd]żha U ž'5L %&\$' Ubħf'bUž  
FL%&\$' cj' z XU tżż\_z VY'U'dfḡi yYbgħj c'

**CfV'' . + ' & \***

; JD\* - ž?i ZfLm dfY'; DG-\$

?i ZfLm dfY' & l '5HL - \$\$'Ubħf'bñż FL - \$\$'cj' z XU ž'; <H>\* Xfy]U\_ż  
&l'; : l % ( fzX)cž\_z VY'U'dfḡi yYbgħj c'

**CV'' . + ) ' , - )**

; JD\* (\$ž?i ZfLm dfY' HDG Gmghfa '%&\$

?i ZfLm dfY' HDG Gmghfa '%&\$' U'Ga UfhGHUjcb"

**CV'' . + ) ( ) - ,**

; JD\* \$' žFi\_gU

Fi\_gU\_A Ua a i h'dfY'gYbncfmbU'Gmghfa') \$\$#%&\$'; DG"

**CV'' . \* \* + % +**

**7H7%&žD• nXfc**

CWfUbbf'd• nXfc'g'dcdfi \Ua ]'dfY'nf\_UX'cž'dcX'cȳ\_i 'U'Xfy]U\_"

**CV'' . + & + ) , -**

## Dcdfi \ m

; 8N&\$žDcdfi \ m

Dcdfi \mibU'dfYdfUj b \_i ZfLm bU'HDG%\$#\$&\$%"'dfY'UyX \_i ZfLm  
g' dchfYVbf'Xj U'dcdfi \m'

**CV'' . \* \* &(-**

; 8N\* \* žDcdfi \ m

GUXU'Xj cWl'dcdfi \cj ž'dfY'\_i ZfLm; JD"  
?i ZfLm Y'a cýbf'cħj zfu 'U'g'i dYj bYb a ]'dcdfi \a ]"

**CV'' . +(( ) \$%**

# J hm\_m

## DfcZYg]cbz`bY

; @G%&žHY`Yg\_cd]Wz j hm\_U

FYZY\_hfcj f j hm\_mg'f W'cgj cf\_ci 'dfY' U\ \_f'U'c\_Ua ý]hf  
j ngi bi hY'Xc'dcýUXcj UbY^j ý\_m'8Y'Yb]Y'j 'W' ž'a ]b"X ý\_U'  
%"&( a ž'a Ul "X ý\_U'"%&" a žj z\U'- (\$[ "

CV" . , ) ) \$\$

; @G%&žHY`Yg\_cd]Wz j hm\_U

J hm\_Uj \cXbz 'dfY'; FN%&& '\fUbc`g'5HL 'Ubhfbc "8Y'Yb]Y'  
j 'W' ž'a ]b"X ý\_U'" - a ž'a Ul "X ý\_U'"\$a žj z\U'- ) \$  
>Y'a cýbz 'UfYhz WU'dc') 'W'

CV" . +) (' - %

; @G%& žHY`Yg\_cd]Wz j hm\_U

J hm\_Uj \cXbz 'dfY'; FN%&& '\fUbc`g'5HL 'Ubhfbc "8Y'Yb]Y'  
j c'Zh'a ]b"X ý\_U'" - a ž'a Ul "X ý\_U'"\$a žj z\U'- ) \$[ "

CV" . +) (' , -

; @G%(&žA]b]j hm\_U

A ]b]j hm\_U dfY'dfYgbf i a ]YghbYb]Y'\fUbc'U'bUX  
a YfU g\_ nbU \_i "Dcg\_nhi Y'j ý\_i '\fUbc'U'&\$W"

CV" . (\$' (&+

; @G%&žHY`Yg\_cd]Wz j hm\_U

J Y a ]cXc'bz 'fYZY\_hfcj z j hm\_U'g' Yfj Ybc#V]Y'ma nbU \_cj Ub‡  
dfY'XcVf• j ]X]hY bcg "J ý\_U'g'U'fYh 'Y'chc Yb‡a j ngi bi hY' Ugh]  
j hm\_m'8Y'Yb]Y'j 'W' U'Zh'a ]b"X ý\_U'"(\$a ž'a Ul "X ý\_U'  
&"\* \$a žj z\U'"(, \_[ "

CV" . \*\*\* + ' \$-

; @G%&žHY`Yg\_cd]Wz j hm\_U

J Y a ]cXc'bz 'fYZY\_hfcj z j hm\_U'g' Yfj Ybc#V]Y'ma nbU \_cj Ub‡  
dfY'XcVf• j ]X]hY bcg "J ý\_U'g'U'fYh 'Y'chc Yb‡a j ngi bi hY' Ugh]  
j hm\_m'8Y'Yb]Y'j 'W' U'Zh'a ]b"X ý\_U%"( +a ž'a Ul "X ý\_U'  
'" \* \$a žj z\U%"(, \_[ "

CV" . \*\*\* + ' %\$

## Nz\_`UXbf

; @G%& žA]b]j hm\_U

GUXU'nc 'ýhmcvW'ncg\_fi h\_cj UH b W' Ughtg'%'( "nzj ]hca "  
J \cXbf'dfY'; A D%&%U'7DF %\$) '\fUbc'm'  
I a cý i Y'j ý\_i '\fUbc'U'%\$ž'(\$ž'+\$ž'%%\$'U'YVc '% \$W"  
CV" . (\* (&%\$\*

## @UWbz j c VU

7DD%\$) žHY`Yg\_cd]Wz j hm\_U

FYZY\_hfcj z j hm\_U'g'%'( "nzj ]hca 'dfY'i dYj bYb]Y'; A D%&%U  
7DF %\$) '\fUbc'cj "A ]b"X ý\_U%"&, a ž'a Ul "X ý\_U'"%&a žj z\U'  
, - \$[ ž'VYn'gh db]W"

CV" . +(, :- \* +



J hm\_m@Y]W"; YcgmghYa g'dcg\_nhi ^ 'ghhUV]b• U  
bY\_nUj • dcXdcfi 'dfY'J Uýy'\fUbc'mU'; DG'Ubhf!  
bm'J } ý]bU'j hm ]Y'\_a z 'h fXYb 'cW cj '\fchž  
\_hcf 'gU'bYcdchfYVi 'Y''Hc'nUfi i 'Yž'ýY'j ý\_U  
j hm\_micghzj U'ghz'Y'ffcj bu\_z"



GLS14



GLS11

GLS12

GLS111

CPP105

# ; DGJ hm\_m

## DfcZYg]cbz`bY

; @G&\$ž'GdcXbz`Ug`; DGj hm\_m  
 G\_fi h\_cj UWUj hm\_U'n'\_UfVfbcj f\c j`z\_bU"8 ý\_U%"\$a žj z\U  
 &- \$[ "DfY dci ý]h]Y`Y'dchfYVb`; <H&)`[ f]d'g`]VY'ci ".J z\U`&) \$[ "

GSR2

**CV"** . \* \* + &&)

; @G&%žJ fWbz`Ug`; DGj hm\_m  
 J hm\_U'n'\_UfVfbcj f\c j`z\_bU'g') #, "nzj ]hca `dfY`; DG`Ubhfbm'  
 >Y`Xcgħi dbz`U^g`VU`cbYhca `U\_c`; @G&&j hm\_U"J z\U`&+\$[ "  
**CV"** . \* \* + &&\*

GLS30



; @G' \$žHY`Yg\_cd]Wz`; DGj hm\_U  
 J hm\_U'n'\_UfVfbcj f\c j`z\_bU'g`f V`cgj cf\_ci `bU`&"\$a `dfY  
 f V`Y`bUghUj Yb]Y" A ]b" X ý\_U%"\* a žj z\U`]VU`+ \$[ "  
**CV"** . +) & &- &

## Nz\_`UXbf

; @G%+žGdcXbz`Ug`; DGj hm\_m  
 G\_fi h\_cj UWUj hm\_U'n`]bbt\_i g`h]fXYb`cW\_cj a `fchca "  
 8 ý\_U%"\$a žj z\U` - \$[ "  
**CV"** . \* \* + &&%

; @G% žJ fWbz`Ug`; DGj hm\_m  
 <`bbt\_cj z\_j hm\_U'g') #, "nzj ]hca `dfY`; DG`Ubhfbm`8cghi dbf  
 U^g`VU`cbYhca `U\_c j hm\_U`; @G%- "J z\U`+\$[ "  
**CV"** . \* \* + &&&

; 58' &žHY`Yg\_cd]Wz`hm\_U  
 HY`Yg\_cd]Wz`hm\_g') #, "nzj ]hca `dfY` i dYj bYb]Y`fzX]U`U; DG`Ubhfbm`  
 Na Ygh`gU`X`fi \_gU\_i` ; JD\*\$`NUVYndY Yb]Y`Y`a cýbf`bU`ghUj`  
 g`FYXi \_Wci` ; <H`\*"  
**CV"** . \* \* + &&,

## Df`g`i ýYbgħj c`dfY`j ýYh\_mj hm\_m

; GF &ž'8j c`bc\`ghc`Ub`dfY`j hm\_m  
 8j Y`Y`Yg\_cd]Wf`bc\mid dfY`f V`Y`bUghUj Yb]Y`j hm]Y\_`&) a a "  
**CV"** . ))`+&\$

; GH\* žHfc`bc`y\_U  
 Hf`h`Y`Yg\_cd]Wf`bc\mžj`Vcfbz`ghUV]`nzV`U`dfY`j hm\_m`&) a a "  
**CV"** . ) \* \$`%,

; GF %%&ž'8j c`bc\`ghc`Ub`dfY`j hm\_m  
 8j Y`Y`Yg\_cd]Wf`bc\mid dfY`f V`Y`bUghUj Yb]Y`J\cXbf`dfY`j !  
 hm\_m`UyXf\c`df]Ya Yf`  
**CV"** . \* \* + %

; NK (%&ž`DfYX`ycj UWfX]Y`\_j hm\_Y  
 DfYX ý]j ýYh\_mj hm\_mg`VU`cbYhca `c`%"\$a`  
**CV"** . (\$`(&,



GSR111

GST6

# BUV<sup>†</sup>U \_m

## DfcZYg]cbz `bY

; ?@&&%ž?BUV<sup>†</sup>U \_m`gHjf]W  
 =>Hf]Y] YbHf] bUV<sup>†</sup>Ub]Y`nUfi i 'X`\\• ýjj chbcg `VUhff]Y" >Y'a cý!  
 bf`df]dc] Yj) `VUhff]]g` UgbY" 6U`Yb]Y`cVgU\i `Y`g]Y cj '\_z!  
 VY`U`\_zVY`bU`df]dc`Yb]Y`VUhff]]g` !d]bcj ci `nzghf \_ci "  
 I a cý i `Y`bUV<sup>†</sup>U j yYh\_m\hmdm`VUhff]‡@Y]W"

CV" .+! .&+

; 8=&&%ž?c`tg\_U`bU`bUV<sup>†</sup>Ub]Y  
 ?c`tg\_U`bU`bUV<sup>†</sup>Ub]Y`Xj cW`@! =cb `VUhff]] ; 96&&%`U`YVc` ; 96&%"  
 CV" .+! .&

; 8=&&%ž?c`tg\_U`bU`bUV<sup>†</sup>Ub]Y  
 ?c`tg\_U`bU`bUV<sup>†</sup>Ub]Y`B]A \ `VUhff]] ; 96&%`U`YVc` ; 96&%"  
 6U`Yb]Y`cVgU\i `Y`g]Y cj '\_zVY`U`\_zVY`bU`df]dc`Yb]Y`VUhff]]  
 g` !d]bcj ci `nzghf \_ci "  
 CV" .+! .&

; 87&&%ž?zVY`bU`bUV<sup>†</sup>Ub]Y j `Ui HY  
 DfY`df]dc`Yb]Y` ; ?@&&%`bU`%&J` !`&( J`Xc`nzghf \_m\mU!  
 dU`cj U`U`j `Ui HY" NUVi Xcj Ubz`Y`Y`\_hfcb]Wz`cW\`fUbU"

CV" .+! ( .- .-



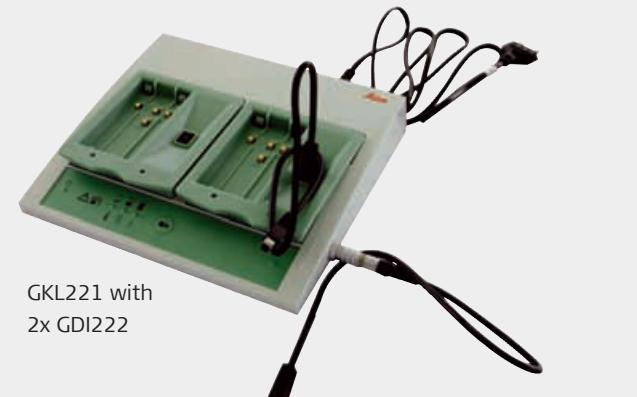
BUV<sup>†</sup>U \_m`U`VUhff]Y`@Y]W` ; YcgmgHya g`dci ýjj U`bU`  
 bcj y]Y`HY`W`bc`Df]Y`nUfi i ^ W`gdc U\`j` nXfc`^YbYf[ ]Y`  
 DfcZYg]cbz `bY`bUV<sup>†</sup>U \_m`a cb]hcfi ^ `gHjf`bUV]hU`VUhff]]ž  
 j Y`U`HY`d`ch` dfY`cdh]a z`bY`bUV]h]Y`Hc`nU]g i `Y`a UI`!  
 a z`bi `gHfcgh]j cg`c`ýjj chbcg `VUhff]Y"

## Nz\_`UXbf

; ?@&&%ž?BUV<sup>†</sup>U \_U`VUhff]]  
 >YXbcXi Wz z`UV\z`bUV<sup>†</sup>U \_U`dfY` ; 96&%`U` ; 96&%`@! =cb `VU!  
 hff]Y" 6U`Yb]Y`cVgU\i `Y`U`UXUdhff`bU`bUV<sup>†</sup>Ub]Y`j `Ui HY"  
 CV" .+! (+) &

; ?@&&%ž?BUV<sup>†</sup>U \_U`VUhff]]  
 >YXbcXi Wz z`UV\z`bUV<sup>†</sup>U \_U`dfY`VUhff]Y`g` !d]bcj ci `nzghf \_ci " Ugc!  
 j Ubf`bUV<sup>†</sup>Ub]Y`dc`XcVi`%(`cX#`g`df`Xca`&\$`a 5ž`&`\$`J`'6U!  
 `Yb]Y`cVgU\i `Y`bUV<sup>†</sup>U \_i `U`g]Y cj '\_zVY"  
 CV" .+! (+)

; ?@&&%ž?BUV<sup>†</sup>U \_U`VUhff]]  
 >YXbcXi Wz z`bUV<sup>†</sup>U \_U`dfY`VUhff]Y`g` !d]bcj ci `nzghf \_ci " Ugc!  
 j Ubf`bUV<sup>†</sup>Ub]Y`dc`XcVi`%(`cX#`g`df`Xca`&\$`a 5" 6U`Yb]Y`  
 cVgU\i `Y`bUV<sup>†</sup>U \_i `U`g]Y cj '\_zVY`dfY`I G`g]Y`%`J`"  
 CV" .+! .- .-



GKL221 with  
2x GDI222



GDC221



GKL211/112



GKL22

# 6Uhff]Y

## J b• hcfbf 'VUhff]Y

; 96&&%ž@! =cb 'VUhff]U

J mgc\_c j \_cbbz 'VUhff]U'dfY'j ýYh\_mdfghfc/Y'n'fUXi  
GmghYa '%&\$ž D]dYf '%\$#\$#&\$ž+"( J '#( "( 5\"  
**CV"** . '+' ' &+\$

---

; 96&%ž@! =cb 'VUhff]U

J mgc\_c j \_cbbz 'VUhff]U'dfY'; DG'cj 'z XU 'FL %&\$ž+"( J '#"&"&5\"  
**CV"** . '+' ' &\* -

---

; 96- \$ž@! =cb 'VUhff]U

J mgc\_c j \_cbbz 'VUhff]U'dfY'GF &# G&\$'; DG'gmghfa mž+"( J '#"&"&5\"  
**CV"** . '+' ' &(%

---

; 96%&%ž'B]A < 'VUhff]U

6Yn• XfyVcj z 'VUhff]U'dfY'dfghfc/Y'HDG( \$\$#, \$\$'U'6i ]XYf"  
\* "\$J '#( "( 5\"  
**CfV"** . \*\* + ' %&

---

; 96%&%ž'B]A < 'VUhff]U

6Yn• XfyVcj z 'VUhff]U'dfY'dfghfc/Y'HDG( \$\$#, \$\$#6i ]XYf'U'8B5"  
\* "\$J '#&%5\"  
**CV"** . \*\* + ' %

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; 58' - ž5XUdhff'bU'U'\_U']W\_f 'VUHf\_f\_m

5XUdhff'bU'\*I '55'U'\_U']W\_ W 'VUhff]]"J \cXbf'dfY'dfghfc/Y'fUXm  
HDG( \$\$#, \$\$#6i ]XYf"

**CV"** . +%& %\*

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; 96% +ž'B]A < 'VUhff]Y

6Uhff]Y'dfY'dfghfc/Y'n'fUXmHDG%\$\$'U'HDG&\$\$\$'%'&J '#%ž, 5\"  
**CV"** . \*\* + ' %

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**CV"** . \*\* + ' %

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GEB171      GEV71

## 9I hYfbf 'nXfc^Y 'YbYf[ ]Y

; 96%+%ž'9I hYfbz 'B]A < 'VUhff]U

J mgc\_c j \_cbbz 'VUhff]U'dfY'X'\cXcf'cVgYfj z WYž%'&J '#- "\$5\"  
G') !d]bcj ci 'bUVfUWci 'nz ghf \_ci "J z\U'&"\$\_[ 'f( ("V£"  
**CV"** . +&+ ' \* +

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; 9J &\$, žNXfc^YbYf[ ]Y

G]Y cj 'UXUdhff'dfY'bYdfYhfy]hf'XcXz] Ub]Y'YbYf[ ]Y"?cbY\_hj]JU  
g'j ýYh\_a ]'bUdz 'UWia ]'z V'Ua ]'@Y]W'"?z V'Y'b]Y'g• 'g• 'Ug ci  
VU'Yb]Už'XU'^'gU'Xc\_• d] "'57'j ghi d'%'\$J!&( \$J"  
**CV"** . +( - &+-

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; 9J +%ž'BUdz 'UMf\_z VY' 'n'Ui hcVUhff]Y

( a '\_z VY'dfY'&J 'nXfc^Y 'YbYf[ ]Y'"7\fzb]dfghfc^dfYX  
dfYdEcj Ub]a 'U'dfYd} hta "

**CV"** . '( - '\$'

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# DUa } cj f'a fX]U'U'cdh\_U

## DUa } cj f'a fX]U'U' #H\_U\_m

A 7: \*(ž7ca dUWk 'Ug\ '\_UfHJ

DUa } cj f'\_Ufhm@Y]W'; YcgmgHya g'Xc\_cbU'Y'gd\_U' dc'y]UXUj \_m dftghfc'cj\_f'UXmGnghfa '%&\$'\$'H]Yh'cXc'b'f'dfUWtj b'f'\_Ufhm' Wfz]U'XzH'U'df]YI H'fa bmW'dcXa ]Yb\_UW' DfUVtj bz 'H'd'cH' \_Uf]Yh'Y'cX'! (\$š7'Xc Ž,) š7"? X]gdcnW]g' dfYj XYB]U'g'dU!

a } ci '' &A 6ž\*(A 6ž&) \*A 6ž'U'Vc '% 6"

CV" . '+' (&+)



A 7: 58%žF YXi \_W]U'bU'7: '\_Ufhm

FYX]\_W]U'dfY'dci y]h]Y j'D7A 7=5'g'chY'">Y'a cýbf'dci y] '' &A 6

7: '\_Ufhmj dfYfghfc'cW' 8B5ž'; DG) \$\$'U'HDG%\$"

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A 7F) žI G6' #H\_U'\_Uf]Yh

#H\_U'\_Uf]Yh'Ca b]8f]j Y'dfY'7ca dUWk 'Ug\ '\_Ufhm' Dcg\_nti 'y j mgc\_•'gdc U\ 'j cg 'df]dfYbcgY'XzH'Df]dc'Yb]Y'Wn'1 G6'dcfh' gc'j yYh\_ a 'D7'cdYfU b a ]gnghfa Ua ]"

CV" . '+' (&) -

A 7F\*ž' #H\_U'\_Uf]Yh

I b]j Yfnz'bU'Ca b]8f]j Y' #H\_U'\_Uf]Yh'dfY'j yYh\_mhmdmidUa } cj\_W

\_Uf]Yh'8cXzj Ubz'g'dfc[ fUa ca 'bU'cVbcj i 'XzH'

CV" . '+' (%&)

## C\_i `zfY'U'cdh\_U

; JC% žGbY b 'ZjHf

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nfU'\_U'98A 'YY\_hfc]i 'df]W]Y'Yb'f'U'Ugbf'cV'Y\_hm'

CV" . '+' () \$()

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bU'j yYh\_mdfYfghfc'Y'n'fUXmHDG'"CV'Y\_hj 'cVgU'Y'dfch]hzj Uy]Y"

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; C5&ž5i hc\_c]a U b 'c\_i `zf

DfY'\_ui hc\_c]a zW]l 'gc'j yYh\_ a ]dfYfghfc' a ]n'fUXmHDG'">Y'dchfYVbf

Xc\_•d] ' ; 96\*&nzgi j bf'gj Yh'c'U'; 96\*' 'VUhf]cj 'Vcl "

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; C?\*ž6c b 'c\_i `zf

DfY'\_ca Zcfhb'cVgYfj zW]l 'df]W]Y'Yb'f'Xc'\*'s'"J Uf]UV]b '\_V'i a cý!

i 'Y'bUghUj Yb]Y c\_i `zf' 'Xc\_dc'YUxj UbY^dc'c'm'DUgi 'Y'bU'j yYh

\_mdfYfghfc'Y'fUXmHDG'"CV'Y\_hj 'cVgU'i 'Y'dfch]hzj Uy]Y"

CV" . '+' &\* \*

; C?)' žJ a Ybb 'c\_i `zf'bU'cV'Y\_hj

J a Ybb 'c\_i `zf'bU'cV'Y\_hj 'dfY'Xcg]U'bi h]Y' (&L'nj } yYb]U"

A cbhžy'Y'dchfYVbf'j m\_cbU 'j 'gYfj ]gbca 'ghfYX]g\_i 'Y]W"

CV" . '+' , \$&



MCF64

MCR6



GFZ3



GOA2



GOK6

## @UhmfdY'8B5

@UhmfdY'b]j Y'U bf'df]ghfc'Y'8B5'g' j mfzVUb]j 'BY!  
a YW\_i 'g'bU]j } yci 'dfYgbcg ci " ]Ufcj a '\_OKca  
Zg]cbz 'bY^fUXm'Y'j n'hU Yb 'bU]bj Ufcj ca 'dzgY'g  
\_cYZ]WYbhca 'fcn Üybcbgh]O%dda #S7"



## DfcZYg]cbz `bY

; D7@&ž=bj Ufcj z ``UHJ'g' ]Ufcj a '\_OKca

DfYgbz 'b]j Y'U bz ``UHJ'g'Xj ca U'\_fi \cj a ]`]VY'Ua ]''8j U'• Wnhm  
bU``UHJ'nUfi i ^ 'gHUV]jh ``Uhmfdj]Y^XfjUb#  
8 ý\_U' \$"a žj z\U'(" &\_[ "

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; D7@ ž=bj Ufcj z ``UHJ'g' ]Ufcj a '\_OKca

DfYgbz 'b]j Y'U bz ``UHJ'g'Xj ca U'\_fi \cj a ]`]VY'Ua ]''8j U'• Wnhm  
bU``UHJ'nUfi i ^ 'gHUV]jh ``Uhmfdj]Y^XfjUb#  
8 ý\_U' \$"a žj z\U'(" &\_[ "

**CV"** . ) \* \$ \*&+%

; D7@ ž=bj Ufcj z ``UHJ'g'Wfh]z\_z hca

DfYgbz ``UHJ'z]bXj ]Xi z`bY'a YfUbz 'bU'cj YfYb]Y'dfYgbcg]Y'8cXz!  
j Ubz 'g'Wfh]z\_z hca 'U'\_cYZ]WYbhca 'fcn]UÜbcgh]"  
8 ý\_U' \$"a žj z\U'(" &\_[ "

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; K 7@ &ž=bj Ufcj z ``UHJ'g' ]Ufcj a '\_OKca

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j \cXbf'dfY'df]Ya mgY'bf'Ud' ]z WY"  
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; K 7@ \$ž=bj Ufcj f'a Yf]h\_c'g' ]Ufcj a '\_OKca

=bj Ufcj f'a Yf]h\_c'g'cj cfa ]'dfY'df]g\_fi h\_cj Ub]Y'df]ua c'bu  
gHj Vi " =XYz`bY'dfY'X`cXcVf'a cb]hfcj Ub]Y'j ý\_m'  
Fcna Yfm\* \$\$! &) 'I'%"") a a ž'a YfUb]Y'bU'j nX]U'Ybcg'%" , 'Uy  
&\$a "

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'U'XY'Yb]a 'bU'a ]]a YhfY" 8cXzj Ubz 'g'dfYdfUj b a 'd•n!  
Xfcfa "A YfUb]Y'dcX'j mgc\_ a 'bUd} hta " 8 ý\_U'a ]b"%"&a ž'a Ul "  
X ý\_U'(" \$žj z\U'&\_[ "?cYZ]WYbhfcnh]UÜbcgh]"%\$dda #S7"

**CV"** . ) + ' \* %

; ?B@(: ž8Y'Ybz 'g'\_c'Ua ]bz hca z ``UHJ

B]j Y'U bz ``UHJ'g'hcfa U'df]dc'jh' b a ]' Ug ua ]" A z'Xj c'jh'  
nbU Yb]Y' ]Ufcj a '\_OKca 'U'XY'Yb]a 'bU'zh' 8cXzj Ubz 'g'dfYdfUj b a 'd•n!  
dfUj b a 'd•nXfcfa 'U'Xj ca U'Xfj]U\_a ]" 8 ý\_U'a ]b"%"&a ž'a Ul "  
X ý\_U'(" \$a žj z\U'("(\_ž\_cYZ]WYbhfcnh]UÜbcgh]"%\$dda #S7"  
J \cXbz 'bU'a YfUb]Y'dcX'j mgc\_ a 'bUd} hta "

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nXfcfa " 8 ý\_U'a ]b"%"&a ž'a Ul " X ý\_U'(" \$a žj z\U'%" , '[ž\_cYZ]  
WYbhfcnh]UÜbcgh]"&( dda #S7"

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# Cables

Device	Instrument	Cable Art. No. and Description
GEB171 External Battery or GEV208 Mains power supply	TPS / DNA	409678 GEV52 direct connection, 1.8m
	GX1200	560130 GEV97 direct connection, 1.8m
	GRX1200	733298 GEV172 Y-cable for two power supplies
	RX1250 / ATX1200	756365 GEV215 Y-cable for RX1250 - ATX - Battery
	ATX900	748418 GEV205 Y-cable for ATX900 - GFU - Battery
	GS20 / SR20	731352 GEV181 direct connection, 1.2m
12V Car Battery	All instruments	439038 GEV71 cable with crocodile clips plus the corresponding cable for the GEB171 listed above
PC – RS232 port	TPS / DNA	563625 GEV102 direct connection, 2m 734698 GEV187 Y-cable for TPS - PC - Battery
	GX / GRX1200	733280 GEV160 connects to Ports 1, 2 or 3
	RX1250 / ATX1200	733282 GEV162 direct connection, 2.8m
	GFU14	733297 GEV171 programming Y-cable
	GS20 / SR20	740872 GEV196 direct connection, 1.2m
PC – USB port	TPS / DNA	734700 GEV189 USB to RS232 converter cable
	GX / GRX1200	734755 GEV195 connects to Ports 1, 2 or 3, 2.0m
	RX1250 / ATX	733281 GEV161 direct connection, 2.8m
RX1210	GX / GRX1200	733283 GEV163 connecting to RX Port, 1.8m 733284 GEV164 for all-on-the-pole setup, 1.1m
RX1250	TPS1200	756367 GEV217 direct connection, 1.8m
	ATX	733299 GEV173 direct connection, 1.2m
GFU14 Satellite Radio	GX1200	639968 GEV125 for connection without GFU housing
	ATX900	748418 GEV205 Y-cable for ATX900 - GFU - Battery
System 500 GFU Radio	GX1200	733288 GEV167 for System 500 GFU housings, 0.5m
External Modem	GX / GRX1200	563809 GEV113 connects to Ports 1, 2 or 3, 2.8m
Timed Device	GX / GRX1200	403448 GEV42 Event input cable, 2m 667744 GEV150 PPS output cable, 2m
Standard GPS Antennas or Gainflex Radio Antenna	GX / GRX1200	667200 GEV141 antenna cable, 1.2m 667201 GEV142 extension antenna cable, 1.6m 636959 GEV120 antenna cable, 2.8m 632372 GEV119 antenna cable, 10m 724969 GEV194 for all-on-the-pole setup, 1.8m
	GS20 / SR20	731353 GEV179 antenna cable, 1.2m

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 : Ul . Ž\*) \*) ) %%) ) \$\$

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## Cf][ ]bz`bY'df[gi ýYbgħj c ?j U]HJ'U'gdc U\`]j cg

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dchfYVi 'YhY'gdc U\`jj f'dfgi yYbglj c'"G'cf][ ]bz`bma 'dfg i yYbglj ca  
@Y]W'; YcgmgħYa g'gU'a ' yYhY'di gh] 'Xc'bzfc b W\`•`c\"

BUyY'dfg i yYbglj c'nUfi i 'Yz'yY'dcXa ]Yb\_mdfYgbcgħ]dfghfc'c!  
@Y]W'; YcgmgħYa g'gd U^'gj c'1 'ydYVZ\_lzVl "DfYh'gU'a ' yYhY'gdc!  
U\b• 'JW\ dfYgbcg ž\_ż U]H 'U'X'\• 'jj chbcg "NUfi i ^ 'dfYgbcg 'U  
gdc U\`jj cg 'a YfUb]U'dfghfc'a ]@Y]W'; YcgmgħYa g

### When it has to be right.



**Total Quality Management -  
Our commitment to total  
customer satisfaction.**

Ask your local Leica Geosystems  
dealer for more information  
about our TQM program.

#### Laser plummet:

Laser class 2 in accordance with  
IEC 60825-1 resp. EN 60825-1  
Laser class II in accordance with  
FDA 21CFR Ch.I § 1040

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5i hcfg\_f'dfzj U\`@Y]W'; YcgmgħYa g'5; ž<YYfVfI [ [ žúj U^'JUfg\_cž&\$+\$+



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