

**ADDENDUM TO RFP-PW-11-2025
(September 23, 2025)**

TOWNSHIP OF NORTH HURON

SCADA UPGRADES TO WINGHAM AND BLYTH WATER SYSTEMS

SPECIFICATIONS

The Township of North Huron is requesting a full SCADA upgrade to a Windows 11 based system with new hardware and software that is able to suit our present and future needs for Wingham and Blyth.

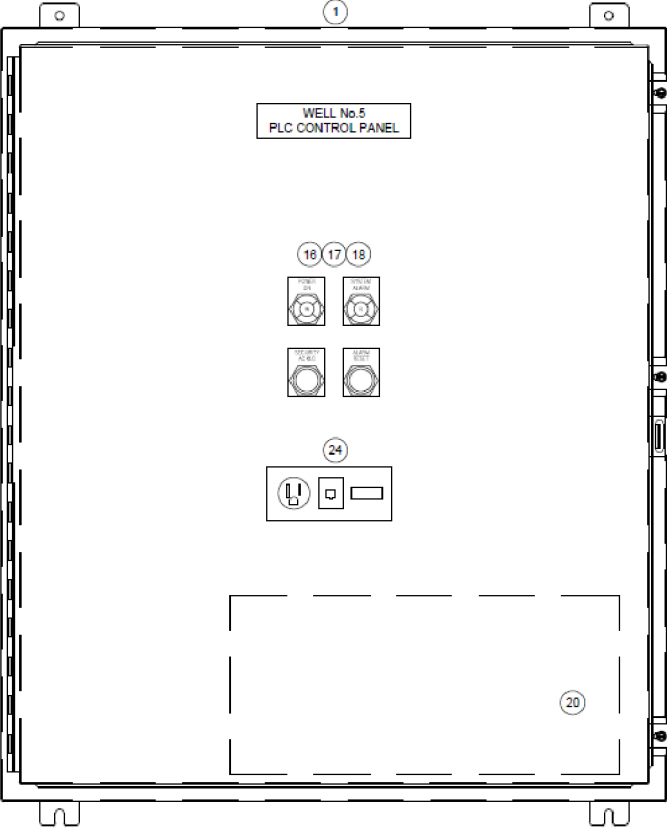
Programming should include:

- Data Collection and Reporting
- Human Machine Interface
- Operator Interface
- Programmable Logic Controller

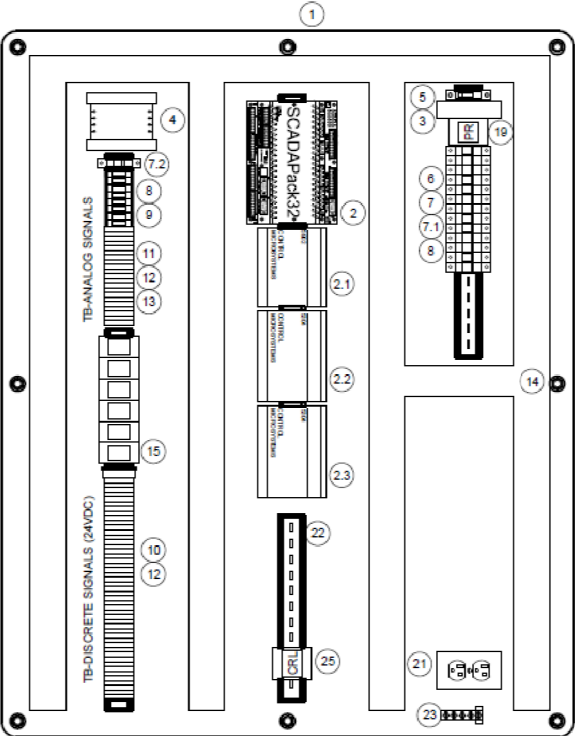
We urge any respondents to take advantage of the pre-submission tour as it will answer many of your questions. Our water system operations are outsourced, and representatives will be there to provide feedback and clarity. We can supply a list of I/O counts for Wingham and a network diagram for Blyth at this time.

Attachments:

- 1. Wingham io Version TCP Version July 17, 2019.pdf**
- 2. Wingham io Version 7 TCP Version April 28, 2015.pdf**
- 3. Blyth Control Panel as Built.pdf**



CONTROL PANEL FRONT DOOR LAYOUT
NTS



CONTROL PANEL BACKPANEL LAYOUT
NTS

NO.	ISSUE/REVISION	DATE
1.0	ISSUE FOR REVIEW	05/25/16

ICS INSTRUMENTATION AND
CONTROL SOLUTIONS INC.
525 HIGHLAND RD W, SUITE 406
KITCHENER ON, N2M 5P4

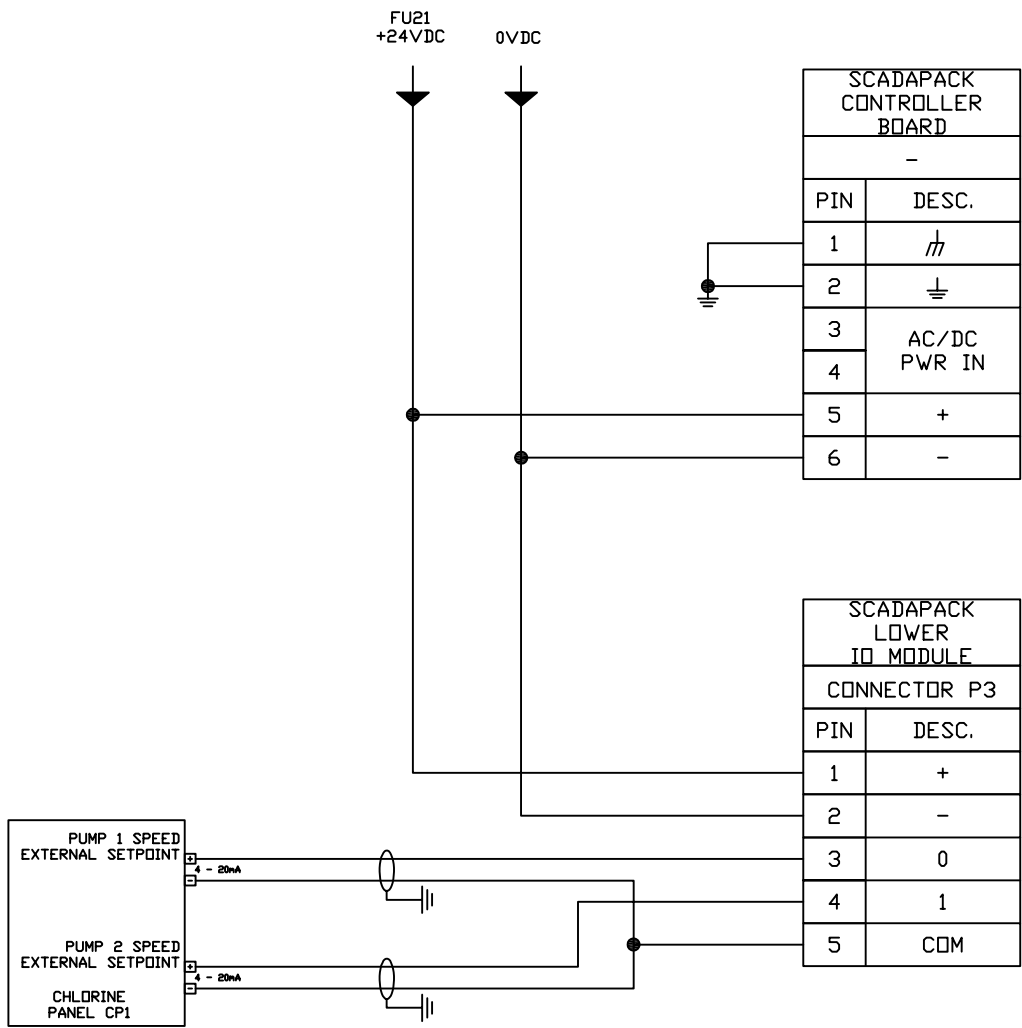
TOWNSHIP OF NORTH HURON
P.O BOX 90, 274 JOSEPHINE ST
WINGHAM, ON N0G 2W0

BLYTH WELL UPGRADES
PLC LAYOUT

DRAWN BY	DATE DRAWN	PAGE NO.
SCALE NA		

	PLC CONTROL PANEL BILL OF MATERIALS (MAJOR COMPONENTS)						
	ITEM	NAME/TAG	QUANTITY	MANUFACTURER	MODEL	DESCRIPTION	APPROVALS
	1	ICP1	1	RALSTON	N12-423616	NEMA 12 42"Hx36"Wx12"D,C/W 3 TURN LATCHES, BACK PANEL, PRINT POCKET	CSA
	2	PLC	1	SCHNIEDER/CONTROL MICRO	SCADAPACK 32 (5232 CONTROLLER P4)	W/ 5606 ONBOARD MODULE	CSA
	2.1	MODEM	1	SCHNIEDER/CONTROL MICRO	5902 (BELL 202)	MODEM	CSA
	2.2	DI MODULE	1	SCHNIEDER/CONTROL MICRO	5305 DIGITAL INPUT MODULE	32 AC/DC DIGITAL INPUTS	CSA
	2.3	AO MODULE	1	SCHNIEDER/CONTROL MICRO	5304 ANALOG OUTPUT MODULE	4 CHANNEL ANALOG CURRENT OUTPUTS	CSA
	3	S. SUPPRESSOR	1	PHOENIX CONTACT	PT2-PE/S-A120AC-ST	120V, 20A SURGE SUPPRESSOR	CSA
	4	24VDC POWER	1	PHOENIX CONTACT	QUINT-PS/1AC/24DC/20	24VDC POWER SUPPLY, 120VAC INPUT, 20A@24V DC OUTPUT	CSA
	5	CB1,CB3	2	ABB/ENTRELEC	S201MUC-Z15	120VAC, 15A, 1 POLE CIRCUIT BREAKER	CSA
	6	CB4	1	ABB/ENTRELEC	S201MUC-Z10	120VAC, 10A, 1 POLE CIRCUIT BREAKER	CSA
	7	CB2, CB5-CB8	5	ABB/ENTRELEC	S201MUC-Z2	120VAC, 2A, 1 POLE CIRCUIT BREAKER	CSA
	7.1	CB9	1	ABB/ENTRELEC	S201MUC-Z3	120VAC, 3A, 1 POLE CIRCUIT BREAKER	CSA
	7.2	CB10	1	ABB/ENTRELEC	S201MUC-Z20	24VDC, 20A, 1 POLE CIRCUIT BREAKER	CSA
	8	FU21 - FU34	14	ABB/ENTRELEC	11566323	24VDC FUSE TERMINAL BLOCK W/ INDICATOR AND FAST ACTING FUSES (SIZED AS SHOWN)	CSA
	9		AS REQUIRED	ABB/ENTRELEC	11695115	FUSE TERMINAL BLOCK END PLATE	CSA
	10		AS REQUIRED	ABB/ENTRELEC	11511607	TERMINAL BLOCK FOR DESCRETE SIGNALS	CSA
	11		AS REQUIRED	ABB/ENTRELEC	11568714	TERMINAL BLOCKS FOR ANALOG SIGNALS	CSA
	12		AS REQUIRED	ABB/ENTRELEC	11836816	TERMINAL BLOCK END PLATE	CSA
	13		1	PHOENIX CONTACT	PT 1X2-BE	SURGE SUPPRESSOR FOR 4-20Ma ANALOG SIGNAL (WELL LEVEL LT-01)	CSA
	14		AS REQUIRED	PANDUIT	TYPE F, SIZE TO SUIT	WIRE DUCT	CSA
	15		AS REQUIRED	PHOENIX CONTACT	-	24VDC SPDT INTERPOSING RELAY W/ INDICATOR AND BUILT-IN RC, CONTACT RATED AT 2A@120VAC	CSA
	16		2	ALLEN BRADLEY	800T-A2A	PUSHBUTTON (BLACK) W/ IND & INC CONTACTS FOR BUILDING ENTRY ACKNOWLEDGE AND SYSTEM ALARM RESET	CSA
	17		1	ALLEN BRADLEY	800T-QSH24W	24VDC LED PILOT LIGHT, RED COLOUR	CSA
	18		1	ALLEN BRADLEY	800T-QSH24W	24VDC LED PILOT LIGHT, WHITE COLOUR	CSA
	19	PR	AS REQUIRED	PHOENIX CONTACT	5603593	120VAC SPDT INTERPOSING RELAY W/ INDICATOR AND BUILT IN RC, CONTACT 6A	CSA
	20		1	EATON-POWERWARE	9130L500T-XL	UNINTERRUPTABLE POWER SUPPLY (UPS), 500 VA	CSA
	21		1	HUBBELL	HBL52621, IVDRY	DUPLEX RECEPTICLE GENERAL, 120VAC 15A	CSA
	22		AS REQUIRED			DIN RAIL	CSA
	23		1	SQUARE D		GROUND BUSS BAR	
	24		1	PHOENIX CONTACT	CDH CPP (PRODUCT 5526291)	PANEL MOUNTED LAPTOP ACCESS / PROGRAMMING PORT	CSA
	25		1	GEMS / WARRICK	26MA1B1	LOW LEVEL CUT-OFF CONTROL RELAY	CSA

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ICS INSTRUMENTATION AND CONTROL SOLUTIONS INC. 525 HIGHLAND RD W, SUITE 406 KITCHENER ON, N2M 5P4		
TOWNSHIP OF NORTH HURON P.O BOX 90, 274 JOSEPHINE ST WINGHAM, ON N0G 2W0		
BLYTH WELL UPGRADES BILL OF MATERIALS		
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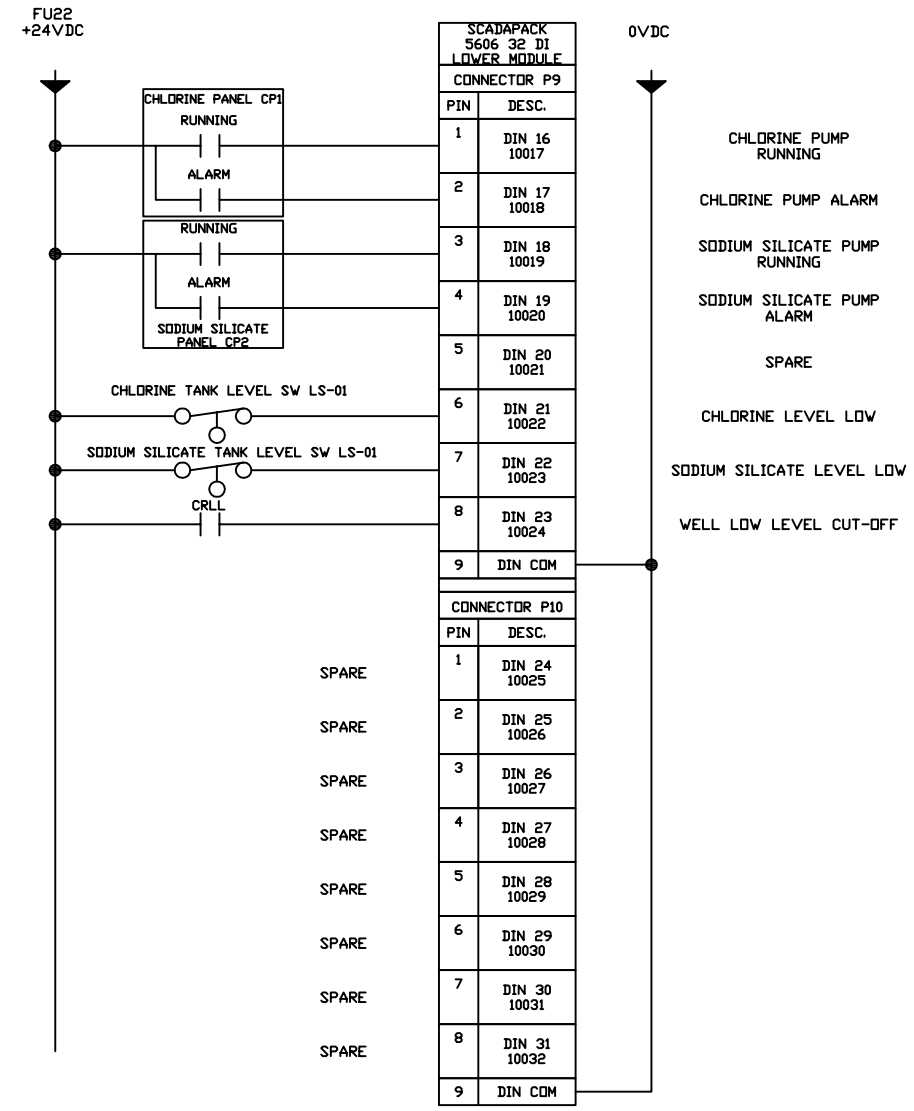
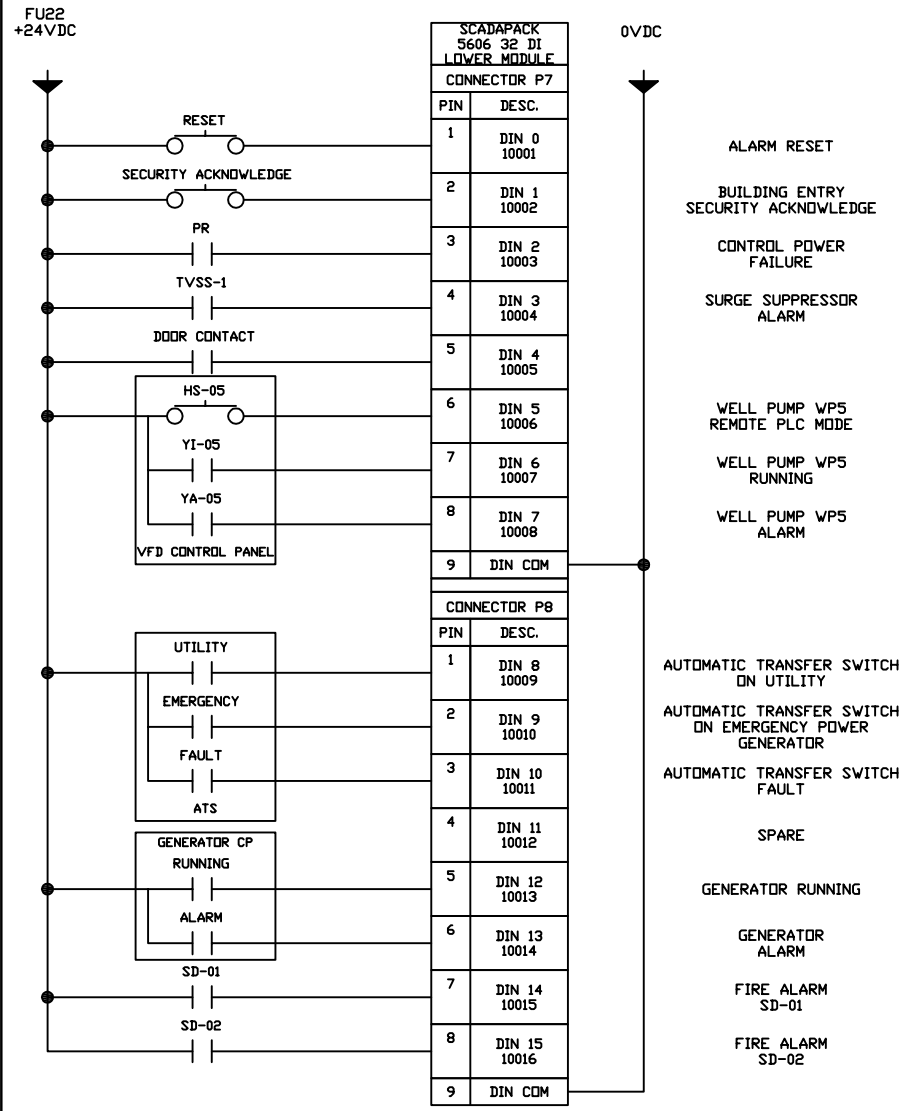
ICS INSTRUMENTATION AND
CONTROL SOLUTIONS INC.
525 HIGHLAND RD W, SUITE 406
KITCHENER ON, N2M 5P4

TOWNSHIP OF NORTH HURON
P.O BOX 90, 274 JOSEPHINE ST
WINGHAM, ON N0G 2W0

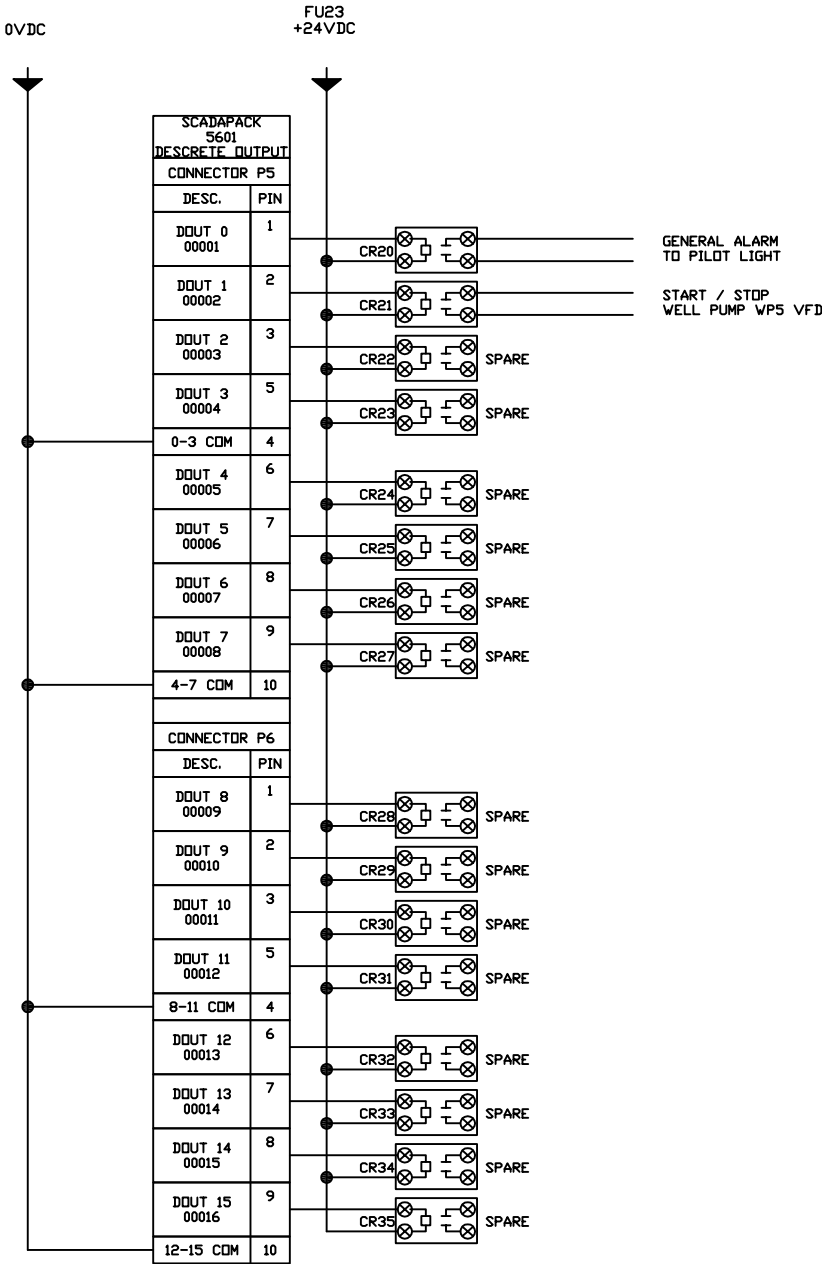
BLYTH WELL UPGRADES
SCADAPACK POWER WIRING

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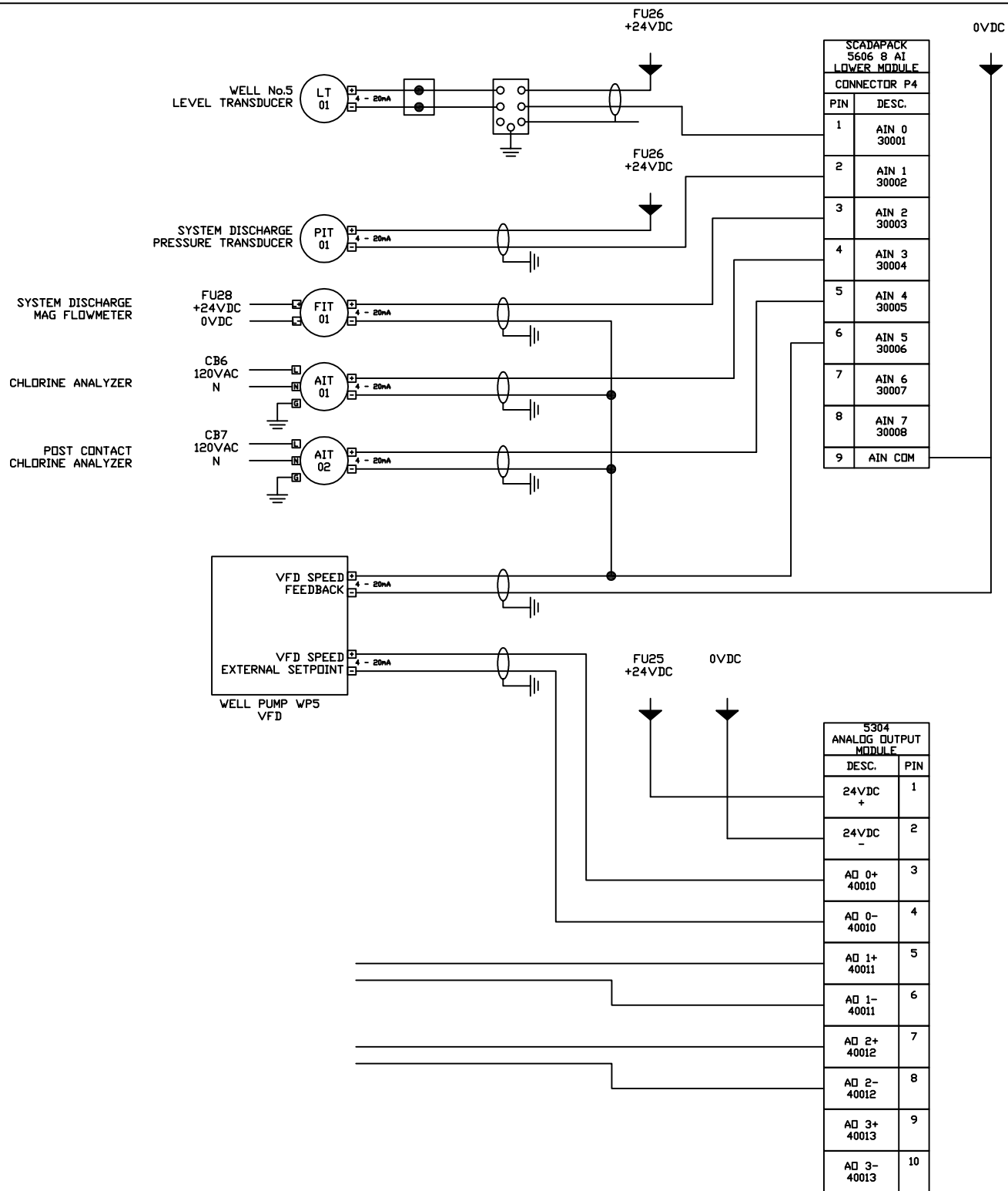
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ICS INSTRUMENTATION AND CONTROL SOLUTIONS INC. 525 HIGHLAND RD W, SUITE 406 KITCHENER ON, N2M 5P4		
TOWNSHIP OF NORTH HURON P.O BOX 90, 274 JOSEPHINE ST WINGHAM, ON N0G 2W0		
BLYTH WELL UPGRADES DIGITAL INPUTS		
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ICS INSTRUMENTATION AND CONTROL SOLUTIONS INC. 525 HIGHLAND RD W, SUITE 406 KITCHENER ON, N2M 5P4		
TOWNSHIP OF NORTH HURON P.O BOX 90, 274 JOSEPHINE ST WINGHAM, ON N0G 2W0		
BLYTH WELL UPGRADES DIGITAL OUTPUTS		
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ICS INSTRUMENTATION AND
CONTROL SOLUTIONS INC.
525 HIGHLAND RD W, SUITE 406
KITCHENER ON, N2M 5P4

TOWNSHIP OF NORTH HURON
P.O BOX 90, 274 JOSEPHINE ST
WINGHAM, ON N0G 2W0

BLYTH WELL UPGRADES
ANALOGS

DRAWN BY	DATE DRAWN	PAGE NO.
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	Location	Wingham Data Collector IO List			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address: 1	
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
INTERNAL MEMORY		1 to 512		Non Volatile Variable Storage		
SCADAPAK LOWER MODULE	DOUT 0	00513	0	Raco Dialer Alarm Zone 1		
	DOUT 1	00514	1	Raco Dialer Alarm Zone 2		
	DOUT 2	00515	2	Raco Dialer Alarm Zone 3		
	DOUT 3	00516	3	Raco Dialer Alarm Zone 4		
	DOUT 4	00517	4	Raco Dialer Alarm Zone 5		
	DOUT 5	00518	5	Raco Dialer Alarm Zone 6		
	DOUT 6	00519	6	Spare		
	DOUT 7	00520	7	Spare		
	DOUT 8	00521	8	Spare		
	DOUT 9	00522	9	Spare		
	DOUT 10	00523	10	Spare		
	DOUT 11	00524	11	Spare		
SCADAPAK UPPER MODULE	DOUT 0	00525	12			
	DOUT 1	00526	13			
INTERNAL	CNFG LED	00527	14	LED Power State		
		00528	15			
INTERNAL		00529	0	clear protocol counters on com1		
SCADAPAK		00530	1	clear protocol counters on com2		
DIAGNOSTICS		00531	2	clear protocol counters on com3		
		00532	3	clear protocol counters on com4		
		00533	4			
		00534	5			
		00535	6			
		00536	7			
		00537	8	clear serial port counters on com1		
		00538	9	clear serial port counters on com2		
		00539	10	clear serial port counters on com3		
		00540	11	clear serial port counters on com4		
		00541	12			
		00542	13			
		00543	14			
		00544	15			
SCADA		00545	0	Well 1 control relay	0=off, 1=on	WGM-W001-RUN
BIT CONTROL		00546	1	Well 4 control relay	0=off, 1=on	WGM-W004-RUN
EQUIPMENT		00547	2	Highlift 1 control relay	0=off, 1=on	WGM-HL01-RUN
START/STOP		00548	3	Highlift 2 control relay	0=off, 1=on	WGM-HL02-RUN
OPEN/CLOSE		00549	4	Highlift 3 control relay	0=off, 1=on	WGM-HL03-RUN
		00550	5			
		00551	6			
		00552	7			
		00553	8			
		00554	9			
		00555	10			
		00556	11			
		00557	12			
		00558	13			
		00559	14			
		00560	15			
SCADA		00561	0	Well 3 Electric Starter control relay	0=off, 1=on	WGM-W003-RUN
BIT CONTROL		00562	1	Well 3 Diesel Starter control relay	0=off, 1=on	WGM-W003-DRUN
EQUIPMENT		00563	2			
START/STOP		00564	3			
OPEN/CLOSE		00565	4			
		00566	5			
		00567	6			
		00568	7			
		00569	8			
		00570	9			
		00571	10			
		00572	11			
		00573	12			
		00574	13			
		00575	14			
		00576	15			
SCADA		00577	0			
BIT CONTROL		00578	1			

	Location	Wingham Data Collector IO List			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	1
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
EQUIPMENT		00579	2			
START/STOP		00580	3			
OPEN/CLOSE		00581	4			
		00582	5			
		00583	6			
		00584	7			
		00585	8			
		00586	9			
		00587	10			
		00588	11			
		00589	12			
		00590	13			
		00591	14			
		00592	15			
		00593	0	Well #1 Manual start/stop request	0 = off, 1 = on	WGM-W001-MS-REQ
SCADA		00594	1	Well #2 Manual start/stop request	0 = off, 1 = on	WGM-W004-MS-REQ
BIT CONTROL		00595	2	Highlift #1 Manual start/stop request	0 = off, 1 = on	WGM-HL01-MS-REQ
EQUIPMENT		00596	3	Highlift #2 Manual start/stop request	0 = off, 1 = on	WGM-HL02-MS-REQ
AUTO/MANUAL		00597	4	Highlift #3 Manual start/stop request	0 = off, 1 = on	WGM-HL03-MS-REQ
		00598	5			
		00599	6			
		00600	7			
		00601	8			
		00602	9			
		00603	10			
		00604	11			
		00605	12			
		00606	13			
		00607	14			
		00608	15			
		00609	0	Well #3 Manual start/stop request	0 = off, 1 = on	WGM-W003-MS-REQ
SCADA		00610	1			
BIT CONTROL		00611	2			
EQUIPMENT		00612	3			
AUTO/MANUAL		00613	4			
		00614	5			
		00615	6			
		00616	7			
		00617	8			
		00618	9			
		00619	10			
		00620	11			
		00621	12			
		00622	13			
		00623	14			
		00624	15			
		00625	0			
SCADA		00626	1			
BIT CONTROL		00627	2			
EQUIPMENT		00628	3			
AUTO/MANUAL		00629	4			
		00630	5			
		00631	6			
		00632	7			
		00633	8			
		00634	9			
		00635	10			
		00636	11			
		00637	12			
		00638	13			
		00639	14			
		00640	15			
		00641	0	Well #1 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-W001-MODE
SCADA		00642	1	Well #4 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-W004-MODE
BIT CONTROL		00643	2	Highlift #1 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-HL01-MODE
EQUIPMENT		00644	3	Highlift #2 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-HL02-MODE
LOCKOUT		00645	4	Highlift #3 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-HL03-MODE
		00646	5			
		00647	6			
		00648	7			
		00649	8			
		00650	9			

	Location	Wingham Data Collector IO List			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	1
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		00651	10			
		00652	11			
		00653	12			
		00654	13			
		00655	14			
		00656	15			
SCADA		00657	0	Well #3 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-W003-MODE
BIT CONTROL		00658	1			
EQUIPMENT		00659	2			
LOCKOUT		00660	3			
		00661	4			
		00662	5			
		00663	6			
		00664	7			
		00665	8			
		00666	9			
		00667	10			
		00668	11			
		00669	12			
		00670	13			
		00671	14			
		00672	15			
SCADA		00673	0			
BIT CONTROL		00674	1			
EQUIPMENT		00675	2			
LOCKOUT		00676	3			
		00677	4			
		00678	5			
		00679	6			
		00680	7			
		00681	8			
		00682	9			
		00683	10			
		00684	11			
		00685	12			
		00686	13			
		00687	14			
		00688	15			
SCADAPAK		00689	0	Well #1 Remote Lockout	0 = Available, 1 = Lockout	WGM-W001-REMLOCK
EQUIPMENT FAIL		00690	1	Well #4 Remote Lockout	0 = Available, 1 = Lockout	WGM-W004-REMLOCK
BIT REGISTERS		00691	2	Highlift #1 Remote Lockout	0 = Available, 1 = Lockout	WGM-HL01-REMLOCK
		00692	3	Highlift #2 Remote Lockout	0 = Available, 1 = Lockout	WGM-HL02-REMLOCK
		00693	4	Highlift #3 Remote Lockout	0 = Available, 1 = Lockout	WGM-HL03-REMLOCK
		00694	5			
		00695	6			
		00696	7			
		00697	8			
		00698	9			
		00699	10			
		00700	11			
		00701	12			
		00702	13			
		00703	14			
		00704	15			
SCADAPAK		00705	0	Well #3 Remote Lockout	0 = Available, 1 = Lockout	WGM-W003-REMLOCK
EQUIPMENT FAIL		00706	1			
BIT REGISTERS		00707	2			
		00708	3			
		00709	4			
		00710	5			
		00711	6			
		00712	7			
		00713	8			
		00714	9			
		00715	10			
		00716	11			
		00717	12			
		00718	13			
		00719	14			
		00720	15			
SCADAPAK		00721	0			
EQUIPMENT FAIL		00722	1			

	Location	Wingham Data Collector IO List			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address: 1	
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
BIT REGISTERS		00723	2			
		00724	3			
		00725	4			
		00726	5			
		00727	6			
		00728	7			
		00729	8			
		00730	9			
		00731	10			
		00732	11			
		00733	12			
		00734	13			
		00735	14			
		00736	15			
SCADAPAK		00737	0	Well #1 Fail	0 = Normal, 1 = Fail	WGM-W001-FAIL
EQUIPMENT		00738	1	Well #4 Fail	0 = Normal, 1 = Fail	WGM-W004-FAIL
GENERAL/MISC		00739	2	Highlift #1 Fail	0 = Normal, 1 = Fail	WGM-HL01-FAIL
STATUS/CONTROL		00740	3	Highlift #2 Fail	0 = Normal, 1 = Fail	WGM-HL02-FAIL
REGISTERS		00741	4	Highlift #3 Fail	0 = Normal, 1 = Fail	WGM-HL03-FAIL
		00742	5			
		00743	6	CL2 Pump #1 Fail	0 = Normal, 1 = Fail	WGM-CP01-FAIL
		00744	7	CL2 Pump #2 Fail	0 = Normal, 1 = Fail	WGM-CP02-FAIL
		00745	8			
		00746	9			
		00747	10			
		00748	11			
		00749	12			
		00750	13			
		00751	14			
		00752	15			
SCADAPAK		00753	0	Well #3 Fail	0 = Normal, 1 = Fail	WGM-W003-FAIL
EQUIPMENT		00754	1			
GENERAL/MISC		00755	2	CL2 Pump #1 Fail	0 = Normal, 1 = Fail	WGM-CP03-FAIL
STATUS		00756	3	CL2 Pump #2 Fail	0 = Normal, 1 = Fail	WGM-CP04-FAIL
REGISTERS		00757	4			
		00758	5			
		00759	6			
		00760	7			
		00761	8			
		00762	9			
		00763	10			
		00764	11			
		00765	12			
		00766	13			
		00767	14			
		00768	15			
SCADAPAK		00769	0			
EQUIPMENT		00770	1			
GENERAL/MISC		00771	2			
STATUS/CONTROL		00772	3			
REGISTERS		00773	4			
		00774	5			
		00775	6			
		00776	7			
		00777	8			
		00778	9			
		00779	10			
		00780	11			
		00781	12			
		00782	13			
		00783	14			
		00784	15			
SCADAPAK		00785	0	Well #1 Automatic Start Request	0 = off, 1 = on	WGM-W001-AS-REQ
EQUIPMENT		00786	1	Well #4 Automatic Start Request	0 = off, 1 = on	WGM-W004-AS-REQ
MISC STATUS		00787	2	Highlift #1 Automatic Start Request	0 = off, 1 = on	WGM-HL01-AS-REQ
REGISTERS		00788	3	Highlift #2 Automatic Start Request	0 = off, 1 = on	WGM-HL02-AS-REQ
		00789	4	Highlift #3 Automatic Start Request	0 = off, 1 = on	WGM-HL03-AS-REQ
		00790	5	Well #3 Automatic Start Request	0 = off, 1 = on	WGM-W003-AS-REQ
		00791	6			
		00792	7			
		00793	8			
		00794	9			

	Location	Wingham Data Collector IO List			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	1
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		00795	10			
		00796	11			
		00797	12			
		00798	13			
		00799	14			
		00800	15			
SCADAPAK		00801		Well #3 Automatic Start Request	0 = off, 1 = on	WGM-W003-AS-REQ
EQUIPMENT		00802				
MISC STATUS		00803				
REGISTERS		00804				
		00805				
		00806				
		00807				
		00808				
		00809				
		00810				
		00811				
		00812				
		00813				
		00814				
		00815				
		00816				
SCADAPAK		00817				
EQUIPMENT		00818				
MISC STATUS		00819				
REGISTERS		00820				
		00821				
		00822				
		00823				
		00824				
		00825				
		00826				
		00827				
		00828				
		00829				
		00830				
		00831				
		00832				
SCADAPAK		00833	0	Well #1 Available to Run	0 = N/A, 1 = Available	WGM-W001-AVAIL
EQUIPMENT		00834	1	Well #4 Available to Run	0 = N/A, 1 = Available	WGM-W004-AVAIL
GENERAL/MISC		00835	2	Highlift #1 Available to Run	0 = N/A, 1 = Available	WGM-HL01-AVAIL
STATUS/CONTROL		00836	3	Highlift #2 Available to Run	0 = N/A, 1 = Available	WGM-HL02-AVAIL
REGISTERS		00837	4	Highlift #3 Available to Run	0 = N/A, 1 = Available	WGM-HL03-AVAIL
		00838	5	Well #3 Available to Run	0 = N/A, 1 = Available	WGM-W003-AVAIL
		00839	6			
		00840	7			
		00841	8	Reset CL2		
		00842	9			
		00843	10			
		00844	11			
		00845	12			
		00846	13			
		00847	14			
		00848	15			
SCADAPAK		00849	0	Well #3 Available to Run	0 = N/A, 1 = Available	WGM-W003-AVAIL
EQUIPMENT		00850	1			
GENERAL/MISC		00851	2			
STATUS/CONTROL		00852	3			
REGISTERS		00853	4			
		00854	5			
		00855	6			
		00856	7			
		00857	8	Reset Chlorine		
		00858	9			
		00859	10			
		00860	11			
		00861	12			
		00862	13			
		00863	14			
		00864	15			
SCADAPAK		00865	0	Elevated Tank Level Device Failure		
EQUIPMENT		00866	1	Elevated Tank Illegal Entry alarm		

	Location	Wingham Data Collector IO List			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address: 1	
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
GENERAL/MISC		00867	2	Elevated Tank High High Level Alarm		WGM-ETANK-HIHALM
STATUS/CONTROL		00868	3	Elevated Tank High Level Alarm		WGM-ETANK-HIALM
REGISTERS		00869	4	Elevated Tank Low Level Alarm		WGM-ETANK-LOWALM
		00870	5	Elevated Tank Low Low Level Alarm		WGM-ETANK-LOLOALM
		00871	6			
		00872	7			
		00873	8			
		00874	9			
		00875	10			
		00876	11			
		00877	12			
		00878	13			
		00879	14			
		00880	15			
SCADAPAK		00881	0	Illegal Entry Alarm	0 = normal, 1 = Alarm	WGM-PH01-ILLENT
EQUIPMENT		00882	1	Pumphouse #1 Well Lockout	0 = normal, 1 = Alarm	WGM-W000-LOCK
GENERAL/MISC		00883	2	Pumphouse #1 HighLift Lockout	0 = normal, 1 = Alarm	WGM-HL00-LOCK
STATUS/CONTROL		00884	3	Pumphouse #1 Well Duty Bit	0 = normal, 1 = Alarm	WGM-W000-DUTY
REGISTERS		00885	4	Wellhouse #3 Communications Failure	0 = normal, 1 = Alarm	WGM-W003-COMMF
		00886	5	Elevated Tank Communications Failed	0 =normal, 1 = alarm	WGM-ETANK-COMMF
		00887	6	Well #1 Low Level Alarm	0 =normal, 1 = alarm	WGM-W001-LLEV
		00888	7	Well #4 Low Level Alarm	0 =normal, 1 = alarm	WGM-W004-LLEV
		00889	8	Pumphouse #1 High High Chlorine Alarm	0 = normal, 1 = Alarm	WGM-PH01-HIHICL2ALM
		00890	9	Pumphouse #1 High Chlorine Alarm	0 = normal, 1 = Alarm	WGM-PH01-HICL2ALM
		00891	10	Pumphouse #1 Low Chlorine Alarm	0 = normal, 1 = Alarm	WGM-PH01-LOCL2ALM
		00892	11	Pumphouse #1 Low Low Chlorine Alarm	0 = normal, 1 = Alarm	WGM-PH01-LOLOCL2ALM
		00893	12	Pumphouse #1 High Turbidity Alarm	0 = normal, 1 = Alarm	WGM-PH01-HINTUALM
		00894	13	Pumphouse #1 High High Turbidity Alarm	0 = normal, 1 = Alarm	WGM-PH01-HIHINTU
		00895	14	Pumphouse #1 Flow Alarm	0 = normal, 1 = Alarm	WGM-PH01-FLOWALM
		00896	15	Pumphouse #1 Pressure Alarm	0 = normal, 1 = Alarm	WGM-PH01-PRESSALM
SCADAPAK		00897	0	Wellhouse #3 Illegal Entry alarm	0 = normal, 1 = Alarm	WGM-WH03-ILLENT
EQUIPMENT		00898	1	Wellhouse #3 Well Lockout	0 = normal, 1 = Alarm	WGM-W003-LOCK
GENERAL/MISC		00899	2	Wellhouse #3 Communications Failure	0 = normal, 1 = Alarm	WGM-W003-COMM
STATUS/CONTROL		00900	3	Pumphouse #1 Communications Failure	0 = normal, 1 = Alarm	WGM-PH01-COMMF
REGISTERS		00901	4	Elevated Tank Communications Failure	0 =normal, 1 = alarm	WGM-ETANK-COMMF
		00902	5			
		00903	6			
		00904	7			
		00905	8	Wellhouse #3 High High Chlorine Alarm	0 = normal, 1 = Alarm	WGM-W003-HIHICL2ALM
		00906	9	Wellhouse #3 High Chlorine Alarm	0 = normal, 1 = Alarm	WGM-W003-HICL2ALM
		00907	10	Wellhouse #3 Low Chlorine Alarm	0 = normal, 1 = Alarm	WGM-W003-LOCL2ALM
		00908	11	Wellhouse #3 Low Low Chlorine Alarm	0 = normal, 1 = Alarm	WGM-W003-LOLOCL2ALM
		00909	12	Wellhouse #3 High High Turbidity Alarm	0 = normal, 1 = Alarm	
		00910	13	Wellhouse #3 High Turbidity Alarm	0 = normal, 1 = Alarm	WGM-W003-HINTUALM
		00911	14	Wellhouse #3 Flow Alarm	0 = normal, 1 = Alarm	WGM-W003-FLOWALM
		00912	15	Wellhouse #3 Discharge Pressure Alarm	0 = normal, 1 = Alarm	WGM-W003-PRESSALM
		00913	0	Well 1 local/remote control mode	0 = local, 1 = remote	WGM-W001-LOR
		00914	1	Well 1 run status	0=off, 1=on	WGM-W001-STATUS
		00915	2	Well 1 Failed	0 = normal, 1 = alarm	WGM-W001-OL
		00916	3	Well 4 local/remote control mode	0 = local, 1 = remote	WGM-W004-LOR
		00917	4	Well 4 run status	0=off, 1=on	WGM-W004-STATUS
		00918	5	Well 4 Failed	0 = normal, 1 = alarm	WGM-W004-OL
		00919	6	Highlift 1 local/remote control mode	0 = local, 1 = remote	WGM-HL01-LOR
		00920	7	Highlift 1 run status	0=off, 1=on	WGM-HL01-STATUS
		00921	8	Highlift 1 Failed	0 = normal, 1 = alarm	WGM-HL01-OL
		00922	9	Highlift 2 local/remote control mode	0 = local, 1 = remote	WGM-HL02-LOR
		00923	10	Highlift 2 run status	0=off, 1=on	WGM-HL02-STATUS
		00924	11	Highlift 2 Failed	0 = normal, 1 = alarm	WGM-HL02-OL
		00925	12	Highlift 3 local/remote control mode	0 = local, 1 = remote	WGM-HL03-LOR
		00926	13	Highlift 3 run status	0 = off, 1 = on	WGM-HL03-STATUS
		00927	14	Highlift 3 Failed	0 = normal, 1 = alarm	WGM-HL03-OL
		00928	15			
		00929	0	BPVC1-3 opened/closed status	0 = opened, 1 = closed	WGM-HL01-OVOPEN
		00930	1	BPVC2-3 opened/closed status	0 = opened, 1 = closed	WGM-HL02-OVOPEN
		00931	2	BPVC3-3 opened/closed status	0 = opened, 1 = closed	WGM-HL03-OVOPEN
		00932	3	Reservoir level high	0 = normal, 1 = alarm	WGM-RES0-HL
		00933	4	Reservoir level low	0 = normal, 1 = alarm	WGM-RES0-LO
		00934	5	Generator running status	0 = off, 1 = running	WGM-GEN1-STATUS
		00935	6	Generator low fuel	0 = normal, 1 = alarm	WGM-GEN1-LS
		00936	7	Deisel generator failure	0 = normal, 1 = alarm	WGM-GEN1-FAIL
		00937	8	Pumphouse 4 temperature alarm	0 = normal, 1 = alarm	WGM-PH04-TEMP
		00938	9	Well #1 temperature alarm	0 = normal, 1 = alarm	WGM-W001-TEMP

	Location	Wingham Data Collector IO List			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	1
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		00939	10	Wellhouse #4 temperature alarm	0 = normal, 1 = alarm	WGM-W004-TEMP
		00940	11	Pumphouse #1 smoke alarm	0 = normal, 1 = alarm	WGM-PH01-SMOKE
		00941	12	Pumphouse #4 smoke alarm	0 = normal, 1 = alarm	WGM-PH04-SMOKE
		00942	13	Illegal entry	0 = normal, 1 = alarm	WGM-PH04-DOOR
		00943	14	Security disarmed	0 = normal, 1 = alarm	WGM-PH04-ARM
		00944	15	Spare		
		00945	0			
		00946	1			
		00947	2			
		00948	3			
		00949	4			
		00950	5			
		00951	6			
		00952	7			
		00953	8			
		00954	9			
		00955	10			
		00956	11			
		00957	12			
		00958	13			
		00959	14			
		00960	15			
		00961	0	Well 3 local/remote control mode	0 = local, 1 = remote	WGM-W003-LOR
		00962	1	Well 3 run status	0=off, 1=on	WGM-W003-STATUS
		00963	2	Well 3 Failed	0 = normal, 1 = alarm	WGM-W003-OL
		00964	3	Wellhouse #3 Illegal entry		WGM-W003-ILLENT
		00965	4	Wellhouse #3 Security Disarmed		WGM-W003-SECDIS
		00966	5			
		00967	6			
		00968	7			
		00969	8			
		00970	9			
		00971	10			
		00972	11			
		00973	12			
		00974	13			
		00975	14			
		00976	15			
		00977	0	Elevated Tank Communications Failure	0 =normal, 1 = alarm	WGM-ETANK-COMM
		00978	1	Communication Heartbeat		
		00979	2	Pumphouse 4 Communications Heartbeat		
		00980	3	Pumphouse 3 Communications Heartbeat		
		00981	4	Elevated Tank Communications Heartbeat		
		00982	5	Communications Paused By Scada	0 = Normal, 1 = Paused	
		00983	6			
		00984	7			
		00985	8			
		00986	9			
		00987	10			
		00988	11			
		00989	12			
		00990	13			
		00991	14			
		00992	15			
		00993	0	Duty Rotation Updated from Wellhouse #3	0 = Normal, 1 = Updated	WGM-HL00-DUTYUPD
		00994	1	Pump Setpoints Updated by Well #3	0 = Normal, 1 = Updated	
		00995	2			
		00996	3			
		00997	4			
		00998	5			
		00999	6			
		01000	7			
		01001	8			
		01002	9			
		01003	10			
		01004	11			
		01005	12			
		01006	13			
		01007	14			
		01008	15			
		01009	0	Elevated Tank Door Switch		
		01010	1	Elevated Tank Security disarm Switch		

	Location	Wingham Data Collector IO List			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	1
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		01011	2	Digital Input Status from Elevated Tank		
		01012	3	Digital Input Status from Elevated Tank		
		01013	4	Digital Input Status from Elevated Tank		
		01014	5	Digital Input Status from Elevated Tank		
		01015	6	Digital Input Status from Elevated Tank		
		01016	7	Digital Input Status from Elevated Tank		
		01017	8	Digital Input Status from Elevated Tank		
		01018	9	Digital Input Status from Elevated Tank		
		01019	10	Digital Input Status from Elevated Tank		
		01020	11	Digital Input Status from Elevated Tank		
		01021	12	Digital Input Status from Elevated Tank		
		01022	13	Digital Input Status from Elevated Tank		
		01023	14	Digital Input Status from Elevated Tank		
		01024	15	Digital Input Status from Elevated Tank		
		01040	0	Well 4 Failed Alarm Enable/Disable		WGM-W004-FAILEDEN
		01041	1	Highlift #1 Failed Alarm Enable/Disable		WGM-HL01-FAILEDEN
		01042	2	Highlift #2 Failed Alarm Enable/Disable		WGM-HL02-FAILEDEN
		01043	3	Highlift #3 Failed Alarm Enable/Disable		WGM-HL03-FAILEDEN
		01044	4	Well 4 Overload alarm Enable/Disable		WGM-W004-OLEN
		01045	5	Highlift #1 Overload Alarm Enable/Disable		WGM-HL01-OLEN
		01046	6	Highlift #2 Overload Alarm Enable/Disable		WGM-HL02-OLEN
		01047	7	Highlift #3 Overload Alarm Enable/Disable		WGM-HL03-OLEN
		01048	8	Well #4 Low Level Alarm enable/Disable		WGM-W004-LLEVEN
		01049	9	Pumphouse #1 High High Chlorine Alarm Enable/Disable		WGM-PH01-HIHICL2EN
		01050	10	Pumphouse #1 High Chlorine Alarm Enable/Disable		WGM-PH01-HICL2EN
		01051	11	Pumphouse #1 Low Chlorine Alarm Enable/Disable		WGM-PH01-LOCL2EN
		01052	12	Pumphouse #1 Low Low Chlorine Alarm Enable/Disable		WGM-PH01-LOLOCL2EN
		01053	13	Pumphouse #1 High High Turbidity Alarm Enable/Disable		WGM-PH01-HIHITURBEN
		01054	14	Pumphouse #1 High Turbidity Alarm Enable/Disable		WGM-PH01-HITURBEN
		01055	15	Pumphouse #1 Illegal Entry Enable/Disable		WGM-PH01-ENTALMEN
		01056	0	Pumphouse #1 Pressure Alarm Enable/Disable		WGM-PH01-PRESSEN
		01057	1	Pumphouse 1 High Reservoir Alarm Enable/Disable		WGM-PH01-RES1HEN
		01058	2	Pumphouse 1 Low Reservoir Alarm Enable/Disable		WGM-PH01-RESLEN
		01059	3	Pumphouse #1 Smoke Alarm Enable/Disable		WGM-PH01-SMOKEEN
		01060	4	Pumphouse #1 Well Lockout Enable/Disable		WGM-W000-LOCKEN
		01061	5	Pumphouse #4 Smoke Alarm enable/disable		WGM-PH04-SMOKEEN
		01062	6	Pumphouse #1 Temperature Alarm Enable/Disable		WGM-PH04-TEMPEN
		01063	7	Pumphouse #1 flow alarm enable/disable		WGM-PH01-FLOWEN
		01064	8	Pumphouse #1 Generator Failed Alarm enable/disable		WGM-GEN1-FAILEN
		01065	9	Pumphouse #1 Generator Low Fuel Alarm enable/disable		WGM-GEN1-LSEN
		01066	10	Pumphouse #1 Generator Running Status enable/disable		WGM-GEN1-RUNEN
		01067	11	Pumphouse #4 Temperature Alarm enable/disable		WGM-PH04-TEMPEN
		01068	12			
		01069	13			
		01070	14			
		01071	15			
		01072	0	Well 3 Failed Enable/Disable		WGM-W003-FAILEN
		01073	1	Well #3 Fail Enable/Disable		WGM-W003-OLEN
		01074	2	Wellhouse #3 High High chlorine Alarm Enable/Disable		WGM-W003-HIHICL2EN
		01075	3	Wellhouse #3 High Chlorine Alarm Enable/Disable		WGM-W003-HICL2EN
		01076	4	Wellhouse #3 Low Chlorine Alarm Enable/Disable		WGM-W003-LOCL2EN
		01077	5	Wellhouse #3 Low Low Chlorine Alarm Enable/Disable		WGM-W003-LOLOCL2EN
		01078	6	Wellhouse #3 High High Turbidity Alarm Enable/Disable		WGM-W003-HIHITURBEN
		01079	7	Wellhouse #3 High Turbidity Alarm Enable/Disable		WGM-W003-HITURBEN
		01080	8	Wellhouse #3 Flow Alarm Enable/Disable		WGM-W003-FLOWEN
		01081	9	Wellhouse #3 Pressure Alarm Enable/Disable		WGM-W003-PRESSEN
		01082	10	Wellhouse #3 Illegal Entry alarm Enable/Disable		WGM-W003-ENTRYEN
		01083	11			
		01084	12			
		01085	13			
		01086	14			
		01087	15			
		01088	0	Elevated Tank High High Level alarm Enable/Disable		WGM-ETANK-HIHIEEN
		01089	1	Elevated Tank High Level alarm Enable/Disable		WGM-ETANK-HIEEN
		01090	2	Elevated Tank Low Level Alarm Enable/Disable		WGM-ETANK-LOEN
		01091	3	Elevated Tank Low Low Level Alarm Enable/Disable		WGM-ETANK-LOLOEN
		01092	4	Elevated tank entry Alarm Enable/Disable		WGM-ETANK-ENTRYEN
		01093	5	Elevated Tank Level device Failure alarm enable/disable		WGM-ETANK-LEVFAILEN
		01094	6			
		01095	7			
		01096	8			
		01097	9			

	Location	Wingham Data Collector IO List			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	1
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		01098	10			
		01099	11			
		01100	12			
		01101	13			
		01102	14			
		01103	15			
		01104	0	Pumphouse 1 communications Failure Alarm enable/disable		WGM-PH01-COMMEN
		01105	1	Wellhouse #3 communications failure alarm Enable/Disable		WGM-W003-COMMEN
		01106	2	Elevated Tank Communications Failure Enable/Disable		WGM-ETANK-COMMEN
		01107	3			
		01108	4			
		01109	5			
		01110	6			
		01111	7			
		01112	8			
		01113	9			
		01114	10			
		01115	11			
		01116	12			
		01117	13			
		01118	14			
		01119	15			
		01120		General purpose read/write bits		
Remaining bits		to				
		02048				
SCADAPAK	DIN 0	10001	0	Spare		
LOWER MODULE	DIN 1	10002	1	Spare		
	DIN 2	10003	2	Spare		
	DIN 3	10004	3	Spare		
	DIN 4	10005	4	Spare		
	DIN 5	10006	5	Spare		
	DIN 6	10007	6	Spare		
	DIN 7	10008	7	Spare		
	DIN 8	10009	8	Spare		
	DIN 9	10010	9	Spare		
	DIN 10	10011	10	Spare		
	DIN 11	10012	11	Spare		
	DIN 12	10013	12	Spare		
	DIN 13	10014	13	Spare		
	DIN 14	10015	14	Spare		
	DIN 15	10016	15	Spare		
DIN 5203/4	DIN/CNTR 0	10017	0			
	DIN/CNTR 1	10018	1			
	DIN/CNTR 2	10019	2			
	INTERRUPT	10020	3			
SCADAPAK	DIN 0	10021	4			
UPPER MODULE	DIN 1	10022	5			
	DIN 2	10023	6			
	DIN 3	10024	7			
	DIN 4	10025	8			
INTERNAL	FORCE LED	10026	9	Forced coils		
OPTION	SW1	10027	10	Scadapak option switch status		
OPTION	SW2	10028	11	Scadapak option switch status		
OPTION	SW3	10029	12	Scadapak option switch status		
		10030	13			
		10031	14			
		10032	15			
Remaining bits		10033				
		to				
		14096				
SCADAPAK	AIN 0	30001		Spare		
LOWER MODULE	AIN 1	30003		Spare		
	AIN 2	30005		Spare		
	AIN 3	30007		Spare		
	AIN 4	30009		Spare		
	AIN 5	30011		Spare		
	AIN 6	30013		Spare		
	AIN 7	30015		Spare		
SCADAPAK	AIN 0	30017		Spare		

	Location	Wingham Data Collector IO List			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	1
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
UPPER MODULE	AIN 1	30019		Spare		
	AIN 2	30021		Spare		
	AIN 3	30023		Spare		
	AIN 4	30025		Spare		
SCADAPAK	STATUS	30027		Controller Status Code	0 - 65535	
SCADAPAK	AIN 5203/4	30029		Ram battery voltage	0 - 65.535 V	
INTERNAL	AIN 5203/4	30031		Temperature Degrees C	0 - 65535 C	
ANALOGS	AIN 5203/4	30033		Temperature Degrees F	0 - 65535 F	
Communications		30146		COM1 - Protocol command errors		
Diagnostic Registers		30148		COM1 - Protocol format errors		
		30150		COM1 - Protocol checksum errors		
		30152		COM1 - Protocol slave commands received		
		30154		COM1- Protocol master commands sent		
		30156		COM1 - Protocol master commands received		
		30158		COM1 - Protocol slave responses sent		
		30160		COM1 - Protocol master command status		
		30162		COM1 - Protocol stored messages		
		30164		COM1 - Protocol forwarded messages		
		30166		COM2 - Protocol command errors		
		30168		COM2 - Protocol format errors		
		30170		COM2 - Protocol checksum errors		
		30172		COM2 - Protocol slave commands received		
		30174		COM2- Protocol master commands sent		
		30176		COM2 - Protocol master commands received		
		30178		COM2 - Protocol slave responses sent		
		30180		COM2 - Protocol master command status		
		30182		COM2 - Protocol stored messages		
		30184		COM2 - Protocol forwarded messages		
		30186		COM3 - Protocol command errors		
		30188		COM3 - Protocol format errors		
		30190		COM3 - Protocol checksum errors		
		30192		COM3 - Protocol slave commands received		
		30194		COM3- Protocol master commands sent		
		30196		COM3 - Protocol master commands received		
		30198		COM3 - Protocol slave responses sent		
		30200		COM3 - Protocol master command status		
		30202		COM3 - Protocol stored messages		
		30204		COM3 - Protocol forwarded messages		
		30206		COM4 - Protocol command errors		
		30208		COM4 - Protocol format errors		
		30210		COM4 - Protocol checksum errors		
		30212		COM4 - Protocol slave commands received		
		30214		COM4- Protocol master commands sent		
		30216		COM4 - Protocol master commands received		
		30218		COM4 - Protocol slave responses sent		
		30220		COM4 - Protocol master command status		
		30222		COM4 - Protocol stored messages		
		30224		COM4 - Protocol forwarded messages		
		30226		COM1 - Serial port framing errors		
		30228		COM1 - Serial port parity errors		
		30230		COM1 - Serial port character overrun errors		
		30232		COM1 - Serial port buffer overrun errors		
		30234		COM1- Serial port I/O line status		
		30236		COM2 - Serial port framing errors		
		30238		COM2 - Serial port parity errors		
		30240		COM2 - Serial port character overrun errors		
		30242		COM2 - Serial port buffer overrun errors		
		30244		COM2- Serial port I/O line status		
		30246		COM3 - Serial port framing errors		
		30248		COM3 - Serial port parity errors		
		30250		COM3 - Serial port character overrun errors		
		30252		COM3 - Serial port buffer overrun errors		
		30254		COM3- Serial port I/O line status		
		30256		COM4 - Serial port framing errors		
		30258		COM4 - Serial port parity errors		
		30260		COM4 - Serial port character overrun errors		
		30262		COM4 - Serial port buffer overrun errors		
		30264		COM4- Serial port I/O line status		
Remaining Registers		30266				
		to				

	Location	Wingham Data Collector IO List			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address: 1	
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		31024				
SCADAPAK	AOUT 0	40001		Spare		
LOWER MODULE	AOUT 1	40003		Spare		
SCADAPAK	CNFG LED	40063		LED Power Settings - Time to return to default state	0 - 65535	
	RTC	40065		Real Time Clock - Hours	0 - 23	
		40067		Real Time Clock - Minutes	0 - 59	
		40069		Real Time Clock - Seconds	0 - 59	
		40071		Real Time Clock - Year	0 - 99	
		40073		Real Time Clock - Month	1 - 12	
		40075		Real Time Clock - Day	1 - 31	
		40077		Real Time Clock - Day of week	1 - 7	
		40079		Real Time Clock - Alarm hour	1 - 23	
		40081		Real Time Clock - Alarm minute	0 - 59	
		40083		Real Time Clock - Alarm second	0 - 59	
		40085		Real Time Clock - Alarm control	0 = off, 1 = on	
		40087		spare		
		40089		spare		
		40091		spare		
		40093		spare		
		40095		spare		
		40097		spare		
		40099		spare		
EQUIPMENT	EQ#1	40101		Well #1 Run Time	0 - 65535 minutes	WGM-W001-RUNT
RUN TIMES	EQ#2	40103		Well #4 Run Time	0 - 65535 minutes	WGM-W004-RUNT
	EQ#3	40105		Highlift #1 Run Time	0 - 65535 minutes	WGM-HL01-RUNT
	EQ#4	40107		Highlift #2 Run Time	0 - 65535 minutes	WGM-HL02-RUNT
	EQ#5	40109		Highlift #3 Run Time	0 - 65535 minutes	WGM-HL03-RUNT
	EQ#6	40111		Generator Runtime	0 - 65535 minutes	WGM-GEN1-RUNT
	EQ#7	40113		Well #3 Run Time	0 - 65535 minutes	WGM-W003-RUNT
	EQ#8	40115			0 - 65535 minutes	
	EQ#9	40117			0 - 65535 minutes	
	EQ#10	40119			0 - 65535 minutes	
	EQ#11	40121			0 - 65535 minutes	
	EQ#12	40123			0 - 65535 minutes	
	EQ#13	40125			0 - 65535 minutes	
	EQ#14	40127			0 - 65535 minutes	
	EQ#15	40129			0 - 65535 minutes	
	EQ#16	40131			0 - 65535 minutes	
	EQ#17	40133		Well #4 pressure		WGM-W004-PRESS
	EQ#18	40135		System pressure		WGM-HL00-PRESS
	EQ#19	40137		Well #4 flowrate		WGM-W004-FLOW
	EQ#20	40139		Well #4 level		WGM-W004-LEV
	EQ#21	40141		Chlorine		WGM-HL00-CL2
	EQ#22	40143		Turbidity		WGM-HL00-NTU
	EQ#23	40145		Reservoir Level		WGM-RES0-LEV
	EQ#24	40147		Spare		
	EQ#25	40149				
	EQ#26	40151				
	EQ#27	40153				
	EQ#28	40155				
	EQ#29	40157				
	EQ#30	40159				
	EQ#31	40161				
	EQ#32	40163				
	EQ#33	40165		Well #3 pressure		WGM-W003-PRESS
	EQ#34	40167		Well #3 flowrate		WGM-W003-FLOW
	EQ#35	40169		Chlorine		WGM-W003-CL2
	EQ#36	40171		Turbidity		WGM-W003-NTU
	EQ#37	40173				
	EQ#38	40175				
	EQ#39	40177				
	EQ#40	40179				
	EQ#41	40181		Elevated Tank Level Transmitter #1		WGM-ETANK1-LEV
	EQ#42	40183		Elevated Tank Level Transmitter #2		WGM-ETANK2-LEV
	EQ#43	40185				
	EQ#44	40187				
	EQ#45	40189				
	EQ#46	40191				
	EQ#47	40193				
	EQ#48	40195				
DOUBLE WORD	#1	40197		Well #1 Flow Totalizer	0 - 2147483648	WGM-W001-TOTAL

	Location	Wingham Data Collector IO List			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address: 1	
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
FLOW TOTALIZERS						
	#2	40201		Well #4 Flow Totalizer	0 - 2147483648	WGM-W004-TOTAL
	#3	40205		Station Discharge Flow Totalizer	0 - 2147483648	WGM-HL00-TOTAL
	#4	40209		Well #3 Flow Totalizer	0 - 2147483648	WGM-W003-TOTAL
	#5	40213		FLOW TOTALIZER #5 (MEGALITRES*10)	0 - 999	
		40215		FLOW TOTALIZER #5 (KILOLITRES/10)	0 - 9999	
	#6	40217		FLOW TOTALIZER #6 (MEGALITRES*10)	0 - 999	
		40219		FLOW TOTALIZER #6 (KILOLITRES/10)	0 - 9999	
	#7	40221		FLOW TOTALIZER #7 (MEGALITRES*10)	0 - 999	
		40223		FLOW TOTALIZER #7 (KILOLITRES/10)	0 - 9999	
	#8	40225		FLOW TOTALIZER #8 (MEGALITRES*10)	0 - 999	
		40227		FLOW TOTALIZER #8 (KILOLITRES/10)	0 - 9999	
	#9	40229		FLOW TOTALIZER #9 (MEGALITRES*10)	0 - 999	
		40231		FLOW TOTALIZER #9 (KILOLITRES/10)	0 - 9999	
	#10	40233		FLOW TOTALIZER #10 (MEGALITRES*10)	0 - 999	
		40235		FLOW TOTALIZER #10 (KILOLITRES/10)	0 - 9999	
		40237		Well #4 Chlorine Pump #1 - Speed Control (Flow Pacing)	0 - 100 %	WGM-CP01-SPEED
		40239		Well #4 Chlorine Pump #2 - Speed Control (Flow Pacing)	0 - 100 %	WGM-CP02-SPEED
		40241		Well #3 Chlorine Pump #1 - Speed Control (Flow Pacing)	0 - 100%	WGM-CP03-SPEED
		40243		Well #3 Chlorine Pump #2 - Speed Control (Flow Pacing)	0 - 100%	WGM-CP04-SPEED
		40245				
		40247				
		40249				
		40251				
		40253				
		40255				
		40257				
		40259				
		40261		Well #4 Start Setpoint	0 - 100%	WGM-W000-LEADSTRT
		40265		Well #4 Stop Setpoint	0 - 100%	WGM-W000-LEADSTP
		40269		Pumphouse #1 Lag Well Start	0 - 100%	WGM-W000-LAGSTRT
		40273		Pumphouse #1 Lag Well Stop	0 - 100%	WGM-W000-LAGSTP
		40277		Stage 1 Start Level Setpoint	0 - 100%	WGM-STG1-START
		40281		Stage 1 Stop Level Setpoint	0 - 100%	WGM-STG1-STOP
		40285		Stage 2 Start Level Setpoint	0 - 100%	WGM-STG2-START
		40289		Stage 2 Stop Level Setpoint	0 - 100%	WGM-STG2-STOP
		40293		Stage 3 Start Level Setpoint	0 - 100%	WGM-STG3-START
		40297		Stage 3 Stop Level Setpoint	0 - 100%	WGM-STG3-STOP
		40301		Stage 4 Start Level Setpoint	0 - 100%	WGM-STG4-START
		40305		Stage 4 Stop Level Setpoint	0 - 100%	WGM-STG4-STOP
		40309		Reservoir Highlift Lockout Setpoint	0 - 100%	WGM-HL00-LOCK
		40313		Duty Rotation		
		40315		Elevated Tank Level		WGM-ETANK-LVL
		40319		Delay Between Pump Starts	0 - 65535 seconds	WGM-PH01-PDLY
		40321				
		40323				
		40325				
		40327		Well #1 Minimum Off Time	0 - 65535 Seconds	WGM-W001-MOFF
		40329		Well #1 Minimum On Time	0 - 65535 Seconds	WGM-W001-MON
		40331		Well #1 Fault Delay 1	0 - 65535 Seconds	WGM-W001-FDLY
		40333		Well #4 Minimum Off Time	0 - 65535 Seconds	WGM-W004-MOFF
		40335		Well #4 Minimum On Time	0 - 65535 Seconds	WGM-W004-MON
		40337		Well #4 Fault Delay 1	0 - 65535 Seconds	WGM-W004-FDLY
		40339		Highlift #1 Minimum Off Time	0 - 65535 Seconds	WGM-HL01-MOFF
		40341		Highlift #1 Minimum On Time	0 - 65535 Seconds	WGM-HL01-MON
		40343		Highlift #1 Fault Delay 1	0 - 65535 Seconds	WGM-HL01-FDLY
		40345		Highlift #2 Minimum Off Time	0 - 65535 Seconds	WGM-HL02-MOFF
		40347		Highlift #2 Minimum On Time	0 - 65535 Seconds	WGM-HL02-MON
		40349		Highlift #2 Fault Delay 1	0 - 65535 Seconds	WGM-HL02-FDLY
		40351		Highlift #3 Minimum Off Time	0 - 65535 Seconds	WGM-HL03-MOFF
		40353		Highlift #3 Minimum On Time	0 - 65535 Seconds	WGM-HL03-MON
		40355		Highlift #3 Fault Delay 1	0 - 65535 Seconds	WGM-HL03-FDLY
		40357		Well #3 Minimum Off Time	0 - 65535 Seconds	WGM-W003-MOFF
		40359		Well #3 Minimum On Time	0 - 65535 Seconds	WGM-W003-MON
		40361		Well #3 Fault Delay 1	0 - 65535 Seconds	WGM-W003-FDLY
		40363		Well 3 Flow Setpoint		
		40365		Well 3 Pressure Setpoint		
		40367		Well 3 Power Setpoint		
		40369		Pumphouse #1 HiHi Chlorine Alarm Setpoint		WGM-PH01-HIHICL2
		40373		Pumphouse #1 High Chlorine Alarm Setpoint		WGM-PH01-HICL2
		40377		Pumphouse #1 Low Chlorine Alarm Setpoint		WGM-PH01-LOCL2
		40381		Pumphouse #1 LoLo Chlorine Alarm Setpoint		WGM-PH01-LOLOCL2
		40385		Pumphouse #1 Hi Turbidity Alarm Setpoint		WGM-PH01-HINI
		40389		Pumphouse #1 High High Turbidity Alarm Setpoint		WGM-PH01HIHINI
		40393		Well #1 Low Flow Setpoint		WGM-W001-LOFLOW
		40397		Well #4 Low Flow Setpoint		WGM-W004-LOFLOW

	Location	Wingham Data Collector IO List			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	1
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		40401		Low Discharge Pressure Alarm Setpoint		WGM-HL00-LOPRESS
		40405		High Discharge Pressure Alarm Setpoint		WGM-HL00-HIPRESS
		40409		Well #3 HiHi Chlorine Alarm Setpoint		WGM-W003-HIHICL2
		40413		Well #3 High Chlorine Alarm Setpoint		WGM-W003-HICL2
		40417		Well #3 Low Chlorine Alarm Setpoint		WGM-W003-LOCL2
		40421		Well #3 LoLo Chlorine Alarm Setpoint		WGM-W003-LOLOCL2
		40425		Well #3 HiHi Turbidity Alarm Setpoint		WGM-W003-HIHiNI
		40429		Well #3 Hi Turbidity Alarm Setpoint		WGM-W003-HINI
		40433		Well #3 Low Flow Setpoint		WGM-W003-LOFLOW
		40437		Well #3 Low discharge Pressure setpoint		WGM-W003-LOPRESS
		40441		Well #3 High discharge Pressure Setpoint		WGM-W003-HIPRESS
		40445		Elevated Tank High High Level Alarm setpoint		WGM-ETANK-HIHSET
		40449		Elevated Tank High Level Alarm setpoint		WGM-ETANK-HISET
		40453		Elevated Tank Low Level Alarm setpoint		WGM-ETANK-LOWSET
		40457		Elevated Tank Low Low Level Alarm setpoint		WGM-ETANK-LOLOSET
		40461				
		40465		Well #4 Eng Pressure		WGM-W001-ENGPRESS
		40469		Discharge Eng Pressure		WGM-HL00-ENGPRESS
		40473		Well #4 Eng Flow		WGM-W004-ENGFLOW
		40477		Well #4 Eng Level		WGM-W004-ENGLEV
		40481		Chlorine Eng Units		WGM-PH01-ENGCL2
		40485		Turbidity Eng Units		WGM-PH01-ENGTURB
		40489		Reservoir Eng Level		WGM-PH01-ENGRES
		40493				
		40497				
		40501		Well #3 pressure Eng Units		WGM-W003-ENGPRESS
		40505		Well #3 flowrate Eng Units		WGM-W003-ENGFLOW
		40509		Chlorine Eng Units		WGM-W003-ENGCL2
		40513		Turbidity Eng Units		WGM-W003-ENGTURB
		40517				
		40521				
		40525		Wellhouse #3 Elevated Tank Start Setpoint (Direct Comms)		WGM-W003-ETANKSTRT
		40529		Wellhouse #3 Elevated Tank Stop Setpoint (Direct Comms)		WGM-W003-ETANKSTOP
		40533				
		40537		Elevated Tank Level Transmitter #1 Eng Units		
		40541		Elevated Tank Level Transmitter #2 Eng Units		
		40701		Well 3 Pressure mode	0 - 2	
				Well #4 Eng Pressure Min		
				Well #4 Eng Pressure Max		
				Well #4 Eng Pressure Avg		
				Discharge Eng Pressure Min		
				Discharge Eng Pressure Max		
				Discharge Eng Pressure Avg		
				Well #4 Eng Flow Min		
				Well #4 Eng Flow Max		
				Well #4 Eng Flow Avg		
				Well #4 Eng Level Min		
				Well #4 Eng Level Max		
				Well #4 Eng Level Avg		
				Chlorine Eng Units Min		
				Chlorine Eng Units Max		
				Chlorine Eng Units Avg		
				Turbidity Eng Units Min		
				Turbidity Eng Units Max		
				Turbidity Eng Units Avg		
				Reservoir Eng Level Min		
				Reservoir Eng Level Max		
				Reservoir Eng Level Avg		
				Well #3 pressure Eng Units Min		
				Well #3 pressure Eng Units Max		
				Well #3 pressure Eng Units Avg		
				Well #3 flowrate Eng Units Max		
				Well #3 flowrate Eng Units Avg		
				Well #3 flowrate Eng Units Min		
				Chlorine Eng Units Min		
				Chlorine Eng Units Max		
				Chlorine Eng Units Avg		
				Turbidity Eng Units Min		
				Turbidity Eng Units Max		
				Turbidity Eng Units Avg		
		41000		Timed Duty Start Hour	0 - 23	WGM-HL00-STRTH
		41002		Timed Duty Start Minute	0 - 59	WGM-HL00-STRTM
		41004		Timed Duty Stop hour	0 - 23	WGM-HL00-STOPH
		41006		Timed Duty Stop Minute	0 - 59	WGM-HL00-STOPM

	Location	Wingham Data Collector IO List			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	1
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		41000		Non volatile memory storage for program variables		
		49999				

Location		Wingham Pumphouse #1			Updated:	02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT			RPU Address:	2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
INTERNAL MEMORY		1 to 512		Non Volatile Variable Storage		
SCADAPAK LOWER MODULE	DOUT 0	00513	0	Well 1 control relay	0=off, 1=on	WGM-W001-RUN
	DOUT 1	00514	1	Well 4 control relay	0=off, 1=on	WGM-W004-RUN
	DOUT 2	00515	2	Highlift 1 control relay	0=off, 1=on	WGM-HL01-RUN
	DOUT 3	00516	3	Highlift 2 control relay	0=off, 1=on	WGM-HL02-RUN
	DOUT 4	00517	4	Highlift 3 control relay	0=off, 1=on	WGM-HL03-RUN
	DOUT 5	00518	5	Spare		
	DOUT 6	00519	6	Spare		
	DOUT 7	00520	7	Spare		
	DOUT 8	00521	8	Spare		
	DOUT 9	00522	9	Spare		
	DOUT 10	00523	10	Spare		
	DOUT 11	00524	11	Spare		
SCADAPAK UPPER MODULE	DOUT 0	00525	12			
INTERNAL	DOUT 1	00526	13			
	CNFG LED	00527	14	LED Power State		
		00528	15			
INTERNAL		00529	0	clear protocol counters on com1		
SCADAPAK		00530	1	clear protocol counters on com2		
DIAGNOSTICS		00531	2	clear protocol counters on com3		
		00532	3	clear protocol counters on com4		
		00533	4			
		00534	5			
		00535	6			
		00536	7			
		00537	8	clear serial port counters on com1		
		00538	9	clear serial port counters on com2		
		00539	10	clear serial port counters on com3		
		00540	11	clear serial port counters on com4		
		00541	12			
		00542	13			
		00543	14			
		00544	15			
SCADA	EQ#1	00545	0	Well #1 manual start/stop request	0 = off, 1 = on	WGM-W001-MS-REQ
BIT CONTROL	EQ#2	00546	1	Well #2 Manual start/stop request	0 = off, 1 = on	WGM-W004-MS-REQ
EQUIPMENT	EQ#3	00547	2	Highlift #1 Manual start/stop request	0 = off, 1 = on	WGM-HL01-MS-REQ
START/STOP	EQ#4	00548	3	Highlift #2 Manual start/stop request	0 = off, 1 = on	WGM-HL02-MS-REQ
OPEN/CLOSE	EQ#5	00549	4	Highlift #3 Manual start/stop request	0 = off, 1 = on	WGM-HL03-MS-REQ
	EQ#6	00550	5			
	EQ#7	00551	6			
	EQ#8	00552	7			
	EQ#9	00553	8			
	EQ#10	00554	9			
	EQ#11	00555	10			
	EQ#12	00556	11			
	EQ#13	00557	12			
	EQ#14	00558	13			
	EQ#15	00559	14			
	EQ#16	00560	15			
SCADA	EQ#17	00561	0			
BIT CONTROL	EQ#18	00562	1			
EQUIPMENT	EQ#19	00563	2			
START/STOP	EQ#20	00564	3			
OPEN/CLOSE	EQ#21	00565	4			
	EQ#22	00566	5			
	EQ#23	00567	6			
	EQ#24	00568	7			
	EQ#25	00569	8			
	EQ#26	00570	9			
	EQ#27	00571	10			

Location		Wingham Pumphouse #1		Updated:		02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT		RPU Address:		2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
	EQ#28	00572	11			
	EQ#29	00573	12			
	EQ#30	00574	13			
	EQ#31	00575	14			
	EQ#32	00576	15			
SCADA	EQ#33	00577	0			
BIT CONTROL	EQ#34	00578	1			
EQUIPMENT	EQ#35	00579	2			
START/STOP	EQ#36	00580	3			
OPEN/CLOSE	EQ#37	00581	4			
	EQ#38	00582	5			
	EQ#39	00583	6			
	EQ#40	00584	7			
	EQ#41	00585	8			
	EQ#42	00586	9			
	EQ#43	00587	10			
	EQ#44	00588	11			
	EQ#45	00589	12			
	EQ#46	00590	13			
	EQ#47	00591	14			
	EQ#48	00592	15			
	EQ#1	00593	0	Well #1 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-W001-MODE
SCADA	EQ#2	00594	1	Well #4 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-W004-MODE
BIT CONTROL	EQ#3	00595	2	Highlift #1 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-HL01-MODE
EQUIPMENT	EQ#4	00596	3	Highlift #2 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-HL02-MODE
AUTO/MANUAL	EQ#5	00597	4	Highlift #3 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-HL03-MODE
	EQ#6	00598	5			
	EQ#7	00599	6			
	EQ#8	00600	7			
	EQ#9	00601	8			
	EQ#10	00602	9			
	EQ#11	00603	10			
	EQ#12	00604	11			
	EQ#13	00605	12			
	EQ#14	00606	13			
	EQ#15	00607	14			
	EQ#16	00608	15			
SCADA	EQ#17	00609	0			
BIT CONTROL	EQ#18	00610	1			
EQUIPMENT	EQ#19	00611	2			
AUTO/MANUAL	EQ#20	00612	3			
	EQ#21	00613	4			
	EQ#22	00614	5			
	EQ#23	00615	6			
	EQ#24	00616	7			
	EQ#25	00617	8			
	EQ#26	00618	9			
	EQ#27	00619	10			
	EQ#28	00620	11			
	EQ#29	00621	12			
	EQ#30	00622	13			
	EQ#31	00623	14			
	EQ#32	00624	15			
SCADA	EQ#33	00625	0			
BIT CONTROL	EQ#34	00626	1			
EQUIPMENT	EQ#35	00627	2			
AUTO/MANUAL	EQ#36	00628	3			
	EQ#37	00629	4			
	EQ#38	00630	5			
	EQ#39	00631	6			
	EQ#40	00632	7			
	EQ#41	00633	8			
	EQ#42	00634	9			
	EQ#43	00635	10			
	EQ#44	00636	11			

Location		Wingham Pumphouse #1			Updated:	02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT			RPU Address:	2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
	EQ#45	00637	12			
	EQ#46	00638	13			
	EQ#47	00639	14			
	EQ#48	00640	15			
SCADA	EQ#1	00641	0	Well #1 Remote Lockout	0 = Available, 1 = Lockout	WGM-W001-REMLOCK
BIT CONTROL	EQ#2	00642	1	Well #4 Remote Lockout	0 = Available, 1 = Lockout	WGM-W004-REMLOCK
EQUIPMENT	EQ#3	00643	2	Highlift #1 Remote Lockout	0 = Available, 1 = Lockout	WGM-HL01-REMLOCK
LOCKOUT	EQ#4	00644	3	Highlift #2 Remote Lockout	0 = Available, 1 = Lockout	WGM-HL02-REMLOCK
	EQ#5	00645	4	Highlift #3 Remote Lockout	0 = Available, 1 = Lockout	WGM-HL03-REMLOCK
	EQ#6	00646	5			
	EQ#7	00647	6			
	EQ#8	00648	7			
	EQ#9	00649	8			
	EQ#10	00650	9			
	EQ#11	00651	10			
	EQ#12	00652	11			
	EQ#13	00653	12			
	EQ#14	00654	13			
	EQ#15	00655	14			
	EQ#16	00656	15			
SCADA	EQ#17	00657	0			
BIT CONTROL	EQ#18	00658	1			
EQUIPMENT	EQ#19	00659	2			
LOCKOUT	EQ#20	00660	3			
	EQ#21	00661	4			
	EQ#22	00662	5			
	EQ#23	00663	6			
	EQ#24	00664	7			
	EQ#25	00665	8			
	EQ#26	00666	9			
	EQ#27	00667	10			
	EQ#28	00668	11			
	EQ#29	00669	12			
	EQ#30	00670	13			
	EQ#31	00671	14			
	EQ#32	00672	15			
SCADA	EQ#33	00673	0			
BIT CONTROL	EQ#34	00674	1			
EQUIPMENT	EQ#35	00675	2			
LOCKOUT	EQ#36	00676	3			
	EQ#37	00677	4			
	EQ#38	00678	5			
	EQ#39	00679	6			
	EQ#40	00680	7			
	EQ#41	00681	8			
	EQ#42	00682	9			
	EQ#43	00683	10			
	EQ#44	00684	11			
	EQ#45	00685	12			
	EQ#46	00686	13			
	EQ#47	00687	14			
	EQ#48	00688	15			
SCADAPAK	EQ#1	00689	0	Well #1 Fail	0 = Normal, 1 = Fail	WGM-W001-FAIL
EQUIPMENT FAIL	EQ#2	00690	1	Well #4 Fail	0 = Normal, 1 = Fail	WGM-W004-FAIL
BIT REGISTERS	EQ#3	00691	2	Highlift #1 Fail	0 = Normal, 1 = Fail	WGM-HL01-FAIL
	EQ#4	00692	3	Highlift #2 Fail	0 = Normal, 1 = Fail	WGM-HL02-FAIL
	EQ#5	00693	4	Highlift #3 Fail	0 = Normal, 1 = Fail	WGM-HL03-FAIL
	EQ#6	00694	5			
	EQ#7	00695	6	CL2 Pump #1 Fail	0 = Normal, 1 = Fail	WGM-CP01-FAIL
	EQ#8	00696	7	CL2 Pump #2 Fail	0 = Normal, 1 = Fail	WGM-CP02-FAIL
	EQ#9	00697	8			
	EQ#10	00698	9			
	EQ#11	00699	10			
	EQ#12	00700	11			
	EQ#13	00701	12			

Location		Wingham Pumphouse #1			Updated:	02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT			RPU Address:	2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
	EQ#14	00702	13			
	EQ#15	00703	14			
	EQ#16	00704	15			
SCADAPAK	EQ#17	00705	0			
EQUIPMENT FAIL	EQ#18	00706	1			
BIT REGISTERS	EQ#19	00707	2			
	EQ#20	00708	3			
	EQ#21	00709	4			
	EQ#22	00710	5			
	EQ#23	00711	6			
	EQ#24	00712	7			
	EQ#25	00713	8			
	EQ#26	00714	9			
	EQ#27	00715	10			
	EQ#28	00716	11			
	EQ#29	00717	12			
	EQ#30	00718	13			
	EQ#31	00719	14			
	EQ#32	00720	15			
SCADAPAK	EQ#33	00721	0			
EQUIPMENT FAIL	EQ#34	00722	1			
BIT REGISTERS	EQ#35	00723	2			
	EQ#36	00724	3			
	EQ#37	00725	4			
	EQ#38	00726	5			
	EQ#39	00727	6			
	EQ#40	00728	7			
	EQ#41	00729	8			
	EQ#42	00730	9			
	EQ#43	00731	10			
	EQ#44	00732	11			
	EQ#45	00733	12			
	EQ#46	00734	13			
	EQ#47	00735	14			
	EQ#48	00736	15			
SCADAPAK		00737	0	Well #1 Automatic Start Request	0 = off, 1 = on	WGM-W001-AS-REQ
EQUIPMENT		00738	1	Well #4 Automatic Start Request	0 = off, 1 = on	WGM-W004-AS-REQ
GENERAL/MISC		00739	2	Highlift #1 Automatic Start Request	0 = off, 1 = on	WGM-HL01-AS-REQ
STATUS/CONTROL		00740	3	Highlift #2 Automatic Start Request	0 = off, 1 = on	WGM-HL02-AS-REQ
REGISTERS		00741	4	Highlift #3 Automatic Start Request	0 = off, 1 = on	WGM-HL03-AS-REQ
		00742	5	Well #3 Automatic Start Request	0 = off, 1 = on	WGM-W003-AS-REQ
		00743	6			
		00744	7			
		00745	8			
		00746	9			
		00747	10			
		00748	11			
		00749	12			
		00750	13			
		00751	14			
		00752	15			
SCADAPAK		00753	0			
EQUIPMENT		00754	1			
GENERAL/MISC		00755	2			
STATUS		00756	3			
REGISTERS		00757	4			
		00758	5			
		00759	6			
		00760	7			
		00761	8			
		00762	9			
		00763	10			
		00764	11			
		00765	12			
		00766	13			

Location		Wingham Pumphouse #1		Updated:		02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT		RPU Address:		2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		00767	14			
		00768	15			
SCADAPAK		00769	0			
EQUIPMENT		00770	1			
GENERAL/MISC		00771	2			
STATUS/CONTROL		00772	3			
REGISTERS		00773	4			
		00774	5			
		00775	6			
		00776	7			
		00777	8			
		00778	9			
		00779	10			
		00780	11			
		00781	12			
		00782	13			
		00783	14			
		00784	15			
SCADAPAK	EQ#1	00785	0	Well #1 Available to Run	0 = N/A, 1 = Available	WGM-W001-AVAIL
EQUIPMENT	EQ#2	00786	1	Well #4 Available to Run	0 = N/A, 1 = Available	WGM-W004-AVAIL
MISC STATUS	EQ#3	00787	2	Highlift #1 Available to Run	0 = N/A, 1 = Available	WGM-HL01-AVAIL
REGISTERS	EQ#4	00788	3	Highlift #2 Available to Run	0 = N/A, 1 = Available	WGM-HL02-AVAIL
	EQ#5	00789	4	Highlift #3 Available to Run	0 = N/A, 1 = Available	WGM-HL03-AVAIL
	EQ#6	00790	5	Well #3 Available to Run	0 = N/A, 1 = Available	WGM-W003-AVAIL
	EQ#7	00791	6			
	EQ#8	00792	7			
	EQ#9	00793	8	Reset CL2		
	EQ#10	00794	9			
	EQ#11	00795	10			
	EQ#12	00796	11			
	EQ#13	00797	12			
	EQ#14	00798	13			
	EQ#15	00799	14			
	EQ#16	00800	15			
SCADAPAK	EQ#17	00801				
EQUIPMENT	EQ#18	00802				
MISC STATUS	EQ#19	00803				
REGISTERS	EQ#20	00804				
	EQ#21	00805				
	EQ#22	00806				
	EQ#23	00807				
	EQ#24	00808				
	EQ#25	00809				
	EQ#26	00810				
	EQ#27	00811				
	EQ#28	00812				
	EQ#29	00813				
	EQ#30	00814				
	EQ#31	00815				
	EQ#32	00816				
SCADAPAK	EQ#33	00817				
EQUIPMENT	EQ#34	00818				
MISC STATUS	EQ#35	00819				
REGISTERS	EQ#36	00820				
	EQ#37	00821				
	EQ#38	00822				
	EQ#39	00823				
	EQ#40	00824				
	EQ#41	00825				
	EQ#42	00826				
	EQ#43	00827				
	EQ#44	00828				
	EQ#45	00829				
	EQ#46	00830				
	EQ#47	00831				

Location		Wingham Pumphouse #1			Updated:	02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT			RPU Address:	2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
	EQ#48	00832				
SCADAPAK		00833	0			
EQUIPMENT		00834	1			
GENERAL/MISC		00835	2			
STATUS/CONTROL		00836	3			
REGISTERS		00837	4			
		00838	5			
		00839	6			
		00840	7			
		00841	8			
		00842	9			
		00843	10			
		00844	11			
		00845	12			
		00846	13			
		00847	14			
		00848	15			
		00849	0	Illegal Entry Alarm	0 = normal, 1 = Alarm	WGM-PH01-ILLENT
		00850	1	Well Lockout	0 = normal, 1 = Alarm	WGM-W000-LOCK
		00851	2	HighLift Lockout	0 = normal, 1 = Alarm	WGM-HL00-LOCK
		00852	3	Well Duty	0 = Well1, 1 = Well4	
		00853	4	Wellhouse #3 Communications Failure	0 = normal, 1 = Alarm	WGM-W003-COMMF
		00854	5	Elevated Tank Communications Failed	0 =normal, 1 = alarm	WGM-ETANK-COMMF
		00855	6	Well #1 Low Level Alarm	0 =normal, 1 = alarm	WGM-W001-LLEV
		00856	7	Well #4 Low Level Alarm	0 =normal, 1 = alarm	WGM-W004-LLEV
		00857	8	Pumphouse #1 High High Chlorine Alarm	0 = normal, 1 = Alarm	WGM-PH01-HIHICL2ALM
		00858	9	Pumphouse #1 High Chlorine Alarm	0 = normal, 1 = Alarm	WGM-PH01-HICL2ALM
		00859	10	Pumphouse #1 Low Chlorine Alarm	0 = normal, 1 = Alarm	WGM-PH01-LOCL2ALM
		00860	11	Pumphouse #1 Low Low Chlorine Alarm	0 = normal, 1 = Alarm	WGM-PH01-LOLOCL2ALM
		00861	12	Pumphouse #1 High Turbidity Alarm	0 = normal, 1 = Alarm	WGM-PH01-HINTUALM
		00862	13	Pumphouse #1 High High Turbidity Alarm	0 = normal, 1 = Alarm	WGM-PH01-HIHINTU
		00863	14	Pumphouse #1 Flow Alarm	0 = normal, 1 = Alarm	WGM-PH01-FLOWALM
		00864	15	Pumphouse #1 Pressure Alarm	0 = normal, 1 = Alarm	WGM-PH01-PRESSALM
Remaining bits		00865		General purpose read/write bits		
		to				
		02048				
SCADAPAK	DIN 0	10001	0	Well 1 local/remote control mode	0 = local, 1 = remote	WGM-W001-LOR
LOWER MODULE	DIN 1	10002	1	Well 1 run status	0=off, 1=on	WGM-W001-STATUS
	DIN 2	10003	2	Well 1 Failed	0 = normal, 1 = alarm	WGM-W001-OL
	DIN 3	10004	3	Well 4 local/remote control mode	0 = local, 1 = remote	WGM-W004-LOR
	DIN 4	10005	4	Well 4 run status	0=off, 1=on	WGM-W004-STATUS
	DIN 5	10006	5	Well 4 Failed	0 = normal, 1 = alarm	WGM-W004-OL
	DIN 6	10007	6	Highlift 1 local/remote control mode	0 = local, 1 = remote	WGM-HL01-LOR
	DIN 7	10008	7	Highlift 1 run status	0=off, 1=on	WGM-HL01-STATUS
	DIN 8	10009	8	Highlift 1 Failed	0 = normal, 1 = alarm	WGM-HL01-OL
	DIN 9	10010	9	Highlift 2 local/remote control mode	0 = local, 1 = remote	WGM-HL02-LOR
	DIN 10	10011	10	Highlift 2 run status	0=off, 1=on	WGM-HL02-STATUS
	DIN 11	10012	11	Highlift 2 Failed	0 = normal, 1 = alarm	WGM-HL02-OL
	DIN 12	10013	12	Highlift 3 local/remote control mode	0 = local, 1 = remote	WGM-HL03-LOR
	DIN 13	10014	13	Highlift 3 run status	0 = off, 1 = on	WGM-HL03-STATUS
	DIN 14	10015	14	Highlift 3 Failed	0 = normal, 1 = alarm	WGM-HL03-OL
	DIN 15	10016	15	Spare		
DIN 5203/4	DIN/CNTR 0	10017	0	Power fail	1 = normal, 0 = fail	
	DIN/CNTR 1	10018	1			
	DIN/CNTR 2	10019	2			
	INTERRUPT	10020	3			
SCADAPAK	DIN 0	10021	4			
UPPER MODULE	DIN 1	10022	5			
	DIN 2	10023	6			
	DIN 3	10024	7			
	DIN 4	10025	8			
INTERNAL	FORCE LED	10026	9	Forced coils		
OPTION	SW1	10027	10	Scadapak option switch status		

Location		Wingham Pumphouse #1		Updated:		02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT		RPU Address:		2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
OPTION	SW2	10028	11	Scadapak option switch status		
OPTION	SW3	10029	12	Scadapak option switch status		
		10030	13			
		10031	14			
		10032	15			
16 - BIT						
DIGITAL INPUT	DIN 0	10097	0	BPVC1-3 opened/closed status	0 = opened, 1 = closed	WGM-HL01-OVOPEN
MODULE #8	DIN 1	10098	1	BPVC2-3 opened/closed status	0 = opened, 1 = closed	WGM-HL02-OVOPEN
	DIN 2	10099	2	BPVC3-3 opened/closed status	0 = opened, 1 = closed	WGM-HL03-OVOPEN
	DIN 3	10100	3	Reservoir level high	0 = normal, 1 = alarm	WGM-RES0-HL
	DIN 4	10101	4	Reservoir level low	0 = normal, 1 = alarm	WGM-RES0-LO
	DIN 5	10102	5	Generator running status	0 = off, 1 = running	WGM-GEN1-STATUS
	DIN 6	10103	6	Generator low fuel	0 = normal, 1 = alarm	WGM-GEN1-LS
	DIN 7	10104	7	Deisel generator failure	0 = normal, 1 = alarm	WGM-GEN1-FAIL
	DIN 8	10105	8	Pumphouse 4 temperature alarm	0 = normal, 1 = alarm	WGM-PH04-TEMP
	DIN 9	10106	9	Well #1 temperature alarm	0 = normal, 1 = alarm	WGM-W001-TEMP
	DIN 10	10107	10	Wellhouse #4 temperature alarm	0 = normal, 1 = alarm	WGM-W004-TEMP
	DIN 11	10108	11	Pumphouse #1 smoke alarm	0 = normal, 1 = alarm	WGM-PH01-SMOKE
	DIN 12	10109	12	Pumphouse #4 smoke alarm	0 = normal, 1 = alarm	WGM-PH04-SMOKE
	DIN 13	10110	13	Illegal entry	0 = normal, 1 = alarm	WGM-PH04-DOOR
	DIN 14	10111	14	Security disarmed	0 = normal, 1 = alarm	WGM-PH04-ARM
	DIN 15	10112	15	Spare		
Remaining bits		10145				
		to				
		14096				
SCADAPAK	AIN 0	30001		Well #4 pressure		WGM-W004-PRESS
LOWER MODULE	AIN 1	30003		System pressure		WGM-HL00-PRESS
	AIN 2	30005		Well #4 flowrate		WGM-W004-FLOW
	AIN 3	30007		Well #4 level		WGM-W004-LEV
	AIN 4	30009		Chlorine		WGM-HL00-CL2
	AIN 5	30011		Turbidity		WGM-HL00-NTU
	AIN 6	30013		Reservoir Level		WGM-RES0-LEV
	AIN 7	30015		Spare		
SCADAPAK	STATUS	30027		Controller Status Code	0 - 65535	
SCADAPAK	AIN 5203/4	30029		Ram battery voltage	0 - 65.535 V	
INTERNAL	AIN 5203/4	30031		Temperature Degrees C	0 - 65535 C	
ANALOGS	AIN 5203/4	30033		Temperature Degrees F	0 - 65535 F	
Communications		30146		COM1 - Protocol command errors		
Diagnostic Registers		30148		COM1 - Protocol format errors		
		30150		COM1 - Protocol checksum errors		
		30152		COM1 - Protocol slave commands received		
		30154		COM1- Protocol master commands sent		
		30156		COM1 - Protocol master commands received		
		30158		COM1 - Protocol slave responses sent		
		30160		COM1 - Protocol master command status		
		30162		COM1 - Protocol stored messages		
		30164		COM1 - Protocol forwarded messages		
		30166		COM2 - Protocol command errors		
		30168		COM2 - Protocol format errors		
		30170		COM2 - Protocol checksum errors		
		30172		COM2 - Protocol slave commands received		
		30174		COM2- Protocol master commands sent		
		30176		COM2 - Protocol master commands received		
		30178		COM2 - Protocol slave responses sent		
		30180		COM2 - Protocol master command status		
		30182		COM2 - Protocol stored messages		
		30184		COM2 - Protocol forwarded messages		
		30186		COM3 - Protocol command errors		
		30188		COM3 - Protocol format errors		
		30190		COM3 - Protocol checksum errors		
		30192		COM3 - Protocol slave commands received		
		30194		COM3- Protocol master commands sent		
		30196		COM3 - Protocol master commands received		
		30198		COM3 - Protocol slave responses sent		
		30200		COM3 - Protocol master command status		

Location		Wingham Pumphouse #1		Updated:		02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT		RPU Address:		2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		30202		COM3 - Protocol stored messages		
		30204		COM3 - Protocol forwarded messages		
		30206		COM4 - Protocol command errors		
		30208		COM4 - Protocol format errors		
		30210		COM4 - Protocol checksum errors		
		30212		COM4 - Protocol slave commands received		
		30214		COM4 - Protocol master commands sent		
		30216		COM4 - Protocol master commands received		
		30218		COM4 - Protocol slave responses sent		
		30220		COM4 - Protocol master command status		
		30222		COM4 - Protocol stored messages		
		30224		COM4 - Protocol forwarded messages		
		30226		COM1 - Serial port framing errors		
		30228		COM1 - Serial port parity errors		
		30230		COM1 - Serial port character overrun errors		
		30232		COM1 - Serial port buffer overrun errors		
		30234		COM1 - Serial port I/O line status		
		30236		COM2 - Serial port framing errors		
		30238		COM2 - Serial port parity errors		
		30240		COM2 - Serial port character overrun errors		
		30242		COM2 - Serial port buffer overrun errors		
		30244		COM2 - Serial port I/O line status		
		30246		COM3 - Serial port framing errors		
		30248		COM3 - Serial port parity errors		
		30250		COM3 - Serial port character overrun errors		
		30252		COM3 - Serial port buffer overrun errors		
		30254		COM3 - Serial port I/O line status		
		30256		COM4 - Serial port framing errors		
		30258		COM4 - Serial port parity errors		
		30260		COM4 - Serial port character overrun errors		
		30262		COM4 - Serial port buffer overrun errors		
		30264		COM4 - Serial port I/O line status		
Remaining Registers		30266				
		to				
		31024				
SCADAPAK	AOUT 0	40001		Chlorine Pump #1 - Speed Control (Flow Pacing)	0 - 100 %	WGM-CP01-SPEED
LOWER MODULE	AOUT 1	40003		Chlorine Pump #2 - Speed Control (Flow Pacing)	0 - 100 %	WGM-CP02-SPEED
ANALOG OUTPUT	AOUT 0	40005		Spare		
MODULE #1	AOUT 1	40007		Spare		
	AOUT 2	40009		Spare		
	AOUT 3	40011		Spare		
SCADAPAK	CNFG LED	40063		LED Power Settings - Time to return to default state	0 - 65535	
	RTC	40065		Real Time Clock - Hours	0 - 23	
		40067		Real Time Clock - Minutes	0 - 59	
		40069		Real Time Clock - Seconds	0 - 59	
		40071		Real Time Clock - Year	0 - 99	
		40073		Real Time Clock - Month	1 - 12	
		40075		Real Time Clock - Day	1 - 31	
		40077		Real Time Clock - Day of week	1 - 7	
		40079		Real Time Clock - Alarm hour	1 - 23	
		40081		Real Time Clock - Alarm minute	0 - 59	
		40083		Real Time Clock - Alarm second	0 - 59	
		40085		Real Time Clock - Alarm control	0 = off, 1 = on	
		40087		spare		
		40089		spare		
		40091		spare		
		40093		spare		
		40095		spare		
		40097		spare		
		40099		spare		
EQUIPMENT	EQ#1	40101		Well #1 Run Time	0 - 65535 minutes	WGM-W001-RUNT

Location				Wingham Pumphouse #1		Updated:	02-10-06
Bell Circuit #				SCADAPACK PLUS I/O LAYOUT		RPU Address:	2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name	
RUN TIMES	EQ#2	40103		Well #4 Run Time	0 - 65535 minutes	WGM-W004-RUNT	
	EQ#3	40105		Highlift #1 Run Time	0 - 65535 minutes	WGM-HL01-RUNT	
	EQ#4	40107		Highlift #2 Run Time	0 - 65535 minutes	WGM-HL02-RUNT	
	EQ#5	40109		Highlift #3 Run Time	0 - 65535 minutes	WGM-HL03-RUNT	
	EQ#6	40111		Generator Runtime	0 - 65535 minutes	WGM-GEN1-RUNT	
	EQ#7	40113			0 - 65535 minutes		
	EQ#8	40115			0 - 65535 minutes		
	EQ#9	40117			0 - 65535 minutes		
	EQ#10	40119			0 - 65535 minutes		
	EQ#11	40121			0 - 65535 minutes		
	EQ#12	40123			0 - 65535 minutes		
	EQ#13	40125			0 - 65535 minutes		
	EQ#14	40127			0 - 65535 minutes		
	EQ#15	40129			0 - 65535 minutes		
	EQ#16	40131			0 - 65535 minutes		
	EQ#17	40133		Well #1 Eng Pressure		WGM-W001-ENGPRESS	
	EQ#18	40137		Discharge Eng Pressure		WGM-HL00-ENGPRESS	
	EQ#19	40141		Well #4 Eng Flow		WGM-W004-ENGFLOW	
	EQ#20	40145		Well #4 Eng Level		WGM-W004-ENGLEV	
	EQ#21	40149		Chlorine Eng Units		WGM-PH01-ENGCL2	
	EQ#22	40153		Turbidity Eng Units		WGM-PH01-ENGTURB	
	EQ#23	40157		Reservoir Eng Level		WGM-PH01-ENGRES	
	EQ#24	40161			0 - 65535 minutes		
	EQ#25	40165			0 - 65535 minutes		
	EQ#35	40169			0 - 65535 minutes		
	EQ#36	40171			0 - 65535 minutes		
	EQ#37	40173			0 - 65535 minutes		
	EQ#38	40175			0 - 65535 minutes		
	EQ#39	40177			0 - 65535 minutes		
	EQ#40	40179			0 - 65535 minutes		
	EQ#41	40181			0 - 65535 minutes		
	EQ#42	40183			0 - 65535 minutes		
	EQ#43	40185			0 - 65535 minutes		
	EQ#44	40187			0 - 65535 minutes		
	EQ#45	40189			0 - 65535 minutes		
	EQ#46	40191			0 - 65535 minutes		
	EQ#47	40193			0 - 65535 minutes		
	EQ#48	40195			0 - 65535 minutes		
DOUBLE WORD	#1	40197		Well #1 Flow Totalizer	0 - 2147483648	WGM-W001-TOTAL	
FLOW TOTALIZERS							
	#2	40201		Well #4 Flow Totalizer	0 - 2147483648	WGM-W004-TOTAL	
	#3	40205		Station Discharge Flow Totalizer	0 - 2147483648	WGM-HL00-TOTAL	
	#4	40209		FLOW TOTALIZER #4 (MEGALITRES*10)	0 - 999		
		40211		FLOW TOTALIZER #4 (KILOLITRES/10)	0 - 9999		
	#5	40213		FLOW TOTALIZER #5 (MEGALITRES*10)	0 - 999		
		40215		FLOW TOTALIZER #5 (KILOLITRES/10)	0 - 9999		
	#6	40217		FLOW TOTALIZER #6 (MEGALITRES*10)	0 - 999		
		40219		FLOW TOTALIZER #6 (KILOLITRES/10)	0 - 9999		
	#7	40221		FLOW TOTALIZER #7 (MEGALITRES*10)	0 - 999		
		40223		FLOW TOTALIZER #7 (KILOLITRES/10)	0 - 9999		
	#8	40225		FLOW TOTALIZER #8 (MEGALITRES*10)	0 - 999		
		40227		FLOW TOTALIZER #8 (KILOLITRES/10)	0 - 9999		
	#9	40229		FLOW TOTALIZER #9 (MEGALITRES*10)	0 - 999		
		40231		FLOW TOTALIZER #9 (KILOLITRES/10)	0 - 9999		
	#10	40233		FLOW TOTALIZER #10 (MEGALITRES*10)	0 - 999		
		40235		FLOW TOTALIZER #10 (KILOLITRES/10)	0 - 9999		
	#11	40237		FLOW TOTALIZER #11 (MEGALITRES*10)	0 - 999		
		40239		FLOW TOTALIZER #11 (KILOLITRES/10)	0 - 9999		
	#12	40241		FLOW TOTALIZER #12 (MEGALITRES*10)	0 - 999		
		40243		FLOW TOTALIZER #12 (KILOLITRES/10)	0 - 9999		
	#13	40245		FLOW TOTALIZER #13 (MEGALITRES*10)	0 - 999		
		40247		FLOW TOTALIZER #13 (KILOLITRES/10)	0 - 9999		
	#14	40249		FLOW TOTALIZER #14 (MEGALITRES*10)	0 - 999		
		40251		FLOW TOTALIZER #14 (KILOLITRES/10)	0 - 9999		
	#15	40253		FLOW TOTALIZER #15 (MEGALITRES*10)	0 - 999		
		40255		FLOW TOTALIZER #15 (KILOLITRES/10)	0 - 9999		

	Location	Wingham Pumphouse #1			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
	#16	40257		FLOW TOTALIZER #16 (MEGALITRES*10)	0 - 999	
		40259		FLOW TOTALIZER #16 (KILOLITRES/10)	0 - 9999	
		40261		Well #4 Start Setpoint	0 - 100%	WGM-W000-LEADSTR
		40265		Well #4 Stop Setpoint	0 - 100%	WGM-W000-LEADSTP
		40269		Lag Well Start Setpoint		WGM-W000-LAGSTR
		40273		Lag Well Stop Setpoint		WGM-W000-LAGSTOP
		40277		Stage 1 Start Level Setpoint	0 - 100%	WGM-STG1-START
		40281		Stage 1 Stop Level Setpoint	0 - 100%	WGM-STG1-STOP
		40285		Stage 2 Start Level Setpoint	0 - 100%	WGM-STG2-START
		40289		Stage 2 Stop Level Setpoint	0 - 100%	WGM-STG2-STOP
		40293		Stage 3 Start Level Setpoint	0 - 100%	WGM-STG3-START
		40297		Stage 3 Stop Level Setpoint	0 - 100%	WGM-STG3-STOP
		40301		Stage 4 Start Level Setpoint	0 - 100%	WGM-STG4-START
		40305		Stage 4 Stop Level Setpoint	0 - 100%	WGM-STG4-STOP
		40309		Reservoir Highlift Lockout Setpoint	0 - 100%	WGM-HL00-LOCK
		40313		Duty Rotation		WGM-HL00-DUTY
		40315		Elevated Tank Level		WGM-ETANK-LVL
		40319		Delay Between Pump Starts	0 - 65535 seconds	WGM-PH01-PDLY
		40321				
		40323				
		40325				
		40327		Well #1 Minimum Off Time	0 - 65535 Seconds	WGM-W001-MOFF
		40329		Well #1 Minimum On Time	0 - 65535 Seconds	WGM-W001-MON
		40331		Well #1 Fault Delay 1	0 - 65535 Seconds	WGM-W001-FDLY
		40333		Well #4 Minimum Off Time	0 - 65535 Seconds	WGM-W004-MOFF
		40335		Well #4 Minimum On Time	0 - 65535 Seconds	WGM-W004-MON
		40337		Well #4 Fault Delay 1	0 - 65535 Seconds	WGM-W004-FDLY
		40339		Highlift #1 Minimum Off Time	0 - 65535 Seconds	WGM-HL01-MOFF
		40341		Highlift #1 Minimum On Time	0 - 65535 Seconds	WGM-HL01-MON
		40343		Highlift #1 Fault Delay 1	0 - 65535 Seconds	WGM-HL01-FDLY
		40345		Highlift #2 Minimum Off Time	0 - 65535 Seconds	WGM-HL02-MOFF
		40347		Highlift #2 Minimum On Time	0 - 65535 Seconds	WGM-HL02-MON
		40349		Highlift #2 Fault Delay 1	0 - 65535 Seconds	WGM-HL02-FDLY
		40351		Highlift #3 Minimum Off Time	0 - 65535 Seconds	WGM-HL03-MOFF
		40353		Highlift #3 Minimum On Time	0 - 65535 Seconds	WGM-HL03-MON
		40355		Highlift #3 Fault Delay 1	0 - 65535 Seconds	WGM-HL03-FDLY
		40357		Timed Duty Start Hour	0 - 23	WGM-HL00-STRTH
		40359		Timed Duty Start Minute	0 - 59	WGM-HL00-STRTM
		40361		Timed Duty Stop hour	0 - 23	WGM-HL00-STOPH
		40363		Timed Duty Stop Minute	0 - 59	WGM-HL00-STOPM
		40365				
		40367				
		40369		Pumphouse #1 HiHi Chlorine Alarm Setpoint		WGM-PH01-HIHICL2
		40373		Pumphouse #1 High Chlorine Alarm Setpoint		WGM-PH01-HICL2
		40377		Pumphouse #1 Low Chlorine Alarm Setpoint		WGM-PH01-LOCL2
		40381		Pumphouse #1 LoLo Chlorine Alarm Setpoint		WGM-PH01-LOLOCL2
		40385		Pumphouse #1 Hi Turbidity Alarm Setpoint		WGM-PH01-HINI
		40389		Pumphouse #1 High High Turbidity Alarm Setpoint		WGM-PH01HIHINI
		40393		Well #1 High Flow Setpoint		
		40397		Well #4 High Flow Setpoint		
		40401		Low Discharge Pressure Alarm Setpoint		WGM-HL00-LOPRESS
		40405		High Discharge Pressure Alarm Setpoint		WGM-HL00-HIPRESS
		41000		Non volatile memory storage for program variables		

		49999				

	Location	Wingham Wellhouse #3			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address: 3	
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
INTERNAL		510		Well 3 Remote Lockout		
NON VOLITILE		511		Well 3 Mode		
MEMORY		512		Well 3 Manual req		
1 - 512						
SCADAPAK	DOUT 0	00513	0	Well 3 Electric Starter control relay	0=off, 1=on	WGM-W003-RUN
LOWER MODULE	DOUT 1	00514	1	Well 3 Diesel Starter control relay	0=off, 1=on	WGM-W003-DRUN
	DOUT 2	00515	2	Spare		
	DOUT 3	00516	3	Spare		
	DOUT 4	00517	4	Spare		
	DOUT 5	00518	5	Spare		
	DOUT 6	00519	6	Spare		
	DOUT 7	00520	7	Spare		
	DOUT 8	00521	8	Spare		
	DOUT 9	00522	9	Spare		
	DOUT 10	00523	10	Spare		
	DOUT 11	00524	11	Spare		
SCADAPAK	DOUT 0	00525	12			
UPPER MODULE	DOUT 1	00526	13			
INTERNAL	CNFG LED	00527	14	LED Power State		
		00528	15			
INTERNAL		00529	0	clear protocol counters on com1		
SCADAPAK		00530	1	clear protocol counters on com2		
DIAGNOSTICS		00531	2	clear protocol counters on com3		
		00532	3	clear protocol counters on com4		
		00533	4			
		00534	5			
		00535	6			
		00536	7			
		00537	8	clear serial port counters on com1		
		00538	9	clear serial port counters on com2		
		00539	10	clear serial port counters on com3		
		00540	11	clear serial port counters on com4		
		00541	12			
		00542	13			
		00543	14			
		00544	15			
SCADA	EQ#1	00545	0	Well #3 Manual Start Request	0 = off, 1 = on	WGM-W003-MS-REQ
BIT CONTROL	EQ#2	00546	1			
EQUIPMENT	EQ#3	00547	2			
START/STOP	EQ#4	00548	3			
OPEN/CLOSE	EQ#5	00549	4			
	EQ#6	00550	5			
	EQ#7	00551	6			
	EQ#8	00552	7			
	EQ#9	00553	8			
	EQ#10	00554	9			
	EQ#11	00555	10			
	EQ#12	00556	11			
	EQ#13	00557	12			
	EQ#14	00558	13			
	EQ#15	00559	14			
	EQ#16	00560	15			
SCADA	EQ#17	00561	0			
BIT CONTROL	EQ#18	00562	1			
EQUIPMENT	EQ#19	00563	2			
START/STOP	EQ#20	00564	3			
OPEN/CLOSE	EQ#21	00565	4			
	EQ#22	00566	5			
	EQ#23	00567	6			
	EQ#24	00568	7			
	EQ#25	00569	8			
	EQ#26	00570	9			
	EQ#27	00571	10			
	EQ#28	00572	11			
	EQ#29	00573	12			
	EQ#30	00574	13			
	EQ#31	00575	14			
	EQ#32	00576	15			
SCADA	EQ#33	00577	0			
BIT CONTROL	EQ#34	00578	1			

	Location	Wingham Wellhouse #3			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address: 3	
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
EQUIPMENT	EQ#35	00579	2			
START/STOP	EQ#36	00580	3			
OPEN/CLOSE	EQ#37	00581	4			
	EQ#38	00582	5			
	EQ#39	00583	6			
	EQ#40	00584	7			
	EQ#41	00585	8			
	EQ#42	00586	9			
	EQ#43	00587	10			
	EQ#44	00588	11			
	EQ#45	00589	12			
	EQ#46	00590	13			
	EQ#47	00591	14			
	EQ#48	00592	15			
	EQ#1	00593	0	Well #3 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-W003-MODE
SCADA	EQ#2	00594	1			
BIT CONTROL	EQ#3	00595	2			
EQUIPMENT	EQ#4	00596	3			
AUTO/MANUAL	EQ#5	00597	4			
	EQ#6	00598	5			
	EQ#7	00599	6			
	EQ#8	00600	7			
	EQ#9	00601	8			
	EQ#10	00602	9			
	EQ#11	00603	10			
	EQ#12	00604	11			
	EQ#13	00605	12			
	EQ#14	00606	13			
	EQ#15	00607	14			
	EQ#16	00608	15			
SCADA	EQ#17	00609	0			
BIT CONTROL	EQ#18	00610	1			
EQUIPMENT	EQ#19	00611	2			
AUTO/MANUAL	EQ#20	00612	3			
	EQ#21	00613	4			
	EQ#22	00614	5			
	EQ#23	00615	6			
	EQ#24	00616	7			
	EQ#25	00617	8			
	EQ#26	00618	9			
	EQ#27	00619	10			
	EQ#28	00620	11			
	EQ#29	00621	12			
	EQ#30	00622	13			
	EQ#31	00623	14			
	EQ#32	00624	15			
SCADA	EQ#33	00625	0			
BIT CONTROL	EQ#34	00626	1			
EQUIPMENT	EQ#35	00627	2			
AUTO/MANUAL	EQ#36	00628	3			
	EQ#37	00629	4			
	EQ#38	00630	5			
	EQ#39	00631	6			
	EQ#40	00632	7			
	EQ#41	00633	8			
	EQ#42	00634	9			
	EQ#43	00635	10			
	EQ#44	00636	11			
	EQ#45	00637	12			
	EQ#46	00638	13			
	EQ#47	00639	14			
	EQ#48	00640	15			
SCADA	EQ#1	00641	0	Well #3 Remote Lockout	0 = Available, 1 = Lockout	WGM-W003-REMLOCK
BIT CONTROL	EQ#2	00642	1			
EQUIPMENT	EQ#3	00643	2			
LOCKOUT	EQ#4	00644	3			
	EQ#5	00645	4			
	EQ#6	00646	5			
	EQ#7	00647	6			
	EQ#8	00648	7			
	EQ#9	00649	8			
	EQ#10	00650	9			

	Location	Wingham Wellhouse #3			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	3
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
	EQ#11	00651	10			
	EQ#12	00652	11			
	EQ#13	00653	12			
	EQ#14	00654	13			
	EQ#15	00655	14			
	EQ#16	00656	15			
SCADA	EQ#17	00657	0			
BIT CONTROL	EQ#18	00658	1			
EQUIPMENT	EQ#19	00659	2			
LOCKOUT	EQ#20	00660	3			
	EQ#21	00661	4			
	EQ#22	00662	5			
	EQ#23	00663	6			
	EQ#24	00664	7			
	EQ#25	00665	8			
	EQ#26	00666	9			
	EQ#27	00667	10			
	EQ#28	00668	11			
	EQ#29	00669	12			
	EQ#30	00670	13			
	EQ#31	00671	14			
	EQ#32	00672	15			
SCADA	EQ#33	00673	0			
BIT CONTROL	EQ#34	00674	1			
EQUIPMENT	EQ#35	00675	2			
LOCKOUT	EQ#36	00676	3			
	EQ#37	00677	4			
	EQ#38	00678	5			
	EQ#39	00679	6			
	EQ#40	00680	7			
	EQ#41	00681	8			
	EQ#42	00682	9			
	EQ#43	00683	10			
	EQ#44	00684	11			
	EQ#45	00685	12			
	EQ#46	00686	13			
	EQ#47	00687	14			
	EQ#48	00688	15			
SCADAPAK	EQ#1	00689	0	Well #3 Fail	0 = Normal, 1 = Fail	WGM-W003-FAIL
EQUIPMENT FAIL	EQ#2	00690	1			
BIT REGISTERS	EQ#3	00691	2	CL2 Pump #1 Fail	0 = Normal, 1 = Fail	WGM-CP03-FAIL
	EQ#4	00692	3	CL2 Pump #2 Fail	0 = Normal, 1 = Fail	WGM-CP04-FAIL
	EQ#5	00693	4			
	EQ#6	00694	5			
	EQ#7	00695	6			
	EQ#8	00696	7			
	EQ#9	00697	8			
	EQ#10	00698	9			
	EQ#11	00699	10			
	EQ#12	00700	11			
	EQ#13	00701	12			
	EQ#14	00702	13			
	EQ#15	00703	14			
	EQ#16	00704	15			
SCADAPAK	EQ#17	00705	0			
EQUIPMENT FAIL	EQ#18	00706	1			
BIT REGISTERS	EQ#19	00707	2			
	EQ#20	00708	3			
	EQ#21	00709	4			
	EQ#22	00710	5			
	EQ#23	00711	6			
	EQ#24	00712	7			
	EQ#25	00713	8			
	EQ#26	00714	9			
	EQ#27	00715	10			
	EQ#28	00716	11			
	EQ#29	00717	12			
	EQ#30	00718	13			
	EQ#31	00719	14			
	EQ#32	00720	15			
SCADAPAK	EQ#33	00721	0			
EQUIPMENT FAIL	EQ#34	00722	1			

	Location	Wingham Wellhouse #3			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	3
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
BIT REGISTERS	EQ#35	00723	2			
	EQ#36	00724	3			
	EQ#37	00725	4			
	EQ#38	00726	5			
	EQ#39	00727	6			
	EQ#40	00728	7			
	EQ#41	00729	8			
	EQ#42	00730	9			
	EQ#43	00731	10			
	EQ#44	00732	11			
	EQ#45	00733	12			
	EQ#46	00734	13			
	EQ#47	00735	14			
	EQ#48	00736	15			
SCADAPAK		00737	0	Well #3 Automatic Start Request	0 = off, 1 = on	WGM-W003-AS-REQ
EQUIPMENT		00738	1			
GENERAL/MISC		00739	2			
STATUS/CONTROL		00740	3			
REGISTERS		00741	4			
		00742	5			
		00743	6			
		00744	7			
		00745	8			
		00746	9			
		00747	10			
		00748	11			
		00749	12			
		00750	13			
		00751	14			
		00752	15			
SCADAPAK		00753	0			
EQUIPMENT		00754	1			
GENERAL/MISC		00755	2			
STATUS		00756	3			
REGISTERS		00757	4			
		00758	5			
		00759	6			
		00760	7			
		00761	8			
		00762	9			
		00763	10			
		00764	11			
		00765	12			
		00766	13			
		00767	14			
		00768	15			
SCADAPAK		00769	0			
EQUIPMENT		00770	1			
GENERAL/MISC		00771	2			
STATUS/CONTROL		00772	3			
REGISTERS		00773	4			
		00774	5			
		00775	6			
		00776	7			
		00777	8			
		00778	9			
		00779	10			
		00780	11			
		00781	12			
		00782	13			
		00783	14			
		00784	15			
SCADAPAK	EQ#1	00785	0	Well #3 Available to Run	0 = N/A, 1 = Available	WGM-W003-AVAIL
EQUIPMENT	EQ#2	00786	1			
MISC STATUS	EQ#3	00787	2			
REGISTERS	EQ#4	00788	3			
	EQ#5	00789	4			
	EQ#6	00790	5			
	EQ#7	00791	6			
	EQ#8	00792	7			
	EQ#9	00793	8	Reset Chlorine		
	EQ#10	00794	9			

	Location	Wingham Wellhouse #3			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	3
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
	EQ#11	00795	10			
	EQ#12	00796	11			
	EQ#13	00797	12			
	EQ#14	00798	13			
	EQ#15	00799	14			
	EQ#16	00800	15			
SCADAPAK	EQ#17	00801				
EQUIPMENT	EQ#18	00802				
MISC STATUS	EQ#19	00803				
REGISTERS	EQ#20	00804				
	EQ#21	00805				
	EQ#22	00806				
	EQ#23	00807				
	EQ#24	00808				
	EQ#25	00809				
	EQ#26	00810				
	EQ#27	00811				
	EQ#28	00812				
	EQ#29	00813				
	EQ#30	00814				
	EQ#31	00815				
	EQ#32	00816				
SCADAPAK	EQ#33	00817				
EQUIPMENT	EQ#34	00818				
MISC STATUS	EQ#35	00819				
REGISTERS	EQ#36	00820				
	EQ#37	00821				
	EQ#38	00822				
	EQ#39	00823				
	EQ#40	00824				
	EQ#41	00825				
	EQ#42	00826				
	EQ#43	00827				
	EQ#44	00828				
	EQ#45	00829				
	EQ#46	00830				
	EQ#47	00831				
	EQ#48	00832				
SCADAPAK		00833	0			
EQUIPMENT		00834	1			
GENERAL/MISC		00835	2			
STATUS/CONTROL		00836	3			
REGISTERS		00837	4			
		00838	5			
		00839	6			
		00840	7			
		00841	8			
		00842	9			
		00843	10			
		00844	11			
		00845	12			
		00846	13			
		00847	14			
		00848	15			
		00849	0	Wellhouse #3 Illegal Entry alarm	0 = normal, 1 = Alarm	WGM-WH03-ILLENT
		00850	1	Well Lockout	0 = normal, 1 = Alarm	WGM-W003-LOCK
		00851	2			
		00852	3	Pumphouse #1 Communications Failure	0 = normal, 1 = Alarm	WGM-PH01-COMMF
		00853	4	Elevated Tank Communications Failure	0 =normal, 1 = alarm	WGM-ETANK-COMMF
		00854	5	Data Concentrator Communications Heartbeat	0 =normal, 1 = alarm	WGM-DCON-COMMF
		00855	6			
		00856	7	Communications Paused By Scada	0 = Normal, 1 = Paused	
		00857	8	Wellhouse #3 High High Chlorine Alarm	0 = normal, 1 = Alarm	WGM-W003-HIHICL2ALM
		00858	9	Wellhouse #3 High Chlorine Alarm	0 = normal, 1 = Alarm	WGM-W003-HICL2ALM
		00859	10	Wellhouse #3 Low Chlorine Alarm	0 = normal, 1 = Alarm	WGM-W003-LOCL2ALM
		00860	11	Wellhouse #3 Low Low Chlorine Alarm	0 = normal, 1 = Alarm	WGM-W003-LOLOCL2ALM
		00861	12	Wellhouse #3 High High Turbidity Alarm	0 = normal, 1 = Alarm	WGM-W003-HIHINTUALM
		00862	13	Wellhouse #3 High Turbidity Alarm	0 =normal, 1 = Alarm	WGM_W003-HINTUALM
		00863	14	Wellhouse #3 Flow Alarm	0 =normal, 1 = Alarm	WGM_W003-FLOWALM
		00864	15	Wellhouse #3 Discharge Pressure Alarm	0 =normal, 1 = Alarm	WGM-W003-PRESSALM
		00993		Duty Rotation Bit Updated By Well #3	0 = normal, 1 = Updated	
		00994		Pump Setpoints Updated by Well #3	0 = normal, 1 = Updated	

	Location	Wingham Wellhouse #3			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address: 3	
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
Remaining bits		00994 to 01999		General purpose read/write bits		
		02000		Well #3 Communications Heartbeat to Data Controller		
SCADAPAK LOWER MODULE	DIN 0	10001	0	Well 1 local/remote control mode	0 = local, 1 = remote	WGM-W003-LOR
	DIN 1	10002	1	Well 1 run status	0=off, 1=on	WGM-W003-STATUS
	DIN 2	10003	2	Well 1 Failed	0 = normal, 1 = alarm	WGM-W003-OL
	DIN 3	10004	3	Spare		
	DIN 4	10005	4	Spare		
	DIN 5	10006	5	Spare		
	DIN 6	10007	6	Power fail	0 = alarm, 1 = normal	
	DIN 7	10008	7	Spare		
	DIN 8	10009	8	Spare		
	DIN 9	10010	9	Spare		
	DIN 10	10011	10	Spare		
	DIN 11	10012	11	Spare		
	DIN 12	10013	12	Spare		
	DIN 13	10014	13	Spare		
	DIN 14	10015	14	Spare		
	DIN 15	10016	15	Spare		
DIN 5203/4	DIN/CNTR 0	10017	0			
	DIN/CNTR 1	10018	1			
	DIN/CNTR 2	10019	2			
	INTERRUPT	10020	3			
SCADAPAK UPPER MODULE	DIN 0	10021	4			
	DIN 1	10022	5			
	DIN 2	10023	6			
	DIN 3	10024	7			
	DIN 4	10025	8			
INTERNAL	FORCE LED	10026	9	Forced coils		
OPTION	SW1	10027	10	Scadapak option switch status		
OPTION	SW2	10028	11	Scadapak option switch status		
OPTION	SW3	10029	12	Scadapak option switch status		
		10030	13			
		10031	14			
		10032	15			
Remaining bits		10145 to 14096				
SCADAPAK LOWER MODULE	AIN 0	30001		Well #3 pressure		WGM-W003-PRESS
	AIN 1	30003		Well #3 flowrate		WGM-W003-FLOW
	AIN 2	30005		Chlorine		WGM-W003-CL2
	AIN 3	30007		Turbidity		WGM-W003-NTU
	AIN 4	30009		Spare		
	AIN 5	30011		Spare		
	AIN 6	30013		Spare		
	AIN 7	30015		Spare		
SCADAPAK UPPER MODULE	AIN 0	30017		Spare		
	AIN 1	30019		Spare		
	AIN 2	30021		Spare		
	AIN 3	30023		Spare		
	AIN 4	30025		Spare		
SCADAPAK	STATUS	30027		Controller Status Code	0 - 65535	
SCADAPAK	AIN 5203/4	30029		Ram battery voltage	0 - 65.535 V	
INTERNAL	AIN 5203/4	30031		Temperature Degrees C	0 - 65535 C	
ANALOGS	AIN 5203/4	30033		Temperature Degrees F	0 - 65535 F	
Communications		30146		COM1 - Protocol command errors		
Diagnostic Registers		30148		COM1 - Protocol format errors		
		30150		COM1 - Protocol checksum errors		
		30152		COM1 - Protocol slave commands received		
		30154		COM1 - Protocol master commands sent		
		30156		COM1 - Protocol master commands received		
		30158		COM1 - Protocol slave responses sent		
		30160		COM1 - Protocol master command status		
		30162		COM1 - Protocol stored messages		
		30164		COM1 - Protocol forwarded messages		

	Location	Wingham Wellhouse #3			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	3
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		30166		COM2 - Protocol command errors		
		30168		COM2 - Protocol format errors		
		30170		COM2 - Protocol checksum errors		
		30172		COM2 - Protocol slave commands received		
		30174		COM2 - Protocol master commands sent		
		30176		COM2 - Protocol master commands received		
		30178		COM2 - Protocol slave responses sent		
		30180		COM2 - Protocol master command status		
		30182		COM2 - Protocol stored messages		
		30184		COM2 - Protocol forwarded messages		
		30186		COM3 - Protocol command errors		
		30188		COM3 - Protocol format errors		
		30190		COM3 - Protocol checksum errors		
		30192		COM3 - Protocol slave commands received		
		30194		COM3 - Protocol master commands sent		
		30196		COM3 - Protocol master commands received		
		30198		COM3 - Protocol slave responses sent		
		30200		COM3 - Protocol master command status		
		30202		COM3 - Protocol stored messages		
		30204		COM3 - Protocol forwarded messages		
		30206		COM4 - Protocol command errors		
		30208		COM4 - Protocol format errors		
		30210		COM4 - Protocol checksum errors		
		30212		COM4 - Protocol slave commands received		
		30214		COM4 - Protocol master commands sent		
		30216		COM4 - Protocol master commands received		
		30218		COM4 - Protocol slave responses sent		
		30220		COM4 - Protocol master command status		
		30222		COM4 - Protocol stored messages		
		30224		COM4 - Protocol forwarded messages		
		30226		COM1 - Serial port framing errors		
		30228		COM1 - Serial port parity errors		
		30230		COM1 - Serial port character overrun errors		
		30232		COM1 - Serial port buffer overrun errors		
		30234		COM1 - Serial port I/O line status		
		30236		COM2 - Serial port framing errors		
		30238		COM2 - Serial port parity errors		
		30240		COM2 - Serial port character overrun errors		
		30242		COM2 - Serial port buffer overrun errors		
		30244		COM2 - Serial port I/O line status		
		30246		COM3 - Serial port framing errors		
		30248		COM3 - Serial port parity errors		
		30250		COM3 - Serial port character overrun errors		
		30252		COM3 - Serial port buffer overrun errors		
		30254		COM3 - Serial port I/O line status		
		30256		COM4 - Serial port framing errors		
		30258		COM4 - Serial port parity errors		
		30260		COM4 - Serial port character overrun errors		
		30262		COM4 - Serial port buffer overrun errors		
		30264		COM4 - Serial port I/O line status		
Remaining Registers		30266				
		to				
		31024				
SCADAPAK	AOUT 0	40001		Chlorine pump #1 Speed	0 - 100%	WGM-CP03-SPEED
LOWER MODULE	AOUT 1	40003		Chlorine Pump #2 Speed	0 - 100%	WGM-CP04-SPEED
5203 AOUT		40005		Well #4 flowrate		
MODULE #0		40007		Well #4 Chlorine		
		40009		Well #4 Turbidity		
		40011		VFD Speed		
SCADAPAK	CNFG LED	40063		LED Power Settings - Time to return to default state	0 - 65535	
	RTC	40065		Real Time Clock - Hours	0 - 23	
		40067		Real Time Clock - Minutes	0 - 59	
		40069		Real Time Clock - Seconds	0 - 59	
		40071		Real Time Clock - Year	0 - 99	
		40073		Real Time Clock - Month	1 - 12	
		40075		Real Time Clock - Day	1 - 31	
		40077		Real Time Clock - Day of week	1 - 7	
		40079		Real Time Clock - Alarm hour	1 - 23	
		40081		Real Time Clock - Alarm minute	0 - 59	

	Location	Wingham Wellhouse #3			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address: 3	
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		40083		Real Time Clock - Alarm second	0 - 59	
		40085		Real Time Clock - Alarm control	0 = off, 1 = on	
		40087		spare		
		40089		spare		
		40091		spare		
		40093		spare		
		40095		spare		
		40097		spare		
		40099		spare		
EQUIPMENT	EQ#1	40101		Well #3 Run Time	0 - 65535 minutes	WGM-W003-RUNT
RUN TIMES	EQ#2	40103			0 - 65535 minutes	
	EQ#3	40105			0 - 65535 minutes	
	EQ#4	40107			0 - 65535 minutes	
	EQ#5	40109			0 - 65535 minutes	
	EQ#6	40111			0 - 65535 minutes	
	EQ#7	40113			0 - 65535 minutes	
	EQ#8	40115			0 - 65535 minutes	
	EQ#9	40117			0 - 65535 minutes	
	EQ#10	40119			0 - 65535 minutes	
	EQ#11	40121			0 - 65535 minutes	
	EQ#12	40123			0 - 65535 minutes	
	EQ#13	40125			0 - 65535 minutes	
	EQ#14	40127			0 - 65535 minutes	
	EQ#15	40129			0 - 65535 minutes	
	EQ#16	40131			0 - 65535 minutes	
	EQ#17	40133			0 - 65535 minutes	
	EQ#18	40135			0 - 65535 minutes	
	EQ#19	40137		Wellhouse #3 Discharge Pressure in Engineering Units		WGM-W003-ENG PRESS
	EQ#21	40141		Wellhouse #3 Discharge Flow in Engineering Units		WGM-W003-ENG FLOW
	EQ#23	40145		Wellhouse #3 Discharge Chlorine in Engineering Units		WGM-W003-ENG CL2
	EQ#25	40149		Wellhouse #3 Discharge Turbidity in Engineering Units		WGM-W003-ENG TURB
	EQ#26	40151			0 - 65535 minutes	
	EQ#27	40153			0 - 65535 minutes	
	EQ#28	40155			0 - 65535 minutes	
	EQ#29	40157			0 - 65535 minutes	
	EQ#30	40159			0 - 65535 minutes	
	EQ#31	40161			0 - 65535 minutes	
	EQ#32	40163			0 - 65535 minutes	
	EQ#33	40165			0 - 65535 minutes	
	EQ#34	40167			0 - 65535 minutes	
	EQ#35	40169			0 - 65535 minutes	
	EQ#36	40171			0 - 65535 minutes	
	EQ#37	40173			0 - 65535 minutes	
	EQ#38	40175			0 - 65535 minutes	
	EQ#39	40177			0 - 65535 minutes	
	EQ#40	40179			0 - 65535 minutes	
	EQ#41	40181			0 - 65535 minutes	
	EQ#42	40183			0 - 65535 minutes	
	EQ#43	40185			0 - 65535 minutes	
	EQ#44	40187			0 - 65535 minutes	
	EQ#45	40189			0 - 65535 minutes	
	EQ#46	40191			0 - 65535 minutes	
	EQ#47	40193			0 - 65535 minutes	
	EQ#48	40195			0 - 65535 minutes	
DOUBLE WORD	#1	40197		Well #3 Flow Totalizer	0 - 2147483648	WGM-W003-TOTAL
FLOW TOTALIZERS						
	#2	40201		FLOW TOTALIZER #2 (MEGALITRES*10)	0 - 999	
		40203		FLOW TOTALIZER #2 (KILOLITRES/10)	0 - 9999	
	#3	40205		FLOW TOTALIZER #3 (MEGALITRES*10)	0 - 999	
		40207		FLOW TOTALIZER #3 (KILOLITRES/10)	0 - 9999	
	#4	40209		FLOW TOTALIZER #4 (MEGALITRES*10)	0 - 999	
		40211		FLOW TOTALIZER #4 (KILOLITRES/10)	0 - 9999	
	#5	40213		FLOW TOTALIZER #5 (MEGALITRES*10)	0 - 999	
		40215		FLOW TOTALIZER #5 (KILOLITRES/10)	0 - 9999	
	#6	40217		FLOW TOTALIZER #6 (MEGALITRES*10)	0 - 999	
		40219		FLOW TOTALIZER #6 (KILOLITRES/10)	0 - 9999	
	#7	40221		FLOW TOTALIZER #7 (MEGALITRES*10)	0 - 999	
		40223		FLOW TOTALIZER #7 (KILOLITRES/10)	0 - 9999	
	#8	40225		FLOW TOTALIZER #8 (MEGALITRES*10)	0 - 999	
		40227		FLOW TOTALIZER #8 (KILOLITRES/10)	0 - 9999	
	#9	40229		FLOW TOTALIZER #9 (MEGALITRES*10)	0 - 999	
		40231		FLOW TOTALIZER #9 (KILOLITRES/10)	0 - 9999	
	#10	40233		FLOW TOTALIZER #10 (MEGALITRES*10)	0 - 999	
		40235		FLOW TOTALIZER #10 (KILOLITRES/10)	0 - 9999	
	#11	40237		FLOW TOTALIZER #11 (MEGALITRES*10)	0 - 999	

	Location	Wingham Wellhouse #3			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	3
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		40239		FLOW TOTALIZER #11 (KILOLITRES/10)	0 - 9999	
	#12	40241		FLOW TOTALIZER #12 (MEGALITRES*10)	0 - 999	
		40243		FLOW TOTALIZER #12 (KILOLITRES/10)	0 - 9999	
	#13	40245		FLOW TOTALIZER #13 (MEGALITRES*10)	0 - 999	
		40247		FLOW TOTALIZER #13 (KILOLITRES/10)	0 - 9999	
	#14	40249		FLOW TOTALIZER #14 (MEGALITRES*10)	0 - 999	
		40251		FLOW TOTALIZER #14 (KILOLITRES/10)	0 - 9999	
	#15	40253		FLOW TOTALIZER #15 (MEGALITRES*10)	0 - 999	
		40255		FLOW TOTALIZER #15 (KILOLITRES/10)	0 - 9999	
	#16	40257		FLOW TOTALIZER #16 (MEGALITRES*10)	0 - 999	
		40259		FLOW TOTALIZER #16 (KILOLITRES/10)	0 - 9999	
		40261				
		40263				
		40265				
		40267				
		40269				
		40271				
		40273				
		40275				
		40277				
		40279				
		40281				
		40283				

		40313		Highlift Duty Rotation	0-3	
		40315		Elevated Tank Level		WGM-ETANK-LVL

		40320		Well 3 Pressure mode	0 - 2	
		40357		Well #3 Minimum Off Time	0 - 65535 Seconds	WGM-W003-MOFF
		40359		Well #3 Minimum On Time	0 - 65535 Seconds	WGM-W003-MON
		40361		Well #3 Fault Delay 1	0 - 65535 Seconds	WGM-W003-FDLY
		40363		Well 3 Flow Setpoint		
		40365		Well 3 Pressure Setpoint		
		40367		Well 3 Power Setpoint		
		40409		Well #3 HiHi Chlorine Alarm Setpoint		WGM-W003-HIHICL2
		40413		Well #3 High Chlorine Alarm Setpoint		WGM-W003-HICL2
		40417		Well #3 Low Chlorine Alarm Setpoint		WGM-W003-LOCL2
		40421		Well #3 LoLo Chlorine Alarm Setpoint		WGM-W003-LOLOCL2
		40425		Well #3 HiHi Turbidity Alarm		WGM-W003-HIHINI
		40429		Well #3 Hi Turbidity Alarm		WGM-W003-HINI
		40433		Well #3 Low Flow Setpoint		WGM-W003-LOFLOW
		40437		Well #3 Low Discharge Pressure Setpoint		WGM-W003-LOPRESS
		40441		Well #3 High Discharge pressure Setpoint		WGM-W003-HIPRESS
		40525		Well #3 Elevated Tank Start Setpoint (Direct Comms)		WGM-W003-ETANKSTRT
		40529		Well #3 Elevated Tank Stop Setpoint (Direct Comms)		WGM-W003-ETANKSTOP
		41001		Well 3 Fail time Setpoint		
		41003		Well 3 minimum offtime setpoint		
		41005		Well 3 Runtime		
		41007		HiHi chlorine setpoint		
		41011		High chlorine setpoint		
		41015		Low Chlorine setpoint		
		41019		LoLo chlorine setpoint		
		41023		HiHi turbidity setpoint		
		41027		High turbidity setpoint		
		41031		Low discharge pressure setpoint		
		41035		High discharge pressure setpoint		
		41039		Low flow setpoint		
		41043		Well 3 totalizer		
		41047		Elevated tank start setpoint		
		41051		Elevated tank stop setpoint		
		41055		VFD mode		
		41057		Flow mode setpoint		
		41059		Pressure mode setpoint		
		41061		Power mode setpoint		

		49999				

	Location	Wingham Elevated Tank			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address: 4	
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
INTERNAL		1				
MEMORY		to		Non Volatile Variable Storage		
		512				
SCADAPAK	DOUT 0	00513	0	Spare		
LOWER MODULE	DOUT 1	00514	1	Spare		
	DOUT 2	00515	2	Spare		
	DOUT 3	00516	3	Spare		
	DOUT 4	00517	4	Spare		
	DOUT 5	00518	5	Spare		
	DOUT 6	00519	6	Spare		
	DOUT 7	00520	7	Spare		
	DOUT 8	00521	8	Spare		
	DOUT 9	00522	9	Spare		
	DOUT 10	00523	10	Spare		
	DOUT 11	00524	11	Spare		
SCADAPAK	DOUT 0	00525	12			
UPPER MODULE	DOUT 1	00526	13			
INTERNAL	CNFG LED	00527	14	LED Power State		
		00528	15			
INTERNAL		00529	0	clear protocol counters on com1		
SCADAPAK		00530	1	clear protocol counters on com2		
DIAGNOSTICS		00531	2	clear protocol counters on com3		
		00532	3	clear protocol counters on com4		
		00533	4			
		00534	5			
		00535	6			
		00536	7			
		00537	8	clear serial port counters on com1		
		00538	9	clear serial port counters on com2		
		00539	10	clear serial port counters on com3		
		00540	11	clear serial port counters on com4		
		00541	12			
		00542	13			
		00543	14			
		00544	15			
SCADA	EQ#1	00545	0			
BIT CONTROL	EQ#2	00546	1			
EQUIPMENT	EQ#3	00547	2			
START/STOP	EQ#4	00548	3			
OPEN/CLOSE	EQ#5	00549	4			
	EQ#6	00550	5			
	EQ#7	00551	6			
	EQ#8	00552	7			
	EQ#9	00553	8			
	EQ#10	00554	9			
	EQ#11	00555	10			
	EQ#12	00556	11			
	EQ#13	00557	12			
	EQ#14	00558	13			
	EQ#15	00559	14			
	EQ#16	00560	15			
SCADA	EQ#17	00561	0			
BIT CONTROL	EQ#18	00562	1			
EQUIPMENT	EQ#19	00563	2			
START/STOP	EQ#20	00564	3			
OPEN/CLOSE	EQ#21	00565	4			
	EQ#22	00566	5			
	EQ#23	00567	6			
	EQ#24	00568	7			
	EQ#25	00569	8			
	EQ#26	00570	9			
	EQ#27	00571	10			
	EQ#28	00572	11			
	EQ#29	00573	12			
	EQ#30	00574	13			
	EQ#31	00575	14			
	EQ#32	00576	15			
SCADA	EQ#33	00849	0	Level Device Failure		
BIT CONTROL	EQ#34	00850	1	Illegal Entry alarm		

	Location	Wingham Elevated Tank			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	4
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
EQUIPMENT	EQ#35	00851	2	Elevated Tank High High Level Alarm		WGM-ETANK-HIHIALM
START/STOP	EQ#36	00852	3	Elevated Tank High Level Alarm		WGM-ETANK-HIALM
OPEN/CLOSE	EQ#37	00853	4	Elevated Tank Low Level Alarm		WGM-ETANK-LOWALM
	EQ#38	00854	5	Elevated Tank Low Low Level Alarm		WGM-ETANK-LOLOALM
	EQ#39	00855	6	future elevated tank Status bits		
	EQ#40	00856	7	future elevated tank Status bits		
	EQ#41	00857	8	future elevated tank Status bits		
	EQ#42	00858	9	future elevated tank Status bits		
	EQ#43	00859	10	future elevated tank Status bits		
	EQ#44	00860	11	future elevated tank Status bits		
	EQ#45	00861	12	future elevated tank Status bits		
	EQ#46	00862	13	future elevated tank Status bits		
	EQ#47	00863	14	future elevated tank Status bits		
	EQ#48	00864	15	future elevated tank Status bits		
		00981		Communications Heartbeat	0	
		00593		General purpose read/write bits		
Remaining bits		to				
		02048				
SCADAPAK LOWER MODULE	DIN 0	10001	0	Door Switch		
	DIN 1	10002	1	Security disarm Switch		
	DIN 2	10003	2	Spare		
	DIN 3	10004	3	Spare		
	DIN 4	10005	4	Spare		
	DIN 5	10006	5	Spare		
	DIN 6	10007	6	Spare		
	DIN 7	10008	7	Spare		
	DIN 8	10009	8	Spare		
	DIN 9	10010	9	Spare		
	DIN 10	10011	10	Spare		
	DIN 11	10012	11	Spare		
	DIN 12	10013	12	Spare		
	DIN 13	10014	13	Spare		
	DIN 14	10015	14	Spare		
	DIN 15	10016	15	Spare		
DIN 5203/4	DIN/CNTR 0	10017	0			
	DIN/CNTR 1	10018	1			
	DIN/CNTR 2	10019	2			
	INTERRUPT	10020	3			
SCADAPAK UPPER MODULE	DIN 0	10021	4			
	DIN 1	10022	5			
	DIN 2	10023	6			
	DIN 3	10024	7			
	DIN 4	10025	8			
INTERNAL	FORCE LED	10026	9	Forced coils		
OPTION	SW1	10027	10	Scadapak option switch status		
OPTION	SW2	10028	11	Scadapak option switch status		
OPTION	SW3	10029	12	Scadapak option switch status		
		10030	13			
		10031	14			
		10032	15			
Remaining bits		10145				
		to				
		14096				
SCADAPAK LOWER MODULE	AIN 0	30001		Level Transmitter #1		WGM-ETANK1-LEV
	AIN 1	30003		Level Transmitter #2		WGM-ETANK2-LEV
	AIN 2	30005		Spare		
	AIN 3	30007		Spare		
	AIN 4	30009		Spare		
	AIN 5	30011		Spare		
	AIN 6	30013		Spare		
	AIN 7	30015		Spare		
SCADAPAK UPPER MODULE	AIN 0	30017		Spare		
	AIN 1	30019		Spare		
	AIN 2	30021		Spare		
	AIN 3	30023		Spare		
	AIN 4	30025		Spare		
SCADAPAK	STATUS	30027		Controller Status Code	0 - 65535	
SCADAPAK	AIN 5203/4	30029		Ram battery voltage	0 - 65.535 V	

	Location	Wingham Elevated Tank			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	4
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
INTERNAL	AIN 5203/4	30031		Temperature Degrees C	0 - 65535 C	
ANALOGS	AIN 5203/4	30033		Temperature Degrees F	0 - 65535 F	
Communications		30146		COM1 - Protocol command errors		
Diagnostic Registers		30148		COM1 - Protocol format errors		
		30150		COM1 - Protocol checksum errors		
		30152		COM1 - Protocol slave commands received		
		30154		COM1 - Protocol master commands sent		
		30156		COM1 - Protocol master commands received		
		30158		COM1 - Protocol slave responses sent		
		30160		COM1 - Protocol master command status		
		30162		COM1 - Protocol stored messages		
		30164		COM1 - Protocol forwarded messages		
		30166		COM2 - Protocol command errors		
		30168		COM2 - Protocol format errors		
		30170		COM2 - Protocol checksum errors		
		30172		COM2 - Protocol slave commands received		
		30174		COM2 - Protocol master commands sent		
		30176		COM2 - Protocol master commands received		
		30178		COM2 - Protocol slave responses sent		
		30180		COM2 - Protocol master command status		
		30182		COM2 - Protocol stored messages		
		30184		COM2 - Protocol forwarded messages		
		30186		COM3 - Protocol command errors		
		30188		COM3 - Protocol format errors		
		30190		COM3 - Protocol checksum errors		
		30192		COM3 - Protocol slave commands received		
		30194		COM3 - Protocol master commands sent		
		30196		COM3 - Protocol master commands received		
		30198		COM3 - Protocol slave responses sent		
		30200		COM3 - Protocol master command status		
		30202		COM3 - Protocol stored messages		
		30204		COM3 - Protocol forwarded messages		
		30206		COM4 - Protocol command errors		
		30208		COM4 - Protocol format errors		
		30210		COM4 - Protocol checksum errors		
		30212		COM4 - Protocol slave commands received		
		30214		COM4 - Protocol master commands sent		
		30216		COM4 - Protocol master commands received		
		30218		COM4 - Protocol slave responses sent		
		30220		COM4 - Protocol master command status		
		30222		COM4 - Protocol stored messages		
		30224		COM4 - Protocol forwarded messages		
		30226		COM1 - Serial port framing errors		
		30228		COM1 - Serial port parity errors		
		30230		COM1 - Serial port character overrun errors		
		30232		COM1 - Serial port buffer overrun errors		
		30234		COM1 - Serial port I/O line status		
		30236		COM2 - Serial port framing errors		
		30238		COM2 - Serial port parity errors		
		30240		COM2 - Serial port character overrun errors		
		30242		COM2 - Serial port buffer overrun errors		
		30244		COM2 - Serial port I/O line status		
		30246		COM3 - Serial port framing errors		
		30248		COM3 - Serial port parity errors		
		30250		COM3 - Serial port character overrun errors		
		30252		COM3 - Serial port buffer overrun errors		
		30254		COM3 - Serial port I/O line status		
		30256		COM4 - Serial port framing errors		
		30258		COM4 - Serial port parity errors		
		30260		COM4 - Serial port character overrun errors		
		30262		COM4 - Serial port buffer overrun errors		
		30264		COM4 - Serial port I/O line status		
Remaining Registers		30266				
		to				
		31024				
SCADAPAK	AOUT 0	40001		Spare		
LOWER MODULE	AOUT 1	40003		Spare		
SCADAPAK	CNFG LED	40063		LED Power Settings - Time to return to default state	0 - 65535	

	Location	Wingham Elevated Tank			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	4
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
	RTC	40065		Real Time Clock - Hours	0 - 23	
		40067		Real Time Clock - Minutes	0 - 59	
		40069		Real Time Clock - Seconds	0 - 59	
		40071		Real Time Clock - Year	0 - 99	
		40073		Real Time Clock - Month	1 - 12	
		40075		Real Time Clock - Day	1 - 31	
		40077		Real Time Clock - Day of week	1 - 7	
		40079		Real Time Clock - Alarm hour	1 - 23	
		40081		Real Time Clock - Alarm minute	0 - 59	
		40083		Real Time Clock - Alarm second	0 - 59	
		40085		Real Time Clock - Alarm control	0 = off, 1 = on	
		40087		spare		
		40089		spare		
		40091		spare		
		40093		spare		
		40095		spare		
		40097		spare		
		40099		spare		
EQUIPMENT	EQ#1	40101			0 - 65535 minutes	
RUN TIMES	EQ#2	40103			0 - 65535 minutes	
	EQ#3	40105			0 - 65535 minutes	
	EQ#4	40107			0 - 65535 minutes	
	EQ#5	40109			0 - 65535 minutes	
	EQ#6	40111			0 - 65535 minutes	
	EQ#7	40113			0 - 65535 minutes	
	EQ#8	40115			0 - 65535 minutes	
	EQ#9	40117			0 - 65535 minutes	
	EQ#10	40119			0 - 65535 minutes	
	EQ#11	40121			0 - 65535 minutes	
	EQ#12	40123			0 - 65535 minutes	
	EQ#13	40125			0 - 65535 minutes	
	EQ#14	40127			0 - 65535 minutes	
	EQ#15	40129			0 - 65535 minutes	
	EQ#16	40131			0 - 65535 minutes	
	EQ#17	40133			0 - 65535 minutes	
	EQ#18	40135			0 - 65535 minutes	
	EQ#19	40137			0 - 65535 minutes	
	EQ#20	40139			0 - 65535 minutes	
	EQ#21	40141			0 - 65535 minutes	
	EQ#22	40143			0 - 65535 minutes	
	EQ#23	40145			0 - 65535 minutes	
	EQ#24	40147			0 - 65535 minutes	
	EQ#25	40149			0 - 65535 minutes	
	EQ#26	40151			0 - 65535 minutes	
	EQ#27	40153			0 - 65535 minutes	
	EQ#28	40155			0 - 65535 minutes	
	EQ#29	40157			0 - 65535 minutes	
	EQ#30	40159			0 - 65535 minutes	
	EQ#31	40161			0 - 65535 minutes	
	EQ#32	40163			0 - 65535 minutes	
	EQ#33	40165			0 - 65535 minutes	
	EQ#34	40167			0 - 65535 minutes	
	EQ#35	40169			0 - 65535 minutes	
	EQ#36	40171			0 - 65535 minutes	
	EQ#37	40173			0 - 65535 minutes	
	EQ#38	40175			0 - 65535 minutes	
	EQ#39	40177			0 - 65535 minutes	
	EQ#40	40179			0 - 65535 minutes	
	EQ#41	40181			0 - 65535 minutes	
	EQ#42	40183			0 - 65535 minutes	
	EQ#43	40185			0 - 65535 minutes	
	EQ#44	40187			0 - 65535 minutes	
	EQ#45	40189			0 - 65535 minutes	
	EQ#46	40191			0 - 65535 minutes	
	EQ#47	40193			0 - 65535 minutes	
	EQ#48	40195			0 - 65535 minutes	
DOUBLE WORD	#1	40197		FLOW TOTALIZER #1 (MEGALITRES*10)	0 - 999	
FLOW TOTALIZERS		40199		FLOW TOTALIZER #1 (KILOLITRES/10)	0 - 9999	
	#2	40201		FLOW TOTALIZER #2 (MEGALITRES*10)	0 - 999	
		40203		FLOW TOTALIZER #2 (KILOLITRES/10)	0 - 9999	
	#3	40205		FLOW TOTALIZER #3 (MEGALITRES*10)	0 - 999	
		40207		FLOW TOTALIZER #3 (KILOLITRES/10)	0 - 9999	
	#4	40209		FLOW TOTALIZER #4 (MEGALITRES*10)	0 - 999	
		40211		FLOW TOTALIZER #4 (KILOLITRES/10)	0 - 9999	

	Location	Wingham Elevated Tank			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	4
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
	#5	40213		FLOW TOTALIZER #5 (MEGALITRES*10)	0 - 999	
		40215		FLOW TOTALIZER #5 (KILOLITRES/10)	0 - 9999	
	#6	40217		FLOW TOTALIZER #6 (MEGALITRES*10)	0 - 999	
		40219		FLOW TOTALIZER #6 (KILOLITRES/10)	0 - 9999	
	#7	40221		FLOW TOTALIZER #7 (MEGALITRES*10)	0 - 999	
		40223		FLOW TOTALIZER #7 (KILOLITRES/10)	0 - 9999	
	#8	40225		FLOW TOTALIZER #8 (MEGALITRES*10)	0 - 999	
		40227		FLOW TOTALIZER #8 (KILOLITRES/10)	0 - 9999	
	#9	40229		FLOW TOTALIZER #9 (MEGALITRES*10)	0 - 999	
		40231		FLOW TOTALIZER #9 (KILOLITRES/10)	0 - 9999	
	#10	40233		FLOW TOTALIZER #10 (MEGALITRES*10)	0 - 999	
		40235		FLOW TOTALIZER #10 (KILOLITRES/10)	0 - 9999	
	#11	40237		FLOW TOTALIZER #11 (MEGALITRES*10)	0 - 999	
		40239		FLOW TOTALIZER #11 (KILOLITRES/10)	0 - 9999	
	#12	40241		FLOW TOTALIZER #12 (MEGALITRES*10)	0 - 999	
		40243		FLOW TOTALIZER #12 (KILOLITRES/10)	0 - 9999	
	#13	40245		FLOW TOTALIZER #13 (MEGALITRES*10)	0 - 999	
		40247		FLOW TOTALIZER #13 (KILOLITRES/10)	0 - 9999	
	#14	40249		FLOW TOTALIZER #14 (MEGALITRES*10)	0 - 999	
		40251		FLOW TOTALIZER #14 (KILOLITRES/10)	0 - 9999	
	#15	40253		FLOW TOTALIZER #15 (MEGALITRES*10)	0 - 999	
		40255		FLOW TOTALIZER #15 (KILOLITRES/10)	0 - 9999	
	#16	40257		FLOW TOTALIZER #16 (MEGALITRES*10)	0 - 999	
		40259		FLOW TOTALIZER #16 (KILOLITRES/10)	0 - 9999	
		40261				
		40263				
		40265				
		40267				
		40269				
		40271				
		40273				
		40275				
		40277				
		40279				
		40281				
		40313		Highlift Duty Rotation		
		40315		Elevated Tank Level		WGM-ETANK-LVL
		40317				
		40319				
		40445		Elevated Tank High High Level Alarm setpoint		WGM-ETANK-HISET
		40449		Elevated Tank High Level Alarm setpoint		WGM-ETANK-HISET
		40453		Elevated Tank Low Level Alarm setpoint		WGM-ETANK-LOWSET
		40457		Elevated Tank Low Low Level Alarm setpoint		WGM-ETANK-LOLOSET

		49999				

Location	Wingham Wellhouse #3	SCADAPACK PLUS I/O LAYOUT		Updated:	02-10-06				
Bell Circuit #				RPU Address:	3				
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name			
INTERNAL		510		Well 3 Remote Lockout			Sent By Scada		
NON VOLITILE		511		Well 3 Mode			Sent By Scada		
MEMORY		512		Well 3 Manual req			Sent By Scada		
1 - 512									
SCADAPAK	DOUT 0	00513	0	Well 3 Electric Starter control relay	0=off, 1=on	WGM-W003-RUN	Read by Scada		
LOWER MODULE	DOUT 1	00514	1						
	DOUT 2	00515	2	Spare					
	DOUT 3	00516	3	Spare					
	DOUT 4	00517	4	Spare					
	DOUT 5	00518	5	Spare					
	DOUT 6	00519	6	Spare					
	DOUT 7	00520	7	Spare					
	DOUT 8	00521	8	Spare					
	DOUT 9	00522	9	Spare					
	DOUT 10	00523	10	Spare					
	DOUT 11	00524	11	Spare					
SCADAPAK	DOUT 0	00525	12						
UPPER MODULE	DOUT 1	00526	13						
INTERNAL	CNFG LED	00527	14	LED Power State					
		00528	15						
INTERNAL		00529	0	clear protocol counters on com1					
SCADAPAK		00530	1	clear protocol counters on com2					
DIAGNOSTICS		00531	2	clear protocol counters on com3					
		00532	3	clear protocol counters on com4					
		00533	4						
		00534	5						
		00535	6						
		00536	7						
		00537	8	clear serial port counters on com1					
		00538	9	clear serial port counters on com2					
		00539	10	clear serial port counters on com3					
		00540	11	clear serial port counters on com4					
		00541	12						
		00542	13						
		00543	14						
		00544	15						
SCADA	EQ#1	00545	0	Well #3 Manual Start Request	0 = off, 1 = on	WGM-W003-MS-REQ	Sent By Scada		
BIT CONTROL	EQ#2	00546	1						
EQUIPMENT	EQ#3	00547	2						
START/STOP	EQ#4	00548	3						
OPEN/CLOSE	EQ#5	00549	4						
	EQ#6	00550	5						
	EQ#7	00551	6						
	EQ#8	00552	7						
	EQ#9	00553	8						
	EQ#10	00554	9						
	EQ#11	00555	10						
	EQ#12	00556	11						
	EQ#13	00557	12						
	EQ#14	00558	13						
	EQ#15	00559	14						
	EQ#16	00560	15						
SCADA	EQ#17	00561	0						
BIT CONTROL	EQ#18	00562	1						
EQUIPMENT	EQ#19	00563	2						
START/STOP	EQ#20	00564	3						
OPEN/CLOSE	EQ#21	00565	4						
	EQ#22	00566	5						
	EQ#23	00567	6						
	EQ#24	00568	7						
	EQ#25	00569	8						
	EQ#26	00570	9						
	EQ#27	00571	10						
	EQ#28	00572	11						
	EQ#29	00573	12						
	EQ#30	00574	13						
	EQ#31	00575	14						
	EQ#32	00576	15						
SCADA	EQ#33	00577	0						
BIT CONTROL	EQ#34	00578	1						
EQUIPMENT	EQ#35	00579	2						
START/STOP	EQ#36	00580	3						
OPEN/CLOSE	EQ#37	00581	4						
	EQ#38	00582	5						
	EQ#39	00583	6						
	EQ#40	00584	7						
	EQ#41	00585	8						
	EQ#42	00586	9						
	EQ#43	00587	10						
	EQ#44	00588	11						
	EQ#45	00589	12						
	EQ#46	00590	13						
	EQ#47	00591	14						
	EQ#48	00592	15						
SCADA	EQ#1	00593	0	Well #3 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-W003-MODE	Sent By Scada		
BIT CONTROL	EQ#2	00594	1						
EQUIPMENT	EQ#3	00595	2						
AUTO/MANUAL	EQ#4	00596	3						
	EQ#5	00597	4						
	EQ#6	00598	5						
	EQ#7	00599	6						

Location	Wingham Wellhouse #3	SCADAPACK PLUS I/O LAYOUT			Updated:	02-10-06				
Bell Circuit #					RPU Address:	3				
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name				
	EQ#8	00600	7							
	EQ#9	00601	8							
	EQ#10	00602	9							
	EQ#11	00603	10							
	EQ#12	00604	11							
	EQ#13	00605	12							
	EQ#14	00606	13							
	EQ#15	00607	14							
	EQ#16	00608	15							
SCADA	EQ#17	00609	0							
BIT CONTROL	EQ#18	00610	1							
EQUIPMENT	EQ#19	00611	2							
AUTO/MANUAL	EQ#20	00612	3							
	EQ#21	00613	4							
	EQ#22	00614	5							
	EQ#23	00615	6							
	EQ#24	00616	7							
	EQ#25	00617	8							
	EQ#26	00618	9							
	EQ#27	00619	10							
	EQ#28	00620	11							
	EQ#29	00621	12							
	EQ#30	00622	13							
	EQ#31	00623	14							
	EQ#32	00624	15							
SCADA	EQ#33	00625	0							
BIT CONTROL	EQ#34	00626	1							
EQUIPMENT	EQ#35	00627	2							
AUTO/MANUAL	EQ#36	00628	3							
	EQ#37	00629	4							
	EQ#38	00630	5							
	EQ#39	00631	6							
	EQ#40	00632	7							
	EQ#41	00633	8							
	EQ#42	00634	9							
	EQ#43	00635	10							
	EQ#44	00636	11							
	EQ#45	00637	12							
	EQ#46	00638	13							
	EQ#47	00639	14							
	EQ#48	00640	15							
SCADA	EQ#1	00593	0	Well #3 Auto/Manual Control Mode	0 = Available, 1 = Lockout	WGM-W003-REMLOCK		Sent By Scada		
BIT CONTROL	EQ#2	00642	1							
EQUIPMENT	EQ#3	00643	2							
LOCKOUT	EQ#4	00644	3							
	EQ#5	00645	4							
	EQ#6	00646	5							
	EQ#7	00647	6							
	EQ#8	00648	7							
	EQ#9	00649	8							
	EQ#10	00650	9							
	EQ#11	00651	10							
	EQ#12	00652	11							
	EQ#13	00653	12							
	EQ#14	00654	13							
	EQ#15	00655	14							
	EQ#16	00656	15							
SCADA	EQ#17	00657	0							
BIT CONTROL	EQ#18	00658	1							
EQUIPMENT	EQ#19	00659	2							
LOCKOUT	EQ#20	00660	3							
	EQ#21	00661	4							
	EQ#22	00662	5							
	EQ#23	00663	6							
	EQ#24	00664	7							
	EQ#25	00665	8							
	EQ#26	00666	9							
	EQ#27	00667	10							
	EQ#28	00668	11							
	EQ#29	00669	12							
	EQ#30	00670	13							
	EQ#31	00671	14							
	EQ#32	00672	15							
SCADA	EQ#33	00673	0							
BIT CONTROL	EQ#34	00674	1							
EQUIPMENT	EQ#35	00675	2							
LOCKOUT	EQ#36	00676	3							
	EQ#37	00677	4							
	EQ#38	00678	5							
	EQ#39	00679	6							
	EQ#40	00680	7							
	EQ#41	00681	8							
	EQ#42	00682	9							
	EQ#43	00683	10							
	EQ#44	00684	11							
	EQ#45	00685	12							
	EQ#46	00686	13							
	EQ#47	00687	14							
	EQ#48	00688	15							
SCADAPAK	EQ#1	00593	0	Well #3 Auto/Manual Control Mode	0 = Normal, 1 = Fail	WGM-W003-FAIL		Read by Alarm Dailer		
EQUIPMENT FAIL	EQ#2	00593	0	Well #3 Auto/Manual Control Mode						
BIT REGISTERS	EQ#3	00593	0	Well #3 Auto/Manual Control Mode	0 = Normal, 1 = Fail	WGM-CP03-FAIL				

Location		Wingham Wellhouse #3		Updated: 02-10-06		
Bell Circuit #				RPU Address: 3		
SCADAPACK PLUS I/O LAYOUT						
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
	EQ#4	00693	0	Well #3 Auto/Manual Control Mode	0 = Normal, 1 = Fail	WGM-CP04-FAIL
	EQ#5	00693	4			
	EQ#6	00694	5			
	EQ#7	00695	6			
	EQ#8	00696	7			
	EQ#9	00697	8			
	EQ#10	00698	9			
	EQ#11	00699	10			
	EQ#12	00700	11			
	EQ#13	00701	12			
	EQ#14	00702	13			
	EQ#15	00703	14			
	EQ#16	00704	15			
SCADAPAK	EQ#17	00705	0			
EQUIPMENT FAIL	EQ#18	00706	1			
BIT REGISTERS	EQ#19	00707	2			
	EQ#20	00708	3			
	EQ#21	00709	4			
	EQ#22	00710	5			
	EQ#23	00711	6			
	EQ#24	00712	7			
	EQ#25	00713	8			
	EQ#26	00714	9			
	EQ#27	00715	10			
	EQ#28	00716	11			
	EQ#29	00717	12			
	EQ#30	00718	13			
	EQ#31	00719	14			
	EQ#32	00720	15			
SCADAPAK	EQ#33	00721	0			
EQUIPMENT FAIL	EQ#34	00722	1			
BIT REGISTERS	EQ#35	00723	2			
	EQ#36	00724	3			
	EQ#37	00725	4			
	EQ#38	00726	5			
	EQ#39	00727	6			
	EQ#40	00728	7			
	EQ#41	00729	8			
	EQ#42	00730	9			
	EQ#43	00731	10			
	EQ#44	00732	11			
	EQ#45	00733	12			
	EQ#46	00734	13			
	EQ#47	00735	14			
	EQ#48	00736	15			
SCADAPAK		00737	0	Well #3 Automatic Start Request	0 = off, 1 = on	WGM-W003-AS-REQ
EQUIPMENT		00738	1			
GENERAL/MISC		00739	2			
STATUS/CONTROL		00740	3			
REGISTERS		00741	4			
		00742	5			
		00743	6			
		00744	7			
		00745	8			
		00746	9			
		00747	10			
		00748	11			
		00749	12			
		00750	13			
		00751	14			
		00752	15			
SCADAPAK		00753	0			
EQUIPMENT		00754	1			
GENERAL/MISC		00755	2			
STATUS		00756	3			
REGISTERS		00757	4			
		00758	5			
		00759	6			
		00760	7			
		00761	8			
		00762	9			
		00763	10			
		00764	11			
		00765	12			
		00766	13			
		00767	14			
		00768	15			
SCADAPAK		00769	0			
EQUIPMENT		00770	1			
GENERAL/MISC		00771	2			
STATUS/CONTROL		00772	3			
REGISTERS		00773	4			
		00774	5			
		00775	6			
		00776	7			
		00777	8			
		00778	9			
		00779	10			
		00780	11			
		00781	12			
		00782	13			
		00783	14			
		00784	15			

Location	Wingham Wellhouse #3			Updated:	02-10-06				
Bell Circuit #				SCADAPACK PLUS I/O LAYOUT	RPU Address: 3				
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name			
SCADAPAK	EQ#1	00785	0	Well #3 Available to Run	0 = N/A, 1 = Available	WGM-W003-AVAIL		Read by Pumphouse1	
EQUIPMENT	EQ#2	00786	1						
MISC STATUS	EQ#3	00787	2						
REGISTERS	EQ#4	00788	3						
	EQ#5	00789	4						
	EQ#6	00790	5						
	EQ#7	00791	6						
	EQ#8	00792	7						
	EQ#9	00793	8	Reset Chlorine					
	EQ#10	00794	9						
	EQ#11	00795	10						
	EQ#12	00796	11						
	EQ#13	00797	12						
	EQ#14	00798	13						
	EQ#15	00799	14						
	EQ#16	00800	15						
SCADAPAK	EQ#17	00801							
EQUIPMENT	EQ#18	00802							
MISC STATUS	EQ#19	00803							
REGISTERS	EQ#20	00804							
	EQ#21	00805							
	EQ#22	00806							
	EQ#23	00807							
	EQ#24	00808							
	EQ#25	00809							
	EQ#26	00810							
	EQ#27	00811							
	EQ#28	00812							
	EQ#29	00813							
	EQ#30	00814							
	EQ#31	00815							
	EQ#32	00816							
SCADAPAK	EQ#33	00817							
EQUIPMENT	EQ#34	00818							
MISC STATUS	EQ#35	00819							
REGISTERS	EQ#36	00820							
	EQ#37	00821							
	EQ#38	00822							
	EQ#39	00823							
	EQ#40	00824							
	EQ#41	00825							
	EQ#42	00826							
	EQ#43	00827							
	EQ#44	00828							
	EQ#45	00829							
	EQ#46	00830							
	EQ#47	00831							
	EQ#48	00832							
SCADAPAK		00833	0	Elevated Tank Heartbeat					
EQUIPMENT		00834	1						
GENERAL/MISC		00835	2						
STATUS/CONTROL		00836	3						
REGISTERS		00837	4						
		00838	5						
		00839	6						
		00840	7						
		00841	8						
		00842	9						
		00843	10						
		00844	11						
		00845	12						
		00846	13						
		00847	14						
		00848	15						
		00849	0	Wellhouse #3 Illegal Entry alarm	0 = normal, 1 = Alarm	WGM-WH03-ILLENT		Read by Alarm Dailer	
		00850	1	Well Lockout	0 = normal, 1 = Alarm	WGM-W003-LOCK		Read by Alarm Dailer	
		00851	2					Read by Alarm Dailer	
		00852	3	Pumphouse #1 Communications Failure	0 = normal, 1 = Alarm	WGM-PH01-COMMF		Read by Alarm Dailer	
		00853	4		0 = normal, 1 = alarm	WGM-ETANK-COMMF		Read by Alarm Dailer	
		00854	5	Data Concentrator Communications Heartbeat	0 = normal, 1 = alarm	WGM-DCON-COMMF		Read by Alarm Dailer	
		00855	6					Read by Alarm Dailer	
		00856	7	Communications Paused By Scada	0 = Normal, 1 = Paused			Read by Alarm Dailer	
		00857	8	Wellhouse #3 High High Chlorine Alarm	0 = normal, 1 = Alarm	WGM-W003-HIHICL2ALM		Read by Alarm Dailer	
		00858	9	Wellhouse #3 High Chlorine Alarm	0 = normal, 1 = Alarm	WGM-W003-HICL2ALM		Read by Alarm Dailer	
		00859	10	Wellhouse #3 Low Chlorine Alarm	0 = normal, 1 = Alarm	WGM-W003-LOCL2ALM		Read by Alarm Dailer	
		00860	11	Wellhouse #3 Low Low Chlorine Alarm	0 = normal, 1 = Alarm	WGM-W003-LOLOCL2ALM		Read by Alarm Dailer	
		00861	12	Wellhouse #3 High High Turbidity Alarm	0 = normal, 1 = Alarm	WGM-W003-HIHINTUALM		Read by Alarm Dailer	
		00862	13	Wellhouse #3 High Turbidity Alarm	0 = normal, 1 = Alarm	WGM W003-HINTUALM		Read by Alarm Dailer	
		00863	14	Wellhouse #3 Flow Alarm	0 =normal, 1 = Alarm	WGM W003-FLOWALM		Read by Alarm Dailer	
		00864	15	Wellhouse #3 Discharge Pressure Alarm	0 =normal, 1 = Alarm	WGM-W003-PRESSALM		Read by Alarm Dailer	
		00993		Duty Rotation Bit Updated By Well #3	0 = normal, 1 = Updated				
		00994		Pump Setpoints Updated by Well #3	0 = normal, 1 = Updated				
Remaining bits		00994		General purpose read/write bits					
		to							
		01999							
		02000		Well #3 Communications Heartbeat to Data Controller				Read by All	
SCADAPAK	DIN 0	10001	0	Well 1 local/remote control mode	0 = local, 1 = remote	WGM-W003-LOR		Read by Scada	
LOWER MODULE	DIN 1	10002	1	Well 1 run status	0=off, 1=on	WGM-W003-STATUS		Read by Scada	

Location	Wingham Wellhouse #3	SCADAPACK PLUS I/O LAYOUT		Updated:	02-10-06				
Bell Circuit #				RPU Address:	3				
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name			
	DIN 2	10003	2	Well 1 Failed	0 = normal, 1 = alarm	WGM-W003-OL	Read by Scada		
	DIN 3	10004	3	Spare			Read by Scada		
	DIN 4	10005	4	Spare			Read by Scada		
	DIN 5	10006	5	Spare			Read by Scada		
	DIN 6	10007	6	Power fail	0 = alarm, 1 = normal		Read by Scada		
	DIN 7	10008	7	Spare			Read by Scada		
	DIN 8	10009	8	Spare					
	DIN 9	10010	9	Spare					
	DIN 10	10011	10	Spare					
	DIN 11	10012	11	Spare					
	DIN 12	10013	12	Spare					
	DIN 13	10014	13	Spare					
	DIN 14	10015	14	Spare					
	DIN 15	10016	15	Spare					
DIN 5203/4	DIN/CNTR 0	10017	0						
	DIN/CNTR 1	10018	1						
	DIN/CNTR 2	10019	2						
	INTERRUPT	10020	3						
SCADAPAK UPPER MODULE	DIN 0	10021	4						
	DIN 1	10022	5						
	DIN 2	10023	6						
	DIN 3	10024	7						
	DIN 4	10025	8						
INTERNAL OPTION	FORCE LED	10026	9	Forced coils					
	SW1	10027	10	Scadapak option switch status					
OPTION	SW2	10028	11	Scadapak option switch status					
OPTION	SW3	10029	12	Scadapak option switch status					
		10030	13						
		10031	14						
		10032	15						
Remaining bits		10145							
		to							
		14096							
SCADAPAK LOWER MODULE	AIN 0	30001		Well #3 pressure		WGM-W003-PRESS	Read by Scada		
	AIN 1	30003		Well #3 flowrate		WGM-W003-FLOW	Read by Scada		
	AIN 2	30005		Chlorine		WGM-W003-CL2	Read by Scada		
	AIN 3	30007		Turbidity		WGM-W003-NTU	Read by Scada		
	AIN 4	30009		Spare					
	AIN 5	30011		Spare					
	AIN 6	30013		Spare					
	AIN 7	30015		Spare					
SCADAPAK UPPER MODULE	AIN 0	30017		Spare					
	AIN 1	30019		Spare					
	AIN 2	30021		Spare					
	AIN 3	30023		Spare					
	AIN 4	30025		Spare					
SCADAPAK	STATUS	30027		Controller Status Code	0 - 65535				
SCADAPAK	AIN 5203/4	30029		Ram battery voltage	0 - 65.535 V				
INTERNAL	AIN 5203/4	30031		Temperature Degrees C	0 - 65535 C				
ANALOGS	AIN 5203/4	30033		Temperature Degrees F	0 - 65535 F				
Communications		30146		COM1 - Protocol command errors					
Diagnostic Registers		30148		COM1 - Protocol format errors					
		30150		COM1 - Protocol checksum errors					
		30152		COM1 - Protocol slave commands received					
		30154		COM1 - Protocol master commands sent					
		30156		COM1 - Protocol master commands received					
		30158		COM1 - Protocol slave responses sent					
		30160		COM1 - Protocol master command status					
		30162		COM1 - Protocol stored messages					
		30164		COM1 - Protocol forwarded messages					
		30166		COM2 - Protocol command errors					
		30168		COM2 - Protocol format errors					
		30170		COM2 - Protocol checksum errors					
		30172		COM2 - Protocol slave commands received					
		30174		COM2 - Protocol master commands sent					
		30176		COM2 - Protocol master commands received					
		30178		COM2 - Protocol slave responses sent					
		30180		COM2 - Protocol master command status					
		30182		COM2 - Protocol stored messages					
		30184		COM2 - Protocol forwarded messages					
		30186		COM3 - Protocol command errors					
		30188		COM3 - Protocol format errors					
		30190		COM3 - Protocol checksum errors					
		30192		COM3 - Protocol slave commands received					
		30194		COM3 - Protocol master commands sent					
		30196		COM3 - Protocol master commands received					
		30198		COM3 - Protocol slave responses sent					
		30200		COM3 - Protocol master command status					
		30202		COM3 - Protocol stored messages					
		30204		COM3 - Protocol forwarded messages					
		30206		COM4 - Protocol command errors					
		30208		COM4 - Protocol format errors					
		30210		COM4 - Protocol checksum errors					
		30212		COM4 - Protocol slave commands received					
		30214		COM4 - Protocol master commands sent					
		30216		COM4 - Protocol master commands received					
		30218		COM4 - Protocol slave responses sent					
		30220		COM4 - Protocol master command status					
		30222		COM4 - Protocol stored messages					
		30224		COM4 - Protocol forwarded messages					
		30226		COM1 - Serial port framing errors					

	Location	Wingham Wellhouse #3			Updated:	02-10-06				
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	3				
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name				
		30228		COM1 - Serial port parity errors						
		30230		COM1 - Serial port character overrun errors						
		30232		COM1 - Serial port buffer overrun errors						
		30234		COM1- Serial port I/O line status						
		30236		COM2 - Serial port framing errors						
		30238		COM2 - Serial port parity errors						
		30240		COM2 - Serial port character overrun errors						
		30242		COM2 - Serial port buffer overrun errors						
		30244		COM2- Serial port I/O line status						
		30246		COM3 - Serial port framing errors						
		30248		COM3 - Serial port parity errors						
		30250		COM3 - Serial port character overrun errors						
		30252		COM3 - Serial port buffer overrun errors						
		30254		COM3- Serial port I/O line status						
		30256		COM4 - Serial port framing errors						
		30258		COM4 - Serial port parity errors						
		30260		COM4 - Serial port character overrun errors						
		30262		COM4 - Serial port buffer overrun errors						
		30264		COM4- Serial port I/O line status						
Remaining Registers		30266								
		to								
		31024								
SCADAPAK LOWER MODULE	AOUT 0	40001		Chlorine pump #1 Speed	0 - 100%	WGM-CP03-SPEED	Read by Scada			
	AOUT 1	40003		Chlorine Pump #2 Speed	0 - 100%	WGM-CP04-SPEED	Read by Scada			
5203 AOUT MODULE #0		40005		Well #4 flowrate			Read by Scada			
		40007		Well #4 Chlorine			Read by Scada			
		40009		Well #4 Turbidity			Read by Scada			
		40011		VFD Speed			Read by Scada			
SCADAPAK	CNFG LED	40063		LED Power Settings - Time to return to default state	0 - 65535					
	RTC	40065		Real Time Clock - Hours	0 - 23					
		40067		Real Time Clock - Minutes	0 - 59					
		40069		Real Time Clock - Seconds	0 - 59					
		40071		Real Time Clock - Year	0 - 99					
		40073		Real Time Clock - Month	1 - 12					
		40075		Real Time Clock - Day	1 - 31					
		40077		Real Time Clock - Day of week	1 - 7					
		40079		Real Time Clock - Alarm hour	1 - 23					
		40081		Real Time Clock - Alarm minute	0 - 59					
		40083		Real Time Clock - Alarm second	0 - 59					
		40085		Real Time Clock - Alarm control	0 = off, 1 = on					
		40087		spare						
		40089		Controller Battery Voltage						
		40091		spare						
		40093		spare						
		40095		spare						
		40097		spare						
		40099		spare						
EQUIPMENT RUN TIMES	EQ#1	40101		Well #3 Run Time	0 - 65535 minutes	WGM-W003-RUNT	Read by Scada			
	EQ#2	40103			0 - 65535 minutes					
	EQ#3	40105			0 - 65535 minutes					
	EQ#4	40107			0 - 65535 minutes					
	EQ#5	40109			0 - 65535 minutes					
	EQ#6	40111			0 - 65535 minutes					
	EQ#7	40113			0 - 65535 minutes					
	EQ#8	40115			0 - 65535 minutes					
	EQ#9	40117			0 - 65535 minutes					
	EQ#10	40119			0 - 65535 minutes					
	EQ#11	40121			0 - 65535 minutes					
	EQ#12	40123			0 - 65535 minutes					
	EQ#13	40125			0 - 65535 minutes					
	EQ#14	40127			0 - 65535 minutes					
	EQ#15	40129			0 - 65535 minutes					
	EQ#16	40131			0 - 65535 minutes					
	EQ#17	40133			0 - 65535 minutes					
	EQ#18	40135			0 - 65535 minutes					
	EQ#19	40137		Wellhouse #3 Discharge Pressure in Engineering Units		WGM-W003-ENGPRESS	Read by Scada			
	EQ#21	40141		Wellhouse #3 Discharge Flow in Engineering Units		WGM-W003-ENGFLOW	Read by Scada			
	EQ#23	40145		Wellhouse #3 Discharge Chlorine in Engineering Units		WGM-W003-ENGCL2	Read by Scada			
	EQ#25	40149		Wellhouse #3 Discharge Turbidity in Engineering Units		WGM-W003-ENGTURB	Read by Scada			
	EQ#26	40151			0 - 65535 minutes					
	EQ#27	40153			0 - 65535 minutes					
	EQ#28	40155			0 - 65535 minutes					
	EQ#29	40157			0 - 65535 minutes					
	EQ#30	40159			0 - 65535 minutes					
	EQ#31	40161			0 - 65535 minutes					
	EQ#32	40163			0 - 65535 minutes					
	EQ#33	40165			0 - 65535 minutes					
	EQ#34	40167			0 - 65535 minutes					
	EQ#35	40169			0 - 65535 minutes					
	EQ#36	40171			0 - 65535 minutes					
	EQ#37	40173			0 - 65535 minutes					
	EQ#38	40175			0 - 65535 minutes					
	EQ#39	40177			0 - 65535 minutes					
	EQ#40	40179			0 - 65535 minutes					
	EQ#41	40181			0 - 65535 minutes					
	EQ#42	40183			0 - 65535 minutes					
	EQ#43	40185			0 - 65535 minutes					
	EQ#44	40187			0 - 65535 minutes					
	EQ#45	40189			0 - 65535 minutes					
	EQ#46	40191			0 - 65535 minutes					

	Location	Wingham Wellhouse #3			Updated:	02-10-06				
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	3				
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name				
		49999								

Location	Wingham Elevated Tank	Updated:	02-10-06				
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT	RPU Address: 4				
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name	
INTERNAL MEMORY		1 to 512		Non Volatile Variable Storage			
SCADAPAK LOWER MODULE	DOUT 0	00513	0	Spare			
	DOUT 1	00514	1	Spare			
	DOUT 2	00515	2	Spare			
	DOUT 3	00516	3	Spare			
	DOUT 4	00517	4	Spare			
	DOUT 5	00518	5	Spare			
	DOUT 6	00519	6	Spare			
	DOUT 7	00520	7	Spare			
	DOUT 8	00521	8	Spare			
	DOUT 9	00522	9	Spare			
	DOUT 10	00523	10	Spare			
	DOUT 11	00524	11	Spare			
SCADAPAK UPPER MODULE	DOUT 0	00525	12				
INTERNAL	DOUT 1	00526	13				
	CNFG LED	00527	14	LED Power State			
		00528	15				
INTERNAL		00529	0	clear protocol counters on com1			
SCADAPAK		00530	1	clear protocol counters on com2			
DIAGNOSTICS		00531	2	clear protocol counters on com3			
		00532	3	clear protocol counters on com4			
		00533	4				
		00534	5				
		00535	6				
		00536	7				
		00537	8	clear serial port counters on com1			
		00538	9	clear serial port counters on com2			
		00539	10	clear serial port counters on com3			
		00540	11	clear serial port counters on com4			
		00541	12				
		00542	13				
		00543	14				
		00544	15				
SCADA	EQ#1	00545	0				
BIT CONTROL	EQ#2	00546	1				
EQUIPMENT	EQ#3	00547	2				
START/STOP	EQ#4	00548	3				
OPEN/CLOSE	EQ#5	00549	4				
	EQ#6	00550	5				
	EQ#7	00551	6				
	EQ#8	00552	7				
	EQ#9	00553	8				
	EQ#10	00554	9				
	EQ#11	00555	10				
	EQ#12	00556	11				
	EQ#13	00557	12				
	EQ#14	00558	13				
	EQ#15	00559	14				
	EQ#16	00560	15				
SCADA	EQ#17	00561	0				
BIT CONTROL	EQ#18	00562	1				
EQUIPMENT	EQ#19	00563	2				
START/STOP	EQ#20	00564	3				
OPEN/CLOSE	EQ#21	00565	4				
	EQ#22	00566	5				
	EQ#23	00567	6				
	EQ#24	00568	7				
	EQ#25	00569	8				
	EQ#26	00570	9				
	EQ#27	00571	10				
	EQ#28	00572	11				
	EQ#29	00573	12				
	EQ#30	00574	13				
	EQ#31	00575	14				
	EQ#32	00576	15				
SCADA	EQ#33	00849	0	Level Device Failure			Read by Alarm Dialer
BIT CONTROL	EQ#34	00850	1	Illegal Entry alarm			Read by Alarm Dialer
EQUIPMENT	EQ#35	00851	2	Elevated Tank High High Level Alarm	WGM-ETANK-HIHALM		Read by Alarm Dialer
START/STOP	EQ#36	00852	3	Elevated Tank High Level Alarm	WGM-ETANK-HIALM		Read by Alarm Dialer
OPEN/CLOSE	EQ#37	00853	4	Elevated Tank Low Level Alarm	WGM-ETANK-LOWALM		Read by Alarm Dialer
	EQ#38	00854	5	Elevated Tank Low Low Level Alarm	WGM-ETANK-LOLOALM		Read by Alarm Dialer
	EQ#39	00855	6	future elevated tank Status bits			
	EQ#40	00856	7	future elevated tank Status bits			
	EQ#41	00857	8	future elevated tank Status bits			
	EQ#42	00858	9	future elevated tank Status bits			
	EQ#43	00859	10	future elevated tank Status bits			
	EQ#44	00860	11	future elevated tank Status bits			
	EQ#45	00861	12	future elevated tank Status bits			
	EQ#46	00862	13	future elevated tank Status bits			
	EQ#47	00863	14	future elevated tank Status bits			
	EQ#48	00864	15	future elevated tank Status bits			
		00981		Communications Heartbeat	0		
Remaining bits		00593 to 02048		General purpose read/write bits			

Location	Wingham Elevated Tank	Updated:	02-10-06				
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT	RPU Address: 4				
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name	
SCADAPAK	DIN 0	10001	0	Door Switch			
LOWER MODULE	DIN 1	10002	1	Security disarm Switch			
	DIN 2	10003	2	Spare			
	DIN 3	10004	3	Spare			
	DIN 4	10005	4	Spare			
	DIN 5	10006	5	Spare			
	DIN 6	10007	6	Spare			
	DIN 7	10008	7	Spare			
	DIN 8	10009	8	Spare			
	DIN 9	10010	9	Spare			
	DIN 10	10011	10	Spare			
	DIN 11	10012	11	Spare			
	DIN 12	10013	12	Spare			
	DIN 13	10014	13	Spare			
	DIN 14	10015	14	Spare			
	DIN 15	10016	15	Spare			
DIN 5203/4	DIN/CNTR 0	10017	0				
	DIN/CNTR 1	10018	1				
	DIN/CNTR 2	10019	2				
	INTERRUPT	10020	3				
SCADAPAK	DIN 0	10021	4				
UPPER MODULE	DIN 1	10022	5				
	DIN 2	10023	6				
	DIN 3	10024	7				
	DIN 4	10025	8				
INTERNAL	FORCE LED	10026	9	Forced coils			
OPTION	SW1	10027	10	Scadapak option switch status			
OPTION	SW2	10028	11	Scadapak option switch status			
OPTION	SW3	10029	12	Scadapak option switch status			
		10030	13				
		10031	14				
		10032	15				
Remaining bits		10145					
		to					
		14096					
SCADAPAK	AIN 0	30001		Level Transmitter #1		WGM-ETANK1-LEV	
LOWER MODULE	AIN 1	30003		Level Transmitter #2		WGM-ETANK2-LEV	
	AIN 2	30005		Spare			
	AIN 3	30007		Spare			
	AIN 4	30009		Spare			
	AIN 5	30011		Spare			
	AIN 6	30013		Spare			
	AIN 7	30015		Spare			
SCADAPAK	AIN 0	30017		Spare			
UPPER MODULE	AIN 1	30019		Spare			
	AIN 2	30021		Spare			
	AIN 3	30023		Spare			
	AIN 4	30025		Spare			
SCADAPAK	STATUS	30027		Controller Status Code	0 - 65535		
SCADAPAK	AIN 5203/4	30029		Ram battery voltage	0 - 65.535 V		
INTERNAL	AIN 5203/4	30031		Temperature Degrees C	0 - 65535 C		
ANALOGS	AIN 5203/4	30033		Temperature Degrees F	0 - 65535 F		
Communications		30146		COM1 - Protocol command errors			
Diagnostic Registers		30148		COM1 - Protocol format errors			
		30150		COM1 - Protocol checksum errors			
		30152		COM1 - Protocol slave commands received			
		30154		COM1 - Protocol master commands sent			
		30156		COM1 - Protocol master commands received			
		30158		COM1 - Protocol slave responses sent			
		30160		COM1 - Protocol master command status			
		30162		COM1 - Protocol stored messages			
		30164		COM1 - Protocol forwarded messages			
		30166		COM2 - Protocol command errors			
		30168		COM2 - Protocol format errors			
		30170		COM2 - Protocol checksum errors			
		30172		COM2 - Protocol slave commands received			
		30174		COM2 - Protocol master commands sent			
		30176		COM2 - Protocol master commands received			
		30178		COM2 - Protocol slave responses sent			
		30180		COM2 - Protocol master command status			
		30182		COM2 - Protocol stored messages			
		30184		COM2 - Protocol forwarded messages			
		30186		COM3 - Protocol command errors			
		30188		COM3 - Protocol format errors			
		30190		COM3 - Protocol checksum errors			
		30192		COM3 - Protocol slave commands received			
		30194		COM3 - Protocol master commands sent			
		30196		COM3 - Protocol master commands received			
		30198		COM3 - Protocol slave responses sent			
		30200		COM3 - Protocol master command status			
		30202		COM3 - Protocol stored messages			
		30204		COM3 - Protocol forwarded messages			
		30206		COM4 - Protocol command errors			
		30208		COM4 - Protocol format errors			
		30210		COM4 - Protocol checksum errors			
		30212		COM4 - Protocol slave commands received			
		30214		COM4 - Protocol master commands sent			
		30216		COM4 - Protocol master commands received			
		30218		COM4 - Protocol slave responses sent			
		30220		COM4 - Protocol master command status			
		30222		COM4 - Protocol stored messages			
		30224		COM4 - Protocol forwarded messages			

Location	Wingham Elevated Tank	SCADAPACK PLUS I/O LAYOUT		Updated:	02-10-06				
Bell Circuit #				RPU Address:	4				
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name			
		30226		COM1 - Serial port framing errors					
		30228		COM1 - Serial port parity errors					
		30230		COM1 - Serial port character overrun errors					
		30232		COM1 - Serial port buffer overrun errors					
		30234		COM1- Serial port I/O line status					
		30236		COM2 - Serial port framing errors					
		30238		COM2 - Serial port parity errors					
		30240		COM2 - Serial port character overrun errors					
		30242		COM2 - Serial port buffer overrun errors					
		30244		COM2- Serial port I/O line status					
		30246		COM3 - Serial port framing errors					
		30248		COM3 - Serial port parity errors					
		30250		COM3 - Serial port character overrun errors					
		30252		COM3 - Serial port buffer overrun errors					
		30254		COM3- Serial port I/O line status					
		30256		COM4 - Serial port framing errors					
		30258		COM4 - Serial port parity errors					
		30260		COM4 - Serial port character overrun errors					
		30262		COM4 - Serial port buffer overrun errors					
		30264		COM4- Serial port I/O line status					
Remaining Registers		30266 to 31024							
SCADAPAK LOWER MODULE	AOUT 0	40001		Spare					
	AOUT 1	40003		Spare					
SCADAPAK	CNFG LED	40063		LED Power Settings - Time to return to default state	0 - 65535				
	RTC	40065		Real Time Clock - Hours	0 - 23				
		40067		Real Time Clock - Minutes	0 - 59				
		40069		Real Time Clock - Seconds	0 - 59				
		40071		Real Time Clock - Year	0 - 99				
		40073		Real Time Clock - Month	1 - 12				
		40075		Real Time Clock - Day	1 - 31				
		40077		Real Time Clock - Day of week	1 - 7				
		40079		Real Time Clock - Alarm hour	1 - 23				
		40081		Real Time Clock - Alarm minute	0 - 59				
		40083		Real Time Clock - Alarm second	0 - 59				
		40085		Real Time Clock - Alarm control	0 = off, 1 = on				
		40087		spare					
		40089		spare					
		40091		spare					
		40093		spare					
		40095		spare					
		40097		spare					
		40099		spare					
EQUIPMENT RUN TIMES	EQ#1	40101			0 - 65535 minutes				
	EQ#2	40103			0 - 65535 minutes				
	EQ#3	40105			0 - 65535 minutes				
	EQ#4	40107			0 - 65535 minutes				
	EQ#5	40109			0 - 65535 minutes				
	EQ#6	40111			0 - 65535 minutes				
	EQ#7	40113			0 - 65535 minutes				
	EQ#8	40115			0 - 65535 minutes				
	EQ#9	40117			0 - 65535 minutes				
	EQ#10	40119			0 - 65535 minutes				
	EQ#11	40121			0 - 65535 minutes				
	EQ#12	40123			0 - 65535 minutes				
	EQ#13	40125			0 - 65535 minutes				
	EQ#14	40127			0 - 65535 minutes				
	EQ#15	40129			0 - 65535 minutes				
	EQ#16	40131			0 - 65535 minutes				
	EQ#17	40133			0 - 65535 minutes				
	EQ#18	40135			0 - 65535 minutes				
	EQ#19	40137			0 - 65535 minutes				
	EQ#20	40139			0 - 65535 minutes				
	EQ#21	40141			0 - 65535 minutes				
	EQ#22	40143			0 - 65535 minutes				
	EQ#23	40145			0 - 65535 minutes				
	EQ#24	40147			0 - 65535 minutes				
	EQ#25	40149			0 - 65535 minutes				
	EQ#26	40151			0 - 65535 minutes				
	EQ#27	40153			0 - 65535 minutes				
	EQ#28	40155			0 - 65535 minutes				
	EQ#29	40157			0 - 65535 minutes				
	EQ#30	40159			0 - 65535 minutes				
	EQ#31	40161			0 - 65535 minutes				
	EQ#32	40163			0 - 65535 minutes				
	EQ#33	40165			0 - 65535 minutes				
	EQ#34	40167			0 - 65535 minutes				
	EQ#35	40169			0 - 65535 minutes				
	EQ#36	40171			0 - 65535 minutes				
	EQ#37	40173			0 - 65535 minutes				
	EQ#38	40175			0 - 65535 minutes				
	EQ#39	40177			0 - 65535 minutes				
	EQ#40	40179			0 - 65535 minutes				
	EQ#41	40181			0 - 65535 minutes				
	EQ#42	40183			0 - 65535 minutes				
	EQ#43	40185			0 - 65535 minutes				
	EQ#44	40187			0 - 65535 minutes				
	EQ#45	40189			0 - 65535 minutes				

	Location	Wingham Elevated Tank		Updated:	02-10-06				
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address: 4				
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name			
	EQ#46	40191			0 - 65535 minutes				
	EQ#47	40193			0 - 65535 minutes				
	EQ#48	40195			0 - 65535 minutes				
DOUBLE WORD	#1	40197		FLOW TOTALIZER #1 (MEGALITRES*10)	0 - 999				
FLOW TOTALIZERS		40199		FLOW TOTALIZER #1 (KILOLITRES/10)	0 - 9999				
	#2	40201		FLOW TOTALIZER #2 (MEGALITRES*10)	0 - 999				
		40203		FLOW TOTALIZER #2 (KILOLITRES/10)	0 - 9999				
	#3	40205		FLOW TOTALIZER #3 (MEGALITRES*10)	0 - 999				
		40207		FLOW TOTALIZER #3 (KILOLITRES/10)	0 - 9999				
	#4	40209		FLOW TOTALIZER #4 (MEGALITRES*10)	0 - 999				
		40211		FLOW TOTALIZER #4 (KILOLITRES/10)	0 - 9999				
	#5	40213		FLOW TOTALIZER #5 (MEGALITRES*10)	0 - 999				
		40215		FLOW TOTALIZER #5 (KILOLITRES/10)	0 - 9999				
	#6	40217		FLOW TOTALIZER #6 (MEGALITRES*10)	0 - 999				
		40219		FLOW TOTALIZER #6 (KILOLITRES/10)	0 - 9999				
	#7	40221		FLOW TOTALIZER #7 (MEGALITRES*10)	0 - 999				
		40223		FLOW TOTALIZER #7 (KILOLITRES/10)	0 - 9999				
	#8	40225		FLOW TOTALIZER #8 (MEGALITRES*10)	0 - 999				
		40227		FLOW TOTALIZER #8 (KILOLITRES/10)	0 - 9999				
	#9	40229		FLOW TOTALIZER #9 (MEGALITRES*10)	0 - 999				
		40231		FLOW TOTALIZER #9 (KILOLITRES/10)	0 - 9999				
	#10	40233		FLOW TOTALIZER #10 (MEGALITRES*10)	0 - 999				
		40235		FLOW TOTALIZER #10 (KILOLITRES/10)	0 - 9999				
	#11	40237		FLOW TOTALIZER #11 (MEGALITRES*10)	0 - 999				
		40239		FLOW TOTALIZER #11 (KILOLITRES/10)	0 - 9999				
	#12	40241		FLOW TOTALIZER #12 (MEGALITRES*10)	0 - 999				
		40243		FLOW TOTALIZER #12 (KILOLITRES/10)	0 - 9999				
	#13	40245		FLOW TOTALIZER #13 (MEGALITRES*10)	0 - 999				
		40247		FLOW TOTALIZER #13 (KILOLITRES/10)	0 - 9999				
	#14	40249		FLOW TOTALIZER #14 (MEGALITRES*10)	0 - 999				
		40251		FLOW TOTALIZER #14 (KILOLITRES/10)	0 - 9999				
	#15	40253		FLOW TOTALIZER #15 (MEGALITRES*10)	0 - 999				
		40255		FLOW TOTALIZER #15 (KILOLITRES/10)	0 - 9999				
	#16	40257		FLOW TOTALIZER #16 (MEGALITRES*10)	0 - 999				
		40259		FLOW TOTALIZER #16 (KILOLITRES/10)	0 - 9999				
		40261							
		40263							
		40265							
		40267							
		40269							
		40271							
		40273							
		40275							
		40277							
		40279							
		40281							
Read from Pumphouse 1		40313		Highlift Duty Rotation			Read from Pumphouse 1		
Read by All		40315		Elevated Tank Level		WGM-ETANK-LVL	Read By All		
		40317							
		40319							
		40445		Elevated Tank High High Level Alarm setpoint		WGM-ETANK-HIHSET			
		40449		Elevated Tank High Level Alarm setpoint		WGM-ETANK-HISET			
		40453		Elevated Tank Low Level Alarm setpoint		WGM-ETANK-LOWSET			
		40457		Elevated Tank Low Low Level Alarm setpoint		WGM-ETANK-LOLOSET			

		49999							

	Location	Wingham Data Collector IO List		Updated:	02-10-06						
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT		RPU Address: 1					
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name					
INTERNAL MEMORY		1									
		10		Non Volatile Variable Storage							
		512									
SCADAPAK LOWER MODULE	DOUT 0	00513	0	Raco Dialer Alarm Zone 1							
	DOUT 1	00514	1	Raco Dialer Alarm Zone 2							
	DOUT 2	00515	2	Raco Dialer Alarm Zone 3							
	DOUT 3	00516	3	Raco Dialer Alarm Zone 4							
	DOUT 4	00517	4	Raco Dialer Alarm Zone 5							
	DOUT 5	00518	5	Raco Dialer Alarm Zone 6							
	DOUT 6	00519	6	Spare							
	DOUT 7	00520	7	Spare							
	DOUT 8	00521	8	Spare							
	DOUT 9	00522	9	Spare							
SCADAPAK UPPER MODULE	DOUT 10	00523	10	Spare							
	DOUT 11	00524	11	Spare							
INTERNAL	CNFG LED	00527	14	LED Power State							
		00528	15								
SCADAPAK DIAGNOSTICS		00529	0	clear protocol counters on com1							
		00530	1	clear protocol counters on com2							
		00531	2	clear protocol counters on com3							
		00532	3	clear protocol counters on com4							
		00533	4								
		00534	5								
		00535	6								
		00536	7								
		00537	8	clear serial port counters on com1							
		00538	9	clear serial port counters on com2							
		00539	10	clear serial port counters on com3							
		00540	11	clear serial port counters on com4							
		00541	12								
		00542	13								
		00543	14								
		00544	15								
SCADAPAK EQUIPMENT GENERAL/MISC STATUS/CONTROL REGISTERS		00865	0	Elevated Tank Level Device Failure							
		00866	1	Elevated Tank Illegal Entry alarm							Read From Elevated Tank
		00867	2	Elevated Tank High High Level Alarm		WGM-ETANK-HIHALM					Read From Elevated Tank
		00868	3	Elevated Tank High Level Alarm		WGM-ETANK-HIALM					Read From Elevated Tank
		00869	4	Elevated Tank Low Level Alarm		WGM-ETANK-LOWALM					Read From Elevated Tank
		00870	5	Elevated Tank Low Low Level Alarm		WGM-ETANK-LOLOALM					Read From Elevated Tank
		00871	6								
		00872	7								
		00873	8								
		00874	9								
		00875	10								
		00876	11								
		00877	12								
		00878	13								
		00879	14								
		00880	15								
SCADAPAK EQUIPMENT GENERAL/MISC STATUS/CONTROL REGISTERS		00881	0	Illegal Entry Alarm	0 = normal, 1 = Alarm	WGM-PH01-ILLENT	MSIP #1	Read From Pumphouse 1			
		00882	1	Pumphouse #1 Well Lockout	0 = normal, 1 = Alarm	WGM-W000-LOCK	MSIP #1	Read From Pumphouse 1			
		00883	2	Pumphouse #1 High/Lift Lockout	0 = normal, 1 = Alarm	WGM-HL00-LOCK	MSIP #1	Read From Pumphouse 1			
		00884	3	Pumphouse #1 Well Duty Bit	0 = normal, 1 = Alarm	WGM-W000-DUTY	MSIP #1	Read From Pumphouse 1			
		00885	4	Wellhouse #3 Communications Failure	0 = normal, 1 = Alarm	WGM-W003-COMMF	MSIP #1	Read From Pumphouse 1			
		00886	5	Elevated Tank Communications Failed	0 = normal, 1 = alarm	WGM-ETANK-COMMF	MSIP #1	Read From Pumphouse 1			
		00887	6	Well #1 Low Level Alarm	0 = normal, 1 = alarm	WGM-W001-LLEV	MSIP #1	Read From Pumphouse 1			
		00888	7	Well #4 Low Level Alarm	0 = normal, 1 = alarm	WGM-W004-LLEV	MSIP #1	Read From Pumphouse 1			
		00889	8	Pumphouse #1 High High Chlorine Alarm	0 = normal, 1 = Alarm	WGM-PH01-HIHICL2ALM	MSIP #1	Read From Pumphouse 1			
		00890	9	Pumphouse #1 High Chlorine Alarm	0 = normal, 1 = Alarm	WGM-PH01-HICL2ALM	MSIP #1	Read From Pumphouse 1			
		00891	10	Pumphouse #1 Low Chlorine Alarm	0 = normal, 1 = Alarm	WGM-PH01-LOCL2ALM	MSIP #1	Read From Pumphouse 1			
		00892	11	Pumphouse #1 Low Low Chlorine Alarm	0 = normal, 1 = Alarm	WGM-PH01-LOLOCL2ALM	MSIP #1	Read From Pumphouse 1			
		00893	12	Pumphouse #1 High Turbidity Alarm	0 = normal, 1 = Alarm	WGM-PH01-HINTUALM	MSIP #1	Read From Pumphouse 1			
		00894	13	Pumphouse #1 High High Turbidity Alarm	0 = normal, 1 = Alarm	WGM-PH01-HIHINTU	MSIP #1	Read From Pumphouse 1			
		00895	14	Pumphouse #1 Flow Alarm	0 = normal, 1 = Alarm	WGM-PH01-FLOWALM	MSIP #1	Read From Pumphouse 1			
		00896	15	Pumphouse #1 Pressure Alarm	0 = normal, 1 = Alarm	WGM-PH01-PRESSALM	MSIP #1	Read From Pumphouse 1			
SCADAPAK EQUIPMENT GENERAL/MISC STATUS/CONTROL REGISTERS		00897	0	Wellhouse #3 Illegal Entry alarm	0 = normal, 1 = Alarm	WGM-WH03-ILLENT		Read From Well 3			
		00898	1	Wellhouse #3 Well Lockout	0 = normal, 1 = Alarm	WGM-W003-LOCK		Read From Well 3			
		00899	2	Wellhouse #3 Communications Failure	0 = normal, 1 = Alarm	WGM-W003-COMM		Read From Well 3			
		00900	3	Pumphouse #1 Communications Failure	0 = normal, 1 = Alarm	WGM-PH01-COMMF		Read From Well 3			
		00901	4	Elevated Tank Communications Failure	0 = normal, 1 = alarm	WGM-ETANK-COMMF		Read From Well 3			
		00902	5					Read From Well 3			
		00903	6					Read From Well 3			
		00904	7					Read From Well 3			
								Read From Well 3			
		00905	8	Wellhouse #3 High High Chlorine Alarm	0 = normal, 1 = Alarm	WGM-W003-HIHICL2ALM		Read From Well 3			
		00906	9	Wellhouse #3 High Chlorine Alarm	0 = normal, 1 = Alarm	WGM-W003-HICL2ALM		Read From Well 3			
		00907	10	Wellhouse #3 Low Chlorine Alarm	0 = normal, 1 = Alarm	WGM-W003-LOCL2ALM		Read From Well 3			
		00908	11	Wellhouse #3 Low Low Chlorine Alarm	0 = normal, 1 = Alarm	WGM-W003-LOLOCL2ALM		Read From Well 3			
		00909	12	Wellhouse #3 High High Turbidity Alarm	0 = normal, 1 = Alarm			Read From Well 3			
		00910	13	Wellhouse #3 High Turbidity Alarm	0 = normal, 1 = Alarm	WGM-W003-HINTUALM		Read From Well 3			
		00911	14	Wellhouse #3 Flow Alarm	0 = normal, 1 = Alarm	WGM-W003-FLOWALM		Read From Well 3			
		00912	15	Wellhouse #3 Discharge Pressure Alarm	0 = normal, 1 = Alarm	WGM-W003-PRESSALM		Read From Well 3			
		00913	0								
		00914	1								
		00915	2	Well 3 Overload							
		00916	3	Well 4 Overload							
		00917	4								
		00918	5								
		00919	6								
		00920	7								
		00921	8	Highlift #1 Overload							
		00922	9								

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Location		Wingham Pumphouse #1			Updated:	02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT			RPU Address:	2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
INTERNAL MEMORY		1 to 512		Non Volatile Variable Storage		
SCADAPAK LOWER MODULE	DOUT 0	00513	0	Well 1 control relay	0=off, 1=on	WGM-W001-RUN
	DOUT 1	00514	1	Well 4 control relay	0=off, 1=on	WGM-W004-RUN
	DOUT 2	00515	2	Highlift 1 control relay	0=off, 1=on	WGM-HL01-RUN
	DOUT 3	00516	3	Highlift 2 control relay	0=off, 1=on	WGM-HL02-RUN
	DOUT 4	00517	4	Highlift 3 control relay	0=off, 1=on	WGM-HL03-RUN
	DOUT 5	00518	5	Spare		
	DOUT 6	00519	6	Spare		
	DOUT 7	00520	7	Spare		
	DOUT 8	00521	8	Spare		
	DOUT 9	00522	9	Spare		
	DOUT 10	00523	10	Spare		
	DOUT 11	00524	11	Spare		
SCADAPAK UPPER MODULE	DOUT 0	00525	12			
INTERNAL	DOUT 1	00526	13			
	CNFG LED	00527	14	LED Power State		
		00528	15			
INTERNAL		00529	0	clear protocol counters on com1		
SCADAPAK		00530	1	clear protocol counters on com2		
DIAGNOSTICS		00531	2	clear protocol counters on com3		
		00532	3	clear protocol counters on com4		
		00533	4			
		00534	5			
		00535	6			
		00536	7			
		00537	8	clear serial port counters on com1		
		00538	9	clear serial port counters on com2		
		00539	10	clear serial port counters on com3		
		00540	11	clear serial port counters on com4		
		00541	12			
		00542	13			
		00543	14			
		00544	15			
SCADA	EQ#1	00545	0	Well #1 manual start/stop request	0 = off, 1 = on	WGM-W001-MS-REQ
BIT CONTROL	EQ#2	00546	1	Well #2 Manual start/stop request	0 = off, 1 = on	WGM-W004-MS-REQ
EQUIPMENT	EQ#3	00547	2	Highlift #1 Manual start/stop request	0 = off, 1 = on	WGM-HL01-MS-REQ
START/STOP	EQ#4	00548	3	Highlift #2 Manual start/stop request	0 = off, 1 = on	WGM-HL02-MS-REQ
OPEN/CLOSE	EQ#5	00549	4	Highlift #3 Manual start/stop request	0 = off, 1 = on	WGM-HL03-MS-REQ
	EQ#6	00550	5			
	EQ#7	00551	6			
	EQ#8	00552	7			
	EQ#9	00553	8			
	EQ#10	00554	9			
	EQ#11	00555	10			
	EQ#12	00556	11			
	EQ#13	00557	12			
	EQ#14	00558	13			
	EQ#15	00559	14			
	EQ#16	00560	15			
SCADA	EQ#17	00561	0			
BIT CONTROL	EQ#18	00562	1			
EQUIPMENT	EQ#19	00563	2			
START/STOP	EQ#20	00564	3			
OPEN/CLOSE	EQ#21	00565	4			
	EQ#22	00566	5			
	EQ#23	00567	6			
	EQ#24	00568	7			
	EQ#25	00569	8			
	EQ#26	00570	9			
	EQ#27	00571	10			

Location		Wingham Pumphouse #1			Updated:	02-10-06
Bell Circuit #				SCADAPACK PLUS I/O LAYOUT	RPU Address:	2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
	EQ#28	00572	11			
	EQ#29	00573	12			
	EQ#30	00574	13			
	EQ#31	00575	14			
	EQ#32	00576	15			
SCADA	EQ#33	00577	0			
BIT CONTROL	EQ#34	00578	1			
EQUIPMENT	EQ#35	00579	2			
START/STOP	EQ#36	00580	3			
OPEN/CLOSE	EQ#37	00581	4			
	EQ#38	00582	5			
	EQ#39	00583	6			
	EQ#40	00584	7			
	EQ#41	00585	8			
	EQ#42	00586	9			
	EQ#43	00587	10			
	EQ#44	00588	11			
	EQ#45	00589	12			
	EQ#46	00590	13			
	EQ#47	00591	14			
	EQ#48	00592	15			
	EQ#1	00593	0	Well #1 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-W001-MODE
SCADA	EQ#2	00594	1	Well #4 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-W004-MODE
BIT CONTROL	EQ#3	00595	2	Highlift #1 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-HL01-MODE
EQUIPMENT	EQ#4	00596	3	Highlift #2 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-HL02-MODE
AUTO/MANUAL	EQ#5	00597	4	Highlift #3 Auto/Manual Control Mode	0 = Auto, 1 = Manual	WGM-HL03-MODE
	EQ#6	00598	5			
	EQ#7	00599	6			
	EQ#8	00600	7			
	EQ#9	00601	8			
	EQ#10	00602	9			
	EQ#11	00603	10			
	EQ#12	00604	11			
	EQ#13	00605	12			
	EQ#14	00606	13			
	EQ#15	00607	14			
	EQ#16	00608	15			
SCADA	EQ#17	00609	0			
BIT CONTROL	EQ#18	00610	1			
EQUIPMENT	EQ#19	00611	2			
AUTO/MANUAL	EQ#20	00612	3			
	EQ#21	00613	4			
	EQ#22	00614	5			
	EQ#23	00615	6			
	EQ#24	00616	7			
	EQ#25	00617	8			
	EQ#26	00618	9			
	EQ#27	00619	10			
	EQ#28	00620	11			
	EQ#29	00621	12			
	EQ#30	00622	13			
	EQ#31	00623	14			
	EQ#32	00624	15			
SCADA	EQ#33	00625	0			
BIT CONTROL	EQ#34	00626	1			
EQUIPMENT	EQ#35	00627	2			
AUTO/MANUAL	EQ#36	00628	3			
	EQ#37	00629	4			
	EQ#38	00630	5			
	EQ#39	00631	6			
	EQ#40	00632	7			
	EQ#41	00633	8			
	EQ#42	00634	9			
	EQ#43	00635	10			
	EQ#44	00636	11			

Location		Wingham Pumphouse #1			Updated:	02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT			RPU Address:	2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
	EQ#45	00637	12			
	EQ#46	00638	13			
	EQ#47	00639	14			
	EQ#48	00640	15			
SCADA	EQ#1	00641	0	Well #1 Remote Lockout	0 = Available, 1 = Lockout	WGM-W001-REMLOCK
BIT CONTROL	EQ#2	00642	1	Well #4 Remote Lockout	0 = Available, 1 = Lockout	WGM-W004-REMLOCK
EQUIPMENT	EQ#3	00643	2	Highlift #1 Remote Lockout	0 = Available, 1 = Lockout	WGM-HL01-REMLOCK
LOCKOUT	EQ#4	00644	3	Highlift #2 Remote Lockout	0 = Available, 1 = Lockout	WGM-HL02-REMLOCK
	EQ#5	00645	4	Highlift #3 Remote Lockout	0 = Available, 1 = Lockout	WGM-HL03-REMLOCK
	EQ#6	00646	5			
	EQ#7	00647	6			
	EQ#8	00648	7			
	EQ#9	00649	8			
	EQ#10	00650	9			
	EQ#11	00651	10			
	EQ#12	00652	11			
	EQ#13	00653	12			
	EQ#14	00654	13			
	EQ#15	00655	14			
	EQ#16	00656	15			
SCADA	EQ#17	00657	0			
BIT CONTROL	EQ#18	00658	1			
EQUIPMENT	EQ#19	00659	2			
LOCKOUT	EQ#20	00660	3			
	EQ#21	00661	4			
	EQ#22	00662	5			
	EQ#23	00663	6			
	EQ#24	00664	7			
	EQ#25	00665	8			
	EQ#26	00666	9			
	EQ#27	00667	10			
	EQ#28	00668	11			
	EQ#29	00669	12			
	EQ#30	00670	13			
	EQ#31	00671	14			
	EQ#32	00672	15			
SCADA	EQ#33	00673	0			
BIT CONTROL	EQ#34	00674	1			
EQUIPMENT	EQ#35	00675	2			
LOCKOUT	EQ#36	00676	3			
	EQ#37	00677	4			
	EQ#38	00678	5			
	EQ#39	00679	6			
	EQ#40	00680	7			
	EQ#41	00681	8			
	EQ#42	00682	9			
	EQ#43	00683	10			
	EQ#44	00684	11			
	EQ#45	00685	12			
	EQ#46	00686	13			
	EQ#47	00687	14			
	EQ#48	00688	15			
SCADAPAK	EQ#1	00689	0	Well #1 Fail	0 = Normal, 1 = Fail	WGM-W001-FAIL
EQUIPMENT FAIL	EQ#2	00690	1	Well #4 Fail	0 = Normal, 1 = Fail	WGM-W004-FAIL
BIT REGISTERS	EQ#3	00691	2	Highlift #1 Fail	0 = Normal, 1 = Fail	WGM-HL01-FAIL
	EQ#4	00692	3	Highlift #2 Fail	0 = Normal, 1 = Fail	WGM-HL02-FAIL
	EQ#5	00693	4	Highlift #3 Fail	0 = Normal, 1 = Fail	WGM-HL03-FAIL
	EQ#6	00694	5			
	EQ#7	00695	6	CL2 Pump #1 Fail	0 = Normal, 1 = Fail	WGM-CP01-FAIL
	EQ#8	00696	7	CL2 Pump #2 Fail	0 = Normal, 1 = Fail	WGM-CP02-FAIL
	EQ#9	00697	8			
	EQ#10	00698	9			
	EQ#11	00699	10			
	EQ#12	00700	11			
	EQ#13	00701	12			

Location		Wingham Pumphouse #1			Updated:	02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT			RPU Address:	2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
	EQ#14	00702	13			
	EQ#15	00703	14			
	EQ#16	00704	15			
SCADAPAK	EQ#17	00705	0			
EQUIPMENT FAIL	EQ#18	00706	1			
BIT REGISTERS	EQ#19	00707	2			
	EQ#20	00708	3			
	EQ#21	00709	4			
	EQ#22	00710	5			
	EQ#23	00711	6			
	EQ#24	00712	7			
	EQ#25	00713	8			
	EQ#26	00714	9			
	EQ#27	00715	10			
	EQ#28	00716	11			
	EQ#29	00717	12			
	EQ#30	00718	13			
	EQ#31	00719	14			
	EQ#32	00720	15			
SCADAPAK	EQ#33	00721	0			
EQUIPMENT FAIL	EQ#34	00722	1			
BIT REGISTERS	EQ#35	00723	2			
	EQ#36	00724	3			
	EQ#37	00725	4			
	EQ#38	00726	5			
	EQ#39	00727	6			
	EQ#40	00728	7			
	EQ#41	00729	8			
	EQ#42	00730	9			
	EQ#43	00731	10			
	EQ#44	00732	11			
	EQ#45	00733	12			
	EQ#46	00734	13			
	EQ#47	00735	14			
	EQ#48	00736	15			
SCADAPAK		00737	0	Well #1 Automatic Start Request	0 = off, 1 = on	WGM-W001-AS-REQ
EQUIPMENT		00738	1	Well #4 Automatic Start Request	0 = off, 1 = on	WGM-W004-AS-REQ
GENERAL/MISC		00739	2	Highlift #1 Automatic Start Request	0 = off, 1 = on	WGM-HL01-AS-REQ
STATUS/CONTROL		00740	3	Highlift #2 Automatic Start Request	0 = off, 1 = on	WGM-HL02-AS-REQ
REGISTERS		00741	4	Highlift #3 Automatic Start Request	0 = off, 1 = on	WGM-HL03-AS-REQ
		00742	5	Well #3 Automatic Start Request	0 = off, 1 = on	WGM-W003-AS-REQ
		00743	6			
		00744	7			
		00745	8			
		00746	9			
		00747	10			
		00748	11			
		00749	12			
		00750	13			
		00751	14			
		00752	15			
SCADAPAK		00753	0			
EQUIPMENT		00754	1			
GENERAL/MISC		00755	2			
STATUS		00756	3			
REGISTERS		00757	4			
		00758	5			
		00759	6			
		00760	7			
		00761	8			
		00762	9			
		00763	10			
		00764	11			
		00765	12			
		00766	13			

Location		Wingham Pumphouse #1		Updated:		02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT		RPU Address:		2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		00767	14			
		00768	15			
SCADAPAK		00769	0			
EQUIPMENT		00770	1			
GENERAL/MISC		00771	2			
STATUS/CONTROL		00772	3			
REGISTERS		00773	4			
		00774	5			
		00775	6			
		00776	7			
		00777	8			
		00778	9			
		00779	10			
		00780	11			
		00781	12			
		00782	13			
		00783	14			
		00784	15			
SCADAPAK	EQ#1	00785	0	Well #1 Available to Run	0 = N/A, 1 = Available	WGM-W001-AVAIL
EQUIPMENT	EQ#2	00786	1	Well #4 Available to Run	0 = N/A, 1 = Available	WGM-W004-AVAIL
MISC STATUS	EQ#3	00787	2	Highlift #1 Available to Run	0 = N/A, 1 = Available	WGM-HL01-AVAIL
REGISTERS	EQ#4	00788	3	Highlift #2 Available to Run	0 = N/A, 1 = Available	WGM-HL02-AVAIL
	EQ#5	00789	4	Highlift #3 Available to Run	0 = N/A, 1 = Available	WGM-HL03-AVAIL
	EQ#6	00790	5	Well #3 Available to Run	0 = N/A, 1 = Available	WGM-W003-AVAIL
	EQ#7	00791	6			
	EQ#8	00792	7			
	EQ#9	00793	8	Reset CL2		
	EQ#10	00794	9	Tower/Pressure Mode	0=tower, 1=pressure	
	EQ#11	00795	10			
	EQ#12	00796	11			
	EQ#13	00797	12			
	EQ#14	00798	13			
	EQ#15	00799	14			
	EQ#16	00800	15			
SCADAPAK	EQ#17	00801		HLP2 ready to run		
EQUIPMENT	EQ#18	00802		HLP2 called to run		
MISC STATUS	EQ#19	00803		HLP2 Running		
REGISTERS	EQ#20	00804		HLP2 Fault		
	EQ#21	00805		HLP2 Voltage Enabled		
	EQ#22	00806		HLP2 Quick Stop		
	EQ#23	00807		HLP2 Stched on Disabled		
	EQ#24	00808		HLP2 Warning		
	EQ#25	00809				
	EQ#26	00810		HLP2 Remote HMI		
	EQ#27	00811		HLP2 Up to Speed		
	EQ#28	00812				
	EQ#29	00813				
	EQ#30	00814				
	EQ#31	00815				
	EQ#32	00816				
SCADAPAK	EQ#33	00817				
EQUIPMENT	EQ#34	00818				
MISC STATUS	EQ#35	00819		Keypad control		
REGISTERS	EQ#36	00820				
	EQ#37	00821				
	EQ#38	00822				
	EQ#39	00823				
	EQ#40	00824				
	EQ#41	00825				
	EQ#42	00826				
	EQ#43	00827				
	EQ#44	00828				
	EQ#45	00829				
	EQ#46	00830				
	EQ#47	00831				

[illegible]

Location		Wingham Pumphouse #1		Updated:		02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT		RPU Address:		2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		03991		Switch Duty on Well 3 not avail		
		03992		Well 3 Duty		
		03993		Highlift 1 Duty		
		03994		Highlift 2 Duty		
		03995		Highlift 3 Duty		
		03996		Highlift Timing Delay		
		03997		Hlift 1 Starting		
		03998		Hlift 2 Starting		
		03999		Hlift 3 Starting		
		04000		Well 3 Starting		
		04001		Polling Complete		
		04002		MSIP 1 Failure		
		04003		MSIP 1 Fail		
		04004		MSIP 1 Complete		
		04005		MSIP 2 Failure		
		04006		MSIP 2 Fail		
		04007		MSIP 2 Complete		
		04008		MSIP 3 Failure		
		04009		MSIP 3 Fail		
		04010		MSIP 3 Complete		
		04011		MSIP 4 Failure		
		04012		MSIP 4 Fail		
		04013		MSIP 4 Complete		
		04014		MSIP 5 Failure		
		04015		MSIP 5 Fail		
		04016		MSIP 5 Complete		
		04017		MSIP 6 Failure		
		04018		MSIP 6 Fail		
		04019		MSIP 6 Complete		
		04020		MSIP 7 Failure		
		04021		MSIP 7 Fail		
		04022		MSIP 7 Complete		
		04023		MSIP 8 Failure		
		04024		MSIP 8 Fail		
		04025		MSIP 8 Complete		
		04026		Strt Comms Poll		
		04027		Reservoir Unlock		
		04028		Reservoir Well Start Request		
		04029		HLP1 Substitution		
		04030		HLP2 Substitution		
		04031		HLP3 Substitution		
		04032		Well 3 Substitution		
		04033		HLP1 Stage req		
		04034		HLP2 Stage req		
		04035		HLP3 Stage req		
		04036		Well 3 Stage req		
		04037		Stage 1 Starting		
		04038		Time Duty Stopping		
		04039		Time Duty Starting		
		04040		Highlift 1 Runtime Minute Done		
		04041		Highlift 2 Runtime Minute Done		
		04042		Highlift 3 Runtime Minute Done		
		04043		Well 4 Runtime Minute Done		
		04044		Well 1 Runtime Minute done		
		04045		countdone		
		04046		Entry		
		04047		HiDisPressAlm		
		04048		HLift1Availt		
		04049		HLift1FailStrtSt		
		04050		HLift1MinOffExp		
		04051		HLift1MinOffStrt		
		04052		Hlift1Run		
		04053		HLift1StrtReq		
		04054		HLift1TempFail		
		04055		Hlift2AvailT		
		04056		HLift2FailStrtSt		
		04057		HLift2MinOffExp		
		04058		HLift2MinOffStrt		
		04059		Hlift2Run		
		04060		HLift2StrtReq		
		04061		HLift2TempFail		
		04062		Hlift3AvailT		
		04063		HLift3FailStrtSt		

Location		Wingham Pumphouse #1		Updated:		02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT		RPU Address:		2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		04064		HLift3MinOffExp		
		04065		HLift3MinOffStrt		
		04066		HLift3Run		
		04067		HLift3StrtReq		
		04068		HLift3TempFail		
		04069				
		04070		LoDisPressAlm		
		04071		NoPumpStart		
		04072		ProgramRun		
		04073		ResLockout		
		04074		Stage1Req		
		04075		Stage2Req		
		04076		Stage3Req		
		04077		Stage4Req		
		04078		StartDlyDne		
		04079		timerdone		
		04080		Unused		
		04081		Well1FailStrtStp		
		04082		Well1Lockout		
		04083		Well1MinOffExp		
		04084		Well1MinOffStrt		
		04085		Well1TempFail		
		04086		Well4FailStrtStp		
		04087		Well4FlowAlm		
		04088		Well4Lockout		
		04089		Well4MinOffExp		
		04090		Well4MinOffStrt		
		04091		Well4TempFail		
		04092		Well4FailDelayed		
		04093		TimedDutyDisabled		
		04094		TimeDutyActive		
		04095		Power Failure		
SCADAPAK	DIN 0	10001	0	Well 1 local/remote control mode	0 = local, 1 = remote	WGM-W001-LOR
LOWER MODULE	DIN 1	10002	1	Well 1 run status	0=off, 1=on	WGM-W001-STATUS
	DIN 2	10003	2	Well 1 Failed	0 = normal, 1 = alarm	WGM-W001-OL
	DIN 3	10004	3	Well 4 local/remote control mode	0 = local, 1 = remote	WGM-W004-LOR
	DIN 4	10005	4	Well 4 run status	0=off, 1=on	WGM-W004-STATUS
	DIN 5	10006	5	Well 4 Failed	0 = normal, 1 = alarm	WGM-W004-OL
	DIN 6	10007	6	Highlift 1 local/remote control mode	0 = local, 1 = remote	WGM-HL01-LOR
	DIN 7	10008	7	Highlift 1 run status	0=off, 1=on	WGM-HL01-STATUS
	DIN 8	10009	8	Highlift 1 Failed	0 = normal, 1 = alarm	WGM-HL01-OL
	DIN 9	10010	9	Highlift 2 local/remote control mode	0 = local, 1 = remote	WGM-HL02-LOR
	DIN 10	10011	10	Highlift 2 run status	0=off, 1=on	WGM-HL02-STATUS
	DIN 11	10012	11	Highlift 2 Failed	0 = normal, 1 = alarm	WGM-HL02-OL
	DIN 12	10013	12	Highlift 3 local/remote control mode	0 = local, 1 = remote	WGM-HL03-LOR
	DIN 13	10014	13	Highlift 3 run status	0 = off, 1 = on	WGM-HL03-STATUS
	DIN 14	10015	14	Highlift 3 Failed	0 = normal, 1 = alarm	WGM-HL03-OL
	DIN 15	10016	15	Spare		
DIN 5203/4	DIN/CNTR 0	10017	0	Power fail	1 = normal, 0 = fail	
	DIN/CNTR 1	10018	1			
	DIN/CNTR 2	10019	2			
	INTERRUPT	10020	3			
SCADAPAK	DIN 0	10021	4			
UPPER MODULE	DIN 1	10022	5			
	DIN 2	10023	6			
	DIN 3	10024	7			
	DIN 4	10025	8			
INTERNAL	FORCE LED	10026	9	Forced coils		
OPTION	SW1	10027	10	Scadapak option switch status		
OPTION	SW2	10028	11	Scadapak option switch status		
OPTION	SW3	10029	12	Scadapak option switch status		
		10030	13			
		10031	14			
		10032	15			
16 - BIT						
DIGITAL INPUT	DIN 0	10097	0	BPVC1-3 opened/closed status	0 = opened, 1 = closed	WGM-HL01-OVOPEN
MODULE #8	DIN 1	10098	1	BPVC2-3 opened/closed status	0 = opened, 1 = closed	WGM-HL02-OVOPEN
	DIN 2	10099	2	BPVC3-3 opened/closed status	0 = opened, 1 = closed	WGM-HL03-OVOPEN

Location		Wingham Pumphouse #1		Updated:		02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT		RPU Address:		2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
	DIN 3	10100	3	Reservoir level high	0 = normal, 1 = alarm	WGM-RES0-HL
	DIN 4	10101	4	Reservoir level low	0 = normal, 1 = alarm	WGM-RES0-LO
	DIN 5	10102	5	Generator running status	0 = off, 1 = running	WGM-GEN1-STATUS
	DIN 6	10103	6	Generator low fuel	0 = normal, 1 = alarm	WGM-GEN1-LS
	DIN 7	10104	7	Deisel generator failure	0 = normal, 1 = alarm	WGM-GEN1-FAIL
	DIN 8	10105	8	Pumphouse 4 temperature alarm	0 = normal, 1 = alarm	WGM-PH04-TEMP
	DIN 9	10106	9	Well #1 temperature alarm	0 = normal, 1 = alarm	WGM-W001-TEMP
	DIN 10	10107	10	Wellhouse #4 temperature alarm	0 = normal, 1 = alarm	WGM-W004-TEMP
	DIN 11	10108	11	Pumphouse #1 smoke alarm	0 = normal, 1 = alarm	WGM-PH01-SMOKE
	DIN 12	10109	12	Pumphouse #4 smoke alarm	0 = normal, 1 = alarm	WGM-PH04-SMOKE
	DIN 13	10110	13	Illegal entry	0 = normal, 1 = alarm	WGM-PH04-DOOR
	DIN 14	10111	14	Security disarmed	0 = normal, 1 = alarm	WGM-PH04-ARM
	DIN 15	10112	15	Spare		
Remaining bits		10145				
		to				
		14096				
SCADAPAK LOWER MODULE	AIN 0	30001		Well #4 pressure		WGM-W004-PRESS
	AIN 1	30003		System pressure		WGM-HL00-PRESS
	AIN 2	30005		Well #4 flowrate		WGM-W004-FLOW
	AIN 3	30007		Well #4 level		WGM-W004-LEV
	AIN 4	30009		Chlorine		WGM-HL00-CL2
	AIN 5	30011		Turbidity		WGM-HL00-NTU
	AIN 6	30013		Reservoir Level		WGM-RES0-LEV
	AIN 7	30015		Spare		
SCADAPAK	STATUS	30027		Controller Status Code	0 - 65535	
SCADAPAK	AIN 5203/4	30029		Ram battery voltage	0 - 65.535 V	
INTERNAL	AIN 5203/4	30031		Temperature Degrees C	0 - 65535 C	
ANALOGS	AIN 5203/4	30032		Temperature Degrees F	0 - 65535 F	
Communications		30146		COM1 - Protocol command errors		
Diagnostic Registers		30148		COM1 - Protocol format errors		
		30150		COM1 - Protocol checksum errors		
		30152		COM1 - Protocol slave commands received		
		30154		COM1 - Protocol master commands sent		
		30156		COM1 - Protocol master commands received		
		30158		COM1 - Protocol slave responses sent		
		30160		COM1 - Protocol master command status		
		30162		COM1 - Protocol stored messages		
		30164		COM1 - Protocol forwarded messages		
		30166		COM2 - Protocol command errors		
		30168		COM2 - Protocol format errors		
		30170		COM2 - Protocol checksum errors		
		30172		COM2 - Protocol slave commands received		
		30174		COM2 - Protocol master commands sent		
		30176		COM2 - Protocol master commands received		
		30178		COM2 - Protocol slave responses sent		
		30180		COM2 - Protocol master command status		
		30182		COM2 - Protocol stored messages		
		30184		COM2 - Protocol forwarded messages		
		30186		COM3 - Protocol command errors		
		30188		COM3 - Protocol format errors		
		30190		COM3 - Protocol checksum errors		
		30192		COM3 - Protocol slave commands received		
		30194		COM3 - Protocol master commands sent		
		30196		COM3 - Protocol master commands received		
		30198		COM3 - Protocol slave responses sent		
		30200		COM3 - Protocol master command status		
		30202		COM3 - Protocol stored messages		
		30204		COM3 - Protocol forwarded messages		
		30206		COM4 - Protocol command errors		
		30208		COM4 - Protocol format errors		
		30210		COM4 - Protocol checksum errors		
		30212		COM4 - Protocol slave commands received		
		30214		COM4 - Protocol master commands sent		
		30216		COM4 - Protocol master commands received		

Location		Wingham Pumphouse #1		Updated:		02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT		RPU Address:		2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		30218		COM4 - Protocol slave responses sent		
		30220		COM4 - Protocol master command status		
		30222		COM4 - Protocol stored messages		
		30224		COM4 - Protocol forwarded messages		
		30226		COM1 - Serial port framing errors		
		30228		COM1 - Serial port parity errors		
		30230		COM1 - Serial port character overrun errors		
		30232		COM1 - Serial port buffer overrun errors		
		30234		COM1- Serial port I/O line status		
		30236		COM2 - Serial port framing errors		
		30238		COM2 - Serial port parity errors		
		30240		COM2 - Serial port character overrun errors		
		30242		COM2 - Serial port buffer overrun errors		
		30244		COM2- Serial port I/O line status		
		30246		COM3 - Serial port framing errors		
		30248		COM3 - Serial port parity errors		
		30250		COM3 - Serial port character overrun errors		
		30252		COM3 - Serial port buffer overrun errors		
		30254		COM3- Serial port I/O line status		
		30256		COM4 - Serial port framing errors		
		30258		COM4 - Serial port parity errors		
		30260		COM4 - Serial port character overrun errors		
		30262		COM4 - Serial port buffer overrun errors		
		30264		COM4- Serial port I/O line status		
Remaining Registers		30266				
		to				
		31024				
SCADAPAK	AOUT 0	40001		Chlorine Pump #1 - Speed Control (Flow Pacing)	0 - 100 %	WGM-CP01-SPEED
LOWER MODULE	AOUT 1	40002		Chlorine Pump #2 - Speed Control (Flow Pacing)	0 - 100 %	WGM-CP02-SPEED
ANALOG OUTPUT MODULE #1	AOUT 0	40005		Spare		
	AOUT 1	40007		Spare		
	AOUT 2	40009		Spare		
	AOUT 3	40011		Spare		
SCADAPAK	CNFG LED	40063		LED Power Settings - Time to return to default state	0 - 65535	
	RTC	40065		Real Time Clock - Hours	0 - 23	
		40067		Real Time Clock - Minutes	0 - 59	
		40069		Real Time Clock - Seconds	0 - 59	
		40071		Real Time Clock - Year	0 - 99	
		40073		Real Time Clock - Month	1 - 12	
		40075		Real Time Clock - Day	1 - 31	
		40077		Real Time Clock - Day of week	1 - 7	
		40079		Real Time Clock - Alarm hour	1 - 23	
		40081		Real Time Clock - Alarm minute	0 - 59	
		40083		Real Time Clock - Alarm second	0 - 59	
		40085		Real Time Clock - Alarm control	0 = off, 1 = on	
		40087		spare		
		40089		spare		
		40091		spare		
		40093		spare		
		40095		spare		
		40097		spare		
		40099		spare		
EQUIPMENT	EQ#1	40101		Well #1 Run Time	0 - 65535 minutes	WGM-W001-RUNT
RUN TIMES	EQ#2	40103		Well #4 Run Time	0 - 65535 minutes	WGM-W004-RUNT
	EQ#3	40105		Highlift #1 Run Time	0 - 65535 minutes	WGM-HL01-RUNT
	EQ#4	40107		Highlift #2 Run Time	0 - 65535 minutes	WGM-HL02-RUNT
	EQ#5	40109		Highlift #3 Run Time	0 - 65535 minutes	WGM-HL03-RUNT
	EQ#6	40111		Generator Runtime	0 - 65535 minutes	WGM-GEN1-RUNT
	EQ#7	40113			0 - 65535 minutes	
	EQ#8	40115			0 - 65535 minutes	
	EQ#9	40117			0 - 65535 minutes	

Location		Wingham Pumphouse #1		Updated:		02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT		RPU Address:		2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
	EQ#10	40119			0 - 65535 minutes	
	EQ#11	40121			0 - 65535 minutes	
	EQ#12	40123			0 - 65535 minutes	
	EQ#13	40125			0 - 65535 minutes	
	EQ#14	40127			0 - 65535 minutes	
	EQ#15	40129			0 - 65535 minutes	
	EQ#16	40131			0 - 65535 minutes	
	EQ#17	40133		Well #1 Eng Pressure		WGM-W001-ENGPRESS
	EQ#18	40137		Discharge Eng Pressure		WGM-HL00-ENGPRESS
	EQ#19	40141		Well #4 Eng Flow		WGM-W004-ENGFLOW
	EQ#20	40145		Well #4 Eng Level		WGM-W004-ENGLEV
	EQ#21	40149		Chlorine Eng Units		WGM-PH01-ENGCL2
	EQ#22	40153		Turbidity Eng Units		WGM-PH01-ENGTURB
	EQ#23	40157		Reservoir Eng Level		WGM-PH01-ENGRES
	EQ#24	40161			0 - 65535 minutes	
	EQ#25	40165			0 - 65535 minutes	
	EQ#35	40169			0 - 65535 minutes	
	EQ#36	40171			0 - 65535 minutes	
	EQ#37	40173			0 - 65535 minutes	
	EQ#38	40175			0 - 65535 minutes	
	EQ#39	40177			0 - 65535 minutes	
	EQ#40	40179			0 - 65535 minutes	
	EQ#41	40181			0 - 65535 minutes	
	EQ#42	40183			0 - 65535 minutes	
	EQ#43	40185			0 - 65535 minutes	
	EQ#44	40187			0 - 65535 minutes	
	EQ#45	40189			0 - 65535 minutes	
	EQ#46	40191			0 - 65535 minutes	
	EQ#47	40193			0 - 65535 minutes	
	EQ#48	40195			0 - 65535 minutes	
DOUBLE WORD	#1	40197		Well #1 Flow Totalizer	0 - 2147483648	WGM-W001-TOTAL
FLOW TOTALIZERS	#2	40201		Well #4 Flow Totalizer	0 - 2147483648	WGM-W004-TOTAL
	#3	40205		Station Discharge Flow Totalizer	0 - 2147483648	WGM-HL00-TOTAL
	#4	40209		FLOW TOTALIZER #4 (MEGALITRES*10)	0 - 999	
		40211		FLOW TOTALIZER #4 (KILOLITRES/10)	0 - 9999	
	#5	40213		FLOW TOTALIZER #5 (MEGALITRES*10)	0 - 999	
		40215		FLOW TOTALIZER #5 (KILOLITRES/10)	0 - 9999	
	#6	40217		FLOW TOTALIZER #6 (MEGALITRES*10)	0 - 999	
		40219		FLOW TOTALIZER #6 (KILOLITRES/10)	0 - 9999	
	#7	40221		FLOW TOTALIZER #7 (MEGALITRES*10)	0 - 999	
		40223		FLOW TOTALIZER #7 (KILOLITRES/10)	0 - 9999	
	#8	40225		FLOW TOTALIZER #8 (MEGALITRES*10)	0 - 999	
		40227		FLOW TOTALIZER #8 (KILOLITRES/10)	0 - 9999	
	#9	40229		FLOW TOTALIZER #9 (MEGALITRES*10)	0 - 999	
		40231		FLOW TOTALIZER #9 (KILOLITRES/10)	0 - 9999	
	#10	40233		FLOW TOTALIZER #10 (MEGALITRES*10)	0 - 999	
		40235		FLOW TOTALIZER #10 (KILOLITRES/10)	0 - 9999	
	#11	40237		FLOW TOTALIZER #11 (MEGALITRES*10)	0 - 999	
		40239		FLOW TOTALIZER #11 (KILOLITRES/10)	0 - 9999	
	#12	40241		FLOW TOTALIZER #12 (MEGALITRES*10)	0 - 999	
		40243		FLOW TOTALIZER #12 (KILOLITRES/10)	0 - 9999	
	#13	40245		FLOW TOTALIZER #13 (MEGALITRES*10)	0 - 999	
		40247		FLOW TOTALIZER #13 (KILOLITRES/10)	0 - 9999	
	#14	40249		FLOW TOTALIZER #14 (MEGALITRES*10)	0 - 999	
		40251		FLOW TOTALIZER #14 (KILOLITRES/10)	0 - 9999	
	#15	40253		FLOW TOTALIZER #15 (MEGALITRES*10)	0 - 999	
		40255		FLOW TOTALIZER #15 (KILOLITRES/10)	0 - 9999	
	#16	40257		FLOW TOTALIZER #16 (MEGALITRES*10)	0 - 999	
		40259		FLOW TOTALIZER #16 (KILOLITRES/10)	0 - 9999	
		40261		Well #4 Start Setpoint	0 - 100%	WGM-W000-LEADSTRT
		40265		Well #4 Stop Setpoint	0 - 100%	WGM-W000-LEADSTP
		40269		Lag Well Start Setpoint		WGM-W000-LAGSTRT
		40273		Lag Well Stop Setpoint		WGM-W000-LAGSTOP
		40277		Stage 1 Start Level Setpoint	0 - 100%	WGM-STG1-START
		40281		Stage 1 Stop Level Setpoint	0 - 100%	WGM-STG1-STOP

Location		Wingham Pumphouse #1			Updated:	02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT			RPU Address:	2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		40285		Stage 2 Start Level Setpoint	0 - 100%	WGM-STG2-START
		40289		Stage 2 Stop Level Setpoint	0 - 100%	WGM-STG2-STOP
		40293		Stage 3 Start Level Setpoint	0 - 100%	WGM-STG3-START
		40297		Stage 3 Stop Level Setpoint	0 - 100%	WGM-STG3-STOP
		40301		Stage 4 Start Level Setpoint	0 - 100%	WGM-STG4-START
		40305		Stage 4 Stop Level Setpoint	0 - 100%	WGM-STG4-STOP
		40309		Reservoir Highlift Lockout Setpoint	0 - 100%	WGM-HL00-LOCK
		40313		Duty Rotation	0 - 3	WGM-HL00-DUTY
		40315		Elevated Tank Level		WGM-ETANK-LVL
		40319		Delay Between Pump Starts	0 - 65535 seconds	WGM-PH01-PDLY
		40321				
		40323				
		40325				
		40327		Well #1 Minimum Off Time	0 - 65535 Seconds	WGM-W001-MOFF
		40329		Well #1 Minimum On Time	0 - 65535 Seconds	WGM-W001-MON
		40331		Well #1 Fault Delay 1	0 - 65535 Seconds	WGM-W001-FDLY
		40333		Well #4 Minimum Off Time	0 - 65535 Seconds	WGM-W004-MOFF
		40335		Well #4 Minimum On Time	0 - 65535 Seconds	WGM-W004-MON
		40337		Well #4 Fault Delay 1	0 - 65535 Seconds	WGM-W004-FDLY
		40339		Highlift #1 Minimum Off Time	0 - 65535 Seconds	WGM-HL01-MOFF
		40341		Highlift #1 Minimum On Time	0 - 65535 Seconds	WGM-HL01-MON
		40343		Highlift #1 Fault Delay 1	0 - 65535 Seconds	WGM-HL01-FDLY
		40345		Highlift #2 Minimum Off Time	0 - 65535 Seconds	WGM-HL02-MOFF
		40347		Highlift #2 Minimum On Time	0 - 65535 Seconds	WGM-HL02-MON
		40349		Highlift #2 Fault Delay 1	0 - 65535 Seconds	WGM-HL02-FDLY
		40351		Highlift #3 Minimum Off Time	0 - 65535 Seconds	WGM-HL03-MOFF
		40353		Highlift #3 Minimum On Time	0 - 65535 Seconds	WGM-HL03-MON
		40355		Highlift #3 Fault Delay 1	0 - 65535 Seconds	WGM-HL03-FDLY
		40357		Timed Duty Start Hour	0 - 23	WGM-HL00-STRTH
		40359		Timed Duty Start Minute	0 - 59	WGM-HL00-STRTM
		40361		Timed Duty Stop hour	0 - 23	WGM-HL00-STOPH
		40363		Timed Duty Stop Minute	0 - 59	WGM-HL00-STOPM
		40365		HLP2 Tower Mode Speed Setpoint	0 - 60 Hz	
		40366		HLP2 Pressure Mose setpoint	0 - 689.9 Kpa	
		40367				
		40368				
		40369		Pumphouse #1 HiHi Chlorine Alarm Setpoint		WGM-PH01-HIHICL2
		40373		Pumphouse #1 High Chlorine Alarm Setpoint		WGM-PH01-HICL2
		40377		Pumphouse #1 Low Chlorine Alarm Setpoint		WGM-PH01-LOCL2
		40381		Pumphouse #1 LoLo Chlorine Alarm Setpoint		WGM-PH01-LOLOCL2
		40385		Pumphouse #1 Hi Turbidity Alarm Setpoint		WGM-PH01-HINI
		40389		Pumphouse #1 High High Turbidity Alarm Setpoint		WGM-PH01HIHINI
		40393		Well #1 High Flow Setpoint		
		40397		Well #4 High Flow Setpoint		
		40401		Low Discharge Pressure Alarm Setpoint		WGM-HL00-LOPRESS
		40405		High Discharge Pressure Alarm Setpoint		WGM-HL00-HIPRESS
		43001		HLP2 PID Process Value		
		43003		HLP2 PID Setpoint		
		43005		HLP2 PID Gain		
		43007		HLP2 PID Reset Time		
		43009		HLP2 PID Rate Time		
		43011		HLP2 PID Deadband		
		43013		HLP2 Output Fullscale		
		43015		HLP2 Output Zero		
		43017		HLP2 PID Cycle Time		
		43019		HLP2 Manual Mode Output		
		43021		HLP2 PID Output		
		43031		HLP 2 speed setpoint	0 - 690	
		44001		Well 1 Minimum Offtimer		
		44002		Well 1 Minimum Ontimer		
		44003		Well 1 Fail to start timer		
		44004		Well 1 Fail to stop timer		
		44005		Well 1 Minute runtime timer		
		44011		Well 4 Minimum Offtimer		
		44012		Well 4 Minimum Ontimer		
		44013		Well 4 Fail to start timer		
		44014		Well 4 Fail to stop timer		
		44015		Well 4 Minute runtime timer		

Location		Wingham Pumphouse #1			Updated:	02-10-06
Bell Circuit #		SCADAPACK PLUS I/O LAYOUT			RPU Address:	2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		44021		Highlift 1 Minimum Offtimer		
		44022		Highlift 1 Minimum Ontimer		
		44023		Highlift 1 Fail to start timer		
		44024		Highlift 1 Fail to stop timer		
		44025		Highlift 1 Minute runtime timer		
		44031		Highlift 2 Minimum Offtimer		
		44032		Highlift 2 Minimum Ontimer		
		44033		Highlift 2 Fail to start timer		
		44034		Highlift 2 Fail to stop timer		
		44035		Highlift 2 Minute runtime timer		
		44041		Highlift 3 Minimum Offtimer		
		44042		Highlift 3 Minimum Ontimer		
		44043		Highlift 3 Fail to start timer		
		44044		Highlift 3 Fail to stop timer		
		44045		Highlift 3 Minute runtime timer		
		45001		Well 4 Pressure Scaling Block		
		45010		Discharge Pressure Scale Block		
		45020		Well 4 Flow Scale Block		
		45030		Well 4 Level Block		
		45040		CL2 Scale Block		
		45050		Turbidity Scale block		
		45060		Reservoir Level Scale Block		
		46001		Power Fail Start Delay timer		
		46002		Avg CL2 10 second timer		
		46003		Well 4 Low Flow Timer		
		46004		High Dis Pressure Timer		
		46005		Low Dis Pressure Timer		
		46006		Power Fail Timer		
		46007		Totalizer timer		
		46008		Communications PollTimer		
		46009		Reset Delay timer		
		46010		Delay Between Hlift Starts Timer		
		46011		Polling Stuck Timer		
		46012		Dlog #1 timer		
		47001		Avg CL2 reading 1		
		47003		Avg CL2 reading 2		
		47005		Avg CL2 reading 3		
		47007		Avg CL2 reading 4		
		47009		Avg CL2 reading 5		
		47011		Avg CL2 reading 6		
		47013		Avg CL2 reading 7		
		47015		Avg CL2 reading 8		
		47017		Avg CL2 reading 9		
		47019		Avg CL2 reading 10		
		47021		Avg CL2 reading 11		
		47023		Avg CL2 reading 12		
		47025		Avg CL2 reading 13		
		47027		Avg CL2 reading 14		
		47029		Avg CL2 reading 15		
		47031		Avg CL2 reading 16		
		47033		Avg CL2 reading 17		
		47035		Avg CL2 reading 18		
		47037		Avg CL2 reading 19		
		47039		Avg CL2 reading 20		
		47041		Avg CL2 reading 21		
		47043		Avg CL2 reading 22		
		47045		Avg CL2 reading 23		
		47047		Avg CL2 reading 24		
		47049		Avg CL2 reading 25		
		47051		Avg CL2 reading 26		
		47053		Avg CL2 reading 27		
		47055		Avg CL2 reading 28		
		47057		Avg CL2 reading 29		
		47059		Avg CL2 reading 30		

[illegible]

	Location	Wingham Pumphouse #1			Updated:	02-10-06
	Bell Circuit #			SCADAPACK PLUS I/O LAYOUT	RPU Address:	2
Module/Type	Point ID	Modbus Address	Bit #	Description	Range/Units	Tag Name
		49501		Well 4 Temp Level		
		49503		Temp Avg CL2 reading		
		49505		HiHi Chlorine Deadband		
		49507		High Chlorine deadband		
		49509		HiHi Turbidity Deadband		
		49511		High Turbidity Deadband		
		49513		Well 4 Low Flow Deadband		
		49515		High Discharge Pressure Deadband		
		49517		Low Pressure Deadband		
		49519		Well 4 Level Deadband		

		49999				

00510	Well 3 Rem Lock
00511	Well 3 Mode
00512	Well 3 Man req
00513	Well 3 ElectStrt
00593	Well #3 Rem Mode
00737	Well #3 Automatic Start Request
00785	Well #3 Avail
00793	Reset Chlorine
00833	Tank Heartbeat
00849	Illegal Entry
00850	Well Lockout
00852	Well 4 CommFail
00854	DataConcHeartbeat
00856	CommPausBy Scada
00857	HighHigh Cl2 Alm
00858	High Cl2 Alarm
00859	Low Cl2 Alarm
00860	LoLo Cl2 Alarm
00861	HiHiTurbAlarm
00862	HighTurbAlarm
00863	Flow Alarm
00864	Dis PressAlarm
00993	Duty Bit UpdtWel3
00994	Pump SetUpdtWel3
10001	Well 1 local/remote control mode
10002	Well 1 run status
10003	Well 1 Failed
10004	Spare
10005	Spare
10006	Spare
10007	Power fail
30001	Well #3 pressure
30003	Well #3 flowrate
30005	Chlorine
30007	Turbidity
30027	Controller Status Code
30029	Ram battery voltage
30031	Temperature Degrees C
30033	Temperature Degrees F
40001	Chlorine pump #1 Speed
40003	Chlorine Pump #2 Speed
40005	Well #4 flowrate
40007	Well #4 Chlorine
40009	Well #4 Turbidity
40011	VFD Speed
40101	Well #3 Run Time
40137	Wellhouse #3 Discharge Pressure in Engineering Units
40141	Wellhouse #3 Discharge Flow in Engineering Units
40145	Wellhouse #3 Discharge Chlorine in Engineering Units
40149	Wellhouse #3 Discharge Turbidity in Engineering Units
40197	Well #3 Flow Totalizer
40313	Highlift Duty Rotation
40315	Elevated Tank Level
40320	Well 3 Pressure mode
40357	Well #3 Minimum Off Time

40359	Well #3 Minimum On Time
40361	Well #3 Fault Delay 1
40363	Well 3 Flow Setpoint
40365	Well 3 Pressure Setpoint
40367	Well 3 Power Setpoint
40409	Well #3 HiHi Chlorine Alarm Setpoint
40413	Well #3 High Chlorine Alarm Setpoint
40417	Well #3 Low Chlorine Alarm Setpoint
40421	Well #3 LoLo Chlorine Alarm Setpoint
40425	Well #3 HiHi Turbidity Alarm
40429	Well #3 Hi Turbidity Alarm
40433	Well #3 Low Flow Setpoint
40437	Well #3 Low Discharge Pressure Setpoint
40441	Well #3 High Discharge pressure Setpoint
40525	Well #3 Elevated Tank Start Setpoint (Direct Comms)
40529	Well #3 Elevated Tank Stop Setpoint (Direct Comms)
41001	Well 3 Fail time Setpoint
41003	Well 3 minimum offtime setpoint
41005	Well 3 Runtime
41007	HiHi chlorine setpoint
41011	High chlorine setpoint
41015	Low Chlorine setpoint
41019	LoLo chlorine setpoint
41023	HiHi turbidity setpoint
41027	High turbidity setpoint
41031	Low discharge pressure setpoint
41035	High discharge pressure setpoint
41039	Low flow setpoint
41043	Well 3 totalizer
41047	Elevated tank start setpoint
41051	Elevated tank stop setpoint
41055	VFD mode
41057	Flow mode setpoint
41059	Pressure mode setpoint
41061	Power mode setpoint
40065	Real Time Clock - Hours
40066	Real Time Clock - Minutes
40067	Real Time Clock - Seconds
40068	Real Time Clock - Year
40069	Real Time Clock - Month
40070	Real Time Clock - Day
40071	Real Time Clock - Day of week
40072	Real Time Clock - Alarm hour
40073	Real Time Clock - Alarm minute
40074	Real Time Clock - Alarm second
40075	Real Time Clock - Alarm control