

Enhance Energy Inc. and North West Redwater Partnership

Knowledge Sharing Report

Appendices i–viii

Calendar Year 2013

Submitted on March 31, 2014

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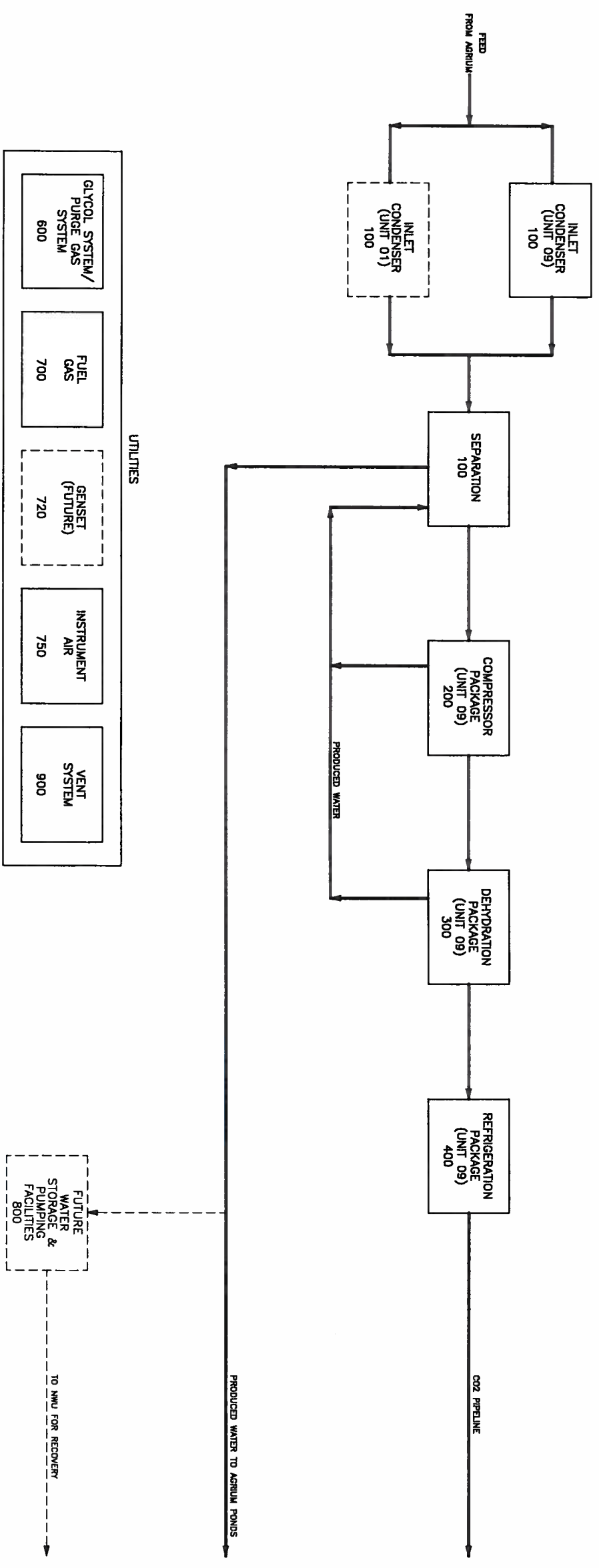
Enhance Energy Inc. and North West Redwater Partnership

APPENDIX i Agrium CRF Block Flow Diagram



Autumn Colour, by Ted Rafferty, a local Alberta painter





REFERENCE DRAWINGS		REVISED		DATE		BY / CHK'D		ENG		APP'D		NOTES	
NO.	TITLE	NO.	ISSUE	DATE	BY	CHK'D	MM	MM	OK	FW	DATE	DESCRIPTION	DATE
D	ISSUED FOR HAZOP	0	ISSUED FOR CONSTRUCTION	2010.SEP.15	DG								
				2011.DEC.23	JG								

PROJ. NO.	SCALE	DRAWING NO.	REV.
A1-EF1-82205-001	NIS	A1-EF1-82205-001	0



CONSULTANTS LOGO

ENHANCE ENERGY INC.

LSD: 04-17-056-21 WAM
 UNIT 09 & 01
 BLOCK FLOW DIAGRAM

Enhance Energy Inc. and North West Redwater Partnership

APPENDIX ii Agrium CRF Heat & Mass Balance



Autumn Colour, by Ted Rafferty, a local Alberta painter




PROD Stream Number	24	25	30	41	52	53	54	55	56	57	60	80	81	82	83	85	86	101	102	103	104	107	112
FROM	PV on CO2 Pipeline	V-300 Battery	P-801/602 EG Supply Header	EG Return Heater AC-820	V-300 H-320	P-331/332 V-300	E-325 H-320	V-310 V-105	E-345 V-105	Total Daily Vapor	H-320 E-335	K-200 PW V-105	V-300 PW LV-300	V-340 PW P-342	LV-300 V-105	P-111 V-105 PW	P-111 Agrium Pond	V-445 V-425	V-425 LV-4051	LV-4051 E-405	V-405 K-400 Stage 1	V-425 K-400 Stage 2	K-400 AC-440/441
TO	Battery	Battery	EG Supply Header	H-320	V-300	H-320	V-105	V-105	V-105	V-105	H-320	V-105	V-300	P-342	V-105	P-111	Agrium Pond	V-425	LV-4051	E-405	K-400 Stage 1	K-400 Stage 2	AC-440/441
Mass Flow CO2	m ton/d	799	800	0	3	0	0	3	2	5	2	0	0	0	0	0	0	0	0	0	0	0	0
BULK PHASE	Units																						
Vapor Mole Flow	kgmol/h	0.0000	1.0000	0.0000	0.0000	0.0000	0.0158	1.0000	0.9822	0.9881	1.0000	0.0014	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0536	1.0000	1.0000	1.0000
Temperature	°C	25.0	48.3	38.0	45.5	44.7	99.9	45.8	43.0	35.1	81.8	42.8	43.0	43.1	43.1	42.9	43.0	38.0	0.6	-15.0	-15.0	0.6	91.1
Pressure	kPag	17826	3820	500	3825	3975	69	276	72	69	3	41	3825	41	41	34	447	1374	345	142	142	345	1395
Total Mole Flow	kgmol/h	784.3	785.0	34748.1	15.2	10.1	12.7	2.5	2.6	5.1	4.8	52.7	0.0	2.2	2.2	1243.1	474.3	406.5	406.5	6.923	6.923	1.155	474.3
Total Mass Flow	kg/h	33.388	33.388	1,028,834	1,028,834	1,507	1,580	110	108	218	147	951	0	39	39	22,407	22,407	8,078	6,923	6,923	3576.6	3576.6	8,078
Volume Flow	m3/h	38.8	421.2	954.7	987.2	1.5	1.4	17.7	39.2	78.6	142.6	2.4	0.0	0.0	0.0	22.6	22.6	13.7	10.8	201.6	3576.6	334.1	890.5
Total Heat Flow	KW	-478	1,754	-358,155	-338,057	-178	-119	7	8	13	15	-484	0	-20	-20	-11,438	-11,432	-1,286	-1,484	-1,484	981	188	1,565
VAPOUR PHASE																							
Vapor Mole Flow	kgmol/h	-	785.0	-	-	-	-	2.5	2.5	5.1	4.8	0.1	-	-	-	-	-	-	-	21.8	406.5	67.8	474.3
Vapor Mass Flow	kg/h	-	33,389	-	-	-	9	110	108	217	147	3	-	-	-	-	-	-	-	371	6,923	1,155	8,078
Vapor Actual Volume Flow	m3/h	-	421.2	-	-	-	3.8	17.7	38.2	78.6	142.6	1.5	-	-	-	-	-	-	-	191.7	3576.6	334.1	890.5
Vapor Std. Volume Flow	sm3/h	-	18122.9	-	-	-	4.8	59.5	119.7	112.7	112.7	1.8	-	-	-	-	-	-	-	516.2	9830.8	1806.0	11236.8
Vapor Molecular Weight	g/mol	-	43.65	-	-	-	42.15	43.92	42.36	42.95	30.83	42.37	-	-	-	-	-	-	-	17.03	17.03	3.46	9.07
Vapor Mass Density	kg/m3	-	79.26	-	-	-	2.23	6.24	2.71	2.76	1.03	2.20	-	-	-	-	-	-	-	0.009	0.009	0.009	0.013
Vapor Viscosity	cP	-	0.018	-	-	-	0.018	0.016	0.018	0.015	0.014	0.015	-	-	-	-	-	-	-	2.117	2.117	2.177	2.399
Vapor Specific Heat	KJ/kg-K	-	1.148	-	-	-	0.948	0.883	0.987	0.881	1.197	0.886	-	-	-	-	-	-	-	0.021	0.021	0.024	0.036
Vapor Thermal Conductivity	W/m-K	-	0.025	-	-	-	0.023	0.019	0.019	0.018	0.023	0.018	-	-	-	-	-	-	-	0.9705	0.9705	0.9526	0.9274
Vapor Z Factor	-	-	0.8163	-	-	-	0.9953	0.9834	0.9922	0.9918	0.9947	0.9935	-	-	-	-	-	-	-	1.341	1.341	1.359	1.374
Vapor Cp / Cv	-	-	1.614	-	-	-	1.271	1.289	1.283	1.285	1.299	1.291	-	-	-	-	-	-	-	-	-	-	-
MOLE FRACTION VAPOUR PHASE																							
Vap. Carbon Dioxide	%	-	98.95	-	-	-	92.73	99.66	93.94	96.09	49.46	93.71	-	-	-	-	-	-	-	0.00	0.00	0.00	0.00
Vap. Hydrogen	%	-	0.75	-	-	-	0.00	0.04	0.64	0.34	0.34	0.00	-	-	-	-	-	-	-	0.00	0.00	0.00	0.00
Vap. Nitrogen	%	-	0.30	-	-	-	0.00	0.02	0.26	0.14	0.14	0.01	-	-	-	-	-	-	-	0.00	0.00	0.00	0.00
Vap. Water	%	-	0.00	-	-	-	7.24	0.28	5.16	3.44	50.06	6.28	-	-	-	-	-	-	-	0.00	0.00	0.00	0.00
Vap. Ethylene Glycol	%	-	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	-	-	-	0.00	0.00	0.00	0.00
Vap. Ammonia	%	-	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	-	-	-	-	-	-	-	0.00	0.00	0.00	0.00
Vapor Total	%	-	100.00	-	-	-	99.98	100.00	100.00	100.00	100.00	100.00	-	-	-	-	-	-	-	100.00	100.00	100.00	100.00
LIQUID PHASE																							
Liquid Mole Flow	kgmol/h	764.3	-	34748.1	34748.1	15.2	10.1	12.5	0.1	0.1	-	52.6	0.0	2.2	2.2	1243.1	1243.1	474.3	406.5	384.7	-	-	-
Liquid Mass Flow	kg/h	33,366	-	1,026,834	1,026,834	1,670	1,507	1,551	2	1	-	946	0	39	39	22,407	22,407	8,078	6,923	6,552	-	-	-
Liquid Actual Volume Flow	m3/h	36.9	-	954.7	987.2	1.5	1.4	1.4	0.0	0.0	-	1.0	0.0	0.0	0.0	22.6	22.6	13.7	10.8	9.9	-	-	-
Liquid Std Volume Flow	m3/h	41.1	-	988.2	988.2	1.5	1.3	1.4	0.0	0.0	-	0.9	0.0	0.0	0.0	22.4	22.4	13.1	11.2	10.6	-	-	-
Liquid Mass Density	kg/m3	903.1	-	1,075.6	1,061.6	1,116.9	1,106.1	1,072.0	990.2	993.3	-	990.2	996.1	990.0	990.0	990.2	990.2	587.9	641.3	660.5	-	-	-
Liquid Viscosity	cP	0.1051	-	4.3738	2.7518	3.9685	15.3776	3.0401	0.6163	0.7164	-	0.6188	0.5943	0.6162	0.6162	0.6178	0.6166	0.1181	0.1749	0.2094	-	-	-
Liquid Specific Heat	KJ/kg-K	2.3375	-	3.6979	3.7145	2.3687	2.3005	2.5568	4.2214	4.2200	-	4.2212	4.2303	4.2211	4.2211	4.2212	4.2207	5.2266	4.6472	4.4919	-	-	-
Thermal Conductivity	W/m-K	0.1125	-	0.3629	0.3729	0.1523	0.2436	0.2474	0.6302	0.6203	-	0.6301	0.6196	0.6305	0.6305	0.6302	0.6304	0.4489	0.5329	0.5886	-	-	-
Surface Tension	Dyn/cm	0.56	-	64.08	60.95	38.85	43.88	40.46	69.07	70.34	-	69.11	68.35	69.07	69.07	69.09	69.07	16.87	25.36	29.07	-	-	-
MOLE FRACTION LIQUID PHASE																							
Liquid Carbon Dioxide	%	98.97	-	0.00	0.00	18.01	0.17	0.44	0.05	0.06	-	0.04	1.09	0.03	0.03	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00
Liquid Hydrogen	%	0.73	-	0.00	0.00	0.01	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Liquid Nitrogen	%	0.30	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Liquid Water	%	0.00	-	73.81	73.81	16.26	0.89	19.61	99.95	99.94	-	99.98	98.91	99.97	99.97	99.96	99.96	0.00	0.00	0.00	0.00	0.00	0.00
Liquid Ethylene Glycol	%	0.00	-	26.19	26.19	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Liq. Triethylene Glycol	%	0.00	-	0.00	0.00	65.72	98.93	79.95	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Liquid Ammonia	%	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Liquid Total	%	100.00	-	100.00	100.00	100.00	100.00	100.00	100.00	100.00	-	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

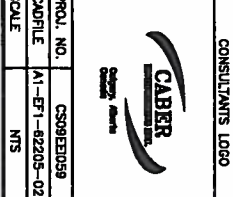
NUMBER	REFERENCE DRAWINGS	TITLE	NO.	ISSUE	REVISIONS	DATE	BY	CHK'D	ENG	APP'D
0	ISSUED FOR CONSTRUCTION					2011.DEC.23	JG			

NO.	REVISIONS	DATE	BY	CHK'D	ENG	APP'D

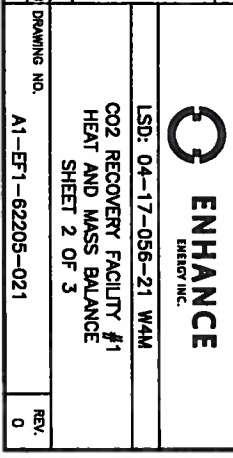
NO.	NOTES



PROFESSIONAL ENGINEER
MILWAUKEE, WISCONSIN
2011.10.03



CABER ENGINEERING
CONSULTANTS LOGO



ENHANCE ENERGY INC.
LSD: 04-17-056-21 WAM
CO2 RECOVERY FACILITY #1
HEAT AND MASS BALANCE
SHEET 2 OF 3

PROJ. NO.	SCALE	DRAWING NO.	REV.
CS09E2059	AS SHOWN	A1-EF1-62205-021	0

PROD Stream Number	113	116	117	131	132	133	134	135	136	137	138	139	140	141	142	143	144	146	150	151	153	
FROM	AC-440/441	EG Supply	K-400	EG Supply	E-101/102	EG Supply	E-221	EG Supply	E-221	EG Supply	E-222	EG Supply	E-222	EG Supply	E-223	EG Supply	E-224	EG Supply	E-224	EG Supply	E-225	EG Supply
TO	V-445	K-400	EG Return	E-101/102	EG Return	E-221	EG Return	E-222	EG Return	E-223	EG Return	E-224	EG Return	E-225	EG Return	E-226	EG Return	Delv Coolers	EG Return	E-325	EG Return	EG Return
Mass Flow CO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BULK PHASE	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units	Units
Vapor Mole Frac	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
Temperature	38.0	38.0	43.8	38.0	75.0	38.0	48.0	38.0	45.0	38.0	45.0	38.0	45.0	38.0	45.0	38.0	45.0	38.0	80.0	80.0	80.0	
Pressure	1374	431	376	431	425	431	339	431	376	431	325	431	346	431	352	431	388	431	411	411	411	
Total Mole Flow	474.3	3304.6	3304.6	13383.9	13383.9	3075.2	3075.2	2921.7	2921.7	2582.9	2582.9	2439.6	2439.6	2454.7	2454.7	2682.0	2682.0	148.6	148.6	40.8	411	
Total Mass Flow	8.078	97.653	97.653	395.506	395.506	90.875	90.875	86.338	86.338	76.328	76.328	72.092	72.092	72.538	72.538	79.257	79.257	4.390	4.390	1.206	152	
Volume Flow	13.7	90.8	91.1	367.7	372.9	84.5	85.0	80.3	80.7	71.0	71.3	67.0	67.4	67.4	67.8	73.7	74.0	4.1	4.1	1.1	0.1	
Total Heat Flow	-1.296	-34.061	-33.488	-137.951	-122.502	-31.897	-30.931	-30.114	-29.478	-28.823	-28.061	-25.145	-24.614	-25.301	-24.786	-27.844	-27.059	-1.531	-1.430	-383	-49	
VAPOUR PHASE																						
Vapor Mole Flow	kgmole/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	
Vapor Mass Flow	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	
Vapor Actual Volume Flow	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	
Vapor Std. Volume Flow	sm3/h	sm3/h	sm3/h	sm3/h	sm3/h	sm3/h	sm3/h	sm3/h	sm3/h	sm3/h	sm3/h	sm3/h	sm3/h	sm3/h	sm3/h	sm3/h	sm3/h	sm3/h	sm3/h	sm3/h	sm3/h	
Vapor Molecular Weight	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	
Vapor Mass Density	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	
Vapor Viscosity	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	
Vapor Specific Heat	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	
Vapor Thermal Conductivity																						
Vapor Z Factor																						
Vapor Cp / Cv																						
MOLE FRACTION VAPOUR PHASE																						
Vap Carbon Dioxide	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
Vap Hydrogen	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
Vap Nitrogen	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
Vap Water	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
Vap Ethylene Glycol	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
Vap Ammonia	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
Vapor Total	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
LIQUID PHASE																						
Liquid Mole Flow	kgmole/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	
Liquid Mass Flow	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	kg/h	
Liquid Actual Volume Flow	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	
Liquid Std Volume Flow	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	m3/h	
Liquid Mass Density	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	kg/m3	
Liquid Viscosity	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	cp	
Liquid Specific Heat	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	kJ/kg-K	
Thermal Conductivity	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	W/m-K	
Surface Tension	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	Dyn/cm	
MOLE FRACTION LIQUID PHASE																						
Liquid Carbon Dioxide	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
Liquid Hydrogen	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
Liquid Nitrogen	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
Liquid Water	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
Liquid Ethylene Glycol	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
Liqd Triethylene Glycol	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
Liquid Ammonia	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	
Liquid Total	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	

NUMBER	0	ISSUE	ISSUED FOR CONSTRUCTION	REVISIONS	DATE	BY	CHK'D	ENG	APP'D	NOTES
					2011.DEC.23	JG				

PROJ. NO.	CS09E0059	CONSULTANT'S LOGO	CABER ENGINEERING
CADFILE	A1-EF1-62205-021C		
SCALE	NTS		

DRAWING NO.	A1-EF1-62205-021
REV.	0

ENHANCE ENERGY INC.

LSD: 04-17-056-21 WAM

CO2 RECOVERY FACILITY #1

HEAT AND MASS BALANCE

SHEET 3 OF 3



Enhance Energy Inc. and North West Redwater Partnership

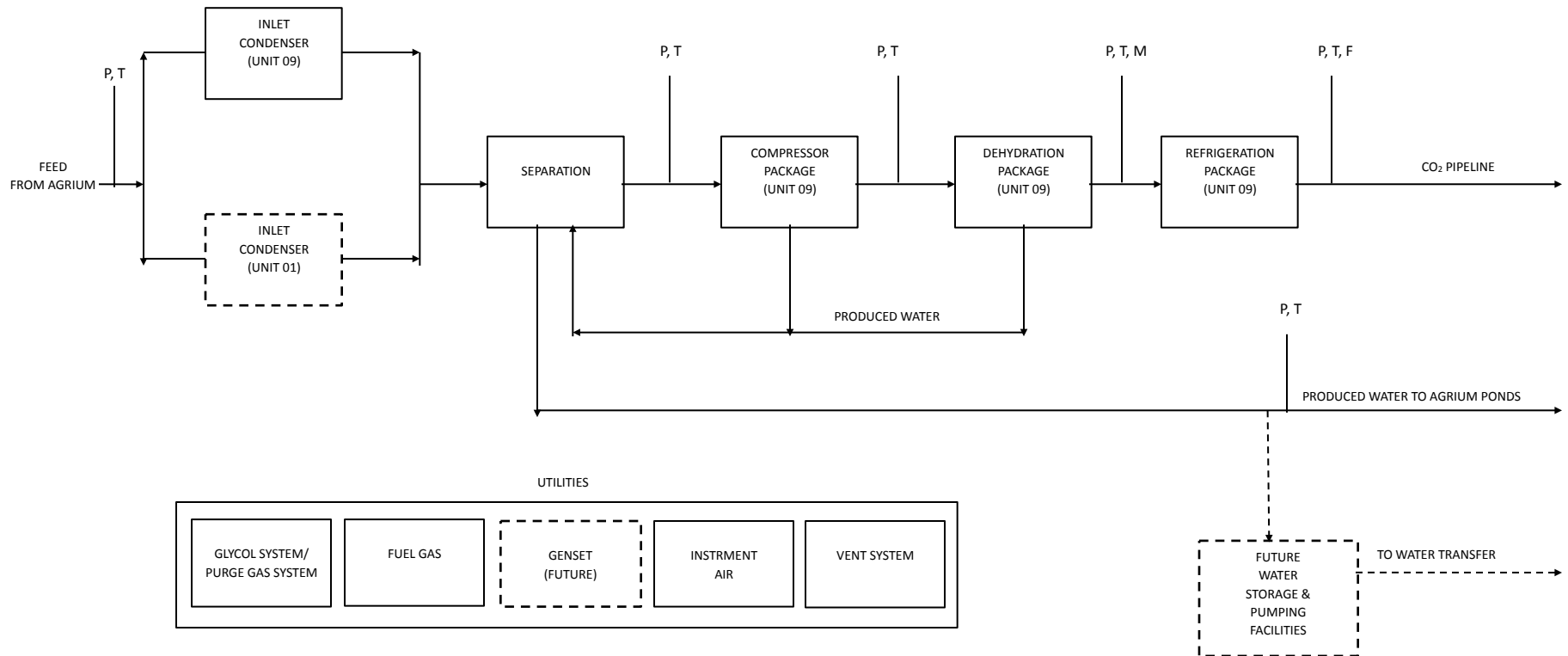
APPENDIX iii Agrium CRF Measurement Point Block Diagram



Autumn Colour, by Ted Rafferty, a local Alberta painter



Enhance Energy, Inc – Agrium CO₂ Recovery Facility Process Measurement Point Diagram



P- Pressure
 T- Temperature
 F- Flow
 M- Moisture

Enhance Energy Inc. and North West Redwater Partnership

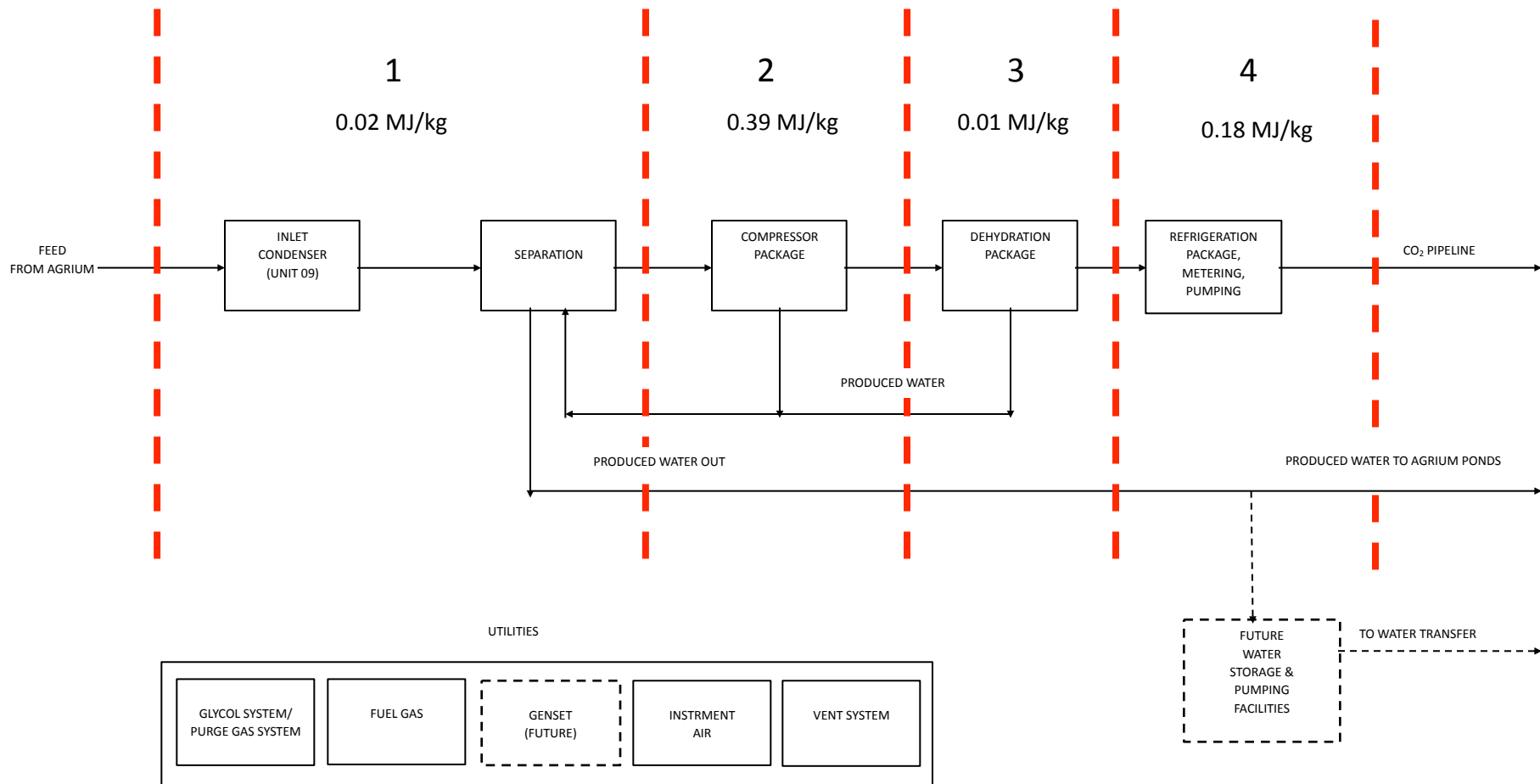
APPENDIX iv Agrium CRF Energy Boundary Block Diagram



Autumn Colour, by Ted Rafferty, a local Alberta painter



Enhance Energy, Inc – Agrium CO₂ Recovery Facility Energy Boundary Diagram



- 1 – Inlet / Separation
- 2- Compression
- 3- Dehydration
- 4- Refrigeration/Metering/Pumping

Note – each area shares an appropriate portion of the utility systems

Enhance Energy Inc. and North West Redwater Partnership

APPENDIX v
Agrium CRF Produced
Water Analysis Report



Autumn Colour, by Ted Rafferty, a local Alberta painter



**Government
of Alberta** ■





Nalco Analytical Resources
 1601 West Diehl Road, Naperville, Illinois 60563-1198
 Phone: (630) 305-2316, Fax: (630) 305-2946, Analytical.Lab.Naperville@Nalco.com



Agrium Redwater
 Redwater AB Canada
 Sample Marked: T-903 Overhead Condensate
 SAP SoldTo Number: 0001000024

Sample Number: NW0702633
 Date Sampled: 16-Jan-2007
 Date Received: 15-Feb-2007
 Date Completed: 07-Mar-2007

Water Analysis Report

Cations/Metals	Filtered	Total
Aluminum (Al)	<1.0	<1.0 mg/L
Barium (Ba)	<4.1	<3.9 mg/L
Boron (B)	<1.0	<1.0 mg/L
Cadmium (Cd)	<0.41	<0.39 mg/L
Calcium (Ca)	<1.0	<1.0 mg/L
Chromium (Cr)	<0.10	<0.10 mg/L
Copper (Cu)	<0.10	<0.10 mg/L
Iron (Fe)	<0.10	<0.10 mg/L
Lead (Pb)	<2.0	<1.9 mg/L
Lithium (Li)	<0.10	<0.10 mg/L
Magnesium (Mg)	<4.1	<3.9 mg/L
Manganese (Mn)	<0.10	<0.10 mg/L
Molybdenum (Mo)	<1.0	<1.0 mg/L
Nickel (Ni)	<1.0	<1.0 mg/L
Phosphorus (P)	<10.1	<9.7 mg/L
Phosphorus (PO ₄)	<31.0	<29.7 mg/L
Potassium (K)	<7.1	6.9 mg/L
Silica (SiO ₂)	<10.8	<10.4 mg/L
Sodium (Na)	<2.0	<1.9 mg/L
Strontium (Sr)	<0.10	<0.10 mg/L
Vanadium (V)	<5.07	<4.85 mg/L
Zinc (Zn)	<0.10	<0.10 mg/L
Calcium (CaCO ₃)	<2.5	<2.4 mg/L
Magnesium (CaCO ₃)	<16.7	<16.0 mg/L
Sodium (CaCO ₃)	<4.4	<4.2 mg/L
Calculated Hardness (CaCO ₃)	NR*	NR*

Anions

Bromide (Br)	<10.0 mg/L
Chloride (Cl)	11 mg/L
Nitrate (NO ₃)	<10.0 mg/L
Nitrite (NO ₂)	<10.0 mg/L
Sulfate (SO ₄)	<10.0 mg/L
Chloride (CaCO ₃)	15 mg/L
Nitrate (CaCO ₃)	<8.1 mg/L
Sulfate (CaCO ₃)	<10.0 mg/L

Authorized by : David R. Szymborski





Nalco Analytical Resources
 1601 West Diehl Road, Naperville, Illinois 60563-1198
 Phone: (630) 305-2315, Fax: (630) 305-2946, Analytical.Lab.Naperville@Nalco.com



Agrium Redwater
 Redwater AB Canada
Sample Marked: T-903 Overhead Condensate
SAP SoldTo Number: 0001000024

Sample Number: NW0702633
Date Sampled: 16-Jan-2007
Date Received: 15-Feb-2007
Date Completed: 07-Mar-2007

Water Analysis Report

ALK - Alkalinity

Bicarbonate (CaCO ₃)	7100 mg/L
Carbonate (CaCO ₃)	110 mg/L
Methyl Orange (CaCO ₃)	7200 mg/L
Phenolphthalein (CaCO ₃)	53 mg/L

Others

pH	8.5 pH Units
Conductivity	13000 μ S/cm
Organic Carbon (C) - Total	1100 mg/L
MS Number	MS0048

Authorized by : David R. Szymborski



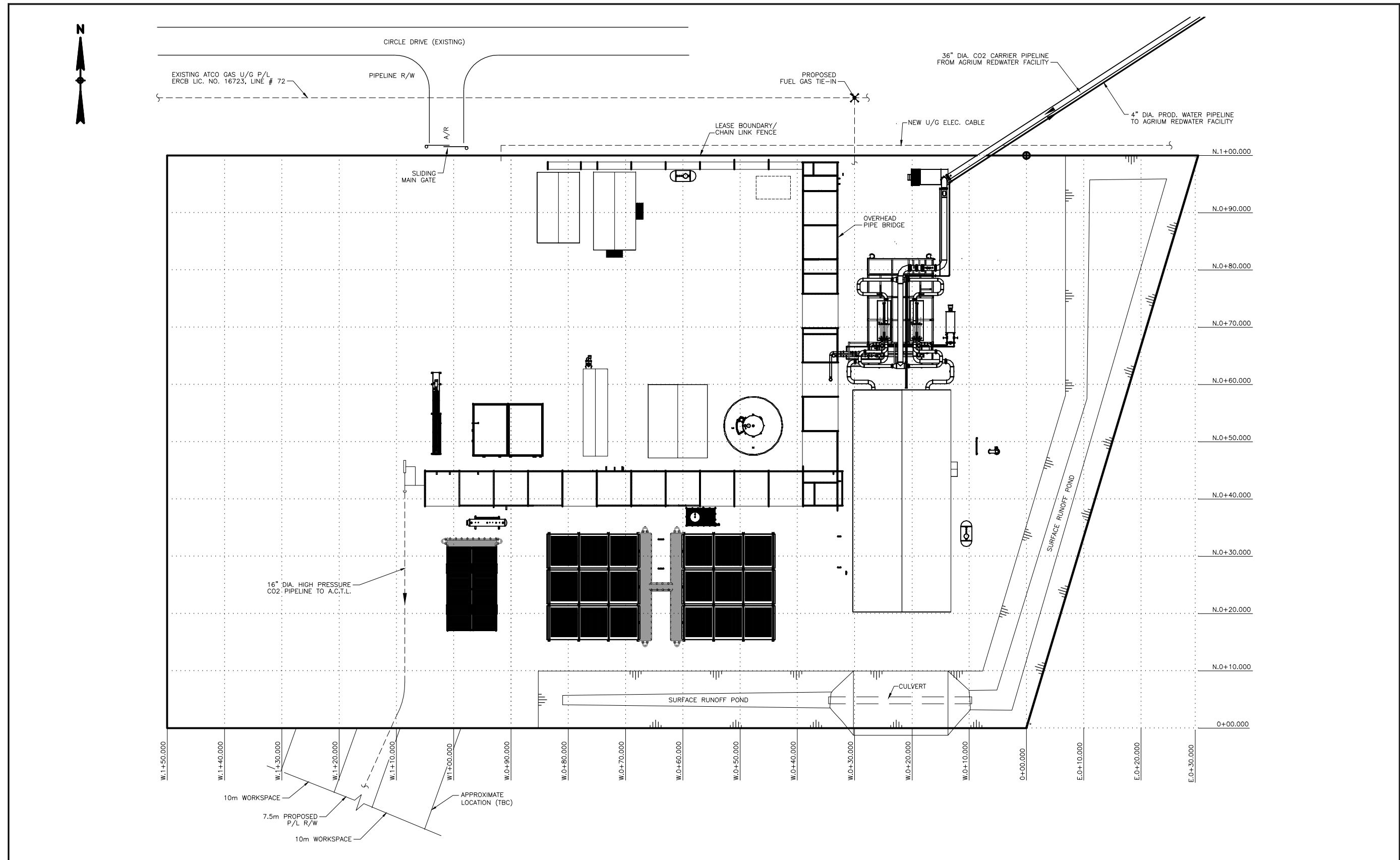
Enhance Energy Inc. and North West Redwater Partnership


APPENDIX vi Agrium CRF Plot Plan



Autumn Colour, by Ted Rafferty, a local Alberta painter





REFERENCE DRAWINGS		REVISIONS							NOTES	PERMIT AND ENGINEER STAMP	CONSULTANTS LOGO	 LSD: 04-17-056-21 W4M CO2 RECOVERY FACILITY #1 SITE PLAN
NUMBER	TITLE	NO.	ISSUE	DATE	BY	CHK'D	ENG	APP'D				
		A	ISSUED FOR INFORMATION	2012.MAR.07	JG							

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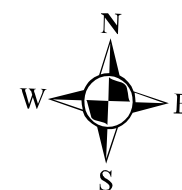
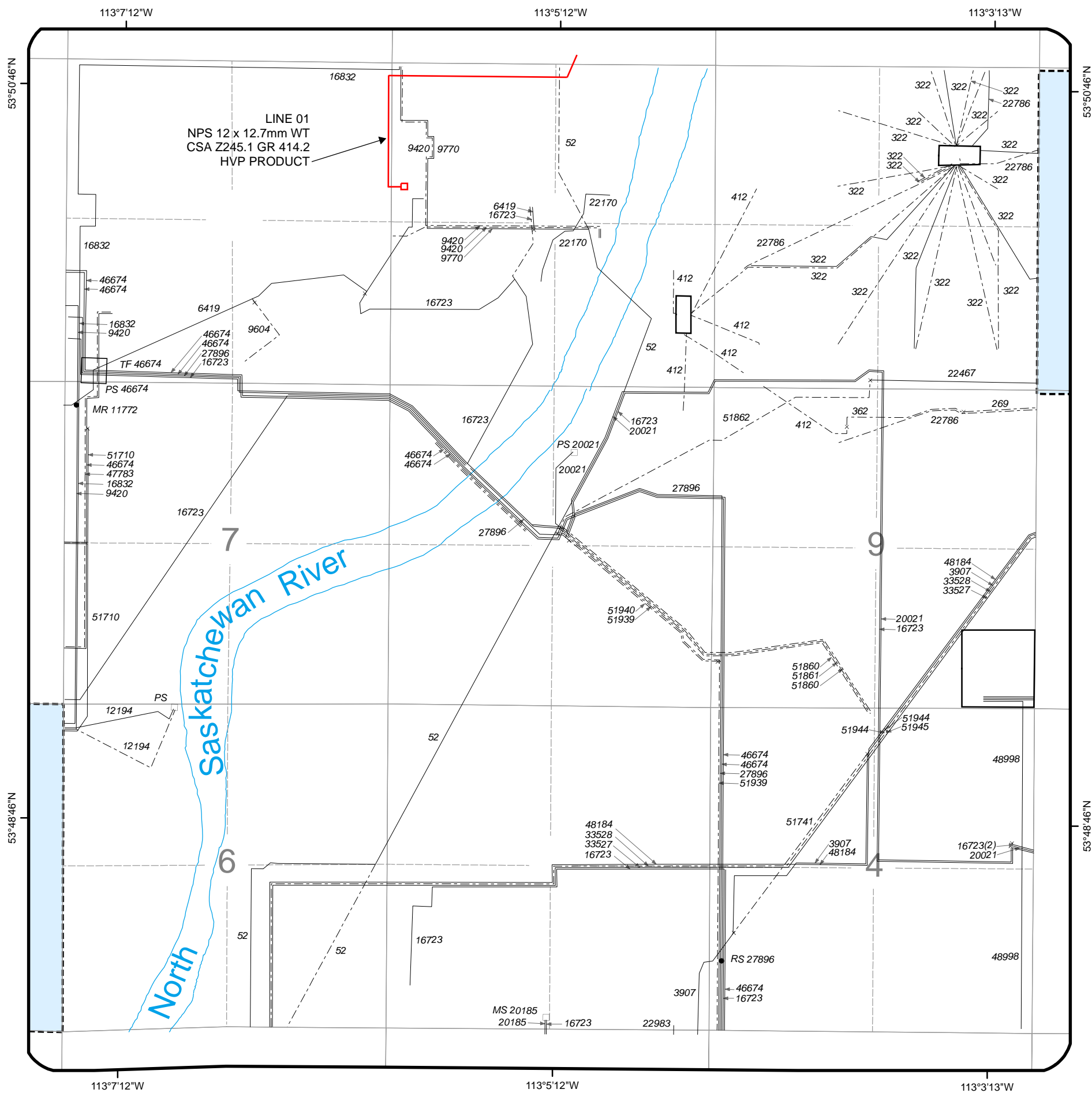
Enhance Energy Inc. and North West Redwater Partnership

APPENDIX vii ERCB ACTL Base Maps



Autumn Colour, by Ted Rafferty, a local Alberta painter





Coordinate System: 10TM



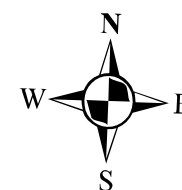
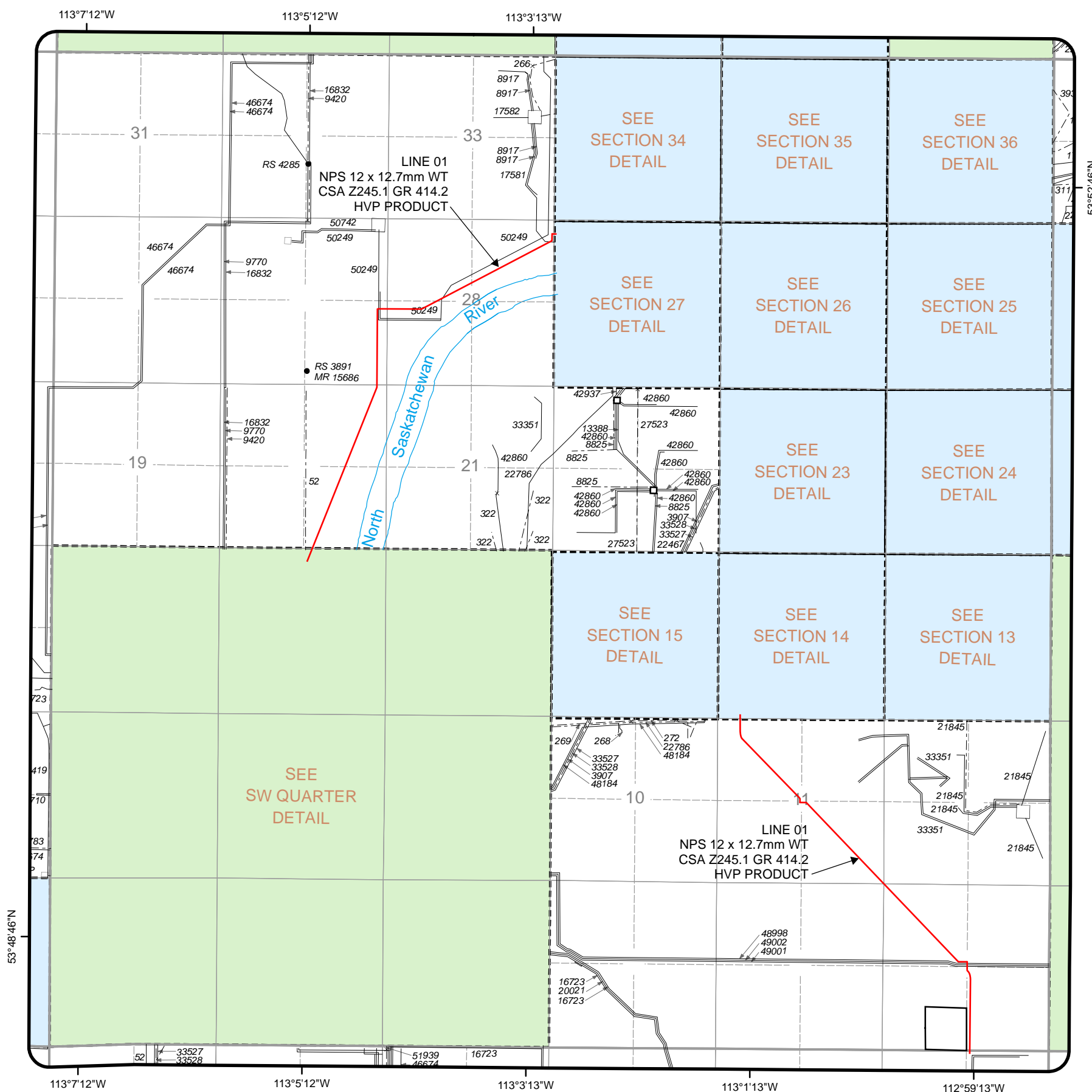
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SW .056- 21W4**

**REVISION DATE:
26 August 2010**

CAUTION
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 - LOW-PRESSURE GAS DISTRIBUTION LINES ARE NOT SHOWN.
 CONTACT THE GAS DISTRIBUTOR IN THIS AREA FOR LINE LOCATION

LEGEND

- PERMITTED:
- LICENSED:
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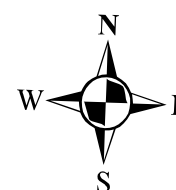
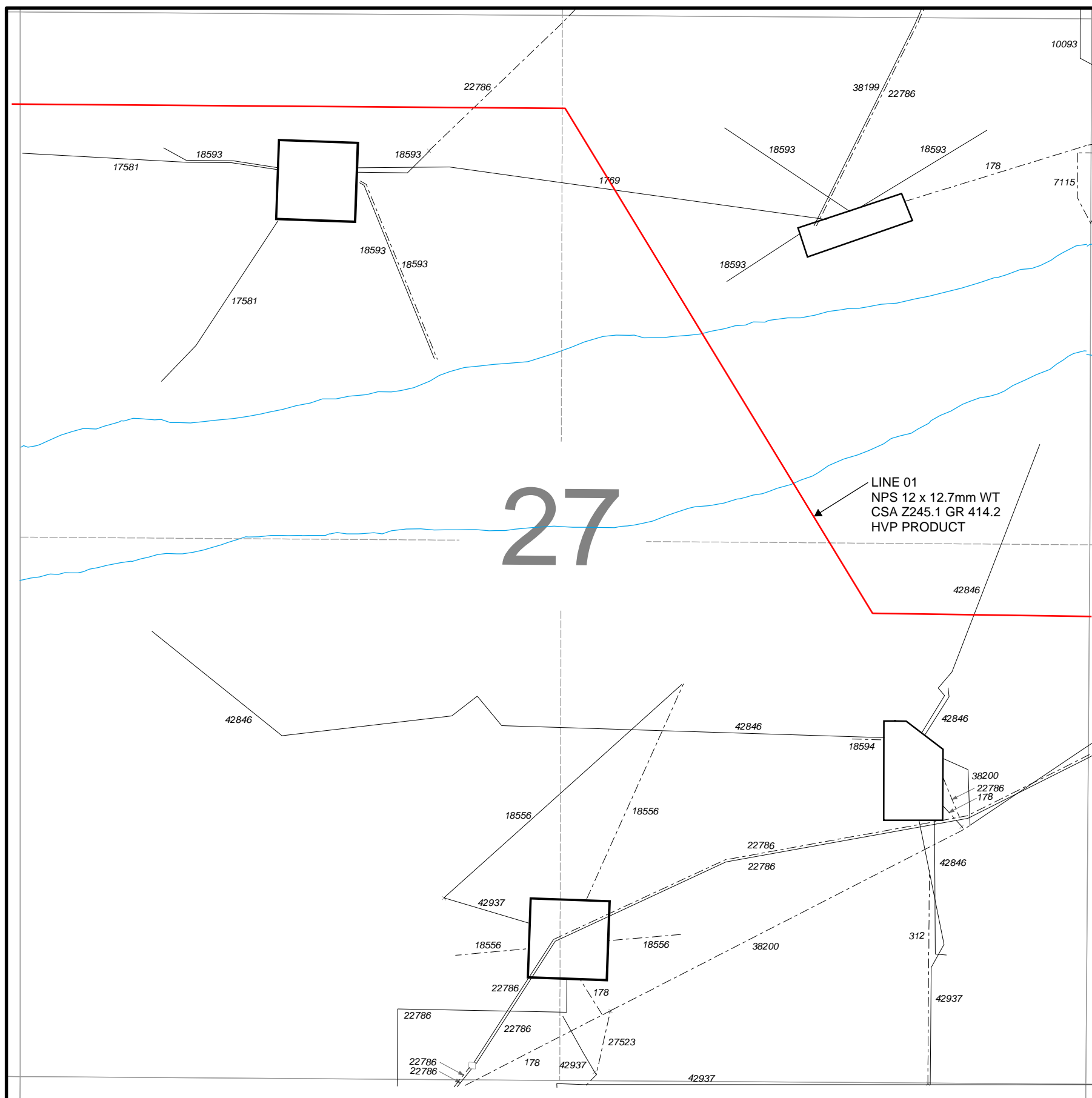
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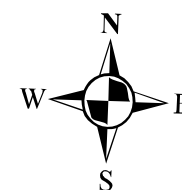
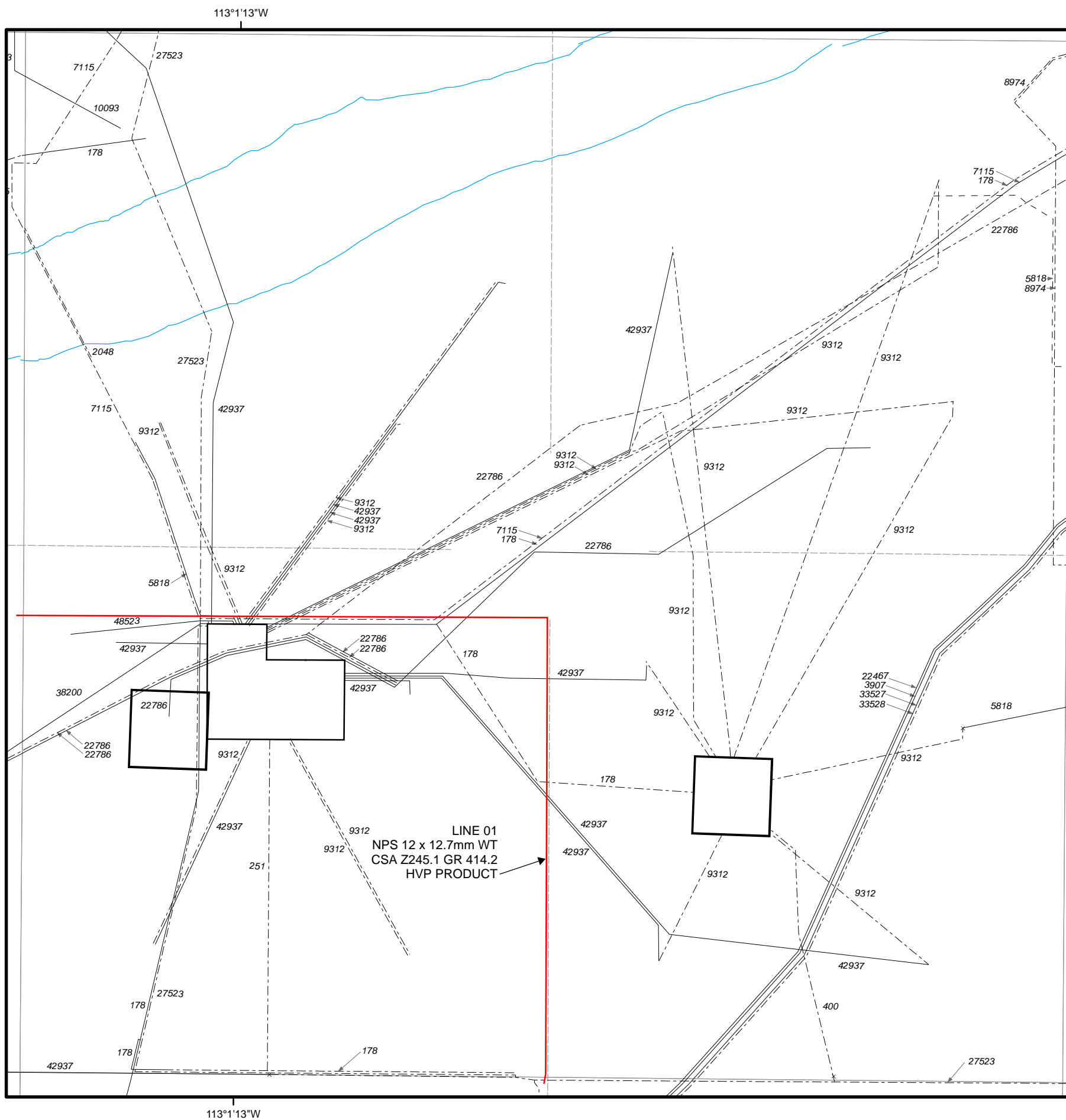
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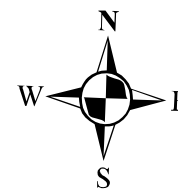
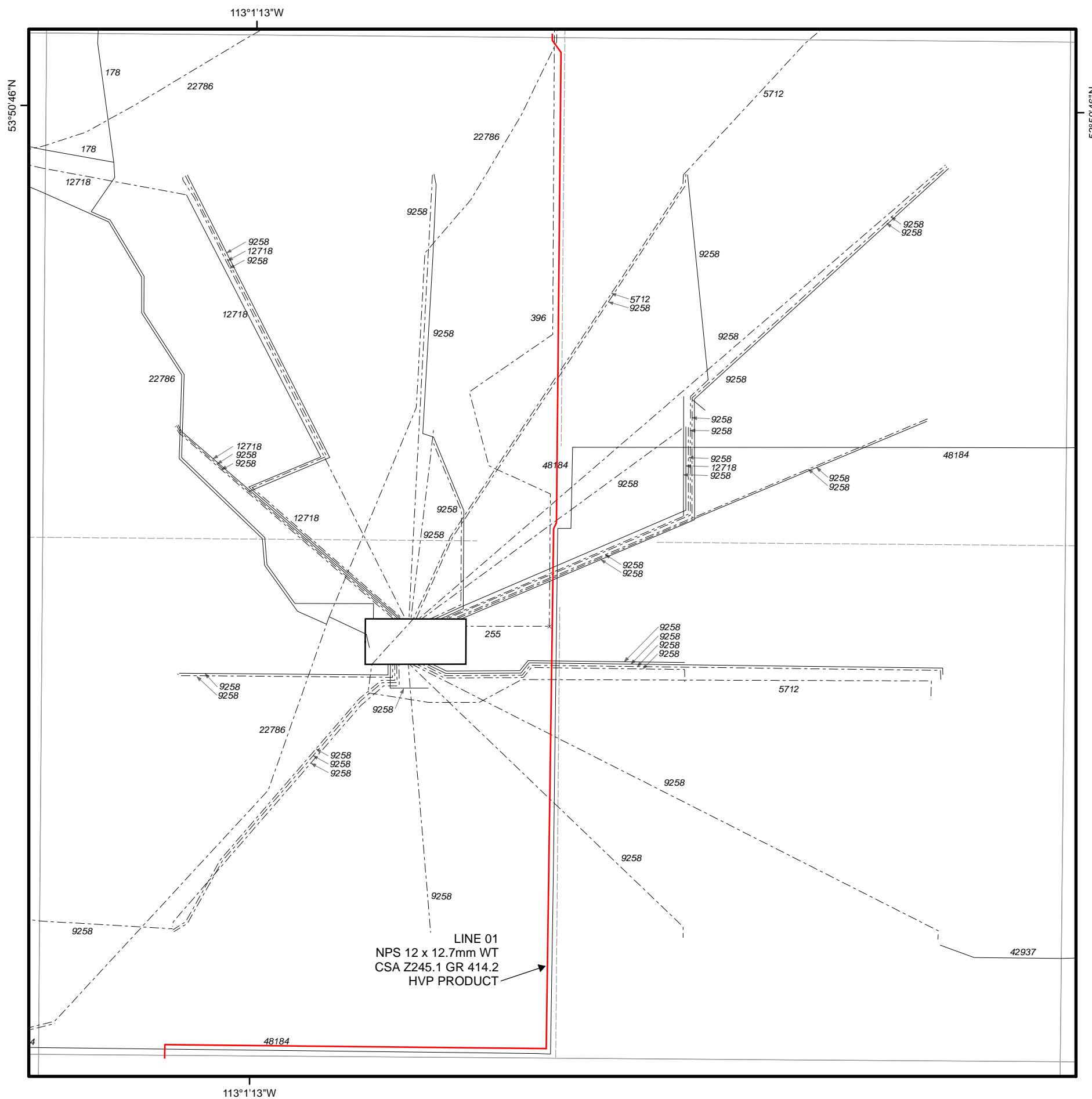
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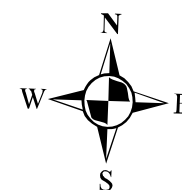
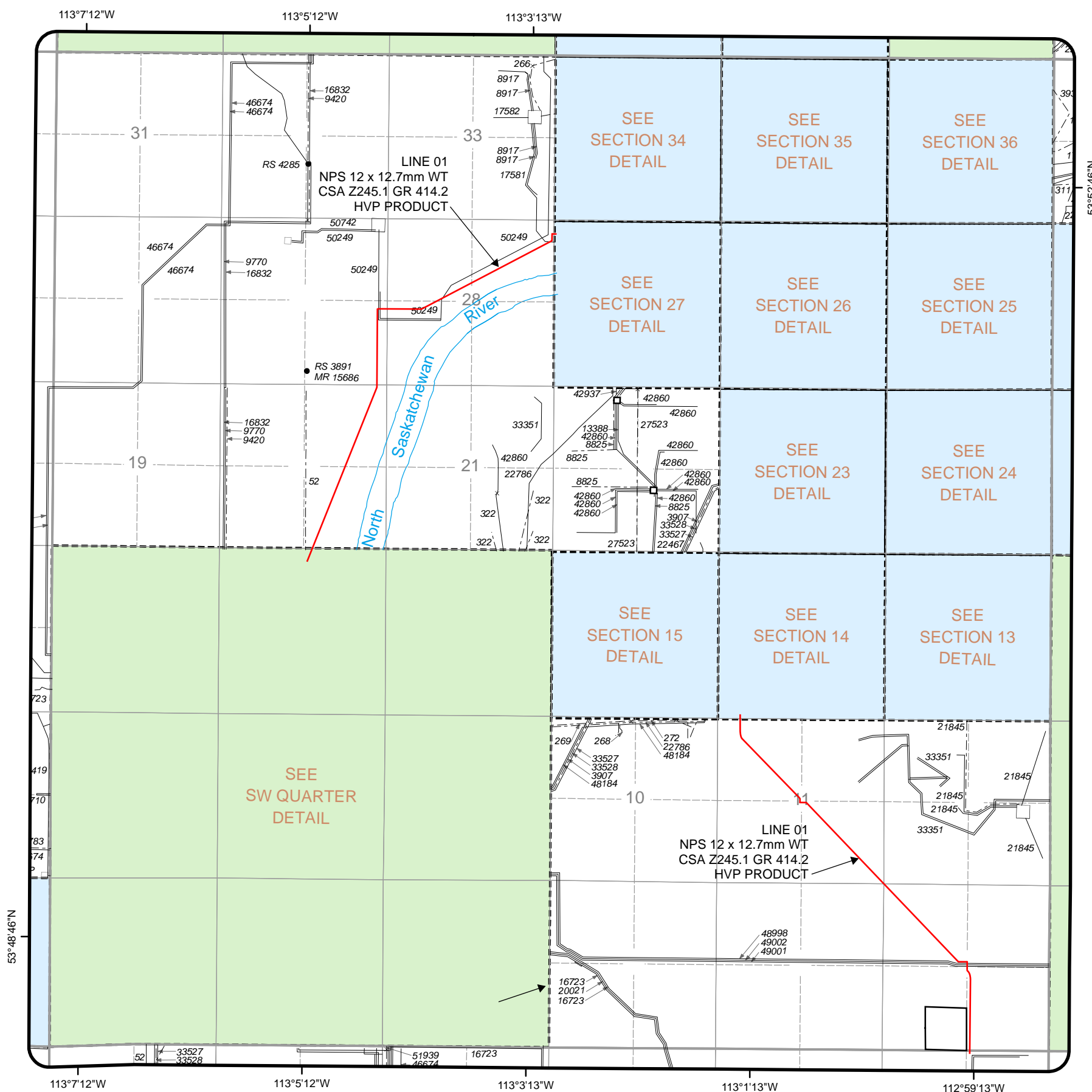
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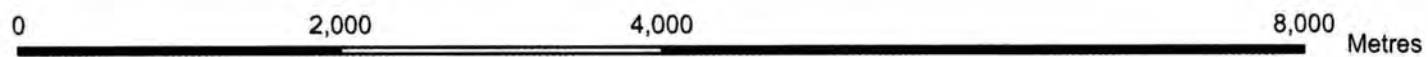
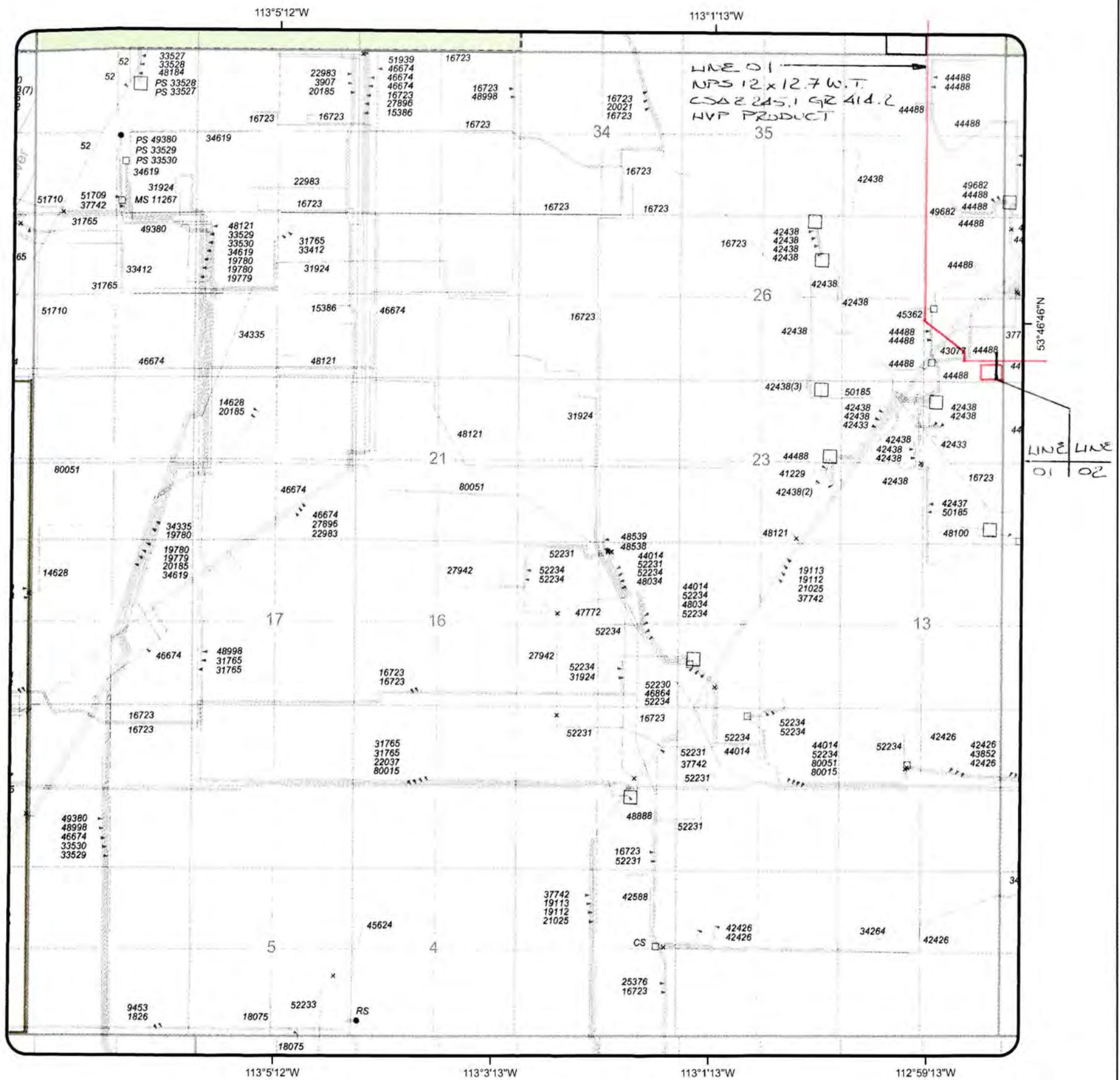
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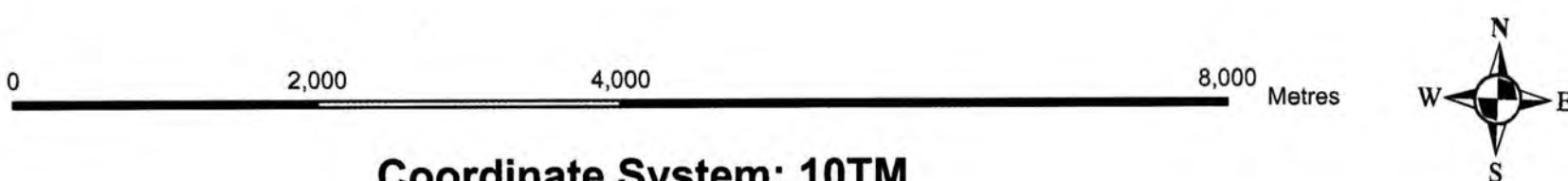
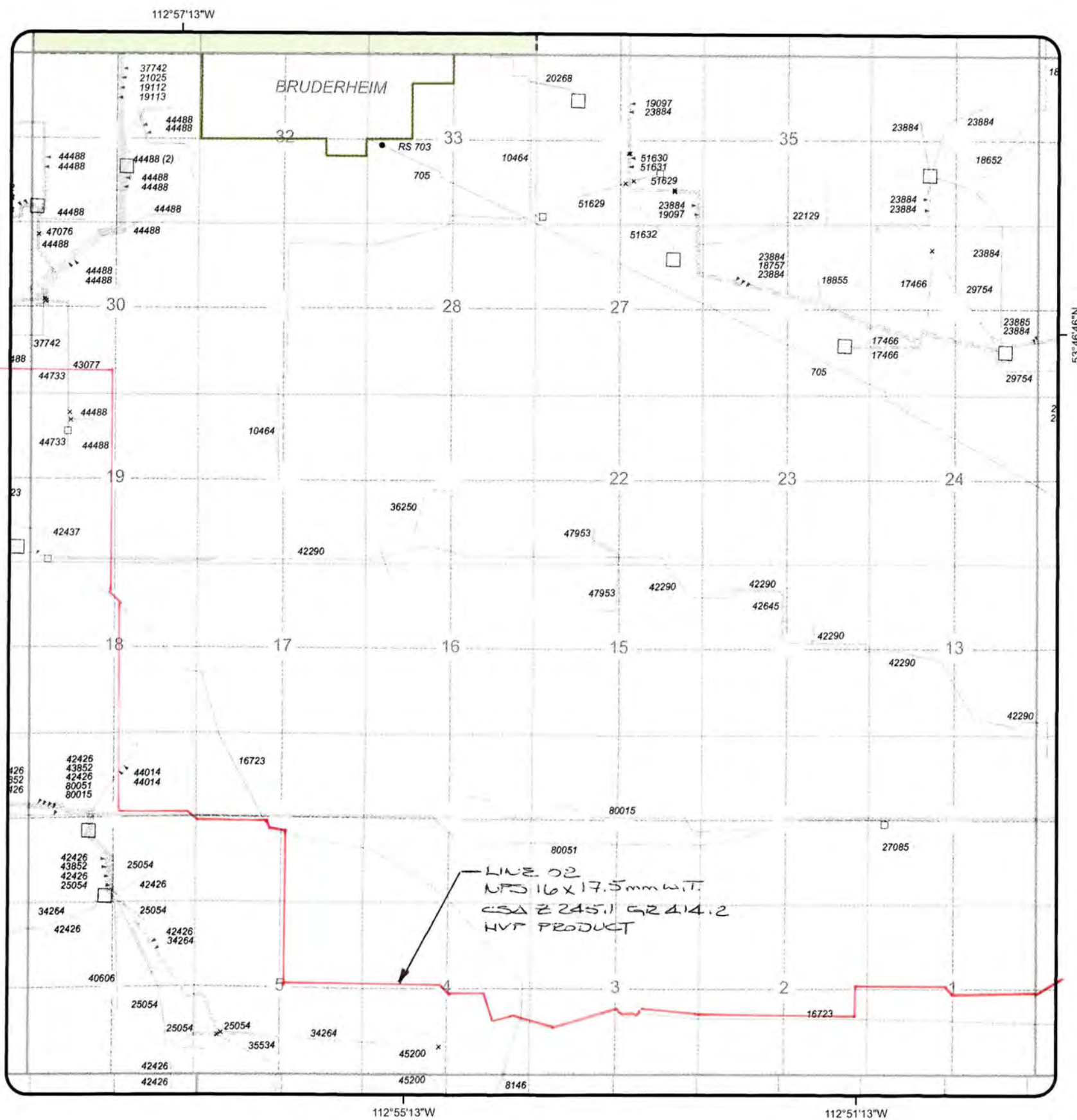
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10 July 2010**

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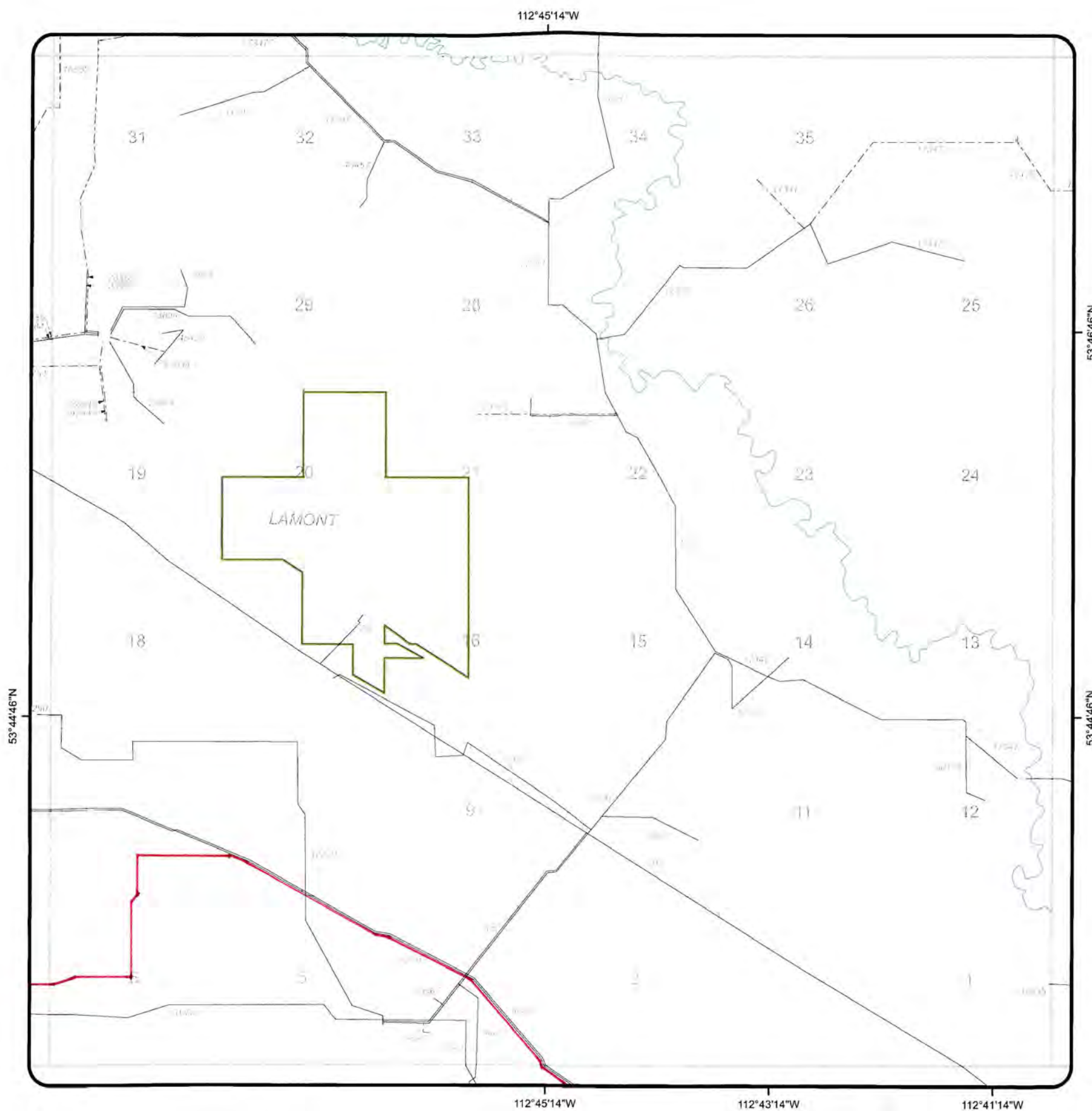
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11 May 2010**

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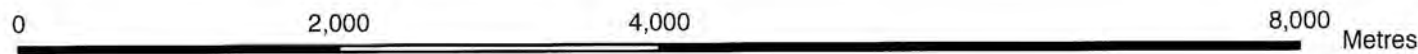
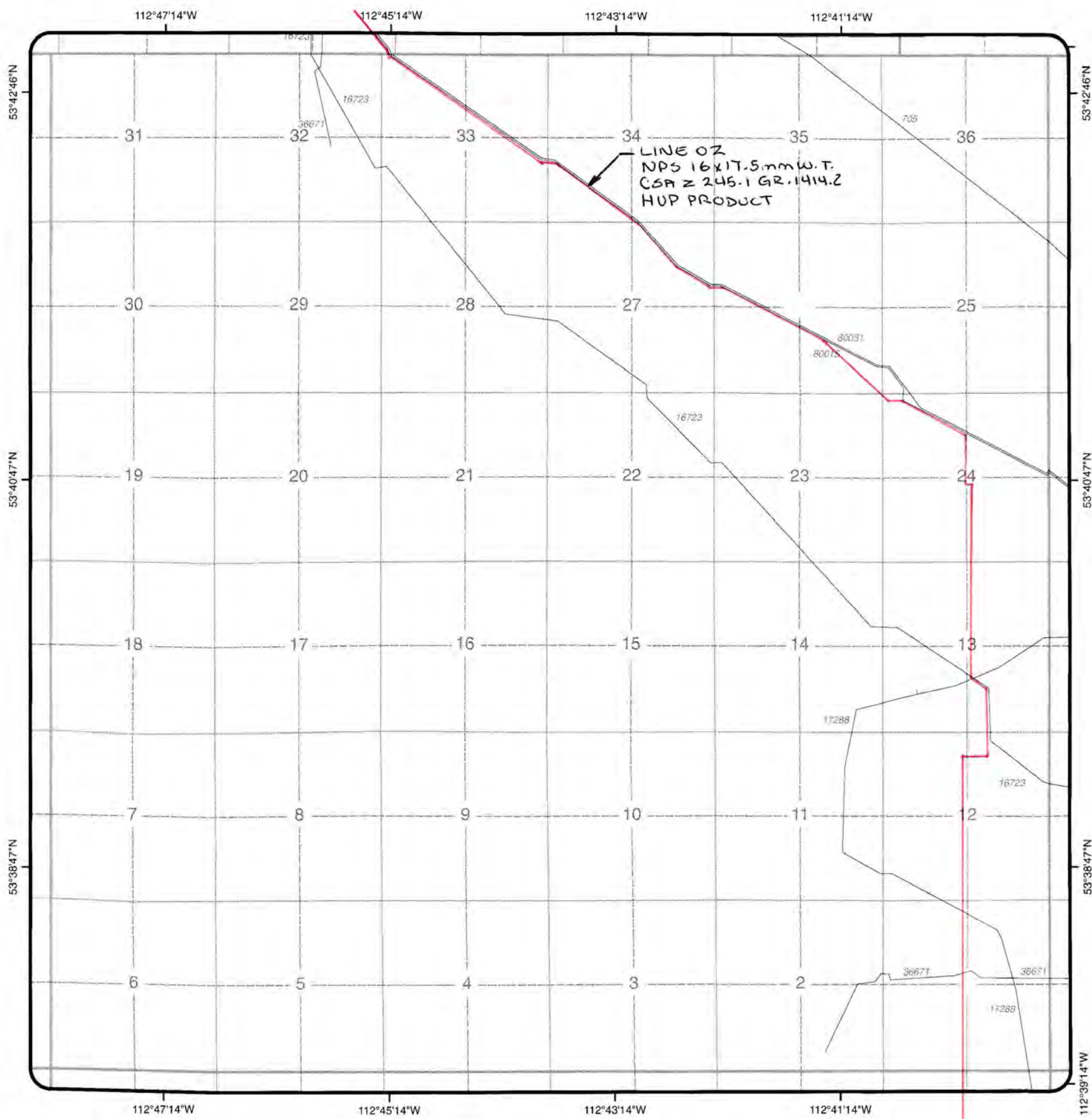
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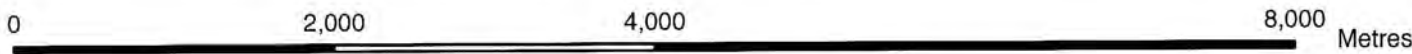
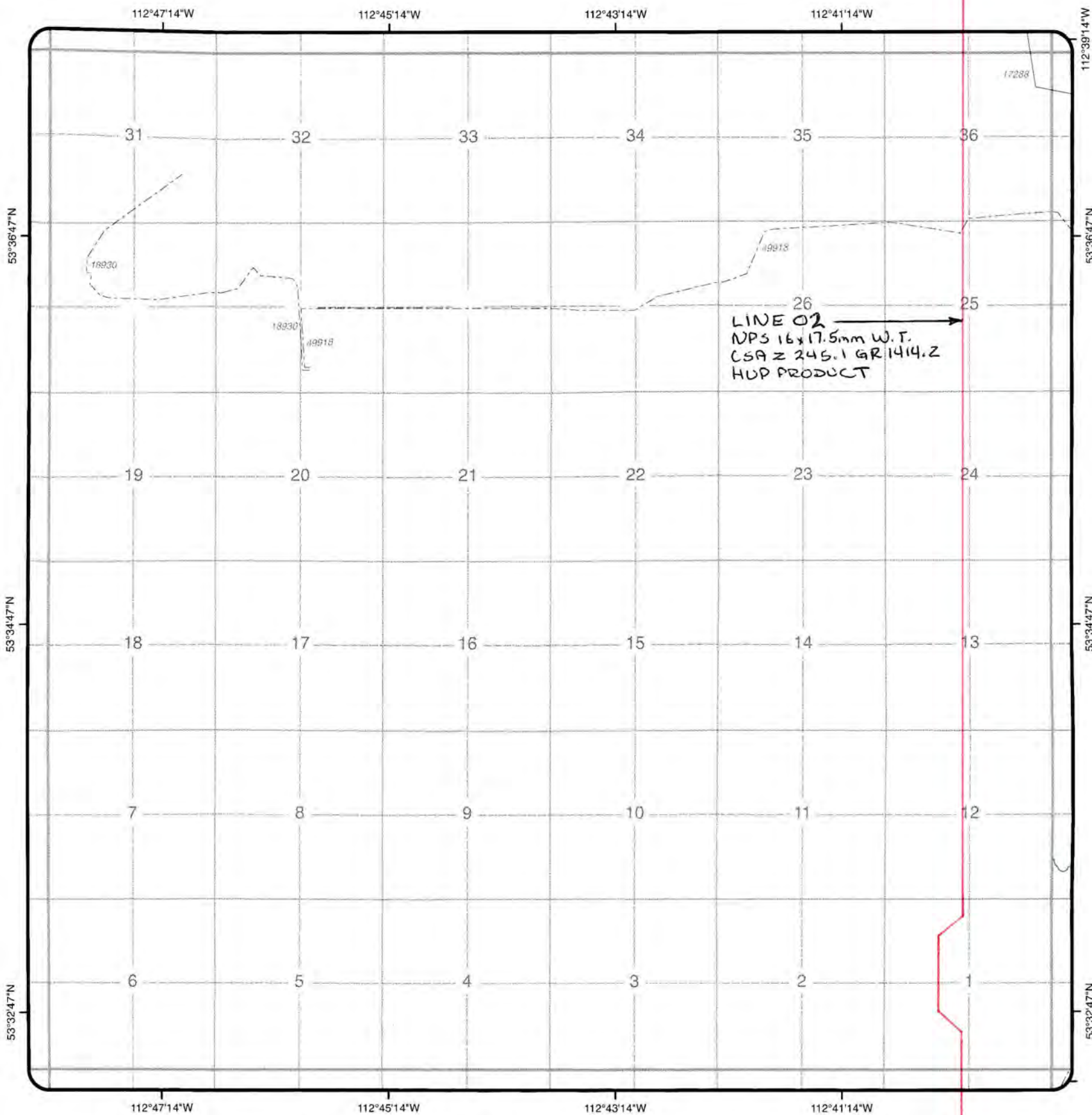
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Coordinate System: 10TM



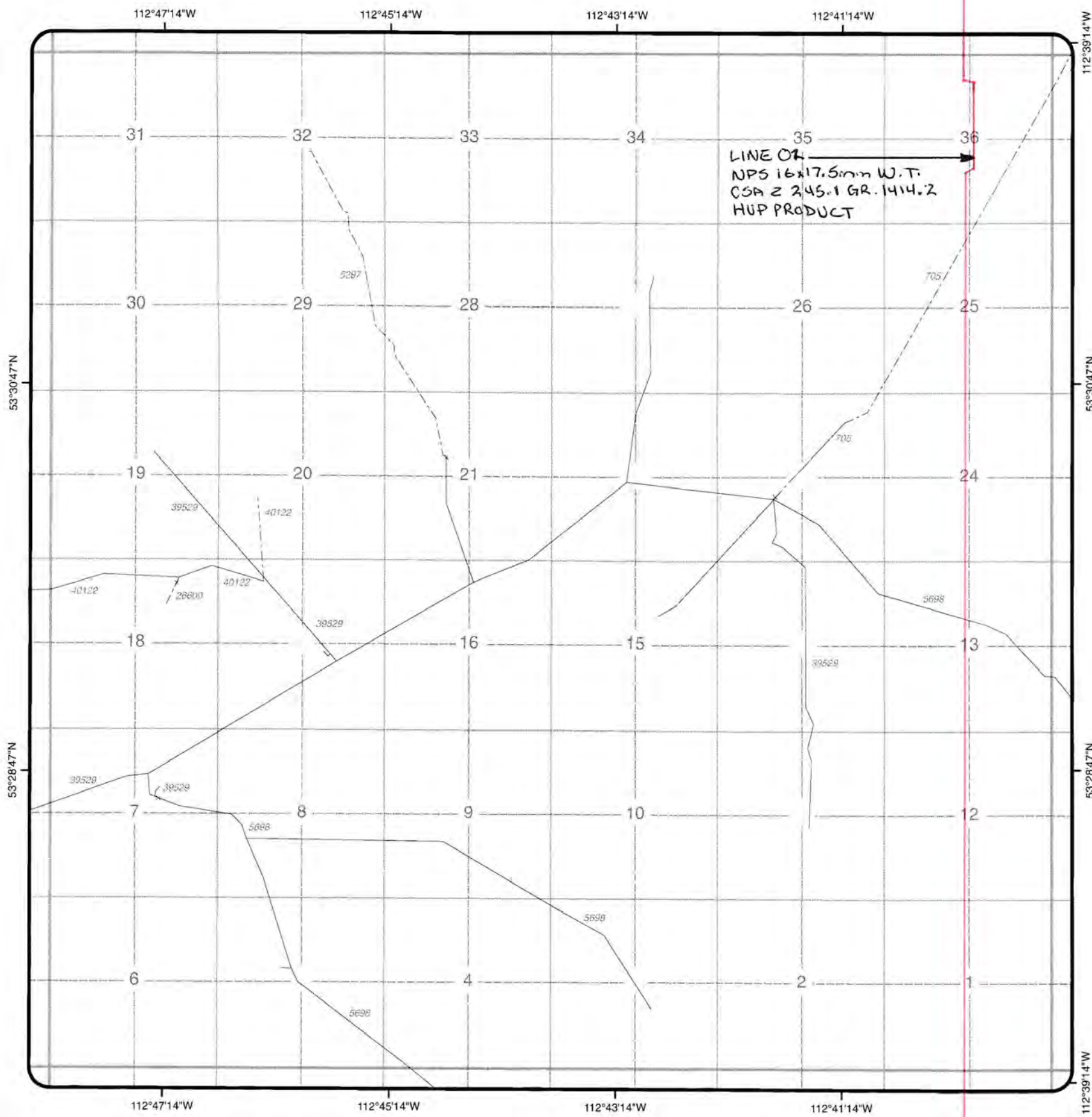
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**REVISION DATE:
27 February 2008**

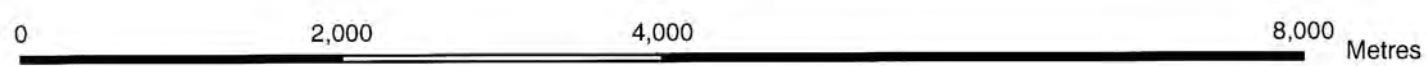
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LINE 02
 NPS 16x17.5mm W.T.
 CSA Z 245.1 GR. 1414.2
 HUP PRODUCT



Coordinate System: 10TM



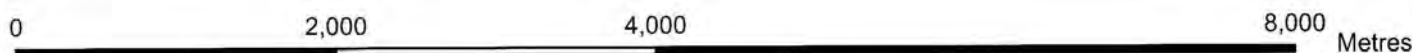
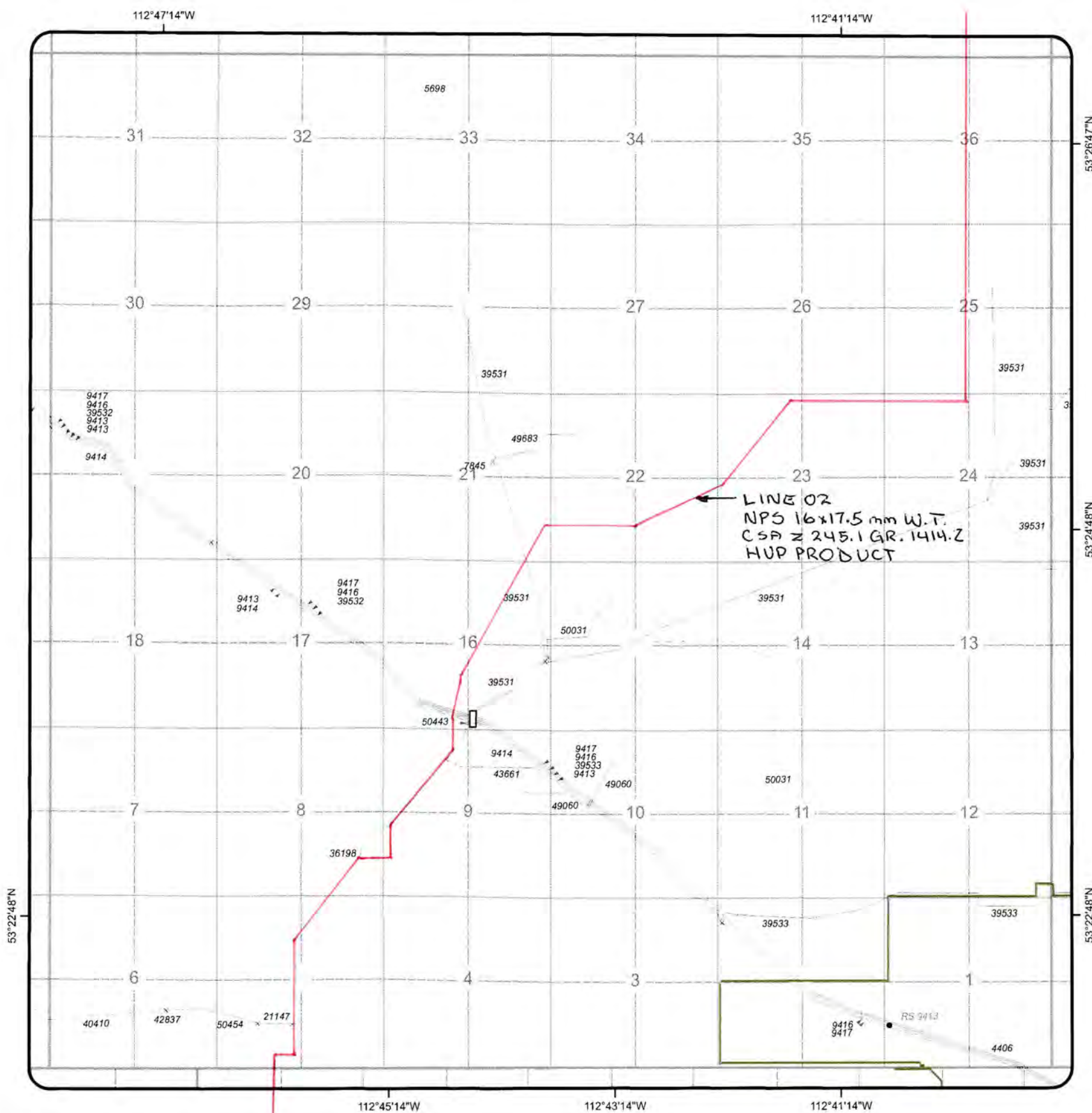
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**REVISION DATE:
 02 April 2008**

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LEGEND

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Coordinate System: 10TM



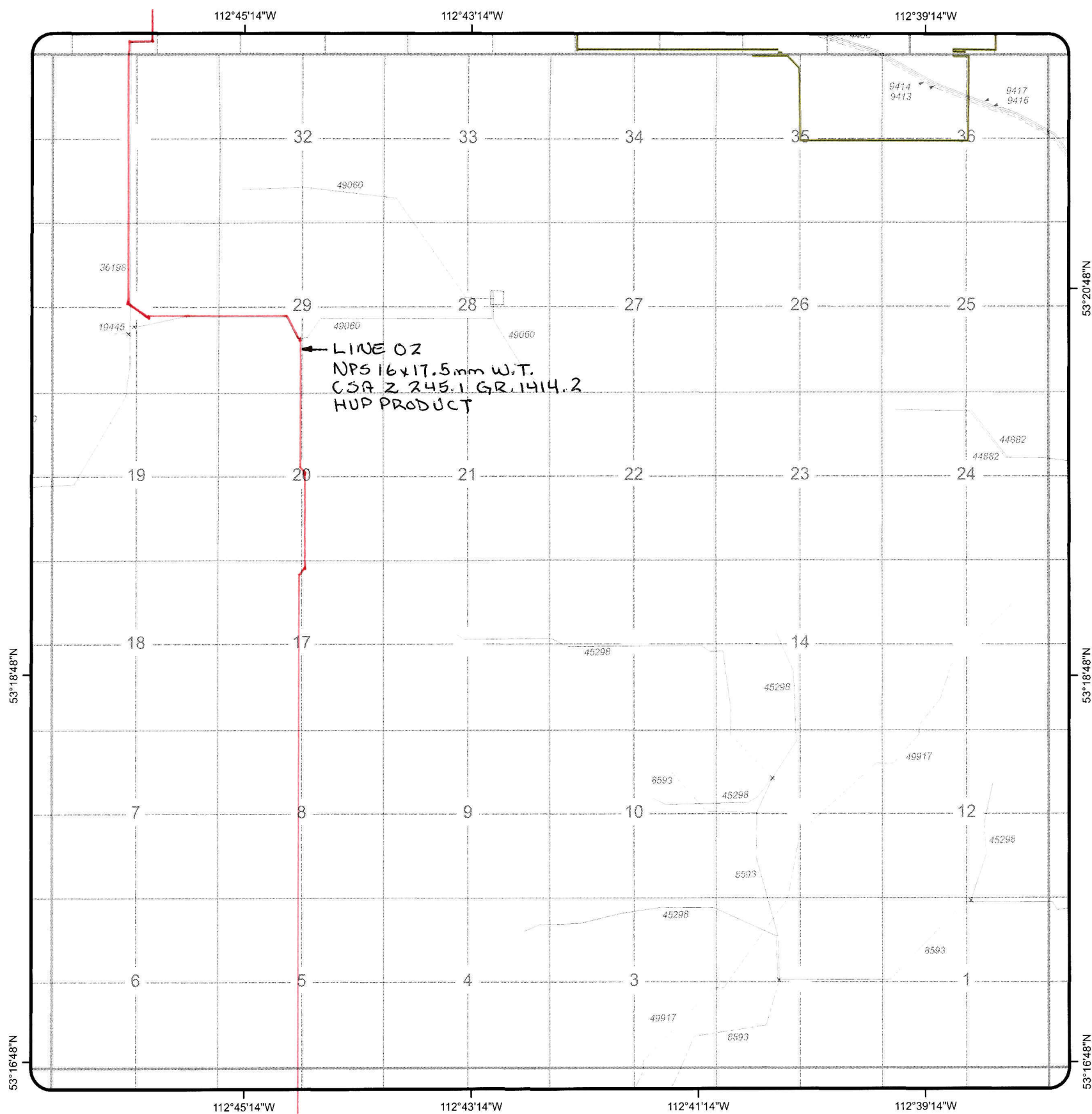
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**REVISION DATE:
28 January 2009**

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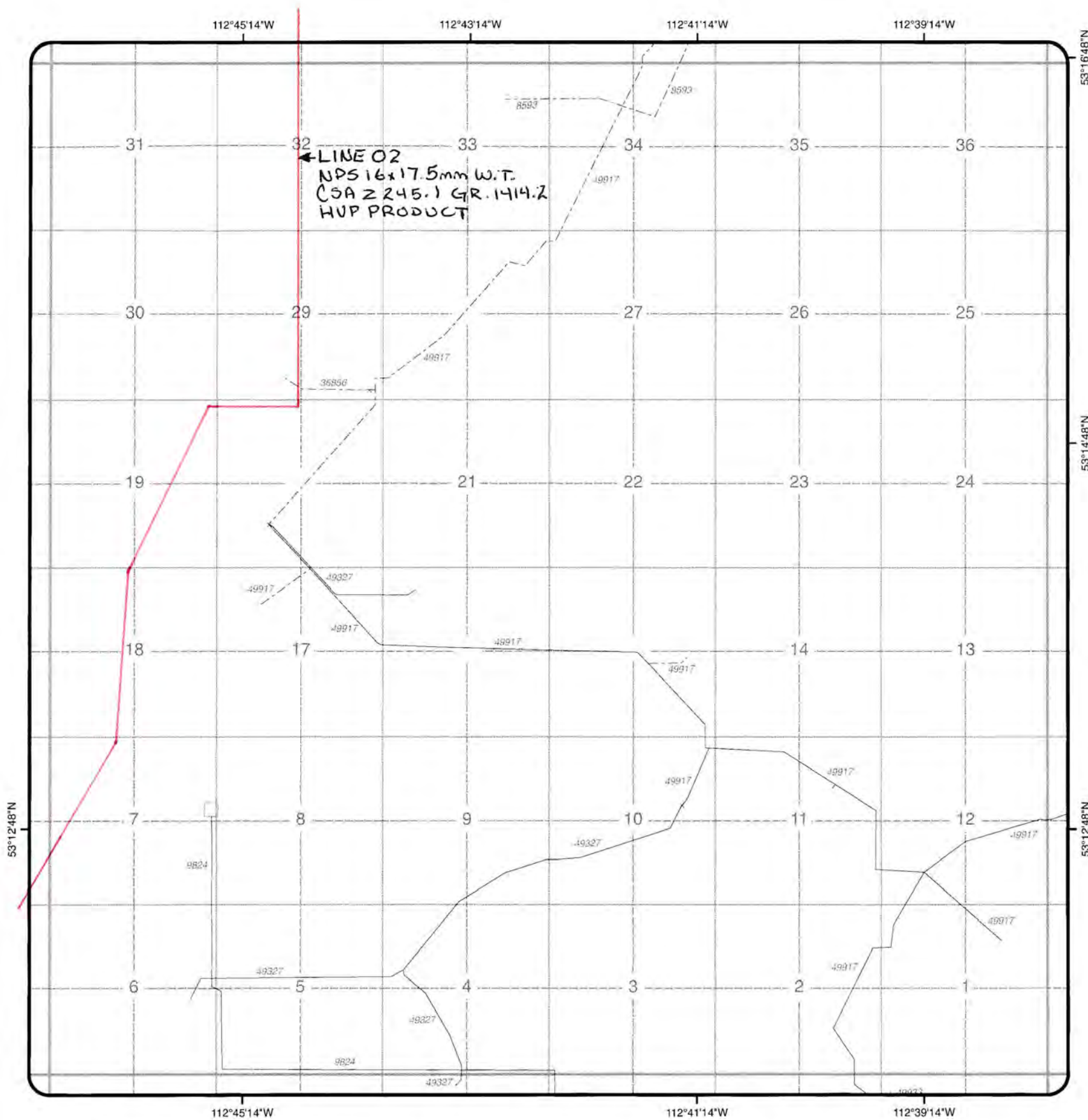
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22 September 2008**

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 - SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
 - LOW-PRESSURE GAS DISTRIBUTION LINES ARE NOT SHOWN.
 CONTACT THE GAS DISTRIBUTOR IN THIS AREA FOR LINE LOCATION

LEGEND

- PERMITTED: -----
- LICENSED: _____
- DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED: - - - - -



Coordinate System: 10TM



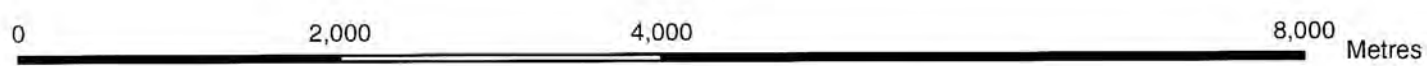
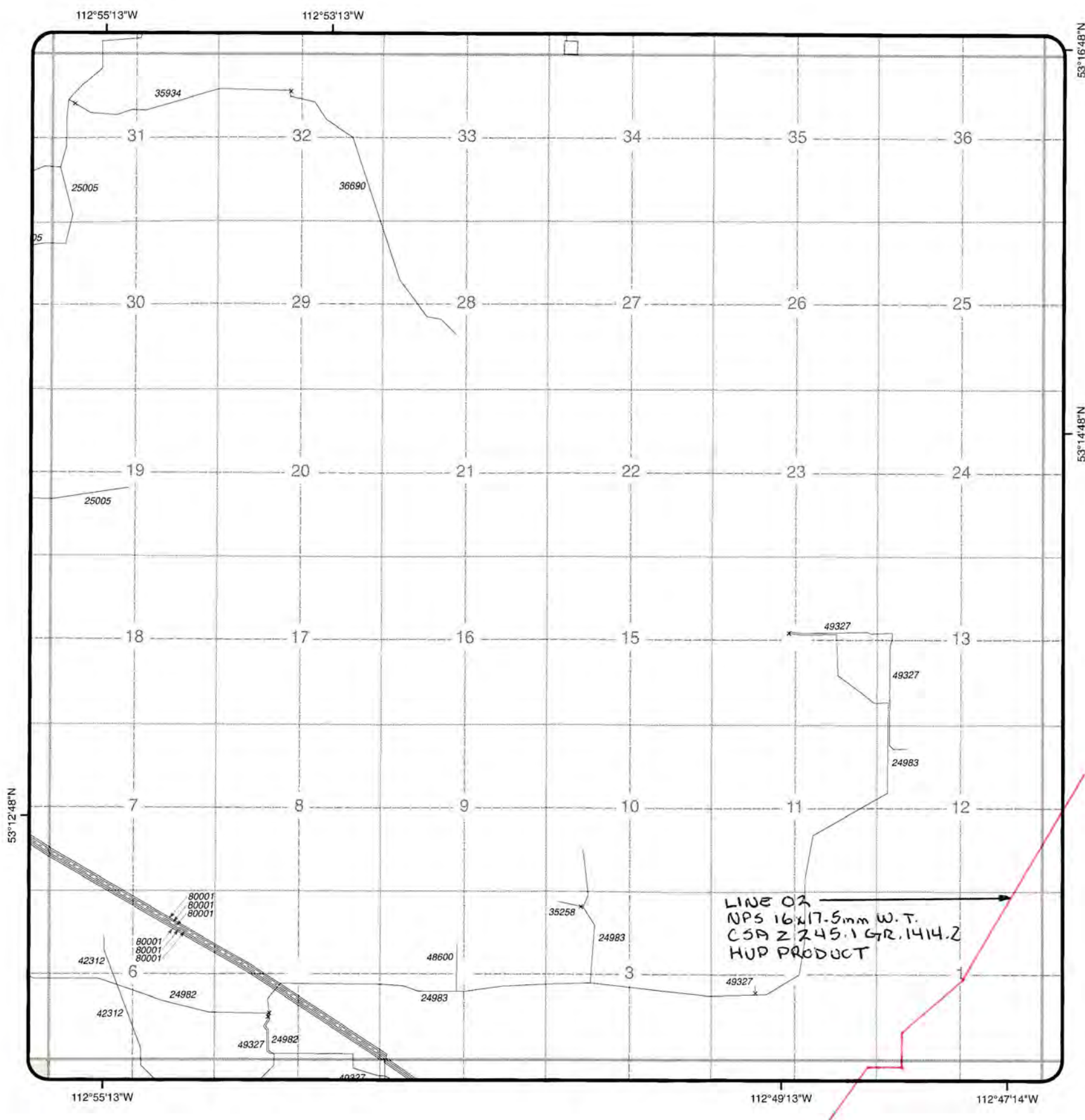
**ALL PIPELINES IN
TWP 049- 19W4**

**REVISION DATE:
12 January 2009**

CAUTION
 - THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
 - LOW-PRESSURE GAS DISTRIBUTION LINES ARE NOT SHOWN.
 CONTACT THE GAS DISTRIBUTOR IN THIS AREA FOR LINE LOCATION

LEGEND

- PERMITTED: -----
- LICENSED: _____
- DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED: - - - - -



Coordinate System: 10TM



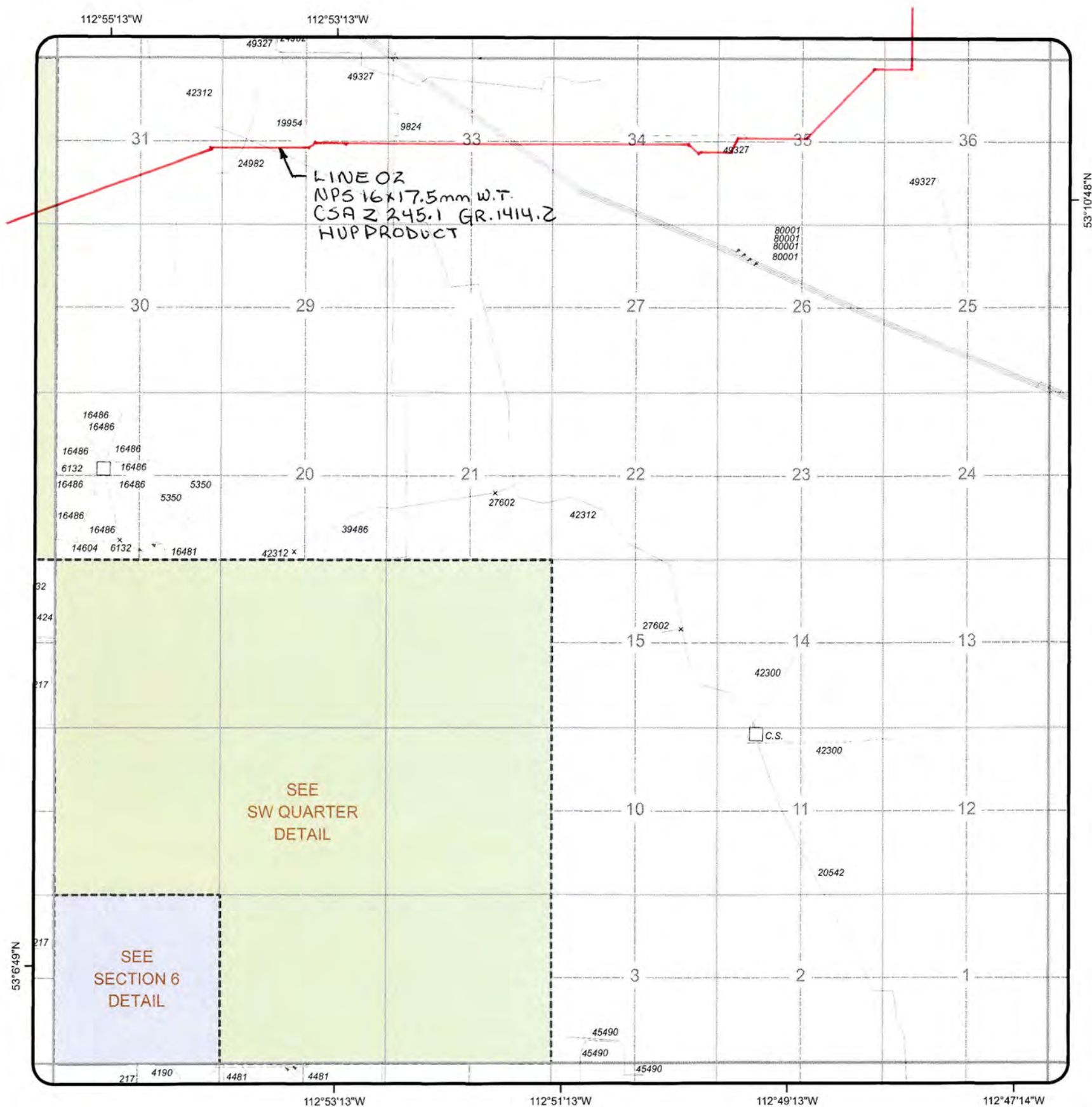
**ALL PIPELINES IN
TWP 049- 20W4**

**REVISION DATE:
28 January 2009**

CAUTION
 - THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
 - LOW-PRESSURE GAS DISTRIBUTION LINES ARE NOT SHOWN.
 CONTACT THE GAS DISTRIBUTOR IN THIS AREA FOR LINE LOCATION

LEGEND

- PERMITTED: -----
- LICENSED: _____
- DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED: - - - - -



Coordinate System: 10TM



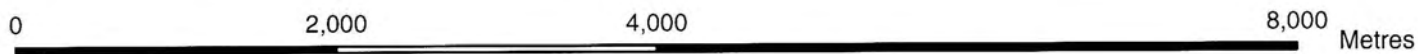
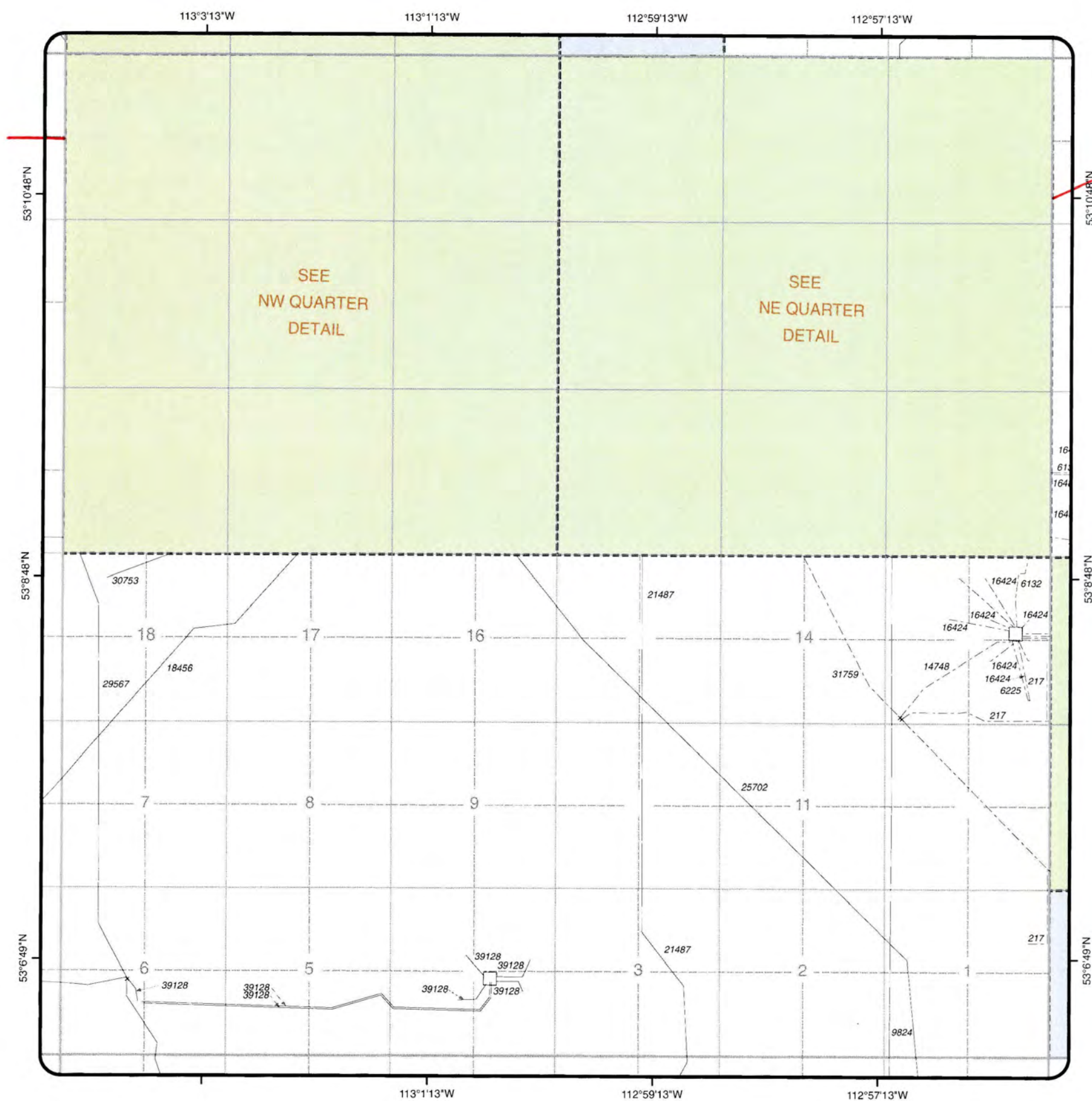
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TWP 048- 20W4

REVISION DATE:
19 November 2008

CAUTION
- THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
- SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
- LOW-PRESSURE GAS DISTRIBUTION LINES ARE NOT SHOWN.
CONTACT THE GAS DISTRIBUTOR IN THIS AREA FOR LINE LOCATION

LEGEND

- PERMITTED: -----
- LICENSED: _____
- DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED: - - - - -



Coordinate System: 10TM



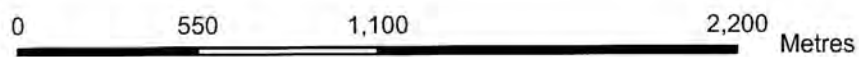
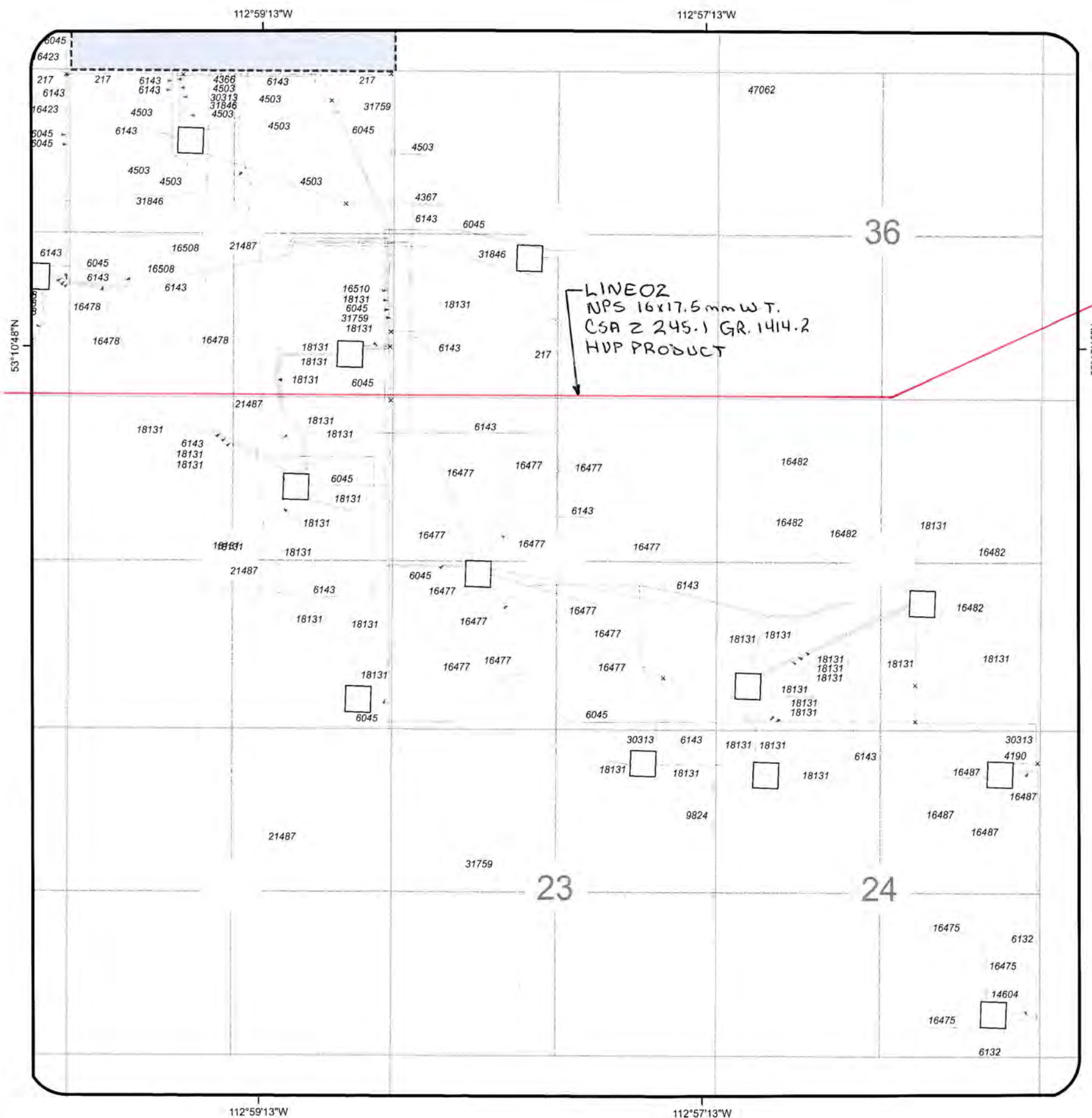
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TWP 048- 21W4**

**REVISION DATE:
10 March 2008**

CAUTION
 - THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
 - LOW-PRESSURE GAS DISTRIBUTION LINES ARE NOT SHOWN.
 CONTACT THE GAS DISTRIBUTOR IN THIS AREA FOR LINE LOCATION

LEGEND

- PERMITTED:
- LICENSED:
- DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED:



Coordinate System: 10TM



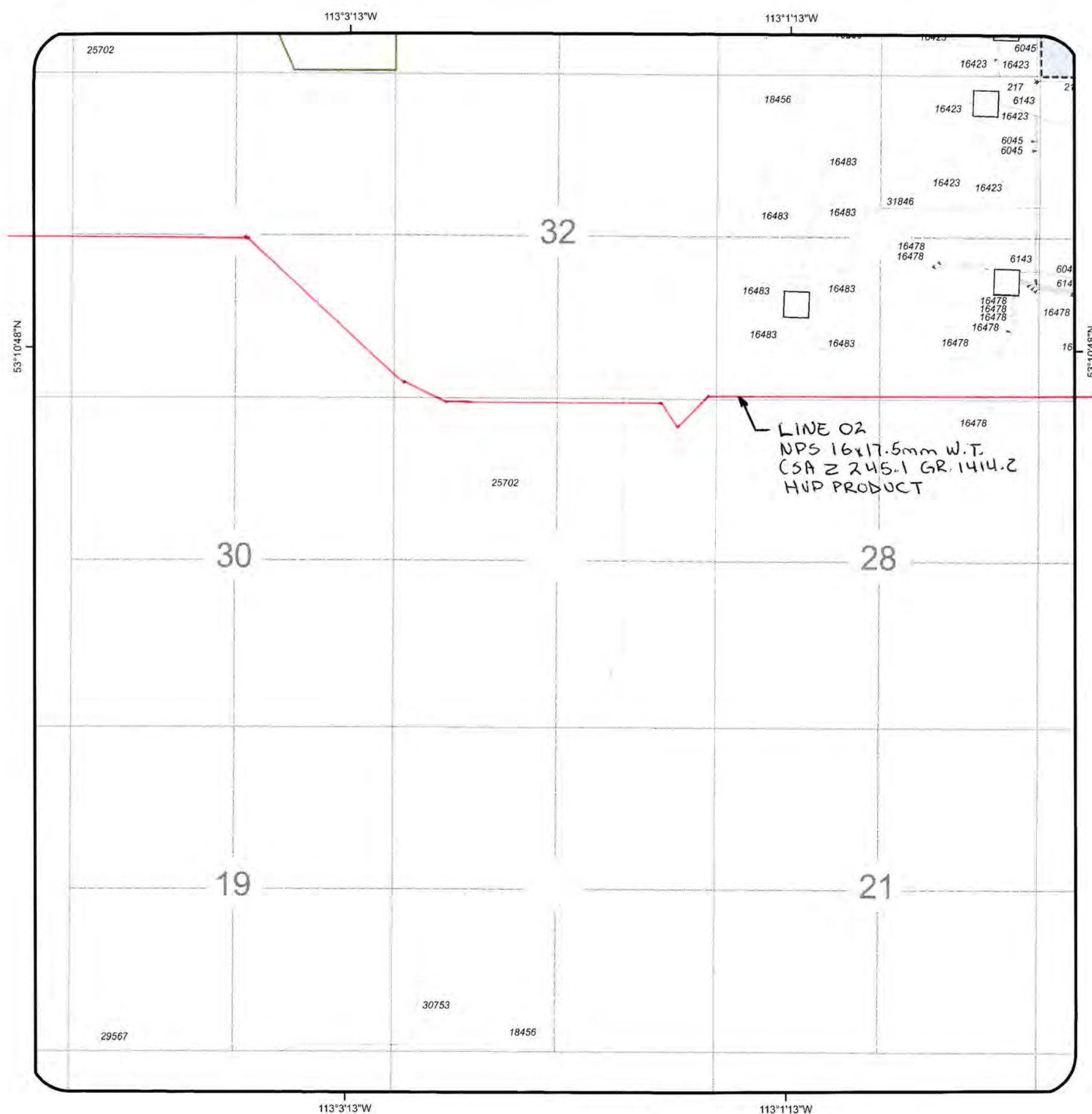
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**REVISION DATE:
27 February 2008**

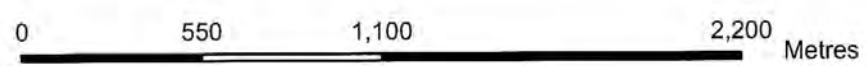
CAUTION
 - THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
 - LOW-PRESSURE GAS DISTRIBUTION LINES ARE NOT SHOWN.
 CONTACT THE GAS DISTRIBUTOR IN THIS AREA FOR LINE LOCATION

LEGEND

- PERMITTED: -----
- LICENSED: _____
- DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED: - - - - -



LINE 02
 NPS 16x17.5mm W.T.
 CSA Z 245.1 GR. 1414.2
 HVP PRODUCT



Coordinate System: 10TM



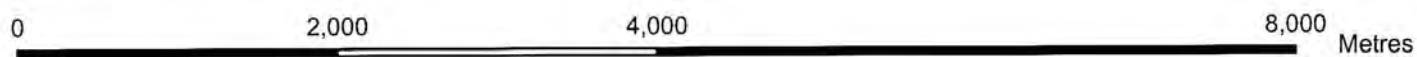
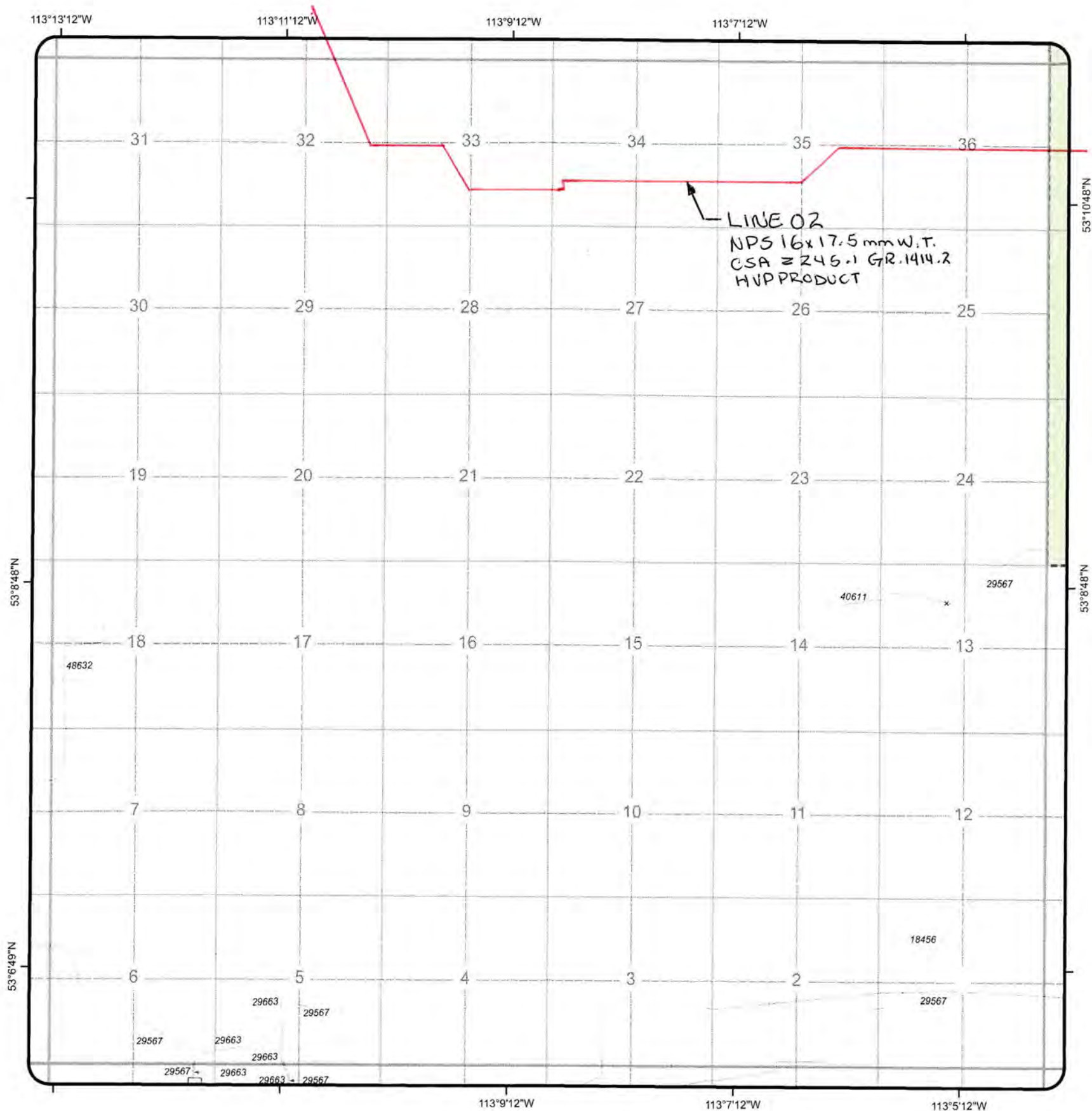
**ALL PIPELINES IN
 NW . 048- 21W4**

**REVISION DATE:
 27 February 2008**

CAUTION
 - THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
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LEGEND

- PERMITTED: -----
- LICENSED: _____
- DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED: - - - - -



Coordinate System: 10TM



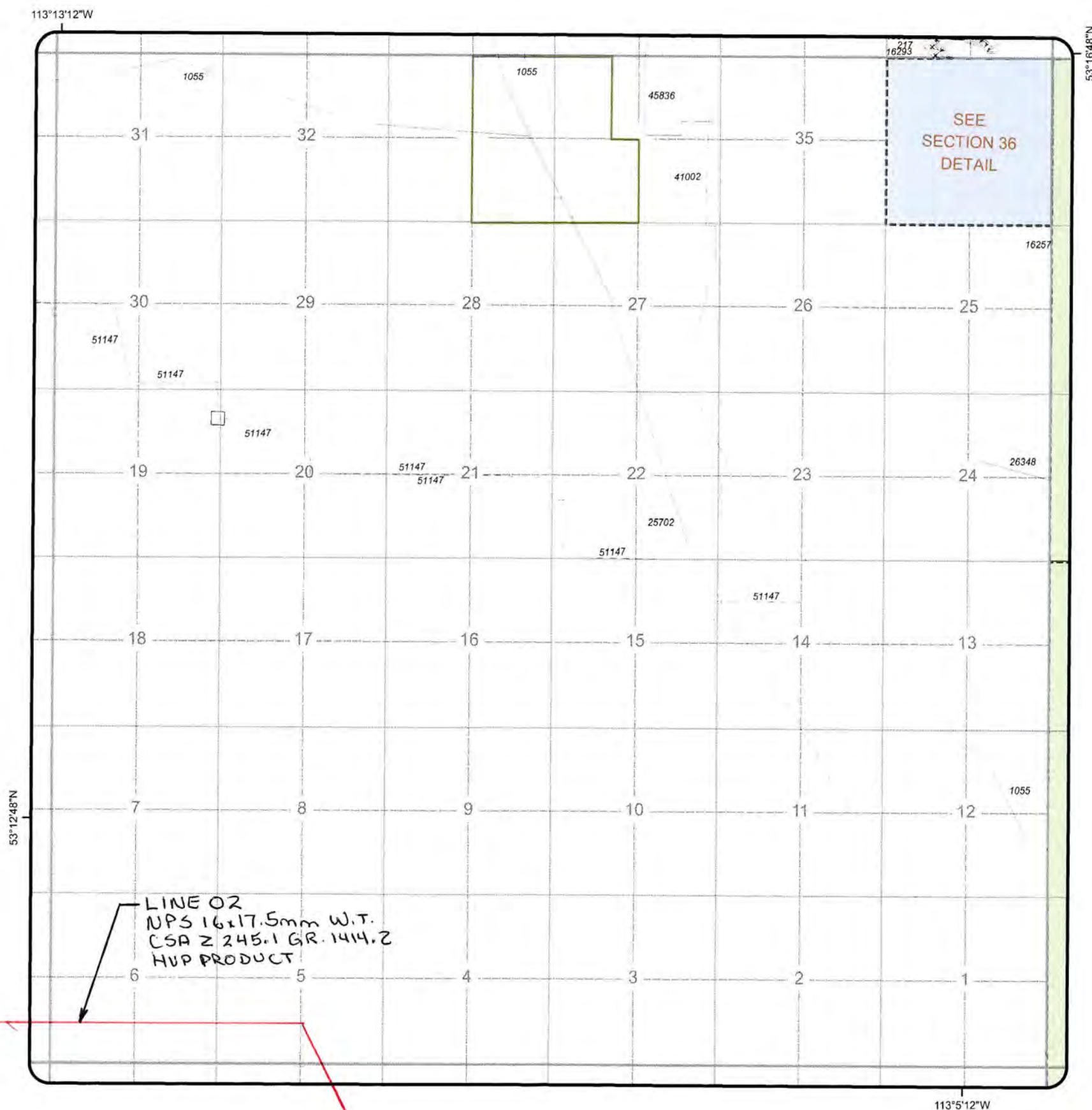
**ALL PIPELINES IN
TWP 048- 22W4**

**REVISION DATE:
27 February 2008**

CAUTION
 - THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
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LEGEND

- PERMITTED: -----
- LICENSED: _____
- DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED: - - - - -



LINE 02
 NPS 16x17.5mm W.T.
 CSA Z 245.1 GR. 1414.2
 HVP PRODUCT



Coordinate System: 10TM



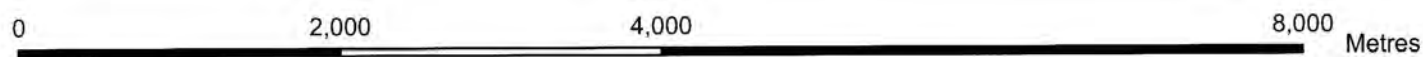
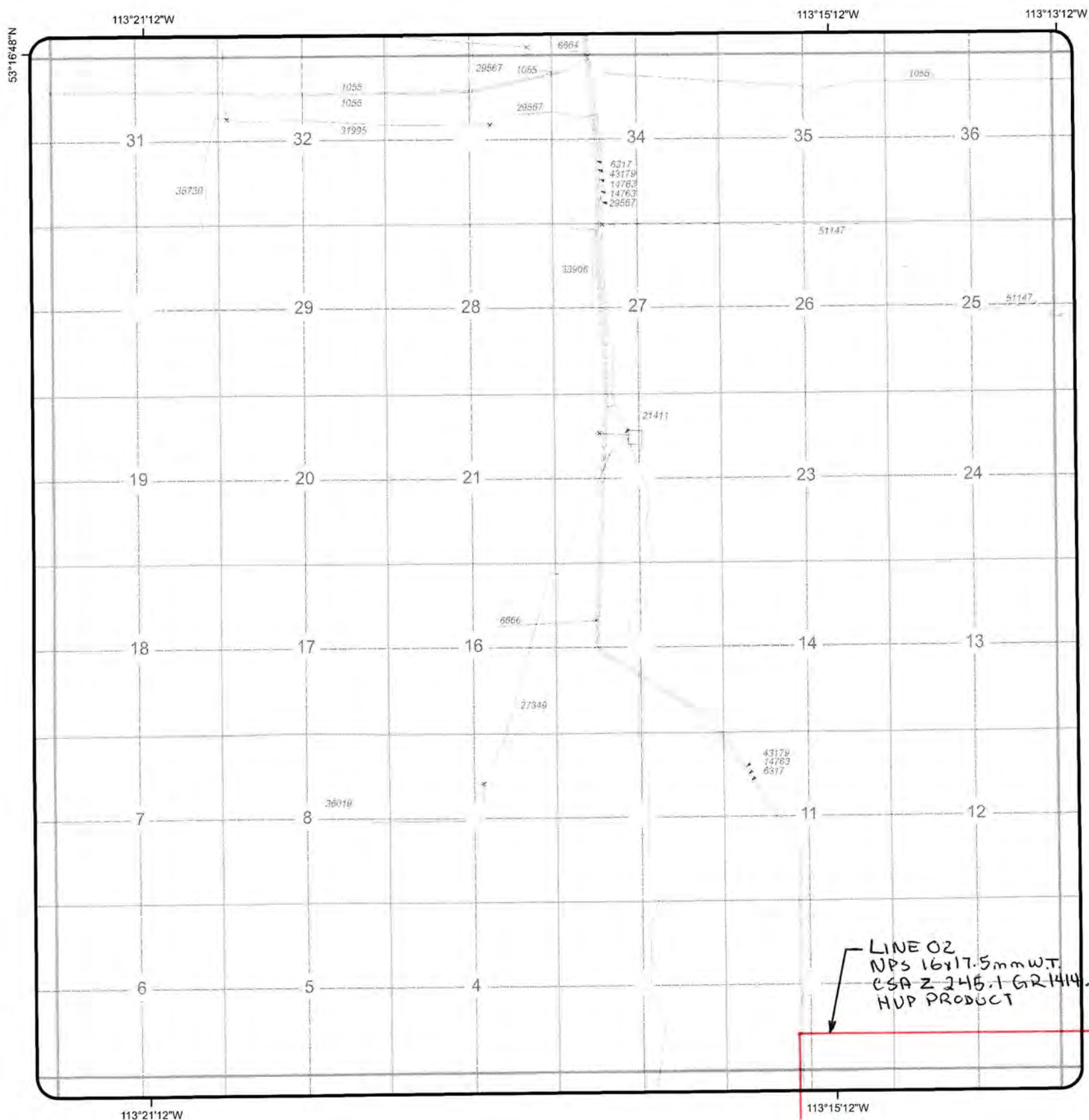
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 TWP 049- 22W4**

**REVISION DATE:
 21 January 2009**

CAUTION
 - THIS PLOT REPRESENTS THE BEST
 INFORMATION AVAILABLE TO THE
 BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS
 SHOULD BE OBTAINED FROM SURVEY
 PLANS, OWNERS AND FIELD
 OBSERVATION BEFORE DIGGING.
 - LOW-PRESSURE GAS DISTRIBUTION
 LINES ARE NOT SHOWN.
 CONTACT THE GAS DISTRIBUTOR
 IN THIS AREA FOR LINE LOCATION

LEGEND

- PERMITTED: -----
- LICENSED: _____
- DISCONTINUED,
 ABANDONED,
 OR ABANDONED
 AND PARTIALLY
 REMOVED: - - - - -



Coordinate System: 10TM



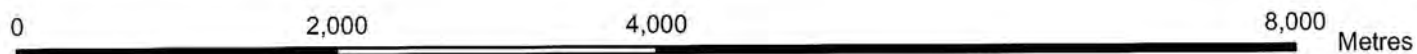
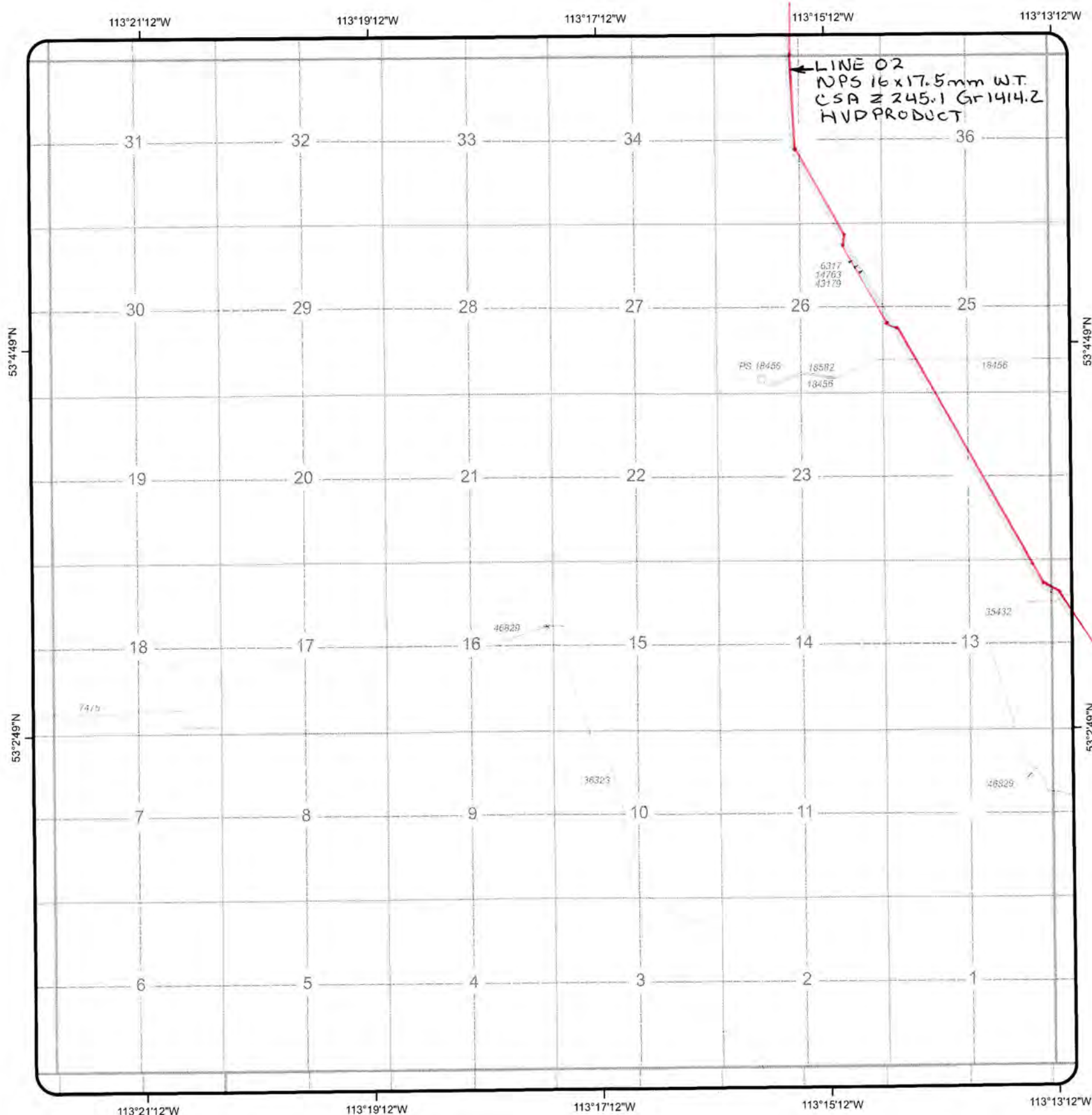
**ALL PIPELINES IN
TWP 049- 23W4**

**REVISION DATE:
21 January 2009**

CAUTION
 - THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
 - LOW-PRESSURE GAS DISTRIBUTION LINES ARE NOT SHOWN.
 CONTACT THE GAS DISTRIBUTOR IN THIS AREA FOR LINE LOCATION

LEGEND

- PERMITTED: -----
- LICENSED: _____
- DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED: - - - - -



Coordinate System: 10TM



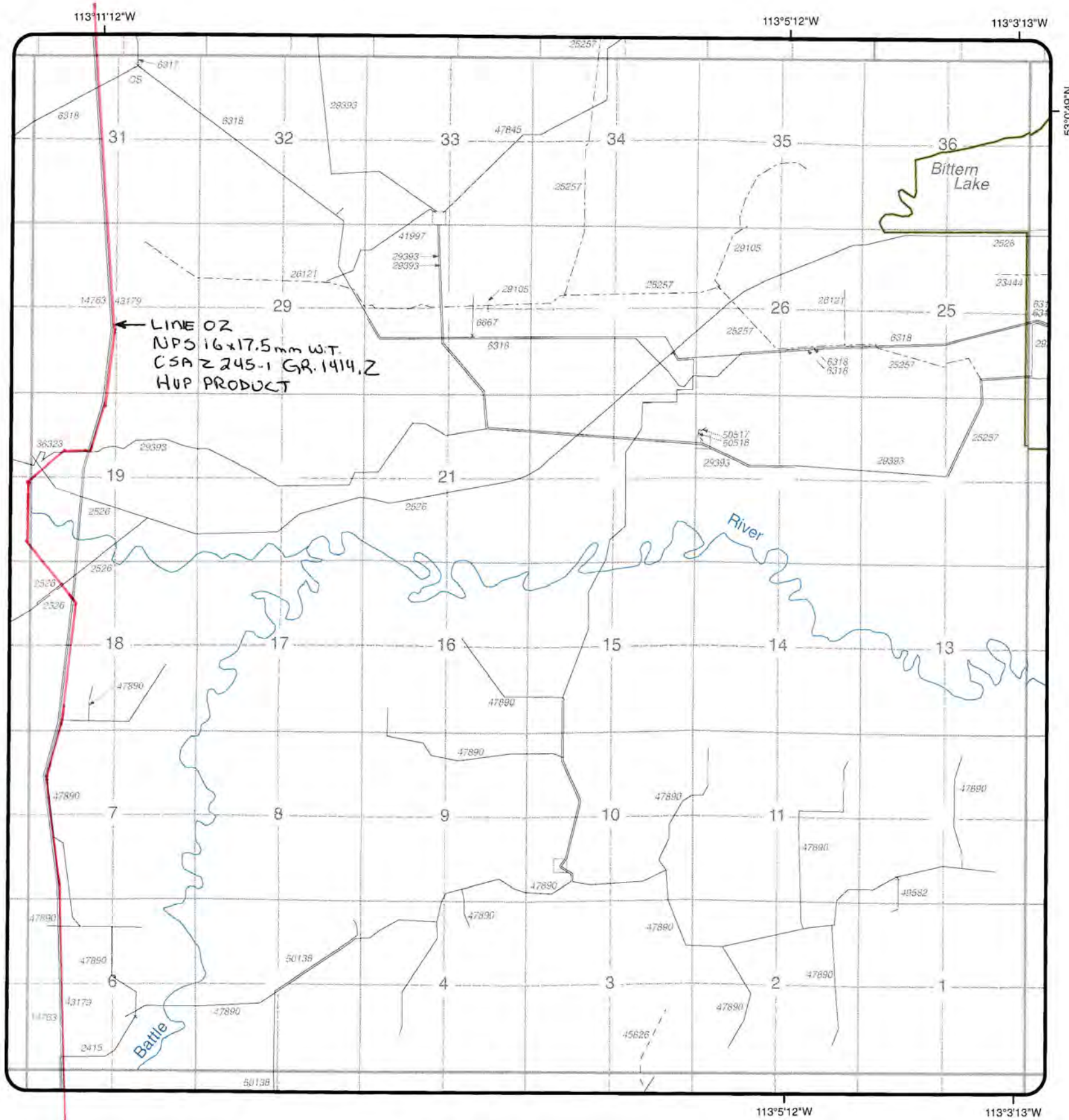
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**REVISION DATE:
27 February 2008**

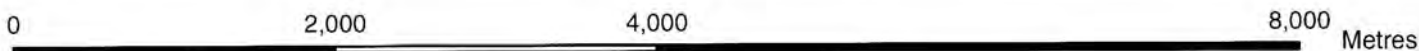
CAUTION
 - THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
 - LOW-PRESSURE GAS DISTRIBUTION LINES ARE NOT SHOWN.
 CONTACT THE GAS DISTRIBUTOR IN THIS AREA FOR LINE LOCATION

LEGEND

PERMITTED:	-----
LICENSED:	—————
DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED:	-----



← LINE OZ
 NPS 16x17.5mm W.T.
 CSA Z 245-1 GR. 1414,2
 HUP PRODUCT



Coordinate System: 10TM



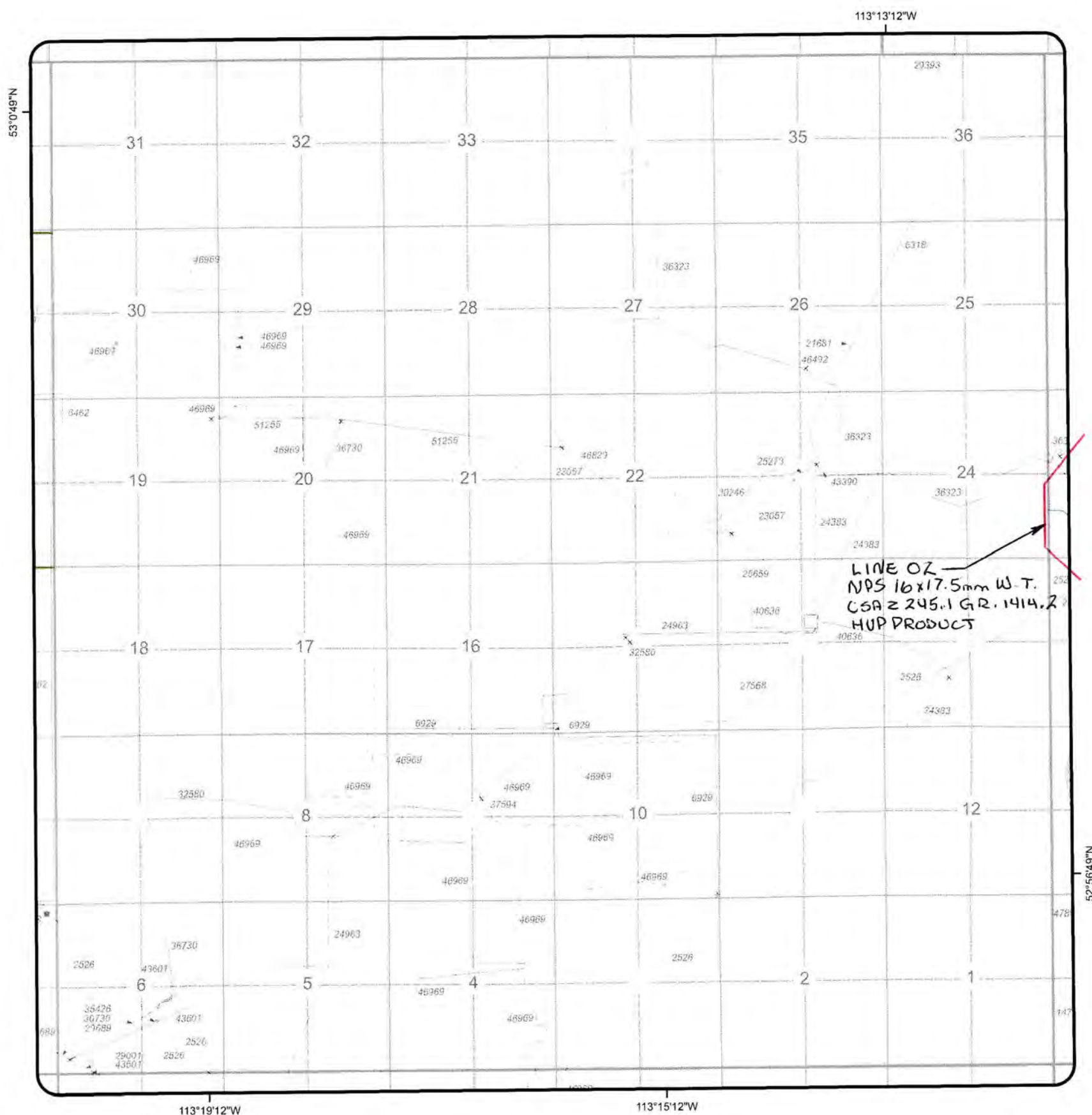
**ALL PIPELINES IN
 TWP 046- 22W4**

**REVISION DATE:
 28 January 2009**

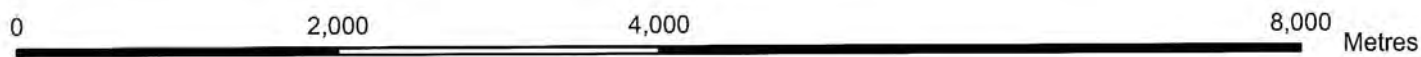
LEGEND

- CAUTION**
- THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
 - LOW-PRESSURE GAS DISTRIBUTION LINES ARE NOT SHOWN. CONTACT THE GAS DISTRIBUTOR IN THIS AREA FOR LINE LOCATION

- PERMITTED: -----
- LICENSED: _____
- DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED: - - - - -



LINE 02
 NPS 16x17.5mm W.T.
 CSA Z 245.1 GR. 1414.2
 HUP PRODUCT



Coordinate System: 10TM



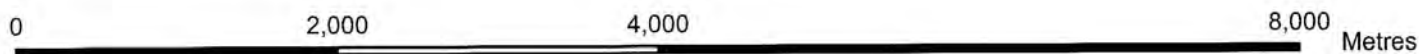
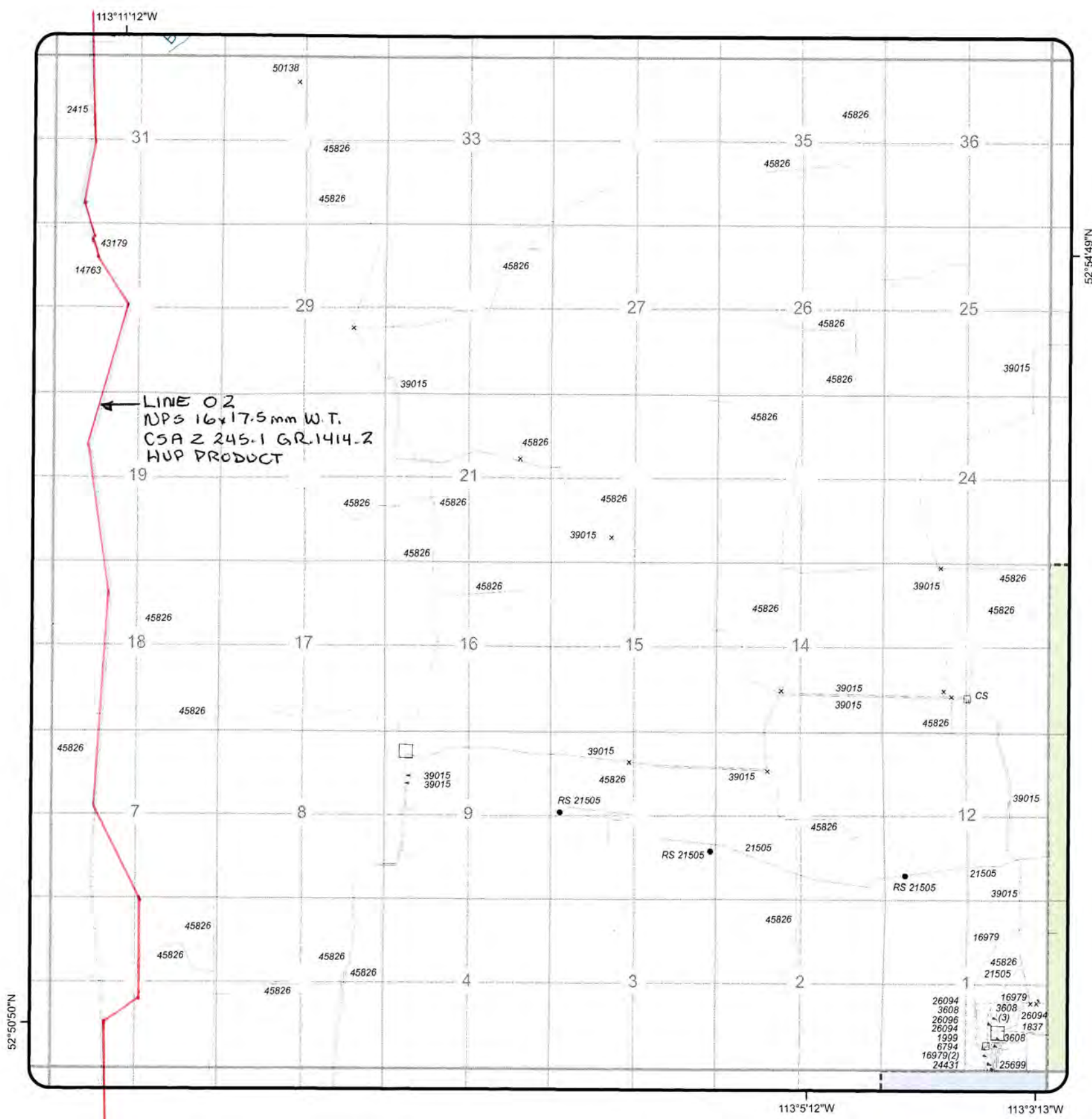
**ALL PIPELINES IN
 TWP 046- 23W4**

**REVISION DATE:
 20 January 2009**

CAUTION
 - THIS PLOT REPRESENTS THE BEST
 INFORMATION AVAILABLE TO THE
 BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS
 SHOULD BE OBTAINED FROM SURVEY
 PLANS, OWNERS AND FIELD
 OBSERVATION BEFORE DIGGING.
 - LOW-PRESSURE GAS DISTRIBUTION
 LINES ARE NOT SHOWN.
 CONTACT THE GAS DISTRIBUTOR
 IN THIS AREA FOR LINE LOCATION

LEGEND

- PERMITTED: -----
- LICENSED: _____
- DISCONTINUED,
 ABANDONED,
 OR ABANDONED
 AND PARTIALLY
 REMOVED: - - - - -



Coordinate System: 10TM



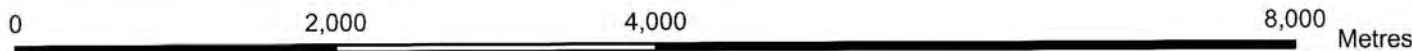
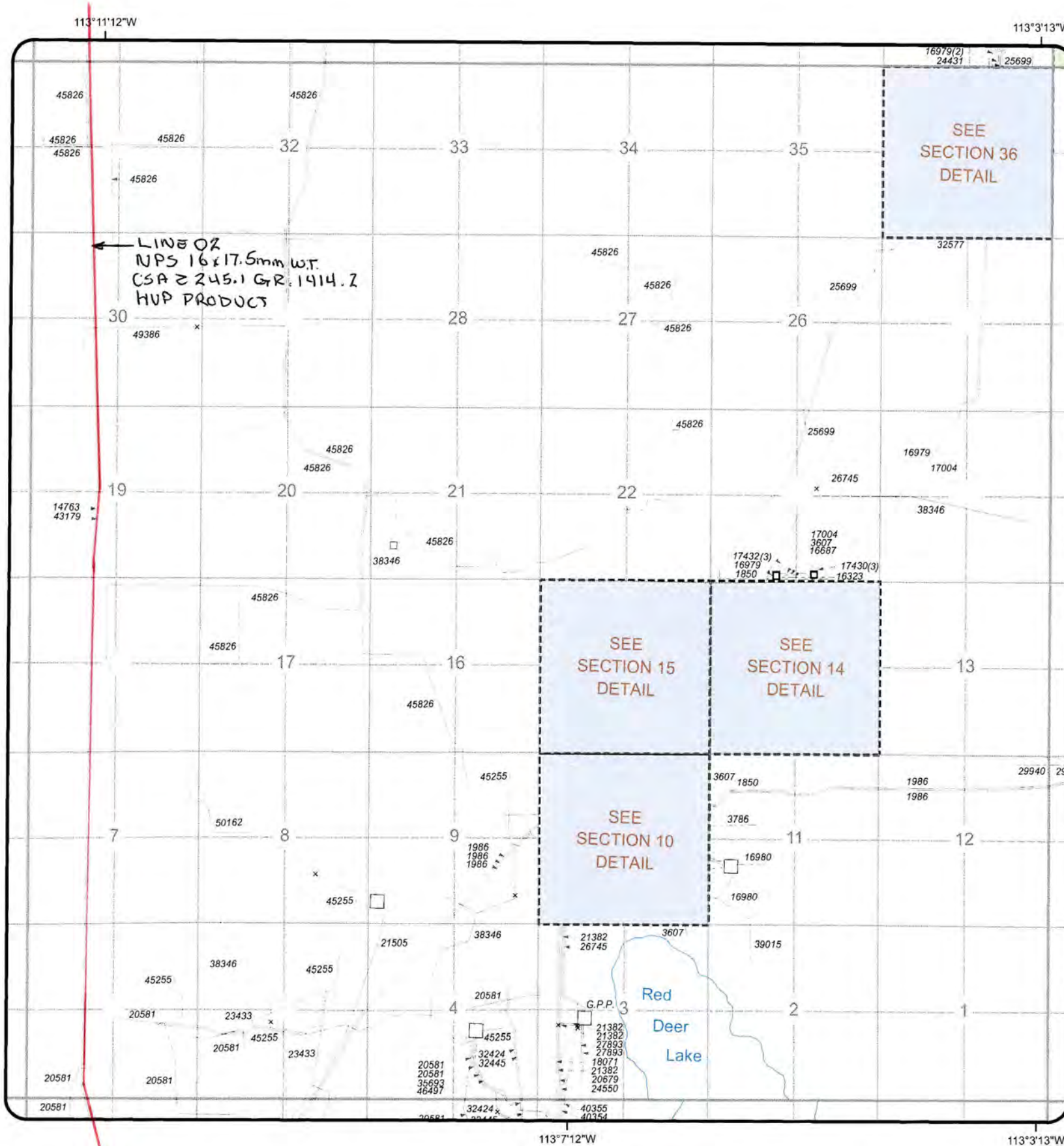
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**REVISION DATE:
28 January 2009**

CAUTION
 - THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
 - LOW-PRESSURE GAS DISTRIBUTION LINES ARE NOT SHOWN.
 CONTACT THE GAS DISTRIBUTOR IN THIS AREA FOR LINE LOCATION

LEGEND

- PERMITTED:
- LICENSED:
- DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED:



Coordinate System: 10TM



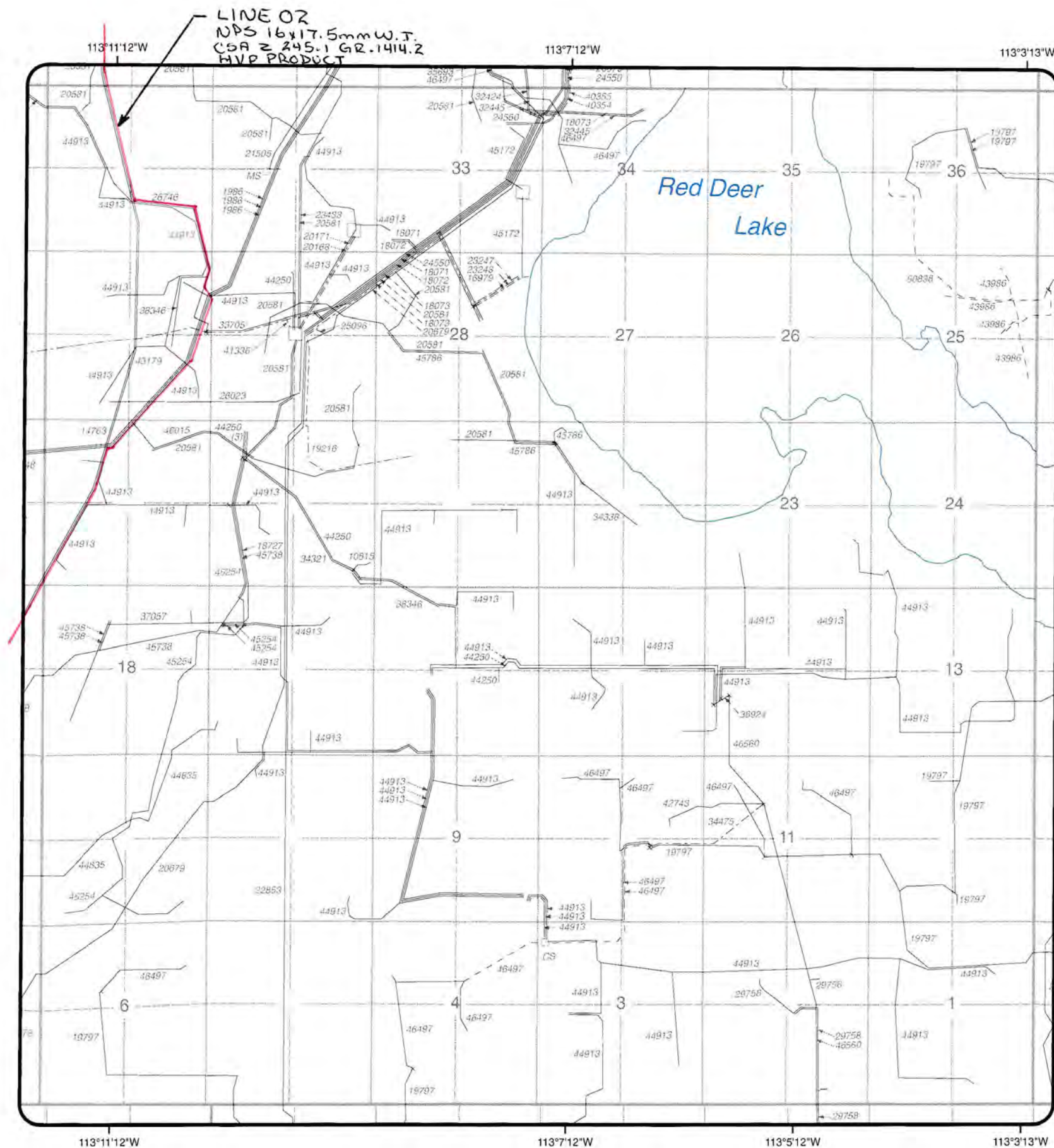
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**REVISION DATE:
03 February 2009**

- CAUTION**
- THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
 - LOW-PRESSURE GAS DISTRIBUTION LINES ARE NOT SHOWN.
- CONTACT THE GAS DISTRIBUTOR IN THIS AREA FOR LINE LOCATION**

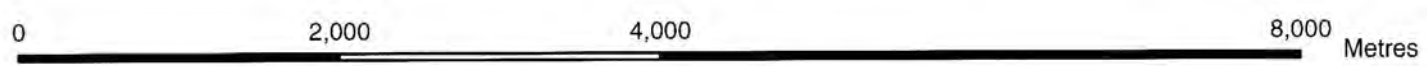
LEGEND

- PERMITTED:
- LICENSED:
- DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED:



LINE 02
 NPS 16x17.5mm W.T.
 CSA Z 245.1 GR.1414.2
 HVP PRODUCT

Red Deer
 Lake



Coordinate System: 10TM



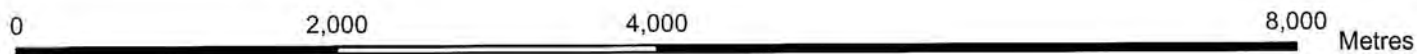
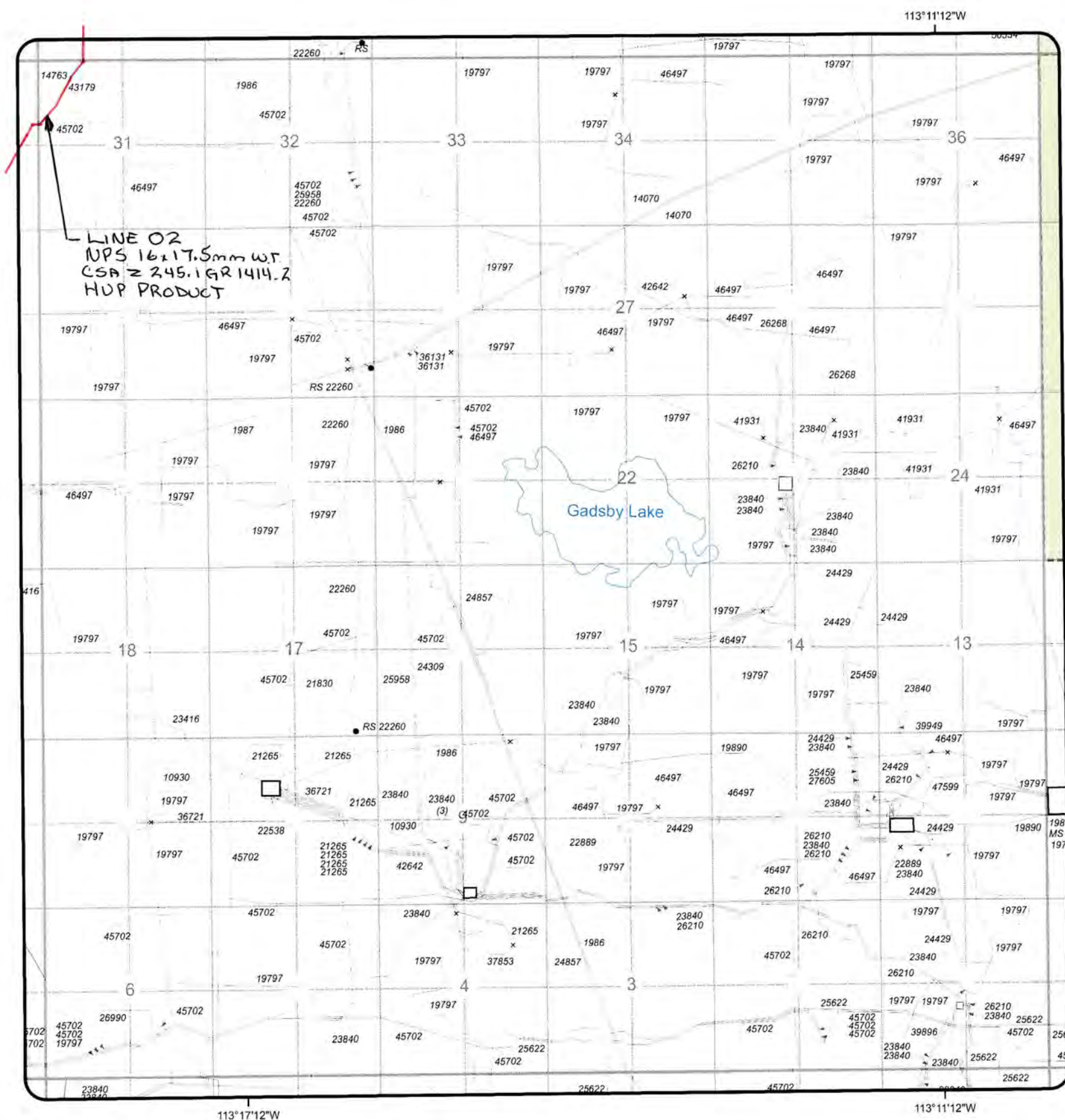
**ALL PIPELINES IN
 TWP 043- 22W4**

REVISION DATE:
 27 January 2009

CAUTION
 - THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
 - LOW-PRESSURE GAS DISTRIBUTION LINES ARE NOT SHOWN.
 CONTACT THE GAS DISTRIBUTOR IN THIS AREA FOR LINE LOCATION

LEGEND

- PERMITTED: -----
- LICENSED: _____
- DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED: - - - - -



Coordinate System: 10TM



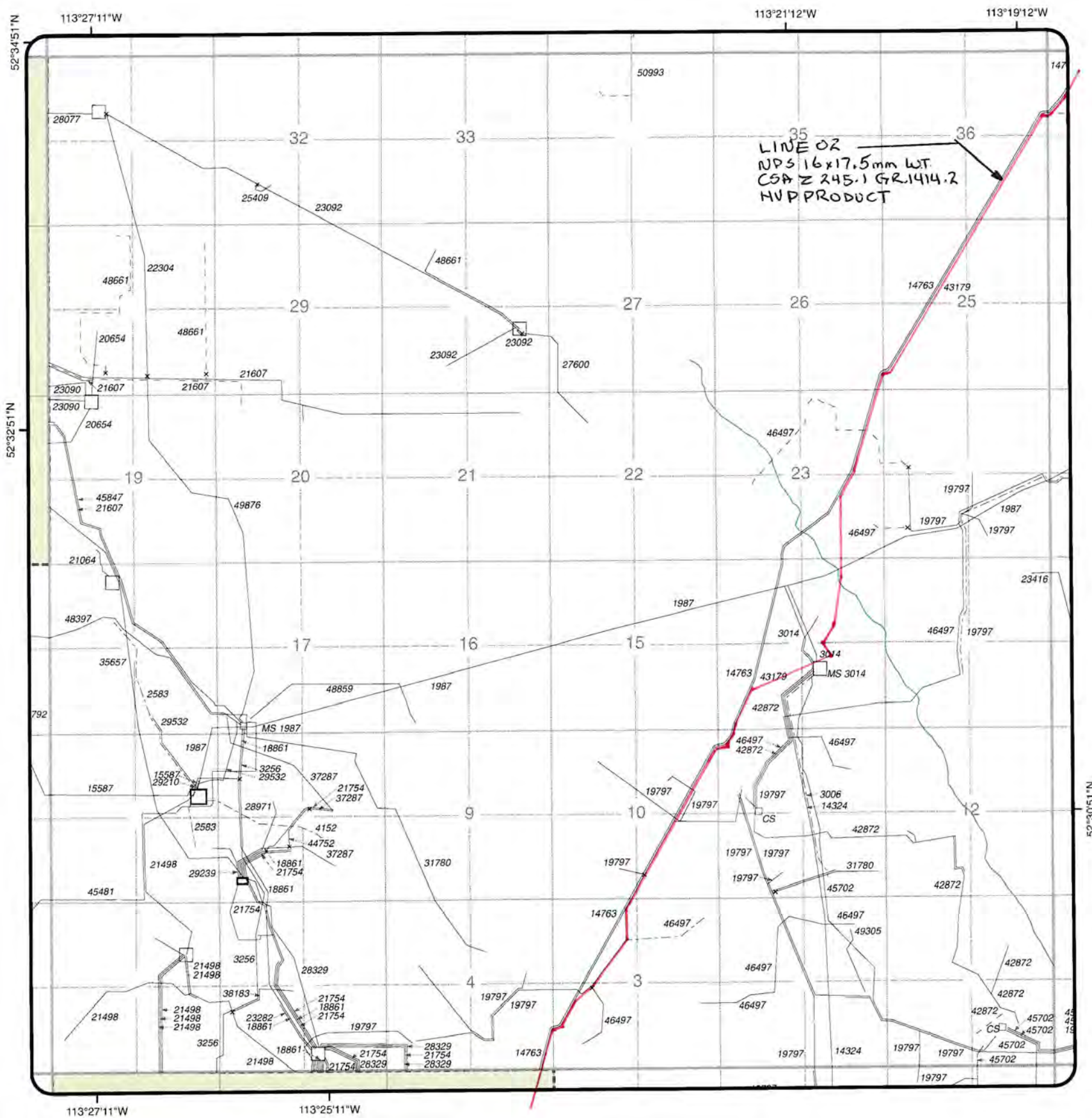
**ALL PIPELINES IN
TWP 041- 23W4**

**REVISION DATE:
09 February 2009**

CAUTION
 - THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
 - LOW-PRESSURE GAS DISTRIBUTION LINES ARE NOT SHOWN.
 CONTACT THE GAS DISTRIBUTOR IN THIS AREA FOR LINE LOCATION

LEGEND

- PERMITTED: -----
- LICENSED: _____
- DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED: - - - - -



Coordinate System: 10TM



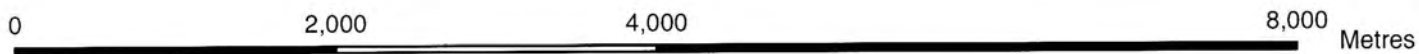
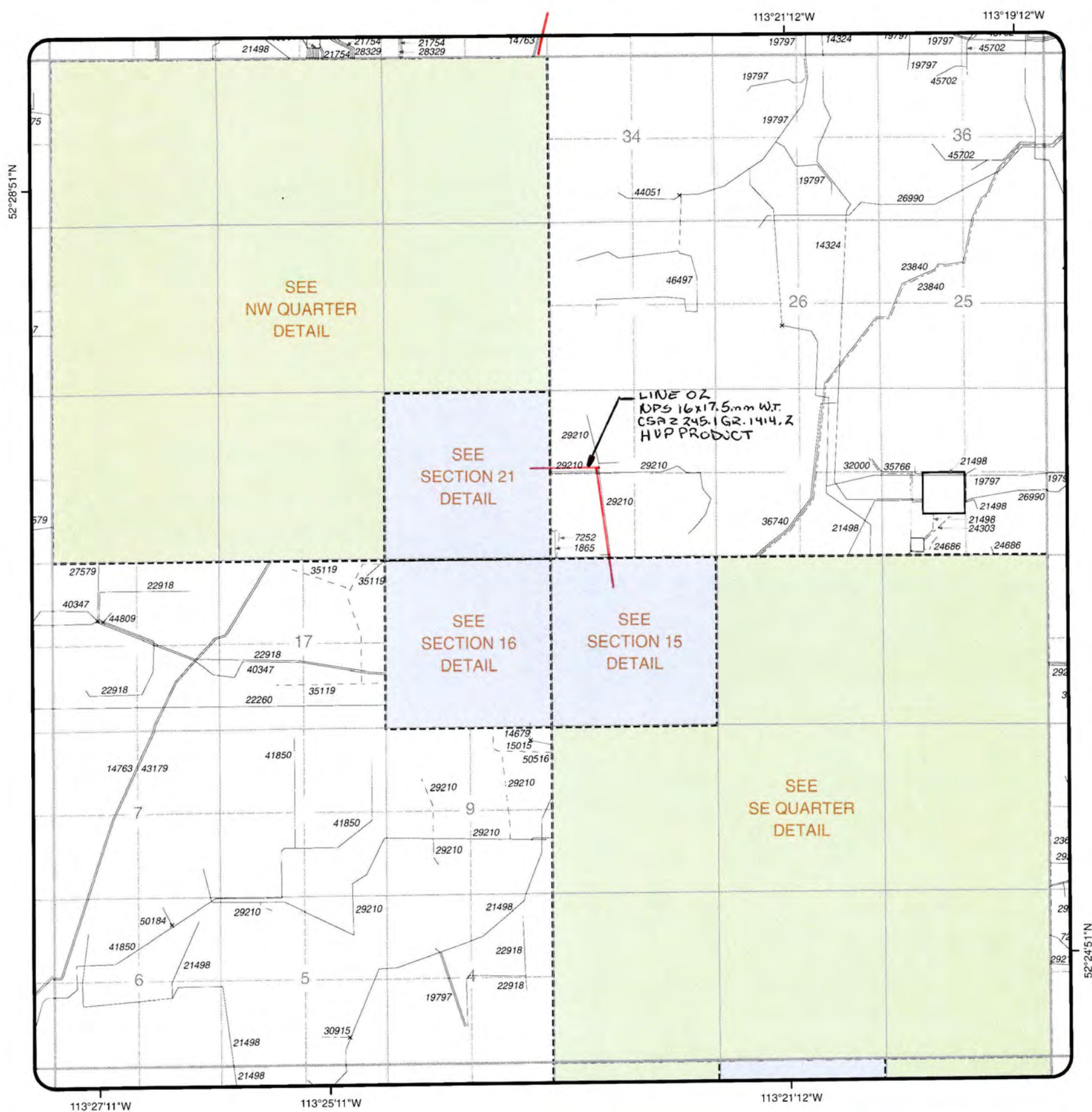
**ALL PIPELINES IN
TWP 041- 24W4**

**REVISION DATE:
27 January 2009**

CAUTION
 - THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
 - LOW-PRESSURE GAS DISTRIBUTION LINES ARE NOT SHOWN.
 CONTACT THE GAS DISTRIBUTOR IN THIS AREA FOR LINE LOCATION

LEGEND

- PERMITTED: -----
- LICENSED: _____
- DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED: - - - - -



Coordinate System: 10TM



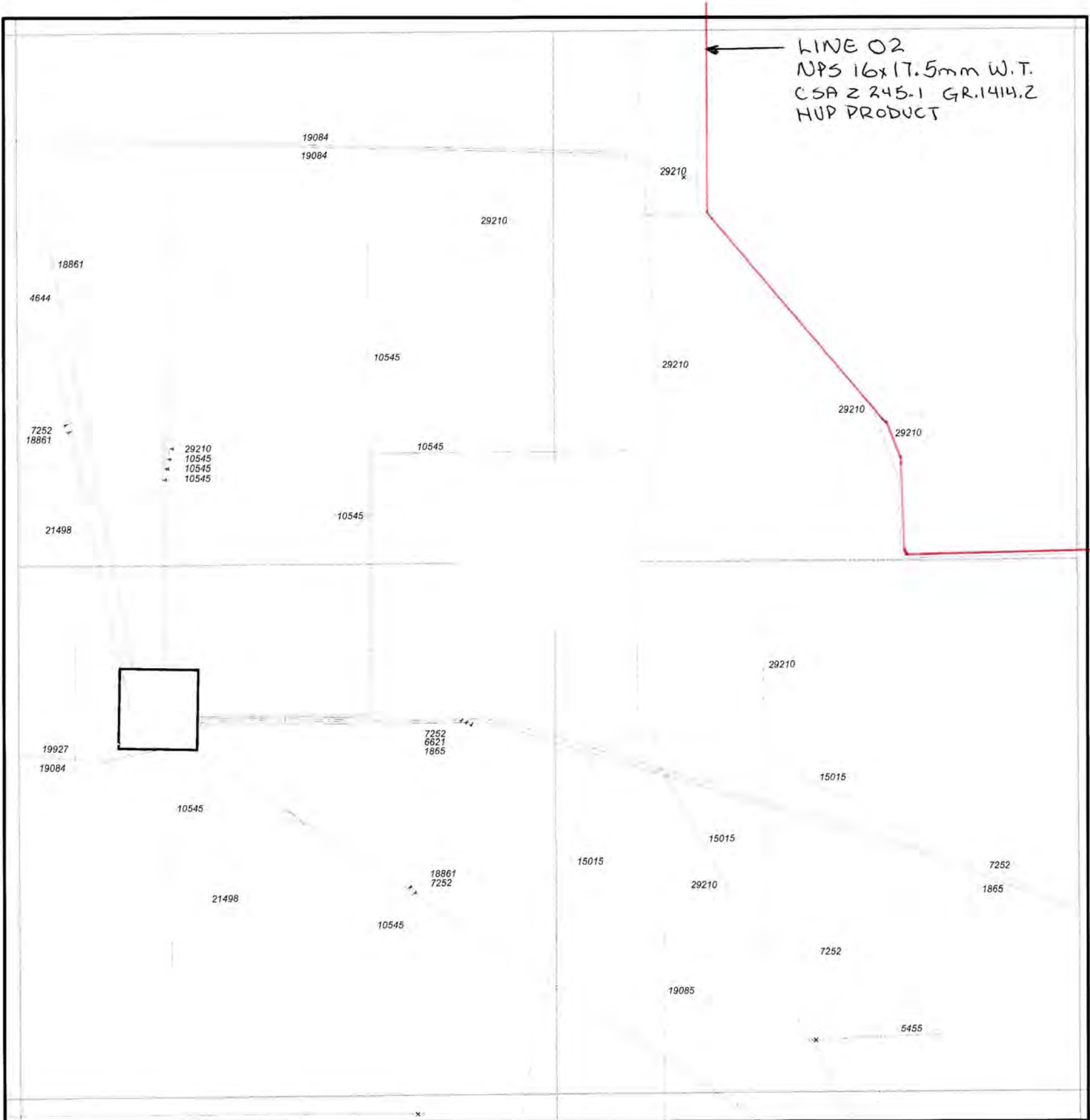
**ALL PIPELINES IN
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**REVISION DATE:
06 February 2009**

- CAUTION**
- THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
 - LOW-PRESSURE GAS DISTRIBUTION LINES ARE NOT SHOWN. CONTACT THE GAS DISTRIBUTOR IN THIS AREA FOR LINE LOCATION

LEGEND

- PERMITTED: -----
- LICENSED: _____
- DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED: - - - - -



Coordinate System: 10TM



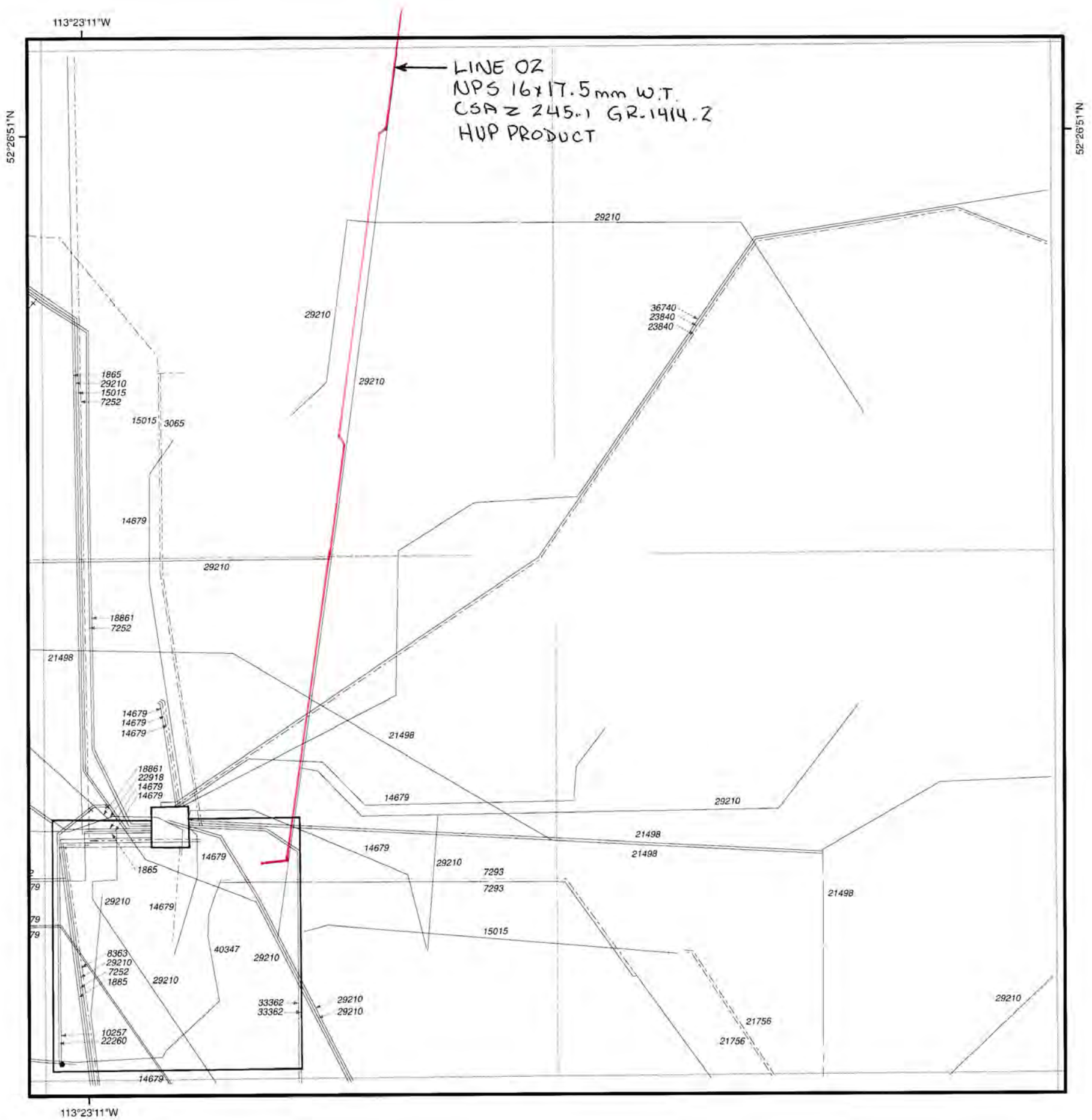
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SEC 21 TWP 040- 24W4**

**REVISION DATE:
04 September 2008**

CAUTION
 - THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
 - LOW-PRESSURE GAS DISTRIBUTION LINES ARE NOT SHOWN.
 CONTACT THE GAS DISTRIBUTOR IN THIS AREA FOR LINE LOCATION

LEGEND

PERMITTED:	-----
LICENSED:	—————
DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED:	- - - - -



← LINE 02
 NPS 16x17.5mm W.T.
 CSA Z 245.1 GR.1414.2
 HUP PRODUCT



Coordinate System: 10TM



**ALL PIPELINES IN
 SEC 15 TWP 040- 24W4**

**REVISION DATE:
 27 February 2008**

CAUTION
 - THIS PLOT REPRESENTS THE BEST INFORMATION AVAILABLE TO THE BOARD AT THIS TIME.
 - SPECIFIC PIPELINE LOCATIONS SHOULD BE OBTAINED FROM SURVEY PLANS, OWNERS AND FIELD OBSERVATION BEFORE DIGGING.
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LEGEND

PERMITTED:	-----
LICENSED:	—————
DISCONTINUED, ABANDONED, OR ABANDONED AND PARTIALLY REMOVED:	- - - - -

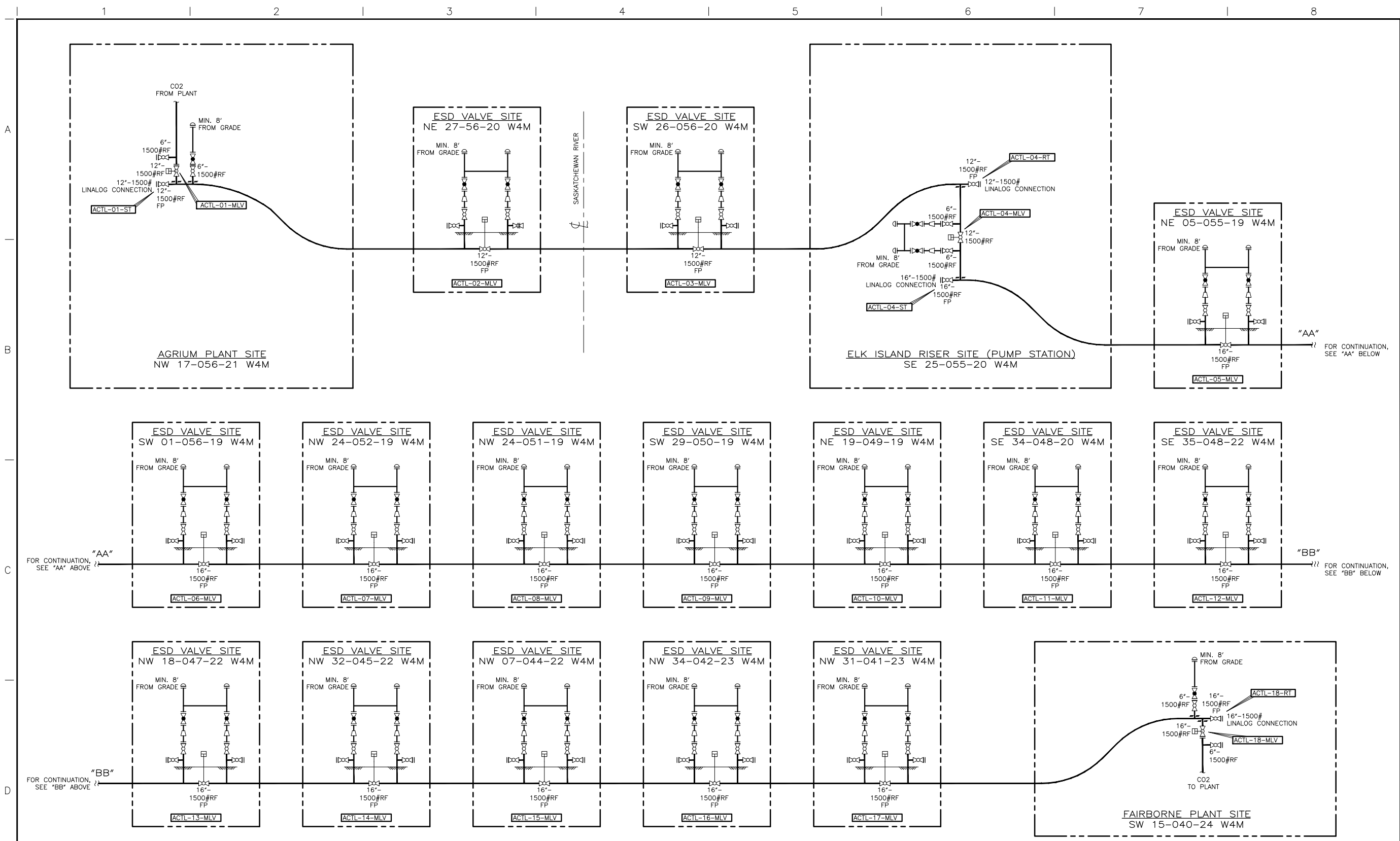
Enhance Energy Inc. and North West Redwater Partnership

APPENDIX viii ACTL Block Valve Schematic



Autumn Colour, by Ted Rafferty, a local Alberta painter





REFERENCE DRAWINGS	DWG. NO.	NO.	DATE	PROJECT DESCRIPTION	PROJ.	BY	APPD.

ISSUE STAGE	DATE	BY	CHKD.	APPD.
A - ISSUED FOR REVIEW	11-02-11	RSN	SAW	

ENGINEER'S STAMP

PERMIT No. P10437

PROFESSIONAL STAMP AFFIXED ABOVE SHALL APPLY ONLY TO REV(S) 0

S.A.W. ENGINEERING LTD.

ENHANCE ENERGY INC.

TITLE: CO2 TRUNKLINES SYSTEM SCHEMATIC

AREA: ALBERTA

FILE NO.: 11-004-SCH-0001

SCALE: NONE

EPDM No.: SAW-11-004

SITE TYPE: CO2 TRUNKLINES

MAIN L.S.D.: -