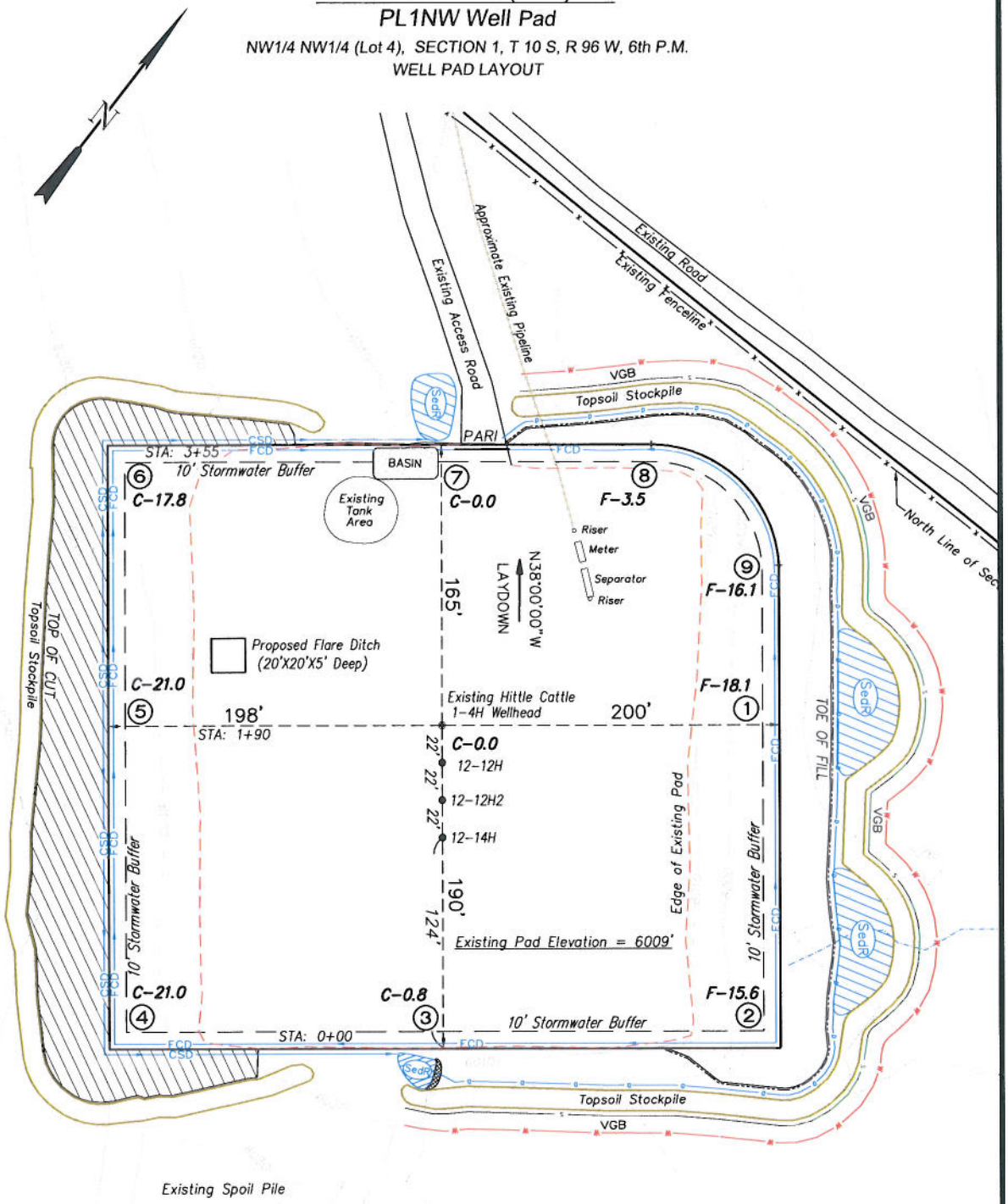
Encana Oil & Gas (USA) Inc.

PL1NW Well Pad

NW1/4 NW1/4 (Lot 4), SECTION 1, T 10 S, R 96 W, 6th P.M.

WELL PAD LAYOUT



Existing Spoil Pile

SURFACE DISTURBANCE (IN ACRES)	
Well Pad	3.22
Side Slopes	0.90
Stockpiles & Stormwater	1.18
TOTAL	5.30

Total Surface Disturbance = 5.30 Acres
(See Sheet 4 for Details)

NOTES:
(1) Slope Track and/or Terrace all Slopes and Piles
(2) Erosion Control & Seed Topsoil
(3) Erosion Control & Seed Outside
(4) Slope away from Substructure Areas 1% to 3% to Flow Control

LEGEND
SL = SLASH
ST = SEDIMENT TRAP
SedR = SEDIMENT RESERVOIR
R.O.D. = RUN-ON DIVERSION
W = PERIMETER CONTROL (WATTLES)
CSD = CUT SLOPE DIVERSION (BERM TOE OF CUT SLOPE)
D = FILL DIVERSION TO SEDIMENT TRAP
VGB = VEGETATION BUFFER (UNDISTURBED LAND INSIDE PC)
FCD = FLOW CONTROL DITCH
PARI = PAD/ACCESS ROAD INTERFACE
= LEVEL SPREADER
= TOE BERM (PLACED AT TOE OF ALL FILL SLOPES/STOCKPILES)
= TOPSOIL BERM
= SEED, ECB & FLEX

60' 0' 60'

WASATCH SURVEYING
906 Main Street
Evanston, Wyoming 82930
Phone No. (307) 789-4545

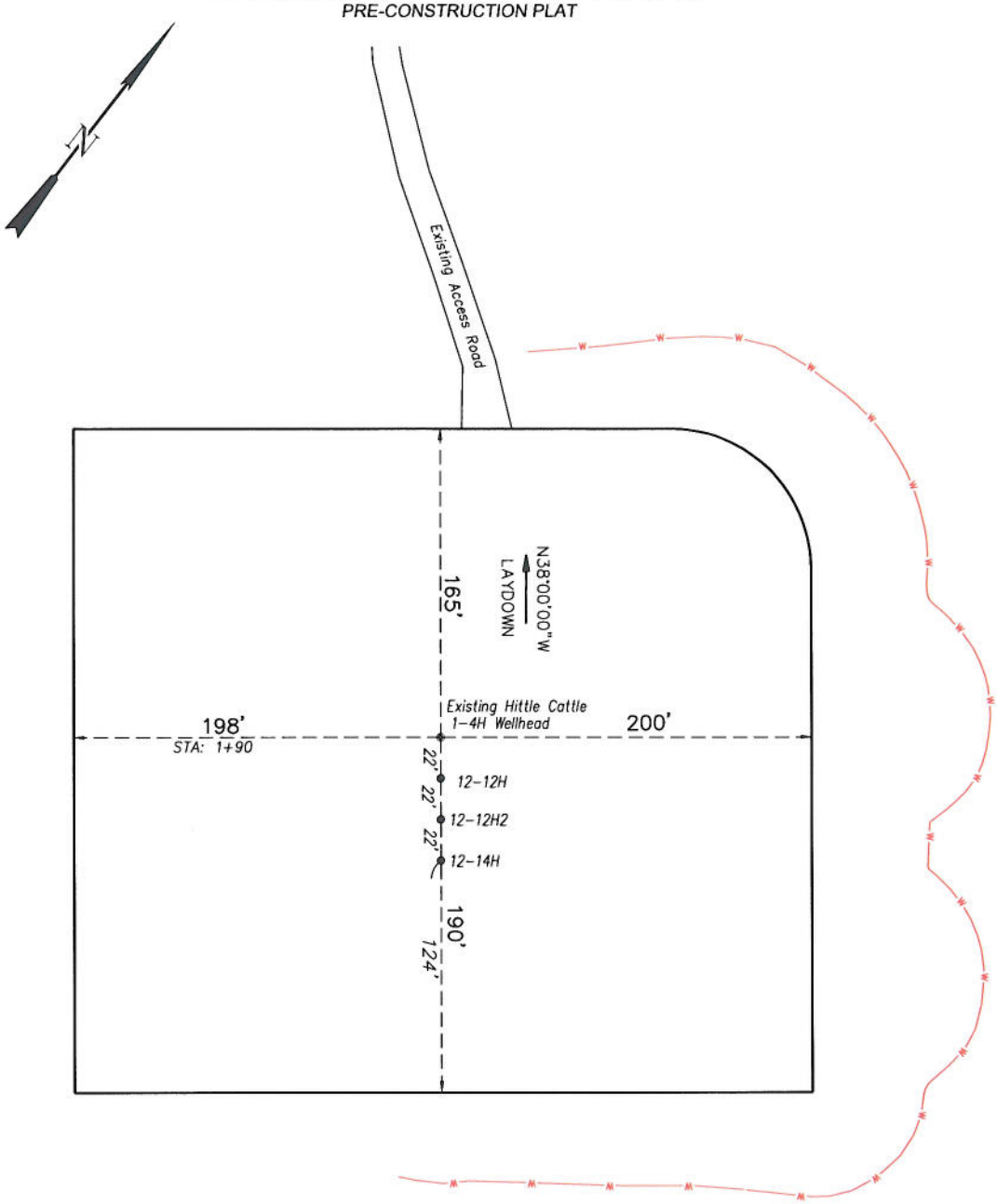
Well Pad Layout		Scale: 1" = 60'		SHEET
Project No.	09-04-06	Date Surveyed:	2/09/09	3
Date Drawn:	5/11/09	Latest Revision Date:	11/01/11	OF 10

Encana Oil & Gas (USA) Inc.

PL1NW Well Pad

NW1/4 NW1/4 (Lot 4), SECTION 1, T 10 S, R 96 W, 6th P.M.

PRE-CONSTRUCTION PLAT



Total Surface Disturbance = 5.30 Acres
(See Sheet 4 for Details)

NOTES:

(1) Slope Track and/or Terrace all Slopes and Piles

(2) Erosion Control & Seed Topsoil

(3) Erosion Control & Seed Outside

(4) Slope away from Substructure Areas 1% to 3% to Flow Control

LEGEND

-SL- = SLASH
ST = SEDIMENT TRAP
SedR = SEDIMENT RESERVOIR
R.O.D. = RUN-ON DIVERSION
-W- = PERIMETER CONTROL (WATTLES)
CSD = CUT SLOPE DIVERSION (BERM TOE OF CUT SLOPE)
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PARI = PAD/ACCESS ROAD INTERFACE
= LEVEL SPREADER
= TOE BERM (PLACED AT TOE OF ALL FILL SLOPES/STOCKPILES)
= TOPSOIL BERM
= SEED, ECB & FLEX

PRE-CONSTRUCTION PHASE COMPLETE, AUTHORIZATION TO CONTINUE CONSTRUCTION.

SIGNATURE:

60' 0' 60'

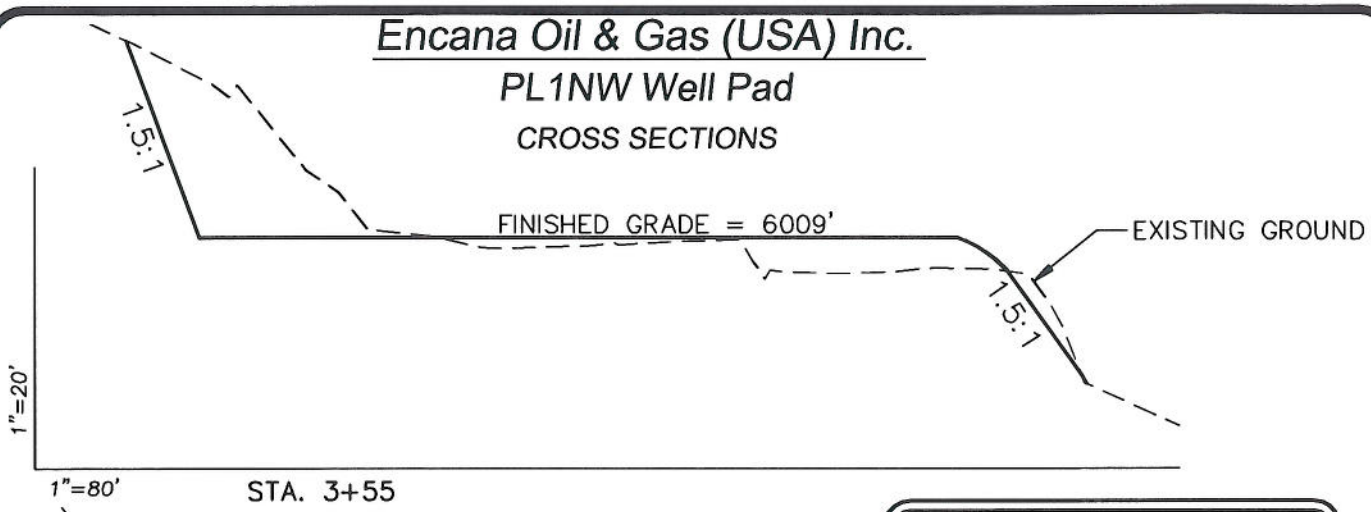
WASATCH SURVEYING
906 Main Street
Evanston, Wyoming 82930
Phone No. (307) 789-4545

Pre-Construction		Scale: 1" = 60'		SHEET
Project No.	09-04-06	Date Surveyed:	2/09/09	3a
Date Drawn:	11/01/11	Latest Revision Date:		OF 10

Encana Oil & Gas (USA) Inc.

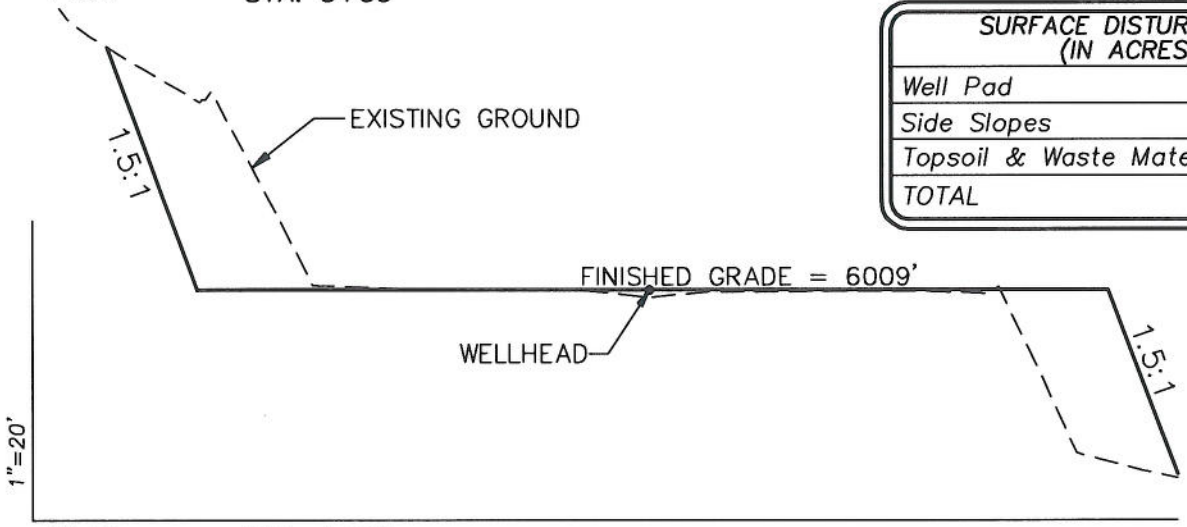
PL1NW Well Pad

CROSS SECTIONS

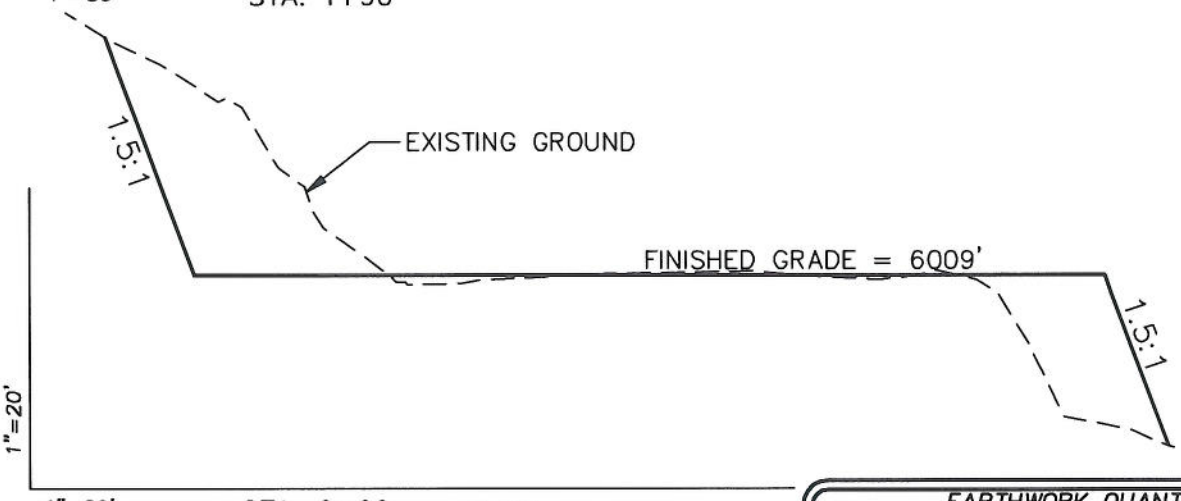


STA. 3+55

SURFACE DISTURBANCE (IN ACRES)	
Well Pad	3.22
Side Slopes	0.90
Topsoil & Waste Material	1.18
TOTAL	5.30



STA. 1+90



STA. 0+00

NOTE:
ALL CUT AND FILL SLOPES ARE AT 1.5:1 UNLESS OTHERWISE NOTED.

EARTHWORK QUANTITIES (in Cubic Yards w/ 10% shrink factor)				
ITEM	CUT	FILL	6" TOPSOIL	EXCESS
PAD	14998	14998	Topsoil not included in Excavation	0
PIT	0	0		0
TOTALS	14998	14998	1600	0

WASATCH SURVEYING
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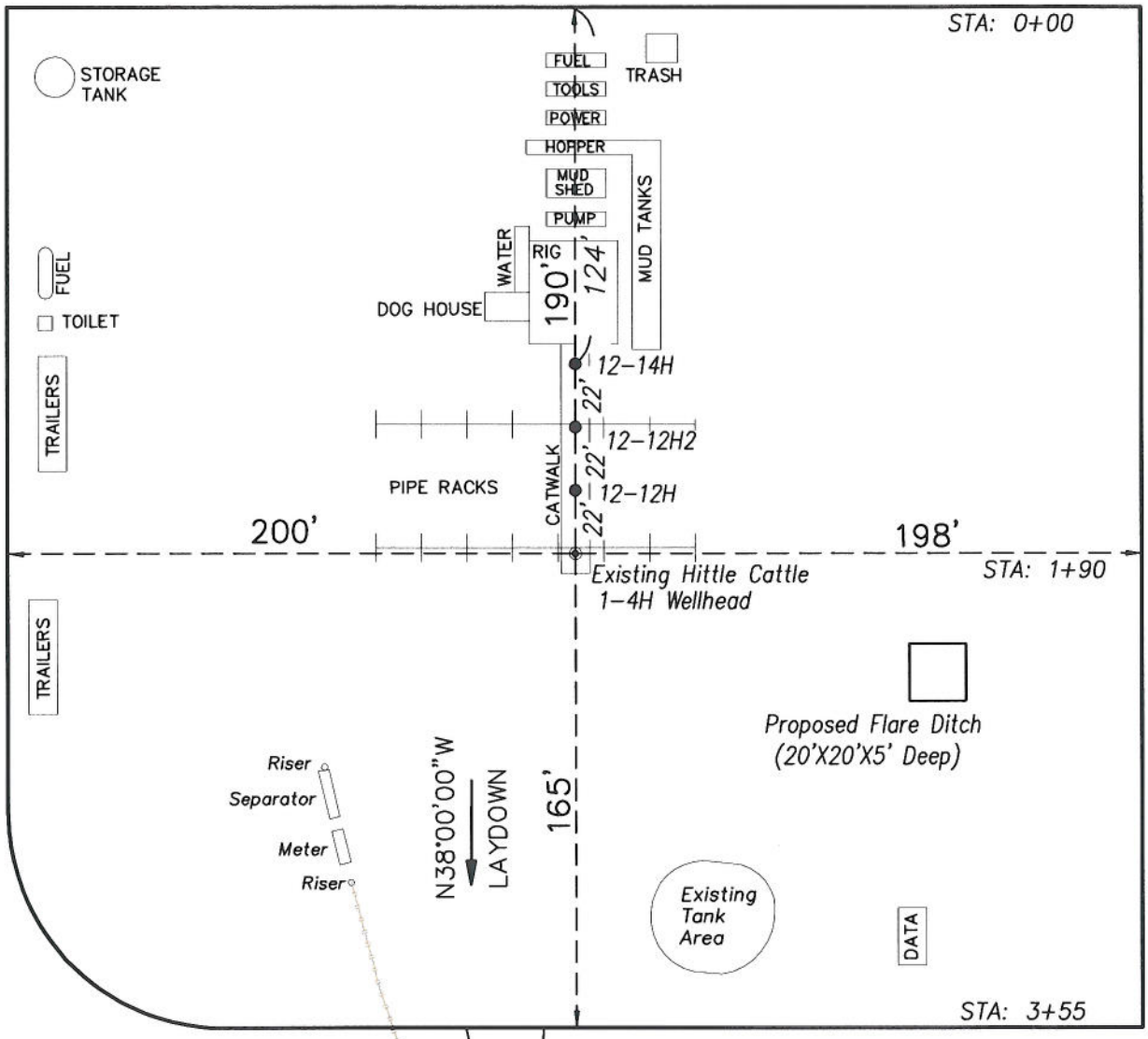
Evanston, Wyoming 82930
Phone No. (307) 789-4545

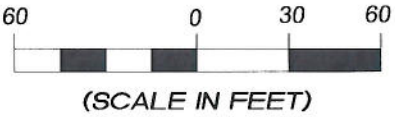
Cross Sections		Scale: As Shown		SHEET
Project No.	09-04-06	Date Surveyed:	2/09/09	4
Date Drawn:	5/11/09	Latest Revision Date:	11/01/11	OF 10

Encana Oil & Gas (USA) Inc.

PL1NW Well Pad

TYPICAL RIG LAYOUT





WASATCH SURVEYING

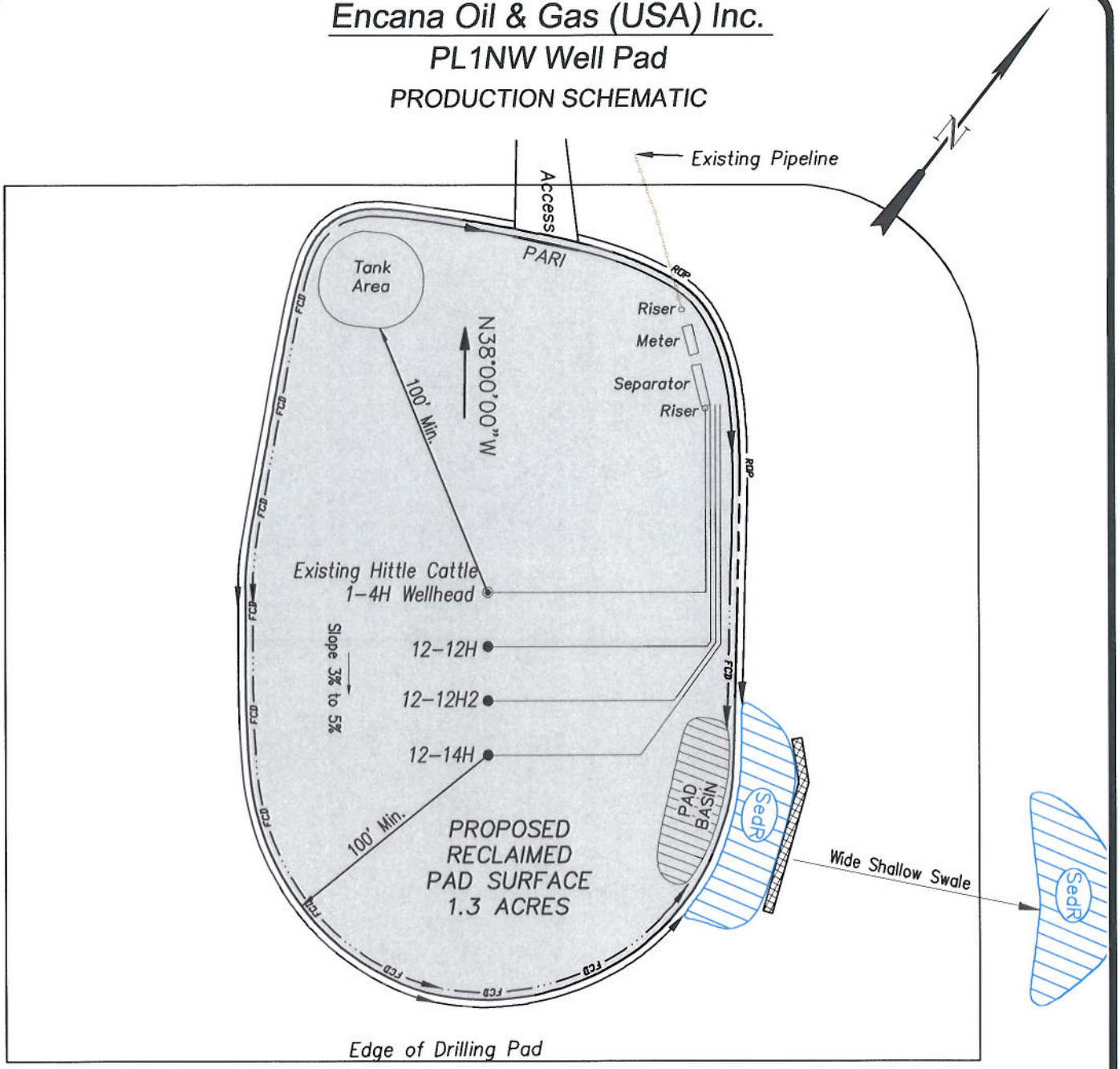
906 Main Street
Evanston, Wyoming 82930
Phone No. (307) 789-4545

Rig Layout		Scale: 1" = 60'		SHEET
Project No.	09-04-06	Date Surveyed:	2/09/09	5
Date Drawn:	5/11/09	Latest Revision Date:	11/01/11	OF 10

Encana Oil & Gas (USA) Inc.

PL1NW Well Pad

PRODUCTION SCHEMATIC



LEGEND

PARI = PAD/ACCESS ROAD INTERFACE
SedR = SEDIMENT RESERVOIR
R.O.P.= RUN-ON PROTECTION
FCD = FLOW CONTROL DITCH
= LEVEL SPREADER

ESTIMATED AREAS
RECLAIMED AREA: 4.0 ACRES
UNRECLAIMED AREA: 1.3 ACRES
(Production Pad)

NOTES:

1. Set Tanks High so pad Entrance & Tank Area Can Drain to Pad Basin
2. Gravel Pad 75' from Wells & Around Tanks and Separators
3. Pad Drains to Pad Basin at a 3% to 5% slope
4. BMP Selection and Position may change Depending on Actual Conditions Encountered During the Construction Process
5. Actual Equipment Layout and Reclaimed Pad Surface Area May Change due to Production Requirements or Site Conditions.

60 0 30 60

(SCALE IN FEET)

WASATCH SURVEYING

906 Main Street
Evanston, Wyoming 82930
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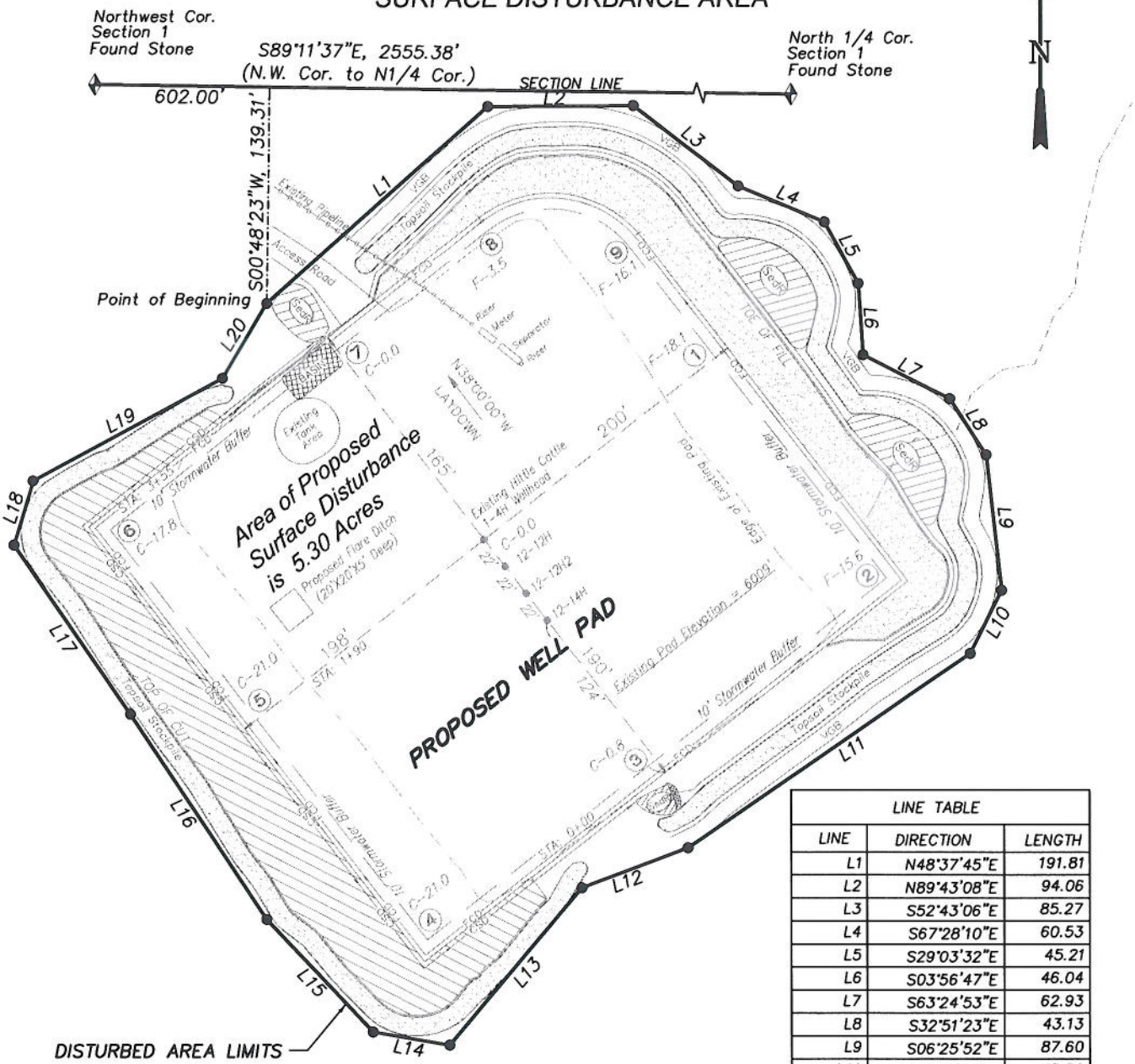
Production Schematic		Scale: 1" = 60'		SHEET
Project No.	09-04-06	Date Surveyed:	2/09/09	6
Date Drawn:	5/11/09	Latest Revision Date:	11/01/11	OF 10

EnCana Oil & Gas (USA) Inc.

PL1NW Well Pad

Section 1, T10S, R96W, 6th P.M.

SURFACE DISTURBANCE AREA



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N48°37'45"E	191.81
L2	N89°43'08"E	94.06
L3	S52°43'06"E	85.27
L4	S67°28'10"E	60.53
L5	S29°03'32"E	45.21
L6	S03°56'47"E	46.04
L7	S63°24'53"E	62.93
L8	S32°51'23"E	43.13
L9	S06°25'52"E	87.60
L10	S26°29'28"W	45.50
L11	S55°39'34"W	221.89
L12	S69°30'32"W	73.34
L13	S40°18'20"W	132.47
L14	N80°27'41"W	50.57
L15	N43°39'19"W	100.20
L16	N33°55'36"W	159.04
L17	N34°41'26"W	132.45
L18	N16°43'44"E	43.11
L19	N61°51'23"E	139.71
L20	N31°08'46"E	56.28

100 0 50 100

(SCALE IN FEET)

WASATCH SURVEYING
906 Main Street
Evanston, Wyoming 82930
Phone No. (307) 789-4545

Surface Disturbance	Scale: 1" = 100'	SHEET
Project No. 09-04-06	Date Surveyed: 2/09/09	7
Date Drawn: 11/01/11	Latest Revision Date:	OF 10