



PUNTOS DE CONTROL VERTICAL (BM)			
PUNTOS	COORDENADAS UTM		COTA snm
	NORTE	ESTE	
BM-089	8571188.982	521179.552	4179.485
BM-090	8571272.21	521731.544	4175.176
BM-091	8571243.658	522086.953	4182.509
BM-092	8571432.192	522473.539	4194.351
BM-093	8571407.589	522782.665	4207.813
BM-094	8571146.61	522895.764	4208.988
BM-095	8570964.938	523078.608	4212.710
BM-096A	8570744.561	523332.43	4230.035
BM-097A	8570860.164	523611.935	4258.832
BM-098A	8570545.377	523810.12	4281.045
BM-099A	8570016.58	523700.42	4301.549
BM-100A	8569699.558	523726.824	4288.397
BM-101A	8569524.772	524016.787	4280.090
BM-102A	8569212.775	524337.006	4276.303
BM-103	8570481.025	525702.927	4209.971
BM-104	8570050.676	525571.87	4229.602
BM-105	8569852.554	525133.914	4248.300
BM-106	8569644.725	524704.659	4261.093
BM-107	8569358.311	524490.82	4248.733
BM-108	8568949.665	524480.197	4272.323
BM-109	8568754.175	524742.652	4274.575
PB-12/BM-110	8568531.452	525113.542	4261.156
AZ-12/BM-111	8568363.206	525560.537	4228.470
BM-112	8567892.589	525773.415	4197.493
BM-113	8567454.533	525963.322	4168.532
BM-114	8567035.522	526077.378	4144.892
BM-115	8567049.903	526483.126	4129.654
BM-116	8567162.194	526804.086	4114.820
BM-117	8566994.538	527338.212	4079.702
BM-118	8566780.217	527692.605	4062.922
PB-13/BM-119	8566794.94	528167.701	4043.016
AZ-13/BM-120	8567165.324	528450.279	4011.197
BM-121	8567303.663	528085.91	3984.693
BM-122	8567769.465	528165.509	3967.107
BM-123	8567628.442	527921.801	3939.429
BM-124	8567835.937	528296.155	3913.451
BM-125	8567484.933	528285.237	3893.312
BM-126	8567505.071	528776.7	3860.181
BM-127	8567771.41	529085.737	3842.897
BM-128	8567489.317	529445.367	3818.492
BM-129	8567141.039	529570.416	3790.789
PB-14/BM-130	8566770.599	529567.059	3762.019
AZ-14/BM-131	8566561.361	529339.193	3736.372
BM-132	8566249.205	529015.384	3714.641
BM-133	8565974.241	529109.671	3696.989
BM-134	8565715.107	529117.342	3669.610
BM-135	8565300.827	528801.99	3640.476
BM-136	8565090.107	528399.529	3617.517
BM-137	8564827.818	528454.65	3600.033
BM-138	8564726.183	528837.841	3562.562
BM-139	8564592.937	528915.477	3538.790
BM-140	8564165.214	528929.232	3512.859
BM-141	8563974.382	528727.182	3492.255
BM-142	8563855.22	528751.205	3474.314
AZ-15/BM-143	8563557.593	528848.878	3448.940
BM-144	8563629.488	529005.313	3424.080
BM-145	8563331.043	528718.439	3401.043
BM-146	8563182.759	528375.579	3372.545
BM-147	8563095.105	528528.164	3344.340
BM-148	8563242.647	528988.206	3308.985
BM-149	8563381.913	529366.583	3289.113
AZ-16/BM-150	8563906.407	529691.67	3267.2485

PUNTOS DE POLIGONAL PRINCIPAL			
PUNTOS	COORDENADAS UTM		COTA snm
	NORTE	ESTE	
P-065	8571266.559	521397.538	4177.347
P-066	8571557.562	522733.008	4206.488
P-067	8571516.437	522784.566	4207.195
P-068	8571271.798	523074.081	4212.078
P-069	8571224.137	523106.711	4211.370
P-070A	8570972.38	523479.008	4239.682
P-071A	8571013.622	523556.305	4249.781
P-072A	8570958.017	523606.353	4254.004
P-073A	8570695.163	523748.733	4275.802
P-074A	8570340.124	523790	4288.978
P-075	8570863.733	524633.502	4152.604
P-076	8570551.991	524943.777	4172.875
P-077	8570045.656	525346.37	4239.755
P-078	8570003.372	525164.872	4246.271
P-079	8569721.557	524945.689	4254.744
P-080	8569143.424	524444.062	4257.687
P-081	8568968.316	524711.618	4272.914
P-082	8568605.84	524882.616	4278.442
P-083	8568249.687	52579.929	4223.666
P-084	8567638.44	525810.26	4182.304
P-085	8567204.158	526560.739	4124.590
P-086	8567220.069	526640.539	4120.526
P-087	8566989.122	527488.033	4078.344
P-088	8566851.414	528015.734	4048.777
P-089	8567580.867	528166.828	3968.228
P-090	8567932.779	528152.45	3921.388
P-091	8567702.551	529255.621	3833.695
P-092	8567380.401	529646.217	3805.709
P-093	8566983.707	529639.811	3779.822
P-094	8566303.503	529135.958	3712.570
P-095	8566156.512	529806.394	3716.150
P-096	8566061.214	528924.681	3706.174
P-097	8565926.319	529049.404	3692.538
P-098	8565536.926	529016.063	3656.233
P-099	8565153.523	528609.676	3629.653
P-100	8565034.515	528402.54	3616.163
P-101	8564991.411	528383.243	3617.592
P-102	8564758.368	528615.22	3592.169
P-103	8564913.536	528742.929	3577.281
P-104	8564682.842	528849.247	3560.651
P-105	8564261.486	528943.109	3523.646
P-106	8563678.247	529002.624	3437.584
P-107	8563460.313	528902.86	3413.151
P-108	8563023.158	528651.074	3334.389
P-109	8563049.713	528698.566	3331.663
P-110	8563409.624	529409.511	3287.677
P-111	8563519.67	529475.924	3282.372

PUNTOS PRINCIPALES GNSS			
PUNTOS	COORDENADAS UTM		COTA
	NORTE	ESTE	
GPS PB-10	8571316.188	521894.443	4179.1775
GPS AZ-10	8571446.132	522404.677	4191.050
GPS PB-11	8570781.978	524902.282	4173.668
GPS AZ-11	8570472.511	524928.816	4178.984
GPS PB-12/BM-110	8568531.452	525113.542	4261.156
GPS AZ-12/BM-111	8568363.206	525560.537	4228.4695
GPS PB-13/BM-119	8566794.94	528167.701	4043.016
GPS AZ-13/BM-120	8567165.324	528450.279	4011.197
GPS PB-14/BM-130	8566770.599	529567.059	3762.0185
GPS AZ-14/BM-131	8566561.361	529339.193	3736.3715
GPS PB-15	8563832.085	528689.039	3490.5395
GPS AZ-15/BM-143	8563557.593	528848.878	3448.94
GPS PB-16	8563701.571	529538.773	3273.572
GPS AZ-16/BM-150	8563906.407	529691.67	3267.2485

LEYENDA	
POLIGONAL DE APOYO	
CARRETERA EXISTENTE	
PUNTOS DE CONTROL HORIZONTAL (AZ)	
PUNTOS DE CONTROL HORIZONTAL (PB)	
PUNTOS DE POLIGONAL (P)	
PUNTOS DE CONTROL VERTICAL (BM)	

PERU
 Ministerio de Transportes y Comunicaciones
 Provias Nacional

Buena Ventura
 Compañía de Minas Buena Ventura

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 Revisión:
 Proceso y Ploteo: GER. ESTUDIOS-HOB

REVISIONES		
N°	FECHA	DESCRIPCION

ESTUDIO DEFINITIVO DE LA REHABILITACION Y MEJORAMIENTO CARRETERA: HUANCAMELICA - LIRCAY
TRAMO: 1+550(Av. Los Chancas)-LIRCAY
 CONTRATO N° 7341-2012

PLANO DE GEOREFERENCIACION
COORDENADAS UTM
 FECHA: SEPTIEMBRE 2013
 ESCALA FORMATO A1: 1/7500
 ESCALA FORMATO A3: 1/15000
7341-12-PCUTM-03