

VERTEX COMMUNICATIONS CORPORATION
FCC Application for Experimental License

Exhibit 1

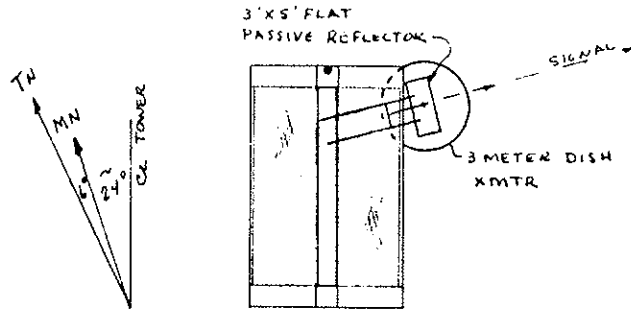
(FCC Form 442-9,10)

Experimentation Program

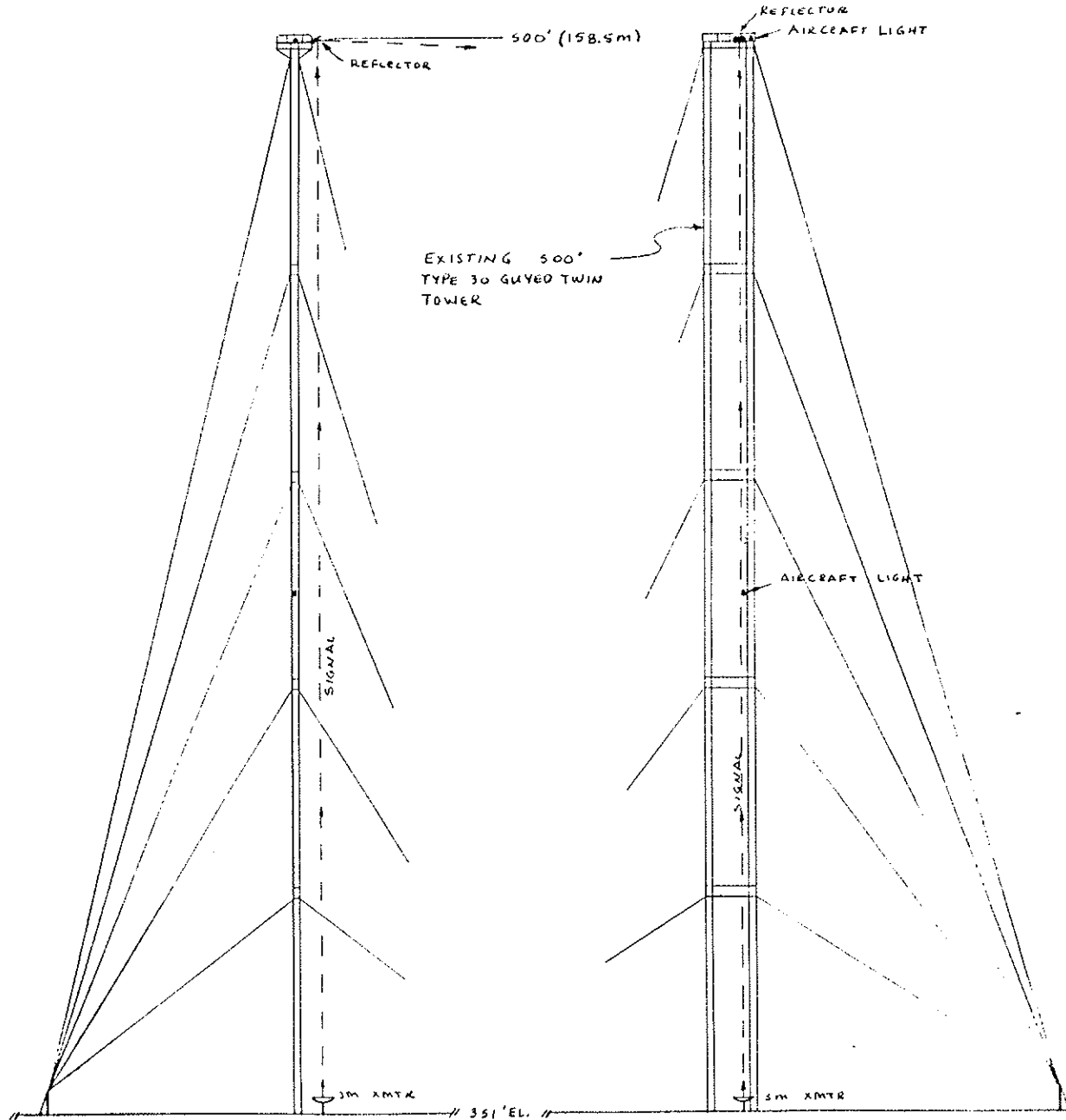
Vertex is applying here for an Experimental License for a test range on which satellite earth station antennas will be "mapped" for gain patterns at various frequencies. Vertex Communications is now engaged in antenna and feed production only for the 3.7-6.425 GHz, 7.25-8.4 GHz, and 10.7-14.5 GHz commercial frequency bands. In the near future (1-2 years) the 14-20 GHz band will become more and more prominent for commercial use, and Vertex will be developing feeds and antennas for that band also.

In addition, for the support of Harris Government Communications System Division and other customers, Vertex is constantly in need of a test range for the military bands up to 20 GHz and higher. This range will be used for both commercial and government/military product development for at least two years. All Vertex commercial transmitting antennas must pass FCC regulations governing sidelobes, spillover, gain, etc. This range will allow Vertex to qualification tests for these requirements. It will also allow Vertex to develop new feeds and specially shaped main and subreflectors with the specific objectives of achieving maximum efficiency, minimum RF loss, minimum cost and 100% compliance with FCC requirements.

Vertex Antenna Test Range will use a 12 foot diameter transmitting antenna located at the base of a 500 foot tower and aimed up the tower at a passive flat reflector. This reflector then points the signal down range approximately 2 miles to the antenna under test which is at azimuth bearing of 84° from true North and elevation of -3° or 3° below horizontal from the top of the tower. The test signal can be either horizontally or vertically polarized. The signal may also be right handed or left handed circular depending on the end user of the antenna under test. This is achieved by using appropriate feeds and polarizers.



PLAN VIEW
TOP PLATFORM
(SCALE 1"=12.5')

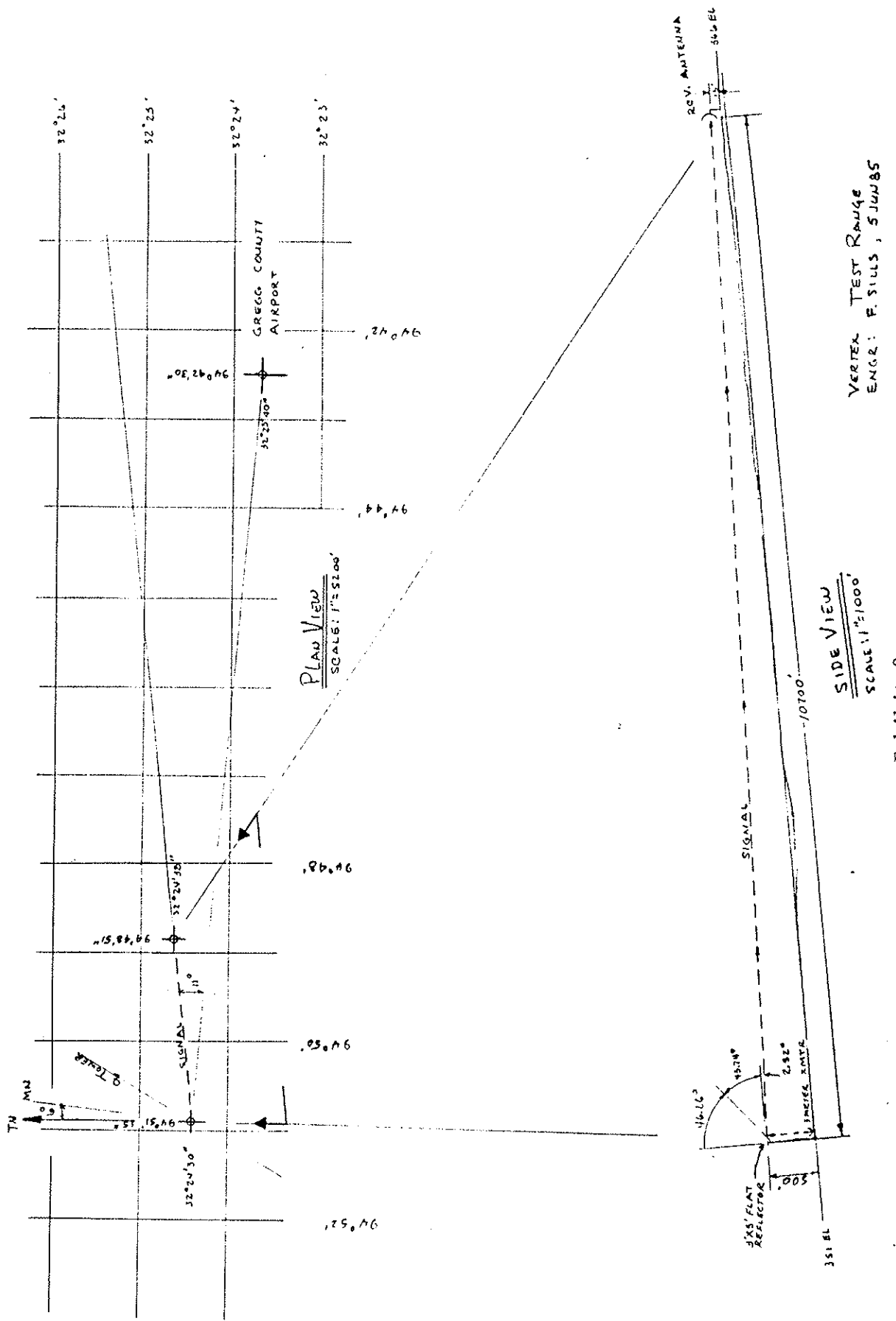


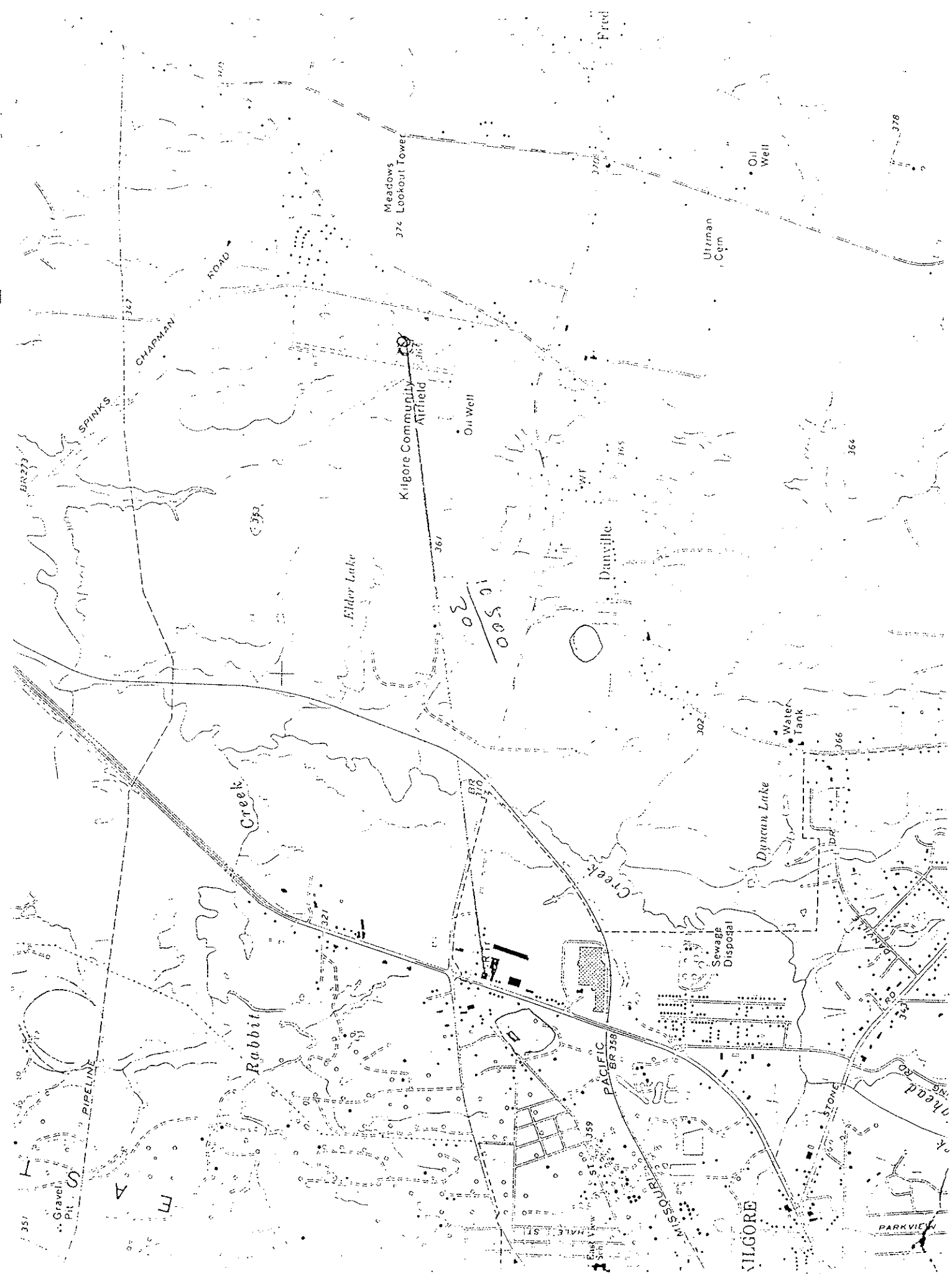
END VIEW

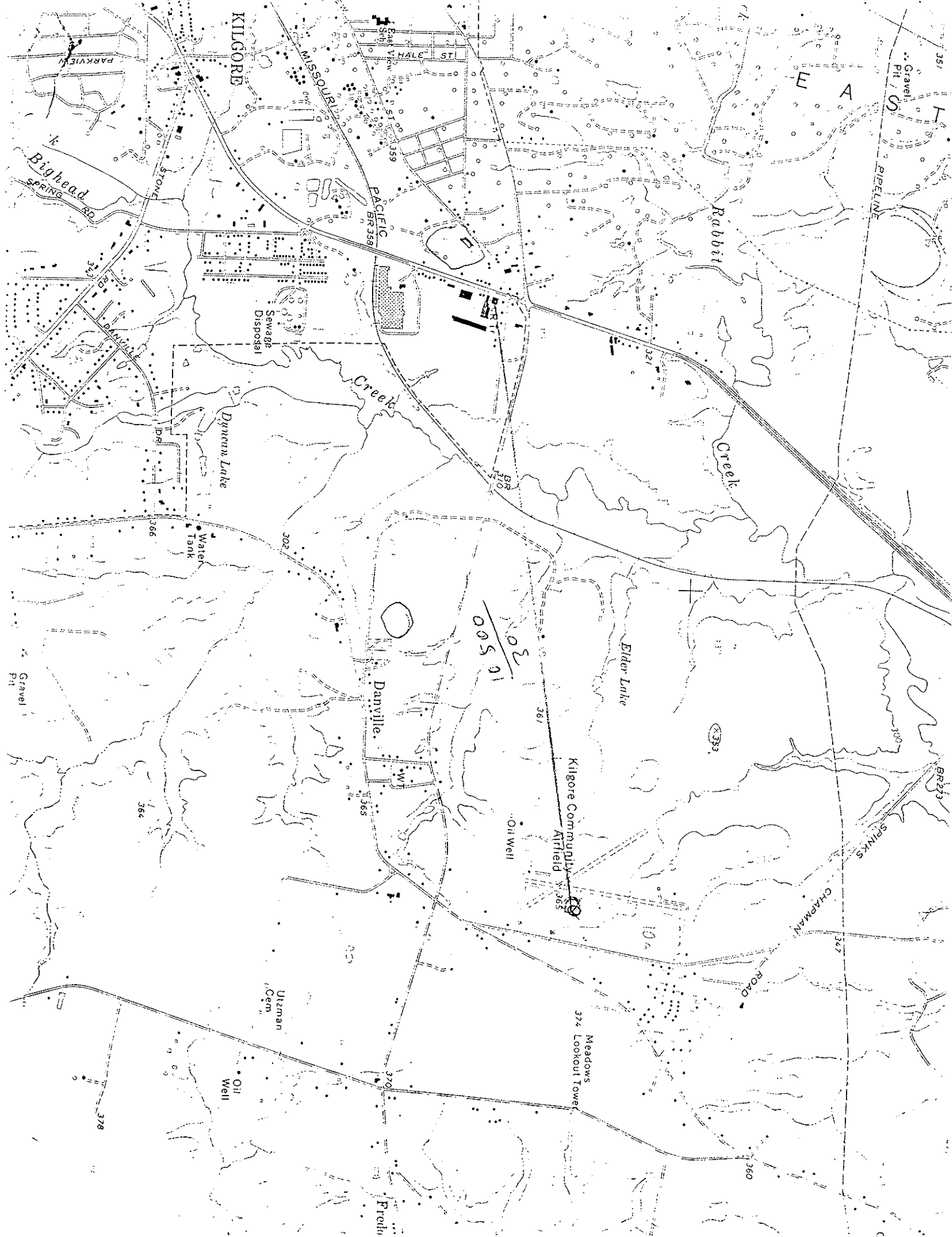
SIDE VIEW

1/500 SCALE

VERTEX TEST RANGE
ENGR: F.S.113-5 JUN 81







KILGORE

MISSOURI

East View Sch

HALF ST

ST

PACIFIC

BR 335

359

351

Gravel Pit

PIPELINE

Bighead Spring Rd

STONE RD

343

340

337

334

331

328

325

322

319

316

313

310

Sewage Disposal

Creek

Duncan Lake

Water Tank

366

363

360

357

354

351

348

345

342

339

336

333

Danville

WT

365

Oil Well

367

364

361

358

355

352

349

346

343

340

337

334

Kilgore Community Airfield

365

362

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356

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CHAPMAN ROAD

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344

341

338

Meadows

374 Lookout Tower

371

368

365

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353

350

347

Uzman Cem

Oil Well

378

Frederick