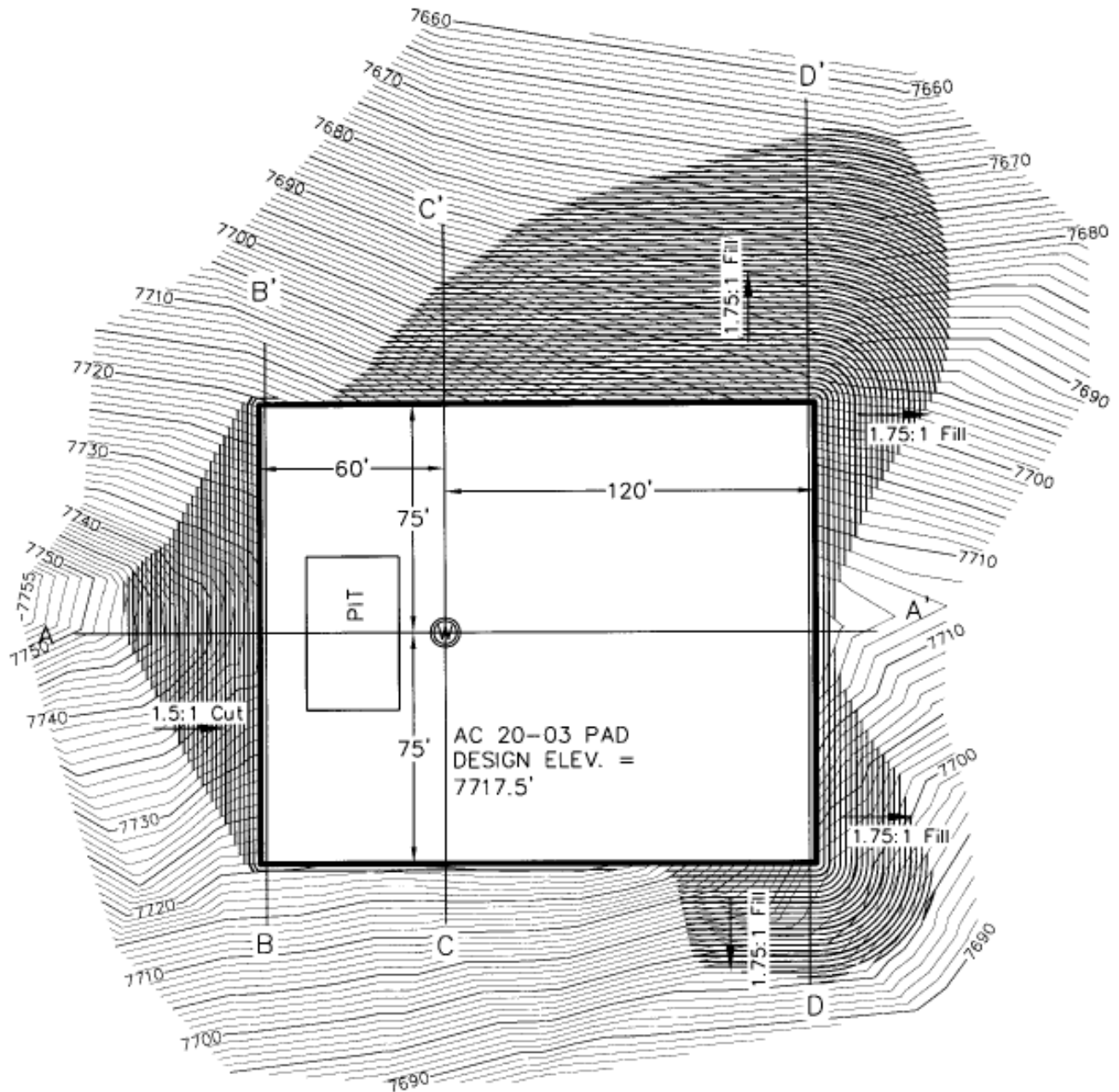


ELEVATIONS OF WELL PAD



SITE MAP



B.M.P. IMPLEMENTATION DURING CLEARING AND WELL PAD/ACCESS ROAD DEVELOPMENT

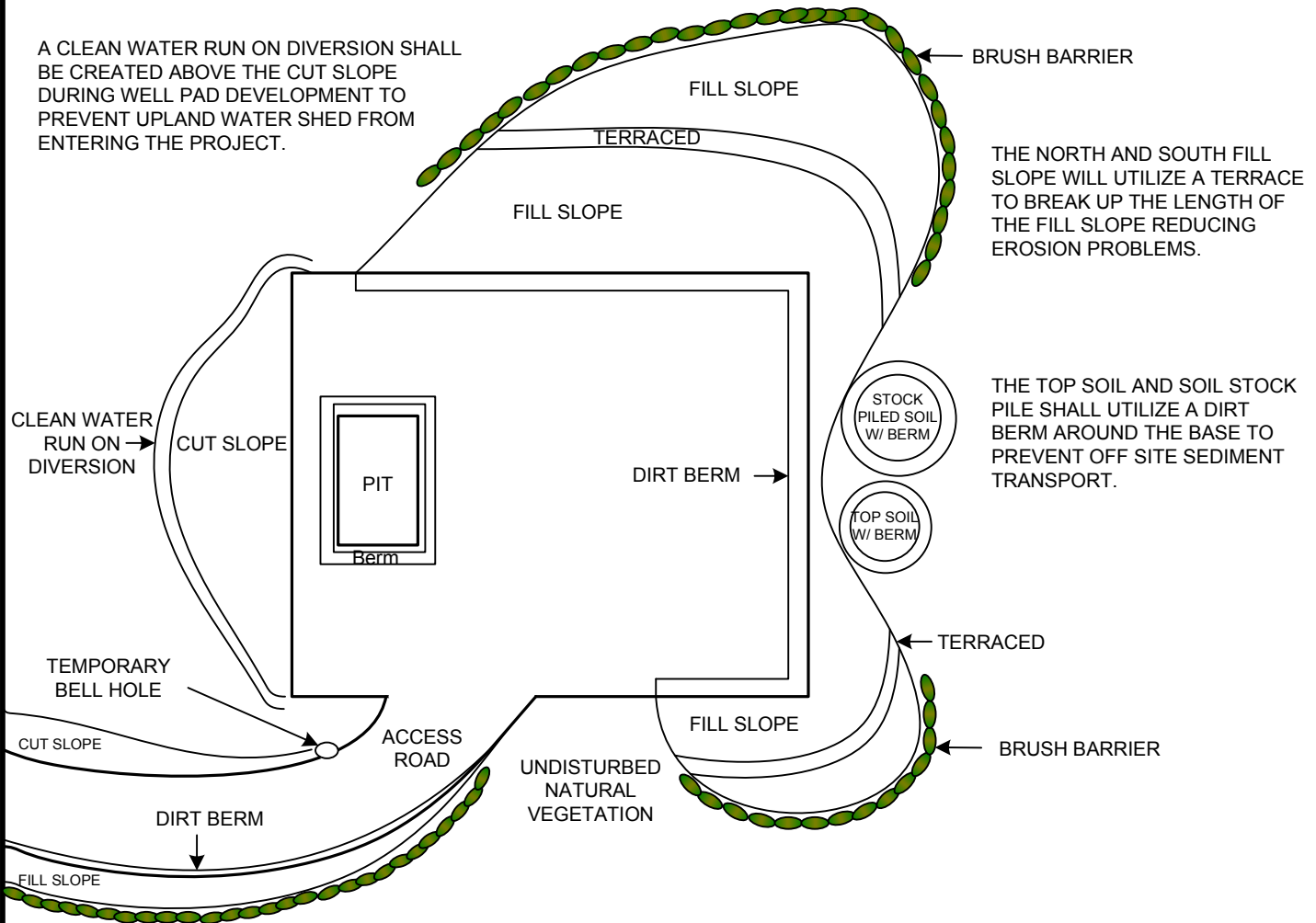


UNDISTURBED NATURAL VEGETATION SHALL BE PRESERVED OUTSIDE OF THE BOUNDARY OF DISTURBANCE, REDUCING SEDIMENT AND EROSION PROBLEMS.

DURING THE CLEARING OPERATION ALL TREE STUMPS WILL BE BURIED IN FILL SLOPE AWAY FROM PIPELINE (ROW). A BRUSH BARRIER WILL BE PLACED DOWN GRADIENT OF THE DISTURBED AREAS TO INTERCEPT AND RETAIN SEDIMENT. IF ADEQUATE TREE CUTTINGS ARE NOT AVAILABLE, A COMPACTED DIRT BERM SHALL BE UTILIZED.

DURING THE ACCESS ROAD DEVELOPMENT SOIL SHALL BE SEPARATED FROM SOLID ROCK. SOME OF THE ROCK WILL BE STORED FOR STABILIZATION PURPOSES AS NEEDED. THE SOIL WILL BE USED TO CREATE A TEMPORARY DIRT BERM UP GRADIENT OF THE FILL SLOPE TO PREVENT EROSION OF THE FILL SLOPE. ALL DIRT BERMS WILL BE COMPACTED TO PREVENT UNEQUAL SETTLEMENT.

A CLEAN WATER RUN ON DIVERSION SHALL BE CREATED ABOVE THE CUT SLOPE DURING WELL PAD DEVELOPMENT TO PREVENT UPLAND WATER SHED FROM ENTERING THE PROJECT.



INITIALLY, ACCESS ROADS WILL BE SLOPED TOWARDS THE CUT SLOPE TO DIRECT RUN-OFF TO TEMPORARY BELL HOLES. THE TEMPORARY BELL HOLES SHALL BE PLACED AT THE TOE OF THE CUT SLOPE ADJACENT TO THE ACCESS ROAD TO INTERCEPT AND RETAIN SEDIMENT UNTIL THE PERMANENT BMP'S ARE IMPLEMENTED.

ONCE FINAL GRADE OF THE FILL SLOPE HAS BEEN ACHIEVED, A DIRT BERM SHALL BE UTILIZED ALONG THE WELL PAD PERIMETER TO PREVENT EROSION OF THE FILL SLOPE AND DIRECT RUN OFF TO A DESIRED LOCATION. IF SEASONAL RESTRAINTS EXIST AND THE SEEDING METHOD CAN NOT BE APPLIED, THEN THE BRUSH BARRIER WILL BE REPLACED WITH A PERMANENT COMPACTED DIRT BERM AT THE TOE OF THE FILL SLOPE. THE BERMS WILL ALSO HELP TO PREVENT ANY ACCIDENTAL LEAKS OR SPILLS THAT MAY OCCUR FROM LEAVING LOCATION THROUGH THE CONSTRUCTION, DRILLING AND PRODUCTION OPERATIONS.

THE DRILL PIT SHALL BE LINED ACCORDING TO COGCC RULE 904.(C)(3)

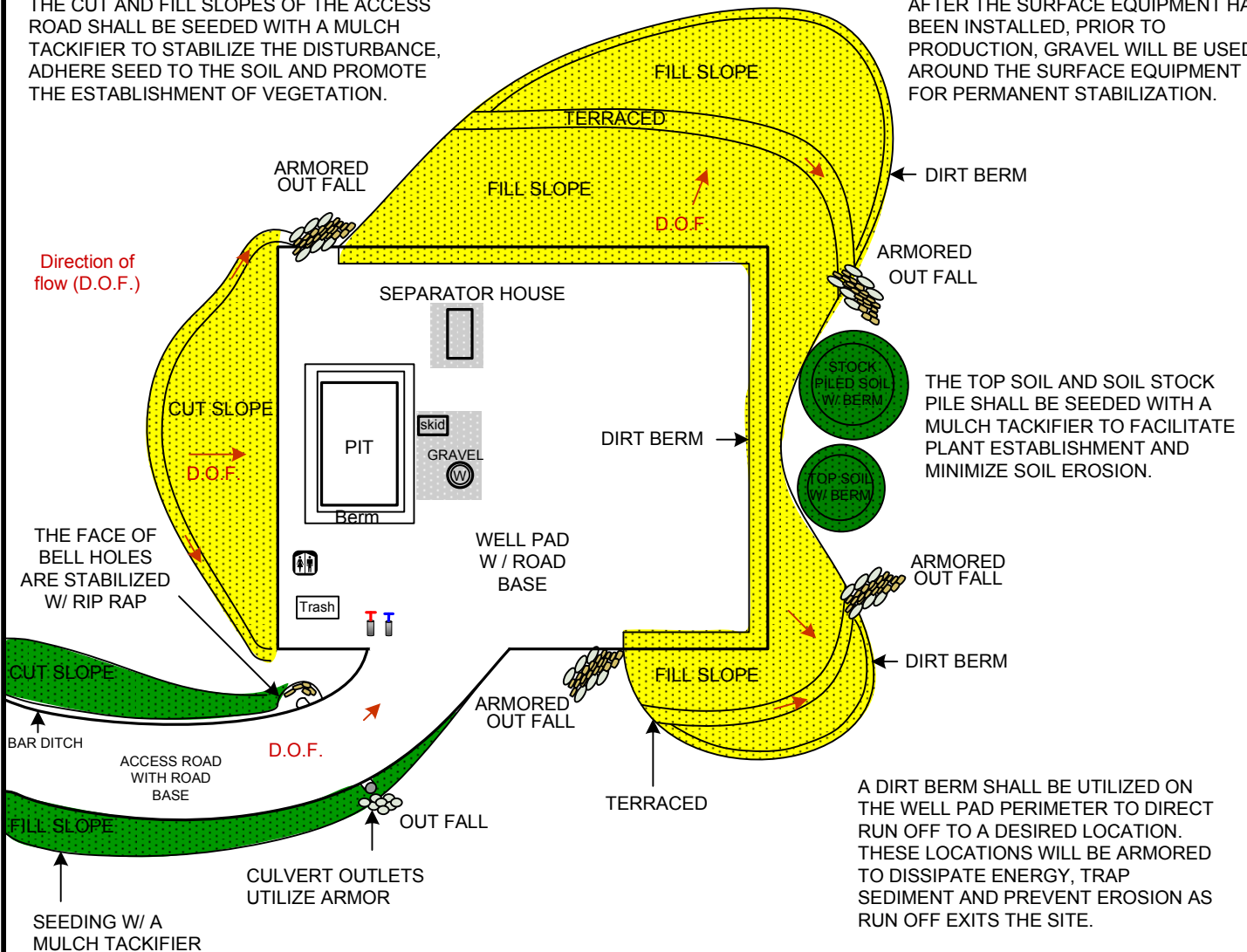


B.M.P. IMPLEMENTATION DURING FINAL STABILIZATION



THE CUT AND FILL SLOPES OF THE ACCESS ROAD SHALL BE SEEDED WITH A MULCH TACKIFIER TO STABILIZE THE DISTURBANCE, ADHERE SEED TO THE SOIL AND PROMOTE THE ESTABLISHMENT OF VEGETATION.

AFTER THE SURFACE EQUIPMENT HAS BEEN INSTALLED, PRIOR TO PRODUCTION, GRAVEL WILL BE USED AROUND THE SURFACE EQUIPMENT FOR PERMANENT STABILIZATION.



PIPELINE WILL BE LEFT EXPOSED IN LOCATIONS MARKED FOR CULVERT INSTALL BY XTO PERSONEL. AFTER THE PIPELINE HAS BEEN INSTALLED, PADDED AND BACK FILLED, FINAL GRADE AND STABILIZATION WILL BEGIN ALONG THE ACCESS ROAD. WHERE POSSIBLE CUT AND FILL SLOPES SHALL BE SLOPED TO A MINIMUM OF 2.5:1 GRADE. ACCESS ROADS WILL BE LIMITED TO (20) FEET WIDE EXCEPT ON TURNS, CURVES, OR TERRAIN WHERE ENGINEERING REQUIREMENTS REQUIRE SOMETHING GREATER. THE BRUSH BARRIER WILL BE REMOVED FROM THE FILL SLOPE AND DEPENDING ON SOIL CONTENT GRADING TECHNIQUES MAY BE UTILIZED FOR TEMPORARY STABILIZATION AND PREPARE THE OUT SLOPE FOR SEEDING. THE ACCESS ROAD SURFACE WILL BE CROWNED. A BAR DITCH WILL BE ESTABLISHED AT THE TOE OF THE CUT SLOPE TO DIRECT RUN OFF TO A DESIRED LOCATION WHERE CULVERTS WILL BE INSTALLED. CULVERT INLETS WILL UTILIZE BELL HOLES THAT ARE LINED WITH RIP RAP ON THE FACE TO STABILIZE THE INLET. CULVERT OUTLETS WILL UTILIZE ARMOR TO DISSIPATE ENERGY, TRAP SEDIMENT AND PREVENT SCOURING OF THE FILL SLOPE. AS A OPTION IN AREAS DETERMINED BY XTO CONSTRUCTION SUPERVISOR, GABION BASKETS WILL BE INSTALLED AS A SEDIMENT TRAP.

ALL CULVERTS WILL BE INSTALLED WITH A MINIMUM COVER OF (1) FOOT WITH PADDING MATERIAL. AFTER THE CULVERTS HAVE BEEN INSTALLED, ROAD BASE WILL BE UTILIZED ON THE ACCESS ROAD AT A WIDTH OF (14) FEET WIDE AT (4) INCHES THICK AFTER COMPACTION. IN AREAS WHERE THE ROAD IS WIDER THAN (20) FEET GRAVEL WILL BE PLACED TO MATCH THE TRAFFIC PATTERN TO STABILIZE THE ROAD SURFACE AND REDUCE OFF SITE VEHICLE TRACKING. THE WELL PAD WILL UTILIZE ROAD BASE INSIDE THE DEAD MAN ANCHORS MATCHING THE ABOVE CRITERIA.

