

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144
July 21, 2008

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.
For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

6288

Pit, Closed-Loop System, Below-Grade Tank, or
Proposed Alternative Method Permit or Closure Plan Application

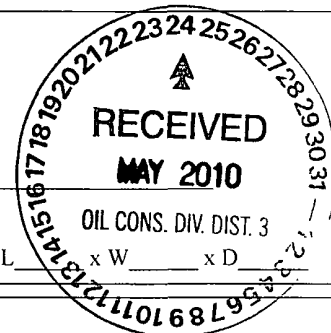
- Type of action: ☐ Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method
☐ Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method
☒ Modification to an existing permit
☐ Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1. Operator: EnerVest Operating, LLC OGRID #: 143199
Address: 1001 Fannin St. Ste 800 Houston, Texas 77002
Facility or well name: Quinn 335 S
API Number: 30-045-32522 OCD Permit Number: Pending
U/L or Qtr/Qtr P Section 17 Township 31N Range 08W County: San Juan
Center of Proposed Design: Latitude 36.892535 Longitude -107.692818 NAD: ☐ 1927 ☒ 1983
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2. ☐ **Pit:** Subsection F or G of 19.15.17.11 NMAC
Temporary: ☐ Drilling ☐ Workover
☐ Permanent ☐ Emergency ☐ Cavitation ☐ P&A
☐ Lined ☐ Unlined Liner type: Thickness _____ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
☐ String-Reinforced
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____ Volume: _____ bbl Dimensions: L _____ x W _____ x D _____



3. ☐ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC
Type of Operation: ☐ P&A ☐ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent)
☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other _____
☐ Lined ☐ Unlined Liner type: Thickness _____ mil ☐ LLDPE ☐ HDPE ☐ PVC ☐ Other _____
Liner Seams: ☐ Welded ☐ Factory ☐ Other _____

4. ☒ **Below-grade tank:** Subsection I of 19.15.17.11 NMAC PERMIT EXISTING BELOW - GRADE TANK
Volume: 120 bbl Type of fluid: Primarily produced water w/ compressor skid precipitation & incidental lubricating oil
Tank Construction material: Steel Open-top w/ expanded metal cover
☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off
☒ Visible sidewalls and liner ☐ Visible sidewalls only ☒ Other _____ Visible sidewalls, liner, 6" lift & electronic monitoring _____
Liner type: Thickness 20 mil ☒ HDPE ☐ PVC ☐ Other _____

5. ☐ **Alternative Method:**
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

6.

Fencing: Subsection D of 19.15.17.11 NMAC (*Applies to permanent pits, temporary pits, and below-grade tanks*)

- ☐ Chain link, six feet in height, two strands of barbed wire at top (*Required if located within 1000 feet of a permanent residence, school, hospital, institution or church*)
- ☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet
- ☒ Alternate. Please specify 42" Hog-wire fence with 2 strands barbed-wire on top

7.

Netting: Subsection E of 19.15.17.11 NMAC (*Applies to permanent pits and permanent open top tanks*)

- ☒ Screen ☐ Netting ☐ Other _____
- ☐ Monthly inspections (If netting or screening is not physically feasible)

8.

Signs: Subsection C of 19.15.17.11 NMAC

- ☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
- ☒ Signed in compliance with 19.15.3.103 NMAC

9.

Administrative Approvals and Exceptions:

Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.

Please check a box if one or more of the following is requested, if not leave blank:

- ☒ Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for consideration of approval
- ☐ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

10.

Siting Criteria (regarding permitting): 19 15 17.10 NMAC

Instructions: *The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.*

Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (<i>Applies to temporary, emergency, or cavitation pits and below-grade tanks</i>) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (<i>Applies to permanent pits</i>) - Visual inspection (certification) of the proposed site; Aerial photo, Satellite image	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Within a 100-year floodplain. - FEMA map	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

11.

Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC
☐ Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
☒ Previously Approved Design (attach copy of design) API Number: 30-045-28314 or Permit Number: 6204

12.

Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9
☐ Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC
☐ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☐ Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
☐ Previously Approved Design (attach copy of design) API Number: _____
☐ Previously Approved Operating and Maintenance Plan API Number: _____ (Applies only to closed-loop system that use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

13.

Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC**Instructions:** Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC
☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC
☐ Climatological Factors Assessment
☐ Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Quality Control/Quality Assurance Construction and Installation Plan
☐ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☐ Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☐ Nuisance or Hazardous Odors, including H₂S, Prevention Plan
☐ Emergency Response Plan
☐ Oil Field Waste Stream Characterization
☐ Monitoring and Inspection Plan
☐ Erosion Control Plan
☐ Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC

14.

Proposed Closure: 19.15.17.13 NMAC**Instructions:** Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan.

- Type: ☐ Drilling ☐ Workover ☐ Emergency ☐ Cavitation ☐ P&A ☐ Permanent Pit ☒ Below-grade Tank ☐ Closed-loop System
☐ Alternative
 Proposed Closure Method: ☒ Waste Excavation and Removal
☐ Waste Removal (Closed-loop systems only)
☐ On-site Closure Method (Only for temporary pits and closed-loop systems)
☐ In-place Burial ☐ On-site Trench Burial
☐ Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

15.

Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.

- ☒ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC
☒ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC
☒ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings)
☒ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☒ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☒ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

16.

Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)**Instructions:** Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.

Disposal Facility Name _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Will any of the proposed closed-loop system operations and associated activities occur on or in areas that *will not* be used for future service and operations?☐ Yes (If yes, please provide the information below) ☐ No*Required for impacted areas which will not be used for future service and operations*☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

17.

Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC**Instructions:** Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.

Ground water is less than 50 feet below the bottom of the buried waste.

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No☐ NA

Ground water is between 50 and 100 feet below the bottom of the buried waste

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No☐ NA

Ground water is more than 100 feet below the bottom of the buried waste.

- NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells

☐ Yes ☐ No☐ NA

Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark).

- Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.

- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image

☐ Yes ☐ No

Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application.

- NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- Written confirmation or verification from the municipality; Written approval obtained from the municipality

☐ Yes ☐ No

Within 500 feet of a wetland.

- US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site

☐ Yes ☐ No

Within the area overlying a subsurface mine.

- Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division

☐ Yes ☐ No

Within an unstable area.

- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map

☐ Yes ☐ No

Within a 100-year floodplain.

- FEMA map

☐ Yes ☐ No

18.

On-Site Closure Plan Checklist: (19.15.17.13 NMAC) **Instructions:** Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached.☐ Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC☐ Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC☐ Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC☐ Construction/Design Plan of Temporary Pit (for in-place burial of a drying pad) - based upon the appropriate requirements of 19.15.17.11 NMAC☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC☐ Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards cannot be achieved)☐ Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

19.

Operator Application Certification:

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name (Print): Ronnie L. Young Title: Compliance Supervisor

Signature: *Ronnie L. Young* Date: 5.19.10

e-mail address: ryoung@enervest.net Telephone: 713-495-6530

20.

OCD Approval: ☒ Permit Application (including closure plan) ☐ Closure Plan (only) ☐ OCD Conditions (see attachment)

OCD Representative Signature: *Janeth D. Kelly* Approval Date: 1/10/2012

Title: Compliance Officer OCD Permit Number: _____

21.

Closure Report (required within 60 days of closure completion): Subsection K of 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☐ Closure Completion Date: _____

22.

Closure Method:

☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ Alternative Closure Method ☐ Waste Removal (Closed-loop systems only)
☐ If different from approved plan, please explain.

23.

Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:

Instructions: Please identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Were the closed-loop system operations and associated activities performed on or in areas that will not be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations:

- ☐ Site Reclamation (Photo Documentation)
☐ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique

24.

Closure Report Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in the box, that the documents are attached.

- ☐ Proof of Closure Notice (surface owner and division)
☐ Proof of Deed Notice (required for on-site closure)
☐ Plot Plan (for on-site closures and temporary pits)
☐ Confirmation Sampling Analytical Results (if applicable)
☐ Waste Material Sampling Analytical Results (required for on-site closure)
☐ Disposal Facility Name and Permit Number
☐ Soil Backfilling and Cover Installation
☐ Re-vegetation Application Rates and Seeding Technique
☐ Site Reclamation (Photo Documentation)

On-site Closure Location: Latitude _____ Longitude _____ NAD: ☐ 1927 ☐ 1983

25.

Operator Closure Certification:

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

EnerVest Operating, LLC (EV)

BELOW-GRADE TANK
DESIGN AND CONSTRUCTION SPECIFICATIONS

Rule 19.15.17.11

- C. Enervest Operating is the official operator of record for all wells which have below-grade tanks to be addressed in this specification. All below-grade tanks are located on these leases and will be in full compliance with 19.15.16.8 regarding signage.
- D. EV will ensure a fence shall be constructed and maintained in good repair with gates that are closed and locked when responsible personnel are not on site. EV shall insure that all gates are closed and locked when responsible personnel are not on-site.

If the below-grade tank is located within 1,000 feet of a permanent residence, school, hospital, institution or church, the fence shall be a chain link security fence at least 6 feet in height with at least two strands of barbed wire on top.

If the below-grade tank is not within 1,000 feet of the above mentioned structures, the fence shall constructed to exclude livestock with at least four strands of barbed wire evenly spaced between one foot from the ground and four foot above the ground.

EV is requesting administrative approval to use a 42" Hog wire fence with 2 strands barbed-wire on top in lieu of the required four strand barbed wire fence. This will be supported with iron posting at the corners and 10 – 12 feet apart. EV believes this will offer better protection for wildlife in these tank areas. Please refer to Exhibit 2.1 of this Section.

- E. EV shall ensure an open top tank is screened with expanded 3/16" metal screen or a fully closed top, both of which are welded on the top of the tank. Such screening will be painted to blend with the below-grade tank. EV believes this is sufficient strength to protect migratory birds or other wildlife.
- I. EV will ensure all below-grade tanks will be constructed of 3/16" steel, resistant to the tank's contents and to damage from sunlight. Based on water production and road condition for access during the winter months there are a choice of three different sizes which could be used:

CAPACITY	DIAMETER	HEIGHT
125 bbl	15'	4'
120 bbl	12'	6'
100 bbl	12'	5'

This tank will contain liquids and should prevent contamination of fresh water to protect the public health and environment.

The below-grade system will include a excavated area for the tanks which will be dependent upon the size of the tank used:

- 18' x 18' x 4' High Square excavated area
- 18' Diameter x 4' High Circular excavated area
- 18' Diameter x 5' High Circular excavated area

Most of our below-grade tank systems were installed prior to June 16, 2008 and are 16.5' x 16.5' x 4' square excavated area design. As tanks are retro fitted, this will be changed to one of the above. The particular area and well conditions will determine which design best for that particular well. EV will ensure that there will be room to walk around the tank inside the containment area which will better enable our field personnel to inspect for damage to liners or incidental leaks. Please refer to tank diagram under Exhibit 2.2 of this section for details.

All excavated areas will be reinforced with metal walls to prevent collapse. There will be sufficient open area on all sides of the tank to witness any incidental release that may occur. Please refer to tank diagram under Appendix 8.

EV will ensure the base of any excavated area containing a below-grade tank will be level and free of rocks, debris, sharp edges or irregularities to prevent punctures, cracks or indentations of the liner or tank bottom.

EV will ensure that any geomembrane liner used shall consist of 30-mil flexible PVC or 60-mil HDPE liner or equivalent liner material. The liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salt and acidic and alkaline solutions and shall be resistant to ultraviolet light. The liner shall have a hydraulic conductivity no greater than 1×10^{-9} cm/sec. The liner shall be compatible with EPA SW-846 method 9090A. EV will install the liner in such a manner as to divert any possible leak for visual inspection. EV will demonstrate to the OCD that the liner complies with the specifications within Subparagraph (a) of Paragraph (4) of Section I of 19.156.17.11 NMAC and obtain approval from the division prior to the installation of the new design.

EV is requesting administrative approval to use an equivalent liner. The "Dura-Skirm J45 BB" is a 45-mil reinforced liner which we feels offers the same or better protection as the required 60-mil liner as indicated above. Please refer to Exhibit 2.3 of this Section for the specification sheets for this liner.

EV will ensure the fluid levels of tanks will be monitored by automatic high level alarms at 24" from the top and shut-off devise at 10 1/2 inches from the top of the

tank. The tanks will be also equipped with a manual shut-off valve in the event it is needed. Please see design specification sheet of this system in this section. The majority of our below-grade tanks are within the berm around our tank battery and as so are protected from run-on water. Those outside this berm will be protected with an earthen berm which will extend at least 6" above surface ground level to divert run-on around the tank. The side walls of the excavated area will extend at least 6" above the ground level to divert run-on water around the tank. Any possible leak will be diverted, on the liner, in such a way can be visually inspected. Please refer to Exhibit 2.4 of this Section for details of this automatic shut-off system.

EV tank design will be a single walled tank constructed to ensure that the side walls are open for visual inspection for leaks; the bottom will be elevated six inches above the ground surface and will contain a geomembrane liner, as described above, directly on the ground level of the containment area.

Once a below-grade tank which was installed prior to June 16, 2008 does not demonstrate integrity, EV shall promptly repair or remove that below-grade tank and close the tank or install a below-grade tank that is in full compliance with Paragraph 1 thru 4 of Section I of 19.15.17.11 NMAC. EV shall comply with the operational requirements of 19.15.17.12 NMAC. Please refer to tank diagram under Appendix 8 for details

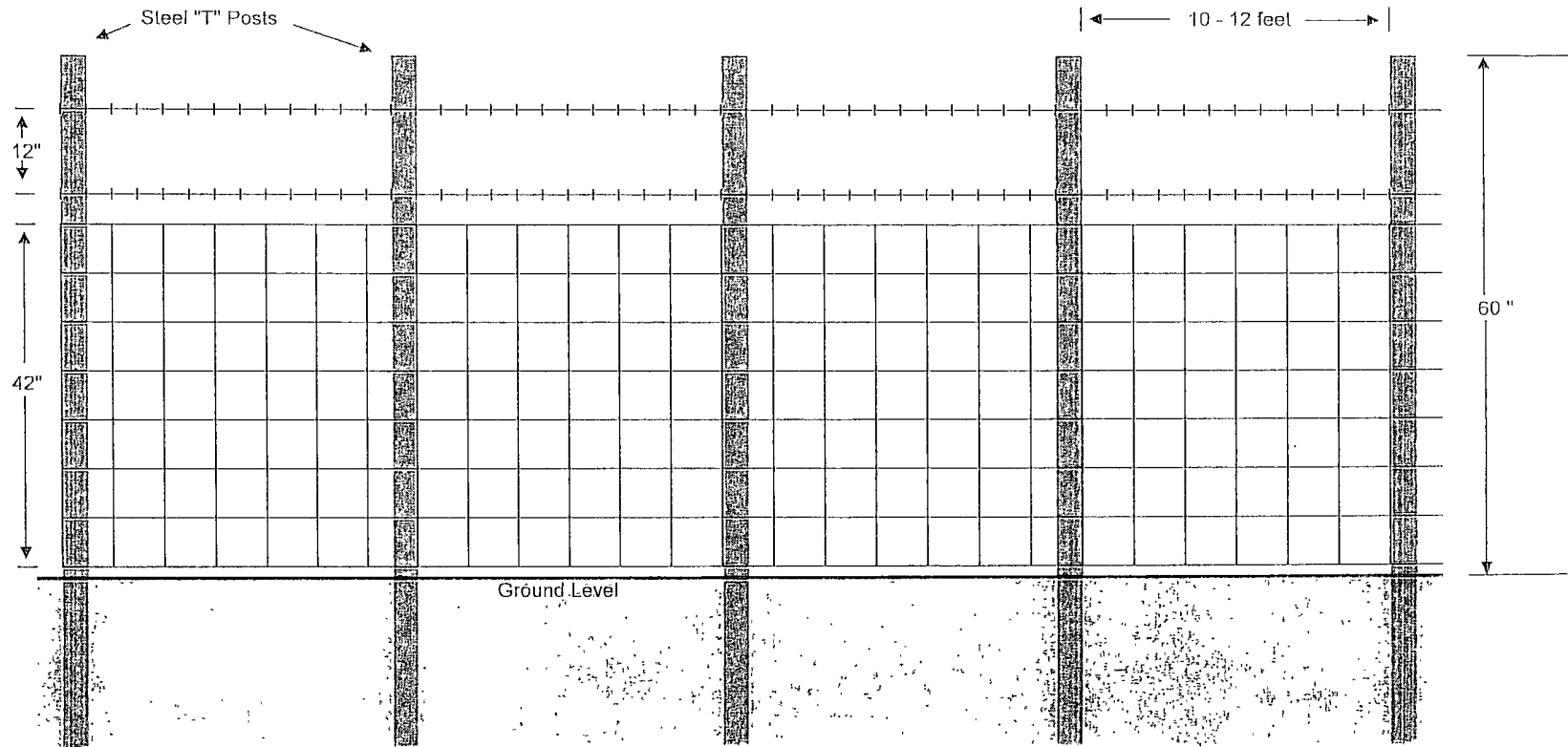
Any single walled below-grade tank installed before June 16, 2008 where any portion of the tank sidewall is below the ground surface and not totally visible shall be closed, retrofited or replaced before June 15, 2013. EV will fully comply with Paragraph 1 thru 4 of Section I of 19.15.17.11 NMAC for all retrofitting or replacement of below-grade tanks.

ENERVEST OPERATING, LLC

Proposed Alternative Fencing

Below-Grade Tank Construction

42" Hogwire Fence with 2 strands barbed-wire on top

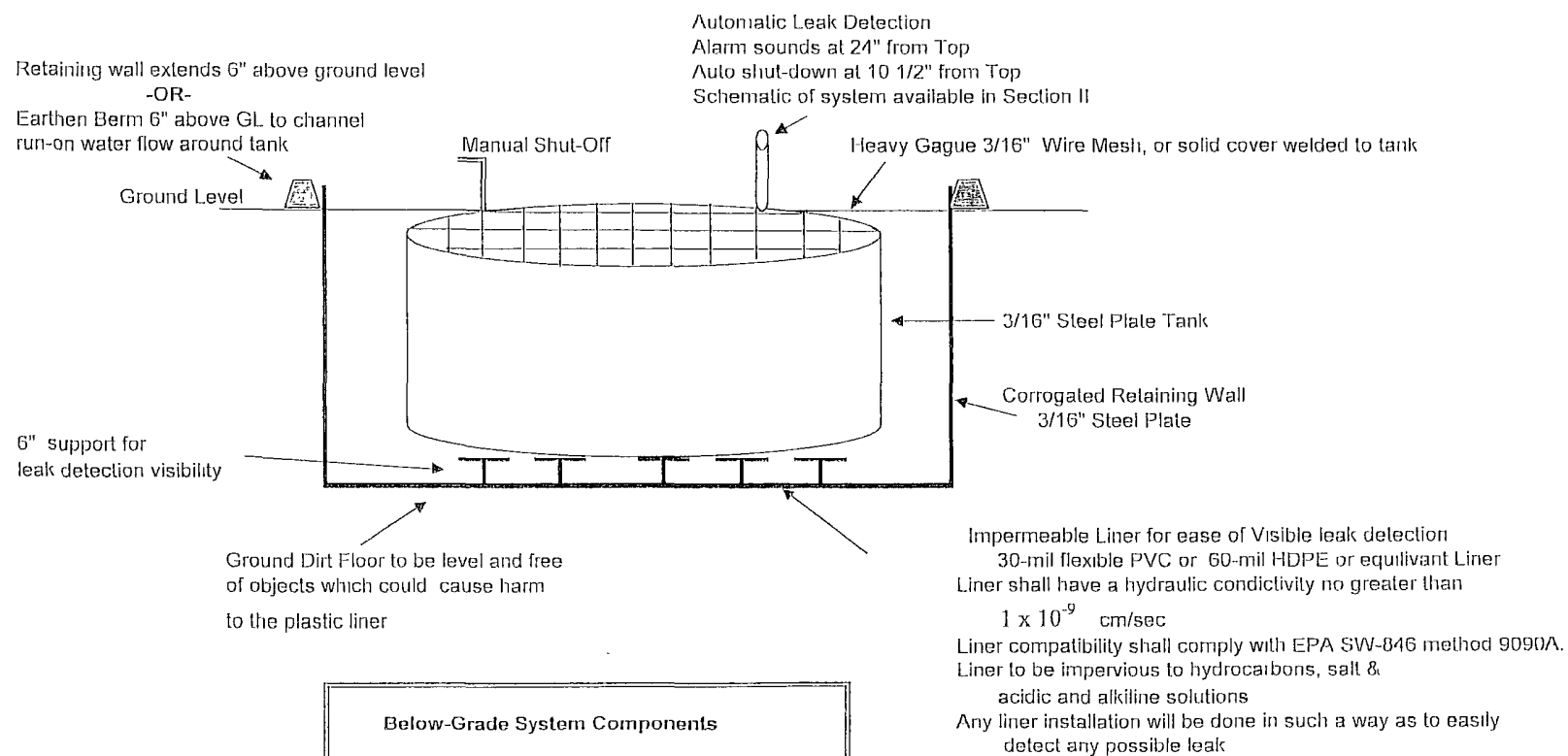




EnerVest Operating, LLC
Western Division

Below-Grade Tank System

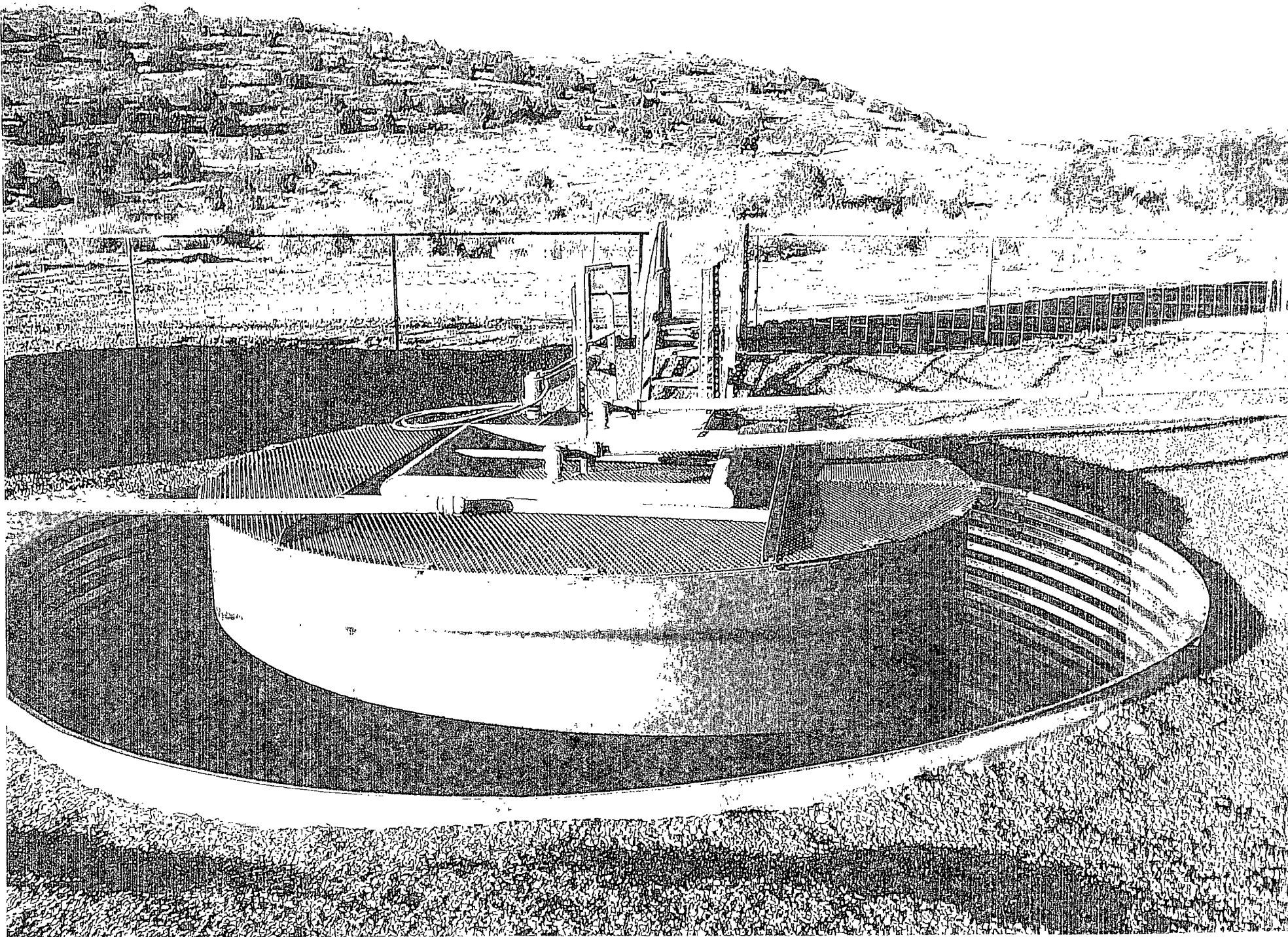
Gravity Fed - Produced Water

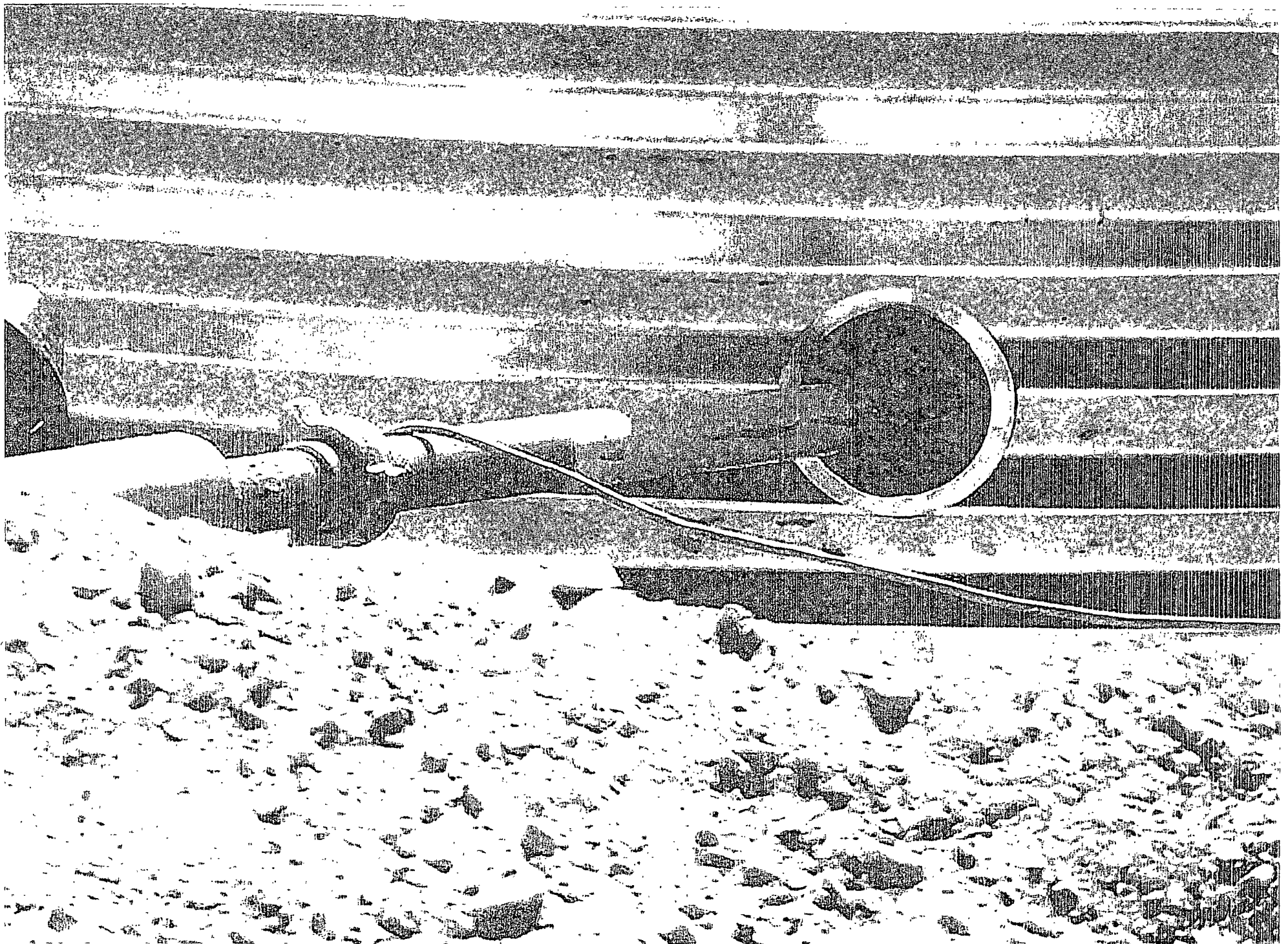


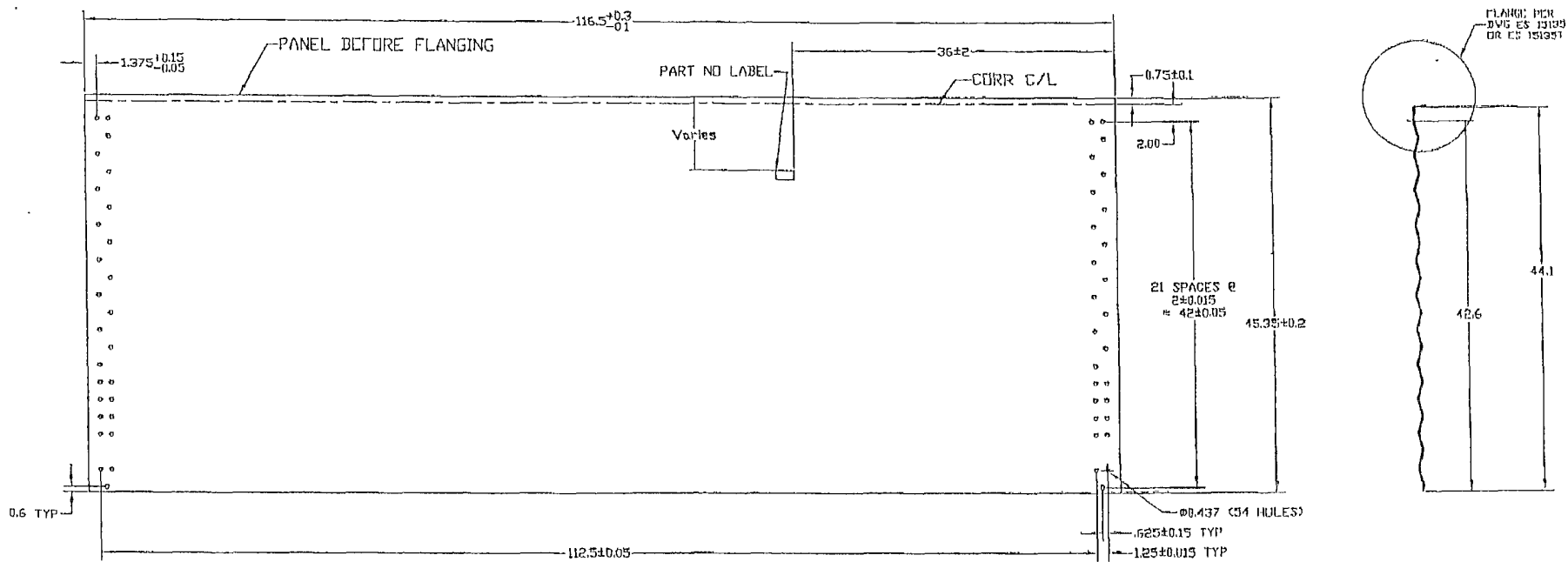
Below-Grade System Components

Capacity	Tank Size Dia x Height	Excavation Areas
125 Bbl	15' x 4'	18' x 18' x 4' Square
120 Bbl	12' x 6'	18' x 4' Circular
100 Bbl	12' x 5'	18' x 5' Circular

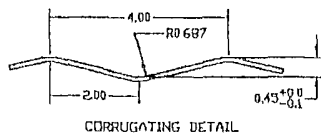
Tank size dependent upon water production & road conditions
Excavation Area size dependent upon tank size







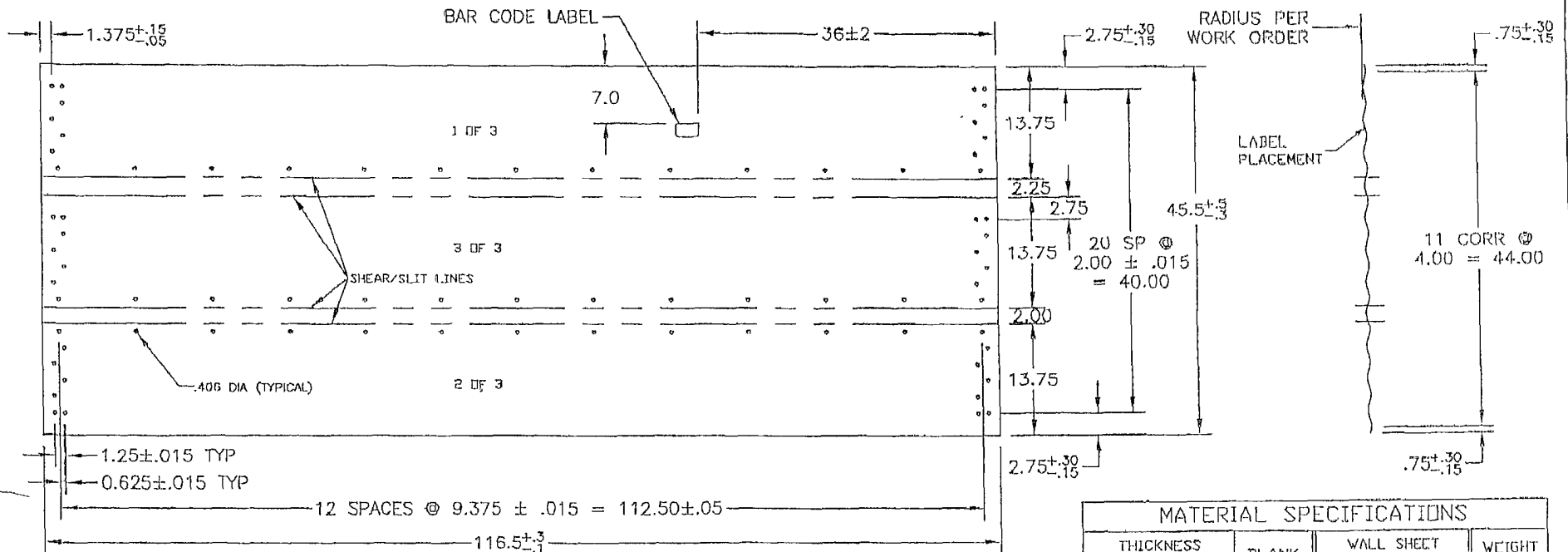
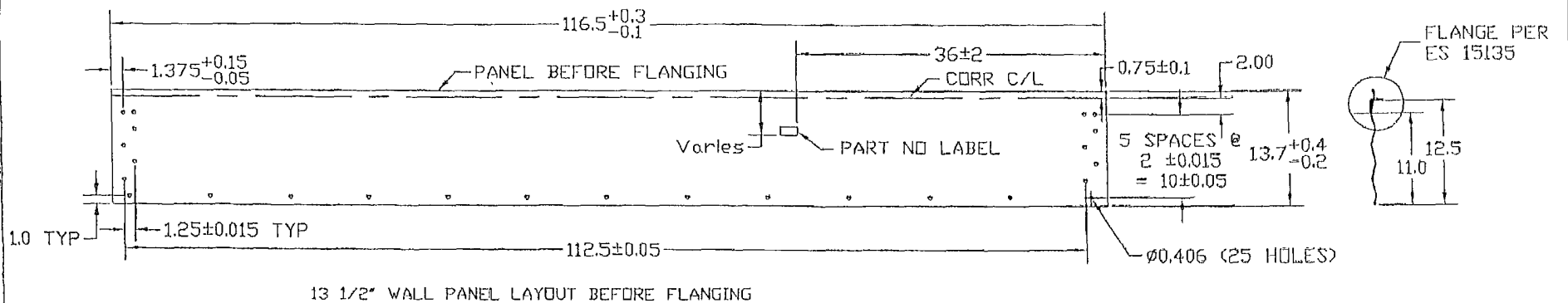
44' WALL PANEL BEFORE FLANGING



- MANUFACTURING NOTES:
1. CORRUGATION..... SEE DETAIL
 2. HOLE OFF CENTER OF CORR..... ± .05
 3. HOLE BURR MAX..... .01
 4. CUT OFF BURR MAX..... .01
 5. CORNER HOLE TO HOLE DIAGONAL ± .13

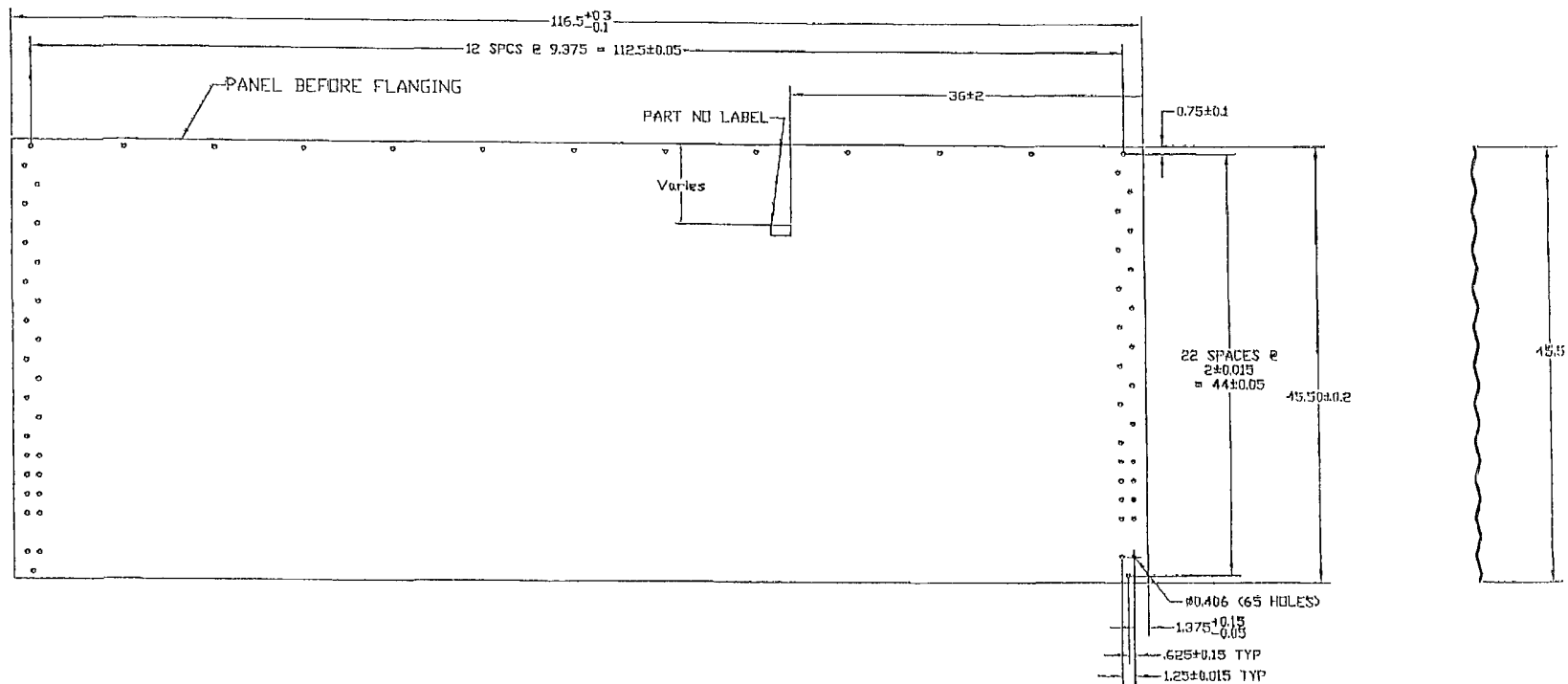
MATERIAL SPECIFICATIONS				
THICKNESS		BLANK WIDTH	WALL SHEET PART NO	WEIGHT (lb)
NOMINAL	MINIMUM			
0.066	0.061	46.3	CW4415F	98.3
0.096	0.088	46.3	CW4413F	143.4

CORRUGATING DETAIL						MATERIAL SEE CHART - ASTM A653 SS GR 30 G115 D1L		BLANK SIZE 46.5 x 116.5		SURFACE AREA		WEIGHT CLASS see chart			
						DIMENSIONS SHOWN ARE IMPERIAL UNITS SHOWN IN BRACKETS		THIS DRAWING IS THE EXCLUSIVE PROPERTY OF WESTEEL AND ALL RIGHTS ARE RESERVED NO PART OF THIS DRAWING MAY BE USED OR REPRODUCED IN ANY MANNER WHATSOEVER WITHOUT WRITTEN PERMISSION FROM WESTEEL, a Division of JENICSYS ENGINEERED PRODUCTS		SCALE nfs		DOWN (Y.N.D.) 02.02.19		LOCATION WINNIPEG	
						TOLERANCES (UNLESS OTHERWISE NOTED)		DRAWING TITLE		E.C.R. A6647		E.P. NO. 02-255		TYPE ACAD14	
						DIMENSIONS: IMPERIAL (in.) METRIC (mm)		CUSTOMER		SIZE B		DRAWING HIL ES 15510		REV. NO. 1	
1	01.28.04	LOWERED CLAMP LOCATION 4"	A6786	RF	BA	X ± .1 X ± .2 XXX ± .03 X ± .10 XXX ± .010 X ± .150		APP'D. BA		PRINTING DATE					
NO	DATE	REVISION	E.C.R.	BY	CH.	ANGULAR ± 1°									

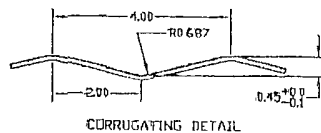


MATERIAL SPECIFICATIONS			
THICKNESS		BLANK WIDTH	WALL SHEET PART NO
NOMINAL	MINIMUM		
0.066	0.061	14.75	CW1357F
		WEIGHT (LBS)	31.5

					MATERIAL		BLANK SIZE		WEIGHT (LBS.)		
					SEE CHART - ASTM A653 SS GR50 G115 OIL		46.5x116.5 (3 pcs)		31.5		
					DIMENSIONS SHOWN ARE IMP MM UNITS SHOWN IN BRACKETS		THIS DRAWING IS THE EXCLUSIVE PROPERTY OF WESTEEL AND ALL RIGHTS ARE RESERVED NO PART OF THIS DRAWING MAY BE USED OR REPRODUCED IN ANY MANNER WHATSOEVER WITHOUT WRITTEN PERMISSION FROM Westeel Limited		LOCATION		
					TOLERANCES (UNLESS OTHERWISE NOTED)		SCALE		DWN. (Y.M.D.)		
					DIMENSIONS:		N.T.S.		2004.11.30		
					IMPERIAL (in.) METRIC (mm)		E.C.R.		E.P. NO.		
					.XX ? .1 .XX ? 2		A6834		02-255		
					.XXX ? .03 .XX ? 1.0		DRAWING TITLE		DWG TYPE		
					.XXX ? .010 .XX ? .50		13.5" FULL PANEL - 57" ONLY		A-2000		
					ANGULAR: ± 1°		CONTAINMENT RING		REV. NO.		
					APPD.		CUSTOMER		SIZE		
					BA		-		A		
							PRINTING DATE (Y.M.D.)		ES 15516		
							-		O		
NO	DATE	REVISION	E.C.R.	BY	CH						



44' WALL PANEL AFTER CORRUGATING AND PUNCHING



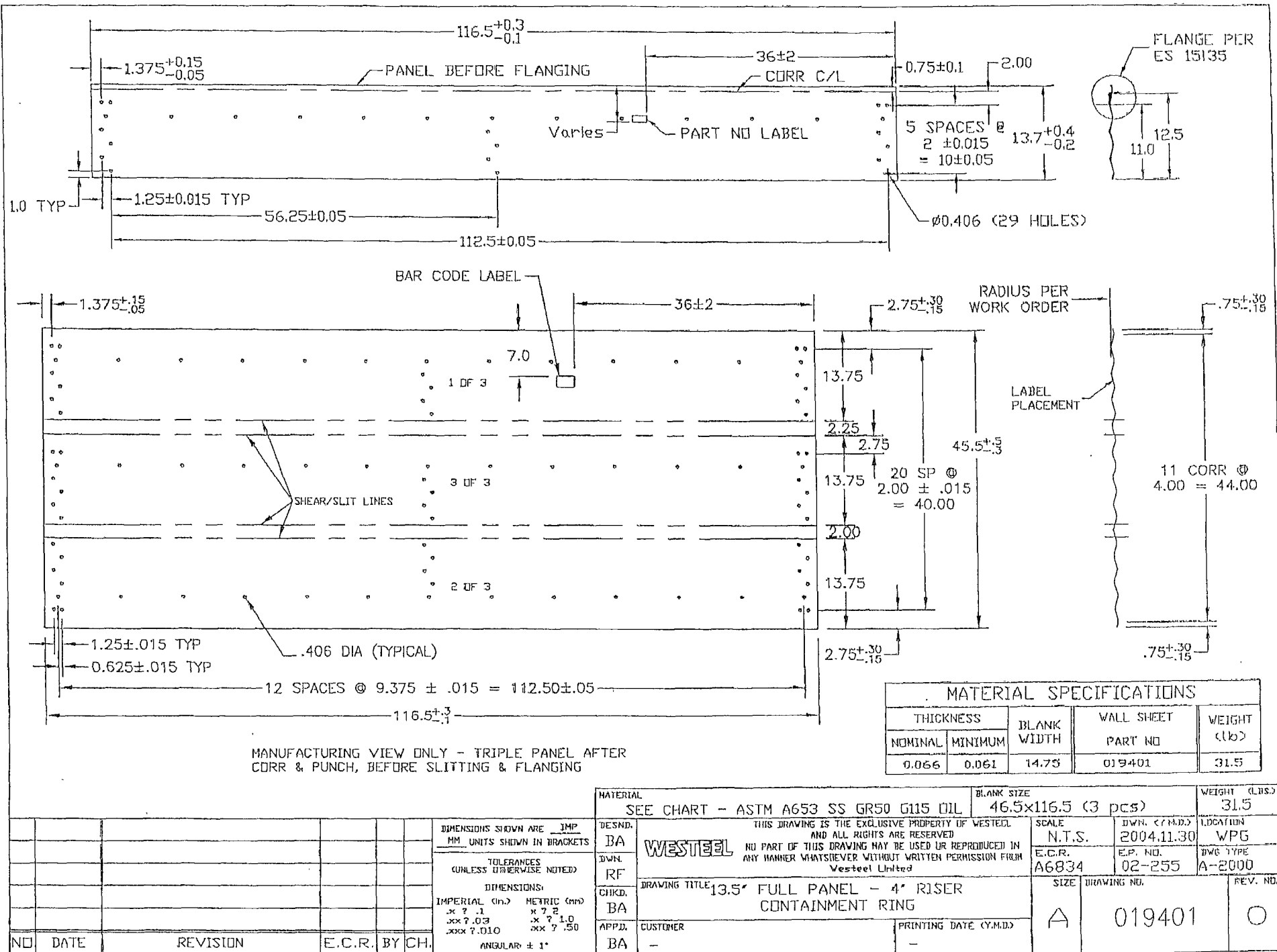
CORRUGATING DETAIL

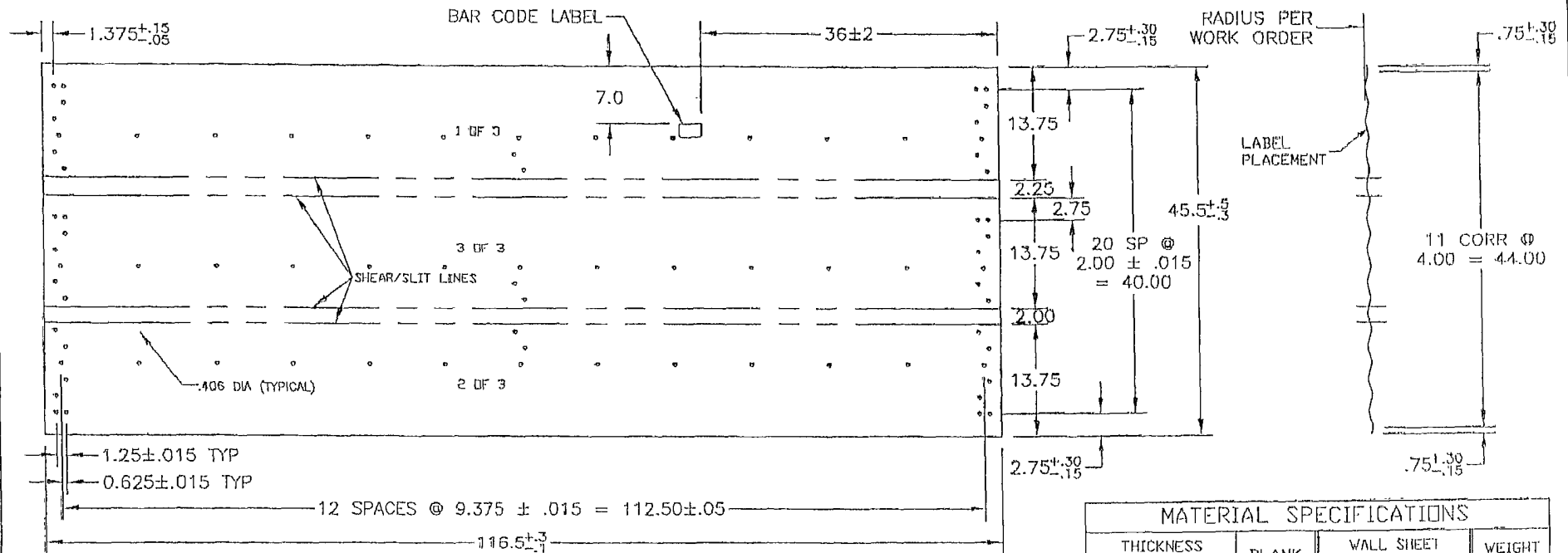
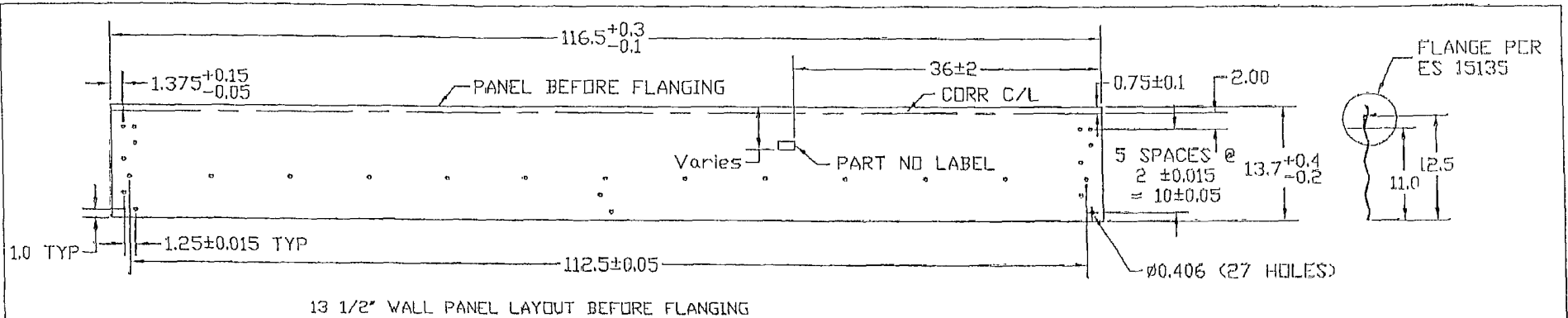
MANUFACTURING NOTES:

1. CORRUGATION SEE DETAIL
2. HOLE OFF CENTER OF CORR. ± .05
3. HOLE BURR MAX. .01
4. CUT OFF BURR MAX. .01
5. CORNER HOLE TO HOLE DIAGONAL ± .13

MATERIAL SPECIFICATIONS				
THICKNESS	BLANK	WALL SHEET	WEIGHT	
NOMINAL	MINIMUM	WIDTH	PART NO.	(Lbs)
0.066	0.061	46.5	CW445715F	97.7
0.139	0.130	46.2	CW445710F	200.5

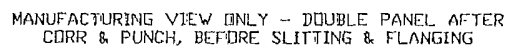
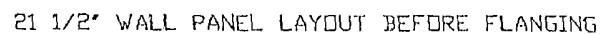
				MATERIAL		BLANK SIZE	SURFACE AREA	WEIGHT (LBS)
				SEE CHART - ASTM A653 SS GR 50 G115 DIL		46.5 x 116.5		SEE CHART
				DESIGN	BA	THIS DRAWING IS THE EXCLUSIVE PROPERTY OF WESTEEL AND ALL RIGHTS ARE RESERVED.	SCALE	DATE
				BY	RF	NO PART OF THIS DRAWING MAY BE USED OR REPRODUCED IN ANY MANNER WHATSOEVER WITHOUT WRITTEN PERMISSION FROM WESTEEL, a Division of JENISYS ENGINEERED PRODUCTS	nts	04.12.01
				CHKD.	BA	DRAWING TITLE	E.C.R.	LOCATION
				APPD.	BA	44' FULL PANEL - 57' ONLY	A6834	WINNIPEG
				PRINTING DATE		CONTAINMENT RING	DRAWING NO.	TYPE
							B ES 15518	A-2000
NO	DATE	REVISION	E.C.R. BY CH.					REV. NO.
								0





MATERIAL SPECIFICATIONS				
THICKNESS		BLANK WIDTH	WALL SHEET PART NO	WEIGHT (lbs)
NOMINAL	MINIMUM			
0.066	0.061	14.75	019419	31.5

					MATERIAL		BLANK SIZE		WEIGHT (LBS.)		
					SEE CHART - ASTM A653 SS GR50 G115 OIL		46.5x116.5 (3 pcs)		31.5		
					DESND. BA		THIS DRAWING IS THE EXCLUSIVE PROPERTY OF WESTEEL AND ALL RIGHTS ARE RESERVED NO PART OF THIS DRAWING MAY BE USED OR REPRODUCED IN ANY MANNER WHATSOEVER WITHOUT WRITTEN PERMISSION FROM Westeel Limited		SCALE N.T.S.		
					DWN. RF		DRAWING TITLE 9.5" FULL PANEL - 52.5" ONLY CONTAINMENT RING		DWN. (Y.M.D.) 2006.08.08		
					CHKD. BA				E.C.R. A6834		
					APPD. BA		CUSTOMER -		E.P. NO. 02-255		
							PRINTING DATE (Y.M.D.) -		DVG TYPE A-2000		
									SIZE DRAWING NO. A 019419		
									REV. NO. O		
DIMENSIONS SHOWN ARE IMP MM UNITS SHOWN IN BRACKETS											
TOLERANCES (UNLESS OTHERWISE NOTED)											
DIMENSIONS:											
IMPERIAL (In.) METRIC (mm)											
.XX .1 .XX .2 .XX .3 .XX .4 .XX .5 .XX .6 .XX .7 .XX .8 .XX .9 .XX 1.0 .XX 1.1 .XX 1.2 .XX 1.3 .XX 1.4 .XX 1.5 .XX 1.6 .XX 1.7 .XX 1.8 .XX 1.9 .XX 2.0 .XX 2.1 .XX 2.2 .XX 2.3 .XX 2.4 .XX 2.5 .XX 2.6 .XX 2.7 .XX 2.8 .XX 2.9 .XX 3.0 .XX 3.1 .XX 3.2 .XX 3.3 .XX 3.4 .XX 3.5 .XX 3.6 .XX 3.7 .XX 3.8 .XX 3.9 .XX 4.0 .XX 4.1 .XX 4.2 .XX 4.3 .XX 4.4 .XX 4.5 .XX 4.6 .XX 4.7 .XX 4.8 .XX 4.9 .XX 5.0 .XX 5.1 .XX 5.2 .XX 5.3 .XX 5.4 .XX 5.5 .XX 5.6 .XX 5.7 .XX 5.8 .XX 5.9 .XX 6.0 .XX 6.1 .XX 6.2 .XX 6.3 .XX 6.4 .XX 6.5 .XX 6.6 .XX 6.7 .XX 6.8 .XX 6.9 .XX 7.0 .XX 7.1 .XX 7.2 .XX 7.3 .XX 7.4 .XX 7.5 .XX 7.6 .XX 7.7 .XX 7.8 .XX 7.9 .XX 8.0 .XX 8.1 .XX 8.2 .XX 8.3 .XX 8.4 .XX 8.5 .XX 8.6 .XX 8.7 .XX 8.8 .XX 8.9 .XX 9.0 .XX 9.1 .XX 9.2 .XX 9.3 .XX 9.4 .XX 9.5 .XX 9.6 .XX 9.7 .XX 9.8 .XX 9.9 .XX 10.0 .XX 10.1 .XX 10.2 .XX 10.3 .XX 10.4 .XX 10.5 .XX 10.6 .XX 10.7 .XX 10.8 .XX 10.9 .XX 11.0 .XX 11.1 .XX 11.2 .XX 11.3 .XX 11.4 .XX 11.5 .XX 11.6 .XX 11.7 .XX 11.8 .XX 11.9 .XX 12.0 .XX 12.1 .XX 12.2 .XX 12.3 .XX 12.4 .XX 12.5 .XX 12.6 .XX 12.7 .XX 12.8 .XX 12.9 .XX 13.0 .XX 13.1 .XX 13.2 .XX 13.3 .XX 13.4 .XX 13.5 .XX 13.6 .XX 13.7 .XX 13.8 .XX 13.9 .XX 14.0 .XX 14.1 .XX 14.2 .XX 14.3 .XX 14.4 .XX 14.5 .XX 14.6 .XX 14.7 .XX 14.8 .XX 14.9 .XX 15.0 .XX 15.1 .XX 15.2 .XX 15.3 .XX 15.4 .XX 15.5 .XX 15.6 .XX 15.7 .XX 15.8 .XX 15.9 .XX 16.0 .XX 16.1 .XX 16.2 .XX 16.3 .XX 16.4 .XX 16.5 .XX 16.6 .XX 16.7 .XX 16.8 .XX 16.9 .XX 17.0 .XX 17.1 .XX 17.2 .XX 17.3 .XX 17.4 .XX 17.5 .XX 17.6 .XX 17.7 .XX 17.8 .XX 17.9 .XX 18.0 .XX 18.1 .XX 18.2 .XX 18.3 .XX 18.4 .XX 18.5 .XX 18.6 .XX 18.7 .XX 18.8 .XX 18.9 .XX 19.0 .XX 19.1 .XX 19.2 .XX 19.3 .XX 19.4 .XX 19.5 .XX 19.6 .XX 19.7 .XX 19.8 .XX 19.9 .XX 20.0 .XX 20.1 .XX 20.2 .XX 20.3 .XX 20.4 .XX 20.5 .XX 20.6 .XX 20.7 .XX 20.8 .XX 20.9 .XX 21.0 .XX 21.1 .XX 21.2 .XX 21.3 .XX 21.4 .XX 21.5 .XX 21.6 .XX 21.7 .XX 21.8 .XX 21.9 .XX 22.0 .XX 22.1 .XX 22.2 .XX 22.3 .XX 22.4 .XX 22.5 .XX 22.6 .XX 22.7 .XX 22.8 .XX 22.9 .XX 23.0 .XX 23.1 .XX 23.2 .XX 23.3 .XX 23.4 .XX 23.5 .XX 23.6 .XX 23.7 .XX 23.8 .XX 23.9 .XX 24.0 .XX 24.1 .XX 24.2 .XX 24.3 .XX 24.4 .XX 24.5 .XX 24.6 .XX 24.7 .XX 24.8 .XX 24.9 .XX 25.0 .XX 25.1 .XX 25.2 .XX 25.3 .XX 25.4 .XX 25.5 .XX 25.6 .XX 25.7 .XX 25.8 .XX 25.9 .XX 26.0 .XX 26.1 .XX 26.2 .XX 26.3 .XX 26.4 .XX 26.5 .XX 26.6 .XX 26.7 .XX 26.8 .XX 26.9 .XX 27.0 .XX 27.1 .XX 27.2 .XX 27.3 .XX 27.4 .XX 27.5 .XX 27.6 .XX 27.7 .XX 27.8 .XX 27.9 .XX 28.0 .XX 28.1 .XX 28.2 .XX 28.3 .XX 28.4 .XX 28.5 .XX 28.6 .XX 28.7 .XX 28.8 .XX 28.9 .XX 29.0 .XX 29.1 .XX 29.2 .XX 29.3 .XX 29.4 .XX 29.5 .XX 29.6 .XX 29.7 .XX 29.8 .XX 29.9 .XX 30.0 .XX 30.1 .XX 30.2 .XX 30.3 .XX 30.4 .XX 30.5 .XX 30.6 .XX 30.7 .XX 30.8 .XX 30.9 .XX 31.0 .XX 31.1 .XX 31.2 .XX 31.3 .XX 31.4 .XX 31.5 .XX 31.6 .XX 31.7 .XX 31.8 .XX 31.9 .XX 32.0 .XX 32.1 .XX 32.2 .XX 32.3 .XX 32.4 .XX 32.5 .XX 32.6 .XX 32.7 .XX 32.8 .XX 32.9 .XX 33.0 .XX 33.1 .XX 33.2 .XX 33.3 .XX 33.4 .XX 33.5 .XX 33.6 .XX 33.7 .XX 33.8 .XX 33.9 .XX 34.0 .XX 34.1 .XX 34.2 .XX 34.3 .XX 34.4 .XX 34.5 .XX 34.6 .XX 34.7 .XX 34.8 .XX 34.9 .XX 35.0 .XX 35.1 .XX 35.2 .XX 35.3 .XX 35.4 .XX 35.5 .XX 35.6 .XX 35.7 .XX 35.8 .XX 35.9 .XX 36.0 .XX 36.1 .XX 36.2 .XX 36.3 .XX 36.4 .XX 36.5 .XX 36.6 .XX 36.7 .XX 36.8 .XX 36.9 .XX 37.0 .XX 37.1 .XX 37.2 .XX 37.3 .XX 37.4 .XX 37.5 .XX 37.6 .XX 37.7 .XX 37.8 .XX 37.9 .XX 38.0 .XX 38.1 .XX 38.2 .XX 38.3 .XX 38.4 .XX 38.5 .XX 38.6 .XX 38.7 .XX 38.8 .XX 38.9 .XX 39.0 .XX 39.1 .XX 39.2 .XX 39.3 .XX 39.4 .XX 39.5 .XX 39.6 .XX 39.7 .XX 39.8 .XX 39.9 .XX 40.0 .XX 40.1 .XX 40.2 .XX 40.3 .XX 40.4 .XX 40.5 .XX 40.6 .XX 40.7 .XX 40.8 .XX 40.9 .XX 41.0 .XX 41.1 .XX 41.2 .XX 41.3 .XX 41.4 .XX 41.5 .XX 41.6 .XX 41.7 .XX 41.8 .XX 41.9 .XX 42.0 .XX 42.1 .XX 42.2 .XX 42.3 .XX 42.4 .XX 42.5 .XX 42.6 .XX 42.7 .XX 42.8 .XX 42.9 .XX 43.0 .XX 43.1 .XX 43.2 .XX 43.3 .XX 43.4 .XX 43.5 .XX 43.6 .XX 43.7 .XX 43.8 .XX 43.9 .XX 44.0 .XX 44.1 .XX 44.2 .XX 44.3 .XX 44.4 .XX 44.5 .XX 44.6 .XX 44.7 .XX 44.8 .XX 44.9 .XX 45.0 .XX 45.1 .XX 45.2 .XX 45.3 .XX 45.4 .XX 45.5 .XX 45.6 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MANUFACTURING NOTES:

1. CORRUGATION.....	SEE DETAIL
2. HOLE OFF CENTER OF CORR.....	± .05
3. HOLE BURR MAX.....	.01
4. CUT OFF BURR MAX.....	.01
5. CORNER HOLE TO HOLE DIAGONAL.....	± .15

MATERIAL SEE CHART - ASTM A653 SQ GR50 6015 DIL		DRAWING SIZE 46.6"x16.5 (2 pcs)		SURFACE AREA 49.4		WEIGHT (LBS) 49.4		
DESIGN RM	THIS DRAWING IS THE EXCLUSIVE PROPERTY OF VESTEL AND ALL RIGHTS ARE RESERVED.		SCALE 1/8" = 1'-0"		DWG. (YARD) 98.08.13		LOCATION WINNIPEG	
TRK RM	NO PART OF THIS DRAWING MAY BE USED OR REPRODUCED IN ANY MANNER WHATSOEVER WITHOUT WRITTEN PERMISSION FROM VESTEL, a Division of JENIST'S ENGINEERED PRODUCTS		E.C.R. A 6428		E.P. (M) 98-197		DATE ACAD14	
CHIEF YS	DRAWING TITLE CONTAINMENT RING 22" WALL PANEL		SIZE B		DRAWING NO. C10514		13 OF 100 1	
APPR RM	CUSTOMER		PRINTING DATE					

PRODUCT DESCRIPTION

DURA-SKRIM J30, J36 and J45 are Linear Low Density Polyethylene geomembranes reinforced with a heavy encapsulated 1300 Denier polyester reinforcement. In addition to excellent dimensional stability the tri-directional reinforcement provides exceptional tear and tensile strength.

DURA-SKRIM J-Series membranes are formulated with thermal and UV stabilizers to assure a long service life. Custom colors are available based on minimum volume requirements.

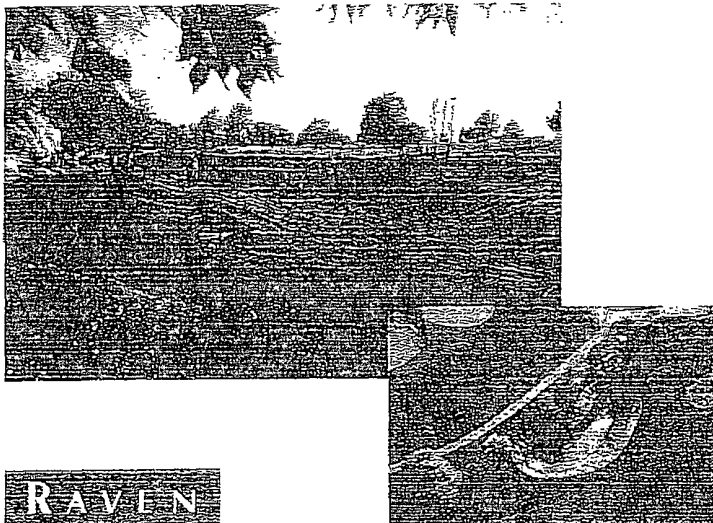
PRODUCT USE

DURA-SKRIM J30, J36 and J45 are used in applications that require exceptional outdoor life and demand high tear strength and resistance to thermal expansion.

DURA-SKRIM J30, J36 and J45 are manufactured from a very chemical-resistant, Linear Low Density Polyethylene with excellent cold crack performance.

SIZE & PACKAGING

DURA-SKRIM J30, J36 and J45 are available in a variety of widths and lengths to meet the project requirements. Large diameter mill rolls are available to assure an efficient seaming process. Factory welded panels are accordion folded and tightly rolled on a heavy-duty core for ease of handling and time saving installation.



RAVEN
INDUSTRIES
Engineered Films Division

PRODUCT	PART NUMBER
DURA-SKRIM J30	J30BB
DURA-SKRIM J36	J36BB
DURA-SKRIM J45	J45BB

COMMON APPLICATIONS

- Waste Lagoon Liners
- Floating Covers
- Daily Landfill Covers
- Modular Tank Liners
- Tunnel Liners
- Remediation Liners
- Earthen Liners
- Interim Landfill Covers
- Remediation Covers
- Landfill Caps
- Erosion Control Covers
- Radon Retarder
- Canal Liners
- Disposal Pit Liner
- Water Containment Ponds
- Heap Leach Liner



DURA-SKRIM®

J30, J36 & J45 BB



PROPERTIES	TEST METHOD	DURA-SKRIM J30BB		DURA-SKRIM J36BB		DURA-SKRIM J45BB	
		Min. Roll Averages	Typical Roll Averages	Min. Roll Averages	Typical Roll Averages	Min. Roll Averages	Typical Roll Averages
APPEARANCE		Black/Black		Black/Black		Black/Black	
THICKNESS, NOMINAL	ASTM D5199	27 mil	30 mil	32 mil	36 mil	40 mil	45 mil
WEIGHT lbs/MSF (oz/yd²)	ASTM D5261	126 lbs (18.14)	140 lbs (20.16)	151 lbs (21.74)	168 lbs (24.19)	189 lbs (27.21)	210 lbs (30.24)
CONSTRUCTION		**Extrusion laminated with encapsulated tri-directional scrim reinforcement					
PLY ADHESION	ASTM D413	16 lbs	20 lbs	19 lbs	27 lbs	25 lbs	33 lbs
1" TENSILE STRENGTH	ASTM D7003	88 lbf MD 63 lbf DD	110 lbf MD 79 lbf DD	90 lbf MD 70 lbf DD	113 lbf MD 87 lbf DD	110 lbf MD 84 lbf DD	138 lbf MD 105 lbf DD
4" TENSILE ELONGATION @ BREAK % (FILM BREAK)	ASTM D7003	550 MD 550 DD	750 MD 750 DD	550 MD 550 DD	750 MD 750 DD	550 MD 550 DD	750 MD 750 DD
1" TENSILE ELONGATION @ PEAK % (SCRIM BREAK)	ASTM D7003	20 MD 20 DD	33 MD 33 DD	20 MD 20 DD	30 MD 31 DD	20 MD 20 DD	36 MD 36 DD
TONGUE TEAR STRENGTH	ASTM D5884	75 lbf MD 75 lbf DD	97 lbf MD 90 lbf DD	75 lbf MD 75 lbf DD	114 lbf MD 107 lbf DD	100 lbf MD 100 lbf DD	125 lbf MD 127 lbf DD
GRAB TENSILE	ASTM D7004	180 lbf MD 180 lbf DD	218 lbf MD 210 lbf DD	180 lbf MD 180 lbf DD	295 lbf MD 294 lbf DD	220 lbf MD 220 lbf DD	341 lbf MD 337 lbf DD
TRAPEZOID TEAR	ASTM D4533	120 lbf MD 120 lbf DD	146 lbf MD 141 lbf DD	130 lbf MD 130 lbf DD	189 lbf MD 172 lbf DD	160 lbf MD 160 lbf DD	193 lbf MD 191 lbf DD
DIMENSIONAL STABILITY	ASTM D1204	<1	<0.5	<1	<0.5	<1	<0.5
PUNCTURE RESISTANCE	ASTM D4833	50 lbf	64 lbf	65 lbf	83 lbf	80 lbf	99 lbf
MAXIMUM USE TEMPERATURE		180°F	180°F	180°F	180°F	180°F	180°F
MINIMUM USE TEMPERATURE		-70°F	-70°F	-70°F	-70°F	-70°F	-70°F

MD = Machine Direction
DD = Diagonal Directions



Note: Minimum Roll Averages are set to take into account product variability in addition to testing variability between laboratories.

*Dimensional Stability Maximum Value

**DURA-SKRIM J30BB, J36BB and J45BB are a four layer reinforced laminate. The outer layers consist of a high strength polyethylene film manufactured using virgin grade resins and stabilizers for UV resistance in exposed applications

DURA-SKRIM J30BB, J36BB and J45BB are reinforced with a 1300 denier tri-directional scrim reinforcement.

Note: To the best of our knowledge, unless otherwise stated, these are typical property values and are intended as guides only, not as specification limits. NO WARRANTIES ARE MADE AS TO THE FITNESS FOR A SPECIFIC USE OR MERCHANTABILITY OF PRODUCTS REFERRED TO, no guarantee of satisfactory results from reliance upon contained information or recommendations and disclaims all liability for resulting loss or damage.



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Ph: (605) 335-0174 • Fx: (605) 331-0333
Toll Free: 800-635-3456



6/09 EFD 1126

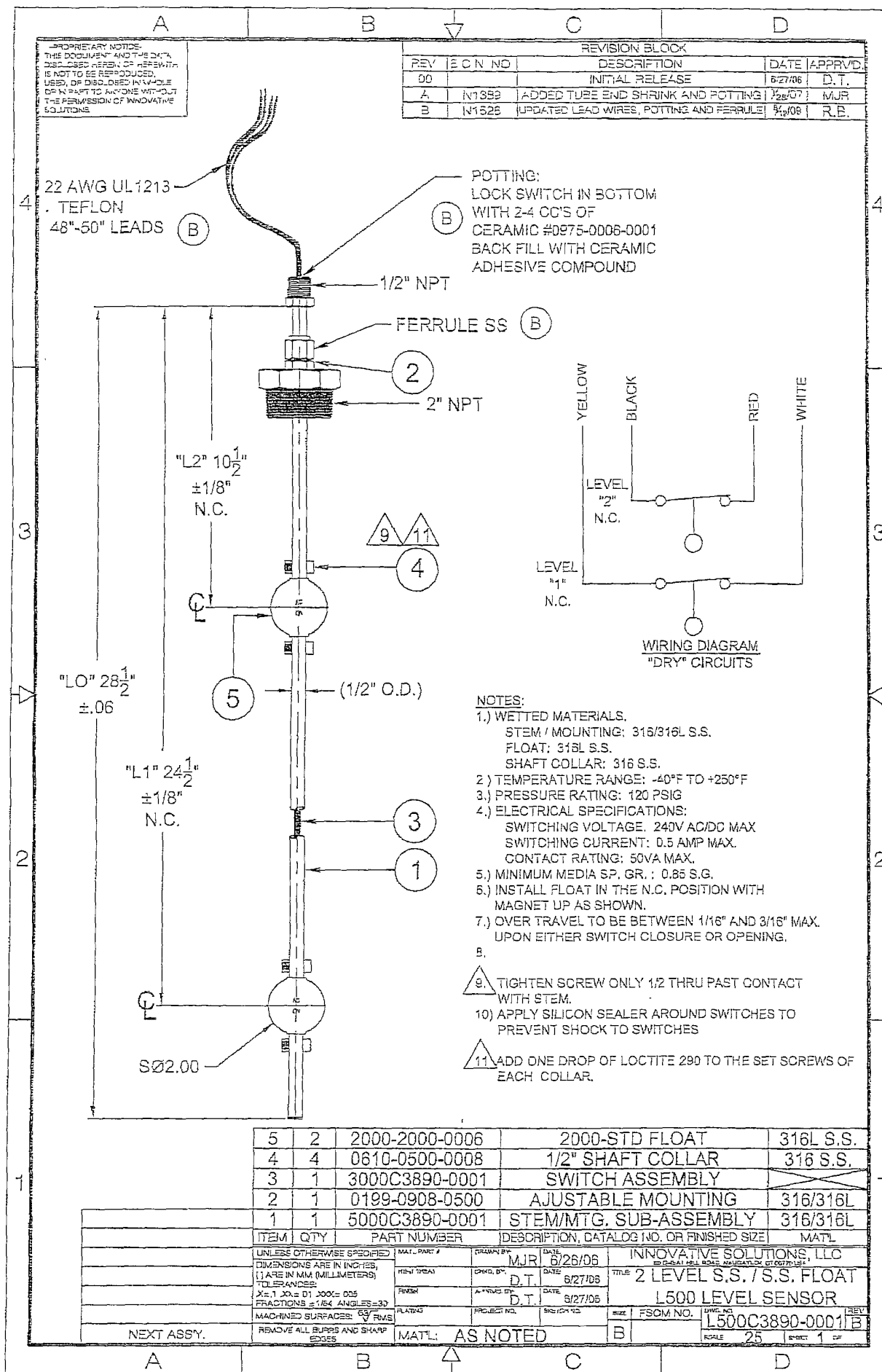


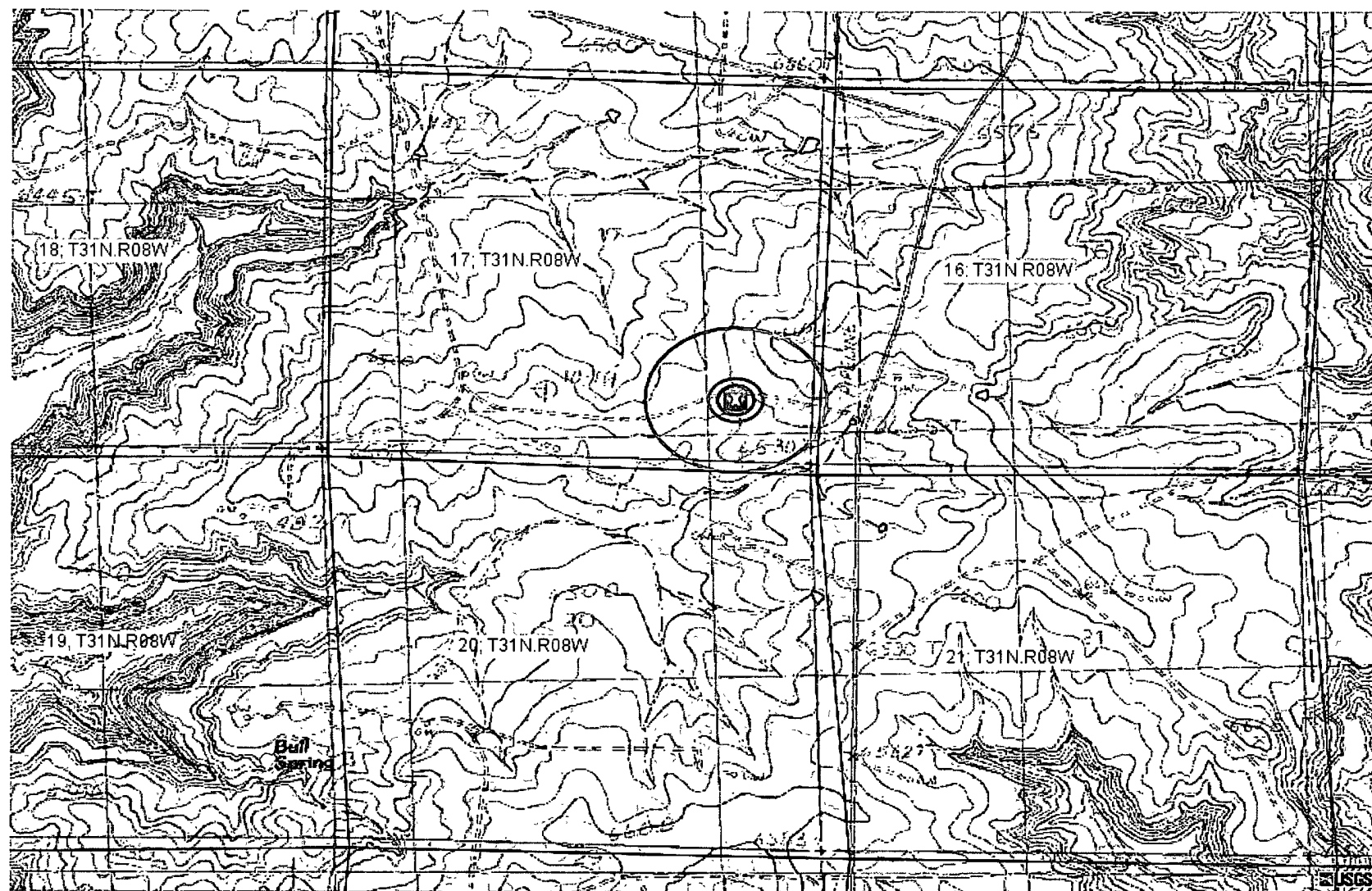
Exhibit 2.4

Quinn 335 S**API 30-045-32522****Sitting Criteria Compliance Demonstration**

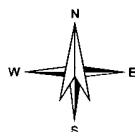
Criteria as per 19.15.17.10.(A) (1)	In Compliance	Comments
Ground water > 50' below bottom to tank	Yes	Refer to "Site Hydrology Report" in Section V
Continuously flowing water course >300 ft from tank & significant watercourse or lakebed, sinkhole, or playa lake measured from high water mark > 200 ft. from tank	Yes	Refer to Observed Setting Requirements completed by field personnel - Appendix 08
Permanent Residence, school, hospital, institution, or church > 300 ft from tank	Yes	Refer to Observed Setting Requirements completed by field personnel - Appendix 08
Private, domestic fresh water well or spring > 500 ft from tank.	Yes	Refer to Observed Setting Requirements completed by field personnel - Appendix 08
Any other fresh water well or spring > 1000 ft from tank.	Yes	Refer to Observed Setting Requirements completed by field personnel - Appendix 08
Within incorporated municipal boundary of defined municipal fresh water field	No	Refer to Observed Setting Requirements completed by field personnel - Appendix 08
Wetland > 500 ft from tank	Yes	Refer to Observed Setting Requirements completed by field personnel - Appendix 08
Not overlying a subsurface mine	Yes	Refer to Observed Setting Requirements completed by field personnel - Appendix 08
Not within an unstable area	Yes	Refer to "Karst Map" in Appendix 09, TOPO Map In Appendix 01, & Observed Setting Req. In Appendix 08
Not within a 100-year floodplain	Yes	Refer to Appendix 6 - 100 year floodplain map

RCVD OCT 28 '11

OIL CONS. DIV.
DIST. 3



0 1000 2000ft

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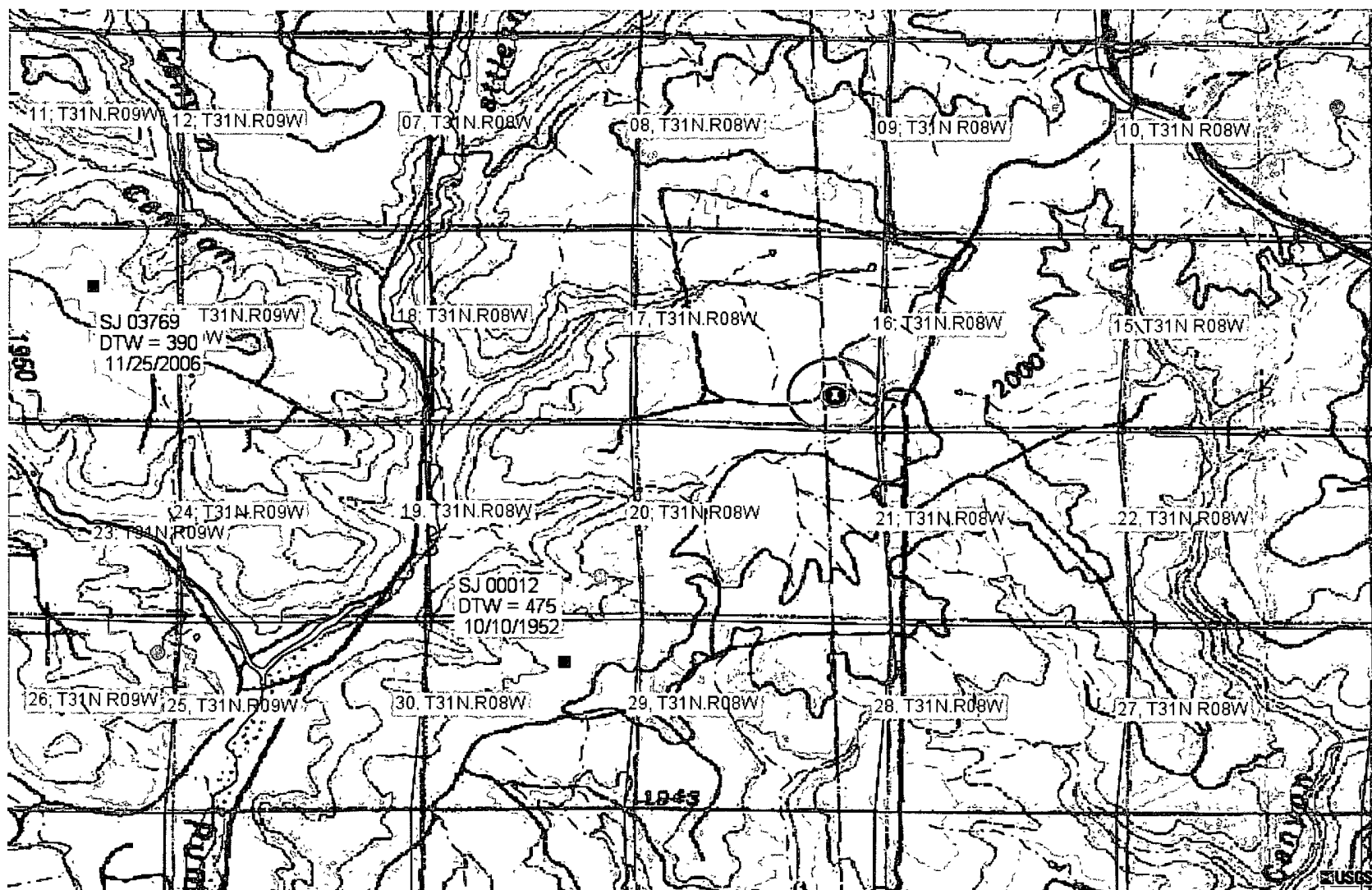
TOPO - Quinn 335 S

Figure: 01

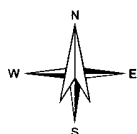
P - Sec 17, 31N, 08W

Nov 03, 2009

API 30-045-32522



0 2000 4000ft



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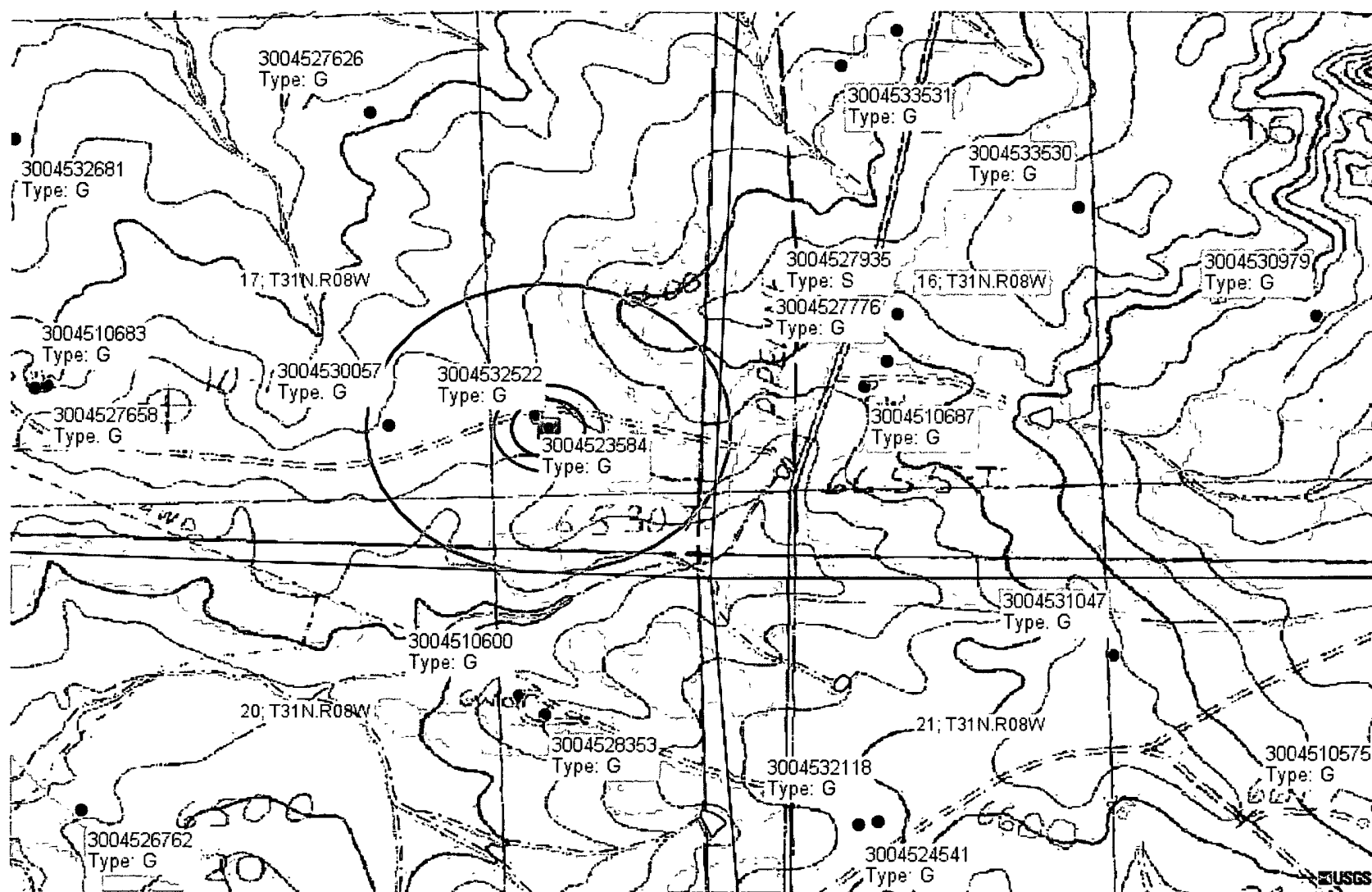
OSE Ground Water - Quinn 335 S

Figure: 02

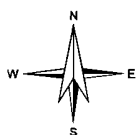
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Nov 13, 2009

API 30-045-32522



0 500 1000ft



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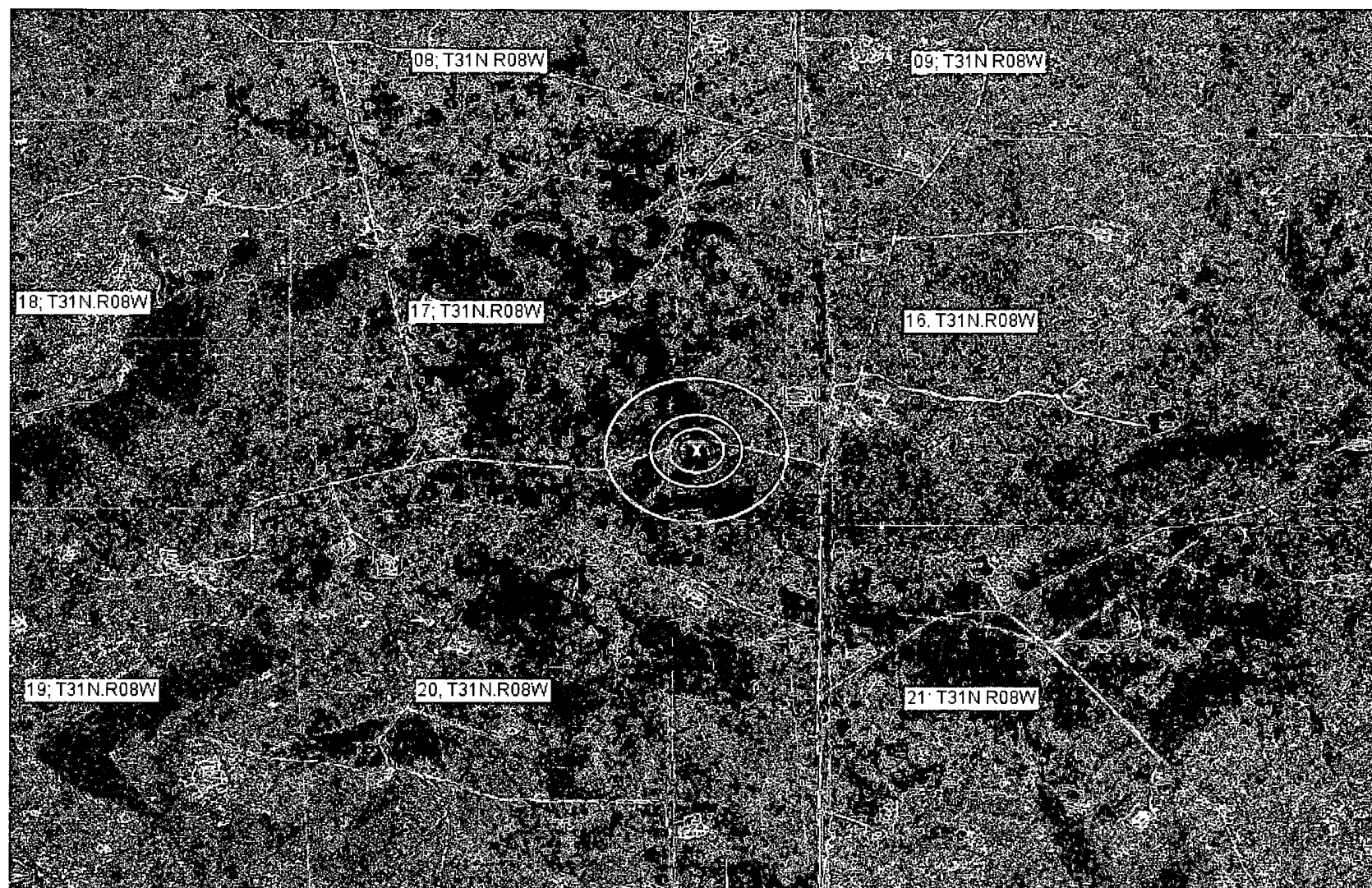
Offset Gas Wells - Quinn 335 S

Figure: 2a

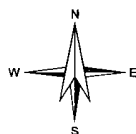
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API 30-045-32522



0 1000 2000ft



Petroleum Recovery
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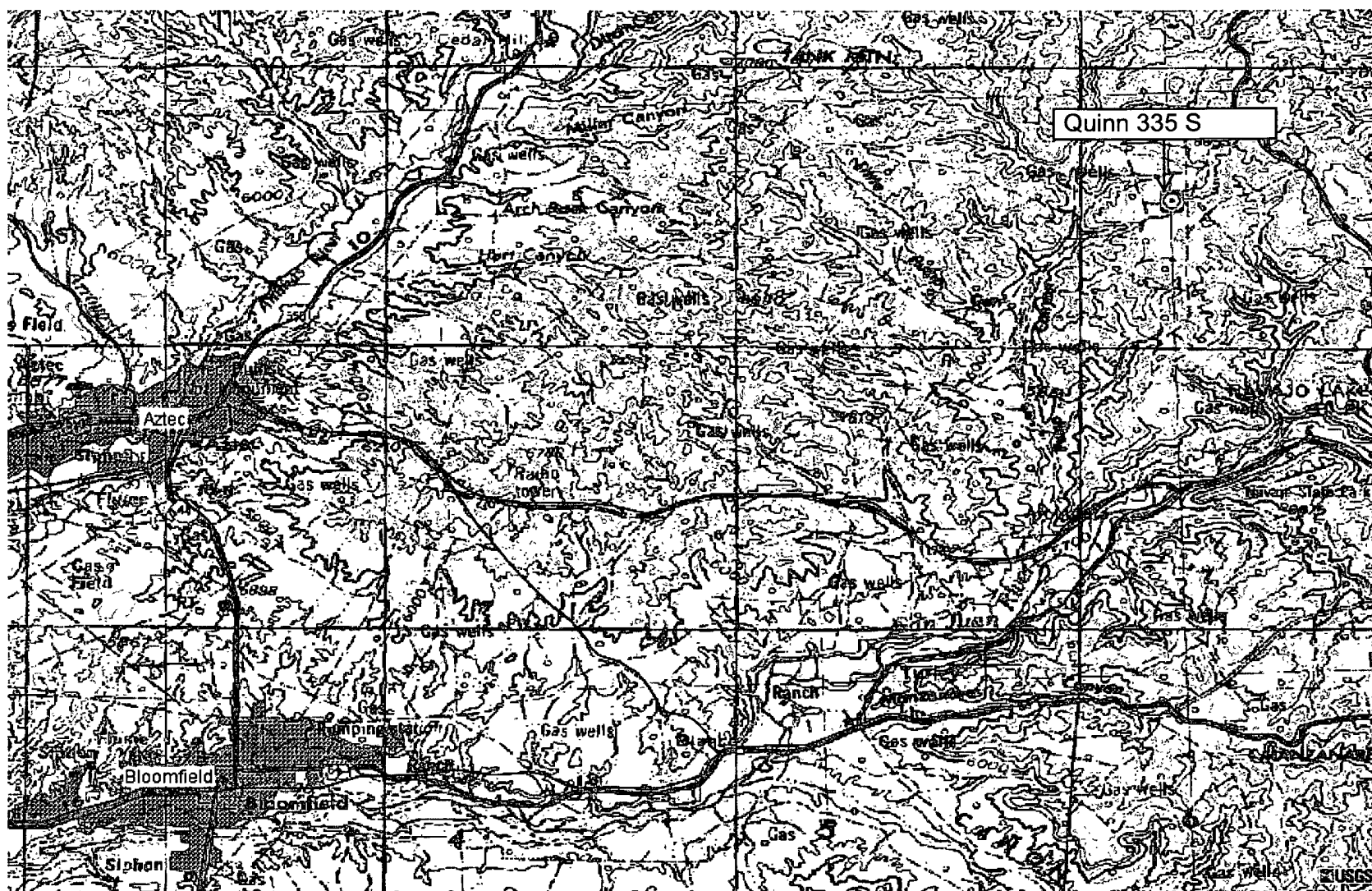
Aerial - Quinn 335 S

Figure: 03

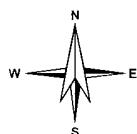
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Nov 03, 2009

API 30-045-32522



0 2 4mi



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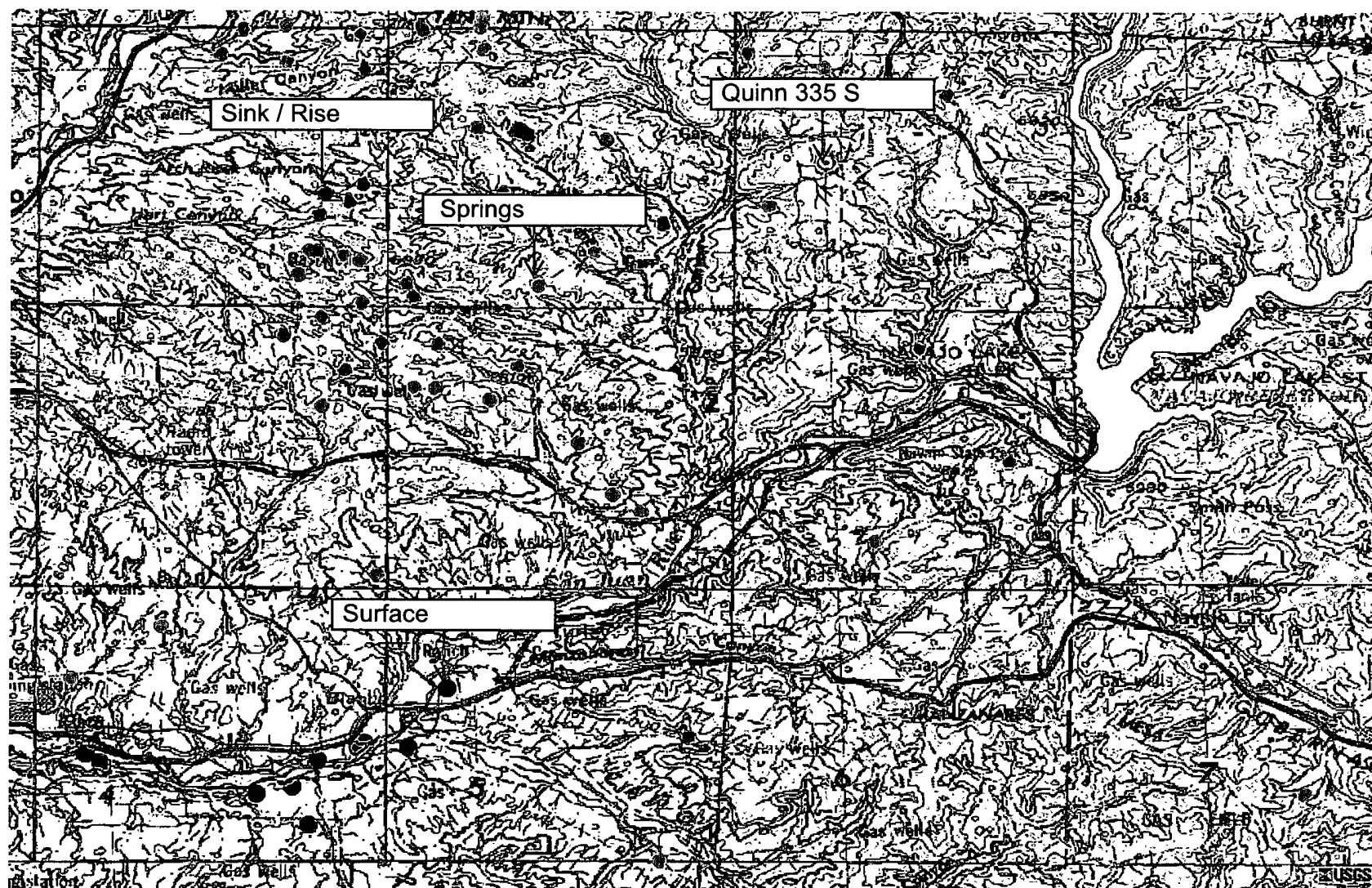
Municipalities - Quinn 335 S

Figure: 04

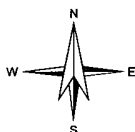
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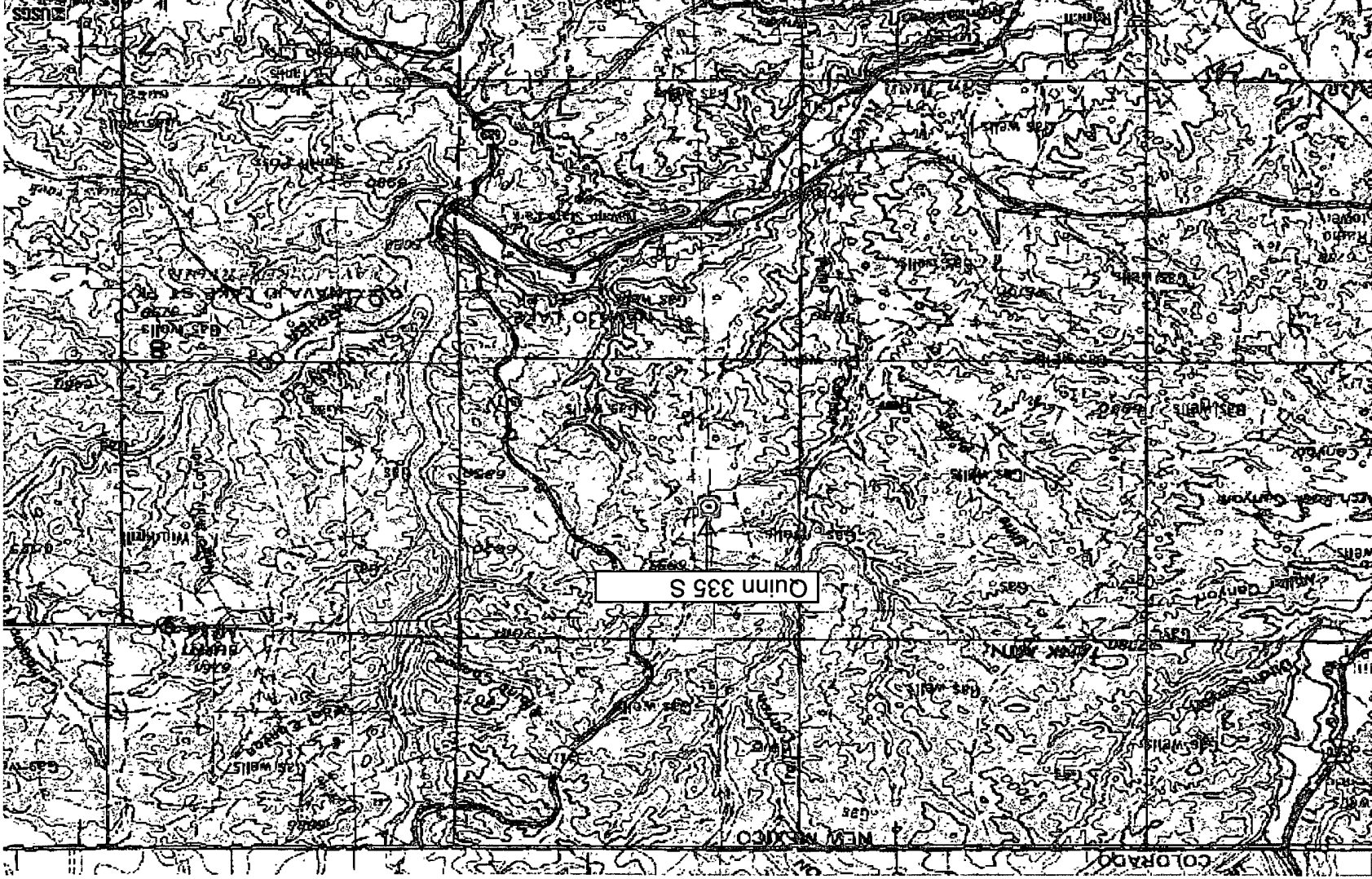
Mines Mills, Quarries - Quinn 335 S

Figure: 07

P - Sec 17, 31N, 08W

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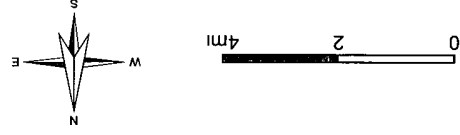


Petroleum Recovery
Research Center

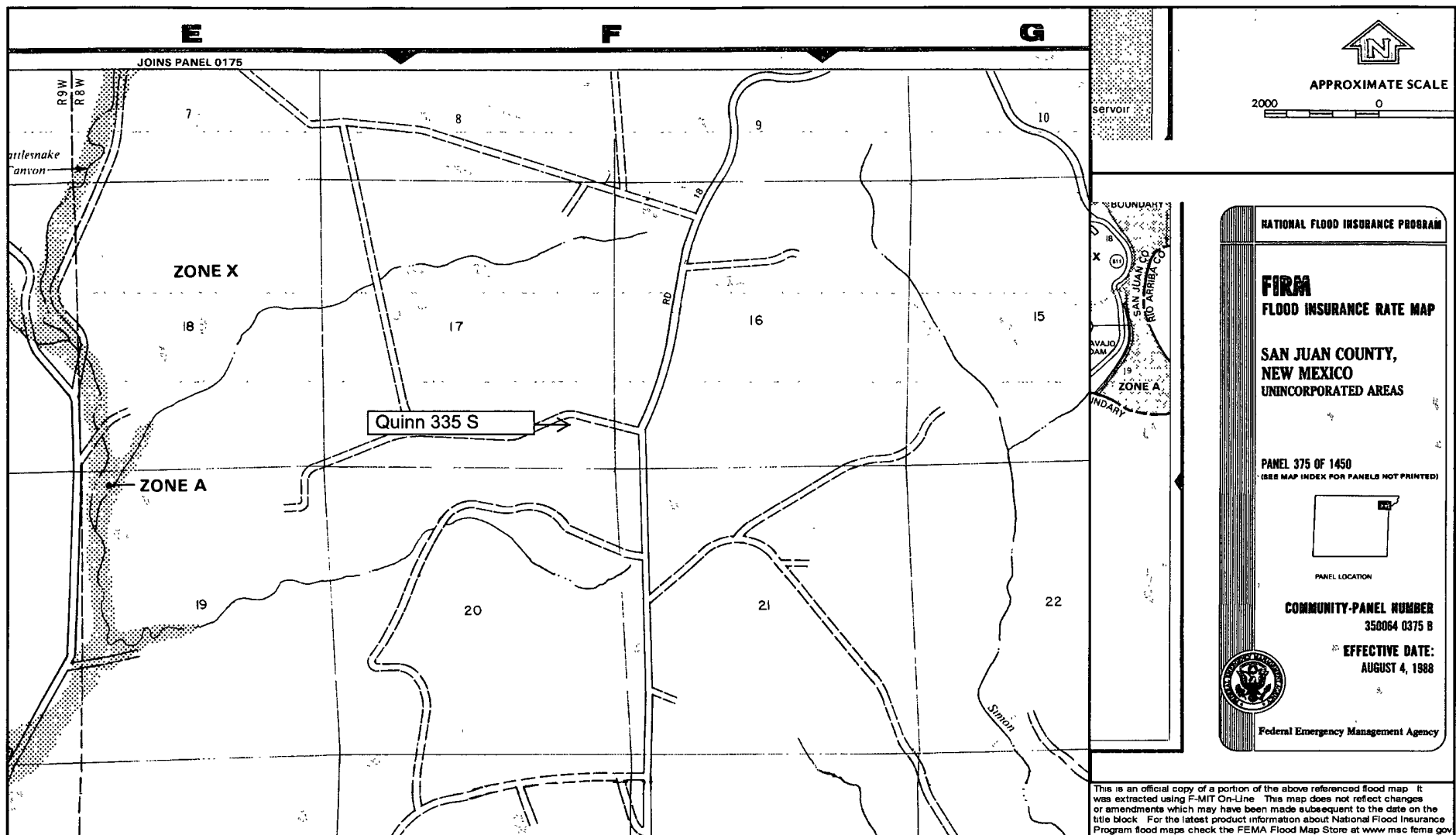
Karst Map - Quinn 335 S

P - Sec 17, 31N, 08W

Nov 03, 2009



API 30-045-32522



Internet Mapping Framework

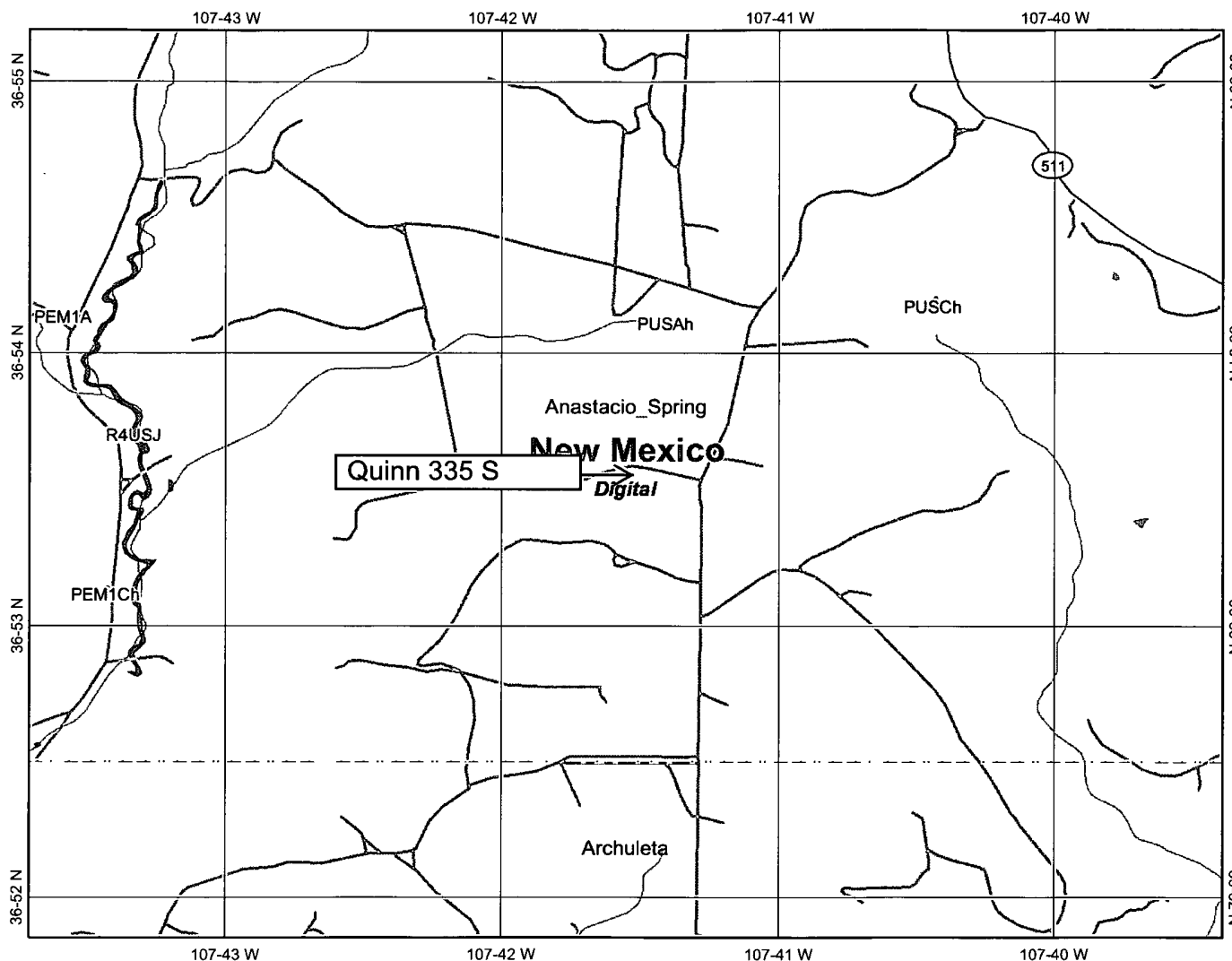


Legend

- Interstate
- Major Roads
- Other Road
- Interstate
- State highway
- US highway
- Roads
- Cities
- USGS Quad Index 24K
- Lower 48 Wetland Polygons
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Lower 48 Available Wetland Data
- Non-Digital
- Digital
- No Data
- Scan
- NHD Streams
- Counties 100K
- States 100K
- South America
- North America



Scale: 1:43,294



Map center: 36° 53' 31" N, 107° 41' 33" W

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

EnerVest Operating, LLC (EV)

**BELOW-GRADE TANK
OPERATIONAL REQUIREMENTS**

Rule 19.15.17.12

- A. EV will operate and maintain Below-Grade Tanks to insure the integrity of the below-grade tank, liner, liner system or berms to prevent contamination of fresh water and protect public health and the environment.

EV will not discharge or store any hazardous waste material of any kind in any Below-Grade Tank.

Any penetration of the below-grade below the liquid's surface that may occur, EV shall remove all liquid above the damage or leak line within 48 hours of the discovery. EV shall notify the appropriate district office within 48 hours of the discovery and repair the damage or replace the liner or below-grade tank.

EV will insure the metal retaining walls of the below-grade system around each tank will extend at least 6" above ground level or be equipped with a 6" earthen berm in an effort to divert run-on water around the below-grade system.

- D. EV will insure that a below-grade tank constructed and installed prior to June 16, 2008 that does not meet the requirements of 19.15.17.11 NMAC and does not demonstrate integrity or that the below-grade tank develops any conditions as identified in 19.15.17.12 NMAC shall close the existing below-grade tank pursuant to the closure requirements of 19.15.17.13 NMAC and install a below-grade tank that is in full compliance with our approved design. Please see below-grade system diagram in Appendix 8 for details.

EV will insure all Below-grade tanks will be equipped with automatic high-level alarm which sounds at 24" and than shut off devise to insure that flow will shut off at the freeboard height of 10 1/2 inches.

The majority of our below-grade tanks are within the berm around our tank battery and as so are protected from run-on water. Those outside this berm will be protected with an earthen berm which will extend at least 6" above surface ground level to divert run-on around the tank.

EV will remove any visible or measurable layer of oil from the fluid surface of a below-grade tank.

With any below-grade tank, installed before June 16, 2008, that is retrofitted or replaced with another tank, EV will insure that the soil beneath the removed soil is inspected for wet, discolored, or any other evidence of release, with photographic evidence. EV will report the results of all testing to the division on form C-141 and demonstrate to the division whether the evidence of contamination indicates an imminent threat to fresh water, public health, safety of the environment exists. If the division determines that the contamination does not pose an imminent threat to fresh water, public health, safety or the environment, EV shall complete the retrofit or the replacement of the below-grade tank as per our approved design program as indicated in Appendix 8. If EV or the division determines that the contamination poses an imminent threat to fresh water, public health, safety or the environment, then EV shall close the existing below-grade tank pursuant to the closure requirements of 19.17.15.13 NMAC prior to initiating the retrofit or replacement.

Section IV

Closure Plan

EnerVest Operating, LLC (EV)

BELOW-GRADE TANK
CLOSURE REQUIREMENTS

Rule 19.15.17.13

Before June 15, 2013, EV shall close, retrofit, or replace an existing below-grade tank that has not demonstrated integrity.

EV shall close a below-grade tank within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the division requires because of imminent danger to fresh water, public health or the environment.

- A. EV shall close an existing below-grade tank that does not meet the requirements of Subsection I, paragraphs (1) through (4), of 19.15.17.11 NMAC if not retrofitted to comply with said requirements prior to any sale or change of operator to 19.15.9.9 NMAC.

Any below-grade tank installed prior to June 16, 2008 that is single walled and where any portion of the tank sidewall is below the ground surface and not visible shall equip or retrofit the below-grade tank to comply with paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, or close it, within 5 years after June 16, 2008.

Within 60 days of cessation of the permitted below-grade tanks operation or as required by Subsection B of 19.15.17.17 NMAC, EV shall close the below-grade tank in accordance with a closure plan that the appropriate division district office approves.

- J. Prior to implementing any closure operations EV shall research county tax records to determine the name and address of the surface owner of the properties involved. EV shall notify this surface owner via Certified U.S. Mail, return receipt requested, of their intent to close said below-grade tank.

Upon determination, EV will notify the appropriate district office prior to any closure operations beginning. Such notification shall be at least 72 hours, via U.S. Mail, prior to beginning work but not more than one week prior to beginning work. Such notice shall contain at a minimum the following:

Operators Name
Unit letter, Section, Township, & Range of well
Well name and well number
API Number of well

- E. All free standing liquids and sludge will be removed at the start of the below-grade tank closure process from the below-grade tank and disposed of in one of the below division-approved facility as indicated below:

TNT Land Farm	Permit # NM-01-0008	Liquids & Sludge
Environtech Land Farm	Permit # NM-01-0011	Solids
AguaMoss	Permit # 247130	Liquids

EV will obtain prior approval from the division to dispose, recycle, reuse, or reclaim the below-grade tanks and provide documentation of the final disposition of the below-grade tank in the closure report.

Existing liners that are removed as a result of closure will be wiped cleaned and disposed of at a solid waste facility listed below in compliance with Subparagraph (M) of Paragraph (I) of Subsection C 19.15.35.8 NMAC..

San Juan Regional Landfill	Permit # SWM 052426 or
"	Special Waster Permit # SWM052433 "sp"

If there is any on-site equipment associated with a below-grade tank, EV shall remove the equipment, unless the equipment is required for some other purpose .

Upon removal of the below-grade tank, EV will take, at a minimum, a five point composite sample from where the tank was sitting. EV shall collect individual grab samples will be taken from any area that is wet, discolored or showing other evidence of a release. All samples will be analyzed for the following:

Components	Test Method	Limits (mg/Kg)
Benzene	EPA SW-846 8021B or 8260B	0.2
BTEX	EPA SW-846 8021B or 8260B	50
TPH	EPA SW-846 418.1	100
Chlorides	EPA 300.1	250 or background, whichever is greater

EV will insure that the results of all sampling shall be reported to the division on approved form C-141. EV understands that the division may require additional delineation upon review of the results.

If sampling demonstrates that concentrations specified above have NOT been exceeded, or that a release has NOT occurred, EV will backfill the excavation with compacted, non-waste containing, earthen material, construct a division prescribed soil cover, and recontour and re-vegetate the site. The division prescribed soil cover, recontouring, and re-vegetation shall comply with 19.15.17.13.

If EV or the division determines that a release has occurred, EV shall fully comply with 19.15.29 NMAC and 19.15.30 NMAC as appropriate.

- G. Once EV has closed a below-grade tank, we shall reclaim the site to a safe and stable condition that blends with the surrounding undisturbed area. When possible, EV will restore the impacted surface area to the condition that existed prior to oil and gas operations by the placement of soil cover.

If the closed area is within the confines of the pad location EV will blend the site to match the pad location as much as possible. Such activities shall prevent erosion, protect fresh water, human health and the environment. EV will obtain written agreement from the surface owner for any alternate re-vegetation proposals and submit to the division for final approval.

- H. The soil cover design will be consistent with the requirements of 19.15.17.13(H)(1) and (3). The soil cover will consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater. The soil cover will be constructed to the site's existing grade and prevent ponding of water and erosion of the cover material.

- I. EV will seed the disturbed areas the first growing season after closing the below grade tank. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or Forest Service stipulated seed mixes will be used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs. During the two growing seasons that prove viability, there shall be no artificial irrigation of the vegetation.

EV shall notify the division when it has seeded or planted and when it successfully achieves re-vegetation by U.S. Mail.

- K. Within 60 days of completion of closure operations, EV will file Form C-144, with attachments, outlining the detailed operations of the closing operations. Such attachments shall include, but not be limited to, proof of surface owner and division notifications, confirmation of sampling analysis, disposal facility names and permit numbers, soil backfilling and cover installation, re-vegetation application rates and seeding techniques, and photo documentations.

Site Specific Hydro Geologic Analysis

Quinn 335 S

API 30-045-32522

The above referenced well is located at UL P, Sec 17, 31N, 08W at an elevation of 6549'.

The water well, SJ03769, in the SE/4 of Sec 14, 31N, 09W was drilled in 2006 for a livestock well. There was no indication of water and this well was plugged in that same year.

The water well, SJ00012 in the NE/4, Sec 30, 31N, 08W was drilled in 1953 by El Paso at an elevation of 6577' and encountered water at 475'. This water is approximately at 6102', or 487' below our well.

Supron Energy drilled the Quinn #7A (045-23584) in 1980 at an elevation of 6544', about 100 feet South of our well. They set surface casing at 274', which is at a depth of 6270 feet, which is 270' deeper than our well. .

Cathodic Protection Report for this well in 1986 reported not enough water to produce. The ground was comprised of clay, sandstone, and shale which should prevent any migration up to our well.

The groundwater at our well site would be greater than 200 feet at a minimum. This should allow ample protection for any groundwater in the area.