February 2022

Volume 1: C-147 Registration for Willamette Containments #1 and #2

Section 1 T25S R35E, Lea County NM

Transmittal Letter **& Closure Cost Estimate**
C-147 Form
Survey and Driving Directions
Design Drawings and Specifications
Design Construction Plan
Operations & Maintenance and Closure Plans

View east from southeast side of fresh water AST on pad showing swale in which Intrepid will construct the two in-ground containments. The lease road servicing the pads is barely visible east of the surface pipelines.

Prepared for:
Intrepid Potash NM LLC
Carlsbad, NM

Prepared by:
R.T. Hicks Consultants, Ltd.
901 Rio Grande NW F-142
Albuquerque, New Mexico

R. T. HICKS CONSULTANTS, LTD.

901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Since 1996

February 18, 2022

Mr. Mike Bratcher
NMOCD - District 2, Supervisor
811 S. First St.
Artesia, NM 88210
Via E-Mail

Ms. Victoria Venegas
NMOCD - District 2
811 S. First St.
Artesia, NM 88210
Via E-Mail

RE: Intrepid Potash NM, LLC, C-147 and Siting Criteria Demonstration for Willamette Recycling Facility and In-Ground Containments 1 &2

Dear Mr. Bratcher and Ms. Venegas:

On behalf of Intrepid Potash NM LLC (Intrepid), R.T. Hicks Consultants is pleased submit Volumes 1 and 2 of the registration for the above-referenced project. The contractor who constructs the in-ground containments will develop a closure cost estimate for reclamation which Intrepid will submit to OCD for approval. Intrepid will not place produced water for recycling into the containments until OCD receives the bond for the approved closure cost.

Please note that the siting criteria demonstration evaluates the recycling project area that includes proposed AST Containments, the treatment/recycling facility, and the in-ground containments.

Hicks Consultants affirms that

- the location meets all siting criteria in the Rule and the location meets the specified setback criteria
- the Design/Construction Plan, Operation and Maintenance Plan and Closure Plan are consistent with the Rule.
- Unless instructed by OCD, we will employ the analytical tests for closure listed in the Rule

Volume 1 of the registration package includes:

- Signed C-147
- Survey with driving directions
- Final engineering plans and specifications for construction of the two in-ground containments
- Demonstrations of equivalency of the secondary liner system
- The Design/Construction Plan
- Operations & Maintenance Plan
- Closure Plan
- Provision of a Game Fence to comply with 19.15.34.13.D1.

Intrepid will specify that the Avian Deterrent System include hazing calls for the Permian Basin of New Mexico.

Volume 2 is the Siting Criteria Demonstration and Appendices

This submission is a registration. However, Intrepid will install four strands of barbed wire on the proposed game fence if requested by the NMOCD District Office.

Intrepid will transmit Volumes 1 and 2 to OCD via the OCD.Online portal.

In compliance with 19.15.34.10 of the Rule, we have copied this submission to Intrepid Potash NM, LLC, the owner of the surface that is the site of the containments.

If you have any questions or concerns regarding this permit or the attached C-147, please contact me. As always, we appreciate your work ethic and diligence.

Sincerely,
R.T. Hicks Consultants

Randall T. Hicks PG
Principal

Copy: Intrepid Potash NM, LLC

R. T. HICKS CONSULTANTS, LTD.
901 Rio Grande Blvd NW ▲ Suite F-142 ▲ Albuquerque, NM 87104 ▲ 505.266.5004 ▲ Since 1996

Intrepid Willamette Containment

Financial Assurance Cost Estimate

This submission includes the closure/reclamation cost estimates for

- Willamette Containments #1 and #2 in-ground recycling containments and
- A possible future AST Containment.

The attached quotation for the in-ground containments is based upon the standards in Rule 34. Mustang summarizes the work on the quote sheet.

The cost of closure sampling and reporting after removal of the liner is $5,000.

The closure cost estimate for the future AST Containment is presented below – as it is the same estimate approved by OCD for the Warrior AST. There is no cost for reclamation of the pad upon which the containment is built as reclamation of the pad is included in the cost estimate for the in-ground containments.

ITEM DESCRIPTION	UNITS	QTY	UNIT PRICE	Rule 34 TOTAL PRICE
Warrior AST				
Removal of AST and Liner Disposal	1	1	$30,000.00	$30,000.00
Assess soil for impacts	1	1	$2,500.00	$2,500.00
Re-grade and Reclaim Site	0	0	$16,000.00	$0.00
Misc. disposal and removal of fencing and cattle guards	1	1	$1,000.00	$1,000.00
Facility Decommision and Reclaim Site Subtotal:				**$33,500.00**

Prior to introducing produced water for recycling into the containments, Intrepid will secure a bond for at least ($759,200.00 + $33,500 + $5000 =) $797,700 and transmit the bond to OCD in Santa Fe.

Please contact me if you have any questions.

Quote
#205912
3/17/2022
Williamette Facility-Cost Closure Estimate

Job Site Address
Intrepid
McDonald NM 88262

Ordered By	Exp. Close	Est. Project Start Date	Sales Rep
Intrepid Potash New Mexico LLC : Roy Cooper	3/17/2022	3/4/2022	Jon Wardlaw

Notes:

Thank you for the opportunity to provide pricing for this project!

* Invoice will reflect actual time/materials required.
* Stand-by time will be billed at an hourly rate.
* Applicable state and local taxes will be added to the invoice.
* Quote is valid for 30days from date issued unless otherwise noted.

205912

MUSTANG extreme environmental services

Quote
#205912
3/17/2022
Williamette Facility-Cost Closure Estimate

Job Site Address
Intrepid
McDonald NM 88262

Ordered By	Exp. Close	Est. Project Start Date	Sales Rep
Intrepid Potash New Mexico LLC : Roy Cooper	3/17/2022	3/4/2022	Jon Wardlaw

Item Details:

Quantity	Units	Item	Rate	Amount
1	Each	**9044-services-Misc Services Misc. Services - Other** Civil Earthwork Cost Closure Estimate for the Williamette Facility. Lea County NM. Section 1, Township 25S, Range 35E Reclamation of the entire site necessary to return the area to as close to its former state as possible to blend with the surrounding landscape. Liner system to be removed and properly disposed of or recycled prior to Earthwork. Earthwork- All material to be non-waste, uncontaminated earthen material from location. Backfilling of the area using materials from the earthen berms will be compacted and stabilized with existing native topsoil covering the area. The reclamation will follow the natural contours of the surrounding landscape as closely as possible to ensure adequate runoff and erosion control. The entire area will be re-seeded during the 1st available growing season after closure.	$759,200.00	$759,200.00

Subtotal	$759,200.00
Tax	See Clarifications
Total	$759,200.00

205912

C-147

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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-147
Revised April 3, 2017

Recycling Facility and/or Recycling Containment

Type of Facility: ☒ Recycling Facility ☒ Recycling Containment*****

Type of action: ☐ Permit ☐ Registration ☐ Modification ☐ Extension ☐ Closure ☐ Other (explain) _____

*** At the time C-147 is submitted to the division for a Recycling Containment, a copy shall be provided to the surface owner.**

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: ___Intrepid Potash NM LLC_____(For multiple operators attach page with information) OGRID #:_ 372681____

Address: __ 2324 W. Peirce St. Carlsbad, NM 88220_____

Facility or well name (include API# if associated with a well): _Willamette Recycling Facility and Containments #1 and #2_____

OCD Permit Number: _____(For new facilities the permit number will be assigned by the district office)

U/L or Qtr/Qtr _B, C, F, G_ Section _____1_____ Township ____25S____ Range __35E_____ County: ___Lea_____

Surface Owner: ☐ Federal ☐ State ☒ Private ☐ Tribal Trust or Indian Allotment

2.

☐ **Recycling Facility:**

Location of recycling facility (if applicable): Latitude ___32.16369_____ Longitude _____-103.22212___Approx____ NAD83

Proposed Use: ☒ Drilling* ☒ Completion* ☒ Production* ☒ Plugging *

The re-use of produced water may NOT be used until fresh water zones are cased and cemented

☐ Other, ***requires permit for other uses. Describe use, process, testing, volume of produced water and ensure there will be no adverse impact on groundwater or surface water.***

☒ Fluid Storage

☒ Above ground tanks ☒ Recycling containment ☐ Activity permitted under 19.15.17 NMAC explain type_____

☐ Activity permitted under 19.15.36 NMAC explain type:_____ ☐ Other explain _____

☐ For multiple or additional recycling containments, attach design and location information of each containment

☐ **Closure Report (required within 60 days of closure completion):** ☐ Recycling Facility Closure Completion Date:_____

3.

☒ **Recycling Containment:** Willamette #1 and #2

☐ Annual Extension after initial 5 years (attach summary of monthly leak detection inspections for previous year)

Center of Recycling Containment (if applicable): Latitude _ ___32.163686_____ Longitude _____-103.2221180 Approx_____

NAD83

☐ For multiple or additional recycling containments, attach design and location information of each containment

☐ Lined ☐ Liner type: Thickness _See Engineering Drawings_____mil ☐ LLDPE ☒ HDPE ☐ PVC ☐ Other _____

☐ String-Reinforced

Liner Seams: ☒ Welded ☐ Factory ☐ Other _____ Volume: _See Drawings_____bbl Dimensions: L_____ x W_____ x D_____

☐ Recycling Containment Closure Completion Date:_____

4.

Bonding:

☐ Covered under bonding pursuant to 19.15.8 NMAC per 19.15.34.15(A)(2) NMAC **(These containments are limited to only the wells owned or operated by the owners of the containment.)**

☒ Bonding in accordance with 19.15.34.15(A)(1). Amount of bond $__SEE COST ESTIMATE____ **(work on these facilities cannot commence until bonding amounts are approved)**

☒ Attach closure cost estimate and documentation on how the closure cost was calculated.

5.

Fencing:

☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☒ Alternate. Please specify__Game Fence with option to install 4 strands barbed wire from -=0-4 feet if required by District Office_____

6.

Signs:

☒ 12”x 24”, 2” lettering, providing Operator’s name, site location, and emergency telephone numbers

☐ Signed in compliance with 19.15.16.8 NMAC

7.

Variances:

Justifications and/or demonstrations that the proposed variance will afford reasonable protection against contamination of fresh water, human health, and the environment.

Check the below box only if a variance is requested:

☐ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval. If a Variance is requested, include the variance information on a separate page and attach it to the C-147 as part of the application.

If a Variance is requested, it must be approved prior to implementation.

8.

Siting Criteria for Recycling Containment

Instructions: The applicant must provide attachments that demonstrate compliance for each siting criteria below as part of the application. Potential examples of the siting attachment source material are provided below under each criteria.

General siting	
Ground water is less than 50 feet below the bottom of the Recycling Containment.	
NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells FIGURE 2	☐ Yes ☒ No ☐ NA
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. FIGURE 3 - Written confirmation or verification from the municipality; written approval obtained from the municipality	☐ Yes ☒ No ☐ NA
Within the area overlying a subsurface mine. FIGURE 4 - Written confirmation or verification or map from the NM EMNRD-Mining and Minerals Division	☐ Yes ☒ No
Within an unstable area. FIGURE 5 - 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 FIGURE 6	☐ Yes ☒ 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). FIGURE 7 - Topographic map; visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within 1000 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 FIGURE 8	☐ Yes ☒ No
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application. FIGURES 1 AND 7 - NM Office of the State Engineer - iWATERS database search; visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within 500 feet of a wetland. FIGURE 9 - US Fish and Wildlife Wetland Identification map; topographic map; visual inspection (certification) of the proposed site	☐ Yes ☒ No

9.
Recycling Facility and/or Containment Checklist:
Instructions: Each of the following items must be attached to the application. Indicate, by a check mark in the box, that the documents are attached.

- ☒ Design Plan - based upon the appropriate requirements.
- ☒ Operating and Maintenance Plan - based upon the appropriate requirements.
- ☒ Closure Plan - based upon the appropriate requirements.
- ☒ Site Specific Groundwater Data -
- ☒ Siting Criteria Compliance Demonstrations –
- ☒ **Certify that notice of the C-147 (only) has been sent to the surface owner(s)**

10.
Operator Application Certification:
I hereby certify that the information and attachments submitted with this application are true, accurate and complete to the best of my knowledge and belief.

Name (Print): Travis McBain Title: Director of Land/Business Development
Signature: Date: February 18, 2022
e-mail address: travis.mcbain@intrepidpotash.com Telephone: 405.938.5411

11.
OCD Representative Signature: **Approval Date:**

Title: **OCD Permit Number:**

☐ OCD Conditions
☐ Additional OCD Conditions on Attachment

SURVEY FOR CONTAINMENT AND RECYCLING FACILITY AND DRIVING DIRECTIONS FROM JAL

TOPOGRAPHIC SURVEY

of Proposed Willamette Containment Pond

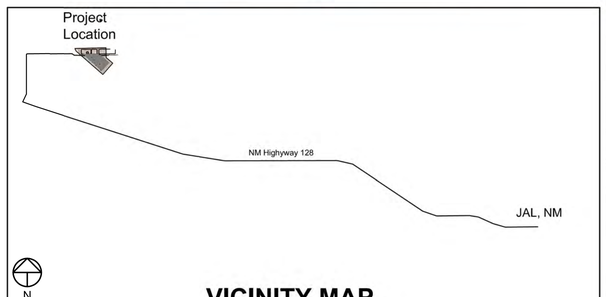
Control Point List				
Point Number	**Northing**	**Easting**	**Elevation**	**Description**
1 (Not in Viewport)	425392.19	856353.40	3330.97	SET 5/8"RB
100	425860.23	854508.96	3331.22	FND BC
103 (Not in Viewport)	425882.22	857148.65	3305.30	FND BC
104 (Not in Viewport)	425835.77	851867.48	3267.02	FND BC

BASIS OF BEARING

The basis of bearing for this survey is Grid North based on the New Mexico State Plane Coordinate System. East Zone, as determined by GPS/GNSS observations. Ground coordinates were obtained by applying a combined grid to ground scale factor of 1.0001328997 at control point located at N425392.188, E856353.398 (ground).True North can be obtained by applying a convergence angle of 0°32'31.2" at "A SET 5/8 INCH REBAR"(CP1). The vertical datum is based on GEOID18 and it provides orthometric heights consistent with the North American Vertical Datum of 1988 (NAVD88)

TOPOGRAPHIC NOTE

The topography shown herein is a combination of UAV data and conventional/GPS data. The UAV data was generated using industry standard quality checks and is **within** the industry recognized ground sampling distance (GSD) standard of below 2.5 cm (1 in). The absolute accuracy level in standard UAV data is equal to 3 X GSD (3 X 0.08 ft = 0.24 ft). UAV data was used for measurements on natural ground and supplemental features.



VICINITY MAP
N.T.S.

Driving Directions	
1	From NM Highway 128 W/E (Kansas St) & NM-18S head West on Highway 128 for 9.6 miles
2	Turn right (North) onto dirt road an head North for .9 miles
3	Turn right (East) and continue East on dirt road for 1 mile
4	Location will be on the right (South) (32.165375,-103.326449)

ONE CALL NOTIFICATIONS

Ticket number: **22JA180447**
Remarks:
Conflict. Marked salt creek pipe line from 32°09'54"N 103°19'35"W to 32°09'54"N 103°19'14"W - The proposed excavation site is going to be in CONFLICT with Salt Creek assets. Sal: creek assets have been marked. No digging may take place without a salt creek representative present. Please notify me 48hrs prior to wanting to excavate salt creek assets. The following dimensions are minimum requirements for potholing when exposing Sal:Creek lines: 3ft each side of the line and 3ft below the bottom of salt creek line and top of installed line. (If ticket is conflicted and marks have been destroyed or not visible please contact Locator: Levi Cobos. 4327554970
Notes:
NO DIGGING MAY TAKE PLACE WITHOUT A SALT CREEK MIDSTREAM REPRESENTATIVE PRESENT WITHIN 10 FT OF SALTCREEK MIDSTREAM PIPELINE. CONTACT AARON THOMAS AT 432-556-1131. MUST NOTIFY 48 BUSINESS HOURS PRIOR TO DIGGING.

I, Jeremy Baker, New Mexico Professional Surveyor, hereby certify that this Topographic Survey Plat was prepared from an actual ground survey performed by me or under my supervision, that this survey is true and correct to the best of my knowledge and belief, that this Topographic Survey Plat and the field survey upon which it is based meet the Minimum Standards for Surveying in New Mexico.

Jeremy Baker — 01/26/2022 (Date)

SURVEYOR NOTE

THIS IS NOT A BOUNDARY SURVEY OR A RIGHT-OF-WAY SURVEY. APPARENT PROPERTY CORNERS, RIGHT-OF-WAY LINES, OR PROPERTY LINES AS SHOWN ARE DERIVED FROM RECORD SURVEY PLATS, RIGHT-OF-WAY MAPS, OR DEEDS REFERENCED HEREON AND ARE NOT GUARANTEED OR TO BE RELIED ON FOR THE ESTABLISHMENT OF PROPERTY LINES.

SquareRoot services
Engineering | Surveying

TOPOGRAPHIC SURVEY
OF
Proposed
Willamette Containment
FOR
R.T. Hicks

PROJECT NUMBER: 22003

PROJECT SURVEYOR: Jeremy Baker
DRAWN BY: Isaac Dominguez

GRAPHIC SCALE
0 100' 200'
SCALE: 1" = 100'
(IN FEET)

LEGEND

- CONTROL POINT AS NOTED
- ####' — MAJOR CONTOUR (5FT)
- MINOR CONTOUR (1FT)
- LQPG — UTILITY-BURIED LIQUID PETROLEUM
- EDGE OF ROAD
- EDGE OF PAD

REVISIONS		
No.	DATE	DESCRIPTION

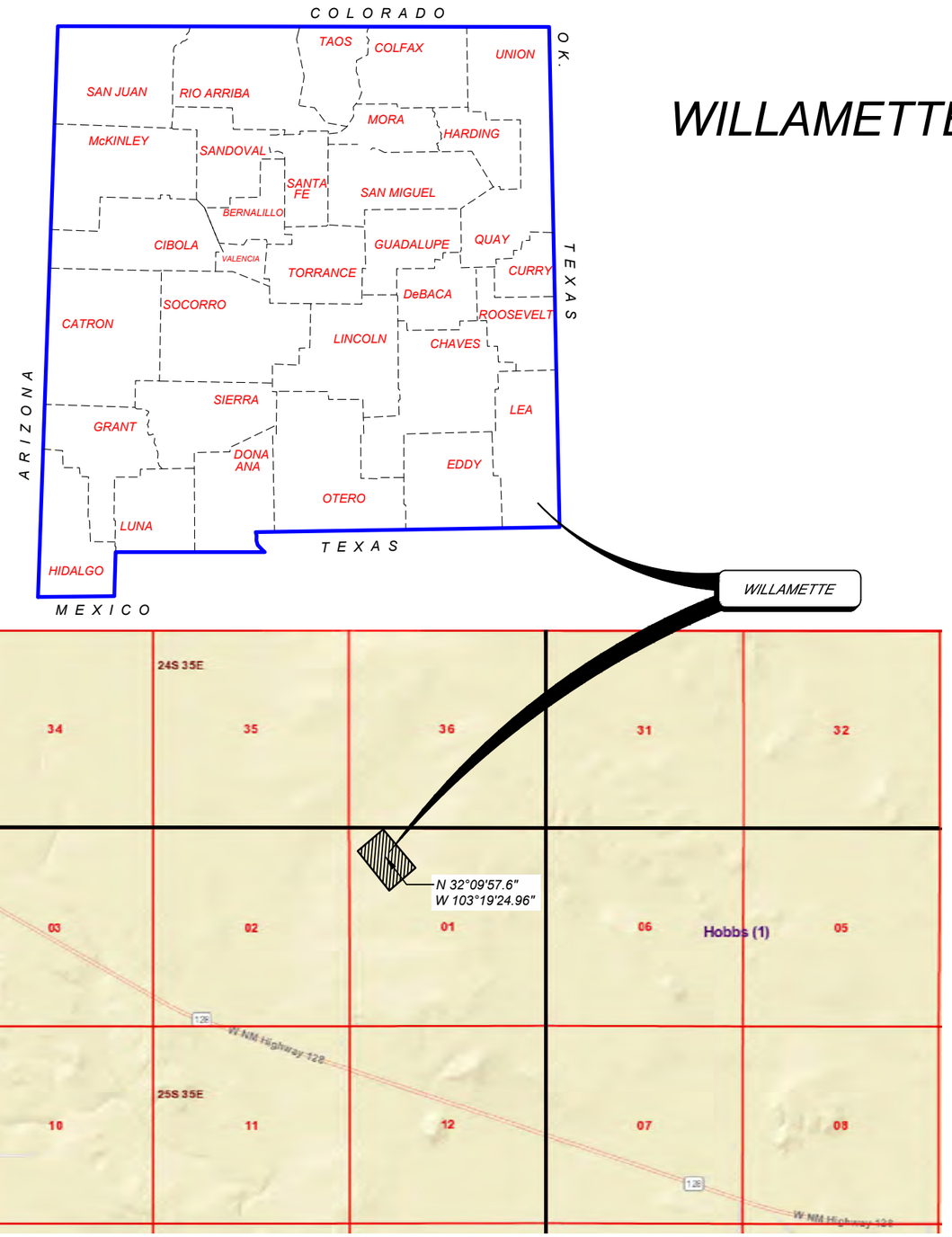
JEREMY E. BAKER — NEW MEXICO — 25773 — PROFESSIONAL SURVEYOR

SHEET: 1 of 1
SU - 101

RECYCLING CONTAINMENT DESIGN DRAWINGS

AVIAN DETERRENT SYSTEM

INTREPID POTASH NM, LLC
WILLAMETTE WATER TREATMENT AND REUSE FACILITY
S1, T25S, R35E
LEA COUNTY, NEW MEXICO



INDEX OF SHEETS

CLAUDIUS SANCHEZ CZYZEWSKA
NEW MEXICO
22897
PROFESSIONAL ENGINEER
03/04/2022

MAGRYM
Magrym Consulting, Inc.
110 W. Louisiana Ave. Ste 314
Midland, TX 79701
(432) 999-2737
www.magrym.com
TX #F-19848 ND #28610PE OK #8561PE

IFC	ISSUED FOR CONSTRUCTION	03/04/22	CSC
R-X	DESCRIPTION	DATE	BY
REVISIONS (OR CHANGE NOTICES)			

INTREPID
Essential Minerals for Success

Intrepid Potash NM LLC
210 Red Cloud Road PO Box 101
Carlsbad, NM 88220

WILLAMETTE WATER TREATMENT AND REUSE FACILITY
S1, T25S, R35E
LEA COUNTY, NEW MEXICO
INTREPID POTASH NM LLC

COVER SHEET	
HORIZONTAL SCALE: NTS	VERTICAL SCALE: NTS
PRINT DATE: 3/4/2022	DESIGNED BY: NC
PROJECT NO. 22-100	CHECKED BY: CSC/EMH
SUBSET: CIVIL	SHEET: C - 100

Drawing File: Z:\Shared\Projects\2022 Projects\22-100 RT Hicks Intrepid Willamette\04_CIVIL\Design\Drawings\MAG-22-100 -CIV-C100_R0.dwg

Control Point Table				
Point #	Northing	Easting	Elevation	Desc
371	425381.22'	854525.55'		CORN
372	424573.85'	855440.50'		CORN
373	423829.60'	854747.63'		CORN
374	425372.70'	853088.85'	3291.8	CORN

IMPORTANT SURVEY NOTES:

1. CONTRACTOR SHALL VERIFY ALL COORDINATES AND DIMENSIONS FROM THE LEASE BOUNDARY PLATS.
2. ALL BOUNDARY, TOPOGRAPHIC AND UTILITY INFORMATION SHOWN ARE BASED ON SURVEY INFORMATION FURNISHED BY SQUARE ROOT SERVICES.
3. THE CONTRACTOR SHALL IDENTIFY AND LOCATE UTILITY LINES, MONITORING WELLS, SURVEY MONUMENTS, AND OTHER NEARBY STRUCTURES PRIOR TO PERFORMING WORK.
4. COORDINATE INFORMATION IS BASED ON STATE PLANE NEW MEXICO EAST, NAD 83.

LEGEND

EXISTING OVERHEAD ELECTRIC — OHE
EXISTING PIPELINE — UGPL
SURVEY AREA
EXISTING GRADE CONTOURS
(2.5 FT INTERVAL)

CLAUDIUS SANCHEZ CZYZEWSKA
NEW MEXICO
22897
PROFESSIONAL ENGINEER
03/04/2022

N

SCALE 1"=250'
0 62.5' 125' 500'

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IFC	ISSUED FOR CONSTRUCTION	03/04/22	CSC
R-X	DESCRIPTION	DATE	BY
REVISIONS (OR CHANGE NOTICES)			

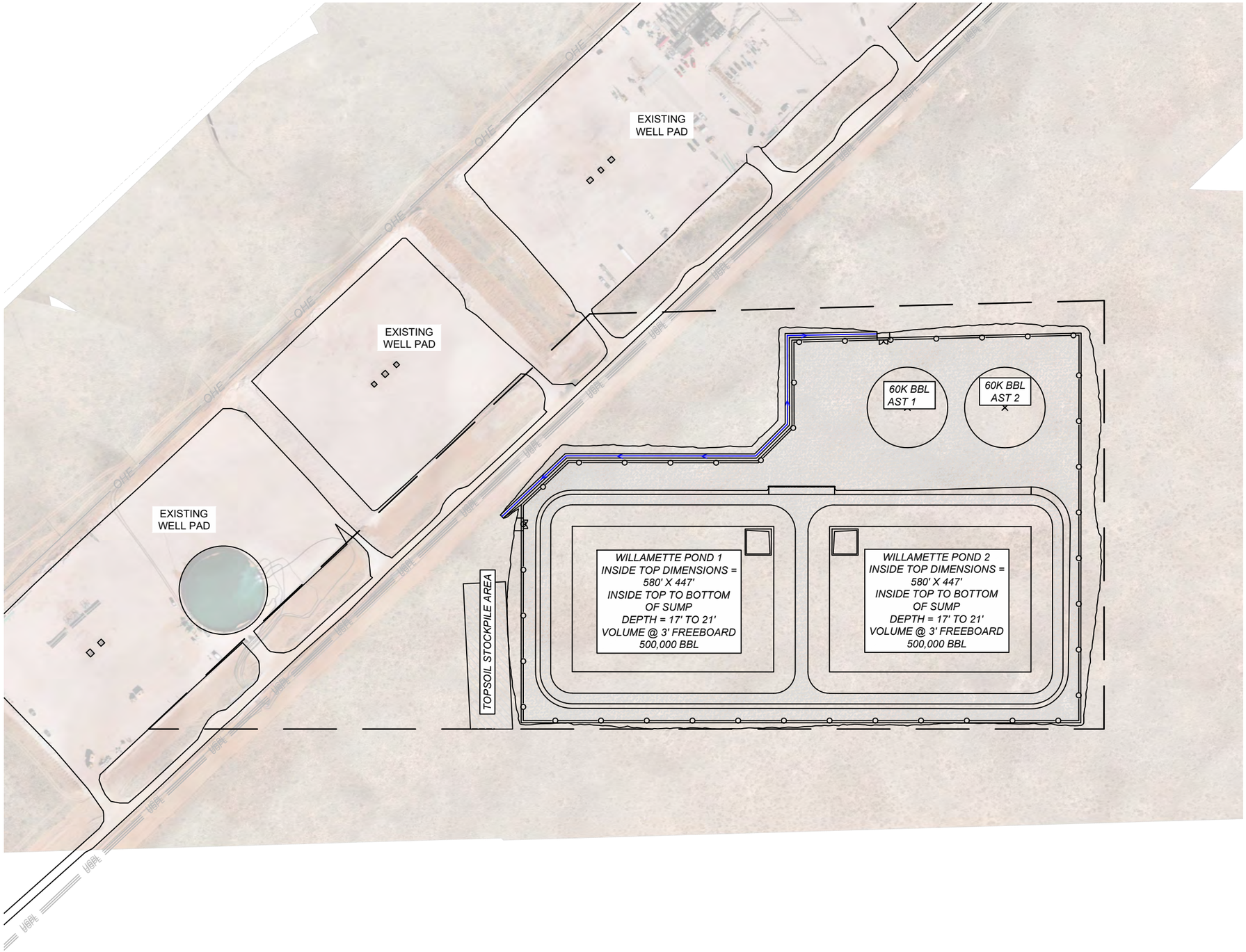
Intrepid Potash NM LLC
210 Red Cloud Road PO Box 101
Carlsbad, NM 88220

WILLAMETTE WATER TREATMENT AND REUSE FACILITY
S1, T25S, R35E
LEA COUNTY, NEW MEXICO
INTREPID POTASH NM LLC

EXISTING CONDITIONS

HORIZONTAL SCALE: 1"=250'	VERTICAL SCALE: NTS
PRINT DATE: 3/4/2022	DESIGNED BY: NC
PROJECT NO. 22-100	CHECKED BY: CSC/EMH
SUBSET: CIVIL	SHEET: C - 101

Drawing File: Z:\Shared\Projects\2022 Projects\22-100 RT Hicks Intrepid Willamette\04_CIVIL\Design\Drawings\MAG-22-100-CIV-Existing Conditions_R0.dwg



SUGGESTED CONSTRUCTION SEQUENCE

1. *CLEAR EXISTING VEGETATION.*
2. *STRIP AND STOCKPILE TOPSOIL AT THE LOCATION DESIGNATED ON THESE PLANS.*
3. *PERFORM EARTHWORK OPERATIONS:*
   - 3.1. *CONSTRUCT STORMWATER DIVERSION CHANNEL.*
   - 3.2. *PERFORM RIPPING/EXCAVATING OPERATIONS.*
   - 3.3. *REPLACE EXCAVATED MATERIAL IN COMPACTED LAYERS ON THE LEVEE/PAD IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS.*
   - 3.4. *FINISH SLOPES USING A SMOOTH ROLLER.*
   - 3.5. *DIG ANCHOR TRENCH.*
4. *INSTALL NEW GAME FENCE AND GATES.*
5. *INSTALL GEOMEMBRANES:*
   - 5.1. *INSTALL GEOTEXTILE AS NEEDED, SECONDARY LINER, GEONET, LEAK DETECTION SYSTEM AND PRIMARY LINER.*
   - 5.2. *INSTALL RUB SHEETS AND WATER LEVEL GAGE/LADDER.*
   - 5.3. *BACKFILL AND COMPACT ANCHOR TRENCH.*
   - 5.4. *INSTALL SLOPE PROTECTION.*
6. *GRADE TREATMENT AREA*
7. *INSTALL WATER TREATMENT COMPONENTS*

LEGEND

EXISTING OVERHEAD ELECTRIC	OHE
EXISTING PIPELINE	UGPL
SURVEY AREA	
PROPOSED 8' GAME FENCE	
PROPOSED DRIVING SURFACE	
PROPOSED STORMWATER FLOW DIRECTION	

CLAUDIUS SANCHEZ CZYZEWSKA
NEW MEXICO
22897
PROFESSIONAL ENGINEER
03/04/2022

N

SCALE 1"=250'

0 62.5' 250' 500'

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R-X	DESCRIPTION	DATE	BY
REVISIONS (OR CHANGE NOTICES)			

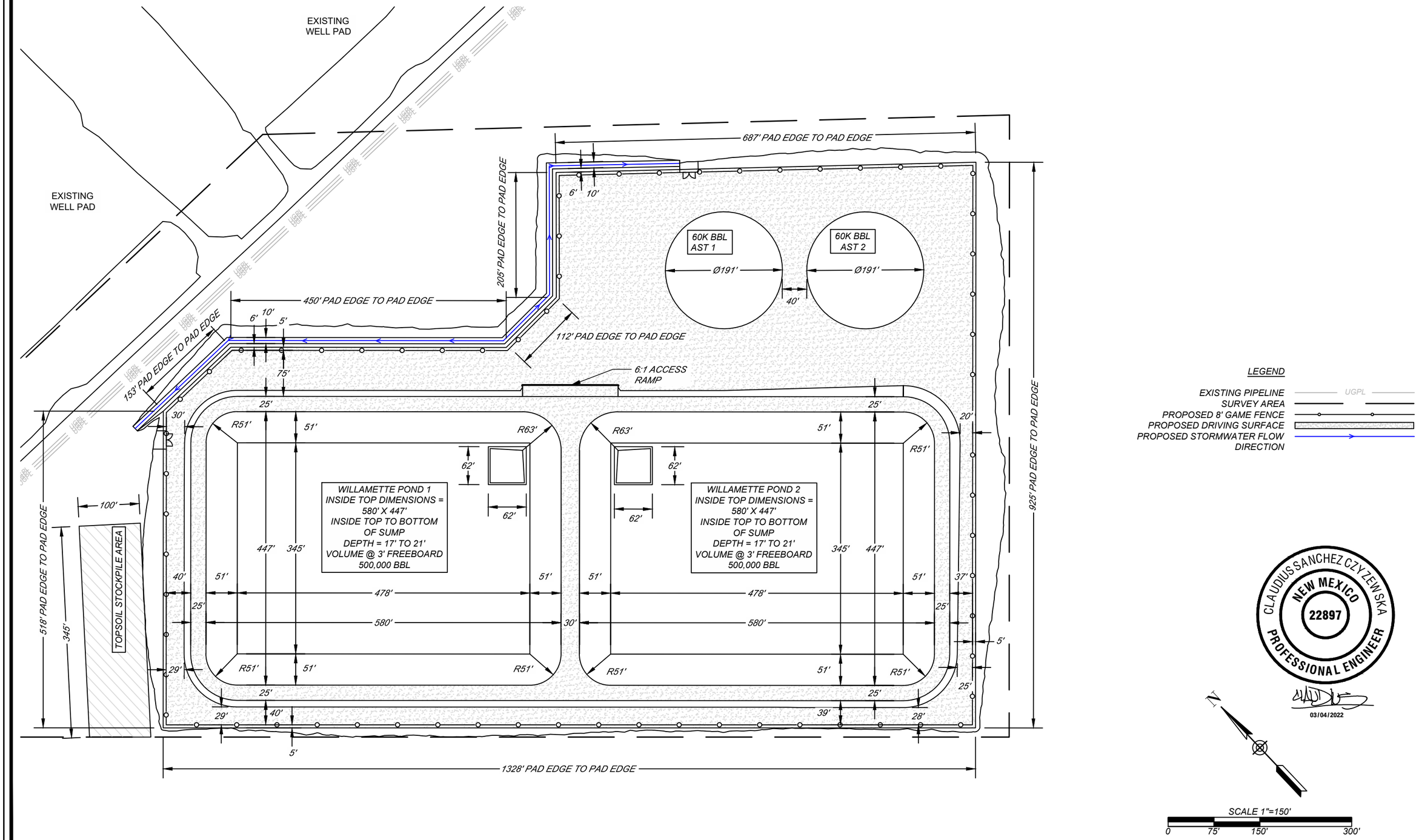
Intrepid Potash NM LLC
210 Red Cloud Road PO Box 101
Carlsbad, NM 88220

WILLAMETTE WATER TREATMENT AND REUSE FACILITY
S1, T25S, R35E
LEA COUNTY, NEW MEXICO
INTREPID POTASH NM LLC

OVERALL SITE PLAN

HORIZONTAL SCALE: 1"=250'	VERTICAL SCALE: NTS
PRINT DATE: 3/4/2022	DESIGNED BY: NC
PROJECT NO. 22-100	CHECKED BY: CSC/EMH
SUBSET: CIVIL	SHEET: C - 102

Drawing File: Z:\Shared\Projects\2022 Projects\22-100 RT Hicks Intrepid Willamette\04_CIVIL\Design\Drawings\MAG-22-100-CIV- Overall Site Plan_R0.dwg



LEGEND

- EXISTING PIPELINE — UGPL —
- SURVEY AREA
- PROPOSED 8' GAME FENCE
- PROPOSED DRIVING SURFACE
- PROPOSED STORMWATER FLOW DIRECTION

CLAUDIUS SANCHEZ CZYZEWSKA
NEW MEXICO
22897
PROFESSIONAL ENGINEER
03/04/2022

N

SCALE 1"=150'
0 75' 150' 300'

IFC	ISSUED FOR CONSTRUCTION	03/04/22	CSC
R-X	DESCRIPTION	DATE	BY
REVISIONS (OR CHANGE NOTICES)			

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(432) 999-2737
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TX #F-19848 ND #28610PE OK #8561PE

Intrepid Potash NM LLC
210 Red Cloud Road PO Box 101
Carlsbad, NM 88220

WILLAMETTE WATER TREATMENT AND REUSE FACILITY
S1, T25S, R35E
LEA COUNTY, NEW MEXICO
INTREPID POTASH NM LLC

PROPOSED SITE PLAN

HORIZONTAL SCALE: 1"=150'	VERTICAL SCALE: NTS
PRINT DATE: 3/4/2022	DESIGNED BY: NC
PROJECT NO. 22-100	CHECKED BY: CSC/EMH
SUBSET: CIVIL	SHEET: C - 103

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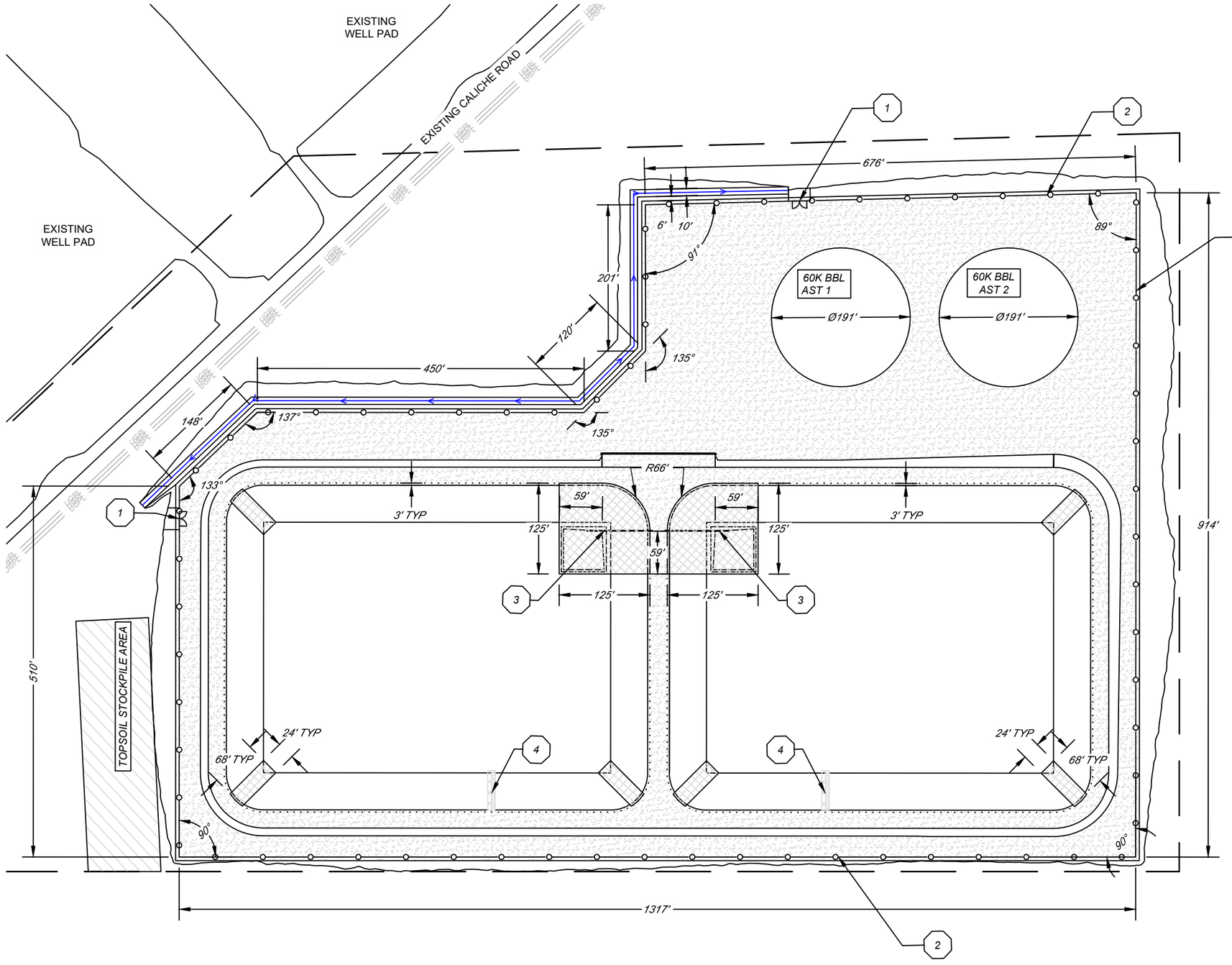

KEYED NOTES

1. 20' DOUBLE GATE (TYP.) PER DETAIL ON SHEET C115
2. PROPOSED 8' GAME FENCE PER DETAIL ON SHEET C115
3. SUMP WITH LEAK DETECTION SYSTEM PER DETAIL ON SHEET C111
4. GAGE LADDER PER DETAIL ON SHEET C116

LEGEND

- EXISTING PIPELINE — UGPL
- SURVEY AREA
- PROPOSED 8' GAME FENCE
- PROPOSED DRIVING SURFACE
- PROPOSED STORMWATER FLOW DIRECTION
- ANCHOR TRENCH
- RUB SHEET

CLAUDIUS SANCHEZ CZYZEWSKA
NEW MEXICO
22897
PROFESSIONAL ENGINEER
03/04/2022

N

SCALE 1"=150'
0 75' 150' 300'

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Midland, TX 79701
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IFC	ISSUED FOR CONSTRUCTION	03/04/22	CSC
R-X	DESCRIPTION	DATE	BY
	REVISIONS (OR CHANGE NOTICES)		

Intrepid Potash NM LLC
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Carlsbad, NM 88220

WILLAMETTE WATER TREATMENT AND REUSE FACILITY
S1, T25S, R35E
LEA COUNTY, NEW MEXICO
INTREPID POTASH NM LLC

PROPOSED LINER AND FENCE PLAN

HORIZONTAL SCALE: 1"=150'	VERTICAL SCALE: NTS
PRINT DATE: 3/4/2022	DESIGNED BY: NC
PROJECT NO. 22-100	CHECKED BY: CSC/EMH
SUBSET: CIVIL	SHEET: C - 104

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GENERAL NOTES

1. NEW MEXICO ADMINISTRATIVE CODE TITLE 19, CHAPTER 15, PART 34, DESIGN CRITERIA FOR RECYCLING CONTAINMENTS SHALL APPLY TO THIS PROJECT.
2. ALL BOUNDARY, TOPOGRAPHIC AND UTILITY INFORMATION SHOWN ARE BASED ON SURVEY INFORMATION FURNISHED BY SQUAREROOT SERVICES.
3. THE CONTRACTOR SHALL IDENTIFY AND LOCATE UTILITY LINES, MONITORING WELLS, SURVEY MONUMENTS, AND OTHER NEARBY STRUCTURES PRIOR TO PERFORMING WORK.
4. COORDINATE INFORMATION IS BASED ON STATE PLANE COORDINATES, NEW MEXICO EAST, NAD 83.
5. THE CONTRACTOR SHALL IDENTIFY ANY DISCREPANCIES PRIOR TO PROCEEDING WITH CONSTRUCTION AND CONTACT THE ENGINEER IN WRITING.
6. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN BEST MANAGEMENT PRACTICES (BMPS) TO MINIMIZE EROSION AND CONTROL SEDIMENT TO PROTECT SURFACE WATER QUALITY DURING STORM EVENTS.

EARTHWORK NOTES

1. THE CONTRACTOR SHALL USE WATER FOR COMPACTION AT ALL TIMES. THE CONTRACTOR SHALL ENSURE THEIR BID INCLUDES CONSTRUCTION WATER. NO EARTHWORK OPERATIONS SHALL TAKE PLACE IF CONSTRUCTION WATER IS NOT AVAILABLE ONSITE.
2. THE CONTRACTOR SHALL BUILD THE LEVEES USING COMPACTED LAYERS. UNCONTROLLED AND INCONSISTENT PUSHING AND PILING OF MATERIAL FOR LEVEE CONSTRUCTION IS NOT ACCEPTABLE. THE CONTRACTOR SHALL DEVELOP A SUCCESSFUL COMPACTION PATTERN EARLY IN THE PROCESS, VERIFIED THROUGH NUCLEAR DENSITY OR SAND CONE TESTING, AND SHALL MAINTAIN CONSISTENCY IN THE COMPACTIVE EFFORT AS LONG AS THE MATERIALS ENCOUNTERED REMAINS CONSISTENT. IF ONSITE SOILS ENCOUNTERED CHANGE, THE CONTRACTOR SHALL DEVELOP A NEW COMPACTION PATTERN.
3. FILL FOR LEVEES SHALL BE PLACED AND COMPACTED IN HORIZONTAL LIFTS WITH MAXIMUM LOOSE LIFT THICKNESS OF 10 INCHES, OR AS DIRECTED BY ENGINEER. CONSTRUCT EACH LAYER CONTINUOUSLY AND APPROXIMATELY HORIZONTAL FOR THE WIDTH AND LENGTH OF THE LEVEE. FILL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DRY DENSITY DETERMINED BY THE ASTM D698 AND AT MOISTURE CONTENT WITHIN +2% TO -2% OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY A STANDARD PROCTOR SOILS TEST ON SAMPLES FROM THE SOURCE AREA.
4. FILL SHALL NOT BE PLACED AND COMPACTED WHEN THE MATERIALS ARE TOO WET TO PROPERLY COMPACT. MATERIAL WHICH IS TOO WET SHALL BE SPREAD ON THE FILL AREA AND PERMITTED TO DRY, ASSISTED BY HARROWING IF NECESSARY, UNTIL THE MOISTURE CONTENT IS REDUCED TO ALLOWABLE LIMITS. IF THE ENGINEER DETERMINED THAT ADDED MOISTURE IS REQUIRED, WATER SHALL BE APPLIED UNIFORMLY OVER THE AREA TO BE TREATED, AND GIVE COMPLETE AND ACCURATE CONTROL OF THE AMOUNT OF WATER TO BE USED. IF TOO MUCH WATER IS ADDED, THAT AREA SHALL BE PERMITTED TO DRY BEFORE COMPACTION IS CONTINUED.
5. PERFORM ONE NUCLEAR DENSITY GAGE TEST PER 2500 CY MINIMUM OR AS DIRECTED BY THE ENGINEER.
6. EARTHWORK CONTRACTOR SHALL PERFORM A VISUAL INSPECTION OF THE FINISHED COMPACTED POND BOTTOM AND SIDE SLOPES BEFORE HDPE LINER INSTALLATION, REMOVING ALL DEBRIS, SHARP OBJECTS AND GRAVEL LARGER THAN 3/4 INCH.
7. EARTHWORK CONTRACTOR SHALL ROLL SURFACE WITH A SMOOTH ROLLER TO ELIMINATE RUTS.

LINER NOTES

1. LINER CONTRACTOR SHALL INSPECT GRADED SURFACE FOR DEBRIS, ROCKS OR OTHER MATERIAL THAT MAY DAMAGE THE LINER AND COORDINATE WITH OWNER IF ADDITIONAL SUBGRADE RESURFACING IS NEEDED PRIOR TO PERFORMING WORK.
2. LINER CONTRACTOR TO PROVIDE SUBMITTAL OF LINER PANEL LAYOUT.
3. LINER CONTRACTOR TO SIGN SUBGRADE ACCEPTANCE FORM (PROVIDED BY OWNER REPRESENTATIVE) DAILY PRIOR TO INSTALLATION.
4. LINER TO BE INSTALLED PER GRI SPECIFICATIONS, GUIDES AND PRACTICES.
5. CONTRACTOR SHALL PLACE SANDBAGS ON LINER DURING INSTALLATION AS REQUIRED TO PREVENT WIND UPLIFT UNTIL POND IS FILLED TO A DEPTH OF 3 FEET.
6. CONTRACTOR SHALL USE BLACK 60 MIL HDPE SMOOTH GEOMEMBRANE AS THE PRIMARY LINER AND BLACK 40 MIL HDPE SMOOTH GEOMEMBRANE AS THE SECONDARY LINER.
7. A 3' DIAMETER MINIMUM PIECE OF 40MIL LINER SHALL BE EXTRUDED WELDED WHERE THE PIE SHAPED CORNER SECTIONS MEET FOR SEAM REINFORCEMENT.
8. INSTALL A FULL DOUBLE WIDTH SECTION OF BLACK OR WHITE 60 MIL TEXTURED HDPE GEOMEMBRANE RUB SHEET. EXTRUDE WELD TO LINER. WELDS SHALL BE 2" LONG AND SPACED EVERY 12" ALONG BOTH SIDES OF THE SHEET. DO NOT WELD END EDGES. SECTION SHALL EXTEND FROM SUMP AND INSTALLED INTO LINER ANCHOR TRENCH AS SHOWN.
9. LINER SHALL BE PROTECTED WITH A 8 OZ. NONWOVEN GEOTEXTILE IF ROCK OR OTHER ANGULAR MATERIALS WITH A DIMENSION GREATER THAN 3/4 INCH ARE PRESENT.
10. SUMPS SHALL BE BACKFILLED WITH NON-ANGULAR MAXIMUM 3/8 INCH SIZED PEA GRAVEL.
11. ALL SEAMS MUST BE WELDED WITH A 6" MINIMUM OVERLAP.
12. CONTRACTOR SHALL NON-DESTRUCTIVELY TEST ALL SEAMS THEIR FULL LENGTH USING AN AIR PRESSURE OR VACUUM TEST, THE PURPOSE OF THIS TEST IS TO CHECK THE CONTINUITY OF THE SEAM.
13. FOR AIR PRESSURE TESTING (ASTM 5820), THE FOLLOWING PROCEDURES ARE APPLICABLE TO THE SEAMS WELD WITH DOUBLE SEAM FUSION WELDER.
    a. THE EQUIPMENT USED SHALL CONSIST OF AN AIR TANK OR PUMP CAPABLE OF PRODUCING A MINIMUM 35 PSI AND A SHARP NEEDLE WITH A PRESSURE GAUGE ATTACHED TO INSERT INTO THE AIR CHAMBER.
    b. SEAL BOTH ENDS OF THE SEAM BY HEATING AND SQUEEZING THEM TOGETHER. INSERT THE NEEDLE WITH THE GAUGE INTO THE AIR CHANNEL. PRESSURIZE THE AIR CHANNEL TO A MINIMUM OF 35 PSI. NOTE TIME STARTS AND WAIT A MINIMUM OF 5 MINUTES TO CHECK. IF PRESSURE AFTER 5 MINUTES HAD DROPPED LESS THAN 2 PSI THE TEST IS SUCCESSFUL (THICKNESS OF MATERIAL MAY CAUSE VARIANCE).
    c. CUT OPPOSITE SEAM END AND LISTEN FOR PRESSURE RELEASE TO VERIFY FULL SEAM HAS BEEN TESTED.
    d. IF THE TEST FAILS, FOLLOW THESE PROCEDURES.
        I. WHILE CHANNEL IS UNDER PRESSURE WALK THE LENGTH OF THE SEAM LISTENING FOR A LEAK.
        II. WHILE CHANNEL IS UNDER PRESSURE APPLY A SOAPY SOLUTION TO THE SEAM EDGE AND LOOK FOR BUBBLES FORMED BY AIR ESCAPING.
        iii. RE-TEST THE SEAM IN SMALLER INCREMENTS UNTIL THE LEAK IS FOUND.
    e. ONCE LEAK IS FOUND USING ONE OF THE PROCEDURES ABOVE, CUT OUT THE AREA AND RETEST THE PORTIONS OF THE PORTIONS OF THE SEAMS BETWEEN THE LEAK AREAS PER 6A AND 6B ABOVE. CONTINUE THIS PROCEDURE UNTIL ALL SECTIONS OF THE SEAM PASS THE PRESSURE TEST.
    f. REPAIR THE LEAK WITH A PATCH AND VACUUM TEST.
14. ALL NON-DESTRUCTIVE TESTS WILL BE NOTED IN THE NON-DESTRUCTIVE LOGS.
15. LINER GAS VENTS SHALL BE SPACED ALONG THE INSIDE SLOPE AT APPROXIMATELY 100 FEET ON CENTER OR MINIMUM 2 VENTS PER SIDE.
16. WHEN ANY PIPING EQUIPMENT, INLET, OR OUTLET IS IN DIRECT CONTACT WITH THE LINER, AN APRON CONSISTING OF 60 MIL HDPE MATERIAL SHALL BE INSTALLED BENEATH THE EQUIPMENT OR STRUCTURE TO PROTECT THE PRIMARY LINER.
17. LAY BOTH LINERS IN ANCHOR TRENCH. BACKFILL ANCHOR TRENCH IN 2 LIFTS AND COMPACT.

STAGE STORAGE		
POND ELEVATION (FT)	WILLAMETTE POND 1 VOLUME (BBL)	WILLAMETTE POND 2 VOLUME (BBL)
3294.60	0	0
3295.60	186	186
3296.60	806	806
3297.60	5,167	5,167
3298.60	23,866	23,866
3299.60	53,668	53,668
3300.60	84,358	84,358
3301.60	115,947	115,947
3302.60	148,443	148,443
3303.60	181,855	181,855
3304.60	216,194	216,194
3305.60	251,467	251,467
3306.60	287,685	287,685
3307.60	324,857	324,857
3308.60	362,992	362,992
3309.60	402,100	402,100
3310.60	442,189	442,189
3311.60	483,270	483,270
3312.60	525,350	525,350
3313.60	568,447	568,447
3314.60	612,572	612,572
3315.60	657,728	657,728

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PROFESSIONAL ENGINEER
03/04/2022

SUMMARY OF QUANTITIES			
ITEM NUMBER	ITEM	UNIT	QTY
1	CLEARING AND GRUBBING	ACRES	45
2	STRIP AND STOCKPILE TOPSOIL (6" AVERAGE)	CUBIC YARD	20,958
3	ESTIMATED CUT (BELOW EXISTING GRADE)*	CUBIC YARD	145,574
4	ESTIMATED FILL (ABOVE EXISTING GRADE)**	CUBIC YARD	124,391
5	8' GAME FENCE	LINEAR FEET	4,381
6	20' DOUBLE GATE	LINEAR FEET	2
7	RUB SHEET 60 MIL HDPE GEOMEMBRANE (TEXTURED)***	SQUARE FEET	40,760
8	PRIMARY 60 MIL HDPE GEOMEMBRANE (SMOOTH)***	SQUARE FEET	542,447
9	200 MIL GEONET***	SQUARE FEET	542,447
10	SECONDARY 40 MIL HDPE GEOMEMBRANE (SMOOTH)***	SQUARE FEET	542,447
11	8 OZ. GEOTEXTILE***	SQUARE FEET	542,447
12	6" HDPE DR11 PIPE WITH PERFORATIONS IN SUMP	LINEAR FEET	180
13	GAGE LADDER	EACH	2
14	DRAIN ROCK	CUBIC YARD	2
15	ANCHOR TRENCH	LINEAR FEET	3,999
16	STORMWATER DIVERSION CHANNEL	LINEAR FEET	1,201
17	CONSTRUCTION WATER	ALLOWANCE	
18	MATERIALS TESTING	ALLOWANCE	
19	EROSION CONTROL BMP'S	ALLOWANCE	

IMPORTANT QUANTITY NOTES:

* CUT QUANTITY (ITEM NUMBER 3) INCLUDES TOPSOIL QUANTITY (ITEM NUMBER 2).

** GEOTECHNICAL INFORMATION WAS NOT AVAILABLE AT THE TIME THESE PLANS WERE PREPARED. 20% FILL FACTOR WAS ASSUMED AND APPLIED TO THE FILL QUANTITY. THE CONTRACTOR SHALL FIELD VERIFY SHRINKAGE AND SWELLING OF EXISTING SOILS. CUT AND FILL QUANTITIES SHOWN ON THIS TABLE PERTAIN TO THE ENTIRE PROJECT AREA. LEVEE, PAD AND ADJACENT DRIVING SURFACE ARE INCLUDED IN THE FILL QUANTITY.

*** THESE ARE COMPLETE-IN-PLACE QUANTITIES. OVERLAP, ANCHOR, WRINKLE, SCRAP AND/OR SPOIL QUANTITIES ARE NOT INCLUDED IN THIS BID ITEM. THE CONTRACTOR SHALL ACCOUNT FOR THESE ADDITIONAL QUANTITIES IN THEIR BID.

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INTREPID Essential Minerals for Success
Intrepid Potash NM LLC
210 Red Cloud Road PO Box 101
Carlsbad, NM 88220

WILLAMETTE WATER TREATMENT AND REUSE FACILITY
S1, T25S, R35E
LEA COUNTY, NEW MEXICO
INTREPID POTASH NM LLC

SUMMARY OF QUANTITIES AND GENERAL NOTES

HORIZONTAL SCALE: NTS	VERTICAL SCALE: NTS
PRINT DATE: 3/4/2022	DESIGNED BY: NC
PROJECT NO. 22-100	CHECKED BY: CSC/EMH
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EXISTING WELL PAD

EXISTING WELL PAD

EXISTING CALICHE ROAD

A C-109 | B C-109 | C C-109 | D C-109

60K BBL AST 1

60K BBL AST 2

3:1 SLOPE

6:1 ACCESS RAMP

TOP OF LEVEE ELEV. = 3615.60'

WILLAMETTE POND 1
INSIDE TOP DIMENSIONS = 580' X 447'
INSIDE TOP TO BOTTOM OF SUMP
DEPTH = 17' TO 21'
VOLUME @ 3' FREEBOARD
500,000 BBL

WILLAMETTE POND 2
INSIDE TOP DIMENSIONS = 580' X 447'
INSIDE TOP TO BOTTOM OF SUMP
DEPTH = 17' TO 21'
VOLUME @ 3' FREEBOARD
500,000 BBL

TOPSOIL STOCKPILE AREA

E C-110 | F C-110

3320 3315 3310 3305 3300 3298 3297 3312 3311 3309

LEGEND

EXISTING PIPELINE	UGPL
SURVEY AREA	
PROPOSED 8' GAME FENCE	
PROPOSED DRIVING SURFACE	
PROPOSED STORMWATER FLOW DIRECTION	
EXISTING GRADE CONTOURS (2.5 FT INTERVAL)	
PROPOSED GRADE CONTOURS (1 FT INTERVAL)	
FG	FINISHED GRADE
SLOPE DIRECTION	

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03/04/2022

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SCALE 1"=150'
0 75' 150' 300'

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WILLAMETTE WATER TREATMENT AND REUSE FACILITY
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LEA COUNTY, NEW MEXICO
INTREPID POTASH NM LLC

GRADING PLAN

HORIZONTAL SCALE:1"=150'	VERTICAL SCALE: NTS
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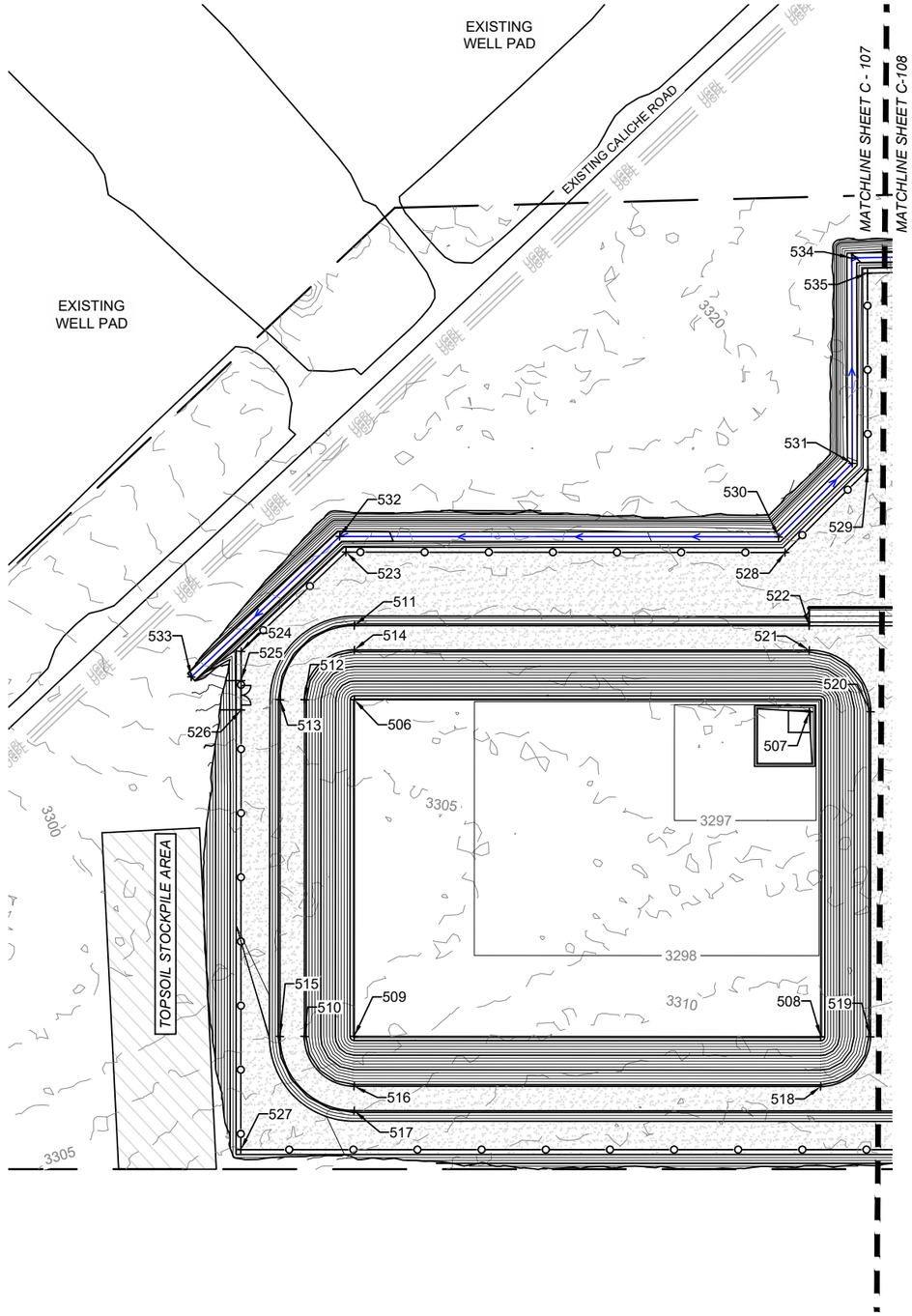

Point Table				
Point #	Northing	Easting	Finished Grade Elevation	Desc
506	425040.52	854151.91	3298.6	FG
507	424714.17	854484.76	3294.6	FG
508	424462.39	854266.70	3298.6	FG
509	424788.13	853916.88	3298.6	FG
510	424822.89	853879.56	3315.6	FG
511	425096.14	854203.70	3315.6	FG
512	425075.28	854114.59	3315.6	FG
513	425092.32	854096.29	3315.6	FG
514	425077.85	854186.67	3315.6	FG
515	424839.93	853861.26	3315.6	FG
516	424750.81	853882.13	3315.6	FG
517	424732.52	853865.09	3315.6	FG
518	424425.06	854231.94	3315.6	FG
519	424427.63	854304.02	3315.6	FG
520	424671.23	854530.87	3315.6	FG
521	424760.27	854527.70	3315.6	FG
522	424778.57	854544.73	3315.6	FG
523	425157.13	854248.64	3312.5	FENCE
524	425155.82	854100.77	3312.5	FENCE
525	425133.93	854080.38	3312.4	FENCE
526	425111.98	854059.94	3312.3	FENCE
527	424782.26	853752.90	3312.0	FENCE
528	424850.47	854577.77	3312.5	FENCE
529	424854.72	854697.65	3312.5	FENCE
530	424866.69	854583.83	3311.5	INV
531	424870.47	854690.44	3311.0	FL
532	425173.18	854254.87	3309.8	FL
533	425171.33	854045.54	3309.0	FL
534	425024.77	854833.36	3310.0	FL
535	425002.41	854834.44	3312.5	FENCE

LEGEND

EXISTING PIPELINE	UGPL
SURVEY AREA	
PROPOSED 8' GAME FENCE	
PROPOSED DRIVING SURFACE	
PROPOSED STORMWATER FLOW DIRECTION	
EXISTING GRADE CONTOURS (2.5 FT INTERVAL)	
PROPOSED GRADE CONTOURS (1 FT INTERVAL)	
FG	FINISHED GRADE
FL	FLOWLINE
FENCE	FENCE CORNER
INV	INVERT ELEVATION

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WILLAMETTE WATER TREATMENT AND REUSE FACILITY
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CONTROL PLAN I

HORIZONTAL SCALE:1"=150'	VERTICAL SCALE: NTS
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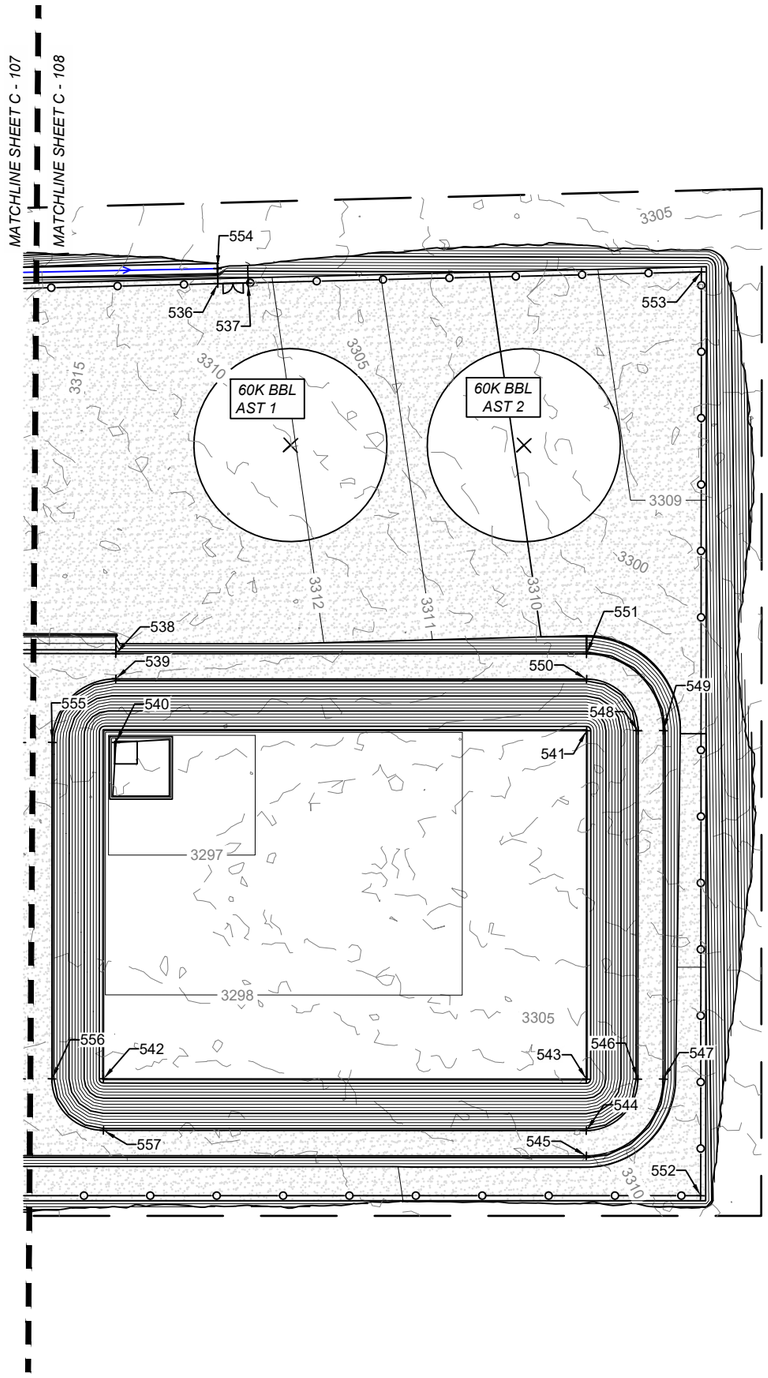

Point Table				
Point #	Northing	Easting	Finished Grade Elevation	Desc
536	424871.55	854982.19	3312.5	FENCE
537	424851.66	855004.65	3312.2	FENCE
538	424672.25	854658.90	3315.6	FG
539	424653.96	854641.86	3315.6	FG
540	424607.85	854598.93	3294.6	FG
541	424299.06	854948.13	3298.6	FG
542	424372.43	854363.30	3298.6	FG
543	424046.67	854713.10	3298.6	FG
544	424009.35	854678.35	3315.6	FG
545	423991.05	854661.31	3315.6	FG
546	424011.92	854750.43	3315.6	FG
547	423994.88	854768.72	3315.6	FG
548	424264.30	854985.46	3315.6	FG
549	424247.26	855003.75	3315.6	FG
550	424336.38	854982.89	3315.6	FG
551	424354.67	854999.93	3315.6	FG
552	423885.12	854717.35	3312.0	FENCE
553	424554.09	855340.64	3308.1	FENCE
554	424882.69	854992.09	3309.0	FENCE
555	424650.79	854552.82	3315.6	FG
556	424407.18	854325.97	3315.6	FG
557	424335.11	854328.54	3315.6	FG

LEGEND

EXISTING PIPELINE	UGPL
SURVEY AREA	
PROPOSED 8' GAME FENCE	
PROPOSED DRIVING SURFACE	
PROPOSED STORMWATER FLOW	
EXISTING GRADE CONTOURS (2.5 FT INTERVAL)	
PROPOSED GRADE CONTOURS (1 FT INTERVAL)	
FG	FINISHED GRADE
FL	FLOWLINE
FENCE	FENCE CORNER

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CONTROL PLAN II

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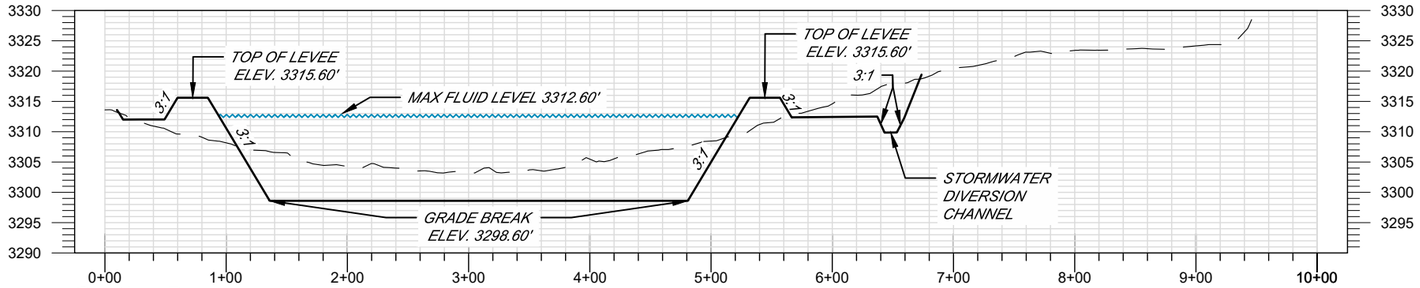
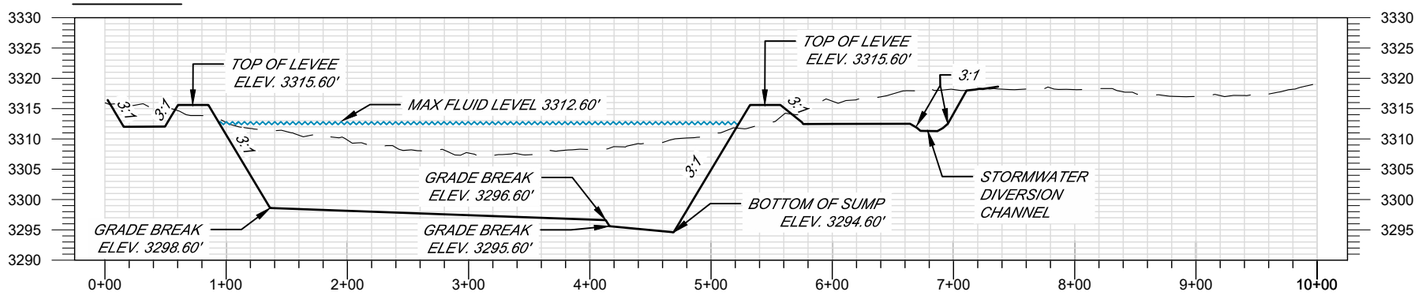
Section A



Section B



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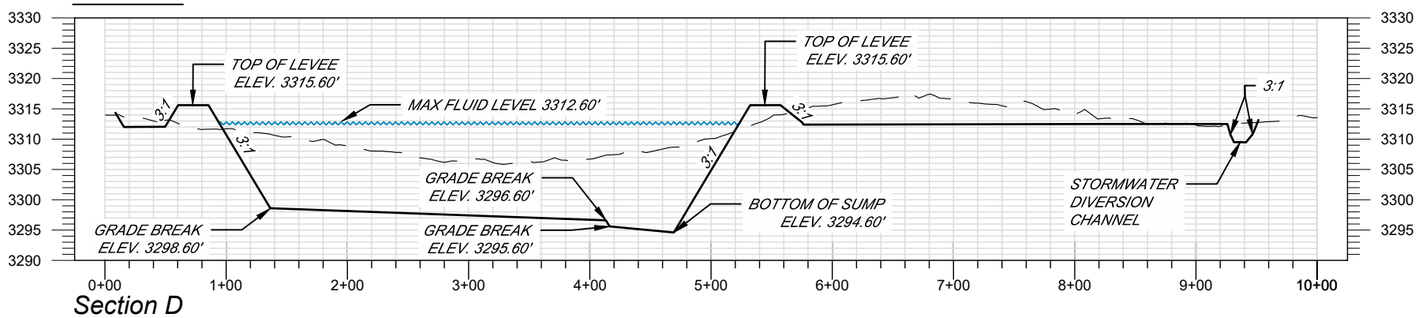

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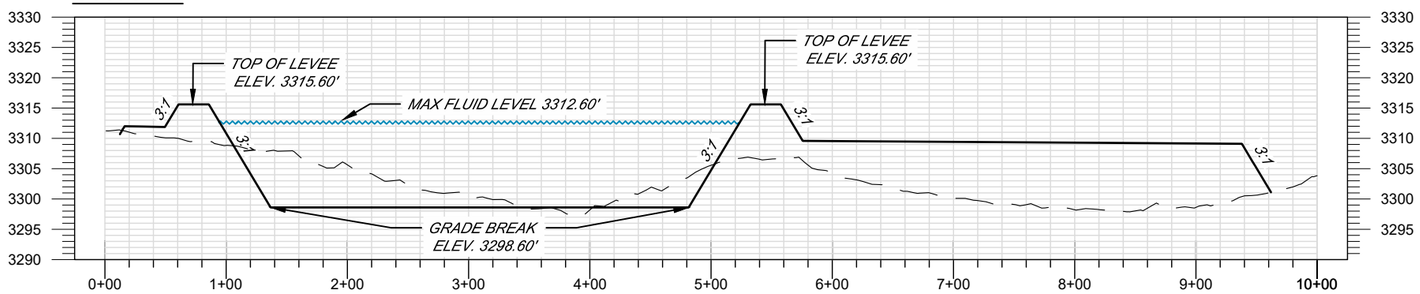

LEGEND

EXISTING GRADE
FINISHED GRADE

NOTES

FOR LEVEE DETAILS SEE PLAN SHEET C - 113

CLAUDIUS SANCHEZ CZYZEWSKA
NEW MEXICO
22897
PROFESSIONAL ENGINEER

03/04/2022

VERTICAL SCALE 1"=25'
0 12.5' 25' 50'

HORIZONTAL SCALE 1"=125'
0 75' 125' 250'

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IFC	ISSUED FOR CONSTRUCTION	03/04/22	CSC
R-X	DESCRIPTION	DATE	BY
REVISIONS (OR CHANGE NOTICES)			

Intrepid Potash NM LLC
210 Red Cloud Road PO Box 101
Carlsbad, NM 88220

WILLAMETTE WATER TREATMENT AND REUSE FACILITY
S1, T25S, R35E
LEA COUNTY, NEW MEXICO
INTREPID POTASH NM LLC

CROSS SECTIONS I

HORIZONTAL SCALE:1"=125'	VERTICAL SCALE:1"=25'
PRINT DATE: 3/4/2022	DESIGNED BY: NC
PROJECT NO. 22-100	CHECKED BY: CSC/EMH
SUBSET: CIVIL	SHEET: C - 110

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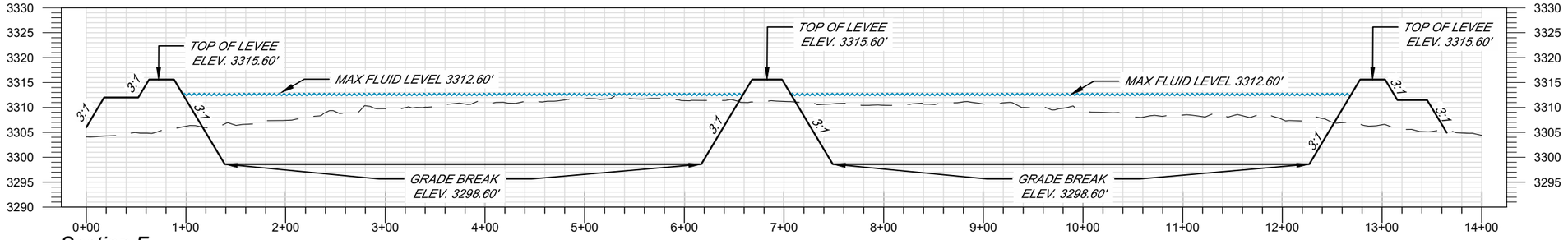
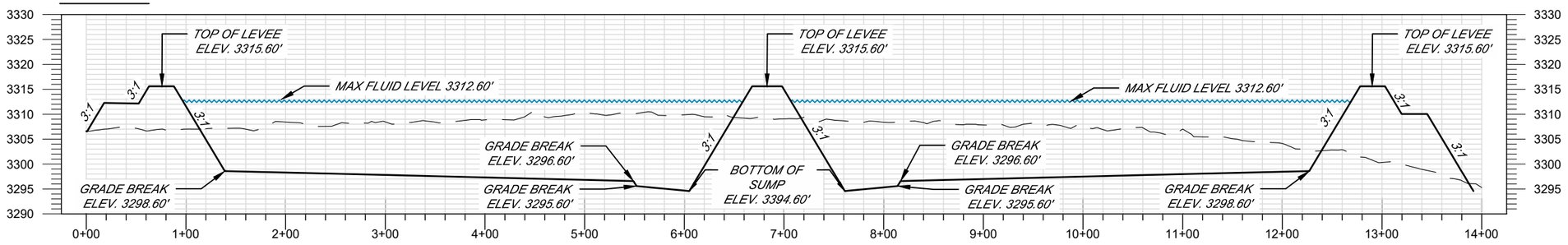
Section E



Section F



LEGEND

EXISTING GRADE
FINISHED GRADE

NOTES
FOR LEVEE DETAILS SEE PLAN SHEET C - 113

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NEW MEXICO
22897
PROFESSIONAL ENGINEER
03/04/2022

VERTICAL SCALE 1"=25'
12.5' 25' 50'

HORIZONTAL SCALE 1"=125'
75' 125' 250'

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WILLAMETTE WATER TREATMENT AND REUSE FACILITY
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LEA COUNTY, NEW MEXICO
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CROSS SECTIONS II

HORIZONTAL SCALE:1"=125'	VERTICAL SCALE:1"=50'
PRINT DATE: 3/4/2022	DESIGNED BY: NC
PROJECT NO. 22-100	CHECKED BY: CSC/EMH
SUBSET: CIVIL	SHEET: C - 111

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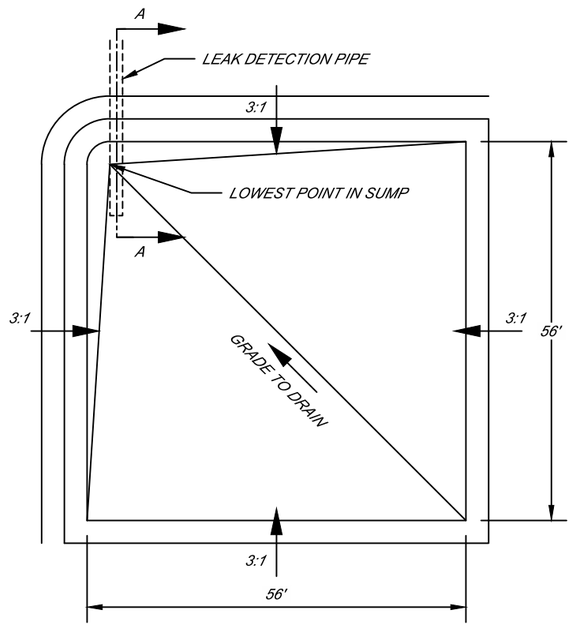
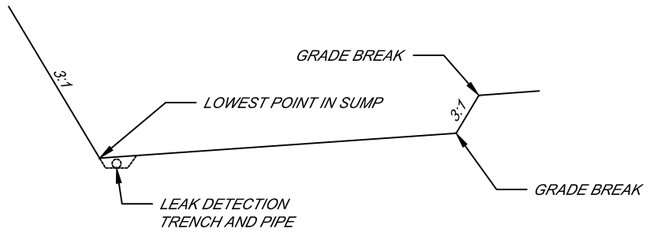
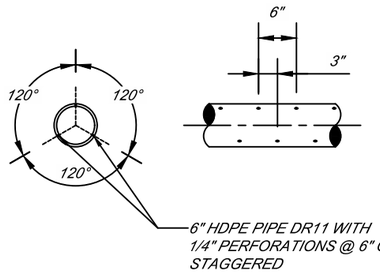


TOP VIEW

1 SUMP WITH LEAK DETECTION SYSTEM
NOT TO SCALE



SIDE VIEW



4 DETAIL 1
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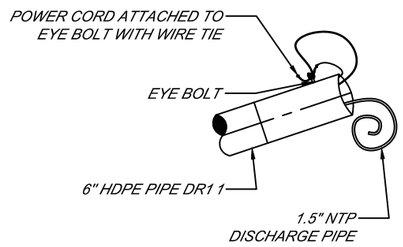

5 DETAIL 2
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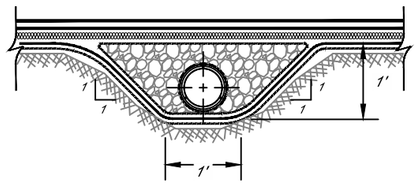

3 SECTION B-B
NOT TO SCALE

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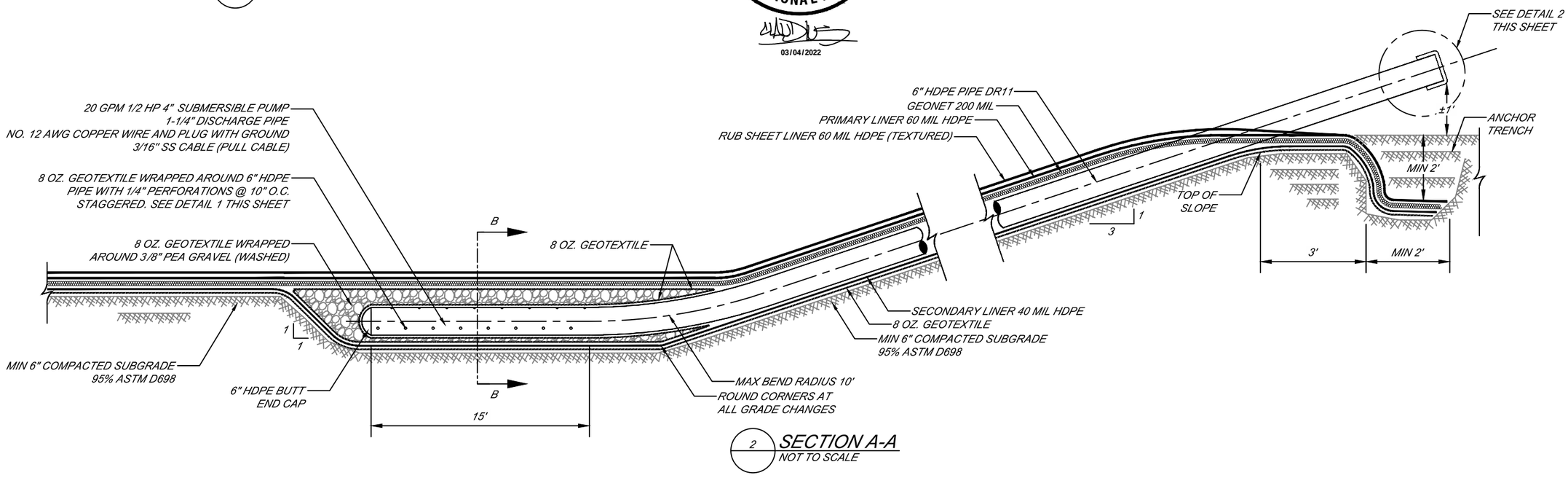
NEW MEXICO
22897
PROFESSIONAL ENGINEER
03/04/2022



2 SECTION A-A
NOT TO SCALE

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WILLAMETTE WATER TREATMENT AND REUSE FACILITY
S1, T25S, R35E
LEA COUNTY, NEW MEXICO
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LEAK DETECTION SYSTEM DETAILS

HORIZONTAL SCALE:NTS	VERTICAL SCALE: NTS
PRINT DATE: 3/4/2022	DESIGNED BY: NC
PROJECT NO. 22-100	CHECKED BY: CSC/EMH
SUBSET: CIVIL	SHEET: C - 111

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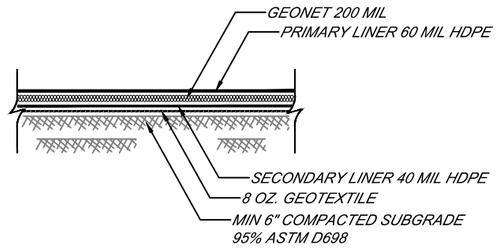
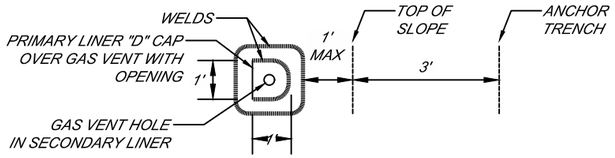
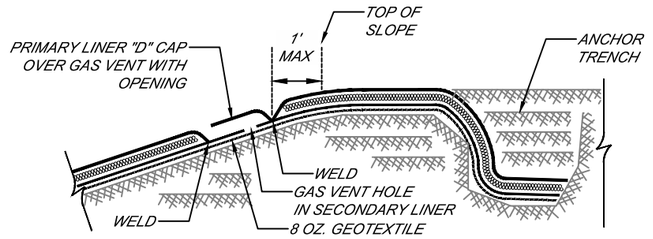


1 TYPICAL POND BOTTOM LINER
NOT TO SCALE

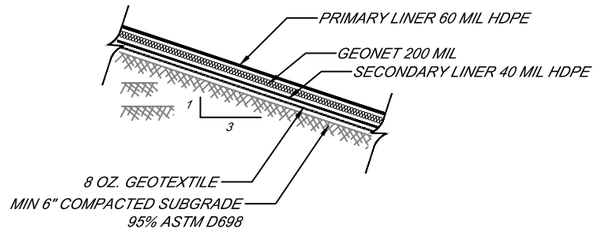


TOP VIEW



SIDE VIEW

NOTE:
GAS VENT SPACING SHALL BE INSTALLED
PER MANUFACTURER'S RECOMMENDATIONS



2 TYPICAL POND SLOPE LINER
NOT TO SCALE

3 TYPICAL GAS VENT
NOT TO SCALE

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22897
PROFESSIONAL ENGINEER
03/04/2022

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210 Red Cloud Road PO Box 101
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WILLAMETTE WATER TREATMENT AND REUSE FACILITY
S1, T25S, R35E
LEA COUNTY, NEW MEXICO
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MISCELLANEOUS DETAILS

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PRINT DATE: 3/4/2022	DESIGNED BY: NC
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SUBSET: CIVIL	SHEET: C - 112

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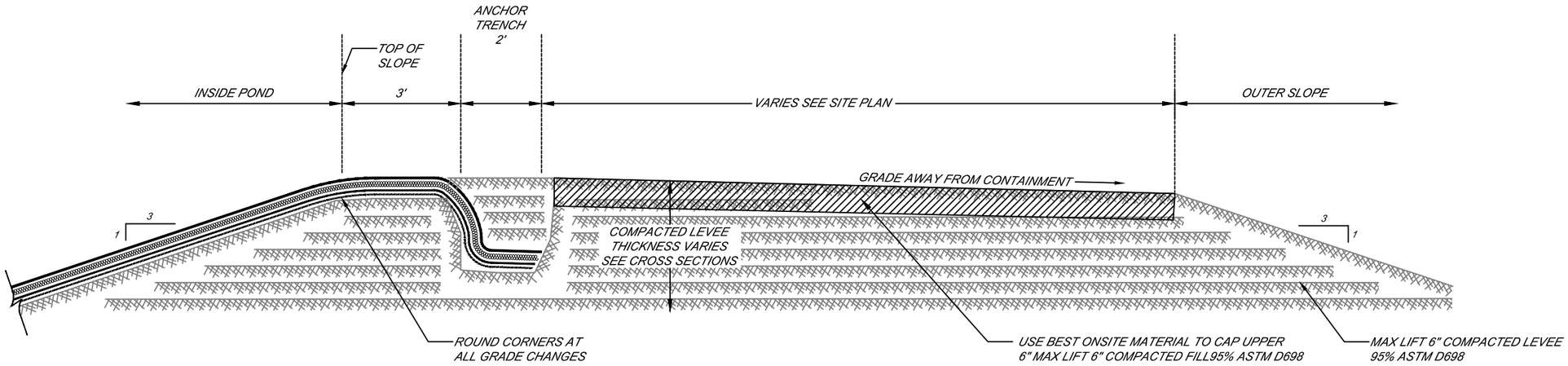

1 TYPICAL LEVEE SECTION
NOT TO SCALE

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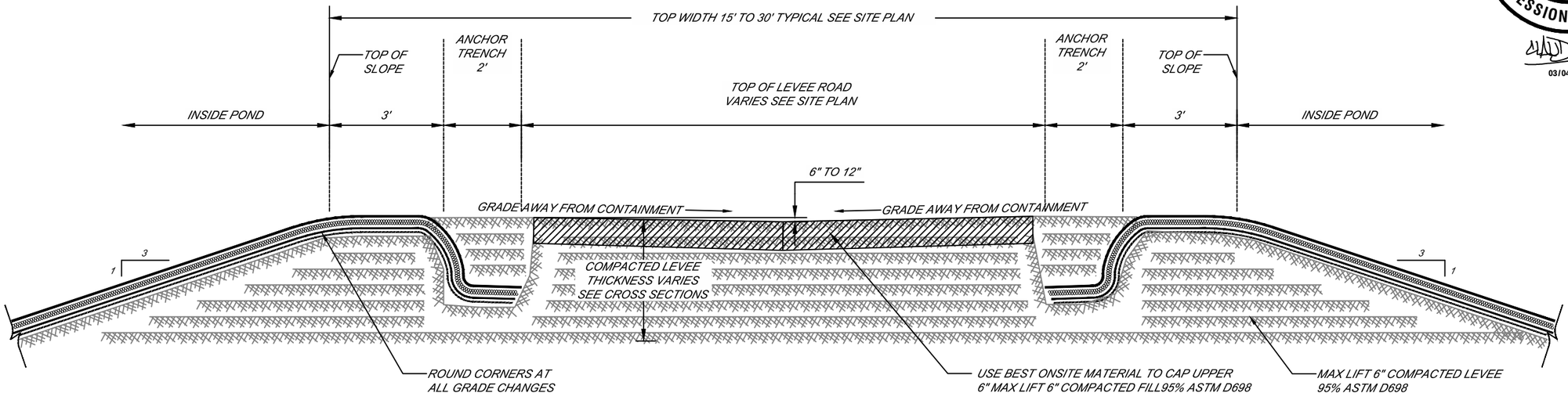
NEW MEXICO
22897
PROFESSIONAL ENGINEER
03/04/2022



2 TYPICAL LEVEE SECTION BETWEEN CONTAINMENTS
NOT TO SCALE

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INTREPID Essential Minerals for Success

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WILLAMETTE WATER TREATMENT AND REUSE FACILITY
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LEVEE DETAILS

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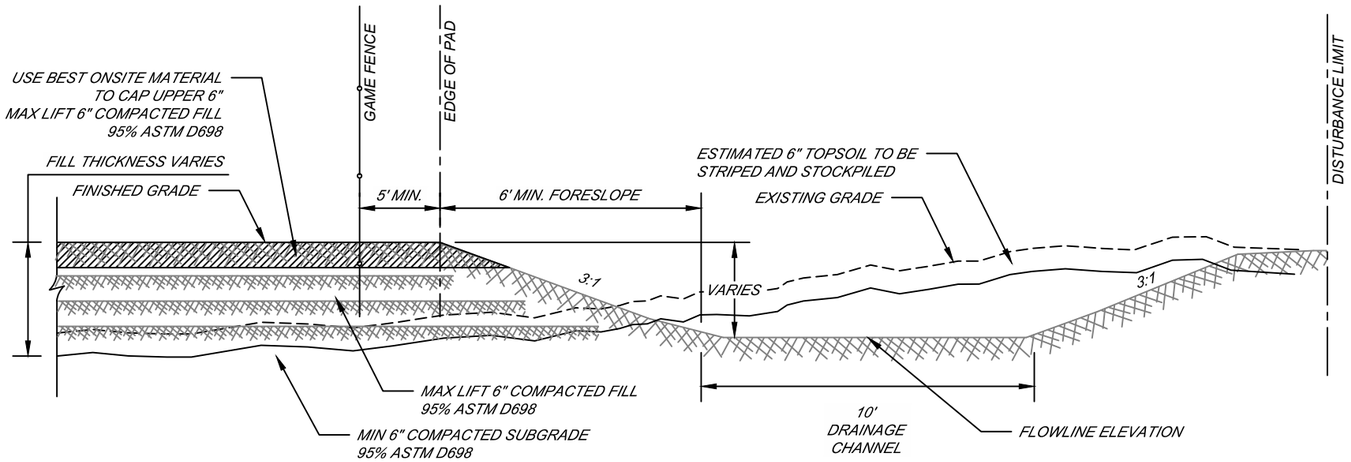

1 TYPICAL PAD AND STORMWATER DIVERSION CHANNEL DETAIL
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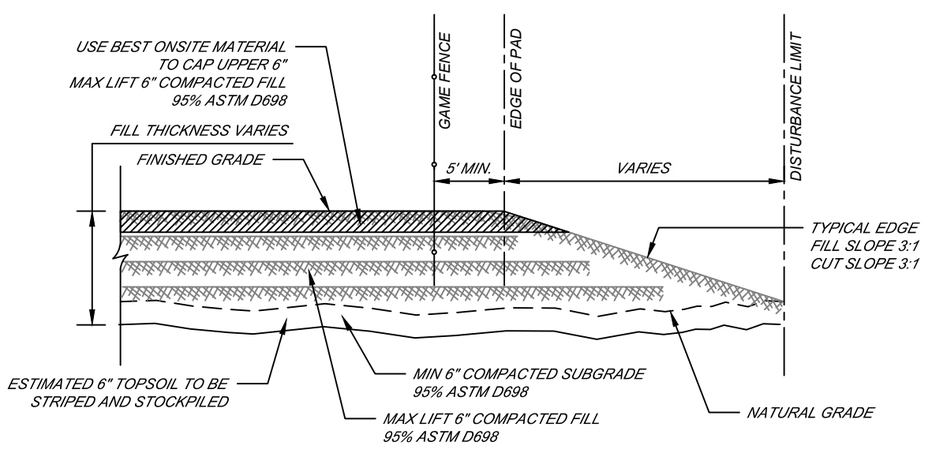

2 TYPICAL PAD EDGE SECTION
NOT TO SCALE

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NEW MEXICO
22897
PROFESSIONAL ENGINEER
03/04/2022

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WILLAMETTE WATER TREATMENT AND REUSE FACILITY
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PAD AND ROAD DETAILS

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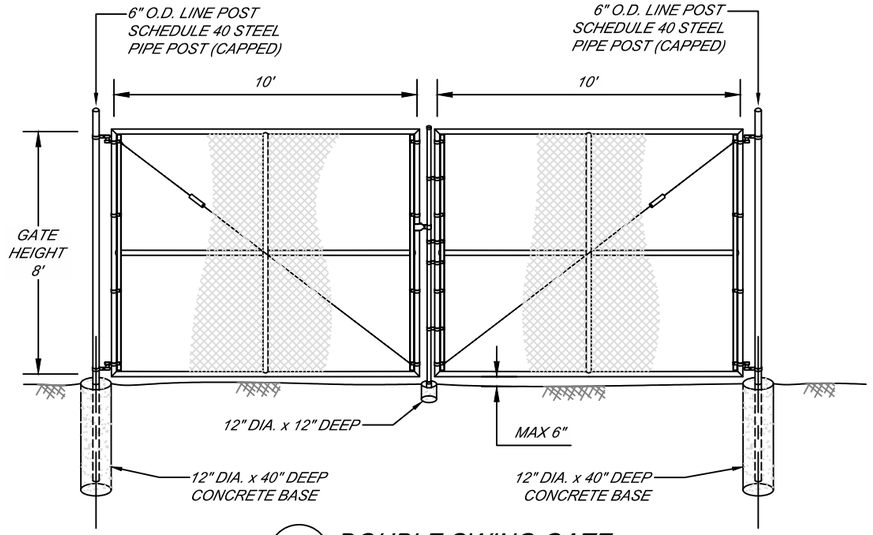
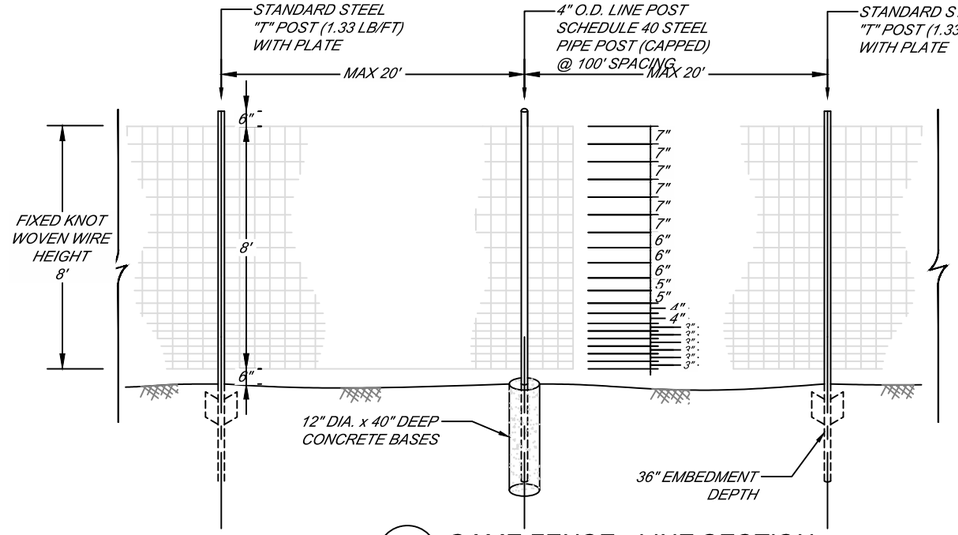
PROJECT NO. 22-100	CHECKED BY: CSC/EMH
SUBSET: CIVIL	SHEET: C - 114

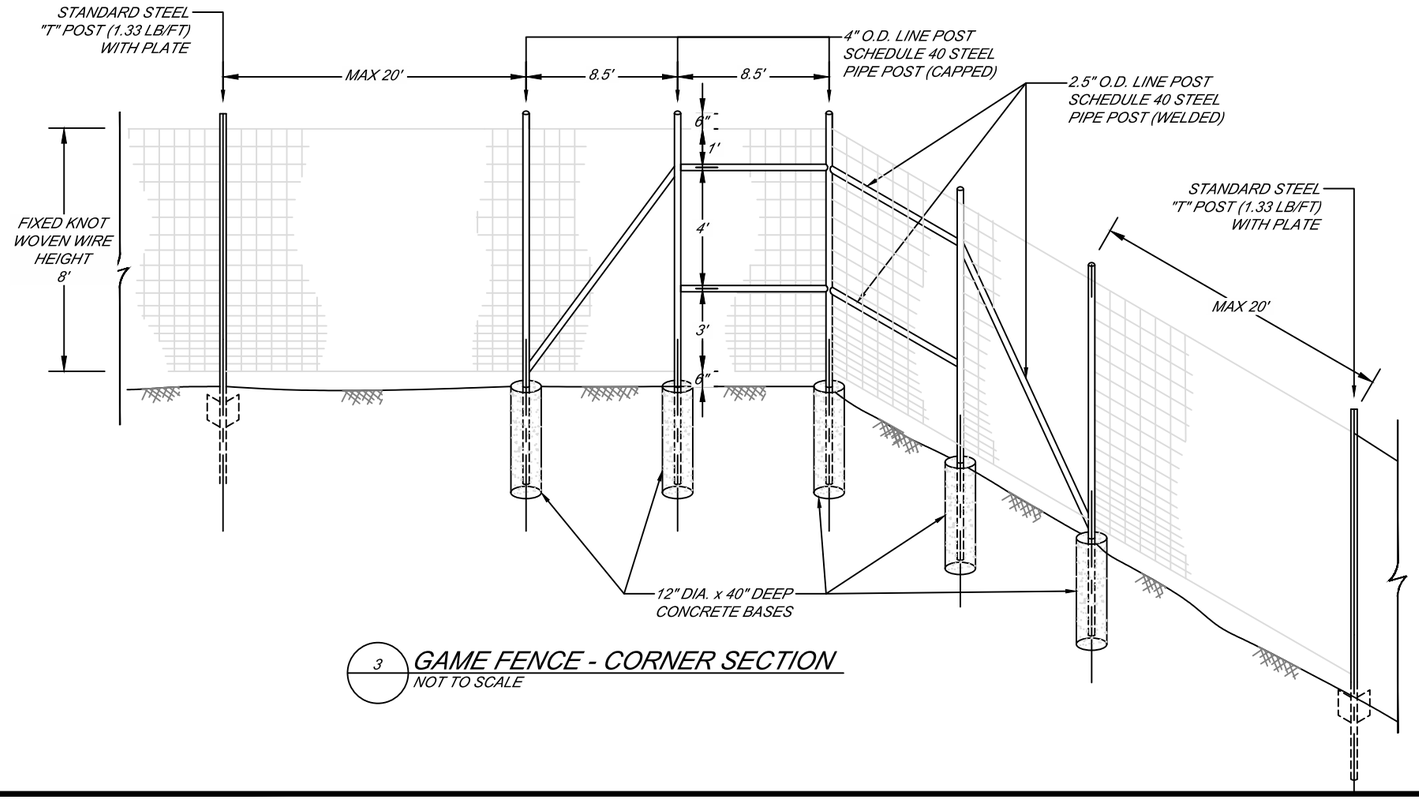
Drawing File: Z:\Shared\Projects\2022 Projects\22-100 RT Hicks Intrepid Willamette\04_CIVIL\Design\Drawings\MAG-22-100-CIV- Details_R0.dwg



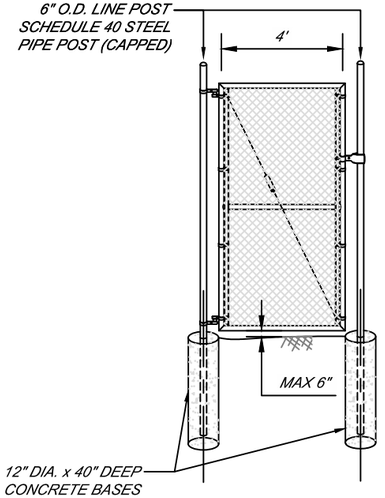
1 **DOUBLE SWING GATE**
NOT TO SCALE



2 **GAME FENCE - LINE SECTION**
NOT TO SCALE



3 **GAME FENCE - CORNER SECTION**
NOT TO SCALE



4 **WALK GATE**
NOT TO SCALE

NOTES:
1. FOR WOVEN WIRE, TOP AND BOTTOM STRANDS SHALL BE 12½ GAUGE OR HEAVIER; INTERMEDIATE STRANDS SHALL BE 14½ GAUGE OR HEAVIER.
2. ALL WIRE SHALL HAVE CLASS III GALVANIZATION.
3. STANDARD WOVEN WIRE FENCES MAY HAVE LINE POSTS SPACED UP TO 15 FEET APART. HI-TENSILE WOVEN WIRE FENCE MAY HAVE LINE POSTS SPACED UP TO 20 FEET APART. CLOSER SPACING IS REQUIRED WHERE NEEDED FOR INCLINES OR CHANGES IN TOPOGRAPHY.
4. CONCRETE FOOTINGS SHALL HAVE TOPS CROWNED.
5. TO PREVENT WIRE FROM SLIPPING ON STEEL POST, DOUBLE WRAP ALL WIRE AROUND STEEL POST OR WELD CHAIN LINK LOOPS.

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FENCE DETAILS

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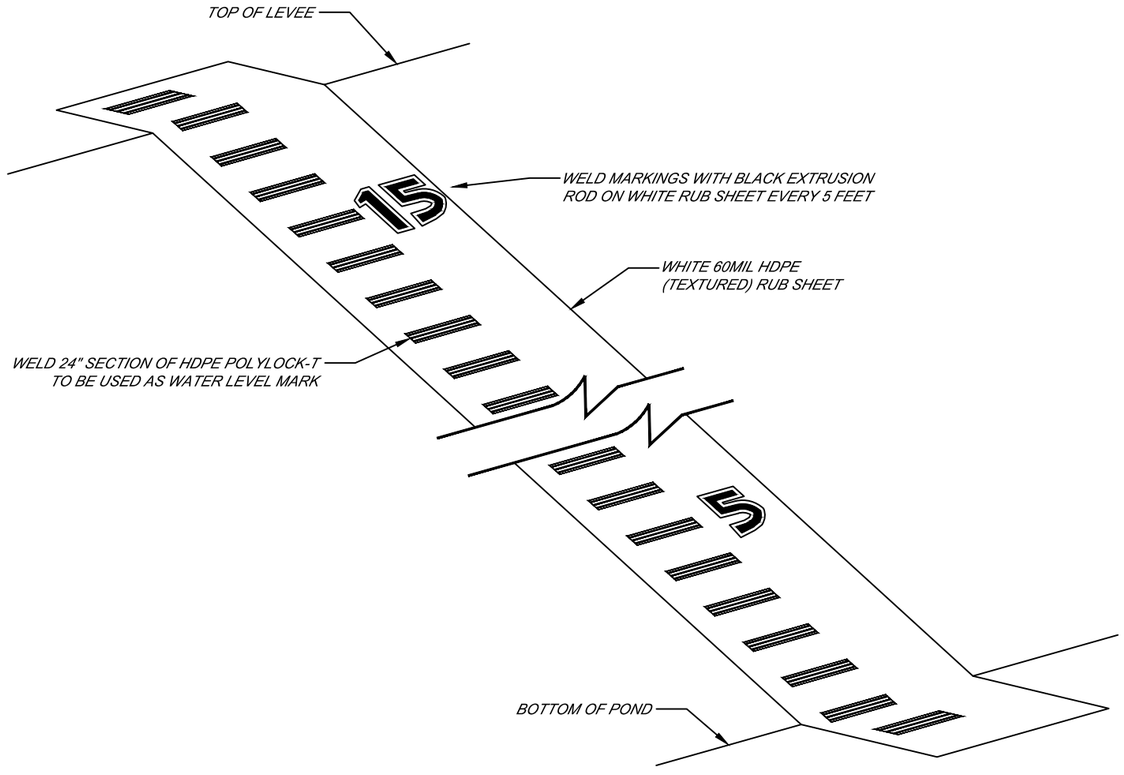
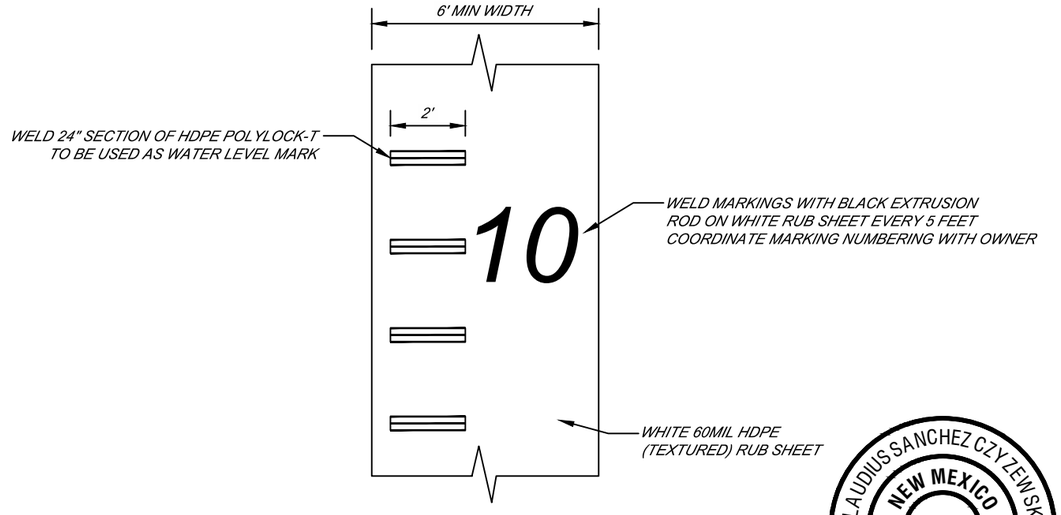


1 GAGE/LADDER DETAIL ISOMETRIC VIEW
NOT TO SCALE



2 GAGE/LADDER DETAIL PLAN VIEW
NOT TO SCALE

CLAUDIUS SANCHEZ CZYZEWSKA
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22897
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03/04/2022

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GAGE/LADDER DETAILS

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EFFECTIVE WIDE-AREA BIRD CONTROL!

Mega Blaster PRO
sonic bird repeller
covers 30 acres!

Mega Blaster PRO uses intermittent distress calls to create a "danger zone" that frightens infesting birds away for good.

PREDATOR cries help scare all the birds.

- NEMA Rated Case
- Crystal-Clear Digital Sounds

- *Laughing Gull*
- *Ring-Billed Gull*
- *Herring Gull*
- *California Gull*
- *Black-Headed Gull*
- *Glaucous-Winged Gull*
- *Double Crested Cormorant*
- *Marsh Hawk*

Perfect for Landfills, Airfields, Fish Farms, Farm Fields or any multi-acre facility.

Our most powerful system features two high-output amplifiers that drive our specially-designed 20 speaker tower. The intense sound output covers up to 30 acres (12 hectares).

It features solid-state electronics mounted inside a NEMA-type control box, suitable for most any application.

The generating unit mounts easily to a post or pole using the included hardware. The unit comes pre-recorded in four different configurations for the most common bird infestations.

Choose any or all of the 8 sounds, including predators to give the birds even more of a sense of danger. Customize by choosing volume and silent time between sounds.

CONFIGURATIONS AVAILABLE:

- Agricultural
  # MEGA-AG
- Crow / Raven
  # MEGA-CROW
- Woodpecker
  # MEGA-WP
- Marine / Gull
  # MEGA-MAR

Mega Blaster PRO

Complete system includes the generating unit with two built-in high-output amplifiers, 20-speaker tower with audio cables, 40 watt solar panel, battery clips and all mounting hardware.

BIRD-X

The Bird Control 'X'-Perts

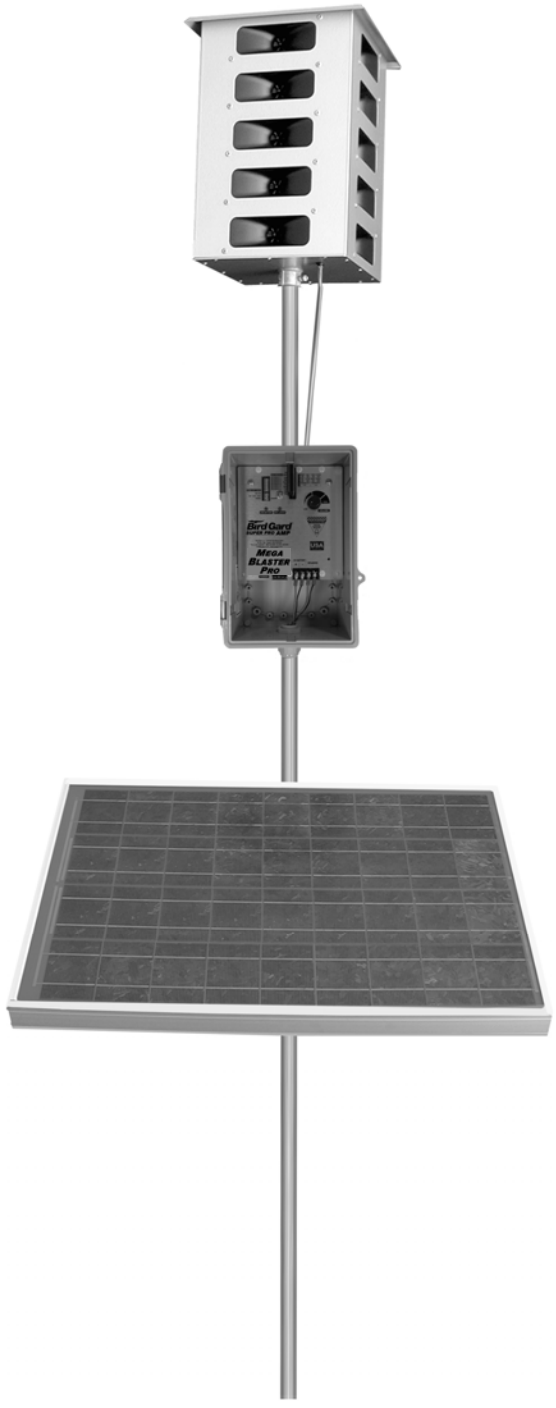
NOTE: This unit is capable of sound output up to 125 decibels. **HEARING PROTECTION IS RECOMMENDED.**

HEARING PROTECTION RECOMMENDED

MEGA BLASTER PRO

BIRD-X

User's Manual



Overview

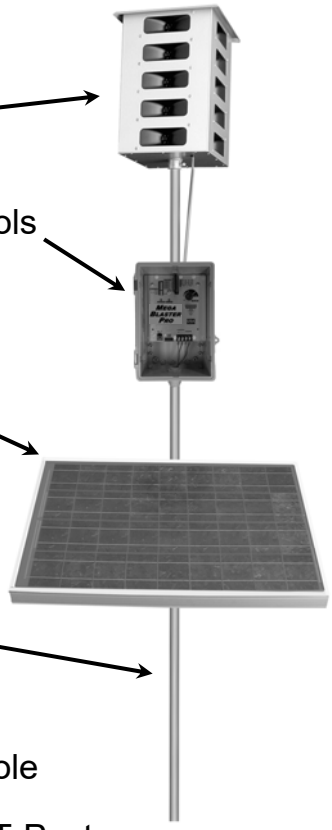
The Bird-X Mega Blaster Pro utilizes the innate power of the natural survival instincts of birds to effectively repel them. Digital recordings of distressed and alarmed birds, along with the sounds made by their natural predators are broadcast through high fidelity weather-resistant speakers over the top of areas. This action triggers a primal fear and flee response. Pest birds soon relocate to where they can feed without feeling threatened.

Your Bird-X Mega Blaster Pro system consists of:

20-Speaker Tower broadcasts the bird sounds

Control Unit produces the bird sounds and contains all operational controls

Solar Panel recharges the 12-volt deep cycle battery



Items needed but <u>not</u> included:

(1) **Mounting Pole** or **Mast** tall enough to raise the 20-Speaker Tower at least 5 feet above the top of the areas, trees or other obstructions

(1) **12-volt Deep Cycle Battery** (RV/Marine) Group 27 or larger wet cell

(1) **T-Post** or similar (Optional) may be needed to support the mounting pole

(1) **Bailing Wire or zip-tie** (Optional) to secure the Mounting Pole to the T-Post

CAUTION: THE MEGA BLASTER PRO IS CAPABLE OF PRODUCING SOUNDS UP TO 125 DECIBELS. PROPER HEARING PROTECTION MUST BE WORN ANYTIME THE UNIT IS TURNED ON.

Bird Control Management Guidelines

An active bird control management program is a key to successfully repelling pest birds. Bird feeding patterns may take several days or weeks to break. Follow all suggestions for maximum effectiveness. Read all instructions prior to installation.

For best results:

- **It is extremely important to fully protect your entire area from birds.** Any areas not fully protected will allow birds to begin feeding at the fringes of the sound coverage. They will soon become bolder and learn the sounds are nothing to fear. This will cause the effectiveness to diminish. Complete Bird-X product coverage forces birds to leave the area entirely.
- Install the Mega Blaster Pro unit at least two weeks before birds are attracted to your area. It is much easier to keep birds away before they have found a food source than it is to repel them once they have developed a feeding pattern.
- Most birds begin feeding from the perimeter of an area. Place Mega Blaster Pro units so the sound protection covers past the edges of the area.
- Birds will often use tall trees for roosting and observation. If birds are in bordering trees it is necessary to position the units so the sound protection covers the trees as well.
- Mount the 20-Speaker Tower at least five feet above trees, areas and structures for maximum coverage. The higher the better. Sound will disperse or reflect off structures or foliage. Mount control unit out of direct sun, if possible.
- When first installed, run Mega Blaster Pro units at FULL volume and on SHORT time off periods. This ensures maximum “bird stress” and creates a hostile environment.
- Watch for changes in bird activity and adjust the location of your Mega Blaster Pro unit if needed.
- **Check the battery and unit settings often to insure continuous bird control. Be certain that the system is not turned down or has a dead battery. Field hands or harvesters may turn down the volume.**
- Changing settings and switches often helps to prevent bird habituation. Periodically change the switch settings of the eight sounds (turning them ON or OFF). NEVER turn OFF the distress calls of the target birds you are trying to repel and always keep at least one predator bird sound turned ON.
- If different bird species enter the protected area and begin causing damage contact us immediately for an updated Sound Recording Card designed to repel the new invading birds.
- Remember that the Mega Blaster Pro system is a management tool, and should be used as part of your overall bird control strategy, sometimes in conjunction with other bird control techniques and devices.

Be aware that under extreme drought or other adverse conditions, birds will disregard all deterrents and risks in order to survive

R.K. FROBEL & ASSOCIATES
Consulting Engineers

Technical Memorandum: 40-mil HDPE as Alternative Secondary Liner System for In Ground Recycling Containment Facilities

NMAC 19.15.34.12 A

I have investigated the suitability of application for 40 mil HDPE geomembrane as an equivalent secondary liner to 30 mil scrim reinforced LLDPE (LLDPEr) in the application for In Ground Recycling Containment facilities. *In summary, it is my professional opinion that the specified 40 mil HDPE geomembrane will provide a secondary liner system that is equal to or better than 30 mil scrim reinforced LLDPEr and will provide the requisite protection of fresh water, public health and the environment for many years when engineering design provides requisite site/soil/slope preparation and when used in concert with requisite primary liners and drainage layers.*

It is understood that the lining system under discussion is composed of a 60 mil HDPE Primary liner, geonet drainage layer and a 40 mil HDPE Secondary liner. *In consideration of the secondary lining system application, size of impoundment and depth, design details as well as the chemical nature of typical processed water, it is my professional opinion that the 40 mil HDPE geomembrane will provide the requisite barrier against processed water loss and will function effectively as a secondary liner.*

The following are discussion points that hopefully will exhibit the equivalency of a 40 mil HDPE secondary liner to that of a 30 mil LLDPEr.

The nature and formulation of the 40 mil HDPE resin is the same as the Primary 60 mil HDPE. The major difference is that the 40 mil HDPE is lower in thickness (more flexible and less puncture resistant). However, in covered conditions, HDPE will resist aging and degradation and remain intact for many decades. In fact, a secondary liner of 40 mil HDPE will outlast an exposed 60 mil HDPE liner. According to the Geosynthetic Research Institute (GRI) study on lifetime prediction (GRI Paper No. 6), the half life of HDPE (GRI GM 13) exposed is > 36 years and the half-life of HDPE covered or buried is greater than 100 years. It is understood that in order to ensure compliance of materials, the primary 60 mil HDPE to be used must meet or exceed GRI GM 13 Standards. Likewise, the secondary liner that is not exposed to the same environmental and chemical conditions must meet or exceed GRI GM 13 for non-reinforced HDPE. Adhering to the minimum requirements of the GRI Specifications, 40 mil HDPE when used as a secondary liner will be equally as protective as the primary 60 mil HDPE liner (reference: www.geosynthetic-institute.org/grispecs) and equally as protective as a 30 mil scrim reinforced LLDPEr liner.

Durability of Geomembranes is directly affected by exposure conditions. Buried or covered geomembranes are not affected by the same degradation mechanisms (UV, Ozone, Chemical, Stress, Temperature, etc) as are fully exposed geomembranes. In this regard, the secondary liner material and thickness can be much less robust than the fully exposed primary liner which in this case is 60 mil HDPE. This is also the case for

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landfill lining systems where the secondary geomembrane in a bottom landfill cell may be 40 mil HDPE.

Thermal Fusion Seaming Requirements. Thermal seaming and QC seam test requirements for geomembranes are product specific and usually prescribed by the sheet manufacturer. Dual wedge thermal fusion welding is commonly used on HDPE and QC testing by air channel (ASTM D 5820) is fully acceptable and recognized as an industry standard. In this regard, there should be no exception requirement for seaming and QC testing as both the Primary and Secondary geomembranes are HDPE. This is fully covered in comprehensive specifications for both the Primary and Secondary geomembranes (Reference: www.ASTM.org/Standards).

Potential for Leakage through the Primary and Secondary Liners. Leakage through geomembrane liners is directly a function of the height of liquid head above any hole or imperfection. The geonet drainage media provides immediate drainage to a low point or sump and thus no hydrostatic head or driving gradient is available to push leakage water through a hole in the secondary liner. In this regard, secondary geomembrane materials can be (and usually are) much less in thickness and also polymer type. Hydraulic Conductivity through the 40 mil HDPE liner material is extremely low due to the polymer type, structure and crystallinity and exceeds requirements of EPA SW-846 Method 9090A.

Chemical Attack. Chemical attack to polymeric geomembranes is directly a function of type of chemical, temperature and exposure time. Again, the HDPE Primary provides the chemically resistant liner and is QC tested to reduce potential defects or holes. If there is a small hole, the geonet drain takes any leakage water immediately to the sump for extraction. Thus, exposure time is very limited on a secondary liner in addition to low temperature, little volume and virtually no head pressure. In this regard, a chemically resistant geomembrane material such as 40 mil HDPE can be specified for the secondary and is a fully acceptable alternate to 30 mil scrim reinforced LLDPEr.

Mechanical Properties Characteristics. Geomembranes of different polymer and/or structure (i.e., reinforced vs non-reinforced) cannot be readily compared using such characteristics as tensile stress/strain, tear, puncture and polymer requirements. For a 40 mil HDPE liner material to function as a Secondary liner it should meet or exceed the manufacturers minimum requirements for Density, Tensile Properties, Tear, Puncture as well as other properties such as UV resistance. The sheet material must also meet or exceed GRI GM 13 minimum requirements. *In this regard, a 40 mil HDPE will be equivalent to a 30 mil LLDPEr as a secondary liner for the conditions listed below:*

- *The subgrade or compacted earth foundation will be smooth, free of debris or loose rocks, dry, unyielding and will support the lining system.*
- *The side slopes for the containment shall be equal to or less than 3H:1V.*
- *The physical properties and condition of the subgrade or liner foundation*

(i.e., density, slope, moisture) will be inspected and certified by a Professional Engineer that it meets or exceeds specification requirements.

- *Immediately prior to installation, the installation contractor shall inspect and sign off on the subgrade conditions that they meet or exceed the HDPE manufacturer and installers requirements.*
- *A protective geotextile will be placed on the finished and accepted subgrade between subgrade and the 40 mil HDPE Secondary liner.*
- *A 200 mil geonet will be placed over the 40 mil HDPE Secondary Liner.*
- *A 60 mil HDPE Primary liner will be placed over the 200 mil geonet drainage layer.*

If you have any questions on the above technical memorandum or require further information, give me a call at 720-289-0300 or email geosynthetics@msn.com

Sincerely Yours,

R K Frobel

Ronald K. Frobel, MSCE, PE

References:

NMAC 19.15.34.12 A DESIGN AND CONSTRUCTION SPECIFICATIONS FOR A RECYCLING CONTAINMENT

Geosynthetic Research Institute (GRI) Published Standards and Papers 2017
www.geosynthetic-institute.org

ASTM Geosynthetics Standards 2017
www.ASTM.org/Standards

SOLMAX

Mustang Extreme

December 9, 2019

Attn: Mr. Steven Roeder
Re: 40 mil HDPE Geomembrane – Hydraulic Conductivity

Dear Mr. Roeder:

Hydraulic Conductivity of HDPE geomembranes can be indirectly obtained through ASTM E96 method (Designing with Geosynthetics, page 437, fifth edition – Robert Koerner).

Based on our test results and the method pointed out in the above reference, it can be concluded that Solmax HDPE geomembranes have a typical Hydraulic Conductivity no higher than 10^{-12} cm/s

Should you need further information, please do not hesitate to contact us.

Sincerely,

Mauricio Ossa
Senior Technical Manager
Houston- Texas

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SOLMAX

Solmax Reflective HDPE Specification

HDPE 40 mils Smooth Geomembrane Properties

Tested Property	Test Description	Test Method	Unit	Test Value[2]
Thickness	Min. Average	ASTM D5199	mils	40
	Min.	ASTM D5199	mils	36
Resin Density	-	ASTM D1505	g/cm^3	≥ 0.932
Sheet Density	-	ASTM D1505	g/cm^3	≥ 0.940
Carbon Black Content[4]	-	ASTM D4218	%	2.0-3.0
Carbon Black Dispersion[5]	-	ASTM D5596	Category	1 & 2
OIT – Standard	Average	ASTM D3895	min	100
Tensile Properties[1]	Min. Average	ASTM D-6693		
Strength at Yield			ppi	84
Elongation at Yield			%	13
Strength at Break			ppi	162
Elongation at Break			%	700
Tear Resistance	Min. Average	ASTM D1004	lbf	28
Puncture Resistance	Min. Average	ASTM D4833	lbf	80
Dimensional Stability	-	ASTM D1204	%	±2
Stress Crack Resistance	SP-NCTL	ASTM D5397	hours	500
Oven Aging[6]	% retained after 90 days	ASTM D5721		
HP-OIT	Min. Average	ASTM D5885	%	80
UV Resistance[7]	% retained after 1600 hours	ASTM D7238		
HP-OIT	Min. Average	ASTM D5885	%	50
Color	Topside	-	-	White

DESIGN/CONSTRUCTION PLAN

Design and Construction Plan In Ground Containments

This plan addresses construction of the earthen containments.

Magrym Engineers is providing the design of the containment and their plans are presented in this submission.

Dike Protection and Structural Integrity

The design and operation provide for the confinement of produced water, prevention of releases and prevention of overtopping due to wave action or rainfall. Additionally, the design prevents run-on of surface water as the containment is surrounded by an above-grade levee (a berm) and/or diversion ditch (between the levee and the soil stockpile) to prevent run-on of surface water.

19.15.34.12 A Design and Construction Specifications
(1). The operator shall design and construct a recycling containment to ensure the confinement of produced water, to prevent releases and to prevent overtopping due to wave action or rainfall.
(8). The operator of a recycling containment shall design the containment to prevent run-on of surface water. The containment shall be surrounded by a berm, ditch or other diversion to prevent run-on of surface water

Stockpile Topsoil

Where topsoil is present, prior to constructing containment, the operator will strip and stockpile the topsoil for use as the final cover or fill at the time of closure.

19.15.34.12 B. Prior to constructing containment, the operator shall strip and stockpile the topsoil for use as the final cover or fill at the time of closure

Signage

The operator will place an upright sign no less than 12 inches by 24 inches with lettering not less than two inches in height in a conspicuous place on the fence surrounding the containment. The sign is posted in a manner and location such that a person can easily read the legend. The sign will provide the following information:

- the operator's name,
- the location of the site by quarter-quarter or unit letter, section, township and range, and
- emergency telephone numbers

19.15.34.12 C. Signs.
The operator shall post an upright sign no less than 12 inches by 24 inches with lettering not less than two inches in height in a conspicuous place on the fence surrounding the containment. The operator shall post the sign in a manner and location such that a person can easily read the legend. The sign shall provide the following information: the operator's name, the location of the site by quarter-quarter or unit letter, section, township and range, and emergency telephone numbers

Fencing

The operator will provide for a fence to enclose the recycling containment in a manner that deters unauthorized wildlife and human access. As specified in the transmittal letter and design drawings, the operator will employ a chain-link or game fence rather than a four foot, four-strand wire fence Because feral pigs, javelina and deer are present in the area, a chain link or game fence is required in order to comply with Section 19.15.34.12 D.1 of the Rule. The specification for fencing provided in 19.15.34.12 D.2 contradicts D.1 because pigs will move beneath the lower strand of a 4-strand, 4-foot high barbed wire fence and deer will jump over. Thus, compliance with D.2 results in a violation of D.1. Compliance with D.1 is the critical component of the Rule and operators need not submit a variance request in order to follow Best Management Practices and comply with the Rule.

19.15.34.12 D. Fencing
(1) The operator shall fence or enclose a recycling containment in a manner that deters unauthorized wildlife and human access and shall maintain the fences in good repair. The operator shall ensure that all gates associated with the fence are closed and locked when responsible personnel are not onsite.
(2) Recycling containments shall be fenced with a four-foot fence that has at least four strands of barbed wire evenly spaced in the interval between one foot and four feet above ground level.

As stated in the O&M plan, the operator will ensure that all gates associated with the fence are closed and locked when responsible personnel are not onsite.

Netting and Protection of Wildlife

The perimeter game/chain-link fence will be effective in excluding stock and most terrestrial wildlife. If requested by the surface owner, the game fence can include a fine mesh from the base to 1 foot above the ground to exclude the small reptiles (e.g. dune sagebrush lizard).

19.15.34.12 E Netting.
The operator shall ensure that a recycling containment is screened, netted or otherwise protective of wildlife, including migratory birds. The operator shall on a monthly basis inspect for and, within 30 days of discovery, report the discovery of dead migratory birds or other wildlife to the appropriate wildlife agency and to the division district office in order to facilitate assessment and implementation of measures to prevent incidents from reoccurring.

The recycling containment will be protective of wildlife, including migratory birds through the implementation of an Avian Protection Plan, routine inspections and the perimeter fence.

The avian protection plan includes the use of a Bird-X Mega Blaster Pro[1] as a primary hazing program for avian species. The device will be equipped with sounds suitable for the Permian Basin environment. In addition to this sonic device, staff will routinely inspect the containment for the presence of avian species and, if detected, will use a blank cartridge or shell in a handgun, starter pistol or shotgun as additional hazing. Decoys of birds of prey may be placed on the game fence and other roosts around the open water to provide additional hazing.

The O&M plan calls for the operator to inspect for and, within 30 days of discovery, report the discovery of dead migratory birds or other wildlife to the appropriate wildlife agency and to the division district office in order to facilitate assessment and implementation of measures to prevent incidents from reoccurring.

Earthwork

The containment will have a properly constructed foundation and interior slopes consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear. Geotextile is required under the liner when needed to reduce localized stress-strain or protuberances that otherwise may compromise the liner's integrity.

19.15.34.12 A
(2) A recycling containment shall have a properly constructed foundation and interior slopes consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear. Geotextile is required under the liner when needed to reduce localized stress-strain or protuberances that otherwise may compromise the liner's integrity…

This volume provides the stamped drawings for the containment with the following design/construction specifications:

a) levee has inside grade no steeper than two horizontal feet to one vertical foot (2H: 1V).

b) levee outside grade is no steeper than three horizontal feet to one vertical foot (3H: 1V)
c) top of the levee is wide enough to install an anchor trench and provide adequate room for inspection and maintenance.
d) The containment floor design calls for a slope toward the sump in the corner(s).

19.15.34.12 A
(2) …The operator shall construct the containment in a levee with an inside grade no steeper than two horizontal feet to one vertical foot (2H:1V). The levee shall have an outside grade no steeper than three horizontal feet to one vertical foot (3H:1V). The top of the levee shall be wide enough to install an anchor trench and provide adequate room for inspection and maintenance.

Liner and Drainage Geotextile Installation

The containment has a primary (upper) liner and a secondary (lower) liner with a leak detection system appropriate to the site's conditions.

19.15.34.12 A
(3) Each recycling containment shall incorporate, at a minimum, a primary (upper) liner and a secondary (lower) liner with a leak detection system appropriate to the site's conditions.

The primary (upper) liner is a geomembrane liner composed of an impervious, synthetic material that is resistant to ultraviolet light, petroleum hydrocarbons, salts and acidic and alkaline solutions. It is 60-mil HDPE. The secondary liner is specified in the design drawings and is 40-mil HDPE or thicker and is equivalent to 30-mil LLDPEr (in accordance with a previously approved variance) Liner compatibility meets or exceeds a subsequent relevant publication to EPA SW-846 method 9090A.

19.15.34.12 A
(4) All primary (upper) liners in a recycling containment shall be geomembrane liners composed of an impervious, synthetic material that is resistant to ultraviolet light, petroleum hydrocarbons, salts and acidic and alkaline solutions. All primary liners shall be 30-mil flexible PVC, 45-mil LLDPE string reinforced or 60-mil HDPE liners. Secondary liners shall be 30-mil LLDPE string reinforced or equivalent with a hydraulic conductivity no greater than 1 x 10-9 cm/sec. Liner compatibility shall meet or exceed the EPA SW-846 method 9090A or subsequent relevant publications.

The recycling containment design has a leak detection system between the upper and lower geomembrane liners of 200-mil geonet to facilitate drainage. The leak detection system consists of a properly designed drainage and collection and removal system placed above the lower geomembrane liner in depressions and sloped to facilitate the earliest possible leak detection. The containment floor design calls for a slope toward the sump in the corner(s) of the containment, as shown in the design drawings. This slope combined with the highly transmissive geonet drainage layer provide for rapid leak detection.

19.15.34.12 A
(7) The operator of a recycling containment shall place a leak detection system between the upper and lower geomembrane liners that shall consist of 200-mil geonet or two feet of compacted soil with a saturated hydraulic conductivity of 1 x 10-5 cm/sec or greater to facilitate drainage. The leak detection system shall consist of a properly designed drainage and collection and removal system placed above the lower geomembrane liner in depressions and sloped to facilitate the earliest possible leak detection.

The liners and drainage material will be installed consistent with the Manufacturer's specifications. In addition to any specifications of the Manufacturer, protocols for liner installation include measures to:

i. minimizing liner seams and orient them up and down, not across, a slope of the levee.
ii. use factory-welded seams where possible.
iii. use field seams in geosynthetic material that are thermally seamed and prior to field seaming, overlap liners four to six inches.
iv. minimize the number of field seams and comers and irregularly shaped areas.
v. provide for no horizontal seams within five feet of the

19.15.34.12 A
(5) The operator of a recycling containment shall minimize liner seams and orient them up and down, not across, a slope of the levee. Factory welded seams shall be used where possible. The operator shall ensure field seams in geosynthetic material are thermally seamed. Prior to field seaming, the operator shall overlap liners four to six inches…

slope's toe.

vi. use qualified personnel to perform field welding and testing.

vii. avoid excessive stress-strain on the liner

viii. The edges of all liners are anchored in the bottom of a compacted earth-filled trench that is at least 18 inches deep

19.15.34.12 A
(5) …The operator shall minimize the number of field seams and corners and irregularly shaped areas. There shall be no horizontal seams within five feet of the slope's toe. Qualified personnel shall perform field welding and testing.

At points of discharge into the lined earthen containment the pipe configuration effectively protects the liner from excessive hydrostatic force or mechanical damage during filling.

19.15.34.12 A
(3) The edges of all liners shall be anchored in the bottom of a compacted earth-filled trench. The anchor trench shall be at least 18 inches deep.

The design shows that at any point of discharge into or suction from the recycling containment, the liner is protected from excessive hydrostatic force or mechanical damage. External discharge or suction lines do not penetrate the liner.

19.15.34.12 A
(6) At a point of discharge into or suction from the recycling containment, the operator shall insure that the liner is protected from excessive hydrostatic force or mechanical damage. External discharge or suction lines shall not penetrate the liner.

Pumping from the containment to hydraulic fracturing operations is the responsibility of stimulation contractors. Typically, lines are permanently placed in the containment with floats attached to prevent damage to the liner system. The containment may be equipped with permanent HDPE stinger (supported by a sacrificial liner or geotextile) for withdrawal of fluid if the owner deems necessary during operations.

Leak Detection and Fluid Removal System Installation

The leak detection system, contains the following design elements

a. The 200-mil HyperNet Geonet drainage material between the primary and secondary liner that is sufficiently permeable to allow the transport of fluids to the observation ports (Appendix A).
b. The containment floor is sloped towards the monitoring riser pipe to facilitate the earliest possible leak detection of the containment bottom. A pump may be placed in the observation port to provide for fluid removal.
c. Piping will withstand chemical attack from any seepage, structural loading from stresses and disturbances from overlying water, cover materials, equipment operation or expansion or contraction (see Appendix A).

OPERATIONS AND MAINTENANCE PLAN

CLOSURE PLAN

Operation and Maintenance Plan
In Ground Containments

Overview

The operator will operate and maintain the lined earthen containment to contain liquids and solids (blow sand and minimal precipitates from the produced water) and maintain the integrity of the liner system in a manner that prevents contamination of fresh water and protects public health and the environment as described below. The purpose of the lined earthen containment is to facilitate recycling, reuse and reclamation of produced water derived from oil and gas wells. During periods when water for E&P operations is not needed, produced water will discharge to injection wells or to a pipeline for transfer to another recycling facility. The containment will not be used for the disposal of produced water or other oilfield waste.

19.15.34.10 D
Recycling containments may not be used for the disposal of produced water or other oilfield wastes.

The operation of the containment is summarized below.

A. Produced water generated from nearby oil and gas wells is delivered to a treatment system located as indicated in the C-147.
B. Unless specified in the transmittal letter, after treatment, the produced water discharges into the containment.
C. When required, produced water is removed from the containment for E&P operations. At this time, produced water will be used for drilling beneath the freshwater zones (beneath surface casing), for well stimulation (e.g. hydraulic fracturing) and other E&P uses as approved by OCD.
D. Whenever the maximum fluid capacity of the containment is reached, treatment and discharge to the containment ceases (see Freeboard and Overtopping Plan, below).
E. The operator will keep accurate records and shall report monthly to the division the total volume of water received for recycling, with the amount of fresh water received listed separately, and the total volume of water leaving the facility for disposition by use on form C-148 (see attached example).
F. The operator will maintain accurate records that identify the sources and disposition of all recycled water that shall be made available for review by the division upon request.

19.15.34.9 E
The operator of a recycling facility shall keep accurate records and shall report monthly to the division the total volume of water received for recycling, with the amount of fresh water received listed separately, and the total volume of water leaving the facility for disposition by use on form C-148.

19.15.34.9 F
The operator of a recycling facility shall maintain accurate records that identify the sources and disposition of all recycled water that shall be made available for review by the division upon request.

G. The containment shall be deemed to have ceased operations if less than 20% of the total fluid capacity is used every six months following the first withdrawal of produced water for use. The operator will report cessation of operations to the appropriate division district office. The appropriate division district office may grant an extension to this determination of cessation of operations not to exceed six months.

19.15.34.13 C
A recycling containment shall be deemed to have ceased operations if less than 20% of the total fluid capacity is used every six months following the first withdrawal of produced water for use. The operator must report cessation of operations to the appropriate division district office. The appropriate division district office may grant an extension to this determination of cessation of operations not to exceed six months.

The operation of the lined earthen containment will follow the mandates listed below:

1. The operator will not discharge into or store any hazardous waste (as defined by 40 CFR 261 and NMAC 19.15.2.7.H.3) in the containments.
2. If the containment's primary liner is compromised above the fluid's surface, the operator will repair the damage or initiate replacement of the primary liner within 48 hours of discovery or seek an extension of time from the division district office.
3. If the primary liner is compromised below the fluid's surface, the operator will remove all fluid above the damage or leak within 48 hours of discovery, notify the division district office and repair the damage or replace the primary liner.
4. If any penetration of the containment liner is confirmed by sampling of fluid in the leak detection system (see Monitoring, Inspection, and Reporting Plan; below), the operator will:
    a. Begin and maintain fluid removal from the leak detection/pump-back system,
    b. Notify the district office within 48 hours (phone or email) of the discovery,
    c. Identify the location of the leak, and
    d. Repair the damage or, if necessary, replace the containment liner.
5. The operator will install, or maintain on site, an oil absorbent boom or other device to contain an unanticipated release and the operator will remove any visible layer of oil from the surface of the recycling containment.
6. The operator will report releases of fluid in a manner consistent with NMAC 19.15.29
7. The containment will be operated to prevent the collection of surface water run-on.

19.15.34.13 B
(4) If the containment's primary liner is compromised above the fluid's surface, the operator shall repair the damage or initiate replacement of the primary liner within 48 hours of discovery or seek an extension of time from the division district office.
(5) If the primary liner is compromised below the fluid's surface, the operator shall remove all fluid above the damage or leak within 48 hours of discovery, notify the division district office and repair the damage or replace the primary liner.

19.15.34.13 B
(7) The operator shall install, or maintain on site, an oil absorbent boom or other device to contain an unanticipated release.
(1) The operator shall remove any visible layer of oil from the surface of the recycling containment.
19.15.34.8 A

(6) All releases from the recycling and re-use of produced water shall be handled in accordance with 19.15.29 NMAC.

8. The operator will maintain the containment free of miscellaneous solid waste or debris.
9. The operator will maintain at least three feet of freeboard for the containment and will use a free-standing staff gauge to allow easy determination of the required 3-foot of freeboard.
10. As described in the design/construction plan, the injection or withdrawal of fluids from the containment is accomplished through hardware that prevents damage to the liner by erosion, fluid jets or impact from installation and removal of hoses or pipes.
11. The operator shall ensure that all gates associated with the fence are closed and locked when responsible personnel are not onsite.
12. The operator will maintain the fences in good repair.

19.15.34.13
(6) The containment shall be operated to prevent the collection of surface water run-on.

19.15.34.13 B
(2) The operator shall maintain at least three feet of freeboard at each containment.

19.15.34.13 B
(3) The injection or withdrawal of fluids from the containment shall be accomplished through a header, diverter or other hardware that prevents damage to the liner by erosion, fluid jets or impact from installation and removal of hoses or pipes.

19.15.34.12 D
(1) The operator shall fence or enclose a recycling containment in a manner that deters unauthorized wildlife and human access and shall maintain the fences in good repair. The operator shall ensure that all gates associated with the fence are closed and locked when responsible personnel are not onsite.

19.15.34.13 A
The operator shall inspect the recycling containment and associated leak detection systems weekly while it contains fluids. The operator shall maintain a current log of such inspections and make the log available for review by the division upon request.

Monitoring, Inspection, and Reporting Plan

The operator will inspect the recycling containment and associated leak detection systems weekly while it contains fluids. The operator shall maintain a current log of such inspections and make the log available for review by the division upon request.

Weekly inspections consist of:

- reading and recording the fluid height of staff gauges,
- recording any evidence that the pond surface shows visible oil,
- visually inspecting the containment's exposed liners
- checking the leak detection system for any evidence of a loss of integrity of the primary liner.
- inspect diversion ditches and berms around the containment to check for erosion and collection of surface water run-on.
- inspect the leak detection system for evidence of damage or malfunction and monitor for leakage.

As stated above, if a liner's integrity is compromised, or if any penetration of the liner occurs, then the operator will take appropriate action within 48 hours, based on if above or below water surface, as noted above.

Monthly, the operator will:

A. Inspect the containment for dead migratory birds and other wildlife. Within 30 days of discovery, report the discovery of dead migratory birds or other wildlife to the appropriate wildlife agency and to the division district office in order to facilitate assessment and implementation of measures to prevent incidents from reoccurring.
B. Report to the division the total volume of water received for recycling, with the amount of fresh water received listed separately, and the total volume of water leaving the facility for disposition by use on form C-148.
C. Record sources and disposition of all recycled water.

19.15.34.12 E
The operator shall on a monthly basis inspect for and, within 30 days of discovery, report the discovery of dead migratory birds or other wildlife to the appropriate wildlife agency and to the division district office in order to facilitate assessment and implementation of measures to prevent incidents from reoccurring.

19.15.34.9 E
The operator of a recycling facility shall keep accurate records and shall report monthly to the division the total volume of water received for recycling, with the amount of fresh water received listed separately, and the total volume of water leaving the facility for disposition by use on form C-148.

19.15.34.9 F
The operator of a recycling facility shall maintain accurate records that identify the sources and disposition of all recycled water that shall be made available for review by the division upon request.

The operator will maintain a log of all inspections and make the log available for the appropriate Division district office's review upon request. An example of the log is attached to this section of the permit application.

Freeboard and Overtopping Prevention Plan

The method of operation of the containment allows for maintaining freeboard with very few potential problems. When the capacity of the containment is reached (3-feet of freeboard), the discharge of produced water ceases and the produced water generated by nearby oil and gas wells is managed by an injection well(s).

If rising water levels suggest that 3-feet of freeboard will not be maintained, the operator will implement one or more of the following options:

I. Cease discharging produced water to the containment.
II. II. Accelerate re-use of the produced water for purposes approved by the Division.
III. Transfer produced water from the containment to injection wells.

The reading of the staff gauge typically occurs daily when treatment operations are ongoing and weekly when discharge to the containment is not occurring.

Protocol for Leak Detection Monitoring, Fluid Removal and Reporting

As shown in Appendix A, the leak detection system includes a monitoring system. Any fluid released from the primary liner will flow to the collection sump, where fluid level monitoring is possible at the monitoring riser pipe associated with the leak detection system.

Staff may employ a portable electronic water level meter to determine if fluid exists in the monitoring riser pipe. Obtaining accurate readings of water levels in a sloped pipe beneath a containment can be a challenge. An electrician's wire snake may be required to push the probe to the bottom of the port and the probe may be fixed in a 2-inch pipe "dry housing" to avoid false readings due to water condensation on the pipe. There are many techniques to determine the existence of water in the sumps – including low flow pumps and a simple small bailer affixed to an electrician's snake. The operator will use the method that works best for this containment.

If seepage from the containment into the leak detection system is suspected by a positive fluid level measurement, the operator will:

1. Re-measure fluid levels in the monitoring riser pipe on a daily basis for one week to determine the rate of seepage.
2. Collect a water sample from the monitoring riser pipe to confirm the seepage is produced water from the containment via electrical conductivity and chloride measurements.
3. Notify NMOCD of a confirmed positive detection in the system within 48 hours of sampling (initial notification).
4. Install a pump into the monitoring riser pipe sump to continually (manually on a daily basis or via automatic timers) remove fluids from the leak detection system into the containment until the liner is repaired or replaced.
5. Dispatch a liner professional to inspect the portion of the containment suspected of leakage during a "low water" monitoring event.
6. Provide NMOCD a second report describing the inspection and/or repair within 20 days of the initial notification.

If the point of release is obvious from a low water inspection, the liner professional will repair the loss of integrity. If the point of release cannot be determined by the inspection, the liner professional will develop a more robust plan to identify the point(s) of release. The inspection plan and schedule will be submitted to OCD with the second report. The operator will implement the plan upon OCD approval.

Closure Plan
In Ground Containments

Overview

After operations cease, the operator will remove all fluids within 60 days and close the containment within six months from the date the operator ceases operations from the containment for use.

19.15.34.14 A
Once the operator has ceased operations, the operator shall remove all fluids within 60 days and close the containment within six months from the date the operator ceases operations from the containment for use.

The operator shall substantially restore the impacted surface area to

a. the condition that existed prior to the construction of the recycling containment or
b. to a condition imposed by federal, state trust land or tribal agencies on lands managed by those agencies as these provisions govern the obligations of any operator subject to those provisions,

19.15.34.14 E
The operator shall substantially restore the impacted surface area to the condition that existed prior to the construction of the recycling containment.

19.15.34.14 G
The re-vegetation and reclamation obligations imposed by federal, state trust land or tribal agencies on lands managed by those agencies shall supersede these provisions and govern the obligations of any operator subject to those provisions, provided that the other requirements provide equal or better protection of fresh water, human health and the environment.

The surface owner will impose a closure design that conforms to their needs for the site. The operator understands that a variance will be submitted to OCD to allow for any alternative closure protocol.

Excavation and Removal Closure Plan – Protocols and Procedures

The containment is expected to hold a small volume of solids, the majority of which will be windblown sand and dust with some mineral precipitates from the water

1. The operator will remove all liquids from the containment and either:
    a. Dispose of the liquids in a division-approved facility, or
    b. Recycle, reuse or reclaim the water for reuse in drilling and stimulation.
2. The operator will close the recycling containment by first removing all fluids, contents and synthetic liners and transferring these materials to a division approved facility.
3. After the removal of the containment contents and liners, soils beneath the containment will be tested by collection of a five-point (minimum) composite sample which includes stained or wet soils, if any, and that sample shall be analyzed for the constituents listed in Table I of 19.15.34.14.
4. After review of the laboratory results:
    a. If any contaminant concentration is higher than the parameters listed in Table I, additional delineation may be required, and the operator must receive approval before proceeding with closure.

19.15.34.14 B
The operator shall close a recycling containment by first removing all fluids, contents and synthetic liners and transferring these materials to a division approved facility.

19.15.34.14 C
The operator shall test the soils beneath the containment for contamination with a five-point composite sample which includes stained or wet soils, if any, and that sample shall be analyzed for the constituents listed in Table I below.

19.15.34.14 C
(1) If any contaminant concentration is higher than the parameters listed in Table I, the division may require additional delineation upon review of the results and the operator must receive approval before proceeding with closure.

b. If all contaminant concentrations are less than or equal to the parameters listed in Table I, then the operator will proceed to
    i. backfill with non-waste containing, uncontaminated, earthen material - Or
    ii. undertake an alternative closure process pursuant to a variance request after approval by OCD.

19.15.34.14 C
(2) If all contaminant concentrations are less than or equal to the parameters listed in Table I, then the operator can proceed to backfill with non-waste containing, uncontaminated, earthen material.

Reclamation and Re-vegetation

a. The operator will reclaim the containment's location to a safe and stable condition that blends with the surrounding undisturbed area.
b. Topsoils and subsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.
c. The disturbed area shall then be reseeded in the first favorable growing season following closure of a recycling containment.

19.15.34.14 E
Once the operator has closed the recycling containment, the operator shall reclaim the containment's location to a safe and stable condition that blends with the surrounding undisturbed area. Topsoils and subsoils shall be replaced to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns. The disturbed area shall then be reseeded in the first favorable growing season following closure of a recycling containment.

Closure Documentation

Within 60 days of closure completion, the operator shall submit a closure report on form C-147, including required attachments, to document all closure activities including sampling results and the details on any backfilling, capping or covering, where applicable. The closure report shall certify that all information in the report and attachments is correct and that the operator has complied with all applicable closure requirements and conditions specified in division rules or directives.

19.15.34.14 D
Within 60 days of closure completion, the operator shall submit a closure report on form C-147, including required attachments, to document all closure activities including sampling results and the details on any backfilling, capping or covering, where applicable. The closure report shall certify that all information in the report and attachments is correct and that the operator has complied with all applicable closure requirements and conditions specified in division rules or directives.

The operator shall notify the division when reclamation and re-vegetation are complete. Specifically the notice will document that all ground surface disturbing activities at the site have been completed, and a uniform vegetative cover has been established that reflects a life-form ratio of plus or minus fifty percent (50%) of pre-disturbance levels and a total percent plant cover of at least seventy percent (70%) of pre-disturbance levels, excluding noxious weeds.

19.15.34.14 H
The operator shall notify the division when reclamation and re-vegetation are complete.

19.15.34.14 F
Reclamation of all disturbed areas no longer in use shall be considered complete when all ground surface disturbing activities at the site have been completed, and a uniform vegetative cover has been established that reflects a life-form ratio of plus or minus fifty percent (50%) of pre-disturbance levels and a total percent plant cover of at least seventy percent (70%) of pre-disturbance levels, excluding noxious weeds.

February 2022

C-147 Registration for Willamette Containments

Section 1 T25S R35E, Lea County NM

Volume 2:

Survey and Driving Directions
Siting Criteria Demonstration and Appendices

View east from southeast side of fresh water AST on pad showing swale in which Intrepid will construct the two in-ground containments. The lease road servicing the pads is barely visible east of the surface pipelines.

Prepared for:
Intrepid Potash NM LLC
Carlsbad, NM

Prepared by:
R.T. Hicks Consultants, Ltd.
901 Rio Grande NW F-142
Albuquerque, New Mexico

SURVEY FOR CONTAINMENT AND RECYCLING FACILITY AND DRIVING DIRECTIONS FROM JAL

TOPOGRAPHIC SURVEY

of Proposed Willamette Containment Pond

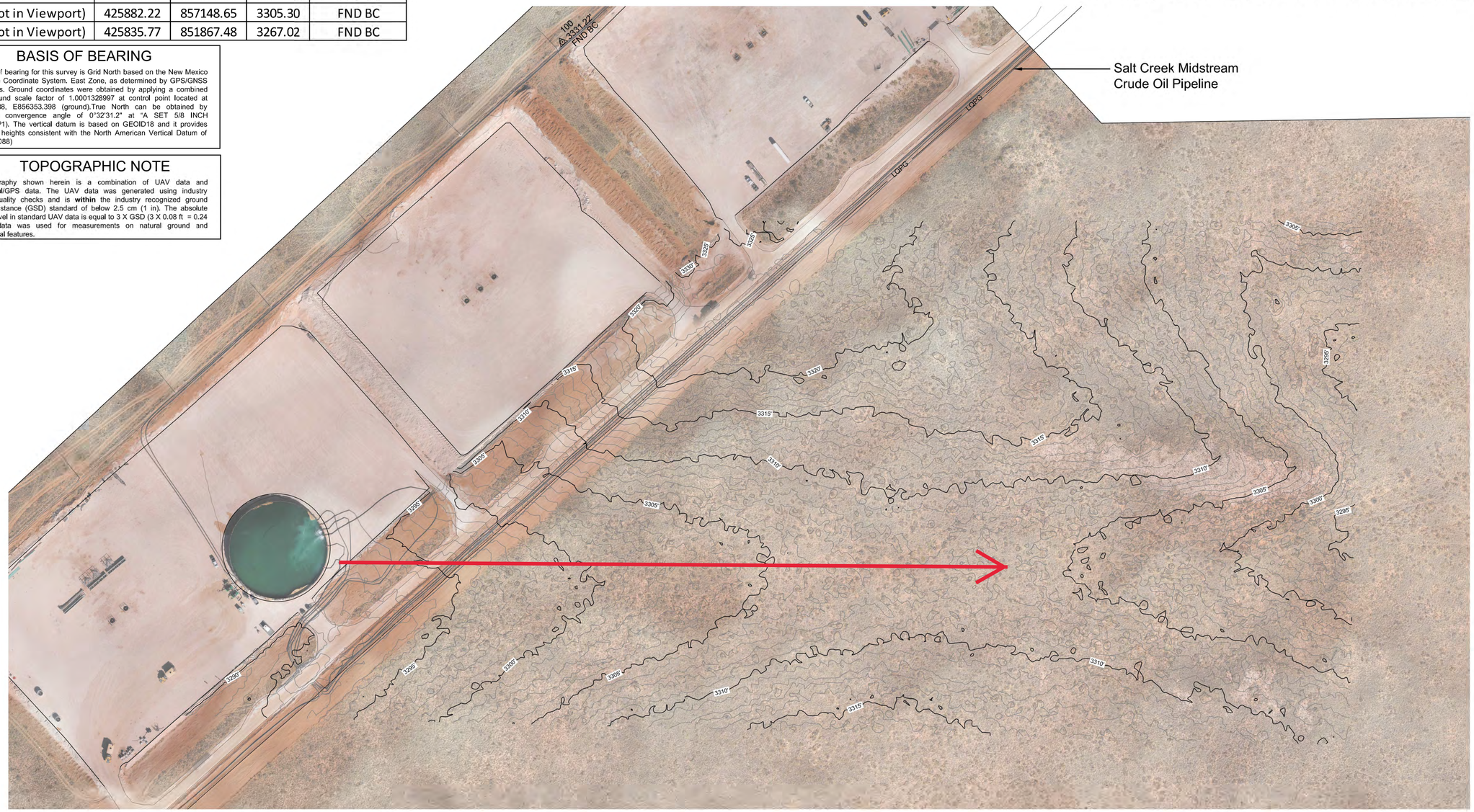
Control Point List				
Point Number	**Northing**	**Easting**	**Elevation**	**Description**
1 (Not in Viewport)	425392.19	856353.40	3330.97	SET 5/8"RB
100	425860.23	854508.96	3331.22	FND BC
103 (Not in Viewport)	425882.22	857148.65	3305.30	FND BC
104 (Not in Viewport)	425835.77	851867.48	3267.02	FND BC

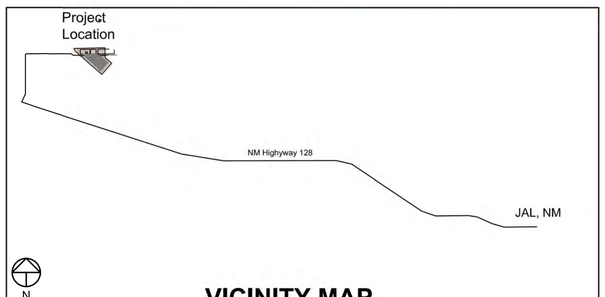
BASIS OF BEARING

The basis of bearing for this survey is Grid North based on the New Mexico State Plane Coordinate System. East Zone, as determined by GPS/GNSS observations. Ground coordinates were obtained by applying a combined grid to ground scale factor of 1.0001328997 at control point located at N425392.188, E856353.398 (ground).True North can be obtained by applying a convergence angle of 0°32'31.2" at "A SET 5/8 INCH REBAR"(CP1). The vertical datum is based on GEOID18 and it provides orthometric heights consistent with the North American Vertical Datum of 1988 (NAVD88)

TOPOGRAPHIC NOTE

The topography shown herein is a combination of UAV data and conventional/GPS data. The UAV data was generated using industry standard quality checks and is **within** the industry recognized ground sampling distance (GSD) standard of below 2.5 cm (1 in). The absolute accuracy level in standard UAV data is equal to 3 X GSD (3 X 0.08 ft = 0.24 ft). UAV data was used for measurements on natural ground and supplemental features.





VICINITY MAP
N.T.S.

Driving Directions	
1	From NM Highway 128 W/E (Kansas St) & NM-18S head West on Highway 128 for 9.6 miles
2	Turn right (North) onto dirt road an head North for .9 miles
3	Turn right (East) and continue East on dirt road for 1 mile
4	Location will be on the right (South) (32.165375,-103.326449)

ONE CALL NOTIFICATIONS

Ticket number: **22JA180447**
Remarks:
Conflict. Marked salt creek pipe line from 32°09'54"N 103°19'35"W to 32°09'54"N 103°19'14"W - The proposed excavation site is going to be in CONFLICT with Salt Creek assets. Sal: creek assets have been marked. No digging may take place without a salt creek representative present. Please notify me 48hrs prior to wanting to excavate salt creek assets. The following dimensions are minimum requirements for potholing when exposing Sal:Creek lines: 3ft each side of the line and 3ft below the bottom of salt creek line and top of installed line. (If ticket is conflicted and marks have been destroyed or not visible please contact Locator: Levi Cobos. 4327554970
Notes:
NO DIGGING MAY TAKE PLACE WITHOUT A SALT CREEK MIDSTREAM REPRESENTATIVE PRESENT WITHIN 10 FT OF SALTCREEK MIDSTREAM PIPELINE. CONTACT AARON THOMAS AT 432-556-1131. MUST NOTIFY 48 BUSINESS HOURS PRIOR TO DIGGING.

I, Jeremy Baker, New Mexico Professional Surveyor, hereby certify that this Topographic Survey Plat was prepared from an actual ground survey performed by me or under my supervision, that this survey is true and correct to the best of my knowledge and belief, that this Topographic Survey Plat and the field survey upon which it is based meet the Minimum Standards for Surveying in New Mexico.

Jeremy Baker — 01/26/2022 (Date)

SURVEYOR NOTE

THIS IS NOT A BOUNDARY SURVEY OR A RIGHT-OF-WAY SURVEY. APPARENT PROPERTY CORNERS, RIGHT-OF-WAY LINES, OR PROPERTY LINES AS SHOWN ARE DERIVED FROM RECORD SURVEY PLATS, RIGHT-OF-WAY MAPS, OR DEEDS REFERENCED HEREON AND ARE NOT GUARANTEED OR TO BE RELIED ON FOR THE ESTABLISHMENT OF PROPERTY LINES.

SquareRoot services
Engineering | Surveying

TOPOGRAPHIC SURVEY
OF
Proposed
Willamette Containment
FOR
R.T. Hicks

PROJECT NUMBER: 22003

PROJECT SURVEYOR: Jeremy Baker
DRAWN BY: Isaac Dominguez

GRAPHIC SCALE
0 100' 200'
SCALE: 1" = 100'
(IN FEET)

LEGEND

- CONTROL POINT AS NOTED
- ####' — MAJOR CONTOUR (5FT)
- MINOR CONTOUR (1FT)
- LQPG — UTILITY-BURIED LIQUID PETROLEUM
- EDGE OF ROAD
- EDGE OF PAD

REVISIONS		
No.	DATE	DESCRIPTION

JEREMY E. BAKER — NEW MEXICO — 25773 — PROFESSIONAL SURVEYOR

SHEET: 1 of 1
SU - 101

GENERAL SITING CRITERIA DEMONSTRATION AND SITE-SPECIFIC GROUNDWATER DATA

Distance to Groundwater

Figure 1, Figure 2, and the discussion below demonstrates that groundwater (fresh water as defined by NMOCD Rules) at the location is greater than 100 feet beneath the area of interest that will include the location of the recycling containment.

Figure 1 is a geologic/ topographic map that shows:

1. The Willamette Containment area identified by the blue stippled polygon. The containment lies within this area as shown in the Site Plan of the Engineering drawings in Volume 1. Within this acre area will be the proposed in-ground containments identified in the C-147 registration and a potential future AST Containment.
2. Water wells from the OSE database as a blue triangle inside colored circles that indicate well depth. OSE wells are often mislocated in the WATERS database as older wells are plotted in the center of the quarter, quarter, quarter, of the Section Township and Range. Additionally, the OSE database can include locations of proposed wells (i.e., permit applications). The permit data show "no date" and "DTW=0" as data. Figure 1 has screened the OSE data and eliminated permit information from Figure 1.
3. Water wells from the USGS database as large triangles color-coded to the formation from which the well draws water.
4. Water wells, which are not documented in the public databases but were identified by field inspection or other published reports as colored squares (Misc. well database).
5. The depth-to-water from the most recent available measurement for each well is provided adjacent to the well symbol.

Note that CP-0180 (southeast of the containment area) is the same well as USGS-15093. The USGS well location is at a corral where Google Earth clearly shows a windmill. CP-180 plots in the middle of a field with no evidence of a well on Google Earth images. We confirmed the location of this windmill by a foot survey and obtained a depth to water measurement under static conditions.

West of the Willamette Recycling Facility area are several USGS wells within and adjacent to an unnamed tributary of Antelope Draw: USGS-15005, USGS-15016 and USGS- 15088. These same wells were measured by others and appear in the Misc Database. In 2017, Hicks Consultants measured the depth to a blockage in the abandoned North Well at about 105 feet.

Well CP-624 is a plugged well boring located about 1 mile southwest of the Willamette RF. The well log describes sandy overburden to a depth of 110 feet that is underlain by red clay. Red clay and blue clay are described to the total depth of 510 feet. This data suggests that the alluvium at this location is not saturated. In contrast, wells located within Antelope Draw or the unnamed tributary (Misc-294, USGS-15088/Misc-293, and Humphreys Windmill, Misc-294) encountered water at more than 70 and less than 110 feet below surface.

Figure 2a is an area topographic and geologic map that shows:

1. The Willamette Recycling Facility and Containment areas identified by the blue stippled polygon with the surface elevation noted.

2. Water wells measured by the USGS, the year of the measurement and the calculated elevation of the groundwater surface.
3. Water wells measured by professionals and documented in published reports or by staff of Hicks Consultants (Misc.).
4. Isocontour lines displaying the elevation of the groundwater surface.

Geology

Quaternary Age eolian and piedmont deposits (Qe/Qp on Figures 1 and 2a) are the dominant exposed material in the area. These deposits are a thin covering of the underlying Triassic upper Chinle Formation (Tr cu) that is exposed about one mile south of the Willamette Recycling Facility and three miles east. In the northeast corner of the Figure, the Ogallala Formation is exposed and thus we surmise that in the eastern area of Figure 2a, the Quaternary deposits are also a thin covering over the Tertiary Ogallala. Quaternary Piedmont deposits are present within many of the drainages and are more than 100 feet thick in places with a perched water-bearing zone overlying the Chinle red beds.

The red beds of the upper Chinle (aka Dockum Group) are dominantly red clay/silt with interbedded thin sandstone units that can transmit usable groundwater. The base of the Chinle is the Santa Rosa Sandstone and is the principal bedrock aquifer of the area. The Ogallala Formation (To) consists primarily of sand with some clay, silt, and gravel, generally capped by caliche.

Based on information from Ground-Water Report 6 (GWR-6) *Geology and Ground-Water Conditions in Southern Lea County, New Mexico* by Alexander Nicholson and Alfred Clebsch (1961), the top of the redbeds (upper Chinle Formation) in the area of the Willamette containment is about 3200 feet above sea level (see Plate 2b), which corresponds to a depth from ground surface of about (3300-3200=) 130 feet. Because groundwater elevation at the Willamette site is no higher than 3000 feet asl (see Groundwater Data, below), the base of Quaternary and/or Tertiary alluvial deposits are about 200 feet higher than the groundwater surface, and therefore not saturated. However, within and near the drainages, the data demonstrate that alluvium (Qp) is saturated.

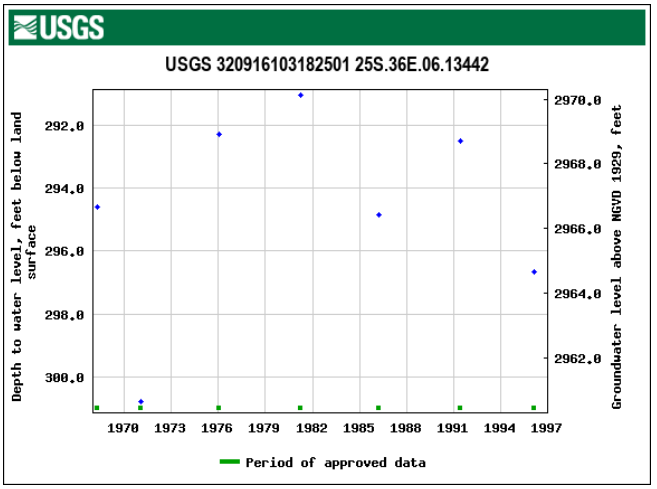
The Appendix Well Logs contains several driller's logs from the OSE files.

Groundwater Data

We relied upon the most recent data measured by the USGS, published data, and measurements by Hicks Consultants to create the water table elevation map shown in Figure 2a and 2b. Water level data from the OSE database rely upon observed water levels by drillers during the completion of the water well. The OSE dataset provides some useful data in certain areas but were not used to generate groundwater elevations for these Figures. Based upon our field survey and examination of Google Earth images, we are confident that the wells shown Figure 2 are located within ¼ mile of the plotted point.

The closest water well to the Willamette facility is USGS-15093, which Hicks Consultants measured in January 2022. Our measurement showing an elevation of 2957 (depth to water of 296.7) agrees with historic measurements between 1970 and 1997, as fluctuations are less than 10 feet. The data from the USGS website if presented below.

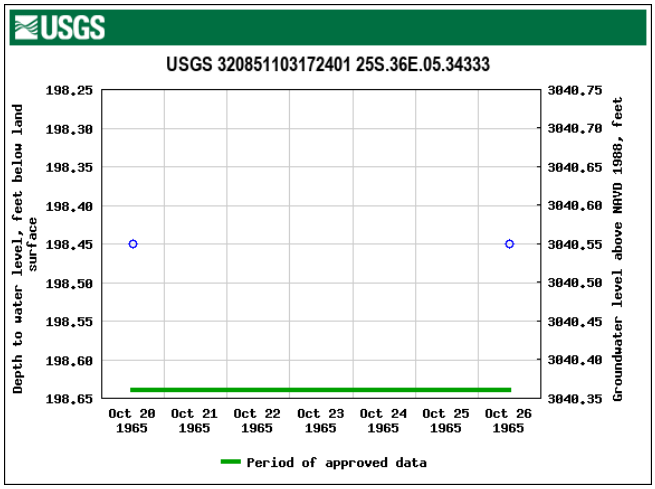
USGS 320916103182501 25S.36E.06.13442 AKA USGS- 15093
0.75 miles east of Willamette



Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°09'36", Longitude 103°18'31" NAD27
Land-surface elevation 3,261.30 feet above NGVD29
The depth of the well is 605 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

USGS-15083 plots in a similar hydrogeologic environment as the Willamette facility and well USGS 15093 as all are distant from drainages filled by Quaternary piedmont deposits. However, we found no evidence of this well with 1965 data on the 1997 Google Earth image. Intrepid staff who are responsible for tending do wells on land owned by Intrepid also found no evidence of this well, however water tanks, served by nearby wells, are present at/near this location. The data for this well are presented below. It should be noted that the latitude/longitude for this well plot in the northern half of Section 8, but the USGS data show the well in the southwestern quarter of Section 5. While Figures 1 and 2 show the well as plotted, we did not employ the data in our interpretations.

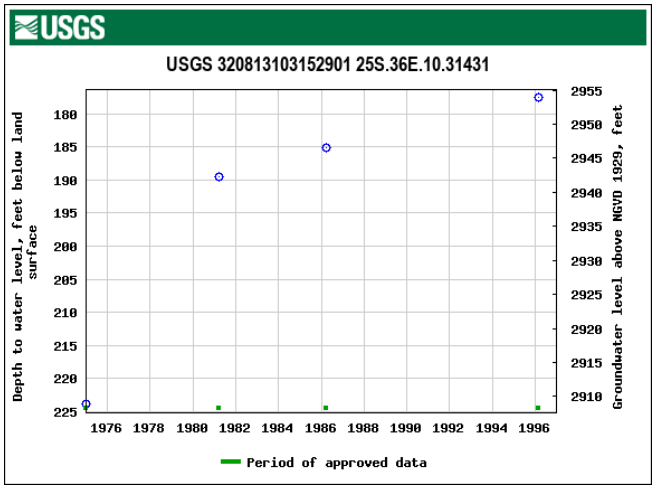
USGS 320851103172401 25S.36E.05.34333 AKA USGS-15083
Mis-Located



Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°08'51", Longitude 103°17'24" NAD27
Land-surface elevation 3,239 feet above NAVD88
The depth of the well is 520 feet below land surface.
This well is completed in the Pecos River Basin alluvial aquifer (N100PCSRVR) national aquifer.
This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.

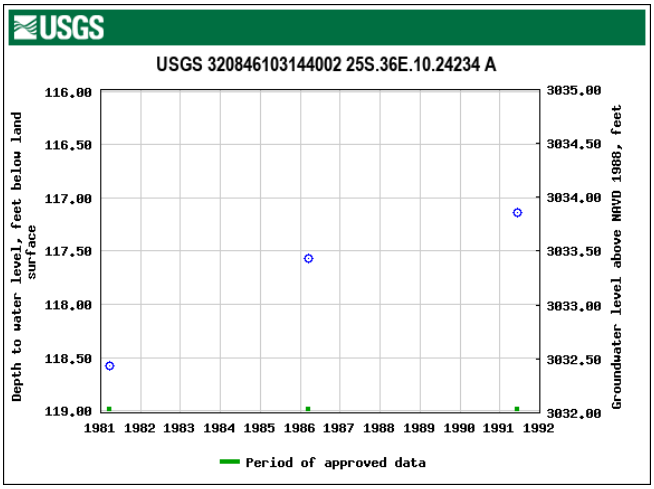
Well USGS-15019 is plotted on the USGS topographic map and is adjacent to Fight in Hollow Draw but piedmont deposits are not mapped at this location. The 1996 groundwater elevation data for this well is essentially identical to that measured in well USGS-15093/Misc-430.

USGS 320813103152901 25S.36E.10.31431 AKA USGS-15019
About 4 miles southeast of Willamette
Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°08'30", Longitude 103°15'33" NAD27
Land-surface elevation 3,132.10 feet above NGVD29
The depth of the well is 512 feet below land surface.
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.



Hicks Consultants inspected the location of Well USGS-15082 and verified the presence of buildings, an old water tank and the mapped exposure of the Chinle Formation. We are confident that the data from the USGS website is accurate as presented below. The 1991 groundwater elevation at this site is 79 feet higher than the measurement from the USGS-15019, which is less than a mile west. Note that Figure 2a shows that the Ogallala Formation in the northeast corner of the map lies on the Chinle. We suggest that water in the Ogallala recharges the Chinle in this area and higher groundwater elevations proximal to the Ogallala should be expected. The Ogallala is not present near the Willamette facility.

USGS 320846103144002 25S.36E.10.24234 A AKA USGS- 15082
4.6 miles southeast of Willamette
Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°08'46", Longitude 103°14'40" NAD27
Land-surface elevation 3,151 feet above NAVD88
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Santa Rosa Sandstone (231SNRS) local aquifer.



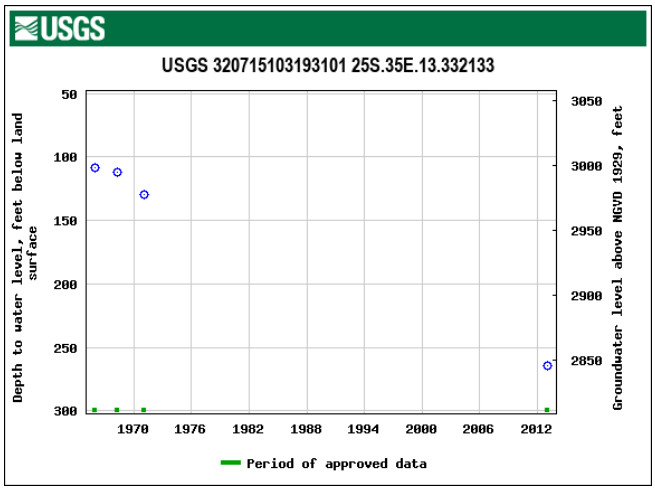
About 2 miles west and southwest of the Willamette facility are several wells in or adjacent to an unnamed drainage and Antelope Draw, respectively. Six measurements from five wells under static conditions show that groundwater elevations range from 3098 to 3115. Well 15007 is listed as pumping but the measurement is 50 feet higher than nearby wells measured under static conditions, which is a little odd. Groundwater in these two drainages is about 145 feet higher than well USGS-15093, near the Willamette facility.

In Figure 2a, Well USGS-14778 provides a groundwater elevation under pumping conditions. Well Misc-297 is an open casing near the USGS well that Hicks Consultants measure in 2015 and documented groundwater 43 feet higher than the 2013 data from USGS-14778. As shown

below in the USGS data, a groundwater elevation of 2887 is about 125 feet less than what was observed in this well in the late1960s and early 1970s.

USGS 320715103193101 25S.35E.13.332133 AKA USGS 14778
2 miles south of Willamette

Lea County, New Mexico
Hydrologic Unit Code 13070007
Latitude 32°07'22.9", Longitude 103°19'31.8" NAD83
Land-surface elevation 3,108.20 feet above NGVD29
This well is completed in the Other aquifers (N9999OTHER) national aquifer.
This well is completed in the Chinle Formation (231CHNL) local aquifer.



Misc-295 presents a groundwater elevation of 2978 in 1971, which is the same datum in 1971 as USGS-14772. We believe that Misc-295 is mis-located in the published report from which we obtained this datum and is the same well as the USGS well.

The 100-foot decline in groundwater elevation in this area was surprising. The Chinle bedrock aquifer and any saturation in the overlying Quaternary/Tertiary sediments is hydraulically connected to the Jal Basin to the south. The Jal Basin is defined by the Office of the State Engineer as the area of thick alluvial sediments where subsidence and erosion have caused the top of the red beds to form a geologic basin. Withdrawals from wells in the Jal basin to provide water for the City of Midland and for oil and gas activities may be the cause of this observed decline.

Finally, the data presented on Figure 2b, which we believe is valid, show that the red bed surface (the contact between the Triassic rocks and overlying Quaternary or Tertiary sediments) is 3200 feet ASL, or about 100 feet higher than groundwater observed in the nearby drainage. Thus, we conclude with a high degree of certainty that the Quaternary or Tertiary sediments are not saturated beneath the Willamette facility.

For the groundwater elevation map (Figure 2), we honored all data that we know are accurate to the best of our knowledge. We employed the most recent data, and we conclude:

- The elevation of the groundwater surface beneath the area in which the Willamette Containment will is no higher than 2975 feet above mean sea level.
- Surface elevation at Willamette is about 3330 and the elevation of a 25-foot deep containment is about 3305.
- As discussed above, the elevation of the red bed surface (Figure 2b) is higher than groundwater elevation. Thus, there is no water table aquifer present beneath the sites.

- At the Willamette site, the distance between the bottom of the proposed containment (about 3305 feet) and the potentiometric surface of Chinle groundwater is (3305-2975=) 330 feet

Distance to Municipal Boundaries and Fresh Water Fields

Figure 3 demonstrates that the Willamette facility is not within incorporated municipal boundaries or within defined municipal fresh water well fields covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended.

- The closest municipality is Jal, NM approximately 5 miles to the east of Willamette and about 7 miles southeast of the Willamette location.
- The closest public well fields belong to the City of Jal. One is within Jal and the second is about 7 miles southwest of Jal and more than 5 miles from the Willamette recycling project area.

Distance to Subsurface Mines

Figure 4 and our general reconnaissance of the Willamette area demonstrate that the nearest mines are caliche pits. This location is not within an area overlying a subsurface mine.

- The nearest mapped caliche pits are about 2.5 miles west and 2.25 miles southeast of the recycling project area.
- There are no subsurface mines in the area shown in Figure 4.

Distance to High or Critical Karst Areas

Figure 5 shows the Willamette recycling project area is not within mapped zone of high or critical with respect to BLM Karst areas.

- The proposed containments are located within a “low” potential karst area.
- The nearest “high” or “critical” potential karst area is located approximately 18 miles west of the proposed recycling facility.
- We observed no evidence of solution voids or unstable ground near the site during the field inspection.

Distance to 100-Year Floodplain

Figure 6 demonstrates that the Willamette recycling project area is within Zone D as designated by the Federal Emergency Management Agency with respect to the Flood Insurance Rate 100-Year Floodplain.

- FEMA describes the location as an area with possible but undetermined flood hazards. No flood hazard analysis was conducted.
- Our field inspection and examination of the topography permits a conclusion that the location is not within any floodplain and has low risk for flooding.
- The nearest mapped flood hazard lies within the City of Jal

Distance to Surface Water

Figure 7 shows an intermittent stream mapped by the USGS about 500 feet southeast of the proposed Willamette recycling area. The site visit and photographs demonstrate that the recycling project area is not within 300 feet of a continuously flowing watercourse or 200-feet of

any other significant watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark) or spring.

Photographs of the mapped USGS "intermittent stream" along the eastern boundary show no evidence of a stream or any drainage channel with a defined bed and bank. The closest mapped water bodies are Lake/Ponds south of the site, one of which is an excavated stock tank.

Distance to Permanent Residence or Structures

Figure 8 and the site visit demonstrates that the location is not within 1000 feet from an occupied permanent residence, school, hospital, institution, church, or other structure in existence at the time of initial application.

- The nearest structures are
  - A lease road and drill pads along the northern boundary of the recycling project area as shown in the recent air photo with the Driving Directions
  - An active SWD well forms the northeastern boundary of the area
- No residences or other structures are in the area.

Distance to Non-Public Water Supply

Figures 1 and 7 demonstrates that the Willamette recycling project is not within 500 horizontal feet of a spring or fresh water well used for domestic or stock watering purposes, in existence at the time of initial application.

- Figure 1 shows the locations of all area water wells, active or plugged.
- The nearest water well is the North K Windmill, which is used for stock, located about 3500 feet east of the recycling facility area.
- There are no domestic water wells located within 1,000 feet of the area of interest.
- No springs were identified within the mapping area (see Figure 7)

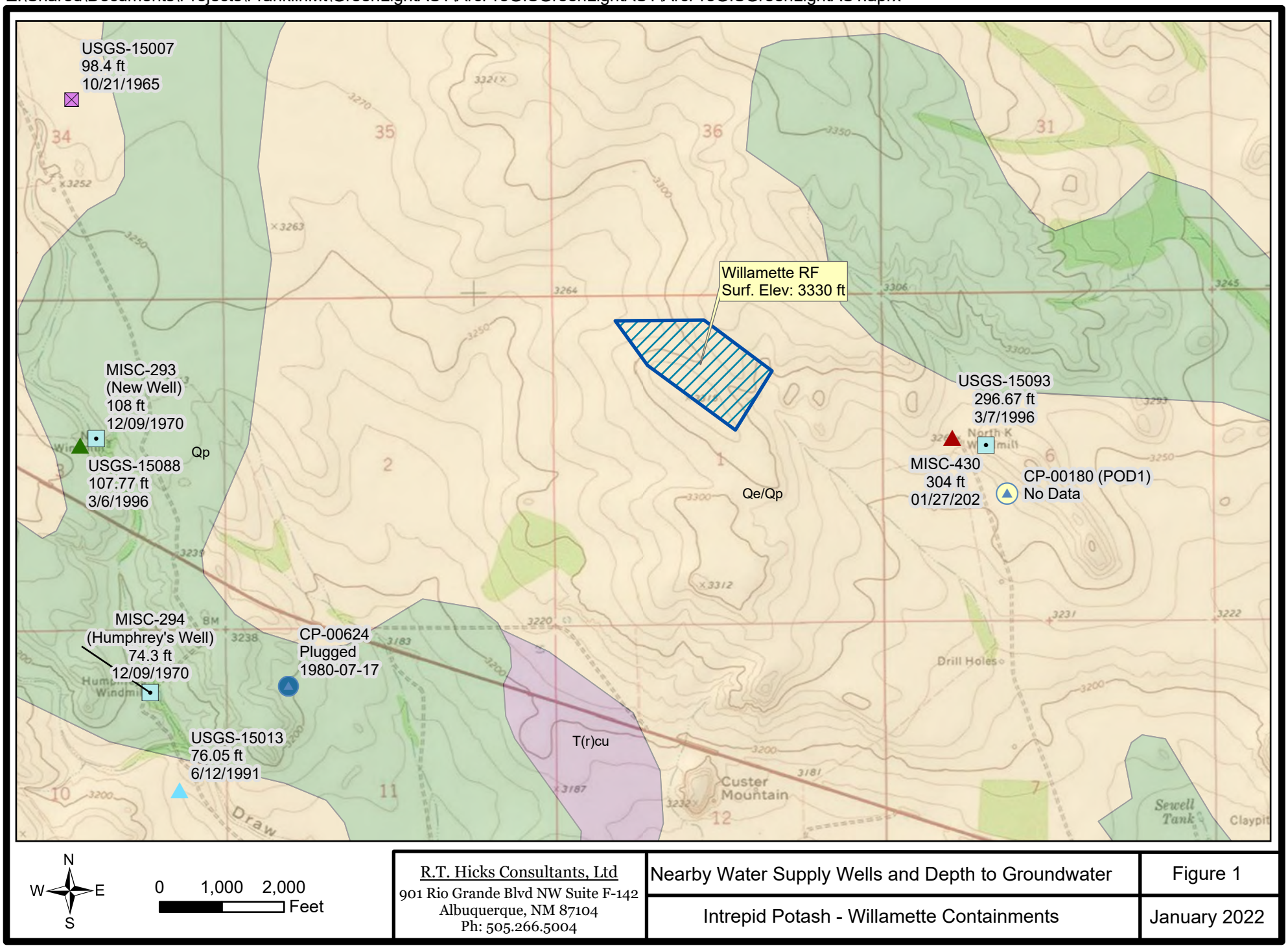
Distance to Wetlands

Figure 9 demonstrates the Willamette location is not within 300 feet of mapped wetlands using the New Mexico database.

- The nearest designated wetland is the same lake/pond to the south discussed in the surface water section
- Natural wetlands (freshwater ponds) are not observed in the area.
- The USA wetlands database does not provide accurate information for most of New Mexico. For example, the USA database maps a riverine wetland within and upstream of the USGS mapped watercourse that the site visit demonstrates is not a watercourse or a wetland.

FIGURES

Z:\Shared\Documents\Projects\FranklinMt\GreenLightAST\ArcProGISGreenLightAST\ArcProGISGreenLightAST.aprx



R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Nearby Water Supply Wells and Depth to Groundwater	Figure 1
	Intrepid Potash - Willamette Containments	January 2022

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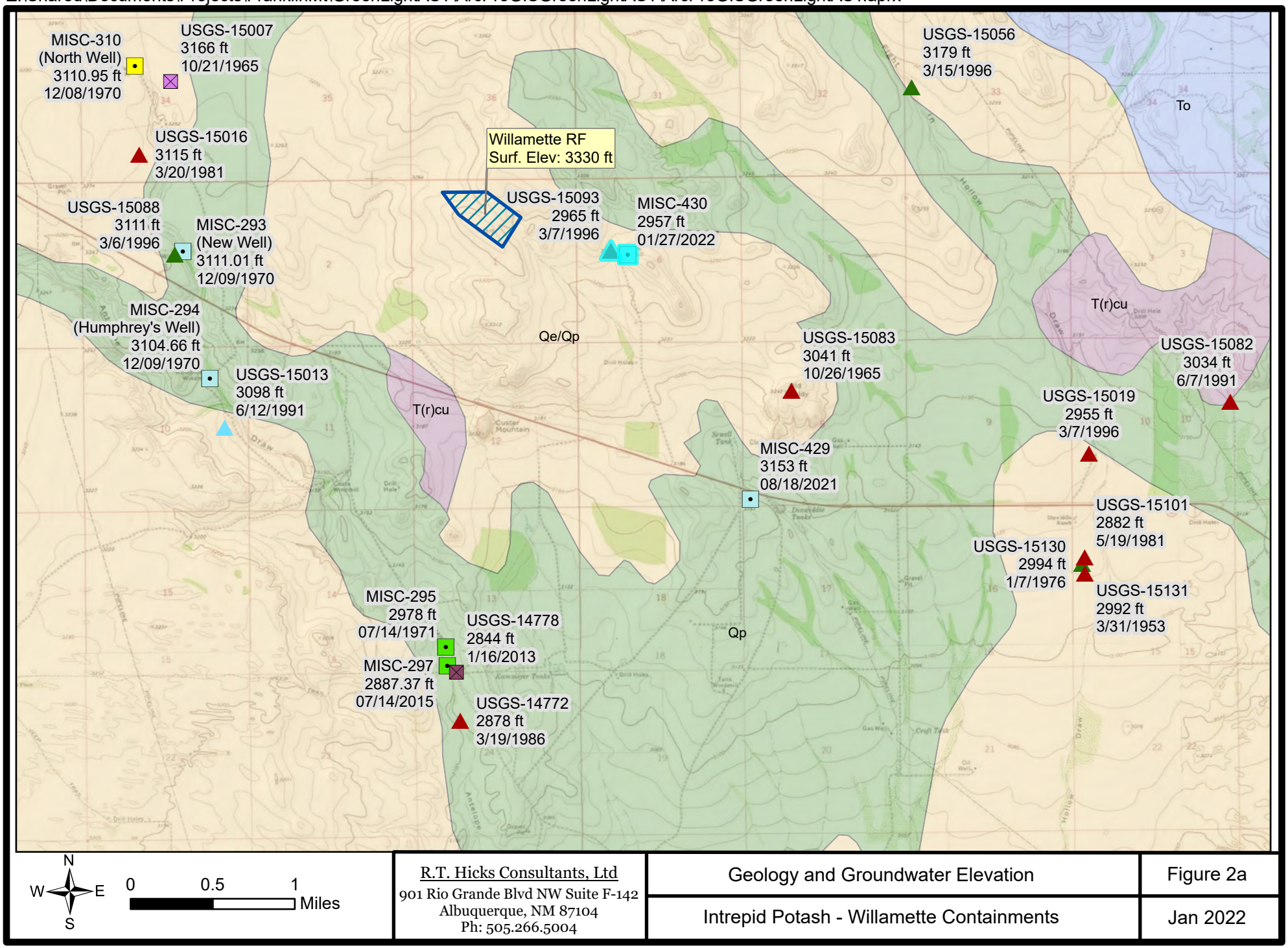

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Geology and Groundwater Elevation	Figure 2a
	Intrepid Potash - Willamette Containments	Jan 2022

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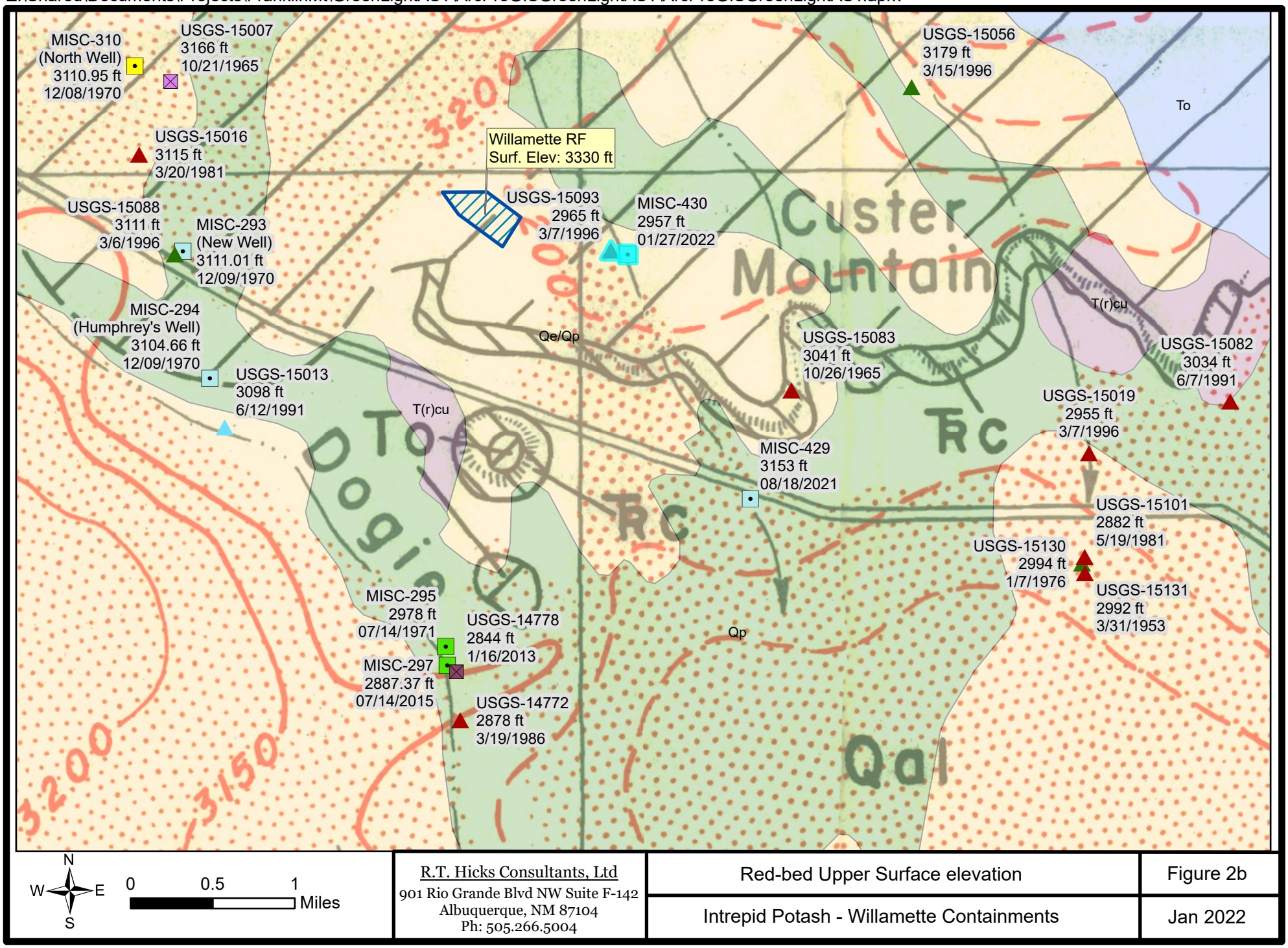

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Red-bed Upper Surface elevation	Figure 2b
	Intrepid Potash - Willamette Containments	Jan 2022

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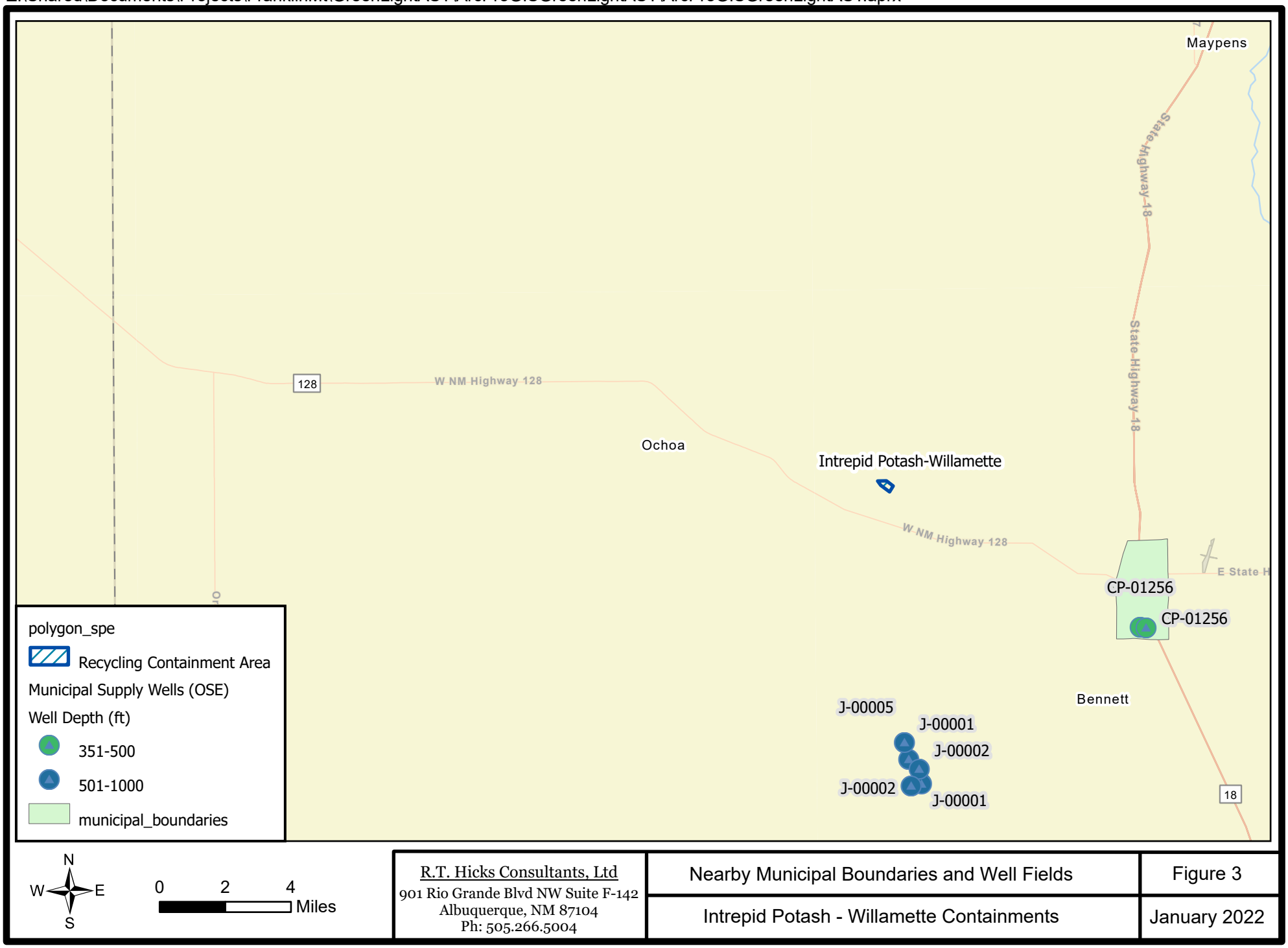

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Nearby Municipal Boundaries and Well Fields	Figure 3
	Intrepid Potash - Willamette Containments	January 2022

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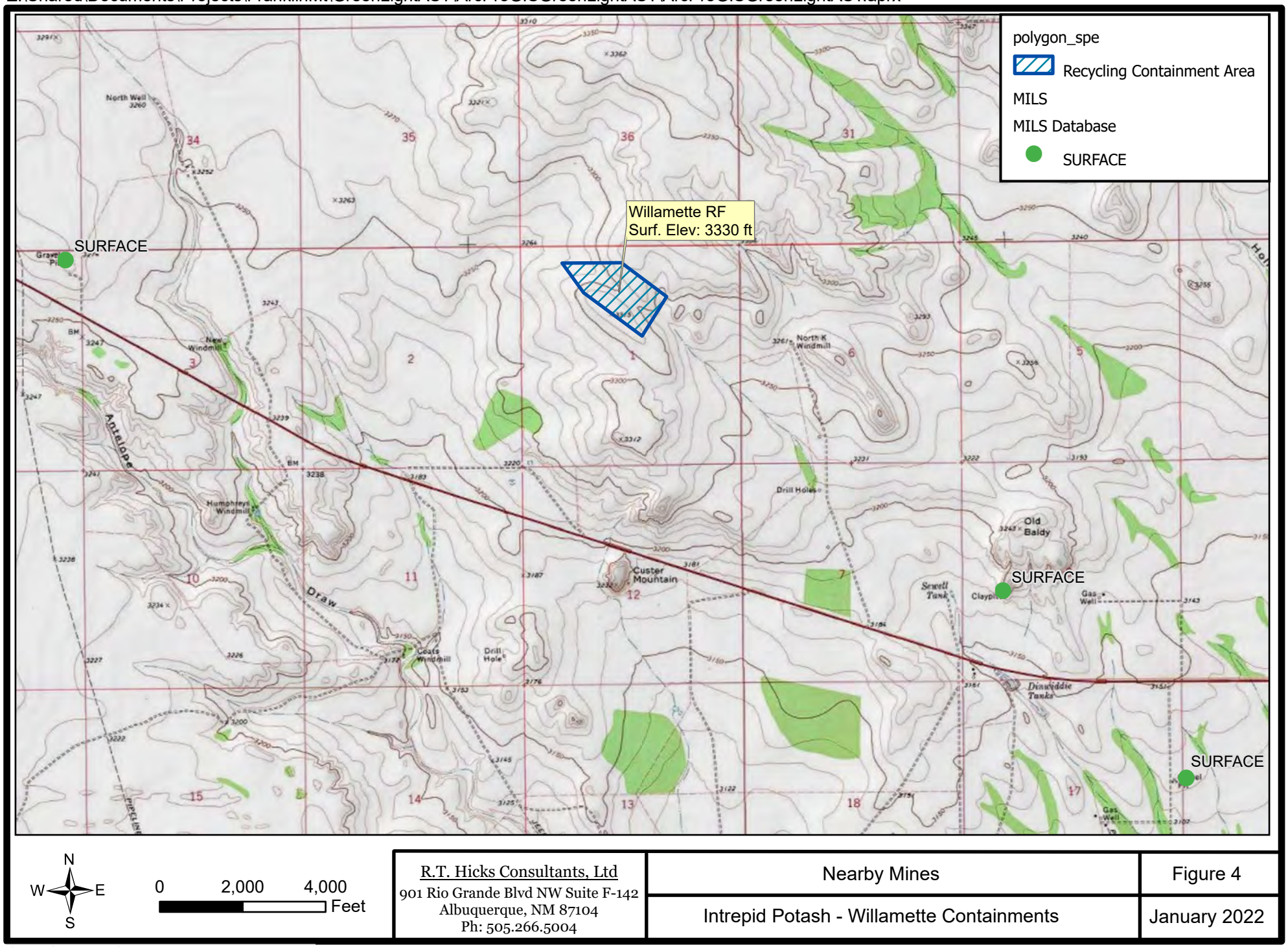

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW Suite F-142
Albuquerque, NM 87104
Ph: 505.266.5004

Nearby Mines

Figure 4

Intrepid Potash - Willamette Containments

January 2022

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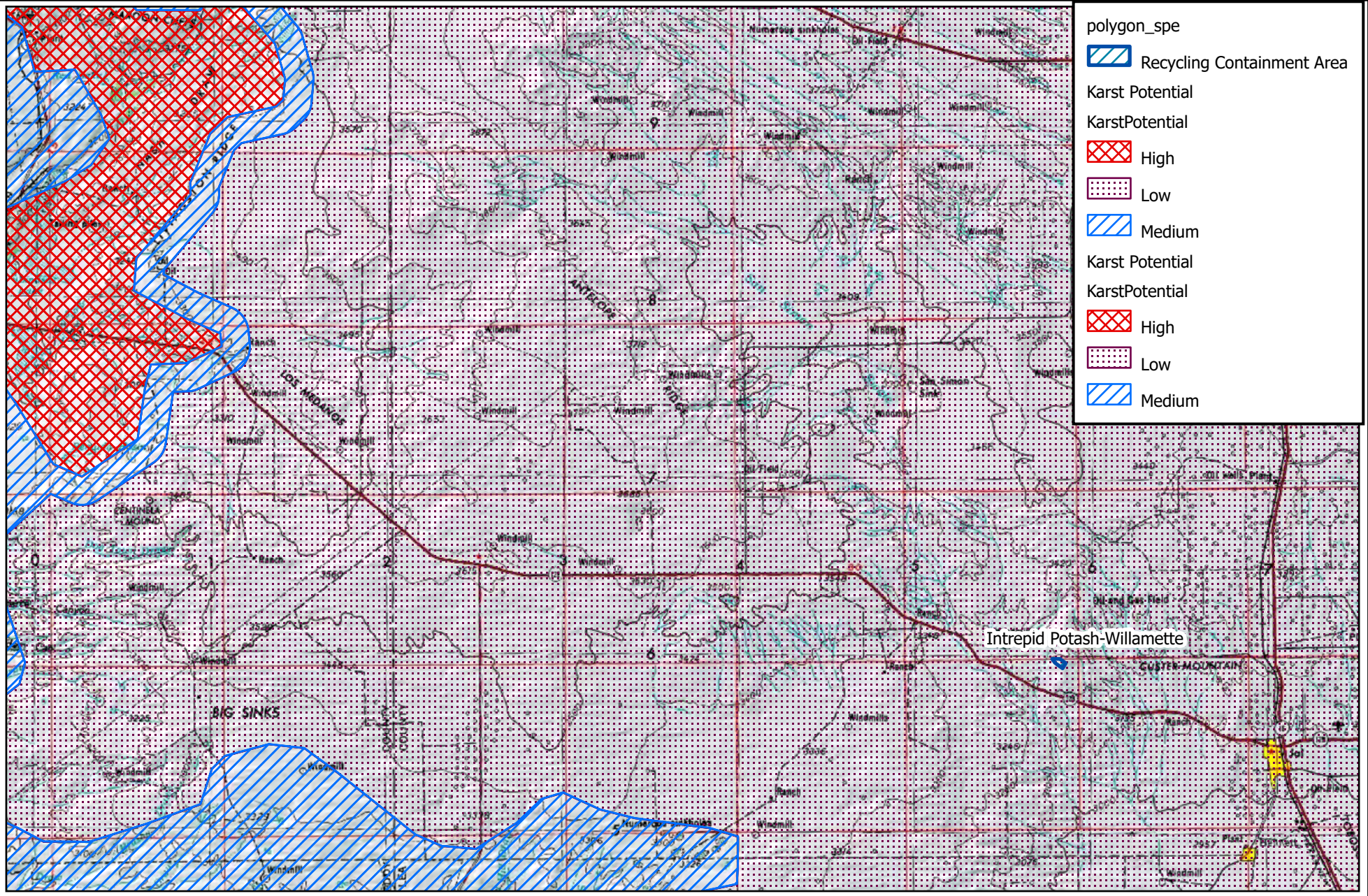

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	BLM Mapped Karst Potential Areas	Figure 5
	Intrepid Potash - Willamette Containments	January 2022

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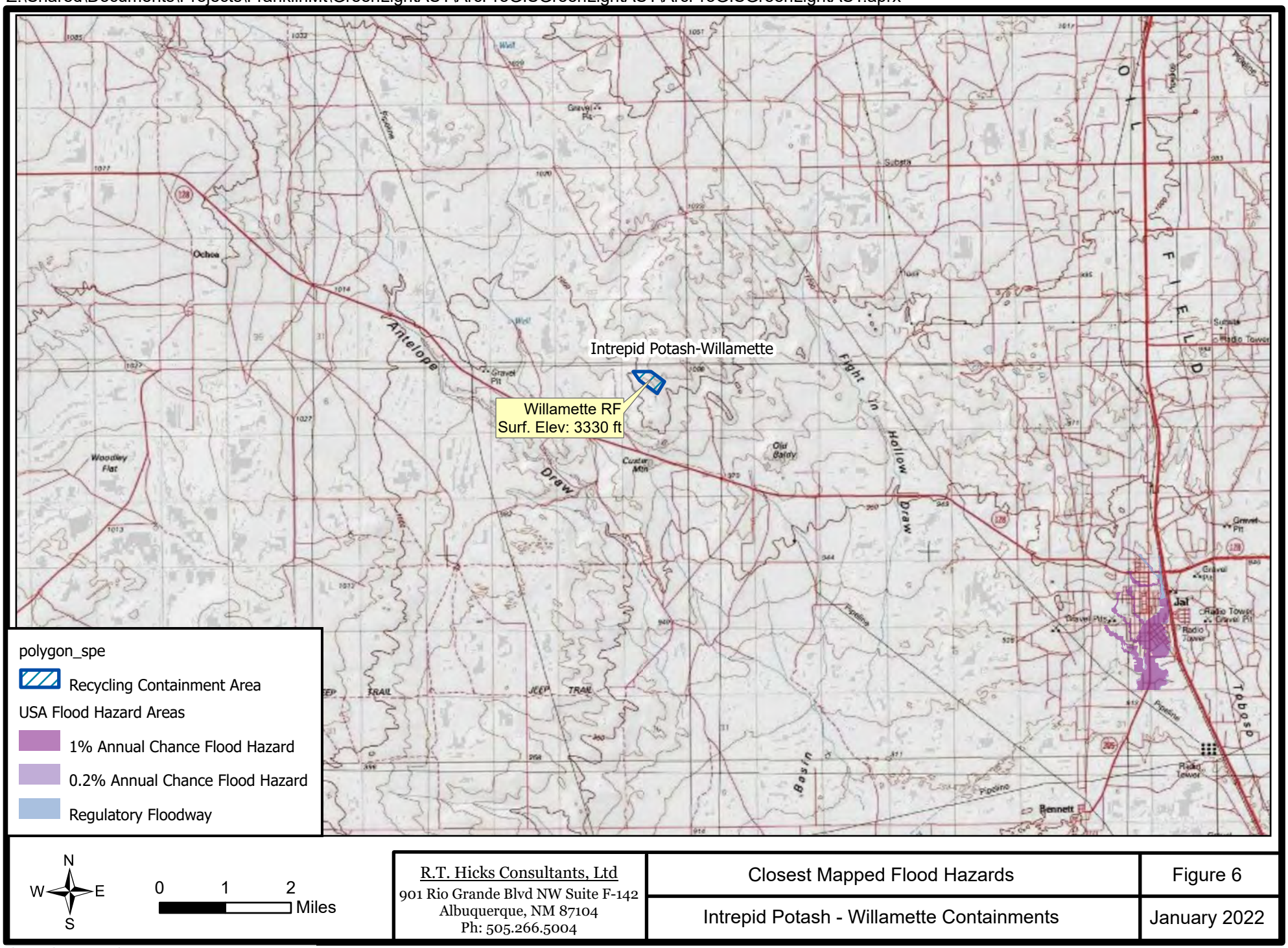

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Closest Mapped Flood Hazards	Figure 6
	Intrepid Potash - Willamette Containments	January 2022

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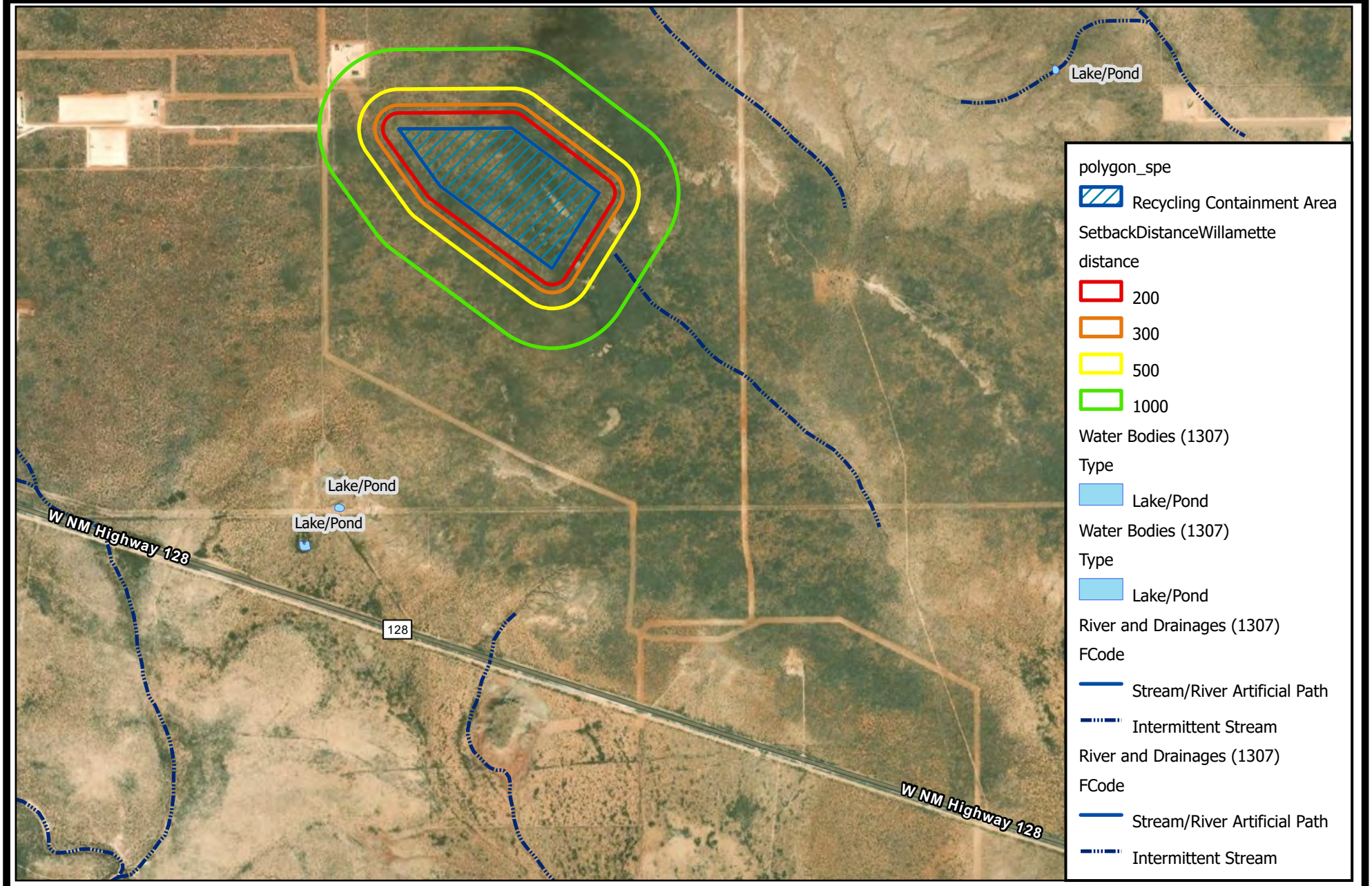

N
W E
S

0 1,000 2,000 Feet

R.T. Hicks Consultants, Ltd
901 Rio Grande Blvd NW Suite F-142
Albuquerque, NM 87104
Ph: 505.266.5004

Mapped Surface Water | Figure 7

Intrepid Potash - Willamette Containments | January 2022

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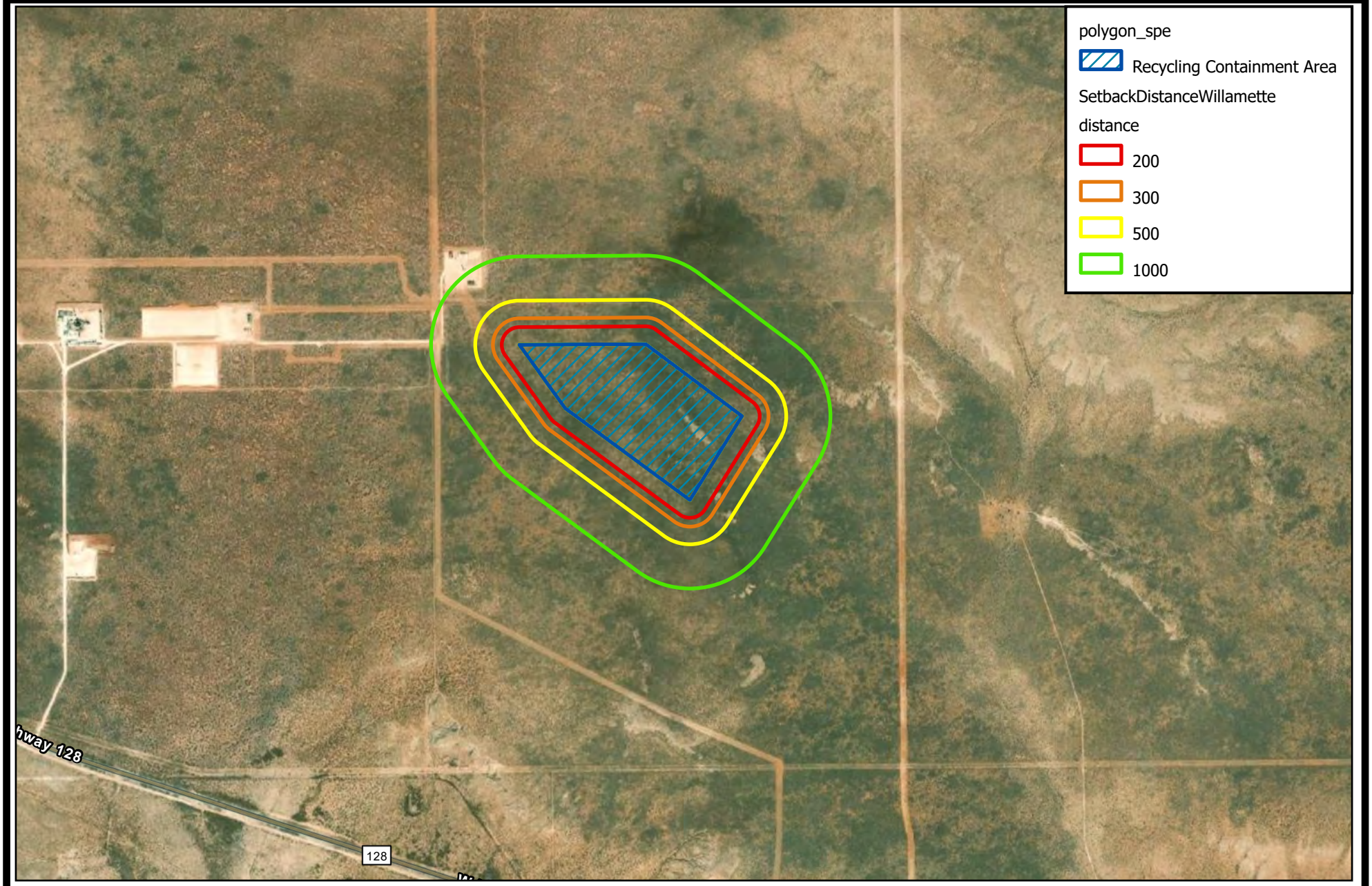

R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Nearby Structures	Figure 8
	Intrepid Potash - Willamette Containments	January 2022

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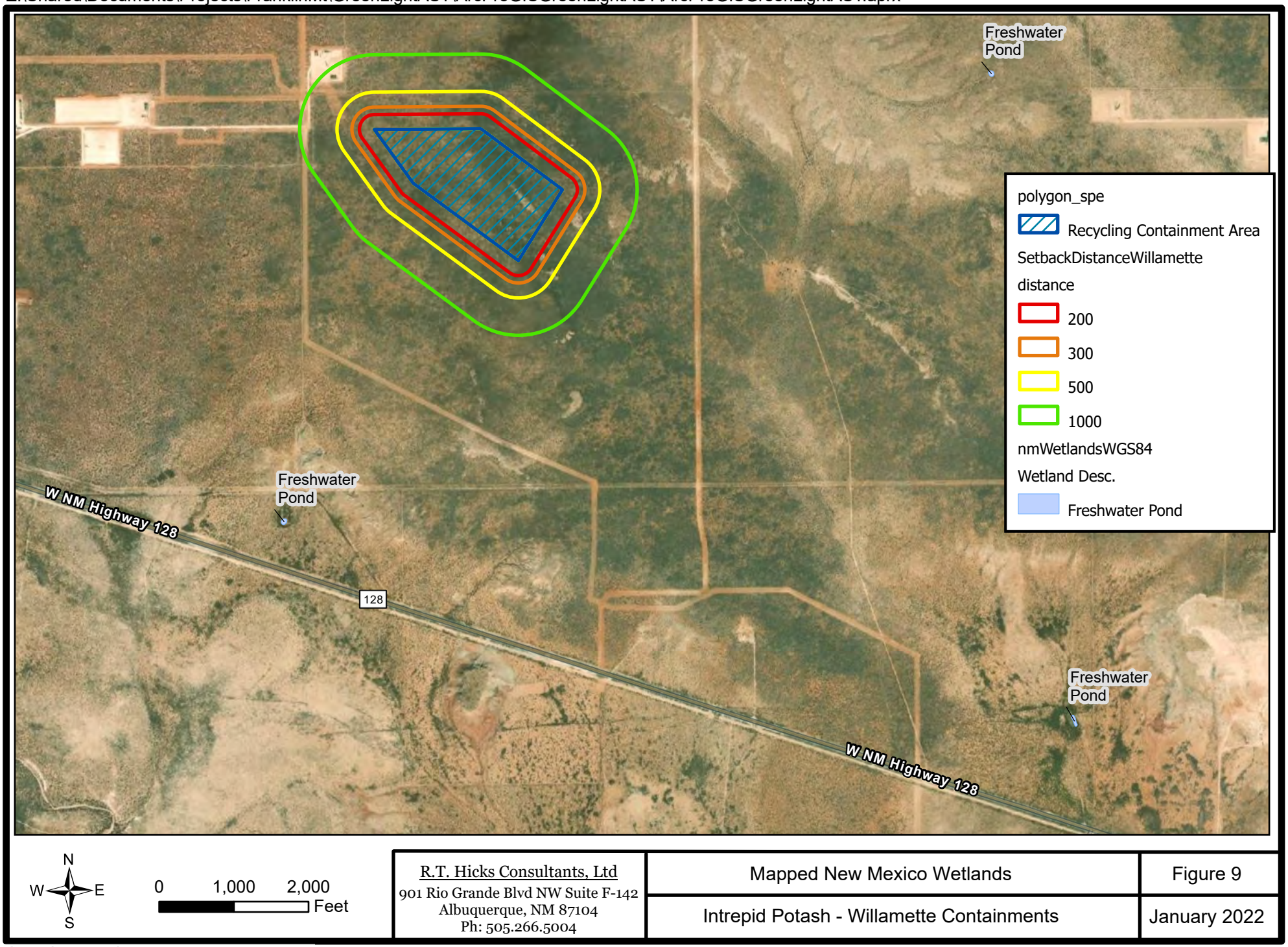
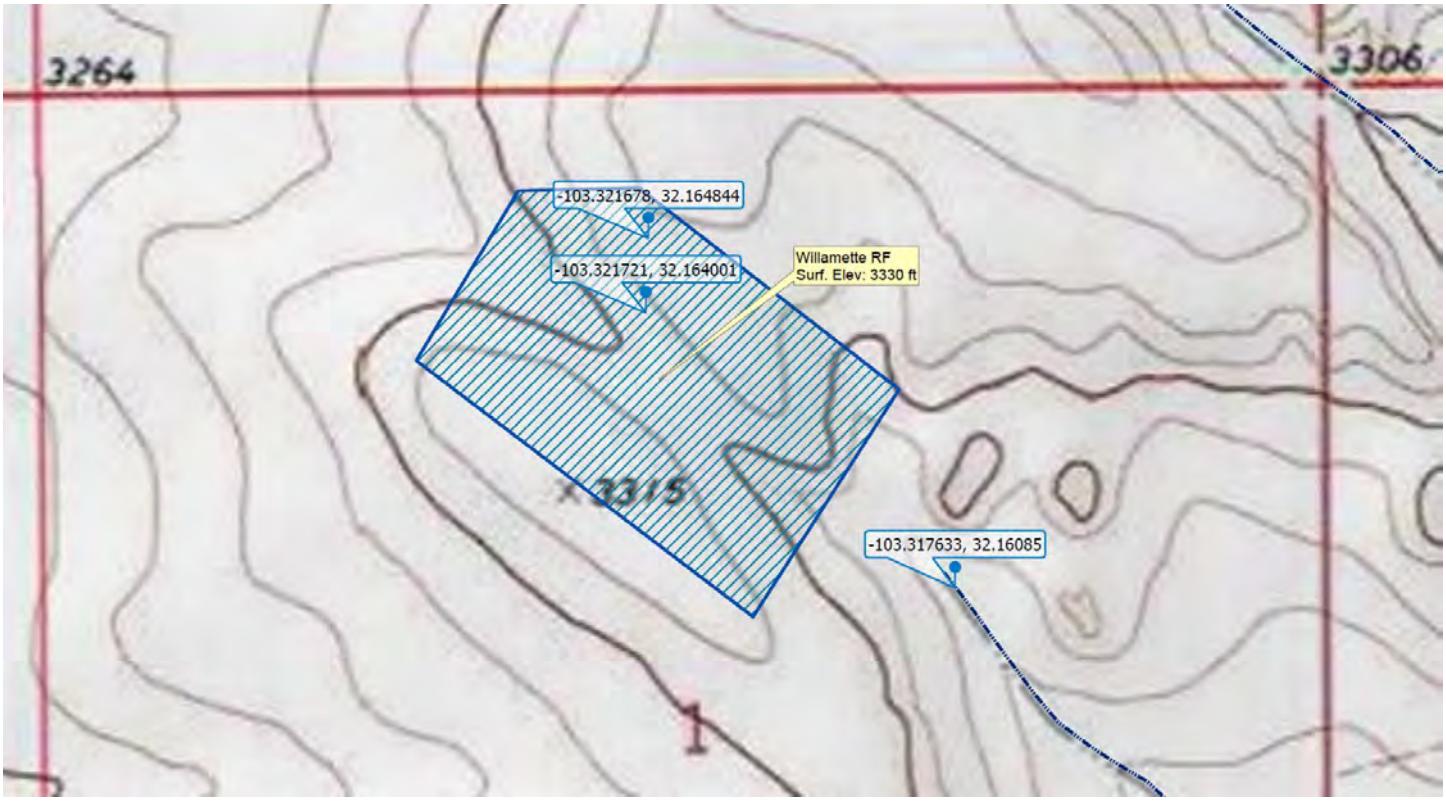


R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Mapped New Mexico Wetlands	Figure 9
	Intrepid Potash - Willamette Containments	January 2022

SITE PHOTOGRAPS

Willamette Recycling Area Site Photos



Location map for Figure

Figure 1 - View south from proposed gas line ROW at north central border of the proposed recycling facility. 32.164844 ,-103.321678

WILLAMETTE RECYCLING AREA SITE PHOTOS

Figure 2- View south from northwest quadrant of proposed recycling facility project area. This image is approximately300 feet due south and downhill of Figure 1. 32.164056, -103.321708

Figure 3 - View west from same location as Figure 1. Well pads are in the upper right corner of this image.

WILLAMETTE RECYCLING AREA SITE PHOTOS

Figure 4 - View northwest (uphill) from the northwestern extent of the mapped watercourse. 32.16085 , -103.31733

Figure 5 - View "downstream" showing nature of USGS mapped watercourse southeast of the proposed recycling facility area. No evidence of a defined channel, bed or bank. Location is same as above.

APPENDIX WELL LOGS

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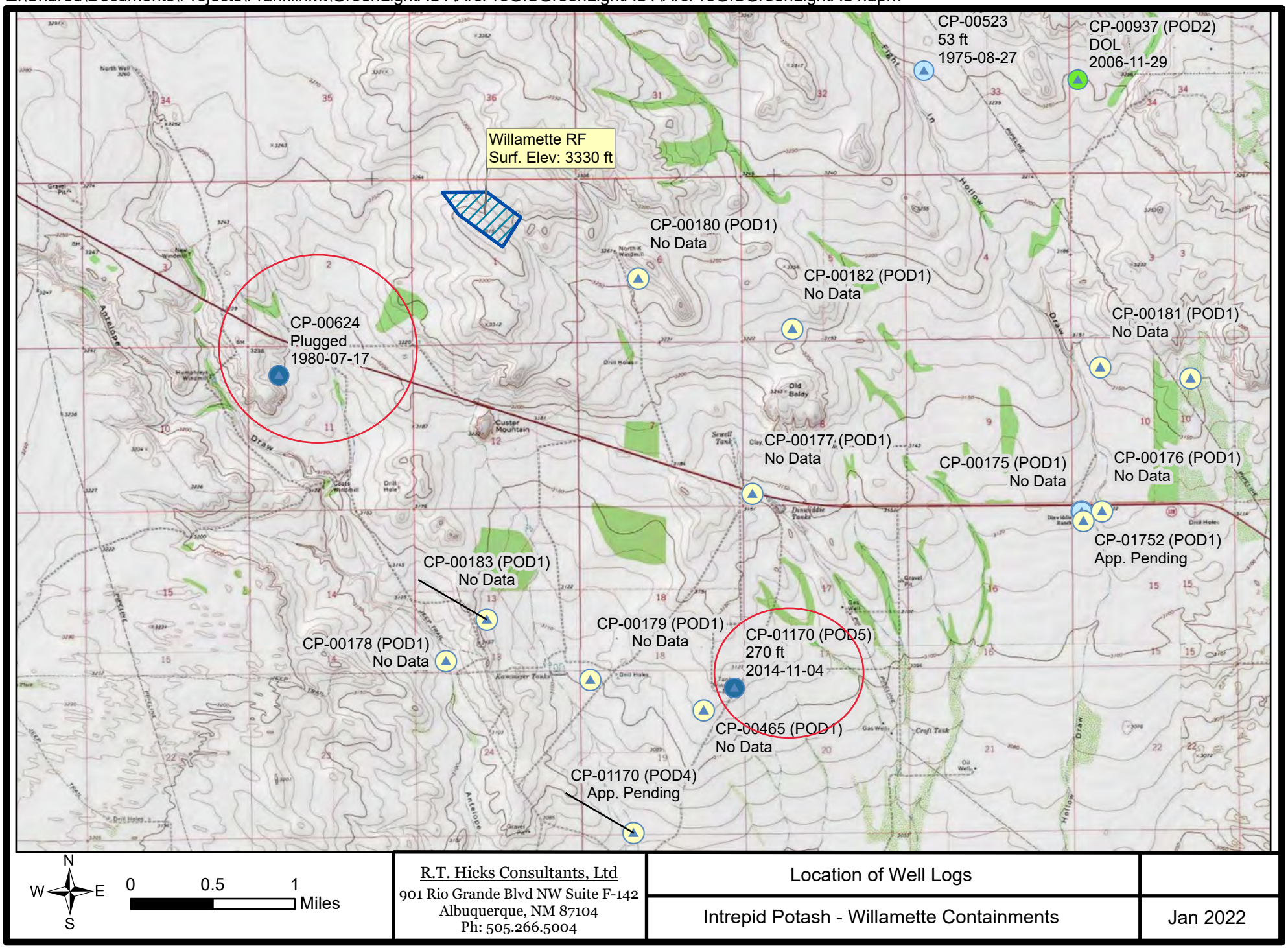


	Location of Well Logs	
R.T. Hicks Consultants, Ltd 901 Rio Grande Blvd NW Suite F-142 Albuquerque, NM 87104 Ph: 505.266.5004	Intrepid Potash - Willamette Containments	Jan 2022

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

OSE POD NUMBER (WELL NUMBER): 5	OSE FILE NUMBER(S): CP-1170
WELL OWNER NAME(S): Beckham Ranch Inc.	PHONE (OPTIONAL): 706-5659
WELL OWNER MAILING ADDRESS: 3904 Jesse James Ct	CITY: Carlsbad STATE: NM ZIP: 88220

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	32	07	16	N
LONGITUDE	103	17	51	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS – PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE

SE1/4, NE1/4, NE1/4, SECTION19, TOWNSHIP25S, RANGE36E

2. DRILLING & CASING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD-1607	LUIS A. (TONY) DURAN	DURAN DRILLING

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
10-28-14	11-04-14	506	505	270

COMPLETED WELL IS: ○ ARTESIAN ○ DRY HOLE ◉ SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT):

DRILLING FLUID: ○ AIR ○ MUD ADDITIVES – SPECIFY: DRILLING MUD

DRILLING METHOD: ◉ ROTARY ○ HAMMER ○ CABLE TOOL ○ OTHER – SPECIFY:

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
0	200	12	STEEL	STEEL PERF	8	1/4	-
200	505	12	STEEL PERF	STEEL	8	1/4	1/8

3. ANNULAR MATERIAL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT
0	20	12	20 BGS 80 LBS CEMENT		MIXER
20	505	12	32 YARDS 1/4 GRAVEL		

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
CP-1170	5	525599

25S.36E.19.2.2.4

Commercial

4. HYDROGEOLOGIC LOG OF WELL

DEPTH (feet bgl) FROM	DEPTH (feet bgl) TO	THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER-BEARING ZONES (gpm)
0	1	1	TOP SOIL	○ Y ◉ N	
1	2	1	CALICHE	○ Y ◉ N	
2	36	34	CLAY & ROCK MIX	○ Y ◉ N	
36	305	269	SAND	○ Y ◉ N	
305	320	15	CLAY	○ Y ◉ N	
320	335	15	ROCK & SAND MIX	◉ Y ○ N	17
335	365	30	ROCK & CLAY	○ Y ◉ N	
365	420	55	ROCK SAND MIX	◉ Y ○ N	8
420	454	34	CLAY	○ Y ◉ N	
454	463	9	SAND	◉ Y ○ N	10
463	502	39	CLAY	○ Y ◉ N	
502	505	3	RED BED	○ Y ◉ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	
				○ Y ○ N	

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: ○ PUMP ○ AIR LIFT ◉ BAILER ○ OTHER – SPECIFY:

TOTAL ESTIMATED WELL YIELD (gpm): 35

5. TEST; RIG SUPERVISION

WELL TEST — TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

MISCELLANEOUS INFORMATION:

PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE:
LUIS A. (TONY) DURAN

6. SIGNATURE

THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

Luis R. Duran Luis A. Duran — SIGNATURE OF DRILLER / PRINT SIGNEE NAME

11/04/14 — DATE

FOR OSE INTERNAL USE — WR-20 WELL RECORD & LOG (Version 06/08/2012)

FILE NUMBER	POD NUMBER	TRN NUMBER
CP-1170	5	525599

25S.36E.19.2.2.4

Revised June 1972

STATE ENGINEER OFFICE

WELL RECORD

FIELD FILE COPY

Section 1. GENERAL INFORMATION

(A) Owner of well Florida Oil and Gas Co. Owner's Well No. Reno Comm.# 1
Street or Post Office Address 900 Vaughn Bldg.
City and State Midland, Texas 79701

Well was drilled under Permit No. CP-624 and is located in the:
1200'FNL 1200'FWL
a. SE ¼ NW ¼ NW ¼ ¼ of Section 11 Township 25S Range 35E N.M.P.M.

b. Tract No. _____ of Map No. _____ of the _____

c. Lot No. _____ of Block No. _____ of the _____
Subdivision, recorded in Lea County.

d. X= _____ feet, Y= _____ feet, N.M. Coordinate System _____ Zone in the _____ Grant.

(B) Drilling Contractor Abbott Bros. License No. WD-46
Address P.O. Box 637, Hobbs, New Mexico 88240

Drilling Began 7/14/80 Completed 7/17/80 Type tools Cable Size of hole 8 in.

Elevation of land surface or _____ at well is _____ ft. Total depth of well 510 ft.

Completed well is [X] shallow [ ] artesian. Depth to water upon completion of well DRY HOLE ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	Depth in Feet To	Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
			DRY HOLE	

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet Top	Depth in Feet Bottom	Length (feet)	Type of Shoe	Perforations From	Perforations To

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement

Section 5. PLUGGING RECORD

Plugging Contractor Abbott Bros.
Address P.O. Box 637,Hobbs, New Mexico
Plugging Method Ruble,cement plug at top,covered w/dirt.
Date Well Plugged 7/17/80
Plugging approved by:

State Engineer Representative

No.	Depth in Feet Top	Depth in Feet Bottom	Cubic Feet of Cement
1			
2			
3			
4			

FOR USE OF STATE ENGINEER ONLY

Date Received July 23, 1980

Quad _____ FWL _____ FSL _____

File No. CP-624 Use OWD Location No. 25.35.11.11444

Section 6. LOG OF HOLE

Depth in Feet From	Depth in Feet To	Thickness in Feet	Color and Type of Material Encountered
0	110	110	Fine sand
110	190	80	Red clay
190	210	20	Blue clay
210	510	300	Red clay
			DRY HOLE

'80 JUL 22 AM 8 32

STATE ENGINEER OFFICE
ROSWELL, N. M.

Section 7. REMARKS AND ADDITIONAL INFORMATION

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

Murrell Abbott
Driller

H.B

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Engineer. All questions, except Section 5, shall be answered as completely and accurately as possible when any well is drilled for any purpose and is used as a plugging record, only Section 1(a) and Section 6 need be completed.

Venegas, Victoria, EMNRD

From: r@rthicksconsult.com
Sent: Tuesday, April 26, 2022 2:30 PM
To: Venegas, Victoria, EMNRD; 'Travis McBain'
Subject: [EXTERNAL] RE: 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931]

Ms. Venegas

The February 18, 2022 submission was a registration for Containments 1 and 2 only. Intrepid has not submitted a C-147 permit application for an AST Containment. We do request that you evaluate the Closure Cost Estimate that includes the future AST as this will allow the bond to be in-place prior to use of the AST. Intrepid has not yet selected a contractor to install the future AST.

When that permit application is provided to OCD for approval, we will provide the exact location of the AST within the recycling area identified in Volume 2 of the C-147 Registration.

I apologize for the confusion on this matter.

Thanks

Randall Hicks, PG
505-238-9515 (cell best number)
505-266-5004 (land line – no voice mail allowed)
901 Rio Grande Blvd. NW
Suite F-142
Albuquerque, NM 87104

From: Venegas, Victoria, EMNRD <Victoria.Venegas@state.nm.us>
Sent: Tuesday, April 26, 2022 2:11 PM
To: Travis McBain <travis.mcbain@intrepidpotash.com>; Randall Hicks <r@rthicksconsult.com>
Subject: 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931]

Please see below. Submit the documentation as soon as p[possible.
Thank you,

Victoria Venegas ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division

(575) 909-0269 | Victoria.Venegas@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Venegas, Victoria, EMNRD
Sent: Tuesday, April 12, 2022 2:13 PM
To: Travis McBain <travis.mcbain@intrepidpotash.com>; Randall Hicks <r@rthicksconsult.com>
Subject: RE: [EXTERNAL] Willamette

Good afternoon,
Application ID: 92847 for 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931] doesn't include the documentation specific for the AST containment, i.e., engineering drawings, liners, closure plan, variances, etc. Please submit the documentation as soon as possible.
Thank you,

Victoria Venegas • Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
(575) 909-0269 | Victoria.Venegas@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: Travis McBain <travis.mcbain@intrepidpotash.com>
Sent: Tuesday, April 12, 2022 11:24 AM
To: Randall Hicks <r@rthicksconsult.com>
Cc: Venegas, Victoria, EMNRD <Victoria.Venegas@state.nm.us>
Subject: Re: [EXTERNAL] Willamette

Randall is correct. One for produced water the other will be used for possible future projects.

Travis McBain, CPL
Director of Land/Business Development
INTREPID
707 17th Street, Suite 4200
Denver, CO 80202
C. 405.938.5411
travis.mcbain@intrepidpotash.com

On Apr 12, 2022, at 12:14 PM, Randall Hicks <r@rthicksconsult.com> wrote:

Ms. Venegas

I am handing this off to Travis McBain. Much of the time the drawings show 2 ASTs but only one is constructed for produced water and the second is either fresh water or a potential additional AST if required.

TRAVIS – what say ye?

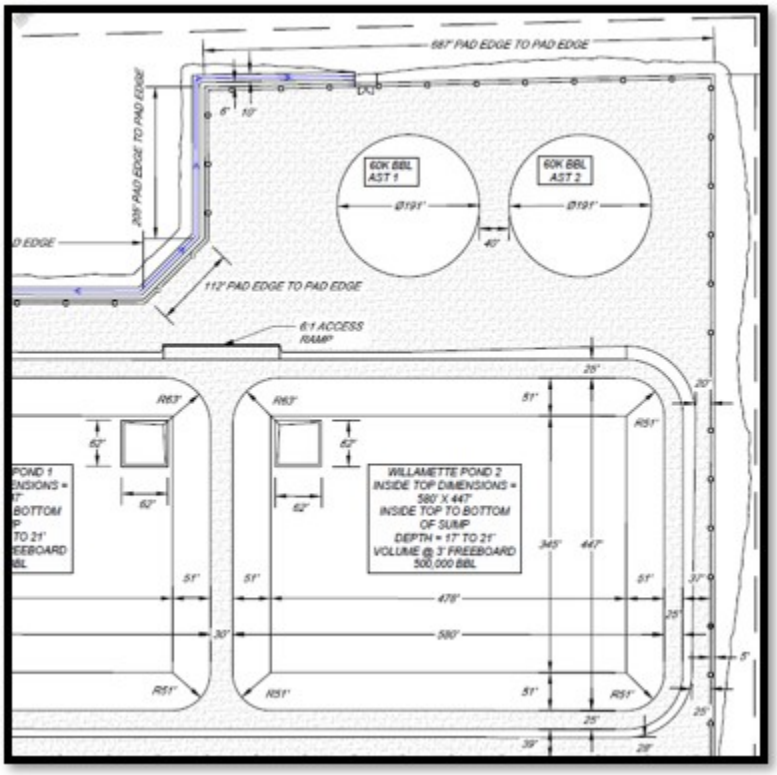
From APRIL 14-25 I WILL BE RELATIVELY UNAVAILABLE – PLEASE CONTACT DAVE HAMILTON, KRISTIN POPE OR LISA CROFT FOR ASSISTANCE. I will be on an island for a 30th Anniversary trip that was to happen in April 2020.

Randall T. Hicks PG
R.T.Hicks Consultants LTD
901 Rio Grande Blvd. NW F-142
Albuquerque, NM 87104

505-238-9515 (mobile and best contact)
505-266-5004 (office land line)

From: Venegas, Victoria, EMNRD <Victoria.Venegas@state.nm.us>
Sent: Tuesday, April 12, 2022 11:07 AM
To: r@rthicksconsult.com; travis.mcbain@intrepidpotash.com
Subject: RE: [EXTERNAL] Willamette

Good morning,
A quick clarification regarding the closure cost estimate; the engineering drawings show two 60k bbl ASTs as you can see here:



However the closure cost estimate letter mentions, explicitly, one AST for the Warrior Containment:

ITEM DESCRIPTION	UNITS	QTY	UNIT PRICE	Rule 34 TOTAL PRICE
Warrior AST				
Removal of AST and Liner Disposal	1	1	$30,000.00	$30,000.00
Assess soil for impacts	1	1	$2,500.00	$2,500.00
Re-grade and Reclaim Site	0	0	$16,000.00	$0.00
Misc. disposal and removal of fencing and cattle guards	1	1	$1,000.00	$1,000.00
Facility Decommision and Reclaim Site Subtotal:				**$33,500.00**

Prior to introducing produced water for recycling into the containments, Intrepid will secure a bond for at least ($759,200.00 + $33,500 + $5000 =) $797,700 and transmit the bond to OCD in Santa Fe.

Can you clarify the discrepancies? Are you planning one or two ASTs at this location?
Thanks,

Victoria Venegas ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
(575) 909-0269 | Victoria.Venegas@state.nm.us
http://www.emnrd.state.nm.us/OCD/

From: r@rthicksconsult.com <r@rthicksconsult.com>
Sent: Friday, March 18, 2022 3:05 PM
To: travis.mcbain@intrepidpotash.com
Cc: Venegas, Victoria, EMNRD <Victoria.Venegas@state.nm.us>
Subject: [EXTERNAL] Willamette

CAUTION: This email originated outside of our organization. Exercise caution prior to clicking on links or opening attachments.

Ms. Venegas

I attach the cost estimate for the Willamette Containments. Intrepid will upload shortly, probably early next week.

In the past, we would sometimes submit a cost estimate for a registration of a pond when the construction contractor was about ½ complete with the excavation. This allowed the contractor to provide the most accurate estimate based upon the conditions encountered.

If we wish to do that in the future, do we indicate that to OCD when we transmit the C-147 or is the need for the cost estimate a new policy to trigger OCD review?

Have a good weekend

Randall Hicks, PG
505-238-9515 (cell)
505-266-5004
901 Rio Grande Blvd. NW
Suite F-142
Albuquerque, NM 87104

Venegas, Victoria, EMNRD

From: Venegas, Victoria, EMNRD
Sent: Thursday, April 28, 2022 2:01 PM
To: 'Travis McBain'; r@rthicksconsult.com
Cc: Enviro, OCD, EMNRD
Subject: 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931]
Attachments: C-147. 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2.pdf

1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931]. Conditions of Approval.

NMOCD has reviewed the recycling containment permit application and related documents, submitted by [372681] INTREPID POTASH - NEW MEXICO, LLC on March 24, 2022, for 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931] in Unit Letter C, Section 01, Township 25S, Range 35E, Lea County, New Mexico.

The form C-147 and related documents 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931] is approved with the following conditions of approval:

- The purpose of this permit is for oil and gas activities regulated under the NMAC 19.15.34.3 STATUTORY AUTHORITY: 19.15.34 NMAC is adopted pursuant to the Oil and Gas Act, Paragraph (15) of Section 70-2-12(B) NMSA 1978, which authorizes the division to regulate the disposition of water produced or used in connection with the drilling for or producing of oil and gas or both and Paragraph (21) of Section 70-2-12(B) NMSA 1978 which authorizes the regulation of the disposition of nondomestic wastes from the exploration, development, production or storage of crude oil or natural gas.

- [372681] INTREPID POTASH - NEW MEXICO, LLC shall construct, operate, maintain, close, and reclaim 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931] in compliance with 19.15.34 NMAC.

- 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931 is approved for five years of operation from the date of permit application. 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931] permit expires on March 24, 2027. If [372681] INTREPID POTASH - NEW MEXICO, LLC wishes to extend operations past five years, an annual permit extension request must be submitted using an OCD form C-147 through OCD Online by February 24, 2027.

- [372681] INTREPID POTASH - NEW MEXICO, LLC cannot receive produced water in 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931] until after the original copy of the financial assurance has been accepted by NMOCD.

- Per Rule 19.15.34.15.A.(1) operators without existing financial assurance pursuant to 19.15.8 NMAC shall furnish financial assurance acceptable to the division in the amount of the recycling containment's estimated closure cost. The total closure cost estimate provided in the application in the amount of $797,700.00 for 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931] meets the requirements of NMAC 19.15.34.15.A.(1).

- If [372681 INTREPID POTASH - NEW MEXICO, LLC decides to add an AST containment to the facility, then [372681] INTREPID POTASH shall submit a C-147 Long Form with the box "Modification" checked and the appropriate documentation specific to the AST containment (*i.e*. Design and Construction Plan, Operations & Maintenance Plan and Closure Plan) via OCD Online. [372681] INTREPID POTASH - NEW MEXICO, LLC would need NMOCD approval prior to installing the future AST containment.

- The financial assurance bond should be mailed to the Oil Conservation Division; Bonding and Compliance; 1220 South St Frances Drive; Santa Fe, NM 87505. NMOCD will notify you when the bond has been received and approved.

- [372681] INTREPID POTASH - NEW MEXICO, LLC shall notify NMOCD when construction of 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931] commences.

- [372681] INTREPID POTASH - NEW MEXICO, LLC shall notify NMOCD when recycling operations commence and cease at 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931].

- A minimum of 3-feet freeboard must be maintained at 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931], at all times during operations.

- If less than 20% of the total fluid capacity is utilized every six months, beginning from the first withdrawal, operation of the facility is considered ceased and notification of cessation of operations should be sent electronically via OCD Online. An request to extend the cessation of operation, not to exceed six months, may be submitted using a C-147 form through OCD Online.

- [372681] INTREPID POTASH - NEW MEXICO, LLC shall submit monthly reports of recycling and reuse of produced water, drilling fluids, and liquid oil field waste on NMOCD form C-148 through OCD Online even if there is zero activity.

- [372681] INTREPID POTASH - NEW MEXICO, LLC shall comply with 19.15.29 NMAC Releases in the event of any release of produced water or other oil field wastes at 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931].

Please reference number 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931] in all future communications.
Regards,

Victoria Venegas ● Environmental Specialist
Environmental Bureau
EMNRD - Oil Conservation Division
(575) 909-0269 | Victoria.Venegas@state.nm.us
http://www.emnrd.state.nm.us/OCD/

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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-147
Revised April 3, 2017

Recycling Facility and/or Recycling Containment

Type of Facility: ☒ Recycling Facility ☒ Recycling Containment*

Type of action: ☐ Permit ☐ Registration ☐ Modification ☐ Extension ☐ Closure ☐ Other (explain) _____

*** At the time C-147 is submitted to the division for a Recycling Containment, a copy shall be provided to the surface owner.**

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: ___Intrepid Potash NM LLC_____(For multiple operators attach page with information) OGRID #:_ 372681____

Address: __ 2324 W. Peirce St. Carlsbad, NM 88220_____

Facility or well name (include API# if associated with a well): _Willamette Recycling Facility and Containments #1 and #2_____

OCD Permit Number: _____(For new facilities the permit number will be assigned by the district office)

1RF-482 FACILITY ID [fVV2210154931]

U/L or Qtr/Qtr _B, C, F, G_ Section ____1_____ Township ____25S___ Range __35E____ County: ___Lea_____

Surface Owner: ☐ Federal ☐ State ☒ Private ☐ Tribal Trust or Indian Allotment

2.

☐ **Recycling Facility:**

Location of recycling facility (if applicable): Latitude ___32.16369_____ Longitude ____-103.22212___Approx____ NAD83

Proposed Use: ☒ Drilling* ☒ Completion* ☒ Production* ☒ Plugging *

The re-use of produced water may NOT be used until fresh water zones are cased and cemented

☐ Other, ***requires permit for other uses. Describe use, process, testing, volume of produced water and ensure there will be no adverse impact on groundwater or surface water.***

☒ Fluid Storage

☒ Above ground tanks ☒ Recycling containment ☐ Activity permitted under 19.15.17 NMAC explain type_____

☐ Activity permitted under 19.15.36 NMAC explain type:_____ ☐ Other explain _____

☐ For multiple or additional recycling containments, attach design and location information of each containment

☐ **Closure Report (required within 60 days of closure completion):** ☐ Recycling Facility Closure Completion Date:_____

3.

☒ **Recycling Containment:** Willamette #1 and #2

☐ Annual Extension after initial 5 years (attach summary of monthly leak detection inspections for previous year)

Center of Recycling Containment (if applicable): Latitude _ ___32.163686_____ Longitude ____-103.2221180 Approx_____

NAD83

☐ For multiple or additional recycling containments, attach design and location information of each containment

☐ Lined ☐ Liner type: Thickness _See Engineering Drawings_____mil ☐ LLDPE ☒ HDPE ☐ PVC ☐ Other _____

☐ String-Reinforced

Liner Seams: ☒ Welded ☐ Factory ☐ Other _____ Volume: _See Drawings_____bbl Dimensions: L_____ x W_____ x D_____

☐ Recycling Containment Closure Completion Date:_____

4.

Bonding:

☐ Covered under bonding pursuant to 19.15.8 NMAC per 19.15.34.15(A)(2) NMAC **(These containments are limited to only the wells owned or operated by the owners of the containment.)**

☒ Bonding in accordance with 19.15.34.15(A)(1). Amount of bond $__SEE COST ESTIMATE____ **(work on these facilities cannot commence until bonding amounts are approved)**

☒ Attach closure cost estimate and documentation on how the closure cost was calculated.

5.

Fencing:

☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☒ Alternate. Please specify__Game Fence with option to install 4 strands barbed wire from -=0-4 feet if required by District Office_____

6.

Signs:

☒ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☐ Signed in compliance with 19.15.16.8 NMAC

7.

Variances:

Justifications and/or demonstrations that the proposed variance will afford reasonable protection against contamination of fresh water, human health, and the environment.

Check the below box only if a variance is requested:

☐ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval. If a Variance is requested, include the variance information on a separate page and attach it to the C-147 as part of the application.

If a Variance is requested, it must be approved prior to implementation.

8.

Siting Criteria for Recycling Containment

Instructions: The applicant must provide attachments that demonstrate compliance for each siting criteria below as part of the application. Potential examples of the siting attachment source material are provided below under each criteria.

General siting	
Ground water is less than 50 feet below the bottom of the Recycling Containment.	
NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells FIGURE 2	☐ Yes ☒ No ☐ NA
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. FIGURE 3 - Written confirmation or verification from the municipality; written approval obtained from the municipality	☐ Yes ☒ No ☐ NA
Within the area overlying a subsurface mine. FIGURE 4 - Written confirmation or verification or map from the NM EMNRD-Mining and Minerals Division	☐ Yes ☒ No
Within an unstable area. FIGURE 5 - 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 FIGURE 6	☐ Yes ☒ 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). FIGURE 7 - Topographic map; visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within 1000 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 FIGURE 8	☐ Yes ☒ No
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application. FIGURES 1 AND 7 - NM Office of the State Engineer - iWATERS database search; visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within 500 feet of a wetland. FIGURE 9 - US Fish and Wildlife Wetland Identification map; topographic map; visual inspection (certification) of the proposed site	☐ Yes ☒ No

9.
Recycling Facility and/or Containment Checklist:
Instructions: Each of the following items must be attached to the application. Indicate, by a check mark in the box, that the documents are attached.

- ☒ Design Plan - based upon the appropriate requirements.
- ☒ Operating and Maintenance Plan - based upon the appropriate requirements.
- ☒ Closure Plan - based upon the appropriate requirements.
- ☒ Site Specific Groundwater Data -
- ☒ Siting Criteria Compliance Demonstrations –
- ☒ **Certify that notice of the C-147 (only) has been sent to the surface owner(s)**

10.
Operator Application Certification:
I hereby certify that the information and attachments submitted with this application are true, accurate and complete to the best of my knowledge and belief.

Name (Print): Travis McBain Title: Director of Land/Business Development
Signature: Date: February 18, 2022
e-mail address: travis.mcbain@intrepidpotash.com Telephone: 405.938.5411

11.
OCD Representative Signature: Victoria Venegas **Approval Date:** 04/28/2022

Title: Environmental Specialist **OCD Permit Number:** 1RF-482 FACILITY ID [fVV2210154931]

☒ OCD Conditions
☒ Additional OCD Conditions on Attachment

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 92847

CONDITIONS

Operator: INTREPID POTASH - NEW MEXICO, LLC 210 Red Cloud Road Carlsbad, NM 88220	OGRID: 372681
	Action Number: 92847
	Action Type: [C-147] Water Recycle Long (C-147L)

CONDITIONS

Created By	Condition	Condition Date
vvenegas	NMOCD has reviewed an approved the recycling containment permit application and related documents, submitted by [372681] INTREPID POTASH - NEW MEXICO, LLC on March 24, 2022, for 1RF-482 - WILLAMETTE RECYCLING FACILITY AND CONTAINMENTS #1 & #2 FACILITY ID [fVV2210154931] in Unit Letter C, Section 01, Township 25S, Range 35E, Lea County, New Mexico.	4/28/2022