




MINERALS PROGRAM INSPECTION REPORT
PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME: Bennett Pit	MINE/PROSPECTING ID#: M-2016-085	MINERAL: Sand and gravel	COUNTY: Weld
INSPECTION TYPE: Monitoring	INSPECTOR(S): Peter Hays	INSP. DATE: November 30, 2021	INSP. TIME: 09:30
OPERATOR: Northern Colorado Constructors	OPERATOR REPRESENTATIVE: Chris Zadel	TYPE OF OPERATION: 112c - Construction Regular Operation	
REASON FOR INSPECTION: Citizen Complaint	BOND CALCULATION TYPE: Partial Bond	BOND AMOUNT: \$1,556,607.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: January 12, 2022	

GENERAL INSPECTION TOPICS

This list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each. No problems or possible violations were noted during the inspection. The mine operation was found to be in full compliance with Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials and/or for Hard Rock, Metal and Designated Mining Operations. Any person engaged in any mining operation shall notify the office of any failure or imminent failure, as soon as reasonably practicable after such person has knowledge of such condition or of any impoundment, embankment, or slope that poses a reasonable potential for danger to any persons or property or to the environment; or any environmental protection facility designed to contain or control chemicals or waste which are acid or toxic-forming, as identified in the permit.

(AR) RECORDS----- <u>Y</u>	(FN) FINANCIAL WARRANTY----- <u>Y</u>	(RD) ROADS----- <u>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(EX) EXPLOSIVES----- <u>N</u>
(PW) PROCESSING WASTE/TAILING---- <u>N</u>	(SF) PROCESSING FACILITIES----- <u>Y</u>	(TS) TOPSOIL----- <u>Y</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE----- <u>N</u>	(RV) REVEGETATION---- <u>N</u>
(SM) SIGNS AND MARKERS----- <u>Y</u>	(SP) STORM WATER MGT PLAN---- <u>N</u>	(RS) RECL PLAN/COMP-- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(ST) STIPULATIONS----- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>N</u>	(OD) OFF-SITE DAMAGE----- <u>N</u>	

Y = Inspected / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

OBSERVATIONS

The Bennett Pit was inspected by Peter Hays with the Division of Reclamation, Mining and Safety (Division/DRMS) in response to a citizen complaint (CT-02) received on November 9, 2021 from Mr. Jerry Regan on behalf of Mr. Fred Karlik. The complaint email was forwarded to the Operator on November 10, 2021. A copy of the complaint email is attached for reference. A map based on the latest available image from Google Earth Pro and the observations from this inspection is attached for reference.

The Karlik property is located at 11170 County Road 22.5, Fort Lupton, CO 80621. The property is located approximately 1000 feet southwest of the southeast permit boundary for the Bennett Pit.

Mr. Chris Zadel with Northern Colorado Constructors, Inc. (NCCI) and Mr. Fred Karlik, landowner, were present during the inspection.

The complaint email submitted by Mr. Regan requested the Division investigate the mysterious volume of water in the northwest corner of the Karlik property. The complaint form proposed the slurry wall was never installed or improperly installed preventing water from escaping the mining operation and leaching into the neighboring properties. Photographs of the field in the northeast corner of Mr. Karlik's property under several inches of water were submitted with the complaint.

The Division contacted Mr. Karlik via phone to arrange the inspection on November 29, 2021. During the conversation and during the inspection, Mr. Karlik stated the field located southeast of his residence was also flooded from July until early November and cracks had recently appeared inside the foundation of the residence.

The focus of this inspection was to investigate the concerns detailed in the complaint. The complaint investigation included observation of the Karlik field near the residence, the residential foundation and the field located in the northeast corner of Mr. Karlik's property. The Karlik property consists primarily of a well-vegetated wetlands with a residence, out-building, a lawn and a field. The vegetation in the wetlands consisted of well-established trees, grasses and wetland species. The field near the residence and the field in the northeast corner of the property were saturated and appeared to have had standing water on them recently based on the appearance of the vegetation.

The Division investigated and considered several possible causes of the water on the Karlik property at the residence and in the northeast corner including; a fracking waterline, groundwater mounding from the slurry wall, a plugged culvert, an irrigation ditch and flood irrigation upgradient of the Karlik property.

The following elevations of the relevant structures are based on cross-sections from Goggle Earth.

Elevations:

Karlik Residence	4841'
Brugger Residence	4842'
MW-RS	4839'
Plugged Culvert	4837'
Karlik Northeast Field	4841'
JT-BH-17	4840'

Fracking water pipeline:

A fracking water pipeline is located south of CR 22.5 on the northern boundary of the Karlik property. Mr. Karlik stated the pipeline was repaired several years ago due to a leak in the pipeline. The photographs submitted with the complaint were located near the vault box for the pipeline in the northeast corner of the Karlik property. The Division was unable to determine if the pipeline was active at the time of the inspection, however if the pipeline is leaking and was recently shutdown this could explain the water in the northwest corner of the property and the water receding recently. The Division believes the pipeline could be a possible cause of the water in the northwest corner of the Karlik property. The Division recommends Mr. Karlik contacts the pipeline owner to investigate a possible leak in the pipeline.

Slurry Wall impacts:

The slurry walls around the perimeters of the North and South mining cells were completed in early 2021. The Operator submitted a slurry wall assessment report by McGrane Water Engineering, LLC revised on October 12, 2017 with the permit application. The report predicted a 1 foot increase in the groundwater elevation in the location of the Karlik property. A copy of Figure A6 - Change in Water Levels with Pit from the report is attached for reference. A one-foot increase in the groundwater elevation would not result in the flooded conditions submitted with the complaint, based on the elevation data from Goggle Earth.

The groundwater level immediately outside of the slurry wall in the southwest corner was predicted to increase by 1.5 feet. The groundwater monitoring well in this area is JT-BH-17. The monthly groundwater data collected by the Operator supports the general 2 foot seasonal groundwater elevation prediction in the McGrane report. The monitoring data has not indicated the predicted 1.5 foot groundwater increase due to mounding affects from the slurry wall to date.

Groundwater Monitoring:

The Operator has been collecting groundwater elevation data at the site since 2017. A copy of the most recent groundwater data was provided by the Operator following the inspection. The closest monitoring well to the northeast corner of the Karlik property is JT-BH-17. The closest monitoring well to the Karlik residence and the plugged culvert is MW-RS. The monitoring data for the monitoring wells from June 2021 to December 2021 is shown below.

JT-BH-17 Data Table

Date	Depth to Groundwater from Top of Well (ft)	Depth to Groundwater from Ground (ft)	Elevation of Groundwater (ft)
June 16, 2021	6.08	3.75	4837.46
July 7, 2021	5.92	3.59	4837.62
July 21, 2021	5.83	3.50	4837.71
August 5, 2021	5.75	3.42	4837.79
August 17, 2021	5.92	3.59	4837.62
September 10, 2021	6.25	3.92	4837.29
September 21, 2021	6.17	3.84	4837.37
October 6, 2021	6.08	3.75	4837.46
October 21, 2021	5.92	3.59	4837.62
November 10, 2021	5.92	3.59	4837.62

November 23, 2021	6.08	3.75	4837.46
December 6, 2021	6.00	3.67	4837.54

The yellow highlighted elevation indicates the highest recorded groundwater elevation for the timeframe.

The data indicates an increase in the groundwater elevation from 3.75 feet below ground elevation in June 2021 to 3.67 feet in December 2021, an increase of 0.08 feet. The McGrane groundwater model predicted an increase of up to 1.5 feet, which does not appear to be indicated by the monitoring well data. Additionally, the maximum groundwater elevation was recorded at 4837.79 in August 2021. The groundwater elevation is below the elevation of the Karlik's properties northeast corner at 4841' and well under the predicted 2 foot seasonal fluctuation in the McGrane report.

MW-RS Data Table

Date	Depth to Groundwater from Top of Well (ft)	Depth to Groundwater from Ground (ft)	Elevation of Groundwater (ft)
June 16, 2021	5.92	2.77	4837.28
July 7, 2021	5.58	2.43	4837.62
July 21, 2021	5.42	2.27	4837.78
August 5, 2021	5.25	2.10	4837.95
August 17, 2021	5.00	1.85	4838.20
September 10, 2021	4.75	1.60	4838.45
September 21, 2021	4.58	1.43	4838.62
October 6, 2021	4.50	1.35	4838.70
October 21, 2021	4.25	1.10	4838.95
November 10, 2021	5.08	1.93	4838.12
November 23, 2021	5.25	2.10	4837.95
December 6, 2021	5.67	2.52	4837.53

The yellow highlighted elevation indicates the highest recorded groundwater elevation for the timeframe.

The data indicates an increase in the groundwater elevation from 2.77 feet below ground elevation in June 2021 to 1.10 feet in October 21, 2021, an increase of 1.67 feet. The increase in groundwater elevation could be contributed to the plugged culvert, however the maximum groundwater elevation was recorded at 4838.95', which is below the elevation of the Karlik's residence at 4841' and within the predicted 2 foot seasonal fluctuation in the McGrane report. The Division does not believe a plugged 24" culvert located approximately 2,000 feet from the Karlik residence could backup enough water to affect the Karlik residence without affects to the properties located between the culvert and the Karlik residence, which were not reported.

Brugger Property:

During the inspection with the Operator, Mr. Brugger drove by and asked what we were doing in front of his property while we were on CR 22.5. The Brugger property is located north of the Karlik property on the north side of CR 22.5. The Operator informed Mr. Brugger of the Karlik complaint and asked if he had experienced high water elevations on his property. Mr. Brugger stated he did not have standing water on his property over the summer. Based on the elevation data from Google Earth, the Brugger property is one foot higher in

elevation (4842') than the Karlik property (4841'). The culvert under CR 22.5 from the Karlik to the Brugger properties was observed during the inspection. The culvert was clear and appeared to be functioning properly. No erosion features were observed at the inlet or outlet of the culvert.

Fresh Water Pond:

The fresh water pond for the processing plant is located outside of the slurry wall and near monitoring well JT-BH-17. If groundwater elevations were raised due to groundwater mounding from the slurry wall the impacts would be greatest in the location of the pond based on the McGrane report. The Operator stated no additional water was observed in the pond. A high water drainage pipe was observed in the pond during the inspection. If the water level increased the water would discharge through the pipe to prevent overtopping of the pond, which has not occurred according to the Operator.

Plugged Culvert:

After the Division notified the Operator of the complaint, the Operator conducted an inspection of the culvert under the road to the oil and gas facility located west of the processing plant. The culvert was discovered to be plugged. The Operator unplugged the culvert and noticed a reduction if the water level upgradient of the culvert. During the inspection, water staining on cattails located in the pond upgradient of the culvert was observed. The Division was unable to determine if the staining was due to seasonal groundwater elevation fluctuation or due to the plugged culvert increasing the water elevation. Similar cattail staining was observed in the pond on the Brugger property which could indicate the staining was due to seasonal groundwater fluctuations and not the plugged culvert.

The diameter of the culvert was estimated at 24" in diameter. The culvert was clear and appeared to be working property at the time of the inspection. The plugged culvert was not related to the mining activities at the site, since the source of the water, sediment and any debris is from the slough which runs through the Karlik and Brugger properties and no mining activities occur in the slough. No evidence of the oil and gas road overtopping with water was observed during the inspection. The culvert is located 2,000 feet from the Karlik residence. The Division does not believe the plugged culvert could backup enough water to cause the flooding on the Karlik property.

Irrigation Ditch:

An irrigation ditch is located southwest and west of the Karlik property. During a previous complaint investigation by the Division for the Lousberg property located west of the Bennett Pit, the Division observed water leaking from the base of the irrigation ditch embankment. The same irrigation ditch runs along the southwest and west sides of the Karlik residence. The ditch was not running during the inspection. The Division believes the irrigation ditch could be contributing to the increased groundwater elevation adjacent to the Karlik residence based on the observations from the Lousberg property. The timeframe for the irrigation ditch operating during the summer and being shut down in the fall would also support the timeframe for the water on the Karlik residence field.

Downgradient Flood Irrigation:

A flood irrigated field is located approximately 1500' south of the Karlik property at an elevation of 4858'. The presence of the flood irrigation upgradient of the Karlik property could increase the groundwater elevation on the Karlik property due to the higher elevation of the property relative to the Karlik property.

Foundation Cracking:

The Division does not have any evidence the foundation cracking occurred within the timeframe of the complaint. The cracking appeared to be typical of foundation settling, but did not appear to disrupt the function of the door and windows in the basement.

Conclusion:

The Division does not believe sufficient evidence exists to conclude the mining operation caused the ponding water on the Karlik property based on:

- the presence of establish wetland vegetation on the Karlik property, indicating typical high groundwater elevations
- the presence of the slough which runs through the Karlik property, transporting water from south to north
- the previously observed leaking irrigation ditch located west and southwest of the Karlik property
- the possible leaking fracking water pipeline
- the flood irrigation occurring upgradient of the Karlik property
- the distance of the non-mining related plugged culvert from the Karlik property
- the highest groundwater monitoring data collected by the Operator indicating the maximum groundwater elevations in two monitoring well were below the elevation of the Karlik property

The Division recommends the landowner does not wait five months to report flooded conditions on their property and to contact the Division as soon as possible if the flooded conditions return next summer.

The Division will continue to require the Operator to collect and report the groundwater elevation data to the Division with the annual reports. Additionally, the Division will require the Operator to conduct inspections of the culvert under the road to the oil and gas facility.

Photographs taken during the inspection are attached. If you need additional information or have any questions, please contact me at the Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at 303.866.3567 x 8124, or by email at peter.hays@state.co.us.

Inspection Contact Address

Chris Zadel
Northern Colorado Constructors
9075 Weld County Road 10
Fort Lupton, CO 80621

Enclosures – Complaint Email, Inspection Map, McGrane Map

Ec: Jared Ebert; DRMS
Jerry Regan at jerrywregan1@gmail.com

PHOTOGRAPHS



View of Karlik field looking south



View of foundation crack above basement window



View of foundation crack above basement door



View of fracking water pipeline vault box located in the northeast corner of the Karlik property



View of vegetation in the northeast corner of the Karlik property



View of the culvert inlet under CR 22.5 from the Karlik to Brugger properties



View of the culvert outlet under CR 22.5 from the Karlik to Brugger properties



View of the pond on the Brugger property with water staining on the cattails



View of the oil and gas road culvert inlet



View of the oil and gas road culvert outlet

**STATE OF
COLORADO****Ebert - DNR, Jared <jared.ebert@state.co.us>**

Water on private property

Jerry Regan <jerrywregan1@gmail.com>

Tue, Nov 9, 2021 at 7:53 PM

To: jared.ebert@state.co.us

Cc: Fred Karlik <ridgedmechanical@gmail.com>

Jared,

Thanks for taking my call yesterday and for offering to investigate this mysterious volume of water. During most of this past "dry" Colorado summer a strange and large volume of water began appearing on the Northwest corner of my client's property in Weld County. I am hopeful you can help us determine where and how the water entered his property. The attached photos will support our claim. It should be noted that the water appears to be receding but the mystery remains, where did the water come from?

The property owner is Fred Karlik. Mr. Karlik is my client. The property is located at 11170 County Road 22.5, Fort Lupton, CO 80621; legal S12 T2N R67W 6th PM, Lot 8 tract 2353.

Immediately across CR22.5 is a gravel mining operation which we think is owned by Northern Colorado Construction. We have found no evidence of a permit posted anywhere on NCC property. An earlier tract map of the vicinity shows the gravel mining operation owned by Pioneer (See attached tract map).

One possible explanation is that a suitable slurry line was never installed or improperly installed to prevent water from escaping the mining operation and leaching into neighboring properties. To my knowledge, Fred's property is the only one affected by this water. As you can see in the attached photos his access road at the Northwest corner was flooded and impassable.

Please contact Fred (phone 720-334-6868) before you inspect this claim so that he can shed additional light on this mystery. My contact information is listed below.

Thank you in advance for investigating this situation.

Jerry W. Regan
Contract Land Agent
2914 Softwind Dr.
Sierra Vista, AZ 85650
(cell) 303-378-5252
jerrywregan1@gmail.com

5 attachments



image0.jpeg
178K

image2.jpeg
145K



image1.jpeg
166K



image3.jpeg
197K

 **SCAN0000.PDF**
386K





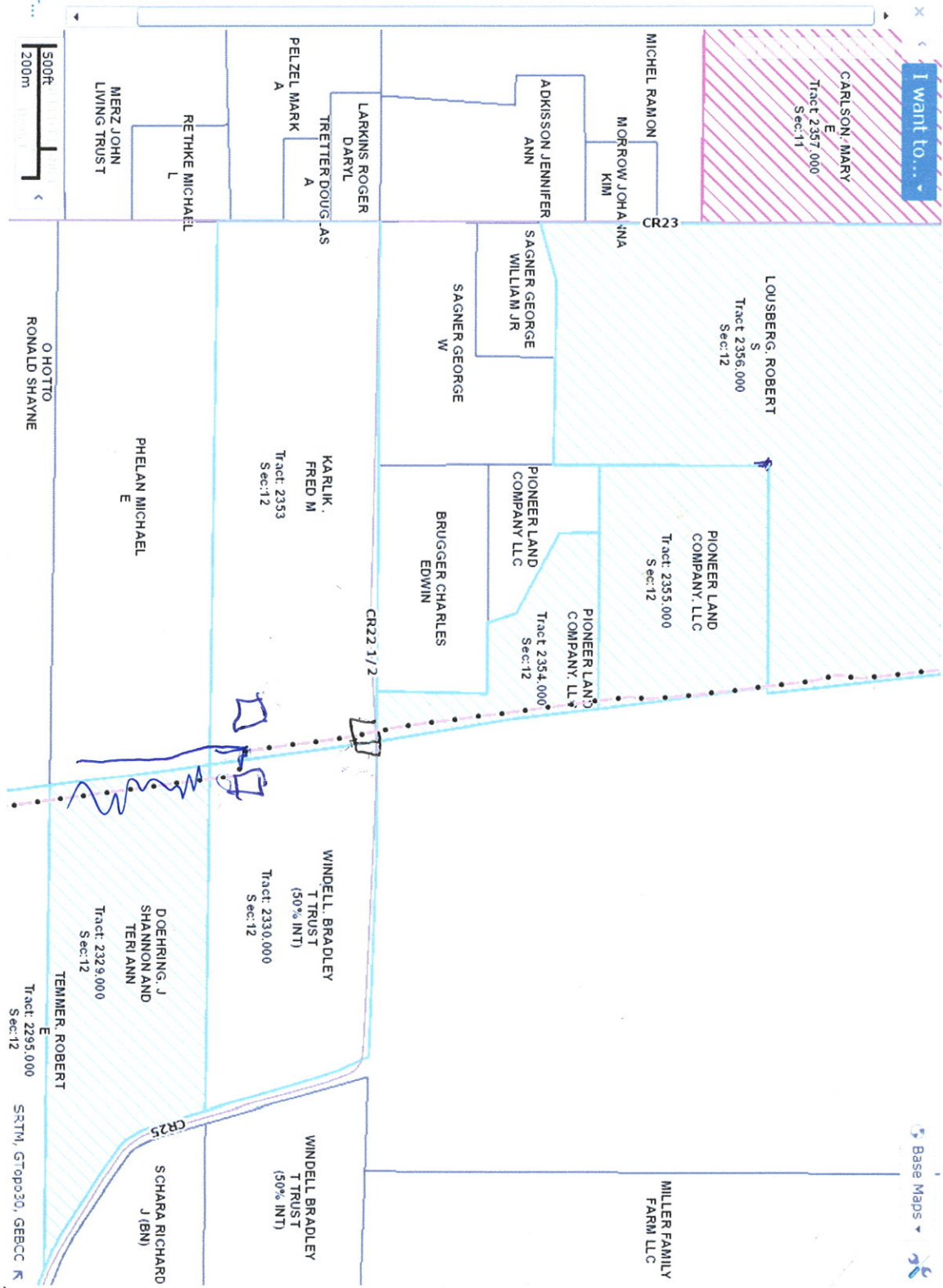


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Map Layers

- ☒ Operational Layers
 - ☒ DJNO As_built
 - ☒ STOR As_built
 - ☒ DJNO Engineering
 - ☒ STOR Engineering
 - ☒ Transportation
 - ☒ Transporation
 - ☒ SBPIL_land
 - ☐ Restrictions
 - ☐ Options
 - ☐ Easements
- ☒ Permission to Survey
 - ☒ Permission to Survey Labels (On Cente
 - ☒ Permission to Survey (On Center Line)
 - ☐ Permission to Survey Labels (Off Cente
 - ☐ Permission to Survey (Off Center Line)
- ☒ Parcels
 - ☒ DCP_pipeline
 - ☒ Suncor Crude Line
 - ☒ SBPIL_CO_Wetlands
 - ☒ SBPIL_BaseMap
 - ☒ SBPIL_Population
 - ☒ SBPIL_PLSS
- ☐ Base Maps
- ☒ World Imagery (Map Service)



Tim

Bennett Pit

M-2016-085

November 30, 2021 CT-02 Inspection Map

Legend

- Approx. Location of Slurry Wall
- Bennett Pit
- Bennett Pit Boundary
- Brugger Residence - 4842'
- Cross-Section Flooded Field to JT_BH_17
- Cross-Section Karlik / Brugger / MW-S / Culvert
- Flooded Field Photographed in Complaint - 4339'
- Fracking Water Pipeline
- Freshwater Pond
- Irrigation Ditch
- JT-BH-17 - 4840'
- Karlik Field
- Karlik Residence - 4841'
- Location of plugged culvert - 4837'
- MW-RS - 4839'
- Pipeline Vault and Riser Pipes - 4841'

Location of plugged culvert - 4837'

Bennett Pit

MW-RS - 4839'

Brugger Residence - 4842'

County Rd 22 1/2

25

Freshwater Pond

JT-BH-17 - 4840'

Pipeline Vault and Riser Pipes - 4841'

Karlik Residence - 4841'

Google Earth

1000 ft



Figure A6 – Change in Water Levels with Pit (Run SS4wPit – SS4noPit)

