STATE OF COLORADO

Eschberger - DNR, Amy <amy.eschberger@state.co.us>

West Farm Pit / M-2008-078 / TR-05 / Adequacy Review

JC York <jcyork@j-tconsulting.com> Mon, Aug 5, 2019 at 2:57 PM
To: "Eschberger - DNR, Amy" <amy.eschberger@state.co.us>
Cc: Karl Nyquist <Karl@cacompanies.com>, Todd Yee <toddyee@j-tconsulting.com>, Roy Cue <Roy@prowersag.com>

Amy –

Attached is our response to the adequacy review letter you provided to us on July 9, 2019 for the West Farm Pit Technical Revision No. 5. Please let me know if you have any questions. We will send a hard copy out in the mail to you.

[Quoted text hidden]

07115 JT DRMS M-2008-078 TR 5 Adequacy Review 1 Response 8.5.19.pdf
2537K

J&T Consulting, Inc.

August 5, 2019

Ms. Amy Eschberger
Environmental Protection Specialist
State of Colorado
Division of Reclamation, Mining, & Safety
1313 Sherman Street – Room 215
Denver, CO 80203

Re: West Farm Pit, Permit No. M-2008-078, Technical Revision No. 5 (TR-05), Adequacy Review No. 1 Response

Ms. Eschberger,

We have received the Division's Technical Revision No. 5 Adequacy Review No. 1 comments relating to Prowers Aggregate Operators, LLC (PAO) permit number M-2008-078. PAO offers the following responses addressing the Division's comments.

1) Please provide more details on the proposed conveyor system, including its approximate dimensions, the type of support pads/footings, and the number of support pads/footings required.

The conveyor will be approximately 5 feet wide and have support legs approximately 10 feet apart. The support legs will rest on 4 in x 4 in x 8 ft long wood ties, which will be placed directly on the ground surface. See the photo of a similar conveyor below. There will be approximately 3,500 lineal feet of conveyor running from the west processing area, to the south across CR HH.5, then to the west within Parcel B of the permit area. Approximately 350 wood ties will be required under the conveyor support legs.

Two washer screens will be located near the start of the conveyor to wash product before it is placed on the conveyor. These screens will have 12 ft x 19 ft x 1 ft thick concrete pads under them, placed directly on the ground surface.

On Parcel B where the conveyor turns to the west, a conveyor head unit will be placed to maintain tension in the conveyor belt. The head unit will have a 16 ft x 35 ft x 8 in thick concrete pad under it placed directly on the ground surface. See the attached Overland Head Section drawing.

On Parcel B there will be 5 radial conveyor stackers. At the start of each stacker there will be portable concrete block to anchor the stackers to. The blocks will be 4 ft x 4f ft x 2 ft thick, placed directly on the ground surface.

See the attached revised Exhibit C-1 Pre-Mining/Mining Plan Map showing the layout of the conveyor, culvert, and radial stackers.

2) Please describe the surface disturbance to occur, if any, for installation and/or reclamation of the proposed overland conveyor system, including the portion to run beneath County Road HH.5. Will a portion of the county road need to be excavated to install the culvert?

Areas under the conveyor system will be cleared and leveled prior to placing the wood ties and/or concrete pads on the ground surface. The culvert will run above existing grade (see response to comment 3 below) with fill materials placed over the culvert and roadway surface.

3) Please provide more details on the portion of the proposed conveyor system to be installed beneath County Road HH.5, including the design drawing(s) for the culvert installation.

The conveyor will run through a 10 ft diameter corrugated metal culvert across CR HH.5. This culvert will be placed at existing grade across CR HH.5. Pit run material will then be placed over the culvert and on top of CR HH.5 approaching the culvert to regrade CR HH.5 in this area, allowing CR HH.5 to pass over the culvert. See the attached CR HH.5 plan and profile and culvert crossing drawings.

4) Please provide a detailed reclamation plan for the proposed conveyor system, including details of any required demolition (type, dimensions, and estimated amount/volume of materials to be demolished), disposal location(s) for demolished materials (if applicable), and any grading or revegetation work required.

Reclamation under the conveyor will consist removing the ties and concrete pads, placing topsoil, and seeding of the disturbed areas. Note that the topsoiling and reseeding of these areas is already included in the permit. As noted previously, approximately 350 wood ties will be removed and landfilled. The concrete pads, including the washer screen pads, head unit pad, and radial stacker pads, will be broken up and either used for riprap or landfilled. The total volume of concrete to be broken up and removed is:

Washer Screen Pads (2 pads x 12 ft x 19 ft x 1 ft thick):	17 cubic yards
Head Unit Pad (1 pad x 16 ft x 35 ft x 8 in thick):	14 cubic yards
Radial Stacker Pads (2 pads x 5 x 4 ft x 4 ft x 2 ft thick):	6 cubic yards
Total:	37 cubic yards

Because all concrete pads will rest on the existing ground surface no backfill will be required after removal of the pads.

The culvert and pit run materials placed on CR HH.5 and over the culvert will be removed and the road restored to its original grade. 100 lineal feet of culvert and approximately 9,125 cubic yards of pit run will be removed to restore the road to its original grade.

5) Please specify any permits, licenses, or approvals that will be required for the installation, operation, or reclamation of the proposed conveyor system. Has the county been notified of the proposed project involving the county road?

The County is aware of the proposed culvert installation project. PAO has an existing agreement with the County to maintain CR HH.5 in the vicinity of the pit during the mining activities. PAO is in the process of amending their existing Special Use Permit with Prowers County to include the conveyor system and install the culvert across CR HH.5.

6) Please provide sufficient details in the reclamation bond estimate for the Division to calculate the required bond, including number of concrete conveyor support pads to be removed, dimensions of the culvert to be removed, disposal costs for demolished materials (if necessary), and estimated volume of backfill material.

The type and quantities of materials to be removed are listed above in the response to comment 4. A revised Exhibit L Reclamation Cost Summary Table and revised financial warranty requirement calculations are attached with unit costs for each reclamation quantity.

7) Please provide a revised reclamation plan map including the proposed conveyor system reclamation.

The final reclamation plan for the pit does not change due to the addition of a conveyor system. A revised Exhibit L Reclamation Phasing Map is attached which shows the conveyor system.

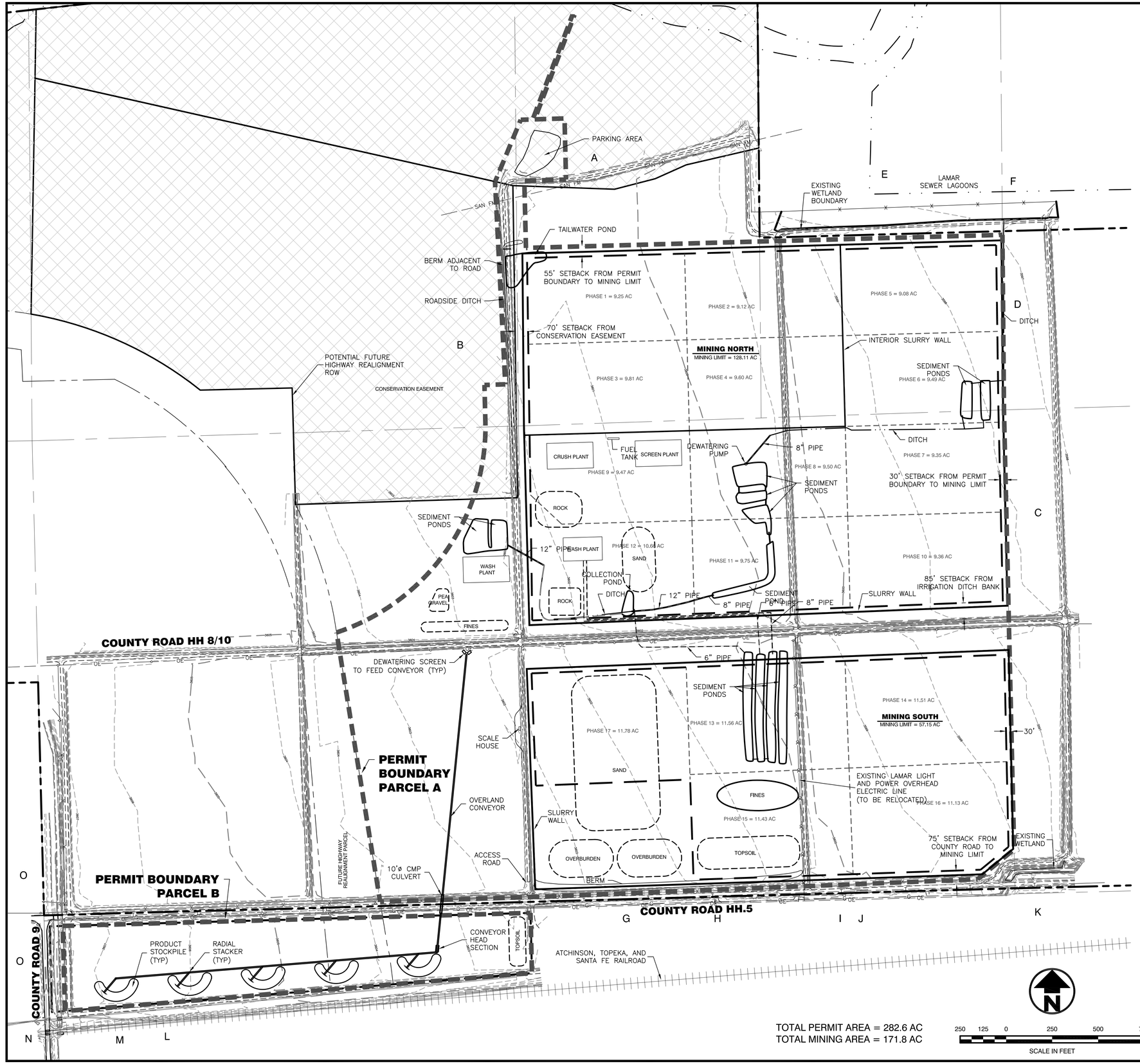
Sincerely,

Todd Yee
J&T Consulting, Inc.

Attachments:

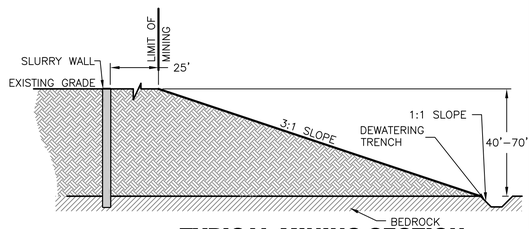
Revised Exhibit C1 – Pre-Mining/Mining Plan Map
GA Overland Head Section Drawing
CR HH.5 Plan and Profile Drawing
CR HH.5 Culvert Crossing Drawing
Revised Exhibit L Reclamation Cost Summary Table
Revised Financial Warranty Requirement Calculations
Revised Exhibit L Reclamation Phasing Map

Cc: Prowers Aggregate Operators, LLC.
File

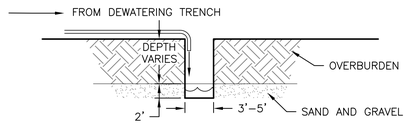


LEGEND:

- PROPERTY LINE
- SECTION LINE
- FENCE LINE
- OVERHEAD ELECTRIC LINES
- UNDERGROUND TELECOM LINE
- UNDERGROUND GAS LINE
- EXISTING SANITARY FORCE MAIN
- MINING LIMIT
- DIRT ROAD
- EXISTING WATER/DITCH
- EXISTING CONTOURS
- FUTURE HIGHWAY REALIGNMENT PARCEL
- PERMIT BOUNDARY
- ELECTRIC RISER BOX
- GUY WIRE
- POWER POLE
- WATER PUMP
- PHASE LIMITS
- STOCKPILE
- DEWATERING TRENCH
- SLURRY WALL



TYPICAL MINING SECTION



RECHARGE DITCH DETAIL

N.T.S.

RECHARGE NOTE:
RECHARGE DITCH TO BE INSTALLED / OPERATED AROUND PERIMETER OF OPEN MINING AREA(S) AS NEEDED TO RECHARGE SURROUNDING ALLUVIAL AQUIFER.

VEGETATION NOTE:
THE ENTIRE PERMIT AREA IS CURRENTLY AND HISTORICALLY HAS BEEN ACTIVELY FARMED. CROP TYPES VARY FROM YEAR TO YEAR AND HAVE BEEN HAY, WHEAT, ONIONS, BARLEY, ETC.

AQUIFER NOTE:
THE ARKANSAS RIVER ALLUVIAL AQUIFER IS THE KNOWN AQUIFER PRESENT AT THE SITE.

PROPERTY OWNERS WITHIN 200 FEET:

	NAME	ASSESSORS I.D. NO.
A-D	GP IRRIGATED FARMS, LLC 732 SE CR 36 SYRACUSE, KS 67878	992200100 800012757 800011753 800011751
E-F	CITY OF LAMAR 102 E. PARMENTER ST LAMAR, CO 81052	83580 83570
G	DAVID D. AND ROBIN L. RASMUSSEN 9626 COUNTY ROAD HH.5 LAMAR, CO 81052	962334040
H	MILFORD Q. AND DANIEL D. RASMUSSEN 9486 COUNTY ROAD HH.5 LAMAR, CO 81052	962334030
I	DANIEL GONZALEZ P.O. BOX 14 LAMAR, CO 81052	962334120
J	IRENE ARAGON 9718 COUNTY ROAD HH.5 LAMAR, CO 81052	962334100 962334105
K	FLORIBERTO RUEDA SANCHEZ & ROSA MARIA RUEDA 9900 CR HH.5 LAMAR, CO 81052	962334011
L	BRIAN AND KAREN NUNNERY 9800 US HIGHWAY 50 LAMAR, CO 81052	900033022
M	GARY HENSON AND EDWARD D. COBERLEY 9181 US HIGHWAY 50 LAMAR, CO 81052	900072250
N	SUTPHIN PETROLEUM, LLC 8825 US HIGHWAY 50 LAMAR, CO 81052	900060340
O	BARR H. INMAN 1105 E MAPLE ST. LAMAR, CO 81052	800032810 800032840

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305 Denver Avenue, Suite D
Fort Lupton, CO 80621
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West Farm Pit

Exhibit C-1 - Pre-Mining/Mining Plan

Prowers Aggregate Operators, LLC

M-2008-078

REVISIONS

No	Date	By	Chk	Description
6	7/12/16	WSS	TPY	Succession Of Operator
7	10/18/18	WSS	TPY	2018 Amendment
8	11/5/18	WSS	TPY	Added Permit and Mining Area
9	12/17/18	WSS	TPY	DRMS Comments
10	1.23.19	WSS	TPY	DRMS Comments
11	6/12/19	WSS	TPY	Added Conveyor
12	8/5/19	WSS	TPY	TR5 Adequacy Review No. 1 Response

J&T CONSULTING, INC.

Job #	07115
Date	7/20/18
Drawn By	WSS
Designed By	TPY
Checked By	JCY
File	JT- Mining
Scale	1" = 250'

Sheet: 1 Of: 2

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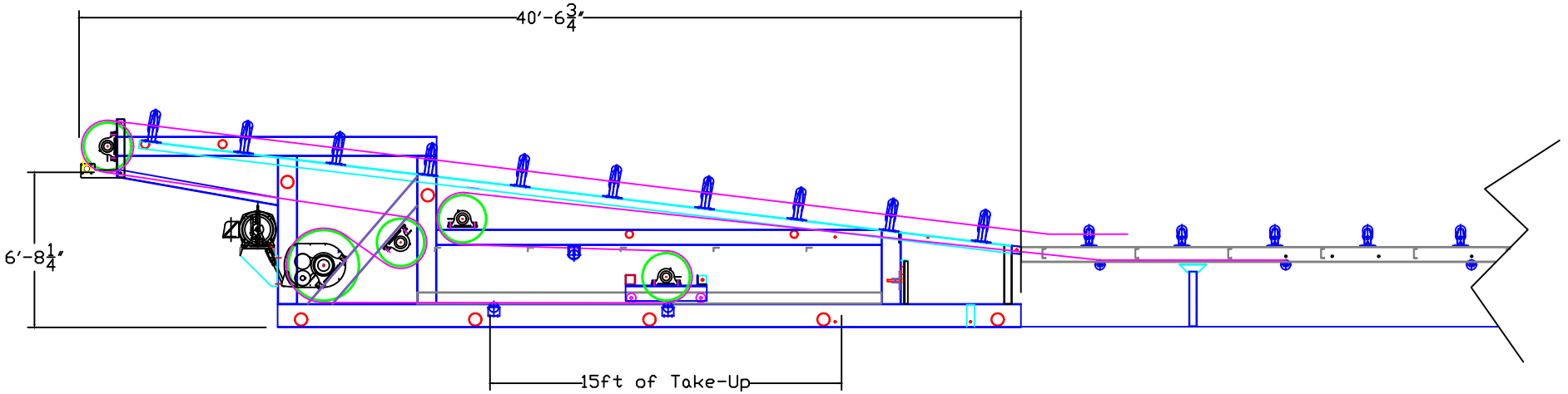
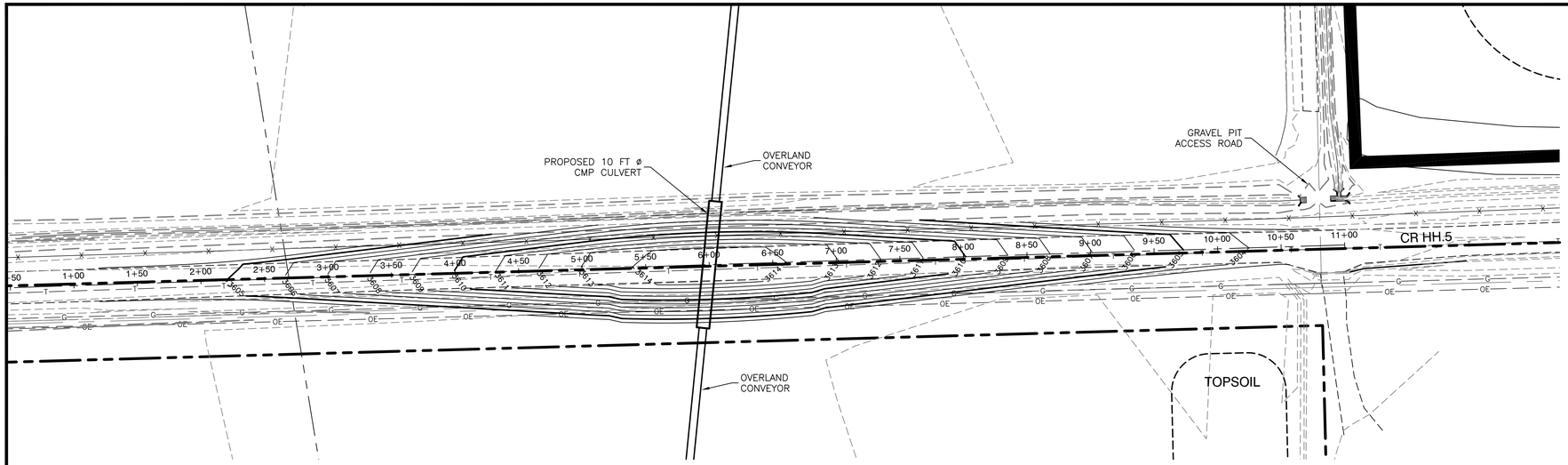


FILE NAME			
CONTRACT NO			
DRAWN 3-28-18			
CHECK			
APPR.			
ISSUED			
	SIZE	FSCM NO	DWG NO / REV
		–	GA Overland Head Section
	SCALE	WEIGHT	SHEET

JMCON 04.06.2019 36 X 1000 MBH.dwg



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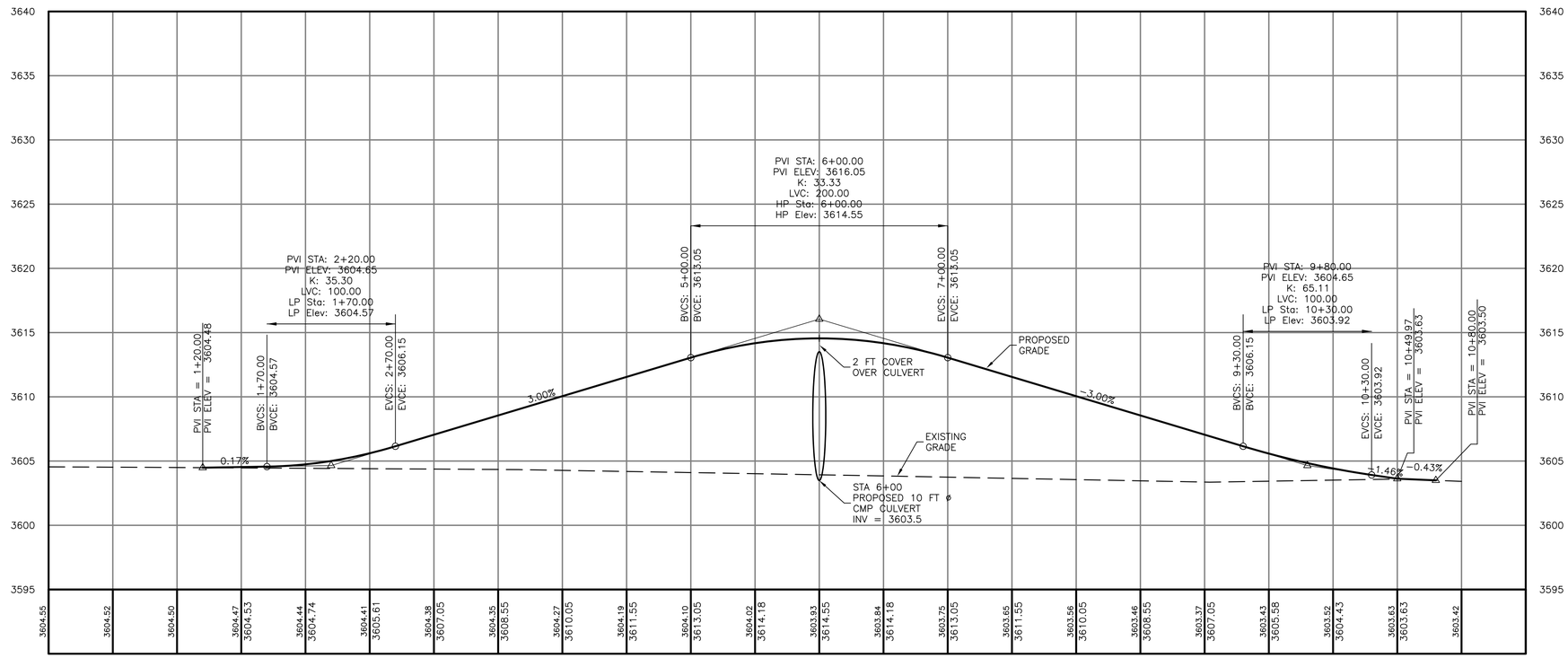

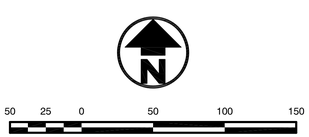

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West Farm Pit

CR HH.5 Plan & Profile

Prowers Aggregate Operators, LLC

M-2008-078

REVISIONS

No	Date	By	Chk	Description

J&T CONSULTING, INC.

Job #	07115
Date	8/5/19
Drawn By	WSS
Designed By	TPY
Checked By	JCY
File	JT- Mining
Scale	1" = 50'h / 5'v

Sheet: 1 Of: 1

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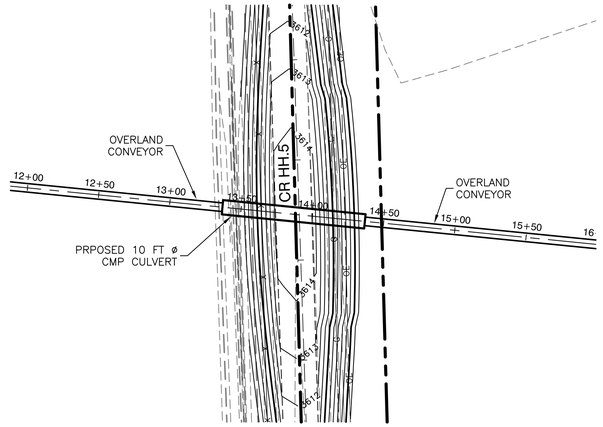

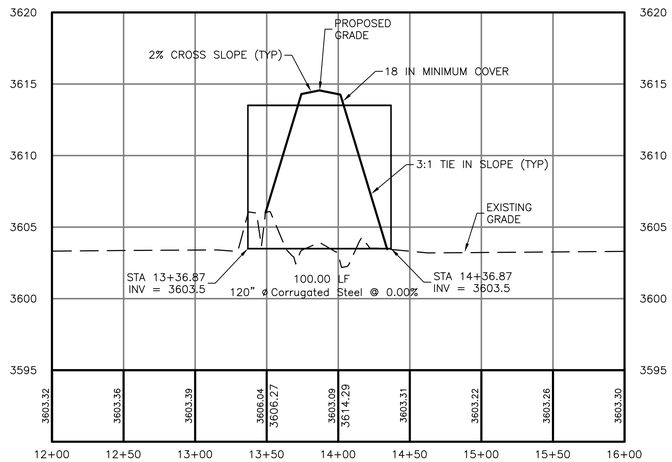

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- WATER PUMP
- PHASE LIMITS
- STOCKPILE
- DEWATERING TRENCH
- SLURRY WALL

50 25 0 50 100 150

SCALE IN FEET

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West Farm Pit

CR HH.5 Culvert Crossing

Prowers Aggregate Operators, LLC

M-2008-078

REVISIONS

No	Date	By	Chk	Description

J&T CONSULTING, INC.

Job #	07115
Date	8/5/19
Drawn By	WSS
Designed By	TPY
Checked By	JCY
File	JT- Mining
Scale	1" = 50'h / 5'v

Sheet: 1 Of: 1

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Reclamation Cost Summary		
Item	Financial Warranty Required	Cumulative Financial Warranty
DRMS Amendment 01 Calculated Bond	$1,849,793	$1,849,793
Conveyor System and Culvert Removal	$66,339	$1,916,132

Summary of Reclamation Bond Costs

Reclamation Operation	Quantity	Unit	Unit Cost	Cost
Amendment 01 Bond Costs				
DRMS Calculated Bond	1	ls	$1,849,793	$1,849,793
Items Added in Technical Revision 5				
Removal of Disposal of Conveyor Support Wood Ties	350.00	ea	$10	$3,500
Demolition & Removal of Concrete Washer Screen Pads	17.00	cy	$500	$8,500
Demolition & Removal of Concrete Head Unit Pad	14.00	cy	$500	$7,000
Demolition & Removal of Concrete Radial Stacker Pads	6.00	cy	$500	$3,000
Removal of Pit Run Material from CH HH.5	9,125.00	cy	$2	$18,250
Removal of CMP Culvert	1.00	ls	$15,000	$15,000
			Total Direct Cost	$55,250
			Overhead and Profit Cost (13.07%)	$7,221
			Contract Cost	$62,471
			Project Management (7.00%)	$3,868
Additional Warranty Required For Technical Revision 5 Items				***$66,339***
Total Financial Warranty Required For All Phases				***$1,916,132***

PARKING AREA = 3.16 AC

RECLAIMED AREA

NORTH DISTURBED AREA AND ROADSIDE DITCH 3.09 AC

WEST WASH PLANT AND SEDIMENT POND AREA = 8.87 AC

RECLAMATION PHASE SCALE HOUSE AND WEST OF ENTRANCE ROAD AREA = 26.76 AC

PERMIT BOUNDARY PARCEL A

PERMIT BOUNDARY PARCEL B

NORTH MINING AREA

SOUTH MINING AREA

PARCEL B AREA = 23.05 AC

COUNTY ROAD HH 8/10

COUNTY ROAD HH.5

COUNTY ROAD 9

LAMAR SEWER LAGOONS

EXISTING WETLAND BOUNDARY

TAILWATER POND

BERM ADJACENT TO ROAD

ROADSIDE DITCH

3605

3580

3555

3540

PHASE 1 RECLAMATION AREA = 11.36 AC

PHASE 2 RECLAMATION AREA = 10.18 AC

PHASE 5 RECLAMATION AREA= 10.58 AC

DITCH

CONCRETE INLET RUNDOWN STRUCTURE

PHASE 3 RECLAMATION AREA = 10.67 AC

PHASE 4 RECLAMATION AREA = 9.60 AC

PHASE 6 RECLAMATION AREA = 9.90 AC

CMP INLET PIPE

FLOATING PUMP STATION

SEDIMENT PONDS

CRUSH PLANT

FUEL TANK

SCREEN PLANT

PHASE 9 RECLAMATION AREA= 9.97 AC

DEWATERING PUMP

8" PIPE

PHASE 8 RECLAMATION AREA = 9.50 AC

SEDIMENT PONDS

DITCH

PHASE 7 RECLAMATION AREA= 9.74 AC

ROCK

PHASE 12 RECLAMATION AREA= 13.19 AC

SEDIMENT PONDS

12" PIPE

WASH PLANT

SAND

COLLECTION POND

WASH PLANT

PEA GRAVEL

FINES

EXISTING CULVERT

ROCK

DITCH

12" PIPE

PHASE 11 RECLAMATION AREA= 11.30 AC

SEDIMENT POND

8" PIPE

6" PIPE

8" PIPE

PHASE 10 RECLAMATION AREA = 11.28 AC

EXISTING CULVERT

EXISTING CULVERT

EXISTING IRRIGATION LATERAL

DEWATERING SCREEN TO FEED CONVEYOR (TYP)

6" PIPE

SCALE HOUSE AND LAND WEST OF SCALE HOUSE RECLAMATION AREA = 26.76 AC

SCALE HOUSE

SEDIMENT PONDS

PHASE 17 RECLAMATION AREA = 15.19 AC

PHASE 13 RECLAMATION AREA = 14.49 AC

PHASE 14 RECLAMATION AREA= 14.95 AC

SAND

OVERLAND CONVEYOR

SLURRY WALL

FINES

PHASE 15 RECLAMATION AREA = 12.11 AC

PHASE 16 RECLAMATION AREA = 12.08 AC

SOUTH STOCKPILE RECLAMATION AREA = 11.56 AC

OVERBURDEN

OVERBURDEN

TOPSOIL

EXISTING WETLAND

ACCESS ROAD

10'ø CMP CULVERT

BERM

FUTURE HIGHWAY RELAMATION PARCEL

CONVEYOR HEAD SECTION

TOPSOIL

LAMAR CANAL

PRODUCT STOCKPILE (TYP)

RADIAL STACKER (TYP)

ATCHINSON, TOPEKA, AND SANTA FE RAILROAD

LEGEND:

- PROPERTY LINE
- SECTION LINE
- FENCE LINE
- OE — OVERHEAD ELECTRIC LINES
- T — UNDERGROUND TELECOM LINE
- G — UNDERGROUND GAS LINE
- SAN FM — EXISTING SANITARY FORCE MAIN
- RECLAMATION PHASE LIMITS
- DIRT ROAD
- EXISTING WATER/DITCH
- 3597 — EXISTING CONTOURS
- PERMIT BOUNDARY
- ELECTRIC RISER BOX
- GUY WIRE
- POWER POLE
- WATER PUMP
- STOCKPILE
- DEWATERING TRENCH

N

250 125 0 250 500 750

SCALE IN FEET

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West Farm Pit

Exhibit L - Reclamation Phasing Map

Prowers Aggregate Operators, LLC

M-2008-078

REVISIONS

No	Date	By	Chk	Description
1	1.23.19	WSS	TPY	DRMS Comments
2	8.5.19	WSS	TPY	TR 5 Adequacy Review No. 1 Response

J&T CONSULTING, INC.

Job #	07115
Date	12/17/18
Drawn By	WSS
Designed By	TPY
Checked By	JCY
File	JT- Exhibit L
Scale	1" = 250'

Sheet: 1 Of: 1

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