
August 6, 2018

Ms. Mary Rasmussen
US Forest Service
Supervisor's Office
2324 East McDowell Road
Phoenix, AZ 85006-2496

Subject: Follow-up: July 17, 2018 Groundwater Modeling Workgroup – Response to Action Items GW-75, GW-76, GW-77, GW80 and GW-81

Dear Ms. Rasmussen,

Please see the attached responses to Groundwater Modeling Workgroup action items GW-75, GW-76, GW-77, GW80 and GW-81 for your review and consideration.

GW-75: Resubmit 6/18 information with elevations and units (ft/day) added

Resolution response: The requested item is contained in the attached information from WSP titled “*GW75 HGU Material Properties.pdf*”

GW-76: Submit water level map that shows the difference between previously submitted 1910 and 2017 maps.

Resolution response: The requested item is contained in the attached WSP figure titled “*GW76 Historical Drawdown.pdf*.”

GW-77: Provide further detail on the boundary fluxes for GHB vs no flow comparison. Specifically compare flux change (<5gpm) to model pumping stress.

Resolution response: The attached WSP figure titled “*GW77 GHB Flux.pdf*” shows the GHB boundary fluxes at three snapshots (Historical, Life of Mine, post-closure). An additional column is included comparing the flowrates across the model boundaries against average dewatering flowrates from the Resolution Mine (ie. the main stress on the system) in the Life of Mine model; expressed as percentage of flow.

GW-80: Provide explanation of how impact is calculated (i.e. subtract No Action from proposed Action) including discussion of any artifacts like the hydrograph bump at year 55.

Resolution response: A detailed explanation of how impact is calculated is provided in the WSP technical report on predictive results submitted separately in an e-mail dated August 6, 2018 “*Follow-up to July 17 2018 GW Modeling Workgroup - Predictive Results.*” There are no hydrograph bumps in the WSP technical report (*See Appendices A&B, Draft Draft Resolution Copper Groundwater Flow Model – Predictive Results*).

GW-81: Clarify DHRES-16 use as analogue in Superior

Resolution response: This is clarified in the WSP technical report (*Draft Draft Resolution Copper Groundwater Flow Model – Predictive Results*).

Sincerely,



Vicky Peacey,

Senior Manager, Environment, Permitting and Approvals; Resolution Copper Company, as Manager of Resolution Copper Mining, LLC

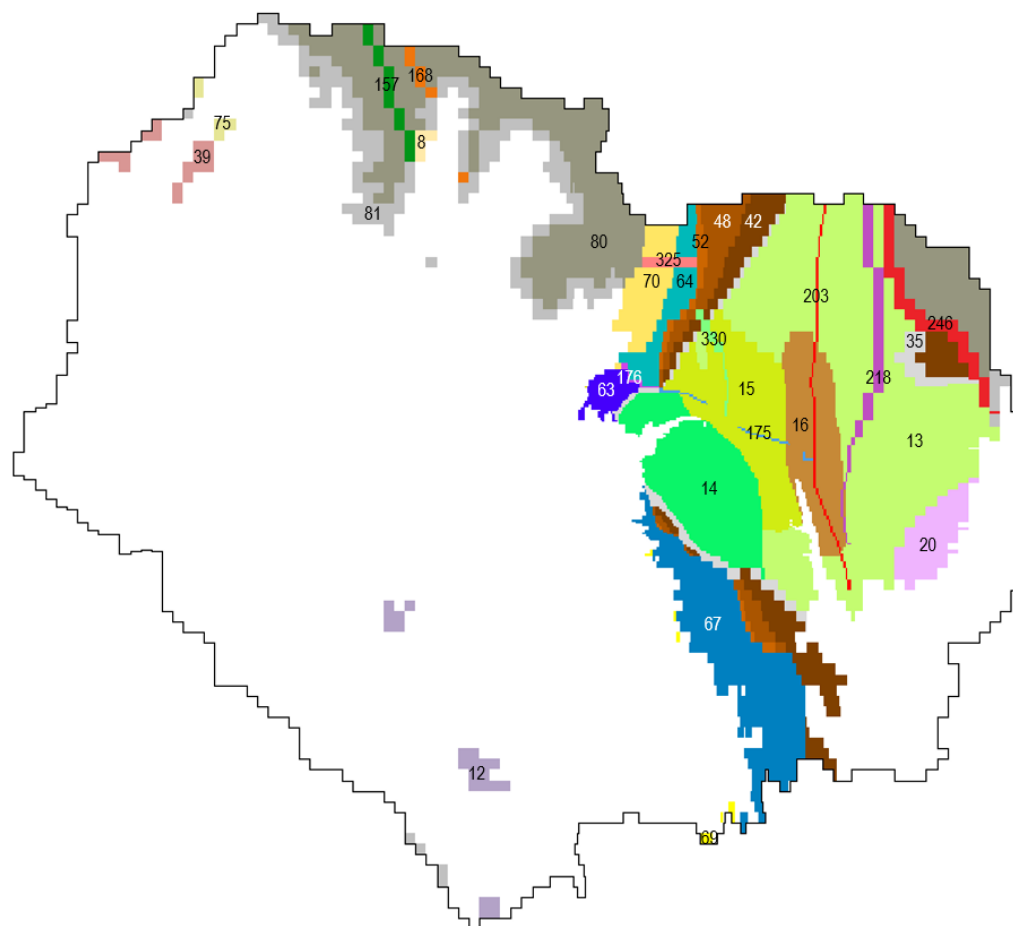
Cc: Ms. Mary Morissette; Senior Environmental Specialist; Resolution Copper Company

Enclosure(s):

GW75 HGU Material Properties.pdf

GW76 Historical Drawdown.pdf

GW77 GHB Flux.pdf

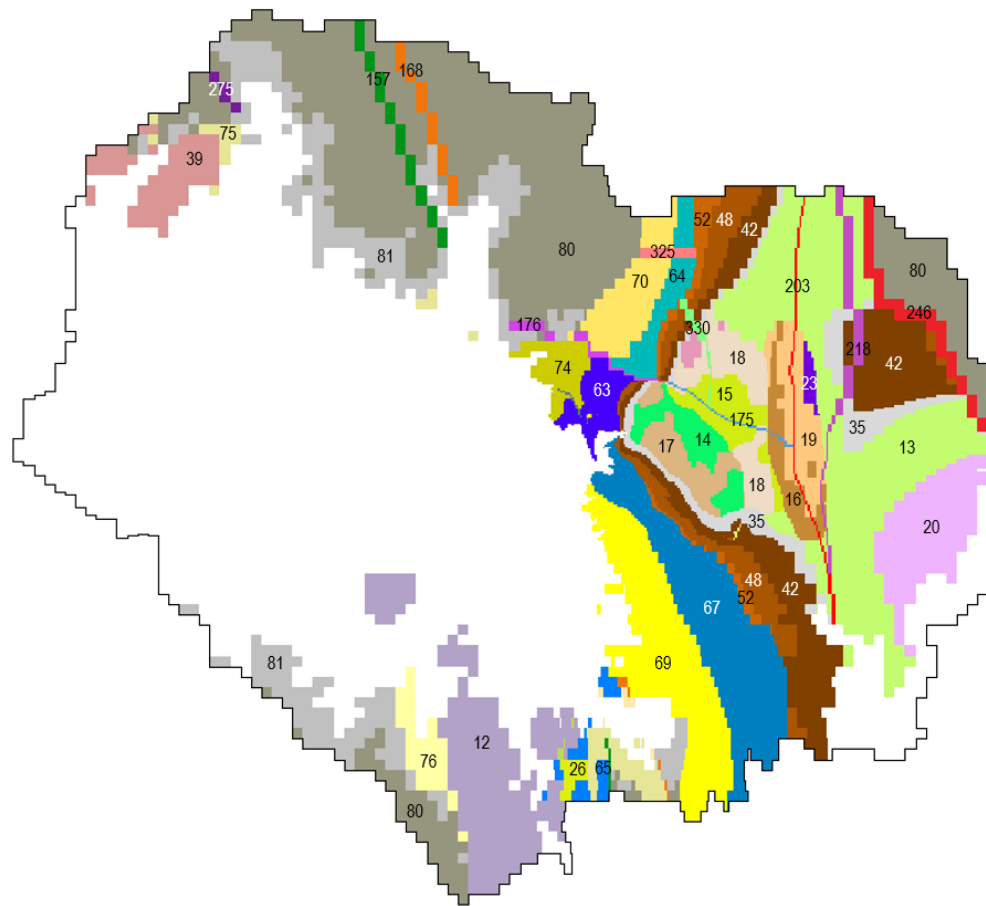


Color	HGU	Zone	Kx (ft/d)	Ky (ft/d)	Kz (ft/d)	Ss (1/ft)	Sy
	QTg	8	2.03E-03	2.03E-03	2.03E-03	3.71E-08	1.00E-02
	Tvy	12	6.25E-03	6.25E-03	6.25E-03	5.00E-08	5.00E-03
	Tal	13	6.25E-02	6.25E-02	6.25E-02	5.00E-08	5.00E-03
	Tal	14	2.50E-01	2.50E-01	2.50E-01	5.00E-08	1.00E-03
	Tal	15	1.26E-02	1.26E-02	1.26E-02	5.00E-08	5.00E-03
	Tal	16	3.00E+00	3.00E+00	3.00E+00	5.00E-08	5.00E-03
	Talv	35	1.00E-03	1.00E-03	1.00E-03	5.00E-08	5.00E-03
	Tvo	39	8.71E-02	8.71E-02	8.71E-02	5.76E-07	5.00E-03
	Tw	42	2.74E-03	2.74E-03	2.74E-03	3.50E-08	1.00E-02
	Tw	48	8.51E-05	8.51E-05	8.51E-05	3.50E-08	1.00E-02
	Tw	52	1.25E-05	1.25E-05	1.25E-05	3.50E-08	1.00E-02
	Pz	63	5.00E-04	5.00E-04	5.00E-04	4.65E-08	1.00E-02
	Pz	64	1.48E-05	1.48E-05	1.48E-05	4.40E-08	8.75E-03
	Pz	67	1.00E-04	1.00E-04	1.00E-04	4.40E-08	8.75E-03
	pCy	69	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	70	1.28E-04	1.28E-04	1.28E-04	1.25E-08	8.75E-03
	pCy	75	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCpi	80	1.00E-04	1.00E-04	1.00E-04	1.00E-08	6.00E-03
	pCpi	81	1.00E-03	1.00E-03	1.00E-03	1.00E-08	6.00E-03
	Arnett	157	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Concentrator	168	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Conley Springs - Shallow	175	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Conley Springs - Deep	176	3.61E-05	3.61E-05	3.61E-05	1.00E-08	1.00E-04
	Devils Canyon	203	1.00E-01	1.00E-01	1.00E-01	1.00E-08	1.00E-04
	Jl Ranch	218	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Mineral Creek	246	1.00E-02	1.00E-02	1.00E-02	1.00E-08	1.00E-04
	Laramide	325	1.00E-05	1.00E-05	1.00E-05	1.00E-08	1.00E-04
	Anxiety	330	5.00E-04	1.00E-02	5.00E-04	1.00E-08	1.00E-04



HGU Material Property Values – Elevation 3,800 ft amsl, Layer 8 (Plan View)

CLIENT:	Resolution Copper	PROJECT:	3D Regional Groundwater Model	
JOB:	31400968.001	DRAWN:	CP	CHECKED: DO
DATE:	August 2018	FIGURE:	GW75-1	

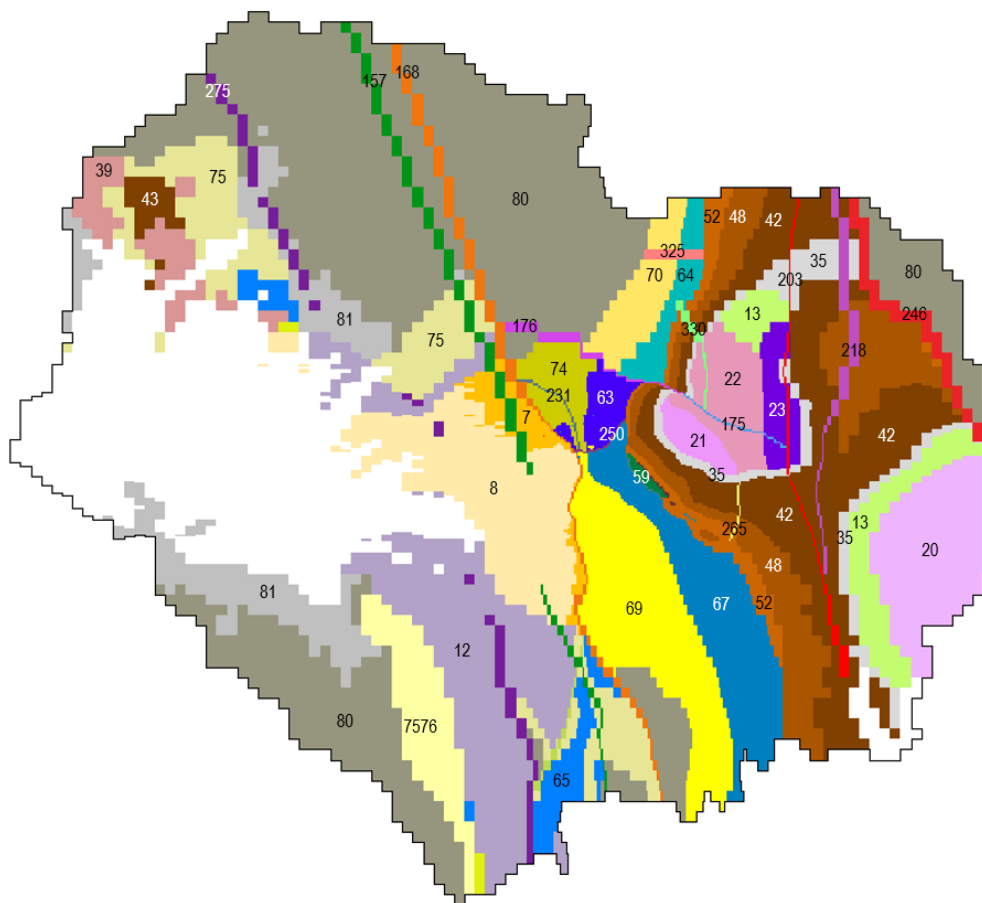


Color	HGU	Zone	Kx (ft/d)	Ky (ft/d)	Kz (ft/d)	Ss (1/ft)	Sy
	Tvy	12	6.25E-03	6.25E-03	6.25E-03	5.00E-08	5.00E-03
	Tal	14	2.50E-01	2.50E-01	2.50E-01	5.00E-08	1.00E-03
	Tal	15	1.26E-02	1.26E-02	1.26E-02	5.00E-08	5.00E-03
	Tal	16	3.00E+00	3.00E+00	3.00E+00	5.00E-08	5.00E-03
	Tal	17	6.00E-02	6.00E-02	6.00E-02	5.00E-08	5.00E-03
	Tal	18	5.00E-03	5.00E-03	5.00E-03	5.00E-08	5.00E-03
	Tal	19	1.00E+00	1.00E+00	1.00E+00	5.00E-08	5.00E-03
	Tal	20	4.00E-01	4.00E-01	4.00E-01	5.00E-08	5.00E-03
	Tal	23	4.00E-01	4.00E-01	4.00E-01	5.00E-08	5.00E-03
	Tal	26	1.00E-03	1.00E-03	1.00E-03	5.00E-08	5.00E-03
	Talv	35	1.00E-03	1.00E-03	1.00E-03	5.00E-08	5.00E-03
	Tvo	39	8.71E-02	8.71E-02	8.71E-02	5.76E-07	5.00E-03
	Tw	42	2.74E-03	2.74E-03	2.74E-03	3.50E-08	1.00E-02
	Tw	48	8.51E-05	8.51E-05	8.51E-05	3.50E-08	1.00E-02
	Tw	52	1.25E-05	1.25E-05	1.25E-05	3.50E-08	1.00E-02
	Pz	63	5.00E-04	5.00E-04	5.00E-04	4.65E-08	1.00E-02
	Pz	64	1.48E-05	1.48E-05	1.48E-05	4.40E-08	8.75E-03
	Pz	65	7.36E-04	7.36E-04	7.36E-04	4.40E-08	8.75E-03
	Pz	67	1.00E-04	1.00E-04	1.00E-04	4.40E-08	8.75E-03
	pCy	69	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	70	1.28E-04	1.28E-04	1.28E-04	1.25E-08	8.75E-03
	pCy	74	7.00E-04	7.00E-04	1.00E-03	1.28E-08	1.00E-02
	pCy	75	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	76	2.71E-04	2.71E-04	2.71E-04	1.25E-08	8.75E-03
	pCpi	80	1.00E-04	1.00E-04	1.00E-04	1.00E-08	6.00E-03
	pCpi	81	1.00E-03	1.00E-03	1.00E-03	1.00E-08	6.00E-03
	Arnett	157	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Concentrator	168	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Conley Springs - Shallow	175	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Conley Springs - Deep	176	3.61E-05	3.61E-05	3.61E-05	1.00E-08	1.00E-04
	Devils Canyon	203	1.00E-01	1.00E-01	1.00E-01	1.00E-08	1.00E-04
	Jl Ranch	218	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Mineral Creek	246	1.00E-02	1.00E-02	1.00E-02	1.00E-08	1.00E-04
	Roblas Woods	275	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Laramide	325	1.00E-05	1.00E-05	1.00E-05	1.00E-08	1.00E-04
	Anxiety	330	5.00E-04	1.00E-02	5.00E-04	1.00E-08	1.00E-04



HGU Material Property Values – Elevation 3,200 ft amsl, Layer 12 (Plan View)

CLIENT:	Resolution Copper	PROJECT:	3D Regional Groundwater Model	
JOB:	31400968.001	DRAWN:	CP	CHECKED: DO
DATE:	August 2018	FIGURE:	GW75-2	

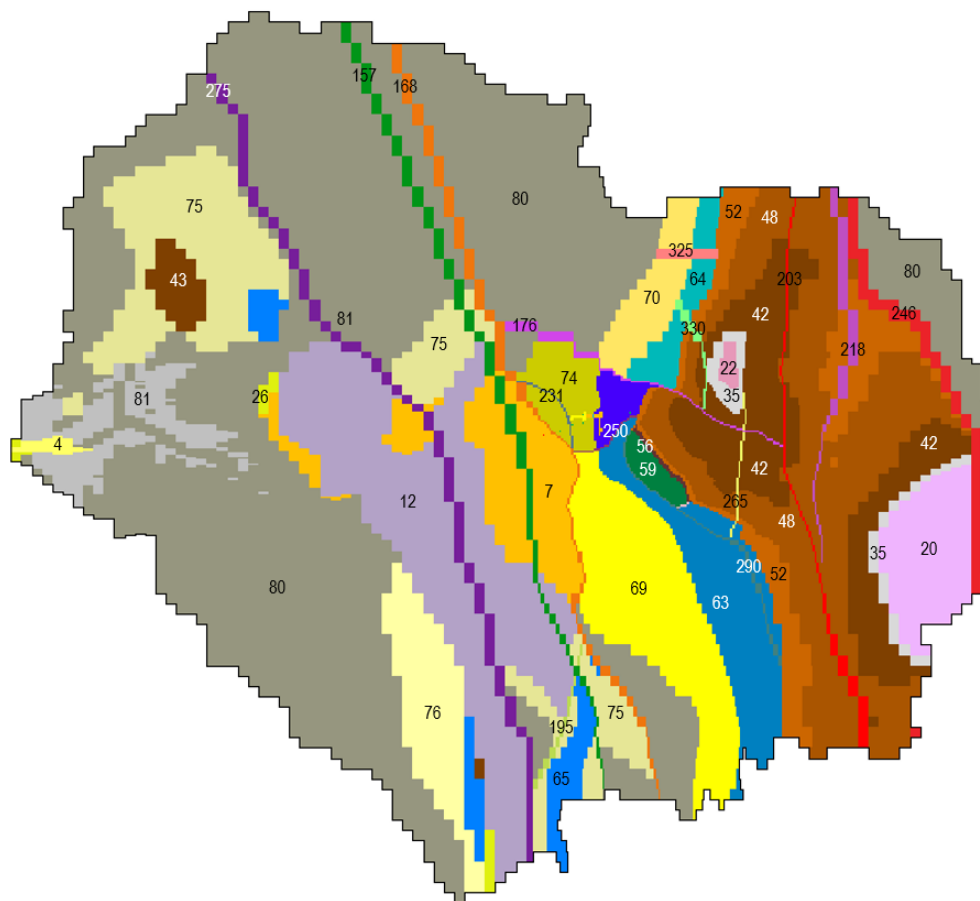


Color	HGU	Zone	Kx (ft/d)	Ky (ft/d)	Kz (ft/d)	Ss (1/ft)	Sy
	QTg	7	2.54E-04	2.54E-04	2.54E-04	3.71E-08	1.00E-02
	QTg	8	2.03E-03	2.03E-03	2.03E-03	3.71E-08	1.00E-02
	Tvy	12	6.25E-03	6.25E-03	6.25E-03	5.00E-08	5.00E-03
	Tal	13	6.25E-02	6.25E-02	6.25E-02	5.00E-08	5.00E-03
	Tal	20	4.00E-01	4.00E-01	4.00E-01	5.00E-08	5.00E-03
	Tal	21	1.07E-02	1.07E-02	1.07E-02	5.00E-08	5.00E-03
	Tal	22	1.00E-03	1.00E-03	1.00E-03	5.00E-08	5.00E-03
	Tal	23	4.00E-01	4.00E-01	4.00E-01	5.00E-08	5.00E-03
	Talv	35	1.00E-03	1.00E-03	1.00E-03	5.00E-08	5.00E-03
	Tvo	39	8.71E-02	8.71E-02	8.71E-02	5.76E-07	5.00E-03
	Tw	42	2.74E-03	2.74E-03	2.74E-03	3.50E-08	1.00E-02
	Tw	43	7.00E-04	7.00E-04	7.00E-04	3.50E-08	1.00E-02
	Tw	48	8.51E-05	8.51E-05	8.51E-05	3.50E-08	1.00E-02
	Tw	52	1.25E-05	1.25E-05	1.25E-05	3.50E-08	1.00E-02
	KVS	59	1.00E-04	1.00E-04	1.00E-04	5.00E-08	7.07E-03
	Pz	63	5.00E-04	5.00E-04	5.00E-04	4.65E-08	1.00E-02
	Pz	64	1.48E-05	1.48E-05	1.48E-05	4.40E-08	8.75E-03
	Pz	65	7.36E-04	7.36E-04	7.36E-04	4.40E-08	8.75E-03
	Pz	67	1.00E-04	1.00E-04	1.00E-04	4.40E-08	8.75E-03
	pCy	69	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	70	1.28E-04	1.28E-04	1.28E-04	1.25E-08	8.75E-03
	pCy	74	7.00E-04	7.00E-04	1.00E-03	1.28E-08	1.00E-02
	pCy	75	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	76	2.71E-04	2.71E-04	2.71E-04	1.25E-08	8.75E-03
	pCpi	80	1.00E-04	1.00E-04	1.00E-04	1.00E-08	6.00E-03
	pCpi	81	1.00E-03	1.00E-03	1.00E-03	1.00E-08	6.00E-03
	Arnett	157	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Concentrator	168	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Conley Springs - Shallow	175	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Conley Springs - Deep	176	3.61E-05	3.61E-05	3.61E-05	1.00E-08	1.00E-04
	Devils Canyon	203	1.00E-01	1.00E-01	1.00E-01	1.00E-08	1.00E-04
	Jl Ranch	218	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Main	231	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Mineral Creek	246	1.00E-02	1.00E-02	1.00E-02	1.00E-08	1.00E-04
	North Boundary	250	6.25E-04	6.25E-04	6.25E-04	1.00E-08	1.00E-04
	Rancho Rio	265	2.50E-04	2.50E-04	2.50E-04	1.00E-08	1.00E-04
	Roblas Woods	275	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Laramide	325	1.00E-05	1.00E-05	1.00E-05	1.00E-08	1.00E-04
	Anxiety	330	5.00E-04	1.00E-02	5.00E-04	1.00E-08	1.00E-04



HGU Material Property Values – Elevation 2,600 ft amsl, Layer 16 (Plan View)

CLIENT:	Resolution Copper	PROJECT:	3D Regional Groundwater Model	
JOB:	31400968.001	DRAWN:	CP	CHECKED: DO
DATE:	August 2018	FIGURE:	GW75-3	

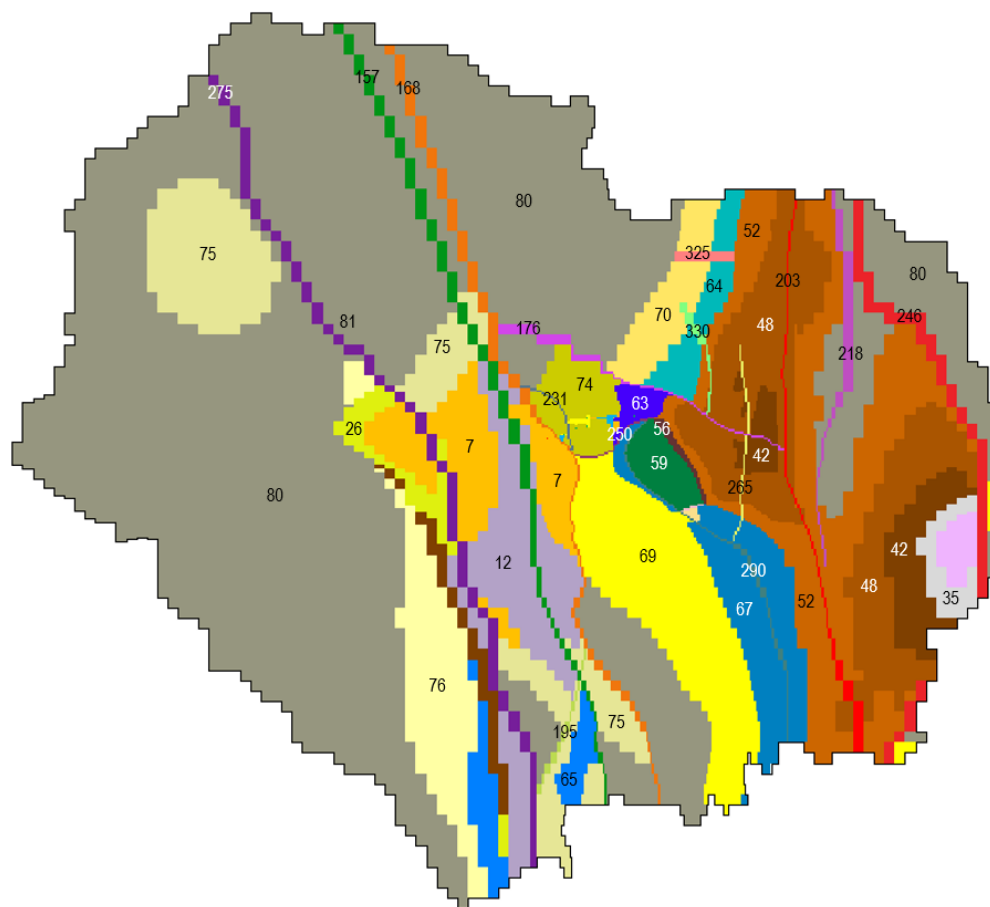


Color	HGU	Zone	Kx (ft/d)	Ky (ft/d)	Kz (ft/d)	Ss (1/ft)	Sy
	QTg	7	2.54E-04	2.54E-04	2.54E-04	3.71E-08	1.00E-02
	Tvy	12	6.25E-03	6.25E-03	6.25E-03	5.00E-08	5.00E-03
	Tal	20	4.00E-01	4.00E-01	4.00E-01	5.00E-08	5.00E-03
	Tal	22	1.00E-03	1.00E-03	1.00E-03	5.00E-08	5.00E-03
	Tal	26	1.00E-03	1.00E-03	1.00E-03	5.00E-08	5.00E-03
	Talv	35	1.00E-03	1.00E-03	1.00E-03	5.00E-08	5.00E-03
	Tw	42	2.74E-03	2.74E-03	2.74E-03	3.50E-08	1.00E-02
	Tw	43	7.00E-04	7.00E-04	7.00E-04	3.50E-08	1.00E-02
	Tw	48	8.51E-05	8.51E-05	8.51E-05	3.50E-08	1.00E-02
	Tw	52	1.25E-05	1.25E-05	1.25E-05	3.50E-08	1.00E-02
	Tw	56	3.03E-06	3.03E-06	5.00E-07	4.01E-08	1.00E-02
	KVS	59	1.00E-04	1.00E-04	1.00E-04	5.00E-08	7.07E-03
	Pz	63	5.00E-04	5.00E-04	5.00E-04	4.65E-08	1.00E-02
	Pz	64	1.48E-05	1.48E-05	1.48E-05	4.40E-08	8.75E-03
	Pz	65	7.36E-04	7.36E-04	7.36E-04	4.40E-08	8.75E-03
	Pz	67	1.00E-04	1.00E-04	1.00E-04	4.40E-08	8.75E-03
	pCy	69	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	70	1.28E-04	1.28E-04	1.28E-04	1.25E-08	8.75E-03
	pCy	74	7.00E-04	7.00E-04	1.00E-03	1.28E-08	1.00E-02
	pCy	75	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	76	2.71E-04	2.71E-04	2.71E-04	1.25E-08	8.75E-03
	pCpi	80	1.00E-04	1.00E-04	1.00E-04	1.00E-08	6.00E-03
	pCpi	81	1.00E-03	1.00E-03	1.00E-03	1.00E-08	6.00E-03
	Arnett	157	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Concentrator	168	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Conley Springs - Deep	176	3.61E-05	3.61E-05	3.61E-05	1.00E-08	1.00E-04
	Concentrator West	195	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Devils Canyon	203	1.00E-01	1.00E-01	1.00E-01	1.00E-08	1.00E-04
	Jl Ranch	218	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Main	231	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Mineral Creek	246	1.00E-02	1.00E-02	1.00E-02	1.00E-08	1.00E-04
	North Boundary	250	6.25E-04	6.25E-04	6.25E-04	1.00E-08	1.00E-04
	Rancho Rio	265	2.50E-04	2.50E-04	2.50E-04	1.00E-08	1.00E-04
	Roblas Woods	275	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	West	290	1.25E-05	1.25E-05	1.25E-05	1.00E-08	1.00E-04
	Laramide	325	1.00E-05	1.00E-05	1.00E-05	1.00E-08	1.00E-04
	Anxiety	330	5.00E-04	1.00E-02	5.00E-04	1.00E-08	1.00E-04



HGU Material Property Values – Elevation 2,000 ft amsl, Layer 20 (Plan View)

CLIENT:	Resolution Copper	PROJECT:	3D Regional Groundwater Model
JOB:	31400968.001	DRAWN:	CP
DATE:	August 2018	CHECKED:	DO
		FIGURE:	GW75-4

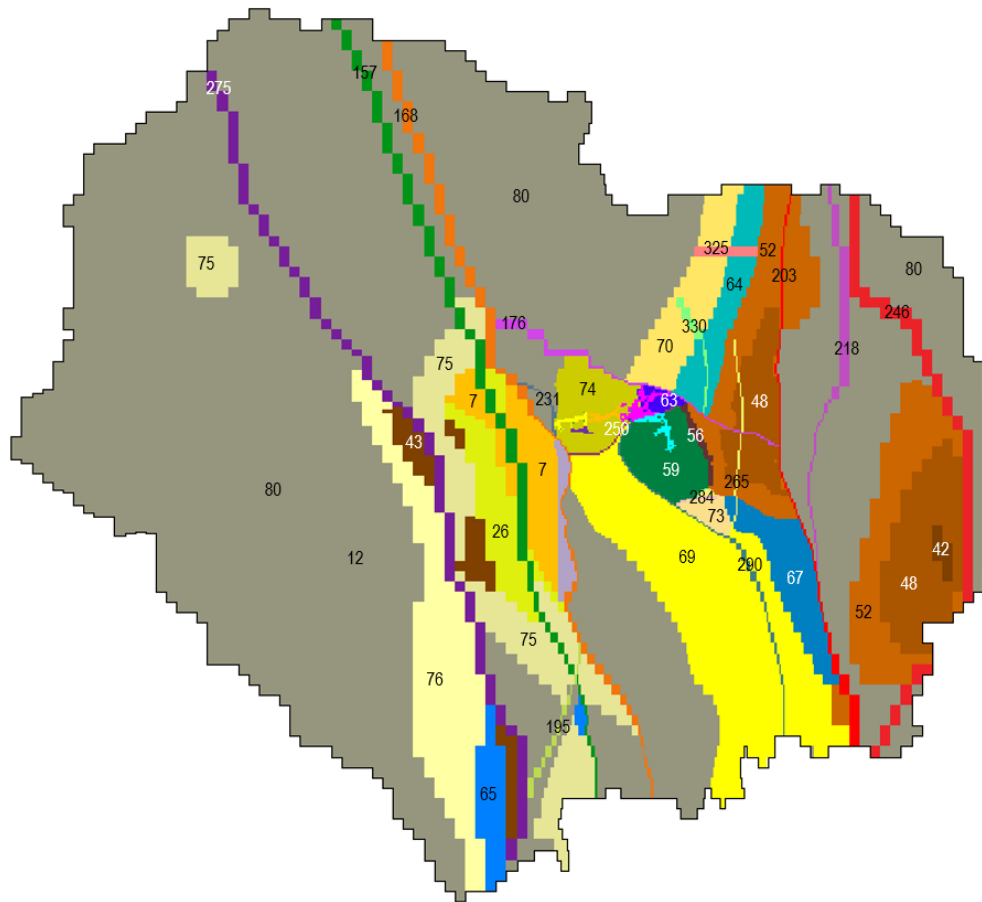


Color	HGU	Zone	Kx (ft/d)	Ky (ft/d)	Kz (ft/d)	Ss (1/ft)	Sy
	QTg	7	2.54E-04	2.54E-04	2.54E-04	3.71E-08	1.00E-02
	Tvy	12	6.25E-03	6.25E-03	6.25E-03	5.00E-08	5.00E-03
	Tal	20	4.00E-01	4.00E-01	4.00E-01	5.00E-08	5.00E-03
	Tal	26	1.00E-03	1.00E-03	1.00E-03	5.00E-08	5.00E-03
	Talv	35	1.00E-03	1.00E-03	1.00E-03	5.00E-08	5.00E-03
	Tw	42	2.74E-03	2.74E-03	2.74E-03	3.50E-08	1.00E-02
	Tw	48	8.51E-05	8.51E-05	8.51E-05	3.50E-08	1.00E-02
	Tw	52	1.25E-05	1.25E-05	1.25E-05	3.50E-08	1.00E-02
	Tw	56	3.03E-06	3.03E-06	5.00E-07	4.01E-08	1.00E-02
	KVS	59	1.00E-04	1.00E-04	1.00E-04	5.00E-08	7.07E-03
	Pz	63	5.00E-04	5.00E-04	5.00E-04	4.65E-08	1.00E-02
	Pz	64	1.48E-05	1.48E-05	1.48E-05	4.40E-08	8.75E-03
	Pz	65	7.36E-04	7.36E-04	7.36E-04	4.40E-08	8.75E-03
	Pz	67	1.00E-04	1.00E-04	1.00E-04	4.40E-08	8.75E-03
	pCy	69	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	70	1.28E-04	1.28E-04	1.28E-04	1.25E-08	8.75E-03
	pCy	74	7.00E-04	7.00E-04	1.00E-03	1.28E-08	1.00E-02
	pCy	75	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	76	2.71E-04	2.71E-04	2.71E-04	1.25E-08	8.75E-03
	pCpi	80	1.00E-04	1.00E-04	1.00E-04	1.00E-08	6.00E-03
	Arnett	157	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Concentrabr	168	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Conley Springs - Deep	176	3.61E-05	3.61E-05	3.61E-05	1.00E-08	1.00E-04
	Concentrabr West	195	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Devils Canyon	203	1.00E-01	1.00E-01	1.00E-01	1.00E-08	1.00E-04
	Jl Ranch	218	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Main	231	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Mineral Creek	246	1.00E-02	1.00E-02	1.00E-02	1.00E-08	1.00E-04
	North Boundary	250	6.25E-04	6.25E-04	6.25E-04	1.00E-08	1.00E-04
	Rancho Rio	265	2.50E-04	2.50E-04	2.50E-04	1.00E-08	1.00E-04
	Roblas Woods	275	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	West	290	1.25E-05	1.25E-05	1.25E-05	1.00E-08	1.00E-04
	Laramide	325	1.00E-05	1.00E-05	1.00E-05	1.00E-08	1.00E-04
	Anxiety	330	5.00E-04	1.00E-02	5.00E-04	1.00E-08	1.00E-04



HGU Material Property Values – Elevation 1,250 ft amsl, Layer 24 (Plan View)

CLIENT:	Resolution Copper	PROJECT:	3D Regional Groundwater Model	
JOB:	31400968.001	DRAWN:	CP	CHECKED: DO
DATE:	August 2018	FIGURE:	GW75-5	

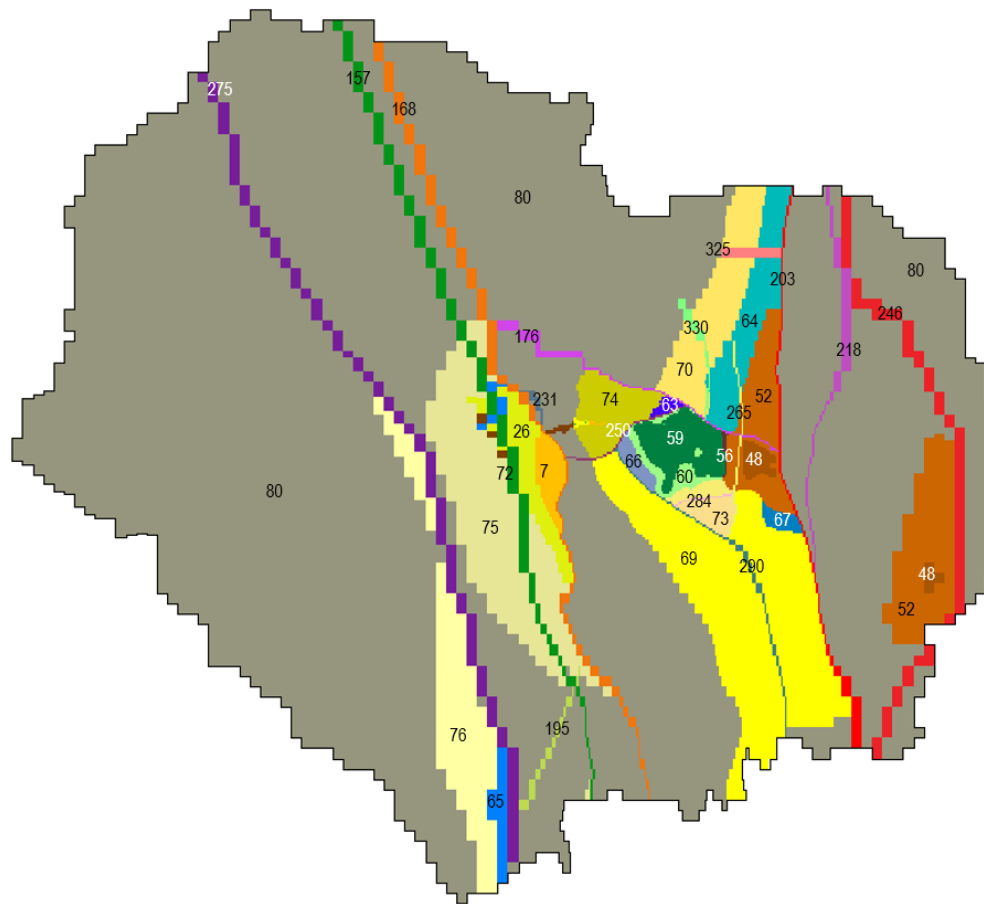


Color	HGU	Zone	Kx (ft/d)	Ky (ft/d)	Kz (ft/d)	Ss (1/ft)	Sy
	QTg	7	2.54E-04	2.54E-04	2.54E-04	3.71E-08	1.00E-02
	Tvy	12	6.25E-03	6.25E-03	6.25E-03	5.00E-08	5.00E-03
	Tal	26	1.00E-03	1.00E-03	1.00E-03	5.00E-08	5.00E-03
	Tw	42	2.74E-03	2.74E-03	2.74E-03	3.50E-08	1.00E-02
	Tw	48	8.51E-05	8.51E-05	8.51E-05	3.50E-08	1.00E-02
	Tw	52	1.25E-05	1.25E-05	1.25E-05	3.50E-08	1.00E-02
	Tw	56	3.03E-06	3.03E-06	5.00E-07	4.01E-08	1.00E-02
	KVS	59	1.00E-04	1.00E-04	1.00E-04	5.00E-08	7.07E-03
	Pz	63	5.00E-04	5.00E-04	5.00E-04	4.65E-08	1.00E-02
	Pz	64	1.48E-05	1.48E-05	1.48E-05	4.40E-08	8.75E-03
	Pz	65	7.36E-04	7.36E-04	7.36E-04	4.40E-08	8.75E-03
	Pz	67	1.00E-04	1.00E-04	1.00E-04	4.40E-08	8.75E-03
	pCy	69	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	70	1.28E-04	1.28E-04	1.28E-04	1.25E-08	8.75E-03
	pCy	73	1.00E-03	1.00E-03	1.00E-04	1.25E-08	8.75E-03
	pCy	74	7.00E-04	7.00E-04	1.00E-03	1.28E-08	1.00E-02
	pCy	75	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	76	2.71E-04	2.71E-04	2.71E-04	1.25E-08	8.75E-03
	pCpi	80	1.00E-04	1.00E-04	1.00E-04	1.00E-08	6.00E-03
	Arnett	157	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Concentrabr	168	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Conley Springs - Deep	176	3.61E-05	3.61E-05	3.61E-05	1.00E-08	1.00E-04
	Concentrabr West	195	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Devils Canyon	203	1.00E-01	1.00E-01	1.00E-01	1.00E-08	1.00E-04
	Jl Ranch	218	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Main	231	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Mineral Creek	246	1.00E-02	1.00E-02	1.00E-02	1.00E-08	1.00E-04
	North Boundary	250	6.25E-04	6.25E-04	6.25E-04	1.00E-08	1.00E-04
	Rancho Rio	265	2.50E-04	2.50E-04	2.50E-04	1.00E-08	1.00E-04
	Roblas Woods	275	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	South	284	1.60E-05	1.60E-05	1.60E-05	1.00E-08	1.00E-04
	West	290	1.25E-05	1.25E-05	1.25E-05	1.00E-08	1.00E-04
	Laramide	325	1.00E-05	1.00E-05	1.00E-05	1.00E-08	1.00E-04
	Anxiety	330	5.00E-04	1.00E-02	5.00E-04	1.00E-08	1.00E-04



HGU Material Property Values – Elevation 50 ft amsl, Layer 28 (Plan View)

CLIENT:	Resolution Copper	PROJECT:	3D Regional Groundwater Model	
JOB:	31400968.001	DRAWN:	CP	CHECKED: DO
DATE:	August 2018	FIGURE:	GW75-6	

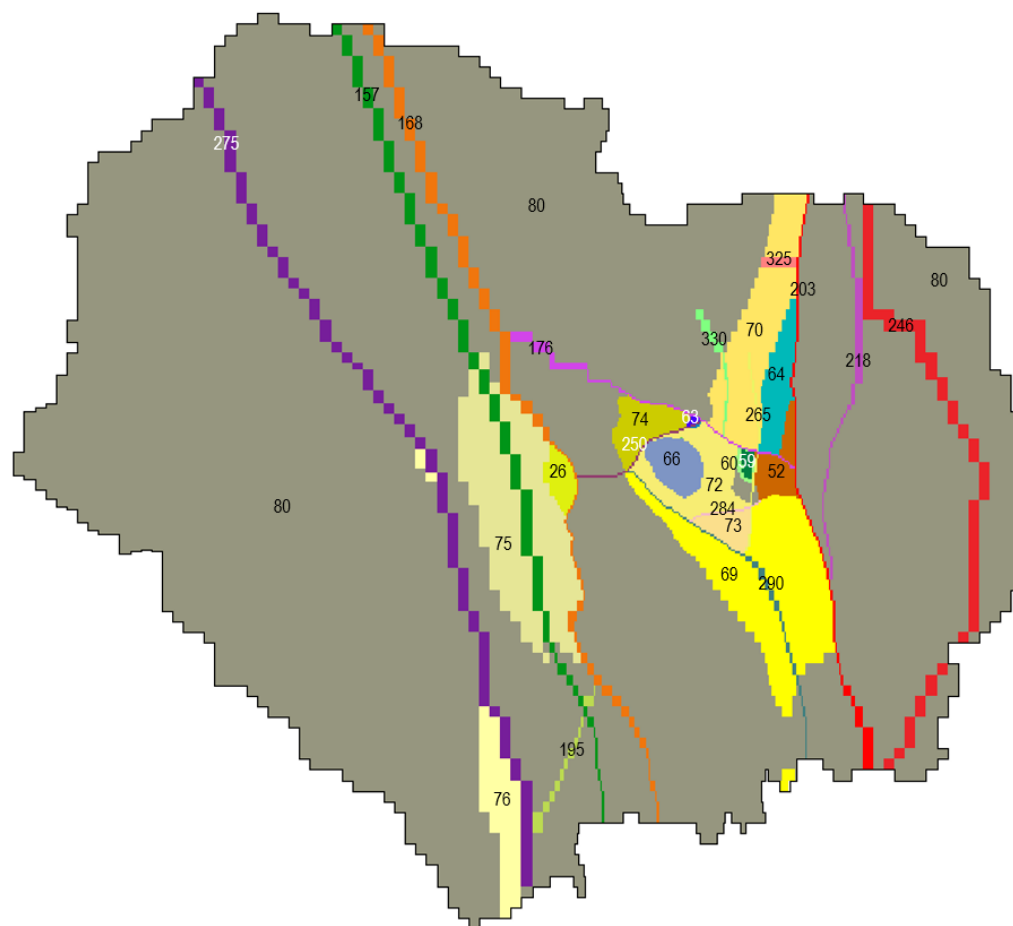


Color	HGU	Zone	Kx (ft/d)	Ky (ft/d)	Kz (ft/d)	Ss (1/ft)	Sy
	QTg	7	2.54E-04	2.54E-04	2.54E-04	3.71E-08	1.00E-02
	Tw	48	8.51E-05	8.51E-05	8.51E-05	3.50E-08	1.00E-02
	Tw	52	1.25E-05	1.25E-05	1.25E-05	3.50E-08	1.00E-02
	Tw	56	3.03E-06	3.03E-06	5.00E-07	4.01E-08	1.00E-02
	KVS	59	1.00E-04	1.00E-04	1.00E-04	5.00E-08	7.07E-03
	KVS	60	2.85E-04	2.85E-04	1.00E-04	1.30E-08	5.00E-03
	Pz	63	5.00E-04	5.00E-04	5.00E-04	4.65E-08	1.00E-02
	Pz	64	1.48E-05	1.48E-05	1.48E-05	4.40E-08	8.75E-03
	Pz	65	7.36E-04	7.36E-04	7.36E-04	4.40E-08	8.75E-03
	Pz	66	1.00E-02	1.00E-02	1.00E-02	2.00E-08	5.00E-03
	Pz	67	1.00E-04	1.00E-04	1.00E-04	4.40E-08	8.75E-03
	pCy	69	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	70	1.28E-04	1.28E-04	1.28E-04	1.25E-08	8.75E-03
	pCy	72	1.00E-02	1.00E-02	5.00E-04	1.00E-08	5.00E-03
	pCy	73	1.00E-03	1.00E-03	1.00E-04	1.25E-08	8.75E-03
	pCy	74	7.00E-04	7.00E-04	1.00E-03	1.28E-08	1.00E-02
	pCy	75	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	76	2.71E-04	2.71E-04	2.71E-04	1.25E-08	8.75E-03
	pCpi	80	1.00E-04	1.00E-04	1.00E-04	1.00E-08	6.00E-03
	Arnett	157	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Concentrator	168	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Conley Springs - Deep	176	3.61E-05	3.61E-05	3.61E-05	1.00E-08	1.00E-04
	Concentrator West	195	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Devils Canyon	203	1.00E-01	1.00E-01	1.00E-01	1.00E-08	1.00E-04
	Jl Ranch	218	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Main	231	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Mineral Creek	246	1.00E-02	1.00E-02	1.00E-02	1.00E-08	1.00E-04
	North Boundary	250	6.25E-04	6.25E-04	6.25E-04	1.00E-08	1.00E-04
	Rancho Rio	265	2.50E-04	2.50E-04	2.50E-04	1.00E-08	1.00E-04
	Roblas Woods	275	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	South	284	1.60E-05	1.60E-05	1.60E-05	1.00E-08	1.00E-04
	West	290	1.25E-05	1.25E-05	1.25E-05	1.00E-08	1.00E-04
	Laramide	325	1.00E-05	1.00E-05	1.00E-05	1.00E-08	1.00E-04
	Anxiety	330	5.00E-04	1.00E-02	5.00E-04	1.00E-08	1.00E-04



HGU Material Property Values – Elevation -1,150 ft amsl, Layer 32 (Plan View)

CLIENT:	Resolution Copper	PROJECT:	3D Regional Groundwater Model
JOB:	31400968.001	DRAWN:	CP
		CHECKED:	DO
DATE:	August 2018	FIGURE:	GW75-7

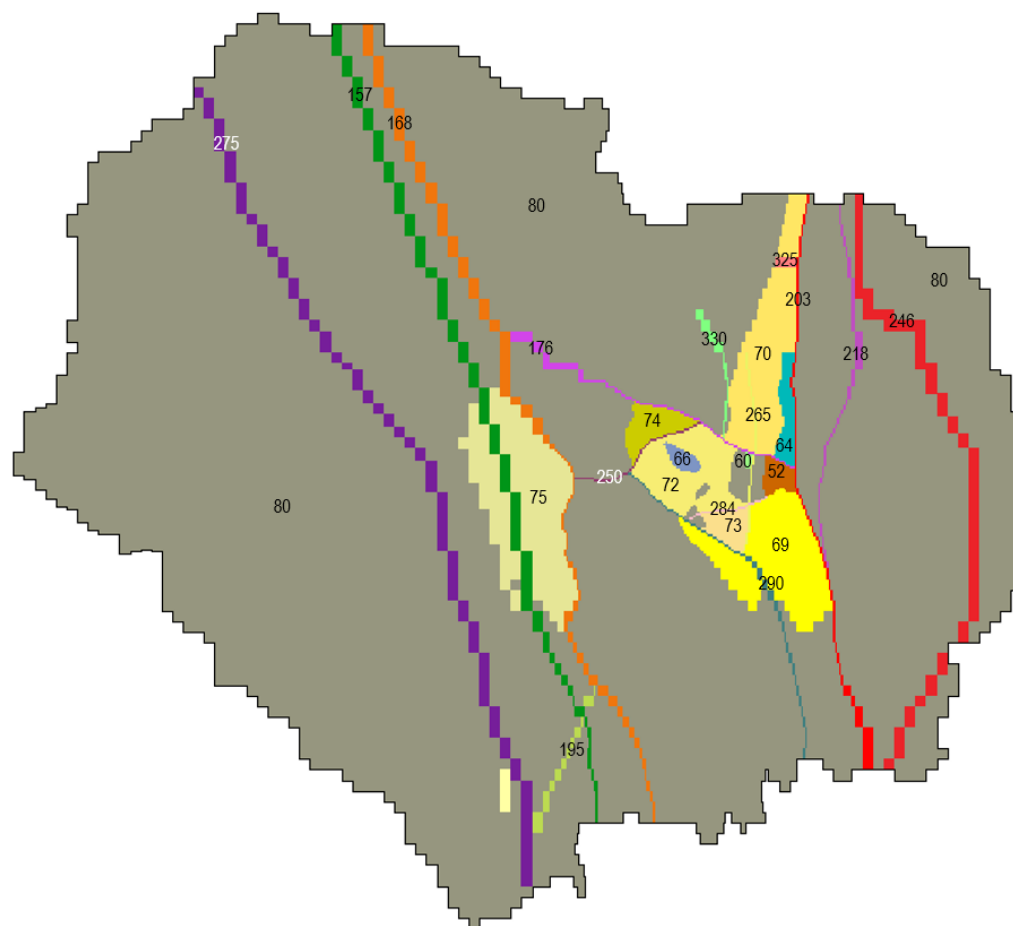


Color	HGU	Zone	Kx (ft/d)	Ky (ft/d)	Kz (ft/d)	Ss (1/ft)	Sy
	Tw	52	1.25E-05	1.25E-05	1.25E-05	3.50E-08	1.00E-02
	KVS	59	1.00E-04	1.00E-04	1.00E-04	5.00E-08	7.07E-03
	KVS	60	2.85E-04	2.85E-04	1.00E-04	1.30E-08	5.00E-03
	Pz	63	5.00E-04	5.00E-04	5.00E-04	4.65E-08	1.00E-02
	Pz	64	1.48E-05	1.48E-05	1.48E-05	4.40E-08	8.75E-03
	Pz	66	1.00E-02	1.00E-02	1.00E-02	2.00E-08	5.00E-03
	pCy	69	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	70	1.28E-04	1.28E-04	1.28E-04	1.25E-08	8.75E-03
	pCy	72	1.00E-02	1.00E-02	5.00E-04	1.00E-08	5.00E-03
	pCy	73	1.00E-03	1.00E-03	1.00E-04	1.25E-08	8.75E-03
	pCy	74	7.00E-04	7.00E-04	1.00E-03	1.28E-08	1.00E-02
	pCy	75	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	76	2.71E-04	2.71E-04	2.71E-04	1.25E-08	8.75E-03
	pCpi	80	1.00E-04	1.00E-04	1.00E-04	1.00E-08	6.00E-03
	Arnett	157	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Concentrator	168	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Conley Springs - Deep	176	3.61E-05	3.61E-05	3.61E-05	1.00E-08	1.00E-04
	Concentrator West	195	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Devils Canyon	203	1.00E-01	1.00E-01	1.00E-01	1.00E-08	1.00E-04
	Jl Ranch	218	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Main	231	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Mineral Creek	246	1.00E-02	1.00E-02	1.00E-02	1.00E-08	1.00E-04
	North Boundary	250	6.25E-04	6.25E-04	6.25E-04	1.00E-08	1.00E-04
	Rancho Rio	265	2.50E-04	2.50E-04	2.50E-04	1.00E-08	1.00E-04
	Roblas Woods	275	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	South	284	1.60E-05	1.60E-05	1.60E-05	1.00E-08	1.00E-04
	West	290	1.25E-05	1.25E-05	1.25E-05	1.00E-08	1.00E-04
	Laramide	325	1.00E-05	1.00E-05	1.00E-05	1.00E-08	1.00E-04
	Anxiety	330	5.00E-04	1.00E-02	5.00E-04	1.00E-08	1.00E-04



HGU Material Property Values – Elevation -2,350 ft amsl, Layer 36 (Plan View)

CLIENT:	Resolution Copper	PROJECT:	3D Regional Groundwater Model	
JOB:	31400968.001	DRAWN:	CP	CHECKED: DO
DATE:	August 2018	FIGURE:	GW75-8	

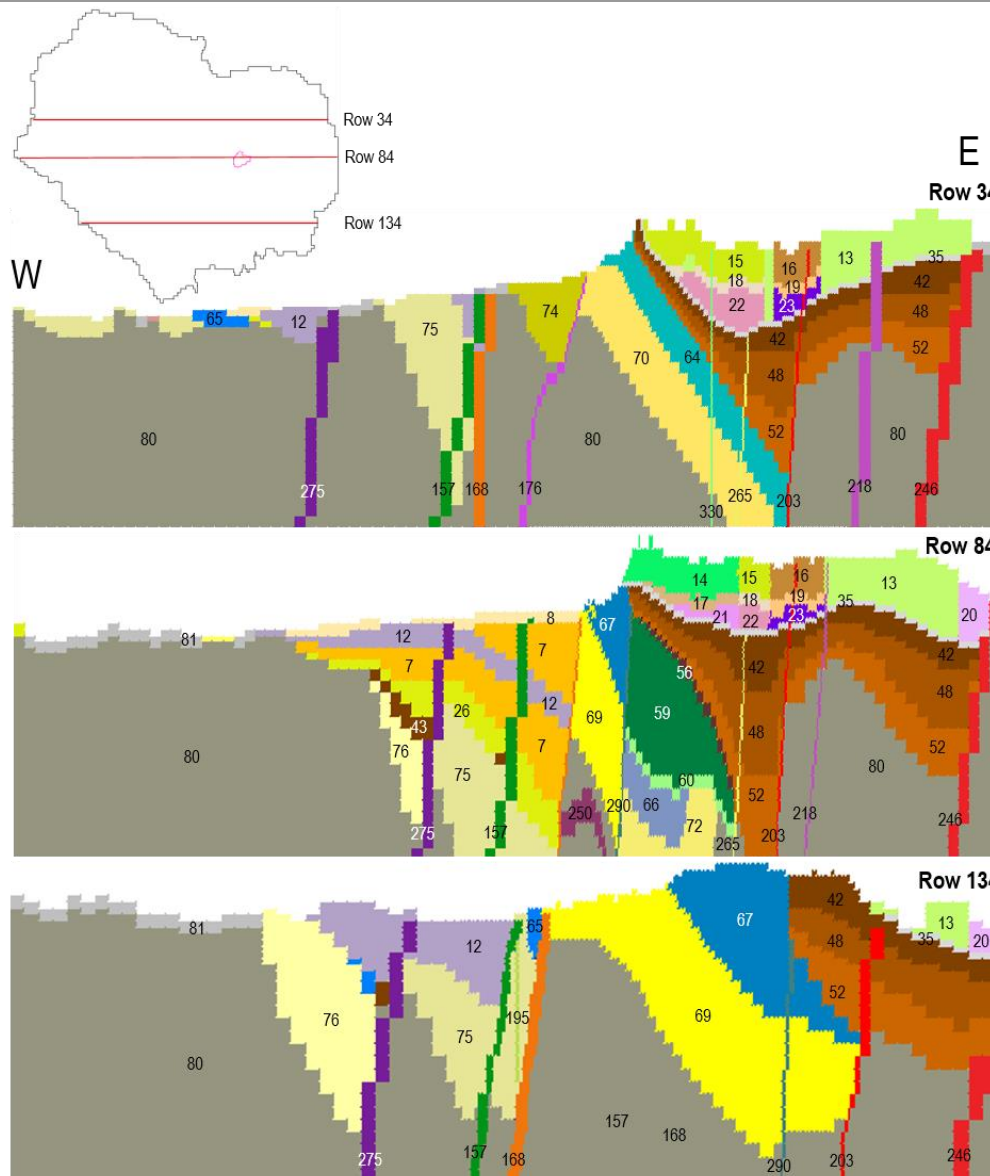


Color	HGU	Zone	Kx (ft/d)	Ky (ft/d)	Kz (ft/d)	Ss (1/ft)	Sy
	Tw	52	1.25E-05	1.25E-05	1.25E-05	3.50E-08	1.00E-02
	KVS	60	2.85E-04	2.85E-04	1.00E-04	1.30E-08	5.00E-03
	Pz	64	1.48E-05	1.48E-05	1.48E-05	4.40E-08	8.75E-03
	Pz	66	1.00E-02	1.00E-02	1.00E-02	2.00E-08	5.00E-03
	pCy	69	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	70	1.28E-04	1.28E-04	1.28E-04	1.25E-08	8.75E-03
	pCy	72	1.00E-02	1.00E-02	5.00E-04	1.00E-08	5.00E-03
	pCy	73	1.00E-03	1.00E-03	1.00E-04	1.25E-08	8.75E-03
	pCy	74	7.00E-04	7.00E-04	1.00E-03	1.28E-08	1.00E-02
	pCy	75	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCpi	80	1.00E-04	1.00E-04	1.00E-04	1.00E-08	6.00E-03
	Arnett	157	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Concentrator	168	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Conley Springs - Deep	176	3.61E-05	3.61E-05	3.61E-05	1.00E-08	1.00E-04
	Concentrator West	195	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Devils Canyon	203	1.00E-01	1.00E-01	1.00E-01	1.00E-08	1.00E-04
	Jl Ranch	218	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Main	231	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Mineral Creek	246	1.00E-02	1.00E-02	1.00E-02	1.00E-08	1.00E-04
	North Boundary	250	6.25E-04	6.25E-04	6.25E-04	1.00E-08	1.00E-04
	Rancho Rio	265	2.50E-04	2.50E-04	2.50E-04	1.00E-08	1.00E-04
	Roblas Woods	275	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	South	284	1.60E-05	1.60E-05	1.60E-05	1.00E-08	1.00E-04
	West	290	1.25E-05	1.25E-05	1.25E-05	1.00E-08	1.00E-04
	Laramide	325	1.00E-05	1.00E-05	1.00E-05	1.00E-08	1.00E-04
	Anxiety	330	5.00E-04	1.00E-02	5.00E-04	1.00E-08	1.00E-04



HGU Material Property Values – Elevation -3,900 ft amsl, Layer 39 (Plan View)

CLIENT:	Resolution Copper	PROJECT:	3D Regional Groundwater Model	
JOB:	31400968.001	DRAWN:	CP	CHECKED: DO
DATE:	August 2018	FIGURE:	GW75-9	

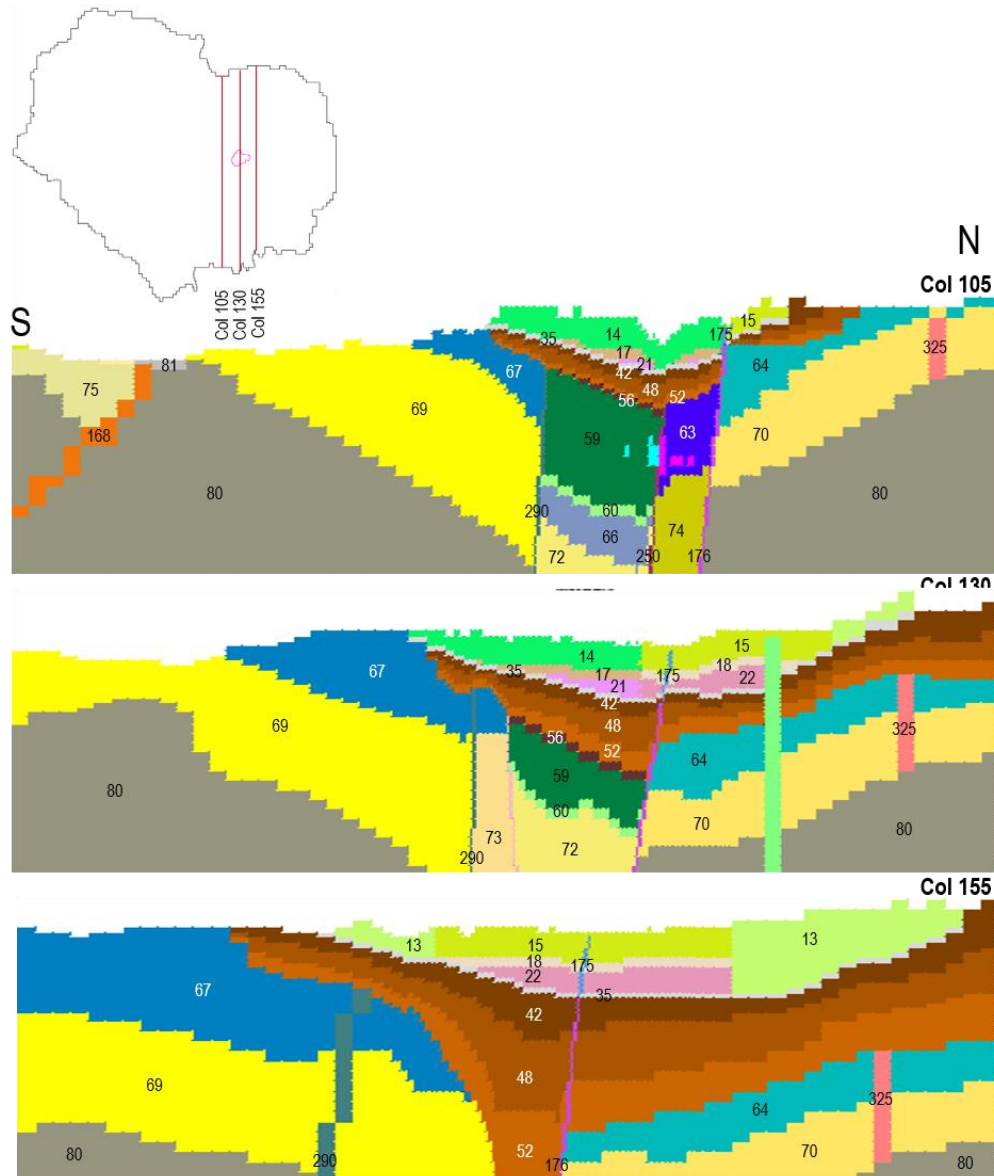


Color	HGU	Zone	Kx (ft/d)	Ky (ft/d)	Kz (ft/d)	Ss (1/ft)	Sy
	Qal	4	1.92E+00	1.92E+00	1.92E-01	1.00E-05	2.00E-01
	QTg	7	2.54E-04	2.54E-04	2.54E-04	3.71E-08	1.00E-02
	QTg	8	2.03E-03	2.03E-03	2.03E-03	3.71E-08	1.00E-02
	Tvv	12	6.25E-03	6.25E-03	6.25E-03	5.00E-08	5.00E-03
	Tal	13	6.25E-02	6.25E-02	6.25E-02	5.00E-08	5.00E-03
	Tal	14	2.50E-01	2.50E-01	2.50E-01	5.00E-08	1.00E-03
	Tal	15	1.28E-02	1.28E-02	1.28E-02	5.00E-08	5.00E-03
	Tal	16	3.00E+00	3.00E+00	3.00E+00	5.00E-08	5.00E-03
	Tal	17	6.00E-02	6.00E-02	6.00E-02	5.00E-08	5.00E-03
	Tal	18	5.00E-03	5.00E-03	5.00E-03	5.00E-08	5.00E-03
	Tal	19	1.00E+00	1.00E+00	1.00E+00	5.00E-08	5.00E-03
	Tal	20	4.00E-01	4.00E-01	4.00E-01	5.00E-08	5.00E-03
	Tal	21	1.07E-02	1.07E-02	1.07E-02	5.00E-08	5.00E-03
	Tal	22	1.00E-03	1.00E-03	1.00E-03	5.00E-08	5.00E-03
	Tal	23	4.00E-01	4.00E-01	4.00E-01	5.00E-08	5.00E-03
	Tal	26	1.00E-03	1.00E-03	1.00E-03	5.00E-08	5.00E-03
	Talv	35	1.00E-03	1.00E-03	1.00E-03	5.00E-08	5.00E-03
	Tvo	38	2.17E-01	2.17E-01	2.17E-01	5.79E-07	5.00E-03
	Tvo	39	8.71E-02	8.71E-02	8.71E-02	5.79E-07	5.00E-03
	Tw	42	2.74E-03	2.74E-03	2.74E-03	3.50E-08	1.00E-02
	Tw	43	7.00E-04	7.00E-04	7.00E-04	3.50E-08	1.00E-02
	Tw	48	8.51E-05	8.51E-05	8.51E-05	3.50E-08	1.00E-02
	Tw	52	1.25E-05	1.25E-05	1.25E-05	3.50E-08	1.00E-02
	Tw	56	3.03E-06	3.03E-06	5.00E-07	4.01E-08	1.00E-02
	KVS	59	1.00E-04	1.00E-04	1.00E-04	5.00E-08	7.07E-03
	KVS	60	2.85E-04	2.85E-04	1.00E-04	1.30E-08	5.00E-03
	Pz	63	5.00E-04	5.00E-04	5.00E-04	4.65E-08	1.00E-02
	Pz	64	1.48E-05	1.48E-05	1.48E-05	4.40E-08	8.75E-03
	Pz	65	7.36E-04	7.36E-04	7.36E-04	4.40E-08	8.75E-03
	Pz	66	1.00E-02	1.00E-02	1.00E-02	2.00E-08	5.00E-03
	Pz	67	1.00E-04	1.00E-04	1.00E-04	4.40E-08	8.75E-03
	pCy	69	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	70	1.28E-04	1.28E-04	1.28E-04	1.25E-08	8.75E-03
	pCy	71	4.56E-05	4.56E-05	4.56E-05	1.00E-08	7.00E-03
	pCy	72	1.00E-02	1.00E-02	5.00E-04	1.00E-08	5.00E-03
	pCy	73	1.00E-03	1.00E-03	1.00E-04	1.25E-08	8.75E-03
	pCy	74	7.00E-04	7.00E-04	1.00E-03	1.28E-08	1.00E-02
	pCy	75	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	76	2.71E-04	2.71E-04	2.71E-04	1.25E-08	8.75E-03
	pCpi	80	1.00E-04	1.00E-04	1.00E-04	1.00E-08	6.00E-03
	pCpi	81	1.00E-03	1.00E-03	1.00E-03	1.00E-08	6.00E-03
	Arnett	157	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Concentrator	168	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Conley Springs - Shallow	175	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Conley Springs - Deep	176	3.61E-05	3.61E-05	3.61E-05	1.00E-08	1.00E-04
	Concentrator West	195	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Devils Canyon	203	1.00E-01	1.00E-01	1.00E-01	1.00E-08	1.00E-04
	Jl Ranch	218	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Main	231	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Mineral Creek	246	1.00E-02	1.00E-02	1.00E-02	1.00E-08	1.00E-04
	North Boundary	250	6.25E-04	6.25E-04	6.25E-04	1.00E-08	1.00E-04
	Rancho Rio	265	2.50E-04	2.50E-04	2.50E-04	1.00E-08	1.00E-04
	Roblas Woods	275	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	South	284	1.60E-05	1.60E-05	1.60E-05	1.00E-08	1.00E-04
	West	290	1.25E-05	1.25E-05	1.25E-05	1.00E-08	1.00E-04
	Laramide	325	1.00E-05	1.00E-05	1.00E-05	1.00E-08	1.00E-04
	Anxiety	330	5.00E-04	1.00E-02	5.00E-04	1.00E-08	1.00E-04



HGU Material Property Values – Rows 34, 84, & 134 (X-Section View)

CLIENT:	Resolution Copper	PROJECT:	3D Regional Groundwater Model
JOB:	31400968.001	DRAWN:	CP
DATE:	August 2018	CHECKED:	DO
		FIGURE:	GW75-10



Color	HGU	Zone	Kx (ft/d)	Ky (ft/d)	Kz (ft/d)	Ss (1/ft)	Sy
	Qal	4	1.92E+00	1.92E+00	1.92E-01	1.00E-05	2.00E-01
	QTq	7	2.54E-04	2.54E-04	2.54E-04	3.71E-08	1.00E-02
	QTq	8	2.03E-03	2.03E-03	2.03E-03	3.71E-08	1.00E-02
	Tvy	12	6.25E-03	6.25E-03	6.25E-03	5.00E-08	5.00E-03
	Tal	13	6.25E-02	6.25E-02	6.25E-02	5.00E-08	5.00E-03
	Tal	14	2.50E-01	2.50E-01	2.50E-01	5.00E-08	1.00E-03
	Tal	15	1.26E-02	1.26E-02	1.26E-02	5.00E-08	5.00E-03
	Tal	16	3.00E+00	3.00E+00	3.00E+00	5.00E-08	5.00E-03
	Tal	17	6.00E-02	6.00E-02	6.00E-02	5.00E-08	5.00E-03
	Tal	18	5.00E-03	5.00E-03	5.00E-03	5.00E-08	5.00E-03
	Tal	19	1.00E+00	1.00E+00	1.00E+00	5.00E-08	5.00E-03
	Tal	20	4.00E-01	4.00E-01	4.00E-01	5.00E-08	5.00E-03
	Tal	21	1.07E-02	1.07E-02	1.07E-02	5.00E-08	5.00E-03
	Tal	22	1.00E-03	1.00E-03	1.00E-03	5.00E-08	5.00E-03
	Tal	23	4.00E-01	4.00E-01	4.00E-01	5.00E-08	5.00E-03
	Tal	26	1.00E-03	1.00E-03	1.00E-03	5.00E-08	5.00E-03
	Talv	35	1.00E-03	1.00E-03	1.00E-03	5.00E-08	5.00E-03
	Tvo	38	2.17E-01	2.17E-01	2.17E-01	5.76E-07	5.00E-03
	Tvo	39	8.71E-02	8.71E-02	8.71E-02	5.76E-07	5.00E-03
	Tw	42	2.74E-03	2.74E-03	2.74E-03	3.50E-08	1.00E-02
	Tw	43	7.00E-04	7.00E-04	7.00E-04	3.50E-08	1.00E-02
	Tw	48	8.51E-05	8.51E-05	8.51E-05	3.50E-08	1.00E-02
	Tw	52	1.25E-05	1.25E-05	1.25E-05	3.50E-08	1.00E-02
	Tw	56	1.00E-06	1.00E-06	5.00E-07	3.50E-08	1.00E-02
	KVS	59	4.86E-04	4.86E-04	2.77E-05	1.45E-08	6.25E-03
	KVS	60	1.40E-03	1.40E-03	2.67E-04	1.45E-08	3.00E-03
	Pz	63	1.51E-03	1.51E-03	1.51E-03	4.40E-08	8.75E-03
	Pz	64	1.48E-05	1.48E-05	1.48E-05	4.40E-08	8.75E-03
	Pz	65	7.36E-04	7.36E-04	7.36E-04	4.40E-08	8.75E-03
	Pz	66	1.03E-02	1.03E-02	3.84E-02	4.40E-08	1.00E-03
	pCy	69	1.00E-02	1.00E-02	1.00E-02	1.25E-08	8.75E-03
	pCy	70	1.28E-04	1.28E-04	1.28E-04	1.25E-08	8.75E-03
	pCy	71	4.56E-05	4.56E-05	4.56E-05	1.00E-08	7.00E-03
	pCy	72	4.52E-03	4.52E-03	8.00E-04	1.25E-08	1.00E-03
	pCy	73	1.00E-03	1.00E-03	1.00E-04	1.25E-08	8.75E-03
	pCy	74	1.02E-04	1.02E-04	1.02E-04	1.25E-08	8.75E-03
	pCy	75	1.00E-03	1.00E-03	1.00E-03	1.25E-08	8.75E-03
	pCy	76	2.71E-04	2.71E-04	2.71E-04	1.25E-08	8.75E-03
	pCpi	80	1.00E-04	1.00E-04	1.00E-04	1.00E-08	6.00E-03
	pCpi	81	1.00E-03	1.00E-03	1.00E-03	1.00E-08	6.00E-03
	Arnett	157	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Concentrator	168	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Conley Springs - Shallow	175	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Conley Springs - Deep	176	3.61E-05	3.61E-05	3.61E-05	1.00E-08	1.00E-04
	Concentrator West	195	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Devils Canyon	203	1.00E-01	1.00E-01	1.00E-01	1.00E-08	1.00E-04
	Jl Ranch	218	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	Main	231	1.00E-04	1.00E-04	1.00E-04	1.00E-08	1.00E-04
	Mineral Creek	246	1.00E-02	1.00E-02	1.00E-02	1.00E-08	1.00E-04
	North Boundary	250	6.25E-04	6.25E-04	6.25E-04	1.00E-08	1.00E-04
	Rancho Rio	265	2.50E-04	2.50E-04	2.50E-04	1.00E-08	1.00E-04
	Roblas Woods	275	1.00E-03	1.00E-03	1.00E-03	1.00E-08	1.00E-04
	South	284	1.60E-05	1.60E-05	1.60E-05	1.00E-08	1.00E-04
	West	290	1.25E-05	1.25E-05	1.25E-05	1.00E-08	1.00E-04
	Laramide	325	1.00E-05	1.00E-05	1.00E-05	1.00E-08	1.00E-04
	Anxiety	330	5.00E-04	1.00E-02	5.00E-04	1.00E-08	1.00E-04



HGU Material Property Values – Rows 105, 130, & 155 (X-Section View)

CLIENT: Resolution Copper

JOB: 31400968.001

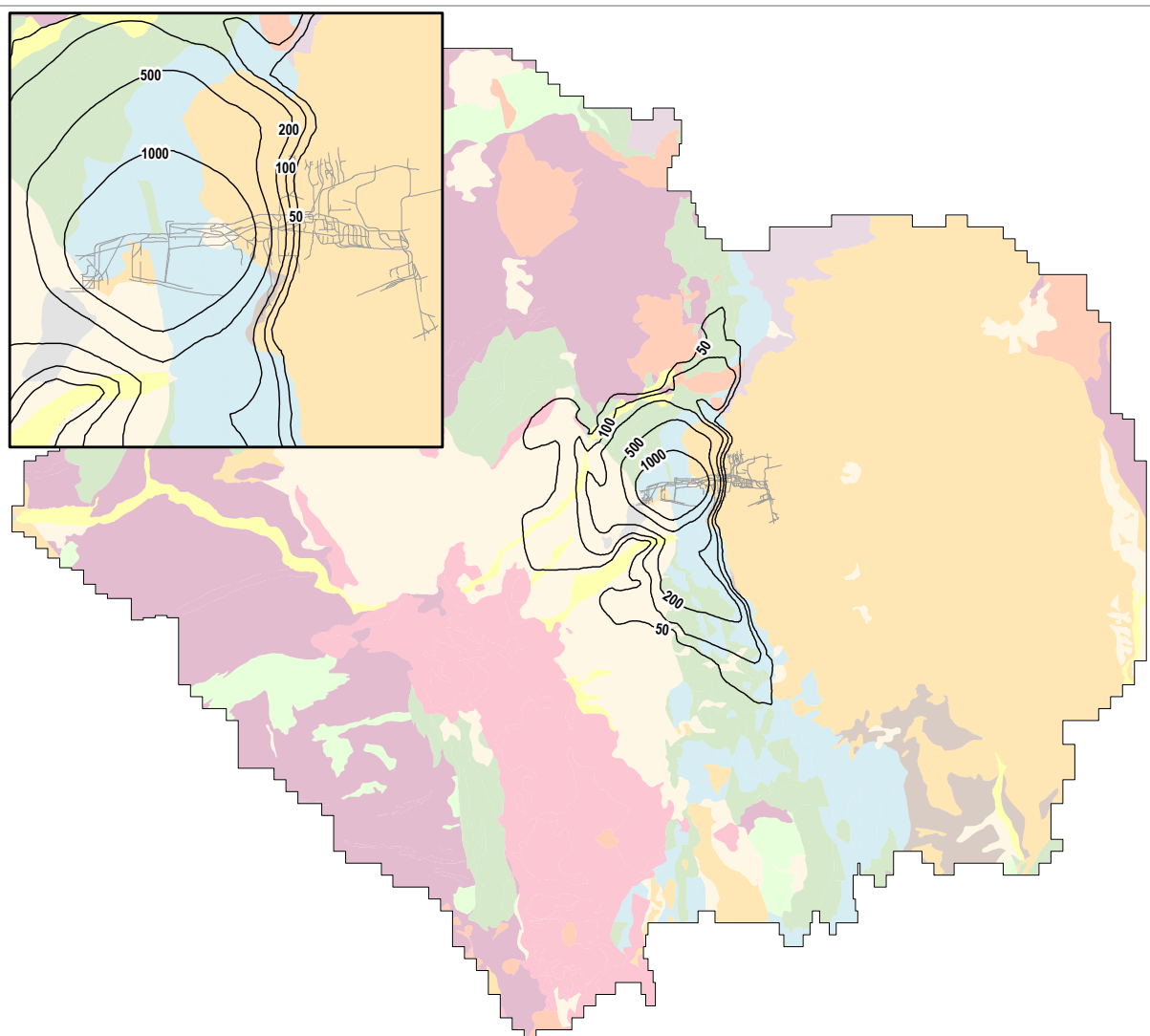
DATE: August 2018

PROJECT: 3D Regional Groundwater Model

DRAWN: CP

CHECKED: DO

FIGURE: GW75-11



Surface Geology

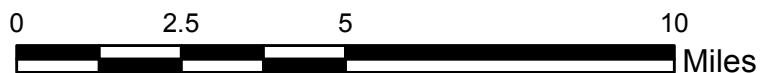
- Pz - Paleozoic Sedimentary Rocks
- QTg - Quaternary-Tertiary Basin-Fill Deposits
- Qal - Quaternary Alluvial Deposits
- TKg - Cretaceous and Tertiary Intrusive Rocks
- Tal - Tertiary Apache Leap Tuff
- Tvo - Tertiary Volcanics - Older
- Tvy - Tertiary Volcanics - Younger
- Tw - Tertiary Whitetail Conglomerate
- d - Disturbed Surficial Deposits
- pCgu - Undifferentiated Precambrian Intrusive Rocks
- pCpi - Older Precambrian Pinal Schist
- pCy - Younger Precambrian Sedimentary Rocks, Basalt, and Diabase

- Drawdown Contour (feet)
- Groundwater Model Domain
- Magma Underground Workings

Model Results: RCM_H_180730

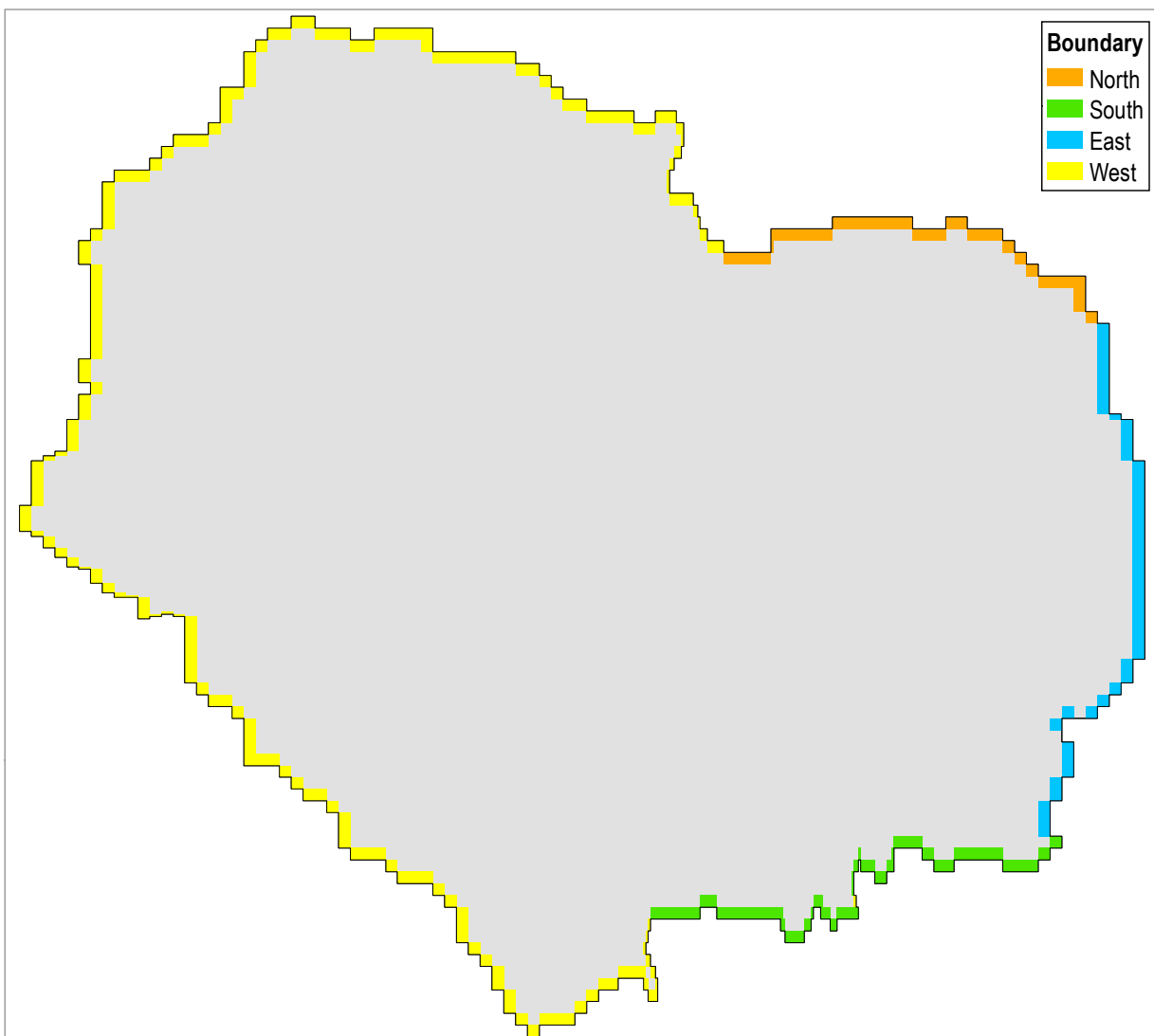
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Coordinate System: NAD83 / Arizona Central (ft)



Historical Model Drawdown - Steady State Conditions (1910) to End of Historical Model (2017)

PROJECT:	3D Regional Groundwater Model	FIGURE #:	GW76
CLIENT:	Resolution Copper	PROJECT #:	31400968.001
DRAWN:	CP	CHECKED:	DO
		DATE:	August 2018



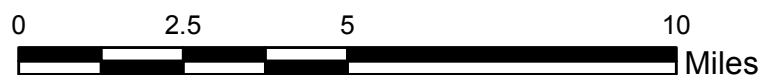
Net Flow (gpm) and ¹ Percentage (%) of Dewatering Stress Across Boundary (+ Inflow)										
Model	North (orange)		South (green)		East (blue)		West (yellow)		Total	
	gpm	%	gpm	%	gpm	%	gpm	%	gpm	%
Historical	8	<1%	4	<1%	1	<1%	8	<1%	21	2%
End LOM	11	1%	5	<1%	1	<1%	8	<1%	25	2%
Post Closure	12	1%	5	<1%	2	<1%	8	<1%	27	3%

¹Dewatering stress flowrate used for % calculation is 1065 gpm, the average dewatering rate through the LoM model.

Model Results: RCM_H_180730

1:185,000

Coordinate System: NAD83 / Arizona Central (ft)



General Head Boundary Flux

PROJECT: 3D Regional Groundwater Model

FIGURE #: GW77

CLIENT: Resolution Copper

PROJECT #: 31400968.001

DRAWN: CP

CHECKED: DO

DATE: August 2018