DATE: July 11, 2011

TO: Lee Robinson, Martin Booth, CERES Team

FROM: Rick Zehner

SUBJECT: Preliminary results of June field work

This memo is meant to give a quick synopsis of results from the 2 ½ weeks of field work completed during June. Each polygon that I visited is mentioned below. For each target area the first topic listed is called 'Site Visit' and gives a synopsis of what I found and/or concluded. I have left the original information compiled from the GIS data (and in the previous memos) after the Site Visit blurb, if you wish to review it.

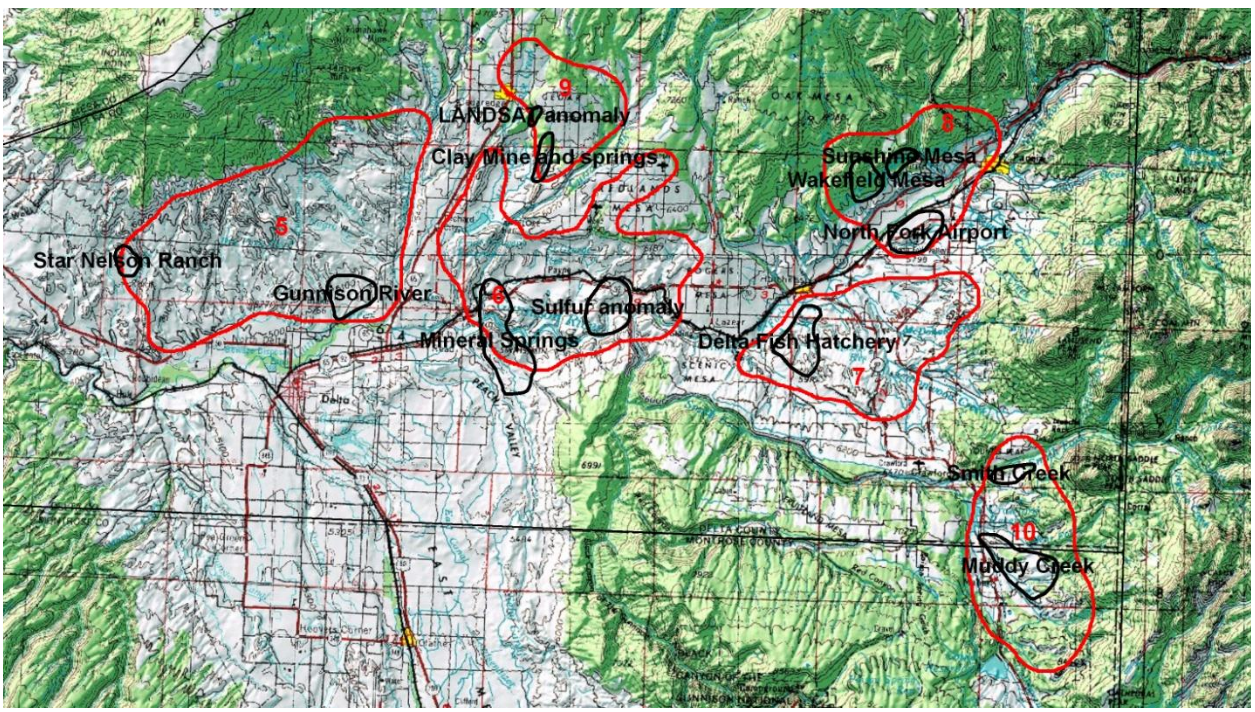

Figure 1. Polygons in Delta County.

Polygon 6: Sulfur Gulch, Delta County

Site Visit: We determined that the Sulfur anomaly at Sulfur Gulch is part of the Gunnison National Conservation Area and unavailable for geothermal exploration.

I visited the Mineral Springs anomaly without actually going onto private land. In snooping around, I detected no real evidence of hydrothermal alteration or geothermal activity. Further work necessitates contacting the most important land owner, James Patterson. After numerous attempts to contact him, including two visits to his house when (at least one time) he appeared to be at home, I had no luck and abandoned the idea. Right now there is nothing compelling me to return here other than the original information from the GIS, listed below.

Land Ownership: 80% private, 20% BLM

Environmental: No ACES, WSA's, or Wilderness areas

Surface Thermal Manifestations: No hot springs/wells and no temperature gradient data occur within the polygon; however two cold springs about a kilometer part on the western edge of the polygon have interesting geochemistry and geothermometry suggesting a geothermal system. Both have low silica, but high boron, fluoride, specific conductivity, and sulfate; one has high lithium (the other is not sampled for Li). Both have 150C Na-K-Ca geothermometers but too much Mg to make a high cation geothermometer temperature (this could be a surface phenomenon.

Satellite Thermal Imagery: In general, ASTER thermal anomalies cover a large portion (~30%) of this polygon and are almost certainly primarily solar driven. Within this broad anomaly could be a few geothermal-driven anomalies at Mineral Springs and the sulfur locality. LANDSAT anomalies are mostly associated with NE-striking ridge tops.

Alteration: Silica is associated with a NS fault on which the two geochemically-anomalous springs occur, and FeOx + silica are associated with this fault (and mines and prospects) south of the springs on Smith Mountain. A large silica anomaly occurs next to a hot/warm water surface anomaly on a northern spur of the polygon at Redlands Mesa. Smaller silica-FeOx anomalies are adjacent to the sulfur prospects (see below).

Mines and Prospects: Two sulfur and one clay prospects are located on BLM land in the southern part of the polygon at lineament intersections and within an ASTER thermal anomaly and splotchy silica-Feox pixel signatures, indicating geothermal activity (past or present). No other mines or prospects within the polygon.

Wells: 13 oil and/or gas wells.

Areas of Interest:

1) Mineral Springs anomaly a) in T14S R94W: eastern half Sec 31; southern half Sec 32, b) in 15S R94W: western half Sec 5, eastern third of Sec 6, NW ¼ Sec 7, all of Sec 8, SW ¼ Sec 9, western half Sec 16, eastern half Sec 17. <u>High priority</u>. Not this area leaks out of the polygon by a half mile or so.
    a) Land Ownership: 60% BLM, 40% private
    b) Distance to transmission: 1-2 miles

2) The sulfur/clay/ASTER anomaly in eastern half of Sec 35 and all of Sec 36 of T14S R94 as well as the northern half of Secs 1 and 2 of T15S R94W should be sampled by 2m survey and nearby springs should be sampled for temperature and geochemistry. Areas around the anomalous geochemical springs should be sampled by 2m survey. <u>High priority</u>.
    a) Land Ownership: 70% BLM, 30% private
    b) Distance to transmission: 1 mile

Polygon 7: MacDonald, Delta County

Site Visit: Locals indicated that a thermal well exists somewhere in the vicinity of the Delta Fish Hatchery, but I could not determine its whereabouts The major ASTER thermal anomaly at Macdonald was tested with 4 2m rods (see Figure), though numerous tries were made to get additional rods into the ground on BLM land (shallow bedrock). Measured temperatures were low and values at 1.5m were uniformly higher than at 2m depth. The data suggests that no thermal anomaly attributable to geothermal activity is present.

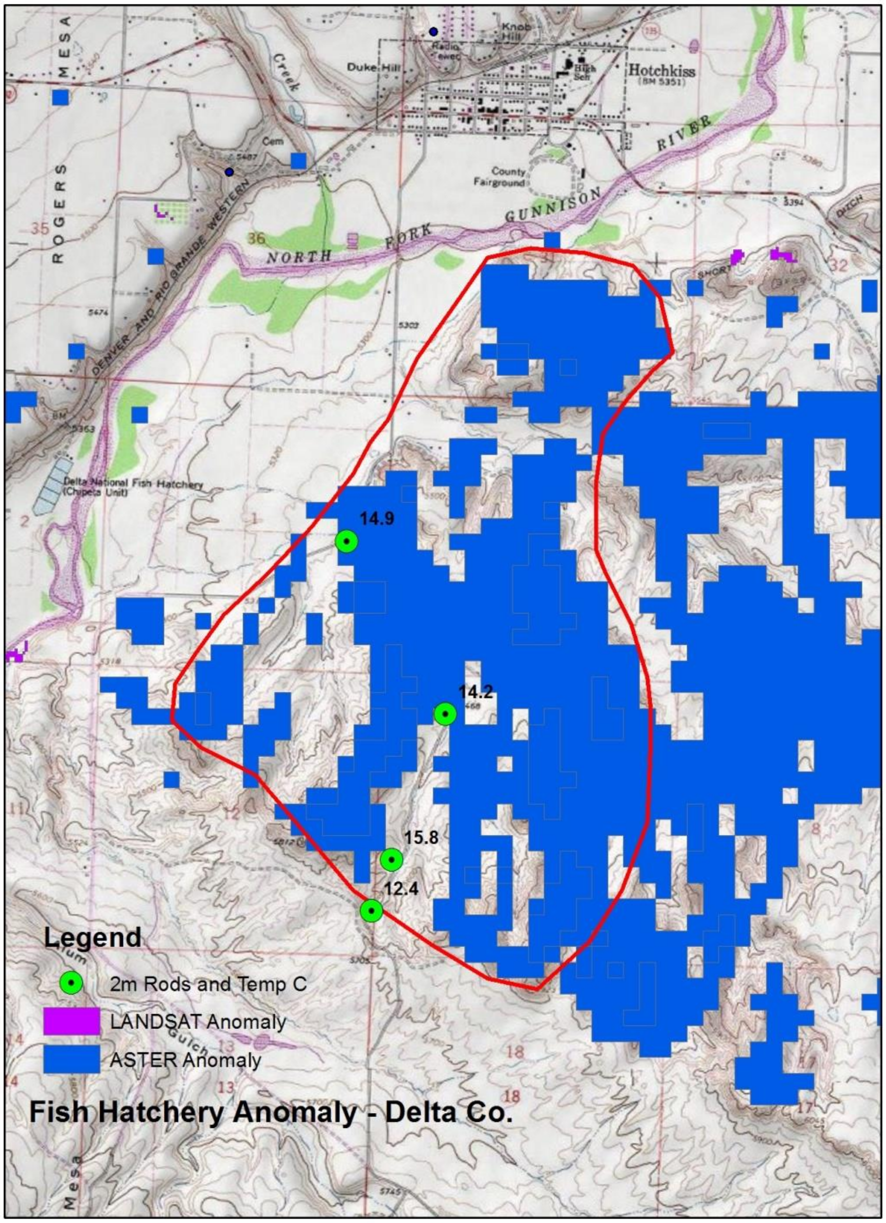

Figure 2. ASTER anomaly at Macdonald adjacent to the Delta Fish Hatchery.

Land Ownership: 70% private, 30% BLM land

Environmental: No ACES, WSA's, or Wilderness areas

Surface Thermal Manifestations: None. No temperature gradient holes or water samples from the geochemical database.

Satellite Thermal Imagery: ASTER anomalies cover about 17% of surface area in the polygon, LANDSAT anomalies are almost zero. The ASTER anomalies are in two large zones in the NE and W parts of the polygon, broadly coincident with silica alteration. The western thermal anomaly seems to strike parallel to a set of NE lineaments.
Alteration: Geology is entirely 'Km' unit and alluvium. Two large silica anomalies are present; one in the NE portion of the polygon, the other in the western part of the polygon, both in Km unit (is KM something like sandstone?). Sparse Feox.

Mines and Prospects: One placer gold and 3 sand/gravel operations.

Wells: 3 oil/gas wells reported within the polygon.

Areas of Interest: Low priority, unless we want to test on the basis of large, unfocused ASTER thermal + silica anomalies (with some structure). A couple areas with roads to test this would be east of the Delta Fish Hatchery in a) western half of Secs 6 and 7 of T and Sec 1 of T15S R92W and eastern 1/4 of Sec 1 T15S R93W; NS boundary road between Secs 8 and 9 of T15S R92W. This area has 70% BLM 30% Private land ownership and a 2 mile distance to transmission.

Polygon 8: Stewart Creek, Delta County

Site Visit: Several land owners gave permission for us to visit and sample their properties, including owners of the warm well. We were unable to gain access to most of the ridge top, owned by the County airport, where the ASTER thermal anomaly occurs. Overall, in this area there is no evidence of hydrothermal alteration (in particular, no silicification/opalitization).

The 2m sampling was difficult because fiber optic cables on both sides of the dirt roads made it difficult to plant rods, and because fields downhill from the warm well were being irrigated so that cold water masked the signal. Overall, the measured temperatures are background values and the values at 1.5m are higher than those at 2m. Although temperatures at 2m depth adjacent to the warm well are slightly warmer than adjacent areas, it's not by much: this could be random and is certainly barely (if at all) above background. It does not appear that the ASTER anomaly is a geothermally induced feature.

The warm well is apparently the only thermal feature I could identify in the area. Locals do not know of any other warm springs or wells in the immediate area. The well was said by the owners to have been drilled around the turn of the (19^{th}) century; they did not know its depth, which is listed as ~80 feet in the literature. If that is the case, we should have detected a thermal anomaly with the 2m equipment. The well water gives off a strong H2S odor. Geochemical results of our water sampling are pending.

The 2m sampling did not identify a target, and there is no obvious opalitization that would explain the low silica values were this a high-temperature system. So there is probably no need to return.

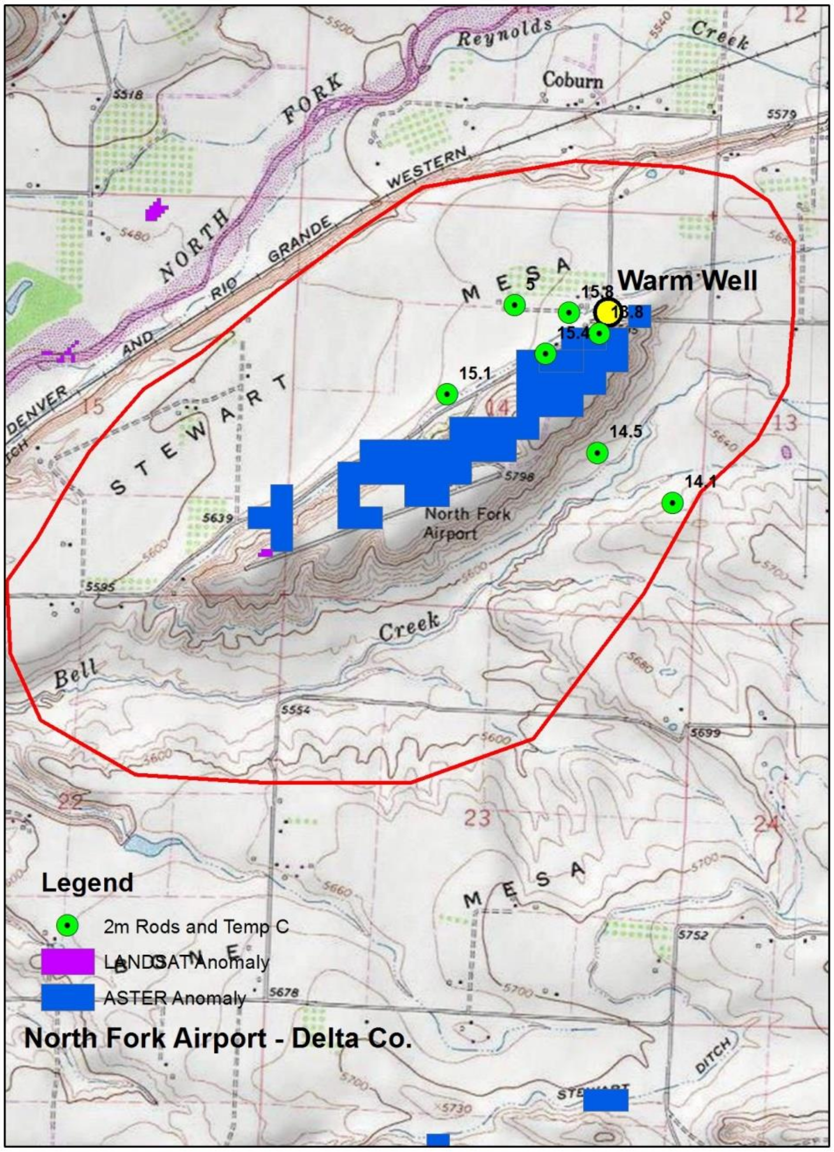

Figure 3. ASTER anomaly at North Fork Airport adjacent to 42C well.

Land Ownership: 85% private, 15% BLM land

Environmental: No ACES, WSA's, or Wilderness areas

Surface Thermal Manifestations: A 42C well occurs just north of the North Fork airport on private land. Water from the well has elevated boron and fluoride, and a 170C Na-K-Ca but only 60C cation geothermometer temperature (high Mg). Sample depth is 20m, flow rate 45 l/m. No other water samples/anomalies or temperature gradient holes.

Satellite Thermal Imagery: An ASTER thermal anomaly follows regional lineaments along Wakefield Mesa in the central part of the polygon. Another ASTER anomaly occurs on the mesa hosting North Fork airport immediately south of the hot well. Geologic unit at both anomalies is 'Km'. LANDSAT thermal anomalies are sparse in this polygon; one such small anomaly occurs in a drainage at Wakefield Mesa.

Alteration: A silica anomaly occurs on top of the Wakefield/Sunshine Mesa ASTER anomaly.

Mines and Prospects: None, except for sand and gravel.

Wells: None

Areas of Interest:

1) Visits to the hot well and ASTER anomaly on north side of North Fork airport. This is all of Sec 14 of T14S R92W as well as the SW ¼ Sec 15 and northern half of Sec 23. <u>High priority</u>.
    a) Land Ownership: 100% private
    b) Distance to transmission: 0 miles

Polygon 18: South Fork, Park County

Site Visit: The South Fork polygon contained three areas of interest to me: the Hartsel Hot Springs area, the thermal-FeOx-clay-chalcedony anomaly near Garo, and an ASTER anomaly that appeared to drain in to the South Fork of the Platte River (actually part of Polygon 19). I will discuss each of these in turn.

The area around Hartsel Hot Springs was especially appealing because it seemed to be associated with large thermal and hydrothermal alteration anomalies, suggesting a large, robust system. Water geochemistry from the spring suggested a possible high temperature system if we could document 1) silicification, to explain the low silica values in the water, and 2) mixing with Mg-rich surface waters, to explain why the Mg-corrected K-Na-Ca geothermometer was low with respect to the high K-Na-Ca geothermometer.

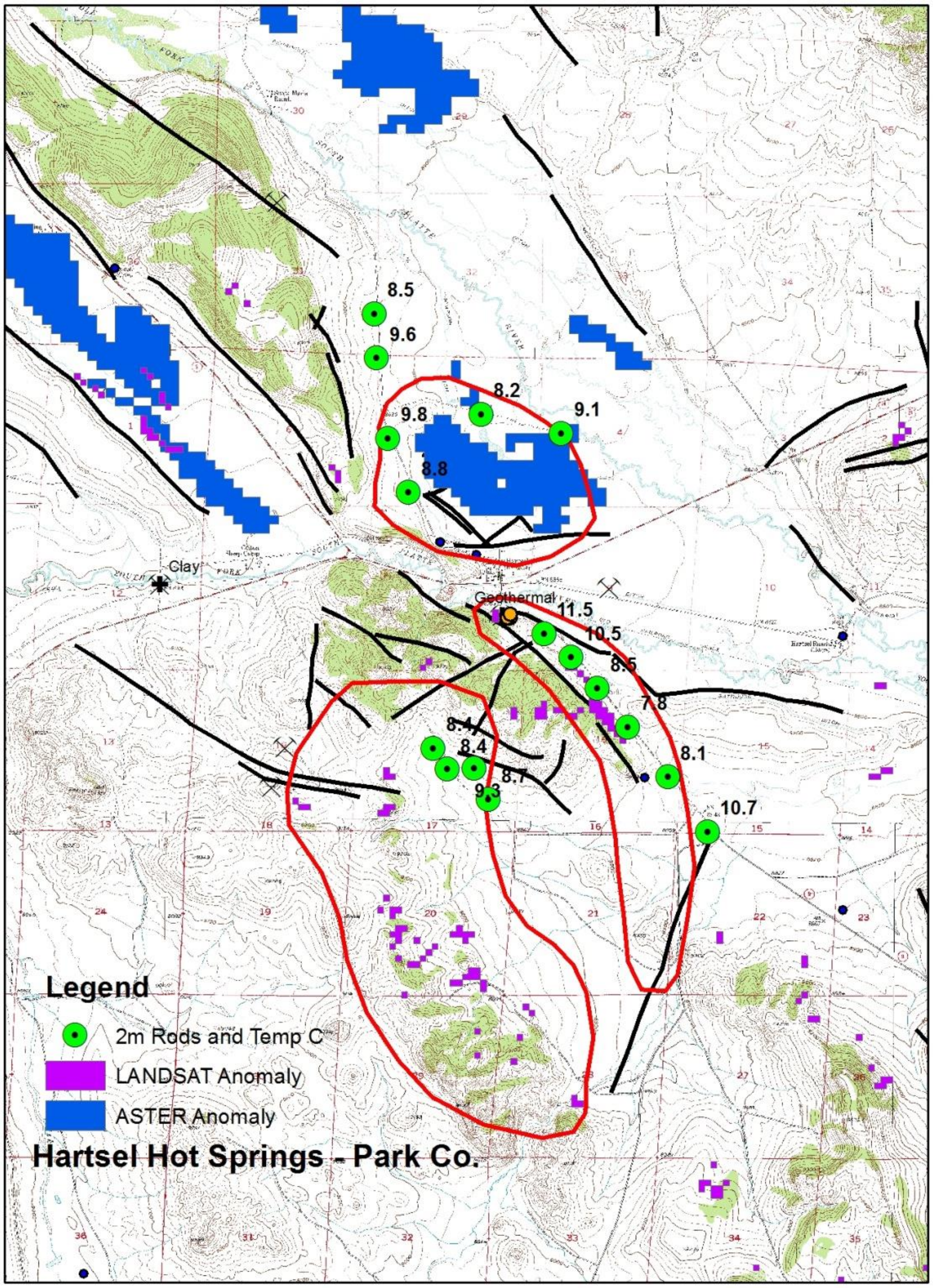

Figure 4. 2m sample sites in vicinity of Hartsel Hot Springs.

The hills west and northeast of Hartsel consist of pink orthoclase-hornblende basement rock together with a nearly flat-lying sandstone-siltstone-conglomerate sequence. The rocks within perhaps 2 miles of the hot spring are locally clay altered, zeolitized, and/or carbonate cemented, but lack any indication of silicification. FeOx anomalies in this area can be attributed to fresh strongly hematitic siltstone.

2m rods were placed at Hartsel in an attempt to delineate thermal conditions at several satellite thermal anomalies, with little success. The 'range front' from the hot springs southeast to the mineral springs, site of an elongate LANDSAT anomaly, contained only background thermal values. Similarly, the possible 'outflow zone' ASTER anomaly northeast of Hartsel, though not completely sampled, also returned non-anomalous values. Finally, 2m rods were placed in the area of alteration in the valley west of the Hartsel springs, to identify any potentially west-flowing geothermal fluids. Again, only background temperatures were recorded.

Figure 5. Boulders of chalcedony in (fresh) hematitic siltstone forms anomaly at Garo.

The thermal-FeOx-clay-chalcedony anomaly to the north of Hartsel at Garo appeared on the GIS to consist of Feox+clay+chalcedony (from USGS data) on hills above an ASTER thermal anomaly, a potential outflow zone. Permission was not obtained to conduct 2m surveys on the private land where the ASTER anomaly resided. However, I was able to make a traverse over BLM land (no vehicles allowed), to determine the source of the mineral anomalies. The bedrock of the hills consists of fresh, strongly hematitic siltstone, definitely the source of the FeOx anomaly. Lying on top of the siltstone are bench conglomerates, presumably deposited by the nearby South Platte River before it eroded further down to its present level. This conglomerate consists of rounded cobble and boulder conglomerate, including large rounded clasts of silicified (chalcedonic) volcanic. This implies transport from a distant source. Thus, in the absence of real geothermal evidence in the hills, there is much less reason to suppose that the satellite thermal anomaly at Garo represents an outflow zone from it.

Regarding the third interesting area, the ASTER anomaly north of Antero Reservoir, I could not gain access permission in the limited time I had. This ASTER anomaly was interesting primarily because it was shaped to suggest a thermal anomaly that had become entrained into the South Platte River groundwater. However, I had made that observation assuming that the South

Platte flowed north towards Denver. The Platte flows south here, so that the “entrainment” would be pointing in the wrong direction.

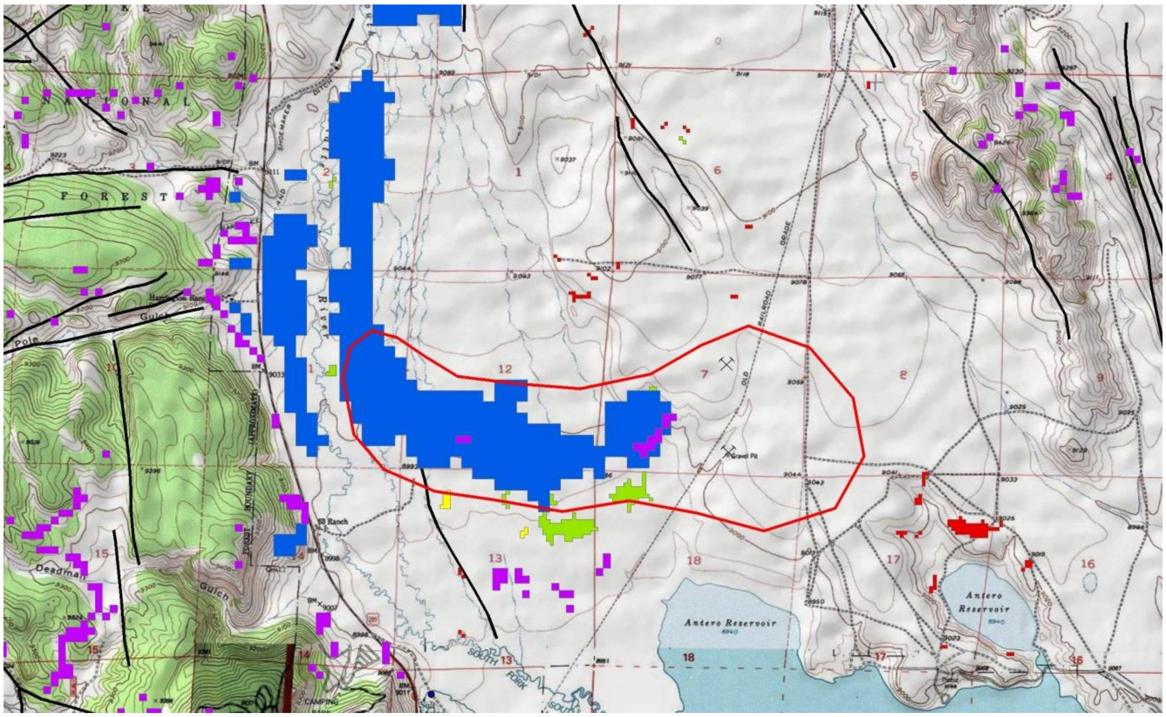

Figure 6. ASTER anomaly adjacent to South Platte River seemed to have become entrained by groundwater flow. Problem is, water flows from north to south.

The GIS information we had at hand gave permissive evidence that a large and robust geothermal system might be hiding here. However, the lack of silicification argues for a lower temperature system, and the lack of substantial subsurface flow (as seen by a lack of a large shallow surface anomaly) suggests a moderate flow rate. For these reasons, I am not inclined to return.

Land Ownership: 85% private, 10% BLM, 5% USFS(?)

Environmental: No ACES, WSA’s, or Wilderness areas

Surface Thermal Manifestations: Hartsel hot spring (53C) is located in the SE portion of the polygon, apparently along a NW-striking lineament. 2 wells in the hamlet of Hartsel (down gradient) have similar temperatures. The springs and wells have similar geochemistry with high Na-K and Na-K-Ca geothermometer temperatures but low silica and cation geothermometer temperatures (high Mg). Lithium is high, fluoride moderate, and boron contents are fairly low. A cold chloride-sulfate spring 1 mile SE, along the same range front lineament, has high fluoride and a high Na-K-Ca geothermometer temperature.

Satellite Thermal Imagery: Both ASTER and LANDSAT anomalies occur in this polygon. One elongate NW-SE ASTER anomaly occurs just NE of Fourmile creek along the same NW structural trend as Hartsel hot springs. A smaller LANDSAT thermal anomaly occurs along the range front between Hartsel hot springs and the chloride-sulfate spring. The area NE and down gradient from Hartsel (both town and springs) has an ASTER thermal anomaly that looks suspiciously like an outflow zone. A small, shallow-looking pond behind a dammed portion of High Creek is a hot/warm water anomaly but is probably solar induced.

Alteration: FeOx anomalies are the principle alteration type in this polygon. Large anomalies in the hills west of both Garo (e.g. Fourmile Creek area) and Hartsel have FeOx anomalies that are visible in aerial photos and are associated with mines and prospects.

Mines and Prospects: Copper-uranium (roll front?) mineralization occurs in the altered areas associated with both the thermal anomalies and the hot springs. Gangue mineralization is limonite, clay, barite, and chalcedony, which could also be construed as geothermal.

Wells: 1 oil/gas well in the polygon.

Areas of Interest: I like this one. Time should be spent testing the thermal anomalies and altered areas NW and SE of Hartsel. There are several springs to sample, with the objective being to acquire geochemical information helpful in identifying the center of this system. Areas 2 and 3 below leak off Polygon 18 a bit.

1) Hartsel range front: SW ¼ Sec 9, all Sec 16, eastern half Sec 21 of T12S R75W. <u>High priority.</u>
   a) Land Ownership: 100% private, according to the shapefile
   b) Distance to transmission: 4 miles
2) Hartsel flats (looks like outflow zone to follow up directions): SW ¼ Sec 4, southern half Section 5, northern half Sec 8 in T12S R75W. <u>High priority.</u>
   a) Land Ownership: 100% private, according to the shapefile
   b) Distance to transmission: 2.5 miles
3) Hills behind (to west of) Hartsel: All Secs 18 and 20, west half of Sec 28 and NE half of Sec 29 in T12S R75W. <u>High priority.</u>
   a) Land Ownership: 80% private, 20% BLM land
   b) Distance to transmission: 5 miles
4) Fourmile Creek area: Southern half of Sec 9, western half of Sec 15, all of Sec 16 and 22 of T11S R76W. Moderate priority.
   a) Land Ownership: 95% private, 5% USFS(?) land
   b) Distance to transmission: 0 miles

Polygon 22: Edith (Pagosa Springs) – Archuleta Co.

Site Visit: First of all, I found the downtown resort part of Pagosa Springs to be even more upscale than I had anticipated. This translates to added difficulty in making a power plant within the town area. Politics will play as important a role as geology in this part of the world.

Most of my visit in Pagosa Springs was centered around JR Ford, real estate agent and civic leader (2007 Citizen of the Year for Pagosa Springs). We discussed local geology and politics, and he drove me around his ranch south of town, showing me a couple of thermal wells and a mineralized spring, which I sampled. Some important points:

- Hot water is found at shallow depth in a maybe 200m radius in the center of town. The direction of hydrologic flow is probably from north to south. The local geology consists of flat-lying(?) sandstones and siltstones that probably form aquifers and aquicludes and direct lateral fluid flow. No deep wells have been drilled in the north of town, so the location of the fracture feeder zone is open to the north.
- Pagosa Springs has a district heating system that serves a number of customers in a ~2 block area adjacent to the springs. Water is drawn from a well just west of the resort, on the tufa

terrace, and is distributed to several buildings in town. There are many buildings in town with their own hot wells, but most (if not all) of them have been shut down.

- The City has already embarked on upgrading its district heating system. Apparently the town voted in late 2010 to have Hardin geothermal (http://hardingeo.com/) upgrade the system. If we're interested in Pagosa, our job will in part be to ensure we're seen as facilitating this project, not competing with it.
- No one seems to know much about the subsurface geology of the springs. If we were to explore for a geothermal resource at Pagosa Springs, we would need to get detailed information about this. One method would be to go through the existing well driller's database and try and reconstruct what rock units are occurring at what depths. But a magnetotelluric (MT) survey would be critical to try an identify geothermal outflow at depth. A survey that measures electromagnetic fields underneath a town with many sources of electromagnetic noise might be tricky, but it might be done. We would be looking for resistivity lows that would indicate clay alteration as a result of the geothermal system at a depth of maybe 1-4km.
- South of the town of Pagosa Springs there is intriguing evidence of geothermal activity in the form of hot and warm wells that seem to line up on NE striking lineaments, etc. Whether this is just distal outflow from the main Pagosa system, and whether this occurs on land that we can develop, is unknown (JR's ranch is off limits to geothermal exploration). Analyses from water samples from a warm well and cool mineralized spring in this area are pending.

Figure 7. A scientist from Flint Geothermal LLC takes a water sample from a tufa mound in the center of Pagosa Springs.

Although geothermal exploration at Pagosa Springs will carry with it political risk, the higher geothermometry of the springs suggests a system amenable to electric power generation. I am inclined to re-visit the area to complete further work.

Land Ownership: The polygon is about half private ownership, with the rest USFS and Ute Tribal lands. The areas surrounding the area with all of the geothermal activity is all private.

Environmental: No problems known.

Surface Thermal Manifestations: There are two areas of geothermal activity within this polygon. By far the most prospective is the Pagosa Hot Springs, on the south end of the town of Pagosa Springs and whose waters underlie much of the town. Pagosa Springs and a well at the county courthouse have similar characteristics: temperatures of ~55C, cation geothermometer temperatures of 192C, silica geothermometer temperatures ranging from 80C – 109C, and hefty B, F, and Li. The difference between the silica and cation geothermometers may indicate either dilution or that silica is precipitating somewhere between the reservoir and the surface. If the latter, we can hope to find it. The second location is the Eoff artesian well approximately 5 miles south of Pagosa springs, apparently a completely different system along a NE-striking lineament. The Eoff well (depth 908m) flows 39C water with low cation and silica geothermometer temperatures, and moderate but elevated B, F, and Li. Unusually, the silica geothermometer (66C-100C) is lower than the cation geothermometer, which may suggest either mixing or precipitation.

Satellite Thermal Imagery: There are three large satellite thermal anomalies within the polygon. The southern 2 are associated with the Cretaceous Picture Cliffs Sandstone and Lewis Shale geologic unit and are not associated with any known geothermal features.

The northern satellite thermal anomaly is about six miles long, 1 mile wide and includes Pagosa Springs at its northern end. Besides the area of the springs itself, two areas stand out. The first is a narrow NE striking feature south of Pagosa Springs along Mill Creek that coincides with an air photo lineament. The second is a broader feature just west of the San Juan River in the vicinity of Stinking Springs Canyon (a suggestive name). I haven't yet located a 'Stinking Springs' on the topo map.

Mines and Prospects: Besides the ubiquitous sand and gravel pits, there are gold, uranium, feldspar, calcium, radium, and gypsum occurrences within the polygon. None of these seem to be associated with geothermal activity. However, there are gold prospects adjacent to Pagosa Springs itself, suggesting that this system might be depositing an epithermal precious metal deposit.

Wells: There are several dozen reported oil/gas wells within the polygon, the majority of which are in the south, away from the geothermal action. Perhaps half a dozen are in the vicinity of Pagosa Springs and might be of interest.

Areas of Interest:
Pagosa Springs: Highest priority: I recommend we perform several steps prior to hitting the ground:

1) look at land ownership at the springs themselves, the hill to the east of the springs ("Reservoir 2"), and the area along Mill Creek as outlined by the thermal anomaly. See attached map. This would be: SE ¼ Sec. 13, eastern ½ Sec. 24 in T35N, R2W, SW ¼ Sec. 18 and all of Secs. 19 and 20 in T35N, R1W
2) Talk with the city or county hydrologist or person responsible for wells to get a list of all thermal springs in town to get depth, temperature, and geochemical data (if any).
3) Have a discussion with the municipal heating district people to get information on wells and geochemistry and their buy-in to the project.

Eeoff well: Low priority: This is a deep well and thus might not present a good target. I'll drive out and take a look at it before we attempt to contact any landowners.

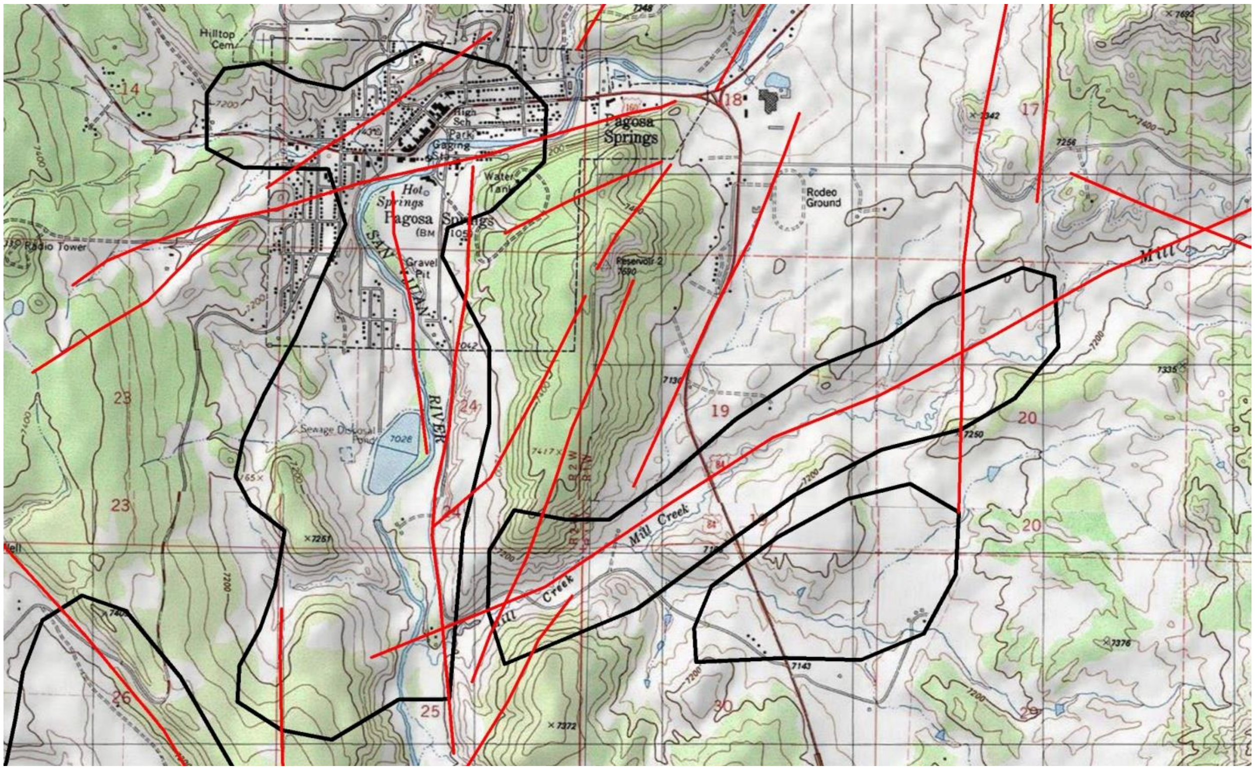

Figure 1. Pagosa Springs. Thermal anomalies outlined in black, air photo lineaments in red. Land people can use cadastral information.

Polygon 23: Redvale - San Miguel Co.

A portion of the large ASTER thermal anomaly at Redvale on USFS land was sampled by 2m probes. Rods were hard to emplace because bedrock is shallow in this cap rock kind of terrain formed by resistant units of the Dakota Sandstone (a couple got stuck permanently out there). Temperatures were background at 2m depths, so thermal anomaly was detected (see Figure).

Lemon Hot Springs was also visited, which is technically outside the Redvale boundary Sandy and Khalid made, but a viable geothermal target. Although technically a warm spring at ~32C, Lemon HS boasts both high silica and cation geothermometer temperatures as well as anomalous B and F. It occurs on patented mining claims (as does all of Placerville) surrounded by BLM land.

The springs issue from Quaternary alluvium maybe 10 feet above the San Miguel River. A fossil travertine terrace lays discontinuously on top of the alluvium, which in turn is covered by post-travertine alluvium. Prospectors dug an adit underneath this travertine terrace in the early 1900’s looking for gold, but instead of striking ‘pay dirt’ they encountered warm water (although river gravels draping the hill behind the springs has been placered for gold). The present owner has widened out the adit into a room containing couches and chairs, a bed, and hot tub (see photo).

The point bar deposits underneath the travertine layer contain isolated permeable layers that contain both warm and cold river water, depending how far down you dig. This in turn suggests that the difference between the cation and silica geothermometer temperatures is due to dilution. We have taken samples of both the warm spring water and river water, to confirm the geothermometry and try running mixing models.

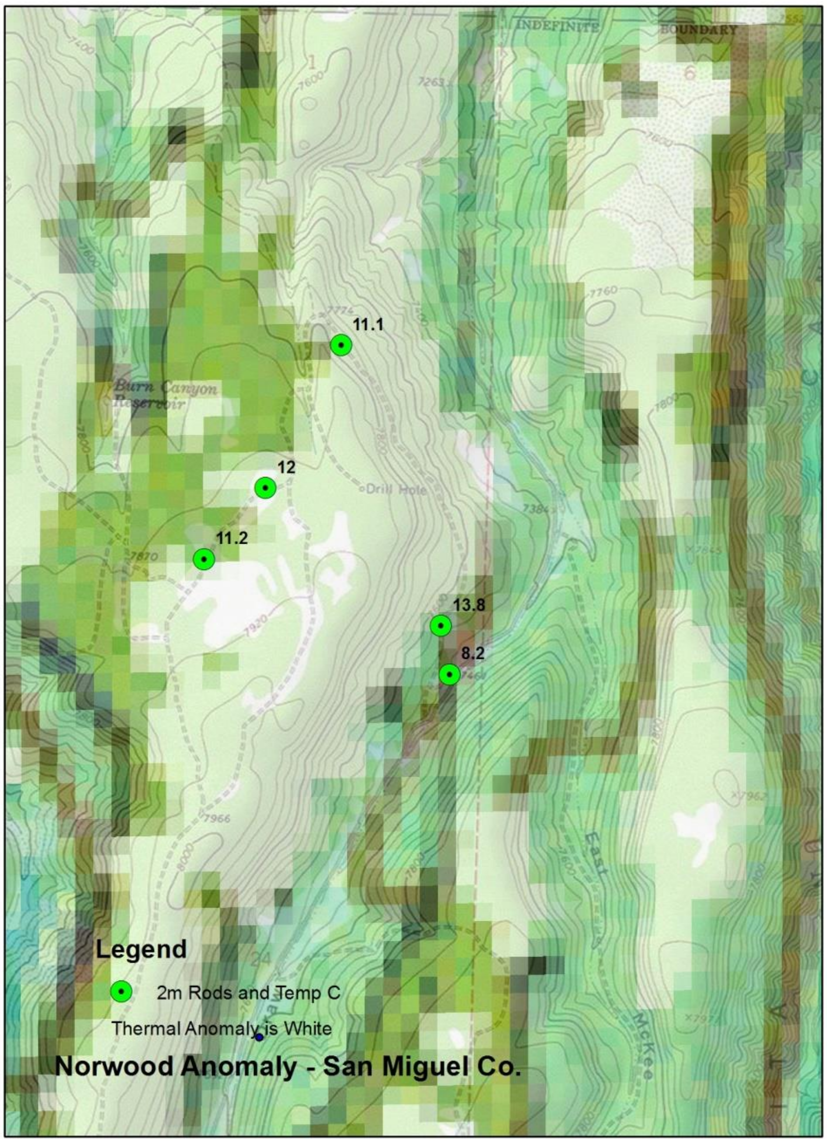

Figure 8. 2m sampling in the Redvale area near Norwood, CO.

However, the target is probably not directly underneath the springs, but comes out of fractures underneath the river alluvium from a more distant source (see Figure). Several factors will influence exploration in this area: 1) Although the springs are surrounded by fee land, photolinears suggest a ENE structure that lead in both directions to private land, 2) the Dakota sandstone forms flat lying hills almost a thousand feet high on either side of the San Miguel river valley, which will influence mapping, geophysics, and drilling, and 3) there is no satellite thermal anomaly within about 4 miles of the springs, which might be stretching the SOPO.

Figure 9. Owner/realtor John Janus relaxes in his subterranean room at Lemon Hot Springs. The warm water issues from a permeable layer in the alluvium about 7 feet below water level in the hole on the left.

The question becomes, how can we cheaply track this reservoir down, and whose land would the target be on? My thoughts right now is that the Lemon HS reservoir may be hot enough to support a power plant and that additional work is indicated, in the form of surface mapping and a magnetotelluric survey. The first step would then be to contact the BLM to ascertain how amenable they would be to quickly permit the survey.

July Field Work

I have approximately one week of reconnaissance work left to explore possible targets at Hogback, Willow, and possibly Hardscrabble. By that time we should have the initial water geochemistry data back, and it will be time to select targets for future work. My inclination at this time would be to return to return to Edith and Redvale to perform more detailed surface work and possibly delineate areas for geophysics.

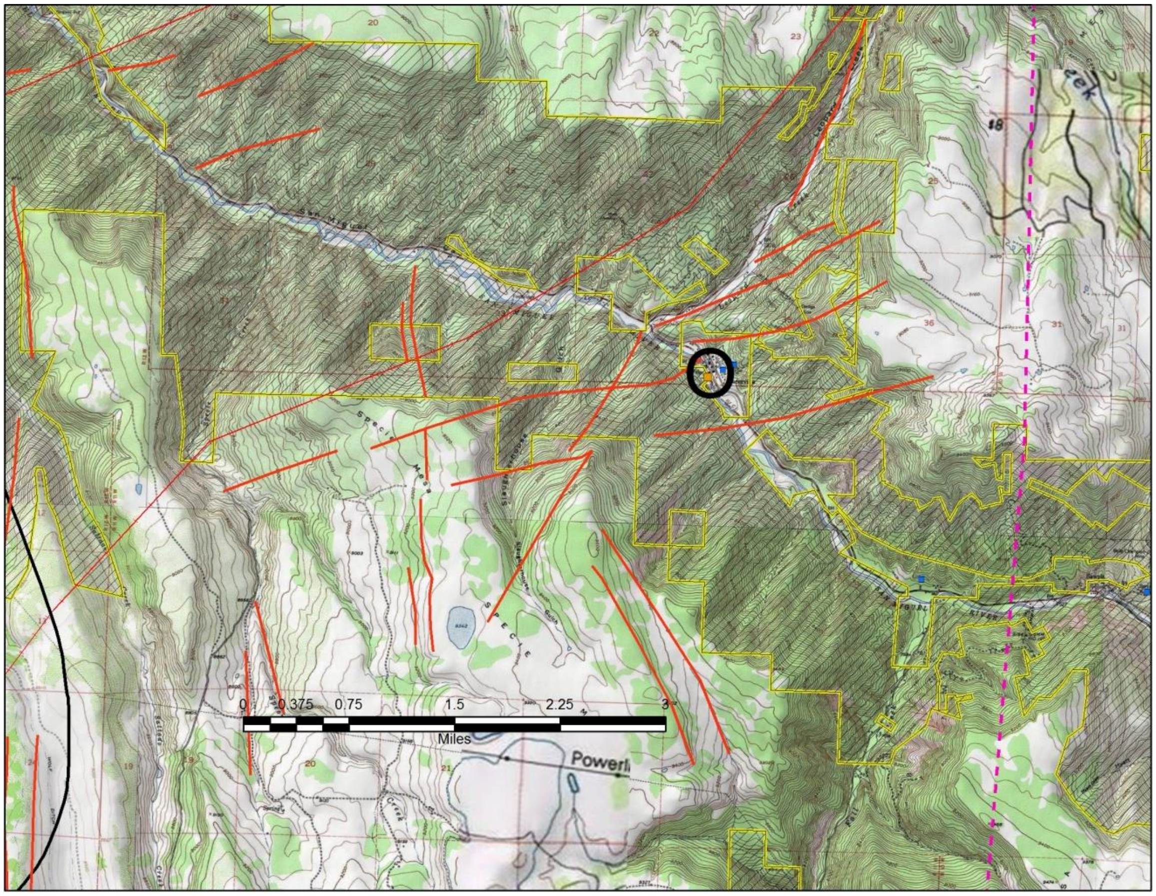

Figure 10. Redvale area of interest. Lemon Hot Springs is circled; hatched pattern shows BLM land and photolinears are shown in red. It is over a mile to private land from the springs, and about a thousand foot climb in elevation.

Comment: Polygon 23 was apparently constructed to include LANDSAT and ASTER anomalies but not the geochemical site that interested me. Lemon Hot Springs is about 4 miles east and up the San Miguel River from the polygon. I have evaluated the polygon and the area around Lemon Hot Springs somewhat separately.

Land Ownership: Within the polygon: Private 50%, BLM 25%, USFS land 25%. Around Lemon Hot Springs, a mix of private and BLM lands.

Environmental: An ACEC occupies the San Miguel River gorge and a narrow track along Beaver Creek. The San Miguel River portion of the ACEC comes upstream to within perhaps a kilometer of Lemon Hot Springs (uncomfortably close).

Surface Thermal Manifestations: Within the polygon, none. Of seven water samples, none have elevated geothermometer or measured temperatures, and only one has slightly elevated boron. However, Lemon "Hot" Springs (actually an adit with warm water coming out at 33^{o}C) is one of the few geothermal springs or wells in Colorado that has both a high cation (152C) and silica (various estimates between 106C and 130C) along with high B and F. The adit is located just above the San Miguel River in the hamlet of Placerville.

Satellite Thermal Imagery: Satellite thermal anomalies occur both in the Jurassic Morrison/Summerville siltstone shale and in Quaternary dune and silt in the vicinity of Norwood. Could silt sized sediments unduly influence the imagery?

Mines and Prospects: Sand and gravel, uranium, manganese, clay, and gold occur within the polygon (23 localities). One uranium and one manganese locality occurs within the thermal anomalies (probably not related to geothermal).

Wells: 15 oil/gas wells, of which 8 are in the area of thermal anomaly within the Jurassic rocks.

Areas of Interest

1) Lemon Hot Spring area: This will be a difficult on to track down. I can't well run a 2m survey around the adit right inside the town of Placerville. However, the adit seems to be located on an ENE striking fault zone. The only private area available for leasing (aside from the adit, which is not going to ever be a power plant) is WSW along this lineament in Secs 4,5,8,9 of T43N, R11W. Distance to transmission: 4 miles. Moderate priority: This is a worthwhile place geothermally speaking and I should go visit this, but isolating a target might be difficult.
2) Thermal anomalies: Essentially, the thermal anomalies in the Jurassic rocks are on both BLM and USFS land, while the anomaly in the Quaternary silts is on private land near Norwood. There is no other supportive data here that suggests a geothermal system is present. I suggest that I make a short visit out here to plant a few rods to confirm a thermal anomaly on whatever land I can, before contacting land owners. Low priority.