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**DIVISION OF RECLAMATION,
MINING & SAFETY-MINERALS
FEE REPORT MAP PW**

112d-3 Annual Report

Permittee Name:	American Soda, L.L.P.	Permit Number	M-1999-002
Operation Name:	Yankee Gulch Minerals Project	County:	Rio Blanco
Annual Fee Due:	\$1,150.00	Anniversary Date:	July 13, 2015
Permit Acreage:	4,084.00	Current Bond Amt:	\$236,424.00

According to C.R.S. 34-32.5-116 or 34-32-116, each year, on the anniversary date of the permit, an operator shall submit the Annual Fee, an Annual Report and Map showing the extent of current disturbances to affected land, required monitoring information, reclamation accomplished to date and during the preceding year, any new disturbance that is anticipated to occur during the upcoming year, any reclamation that will be performed during the upcoming year, the dates for the beginning of active operations, and the date active operations ceased for the year.

Information contained in this report will be reviewed by the Division upon receipt and prior to the next compliance inspection of the site. If, while completing this report, you learn that your site is not in compliance with the rules and the act, it is advisable that the issues be rectified promptly to avoid possible enforcement action.

1. Is the site identification sign posted in accordance with Rule 3.1.12(1)?

YES

NO

3.1.12 Signs and Markers

(1) At the entrance of the mine site the Operator shall post a sign, which shall be clearly visible from the access road, with the following:

- (a) the name of the Operator,
- (b) a statement that a reclamation permit for the operation has been issued by the Colorado Mined Land Reclamation Board, and
- (c) the permit number.

Sign posted on main gate to American Soda Solution Mining Well Field



2. Is the affected area boundary clearly marked in accordance with Rule 3.1.12(2)?	YES	NO
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3.1.12 Signs and Markers

. . . . (2) The boundaries of the affected area will be marked by monuments or other markers that are clearly visible and adequate to delineate such boundaries.

(a) for 110 Limited Impact Operations and Limited Impact 110 Designated Operations the permit boundary for the purposes of this Rule shall be considered the affected area;

(b) for 112 Regular Operations and 112 Designated Mining Operations the area proposed to be disturbed by mining operations for which a Financial Warranty and Performance Warranty have been posted shall be the affected area.

Permit sign on gate below pilot test mine pad - marking second boundary.



3. Is the mine site in final reclamation (all material extraction and stockpile removal is complete)? If "YES", please note time limits related to completion of reclamation, Rule 3.1.3.	YES	NO
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4. What was the date of last excavation, processing or hauling activity at the mine?	2013
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The American Soda mining projected involves circulation of hot water through wells to extract sodium minerals. The last time this activity took place on the permitted site was 2004. In 2006 hauling and excavation occurred as two ponds, used during the test mine phase, were closed out and reclaimed. This hauling and excavation was related to reclamation and not mining. In the fall of 2013 the lateral leg

extending to well 28-21 (including all access roads and well pads 29-51, 29-53 and 29-22) was re-contoured and reclamation seeded. In 2014		
5. Does the mine operate more than 180 days per year?	YES	NO
6. Has this mine been granted:	YES	NO
a) approval of TEMPORARY CESSATION Status?		
b) approval for INTERMITTENT OPERATION?	YES	NO
7. Number of acres currently affected (mining + incomplete and or unreleased reclamation).	46.8 acres	
8. Number of acres that were newly affected during the current report year.	0 acres disturbed	
9. Number of acres that were reclaimed during the current report year.	3.28 acres	
10. Estimated new acreage to be affected in the next report year.	~ 3 acres reclaimed	
11. Estimated acres to be reclaimed in the next report year.	~ 3 acres	
12. Total acres in various stages of reclamation, since permitted mining activities began:	46.8 acres	
Total acres backfilled: (see below)		
Well 20-2: Test Mine Production Well Reclaimed in 2005 no backfill required	0 acres	
Well 20-6: Test Mine Rule Authorization Class V Disposal Well 20-6 reclaimed 2000 backfilled	0.8 acres	
Well 20-11: Commercial Phase Production Well Reclaimed in 2005 backfilled	0.4 acres	
Well 20-12: Commercial Phase Production Well Reclaimed in 2005 no backfill required	0 acres	
Well 20-14: Commercial Phase Production Well Reclaimed in 2005 backfilled	0.5 acres	
Well 21-15: Commercial Phase Production Well Reclaimed in 2005 backfilled	0.6 acres	
Well 21-16: Commercial Phase Production Well Reclaimed in 2005 backfilled	0.5 acres	
Well 28-17: Commercial Phase Production Well Reclaimed in 2005 backfilled	0.8 acres	
Well 28-41: Commercial Phase Production Well Reclaimed in 2005 backfilled	0.9 acres	
Well 29-20: Commercial Phase Production Well Reclaimed in 2005 backfilled	0.3 acres	
Well 29-51: Commercial Phase Production Well Reclaimed in 2013 backfilled	0.08 acres	
Well 29-53: Commercial Phase Production Well Reclaimed in 2013 backfilled	0.14 acres	
Well 29-22: Commercial Phase Production Well Reclaimed in 2013 backfilled	0.14 acres	
Well 28-21: Commercial Phase Production Well Reclaimed in 2013 backfilled	0.12 acres	
Well 20-30: Commercial Phase Production Well Reclaimed in 2014 backfilled	0.11 acres	
Well 20-31: Commercial Phase Production Well Reclaimed in 2014 backfilled	0.21 acres	
Well 20-32: Commercial Phase Production Well Reclaimed in 2014 backfilled	0.23 acres	
Well 20-35: Commercial Phase Production Well Reclaimed in 2014 backfilled	0.24 acres	
Well 29-23: Commercial Phase Production Well Reclaimed in 2014 backfilled	0.15 acres	
Well 29-24: Commercial Phase Production Well Reclaimed in 2014 backfilled	0.17 acres	
Well 29-26: Commercial Phase Production Well Reclaimed in 2014 backfilled	0.15 acres	
Well 29-28: Commercial Phase Production Well Reclaimed in 2014 backfilled	0.24 acres	
Well 29-68: Commercial Phase Production Well Reclaimed in 2014 backfilled	0.16 acres	
Total acres backfilled		6.94 acres
Total acres graded		
Pond Solids Disposal Cell Reclaimed in 2006, reseeded in 2007	2 acres	
Test Mine Facility Ponds Reclaimed in 2006, reseeded in 2007	13 acres	
Roads and Pads for 28-21 lateral leg in 2013, reseeded in 2013	1.8 acres	

Total acres graded		17 acres		
Total acres seeded with approved seed mix				
Well 20-2: Test Mine Production Well Reclaimed in 2005 no backfill required		0.3 acres		
Well 20-6: Test Mine Rule Authorization Class V Disposal Well 20-6 reclaimed 2000 backfilled		0.8 acres		
Well 20-11: Commercial Phase Production Well Reclaimed in 2005 seeded		0.4 acres		
Well 20-12: Commercial Phase Production Well Reclaimed in 2005 seeded		0.2 acres		
Well 20-14: Commercial Phase Production Well Reclaimed in 2005 seeded		0.5 acres		
Well 21-15: Commercial Phase Production Well Reclaimed in 2005 seeded		0.6 acres		
Well 21-16: Commercial Phase Production Well Reclaimed in 2005 seeded		0.5 acres		
Well 28-17: Commercial Phase Production Well Reclaimed in 2005 seeded		0.8 acres		
Well 28-41: Commercial Phase Production Well Reclaimed in 2005 seeded		0.9 acres		
Well 29-20: Commercial Phase Production Well Reclaimed in 2005 seeded		0.3 acres		
Pond Solids Disposal Cell Reclaimed in 2006, reseeded in 2007		2 acres		
Test Mine Facility Ponds Reclaimed in 2006, reseeded in 2007		13 acres		
Well 29-51: Commercial Phase Production Well Reclaimed in 2013 seeded		0.08 acres		
Well 29-53: Commercial Phase Production Well Reclaimed in 2013 seeded		0.14 acres		
Well 29-22: Commercial Phase Production Well Reclaimed in 2013 seeded		0.14 acres		
Well 28-21: Commercial Phase Production Well Reclaimed in 2013 seeded		0.12 acres		
Well 20-30: Commercial Phase Production Well Reclaimed in 2014 seeded		0.21 acres		
Well 20-31: Commercial Phase Production Well Reclaimed in 2014 seeded		0.42 acres		
Well 20-32: Commercial Phase Production Well Reclaimed in 2014 seeded		0.46 acres		
Well 20-35: Commercial Phase Production Well Reclaimed in 2014 seeded		0.48 acres		
Well 29-23: Commercial Phase Production Well Reclaimed in 2014 seeded		0.29 acres		
Well 29-24: Commercial Phase Production Well Reclaimed in 2014 seeded		0.35 acres		
Well 29-26: Commercial Phase Production Well Reclaimed in 2014 seeded		0.29 acres		
Well 29-28: Commercial Phase Production Well Reclaimed in 2014 seeded		0.47 acres		
Well 29-68: Commercial Phase Production Well Reclaimed in 2014 seeded		0.31 acres		
Total acres seeded with approved seed mix		24.06 acres		
Total acres fertilized with approved fertilizer		19.8 acres		
Total acres with topsoil replaced		24.86 acres		
Topsoil replacement depth (in)		6 – 10”		
Total acres mulched with approved mulch		0 acres		
Mulch application rate (tons)		N/A		
Seed application method	No till drill seeding (pre-winter)			
Fertilizer application method	Broadcast when used			
Mulch application method	No mulch used			
13. Is weed control being conducted in accordance with an approved Weed Control Plan? Weed control is being conducted. Evaluations are done every year. Noxious weeds defined by Rio Blanco County are primary focus.		YES	NO	N/A
14. Is adequate topsoil reserved for reclamation, based on your approved permit? If “No”, please explain:		YES	NO	N/A
15. Is the reserved topsoil vegetated/stabilized in accordance with Rule 3.1.9(1)? If “No”, please explain:		YES	NO	N/A
16. If mining has exposed groundwater, is the site in compliance with the approved mining plan and Office of the State Engineer (Well Permit, S.W.S.P., and/or Permanent Augmentation Plan)?		YES	NO	N/A

17. Are all hazardous materials stored within approved spill containment structures? No hazardous materials presently stored on site.	YES	NO	N/A
18. Is your financial warranty value sufficient to cover the cost to complete reclamation?	YES	NO	N/A
19. Is your basis for legal right to enter still valid?	YES		NO
20. Does your permit require you to submit monitoring information annually? If "Yes", please attach the required monitoring results to this Annual Report. (We submit data quarterly – We are current)	YES	NO	N/A
21. As required by rule, attach a map to this report that accurately depicts the permit boundary, current affected area boundary and location of the acreages specified in items 7 – 12 and 14.	CURRENT MAP ATTACHED		

Division records indicate the following permittee contact information. If this information is not current, please type or print **current** contact information:

Permittee Contact:	Please make change from Todd Wilson he is no longer the current plant manager.	David Valvoda, Plant Manager Celina Akin, Environmental Specialist
Permittee Company:	American Soda, L. L. P.	American Soda, L. L. P. dba Solvay Chemicals
Address:	2717 County Road 215 Parachute, CO 81635	Same
Phone Number:	(970) 285-6500	(970) 285-0428/ 285-0406
Fax Number	(970) 285-6393	Same
Email Address	Celina.akin@Solvay.com	Same

I, the undersigned, hereby state that the information provided in this report is true and accurate, and that site operations are being conducted in accordance with the Division approved mining and reclamation plans.

David Valvoda
Signature of Permittee, Corporate Officer, Owner, or Documented Designee

7/9/15
Date

This copy with the original check is not bound. A second copy was sent to Travis Marshall in Grand Junction Office - (Celina)

Access gate from main road to the well field. Added reinforced gate post support – installed June 2014.





YANKEE GULCH SODIUM MINERALS PROJECT

**July 13, 2014 through July 12, 2015
ANNUAL RECLAMATION AND MINING
REPORT**

**Hard Rock Mining Operation
Permit No. M-99-002
U.S. Sodium Lease
Nos. C-0118328 and C-0118329**

Submitted To:

**COLORADO DEPARTMENT OF NATURAL RESOURCES,
RECLAMATION, MINING & SAFETY DIVISION
DENVER, COLORADO**

By:

**American Soda L. L. P., a wholly owned
subsidiary of Solvay Chemicals
PARACHUTE, COLORADO
July 9, 2015**

DRMS – Travis Marshall/Michelle Ramirez (2/5)

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WELLFIELD STATUS MAP JULY 2015 - YANKEE GULCH SODIUM MINERALS PROJECT

1.0 EXECUTIVE SUMMARY – Interim Status

American Soda, L. L. P. (a wholly owned subsidiary of Solvay Chemicals) is submitting this 2014-2015 Annual Report in compliance with C.R.S. 34-32-116(3) Colorado Mined Land Reclamation Act.

(3) On the anniversary date of the permit each year, the operator shall submit a report and a map showing the extent of current disturbances to affected land, reclamation accomplished to date and during the preceding year, new disturbances that are anticipated to occur during the upcoming year, and reclamation that will be performed during the upcoming year.

The anniversary date for 112 Permit No. M-1999-002 American Soda Yankee Gulch Sodium Minerals Project is July 13, 2015. Included with this document is a check for payment to the Division for the Annual Permit Fees in the amount of \$1,150. A copy of the check is included with the document sent to the Grand Junction office and the actual check will be sent to the Denver office along with an unbound copy of the report.

This document provides a summary of the surface disturbance and reclamation performed during the current reporting period from July 13, 2014 to July 12, 2015, as well as planned disturbance and reclamation for the next reporting period. Activities at the Yankee Gulch Project during the reporting period were conducted under the regulatory guidance and inspection oversight of the Colorado Division of Reclamation, Mining, and Safety (DRMS) under 112 Permit No. M-1999-002.

A key component of this document is the Well Field Status Map which identifies areas where disturbance and reclamation may have occurred during the report period. A copy of the most recent Well Field Status Map is included indicating the areas where changes have occurred regarding reclamation since the last reporting period. In addition to the current status of the 0 – 5 year mining panel the Well Field Status Map also provides a general regional location map of the American Soda Yankee Gluch Mining Operation on the map insert in the lower left corner.

Section 2.0 of this report addresses permit modifications for the Yankee Gulch Project during the 2014 – 2015 permit period.

Section 3.0 addresses the status of American Soda's project operations, including the extent of current disturbances and reclamation and any disturbance or reclamation activity planned for 2015 – 2016.

2.0 PERMIT MODIFICATIONS

During the current reporting period, July 13, 2014 – July 12, 2015, no permit modifications or Technical Revisions were submitted by American Soda for 112 Permit No. M-1999-002.

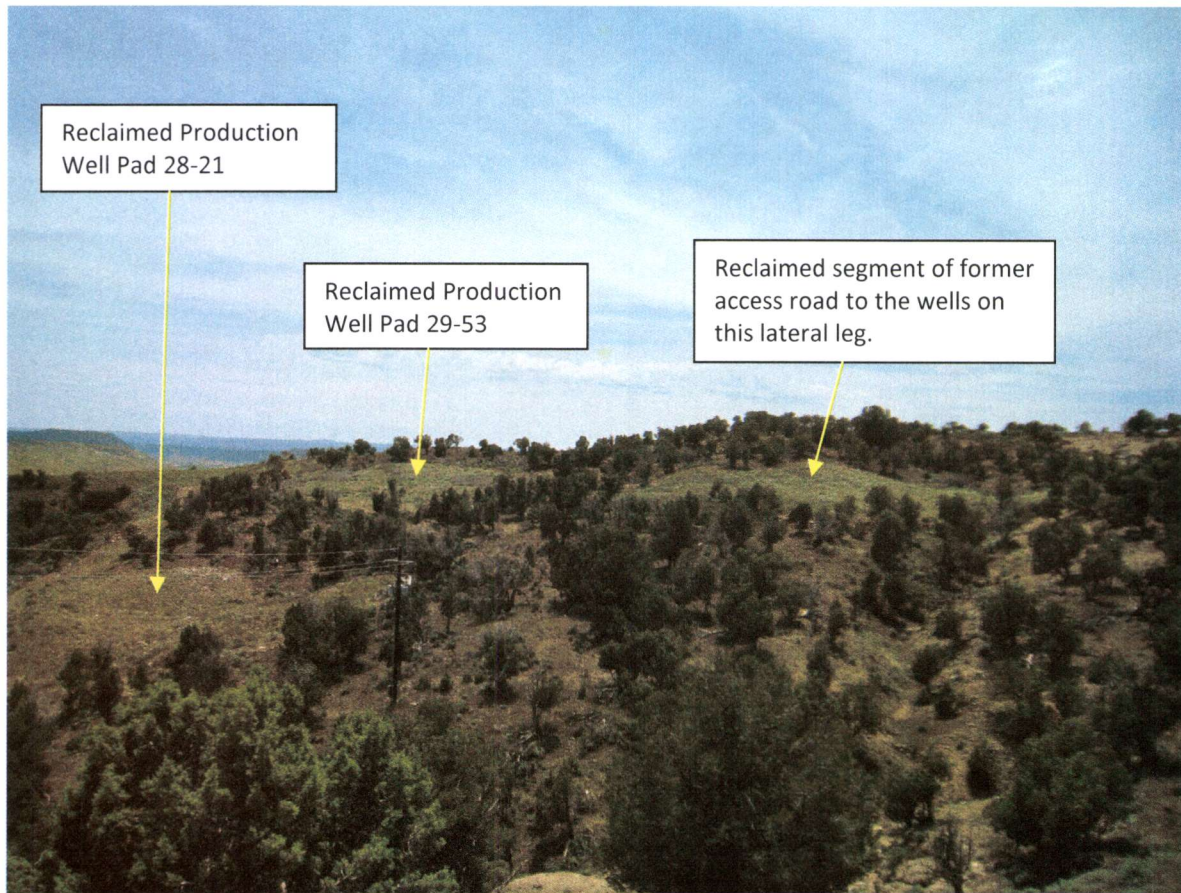


Photo 1 – Landscape view of three areas initially reclaimed in 2013 (photo taken in late June 2015). Good establishment of dense and diverse vegetation providing excellent cover after two full growing seasons with above average precipitation. All previously reclaimed areas are periodically inspected and photographed to monitor reclamation success.

3.0 STATUS OF PROJECT OPERATIONS (2014 – 2015)

3.1 Current Status/Activities

The American Soda Yankee Gulch project is presently in interim status with no solution mining or processing taking place. Ongoing activities during the report period were focused on the well field and test mine pad. These activities include inspection and maintenance of storm water control features, security, and maintenance of access roads, vegetation establishment and control of noxious weeds. Ground water sampling is completed quarterly and the data is reported four times per year in separate documents.



Photo 2 – Many species of mammals make their home in Piceance Creek. This badger came out of his den on the other side of the fence in daylight hours to see what was going on as we sampled the ground water nearby at alluvial well 21-2. Photo September 2014.

In the fall of 2014 four production wells, each having only the long string remaining, were plugged and one dual string well was plugged after one half of it failed mechanical integrity testing earlier in the year. The short string of production well 29-26 failed mechanical integrity and was plugged and abandoned along with the long string of well 29-26 in September 2014.



Photo 3 – Production well 29-26 location prior to plugging and abandonment. The short string on production well 29-26 failed to hold pressure and was plugged and abandoned using tremie- line cement placement through shallow coil tubing in September 2014. The long string was also plugged to close out the location. The well skid was removed from the pad, the piping was all cut and removed and the location was restored to the original contours. The top soil pile was distributed over the newly contoured pad and the pad was drill seeded. All of the cut trees you see that were originally harvested from the location and stockpiled when it was created in 2000 are now spread out over the pad to provide habitat and to restrict vehicle access.

Following is a series of photos showing the well pads that were reclaimed in the fall of 2014. All- in- all nine locations were reclaimed during the report period. The first photo, Photo 4 actually shows two well pads in the same photo because of their close proximity to each other that were reclaimed during the report period. Production well pad 29-68 remained in place until closure of the pad for production well 29-26 since it provided access to the location. The well at 29-68 was plugged and abandoned in 2004. All pads that remained in place for years after plugging and abandonment, such as well pad 29-68, were monitored annually and controlled for noxious weed growth and maintained to preserve storm water BMPs. The larger pad still containing the well skid and piping in photo 4 is production well pad 29-26. A short segment of road joins the two pads and it was also reclaimed in fall 2014.

Photo 4 - Production well pad 29-26 and production well pad 29-68 before plugging and abandonment. Reclamation work completed in fall 2014 included demolition of the well skid and piping, reclamation re-contouring and drill seeding.

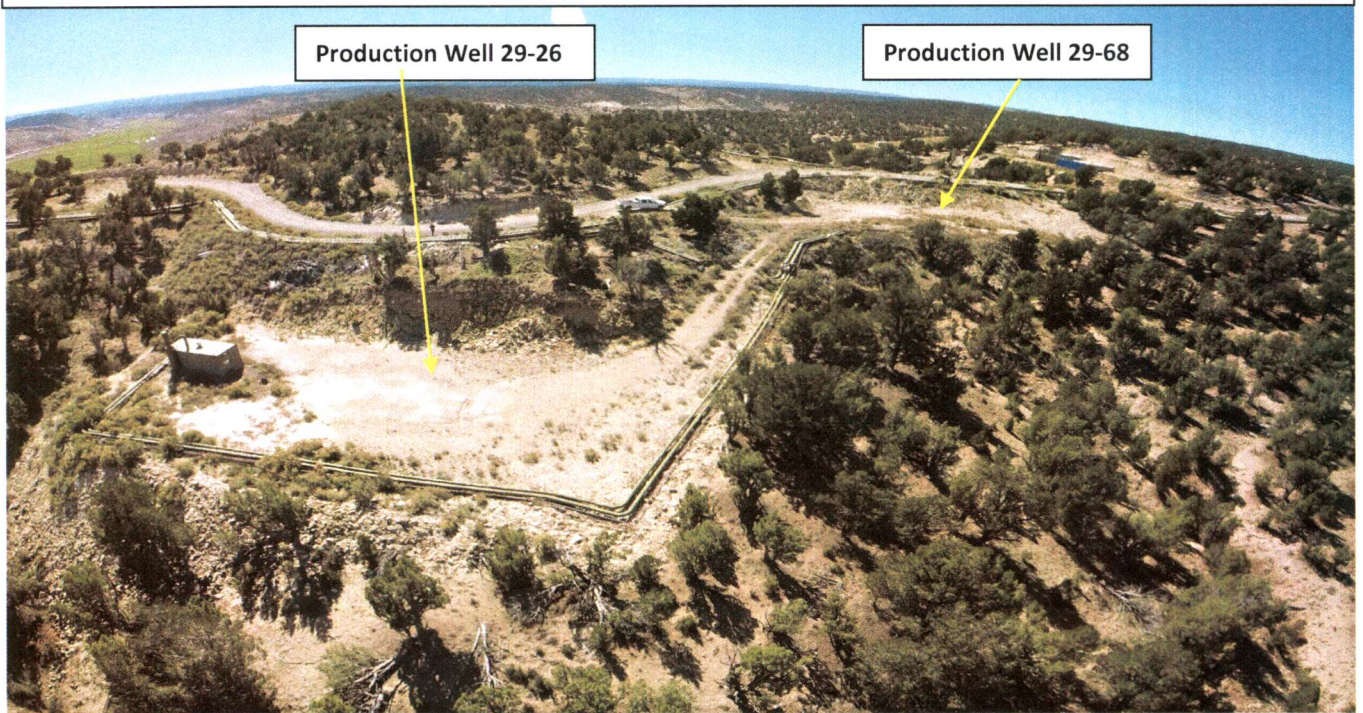


Photo 5 - Production well pad 29-26 and production well pad 29-68 after plugging and abandonment, demolition of well skid and piping, reclamation re-contouring and drill seeding. Photo taken June 2015.

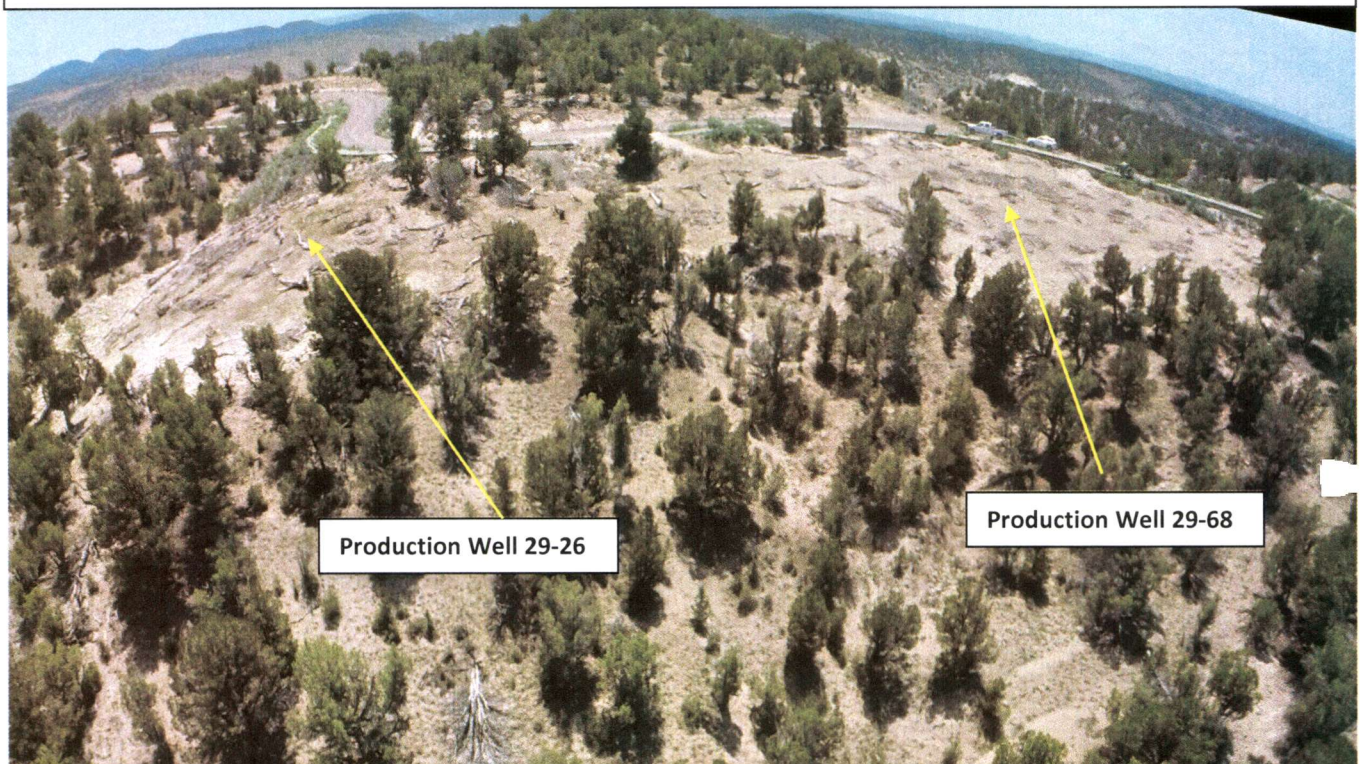


Photo 6 – Production well pad 20-35 was plugged and abandoned in September 2004. In the fall of 2014 the piping and well skid were removed and the well pad re-contoured and reclaimed. A reclaimed natural gas pipeline corridor can be seen on the left side of this photo taken in fall 2014.



Photo 7 – Production well pad 20-35 after the pad was re-contoured, top soil distributed across the disturbance area and drill seeded. Trees removed during the construction of the pad which were stock piled then are now spread out across the reclamation area to provide habitat and to restrict access for motor vehicles. Photo taken June 2015.



Photo 8 - Production well 20-32 and pad for ground water monitoring wells 20-4A and 20-4B. Photo taken fall 2014 as piping was being removed from the 20-32 pad. A truck and trailer loaded with pipe can be seen exiting the pad..



Photo 9 – Production well 20-32 after re-contouring and drill seeding. The reclamation area is temporarily bisected by the narrow road to allow access to the ground water monitoring well 20-4A and B. Photo taken June 2015.

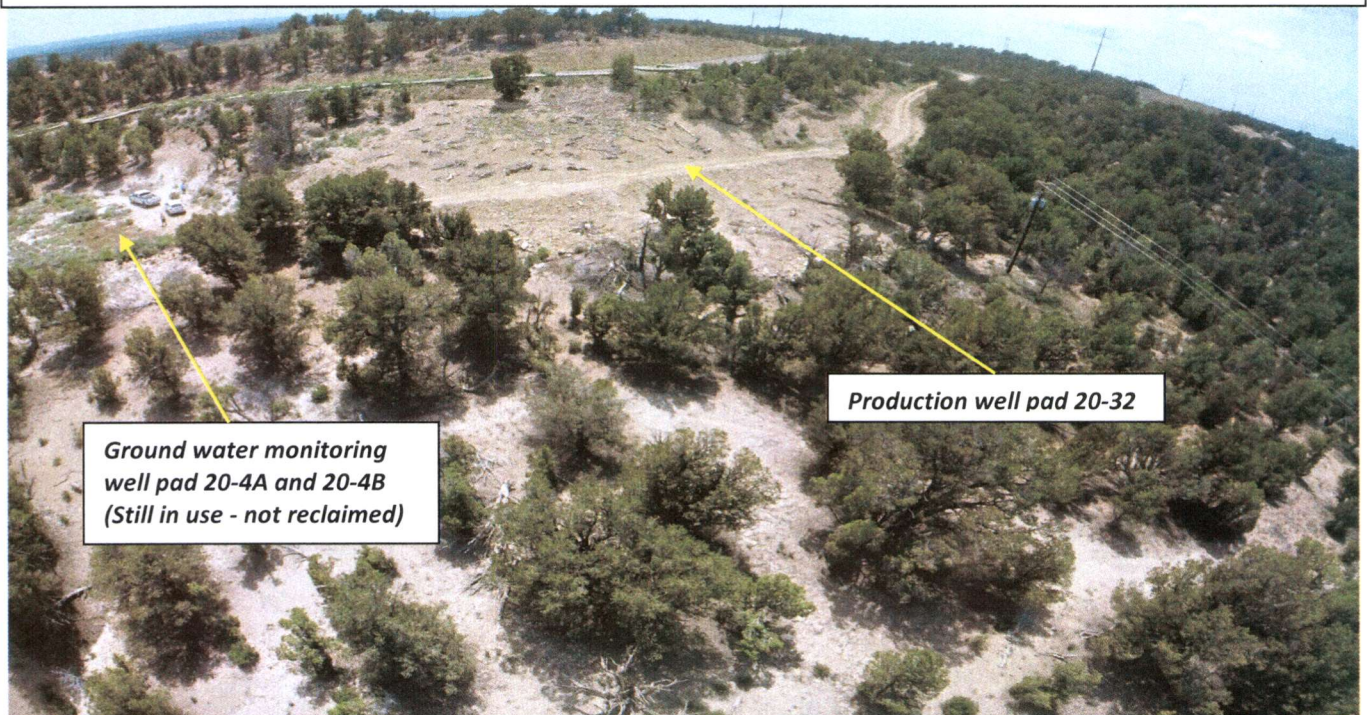


Photo 10 – A white truck is parked on production well pad 20-31. Lateral piping dropping down the slope from production well pad 20-74 and the skid are still in place on this location. Photo taken September 2014.



Photo 11 – Production well pad 20-31 after reclamation re-contouring and reseeding. In this view you can also see production well pad 20-74. The well skid is still in place with the lateral piping extending out to the skid. The piping to well 20-31 was removed prior to reclamation. Several dead trees in a small area just below the pad for 20-74 were cut down. Some of these trees will be scattered on the 20-74 pad after it is re-contoured and drill seeded.

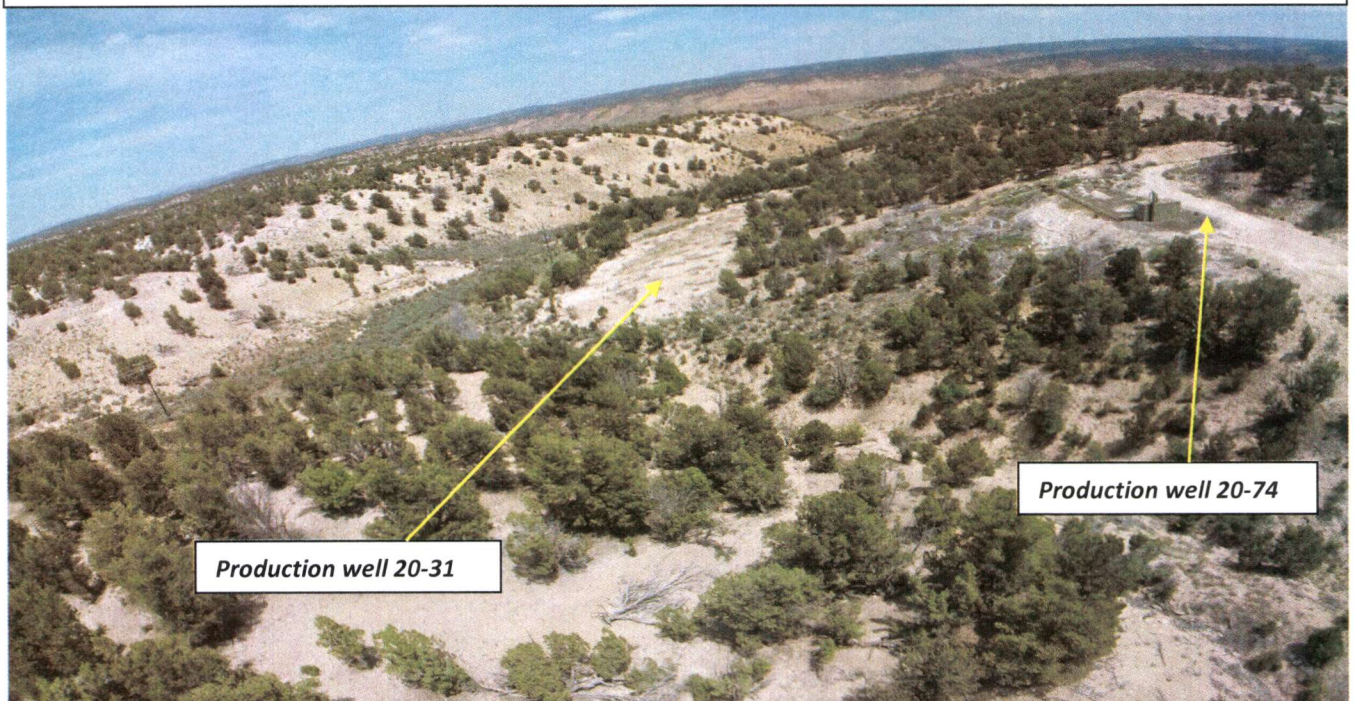


Photo 12 – Production well pad 20-30 in fall 2014. Lateral well piping is still in place lengthwise across the base of the cut slope of the pad but in this photo the well skid is removed from the location.



Photo 13 – Production well pad 20-30 after re-contouring and drill seeding. Photo taken June 2015. Reclamation work is completed in late fall to allow for overwinter seeding which enhances germination.



Photo 14 – Production well pad 29-23 in fall 2014. Lateral piping is still in place on the pad but the well skid is absent. The road where the white truck is parked provides access to production well pad 29-27 on the far side of the ridge out of view in this photograph.



Photo 15- Production well pad 29-23 after reclamation is completed and trees are scattered. Photo from June 2015.

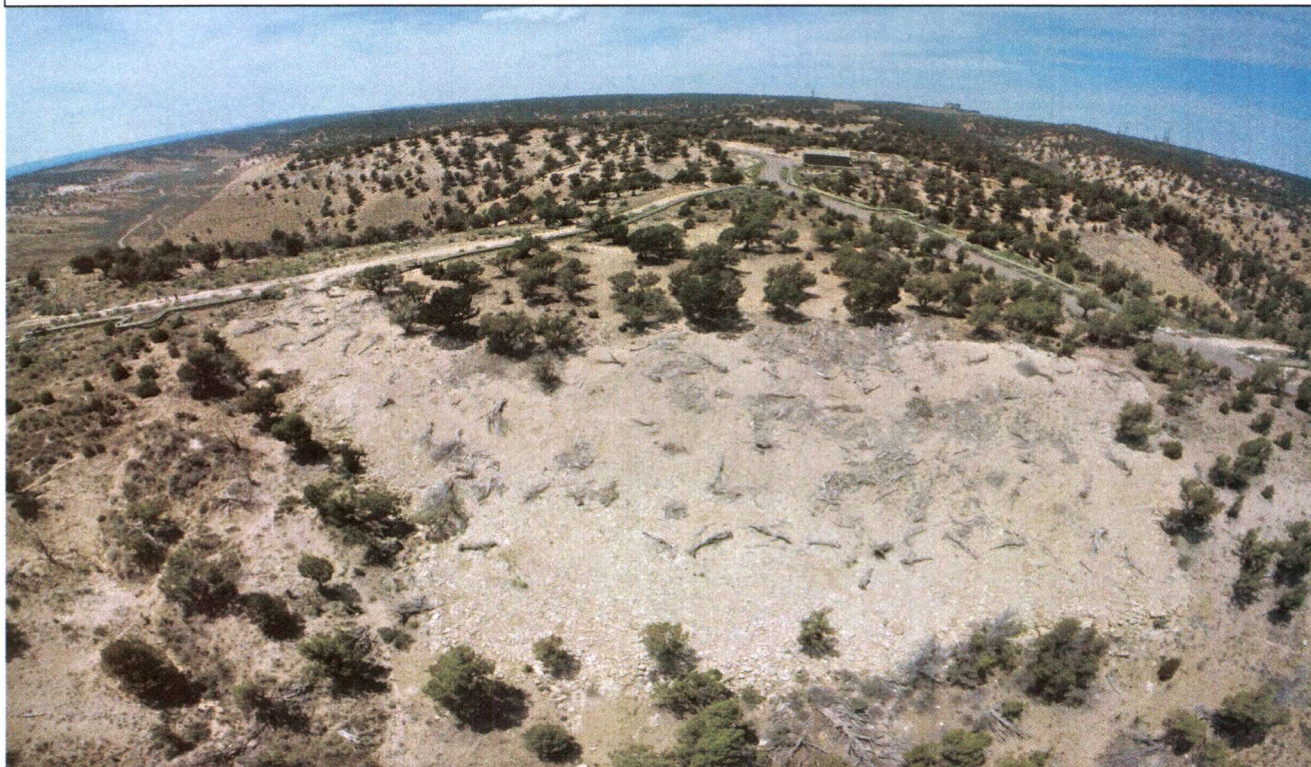


Photo 16- Production well pad 29-24 in fall 2014. Well skid and piping are still in place. This location has an extensive cut slope and the lateral access road into it intersects a complex two leg drainage into Yankee Gulch.



Photo 17 – Production well pad 29-24 after re-contouring and drill seeding is complete. Photo taken June 2015.



Photo 18 – Production well pad 29-28 in fall 2014 before the well skid and lateral piping were removed.



Photo 19 – Production well pad 29-28 after re-contouring and drill seeding were complete. The remainder of the lateral access road to this location is scheduled for reclamation in the fall of 2015. Photo taken June 2015.



Work completed in the fall of 2014 included the plugging and abandonment of one well with both stringers still open and four wells with only one stringer remaining open. Additionally nine production well pads and eight lateral access roads encompassing these wells were also reclaimed in the fall of 2014. Table 1 below shows the status of the solution mining wells up to July 2015.

Presently, there are five total sites throughout the well field with production well strings currently remaining open with cast iron bridge plugs set (shown in green on Table 1). Both the long string and the short string are open to the bridge plug at production well 20-26, well 20-74, well 29-29, and well 29-27. Only the short string remains open at production well 20-19.

TABLE 1 - American Soda Solution Mining Wells Status July 2015 DRMS Annual Report			
Well	Status	Date	Comment
20-11 (CO3858-04537)	P & A	6/16/04	Plugged and Abandoned
20-12 (CO3858-04552)	P & A	6/17/04	Plugged and Abandoned/Installed TDR
20-14 (CO3858-04599)	P & A	7/9/04	Plugged and Abandoned
20-19 (CO3858-04556)	Bridge Plugs Set P & A Long String Only	7/24/04 12/17/08	Long term stand-by (passed MIT 6/5/14) Long String Plugged and Abandoned after failure to pass MIT 9/11/2008
20-2 (CO3858-04597)	P & A	6/14/04	Plugged and Abandoned
20-30 (CO3858-04557)	P & A	9/7/04	Plugged and Abandoned
20-31 (CO3858-04558)	P & A	9/7/04	Plugged and Abandoned
20-32 (CO3858-04559)	P & A	9/6/04	Plugged and Abandoned
20-33 (CO3858-04560)	P & A P & A	10/24/14 12/19/08	Long string Plugged and Abandoned Short string Plugged and Abandoned
20-35 (CO3858-04561)	P & A	9/9/04	Plugged and Abandoned
20-36 (CO3858-04562)	Bridge Plugs Set	9/1/04	Long term stand-by (passed MIT 6/4/14)
20-74 (CO3858-04563)	Bridge Plugs Set	8/19/04	Long term stand-by (passed MIT 6/4/14)
20-76 (CO3858-04651)	P & A	9/6/04	Plugged and Abandoned
21-15 (CO3858-04564)	P & A	6/18/04	Plugged and Abandoned
21-16 (CO3858-04565)	P & A	9/8/04	Plugged and Abandoned
28-21 (CO3858-04567)	P & A	8/29/12 12/18/08	Long String Plugged and Abandoned Short String Plugged and Abandoned
29-20 (CO3858-04569)	P & A	9/9/04	Plugged and Abandoned
29-22 (CO3858-04570)	P & A	9/9/04	Plugged and Abandoned
29-23 (CO3858-04571)	P & A	10/24/06	Plugged and Abandoned
29-24 (CO3858-04572)	P & A	9/8/04	Plugged and Abandoned
29-26 (CO3858-04573)	P & A	10/7/14 10/3/14	Long String Plugged and Abandoned Short String plugged and Abandoned
29-27 (CO3858-04574)	Bridge Plugs Set	7/28/04	Long term stand-by (passed MIT 6/5/14)
29-28 (CO3858-04575)	P & A P & A	10/14/14 12/19/08	Long String Plugged and Abandoned Short String Plugged and Abandoned
29-29 (CO3858-04576)	Bridge Plugs Set	8/19/04	Long term stand-by (passed MIT 6/4/14)
29-34 (CO3858-04577)	P & A	10/17/14 10/15/10	Long String Plugged and Abandoned Short String Plugged and Abandoned
29-53 (CO3858-04654)	P & A	9/10/04	Plugged and Abandoned
29-68 (CO3858-04578)	P & A	9/13/04	Plugged and Abandoned
29-78 (CO3858-04657)	P & A P & A	10/22/14 10/25/06	Long String Plugged and Abandoned Short String Plugged and Abandoned
28-17 (CO3858-04566)	P & A	6/15/04	Plugged and Abandoned
28-41 (CO3858-04568)	P & A	6/16/04	Plugged and Abandoned
20-3 (CO3858-04598)	P & A	6/17/04	Plugged and Abandoned

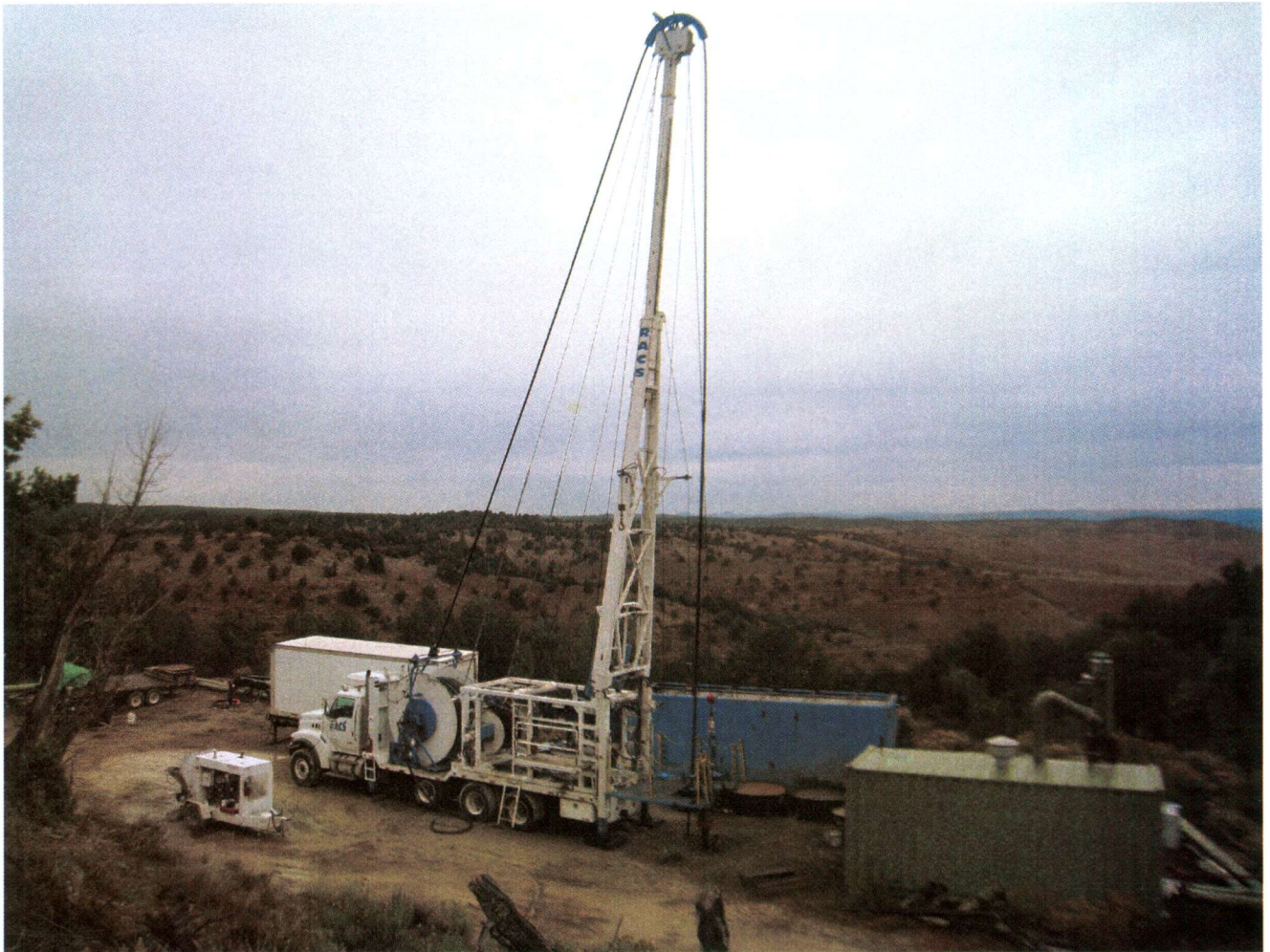


Photo 20 – A drill rig using shallow coil for tremie-line placement of cement from cast iron bridge plug set at 1840 feet to the top of the well on production well 29-78 in October 2014. Lateral piping still extends to this location which is planned for re-contouring and drill seeding in 2015.



Photo 21 – Rigging up to plug and abandon production well 29-34 in October 2014. The smaller drill rig and shallow coil are ideal for the work needed on these small footprint well pads. The lateral pipe extending to this well comes in from the top across the undisturbed ground rather than parallel to the access road for this well. This was a shorter distance to lay the pipe. Care will be observed in removing this run of pipe from the well field so that the established vegetation is not disturbed.

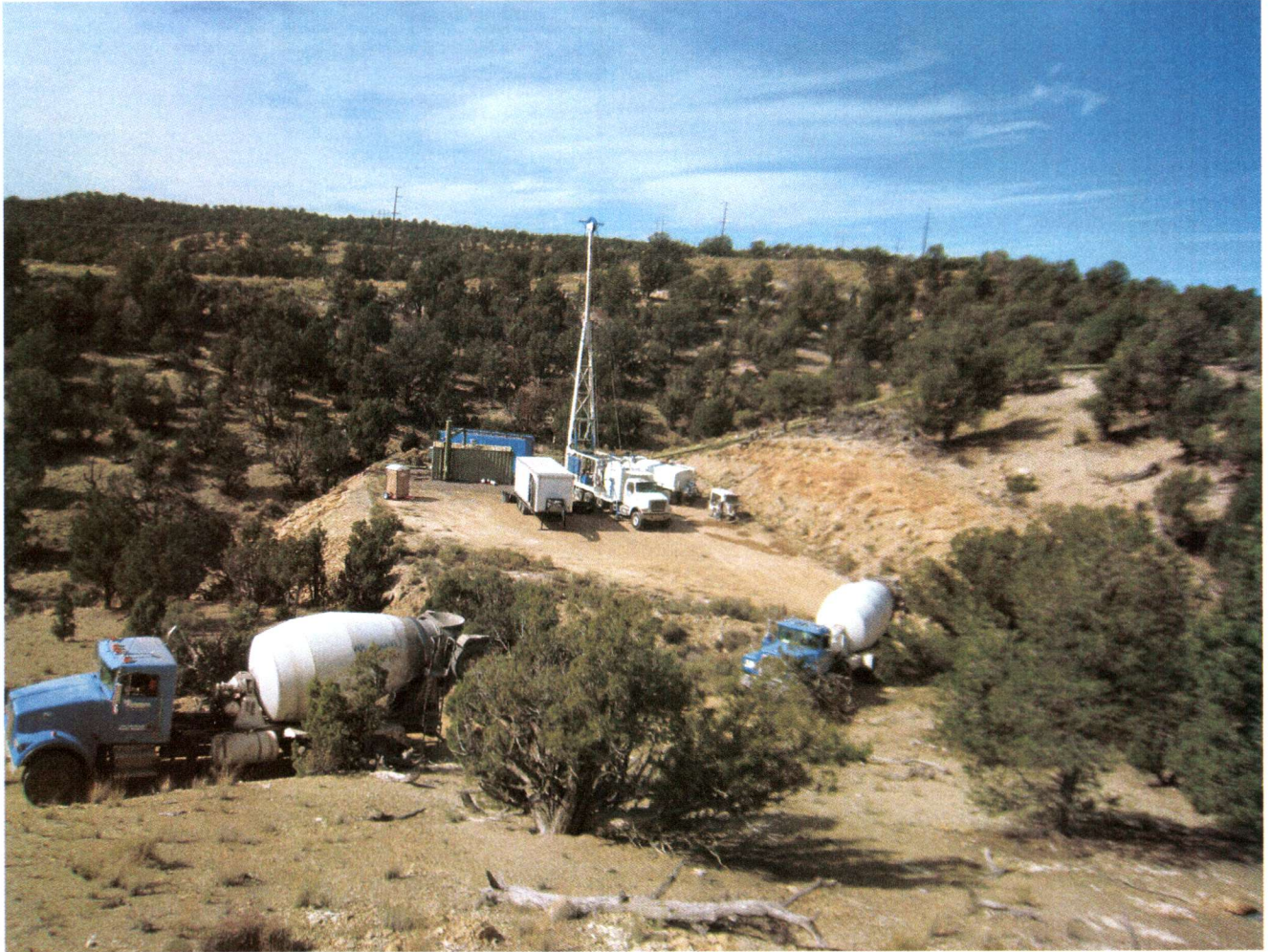


Photo 22 – Loaded cement trucks backing onto location at production well pad 29-34. A small portable cement batch plant set up by the contractor on location at production well pad 20-33, easy access from the main well field road, enhanced the efficiency of plugging the wells. Photo taken October 2014.



Photo 23 – After a production well is plugged and abandoned the well head is cut down and capped and a marker is welded in place to identify the well. Next the well skid and pipe are removed so the site is ready for re-contouring. In the photo above a well skid is being loaded on a truck for short transport to the test mine pad. The well skids are being temporarily staged on this location until they are all ready to be hauled out. Five well skids still remain on location connected to piping in the well field. Before transport on public roads each well skid must have the gas separator (14 foot tall pressure vessel mounted on the side) removed from the side and piping removed from the top to meet height and width road restrictions. Inside of some of the containers large valves not connected laying on the floor must be strapped down with chains to keep them from going through the end of the container as they are tilted onto a wench truck for transport. All of the pipe openings in the well skids are also covered to prevent loose materials from blowing or vibrating out during transport. This well skid is being removed from production well pad 29-68 in the fall of 2014.



Photo 24 – Construction equipment moving dirt to re-contour production well pad 20-35 in September 2014. Smaller sized equipment that can move in a tighter radius is used for this work so that the maximum amount of mature pinion juniper trees along the margins of the pads can be preserved as cast over slopes are restored. The loader easily works around the pinion juniper tree on the edge of this pad so it can remain undisturbed.



Photo 25 – Re-contouring and drill seeding of production well pad 29-24 has been the most time consuming location to reclaim so far. The cut slope on this location is substantial and the cast over slope and lateral road incorporated a more complex storm drainage system that had to be self- sustaining and stable once the culverts were removed. The reclaimed slope was drill seeded by pulling the seeder across the slope with a skid steer. Some areas of this location were hand seeded.



Photo 26 – An estimated 44,000 feet of carbon steel pipe twists and runs through the well field extending down the lateral lines and along the main well field road. Nearly all runs of pipe are in pairs and in some sections there are three runs of pipe side-by-side. Along each run of pipe is a series of 4 to 12 cables which also have to be removed. Both the pipe and the cable bundles are cut into 27 foot sections and loaded for transport to the Parachute site. Before the loaded pipe trailer leaves the well field the ends of each section of pipe are capped to prevent debris from blowing out as the pipe is transported. Insulation that is removed from one foot sections of the pipe where it is cut is gathered up and put into a large covered dumpster at the test mine pad. A fire watch and water truck is on location during all work activity at the Picenace site. Once the pipe is transported to the Parachute site the remaining pipe insulation is removed on an asphalt pad that is easily cleaned.



Photo 27 – Dual lateral piping and accompanying four lines of cable extending along the access road to production well 29-28. All of the piping and cables extending to production well 29-28 were removed and transported to the Parachute site in October 2014. Not all pipe lines run adjacent to the lateral roads. Pipe lines extending from the main well field road across country in a more direct route for a shorter distance to wells which are more remotely located are carefully removed to preserve the established vegetation.

In addition to plugging and abandonment work on the production wells, and continued ground water monitoring throughout the well field, the roads and well pads are inspected periodically for erosion and the presence of noxious weed populations. Approved herbicides were applied by certified contractors periodically throughout the reporting period to control undesirable vegetation and enhance the establishment of reclamation species.



Photo 28 – A side view of reclaimed production well pad 29-22 taken in June 2015. This pad and the road to it were re-contoured and drill seeded in the fall of 2013. The drill seeding was done in multiple directions to break up the appearance of orderly rows. The vegetation density is very good all across this reclamation area and all the trees near the original disturbance were preserved during the work. It nearly impossible to identify where the location of former production well 29-22 was.

3.2 Reclamation of Disturbed Areas Summary

As the Yankee Gulch project developed from the test mine phase in 1997 through the construction and operation of the commercial phase (2000-2015) a number of areas have been disturbed and reclaimed. A summary of the disturbed and reclaimed areas and the present status of these areas are included in Table 2 on the following page. No new areas were disturbed during the current reporting period (2014 – 2015). Those areas reclaimed are represented in the table.

TABLE 2
DISTURBED AND RECLAIMED AREAS WITHIN DIVISION OF RECLAMATION, MINING AND
SAFETY PERMIT BOUNDARY

	AREA DETAIL	DISTURBED AREA ACRES/YEAR		CURRENT STATUS
Piceance Site Processing Facility	Major processing equipment, control room, admin offices, maintenance shop, heliport, septic leach field, topsoil pile, electrical substation	11.8	2000	Sold September 2005. Addressed in 112 Permit Amendment I. Areas all in use – American Soda reclaimed 0.5 acres in 2001
Evaporation Pond	Six foot deep one acre lined pond northwest of the processing facility	2.0	2000	Sold September 2005. Addressed in 112 Permit Amendment I. Pond in use – No Reclamation
Temporary Lay down & Parking Area	Area used during construction for temporary storage of building materials and parking for construction work force.	10.8	2000	Sold September 2005. Addressed in 112 Permit Amendment I. Construction of Natural Gas Facility in this area – American Soda Reclaimed 10.8 acres in 2001.
Temporary Batch Plant Area	Area just west of helipad and topsoil pile	1.5	2000	Sold September 2005. Addressed in 112 Permit Amendment I. Area in use. American Soda Reclaimed 1.5 acres in 2001.
Main Access Road	Road extending from County Road 5 to the former processing facility. Asphalt road is 24-foot plus 4-foot shoulders	13	2000	Sold September 2005. American Soda retains a right-of-way on this road to access the Well Field. Road will remain BLM permanent feature.
Well Field Piping and Pump Stations	12-inch diameter main header pipe rack, 8-inch lateral pipelines, and 4-inch individual well pipelines. Two pumping stations.	8.8	2000	Retained by American Soda. See Well Field Status Map for detail of piping that remains in place. Pumping stations remain in place with no reclamation. Some areas where piping has been removed have been reclaimed.
Well Field Roads	Road extending from Main Access road down to Test Mine bench and ponds and roads accessing each well pad in the well field	6.96	2000	Retained by American Soda. See Well Field Map for detail of roads that remain in place. Some well field roads have been reclaimed.

TABLE 2 - CONTINUED				
	AREA DETAIL	DISTURBED ACRES/YEAR	AREA	CURRENT STATUS
Test Mine Facility and Ponds	Process building and control room building on bench with supply well 20-8. Two lined process water ponds.	13	1997	Retained by American Soda. Well skids and piping removed from P&A wells are staged on this pad. Ponds reclaimed initially in 2006. Drill seeded area in 2007. Pond area is 8 acres. Test Mine Pad and road (5 acres) is still in use.
Pond Solids Disposal Cell	Lined excavation filled with approximately 5,000 cubic yards of non-hazardous sodium mineral solids. Capped with cement and soil.	2	2006	Retained by American Soda. Approximately 3 acres reclaimed initially in 2006 with broadcast seeding. Area was seeded a second time in 2007 with a no-till drill.
Solution Mining Well Pads	30 well pads approximately 150' X 80' plus cut and fill slopes and topsoil piles	14.26	2000	See Table 3 – Detail Status and Reclamation for Well Pads and Roads.
Total Disturbed Acres Retained by American Soda (only the yellow shaded areas of the table)				45.02 acres



PHOTO 29 - Looking down Yankee Gulch from the draw just north of the test mine pad in October 2014. This reclamation area was once the location of the two ponds constructed for the test mine operation. Vegetation in the formerly disturbed area is similar in density, diversity, and cover to the vegetation of the valley where no disturbance has occurred.

Detail on the solution mining and ground water monitoring well pads, roads, top soil piles and the operational status of the long term stand-by production wells and those wells which are plugged and abandoned is included in Table 3 following.

TABLE 3 STATUS AND RECLAMATION DETAIL FOR WELL PADS AND ROADS			
Well	Status	Date Plugged & Abandoned	Comment
19-2	Ground Water Monitoring Well	Well in use for monitoring	Upper aquifer ground water monitoring well (above A Groove) Well pad and road still in use. Interim reclamation on top soil pile only approximately 0.02 acres in 2000. Vegetation and storm water management ongoing.
19-3	Ground Water Monitoring Well	Well in use for monitoring	Shallow alluvial well down gradient of Evaporation Pond which was never constructed. Dry well – Level only, not sampled. No road and no pad for well. Access by foot.
20-1	Plugged & Abandoned	2000	Core hole converted to monitoring well for test mine phase. Located on test mine pad. Not shown on map. Pad still in use. Well plugged & abandoned prior to commercial phase.
20-2	Plugged & Abandoned	6/14/04	Test mine well continued as production well in commercial phase. Well pad and road contoured and reseeded. Approximately 0.3 acres reclaimed 2005. Two lane track remains for access to Well 21-4 ground water monitoring location.
20-3	Plugged & Abandoned	6/17/04	Test mine production well never operated in commercial phase. Well was on test mine pad. Not reclaimed. Test mine pad still in use. Cast over slope and top soil pile reclaimed ~ 0.5 acres in 1998/1999.
20-4A	Ground water monitoring well	Well in use for monitoring	Ground water monitoring well used for levels only. On pad with 20-4B. Upper aquifer ground water monitoring well (A Groove) Well pad and road still in use. Vegetation and storm water management ongoing.
20-4B	Ground Water monitoring well	Well in use for monitoring	Lower aquifer ground water monitoring well (B Groove) Well pad and road still in use. Interim reclamation on top soil pile only approximately 0.02 acres in 2000. Vegetation and storm water management ongoing.
20-5	Ground Water monitoring well	Well in use for monitoring	Upper aquifer monitoring well (Uinta) pad still in use. Road is two lane track leading to TDR subsidence well at 20-12. Area reclaimed with 20-11 and 20-12 production wells. No top soil pile. Vegetation and storm water management ongoing.
20-6	Plugged & Abandoned	10/11/00	Former Class I Disposal Well in service during test mining phase only. Well pad and road contoured and reseeded ~ 0.8 acres in 2000. Pad reseeded in 2005 ~ 0.2 acres. Vegetation and storm water management ongoing.
20-8	Ground Water monitoring well	Well in use for monitoring	Upper aquifer monitoring well (Uinta). Well was former supply well for test mine and sits on test mine pad still in use. No separate top soil pile. Vegetation and storm water management ongoing.
20-9	Ground Water monitoring well	Well in use for monitoring	Lower aquifer monitoring well (B Groove). Well installed to monitor down gradient of 20-6 Class I Disposal Well during test mine. Continued in commercial phase. Well pad and road ~ 0.1 acres. Top soil pile seeded 2000 ~ 0.02 acres.
20-10	Ground Water monitoring well	Well in use for monitoring	Upper aquifer monitoring well (Uinta). Well pad and road still in use. Interim reclamation on top soil pile only approximately 0.02 acres in 2000. Vegetation and storm water management ongoing.

TABLE 3 - Continued			
Well	Status	Date Plugged & Abandoned	Comment
20-11	Plugged & Abandoned	6/16/04	Well pad and road contoured and reseeded. Approximately 0.4 acres reclaimed 2005.
20-12	Plugged & Abandoned TDR Subsidence Monitoring Cable Installed	6/17/04	Well pad and road contoured and reseeded. Approximately 0.2 acres reclaimed 2005. Two lane tracks provide access to TDR cable in well 20-12 and well 20-5 Uinta ground water monitoring well. Vegetation and storm water management ongoing.
20-14	Plugged & Abandoned	7/9/04	Test mine well continued as production well in commercial phase. Well pad and road contoured and reseeded. Approximately 0.5 acres reclaimed in 2005. Two lane track remains for access to 21-4 ground water monitoring well pad.
20-19	Long term stand-by short string only. Bridge Plug Set	7/24/04 12/17/08 P & A LS	Vegetation and storm water management ongoing. Lateral Piping and well skid in place. Short string passed MIT 2014, long string P & A Dec 2008. Interim reclamation on top soil pile only ~ 0.02 acres in 2000.
20-30	Plugged & Abandoned	9/7/04	Well pad and road contoured and reseeded. Approximately 0.21 acres reclaimed in 2014.
20-31	Plugged & Abandoned	9/7/04	Well pad and road contoured and reseeded. Approximately 0.42 acres reclaimed in 2014.
20-32	Plugged & Abandoned	9/6/04	Well pad and road contoured and reseeded. Approximately 0.46 acres reclaimed in 2014.
20-33	Plugged & Abandoned	9/2/04 10/24/14	Vegetation and storm water management ongoing. Lateral Piping and well skid in place. Interim reclamation on top soil pile only ~ 0.02 acres in 2000.
20-35	Plugged & Abandoned	9/9/04	Well pad and road contoured and reseeded. Approximately 0.48 acres reclaimed in 2014.
20-36	Long term stand-by Bridge Plugs Set	9/1/04	Vegetation and storm water management ongoing. Lateral Piping and well skid in place. Well passed MIT 2014. Interim reclamation on top soil pile only ~ 0.02 acres in 2000.
20-74	Long term stand-by Bridge Plugs Set	8/19/04	Vegetation and storm water management ongoing. Lateral Piping and well skid in place. Well passed MIT 2014. Interim reclamation on top soil pile only ~ 0.02 acres in 2000.
20-76	Plugged & Abandoned	9/6/04	Vegetation and storm water management ongoing on pad and access road. Interim reclamation on top soil pile only ~ 0.02 acres in 2000.
21-2	Ground Water monitoring well	Well in use for monitoring	Alluvial monitoring well. Installed during test mine phase to monitor down gradient of test mine ponds. Well pad and road still in use. Same pad as 21-3 well. Interim reclamation on top soil pile only approximately 0.02 acres in 2000. Vegetation and storm water management ongoing.
21-3	Ground Water monitoring well	Well in use for monitoring	Multiple completion monitoring well (4 zones). Well pad and road still in use. Same pad as 21-2 well. Interim reclamation on top soil pile only approximately 0.02 acres in 2000 recorded with 21-2 above. Vegetation and storm water management ongoing.

TABLE 3 - Continued			
Well	Status	Date Plugged & Abandoned	Comment
21-4	Ground Water monitoring well	Well in use for monitoring	Nested wells (4 zones). Well pad and road still in use. Road is two lane track. Area reclaimed along with 20-14 production well pad. Vegetation and storm water management ongoing.
21-5	Ground Water monitoring well	Well in use for monitoring	Alluvial monitoring well. Well pad and road still in use. Road is two lane track used by rancher for irrigation. Vegetation and storm water management ongoing.
21-15	Plugged & Abandoned	6/18/04	Well pad and road contoured and reseeded. Approximately 0.6 acres reclaimed in 2005
21-16	Plugged & Abandoned	9/8/04	Well pad and road contoured and reseeded. Approximately 0.5 acres reclaimed in 2005
28-1	Ground Water monitoring well	Well in use for monitoring	Alluvial monitoring well. Well pad and road still in use. Road is two lane track used by rancher for irrigation. Vegetation and storm water management ongoing.
28-17	Plugged & Abandoned	6/15/04	Well pad and road contoured and reseeded. Approximately 0.8 acres reclaimed in 2005
28-21	Plugged & Abandoned	8/29/12	Well pad and road contoured and reseeded. Approximately 0.12 acres reclaimed in 2013.
28-41	Plugged & Abandoned	6/16/04	Well pad and road contoured and reseeded. Approximately 0.9 acres reclaimed in 2005.
29-2	Ground Water monitoring well	Well in use for monitoring	Lower aquifer monitoring well (B Groove). Well pad and road still in use. Road is two lane track adjacent to natural gas pipeline ROW. Vegetation and storm water management ongoing.
29-3	Ground Water monitoring well	Well in use for monitoring	Upper aquifer monitoring well (A Groove). Well pad and road still in use. Road is access to 29-24 production well. Interim reclamation on top soil pile only approximately 0.02 acres in 2000. Vegetation and storm water management ongoing.
29-4	Ground Water monitoring well	Well in use for monitoring	Nested monitoring well (4 zones). Well pad and road still in use. Interim reclamation on top soil pile only approximately 0.02 acres in 2000. Vegetation and storm water management ongoing.
29-20	Plugged & Abandoned	9/9/04	Well pad and road contoured and reseeded. Approximately 0.3 acres reclaimed in 2005.
29-22	Plugged & Abandoned	9/9/04	Well pad and road contoured and reseeded. Approximately 0.14 acres reclaimed in 2013.
29-23	Plugged & Abandoned	10/24/06	Well pad and road contoured and reseeded. Approximately 0.29 acres reclaimed in 2014.
29-24	Plugged & Abandoned	9/8/04	Well pad and road contoured and reseeded. Approximately 0.35 acres reclaimed in 2014.
29-26	Plugged & Abandoned	10/3/2014 10/7/2014	Well pad and road contoured and reseeded. Approximately 0.29 acres reclaimed in 2014
29-27	Long term stand-by Bridge Plugs Set	7/28/04	Vegetation and storm water management ongoing. Lateral Piping and well skid in place. Well passed MIT 2014. Interim reclamation on top soil pile only ~ 0.02 acres in 2000.

TABLE 3 - Continued			
Well	Status	Date Plugged & Abandoned	Comment
29-28	Plugged & Abandoned	10/14/14 12/19/08	Well pad and road contoured and reseeded. Approximately 0.47 acres reclaimed in 2014.
29-29	Long term stand-by Bridge Plugs Set	8/19/04	Vegetation and storm water management ongoing. Lateral Piping and well skid in place. Well passed MIT 2014. Interim reclamation on top soil pile only ~ 0.03 acres in 2000.
29-34	Plugged & Abandoned	10/17/14 P & A LS 10/15/10 P & A SS	Vegetation and storm water management ongoing. Lateral Piping in place. Interim reclamation on top soil pile only ~ 0.04 acres in 2000.
29-51	Well drilled to 200 feet then drilling stopped.	8/23/03	Well pad and road contoured and reseeded. Approximately 0.082 acres reclaimed in 2013.
29-53	Plugged & Abandoned	9/10/04	Well pad and road contoured and reseeded. Approximately 0.14 acres reclaimed in 2013.
29-68	Plugged & Abandoned	9/13/04	Well pad and road contoured and reseeded. Approximately 0.31 acres reclaimed in 2014.
29-78	Plugged and Abandoned	10/22/14 P & A LS 10/25/06 P & A SS	Vegetation and storm water management ongoing. Lateral Piping in place. Interim reclamation on top soil pile only ~ 0.02 acres in 2000.

Table 3 Color Key:

	Monitoring Well – Still in use. Top soil pile reclaimed.
	Well Plugged and Abandoned, Well pad re-contoured and drill seeded.
	Long Term Stand-by Short String only, Long string P & A
	Well plugged and abandoned, Well skid still on pad, top soil pile reclaimed
	Well Plugged and Abandoned, Vegetation maintenance ongoing.
	Long Term Stand-by Bridge Plugs Set both long & short string



PHOTO 30 - The careful preservation of mature pinion juniper as production pads are closed and areas are re-contoured allows many types of wildlife in the well field to keep their habitat and shelter most likely already stocked for the winter.



PHOTO 31 - *A cotton tail rabbit watches from the shelter of some brush along the main well field road. A small section of the main well field piping is visible on the left. Photo taken summer 2014.*

3.3 Planned Disturbances/Reclamation for 2014 – 2015

In the 2015 field season the four remaining production wells (20-36, 20-74, 29-29 and 29-27) that have both strings still open to the cast iron bridge plugs will be plugged and abandoned as well as the one remaining production well (20-19) with only the short string still open to the cast iron bridge plug.

At least six and as many as nine well pads will be re-contoured and drill seeded beginning with work on the wells plugged in 2014 (20-33, 29-34, 29-78 and 20-76) that were not reclaimed in 2014 and then following the activity of the coil tubing rig plugging and abandoning the remaining wells beginning at production well 20-36, 20-74, 29-29, 29-27 and finally production well pad 20-19. Plugging and abandonment of water supply well/ground water Uinta monitoring well 20-8 is also planned for fall 2015. Demolition of the piping and removal of the well skids on five of the production wells after the plugging and abandonment work is complete will be followed by re-contouring and drill seeding. All work will be staged in a timeframe that accommodates a late fall seeding for best success.

Demolition of the former test mine building is planned for early fall 2015 and removal of all well skids from the Piceance site will occur once the last production well is plugged and abandoned. Demolition of a portion of the main well field piping is also planned. No new disturbances are planned for the 2015 – 2016 reporting period.

As inspections and monitoring are conducted in the well field, areas where reclamation vegetation has failed to establish are recorded. Vegetation management will include the maintenance of storm water control features as well as seasonal application of BLM approved herbicides.



PHOTO 32 - The Piceance Creek Valley viewed from the main well field road near the upper pump house on an overcast fall day 2014. The yellow fall brush contrasts nicely with the lush green valley meadows and the darker pinion juniper foliage.



PHOTO 30 - The careful preservation of mature pinion juniper as production pads are closed and areas are re-contoured allows many types of wildlife in the well field to keep their habitat and shelter most likely already stocked for the winter.



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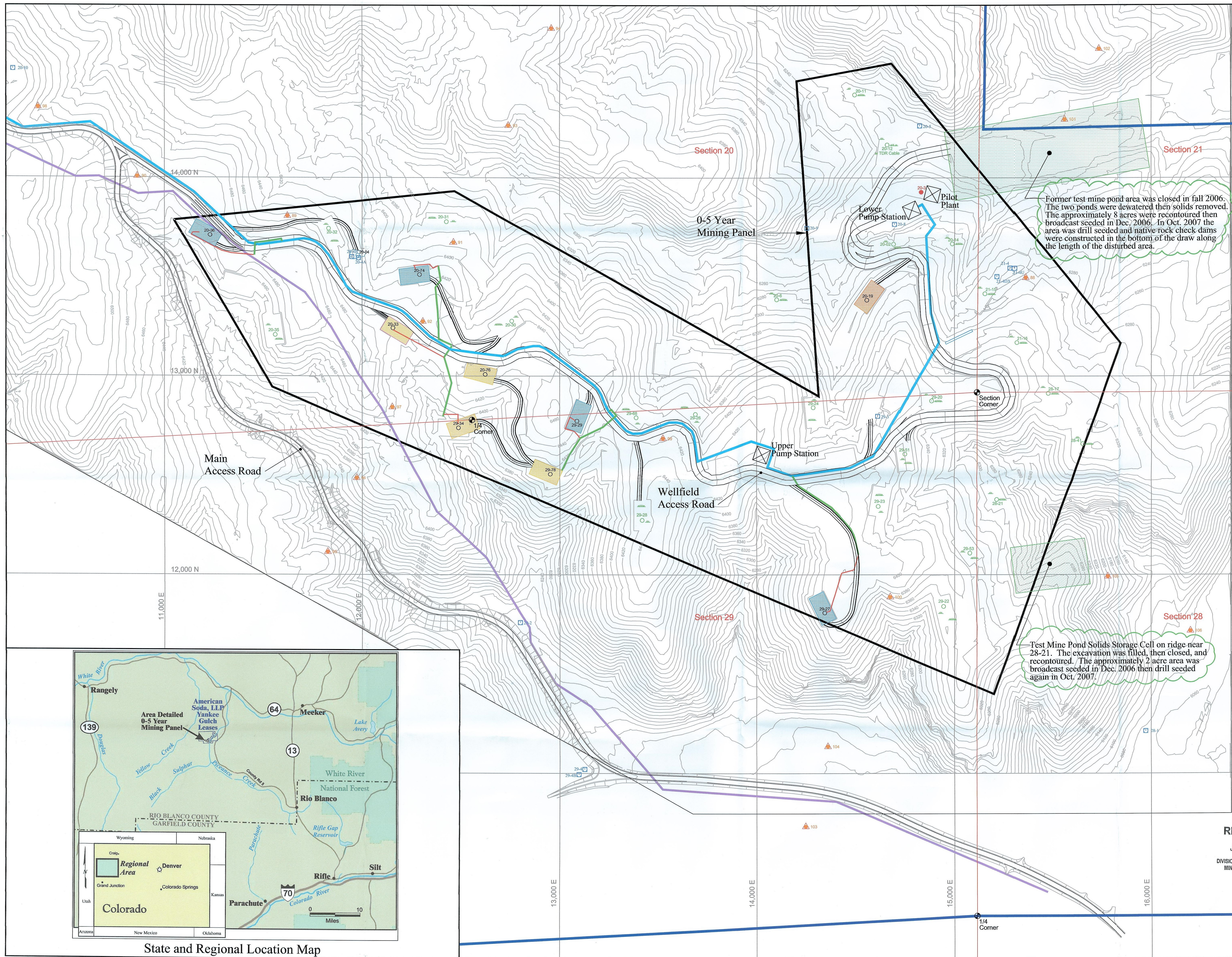
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0 200 400 600
Scale (ft)

Legend

- Yankee Gulch Lease Boundary
- Well—
Long-term Standby,
Vegetation Maintenance Ongoing
- Well—
Plugged and Abandoned,
Vegetation Maintenance Ongoing
- Well—
Long String Plugged and Abandoned
- Well—
Plugged and Abandoned,
Well Skid Removed, Pad Contoured,
Graded, and Seeded
- Well 20-3—Pilot Plant Well,
Plugged and Abandoned
- Ground Water
Monitoring Well*
- Subsidence Monitoring Point
- Main Piperack—12"
- Lateral Piperack—8"
- Individual Well Piperack—4"
- Interplant Pipeline
- Individual Well Access Road
- Found Brass Cap
- Section Line
- Surface Contour (ft)

*Ground Water Monitoring Wells
Outside of Detailed Map Extents

Well No.	Easting	Northing
19-2	9340	16885
20-10	10234	14544
21-5	18656	17097

Notes: Project location—T.1S., R.97W., Rio Blanco County, Colorado.
Section lines are approximate.
Contour interval = 10 ft
Surface contours have not been modified to show regraded areas
7m-1999-002

RECEIVED
JUL 10 2015
DIVISION OF RECLAMATION
MINING AND SAFETY

Wellfield Status Map
Yankee Gulch
Sodium Minerals Project

DESIGNED BY: N/A
DRAWN BY: RJL
CHECKED BY: CA

DATE: 06-12-2015
SCALE: AS SHOWN

PREPARED FOR:
AMERICAN SODA, L.L.P.
A Wholly Owned Subsidiary of Solvay Chemicals
AGAPITO ASSOCIATES, INC.
Mining and Civil Engineers and Geologists

JOB NO.: 254-35
ACAD FILE: 0605surf_00_05_05—for Status Map June2015 Akin.dwg

Division of Reclamation, Mining, and Safety

Fee Receipt for M1999002

American Soda, L.L.P.

000000000

Receipt #: 19883

Date: 07/10/2015

Permit: M1999002

Payment Method	Revenue Code	Fee Description/Notes	Amount
30031309 msr	4300-MAF0	Minerals Annual Fees M1999-002 paid by Solvay Finance (America), Inc.	\$1,150.00
Receipt Total:			\$1,150.00