

# WEST RIDGE MINE

007/041

CHANGE TO  
THE MINING AND RECLAMATION PLAN

***TO INCLUDE:  
COAL-FINES CATCHMENT STRUCTURES  
C AND E  
IN THE C CANYON DRAINAGE  
BELOW THE WEST RIDGE MINE***

**THIS IS IN RESPONSE TO VIOLATION #10063  
WHICH REQUIRES A SECOND CLEANUP OF THE  
COAL FINES BELOW THE MINE**

**\*\*\*\*\*APPROVED\*\*\*\*\***

**SUBMITTAL OF CLEAN COPIES  
TASK #3708**

SUBMITTED: JANUARY 24, 2011

COVER LETTER.....C1/C2 FORMS

C007/0041  
Successing



**COPY**

P.O. Box 910, East Carbon, Utah 84520  
Telephone (435) 888-4000 Fax (435) 888-4002

Utah Division of Oil, Gas & Mining  
Utah Coal Program  
1594 West North Temple, Suite 1210  
P.O.Box 145801  
Salt Lake City, UT 84114-5801

January 24, 2011

Attn: Daron Haddock  
Permit Supervisor

Re: West Ridge Mine C/007/041  
Permit Change to Include Catchment Structures C and E  
Response to Violation #10063  
Submittal of Clean Copies, Task #3708

Dear Mr. Haddock:

Enclosed are six (6 ea.) clean copies (Task #3708) for the approved amendment to the West Ridge MRP to include catchment structures C and E in the C Canyon drainage below the minesite. This amendment was in response to Violation #10063 which has now been terminated.

If you have questions or comments please contact me at (435) 888-4017.

Sincerely,

David Shaver  
Resident Agent

File in:

- Confidential
- Shelf
- Expandable

Date Folder 01/01/2011 C0070041

See Successing For additional information

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**FEB 01 2011**

**DIV. OF OIL, GAS & MINING**

## APPLICATION FOR PERMIT PROCESSING

<input type="checkbox"/> Permit Change	<input type="checkbox"/> New Permit	<input type="checkbox"/> Renewal	<input type="checkbox"/> Transfer	<input type="checkbox"/> Exploration	<input type="checkbox"/> Bond Release	Permit Number: C/007/041
Title of Proposal: <b>Change to the MRP to include Catchment structures C and E in C Canyon Drainage below mine, Clean copies, Task #3708</b>						Mine: WEST RIDGE MINE
						Permittee: WEST RIDGE Resources, Inc.

Description, include reason for application and timing required to implement:.

Instructions: If you answer yes to any of the first 8 questions (gray), submit the application to the Salt Lake Office. Otherwise, you may submit it to your reclamation specialist.

<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	1. Change in the size of the Permit Area? <u>0.46</u> acres Disturbed Area? <u>0.46</u> acres <input checked="" type="checkbox"/> increase <input type="checkbox"/> decrease.
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	2. Is the application submitted as a result of a Division Order?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	3. Does application include operations outside a previously identified Cumulative Hydrologic Impact Area?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	4. Does application include operations in hydrologic basins other than as currently approved?
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	5. Does application result from cancellation, reduction or increase of insurance or reclamation bond?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	6. Does the application require or include public notice/publication?
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	7. Does the application require or include ownership, control, right-of-entry, or compliance information?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	8. Is proposed activity within 100 feet of a public road or cemetery or 300 feet of an occupied dwelling?
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	9. Is the application submitted as a result of a Violation? <u>Yes NOV 10063</u>
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	10. Is the application submitted as a result of other laws or regulations or policies? Explain:
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	11. Does the application affect the surface landowner or change the post mining land use?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	12. Does the application require or include underground design or mine sequence and timing?
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	13. Does the application require or include collection and reporting of any baseline information?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	14. Could the application have any effect on wildlife or vegetation outside the current disturbed area?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	15. Does application require or include soil removal, storage or placement?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	16. Does the application require or include vegetation monitoring, removal or revegetation activities?
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	17. Does the application require or include construction, modification, or removal of surface facilities?
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	18. Does the application require or include water monitoring, sediment or drainage control measures?
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	19. Does the application require or include certified designs, maps, or calculations?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	20. Does the application require or include subsidence control or monitoring?
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	21. Have reclamation costs for bonding been provided for?
<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	22. Does application involve a perennial stream, a stream buffer zone or discharges to a stream?
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	23. Does the application affect permits issued by other agencies or permits issued to other entities?

Attach 3 complete copies of the application.

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein. (R645-301-123)

Signed - Name - Position - Date  
 Subscribed and sworn to before me this 19<sup>th</sup> day of January 2011  
 Notary Public  
 My Commission Expires March 27, 2013  
 STATE OF Utah  
 COUNTY OF Carbon



Received by Oil, Gas & Mining

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ASSIGNED TRACKING NUMBER

# Application for Permit Processing Detailed Schedule of Changes to the MRP

COPY

Title of Application:

Change to the MRP to include Catchment Structure C and E in the

C Canyon drainage below the mine, ~~response to deficiencies~~, Task #2500

clean copies 3708

Permit Number: C/007/041

Mine: WEST RIDGE MINE

Permittee: WEST RIDGE RESOURCES

Provide a detailed listing of all changes to the mining and reclamation plan which will be required as a result of this proposed permit application. Individually list all maps and drawings which are to be added, replaced, or removed from the plan. Include changes of the table of contents, section of the plan, pages, or other information as needed to specifically locate, identify and revise the existing mining and reclamation plan. Include page, section and drawing numbers as part of the description.

DESCRIPTION OF MAP, TEXT, OR MATERIALS TO BE CHANGED

<input type="checkbox"/> ADD	<input checked="" type="checkbox"/> REPLACE	<input type="checkbox"/> REMOVE	DESCRIPTION
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Chapter 1 text: all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 5 text. pg 5-1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 7 text pg 7-1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Chapter 5: Appendix 5-150
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Narrative text: all
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attachment 1: map (replace)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attachment 3: BLM Draw
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attachment 4: Div Wtr Rights
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Emergency Authorization
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attachment 9: Addendum to
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Address Violation 10063
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attachment 10: As-built photos, C+E
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attachment 11: As-built drawings, C+E
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attachment 12: MSDS, flocculant
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Attachment 13: Soils Information
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Maps 1-1, 2-1, 3-1, 3-4B, 3-4C, 3-4D, 4-1, 5-2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5-3, 6-1, 7-3, 7-5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Any other specific or special instructions required for insertion of this proposal into the Mining and Reclamation Plan?

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CHAPTER 1.....REPLACEMENT PAGES

~WEST RIDGE MINE - PERMIT APPLICATION PACKAGE~

TABLE OF CONTENTS- CHAPTER 1  
R645-301-100 PERMIT APPLICATION REQUIREMENTS: GENERAL  
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APPENDIX 1-1	Certifications, Verifications, Publications Attachment 1-1 Certificate of Liability Insurance Attachment 1-2 Newspaper Advertisement Attachment 1-3 Proof of Publication Attachment 1-4 Filing Fee Verification Attachment 1-5 Verification Statement
APPENDIX 1-2	Violation Information
APPENDIX 1-3	Reference List
APPENDIX 1-4	Proof of Lease Assignment
APPENDIX 1-4A	Federal Lease SL-068754, U-01215
APPENDIX 1-4B	Federal Lease UTU-78562
APPENDIX 1-4C	State Lease ML-47711
APPENDIX 1-4D	State Lease ML-49287
APPENDIX 1-4E	State Lease ML-51744
APPENDIX 1-4F	Penta Creek Fee Lease
APPENDIX 1-5	Current and Previous Coal Mining Permits
APPENDIX 1-6	Consultation and Coordination
APPENDIX 1-7	Ownership and Control
APPENDIX 1-8	Letter from Carbon County
APPENDIX 1-9	*****Deleted*****
APPENDIX 1-10	SITLA - Special Use Lease (Topsoil Borrow Area)
APPENDIX 1-11	Material Deposit Special Use Lease Agreement
APPENDIX 1-12	Waterline/Pump House Right of Way
APPENDIX 1-13	Correspondence Regarding Security Gate
APPENDIX 1-14	*****Moved*****
APPENDIX 1-15	Legal Description of Grassy Trail Reservoir

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**R645-301-100 CHAPTER 1**

<b>MAP NUMBER</b>	<b>DESCRIPTION</b>	<b>SCALE</b>
<b>MAP 1-0</b>	<b>Permit Map</b>	<b>1" = 2000'</b>
<b>MAP 1-1</b>	<b>Location Map</b>	<b>1" = 2000'</b>

**R645-301-100 PERMIT APPLICATION REQUIREMENTS: GENERAL CONTENTS**

**SCOPE**

The objective of this chapter is to set forth all relevant information concerning ownership and control of WEST RIDGE Resources, Inc., the ownership and control of the property to be affected by mining activities and all other information and documentation required under Part UMC.

**R645-301-112 IDENTIFICATION OF INTERESTS**

112.100 WEST RIDGE Resources, Inc. is a corporation organized and existing under the laws of Utah and qualified to do business in Utah.

112.200 The applicant, WEST RIDGE Resources, Inc. will also be the operator.

WEST RIDGE Resources, Inc.  
P.O. Box 910  
East Carbon, Utah 84520  
(435) 888-4000  
David Hibbs - President

Employer Identification Number: 87-0585129

112.220 The resident agent of the applicant, WEST RIDGE Resources, Inc., is:

Dave Shaver  
WEST RIDGE Resources, Inc.  
P.O. Box 910  
East Carbon, Utah 84520

(435) 888-4000

112.230 WEST RIDGE Resources, Inc. will pay the abandoned mine land reclamation fee.

112.300      **Ownership and Control - See Appendix 1-7**

WEST RIDGE Resources, Inc. is the permittee and operator of the WEST RIDGE Mine. WEST RIDGE Resources, Inc. is a wholly owned subsidiary of ANDALEX Resources, Inc.. WEST RIDGE Resources, Inc. is a Utah corporation licensed to do business in the State of Utah. All leases associated with the WEST RIDGE Mine are owned by ANDALEX Resources, Inc. ANDALEX Resources, Inc, is a wholly owned subsidiary of UtahAmerican Energy Inc., which in turn is a wholly owned subsidiary of Murray Energy Corporation.

112.340      See Appendix 1-5

112.350      See Appendix 1-5

112.410      See Appendix 1-5

112.420      See Appendix 1-7

112.500      Surface Owners:

Bureau of Land Management  
Utah State Office  
136 East South Temple  
Salt Lake City, Utah 84111

Glen Wells  
700 West U.S. Hwy 6  
Price, Utah 84501

Penta Creek, LLC  
140 S. Newton  
Albert Lea, MN 56007

Dave Hinkins  
155 West 100 South  
Orangeville, Utah 84537

School and Institutional Trust  
Lands Administration  
355 West North Temple, Suite 400  
Salt Lake City, Utah 84180-1204

Matt Rauhala  
1236 East Main  
Price, Utah 84501

Subsurface Owners:

Bureau of Land Management  
Utah State Office  
136 East South Temple  
Salt Lake City, Utah 84111

Penta Creek, LLC  
140 S. Newton  
Albert Lea, MN 56007

School and Institutional Trust  
Lands Administration  
355 West North Temple, Suite 400  
Salt Lake City, Utah 84180-1204

WEST RIDGE Resources, Inc. is the holder of record for federal lease SL-068754 and UTU 78562 (see Table 1-1), state lease ML 47711 and ML 49287 (see Table 1-2A) and the Penta Creek Fee lease (see Table 1-2B).

Proof of lease assignment for all leases (Federal leases SL-068754 and UTU 78562, and State leases ML 47711 and ML 49287), and the Penta Creek fee lease can be found in Appendix 1-4.

112.600 Contiguous surface owners:

Bureau of Land Management  
Utah State Office  
136 East South Temple  
Salt Lake City, Utah 84111

Dave Hinkins  
155 West 100 South  
Orangeville, Utah 84537  
Glen Wells  
700 West U.S. Hwy 6  
Price, Utah 84501

Penta Creek, LLC  
140 S. Newton  
Albert Lea, MN 56007

School and Institutional Trust  
Lands Administration  
355 West North Temple, Suite 400  
Salt Lake City, Utah 84180-1204

Contiguous subsurface owners:

School and Institutional Trust  
Lands Administration  
355 West North Temple, Suite 400  
Salt Lake City, Utah 84180-1204

Penta Creek, LLC  
140 S. Newton  
Albert Lea, MN 56007

Dave Hinkins  
155 West 100 South  
Orangeville, Utah 84537

Bureau of Land Management  
Utah State Office  
136 East South Temple  
Salt Lake City, Utah 84111

112.700 See Appendix 1-5

112.800 There are no pending interests or bids existing on lands contiguous to the present leased area.

112.900 After WEST RIDGE Resources, Inc. is notified that the application is approved, but before the permit is issued, WEST RIDGE Resources, Inc. will update, correct or indicate that no change has occurred in the information previously submitted under R645-301-112.100 through R645-301-112.800.

**R645-301-113 VIOLATION INFORMATION**

- 113.100 The applicant or any subsidiary, affiliate or persons controlled by or under common control with the applicant has not had a federal or state permit to conduct coal mining and reclamation operations suspended or revoked in the five years preceding the date of submission of the application.
- 113.120 The applicant etc. has not forfeited any performance bond or similar security
- 113.200 Not applicable
- 113.300 A listing of violations received by the applicant in connection with any coal mining and reclamation operation during the three year period preceding the application date is provided in Appendix 1-2. MSHA numbers for the operations can be found in Appendix 1-5. There have been no unabated violations or cessation orders issued to any affiliated companies during the previous three years.
- 113.400 After WEST RIDGE Resources, Inc. is notified that the application is approved, but before the permit is issued, WEST RIDGE Resources, Inc. will update, correct or indicate that no change has occurred in the information previously submitted under R645-301-113.

**R645-301-114 RIGHT OF ENTRY INFORMATION**

- 114.100 WEST RIDGE Resources, Inc., currently holds 4,899.92 acres of federal coal (2,650.67 acres leased under SL-068754 and 2249.25 acres leased under UTU 78562) in the Book Cliffs coal field (refer to Maps 1-0 and 5-3). A complete legal description of all Federal leases held by WEST RIDGE is found in Table 1-1. WEST RIDGE currently holds 2162.34 acres of state coal (801.24 acres under ML 47711, 881.10 under ML 49287, and 480 acres under ML 51744. A complete legal description of all State leases held by WEST RIDGE is found in Table 1-2. WEST RIDGE also holds a 734.44 acre lease on contiguous private (fee) coal lands located along the eastern side of the mineable reserve. A complete legal description of this fee lease is found in Table 1-3. None of these leases are the subject of any pending litigation. Proof of lease assignment for all leases can be found in Appendix 1-4.

WEST RIDGE Resources, Inc. bases its legal right to enter and conduct mining activities in the permit area pursuant to the language contained in the Federal Coal Lease, Part I Lease Rights Granted which reads as follows:

*"That the lessor, in consideration of the rents and royalties to be paid and the covenants to be observed as hereinafter set forth, does hereby grant and lease to the*

*lessee the exclusive right and privilege to mine and dispose of all the coal in, upon, or under the following described tracts of land, situated in the State of Utah... together with the right to construct all such works, buildings, plants, structures and appliances as may be necessary and convenient for the mining and preparation of the coal for market, the manufacture of coke or other products of coal, the housing and welfare of employees, and subject to the conditions herein provided, to use so much of the surface as may reasonably be required in the exercise of the rights and privileges herein granted."*

In addition to the coal leases, WEST RIDGE also holds several surface use permits as part of the operation, including:

1) SITLA Special Use Lease Agreement No. 1163. The substitute topsoil borrow area, which is also included within the permit area, is located on lands administered by the Utah School and Institutional Trust Lands Administration (SITLA). This area is located within the SE1/4 of section 16, T 14 S, R 13 E. SITLA has issued a long term special use permit to WEST RIDGE Resources, Inc. which provides full assurance that the topsoil resource in this area will be available for (and, indeed dedicated to) final reclamation of the West Ridge minesite if needed. This area is not contiguous with the main coal leasehold. (See Appendix 1-10 for details)

2) BLM Right-of-Way UTU-77120 This right-of-way authorizes the installation and operation of a pumping station used to facilitate the delivery of culinary water to the West Ridge Mine. This area is not contiguous with the main coal leasehold. (See Appendix 1-12 for details)

3) BLM Right-of-Way 87110 This right-of way authorizes the installation of three (3 ea.) catchment structures in the C Canyon drainage below the mine. These catchments are designed to provide containment of unanticipated coal-fines accumulations from the mine discharge water. These catchment structures comprises a total of 0.69 acres (Refer to Appendix 5-15 for details).

The permit area consists of the following areas:

- 1) all of federal coal leases SL-068754-U-01215 (2,650.67 acres)
- 2) all of federal coal lease UTU 78562 (2,249.25 acres),
- 3) all of state coal leases ML-47711 (801.24 acres)
- 4) all of state coal lease ML-49287 (881.10 acres)
- 5) a small portion of state coal lease ML-51744 (22.5 acres)
- 6) most of the Penta Creek fee coal lease (145.22 acres)
- 7) SITLA surface lease 1163, for topsoil borrow area (9.6 acres).
- 8) BLM right-of-way UTU-77120, for pumping station (0.23 acres)
- 9) BLM right-of-way UTU-87110, for catchment structures (0.69 acres)
- 10) Carbon County authorization, road security gate (0.79 acres). See Appendix 1-13.

The total permit area is 6761.29 acres. Refer to Map 1-1 for the permit area location. Refer to Table 1-4 for the legal description of the permit area by composite leasehold, and Table 1-5 for the legal description of the permit area in total area. Table 1-6 describes the surface ownership of the permit area.

Disturbed area within the permit area consists of the following;

1)	Minesite surface facilities	29.82 acres
2)	Pumping station	0.23 acres
3)	GVH installation	0.24 acres
4)	GVH topsoil storage	0.1 acres
5)	Catchment structures A	0.12 acres
6)	Catchment structures C	0.23 acres
7)	Catchment structures E	<u>0.23 acres</u>
	TOTAL	30.97 acres

See Table 1-7 for complete legal description of disturbed areas.

114.200 Not applicable, the fee lease mineral estate is not severed from the surface estate.

**TABLE 1-1  
FEDERAL LEASE and R.O.W. PROPERTIES**

<u>PARCEL</u>	<u>ACREAGE</u>	<u>LEGAL DESCRIPTION</u>
<u>1) FEDERAL COAL LEASE SL-068754</u> (SL-068754-U-01215)	2,650.67	T 14 S, R 13 E  Section 10: NE, E2NW, N2SE, SESE Section 11: All Section 12: S2SW, NWSW Section 13: S2, NW, S2NE, NWNE Section 14: E2, N2NW, SENW Section 15: NENE Section 24: N2, N2SE, NESW
<u>2) FEDERAL COAL LEASE UTU-78562</u>	2,249.25	T 13 S, R 13 E  Section 34: NESE, S2SE Section 35: All  T 14 S, R 13 E  Section 1: All Section 12: Lots 1 thru 4, S2N2, NESW, SE Section 13: NENE  T 14 S, R 14 E  Section 6: Lot 6, NESW Section 7: Lots 3 and 4 Section 18: Lot 1, E2NW
<u>3) PUMPING STATION</u> (BLM R.O.W. UTU-7712)	0.23	T 14 S, R 13 E  Section 21: NENE (0.23 acres thereof)

4) CATCHMENT STRUCTURE A  
(BLM R.O.W. UTU-87110)

0.23

T 14 S, R 13 E

Section 15:      SESE (0.23 acres therein)

5) CATCHMENT STRUCTURE C  
(BLM R.O.W . UTU-87110)

0.23

T 14 S, R 13 E

Section 28:      NWNW (0.23 acres therein)

6) CATCHMENT STRUCTURE E  
(BLM R.O.W . UTU-87110)

0.23

T 14 S, R 12 E

Section 25:      SESE (0.23 acres therein)

**TOTAL FEDERAL**

**4900.84 acres**



**TABLE 1-3  
FEE LEASE PROPERTIES  
(PENTA CREEK)**

<u>PARCEL</u>	<u>ACREAGE</u>	<u>LEGAL DESCRIPTION</u>
<u>1) PENTA CREEK FEE LEASE</u>	382.08	T 14 S, R 14 E
		Section 6: Lot 7, SESW
		Section 7*: Lots 1 and 2, NENW, E2SW, SWSE
		Section 18: Lots 2 and 3, NWNE
<p>*Less and excepting from the portion of the above legal subdivisions in Section 7, those lands under and around Grassy Trail Dam and Reservoir owned by East Carbon City and Sunnyside City, such lands being more accurately described in Appendix 1-15.</p>		
<u>2) PENTA CREEK LEASE EXTENSION</u>	352.36	T 14 S, R 14 E
		Section 6: Lots 2, 3, 4 and 5, SWNW, SWNE, S2SE
 <u>TOTAL FEE LEASES:</u>	 <u>734.44</u>	

**TABLE 1-4  
LEGAL DESCRIPTION OF PERMIT AREA  
(BY LEASEHOLD)**

<u>PARCEL</u>	<u>ACREAGE</u>	<u>LEGAL DESCRIPTION</u>
1) <u>FEDERAL LEASE SL-068754</u> (SL-068754-U-01215)	2,650.67	T 14 S, R 13 E
		Section 10: NE, E2NW, N2SE, SESE
		Section 11: All
		Section 12: S2SW, NWSW
		Section 13: S2, NW, S2NE, NWNE
		Section 14: E2, N2NW, SENW
		Section 15: NENE
		Section 24: N2, N2SE, NESW
2) <u>FEDERAL LEASE UTU-78562</u>	2249.25	T 13 S, R13 E
		Section 34: NESE, S2SE
		Section 35: All
		T 14 S, R 13 E
		Section 1: All
		Section 12: Lots 1 thru 4, S2N2, NESW, SE
		Section 13: NENE
		T 14 S, R 14 E
3) <u>STATE LEASE ML 47711</u>	801.24	T 14 S, R 13 E
		Section 2: Lots 1 thru 4, S2N2, S2
		T 13 S, R 13 E
		Section 36: SW

**TABLE 1-4 (continued)**

<u>4) STATE LEASE ML 49287</u>	881.10	T 14 S, R 13 E	
		Section 3:	Lots 1, 2 and 3, S2N2, S2
		Section 10:	W2NW, SW, SWSE
<u>5) STATE LEASE ML 51744</u>	22.5	T 13 S, R 13 E	
		Section 36:	SWSWNW, SWNWSWNW, SWSESWNW, S2SWSWSE, NWSWSWSE
<u>6) PENTA CREEK FEE LEASE</u>	124.92	T 14 S, R 14 E	
		Section 7*:	SESW, SWNESW
		Section 18:	Lots 2 and 3
<u>7) PENTA CREEK LEASE EXTENSION</u>	20.3	T 14 S, R 14 E	S2SWLot 4, W2Lot 5
<u>8) PUMPING STATION</u> (BLM R.O.W. UTU-7712)	0.23	T 14 S, R 13 E	
		Section 21	NESENE (0.23 acres thereof, containing pumping station)
<u>9) TOPSOIL SALVAGE AREA</u> (SITLA special use agreement #1163)	9.6	T 14 S, R 13 E	
		Section 16:	E2NESE (9.6 acres thereof, containing substitute topsoil area)
<u>10) CATCHMENT STRUCTURE A</u> (BLM R.O.W . UTU-87110)	0.23	T 14 S, R 13 E	
		Section 15:	SESW (0.23 acres thereof, containing catchment structure)
<u>11) CATCHMENT STRUCTURE C</u> (BLM R.O.W . UTU-87110)	0.23	T 14 S, R 13 E	
		Section 28:	NWNW (0.23 acres thereof, containing catchment structure)
<u>12) CATCHMENT STRUCTURE E</u> (BLM R.O.W . UTU-87110)	0.23	T 14 S, R 12 E	
		Section 25:	SESE (0.23 acres thereof, containing catchment structure)

13) SECURITY GATE  
(Carbon County authorization)

0.79

T 14 S, R 13 E

Section 15: NWSENE (0.79 acres thereof, containing security gate)

TOTAL PERMIT AREA

6761.29 acre

\*Less and excepting from the portion of the above legal subdivisions in Section 7, those lands under and around Grassy Trail Dam and Reservoir owned by East Carbon City and Sunnyside City, such lands being more accurately described in Appendix 1-15.

**TABLE 1-5  
LEGAL DESCRIPTION OF PERMIT AREA  
(TOTAL AREA)**

T13S, R13E	Section 34	NESE, S2SE
	Section 35	All
	Section 36	SW, SWSWNW, SWNWSWNW, SWSESWNW, S2SWSWSE, NWSWSWSE
T14S, R12E	Section 25	SESE (part thereof containing catchment structure E)
T14S, R13E	Section 1	All
	Section 2	All
	Section 3	Lots 1, 2 and 3, S2N2, S2
	Section 10	All
	Section 11	All
	Section 12	All
	Section 13	All
	Section 14	E2, N2NW, SENW
	Section 15	NENE, NWSENE (part thereof, containing security gate) SESW (part thereof, containing catchment structure A)
	Section 16	E2NESE (part thereof, containing substitute topsoil area)
	Section 21	NESENE (part thereof, containing pumping station)
	Section 24	N2, N2SE, NESW
	Section 28	NWNW (part thereof, containing catchment structure C)
T14S, R14E	Section 6	S2SWLot 4, W2Lot 5, Lot 6, NESW
	Section 7	Lots 3 and 4, SESW, SWNESW
	Section 18	Lots 1, 2 and 3, E2NW

**TOTAL PERMIT AREA = 6761.29 acres.**

**TABLE 1-6  
SURFACE OWNERSHIP OF PERMIT AREA**

T(S)/R(E)	Section	BLM	Penta Creek	Hinkins	Wells	Rauhala	SITLA	Total
13/13	34	-	-	-	120	-	-	120.00
13/13	35	40	-	448.91	151.09	-	-	640.00
13/13	36	-	182.25	-	-	-	-	282.25
14/12	25	0.23	-	-	-	-	-	0.23
14/13	1	283.75	328.68	-	-	39.92	-	652.35
14/13	2	-	641.24	-	-	-	-	641.24
14/13	3	-	-	-	80.66	-	520.44	601.10
14/13	10	360	-	-	-	-	280	640.00
14/13	11	650.87	-	-	-	-	-	650.87
14/13	12	-	648.96	-	-	-	-	648.96
14/13	13	640	-	-	-	-	-	640.00
14/13	14	440	-	-	-	-	-	440.00
14/13	15	41.02	-	-	-	-	-	41.02
14/13	16	-	-	-	-	-	9.6	9.60
14/13	21	0.23	-	-	-	-	-	0.23
14/13	24	440	-	-	-	-	-	440.00
14/12	28	0.23	-	-	-	-	-	0.23
14/14	6	96.71	-	-	-	-	-	96.71
14/14	7	74.08	50.00	-	-	-	-	124.08
14/14	18	117.25	74.92	-	-	-	-	192.17
			-	-	-	-	-	
		3184.37	1926.05	448.91	351.75	39.92	810.04	6761.29



7) Catchment Structure E: portion thereof of the following, containing 0.23 acres (all BLM)

T 14 S, R 12 E

Section 25: SESE

**TOTAL DISTURBED AREA = 30.97 acres**

**R645-301-115 STATUS OF UNSUITABILITY CLAIMS**

115.100 The proposed permit area is not within an area designated as unsuitable for mining. WEST RIDGE Resources, Inc. is not aware of any petitions currently in progress to designate the area as unsuitable for coal mining and reclamation activities.

The area in which the proposed facility will be located has been evaluated within area management plans. It has not been found unsuitable for mining activities under any categories of examination.

115.200 Not applicable.

115.300 WEST RIDGE Resources, Inc. will not be conducting mining operations within 100 feet of an occupied dwelling. WEST RIDGE Resources, Inc. has received permission from Carbon County to construct facilities and operate coal mining activities within 100 feet of a public road. Refer to the letter from Carbon County in Appendix 1-8.

**R645-301-116 PERMIT TERM**

116.100 The anticipated starting and termination dates of the coal mining and reclamation operation are as follows:

	<u>Begin</u>	<u>Complete</u>
Construction of Mining Pad, Mining Support Structures, and Portals	Apr. 1999	Dec. 1999
Begin Mining	Jan. 2000	
Terminate Mining		Dec. 2017*
Remove Facilities	Jan. 2018*	June 2018*
Regrade Area	July 2018*	Sept. 2018*
Revegetate Site	Oct. 2018*	Nov. 2018*

\*This assumes mine life extended through acquisition of adjacent state and federal coal reserves.

116.200 The initial permit application will be for a five year term with successive five year permit renewals.

**R645-301-117            INSURANCE, PROOF OF PUBLICATION AND FACILITIES OR  
STRUCTURES USED IN COMMON**

- 117.100        The Certificate of Liability Insurance is included as Attachment 1-1 in Appendix 1-1.
- 117.200        A copy of the newspaper advertisement of the application for a permit and proof of publication are included as Attachment 1-2 and 1-3 respectively, in Appendix 1-1. A copy of the newspaper advertisement for the Whitmore lease revision is included as Attachment 1-3 in Appendix 1-1.
- 117.300        Not applicable.

**R645-301-118            FILING FEE**

Verification of filing fee payment is included as Attachment 1-4 in Appendix 1-1.

**R645-301-123            NOTARIZED STATEMENT**

A notarized statement attesting to the accuracy of the information submitted can be referenced as Attachment 1-5 in Appendix 1-1.

**R645-301-130            REPORTING OF TECHNICAL DATA**

Technical reports prepared by consultants specifically for WEST RIDGE Resources, Inc. are typically presented in an appendix format and, in general, provide the name and address of the person or company (consultant) preparing the report, the name of the report, the date of collection and analysis of the data, and descriptions of the methodology used to collect and analyze the data. The body of the report usually will provide the date the actual field work was conducted and a description of the methodology used to collect and analyze the data. The format of each report may vary depending on the contents of the report and organization preparing it.

For laboratory analyses, such as Appendix 7-2 and 7-3, the company performing the analyses as well as the date of the analyses, is presented on the laboratory report rather than the cover page.

A list of consultants and their appended reports is contained in Appendix 1-6, Consultation and Coordination. Sources used in the preparation of the permit application are referenced in Appendix 1-3. References in all chapters are keyed to this main reference list.

Mining and exploration activities had been conducted in the currently proposed disturbed area prior to August 3, 1977. A road existed into C Canyon in 1952 when drill hole B-6 was drilled in the right fork. A road was also constructed up the left fork of C Canyon to a drill hole site during the same year. In addition to the drill holes, the coal outcrop in the left fork of C Canyon was exposed for sampling purposes. A small pad was built at the outcrop location and it was left in place as were the roads.

In 1986, another drill hole, 86-2, was drilled west of the first drill hole in the right fork. A minor amount of road work was done in conjunction with this second drill hole. Kaiser Coal Company obtained permission from the BLM to grade the existing road and make it passable for the drill rig. The drill hole site was reclaimed but the road, a public road, was left in place.

Through use of aerial photography and site evaluations, it is possible to document previous mining related disturbances in C Canyon. Refer to Map 5-1 for delineation of the disturbance prior to August 3, 1977.

The total of all the previously disturbed areas within the minesite disturbed area is estimated to be as follows:

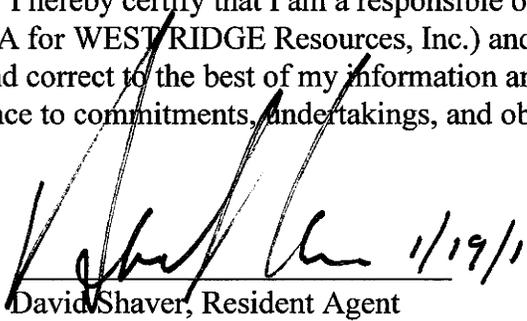
roads in right and left forks	=	1.27 acres
road culvert	=	.05 acres
water monitoring well	=	.05 acres
material storage pad	=	.05 acres
		<hr/>
		1.62 acres

WEST RIDGE Resources, Inc. is proposing to utilize the entire previously disturbed area in their current proposal and to reclaim it upon cessation of mining operations.

In the 1950's a road was constructed in the Right Fork of Bear Canyon to access an exploratory drillhole site. This road now provides access to the site of the Bear Canyon GVH installation. (Refer to Appendix 5-14 for a detailed description of the Bear Canyon GVH facility)

**ATTACHMENT 1-5  
VERIFICATION STATEMENT**

I hereby certify that I am a responsible official (Resident Agent) of the applicant (ANDALEX and IPA for WEST RIDGE Resources, Inc.) and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments, undertakings, and obligations, herein

 1/19/11 Signed - Name - Position - Date  
David Shaver, Resident Agent

Subscribed and sworn to before me this\_\_ day of\_\_\_\_, 20\_

\_\_\_\_\_  
**Notary Public**

My commission Expires: \_\_\_\_\_, 20\_\_ )

Attest: STATE OF \_\_\_\_\_ ) ss:

COUNTY OF \_\_\_\_\_ )

CHAPTER 5.....REPLACEMENT PAGES

## CHAPTER 5 R645-301-500 ENGINEERING

*Historical Note: In the spring of 2009, and again in the summer of 2010, the company constructed small catchment structures in the C Canyon drainage below the minesite. The purpose of these structures was to contain coal-fines which had accumulated in the drainage channel as a result of non-compliance discharge water from the mine, and to assist in the subsequent clean-up project. Please refer to Appendix 5-15 for a complete description of these catchment structures, including history, location, right-of-entry, as-built design, operational criteria, and reclamation information.*

### R645-301-511      GENERAL REQUIREMENTS

Chapter 5 contains information regarding the proposed coal mining operation and reclamation plans, a discussion of its potential impact to the environment and methods to achieve compliance with design criteria.

Reclamation plans and estimates are presented for postmining restoration of the area.

NOTE: The following discussion for the remainder of R645-301-511 applies specifically to the Gob Gas Vent Hole (GVH) installation proposed in Bear Canyon. In order to facilitate the review it is presented here in its entirety rather than interspersed throughout the chapter. A more detailed and complete discussion of the Bear Canyon GVH proposal can be found in Appendix 5-14. Unless specifically noted in this following discussion, nothing related to the Bear Canyon GVH proposal affects the contents of the existing approved MRP as described hereinafter.

The GVH facility will consist of three drillholes, four methane extractor units, and interconnecting piping. A detailed description of the drillhole installation, and the assembly and operation of the methane extractor units can be found in Attachment 7 of Appendix 5-14. The site pad will consist of a narrow strip (approximately 35' wide x 300' long) located adjacent to and parallel with the road. The drillholes will be located at the southern (down-canyon) end of the site pad. The extractor units will be located in a serial arrangement along the northern (up-canyon) end of the site pad. The total facility area will be about 0.24 acres, including the adjacent cutslopes.

Three angled holes will be drilled at angles ranging from 20 degrees to 45 degrees from vertical. Drilling will be conducted using tri-cone rotary and/or hammer. Drilling fluid will be primarily compressed air (600-800 psi) with water and Baroid Quick Foam and EZ Mud (see Attachment 15 for MSDS sheets for these products). Cuttings will pass up the annulus and be diverted to the reserve pit on the surface. Each hole will be spudded with a 19" diameter hole into which a 16" diameter conductor casing will be set and grouted to an approximate depth of 20'. Thereafter, a 12.25" hole will be drilled to within 200' of the Lower Sunnyside coal seam (an inclined depth of 200'-300'). A 9.625"

CHAPTER 7.....REPLACEMENT PAGES

**CHAPTER 7**  
**R645-301-700 HYDROLOGY**

*Historical Note: In the spring of 2009, and again in the summer of 2010, the company constructed small catchment structures in the C Canyon drainage below the minesite. The purpose of these structures was to contain coal-fines which had accumulated in the drainage channel as a result of non-compliance discharge water from the mine, and to assist in the subsequent clean-up project. Please refer to Appendix 5-15 for a complete description of these catchment structures, including history, location, right-of-entry, as-built design, operational criteria, and reclamation information.*

**R645-301-711            General Requirements**

This chapter includes a description of hydrology and hydrogeology of the West Ridge permit area. Specifically, this permit application includes:

- 711.100        Existing hydrologic resources according to R645-301-720.
- 711.200        Proposed operations and potential impacts to the hydrologic balance according to R645-301-730.
- 711.300        The methods and calculations utilized to achieve compliance with the hydrologic design criteria and plans according to R645-301-740.
- 711.400        Applicable hydrologic performance standards according to R645-301-750.
- 711.500        Reclamation activities according to R645-301-760.

NOTE: The following discussion for the remainder of R645-301-711 applies specifically to the Gob Gas Vent Hole (GVH) installation proposed in Bear Canyon. In order to facilitate the review it is presented here in its entirety rather than interspersed throughout the chapter. A more detailed and complete discussion of the Bear Canyon GVH proposal can be found in Appendix 5-14. Unless specifically noted in this following discussion, nothing related to the Bear Canyon GVH proposal affects the contents of the existing approved MRP as described hereinafter.

The GVH site will be located on the opposite side of the road (southeast side) from the primary canyon drainage channel. Therefore, construction and operation of the GVH facility will have no affect on the natural canyon drainage. Because

**APPENDIX 5-15....CATCHMENT STRUCTURES  
REPLACEMENT TEXT**

**NOTE TO REVIEWERS:**

**REPLACE ALL TEXT IN APPENDIX 5-15**

**DO NOT CHANGE ANY OF THE ATTACHMENTS  
EXCEPT AS NOTED**

APPENDIX 5-15

COAL-FINES CATCHMENT STRUCTURE  
C CANYON DRAINAGE

## ATTACHMENTS

Attachment 1	Location Map
Attachment 2	BLM NEPA Document (Catagorical Exclusion)
Attachment 3	BLM Right-of-Way Grant
Attachment 4	Div. Water Rights Channel Alteration Permit
Attachment 5	Catchment Structure A, As-Built Drawing
Attachment 6	Catchment Structure A, As-Constructed Photos
Attachment 7	Pre and Post-Reclamation Photos of Catchment Sites C, E and F
Attachment 8	BLM Seed Mix
Attachment 9	Addendum to Address Second Violation #10063, Issued July 21, 2010
Attachment 10	Catchment Structures C and E, As-Constructed Photos (Re-Constructed, 2010)
Attachment 11	Catchment Structures C and E, As-Constructed Drawings (Re-Constructed, 2010)
Attachment 12	MSDS Sheet for Flocculant 83400
Attachment 13	Soils Information, Catchments C and E

## COAL-FINES CATCHMENT STRUCTURE C CANYON DRAINAGE

### 1) Introduction:

West Ridge Resources became aware of excessive coal fines in the discharge water from the West Ridge Mine, and subsequent accumulations in the C Canyon drainage beyond the permit area below the minesite, in late January, 2009. The company immediately notified the various state and federal agencies involved, namely Division of Oil, Gas & Mining (DOGGM), Division of Water Quality (DWQ), Bureau of Land Management (BLM), Utah School & Institutional Trust Lands Administration (SITLA), and Utah Division of Water Rights (DWRights). On January 29, 2009, DOGM issued Citation No. 10033 for offsite sediment. After that there were a number of on-site meetings to assess the situation, followed by several planning meetings designed to come to a consensus agreement among all the agencies as to the best plan to mitigate the discharge problem from the mine and the accumulations situation in the drainage. At the request of the various regulatory agencies, the accumulation material was sampled and analyzed for RCRA metals, volatile organic compounds, semi-volatile organics, as well as other analytes requested specifically by DOGM, to make sure that the material was not toxic, hazardous, or acid-forming. These analyses were then factored into the formulation of an acceptable containment and clean-up plan. Based on these site inspections and planning meetings, and the results of the analyses, a conceptual plan was then agreed upon. This plan consisted of an initial containment phase, followed later by a clean-up phase, and finally site reclamation. This plan was then formally submitted to DOGM and DWQ on March 27, 2009, as part of the abatement requirements for the violations issued by those agencies. The plan was subsequently accepted and the cleanup operation implemented accordingly. The elements of this plan are described below.

### 2) Containment:

Containment was accomplished by constructing four catchment structures at selected locations within the C Canyon drainage below the mine. These catchments were located at various intervals over a seven-mile stretch of the drainage, and all were accessible by way of pre-existing roads. The location of these structures, at sites A, C, E and F, is shown on Attachment 1. (It was subsequently determined that the catchments at sites B and D would not have to be utilized.)

Due to the urgency of the situation, it was agreed early-on by all parties that a containment plan should be implemented as soon as possible in order to prevent the coal-fines material from migrating any further down the C Canyon drainage. Toward this end, BLM, DWRights, and SITLA all issued expedited approvals to allow immediate construction of the catchment structures, and road access thereto. BLM issued a right-of-way for catchment Site A on Feb. 9, and for the other sites and access roads on Feb. 23; DWRights issued channel alteration permits on Feb. 3; and SITLA issued right-of-entry agreements for the access roads on Feb. 17.

In preparation for issuing the necessary rights-of-way for the catchments, BLM determined under the NEPA review that the sites qualified for a Categorical Exclusion (CX), as shown in Attachment 2. The following reasons contributed to this determination:

- a) The fact that all catchment construction was to be done within the existing drainage channel and adjacent flood-plain, therefore within the zone that is subject to regular flashflood scouring events. Within this flood-plain, vegetation and topsoil resources were not well developed due to the frequent storm-related scouring within the confines of the flood-plain.
- b) The fact that each unit was of relatively small size, i.e., less than 10,000 sq. ft. (0.23 acres).
- c) The fact that each site was accessed by an existing road which required no upgrade or additional disturbance.
- d) The fact that the BLM's current management plan did not identify any environmental issues in the area, such as T&E, visual resources, recreational resources, etc.
- e) The fact that on-site cultural resource surveys determined nothing of significance.

Because of prior road authorizations, work was commenced first at Site A on Feb. 11, 2009. All construction of site A was done within the pre-existing right-of-way UTU-1256 for the adjacent road. Work then moved to Site F, the lowest unit downstream. It was felt that this site represented a reasonable line of defense against future downstream fines migration, and was therefore assigned an elevated priority for construction. This facility was completed on March 16. Construction at Site E was completed on March 23, and Site C was completed in mid-April.

All work on the catchments was done under the appropriate permits, rights-of-way, and other authorizations granted from BLM, SITLA and Division of Water Rights (stream alteration). Archeological clearances were completed where necessary. No cultural resource clearance was required for Site A because it was constructed within the right-of-way of the existing road and the area had already been cleared. Refer to Attachment 3 for BLM right-of-way grant for the catchment site. Refer to Attachment 4 for the DWRights channel alteration permit.

Each catchment structure consisted of a small stilling basin excavated out of the natural drainage channel, a small low-lying impoundment dam to contain the basin, and a series of siltation filtering devices installed within the dam. Therefore, each catchment was designed to employ elements of both settling and filtration. A bypass culvert, consisting of a 12" dia. poly-pipe, was constructed around each unit to allow the stream flow to be diverted around the stilling basin and filter boxes at times when the basins were being cleaned or the filters were being replaced. Refer to Attachment 5 for an as-built drawing of Catchment Structure A, and to Attachment 6 for as-constructed photos of the facility.

The filtration devices consist of a series of excelsior log sediment traps, contained within steel holding boxes. These boxes are designed to hold the filter logs firmly in place and prevent the streamflow from bypassing under the logs or around the ends. The holding boxes are also designed to allow the logs to be quickly and easily replaced as needed with new ones as they fill up with accumulations.

### **3) Clean-up:**

Prior to clean-up operations, the entire C Canyon drainage channel was inspected by representatives of the various state and federal regulatory agencies and company representatives. This inspection tour took place in late April, 2009, after all the catchment structures were in place. The purpose of this inspection tour was to assess the extent and magnitude of the coal-fines accumulation material as part of formulating the final clean-up plan. Most of the accumulations were observed to be between the mine and Site A. Based on the results of the inspection tour it was determined that active cleaning techniques would be more appropriate in the channel immediately below the mine in the area of highest concentrations, while passive, non-invasive natural cleaning processes would be more appropriate in the remaining channel below Site A where the accumulations were less.

In order to facilitate the clean-up effort, the company utilized a flocculant chemical additive during the active portion of clean-up. This involved metering the chemical into the stream-flow immediately above catchment unit A. The flocculant was metered into the flow at a rate determined by previous bench testing on the material. and was only utilized during active portions of the clean-up

The clean-up operations were conducted under complete oversight from the various regulatory agencies,. Active cleaning began on June 30, 2009, at the minesite and proceeded downstream from there. Cleaning involved hand crews utilizing household sweeping brooms to dislodge and break up the accumulated material. The stream-flow then carried the material down to the first catchment structure at Site A, where it was captured and later removed. On August 26, the cleanup was completed, the channel was inspected by officials from DOGM and DWQ, and the violation was officially abated.

### **4) Reclamation:**

After the clean-up was determined successful by the government agencies involved (DOGM, DWQ and BLM), and the violation was formally abated, it was determined that catchment A should be left in-place to provide an element of insurance against unforeseen upset conditions which might possibly arise in the future involving the mine water discharge. Therefore, since this catchment would continue to remain in service as part of the mine operation, it was decided that it should be included in the SMCRA Mining and Reclamation permit and within the permit area.

It was also determined at that time that catchment structures C, E and F should be reclaimed since they were no longer needed either for containment or cleanup. The company then applied to BLM for relinquishment of the right-of-way for these sites. Based on BLM authorization, reclamation of sites C, E and F were completed in October 2009 under the terms of the right-of-way UTU-87111, and BLM signed-off on the reclamation of these areas for shortly thereafter, subject to demonstration of successful re-vegetation the following summer (2010).

In reclaiming catchments C, E and F, undisturbed segments of the channel above and below the catchment sites were used as a basis of comparison in restoring the areas to an acceptable reclaimed condition. It should be noted that these sites were originally constructed totally within the natural flood-plain of the drainage channel. This was one of the reasons the BLM issued the right-of-way under Categorical Exclusion (CX), without requiring more extensive environmental analysis. These areas are subject to cyclic regular inundations from high-intensity high volume runoff events which add a natural dynamics toward augmenting successful future reclamation.

Successful reclamation of sites C, D and F can be used as a model for the future reclamation of site A. Therefore the reclamation plan for site A consists of what was done at the other three sites, and is described in more detail below. Pre-reclamation and post-reclamation photos of these sites are included in Attachment 7, since these sites serve as a model for future reclamation of Site A. It should be noted that these photos were taken shortly after reclamation in the fall of 2009. Although reseeding has been done at these sites as per BLM requirements, the vegetation has not yet had a chance to become re-established, but should be evident by the summer of 2010.

Reclamation of site A will begin at such time as the company and the regulatory agencies agree that it is no longer needed as a back-up facility to ensure protection to the drainage channel in the event of a future unforeseen discharge of coal-fines from the mine. This could be when the mine no longer discharges water, or when the mine undergoes final reclamation.

The BLM right-of-way for site A includes 0.23 acres. There is a pre-existing BLM road which runs through the site, which will remain in place after final reclamation. Existing disturbance associated with the installation of site A involves less than 0.12 acres, all located in the stream flood channel north of the existing road. Once started the reclamation will proceed in the following order:

- 1) The channel flow will be temporarily diverted through the by-pass pipe. The impounded water in the stilling basin will then be drained off, and any remaining coal-fines accumulation material will be cleaned out of the basin and hauled off-site to an approved disposal facility (such as ECDC).
- 2) The concrete barriers between the road and the basin, which presently serve as a public safety barricade, will be removed and utilized at another location within the company.

- 3) The steel containment structures for the filter logs will be removed and hauled off-site to an approved disposal site, such as a scrap-metal recycle facility.
- 4) The low-lying outlet dams (where the filter boxes were located) will be excavated out to the original stream bottom elevation and configuration. The excavated material will be used to help fill up the stilling basin.
- 5) The rest of the stilling basin will be backfilled with the material from the adjacent equipment storage area, and from the "excess fill storage area" located between the basin and the steep bank immediately to the north. This is the material that was originally dug out of the channel to construct the stilling basin. Additional material from the small material storage pad will also be used to blend back into the excavated channel area. In this manner the stream channel surface can be restored as it is filled back up, and the configuration of the adjacent channel flanks will also be restored at the same time.
- 6) As the re-contouring process continues, boulders and large rocks will be arranged within the channel and along the channel flanks in an attempt to mimic the pre-existing channel morphology as much as possible, and to blend in with the visual appearance of the natural channel above and below the reclamation site.
- 7) The boulder placement will be done not only for visual appearance, but also for erosional control. This will be done by placing boulders in and along the reclaimed channel to slow and control the water-flow velocity. Additional armoring will be placed along the outer bank of the curved section of channel in the area where the filter boxes were removed. The boulder placement will be done to match the natural appearance of the area.
- 8) After the channel has been restored, and the channel flanks have been reclaimed by removing the material storage pad, the by-pass pipe will be removed. The bypass pipe has been installed more-or-less parallel with the channel and buried under the pad and the existing road. Therefore, after the material pad have been reclaimed, the bypass pipe will be easily accessible. Once the channel water-flow has been returned to the newly-reclaimed channel, and the bypass pipe removed, the final re-contouring of the channel flanks will be done.
- 9) All reconstructed bank areas and flanks will be roughened and scarified in preparation for re-seeding. It should be noted that since the site was constructed within the channel and the immediate flood plain, there was no topsoil salvaging done during initial construction. There was little definable topsoil in the pre-existing site, which consisted primarily of flash-flood alluvial debris, and vegetation was sparse. However, after the pad material is removed, and the excess fill material from the "excess fill material area" is backfilled into the basin

area as part of the channel restoration, the original pre-existing flood-plain contour will be re-established.

- 10) The disturbed areas will then be re-seeded using a seed mix recommended by the BLM. See Attachment 8 for the proposed seed mix. This is the same seed mix that was used on the reclamation of catchment site C located nearby. Seed will be hand-broadcast and then raked in. After the areas have been re-seeded, a layer of wood straw will be scattered over the reclaimed areas. As required by BLM, re-seeding will be done in to fall of the year (after November) to increase the potential for successful germination.
- 11) Upon final reclamation, the reclaimed surface soils in the vicinity of the former catchments will be tested for pH, EC and SAR to allow for the evaluation of the salinity and the need for a revision or addition to the final seed mix to enhance germination and establishment.

Note: Catchment A is being left in place as a contingency for potential future cleanup events. In the meantime, the basin is likely to fill up with natural sediment material from normal precipitation events. This material will not be cleaned out unless and until the basin needs to be pressed back into service in the unlikely event of a future coal fines cleanup resulting from an inadvertent discharge. Also, the excelsior logs will not be maintained in the filter boxes until such time as they may be needed for future cleanup efforts.

#### **5) Bonding:**

The following bonding calculations are provided:

1) Demolition: a) Remove the steel filter boxes. There are a total of 22 of these filter boxes at the catchment site. They measure 13' long x 2' wide x 2.5' high. They are equipped with lifting lugs and can easily be removed from the site, loaded on a flatbed truck, and hauled off. They are valuable for scrap, and can easily be properly disposed of. Demolition cost is estimated to be about the same as for the powder magazines (bond item 04) at the West Ridge Mine, which have been determined at \$154 each. Therefore, the demolition cost associated with the filter boxes is estimated at  $22 \times \$154 = \$3,388$ .

2) Demolition: b) Removal of the bypass pipe. There is a total of 50' of 12" poly pipe installed at this site. This pipe is put together in 20' lengths with removable couplers. It is easy to dis-assemble, and can be re-used after being removed from the sites. Demolition and removal cost of this pipe is estimated to be about the same as for similar culverts (bond item 27) at the West Ridge Mine, which has been determined to be \$442.

3) Earthwork: Based on the estimated quantity of backfill required to reclaim comparable sites C, E and F, the estimated time required to backfill and grade the site is about 12 days or 96 working hours. Similar earthwork cost for the West Ridge Mine (i.e., "establish rubbleland surface" bond item) is estimated to be \$19,230/111 hrs = \$173/hr. Therefore, it is estimated to cost about \$173 x 96 hrs = \$16,608 for earthwork reclamation of the catchment site. This is in line with historical costs incurred in reclaiming the lower catchment sites.

4) Revegetation: The total area of the catchment site is 0.92 acres. The existing West Ridge pumphouse, which is located nearby in a similar is 0.9 acres, or 0.21 times larger, and its re-vegetation cost is presently bonded at \$4506. Therefore, the re-vegetation cost for the catchment site is estimated to be about \$4506.

The total reclamation cost for the catchment site is estimated at:

Demolition	\$3,830
Earthwork	\$16,608
Re-vegetation	\$4,506
Direct Cost	\$24,944
Indirect Cost (26.8%)	\$6,685
<u>TOTAL</u>	<u>\$31,628</u>

The present West Ridge Mine reclamation bond amount is \$1,966,000 (as of November 12, 2008), and the bond posted is \$2,117,000. In other words, there is presently \$151,000 excess bonding currently in place. Therefore, the existing bond should be adequate to include the reclamation of the catchment site.

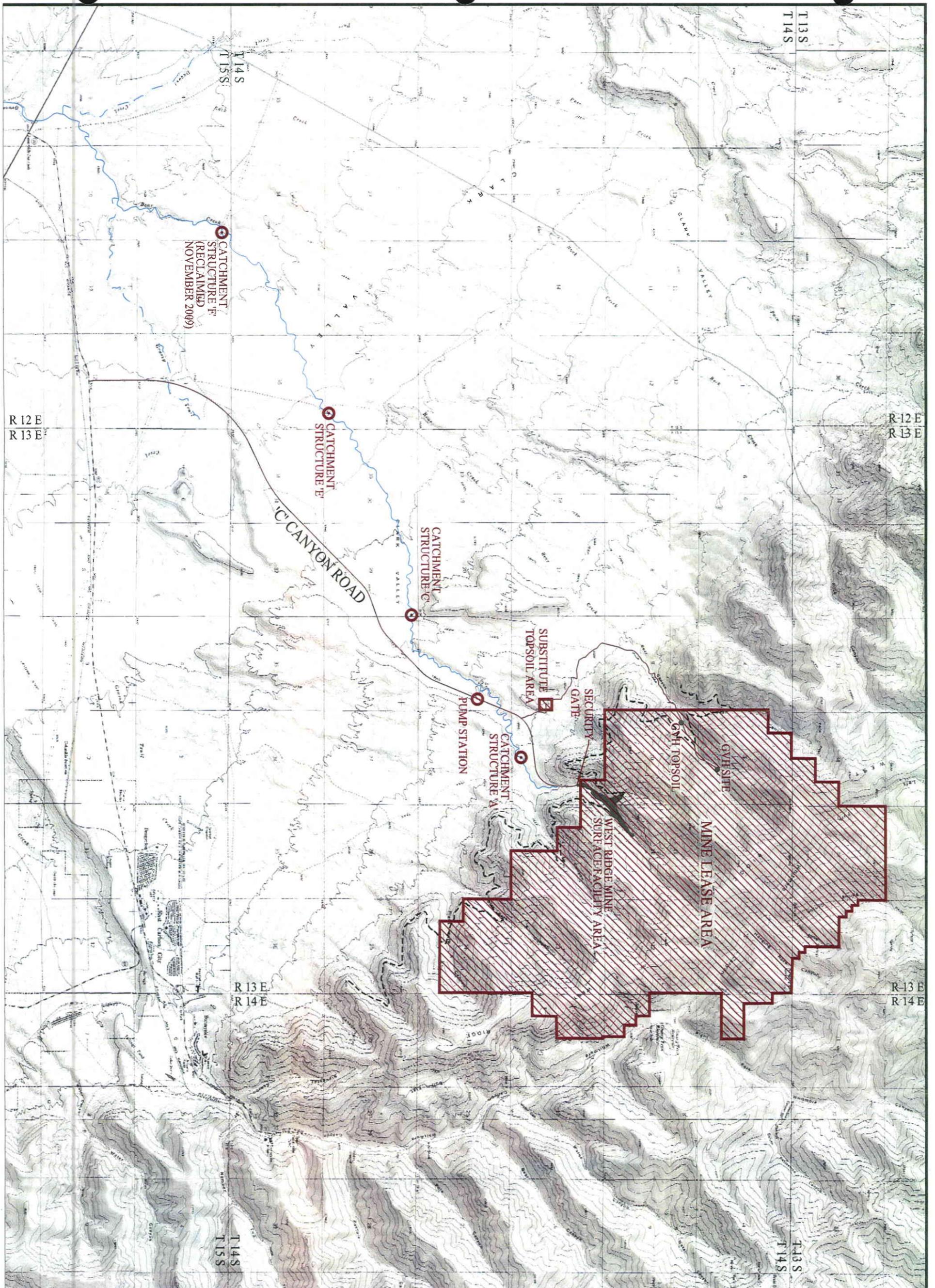
**6) Second Violation:**

On July 21, 2010, the company incurred a second violation for additional coal fines accumulations in the drainage below the mine. A complete discussion of this situation is included in Attachment 9 of this Appendix, "Addendum to Address Second Violation #10063, Issued July 21, 2010".

APPENDIX 5-15....CATCHMENT STRUCTURES  
REPLACEMENT MAP

NOTE TO REVIEWERS:

REPLACE THIS MAP IN ATTACHMENT 1



# WEST RIDGE MINE Catchment Structures Location Map

**LEGEND:**

- Lease Areas
- Surface Facility Area
- GVH Site
- Outcrop



I CERTIFY THIS MAP TO BE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



**WEST RIDGE**  
RESOURCES, INC.

SCALE: 1"=5000'

APPENDIX 5-15.....CATCHMENT STRUCTURES  
ADDITIONAL BLM RIGHT-OF-WAY GRANT

NOTE TO REVIEWERS:

ADD THIS BLM RIGHT-OF-WAY GRANT  
TO ATTACHMENT 3



## United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Green River District-Price Field Office

125 South 600 West

Price, Utah 84501

Phone: (435) 636-3600 Fax: (435) 636-3657

<http://www.blm.gov/ut/st/en/fo/price.html>



Hand Delivered

2/23/09  
Date

In Reply Refer to:

UTU-87110, UTU-87111

2800 (LLUTG02000)

David Shaver

West Ridge Resources, Inc.

PO Box 910

East Carbon, UT 84520

Re: West Ridge - Sediment Catchment Structures and Access Roads

### DECISION

:  
:  
:

Amendment Approved UTU-87110

Right-of-way Issued UTU-87111

Rental Determined

Enclosed is a copy of right-of-way (R/W) grant (serial number UTU-87111) which has been approved by the Bureau of Land Management and issued under authority of Title V of the Federal Land Policy and Management Act, as amended.

The rental due for UTU-87111 for the term of the grant is \$164.66.

UTU-87110 is hereby amended to authorize sites B, C, E and F sediment catchment structures, in accordance with the enclosed map. This amendment will be 80-feet wide by 120-feet long for site B, 50-feet wide by 200-feet long for site C, 70-feet wide by 140-feet long for site E, 60-feet wide by 165-feet long for Site F, and encumber an additional .903 acres for a right-of-way total of 1.133 acres.

The amendment is legally described as:

T. 14 S., R. 13 E., SLM, Carbon County, Utah  
Section 22: NW $\frac{1}{4}$ NW $\frac{1}{4}$ ;  
Section 28: NW $\frac{1}{4}$ NW $\frac{1}{4}$ , NE $\frac{1}{4}$ NE $\frac{1}{4}$ , SE $\frac{1}{4}$ NE $\frac{1}{4}$ .  
Section 29: NE $\frac{1}{4}$

T. 14 S., R. 12 E., SLM, Carbon County, Utah  
Section 25: SE $\frac{1}{4}$ SE $\frac{1}{4}$ .

T. 15 S., R. 12 E., SLM, Carbon County, Utah  
Section 03: NE $\frac{1}{4}$ NE $\frac{1}{4}$ .

This amendment is granted under the authority of Title V of the Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776 43 U.S.C. 1761). It is amended subject to all valid existing rights, the terms and conditions of the original grant approved and 43 CFR 2800. The rental for the amendment was figured to coincide with the original grant. The rental due through December 31, 2012, is \$29.78 (sites B, C, E and F).

Additional terms and conditions contained in the enclosed Plan of Development and the map are made a part of this amendment. Additional Terms and Conditions to the right-of-way grant are attached as well. The term of this amendment to the right-of-way grant is being established to coincide with the original grant and expires on 12/31/2012.

The cost reimbursement provisions of 43 CFR 2804.14 and 2884.12, establish a cost recovery fee schedule for processing fees. It has been determined that both your applications fall under Category II. Under this category, you are required to pay a non-refundable application processing fee in the amount of \$386.00 each application.

The cost reimbursement provisions of 43 CFR 2805.16 and 2885.23, establish a cost recovery fee schedule for monitoring fees. It has been determined that both your applications fall under Category II. Under this category, you are required to pay a non-refundable monitoring fee in the amount of \$386.00 each application.

<i>Catchment</i>		<i>Road</i>	
<u>UTU-87110 (Amendment)</u>		<u>UTU-87111</u>	
CR Processing	\$386.00	CR Processing	\$386.00
CR Monitoring	\$386.00	CR Monitoring	\$386.00
Rent for term	<u>\$ 29.78</u>	Rent for term	<u>\$164.66</u>
Total Due	\$801.78	Total Due	\$936.66

Therefore, the total payment required at this time is \$1,738.44.

The issuance of this R/W grant constitutes a final decision by the Bureau of Land Management in this matter.

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4, and the enclosed Form 1842-1. If an appeal is taken, your notice of appeal must be filed in this office (at the above address) within

30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition pursuant to regulation 43 CFR 4.21 (58 FR 4939, January 19, 1993) or 43 CFR 2801.10 for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay **must** also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

#### Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

- (1) The relative harm to the parties if the stay is granted or denied;
- (2) The likelihood of the appellant's success on the merits;
- (3) The likelihood of immediate and irreparable harm if the stay is not granted; and
- (4) Whether the public interest favors granting the stay.

Should you appeal, you must still pay the rental requested. Failure to pay on time may result in termination of the right-of-way [see 43 CFR 2805.12(f) and 2806.13(c) or 2885.17(c)].

Please note, however, that under the regulations in 43 CFR Group 2800, this decision is effective even if an appeal is filed.

You have 30 days from receipt of this letter to submit the above-mentioned rental payment. Should the rental not be received within the time allowed, the application will be rejected.

If you have any questions, please contact Connie Leschin, Realty Specialist, at the above address or call (435) 636-3610.

Sincerely,



Michael Stiewig  
Field Manager

Enclosures

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

INFORMATION ON TAKING APPEALS TO THE INTERIOR BOARD OF LAND APPEALS

DO NOT APPEAL UNLESS

1. This decision is adverse to you,  
AND
2. You believe it is incorrect

IF YOU APPEAL, THE FOLLOWING PROCEDURES MUST BE FOLLOWED

**1. NOTICE OF APPEAL.....** A person served with the decision being appealed must transmit the *Notice of Appeal* in time for it to be filed in the office where it is required to be filed within 30 days after the date of service. If a decision is published in the FEDERAL REGISTER, a person not served with the decision must transmit a *Notice of Appeal* in time for it to be filed within 30 days after the date of publication (43 CFR 4.411 and 4.413).

**2. WHERE TO FILE NOTICE OF APPEAL.....** PRICE FIELD OFFICE, BUREAU OF LAND MANAGEMENT  
125 SOUTH 600 WEST, PRICE, UTAH 84501

**WITH COPY TO SOLICITOR...** OFC OF THE REGIONAL SOLICITOR, DEPARTMENT OF THE INTERIOR  
6201 FEDERAL BLDG - 125 S STATE ST, SALT LAKE CITY, UTAH 84138-1180

**3. STATEMENT OF REASONS** Within 30 days after filing the *Notice of Appeal*, file a complete statement of the reasons why you are appealing. This must be filed with the United States Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia 22203. If you fully stated your reasons for appealing when filing the *Notice of Appeal*, no additional statement is necessary (43 CFR 4.412 and 4.413).

**WITH COPY TO SOLICITOR.....** OFC OF THE REGIONAL SOLICITOR, DEPARTMENT OF THE INTERIOR  
6201 FEDERAL BLDG - 125 S STATE ST, SALT LAKE CITY, UTAH 84138-1180

**ADVERSE PARTIES.....** Within 15 days after each document is filed, each adverse party named in the decision and the Regional Solicitor or Field Solicitor having jurisdiction over the State in which the appeal arose must be served with a copy of: (a) the *Notice of Appeal*, (b) the *Statement of Reasons*, and (c) any other documents filed (43 CFR 4.413). If the decision concerns the use and disposition of public lands, including land selections under the Alaska Native Claims Settlement Act, as amended, service will be made upon the Associate Solicitor, Division of Land and Water Resources, Office of the Solicitor, United States Department of the Interior, Washington, D.C. 20240. If the decision concerns the use and disposition of mineral resources, service will be made upon the Associate Solicitor, Division of Mineral Resources, Office of the Solicitor, United States Department of the Interior, Washington, D.C. 20240.

**PROOF OF SERVICE.....** Within 15 days after any document is served on an adverse party, file proof of that service with the United States Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia 22203. This may consist of a certified or registered mail "Return Receipt Card" signed by the adverse party (43 CFR 4.401(e)).

**REQUEST FOR STAY.....** Except where program-specific regulations place this decision in full force and effect or provide for an automatic stay, the decision becomes effective upon the expiration of the time allowed for filing an appeal unless a petition for a stay is timely filed together with a *Notice of Appeal* (43 CFR 4.21). If you wish to file a petition for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Interior Board of Land Appeals, the petition for a stay must accompany your *Notice of Appeal* (43 CFR 4.21 or 43 CFR 2801.10 or 43 CFR 2881.10). A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the *Notice of Appeal* and *Petition for a Stay* must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay. Except as other provided by law or other pertinent regulations, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards: (1) the relative harm to the parties if the stay is granted or denied, (2) the likelihood of the appellant's success on the merits, (3) the likelihood of immediate and irreparable harm if the stay is not granted, and (4) whether the public interest favors granting the stay.

Unless these procedures are followed, your appeal will be subject to dismissal (43 CFR 4.402). Be certain that all communications are identified by serial number of the case being appealed.

Your document is not filed until it is actually received in the proper office (43 CFR 4.401(a)). See 43 CFR Part 4, subpart b for general rules relating to procedure and practice involving appeals.

**EXHIBIT A**  
**Facility Plan of Development Outline**  
**(Short Term Use Permit for Catchment Structures)**

- 1) Purpose and Need for the Facility
  - a) Actual purpose and/or need for the proposal

The West Ridge Mine has recently been issued a violation by the Utah Division of Oil, Gas & Mining for discharging coal fines (mixed in with the mine discharge water) which have accumulated along the banks of the C Canyon drainage below the mine. The mine water discharge is covered under approved UPDES permit UT0025640 issued by the Utah Division of Water Quality. West Ridge Resources proposes to remedy the situation by the following means:

- 1) Make adjustments to the underground pumping system to allow greater settling time to bring the discharge water back into compliance. This new system is expected to be installed and operational by April, 2009.
- 2) As soon as possible, under Phase 1 (Containment), install a series of in-stream catchment structures to prevent additional migration of coal fines down the drainage.
- 3) Under Phase 2 (Clean-up), install a series of sediment basins to collect the coal fines as part of the channel clean-up program scheduled for spring and summer of 2009.

This application applies specifically to item 2), the Phase 1 (Containment) in-stream catchment structures. The Phase 2 (Clean-up) sediment basins referred to in item 3) will be subject to a separate permitting application.

It should be noted that the C Canyon drainage is an ephemeral stream. The mine water discharge normally is the only component of flow. The mine is presently discharging about 700 gpm continuously into the drainage

- b) What will be constructed
  - i) New construction, reconstruction, or improvement,

West Ridge proposes to construct up to six (6 ea.) catchment structures within the drainage channel at points A, B, C, D, E and F as shown on the attached map. All points are located where there is existing road access to (and across) the drainage channel. The typical catchment structure will consist of the following:

- 1) A series of sediment control devices installed across the channel immediately downstream from the road crossing. Sediment control devices could include any combination of silt fence, straw bales, excelsior logs, etc.
- 2) A series of sediment control devices installed across the channel immediately upstream from the road crossing.

3) A shallow depression excavated in the channel above the road crossing. This depression will measure approximately 4' deep x 40' long for the width of the channel at that particular spot. This depression could be constructed through a combination of excavating down into the channel bottom, and also constructing a low dam (impoundment structure) across the channel at the downstream end of the catchment. The purpose of the depression is to allow the mine water discharge to slow down and deposit some of the existing coal fines. The catchment basin's proximity to the road crossing will also allow a tanker truck to position itself in the road-channel crossing and, with the use of a slurry pump, remove excess accumulations of coal fines deposited in the catchments.

A typical catchment structure is shown on the attached drawing. The primary purpose of these catchment structures is to prevent down-stream migration of the coal fines until the clean-up effort can begin later in the spring. A secondary purpose is to provide staging areas during the clean-up process itself, for deployment of hand crews, slurry pump trucks, vacuum trucks, and/or other operational requirements.

All sites have existing road access, although these roads would need minor upgrade to make them serviceable to the catchments.

**c) Estimated needs**

NA

**d) Type of facility (communications site, compressor site, well pad, etc...)**

In-stream catchment structures (as described above) and access road upgrade.

**e) Length and width of the right-of-way and the area needed for related facilities**

The size of the typical catchment structures would be about 100' long by 20' wide, which includes both the basins and the siltation control structures located downstream from the catchments.

**f) Is this ancillary to an existing right-of-way**

Access to all sites will be from the existing C Canyon Road, which is owned and maintained by Carbon County. Site A is located within road right-of-way UTU-01756 controlled by AMCA Coal Leasing. Site F is near the Helper-Columbia powerline which is held by Rocky Mountain Power. Due to its linear nature, there may be a right-of-way associated with the road leading to (and past) point D.

**g) Is there any existing facilities (abandoned or otherwise) being used**

All points are located where there is existing road access to (and across) the drainage channel.

h) List alternative locations

There are numerous other points along the drainage that could accommodate the catchment structures, but these would all require new road construction.

i) Is the use temporary or permanent

All structures and usage is temporary. The catchment structures need to be installed as soon as possible to contain the accumulations, and to facilitate the clean-up effort. Clean-up (Phase 2) is expected to begin in the spring of 2009, and should be finished by the end of the summer OF 2009.

j) Any future development that is anticipated in the area or on the site

None, other than the Phase 2 clean-up effort mentioned above.

2) Design Factors

a) Layout of facility(containing boundaries and all development proposed)

i Cut and fill diagrams

The catch basins will be approximately 4' deep by 30' long as shown in the attached drawing.

ii Special engineering requirements

The siltation control devices will be of an acceptable type normally associated with sediment control, such as silt fences, filter fabric, straw bales, and/or excelsior logs.

b) Schematics of buildings, yards, units, etc

See attached drawing

c) Permanent width or size

There will be no permanent structures associated with this proposal, other than minor upgrade of existing roadways.

d) New construction vs. existing

New catchment structures, upgrade of existing roads into all sites.

e) Temporary areas needed

Catchment structures at sites A through F, and road access thereto.

3) Additional Components of the Right-of-way

a) Connection to an existing Right-of-way

See answer to 1)f) above

- i Existing components on or off public land
- ii Possible future components
- iii ROW case file numbers and references

b) Sand/Gravel supplies

- i Source location and contact

Any sand/gravel utilized with this proposal will be obtained from a commercial source, and will be certified weed-free.

4) Government Agencies Involved

a) Other Federal offices, i.e. FERC or USFW

BLM (land ownership), possibly EPA (DWQ oversight), possibly OSM (DOGMA oversight)

b) State Government

Division of Oil, Gas and Mining (violation administration)

Division of Water Quality

Division of Water Rights (Stream channel alteration)

c) County and other local governments

none required

5) Right-of-way location

Refer to the attached map for the proposed locations of the catchment structures

a) Legal description

Site A	T14S,R13E	Sec 15	SESW
Site A access road	T14S,R13E	Sec 15	SESW, SWSW (ROW UTU-01756)
Site B	T14S,R13E	Sec 22	NWNW
Site B access road	T14S,R13E	Sec 22	NWNW
Site C	T14S,R13E	Sec 28	NWNW
Site C access road	T14S,R13E	Sec 28 Sec 29	NWNW NENE, SENE
Site D	T14S,R13E	Sec 30	NESW

Site D access road	T14S,R13E	Sec 30 Sec 31	NESW, SESW NWNE, SWNE, NWSE
Site E	T14S,R12E	Sec 25	SESE
Site E access road	T14S,R12E	Sec 25 Sec 36***	SESE NENE, NWNE, SWNE, NWSE, SWSE
	T15S,R12E	Sec 1	NWNE, SWNE
Site F	T15S,R12E	Sec 3	NENE
Site F access road	T15S,R12E	Sec 1 Sec 2*** Sec 3	SENW, SWNW NWNW, NENW, NWNE, SWNE, SENE NENE

\*\*\* denotes SITLA land ownership

b) Acre calculation of the right-of-way by land status(federal, private, etc...)

The overall dimensions of each catchment site will vary somewhat depending on the specific of the site. However, in general, the average length of the facility would be about 70', and the average width approximately 20', for an average area of about 0.03 acres.

c) Site specific engineering surveys for critical areas (note: in addition to normal centerline survey)

- i Offsets
- ii Layout designs

d) Maps

- i USGS Topographic maps

See attached map, which is a seamless, joined version of the Sunnyside, Sunnyside Junction, and Mount Bartles USGS topo maps

- USGS Topo map name
- 1:24000 scale
- Depicts the project and any other development that could be affected or might affect the proposal in the immediate area of the project

e) Anticipated conflicts with resources

- i Public health and safety

None anticipated

- ii Air, noise, geologic hazards, mineral and energy resources, paleontological resources, soils, water, vegetation,

The C canyon drainage is a naturally ephemeral drainage and as such does not support any fish or aquatic wildlife, nor any riparian vegetation. However, the mine has been

discharging water at a steady rate for the past six years and the discharge water itself may now support some plant life along the banks in various sections. The coal fines in the mine discharge water, which has accumulated over time, is now a problem.

iii Wildlife, threatened and endangered species,

There are no known wildlife or T&E species which would be affected by this proposal

iv Cultural resources

All activity will take place along existing roads and within the natural drainage channel, so impacts to cultural resources should not be a factor.

- Cultural Survey widths are determined by the scope of projects-
  - 1) Check with the BLM Office for details.
  - 2) Certified Archaeologists need to call our office before surveying

v Visual resources, recreation activities, wilderness,

All activity will take place along existing roads and within the natural drainage channel, so impacts to visual resources, recreation or wilderness should not be a factor.

vi BLM projects,

N/A

6) Construction of the Facility

a) General overview of facility construction

Refer to discussion above, and see attached map and drawing

b) Equipment needed for construction

Grader, backhoe, small dozer, pick-up trucks, pumps

c) Site specific problems relating to surface use or special mitigation

- i Engineering drawings and specifications (if required)
- ii Special equipment
- iii Additional construction materials needed (sand, gravel, etc.) and their sources

d) Diagrams, drawings, and cross sections to help visualize the scope of the project

See attached drawing

e) Is the topography such that additional surface disturbance would occur

No

7) Describe Stabilization, Rehabilitation and Reclamation

After the Phase 1 stabilization and Phase 2 clean-up operations are completed to the satisfaction of all state and federal regulatory agencies, the catchment structures will be removed and the channel will be restored and reclaimed to its original condition. Areas disturbed along the banks will be re-seeded according to BLM requirements if needed. Siltation control devices are part of the operational plan of the catchments, and siltation control will continue to be utilized during any subsequent reclamation activities as well.

- a) Soil and ground preparation
- b) Seed mixes
- c) Additional preparation and procedures
- d) Erosion control structures
- e) Any other reclamation planned

8) Operation and Maintenance

- a) Will new or expanded access be needed for operation and maintenance

No

- b) Will all maintenance activities be confined to the right-of-way

Yes

- c) How will snow removal be handled (if needed)

Snow along the access roads will be push aside with a grader or truck plow if needed.



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
RIGHT-OF-WAY GRANT

SERIAL NUMBER UTU-87111

1. A right-of-way is hereby granted pursuant to Title V of the Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761).

2. Nature of Interest:

a. By this instrument, the holder:

West Ridge Resources, Inc.  
PO Box 910  
East Carbon, UT 84520

receives a right to operate and terminate access roads to site E and site F and construct, operate and terminate roads to site B and site C sediment catchment structures as described in the Plan of Development and Map attached, on public lands described as follows:

**Project Location:** T. 14 S., R. 13 E., SLM, Carbon County, Utah  
Section 22: NW $\frac{1}{4}$ NW $\frac{1}{4}$ ;  
Section 28: NW $\frac{1}{4}$ ;  
Section 29: NE $\frac{1}{4}$ .

T. 14 S., R. 12 E., SLM, Carbon County, Utah  
Section 25: SE $\frac{1}{4}$ SE $\frac{1}{4}$ .

T. 15 S., R. 12 E., SLM, Carbon County, Utah  
Section 03: NE $\frac{1}{4}$ NE $\frac{1}{4}$ .

- b. The right-of-way or permit area granted herein is 20 feet wide, 8,100 feet long and contains 3.72 acres, more or less.
- c. This instrument shall terminate 3 years from its effective date unless, prior thereto, it is relinquished, abandoned, terminated, or modified pursuant to the terms and conditions of this instrument or of any applicable Federal law or regulation.
- d. This instrument may be renewed. If renewed, the right-of-way or permit shall be subject to the regulations existing at the time of renewal and any other terms and conditions that the authorized officer deems necessary to protect the public interest.
- e. Notwithstanding the expiration of this instrument or any renewal thereof, early relinquishment, abandonment, or termination, the provisions of this instrument, to the extent applicable, shall continue in effect and shall be binding on the holder, its successors, or assigns, until they have fully satisfied the obligations and/or liabilities accruing herein before or on account of the expiration, or prior termination, of the grant.

3. Rental:

For and in consideration of the rights granted, the holder agrees to pay the Bureau of Land Management fair market value rental as determined by the authorized officer unless specifically exempted from such payment by regulation. Provided, however, that the rental may be adjusted by the authorized officer, whenever necessary, to reflect changes in the fair market rental value as

determined by the application of sound business management principles, and so far as practicable and feasible, in accordance with comparable commercial practices.

Terms and Conditions:

4. Standard

- a. This grant or permit is issued subject to the holder's compliance with all applicable regulations contained in Title 43 Code of Federal Regulations part 2800.
- b. Upon grant termination by the authorized officer, all improvements shall be removed from the public lands within 90 days, or otherwise disposed of as provided in paragraph (4)(d) or as directed by the authorized officer.
- c. Each grant issued for a term of 10 years or more shall, at a minimum, be reviewed by the authorized officer at the end of the 10th year and at regular intervals thereafter not to exceed 10 years. Provided, however, that a right-of-way or permit granted herein may be reviewed at any time deemed necessary by the authorized officer.
- d. The stipulations, plans, maps, or designs set forth in Exhibits A (Plan of Development) and B (Map), attached hereto, are incorporated into and made a part of this grant instrument as fully and effectively as if they were set forth herein in their entirety.
- e. The holder shall operate and maintain the facilities, improvements, and structures within this right-of-way in strict conformity with the plan of development which was approved and made part of this grant. Any relocation, additional construction, or use that is not in accord with the approved plan of development, shall not be initiated without the prior written approval of the authorized officer. A copy of the complete right-of-way grant, including all stipulations and approved plan of development, shall be made available on the right-of-way area during construction, operation, and termination to the authorized officer. Noncompliance with the above will be grounds for an immediate temporary suspension of activities if it constitutes a threat to public health and safety or the environment.
- f. The map, site plan, building design, floor plan, tower design, and electrical drawings submitted with the original proposal shall be made a part of this right-of-way grant. All construction must conform to these drawings and maps.
- g. Failure of the holder to comply with applicable law or any provision of this right-of-way grant or permit shall constitute grounds for suspension or termination thereof.

5. Applicable Laws

- a. The holder shall comply with all Federal, State, and local regulations whether or not specifically mentioned within this grant.
- b. Use of pesticides shall comply with the applicable Federal and state laws. Pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, the holder shall obtain from the authorized officer written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the authorized officer. Emergency use of pesticides shall be approved in writing by the authorized officer prior to such use.
- c. The holder of this right-of-way grant or the holder's successor in interest shall comply with Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d et seq.) and the regulations of the Secretary of the Interior issued pursuant thereto.
- d. The holder shall meet Federal, State, and local emission standards for air quality.
- e. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder(s) shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by

any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

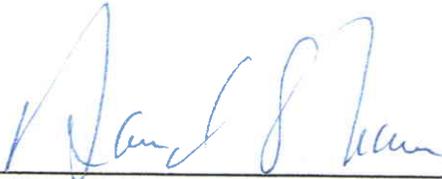
- f. The holder shall comply with the construction practices and mitigating measures established by 33 CFR 323.4, which sets forth the parameters of the "nationwide permit" required by Section 404 of the Clean Water Act. If the proposed action exceeds the parameters of the nationwide permit, the holder shall obtain an individual permit from the appropriate office of the Army Corps of Engineers and provide the authorized officer with a copy of same. Failure to comply with this requirement shall be cause for suspension or termination of this right-of-way grant.
- g. The holder of Right-of-Way No. UTU-87111 agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901 et seq.) on the right-of-way (unless the release or threatened release is wholly unrelated to the right-of-way holder's activity on the right-of-way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.
- h. If during any phase of the construction, operation, or termination any oil or other pollutant should be discharged from containers or vehicles and impact Federal lands, the control and total removal, disposal, and cleanup of such oil or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of holder to control, cleanup, or dispose of such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting therefrom, the authorized officer may take such measures as he deems necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the authorized officer shall not relieve the holder of any liability or responsibility.
- i. The holder is prohibited from discharging oil or other pollutants into or upon the navigable waters of the United States, adjoining shorelines, or the waters of the contiguous zone in violation of Section 311 of the Clean Water Act as amended, 33 U.S.C. 1321, and the regulations issued there under, or applicable laws of the State and regulations issued there under. Holder shall give immediate notice of any such discharge to the authorized officer and such other Federal and State officials as are required by law to be given such notice.

#### 6. Miscellaneous

- a. The holder shall perform all operations in a good and workmanlike manner so as to ensure protection of the environment and the health and safety of the public.
- b. The holder shall designate a representative who shall have the authority to act upon and to implement instructions from the authorized officer. The holder's representative shall be available for communication with the authorized officer within a reasonable time when construction or other surface disturbing activities are underway.
- c. All operation, maintenance, and termination practices shall be in accordance with safe and proven engineering practices.
- d. The holder shall provide for the safety of the public entering the right-of-way. This includes, but is not limited to barricades for open trenches, flagmen/women with communication systems for single-lane roads without intervisible turnouts, and attended gates for blasting operations.
- e. The holder shall permit free and unrestricted public access to and upon the right-of-way for all lawful purposes except for those specific areas designated as restricted by the authorized officer to protect the public, wildlife, livestock or facilities constructed within the right-of-way.
- f. Construction-related traffic shall be restricted to routes approved by the authorized officer. New access roads or cross-country vehicle travel will not be permitted unless prior written approval is given by the authorized officer. Authorized roads used by the holder shall be rehabilitated or maintained when construction activities are complete as approved by the authorized officer.

- g. The holder shall inform the authorized officer within 48 hours of any accidents on federal lands.
  - h. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.
  - i. The holder shall protect all survey monuments found within the right-of-way. Survey monuments include, but are not limited to, General Land Office and Bureau of Land Management Cadastral Survey Corners, reference corners, witness points, U.S. Coastal and Geodetic benchmarks and triangulation stations, military control monuments, and recognizable civil (both public and private) survey monuments. In the event of obliteration or disturbance of any of the above, the holder shall immediately report the incident, in writing, to the authorized officer and the respective installing authority if known. Where General Land Office or Bureau of Land Management right-of-way monuments or references are obliterated during operations, the holder shall secure the services of a registered land surveyor or a Bureau cadastral surveyor to restore the disturbed monuments and references using surveying procedures found in the Manual of Surveying Instructions for the Survey of the Public Lands in the United States, latest edition. The holder shall record such survey in the appropriate county and send a copy to the authorized officer. If the Bureau cadastral surveyors or other Federal surveyors are used to restore the disturbed survey monument, the holder shall be responsible for the survey cost.
  - j. The holder shall be responsible for weed control on disturbed areas within the limits of the right-of-way. The holder is responsible for consultation with the authorized officer and/or local authorities for acceptable weed control methods (within limits imposed in the grant stipulations).
  - k. The holder shall restore drainages, to the greatest extent possible, to the original bank configuration, stream bottom width, and channel gradient. Loose soil, fill, and culverts shall be removed from drainage channels as directed by the authorized officer.
7. Construction
- a. The holder shall conduct all activities associated with the operation and termination of the right-of-way within the authorized limits of the right-of-way.
  - b. The holder shall furnish and apply water or other means satisfactory to the authorized officer for dust control.
  - c. No routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of four inches deep, the soil shall be deemed too wet to adequately support construction equipment.
8. Maintenance
- a. A litter policing program shall be implemented by the holder, if requested and approved of in writing by the authorized officer, which covers all roads and sites associated with the right-of-way.
9. Reclamation, Rehabilitation and Termination
- a. The holder shall seed all disturbed areas that have been or are being reclaimed with a seed mixture(s) submitted to and approved by the authorized officer.
  - b. Prior to termination of the right-of-way, the holder shall contact the authorized officer to arrange a pre-termination conference. This conference will be held to review the termination provisions of the grant.

IN WITNESS WHEREOF, The undersigned agrees to the terms and conditions of this right-of-way grant or permit.



(Signature of Holder)

Project Eng

(Title)

2/23/09

(Date)



(Signature of BLM Authorized Officer)

Field Manager, Price Field Office

(Title)

2/23/09

(Effective Date of Grant)

APPENDIX 5-15.....CATCHMENT STRUCTURES  
ADDITIONAL AUTHORIZATION

NOTE TO REVIEWERS:

ADD THIS EMERGENCY AUTHORIZATION  
FROM DIV WATER RIGHTS  
TO ATTACHMENT 4



JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Water Rights

JERRY D. OLDS  
State Engineer/Division Director

July 27, 2010

Dave Shaver  
Project Engineer  
West Ridge Resources, Inc.  
PO Box 910  
East Carbon, UT 84520

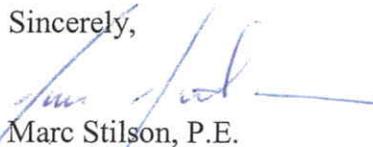
RE: EMERGENCY AUTHORIZATION: C CANYON DRAINAGE CHANNEL.

The information you submitted yesterday to our office in regards to the coal fines discharge into the C Canyon drainage has been reviewed. Due to the urgent need to construct catchment structures in the stream channel to prevent the further migration of coal fines down the drainage and the possible hazardous nature of the material, you are hereby **GRANTED** emergency authorization to begin work on this project.

The request for reauthorization of the 2009 stream alteration permit will continue to be processed and any concerns submitted by other federal and state agencies with regards to the work will need to be addressed forthwith.

If you have any questions, please contact Marc Stilson at (435) 613-3750 or Daren Rasmussen at (801) 538-7377.

Sincerely,



Marc Stilson, P.E.

Southeastern Regional Engineer



APPENDIX 5-15.....CATCHMENT STRUCTURES  
ADDITIONAL ATTACHMENTS

NOTE TO REVIEWERS:

ADD THE FOLLOWING ATTACHMENTS TO THE  
BACK OF APPENDIX 5-15

Attachment 9...Addendum to Address Second Violation,  
10063

Attachment 10...Catchments C and E, As-constructed  
Photos

Attachment 11...Catchments C and E, As-constructed  
Drawings

Attachment 12...MSDS Sheet for Flocculant, 83400

Attachment 13...Soils Information

ATTACHMENT 9

ADDENDUM TO ADDRESS SECOND VIOLATION  
VIOLATION 10063  
ISSUED JULY 21, 2010

ATTACHMENT 9

ADDENDUM TO ADDRESS SECOND  
VIOLATION

VIOLATION #10063  
ISSUED JULY 21, 2010

**ATTACHMENT 9: ADDENDUM TO ADDRESS SECOND VIOLATION  
VIOLATION 10063, ISSUED JULY 21, 2010**

*Historical Note: The preceding discussion was approved by the Division and was incorporated into the Mining and Reclamation Plan on May, 2010. Shortly thereafter, on July, 2010, the company incurred a second violation for coal fines accumulations from the mine. The following narrative has been submitted in response to this most recent violation. It is presented in the same format as the preceding discussion.*

**1a) Introduction:**

On July 21, 2010, the company received a second violation for additional accumulations of coal fines in the C Canyon drainage below the West Ridge Mine. The accumulations were the result of non-compliance discharge which occurred after the successful channel cleanup of the previous summer (2009). Representatives from the Division and DWQ inspected the drainage and determined that the coal fines must be cleaned up from the mine down to and including Catchment E. This is a distance of about five miles measured straight-line, and perhaps seven miles total, considering channel meander and sinuosity.

As part of the violation abatement requirements, the Division determined that Catchments C and E would have to be permitted as part of the MRP. It also determined that these catchments could be re-constructed and utilized as part of the required cleanup process prior to having the approval of the MRP amendment. Reconstruction work on the catchments was completed in August, 2010, and cleanup began in September, 2010.

**2a) Containment:**

After the channel was cleaned in the summer of 2009 and the initial violation was formally abated, the company reclaimed Catchments C and E in November, 2009. The BLM was in the final stages of approving the reclamation when the second violation occurred.

Fortunately, the BLM right-of-way for Catchment C and E is still in place (refer to Attachment 3). Also, Division of Water Rights has approved an Emergency Authorization for the catchments (identical to the one issued previously, refer to Attachment 4) and is proceeding with the extension of the previously-issued stream alteration permit for catchments C and E.

The company reconstructed catchments C and E similar to what was done in 2009 (as described above), and to utilize these re-constructed catchments, as well as existing Catchment A, in the clean-up response to the second violation #10063. As-constructed photos of the catchments during the 2009 clean-up are included as part of this attachment. Photos of the re-constructed catchments are also shown in this attachment. As-built drawings and cross-sections of these catchment structures are included in Attachment 10.

### **3a) Clean-up:**

Based on previous successful clean-up efforts in this drainage during the preceding summer of 2009, the company is utilizing an identical cleaning procedure for the 2010 cleanup. Much of this cleanup has already been accomplished. In summary, this procedure consists of the following:

a) Prior to cleaning, catchment structures will be in place at downstream locations A, C and E, as shown on attachment 1. These structures will all include settling basins and filter containment boxes, as previously described.

b) During cleaning operations, the downstream receiving catchment will be equipped with a flocculant chemical injection system identical to the one used in the previous cleanup. This would include a flocculant storage tote, a metering pump, a make-up water pump, and an application apparatus to inject the floc into the stream. This system would be installed immediately above the inlet of the catchment ponds. The flocculant to be used is Nalco 83400, and the MSDS sheet for this chemical is provided in Attachment 12.

c) Clean-up will be performed by 4-5 man crews using ordinary bristle sweep brooms. Crewmen will sweep the accumulations from the sides of the channel using a swirling sweeping motion. The dislodged accumulations will then be carried downstream by the stream-flow. Crewmen will be instructed to stay within the channel during cleaning operations, rather than sweeping from the banks, in order to minimize damage the riparian plant-life along the channel banks. The brooming method has been previously approved by the regulatory agencies because it is effective in removing the accumulations but is gentle enough not to damage the natural channel armoring.

d) When the dislodged accumulations suspended in the streamflow reaches the downstream catchment structure, the chemical flocculant will be injected into the water. Experience has shown this method to be very effective in quickly dropping out the suspended coal fines. Filter logs will also be maintained at the catchment outlets to provide a secondary means of capturing the coal fines.

e) After the catchment basins have filled up with fines, the stream cleaning operations will be temporarily halted. The channel flow will be diverted around the catchment basin, and the solids allowed to dry out for several days. Experience has demonstrated that within a couple of days the coal fines can then be easily handled. A back-hoe will scoop the fines out of the basin and load it into a dump truck. The material will then be hauled to the West Ridge mine where it will be disposed of at the main coal pile. It will later be blended back into the run-of-mine coal as part of the commercial product.

f) During cleanup operations, crews will exercise caution to prevent damage to riparian vegetation growing along the banks and edges of the channel, based on the protocol established by the regulatory agencies in the previous cleanup efforts. The same contractor involved with the

2009 cleanup, using the same foreman and crew, and familiar with the protocol, will perform the cleanup.

**4a) Reclamation:**

The catchments will remain as permitted structures until the Division determines they are no longer required. The catchments have been constructed and are being utilized during the violation 10063 cleanup operations during August, September and October, 2010. The C Canyon drainage in the area of catchments C and E is subject to violent flash-flooding, especially during late-summer thunderstorm conditions. Therefore, any structures left in the channel for any length of time would be quickly destroyed. Therefore, there is a high probability that the catchments will be reduced to a state of non-functionality at some time after the 2010 cleanup is completed. However, they can easily be re-stored to functionality in a matter of three or four days in the future if the need arises. Under the current mine-plan (July, 2010) the down-dip longwall panels area within the mine are scheduled to be completed by May, 2012. After that time the mine water can be allowed to impound in the lower area of the mine and there will no longer be any need to pump any water out to the surface. In other words, in less than two years there may no longer be any future need for the cleanup catchments, and final reclamation can then be performed. Therefore, the interim "non-functional" period would be relatively short. During this interim period the catchments will not be maintained against natural flood events and normal siltation, since their only function is to serve as part of another possible active cleanup process in the future. However, during this interim period, the disturbed areas of the sites will be roughened and re-vegetated with the approved seed mix in order to provide interim erosional control. If the catchments are needed in the future they will then be returned to functionality according to this plan.

Final reclamation of the sites will be conducted after the Division determines they are no longer required. Reclamation will proceed as described in the narrative above, Item 4. It should be noted that, after the initial cleanup, catchments C and E were fully reclaimed in the fall of 2009, including re-seeding in November, 2009. In July, 2010, officials from BLM inspected the sites and were satisfied that all components of reclamation had been adequately met according to the terms of the right-of-way grant, including channel restoration, stabilization, and re-vegetation. Based on the success of the previous reclamation of these sites, the company would propose to reclaim the sites in a similar manner, under the terms outlined above, upon final reclamation. The same seed mix would be used (see Attachment 8). Photos of the sites during operation and after reclamation are included as part of this attachment. It should be noted that during final reclamation of these sites, large boulders will be placed in the bottom of basin areas during backfilling operations. This will be done to insure long-term stability of the reclaimed channel against potential erosional effects of normal flash-flooding events in the future.

Since the time of the first construction/reclamation additional information has been obtained regarding the soils of the sites. A sampling program was agreed upon in consultation with Division specialist. Composite samples (taken from six individual locations, and then mixed together) were taken from the bottom of the excavated settling basins to approximate the soil characteristic of the disturbed areas. Also, soil samples were taken in undisturbed areas at the

perimeter of the sites to better approximate the undisturbed soil characteristics at the site. The undisturbed samples were taken from 0"-7" depth, and from 7"-24" depth. Locations of the sample test pits and lab analysis results are presented in Attachment 13. This soils information will help provide additional guidance for future reclamation efforts if needed.

Upon final reclamation, the reclaimed surface soils in the vicinity of the former catchments will be tested for pH, EC and SAR to allow for the evaluation of the salinity and the need for a revision or addition to the final seed mix to enhance germination and establishment.

**5a) Bonding:**

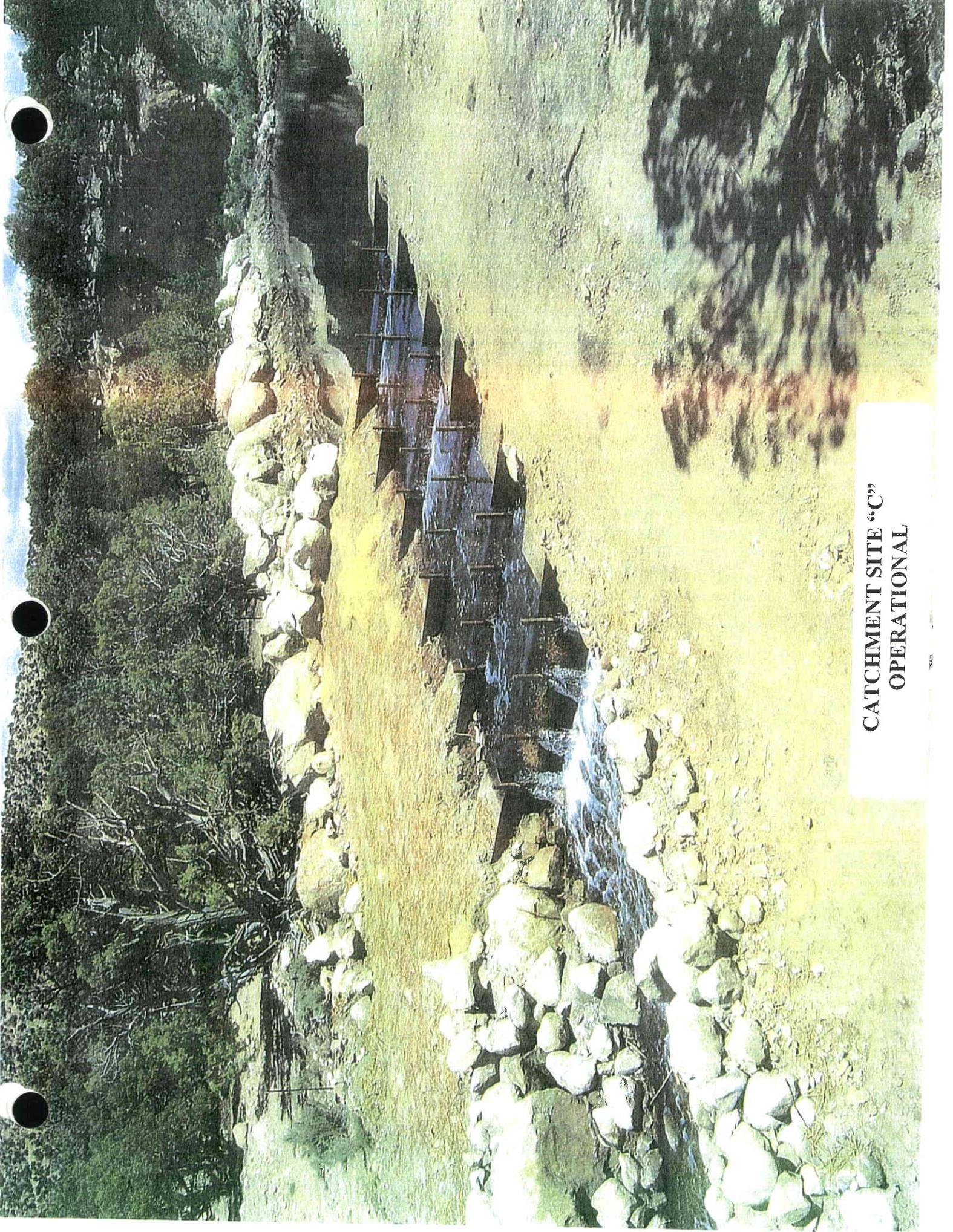
As detailed in the above narrative, the bonding costs for the catchments is determined to be \$31,628 for each site, which includes demolition, earthwork, re-vegetation and indirect costs. This bonding cost has been approved previously by the Division. Therefore, the additional bonding cost associated with reclaiming Catchments C and E would be \$63,256. The present West Ridge Mine reclamation cost is \$1,998,000 (as of July 27, 2010) and the bond is posted in the amount of \$2,184,000. In other words, there is presently \$218,000 excess bonding currently in place. Therefore the existing bond should be adequate to include the reclamation of Catchment sites C and E.

**6a) Mapping Designations:**

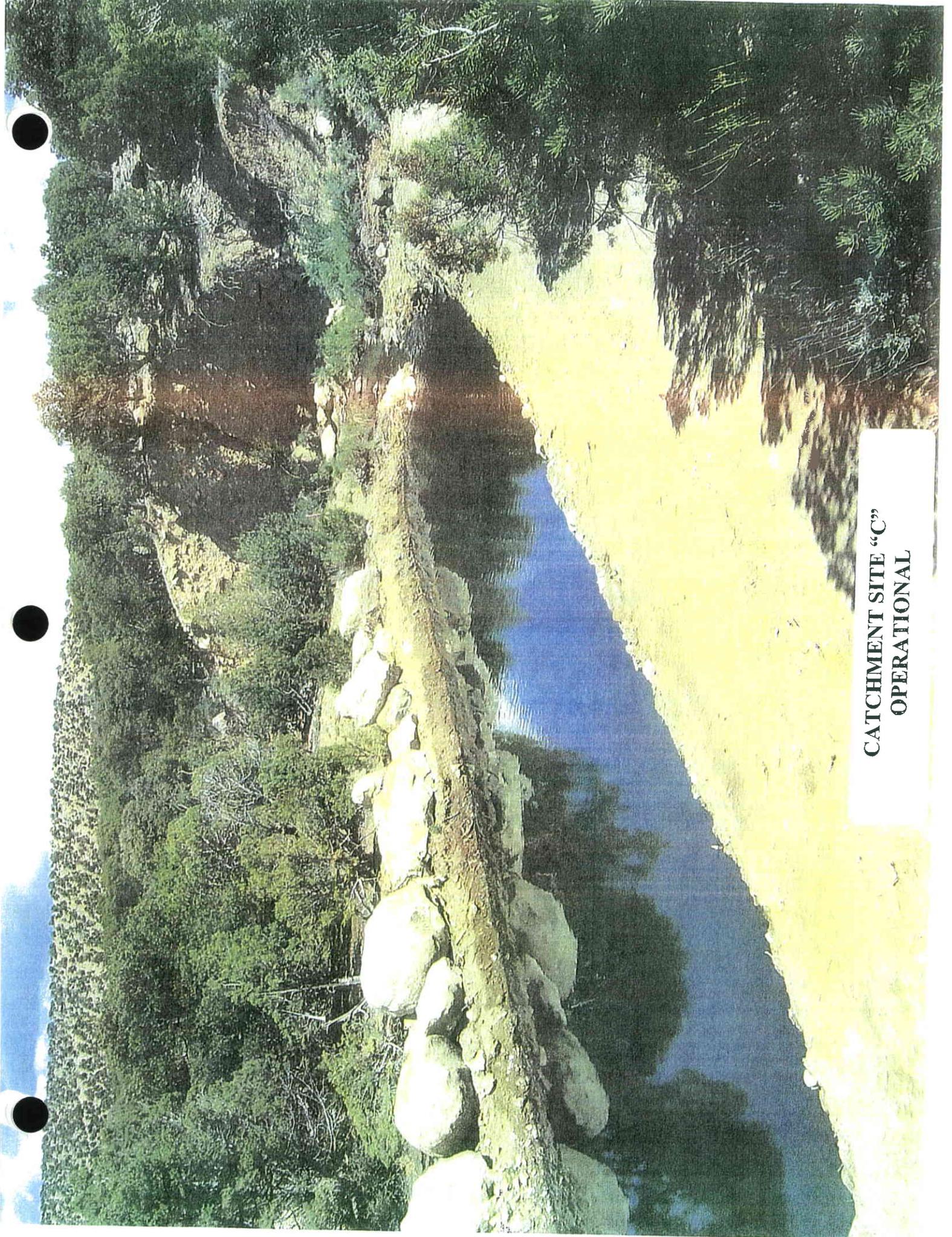
The location of Catchment Structures C and E are shown on Map 1-0/1-1. These catchments are located beyond the general area of resource mapping used for the permitting of the primary mining operation. Therefore, pertinent resource mapping information for the catchments is given on the As-Constructed drawings appearing in Attachment 11, and provided herein as well. This information corresponds to the mapping designations for the primary permitting area, as follows:

<u>Map Number</u>	<u>Resource</u>	<u>Designation</u>
Map 2-1	Soils	Catchment C: Soil Unit 36 Catchment E: Soil Unit 49
Map 3-4B	Wildlife-Deer	Catchment C: Winter Range Catchment E: Unclassified
Map 3-4C	Wildlife-Elk	Catchment C: Winter Range Catchment E: Winter Range
Map 3-4D	Wildlife-Antelope	Catchment C: Unclassified Catchment E: Year-long Range
Map 3-1	General Vegetation	Catchment C: Pinyon/Juniper Catchment E: Sagebrush

Map 4-1	Land Use	Catchment C: Mud Springs Allotment Catchment E: Mud Springs Allotment
Map 5-2	Surface Ownership	Catchment C: U.S.A. (BLM) Catchment E: U.S.A. (BLM)
Map 5-3	Sub-Surface Ownership	Catchment C: U.S.A. (BLM) Catchment E: U.S.A. (BLM)
Map 6-1	Regional Geology	Catchment C: Qsw-Slope wash deposits-Quaternary Catchment E: Qsw-Slope wash deposits-Quaternary
Map 7-3	Water Rights	Catchment C: None Catchment E: None
Map 7-5	Seep and Spring Survey	Catchment C: None Catchment E: None

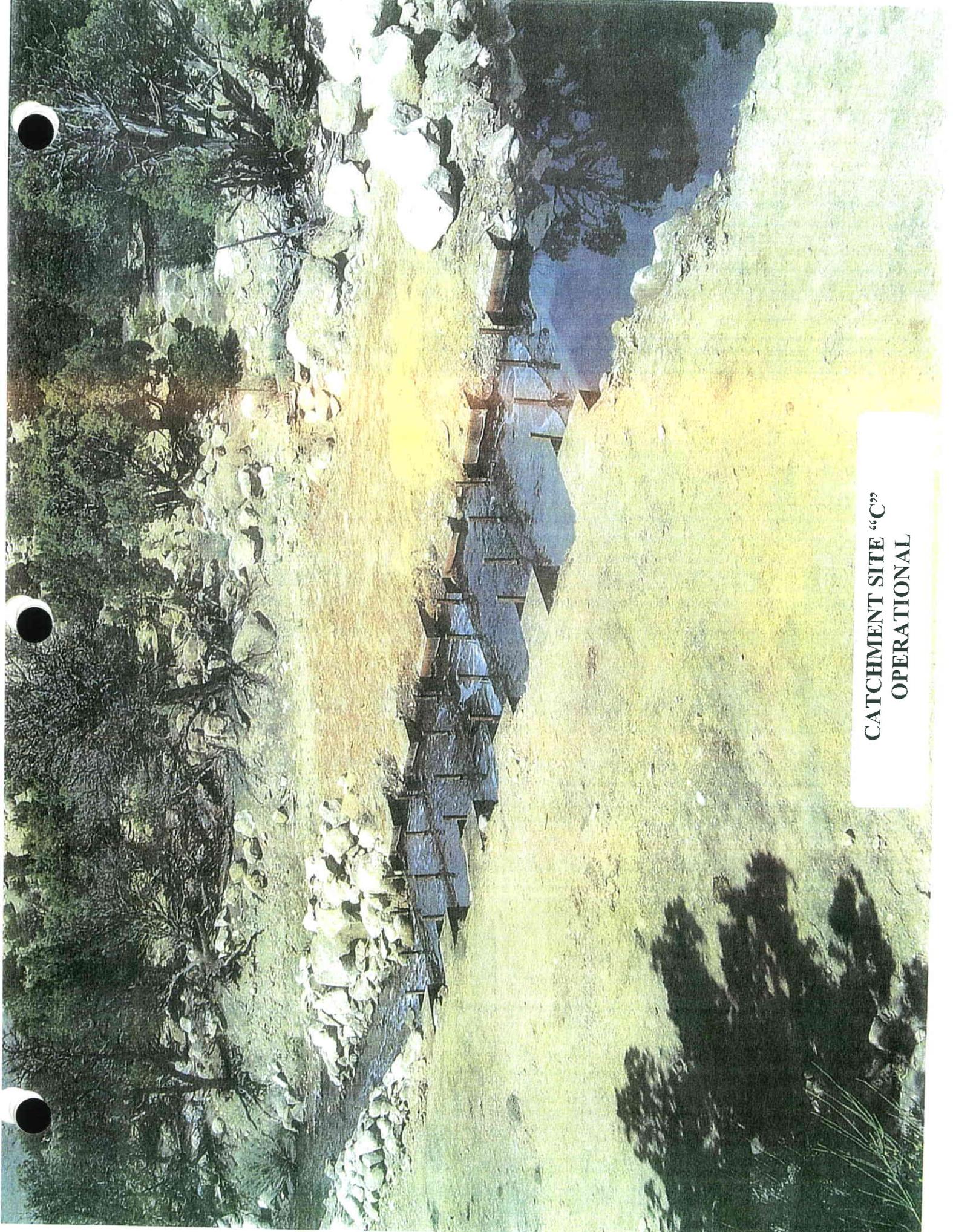


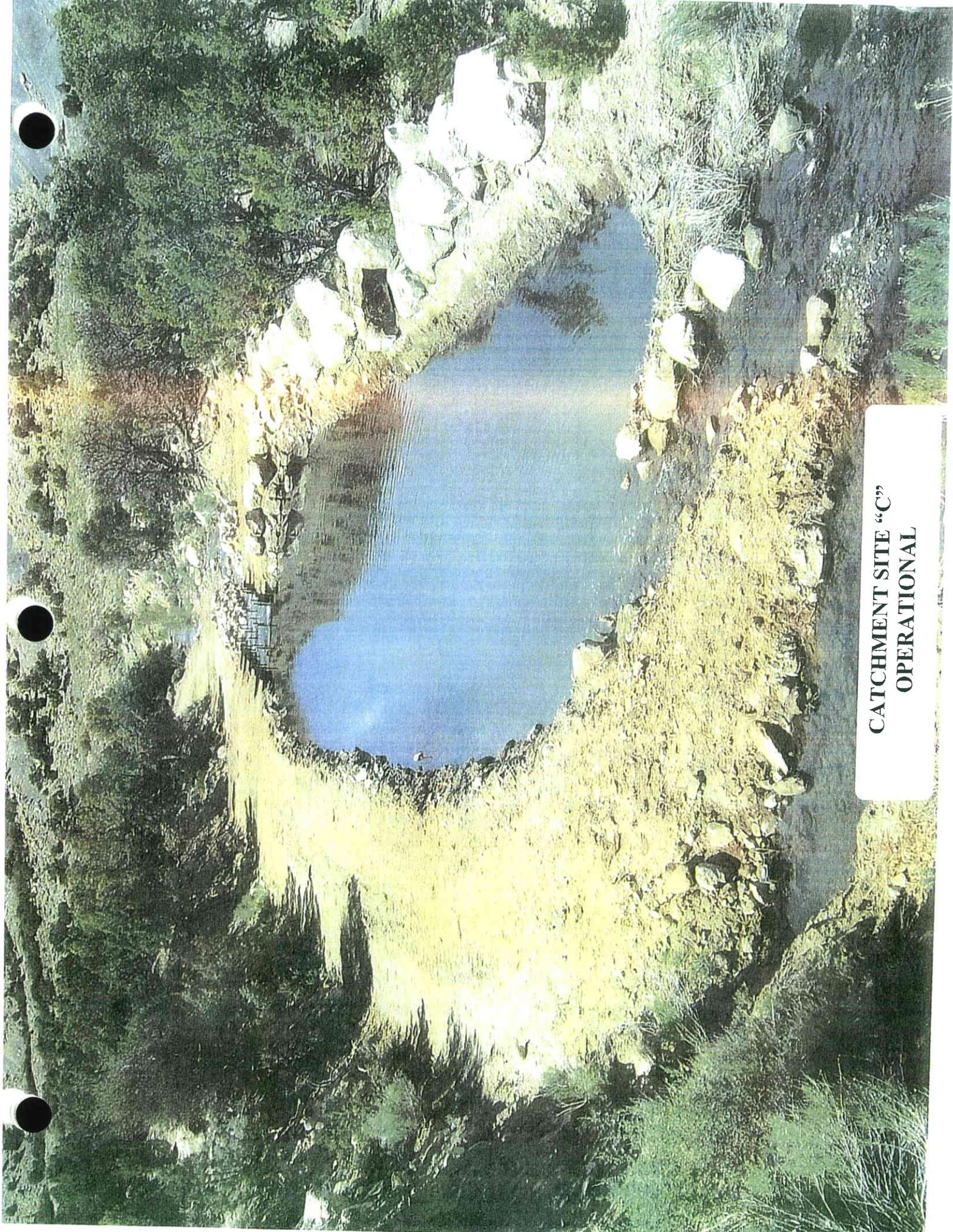
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OPERATIONAL**



**CATCHMENT SITE "C"  
OPERATIONAL**

**CATCHMENT SITE "C"  
OPERATIONAL**

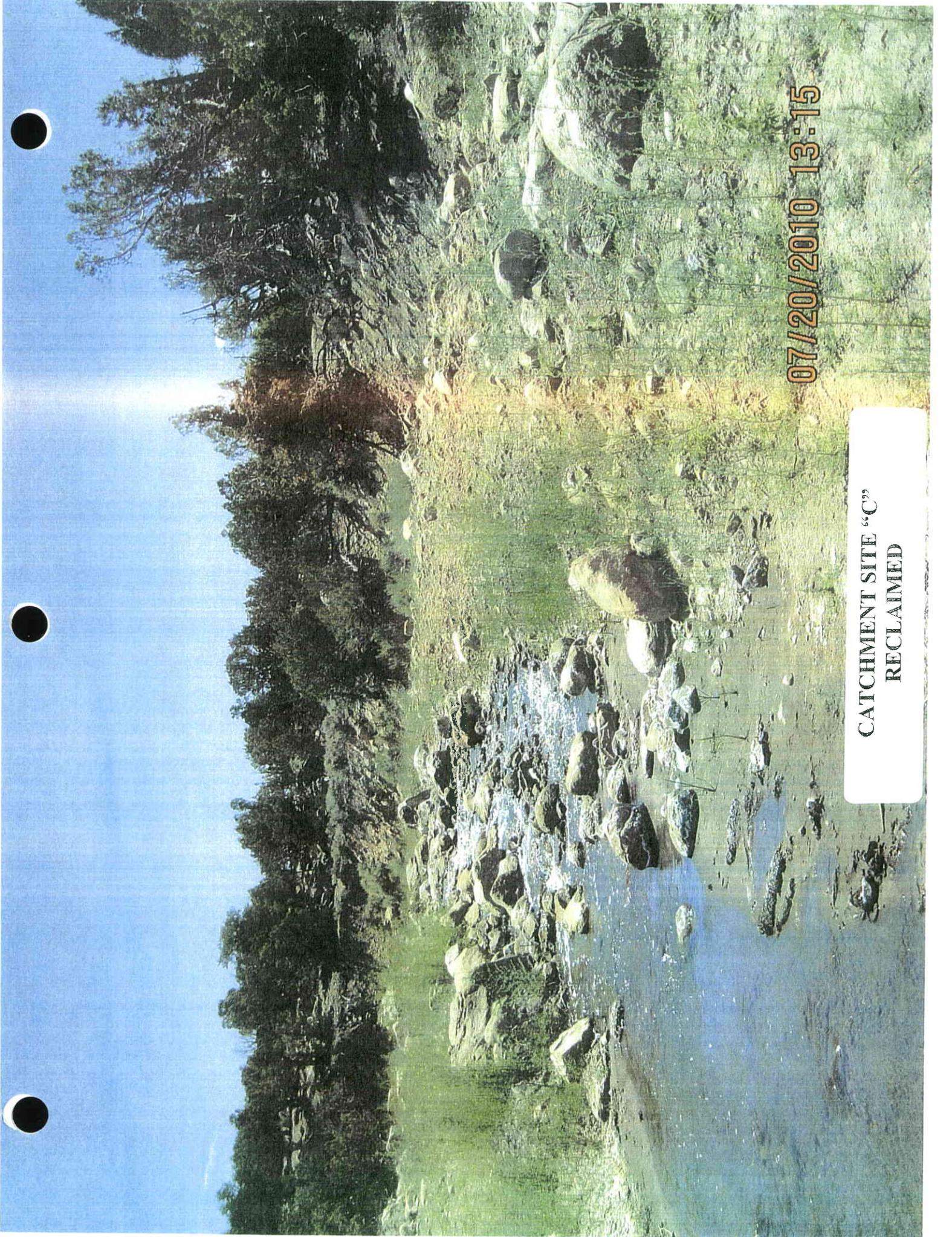




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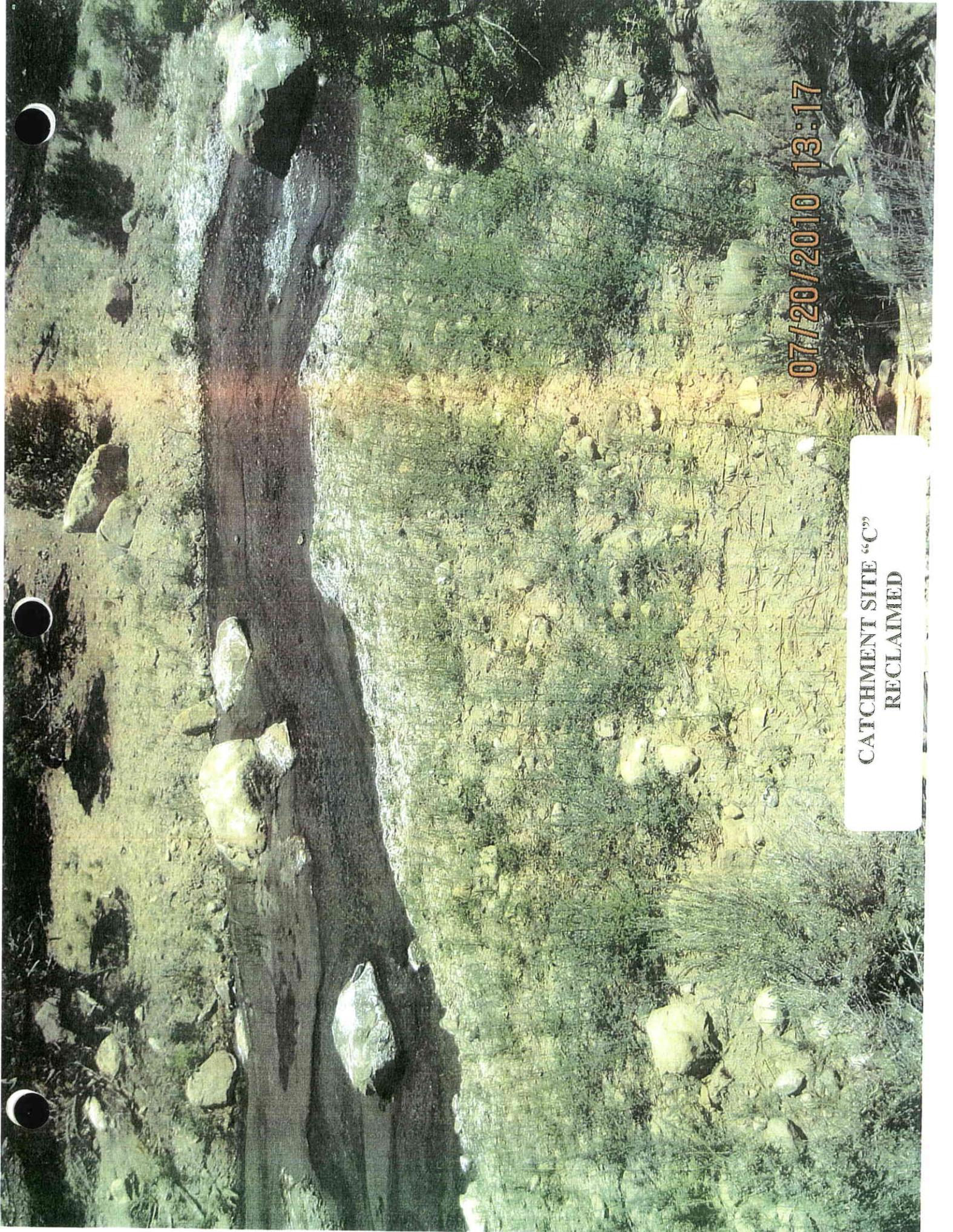
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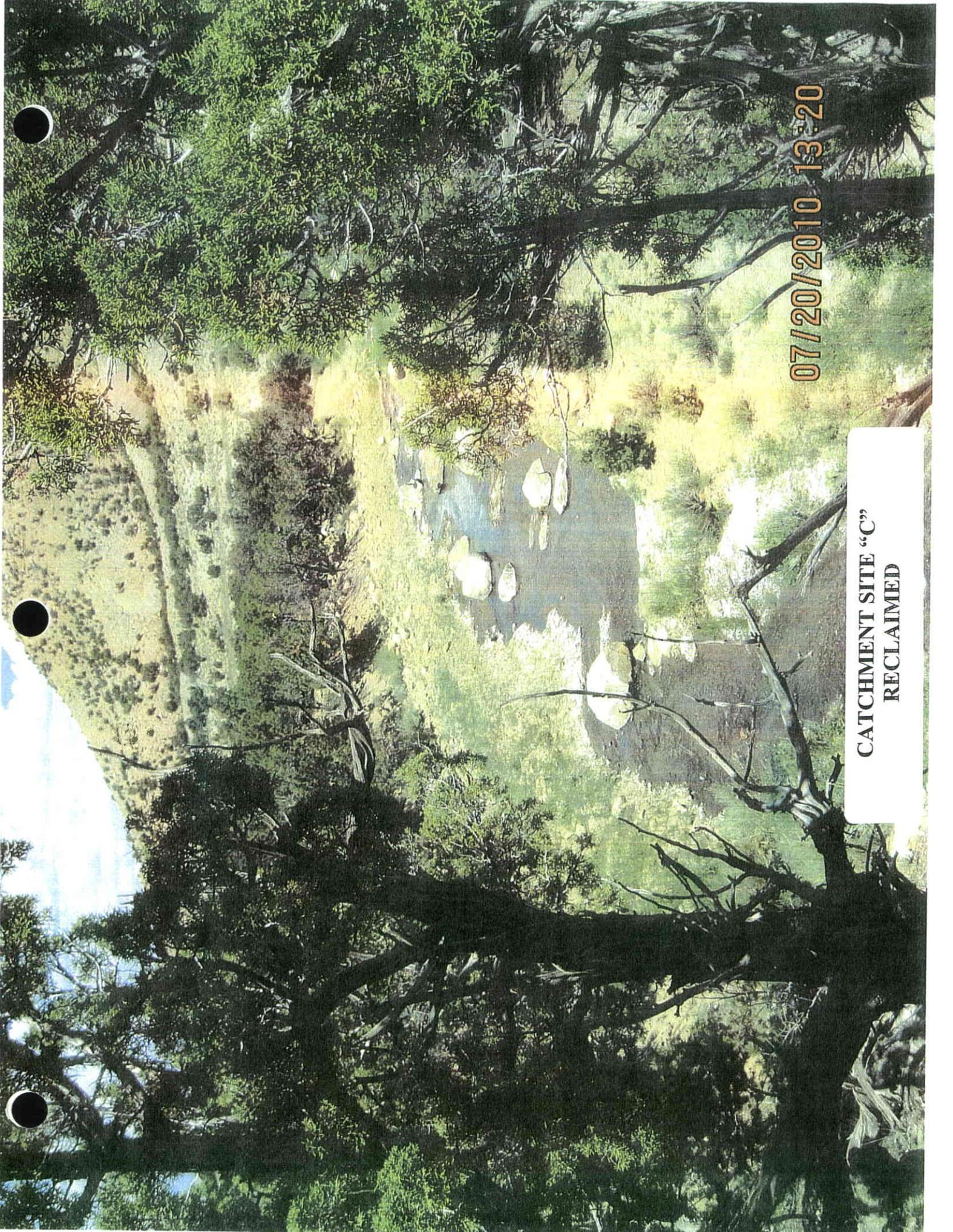
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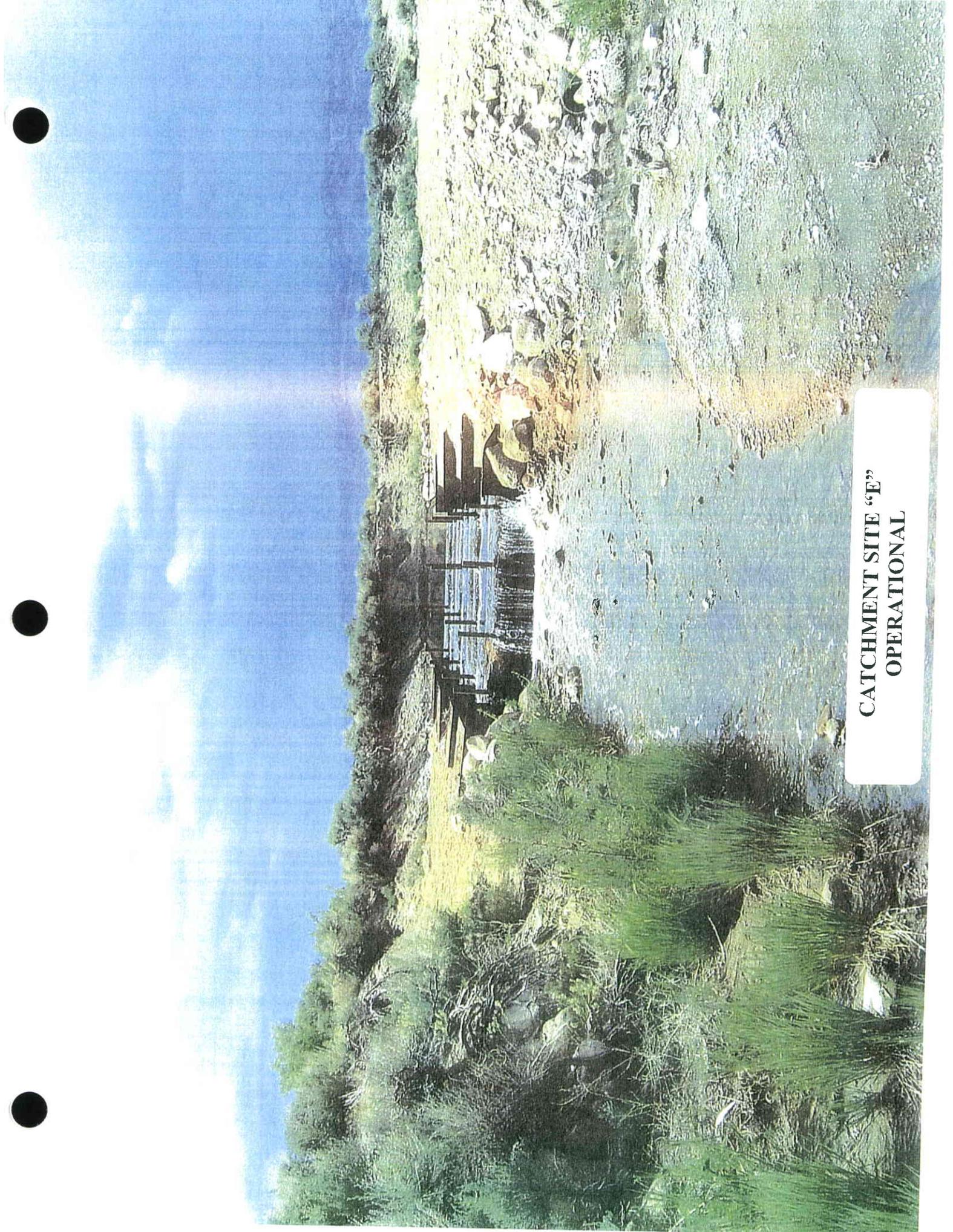
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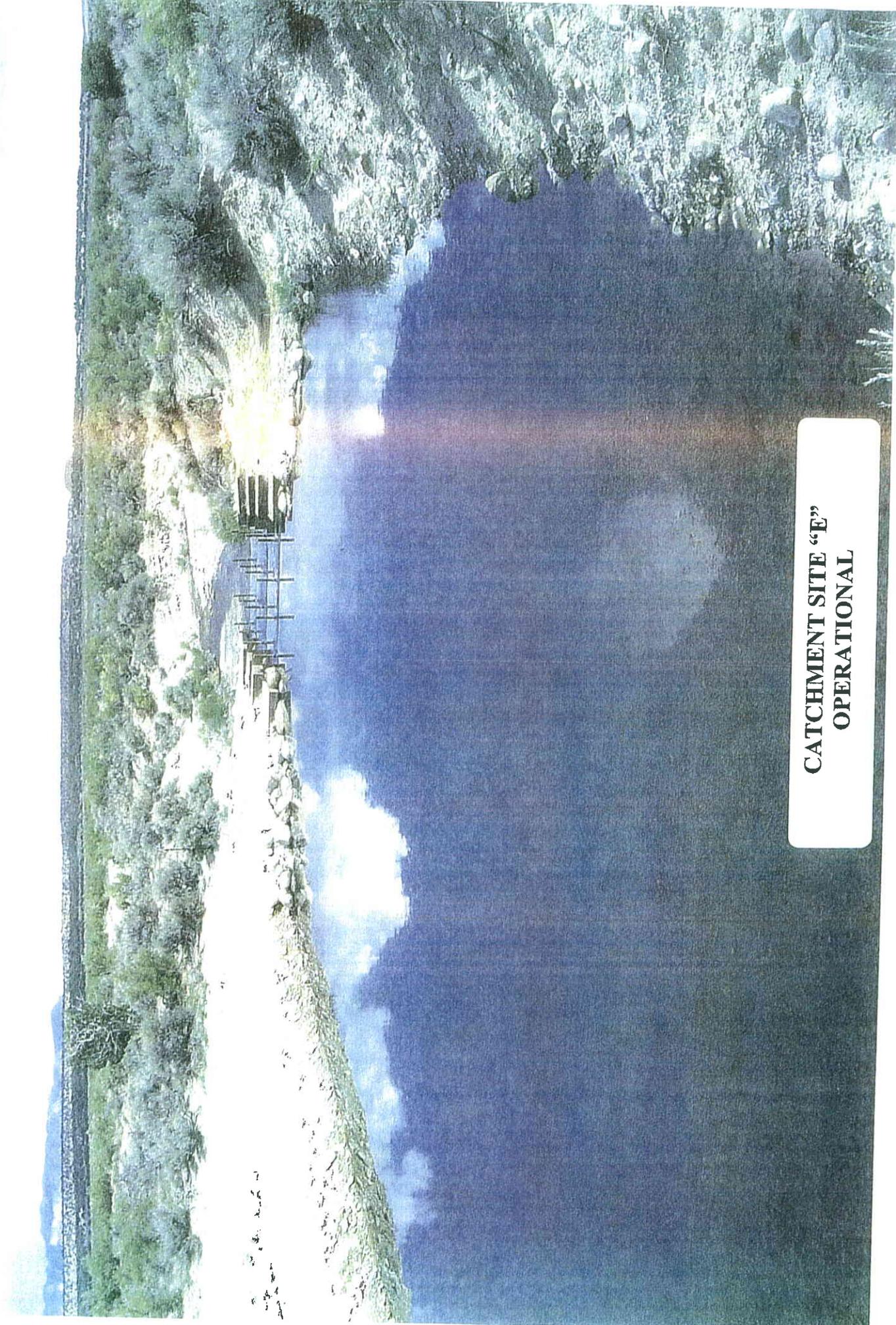


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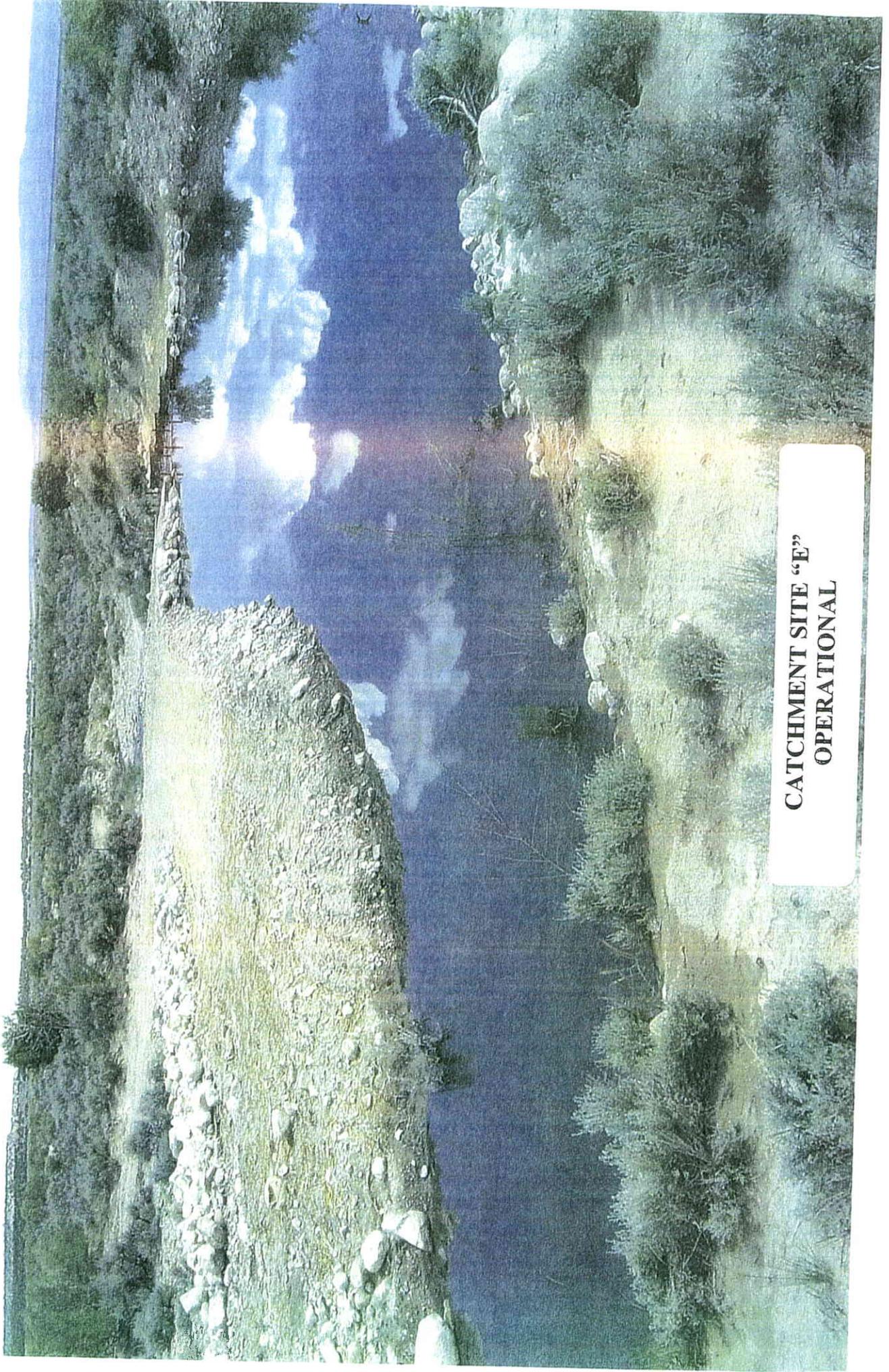
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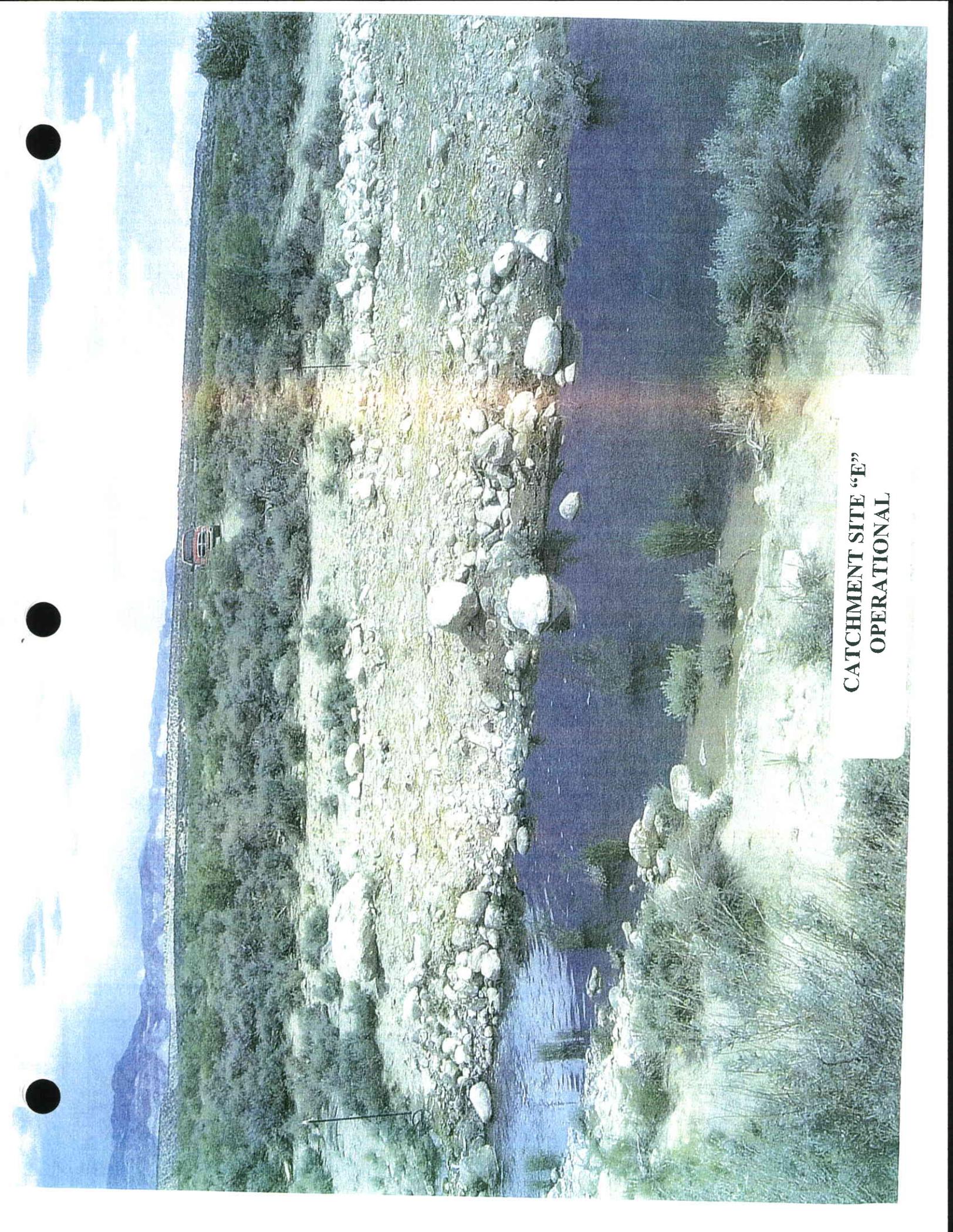
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**CATCHMENT SITE "E"  
OPERATIONAL**



**CATCHMENT SITE "E"  
OPERATIONAL**

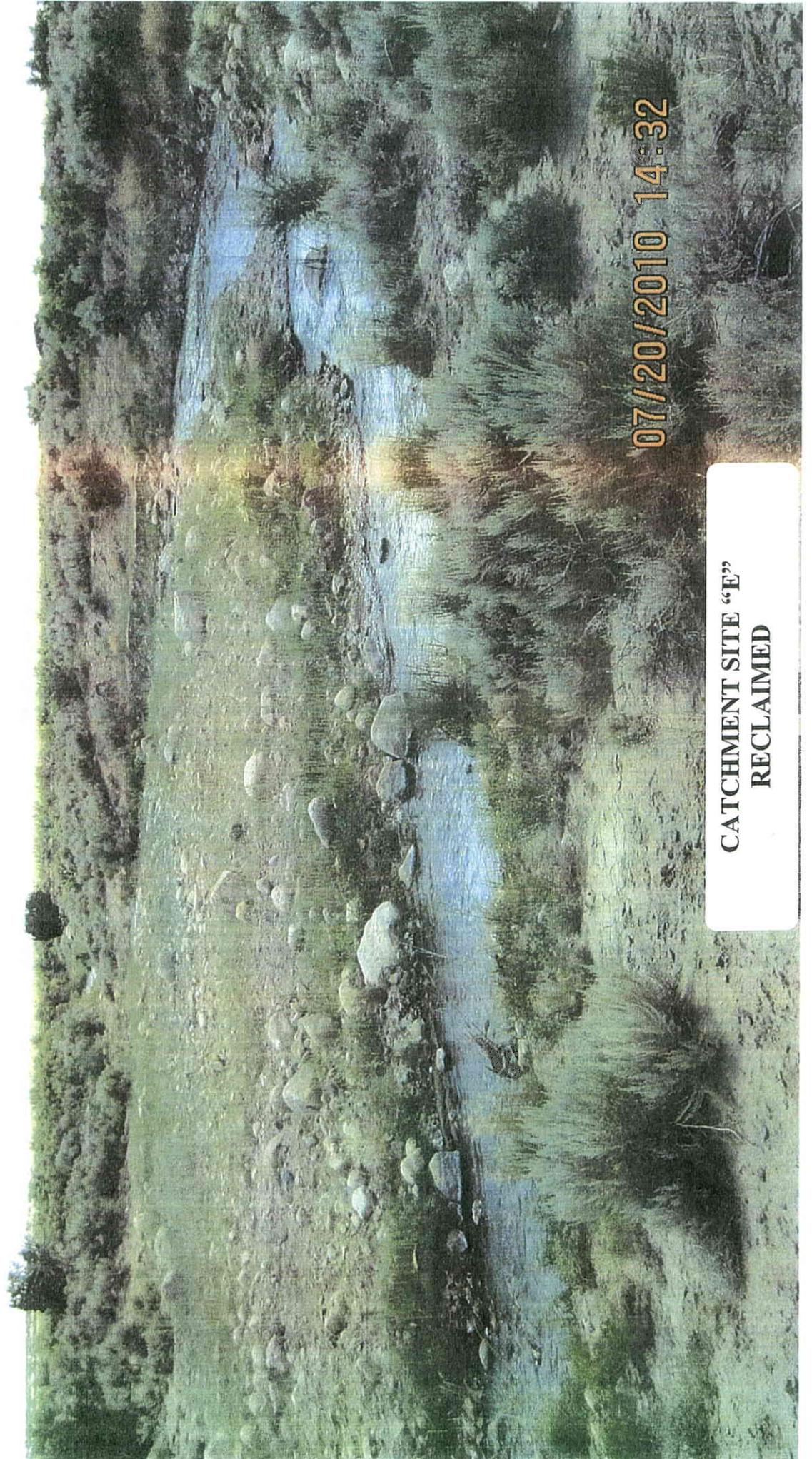


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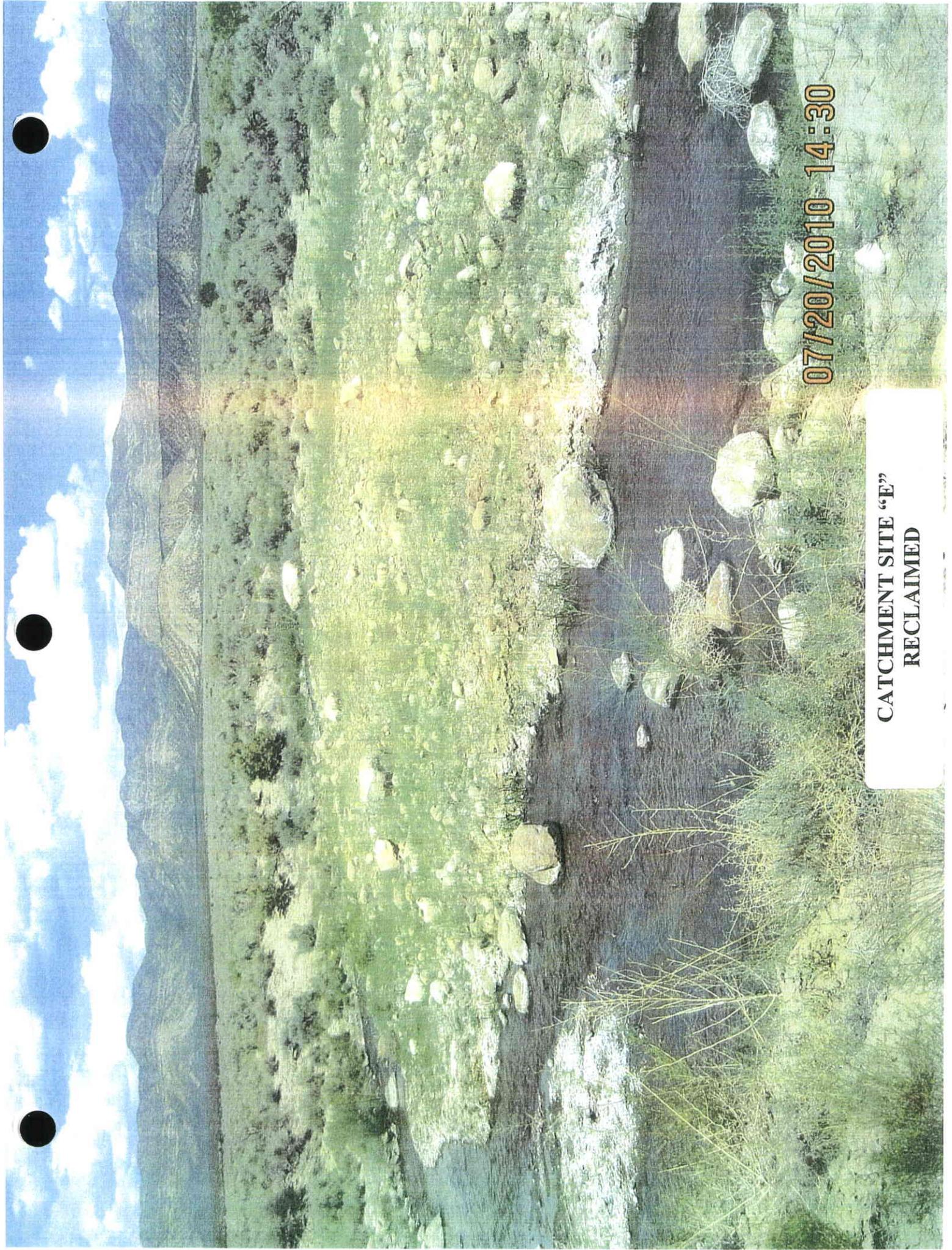
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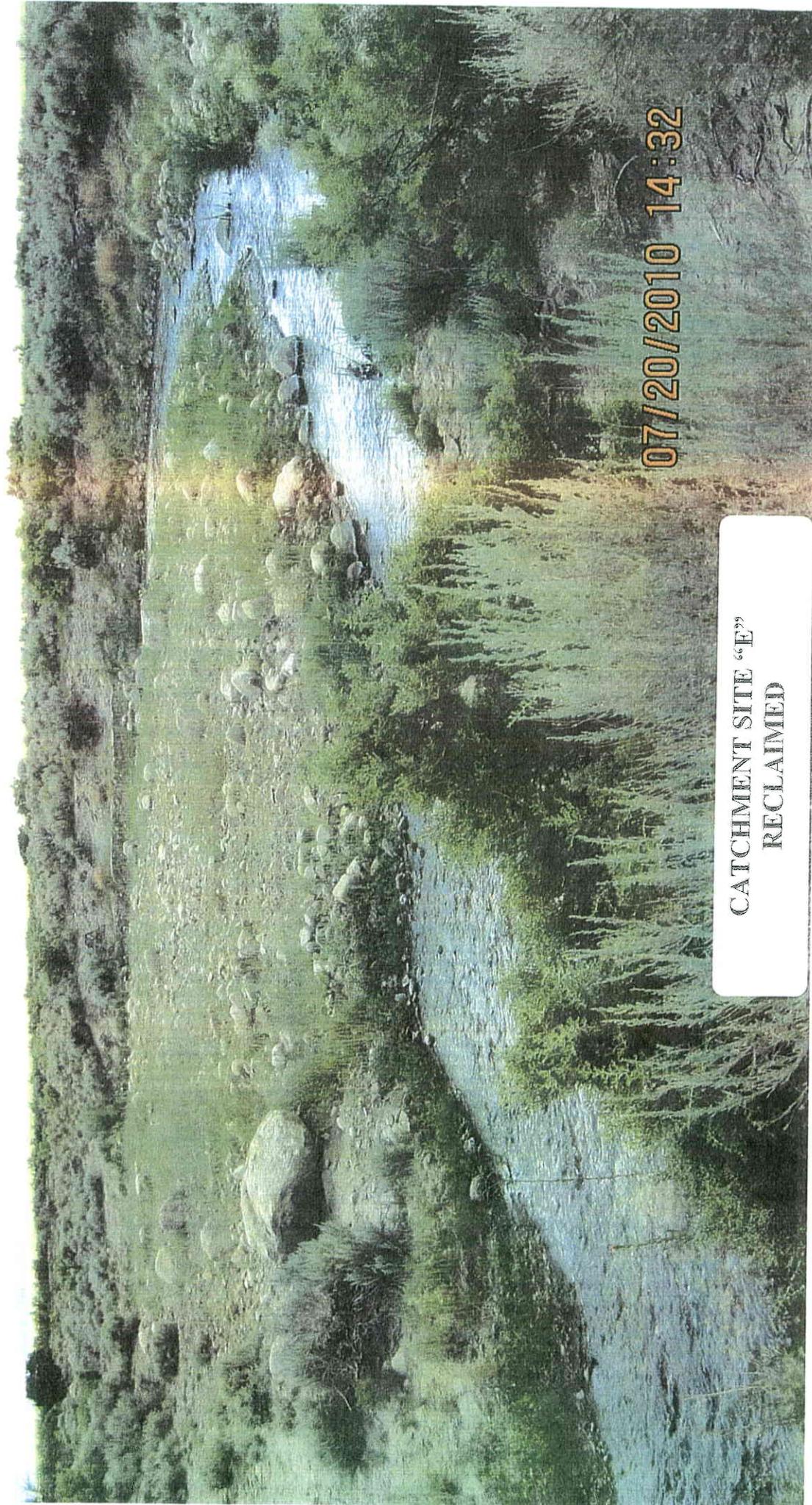
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**CATCHMENT SITE "E"  
RECLAIMED**



CATCHMENT SITE "E"  
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ATTACHMENT 10

CATCHMENT STRUCTURES C AND E  
AS-CONSTRUCTED PHOTOS  
RE-CONSTRUCTED, 2010



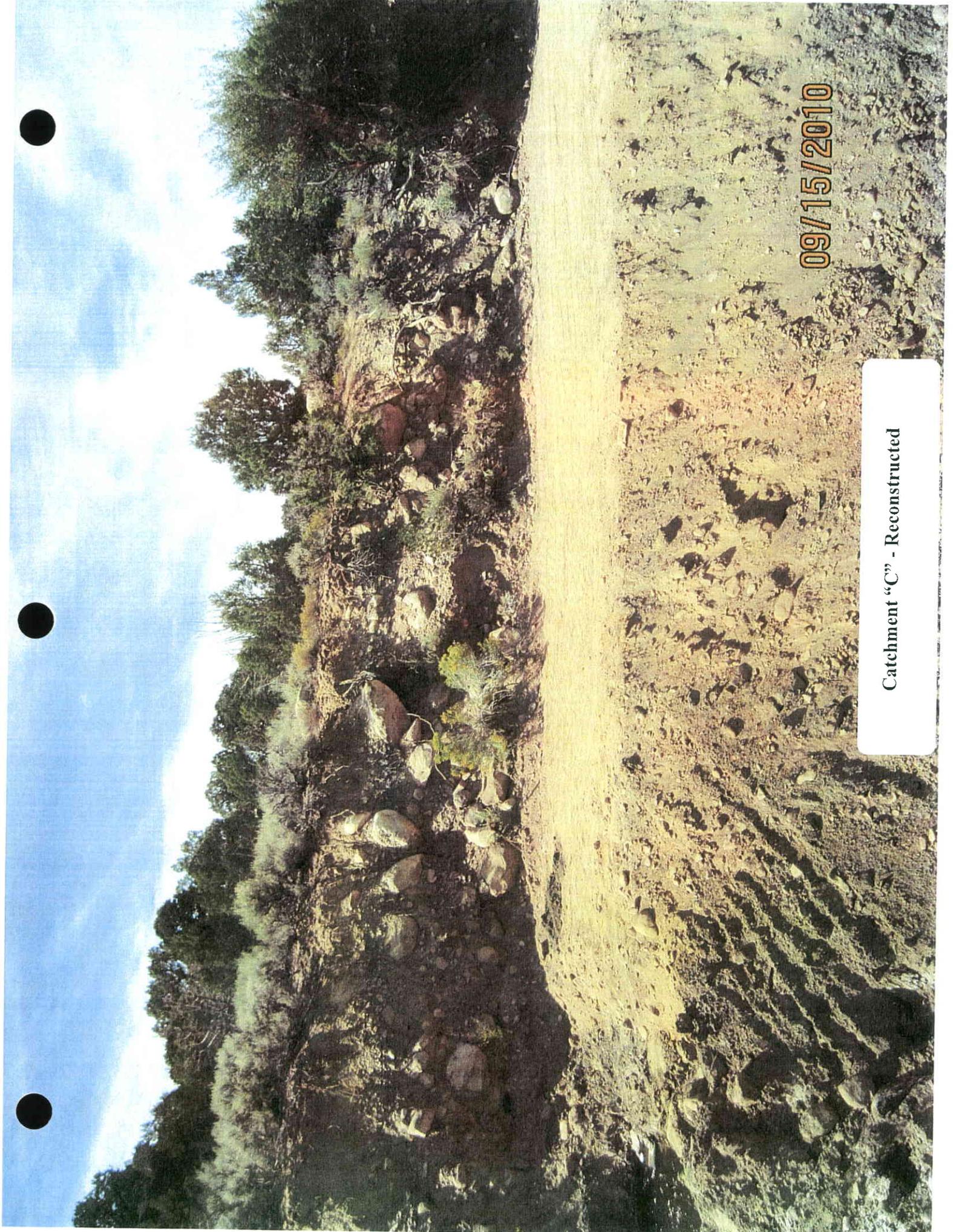
09/15/2010

Catchment "C" - Reconstructed



09/15/2010

Catchment "C" - Reconstructed



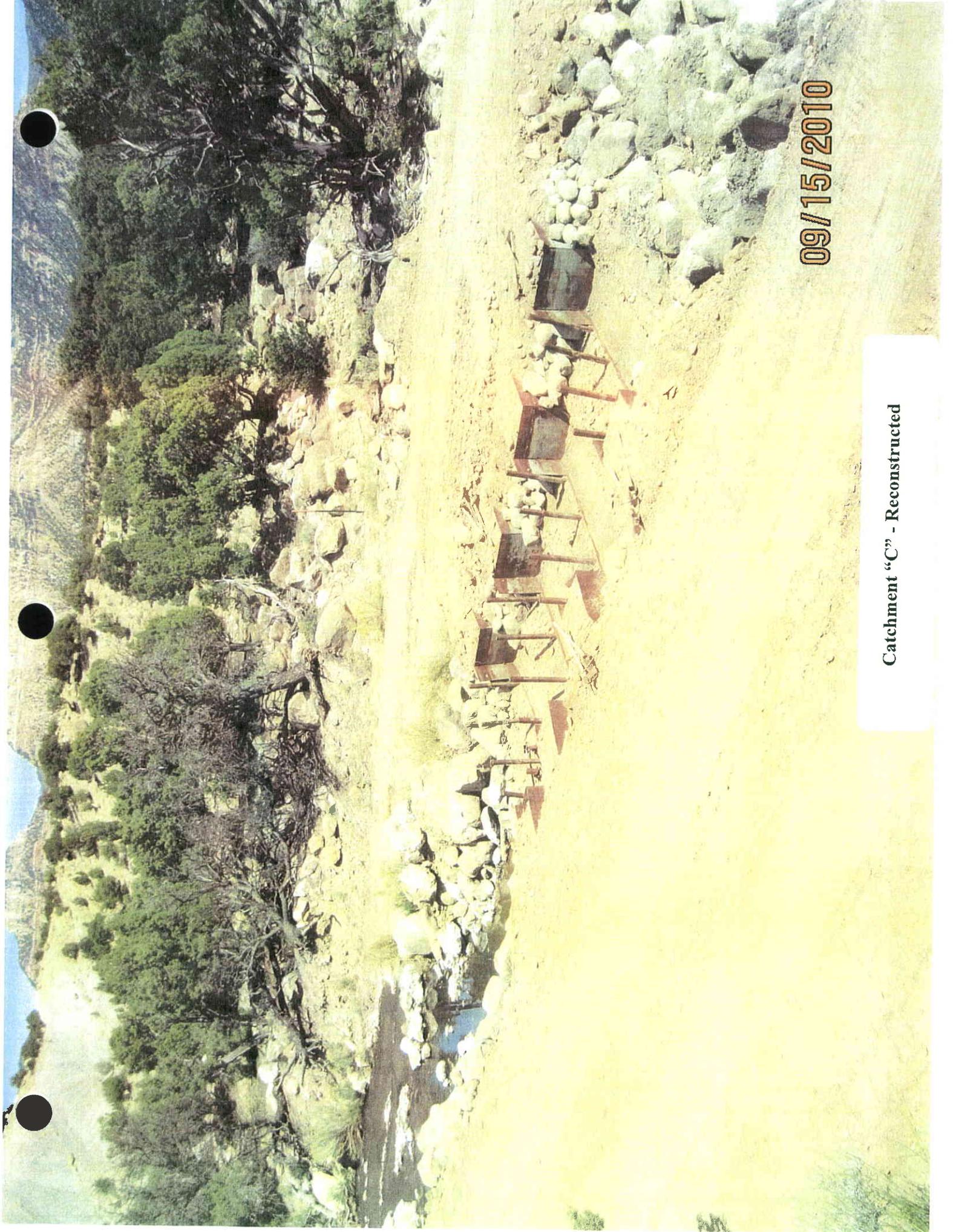
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Catchment "C" - Reconstructed



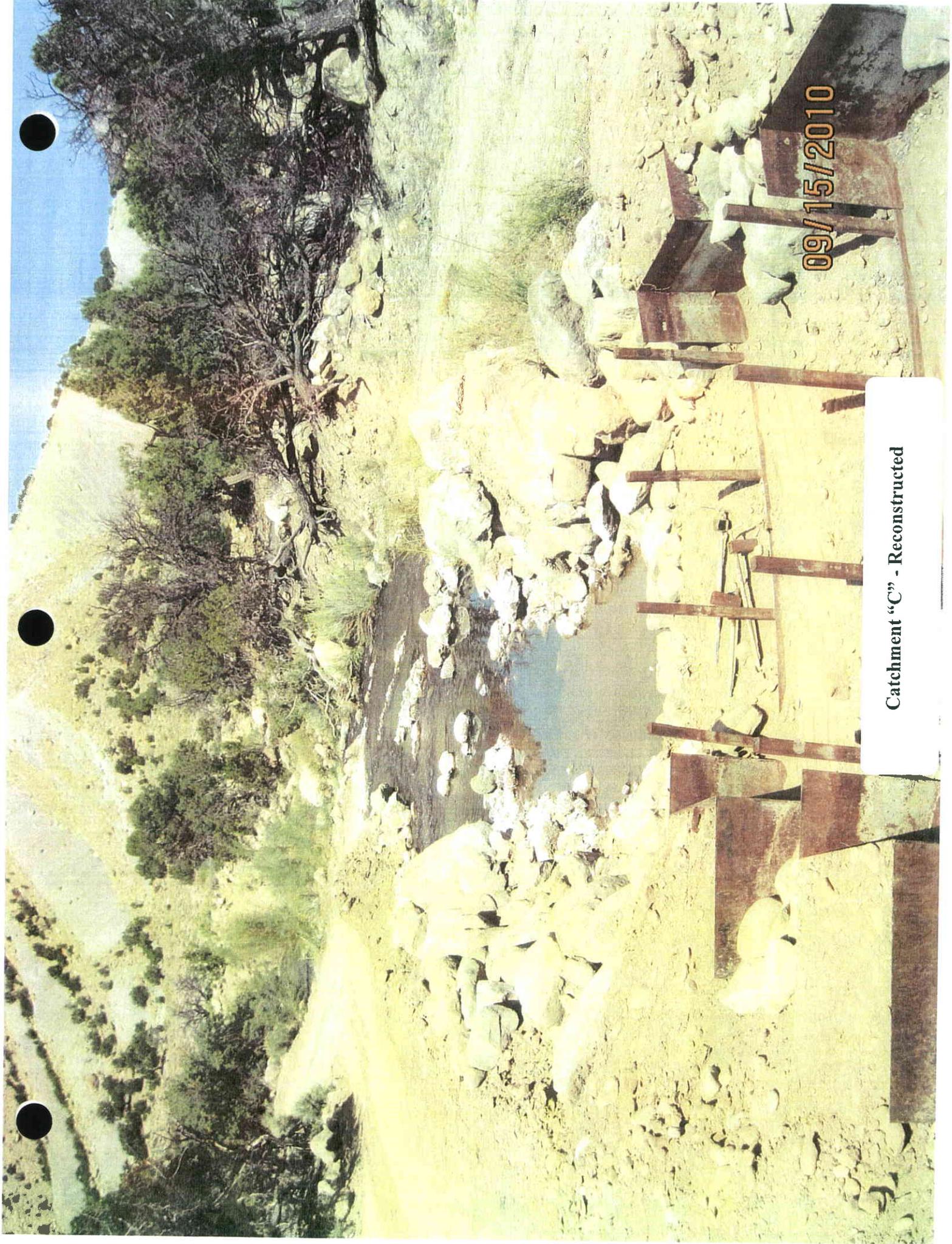
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Catchment "C" - Reconstructed



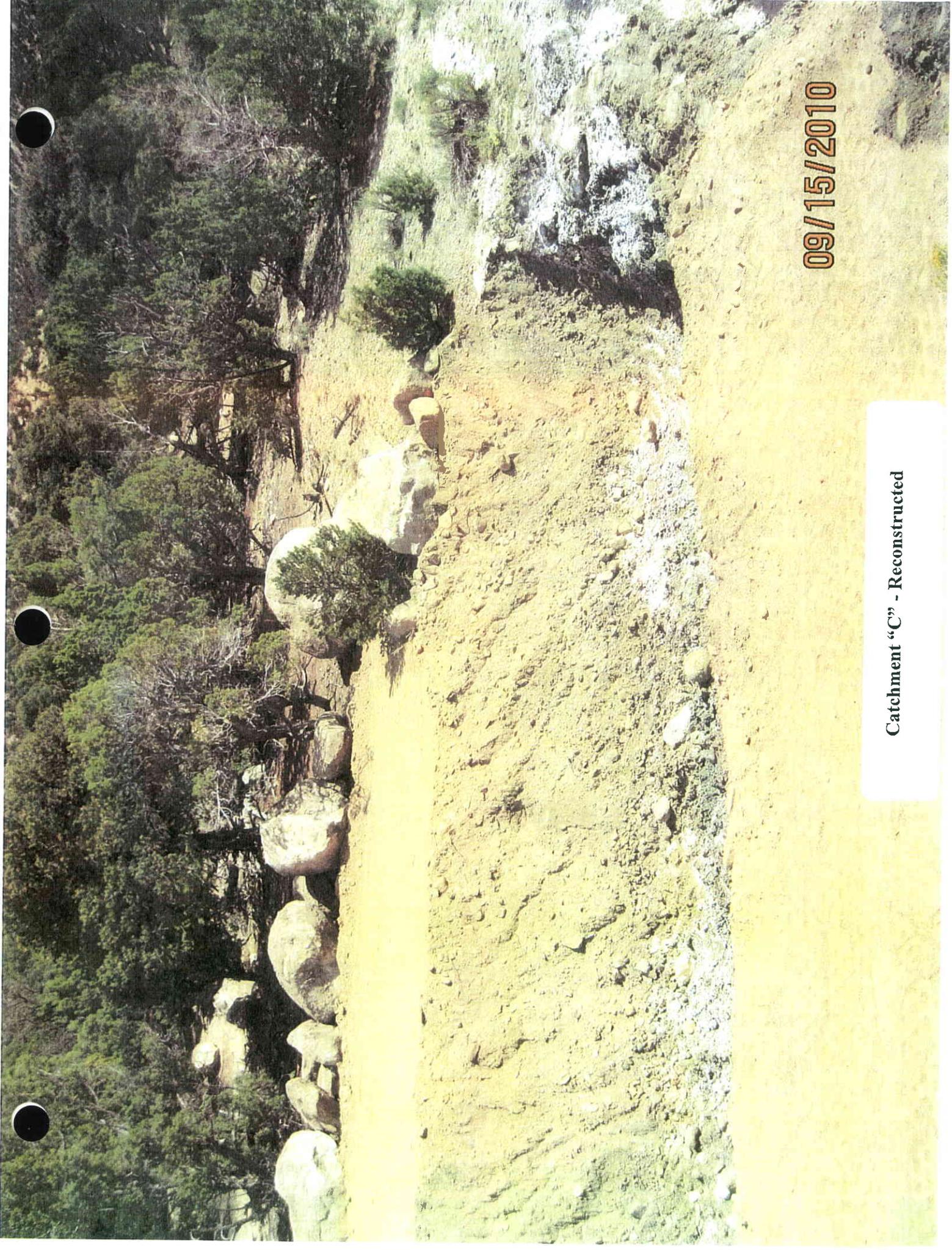
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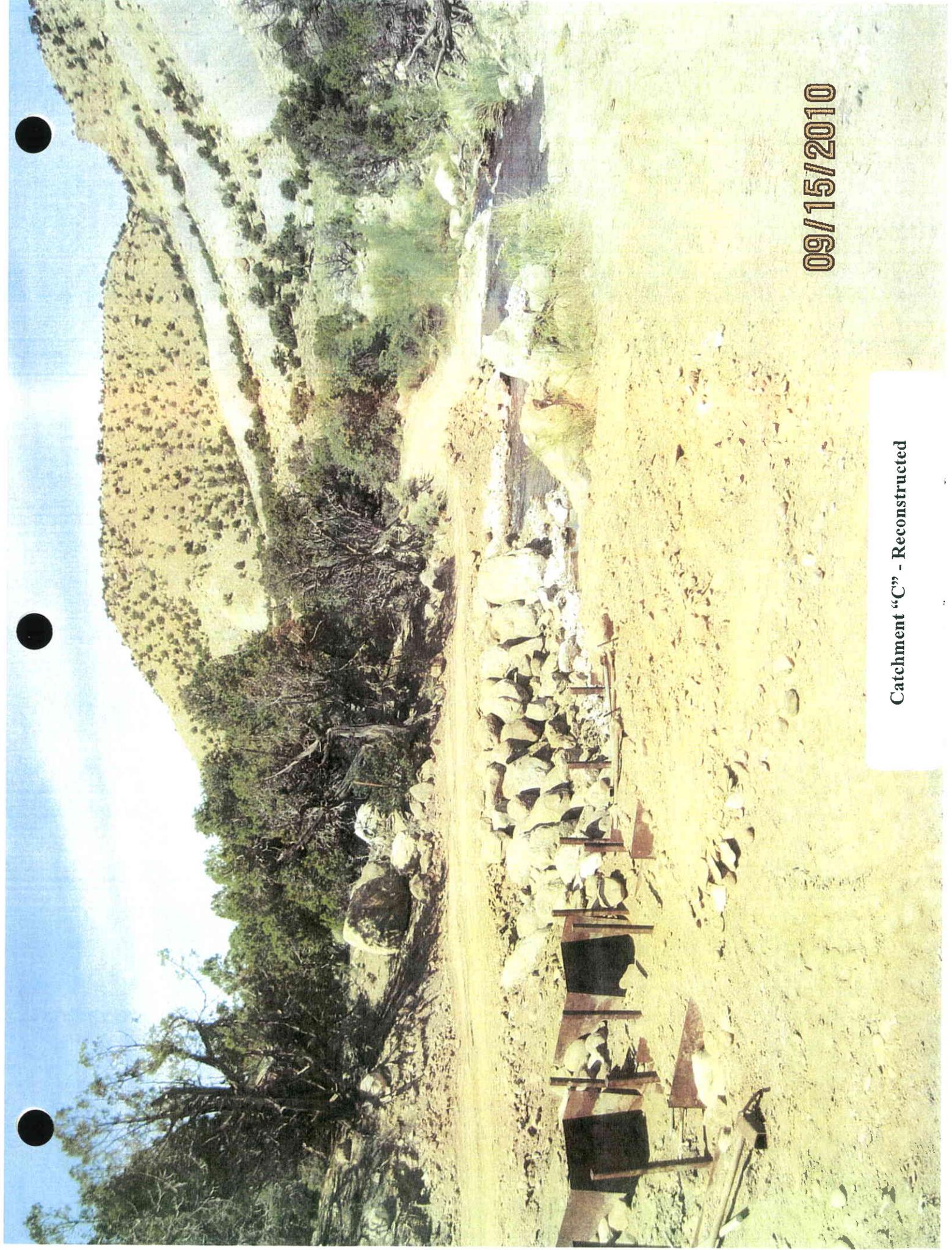
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Catchment "C" - Reconstructed



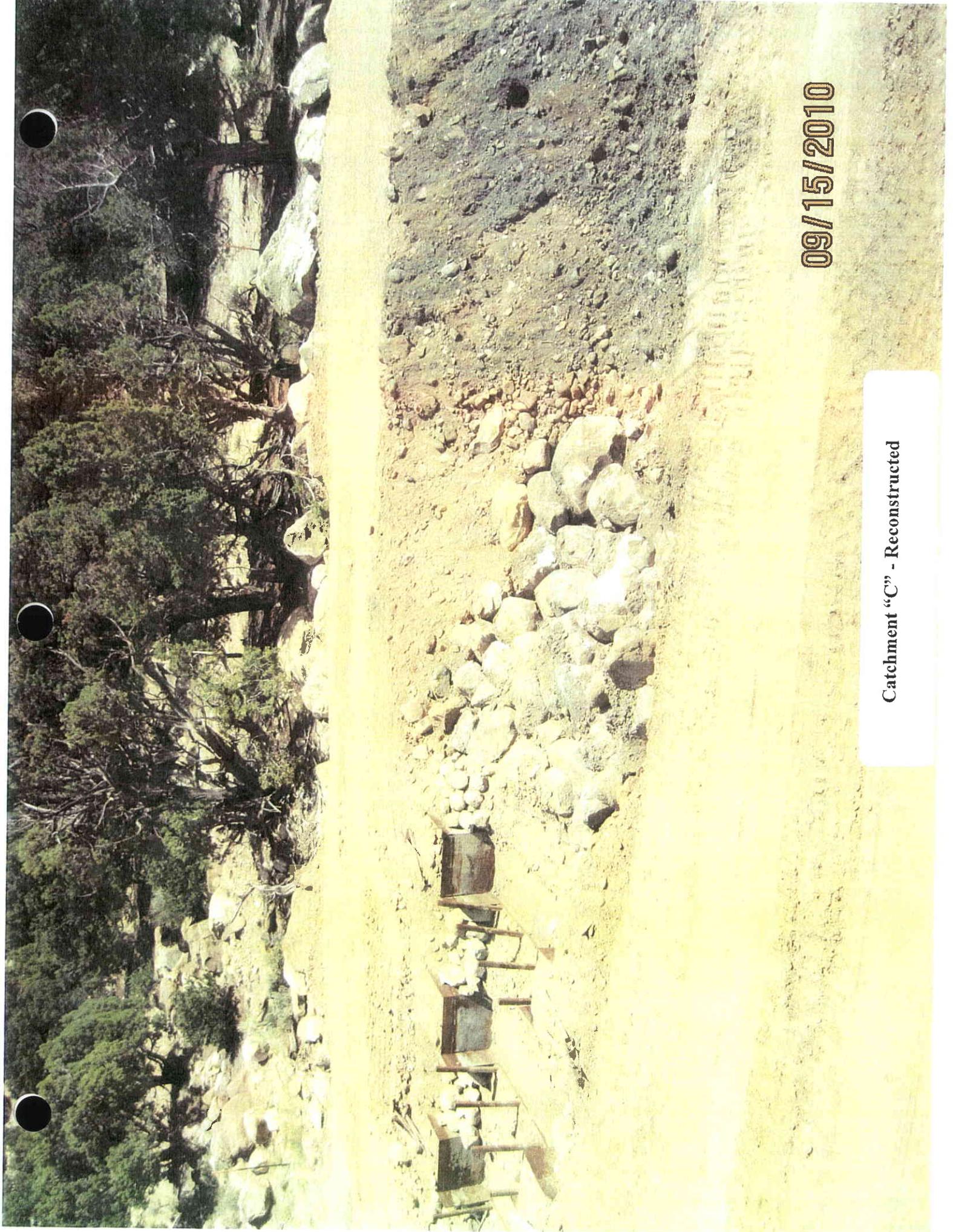
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Catchment "C" - Reconstructed



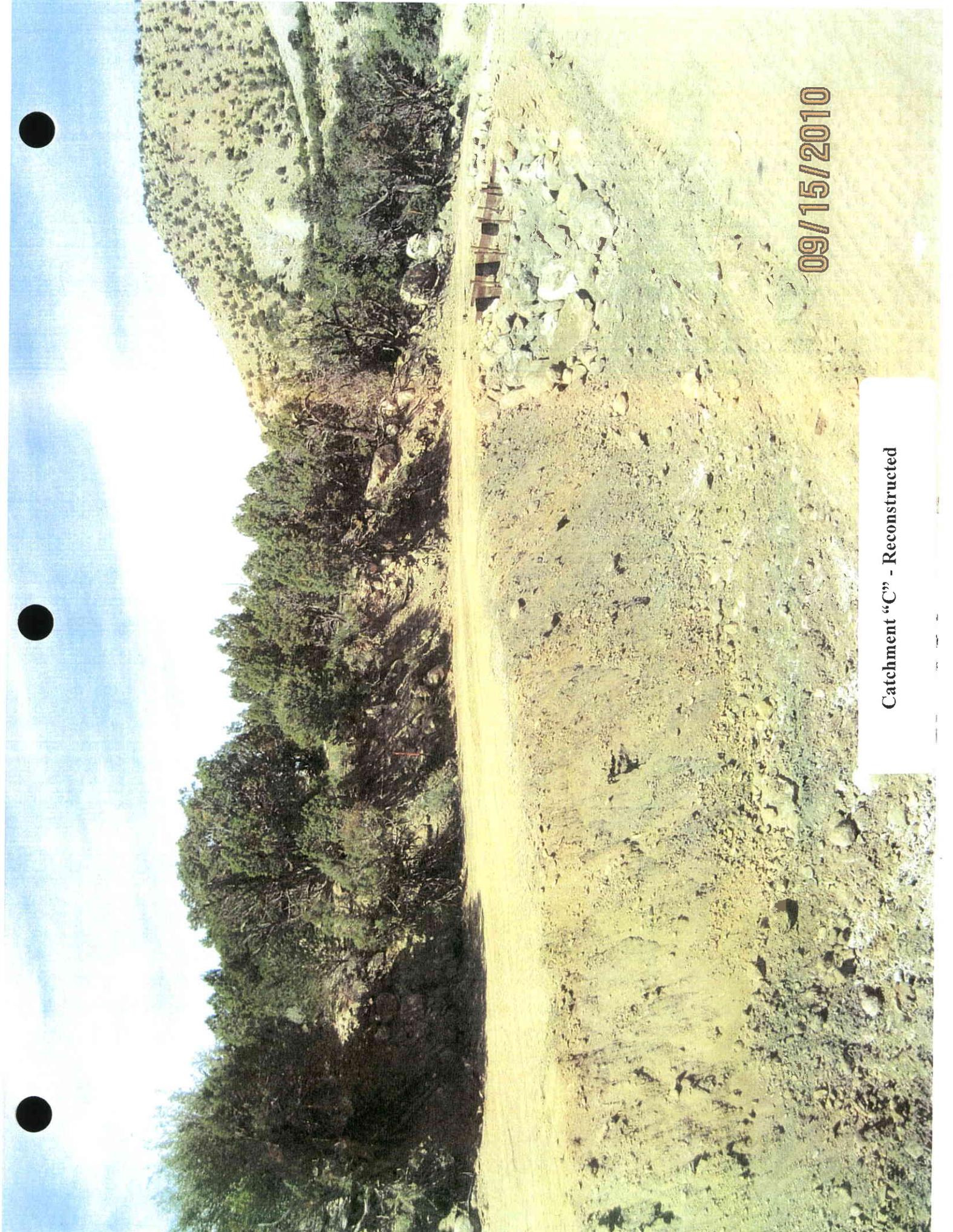
Catchment "C" - Reconstructed

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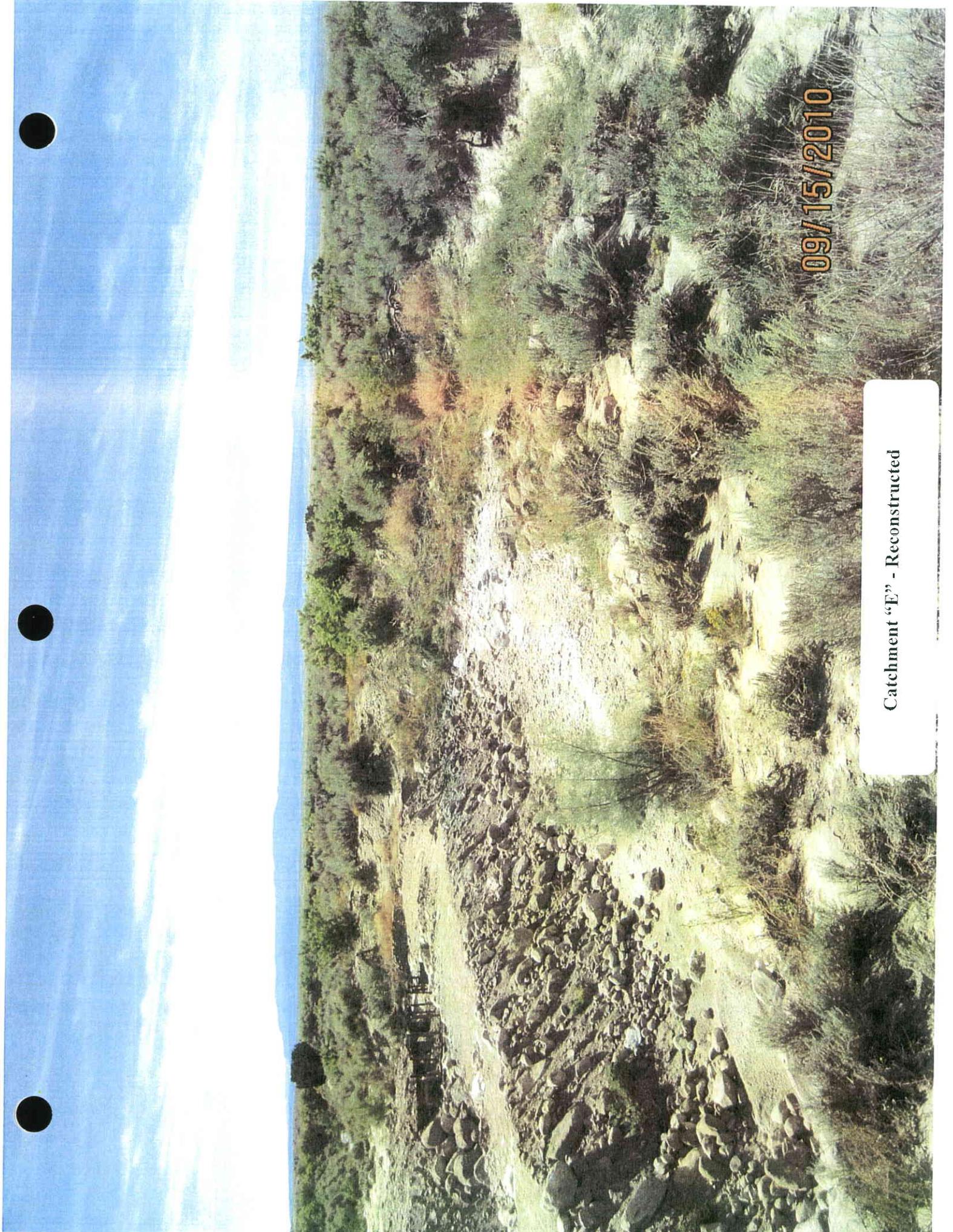
09/15/2010

Catchment "C" - Reconstructed



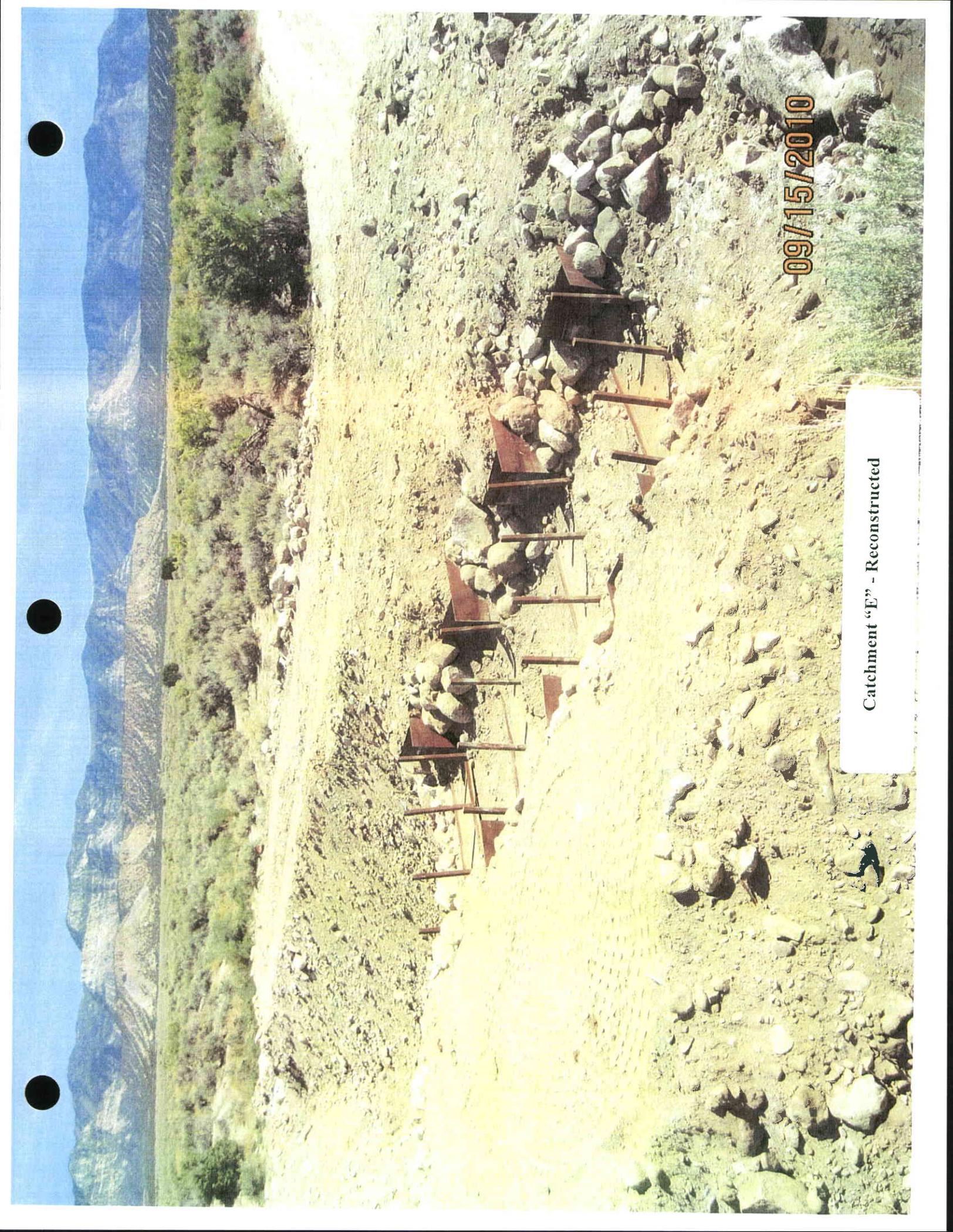
09/15/2010

Catchment "C" - Reconstructed



09/15/2010

Catchment "E" - Reconstructed

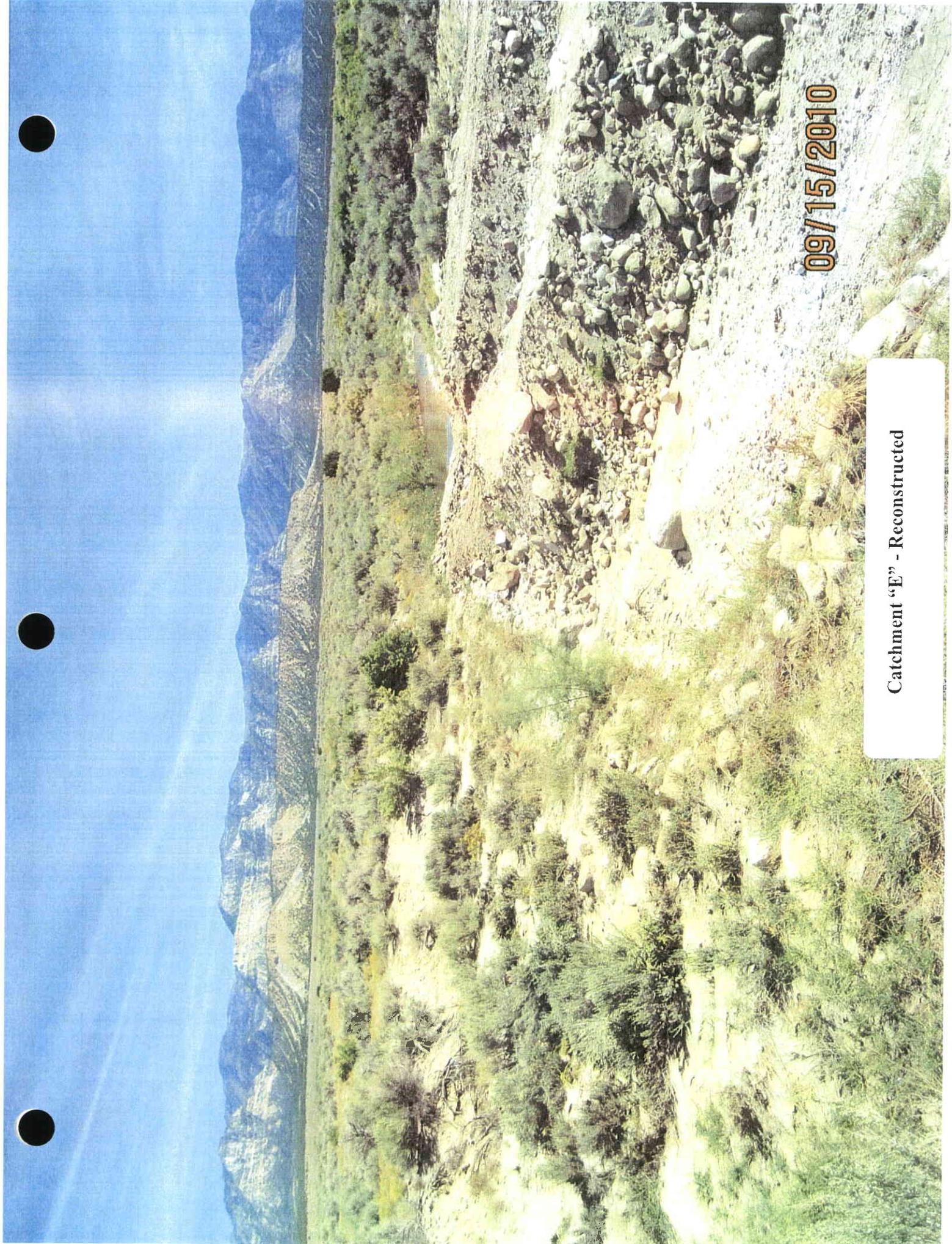


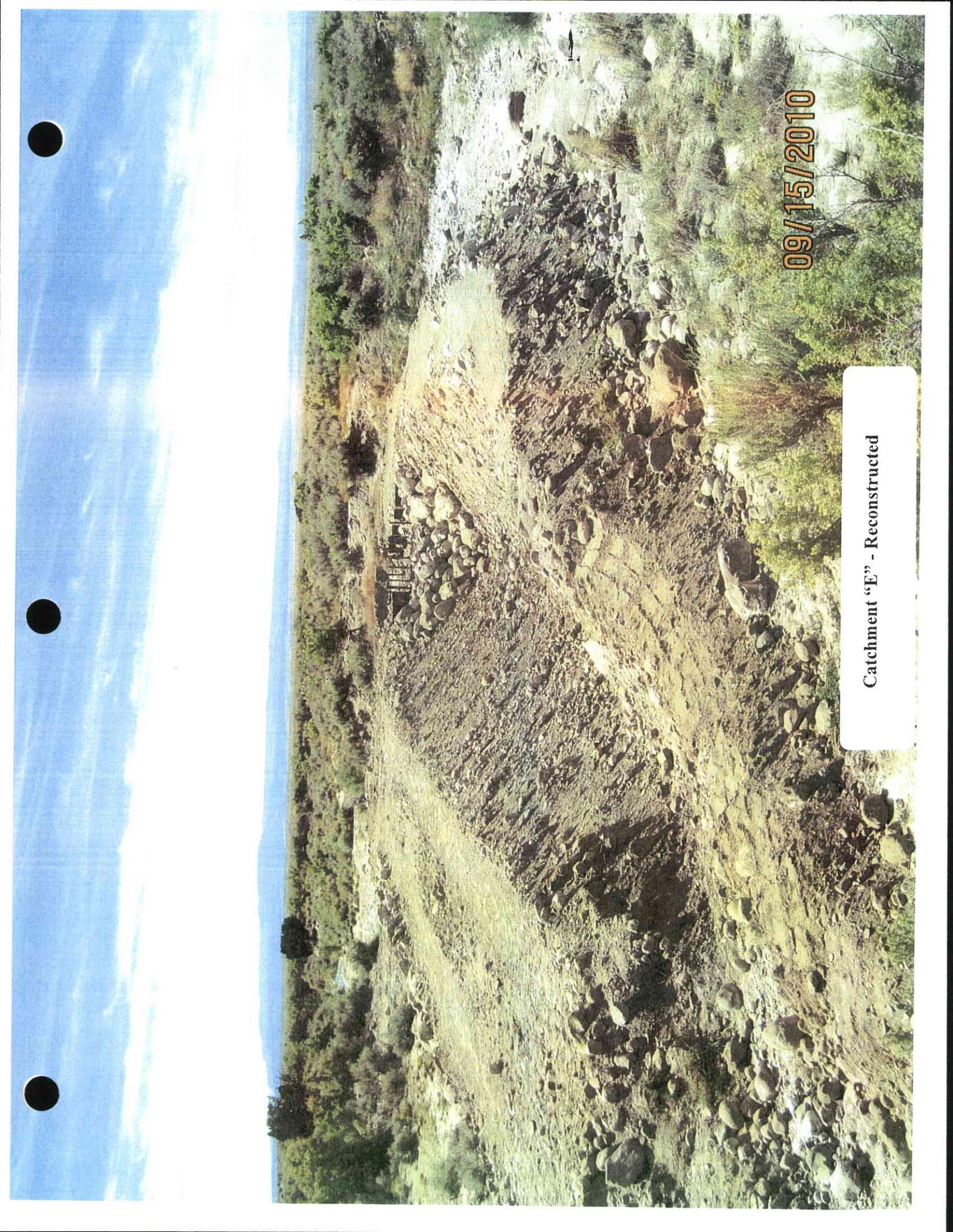
09/15/2010

Catchment "E" - Reconstructed

09/15/2010

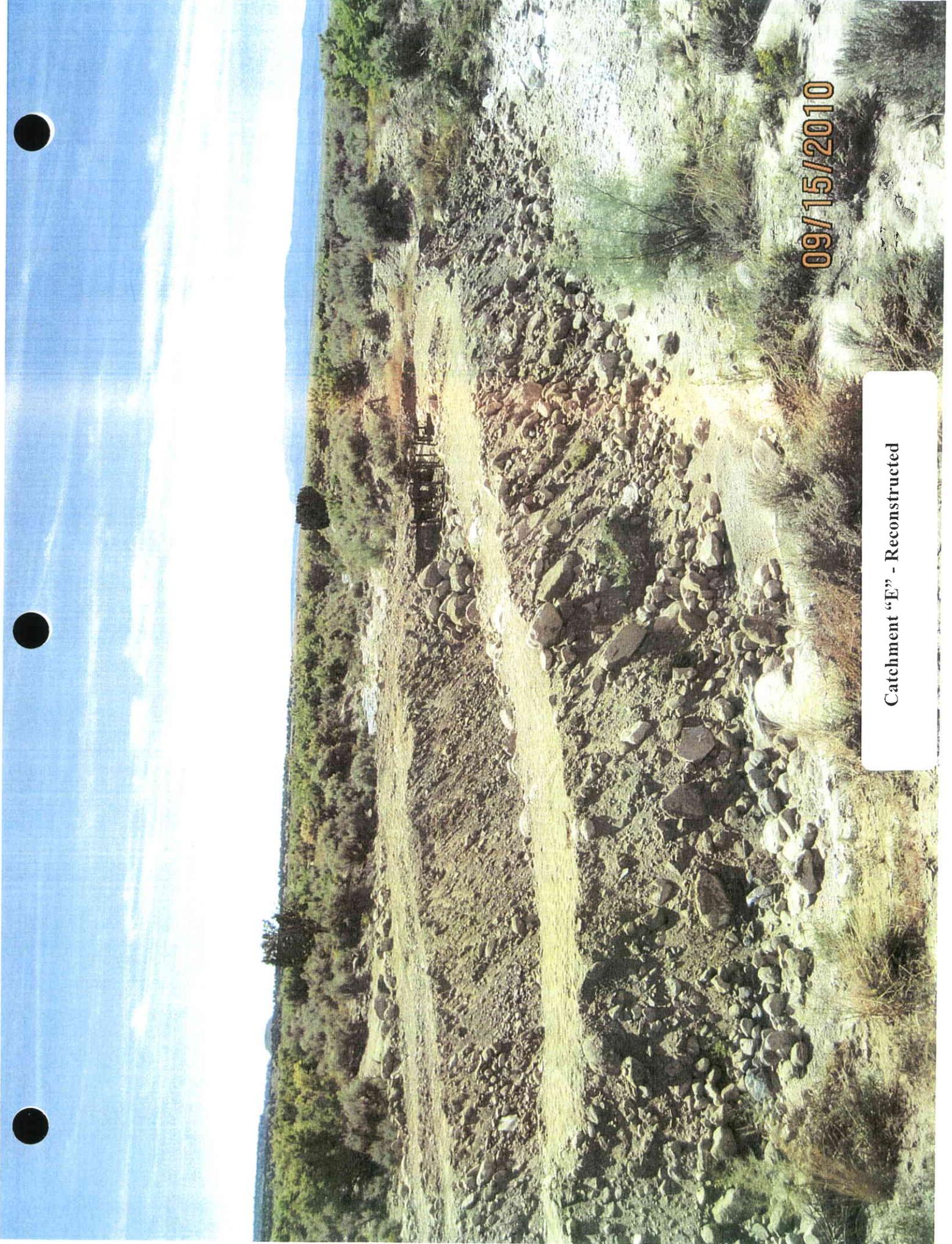
Catchment "E" - Reconstructed





09/15/2010

Catchment "E" - Reconstructed



09/15/2010

Catchment "E" - Reconstructed

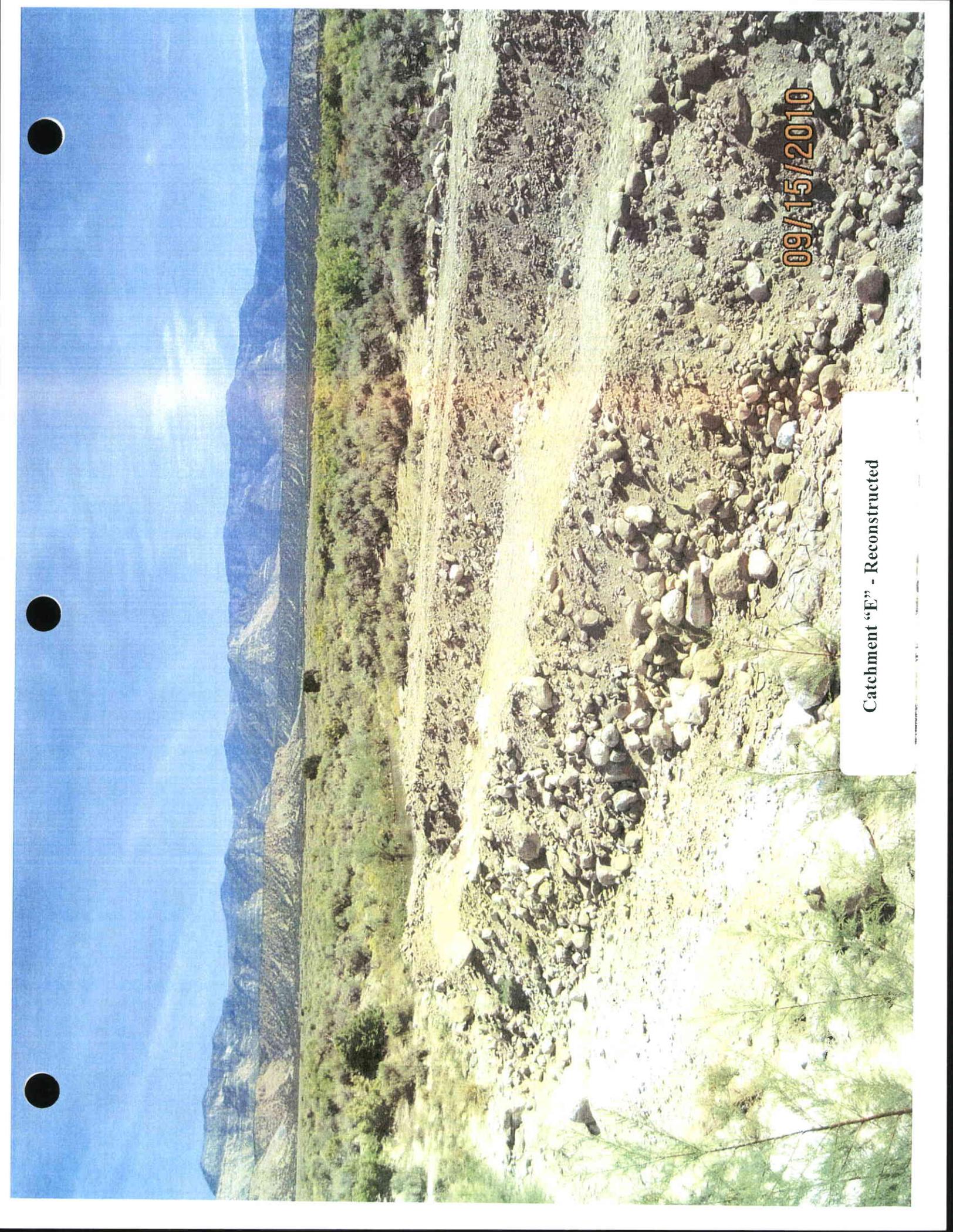


09/15/2010

Catchment "E" - Reconstructed

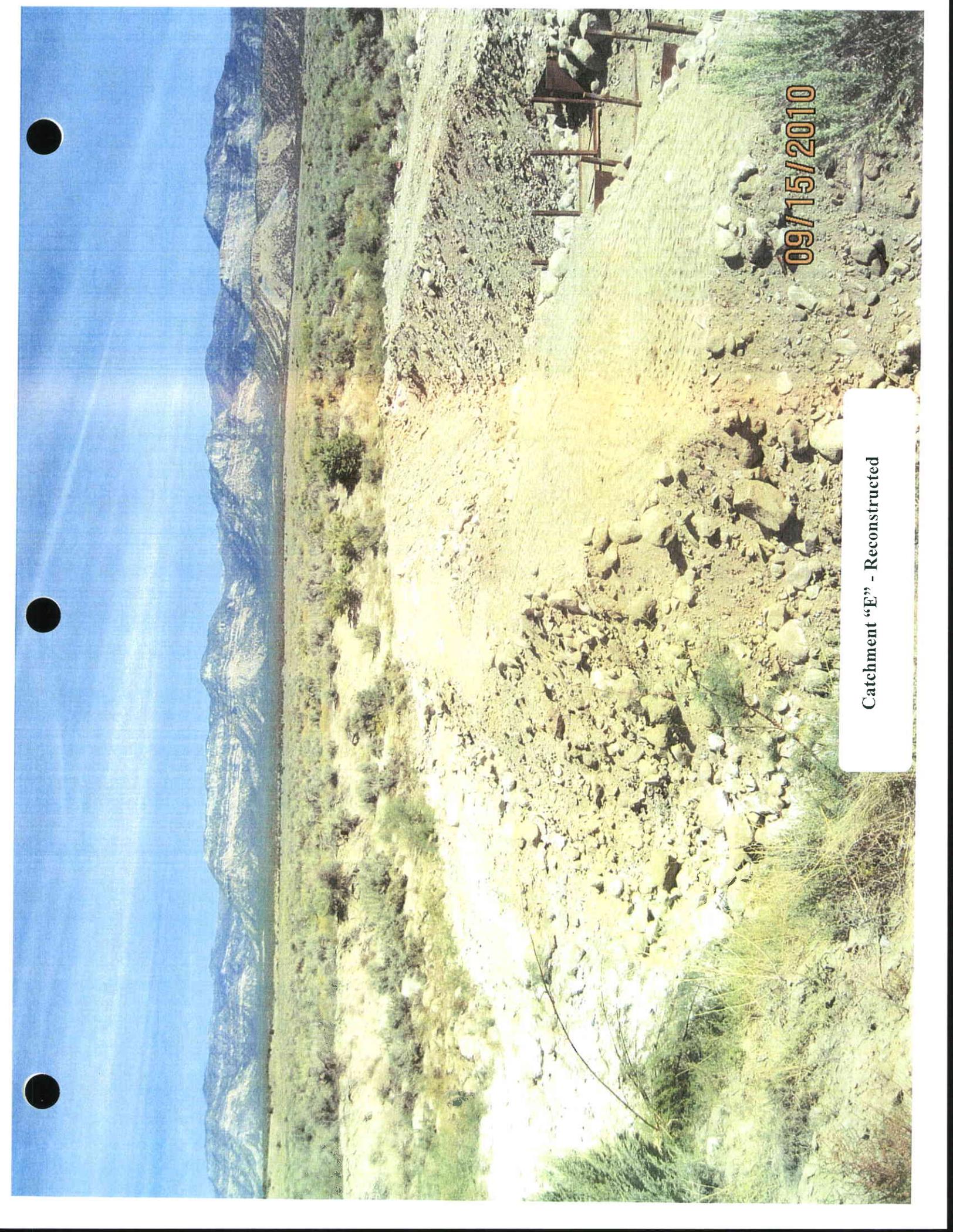
09/15/2010

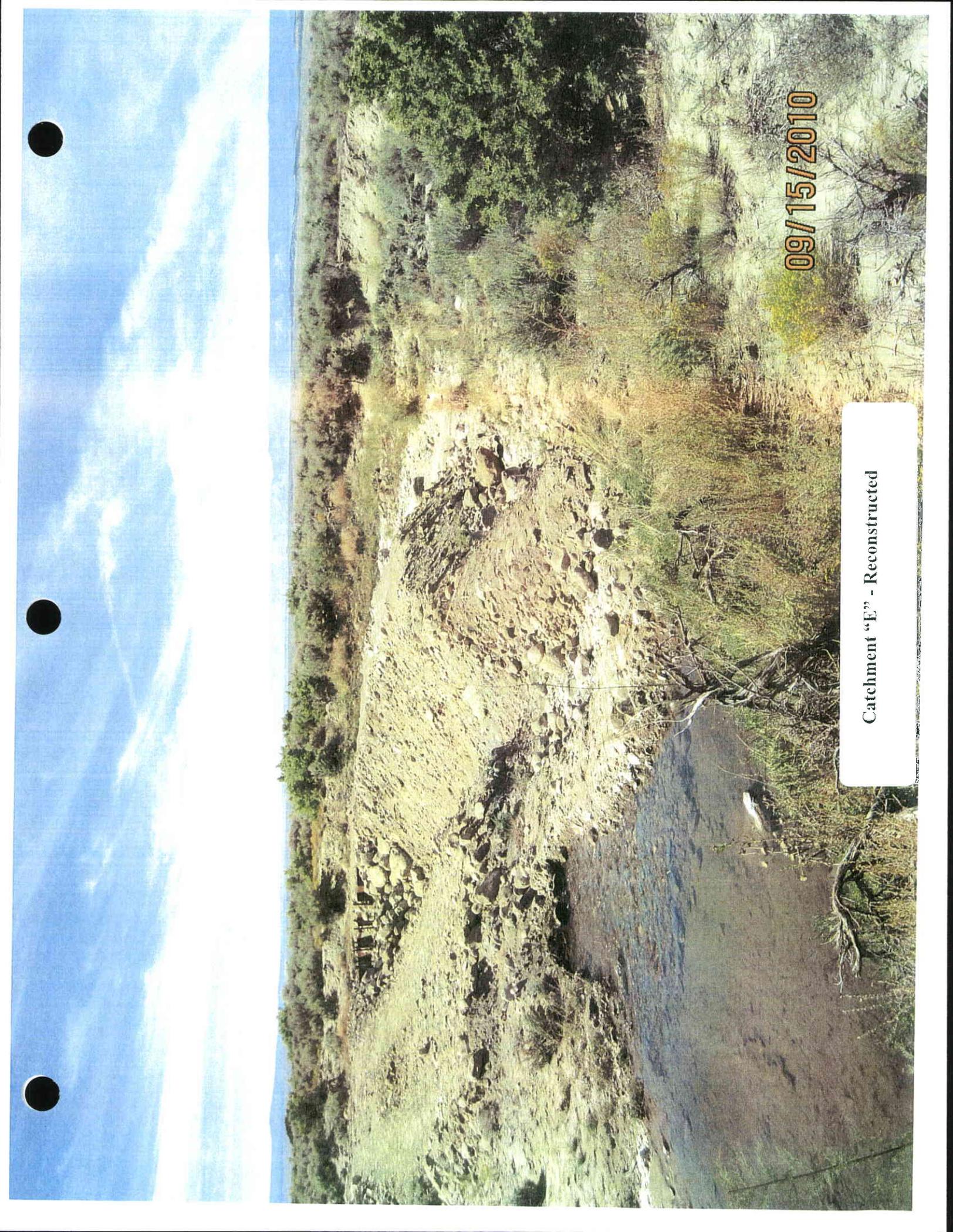
Catchment "E" - Reconstructed



09/15/2010

Catchment "E" - Reconstructed



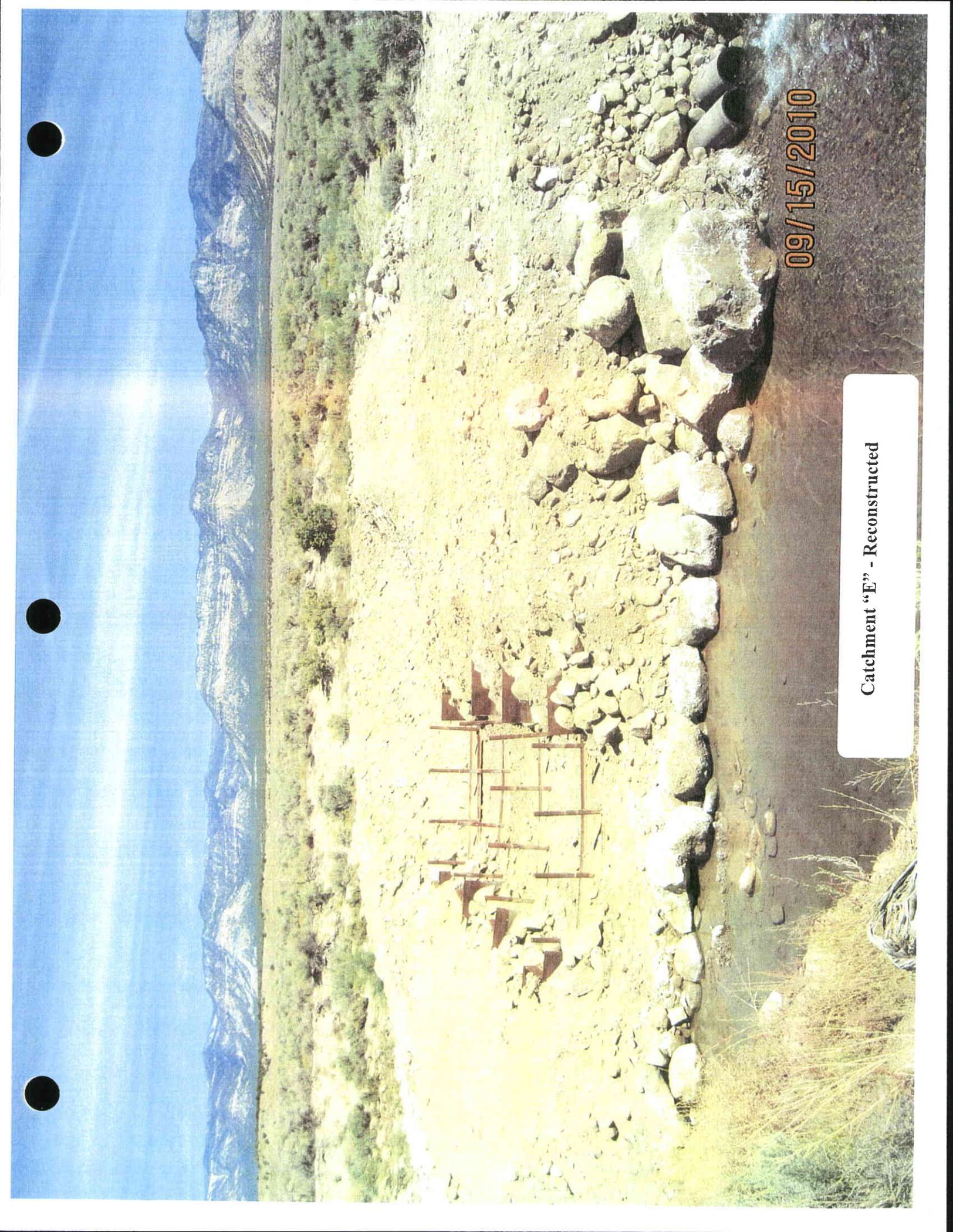


09/15/2010

Catchment "E" - Reconstructed

09/15/2010

Catchment "E" - Reconstructed

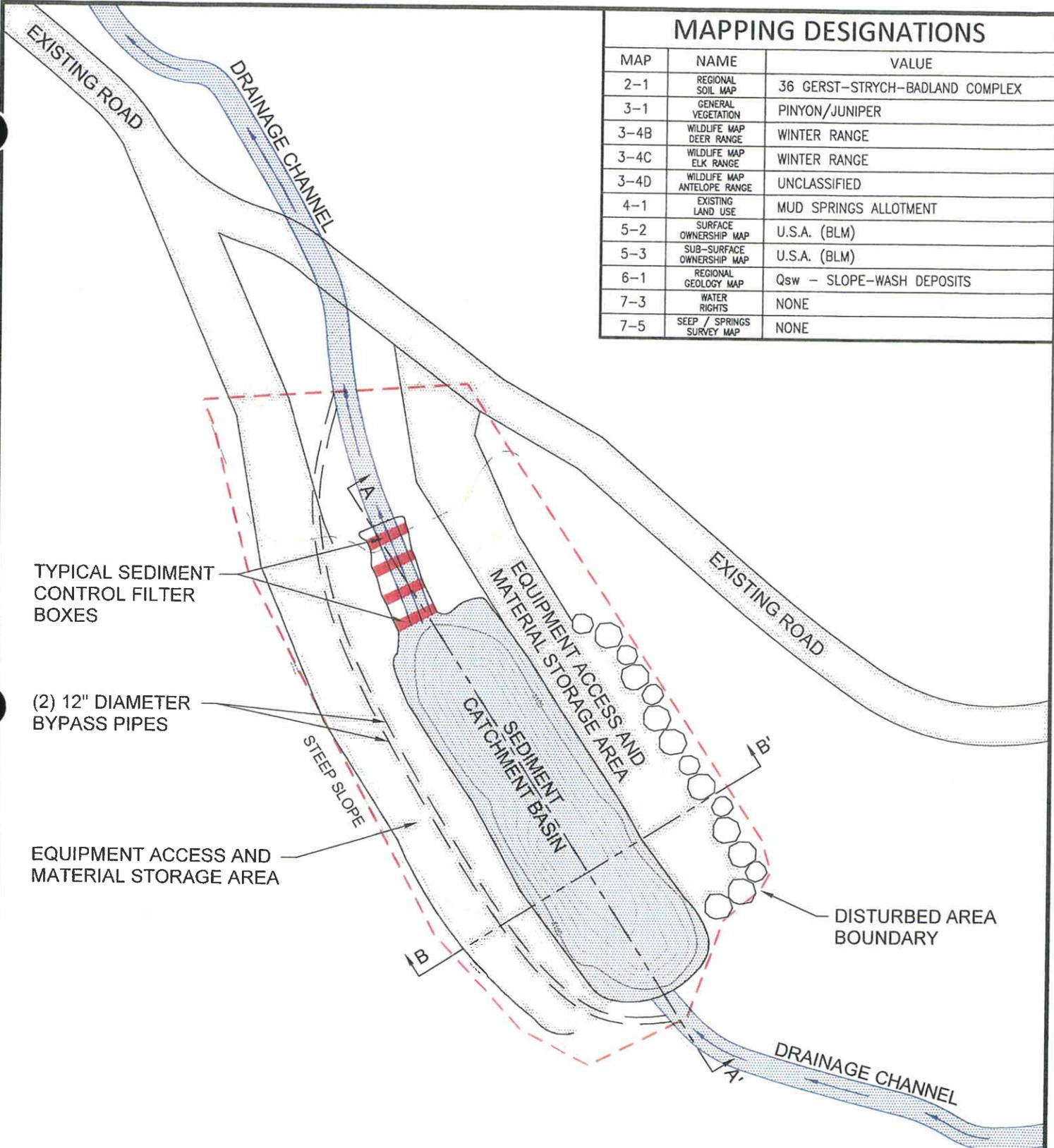


ATTACHMENT 11

CATCHMENT STRUCTURES C AND E  
AS-CONSTRUCTED DRAWINGS  
RE-CONSTRUCTED, 2010

# MAPPING DESIGNATIONS

MAP	NAME	VALUE
2-1	REGIONAL SOIL MAP	36 GERST-STRYCH-BADLAND COMPLEX
3-1	GENERAL VEGETATION	PINYON/JUNIPER
3-4B	WILDLIFE MAP DEER RANGE	WINTER RANGE
3-4C	WILDLIFE MAP ELK RANGE	WINTER RANGE
3-4D	WILDLIFE MAP ANTELOPE RANGE	UNCLASSIFIED
4-1	EXISTING LAND USE	MUD SPRINGS ALLOTMENT
5-2	SURFACE OWNERSHIP MAP	U.S.A. (BLM)
5-3	SUB-SURFACE OWNERSHIP MAP	U.S.A. (BLM)
6-1	REGIONAL GEOLOGY MAP	Qsw - SLOPE-WASH DEPOSITS
7-3	WATER RIGHTS	NONE
7-5	SEEP / SPRINGS SURVEY MAP	NONE



TYPICAL SEDIMENT CONTROL FILTER BOXES

(2) 12" DIAMETER BYPASS PIPES

EQUIPMENT ACCESS AND MATERIAL STORAGE AREA

EQUIPMENT ACCESS AND MATERIAL STORAGE AREA  
SEDIMENT CATCHMENT BASIN

DISTURBED AREA BOUNDARY

STEEP SLOPE



**CATCHMENT STRUCTURE 'C'**  
**AS-BUILT, PLAN VIEW**

**WEST RIDGE RESOURCES, INC.**

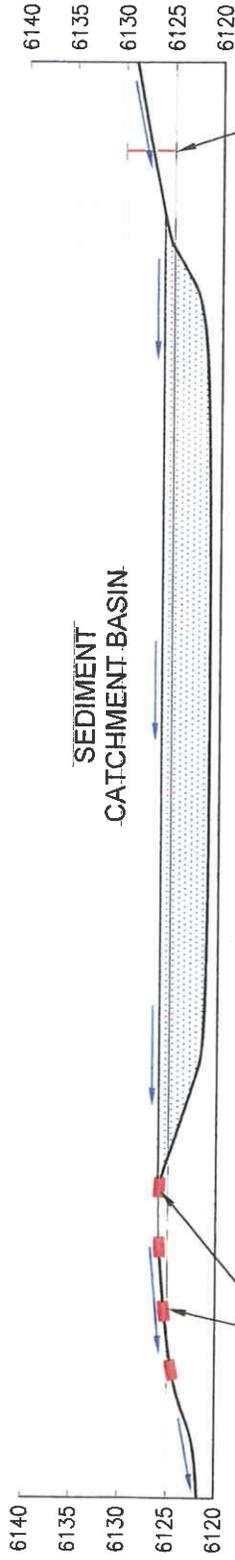
794 NORTH "C" CANYON ROAD  
EAST CARBON, UTAH 84520

MSHA MINE ID # 42-02233

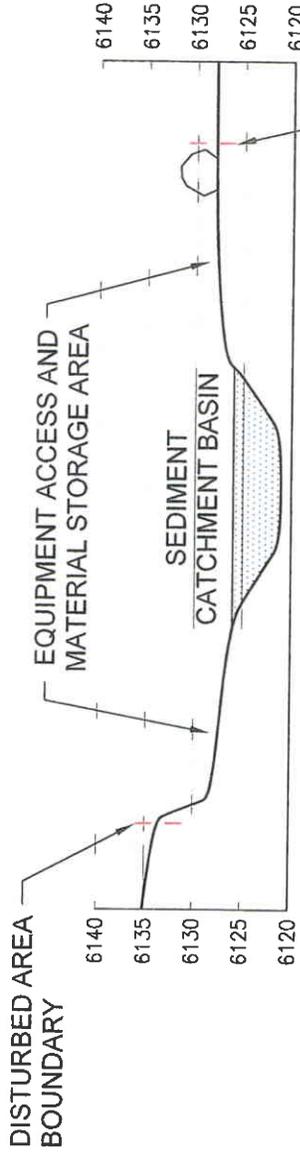
DRAWN BY PJ	SCALE 1" = 30'
APPROVED BY DS	DATE 29 SEPT. 2010

ATTACHMENT 11 DRAWING #1

G:\Current Drawings\05\West Ridge Mine\MineWater\Issue\Catchments\Pond C 9-27-10.dwg, Plan, 9/29/2010 1:40:19 PM



**SECTION A-A'**



**SECTION B-B'**



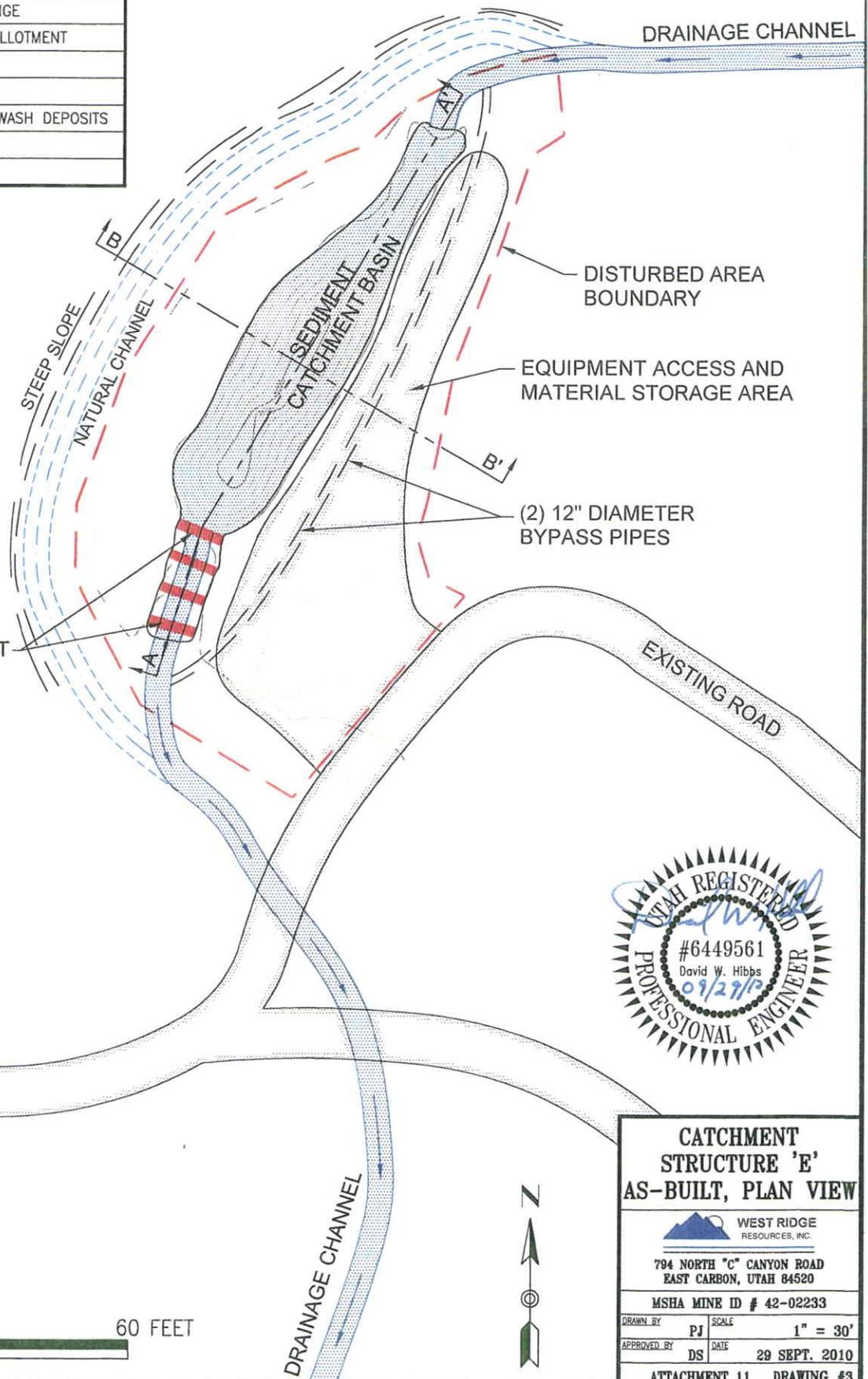
**CATCHMENT STRUCTURE 'C' AS-BUILT, SECTIONS**

WEST RIDGE RESOURCES, INC.	
764 NORTH "C" CANYON ROAD EAST CARBON, UTAH 84630	
MSHA MINE ID # 42-02233	SCALE 1" = 20'
DRAWN BY PJ	DATE 29 SEPT. 2010
APPROVED BY DS	ATTACHMENT 11 DRAWING #2



# MAPPING DESIGNATIONS

MAP	NAME	VALUE
2-1	REGIONAL SOIL MAP	49 HAVERDAD LOAM, ALKALI
3-1	GENERAL VEGETATION	SAGEBRUSH
3-4B	WILDLIFE MAP DEER RANGE	UNCLASSIFIED
3-4C	WILDLIFE MAP ELK RANGE	WINTER RANGE
3-4D	WILDLIFE MAP ANTELOPE RANGE	YEAR-LONG RANGE
4-1	EXISTING LAND USE	MUD SPRINGS ALLOTMENT
5-2	SURFACE OWNERSHIP MAP	U.S.A. (BLM)
5-3	SUB-SURFACE OWNERSHIP MAP	U.S.A. (BLM)
6-1	REGIONAL GEOLOGY MAP	Qsw - SLOPE-WASH DEPOSITS
7-3	WATER RIGHTS	NONE
7-5	SEEP / SPRINGS SURVEY MAP	NONE



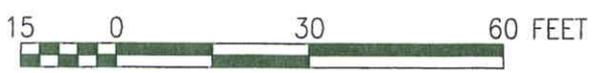
## CATCHMENT STRUCTURE 'E' AS-BUILT, PLAN VIEW

WEST RIDGE RESOURCES, INC.  
794 NORTH "C" CANYON ROAD  
EAST CARBON, UTAH 84520

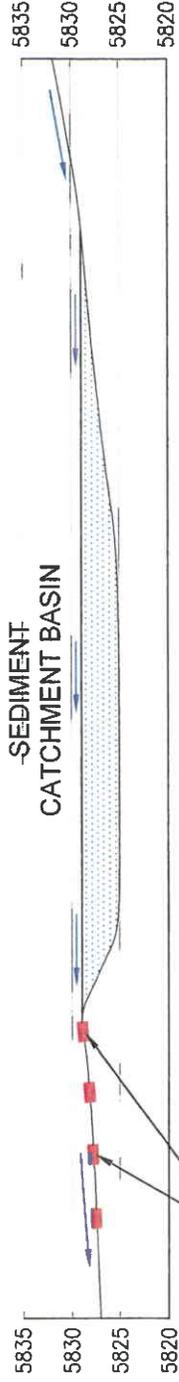
MSHA MINE ID # 42-02233

DRAWN BY PJ SCALE 1" = 30'  
APPROVED BY DS DATE 29 SEPT. 2010

ATTACHMENT 11 DRAWING #3

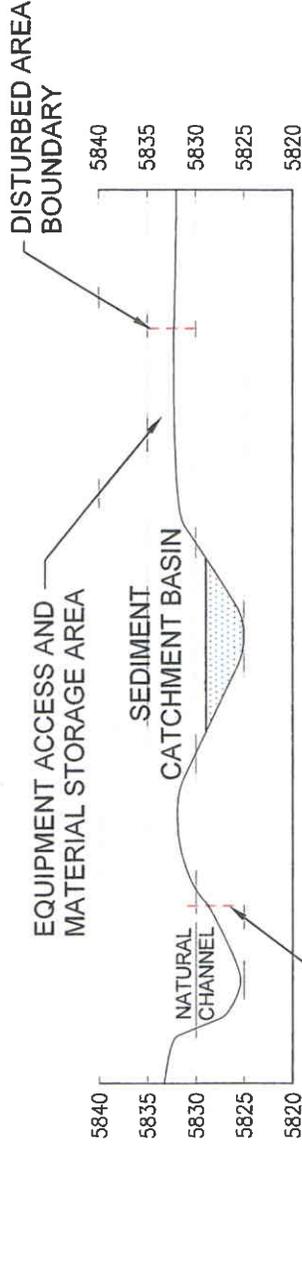


G:\Current Drawings\West Ridge Mine\MineWater\_Issue\Catchments\Pond E 9-27-10.dwg, POND, 9/29/2010 1:44:08 PM



**SECTION A-A'**

TYPICAL SEDIMENT CONTROL FILTER BOXES



**SECTION B-B'**



**CATCHMENT STRUCTURE 'E' AS-BUILT, SECTIONS**

WEST RIDGE RESOURCES INC. 794 NORTH "C" CANYON ROAD EAST CARBON, UTAH 84520	
MSHA MINE ID # 42-02233	DRAWN BY: PJ SCALE: 1" = 20'
APPROVED BY: DS DATE: 29 SEPT. 2010	SHEET: ATTACHMENT 11 DRAWING #4



ATTACHMENT 12

MSDS SHEETS FOR FLOCCULANT  
NALCO #83400



# SAFETY DATA SHEET

PRODUCT

**83400 Flocculant**

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : **83400 Flocculant**

COMPANY IDENTIFICATION :  
Nalco Company  
1601 W. Diehl Road  
Naperville, Illinois  
60563-1198

EMERGENCY TELEPHONE NUMBER(S) : (800) 424-9300 (24 Hours) CHEMTREC

NFPA 704M/HMIS RATING

HEALTH : 1/1 FLAMMABILITY : 1/1 INSTABILITY : 0/0 OTHER :  
0 = Insignificant 1 = Slight 2 = Moderate 3 = High 4 = Extreme \* = Chronic Health Hazard

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

Hazardous Substance(s)	CAS NO	% (w/w)
Hydrotreated Light Distillate	64742-47-8	10.0 - 30.0

## 3. HAZARDS IDENTIFICATION

### \*\*EMERGENCY OVERVIEW\*\*

#### CAUTION

May cause irritation with prolonged contact.

Do not get in eyes, on skin, on clothing. Do not take internally. Wear suitable protective clothing. Keep container tightly closed. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of soap and water. Protect product from freezing.

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions.

PRIMARY ROUTES OF EXPOSURE :

Eye, Skin

HUMAN HEALTH HAZARDS - ACUTE :

EYE CONTACT :

Can cause mild to moderate irritation.

SKIN CONTACT :

Can cause mild irritation.

INGESTION :

Not a likely route of exposure. No adverse effects expected.

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## SAFETY DATA SHEET

PRODUCT

**83400 Flocculant**

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### INHALATION :

Not a likely route of exposure. No adverse effects expected.

### SYMPTOMS OF EXPOSURE :

#### Acute :

A review of available data does not identify any symptoms from exposure not previously mentioned.

#### Chronic :

Frequent or prolonged contact with product may defat and dry the skin, leading to discomfort and dermatitis.

### AGGRAVATION OF EXISTING CONDITIONS :

A review of available data does not identify any worsening of existing conditions.

### HUMAN HEALTH HAZARDS - CHRONIC :

No adverse effects expected other than those mentioned above.

## 4. FIRST AID MEASURES

### EYE CONTACT :

Immediately flush eye with water for at least 15 minutes while holding eyelids open. If irritation persists, repeat flushing. Get immediate medical attention.

### SKIN CONTACT :

Immediately flush with plenty of water for at least 15 minutes. If symptoms persist, call a physician.

### INGESTION :

Do not induce vomiting without medical advice. If conscious, washout mouth and give water to drink. Get medical attention.

### INHALATION :

Remove to fresh air, treat symptomatically. Get medical attention.

### NOTE TO PHYSICIAN :

Based on the individual reactions of the patient, the physician's judgement should be used to control symptoms and clinical condition.

## 5. FIRE FIGHTING MEASURES

FLASH POINT : > 200 °F / > 93 °C ( PMCC )

### EXTINGUISHING MEDIA :

Foam, Dry powder, Carbon dioxide, Other extinguishing agent suitable for Class B fires

### UNSUITABLE EXTINGUISHING MEDIA :

Do not use water unless flooding amounts are available.

### FIRE AND EXPLOSION HAZARD :

May evolve oxides of carbon (COx) under fire conditions. May evolve oxides of nitrogen (NOx) under fire conditions.



## SAFETY DATA SHEET

PRODUCT

**83400 Flocculant**

EMERGENCY TELEPHONE NUMBER(S)

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### SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTING :

In case of fire, wear a full face positive-pressure self contained breathing apparatus and protective suit.

## 6. ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS :

Notify appropriate government, occupational health and safety and environmental authorities. Do not touch spilled material. Stop or reduce any leaks if it is safe to do so. Use personal protective equipment recommended in Section 8 (Exposure Controls/Personal Protection).

### METHODS FOR CLEANING UP :

**SMALL SPILLS:** Soak up spill with absorbent material. Place residues in a suitable, covered, properly labeled container. Wash affected area. **LARGE SPILLS:** Contain liquid using absorbent material, by digging trenches or by diking. Reclaim into recovery or salvage drums or tank truck for proper disposal. Contact an approved waste hauler for disposal of contaminated recovered material. Dispose of material in compliance with regulations indicated in Section 13 (Disposal Considerations).

### ENVIRONMENTAL PRECAUTIONS :

Do not contaminate surface water.

## 7. HANDLING AND STORAGE

### HANDLING :

Do not take internally. Have emergency equipment (for fires, spills, leaks, etc.) readily available. Ensure all containers are labeled. Avoid eye and skin contact.

### STORAGE CONDITIONS :

Store separately from oxidizers. Store the containers tightly closed.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### OCCUPATIONAL EXPOSURE LIMITS :

This product does not contain any substance that has an established exposure limit.

Country/Source	Substance(s)	Category:	ppm	mg/m3
	Oil Mist (Mineral) (Mist)	ACGIH/TWA		5
		ACGIH/STEL		10

### ENGINEERING MEASURES :

General ventilation is recommended.

### RESPIRATORY PROTECTION :

Due to its low volatility and toxicity, the hazard potential associated with this material is relatively low. Respiratory protection is not normally needed.

### HAND PROTECTION :

Nitrile gloves PVC gloves



## SAFETY DATA SHEET

PRODUCT

**83400 Flocculant**

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### SKIN PROTECTION :

Wear standard protective clothing.

### EYE PROTECTION :

Wear chemical splash goggles.

### HYGIENE RECOMMENDATIONS :

Keep an eye wash fountain available. Keep a safety shower available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Viscous liquid
APPEARANCE	Opaque Off-white
ODOR	Citrus oranges
SPECIFIC GRAVITY	1.051 @ 74 °F / 23 °C
DENSITY	8.8 lb/gal
SOLUBILITY IN WATER	Miscible
pH (100 %)	6.6
FREEZING POINT	-20 °F /

Note: These physical properties are typical values for this product and are subject to change.

## 10. STABILITY AND REACTIVITY

### STABILITY :

Stable under normal conditions.

### HAZARDOUS POLYMERIZATION :

Hazardous polymerization will not occur.

### CONDITIONS TO AVOID :

Freezing temperatures.

### MATERIALS TO AVOID :

Addition of water results in gelling. Contact with strong oxidizers (e.g. chlorine, peroxides, chromates, nitric acid, perchlorate, concentrated oxygen, permanganate) may generate heat, fires, explosions and/or toxic vapors.

### HAZARDOUS DECOMPOSITION PRODUCTS :

Under fire conditions: Oxides of carbon, Oxides of nitrogen

## 11. TOXICOLOGICAL INFORMATION

No toxicity studies have been conducted on this product.



## SAFETY DATA SHEET

PRODUCT

**83400 Flocculant**

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC.

### SENSITIZATION :

This product is not expected to be a sensitizer.

### CARCINOGENICITY :

None of the substances in this product are listed as carcinogens by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP) or the American Conference of Governmental Industrial Hygienists (ACGIH).

### HUMAN HAZARD CHARACTERIZATION :

Based on our hazard characterization, the potential human hazard is: Low

## 12. ECOLOGICAL INFORMATION

### ECOTOXICOLOGICAL EFFECTS :

The following results are for a 1% aqueous solution.

### ACUTE FISH RESULTS :

Species	Exposure	LC50	Test Descriptor
Fathead Minnow	96 hrs	150 mg/l	Product

### ENVIRONMENTAL HAZARD AND EXPOSURE CHARACTERIZATION

Based on our hazard characterization, the potential environmental hazard is: Low

If released into the environment, see CERCLA/SUPERFUND in Section 15.

## 13. DISPOSAL CONSIDERATIONS

If this product becomes a waste, it is not a hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA) 40 CFR 261, since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

As a non-hazardous waste, it is not subject to federal regulation. Consult state or local regulation for any additional handling, treatment or disposal requirements. For disposal, contact a properly licensed waste treatment, storage, disposal or recycling facility.

## 14. TRANSPORT INFORMATION

The information in this section is for reference only and should not take the place of a shipping paper (bill of lading) specific to an order. Please note that the proper Shipping Name / Hazard Class may vary by packaging, properties, and mode of transportation. Typical Proper Shipping Names for this product are as follows.

### LAND TRANSPORT :

Proper Shipping Name :

PRODUCT IS NOT REGULATED DURING  
TRANSPORTATION

### AIR TRANSPORT (ICAO/IATA) :

Nalco Company 1601 W. Diehl Road • Naperville, Illinois 60563-1198 • (630)305-1000

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## SAFETY DATA SHEET

PRODUCT

**83400 Flocculant**

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

Proper Shipping Name :

PRODUCT IS NOT REGULATED DURING  
TRANSPORTATION

MARINE TRANSPORT (IMDG/IMO) :

Proper Shipping Name :

PRODUCT IS NOT REGULATED DURING  
TRANSPORTATION

### 15. REGULATORY INFORMATION

This section contains additional information that may have relevance to regulatory compliance. The information in this section is for reference only. It is not exhaustive, and should not be relied upon to take the place of an individualized compliance or hazard assessment. Nalco accepts no liability for the use of this information.

NATIONAL REGULATIONS, USA :

OSHA HAZARD COMMUNICATION RULE, 29 CFR 1910.1200 :

Based on our hazard evaluation, the following substance(s) in this product is/are hazardous and the reason(s) is/are shown below.

Hydrotreated Light Distillate : Exposure Limit

CERCLA/SUPERFUND, 40 CFR 117, 302 :

Notification of spills of this product is not required.

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312, AND 313 :

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355) :

This product does not contain substances listed in Appendix A and B as an Extremely Hazardous Substance.

SECTIONS 311 AND 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370) :

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following indicated EPA hazard categories:

- |   |                                   |
|---|-----------------------------------|
| X | Immediate (Acute) Health Hazard   |
| - | Delayed (Chronic) Health Hazard   |
| - | Fire Hazard                       |
| - | Sudden Release of Pressure Hazard |
| - | Reactive Hazard                   |

Under SARA 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are: 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372) :

This product does not contain substances on the List of Toxic Chemicals.

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## SAFETY DATA SHEET

PRODUCT

**83400 Flocculant**

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

### TOXIC SUBSTANCES CONTROL ACT (TSCA) :

The substances in this preparation are included on or exempted from the TSCA 8(b) Inventory (40 CFR 710)

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15 / formerly Sec. 307, 40 CFR 116.4 / formerly Sec. 311 :

This product may contain trace levels (<0.1% for carcinogens, <1% all other substances) of the following substance(s) listed under the regulation. Additional components may be unintentionally present at trace levels.

Substance(s)	Citations
<ul style="list-style-type: none"><li>• Sodium Hydroxide</li><li>• Formic Acid</li></ul>	Sec. 311

CLEAN AIR ACT, Sec. 112 (40 CFR 61, Hazardous Air Pollutants), Sec. 602 (40 CFR 82, Class I and II Ozone Depleting Substances) :

This product may contain trace levels (<0.1% for carcinogens, <1% all other substances) of the following substance(s) listed under the regulation. Additional components may be unintentionally present at trace levels.

Substance(s)	Citations
<ul style="list-style-type: none"><li>• Formic Acid</li></ul>	Sec. 111

### CALIFORNIA PROPOSITION 65 :

Substances known to the State of California to cause cancer are present as an impurity or residue.

### MICHIGAN CRITICAL MATERIALS :

Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

### STATE RIGHT TO KNOW LAWS :

Substances listed under this regulation are not intentionally added or expected to be present in this product. Listed components may be present at trace levels.

### NATIONAL REGULATIONS, CANADA :

#### WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS) :

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

#### WHMIS CLASSIFICATION :

D2B - Materials Causing Other Toxic Effects - Toxic Material

#### CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA) :

The substance(s) in this preparation are included in or exempted from the Domestic Substance List (DSL).

**SAFETY DATA SHEET**

PRODUCT

**83400 Flocculant**

EMERGENCY TELEPHONE NUMBER(S)

(800) 424-9300 (24 Hours) CHEMTREC

**16. OTHER INFORMATION**

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to insure safe workplace operations. Please consult your local sales representative for any further information.

## REFERENCES

Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices, American Conference of Governmental Industrial Hygienists, OH., (Ariel Insight CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Hazardous Substances Data Bank, National Library of Medicine, Bethesda, Maryland (TOMES CPS CD-ROM Version), Micromedex, Inc., Englewood, CO.

IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, Geneva: World Health Organization, International Agency for Research on Cancer.

Integrated Risk Information System, U.S. Environmental Protection Agency, Washington, D.C. (TOMES CPS CD-ROM Version), Micromedex, Inc., Englewood, CO.

Annual Report on Carcinogens, National Toxicology Program, U.S. Department of Health and Human Services, Public Health Service.

Title 29 Code of Federal Regulations, Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA), (Ariel Insight CD-ROM Version), Ariel Research Corp., Bethesda, MD.

Registry of Toxic Effects of Chemical Substances, National Institute for Occupational Safety and Health, Cincinnati, OH, (TOMES CPS CD-ROM Version), Micromedex, Inc., Englewood, CO.

Ariel Insight (An integrated guide to industrial chemicals covered under major regulatory and advisory programs), North American Module, Western European Module, Chemical Inventories Module and the Generics Module (Ariel Insight CD-ROM Version), Ariel Research Corp., Bethesda, MD.

The Teratogen Information System, University of Washington, Seattle, WA (TOMES CPS CD-ROM Version), Micromedex, Inc., Englewood, CO.

Prepared By : Product Safety Department

Date issued : 07/31/2009

Version Number : 1.10

ATTACHMENT 13

SOILS INFORMATION  
CATCHMENT STRUCTURES C AND E

**PLANT AND WILDLIFE SCIENCES**  
**Brigham Young University**  
**275 WIDB**  
**Provo, UT 84602-5183**  
**PHONE: (801) 422-2760**  
**FAX: (801) 422-0008**

**FAX**

**To:**

Utah American Energy - Dana Marrelli

**Fax #:**

435-888-4002

**From:**

BRUCE WEBB

**Date:**

Sept. 28, 2010

**Subject:**

Soil analysis results

**Pages:**

7

**Notes:**

# BRIGHAM YOUNG UNIVERSITY

## Soil and Plant Analysis Laboratory

255 WIDB  
 Provo, UT 84602  
 801-422-2147

### Plant and Wildlife Sciences Department

Name Utah American Energy  
 Street PO Box 910  
East Carbon Utah 84520  
 City State Zip

### SOIL TEST REPORT AND RECOMMENDATIONS

Date: 28-Sep-10  
 Telephone: 435-888-4026  
 Fax: 435-888-4002

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Matter
Sample 1	Turf	7.60	68.72	15.44	15.84	Sandy Loam		0.53

Soil Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Nitrate-Nitrogen ppm N	4.45	X					apply 2.8 lbs of N/1000 sq ft
Phosphorus ppm P	16.61			X			no fertilizer needed
Potassium ppm K	124.80				X		no fertilizer needed
Salinity-EcE dS/m	2.35		X				no salinity problem
SAR-Sodium Absorption Ratio	3.00		X				no sodium hazard
Calcium-SAR ppm Ca	273.76						
Magnesium SAR ppm Mg	91.52						
Sodium SAR ppm Na	225.28						
Ca Carbonate %CaCO3	13.98						
Saturation %	25.66						

Notes:

Catchment C, As-built sample (composite)

# BRIGHAM YOUNG UNIVERSITY

## Soil and Plant Analysis Laboratory

255 WIDB

Provo, UT 84602

801-422-2147

### Plant and Wildlife Sciences Department

### SOIL TEST REPORT AND RECOMMENDATIONS

Name Utah American Energy  
 Street PO Box 910  
East Carbon Utah 84520  
 City State Zip

Date: 28-Sep-10  
 Telephone: 435-888-4026  
 Fax: 435-888-4002

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Matter
Sample 2	Turf	7.79	74.72	15.44	9.84	Sandy Loam		0.40

Soil Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Nitrate-Nitrogen ppm N	4.32	X					apply 2.8 lbs of N/1000 sq ft
Phosphorus ppm P	24.15			X			no fertilizer needed
Potassium ppm K	131.20				X		no fertilizer needed
Salinity-ECe dS/m	0.44	X					no salinity problem
SAR-Sodium Absorption Ratio	0.57	X					no sodium hazard
Calcium-SAR ppm Ca	115.68						
Magnesium SAR ppm Mg	24.48						
Sodium SAR ppm Na	25.76						
Ca Carbonate %CaCO3	11.90						
Saturation %	26.40						

Notes:

Catchment C Undisturbed  
0-7"

# BRIGHAM YOUNG UNIVERSITY

## Soil and Plant Analysis Laboratory

**255 WIDB**  
**Provo, UT 84602**  
**801-422-2147**

### Plant and Wildlife Sciences Department

### SOIL TEST REPORT AND RECOMMENDATIONS

Name Utah American Energy  
 Street PO Box 910  
East Carbon Utah 84520  
 City State Zip

Date: 28-Sep-10  
 Telephone: 435-888-4026  
 Fax: 435-888-4002

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Matter
Sample 3	Turf	7.91	78.72	9.44	11.84	Sandy Loam		0.26

Soil Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Nitrate-Nitrogen ppm N	3.77	X					apply 2.8 lbs of N/1000 sq ft
Phosphorus ppm P	23.40			X			no fertilizer needed
Potassium ppm K	128.00				X		no fertilizer needed
Salinity-EcE dS/m	0.48	X					no salinity problem
SAR-Sodium Absorption Ratio	0.81	X					no sodium hazard
Calcium-SAR ppm Ca	107.36						
Magnesium SAR ppm Mg	20.32						
Sodium SAR ppm Na	34.88						
Ca Carbonate %CaCO3	14.36						
Saturation %	23.00						

Notes:

Catchment C

Undisturbed  
 7"-24"

# BRIGHAM YOUNG UNIVERSITY

## Soil and Plant Analysis Laboratory

**255 WIDB**

**Provo, UT 84602**

**801-422-2147**

### Plant and Wildlife Sciences Department

Name Utah American Energy  
 Street PO Box 910  
East Carbon Utah 84520  
 City State Zip

### SOIL TEST REPORT AND RECOMMENDATIONS

Date: 28-Sep-10  
 Telephone: 435-888-4026  
 Fax: 435-888-4002

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Matter
Sample 4	Turf	7.54	68.72	17.44	13.84	Sandy Loam		1.29

Soil Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Nitrate-Nitrogen ppm N	4.06	X					apply 2.8 lbs of N/1000 sq ft
Phosphorus ppm P	7.10		X				apply 1.4 lbs of P2O5/1000 sq ft
Potassium ppm K	41.60		X				apply 0.9 lbs of K2O/1000 sq ft
Salinity-ECe dS/m	4.80				X		salinity a problem for sensitive crops
SAR-Sodium Absorption Ratio	5.78		X				no sodium hazard
Calcium-SAR ppm Ca	520.64						
Magnesium SAR ppm Mg	284.16						
Sodium SAR ppm Na	663.04						
Ca Carbonate %CaCO3	18.37						
Saturation %	26.70						

Notes:

Catchment E

As-built sample  
(composite)

# BRIGHAM YOUNG UNIVERSITY

## Soil and Plant Analysis Laboratory

255 WIDB

Provo, UT 84602

801-422-2147

### Plant and Wildlife Sciences Department

### SOIL TEST REPORT AND RECOMMENDATIONS

Name Utah American Energy  
Street PO Box 910  
East Carbon Utah 84520  
City State Zip

Date: 28-Sep-10  
Telephone: 435-888-4026  
Fax: 435-888-4002

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Matter
Sample 5	Turf	7.72	70.72	19.44	9.84	Sandy Loam		0.77

Soil Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Nitrate-Nitrogen ppm N	4.55	X					apply 2.8 lbs of N/1000 sq ft
Phosphorus ppm P	19.78			X			no fertilizer needed
Potassium ppm K	172.80				X		no fertilizer needed
Salinity-EcE dS/m	2.90		X				no salinity problem
SAR-Sodium Absorption Ratio	3.19		X				no sodium hazard
Calcium-SAR ppm Ca	367.84						
Magnesium SAR ppm Mg	66.56						
Sodium SAR ppm Na	253.44						
Ca Carbonate %CaCO3	11.98						
Saturation %	29.71						

Notes:

Catchment E Undisturbed  
0"-7"

# BRIGHAM YOUNG UNIVERSITY

## Soil and Plant Analysis Laboratory

**255 WIDB  
Provo, UT 84602  
801-422-2147**

### Plant and Wildlife Sciences Department

Name Utah American Energy  
Street PO Box 910  
East Carbon Utah 84520  
City State Zip

### SOIL TEST REPORT AND RECOMMENDATIONS

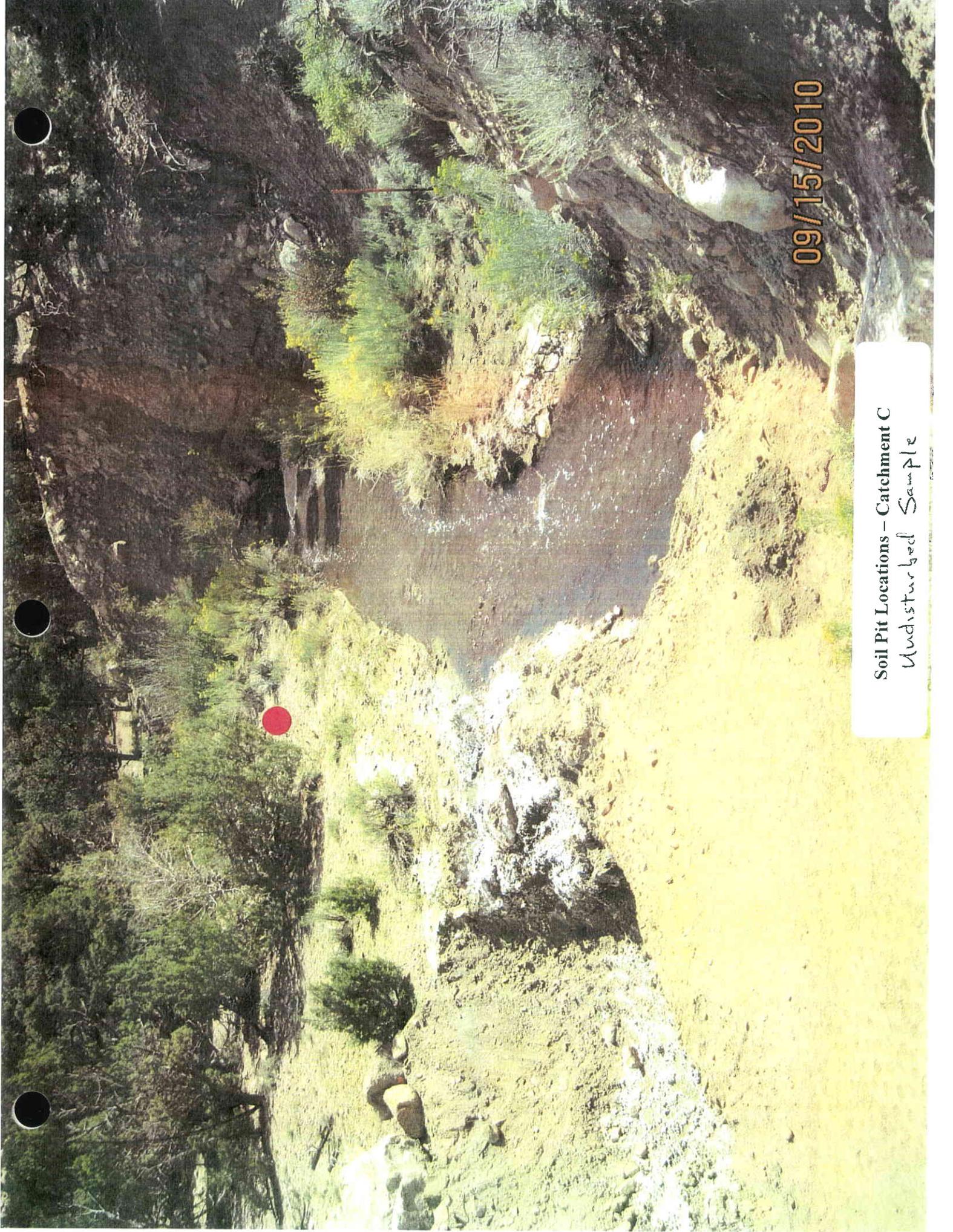
Date: 28-Sep-10  
Telephone: 435-888-4026  
Fax: 435-888-4002

Sample Identification	Crop to be grown	pH	% Sand	% Silt	% Clay	Soil Texture	Cation Exchange meq/100g	% Organic Matter
Sample 6	Turf	7.82	74.72	13.44	11.84	Sandy Loam		0.38

Soil Test	Results	Very Low	Low	Medium	High	Very High	Recommendations
Nitrate-Nitrogen ppm N	2.89	X					apply 2.8 lbs of N/1000 sq ft
Phosphorus ppm P	16.47			X			no fertilizer needed
Potassium ppm K	201.60				X		no fertilizer needed
Salinity-ECE dS/m	0.51	X					no salinity problem
SAR-Sodium Absorption Ratio	0.61	X					no sodium hazard
Calcium-SAR ppm Ca	117.44						
Magnesium SAR ppm Mg	25.44						
Sodium SAR ppm Na	28.16						
Ca Carbonate %CaCO3	13.21						
Saturation %	26.05						

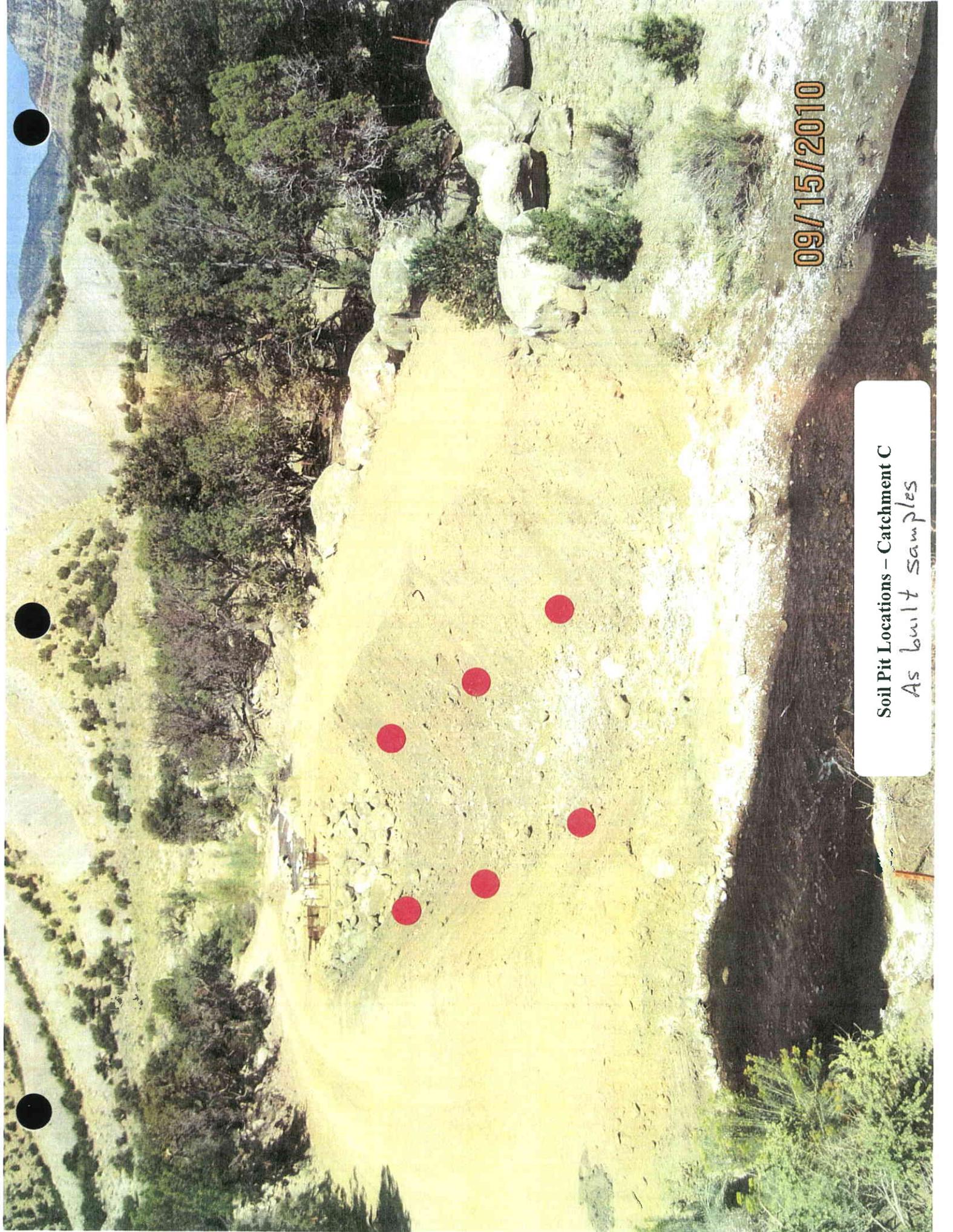
Notes:

Catchment **E**      Undisturbed  
7"-29"



09/15/2010

Soil Pit Locations - Catchment C  
Undisturbed Sample



09/15/2010

Soil Pit Locations - Catchment C  
As built samples



09/15/2010

Undisturbed Soil Pit Locations  
Catchment C

09/15/2010

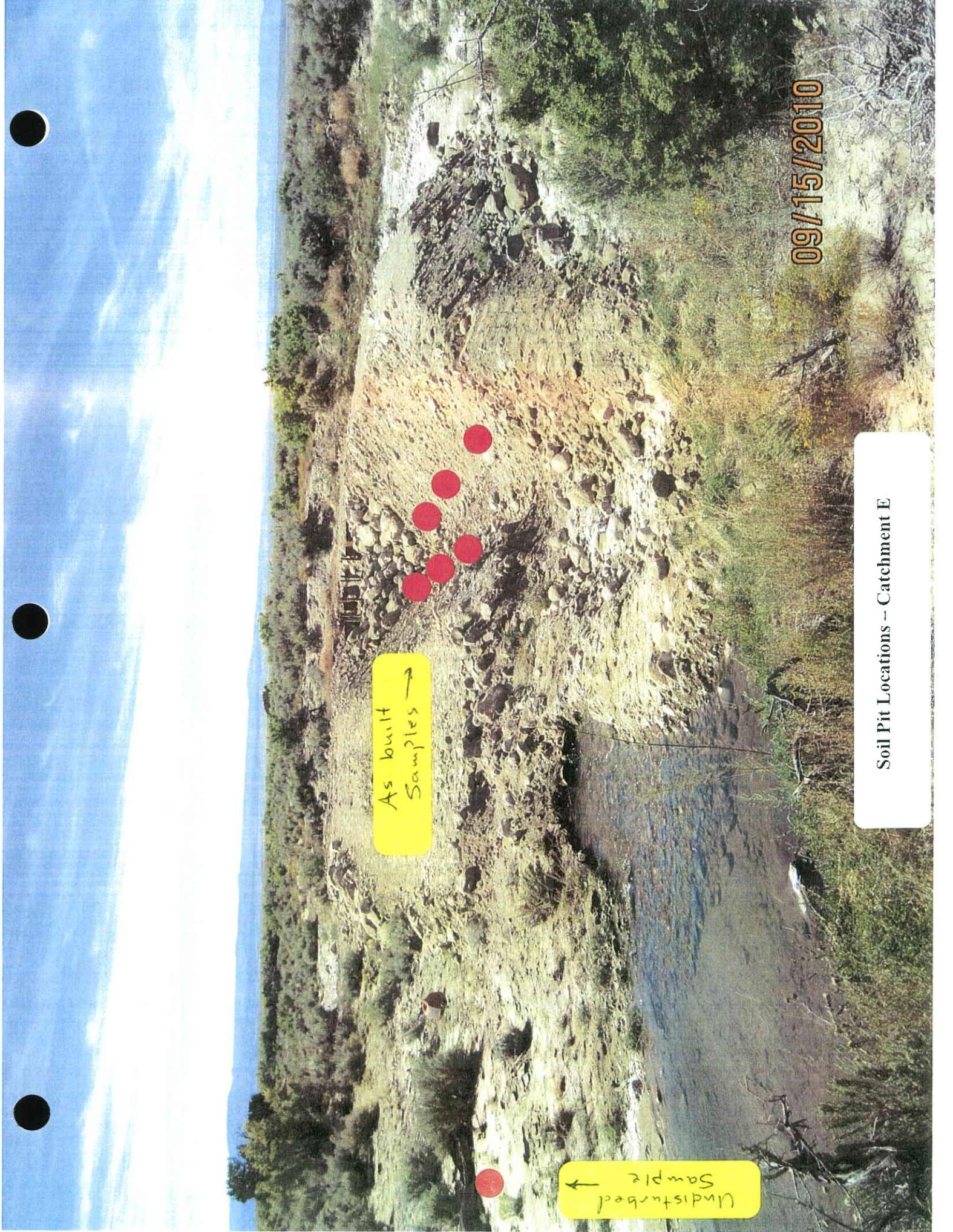
Undisturbed Soil Pit Locations  
Catchment C



## REPLACEMENT MAPS

### NOTE TO REVIEWERS:

THIS SINGLE MAP REPLACES BOTH MAP 1-0 AND  
MAP 1-1



As built  
Samples →

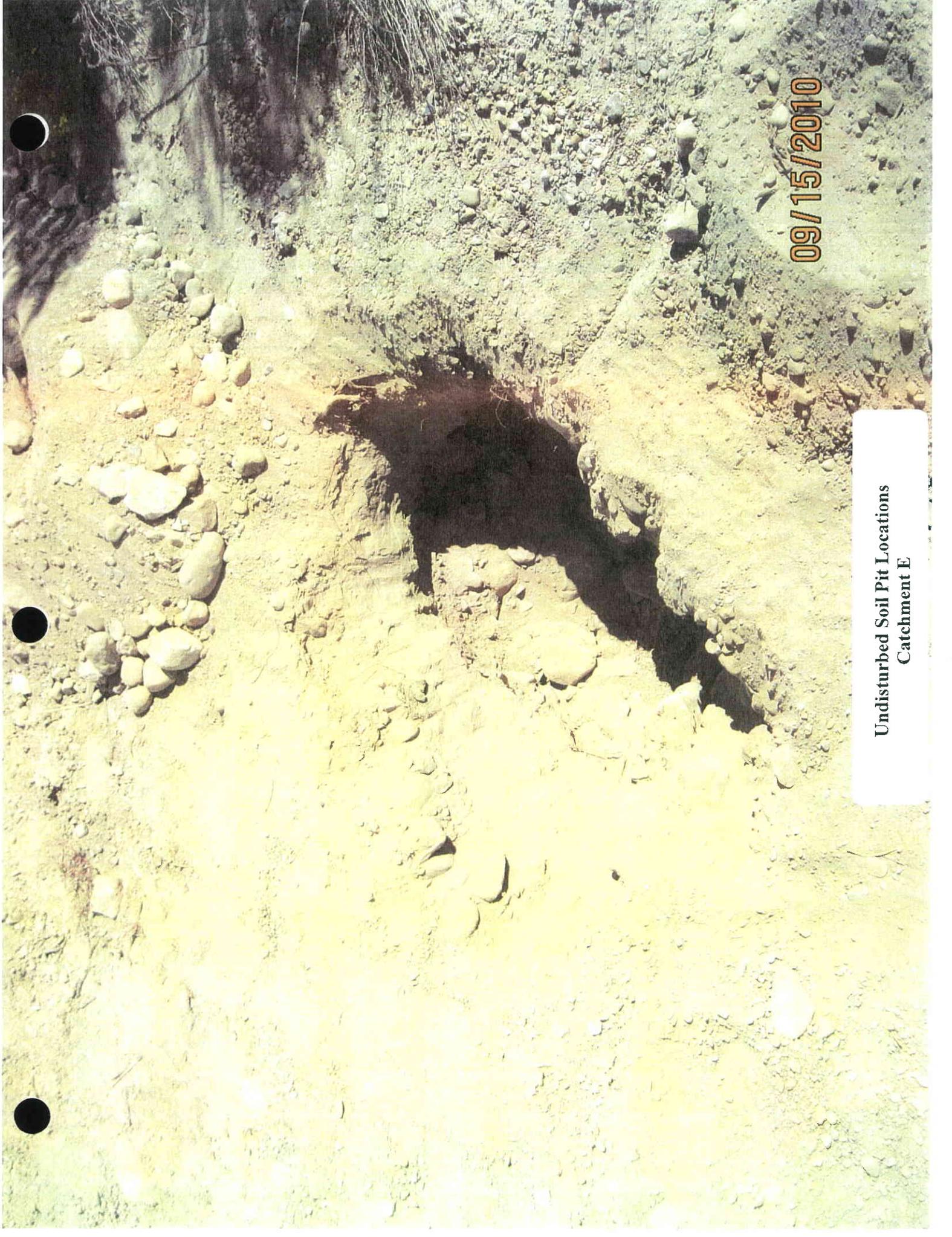
←  
Undisturbed  
Sample

09/15/2010

Soil Pit Locations – Catchment E

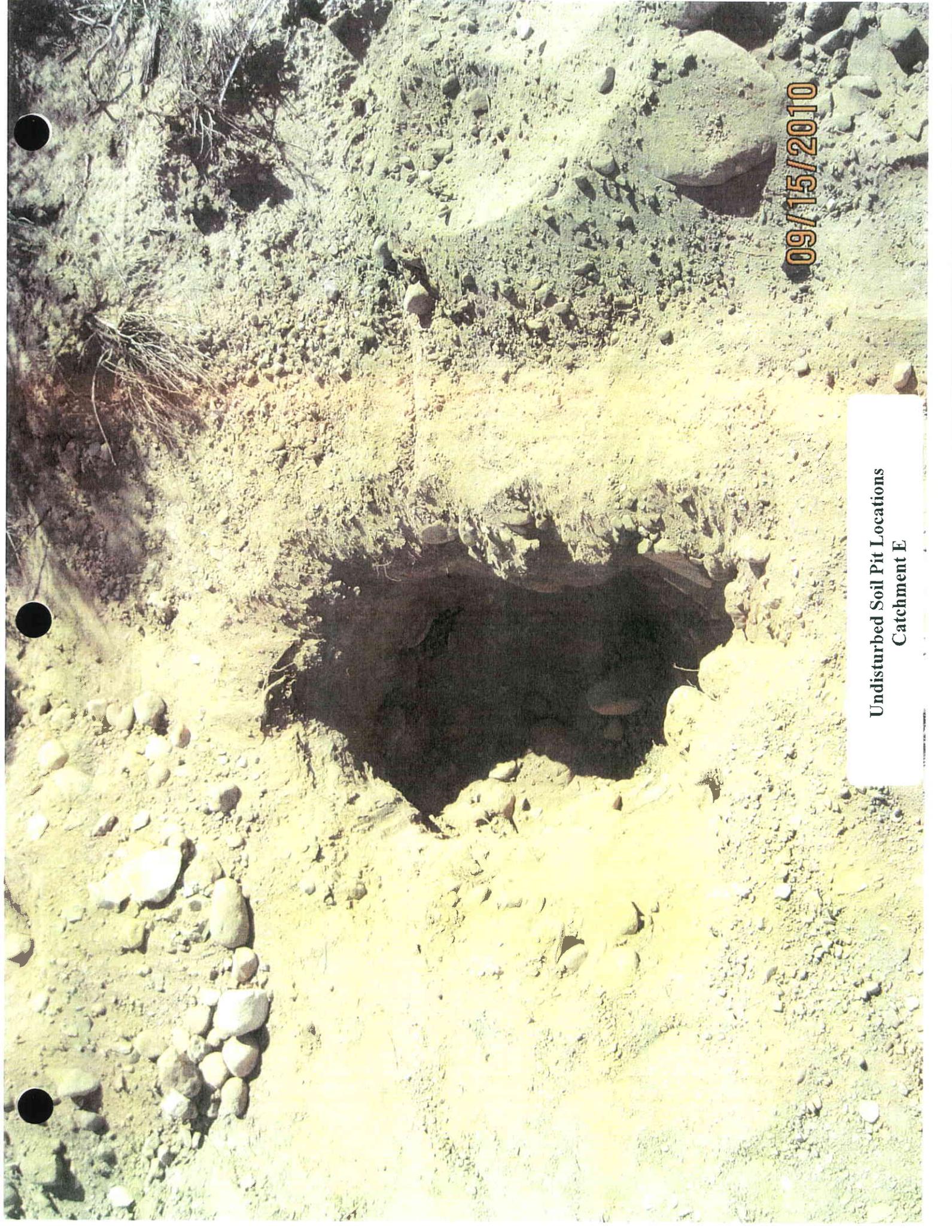
09/15/2010

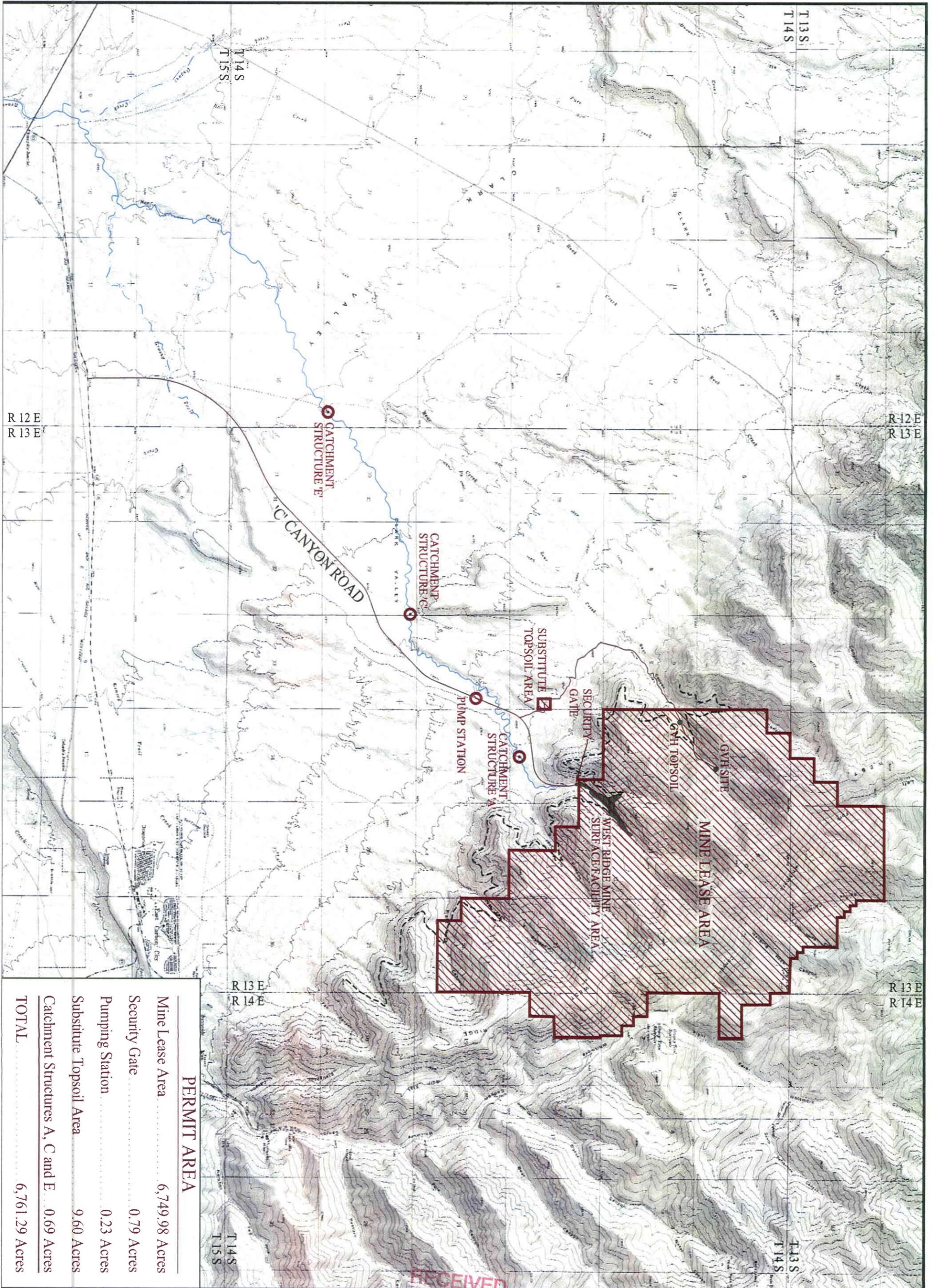
Undisturbed Soil Pit Locations  
Catchment E



09/15/2010

Undisturbed Soil Pit Locations  
Catchment E





PERMIT AREA	
Mine Lease Area	6,749.98 Acres
Security Gate	0.79 Acres
Pumping Station	0.23 Acres
Substitute Topsoil Area	9.60 Acres
Catchment Structures A, C and E	0.69 Acres
<b>TOTAL</b>	<b>6,761.29 Acres</b>

**WEST RIDGE MINE**  
 Map 1-0, Permit Map  
 Map 1-1, Location Map

DATE: 10-18-10      REV: 8      ACAD REF: Maps 1-0 and 1-1 Rev 8

**LEGEND:**  
 Lease Areas  
 Surface Facility Area  
 GVH Site  
 Outcrop



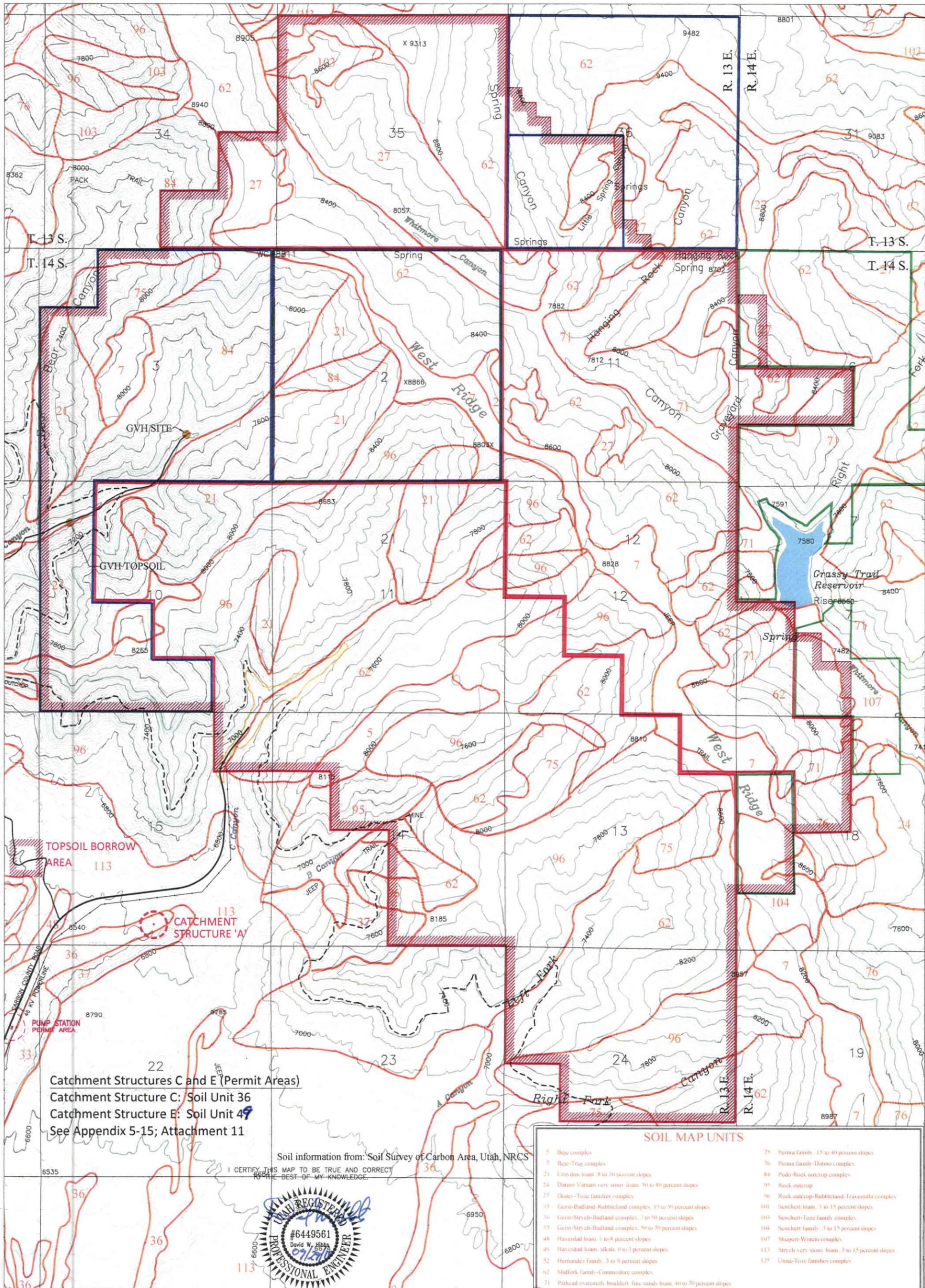
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 STATE REGISTERED PROFESSIONAL ENGINEER  
 #6449561  
 David W. Hibbs

I CERTIFY THIS MAP TO BE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



**WEST RIDGE**  
 RESOURCES, INC.

SCALE: 1"=5000'



Catchment Structures C and E (Permit Areas)  
 Catchment Structure C: Soil Unit 36  
 Catchment Structure E: Soil Unit 49  
 See Appendix 5-15; Attachment 11

Soil information from: Soil Survey of Carbon Area, Utah, NRCS

I CERTIFY THIS MAP TO BE TRUE AND CORRECT  
 TO THE BEST OF MY KNOWLEDGE.

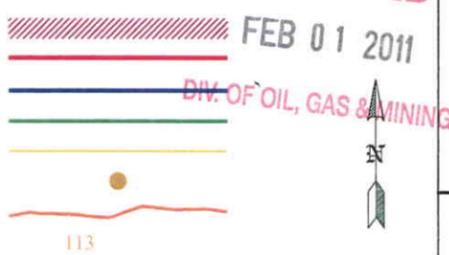


# WEST RIDGE MINE

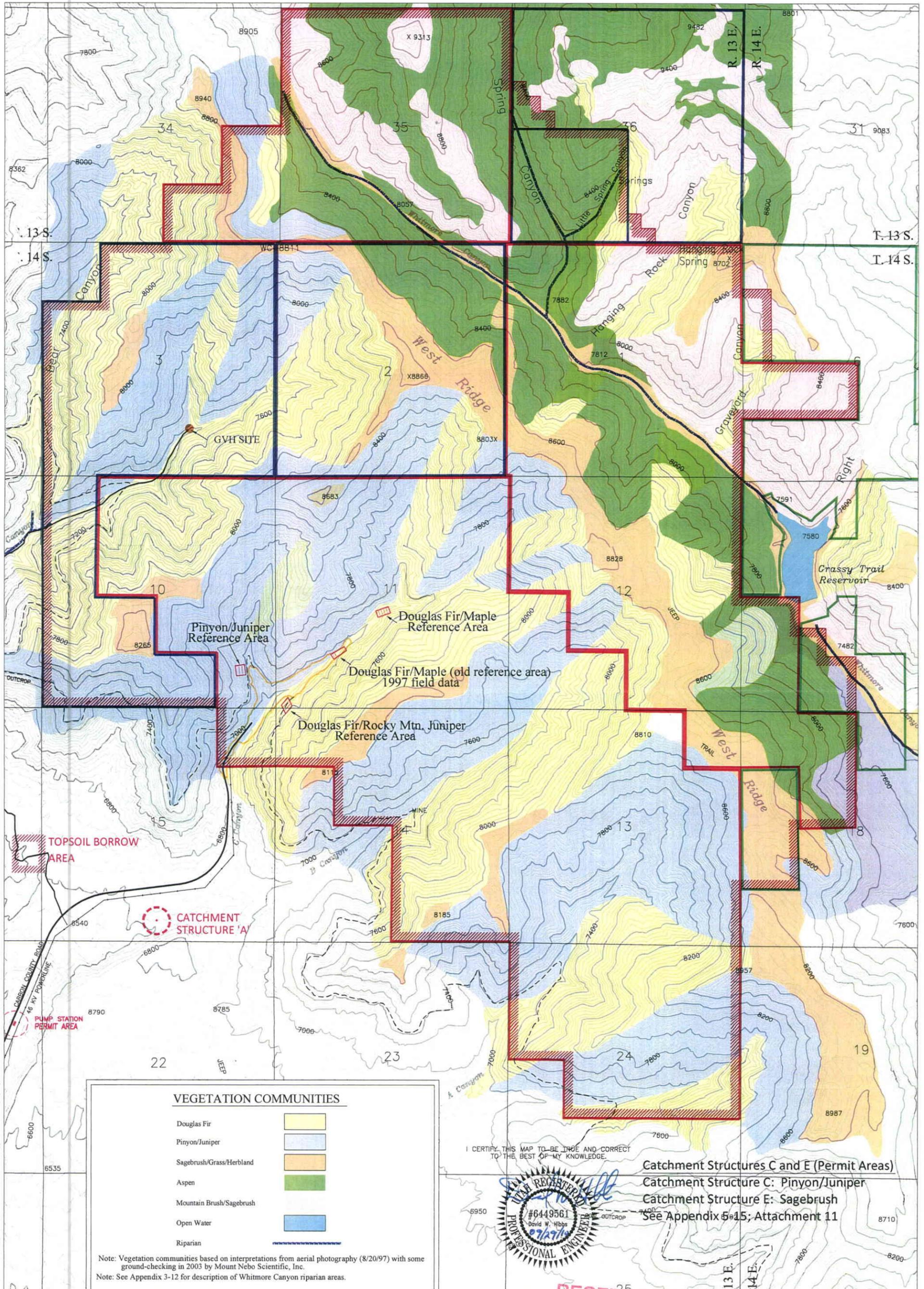
## Map 2-1

### Regional Soil Map

**LEGEND:**  
 Permit Boundary  
 Federal Lease  
 State Lease  
 Penta Creek Fee  
 Surface Facility Area  
 GVH Site  
 Soil Mapping Boundary  
 Soil Map Number



SCALE: 1"=2000'



# WEST RIDGE MINE

## Map 3-1

### General Vegetation Communities

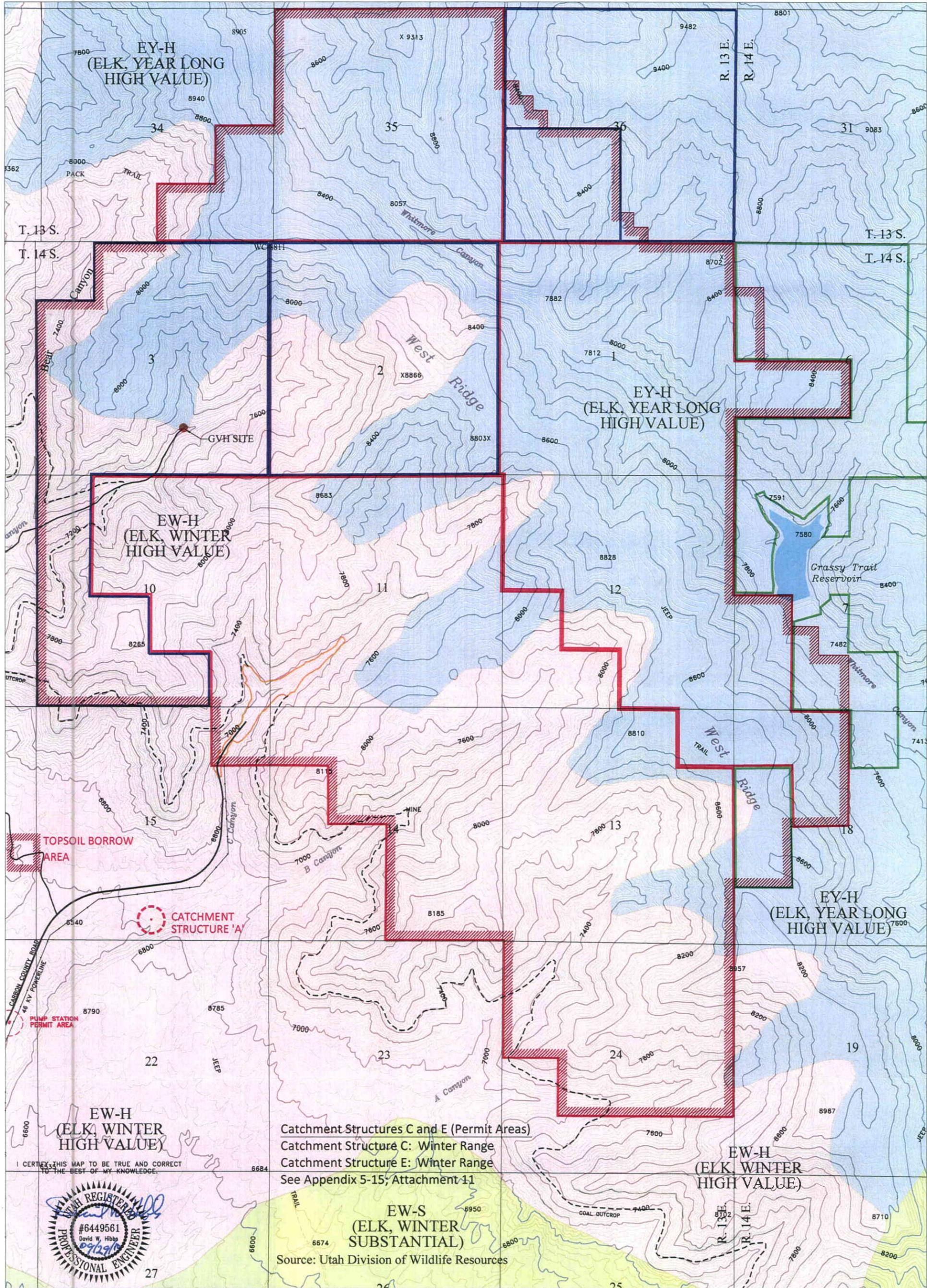
- LEGEND:**
- Permit Boundary
  - Federal Lease
  - State Lease
  - Penta Creek Fee
  - Surface Facility Area
  - GVH Site
  - Outcrop

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 RESOURCES, INC.

SCALE: 1"=2000'





**WEST RIDGE MINE**  
 Map 3-4C  
 Wildlife Map - Elk Range

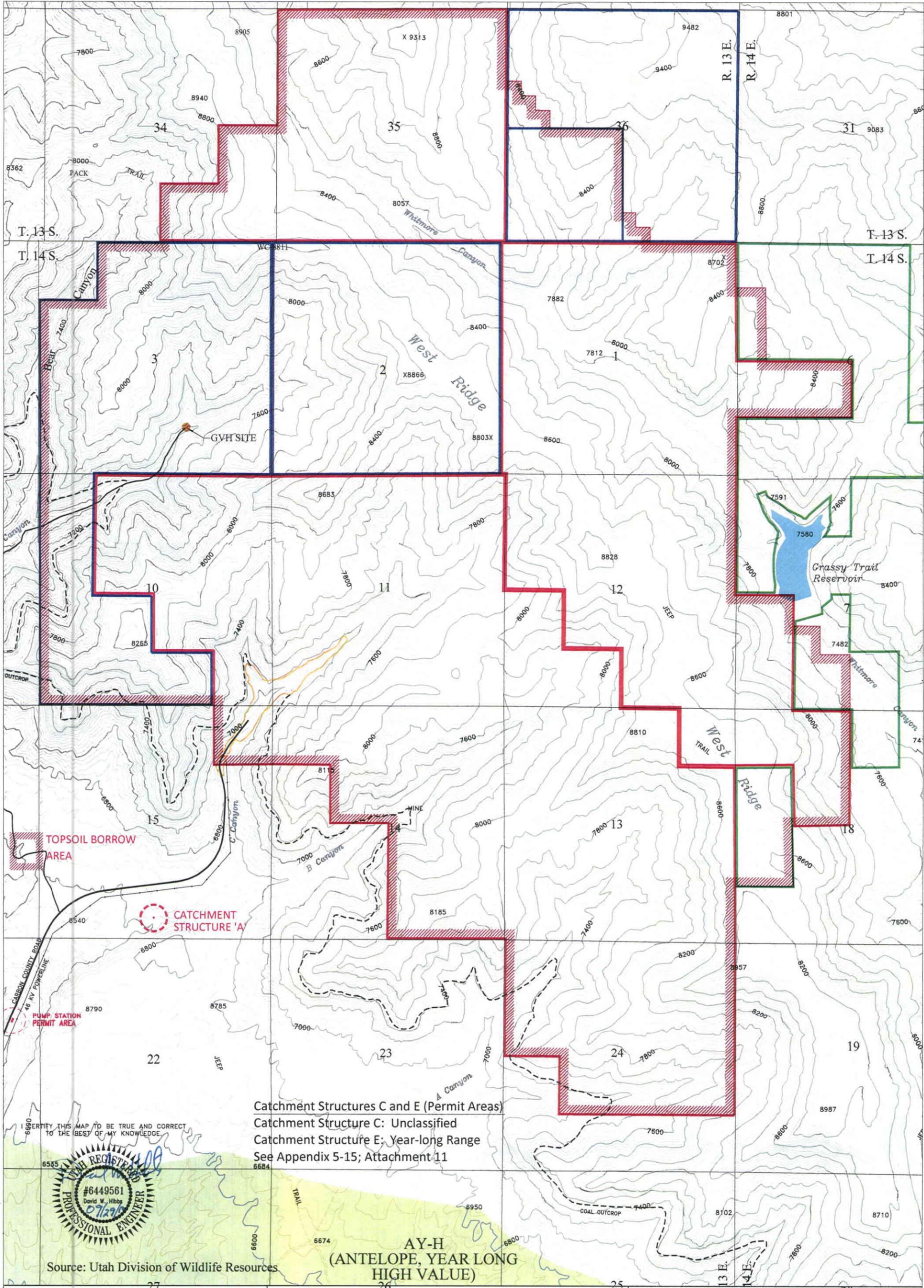
- Permit Boundary
- Federal Lease
- State Lease
- Penta Creek Fee
- Surface Facility Area
- GVH Site
- EW-S
- EY-H
- EW-H

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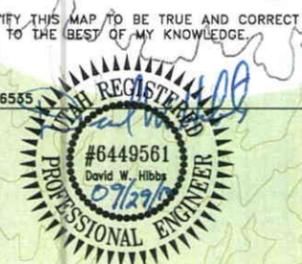


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SCALE: 1"=2000'



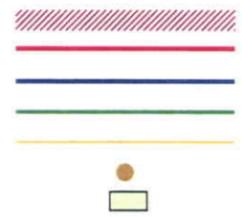
Catchment Structures C and E (Permit Areas)  
 Catchment Structure C: Unclassified  
 Catchment Structure E: Year-long Range  
 See Appendix 5-15; Attachment 11



Source: Utah Division of Wildlife Resources

**LEGEND:**

- Permit Boundary
- Federal Lease
- State Lease
- Penta Creek Fee
- Surface Facility Area
- GVH Site
- AY-H



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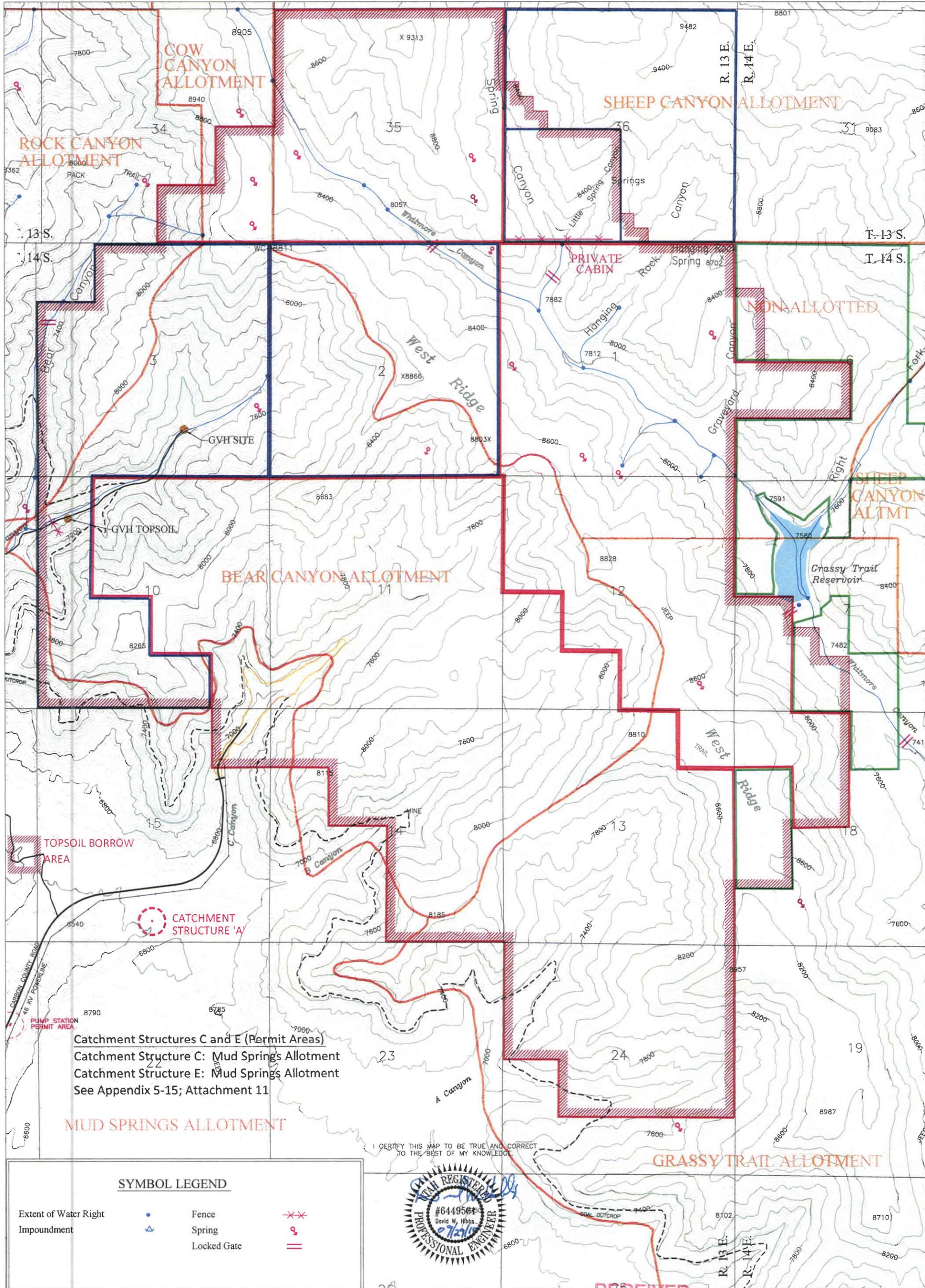
**WEST RIDGE**  
RESOURCES, INC.

SCALE: 1"=2000'

**WEST RIDGE MINE**

Map 3-4D

**Wildlife Map - Antelope Range**



Catchment Structures C and E (Permit Areas)  
 Catchment Structure C: Mud Springs Allotment  
 Catchment Structure E: Mud Springs Allotment  
 See Appendix 5-15; Attachment 11

I CERTIFY THIS MAP TO BE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



**SYMBOL LEGEND**

- Extent of Water Right
- Impoundment
- Fence
- Spring
- Locked Gate

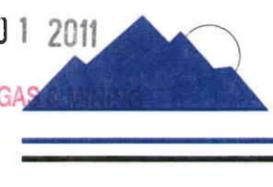
Refer to Map 7-3 for State Appropriated Water Rights

**WEST RIDGE MINE**  
**Map 4-1**  
**Existing Land Use**

- LEGEND:**
- Permit Boundary
  - Federal Lease
  - State Lease
  - Penta Creek Fee
  - Surface Facility Area
  - GVH Site
  - Grazing Allotment Boundary

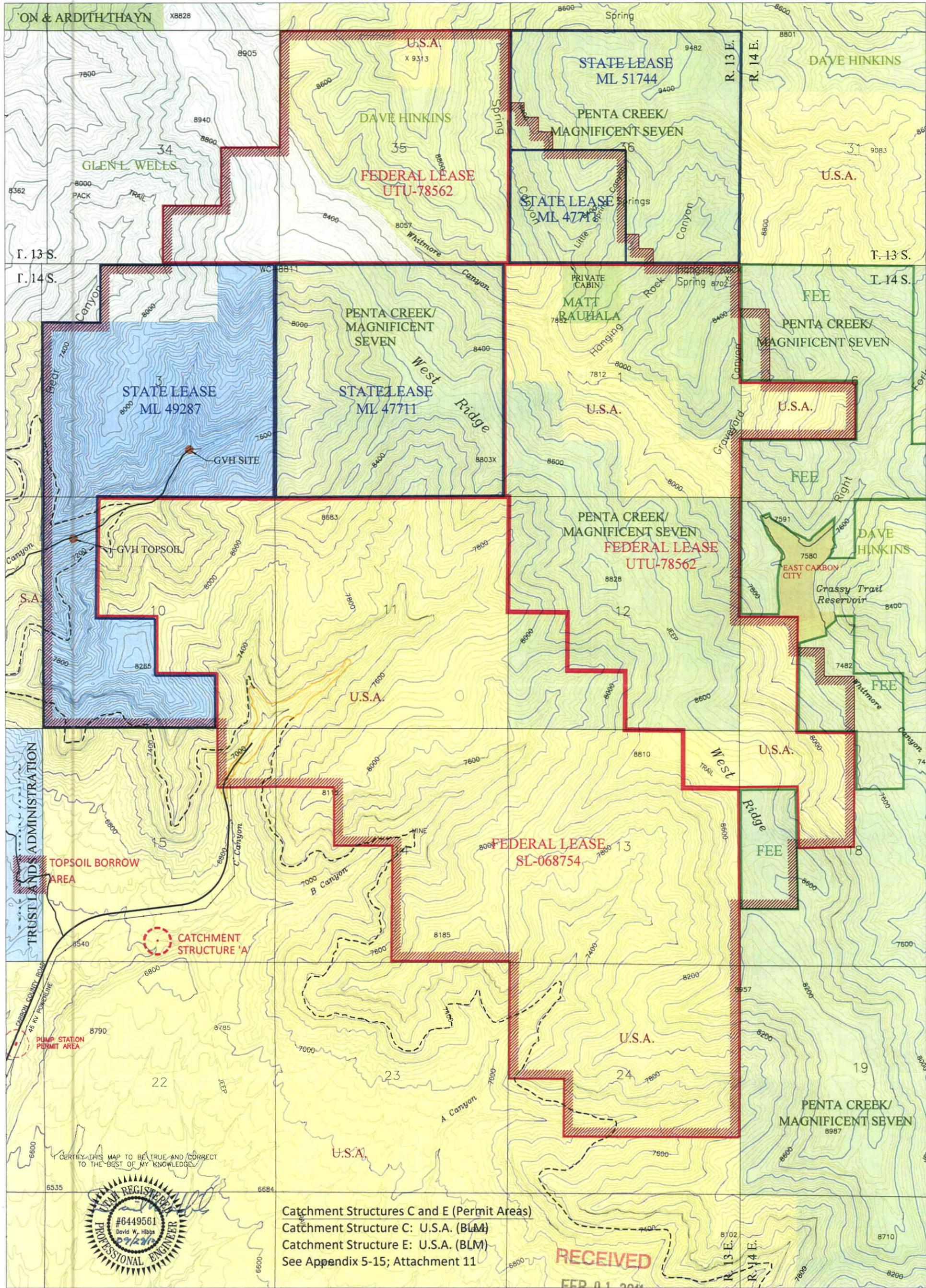
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**RESOURCES, INC.**

SCALE: 1"=2000'



Catchment Structures C and E (Permit Areas)  
 Catchment Structure C: U.S.A. (BLM)  
 Catchment Structure E: U.S.A. (BLM)  
 See Appendix 5-15; Attachment 11

# WEST RIDGE MINE

## Map 5-2

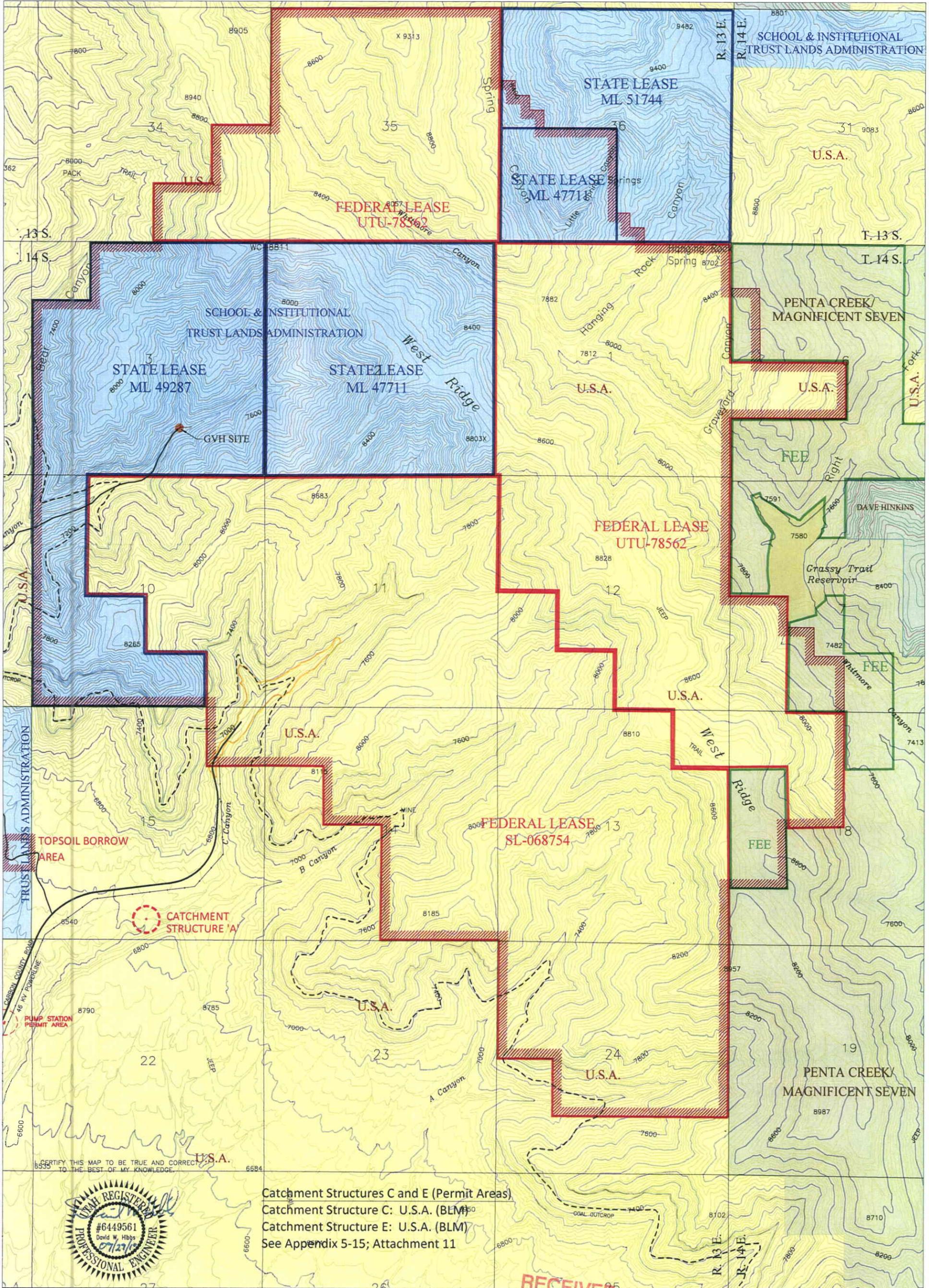
### Surface Ownership Map

- LEGEND:**
- Permit Boundary
  - Federal Lease
  - State Lease
  - Pentacreek Fee
  - Surface Facility Area
  - GVH Site
  - Outcrop
  - School Trust Land (SITLA)
  - Pentacreek/Magnificent Seven
  - U.S.A. (BLM)
  - Dave Hinkins
  - Glen L. Wells
  - Matt Rauhala
  - Milton & Ardith Thayn
  - East Carbon City

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**WEST RIDGE**  
RESOURCES, INC.

SCALE: 1"=2000'



I CERTIFY THIS MAP TO BE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



Catchment Structures C and E (Permit Areas)  
 Catchment Structure C: U.S.A. (BLM)  
 Catchment Structure E: U.S.A. (BLM)  
 See Appendix 5-15; Attachment 11

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# WEST RIDGE MINE

## Map 5-3

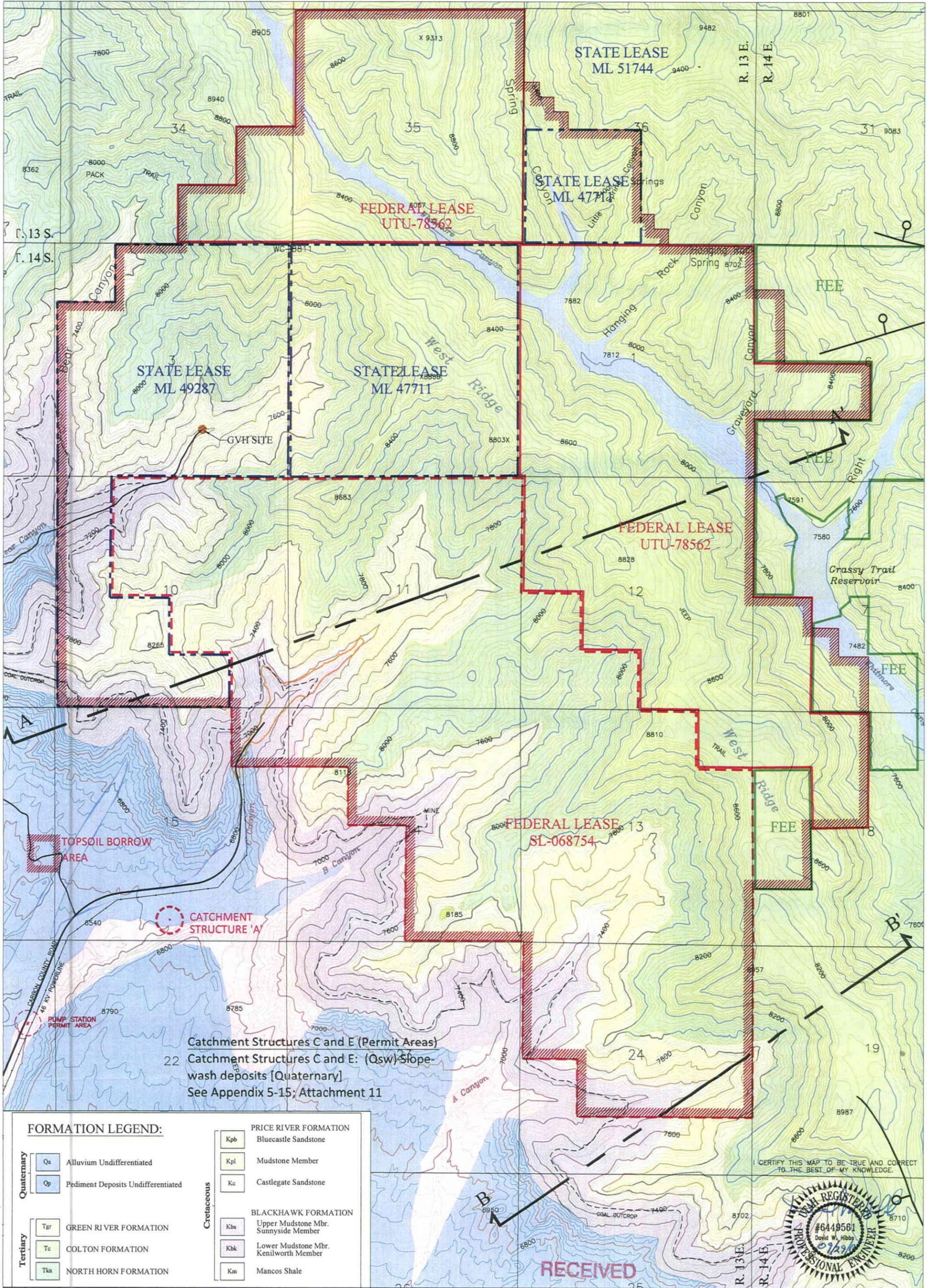
### Sub-surface Ownership Map

**LEGEND:**

Permit Boundary		School Trust Lands (SITLA)	
Federal Lease		Penta Creek/Magnificent Seven	
State Lease		U.S.A. (BLM)	
Penta Creek Fee		Dave Hinkins	
Surface Facility Area		East Carbon City	
GVH Site			
Outcrop			



SCALE: 1"=2000'



Catchment Structures C and E (Permit Areas)  
 22 Catchment Structures C and E: (Qsw) Slope-wash deposits [Quaternary]  
 See Appendix 5-15; Attachment 11

**FORMATION LEGEND:**

Quaternary	Qa	Alluvium Undifferentiated
	Qp	Pediment Deposits Undifferentiated
Tertiary	Tgr	GREEN RIVER FORMATION
	Tc	COLTON FORMATION
	Tka	NORTH HORN FORMATION

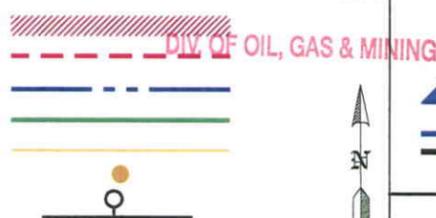
Cretaceous	Kpb	PRICE RIVER FORMATION Bluecastle Sandstone	
	Kpl	Mudstone Member	
	Kc	Castlegate Sandstone	
	BLACKHAWK FORMATION	Kbs	Upper Mudstone Mbr. Sunnyside Member
		Kbk	Lower Mudstone Mbr. Kenilworth Member
		Km	Mancos Shale

**WEST RIDGE MINE**  
 Map 6-1  
 Regional Geology Map

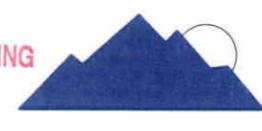
DATE: 9-29-10    REV: 15    ACAD REF: MAP6-1 GEOLOGY REV15

**LEGEND:**

- Permit Boundary
- Federal Lease
- State Lease
- Penta Creek Fee
- Surface Facility Area
- GVH Site
- Fault

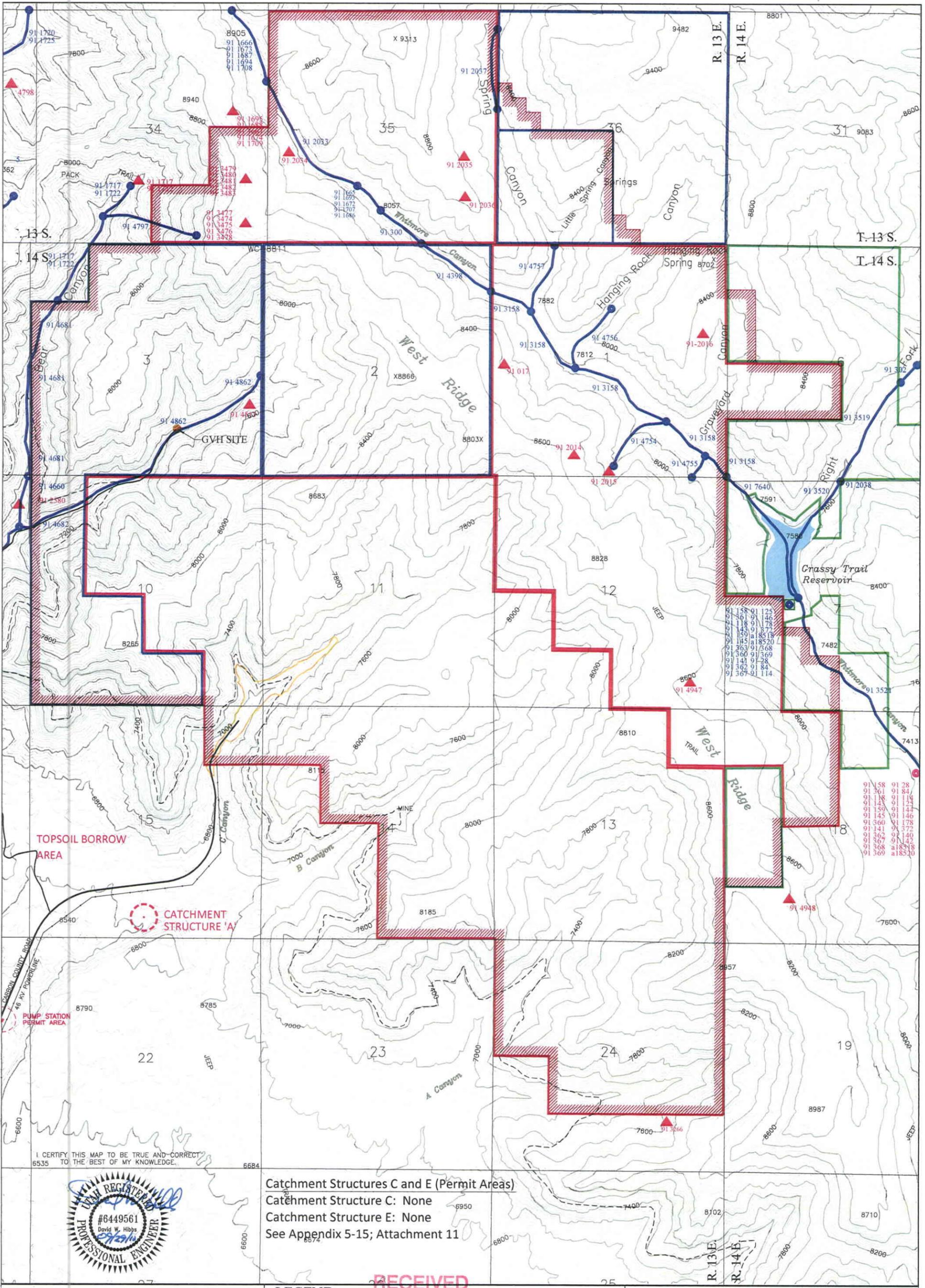


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**WEST RIDGE**  
 RESOURCES, INC.

SCALE: 1"=2000'



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Catchment Structures C and E (Permit Areas)  
 Catchment Structure C: None  
 Catchment Structure E: None  
 See Appendix 5-15; Attachment 11

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# WEST RIDGE MINE

## Map 7-3

### Water Rights

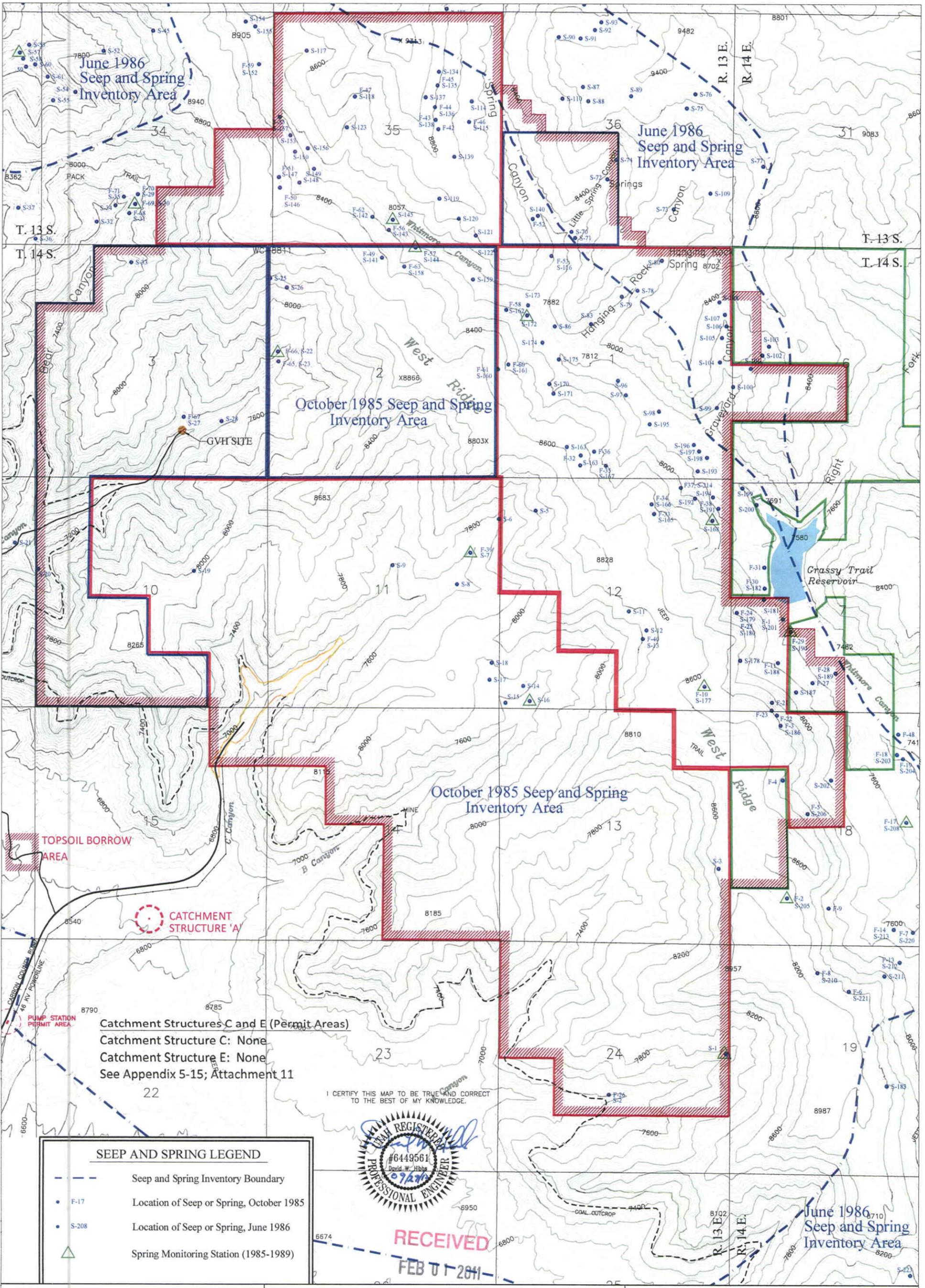
- LEGEND:**
- Permit Boundary
  - Federal Lease
  - State Lease
  - Penta Creek Fee
  - Surface Water Right:
    - Point to Point
    - Spring
    - Ground Water Right
    - Municipal Water System Intake



**WEST RIDGE**  
RESOURCES, INC.



SCALE: 1"=2000'



Catchment Structures C and E (Permit Areas)  
 Catchment Structure C: None  
 Catchment Structure E: None  
 See Appendix 5-15; Attachment 11

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SEEP AND SPRING LEGEND	
	Seep and Spring Inventory Boundary
	Location of Seep or Spring, October 1985
	Location of Seep or Spring, June 1986
	Spring Monitoring Station (1985-1989)

# WEST RIDGE MINE

## Map 7-5

### Seep/Spring Survey Map

**LEGEND:**

	Permit Boundary
	Federal Lease
	State Lease
	Penta Creek Fee
	Surface Facility Area
	GVH Site



**WEST RIDGE**  
 RESOURCES, INC.



SCALE: 1"=2000'