District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources Department Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

Pit, Closed-Loop System, Below-Grade Tank, or Proposed Alternative Method Permit or Closure Plan Application

	ystem, below-grade tank, or proposed alternative method system, below-grade tank, or proposed alternative method				
•	ndividual pit, closed-loop system, below-grade tank or alternative request				
Please be advised that approval of this request does not relieve the operator of lia	ability should operations result in pollution of surface water, ground water or the				
environment. Nor does approval relieve the operator of its responsibility to com	ply with any other applicable governmental authority's rules, regulations or ordinances.				
Operator: <u>Energen Resources Corporation</u>	OGRID #: <u>162928</u>				
Address: 2010 Afton Place, Farmington, New Mexico 87401 RCUD .TII 2 'OR					
Facility or well name: San Juan 32-5 #115 OIL CONS. DIV.					
API Number: 30-039-30546 OCD Permit Number: DIST. 3					
U/L or Qtr/Qtr <u>SESE</u> Section <u>22</u> Township <u>32</u>	N Range <u>6W</u> County: <u>Rio Arriba</u>				
Center of Proposed Design: Latitude 36.95899° N Longitude	<u>107.43676° W</u> NAD: □1927 ⊠ 1983				
Surface Owner: 🛛 Federal 🗌 State 🔲 Private 🔲 Tribal Trust or Indian	Allotment				
☑ Pit: Subsection F or G of 19.15.17.11 NMAC	Closed-loop System: Subsection H of 19.15.17.11 NMAC				
Temporary: 🛛 Drilling 🗌 Workover	☐ Drying Pad ☐ Tanks ☐ Haul-off Bins ☐ Other				
Permanent Emergency Cavitation	Lined Unlined				
☐ Lined ☐ Unlined	Liner type: Thicknessmil				
Liner type: Thickness 20 mil LLDPE HDPE PVC	Other				
☐ Other String-Reinforced	Seams: Welded Factory Other				
Seams: ☐ Welded ☒ Factory ☐ Other	Volume:bblyd ³				
Volume: <u>2000</u> bbl Dimensions: L_125 x W_90 x D_15	Dimensions: Lengthx Width				
Below-grade tank: Subsection I of 19.15.17.11 NMAC	Fencing: Subsection D of 19.15.17.11 NMAC				
Volume:bbl	☐ Chain link, six feet in height, two strands of barbed wire at top				
Type of fluid:	☐ Four foot height, four strands of barbed wire evenly spaced between one and				
Tank Construction material:	four feet				
Secondary containment with leak detection	Netting: Subsection E of 19.15.17.11 NMAC				
☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off	Screen Netting Other				
☐ Visible sidewalls and liner	☐ Monthly inspections				
☐ Visible sidewalls only	Signs: Subsection C of 19.15.17.11 NMAC				
Other	12'x24', 2' lettering, providing Operator's name, site location, and				
Liner type: Thicknessmil HDPE PVC	emergency telephone numbers				
Other	⊠ Signed in compliance with 19.15.3.103 NMAC				
Alternative Method:	Administrative Approvals and Exceptions:				
Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration	Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance.				
of approval.	Please check a box if one or more of the following is requested, if not leave				
	blank:				
	Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau office for				
	consideration of approval. Security of Security Requests must be submitted to the Senta Fe				

Environmental Bureau office for consideration of approval.

Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to drying pads or above-grade tanks associated with a closed-loop system.	
Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes 🛭 No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ (Yes ⊠ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ⊠ No ☐ NA
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ☐ No ☑ NA
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site	☐ Yes ☑ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ⊠ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within the area overlying a subsurface mine Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ⊠ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	☐ Yes ⊠ No
Within a 100-year floodplain FEMA map	☐ Yes ⊠ No
Form C-144 Oil Concentration Division Day 2.4	

Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
Previously Approved Design (attach copy of design) API Number: or Permit Number:
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. Geologic and Hydrogeologic Data (required for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations (required for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
Previously Approved Design (attach copy of design) API Number:
Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.19 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Freeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Nuisance or Hazardous Odors, including H ₂ S, Prevention Plan Emergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Erosion Control Plan Erosion Control Plan Erosion Control Plan Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
Proposed Closure: 19.15.17.13 NMAC
Type: Drilling Workover Emergency Cavitation Permanent Pit Below-grade Tank Closed-loop System Alternative Proposed Closure Method: Waste Excavation and Removal On-site Closure Method (only for temporary pits and closed-loop systems) In-place Burial On-site Trench Burial Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration)

Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the closure plan. Recommendations of acceptable source material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC for guidance.	
Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ⊠ No ☐ NA
Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ⊠ No ☐ NA
Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	⊠ Yes □ No □ NA
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ☑ No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image	☐ Yes ⊠ No
Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site	☐ Yes ⊠ No
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality	☐ Yes ⊠ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site	☐ Yes ⊠ No
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division	☐ Yes ⊠ No
 Within an unstable area. Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map 	☐ Yes ⊠ No
Within a 100-year floodplain FEMA map	☐ Yes ⊠ No
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be a closure plan. Please indicate, by a check mark in the box, that the documents are attached. Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC	ttached to the
Waste Removal Closure For Closed-loop Systems That Utilize Haul-off Bins Only: (19.15.17.13.D NMAC) Instructions: Please in or facilities for the disposal of liquids, drilling fluids and drill cuttings.	identify the facility
Disposal Facility Name: Disposal Facility Permit Number:	
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Construction and Design of Burial Trench (if applicable) based upon the appropriate requirements of 19.15.17.11 NMAC	n. Please indicate,
Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Waste Material Sampling Plan - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards canno Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC	t be achieved)

Operator Application Certification:		
I hereby certify that the information submitted with this application is t	rue, accurate and complete to the	e best of my knowledge and belief.
Name (Print):	Title:	Drilling Engineer
Signature:	Date:	
e-mail address: <u>Dmills@energen.com</u>		505-324-4121
OCD Approval: Permit Application (including closure plan)		15.
OCD Representative Signature: Brandon Donald		Approval Date: 7/27/08
Title: Enviro Spec	OCD Permit Numb	per:
Closure Report (required within 60 days of closure completion): S		AC letion Date:
Closure Method: ☐ Waste Excavation and Removal ☐ On-Site Closure Method ☐ ☐ If different from approved plan, please explain.	Alternative Closure Method	
Closure Report Attachment Checklist: Instructions: Each of the formark in the box, that the documents are attached. Proof of Closure Notice Proof of Deed Notice (if applicable) Plot Plan Confirmation Sampling Analytical Results Waste Material Sampling Analytical Results Disposal Facility Name and Permit Number Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) On-site Closure Location: Latitude	llowing items must be attached Longitude	to the closure report. Please indicate, by a check NAD: []1927 [] 1983
Operator Closure Certification:		
I hereby certify that the information and attachments submitted with this belief. I also certify that the closure complies with all applicable closure		
Name (Print):	Title:	
Signature:	Date:	
e-mail address:	Telephone:	

Hydrogeologic Data:

Water Well:

The distance to the nearest water well is 2,174,000' based on the coordinates: 4094610, 281797 from the iWaters database.

Site Specific:

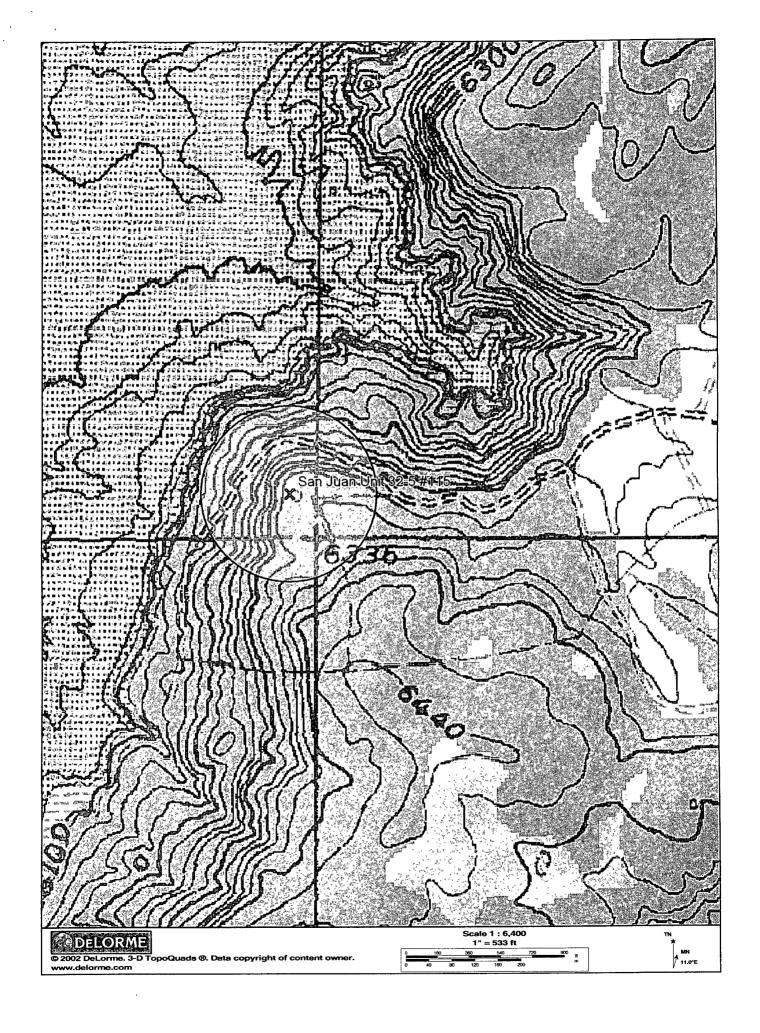
The San Jose formation is the highest water bearing zone at this site with the exception of possible perched water. It is the youngest Tertiary bedrock unit in the San Basin. The formation occurs at the surface to a depth of 1,088' at the proposed San Juan 32-5 Unit ##115 location and ranges from 900' to 1,400' in this township and range. A straight line shot from Navajo Reservoir is 600 feet to the east and is 170 vertical feet below the pit location so the highest groundwater will be at least 170' below the pit bottom. The only potentially unstable areas in the region are over subsurface coal mines. This pit will not be located over a subsurface mine.

Geologic Summary:

The San Jose is a sequence of interbedded sandstones and mudstones deposited in an alluvial and fluvial environment. The formation accumulated in broad, wet, alluvial aprons. Groundwater is associated with the alluvial and fluvial sandstone aquifers, hence it is controlled by the distribution of these sands. The San Jose can further be broken into four members: Cuba Mesa, Regina, Llaves, and Tapicitos (in ascending order). The first two, Cuba Mesa and Regina, are predominately sandstone and the latter two, Llaves and Tapicitos, are predominately mudstone.

Reference:

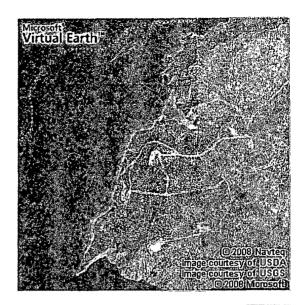
Stone W.J., Lyford F.P., Frenzel P.F., Mizell N.H., and Padgett E.T.: Hydrology and water resources of San Juan Basin, New Mexico Hydrologic Report 6, 1983.

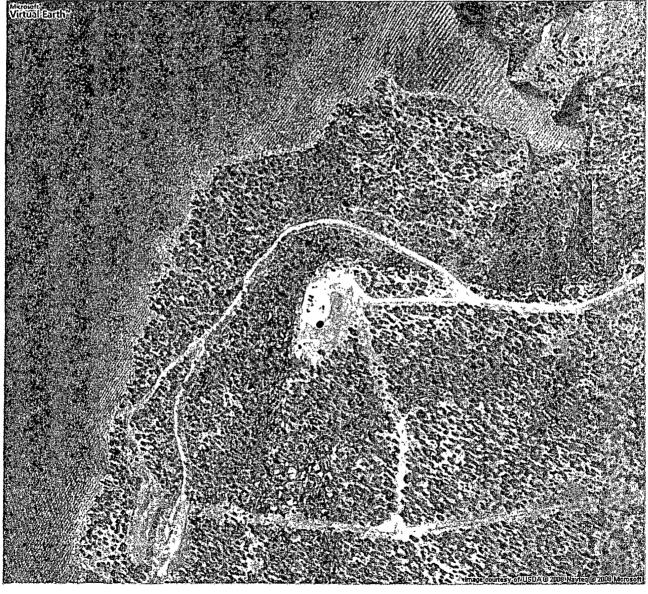


(A) Live Search Maps

San Juan 32-5 Unit #115 🕏

NEW! Try Live Search 411
Dial 1-800-CALL-411 for latest info





New Mexico Office of the State Engineer POD Reports and Downloads

	Townsh	ip: 32N	Range: 06W	Sections:	22			
	NAD27 X	ζ:	Y:	Zone:		Search Rac	lius:	
Cour	ty:	A Basi	n:			Number:	Suffix:	
Owne	er Name: (First)		(Last)			O Non-Domes	stic ODomestic	All
	POD / Surface I	Data Repor	t Av	g Depth to Wa	ater R	eport	Vater Column Repor	t
		[Clear Form	iWATERS	Menu	Help		
		la ann a an All Mariann fan an an an an All Mariann	all a defer the case as a second deferred the sale as a set as a second difference of	Andrew College	alayinddi Miller adaillainii yensa am			
		POD	/ SURFACE DAT	TA REPORT	06/2	23/2008	(quarters are	1=NW 2=NE 3=SW 4=SE
(a	cre ft per an	num)					· -	biggest to smallest
DB File Nbr Us	e Diversion	Owner			PC	DD Number	Source	Tws Rng Sec q q q
SP 02741 IF	R 0	ESPINO	SA DITCH		SF	02741		32N 06W 22 1 1 2
SP 02741 1 IF	R 78	MANUEL	ITA ESPINOSA		SE	02741		32N 06W 22 1 1 2

Record Count: 2

New Mexico Office of the State Engineer Water Right Summary

Back

DB File Nbr:

SP 02741

Primary Purpose:

IRR

IRRIGATION

Primary Status:

ADJ

Adjudicated

Total Acres: Total Diversion:

0 0

Owner: ESPINOSA DITCH

Documents on File

Doc

File/Act

Status 1 2 3 Trans Desc

From/To

Acres Diversion Consumptive

SP 02741

04/08/1948 ADJ PRC ABS SP 02741

Τ

0

0

(qtr are 1=NW 2=NE 3=SW 4=SE)

Point of Diversion POD Number

(qtr are biggest to smallest Source Tws Rng Sec q q q 32N 06W 22 1 1 2 X Y are in Feet Zone X

UTM are in Meters) Y $\overline{1}3$

UTM Zone Easting Northing 4094610 La

Priority Status

Acres Diversion

POD Number

Source

12/31/1911 ADJ

0

SP 02741

(quarters are 1=NW 2=NE 3=SW 4=SE)

Place of Use

(quarters are biggest to smallest

Tws Rng Secqqqq

Acres Diversion Consumptive

Use Priority IRR

Status ADJ

Other Location Description

281797

SEE SP-02741-1 FOR PLACES OF U

New Mexico Office of the State Engineer Water Right Summary

Back

DB File Nbr:

SP 02741 1

Primary Purpose:

IRRIGATION IRR

Primary Status: Total Acres: ADJ Adjudicated 33.9

Total Diversion:

78

Owner: MANUELITA ESPINOSA

Documents on File

Doc

File/Act Status 1 2 3 Trans Desc From/To

Acres Diversion Consumptive

04/08/1948 ADJ PRC ABS SP 02741 1

33.9

78

Y

(qtr are 1=NW 2=NE 3=SW 4=SE)

Point of Diversion POD Number

(qtr are biggest to smallest Source Tws Rng Sec qqq X Y are in Feet Zone X

UTM are in Meters)

UTM Zone Easting Northing <u>1</u>3 281797

La

4094610

Priority Status Acres Diversion POD Number

Source

12/31/1911 ADJ

33.9 78 SP 02741

32N 06W 22 1 1 2

(quarters are 1=NW 2=NE 3=SW 4=SE)

Place of Use

SP 02741

(quarters are biggest to smallest

Tws Rnq Sec qqq 32N 06W 22 3

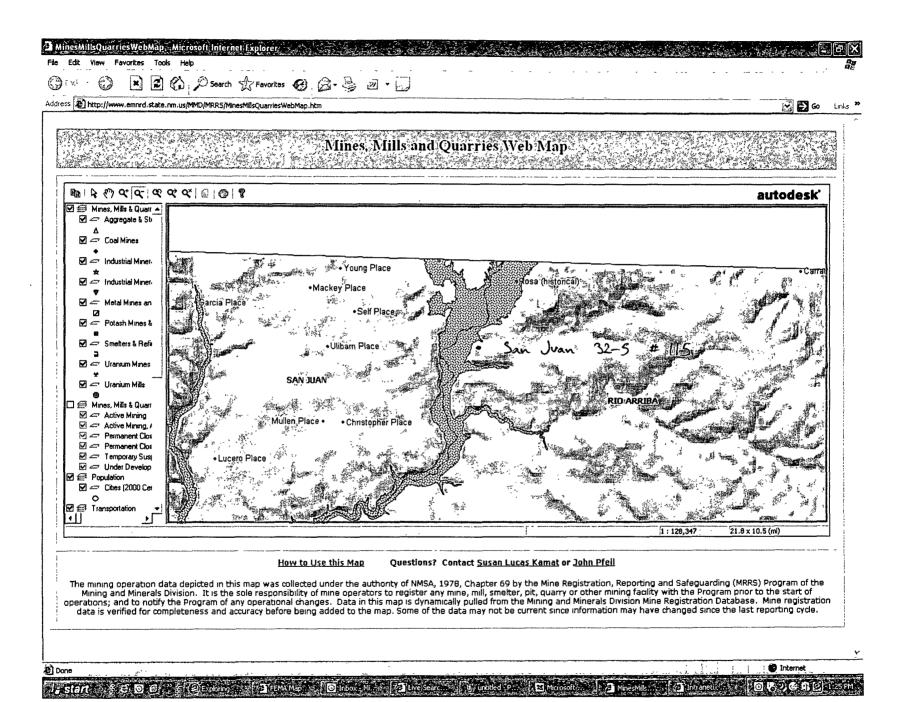
Acres Diversion Consumptive Use 78

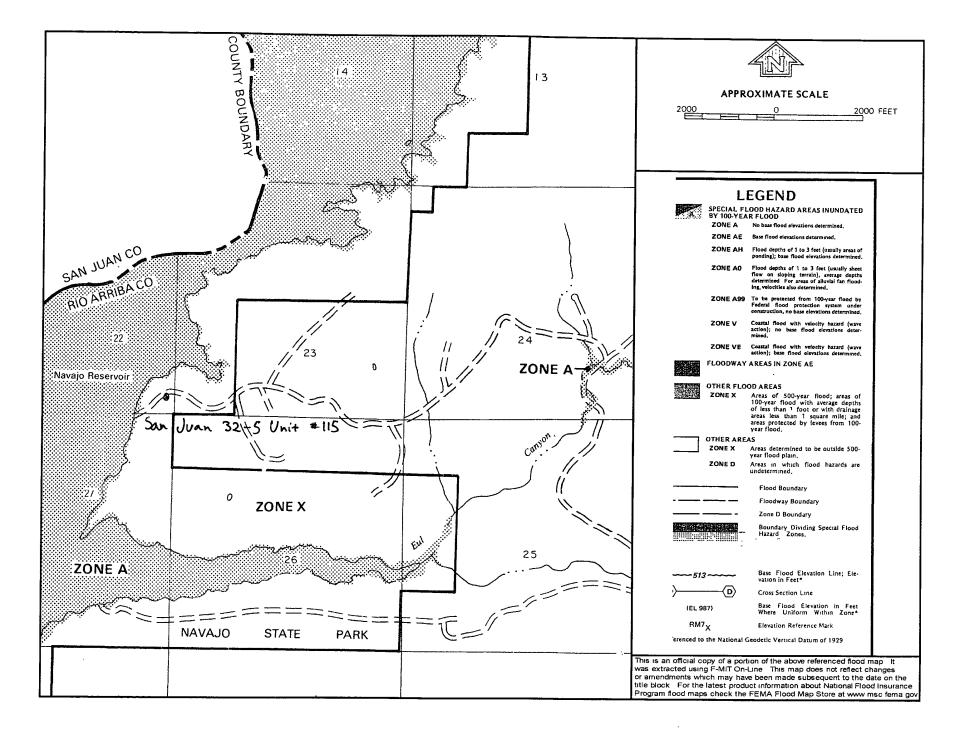
33.9

Priority IRR

Other Location Description Status

ADJ





Temporary Pit Design Plan:

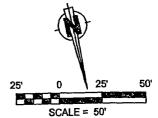
The pit will be designed and constructed in the following manner:

- 1) Top soil will be stripped, stockpiled and stored as designated on the attached well sight layout schematic. Storage will be in accordance with the requirements set forth as described in item B of the siting requirements of 19.15.17.11 NMAC.
- 2) A sign will be posted on location in accordance with 19.15.3.103 NMAC.
- 3) A four strand barbwire fence will be constructed around the perimeter of the pit with the strands evenly spaced between one and four feet from the ground. This fence will be used to excluded livestock from inadvertently entering the pit. The side of the fence adjacent to the rig will be removed during operations. This fence if located within 1000 feet of a permanent residence, school, hospital, institution or church will be a six foot chain link fence with two strands of barbed wire at the top.
- 4) The pit will be designed to confine liquids, prevent unauthorized releases by constructing a foundation with interior slopes consisting of a firm and unyielding base that are smooth and free of rocks, debris or other sharp edges to prevent liner damage.
- 5) The slopes will be constructed with a 2:1 ratio of vertical to horizontal with a changing slope within five feet of the shale shakers trending towards horizontal.
- 6) The volume of the pit will no exceed 10 acre feet including freeboard.
- 7) The pit will be lines with a LLDPE geomembrane liner with a thickness of no less then 20mm. The liner material will be compatible with EPA SW-846 method 9090A.
- 8) Liner seams will be orientated perpendicular to the largest slope with an overlap of four to six inches.
- 9) If needed a geotextile will be place under the liner to reduce localized stress-strain that may compromise liner integrity.
- 10) The edges of the liner will be anchored in the bottom of a compacted earthfilled trench no less the 18 inches deep.
- 11) To prevent runon of surface water a berm no less then 12 inches high will be constructed around the perimeter of the pit. With drainage ditches being directed to the runoff requirements set forth in the APD Condition of Approval.

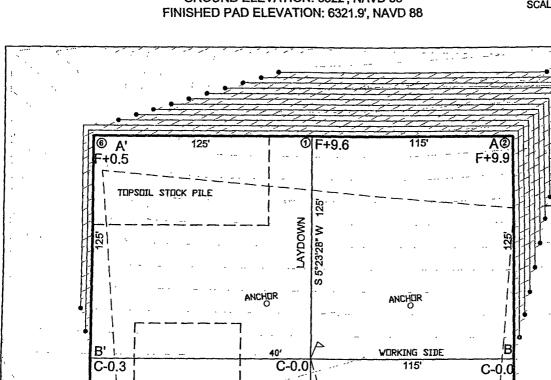
ATITUDE: 36.95899°N ONGITUDE: 107.43678°W DATUM: NAD 83

ENERGEN RESOURCES CORPORATION

32-5 UNIT #115 120' FSL & 50' FEL LOCATED IN THE SE/4 SE/4 OF SECTION 22, T32N, R6W, N.M.P.M., RIO ARRIBA, NEW MEXICO GROUND ELEVATION: 6322', NAVD 88



ZUNE



RESERVE PIT

60' x 135'

EXISTING ACCESS

-8.0

FOOT CONTOUR INTERVAL SHOWN

CALE: 1" = 50' OB No.: ERG181 DATE: 08/20/07



North Side of pad

+3.9

SEPERATOR

*EXISTING PIPELINE

110

ANCHOR

WELL HEAD

50' CONSTUCTION ZONE

S.J. 32-5 ##90

Russell Surveying 1409 W. Aztec Blvd. #2 Aztec, New Mexico 87410 (505) 334-8637

Temporary Pit Operations Plan:

The pit will be operated and maintained; to contain liquids and solids, to insure liner and secondary containment integrity, to aid in the prevention of contamination of fresh water sources, in order to protect public health and the environment. To attain this goal the following steps will be followed;

- 1) The fluids in the pit remaining after rig release will be vacuumed out and transported to active drilling locations to be reused or disposed of with Agua Moss LLC in the Pretty Lady #1 (Disposal API Number # 30-048-30922) within 30 days. Residual fluids after vacuuming will be allowed to evaporate.
- 2) No hazardous waste, miscellaneous solid waste or debris will be discharged into or stored in the pit. Only fluids or cuttings used or generated in the drilling process will be placed or stored in the pit.
- 3) The division district office will be notified within 48 hrs of the discovery of compromised liner integrity. Upon the discovery of the compromised liner repairs will be enacted immediately.
- 4) The division district office will be notified within 48 hrs of the discovery of compromised liner integrity below the fluid level unless more then 25 bbls is released in which case Rule 116's 24 hr notification will apply. All liquid above the damaged liner section will be removed to a level below the damage within 48 hrs and repairs will be enacted.
- 5) Precautionary measures will be taken to insure no liner damage is caused when adding or removing fluids and solids from the pit. This will be accomplished by gradually increasing the slope of the pit from negligible underneath the shale shakers to the 2:1 ratio required by 19.15.17.11 within five feet. A perforated pipe will be installed in the corner of the pit so that a vacuum hose can be run through it to remove fluids without damaging the liner.
- 6) Perimeter berms and ditches will be constructed around the exterior of the pit to prevent surface water run-on but the rig side may be left open to allow location drainage.
- 7) A oil absorbent boom will be maintained on site to remove oil from the pit's surface if necessary. Immediately on the cessation of drilling any accumulated oil will be removed from the surface of the pit.
- 8) A minimum of two feet of freeboard will be maintained at all times. Once fluid levels have the possibility of rising above the minimum freeboard fluid will be vacuumed out of the pit.
- 9) All of the above operations will be inspected and a log will be signed and dated. During drilling operations the inspection will be daily and after rig release they will be carried out weekly as log as there is fluid in the pit.

Temporary Pit Closure Plan:

The pit will be closed with in place burial. The surface owner will be notified prior to closure by certified mail and the return receipt will be included in the closure packet. The OCD will be verbally or by other means notified at least 72 hours and not more then one week prior to the pit closing. The following process will be used to close the pit:

- 1) At time of closure, all free standing fluids will be removed and the contents will be solidified to a bearing capacity sufficient to support the final cover. This will be accomplished by mixing the contents with soil at a mixing ratio no greater then 3:1 soil to contents.
- 2) The liner will be cut off at the mudline.
- 3) Sampling will be done by collecting a minimum of a five-point composite sample of the contents after stabilization. If the ground water is less then 100 feet below the pit but greater then 50 feet testing for Chlorides will be done to the lower limit. The sample will be analyzed for the following components;

Components	Tests Method	Limit (mg/Kg)
Benzene	EPA SW-846 8021B or 8260B	0.2
BTEX	EPA SW-846 8021B or 8260B	50
TPH	EPA SW-846 418.1	2500
GRO/DRO	EPA SW-846 8015M	500
Chlorides	EPA 300.1	1000/500

- 4) After demonstrating that the stabilized contents are under the limits listed above the contents will be covered with compacted non-waste containing earthen material to a minimum of three feet. If stabilized contents exceed a volume that can be covered with three feet of earth and a foot of topsoil the excess contents will be removed and sent to Envirotech (Permit NM-01-0011). If the stabilized contents do no meet the above stated limits the stabilized contents will all be hauled to Envirotech pursuant to excavation and removal guidelines (19.15.17.13 B1)
- 5) After the stabilized contents have been covered, the stockpiled topsoil will replaced to a minimum depth of one foot. Topsoil cover will be graded to prevent ponding of water and erosion of the cover material while matching pre-existing grade when possible. This will be accomplished within six months of rig release.
- 6) The exact location of the on-site burial will be reported to the Aztec field office on the C-105 form. A deed notice identifying the exact location of the on-site burial will be filed with the county clerk. The final closure report (C-144) will be filled within 60 days of closure completion and include sampling results, plot plan, details on back filling, covering and inspections during the life of the pit.
- 7) The disturbed area will be seeded or planted the first growing season after closing the pit. Seed will be drilled on the contour whenever practical or by other division-approved methods. The being to obtain vegetative cover that equals 70% of the native cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation) consisting of at least three native

- Cover will be maintained through two successive growing seasons. During the two growing seasons that prove viability there shall be no artificial irrigation of the vegetation. Seeding or planting will continue until the required cover is reached. If conditions are not favorable to establishment of vegetation due to periods of drought or similar problems then the Aztec office of the OCD will be notified. The Aztec office of the OCD will also be notified when the disturbed ground successfully achieves re-vegetation.
- 8) Until the abandonment of the wells on the pad where the pit is located a steel marker no less then four inches in diameter will be cemented in a hole three feet deep in the center of the onsite burial. The top of this marker will be flush with the ground with a threaded collar for future abandonment use to allow access of the pad and for safety concerns. On top of this marker, a steel 12 inch square plate indicating onsite burial will be intermittent welded to the top of the collar to allow easy removal at time of the well being abandoned. Once all wells on the pad are abandoned a four foot tall riser will be threaded into the top of the marker and circumferential welded around the base with; operator name, lease name, well name and number, unit number, section, township and rage, and a designation that it is an onsite burial location.

Nathan Smith

From: Nathan Smith

Sent: Tuesday, July 01, 2008 10:16 AM

To: 'bill_fiess@blm.gov'

Subject: Drilling Reserve Pit Construction

Mr. Liess

Under the new pit rules, we are required to notify the surface owner of the construction of a temporary drilling reserve pit. This temporary reserve pit will be for the San Juan 32-5 Unit #115.

Thanks

Nathan Smith
Drilling Engineer

office: 505.324.4151 mobile: 505.793.7604

email to: (nsmith@energen.com)