Form C-144 June 16, 2008

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

Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method Type of action: Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method

Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request

Please he advised that approval of this request does not relieve the operator of liability 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: Energen Resources Corporation	OGRID #: <u>162928</u>					
Address: 2010 Afton Place, Farmington, New Mexico 87401	RCVD JUL 2 '08					
Facility or well name: Atlantic A #211R	OIL CONS. DIV.					
API Number: 30-045-34707 OCD Permit	Number: DIST, 3					
U/L or Qtr/Qtr NENE Section 29 Township 31	N Range 10W County: Rio Arriba					
Center of Proposed Design: LatitudeLongitudeNAD:	1927 🔀 1983					
Surface Owner: X Federal X State Private Tribal Trust or Indian Allotment						
☑ <u>Pit</u> : 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	Other					
Other String-Reinforced	Seams: Welded Factory Other					
Seams: ☐ Welded ☒ Factory ☐ Other	Volume:bblyd³					
Volume: <u>1000</u> bbl Dimensions: L <u>100</u> x W <u>55</u> x D <u>10</u>	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: Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration	Administrative Approvals and Exceptions: 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. Exception(s): Requests must be submitted to the Santa Fe					
	Environmental Bureau office for consideration of approval.					

acceptable source material are provided below. Requests reg approval from the appropriate district office or may be consider Environmental Bureau office for consideration of approval.	r each siting criteria below in the application. Recommendation arding changes to certain siting criteria may require administrated an exception which must be submitted to the Santa Fe Applicant must attach justification for request. Please refer to ply to drying pads or above-grade tanks associated with a clo	ative	
Ground water is less than 50 feet below the bottom of the temp - NM Office of the State Engineer - iWATERS database	orary pit, permanent pit, or below-grade tank. *\times \text{escarch; USGS; Data obtained from nearby wells}	☐ Yes ⊠ No	0
Within 300 feet of a continuously flowing watercourse, or 200 (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the continuously flowing watercourse, or 200 (measured from the ordinary high-water mark).	feet of any other watercourse, lakebed, sinkhole, or playa lake he proposed site	☐ Yes ⊠ No	0
Within 300 feet from a permanent residence, school, hospital, and (Applies to temporary, emergency, or cavitation pits and below Visual inspection (certification) of the proposed site; A		n. ☐ Yes ⊠ No	0
Within 1000 feet from a permanent residence, school, hospital, (Applies to permanent pits) - Visual inspection (certification) of the proposed site; A	institution, or church in existence at the time of initial application applications. Satellite image	on. ✓ Yes N	0
watering purposes, or within 1000 horizontal feet of any other	ell or spring that less than five households use for domestic or st fresh water well or spring, in existence at the time of initial appl search; Visual inspection (certification) of the proposed site		0
Within incorporated municipal boundaries or within a defined adopted pursuant to NMSA 1978, Section 3-27-3, as amended. Written confirmation or verification from the municipal.		nance ☐ Yes ☒ N	o
Within 500 feet of a wetland US Fish and Wildlife Wetland Identification map; Top	ographic map; Visual inspection (certification) of the proposed	site Yes 🛭 N	О
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the N	IM EMNRD-Mining and Mineral Division	☐ Yes 🛭 N	lo
Within an unstable area. - Engineering measures incorporated into the design; NN Society; Topographic map	M Bureau of Geology & Mineral Resources; USGS; NM Geolog	gical Yes 🛛 N	10
Within a 100-year floodplain. - FEMA map		☐ Yes ⊠ N	lo
Form C-144	Oil Conservation Division	Page 2 of 5	

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 19.15.17.12 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 19.15.17.9 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 Liner Specifications and Compatibility Assessment - 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					
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)					

Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 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					
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site					
Within the area overlying a subsurface mine Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division					
 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					
Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the 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					
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.	ndentify the facility				
Disposal Facility Name: Disposal Facility Permit Number:					
Disposal Facility Name: Disposal Facility Permit Number:					
Soft Cover Design - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC					

Operator Application Certification:		
I hereby certify that the information submitted with this application is tru	e, accurate and complete to the	e best of my knowledge and belief.
Name (Print): Devin Mills	Title:	Drilling Engineer
Signature: 89	Date:	6/20/2008
e-mail address: <u>Dmills@energen.com</u>		505-324-4121
OCD Approval: Permit Application (including closure plan)		
OCD Representative Signature: Bundon Davell	•	Approval Date:
Title: Enviro Spe	OCD Permit Numb	er:
Closure Report (required within 60 days of closure completion): Sub-		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 followark 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		
Operator Closure Certification:		
I hereby certify that the information and attachments submitted with this obelief. I also certify that the closure complies with all applicable closure to		
Name (Print):	Title:	
Signature:	Date:	
e-mail address:	Telephone:	

Hydrogeologic Data:

Site Specific:

The Ojo Alamo formation is the highest water bearing zone at this site. It is the lowest Tertiary rock unit in the San Basin. The formation occurs at the surface to a depth of 209' at this proposed Atlantic A #211R location and ranges from 150' to 400' in this township and range. The only potentially unstable areas in the region are over subsurface coal mines. This pit will not be located over a subsurface mine.

Based on topographic maps and aerial photos, there did not appear to be any sandy areas located within drainages that may potentially hold shallow ground water. Depth to ground water is no less than 100' according to the attached cathodic data sheet for the cathodic well located is the same section of the same township and range. A visual inspection was also conducted to identify the possibility of water wells with windmills or other pumping equipment or other visual indications and none were observed. No other water well sites within 1000' were indicated being present by the USFS, Jicarilla Ranger District.

Geologic Summary:

The Ojo Alamo is a sequence of interbedded sandstones, conglomeratic sandstone, and shales 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.

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.

Temporary Pit Design Plan:

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

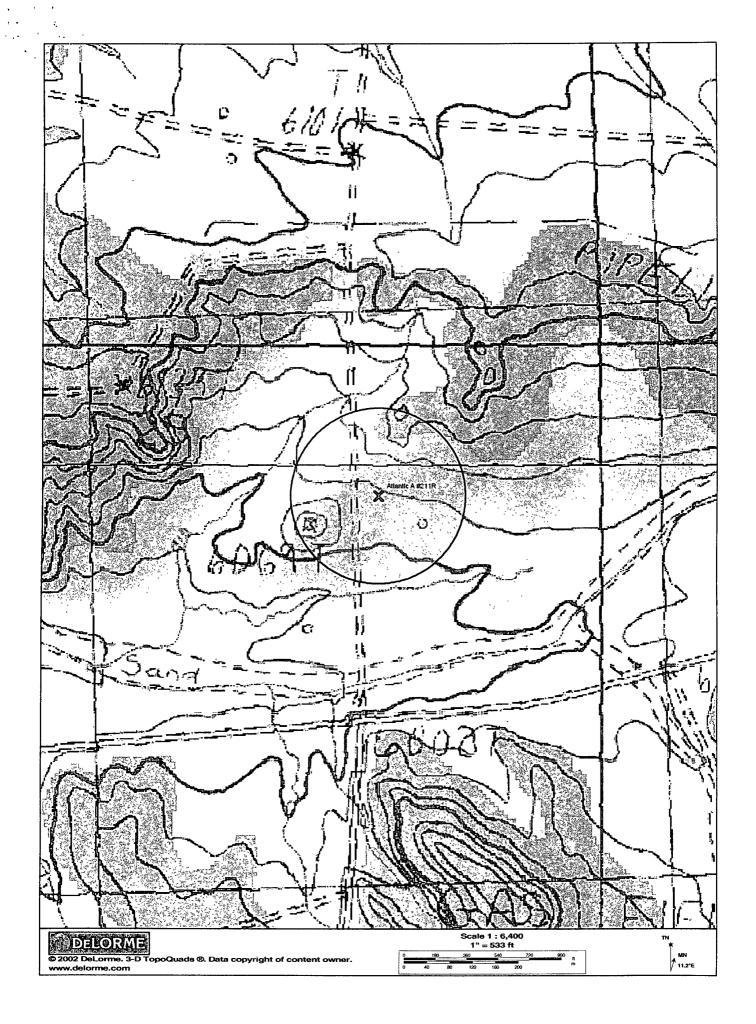
- 1) Top soil will be stripped, stockpiled and stored as designated on the attached well sight layout schematic. Storage will be in accordance with the requirements set forth as described in item B of the siting requirements of 19.15.17.11 NMAC.
- 2) A sign will be posted on location in accordance with 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.

DATA SHEET FOR DEEP GROUND BED CATHODIC PROTECTION WELLS NORTHWESTERN NEW MEXICO (Submit 3 copies to OCD Aztec Office)

	- -
Operator MERIDIAN OIL INC.	Location: Unit K Sec. 29 Twp31 Rng 10
Name of Well/Wells or Pipeline Service	ced ATLANTIC A #7, #10, #210
	cps 2071w
Elevation 6034' Completion Date 1/12/89	Total Depth 380' Land Type* N/A
Casing, Sizes, Types & Depths	N/A
If Casing is cemented, show amounts	types usedN/A
If Cement or Bentonite Plugs have bee	en placed, show depths & amounts used
Depths & thickness of water zones wit	th description of water when possible 100' & 120' NO SAMPLE
Depths gas encountered: N/A	
Type & amount of coke breeze used:	N/A
Depths anodes placed: 330', 320', 310',	300', 290', 280', 245', 235', 225', 215'
Depths vent pipes placed: 360'	
Vent pipe perforations: 300'	
Remarks: gb #3	

If any of the above data is unavailable, please indicate so. Copies of all logs, including Drillers Log, Water Analyses & Well Bore Schematics should be submitted when available. Unplugged abandoned wells are to be included

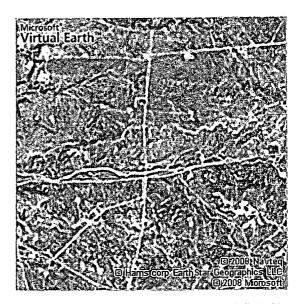
^{*}Land Type may be shown: F-Federal; I-Indian; S-State; P-Fee. If Federal or Indian, add Lease Number.

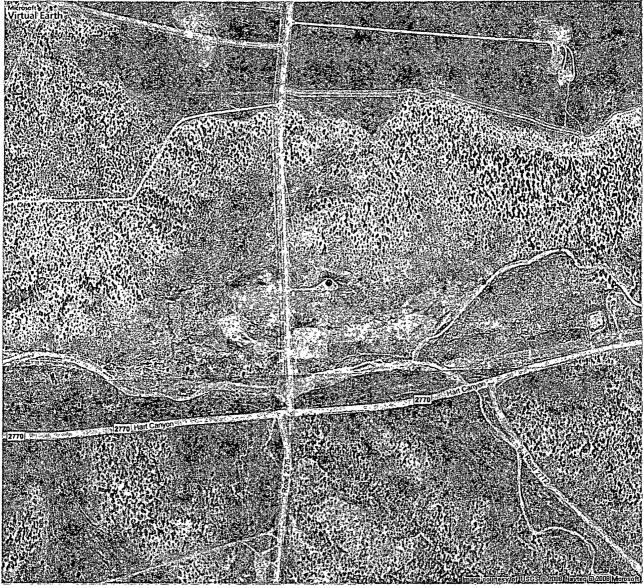


Live Search Maps

Atlantic A #211R ●

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





New Mexico Office of the State Engineer POD Reports and Downloads

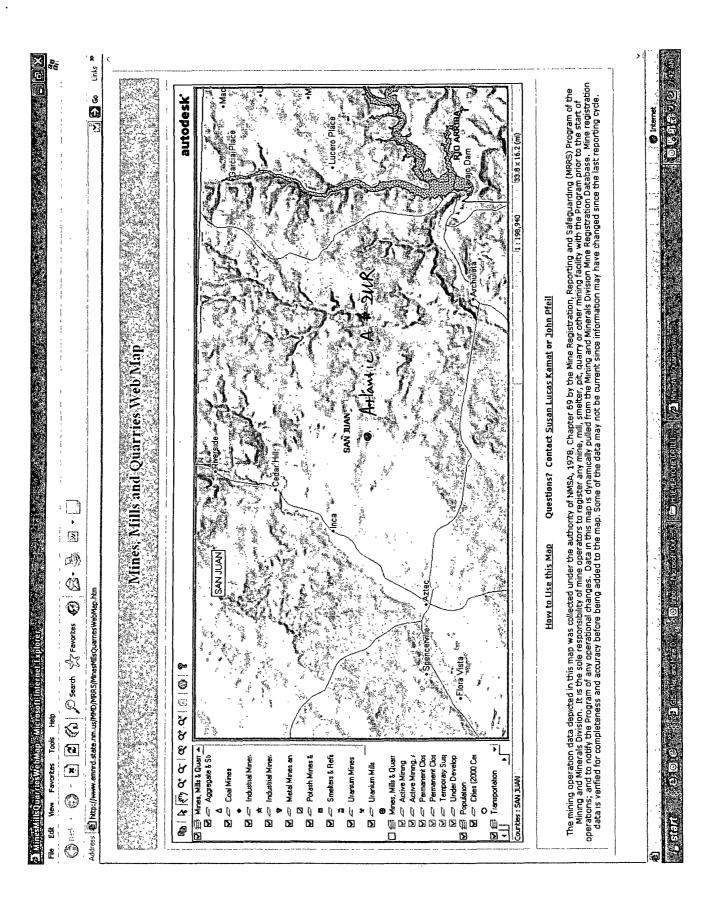
Township: 31N	Range: 10W	Sections: 29				
NAD27 X:	Y:	Zone:	Search Radius:	-		
County:	Basin:		Number:	Suffix:		
Owner Name: (First)	. (Las	st)	○ Non-Domestic	ODomestic		
POD / Surface Data Report Avg Depth to Water Report Water Column Report Clear Form iWATERS Menu Help						

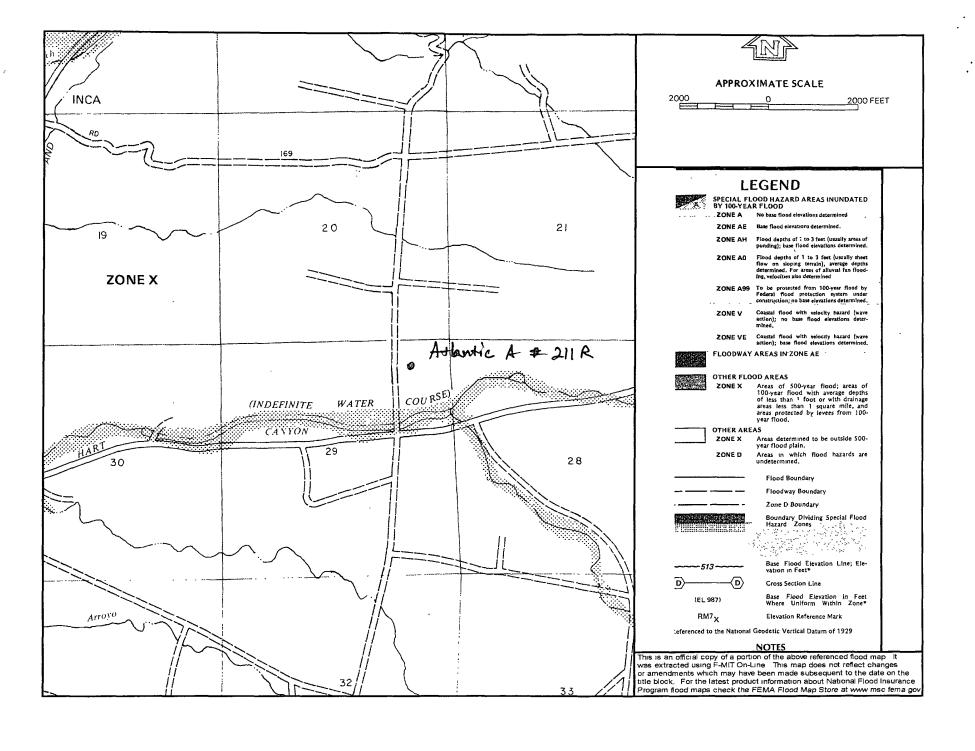
AVERAGE DEPTH OF WATER REPORT 06/26/2008

(Depth Water in Feet)

Bsn Tws Rng Sec Zone X Y Wells Min Max Avg

No Records found, try again





Excavated Pit Soil Storage

The soil excavated for the proposed temporary drilling reserve pit will be stored on location and will be more than 300 feet of a continuously flowing watercourse, or 200 feet of any other watercourse, lakebed, sinkhole, or playa lake.

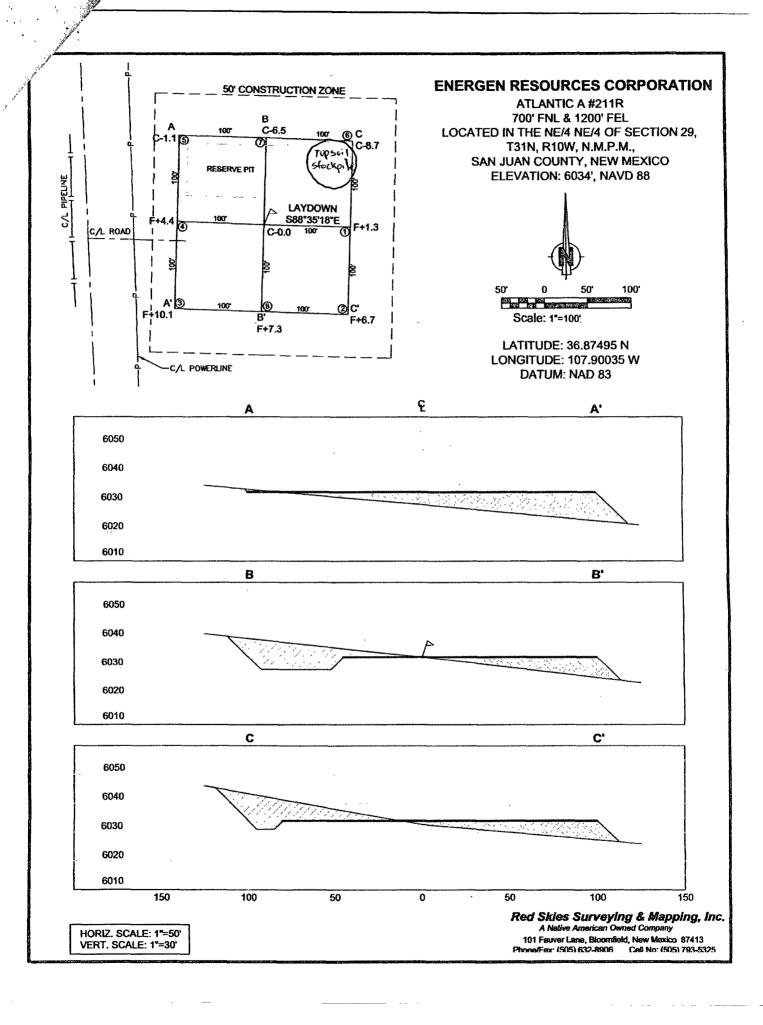
District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 1000 Rio Brazos Rd., Aztec, NM 87410 District IV

State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

Form C-102 Revised October 12, 2005 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

220 S. St. Franci	s Dr., Santa I	· ·	77 Y Y A	·			or prov		N	m	AMI	ENDED REPORT
1	API Numbe		ELL LO	CATIO Pool Cod	N AND ACR	ĿΑ	GE DEDIC	CATIO	ON PLA Pool Na			
	744 X THEREOC	•		71629					FC			
+ Property	Code		L		5 Property 1	Name	· · · · · · · · · · · · · · · · · · ·				6	Well Number
					ATLANT							# 211R
OGRID	4			With the	⁸ Operator							⁹ Elevation
16292	8			ENE	RGEN RESOURCE						6034'	
L or lot no.	Section	T	Б Т	f -4 Y.d	Surface	·		T F4	£	East/W		T
A A	29	Township 31N	Range 10W	Lot Idn	Feet from the	"	orth/South line NORTH	1	from the	Eastw		County SAN JUAN
	1	<u> </u>		(4 I Y -	<u> </u>	CT		<u> </u>				
L or lot no.	Section	Taurahin I	DO	Lot Idn	le Location I				Tace from the	East/W	oet line	County
T of for Ho.	Section	Township	Range	Lot lan	rect from the	l N	orth/South line	rect	irom the	EBSUN	est iine	County
Dedicated Acre	es 13 Joint o	r Infill 14 Co	onsolidation C	ode 15 O	rder No.	<u> </u>		<u> </u>		<u> </u>		<u> </u>
Decicated Mer	cs com c		onsonuation (, indic	100, 110.							

lo allowable	will be as	sioned to thi	is completi	on until s	ıll interests have	hee	n consolidated	loran	on-etanda	rd unit ha	s heen a	nnroyed by the
ivision.	Will OC as	signed to thi	.s complete		889°46'00"W	OCC	2715.90' (R)	1 O1 a 11	on-standa	ia unit no	is been a	pproved by the
					589°44'04"W		2715.43' (M)					
16			FD. 3 1/4					3 1/4"	17 O	PERATO	OR CER	TIFICATION
		1	BRASS CAR BLM 196			90.	BRASS	CAP 1968				ned herein is true and compl
			DEW 130			1		1900				l that this organization either al interest in the land includi
1.77	· · · · ·	10	Craws Cr		GEN RESOURCE ATLANTIC A #211		1200'			••		right to drill this well at this
				1		Ï		£3	location pursuant to a contract with an owner of such a min			· ·
					2 () The "L		: 77° t	76'	interest, or to	a voluntary pod	oling agreeme	nt or a compulsory pooling
						<u> </u>		2630.76' (R) 2630.77' (M)	order heretaf	ore entered by t	hothvision.	
				•				2 2	1/A	LS.	Er	7-1-08
									Signature			
		1.7	, *, * *]	1 2 3 4 5		(())	N00°12'00"W N00°13'17"W	NaT	Han -	5,22	th
•			*		. w [*] #		Section 1	3'17	Printed Nan	ie		
								2.5				
								22				
· · · · · · · · · · · · · · · · · · ·				29-		╫┈			1861 18	VEVO	R CER	TIFICATION
							FD. BRAS	3 1/4" S CAP				cation shown on this
								1968				es of actual surveys
*\cons	5.19		7. 3. 3	1	(4.6) 16		4 1 75 12		, .	•	•	vision, and that the
	·				-		-		-			best of my belief.
		-								0/0		W. BENALT
									Date 1880			
									Signature a	nd Seal of Pr	ofe sional S	ME TO
									0.6		REG	40
						Ì					19 (11952
5. As.	, ^ ,		e* - 3		t43 18		. j." :>				13/	R Ind
							*			l	1 Xed	11952
									NM #11			POPERSIONA



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 2:41 PM

To: 'bill_liess@blm.gov'

Subject: Atlantic A #211R Temporary Drilling Pit

Mr. Liess-

Energen Resources will be constructing a temporary drilling reserve pit for the drilling and completion operation of the Atlantic A #211R.

Thanks

Nathan Smith
Drilling Engineer

office: 505.324.4151 mobile: 505.793.7604

email to: (nsmith@energen.com)