State of New Mexico Energy Minerals and Natural Resources

 $\label{eq:July21,2008} \mbox{ July 21, 2008}$ For temporary pits, closed-loop sytems, and below-grade

Form C-144

District II
1301 W Grand Ave , Artesia, NM 88210
District III
1000 Rio Brazos Rd , Aztec, NM 87410

Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

For temporary pits, closed-loop sytems, and below-grad 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

District IV			
1220 S St	Francis Dr., Santa Fe, NM	87505	
	<u> </u>		

[V / -]	tem, Below-Grade Tank, or od Permit or Closure Plan Application
Closure of a pit, closed-loo Modification to an existing	d for an existing permitted or non-permitted pit, closed-loop system,
Please be advised that approval of this request does not relieve the operator	adividual pit, closed-loop system, below-grade tank or alternative request of hability should operations result in pollution of surface water, ground water or the imply with any other applicable governmental authority's rules, regulations or ordinances.
Operator: ConocoPhillips Company	OGRID#: 217817
Address: PO Box 4289, Farmington, NM 87499	
Facility or well name: Rhoda Abrams 2M	
API Number: 30-045-34406	OCD Permit Number:
U/L or Qtr/Qtr: K(NESW) Section: 5 Township: 3	ON Range: 11W County: San Juan
Center of Proposed Design: Latitude: 36.84062' N Surface Owner: X Federal State Private	Longitude: 108.01838' W NAD: 1927 X 1983 Tribal Trust or Indian Allotment
2 X Pit: Subsection F or G of 19.15.17.11 NMAC Temporary: X Drilling Workover Permanent Emergency Cavitation P&A X Lined Unlined Liner type: Thickness 20 X String-Reinforced Liner Seams. X Welded X Factory Other	mil X LLDPE HDPE PVC Other Volume 4400 bbl Dimensions L 65' x W 45' x D 10'
notice	over or Drilling (Applies to activities which require prior approval of a permit or of intent)
Drying Pad Above Ground Steel Tanks Haul-off Bir Lined Unlined Liner type: Thickness Liner Seams: Welded Factory Other	ns Other mil OLLDPE HDPE PVD Other RECEIVED
	over or Drilling (Applies to activities which require prior approval of a permit or of intent) as Other MI OLLOPE HDPE PVD Other RECEIVED OIL CARE TO THE STATE OF THE STA
Visible sidewalls and liner Visible sidewalls only	Other

Alternative Method:

Thickness

Liner Type:

Other

PVC

Submittal of an exception request is required Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

HDPE

mil

6 Fencing: Subsection D of 19 15.17.11 NMAC (Applies to permanent pit, temporary pits, and below-grade tanks)		
Subsection D of 15 15.17.11 Name (Applies to permanent pin, temporary pins, una vector grade tanks)		
Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, hospital, inst.	tution or chur	ch)
Four foot height, four strands of barbed wire evenly spaced between one and four feet X Alternate. Please specify 4' hogwire fence with a single strand of barbed wire on top.		l
Netting: Subsection E of 19.15.17 11 NMAC (Applies to permanent pits and permanent open top tanks)		
Screen Netting Other		
Monthly inspections (If netting or screening is not physically feasible)		
8		
Signs: Subsection C of 19.15.17.11 NMAC 12" X 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers		
X Signed in compliance with 19 15.3.103 NMAC		
9		
Administrative Approvals and Exceptions:		
Justifications and/or demonstrations of equivalency are required Please refer to 19 15 17 NMAC for guidance. 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 of the Santa Fe Environmental Bureau office for cons	ideration of ap	proval
Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval		
Siting Criteria (regarding permitting): 19.15.17.10 NMAC 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.		ļ
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	XNo
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	X No
Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.	Yes	XNo
(Applies to temporary, emergency, or cavitation pits and helow-grade tanks)	□NA	
- Visual inspection (certification) of the proposed site; Aerial photo; Satellite image		_
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application.	Yes	□No
(Applied to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo, Satellite image	XNA	
Within 500 horizonal 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.	Yes	XNo
- NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site.		
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	Yes	XNo
- Written confirmation or verification from the municipality; Written approval obtained from the municipality Within 500 feet of a wetland.	∏Yes	X No
- 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	Yes	XNo
Within an unstable area.	□Yes	X No
- Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society, Topographic map	LJ `**	ا الت
Within a 100-year floodplain	Yes	XNo

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 tems 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
X Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17 9
X Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19 15.17 10 NMAC
X Operating and Maintenance Plan - based upon the appropriate requirements of 19.15 17.12 NMAC
X Closure Plan (Please complete Boxes 14 through 18, if applicable) - 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 or Permit
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 (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9
Siting Criteria Compliance Demonstrations (only 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 (Please complete Boxes 14 through 18, if applicable) - 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
Previously Approved Operating and Maintenance Plan API
Permanent Pits Permit Application Checklist: 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 (I) 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 H2S, 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
14 Proposed Closure: 19.15.17 13 NMAC Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan. Type: X Drilling Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank Closed-loop System Alternative
Wasta Exceptation and Pemoval Clasura Plan Charlests (10.15.17.12 NMAC) Instructions: Each of the following items must be attached to the clasura plan
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 I of 19.15 17 13 NMAC
Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19 15.17.13 NMAC

Form C-144 Orl Conservation Division Page 3 of 5

16 Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15 17.13.D NMAC)							
Instructions: Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two face required.	acil _i țies						
Disposal Facility Name Disposal Facility Permit #							
Disposal Facility Name: Disposal Facility Permit #:							
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will not be used for future service and operations? Yes (If yes, please provide the information No							
Required for impacted areas which will not be used for future service and operations Soil Backfill and Cover Design Specification - based upon the appropriate requirements of Subsection H 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							
17							
Siting Criteria (Regarding on-site closure methods only: 19.15.17.10 NMAC Instructions Each string criteria requires a demonstration of compliance in the closure plan Recommendations of acceptable source material are provided belo certain siting criteria may require administrative approval from the appropriate district office or may be considered an exception which must be submitted to the 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 X No						
Cround water is between 50 and 100 feet below the bettern of the housed waste							
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	XYes No						
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 XNo						
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake							
(measured from the ordinary high-water mark)	Yes XNo						
- Topographic map; Visual inspection (certification) of the proposed site Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application	Yes X No						
- Visual inspection (certification) of the proposed site; Aerial photo; satellite image	I I I I I I I I I I I I I I I I I I I						
	Yes X 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 fee of any other fresh water well or spring, in existence at the time of the initial application - NM Office of the State Engineer - iWATERS database; Visual inspection (certification) of the proposed site							
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.	Yes X No						
Written confirmation or verification from the municipality; Written approval obtained from the municipality Within 500 feet of a wetland	Yes X No						
- US Fish and Wildlife Wetland Identification map, Topographic map; Visual inspection (certification) of the proposed site							
Within the area overlying a subsurface mine.	Yes X No						
- Written confiramtion or verification or map from the NM EMNRD-Mining and Mineral Division Within an unstable area	Yes X No						
Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map	Tes Ano						
Within a 100-year floodplain - FEMA map	Yes X No						
On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure	re plan. Please indicate,						
by a check mark in the box, that the documents are attached.							
X Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC							
X Proof of Surface Owner Notice - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC							
Construction/Design Plan of Burial Trench (if applicable) based upon the appropriate requirements of 19 15.17.11 NMAC Construction/Design Plan of Temporary Pit (for in place burial of a drying pad) - based upon the appropriate requirements of 19	0 15 17 11 NMAC						
X Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC	7 15.17.11 POVIAC						
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							
X Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings or in case on-site closure standards can	nnot be achieved)						
X Soil Cover Design - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC							
X Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19 15.17.13 NMAC X Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15 17 13 NMAC							

Form C-144 Oil Conservation Division Page 4 of 5

19	
	ation Certification: the information submitted with this application is true, accurate and complete to the best of my knowledge and belief
Name (Print)	Crystal Tafoya Title: Regulatory Technician
Signature:	(tale 10/6/08
e-mail address.	crystal tafoya@conocophillus.com Telephone. 505-326-9837
e man adaress.	o your target o some op my gordyn
20	
OCD Approval:	Permit Application (including closure plan) Closure Plan (only) OCD Conditions (see attachment)
OCD Representa	Approval Date: 1/- 7-08
]	+ + + + + + + + + + + + + + + + + + +
Title:	Enviro (sple OCD Permit Number:
21	
Closure Report ((required within 60 days of closure completion): Subsection K of 19 15 17 13 NMAC
	stors are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure
1	o be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an Ian has been obtained and the closure activities have been completed.
	Closure Completion Date:
22 Closure Method:	
	avation and Removal On-site Closure Method Alternative Closure Method Waste Removal (Closed-loop systems only)
=	from approved plan, please explain.
23 Closure Report Re	egarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:
Instructions: Please	e identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities
were utilized.	
Disposal Facility	
Disposal Facility Were the closed	l-loop system operations and associated activities performed on or in areas that will not be used for future service and operations?
l —	please demonstrate compliane to the items below)
Required for imp	pacted areas which will not be used for future service and operations:
Site Reclam	nation (Photo Documentation)
	lling and Cover Installation
Re-vegetation	on Application Rates and Seeding Technique
24	
	rt Attachment Checklist: Instructions: Each of the following items must be attached to the closure report. Please indicate, by a check mark in edocuments are attached.
l 🚐 ʻ	Closure Notice (surface owner and division)
Proof of D	Deed Notice (required for on-site closure)
Plot Plan (for on-site closures and temporary pits)
Confirmati	ion Sampling Analytical Results (if applicable)
Waste Mat	terial Sampling Analytical Results (if applicable)
l 🗯 🗀	Facility Name and Permit Number
. =	filling and Cover Installation
	tion Application Rates and Seeding Technique
	mation (Photo Documentation) osure Location: Latitude: Longitude: NAD 1927 1983
Sit-site Cit	OSHIC EXCHION. LAMBUC. 1765
25	
Operator Closur	re Certification:
I hereby cerufy that	t the information and attachments submitted with this closure report is ture, accurate and complete to the best of my knowledge and belief. I also certify that
the closure complie	es with all applicable closure requirements and conditions specified in the approved closure plan.
Name (Print):	Title.
Signature.	Date.
Jighature.	Date.
e-mail address	Telephone

New Mexico Office of the State Engineer POD Reports and Downloads

Township: 3	0N Range: 11W	Sections: 4,5,6,7,8	,9	-
NAD27 X:	Y:	Zone:	Search Radius:	1
County:	Basin:		Number:	Suffix:
Owner Name: (First)	(La	ast) All	O Non-Domestic	ODomestic
POD g g g/dankan ² kern s rele. Tre	/ Surface Data Report	Avg Dep	th to Water Report]
	Clear Form	iWATERS Menu	Help	

WATER COLUMN REPORT 10/03/2008

	· -	arters												•
		arters							lest)			Depth	Depth	Wat∈
	Number	Tws		Sec	q	đ	đ	Zone		Х	Y	Well	Water	Colum
SJ	01364	30N	11W		2							115	86	2
	03076	30N	11W	04	2	2	3					44	10	3
	02903	30N	11W	04	2	3	2					49	31	1
SJ	03039	30N	11W	04	4	1	2					53	40	1
SJ	01450	30N	11W	04	4	3						45	20	2
SJ	02941	30N	11W	04	4	3	2					58	37	2
SJ	01367	30N	11W	04	4	4	1					48	20	2
SJ	03407	30N	11W	04	4	4	4	W	45370	00	2124100	30	5	2
SJ	03267	30N	11W	05	2	1	3					83	60	2
(SJ	03245	30N	11W	06	4	4	4					80	(365.	1
SJ	02194	30N	11W	07								59	22	3
SJ	02140	30N	11W	07	1	1	1					70	60	1
SJ	00688	30N	11W	07	1	4	3					70	58	1
SJ	00358	30N	11W	07	1	4	3					61	38	2
SJ	00690	30N	11W	07	1	4	3					60		
SJ	00415	30N	11W	07	1	4	3					53	40	1
SJ	00882	30N	11W	07	1	4	3					60	50	1
	00748	30N	11W	07	1	4	3					60	41	1
SJ	00689	30N	11W	07	1	4	3					78	(65)	1
SJ	00387	30N	11W	07	1	4	3							
SJ	00389	30N	11W	07	1	4	3					53		
SJ	00739	30N	11W	07	1	4	3					70	58	1
SJ	00397	30N	11W	07	1	4	3					56	35	2
SJ	00806	30N	11W	07	1	4	3					38	20	1
SJ	00889	30N	11W	07	1	4	3					55		
SJ	03271	30N	11W	07	2	3	2							
SJ	01475	30N	11W	07	2	3	3					49	27	2
SJ	03465	30N	11W	07	2	3	4					80		

SJ 00259	_ 30N	11W 07	2 4				25	12	1
SJ 01492	30N	11W 07	3				60	22	3
SJ 03794 POD1	30N	11W 07	3 1	. 3	266272	2119520	44	27	. 1
SJ 01172	30N	11W 07	3 2				50	30	2
SJ 01310	30N	11W 07	3 3				80	50	3
SJ 01484	_ 30N	11W 07	3 3				61	10	Ē
SJ 03630	_ 30и	11W 07	3 3				68	24	Ĺ
SJ 01425	_ 30N	11W 07	3 4				55	25	3
SJ 01468	_ 30и	11W 07	3 4				60	25	3
SJ 02006	_ 30N	11W 07	3 4				50	24	2
SJ 03484	30N	11W 07	3 4				75		
SJ 02715	_ 30м	11W 07	3 4			,	68	20	4
SJ 02005	_ 30N	11W 07	3 4	4			55	20	3
SJ 00135	_ 30N	11W 07	4 1				180	23	15
SJ 00769	_ 30N	11W 07	4 1				50	14	3
SJ 01406	_ 30N	11W 07	4 1				45	12	3
SJ 02936	_ 30N	11W 07	4 1	1			38	30	
SJ 00329	_ 30N	11W 07	4 1	. 3			63	20	4
SJ 00620	_ 30N	11W 07		. 3			52	35	1
SJ 00162	_ 30N	11W 07	4 1				58	23	3 2
SJ 00679	_ 30N	11W 07	4 1	3			48	22	
SJ 02906	_ 30N	11W 07	4 1				45	24	2
SJ 00893	_ 30N	11W 07	4 2				80	40	4
SJ 01404	_ 30N	11W 07	4 3				40	15	2
SJ 01667	_ 30N	11W 07	4 3				41	21	2
SJ 00604	_ 30N	11W 07	4 3				38	22	1
SJ 00920	_ 30N	11W 07	4 3				35	12	2
SJ 00601	_ 30N	11W 07	4 3				40	22	1
SJ 00918	_ 30N	11W 07	4 3				35	14	2
		1111 07		^			う ⊏	1 2	_
SJ 00919	-30N	11W 07	4 3				35	12	2
SJ_01567	_ 30N	11W 07	4 4				35	14	2
SJ_01567 SJ_00183	30N 30N	11W 07 11W 08	4 4 1 1	2			35		
SJ_01567 SJ_00183 SJ_03154	30N 30N 30N	11W 07 11W 08 11W 08	4 4 1 1 1 1	4			$ \begin{array}{r} 35 \\ 360 \\ 40 \end{array} $	14	2
SJ_01567 SJ_00183 SJ_03154 SJ_03431	30N 30N 30N 30N	11W 07 11W 08 11W 08 11W 08	4 4 1 1 1 1 1 4	4			35 360 40 50	14	2 €
SJ_01567 SJ_00183 SJ_03154 SJ_03431 SJ_00332	30N 30N 30N 30N 30N 30N	11W 07 11W 08 11W 08 11W 08 11W 08	4 4 1 1 1 1 1 4 2 2	4			$ \begin{array}{r} 35 \\ \hline 360 \\ 40 \\ 50 \\ 52 \end{array} $	14 . 300	2 €
SJ_01567 SJ_00183 SJ_03154 SJ_03431 SJ_00332 SJ_01999	30N 30N 30N 30N 30N 30N 30N	11W 07 11W 08 11W 08 11W 08 11W 08 11W 08	4 4 1 1 1 1 1 4 2 2 2 2	4			35 360 40 50 52 61	14 . 300)	2 6 1 1
SJ_01567 SJ_00183 SJ_03154 SJ_03431 SJ_00332 SJ_01999 SJ_01814	30N 30N 30N 30N 30N 30N 30N 30N	11W 07 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08	4 4 1 1 1 1 1 4 2 2 2 2 2 2	4			35 360.: 40 50 52 61 52	34 45 10	2 6 1 1 2
SJ_01567 SJ_00183 SJ_03154 SJ_03431 SJ_00332 SJ_01999 SJ_01814 SJ_01451	30N 30N 30N 30N 30N 30N 30N 30N 30N	11W 07 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08	4 4 1 1 1 1 1 4 2 2 2 2 2 2 2 2	4			35 360 40 50 52 61 52 64	14 . 300 34 45 10 34	2 6 1 1 4 3
SJ_01567 SJ_00183 SJ_03154 SJ_03431 SJ_00332 SJ_01999 SJ_01814 SJ_01451 SJ_01968	30N 30N 30N 30N 30N 30N 30N 30N 30N	11W 07 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08	4 4 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2 2 2	4			35 360 40 50 52 61 52 64 40	14 . 300 34 45 10 34 25	2 6 1 1 4 3 1
SJ_01567 SJ_00183 SJ_03154 SJ_03431 SJ_00332 SJ_01999 SJ_01814 SJ_01451 SJ_01968 SJ_03398	30N 30N 30N 30N 30N 30N 30N 30N 30N 30N	11W 07 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08	4 4 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1			35 360 40 50 52 61 52 64 40 80	14 . 300 34 45 10 34	2 6 1 1 4 3
SJ_01567 SJ_00183 SJ_03154 SJ_03431 SJ_00332 SJ_01999 SJ_01814 SJ_01451 SJ_01968	30N 30N 30N 30N 30N 30N 30N 30N 30N	11W 07 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08	4 4 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2 2 2	1 2			35 360 40 50 52 61 52 64 40	14 . 300 34 45 10 34 25	2 6 1 1 4 3 1 6
SJ_01567 SJ_00183 SJ_03154 SJ_03431 SJ_00332 SJ_01999 SJ_01814 SJ_01451 SJ_01968 SJ_03398 SJ_03240	30N 30N 30N 30N 30N 30N 30N 30N 30N 30N	11W 07 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08	4 4 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2 2 2	1 2 2 2			35 360 40 50 52 61 52 64 40 80 50	14 . 300 34 45 10 34 25 20	2 6 1 1 4 3 1
SJ_01567 SJ_00183 SJ_03154 SJ_03431 SJ_00332 SJ_01999 SJ_01814 SJ_01451 SJ_01968 SJ_03398 SJ_03240 SJ_03210	30N 30N 30N 30N 30N 30N 30N 30N 30N 30N	11W 07 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08 11W 08	4 4 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2 2 2	2 4 1 2 2 2			35 360 40 50 52 61 52 64 40 80 50 60	34 45 10 34 25 20	2 6 1 1 4 3 1 6
SJ-01567 SJ 00183 SJ 03154 SJ 03431 SJ 00332 SJ 01999 SJ 01814 SJ 01451 SJ 01968 SJ 03398 SJ 03240 SJ 03210 SJ 03098	30N 30N 30N 30N 30N 30N 30N 30N 30N 30N	11W 07 11W 08 11W 08	4 4 4 1 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2	2 4 1 2 2 2 2			35 360 40 50 52 61 52 64 40 80 50 60 63 50 60	34 45 10 34 25 20 30 23	2 6 1 1 4 3 1 6
SJ-01567 SJ 00183 SJ 03154 SJ 03431 SJ 00332 SJ 01999 SJ 01814 SJ 01451 SJ 01968 SJ 03398 SJ 03240 SJ 03210 SJ 03098 SJ 03381 SJ 00220 SJ 03653	30N 30N 30N 30N 30N 30N 30N 30N 30N 30N	11W 07 11W 08	4 4 4 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2 2	1 2 2 2 2 2 2 3 4			35 360 40 50 52 61 52 64 40 80 50 60 63 50 60 62	34 45 10 34 25 20	2 6 1 1 4 3 1 6 3 4
SJ-01567 SJ 00183 SJ 03154 SJ 03431 SJ 00332 SJ 01999 SJ 01814 SJ 01451 SJ 01968 SJ 03398 SJ 03240 SJ 03210 SJ 03098 SJ 03381 SJ 00220 SJ 03653 SJ 03646	30N 30N 30N 30N 30N 30N 30N 30N 30N 30N	11W 07 11W 08	4 4 4 1 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2	1 2 2 2 2 2 2 3 4 4			35 360 40 50 52 61 52 64 40 80 50 60 63 50 60 62 61	34 45 10 34 25 20 30 23	2 6 1 1 4 3 1 6
SJ_01567 SJ_00183 SJ_03154 SJ_03431 SJ_00332 SJ_01999 SJ_01814 SJ_01451 SJ_01968 SJ_03398 SJ_03240 SJ_03210 SJ_03210 SJ_03098 SJ_03381 SJ_00220 SJ_03653 SJ_03646 SJ_01115	30N 30N 30N 30N 30N 30N 30N 30N 30N 30N	11W 07 11W 08	4 4 1 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2 2	1 2 2 2 2 2 2 3 4 4 4			35 360.: 40 50 52 61 52 64 40 80 50 60 63 50 60 62 61 35	34 45 10 34 25 20 30 23 36 26 24 26	2 6 1 1 4 3 1 6 2 3 3
SJ-01567 SJ 00183 SJ 03154 SJ 03431 SJ 00332 SJ 01999 SJ 01814 SJ 01451 SJ 01968 SJ 03398 SJ 03240 SJ 03210 SJ 03098 SJ 03098 SJ 03381 SJ 00220 SJ 03653 SJ 03646 SJ 01115 SJ 00228	30N 30N 30N 30N 30N 30N 30N 30N 30N 30N	11W 07 11W 08	4 4 1 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2 2	1 2 2 2 2 2 2 3 4 4 4 4			35 360 40 50 52 61 52 64 40 80 50 60 63 50 60 62 61 35 67	34 45 10 34 25 20 30 23 36 26 24 26 38	2 6 1 1 4 3 1 6 2 3 3
SJ-01567 SJ 00183 SJ 03154 SJ 03431 SJ 00332 SJ 01999 SJ 01814 SJ 01451 SJ 01968 SJ 03398 SJ 03240 SJ 03210 SJ 03210 SJ 03098 SJ 03381 SJ 00220 SJ 03653 SJ 03646 SJ 01115 SJ 00228 SJ 03639	30N	11W 07 11W 08	4 4 1 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2 2	1 2 2 2 2 2 2 3 4 4 4 4 4 4			35 360 40 50 52 61 52 64 40 80 50 60 63 50 60 62 61 35 67 60	34 45 10 34 25 20 30 23 36 26 24 26 38 24	2 6 1 1 4 3 1 6 3 4 2 3 3
SJ_01567 SJ_00183 SJ_03154 SJ_03431 SJ_00332 SJ_01999 SJ_01814 SJ_01451 SJ_01968 SJ_03398 SJ_03240 SJ_03210 SJ_03210 SJ_03210 SJ_03210 SJ_03653 SJ_03646 SJ_01115 SJ_00228 SJ_03639 SJ_03030	30N 30N 30N 30N 30N 30N 30N 30N 30N 30N	11W 07 11W 08	4 4 1 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2 2	1 2 2 2 2 2 2 3 4 4 4 4 4 4 4 4 2			35 360 40 50 52 61 52 64 40 80 50 60 63 50 60 62 61 35 67 60 56	34 45 10 34 25 20 30 23 36 26 24 26 38	2 6 1 1 4 3 1 6 2 3 3
SJ-01567 SJ 00183 SJ 03154 SJ 03431 SJ 00332 SJ 01999 SJ 01814 SJ 01451 SJ 01968 SJ 03398 SJ 03240 SJ 03210 SJ 03210 SJ 03098 SJ 03653 SJ 03653 SJ 03646 SJ 01115 SJ 00228 SJ 03639 SJ 03030 SJ 03378	30N	11W 07 11W 08	4 4 1 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2 2	1 2 2 2 2 2 2 2 3 4 4 4 4 4 4 4 2 2 2			35 360 40 50 52 61 52 64 40 80 50 60 63 50 60 62 61 35 67 60 56 50	14 . 300 34 45 10 34 25 20 30 23 36 26 24 26 38 24 40	2 6 1 1 2 3 1 6 2 3 3 2
SJ-01567 SJ 00183 SJ 03154 SJ 03431 SJ 00332 SJ 01999 SJ 01814 SJ 01451 SJ 01968 SJ 03398 SJ 03240 SJ 03210 SJ 03210 SJ 03098 SJ 03653 SJ 03653 SJ 03646 SJ 01115 SJ 00228 SJ 03639 SJ 03639 SJ 03378 SJ 00249	30N	11W 07 11W 08	4 4 1 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2 2	1 2 2 2 2 2 2 2 3 4 4 4 4 4 4 4 2 2 2 2 2			35 360 40 50 52 61 52 64 40 80 50 60 63 50 60 62 61 35 67 60 56 50 46	14 . 300 34 45 10 34 25 20 30 23 36 26 24 26 38 24 40	2 6 1 1 4 3 4 2 3 3 1
SJ-01567 SJ 00183 SJ 03154 SJ 03431 SJ 00332 SJ 01999 SJ 01814 SJ 01451 SJ 01968 SJ 03398 SJ 03240 SJ 03210 SJ 03210 SJ 03098 SJ 03381 SJ 00220 SJ 03653 SJ 03653 SJ 03646 SJ 01115 SJ 00228 SJ 03639 SJ 03639 SJ 03030 SJ 03378 SJ 00249 SJ 02293	30N	11W 07 11W 08	4 4 1 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2 2	2 4 1 2 2 2 2 2 2 3 4 4 4 4 4 4 4 2 2 2 2 2 2			35 360 40 50 52 61 52 64 40 80 50 60 63 50 60 62 61 35 67 60 56 50 46 50	14 . 300 34 45 10 34 25 20 30 23 36 26 24 26 38 24 40	2 6 1 1 2 3 1 6 2 3 3 2
SJ-01567 SJ 00183 SJ 03154 SJ 03431 SJ 00332 SJ 01999 SJ 01814 SJ 01451 SJ 01968 SJ 03398 SJ 03240 SJ 03210 SJ 03210 SJ 03098 SJ 0328 SJ 03653 SJ 03653 SJ 03646 SJ 01115 SJ 00228 SJ 03639 SJ 03639 SJ 03639 SJ 03378 SJ 00249 SJ 02293 SJ 03305	30N	11W 07 11W 08	4 4 1 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2 2	2 4 1 2 2 2 2 2 3 4 4 4 4 4 4 4 2 2 2 2 2 2 2			35 360 40 50 52 61 52 64 40 80 50 60 63 50 60 62 61 35 67 60 56 50 46 50 50 50 50 50 50 60 60 60 60 60 60 60 60 60 6	14 . 300 34 45 10 34 25 20 30 23 36 26 24 26 38 24 40 30 35	2 6 1 1 4 3 4 2 3 3 4 2 3 1 1
SJ-01567 SJ 00183 SJ 03154 SJ 03431 SJ 00332 SJ 01999 SJ 01814 SJ 01451 SJ 01968 SJ 03398 SJ 03240 SJ 03210 SJ 03210 SJ 03098 SJ 03240 SJ 03653 SJ 03646 SJ 01115 SJ 00220 SJ 03653 SJ 03646 SJ 01115 SJ 00228 SJ 03639 SJ 03639 SJ 03649 SJ 03293 SJ 02293 SJ 02293 SJ 03305 SJ 03305 SJ 03305	30N	11W 07 11W 08	4 4 1 1 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2	2 4 1 2 2 2 2 2 3 4 4 4 4 4 4 4 2 2 2 2 2 2 2			35 360 40 50 52 61 52 64 40 80 50 60 63 50 60 62 61 35 67 60 56 50 46 50 50 50 50 50 50 50 50 50 50	14 . 300 34 45 10 34 25 20 30 23 36 26 24 26 38 24 40	2 6 1 1 4 3 4 2 3 3 1
SJ-01567 SJ 00183 SJ 003154 SJ 003431 SJ 00332 SJ 01999 SJ 01814 SJ 01451 SJ 01968 SJ 03398 SJ 03240 SJ 03210 SJ 03210 SJ 03098 SJ 03381 SJ 00220 SJ 03653 SJ 03646 SJ 01115 SJ 00228 SJ 03639 SJ 03639 SJ 03639 SJ 0378 SJ 00249 SJ 02293 SJ 03305 SJ 03305 SJ 03303 SJ 03303 SJ 03303 SJ 03303 SJ 03202	30N	11W 07 11W 08	4 4 1 1 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2	2 4 1 2 2 2 2 2 3 4 4 4 4 4 4 4 2 2 2 2 2 2 2			35 360 40 50 52 61 52 64 40 80 50 60 63 50 60 62 61 35 67 60 56 50 46 50 50 50 60 62 61 55 67 60 50 50 50 50 50 50 50 50 50 5	14 , 300 34 45 10 34 25 20 30 23 36 26 24 26 38 24 40 35	2 6 1 1 4 3 1 6 2 3 3 3 1 1 1 1 1 1 2 3 1 1 1 1 1 1 1 1
SJ-01567 SJ 00183 SJ 03154 SJ 03431 SJ 00332 SJ 01999 SJ 01814 SJ 01451 SJ 01968 SJ 03398 SJ 03240 SJ 03210 SJ 03210 SJ 03098 SJ 03240 SJ 03653 SJ 03646 SJ 01115 SJ 00220 SJ 03653 SJ 03646 SJ 01115 SJ 00228 SJ 03639 SJ 03639 SJ 03649 SJ 03293 SJ 02293 SJ 02293 SJ 03305 SJ 03305 SJ 03305	30N	11W 07 11W 08	4 4 1 1 1 1 1 1 1 4 2 2 2 2 2 2 2 2 2 2	2 4 1 2 2 2 2 2 3 4 4 4 4 4 4 4 2 2 2 2 2 2 2			35 360 40 50 52 61 52 64 40 80 50 60 63 50 60 62 61 35 67 60 56 50 46 50 50 50 50 50 50 50 50 50 50	14 . 300 34 45 10 34 25 20 30 23 36 26 24 26 38 24 40 30 35	2 6 1 1 4 3 4 2 3 3 4 2 3 1 1

SJ 03480	30N	11W 08	3	2	4		50		
SJ 03089	30N	11W 08	3	2	4		48	36	1
SJ 02413	30N	11W 08	3	4	1		40	31	
SJ 03199	30N	11W 08	3	4	1		40	20	2
SJ 02915	30N	11W 08	3	4	1		45		
SJ 03367	3 0 N	11W 08	3	4	4		29	5	2
SJ 01570	30N	11W 08	4	1			59	37	2
SJ 01520	30N	11W 08		1	2		58	18	4
SJ 00925	30N	11W 08	4		2		32	20	1
SJ 03642	30N	11W 08	4	1	2		58	32	2
SJ 03313	30N	11W 08	4	1	4		58	20	3.
SJ 02485	30N	11W 08	4	1	4		49	30	1
SJ 02261	30N	11W 08	4	3	2		4.1	0	_
SJ 03419	30N	11W 08		4	2		41	9	3
SJ 02241	30N	11W 09	1	1			39	27	1
SJ 01560	30N	11W 09	1				36	26	1
SJ 01585	30N	11W 09	1		1		40	28	1
SJ 02236	30N	11W 09	1				35	17	.1
SJ 03499	30N	11W 09	1				53	12	Ĺ
SJ 03304	30N	11W 09		1			55	30	2
SJ 03726 POD1 SJ 03209	30N	11W 09		1			47	30	1
SJ 03342	30N	11W 09 11W 09	1	1 1			49 50	32 31	1
SJ 03225	30N	11W 09	1		<i>3</i>		50	2.1	1
SJ 03229	30N	11W 09	1		4		50		
SJ 00924	30N	11W 09	1		2		46	16	3
SJ 00438	30N	11W 09	1		3		29	19	1
SJ 01574	30N	11W 09	1		,		46	27	1
SJ 01169	30N	11W 09	1				56	33	2
SJ 03019	30N	11W 09	1		1		50	30	2
SJ 03031	30N	11W 09	1	3	1		55	35	2
SJ 02493	30N	11W 09	1		1		49	26	2
SJ 03724 POD1	30N	11W 09	1		1		47	36	1
SJ 02237	30N	11W 09	1		1		48	28	2
SJ 03482	30N	11W 09	1		2		50		
SJ 02336	30N	11W 09	1	3	2		46	11	3
SJ 01465	30N	11W 09	1	3	2		47		
SJ 03423	30N	11W 09	1		3		50	20	3
SJ 00750	30N	11W 09	1	4			26	6	2
SJ 02975	30N	11W 09	2	1	4		37	12	2
SJ 03268	30N	11W 09	2	2	2		61	10	Ę
SJ 00364 CLW263561	30N	11W 09	2	3	2		33	11	2
SJ 03128	30N	11W 09		3	2		50		
SJ 00364	30N	11W 09	2	3	2		50	20	3 3 2
SJ 02528	30N	11W 09	2	4		•	60	28	3
SJ 01955	3 0 M	11W 09	2				40	11	
SJ 02290	30N	11W 09	2	4	2		45	15	3
SJ 00347	30N	11W 09	4				36	19	1
SJ 01436	30N	11W 09		1	,		210	50	16
SJ 03471	30N	11W 09		1			20	5	1
SJ 03223	30N	11W 09		2			59	25	3
SJ 03263	30N	11W 09		2			63	35	2
SJ 03374	30N	11W 09		3			44	29	1
SJ 02796	30N	11W 09	4	3	2		100	(2	_
SJ 03214	30N	11W 09		4			93	63	3
SJ 03213	30N	11W 09	4	4	2		100		

Record Count: 143

New Mexico Office of the State Engineer **POD Reports and Downloads**

Township: 31N	Range: 11W	Sections: 31,32	2,33	-	•		
NAD27 X:	Y:	Zone:		Search Radius:	, 1		
County:	Basin:			Number:	Suffix:		
Owner Name: (First)	(Las	st), (a) All	-	○ Non-Domestic	ODomestic		
POD / Surface Data Report Avg Depth to Water Report Water Column Report							
	Clear Form	iWATERS Men	<u>u</u>	Help			

WATER COLUMN REPORT 10/03/2008

(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are biggest to smallest) Depth Depth Wate Colun Tws Rng Sec q q q Well Water 31N 11W 31 2 2 89 50 31N 11W 33 300 200 1(31N 11W 33

4 3 2

31N 11W 33

Record Count: 4

POD Number

SJ 01811

SJ 02994

SJ 02993

SJ 01137

3

12

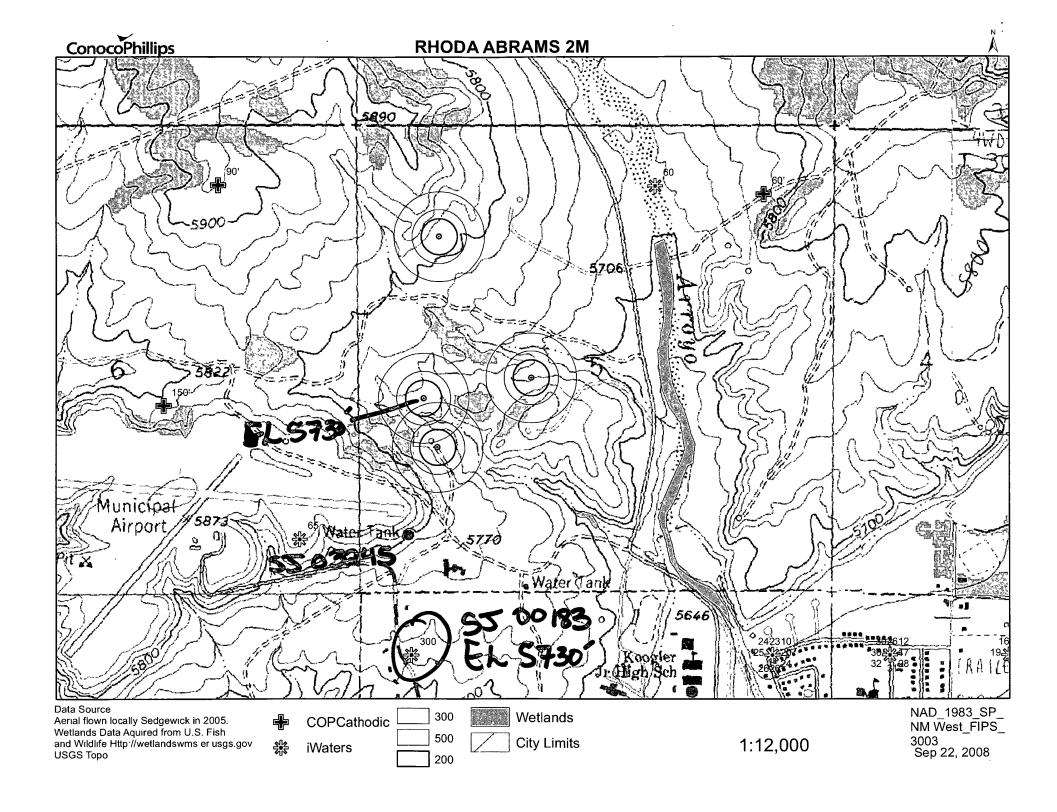
1

280

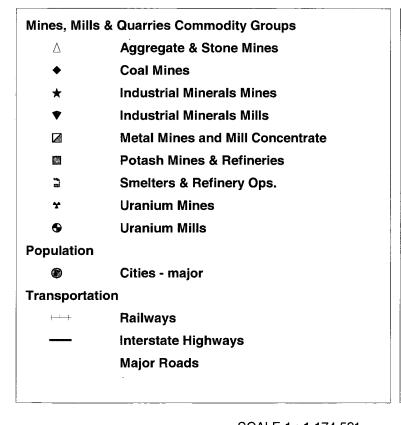
37

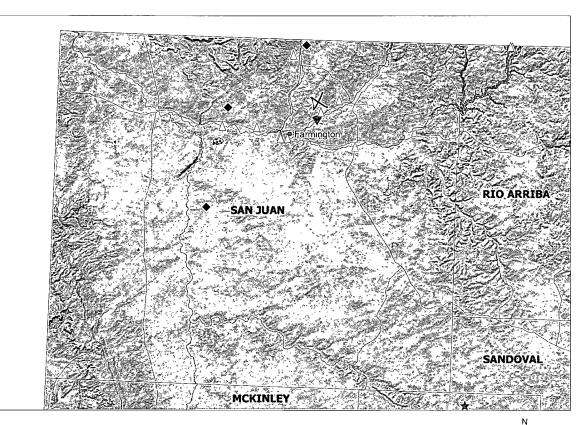
160

19



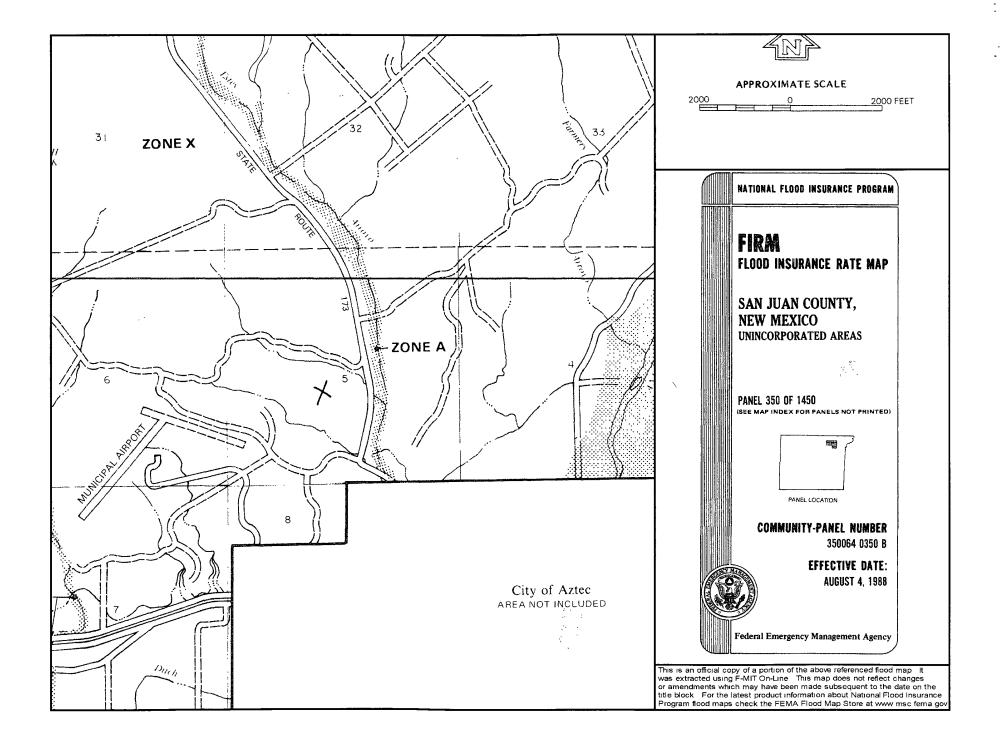
Rhoda Abrams 2M Mines, Mills and Quarries Web Map











Hydrogeological Report for Rhoda Abrams 2M

Regional Geological context:

The Nacimiento Formation is of Paleocene age (Baltz, 1967, p. 35). It crops out in a broad band inside the southern and western margins of the central basin and in a narrow band along the west face of the Nacimiento Uplift. The Nacimiento is a nonresistant unit and typically erodes to low, rounded hills or forms badland topography.

The Nacimiento Formation occurs in approximately only the southern two-thirds of the San Juan Basin where it commformably overlies and intertongues with the Ojo Alamo Sandstone (Fassett, 1974, p. 229). The Nacimiento Formation grades laterally into the main part of the Animas Formation (Fassett and Hinds, 1971, p. 34); thus, in this area, the two formations occupy the same stratigraphic interval.

Strata of the Nacimiento Formation were deposited in lakebeds in the central basin area with lesser deposition in stream channels (Brimhall, 1973, p. 201). In general, the Nacimiento consists of drab, interbedded black and gray shale with discontinuous, white, medium- to very coarse grained arkosic sandstone (Stone e al., 1983, p.30). Stone et al. indicated that the formation may contain more sandstone than commonly reported because some investigators assume the slope-forming strata in the unit area shales, whereas in many places the strata actually are poorly consolidated sandstones. Total thickness of the Nacimiento Formation ranges from about 500 to 1,300 feet. The unit generally thickens from the basin margins toward the basin center (Steven et al., 1974). The sandstone deposits within the Nacimiento Formation are much thinner than the total thickness of the formation because their environment of deposition was localized stream channels (Brimhall, 1973, p. 201). The thickness of the combined San Jose, Animas, and Nacimiento Formations ranges from 500 to more than 3.500 feet.

Hydraulic Properties:

Reported well yields for 53 wells completed in either the Animas or Nacimiento Formations range from 2 to 90 gallons per minute and the median yield is 7.5 gallons per minute. The primary use of water from Nacimiento and Animas Formations is domestic and livestock supplies. There are no known aquifer tests for the Animas or Nacimiento Formations, but specific capacities reported for six wells range from 0.24 to 2.30 gallons per minute per foot of drawdown (Levings et al., 1990).

The Animas and Nacimiento Formations are in many ways hydrologically similar to the San Jose Formation because sands in both units produce approximately the same quantities of water. However, the greater percentage of fine materials in the Animas and Nacimiento Formations may restrict downward vertical leakage to the Ojo Alamo Sandstone or Kirtland Shale. The poorly cemented fine material is highly erodible, forms a badland terrain, and supports only spotty vegetation. These conditions are more conductive to runoff than retention of precipitation.

References:

Baltz, E.H., 1967, Stratigraphy and regional tectonic implications of part of Upper Cretaceous rocks, east-central San Juan Basin, New Mexico: USGS Professional Paper

552, 101 p.

Brimhall, R.M., 1973, Ground-water hydrology of Tertiary rocks of the San Juan Basin, New Mexico, in Fassett, J.E., ed., Cretaceous and Tertiary rocks of the Southern Colorado Plateau: Four Corners Geological Society Memoir, p. 197-207.

Fassett, J.E., 1974, Cretaceous and Tertiary rocks of the eastern San Juan Basin, New Mexico and Colorado, in Guidebook of Ghost Ranch, central-northern New Mexico: New Mexico Geological Society, 25th Field Conference, p. 225-230.

Fassett, J.E., and Hinds, J.S., 1971, Geology and fuel resources of the Fruitland Formation and Kirtland Shale of the San Juan Basin, New Mexico and Colorado: USGS Professional Paper 676, 76 p.

Levings, G.W., Craigg, S.d., Dam, W.L., Kernodle, J.M., and Thorn, C.R., 1990, Hydrogeology of the San Jose, Nacimiento, and Animas Formations in the San Juan structural basin, New Mexico, Colorado, Arizona, and Utah: USGS Hydrologic Investigations Atlas HA-720-A, 2 sheets.

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

Ţ

Siting Criteria Compliance Demonstration & Hydro Geologic Analysis

The Rhoda Abrams 2M is not located in an unstable area. The location is not over a mine and is not on the side of a hill as indicated on the Mines, Mills and Quarries Map and Topographic Map. The location of the excavated pit material will not be located within 300' of any continuously flowing watercourse or 200' from any other watercourse as indicated on the Topographic Map. The location is not within a 100-year floodplain area as indicated on the FEMA Map. The subject well has an elevation of 5730'. The iWATERS data points are located in section 6 and 11 and are SJ03245 and SJ00183 with a depth to water of 65' and 300' and an approximate elevation of 5860' and 5730' as indicated on the TOPO Map. The iWATERS data provides the indication that groundwater depth is greater than 60'. The hydro geologic analysis indicates the groundwater depth and the Nacimiento formation will create a stable area for this new location.

Tafoya, Crystal

From:

Tafoya, Crystal

Sent:

Saturday, October 04, 2008 7:36 AM

To: Subject: 'mark_kelly@nm.blm.gov' Surface Owner Notification

The temporary pit for the Rhoda Abrams 2M will be closed on-site. Please let me know if you have any questions.

Thank you,

Crystal L. Tafoya Regulatory Technician **ConocoPhillips Company** San Juan Business Unit

Phone: (505) 326-9837

Email: Crystal.Tafoya@conocophillips.com

DISTRICT I 1625 N. French Dr., Hobbs, N.M. 88240

State of New Mexico Energy, Minerals & Natural Resources Department

Form C-102 Revised October 12, 2005

DISTRICT II
1301 W. Grand Avenue, Artesia, N.M. 88210

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe. NM 87606

DISTRICT III 1000 Rio Brazos Rd., Astec, N.M. 87410 OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit to Appropriate District Office State Lease — 4 Copies Fee Lease — 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045- 34406	*Pool Code 72319		*Pool Name SA VERDE	
*Property Code 31836	α	porty Name		*Well Number ⊋:M:
70GRID No. 217817	· · · · · · · · · · · · · · · · · · ·	rator Name HILLIPS, COMPANY		'Elevation 5730'

10 Surface Location UL or lot no. Section Township Range Lot Idn Feet from the North/South line Feet from the East/West line County 2380' SOUTH 1930' WEST K 5 **30N** 11W SAN JUAN

" Bottom Hole Location If Different From Surface Feet from the UL or lot no. Section Township North/South line East/West line Range County 1668 30N 11W NORTH WEST SAN JUAN Dedicated Acres s Joint or Infill 16 Consolidation Code SOrder No. 315.79 acres (MV/DK)

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16	OR A NON-STAN	DARD UNIT	HAS BEEN	APPROVED	BY	THE DIVISION
FND 3-1/4" 80 N 89"53"17" BLU 1953 N 89"53"17	" E 2658.34" (M) 2855.84' (R)	FND 3-1/4" BC BLM 1953			\neg	17 OPERATOR CERTIFICATION I hereby cerufy that the information contained herein us true and complete to the best of my knowledge and belief, and that this organization either
8) .29 .14 (A) .29 .14	3	2		1		owns a working outerest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this
291	~					location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling
LEASE # USA	LEASE # FER		- + - 			order heretofore entered by the division. Adam As Socreta 7-3-08 Significant Date Thon da Rogers Printed Name
ings (/2/ rezear ; w/wased stare	N 18'00'45" W	853.00'				18GLIDATELYON GENERAL TROOP
1950 LAT. 36.84062* N (NADI LONG. 108.01638* W (N G. 9. LAT. 3650.43699* N (N G. 15. LONG. 108'00.94535* W 10. 10. 108'00.94535* W 20. 20. 108'00.94535* W	VADB3) (AD27) (NAD27) 7					Interest of the same is true and correct to the best of my belief.
LEASE # USA SF-07E	<u> </u>					Date of Survey Signature and Seal of Professional Surveyor:
HD 1-1/2" FIPE N 89'42'5	'. W . '2841.98' (R) B" W . '2639.88' (M)	FND 3° BC 'LS 7259"				X 10201 Certificate Number

ConocoPhillips Company San Juan Basin Closure Plan

In accordance with Rule 19.15.17.12 NMAC the following information describes the closure requirements of temporary pits on ConocoPhillips Company (COPC) locations. This is COPC's standard procedure for all temporary pits. A separate plan will be submitted for any temporary pit which does not conform to this plan.

All closure activities will include proper documentation and be available for review upon request and will be submitted to OCD within 60 days of closure of pit closure. Closure report will be filed on C-144 and incorporate the following:

- Details on Capping and Covering, where applicable.
- Plot Plan (Pit Diagram)
- Inspection Reports
- Sampling Results
- C-105
- Copy of Deed Notice will be filed with County Clerk

General Plan:

- All free standing liquids will be removed at the start of the pit closure process from the pit and disposed of in a division-approved facility or recycle, reuse or reclaim the liquids in a manner that the appropriate division district office approves. The facilities to be used will be Basin Disposal (Permit #NM-01-005) and Envirotech Land Farm (Permit #NM-01-011)
- 2. The preferred method of closure for all temporary pits will be on-site burial, assuming that all the criteria listed in sub-section (B) of 19.15.17.13 are met.
- 3. The surface owner shall be notified of COPC's closing of the temporary pit prior to closure as per the approved closure plan via certified mail, return receipt requested.
- 4. Within 6 months of the Rig Off status occurring COPC will ensure that temporary pits are closed, re-contoured, and reseeded.
- 5. Notice of Closure will be given prior to the Aztec Division office between 72 hours and one week via email, or verbally. The notification of closure will include the following:
 - i. Operator's name
 - ii. Location by Unit Letter, Section, Township, and Range. Well name and API number.
- 6. Liner of temporary pit shall be removed above "mud level" after stabilization. Removal of liner will consist of manually or mechanically cutting liner at mud level and removing all remaining liner. Care will be taken to remove "All" of the liner i.e., edges of liner entrenched or buried. All excessive liner will be disposed of at the San Juan County Landfill located on CR 3100.
- 7. Pit contents shall be mixed with non-waste containing, earthen material in order to achieve the solidification process. The solidification process will be accomplished using a combination of natural drying and mechanically mixing. Pit contents will be mixed with non-waste, earthen material to a consistency that is deemed a safe and stable. The mixing ratio shall not exceed 3 parts clean soil to 1 part pit contents.
- 8. A five point composite sample will be taken of the pit using sampling tools and all samples tested per Subsection B of 19.15.17.13(B)(1)(b). In the event that the criteria are not met, all contents will be handled per Subparagraph (a) of Paragraph (1) of Subsection B of 19.15.17.13 i.e., Dig and haul.

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)

9. A five point composite sample will be taken from the cavitation pit pursuant to 19.15.17.13(B)(1)(b)(i) in order to assure there has not been any type of release.

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	500

- 10. Upon completion of solidification and testing standards being passed, the pit area will be backfilled with compacted, non-waste containing, earthen material. A minimum of four feet of cover shall be achieved and the cover shall include one foot of suitable material to establish vegetation at the site, or the background thickness of topsoil, whichever is greater. If standard testing fails COPC will dig and haul all contents pursuant to 19.15.17.13.i.a. After doing such, confirmation sampling will be conducted to ensure a release has not occurred.
- 11. During the stabilization process if the liner is ripped by equipment the Aztec OCD office will be notified within 48 hours and the liner will be repaired if possible. If the liner can not be repaired then all contents will be excavated and removed.
- 12. Dig and Haul Material will be transported to the Envirotech Land Farm located 16 miles south of Bloomfield on Angel Peak Road, CR 7175. Permit # NM010011
- 13. Re-contouring of location will match fit, shape, line, form and texture of the surrounding. Re-shaping will include drainage control, prevent ponding, and prevent erosion. Natural drainages will be unimpeded and water bars and/or silt traps will be place in areas where needed to prevent erosion on a large scale. Final re-contour shall have a uniform appearance with smooth surface, fitting the natural landscape.
- 14. Notification will be sent to OCD when the reclaimed area is seeded.
- 15. COPC shall seed the disturbed areas the first growing season after the operator closes the pit. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or Forest Service stipulated seed mixes will used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs.

Туре	Variety or Cultivator	PLS/A
Western wheatgrass	Arriba	3.0
Indian ricegrass	Paloma or Rimrock	3.0
Slender wheatgrass	San Luis	2.0
Crested wheatgrass	Hy-crest	3.0
Bottlebrush Squirreltail	Unknown	2.0
Four-wing Saltbrush	Delar	.25

Species shall be planted in pounds of pure live seed per acre: Present Pure Live Seed (PLS) = Purity X Germination/100 Two lots of seed can be compared on the basis of PLS as follows:

Source No. One (poor quality)

Purity

50 percent

Germination

40 percent

Percent PLS

20 percent

Source No. two (better quality)

Purity

80 percent

Germination

63 percent

Percent PLS

50 percent

5 lb. bulk seed required to make 2 lb. bulk seed required to make

1 lb. PLS 1 lb. PLS

16. The temporary pit will be located with a steel marker, no less than four inches in diameter, cemented in a hole three feet deep in the center of the onsite burial upon the abandonment of all the wells on the pad. The marker will be flush with the ground to allow access of the active well pad and for safety concerns. The marker will include a threaded collar to be used for future abandonment. The top of the marker will contain a welded steel 12" square plate that indicates the onsite burial of the temporary pit. The plate will be easily removable and a four foot tall riser will be threaded into the top of the collar marker and welded around the base with the operator's information at the time of all wells on the pad are abandoned. The operator's information will include the following: Operator Name, Lease Name, Well Name and number, Unit Number, Section, Township, Range and an indicator that the marker is an onsite burial location.