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

30-045-23545

Dugan Production Corp.

P.O. Box 420

Name of Company

Address

State of New Mexico Energy Minerals and Natural Resources

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

OPERATOR

Form C-141 Revised October 10, 2003

X Final Report

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Initial Report

Kurt Fagrelius

505-325-1821

Release Notification and Corrective Action

Contact

Telephone No

Facility Nar	ne M	<u>lestern</u>	Feder	cal #8Y	I	Facility Typ	e Perman	ent	Pit			
Surface Ow	ner <u>T</u> 1	ribal Tı	cust	Mineral O	wner	Federa	1		Lease N	lo. SF	r-07889	70
				LOCA	TION	OF REI	LEASE					
Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from the	East/V	West Line	County	······	
В	18	26N	11W	790	N	Iorth	1850	Ea	.st	Sar	n Juan	
		J	-						*			
			La	titude_36.492	29 N	_ Longitud	e_108.0418	35 W	•			
		7.7 - 2.7				OF RELI			<u>-</u>			
Type of Release				d Pit Closu ent pit rel			Release Unkno		Volume F			7
Was Immedia			perman	eur bir iei	ease	If YES, To	our of Occurrence	e :	Date and		Discovery N	. A .
was inmedia	ne Nonce C	_	Yes [No 🛚 Not Red	quired	11 165, 10	N/A	Ą		930	31-123	456
By Whom?						Date and H				/.V	An a	8
Was a Water	course Reac		Yes X	No		If YES, Vo	lume Impacting the	he Wat	ercourse	.62723 .04723	CEI	10111213, 10111213,
If a Watercou	irse was Im	pacted, Descri	be Fully *							is Of C	ONS. DIV. DIS.	$\frac{1}{2}$
									/	132 de C	NS. DIV	73
N/A	1									15	UST	3 .4
										/ce5	/>	1919
		em and Remed									<u> २०८६। श</u>	
				chloride a		_				_		-
sample te	sted 41	.6-mg/kg	chlori	de and 3680	0-mg,	/kg TPH	which excee	ed th	e thres	shold I	limits o	f
I.				mple result								
Describe Are Following	a Affected a	and Cleanup A	oction Tak	en* Contaminalysis data,	ation 36-y	was addr ards of o	essed under	the soil	"spill r was hau	ule" 1: led fr	9.15 30 om site o	of.
				it was then								
1 3. 3				PH. The chlo				~			groundwa	ater
				"Final" C-14							MOCD	
				is true and compliated or file certain ie								
				e of a C-141 repor								
should their o	perations h	ave failed to a	dequately	investigate and re	mediate	contaminati	on that pose a thre	at to gr	round water	, surface	water, huma	n health
				tance of a C-141 r	eport do	es not reliev	e the operator of i	espons	ibility for co	ompliance	e with any of	her
federal, state,	or local lav	vs and/or regu	lations		ŀ		OIL COM	TEDA	ATION	DIVIC	ION	
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Signature	//4/	12g	106	ν <u>`</u>				\wedge	- 11,	$\Delta = 11$	1	
, IN	Kurt	Fagrel:	ine	_	1	Approved by	District Superviso	or 🕠	MASH	V.Kol	1.0	
Printed Name								- 7	MAN!	MA	WX	
Title	VP Ex	kplorat:	ion			Approval Dat	e 11/30/20	<u> 110</u>	Expiration l	Date	<u> </u>	
E-mail Addre	ss kfaqı	celius@du	gannro	duction.com	, <i>(</i>	Conditions of	Approval				. —	
2 man radie			J ==== C			20.10110113 01				Attach	ed 🔲	
Date	1/4/20			505-325-182	21							
* Attach Addıt	ional Shee	ets If Necessa	ary			n	JK11334	531	97			



Preliminary Sample Analysi

PHONE (575) 393-2326 ° 101 E MARLAND ° HOBBS, NM 88240



September 15, 2010

MIKE SANDOVAL

DUGAN PRODUCTION

P. O. BOX 420

FARMINGTON, NM 87499

RE. PIT CLOSURES

Enclosed are the results of analyses for samples received by the laboratory on 09/08/10 10.30.

Cardinal Laboratories is accredited through Texas NELAP for

Method SW-846 8021

Benzene, Toluene, Ethyl Benzene, and Total Xylenes

Method SW-846 8260

Benzene, Toluene, Ethyl Benzene, and Total Xylenes

Method TX 1005

Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for.

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

Celey & Keine



Analytical Results For:

DUGAN PRODUCTION MIKE SANDOVAL P. O. BOX 420 FARMINGTON NM, 87499 Fax To (505) 327-4043

Received:

09/08/2010

Reported

09/15/2010

Project Name

PIT CLOSURES

Project Number:

WESTERN FED #8Y

Project Location

NOT GIVEN

Sampling Date

09/07/2010

Sampling Type

Soil

Sampling Condition

44 (See Notes)

Sample Received By

Jodi Henson

Sample ID: WESTERN FED #8Y (H020813-01)

BTEX 8021B	mg,	/kg	Analyze	ed By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0 050	09/13/2010	ND	2150	85.9	2500	2.16	
Toluene*	<0.050	0 050	09/13/2010	ND	2000	79 9	2500	2.19	
Ethylbenzene 1	<0.050	0 050	09/13/2010	ND	2090	83 5	2500	2 15	
Total Xylenes*	<0 150	0.150	09/13/2010	ND	6080	81.1	7500	2 55	
Surrogate 4-Bromofluorobenzene (Pll	102	% 80-120							
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifiei
Chloride	416	16.0	09/08/2010	09/08/2010 ND		108	400	0 00	
TPH 418.1	mg,	/kg	Analyze	d By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	36800	500	09/10/2010	ND	926	90.8	1020	4.02	
TPH 8015M	mg/	/kg	Analyze	d By. AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10 0	10.0	09/15/2010	ND	196	98 1	200	1 07	
DRO >C10-C28	245	10.0	09/15/2010	ND	167	83.6	200	3 54	
Total TPH C6-C28	245	10.0	09/15/2010						
Surrogate 1-Chlorooctane	85 5	% 70-130							
Surrogate 1-Chlorooctadecane	123	% 70-130							

Cardinal Laboratories

*=Accredited Analyte

PLEASE MOTE uponly and Damages. Carrinals labeling are clients entitive refresh to an claim arising whethe baser is contract or too, shill be limited to the including to the history and because whatsheer shall be deemed area unless made in vitting and received by Cardinal vitting whether the completor of the applicable service. If no eight shall Cardinal be fall for indicateful or consequential damages including with the completor of the applicable service. If no eight shall Cardinal be fall for indicateful or consequential damages including with the completor of the applicable service. It no eight shall Cardinal be fall for indicateful or consequential damages including with the completor of the applicable service. It no eight shall cardinal be fall for indicateful or consequential damages. rition is passed upon any of the above stated reasons or observace. Results relate only to the Lamples Ingenified above. This region shall not be reproduced except in full your whiten approved by it a division to the company of the above stated reasons or observace.



Notes and Definitions

5-04	The surrogate recovery for this sample is outside of established control mints due to a sample marrix effect
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
k 3	Samples not received at proper temperature of 6°C or below
**1	Insufficient time to reach temperature
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

Fig. 55.55 "OTE Labilit and Damages. Curdinals Intolog and clients endusive remest to an Junit ansing whether buside is undersooned shall be determed. Asked unless that the limbur, band in client, for another than (IX), class after completent or the applicable service. If no event shall be determed asked unless made in writing and returned to Caldinal within that (IX), class after completent or the applicable service. If no event shall be 19th to incidental or consequential detailed and returned or consequent asked unless that the information of the applicable service is no event shall be 19th to incidental or consequential detailed.

Let unless the complete service is no event shall be determed asked the same service in a event shall be determed asked the same service in a event shall be determed asked to a same service in a event shall be determed asked to a same service in a event shall be determed asked to a same shall be determed asked to

Celegri Keine

Analytical Laboratories
Laboratories

CHAIN OF CUSTODY RECORD

ECORD	Pageof
Table I - Matrix Type	TOR GALOSE ONE)
1 = Surface Water. 2 = Ground Water	GALJOB#
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil	
6 = Waste, 7 = Other (Specify)	

Chem Files 622	#1.32	<u>/</u>	
Contact M. AC	Sunch	6.14	
Phone Number: 33	0-0	929	¥

FAX Number 337-4-45.

NOTES
1) Ensure proper container packaging
2) Ship samples promptly following collection
3) Designate Sample Reject Disposition
- プップ

Project Name Pot Clarife

Lab Name Green Ana	lytical Labor	atories	(9	70) 24	7-4220) FA	YX (S	70)	247-	4227	7				Αı	ıaly se	s Re	quir	ed					
Address 75 Suttle S	Street, Duran	go CO 81.	303							_														
	Colle	ction		Miscell	aneous	5		Pre	serv	ative	(5)							Ì	İ	1				
Sample ID H 20813 -	Date	Time	Collected by (Ind)	Matrix Type From Table 1	No of Containers	Sample Fiftered 9 Y/N	Unpreserved (Ice Only)	HNO3	HCI.	H2SO4	NAOII	Other (Specify)	5cm 9.7	BIEX	1.81h Hd.	TPH 8015	7					C	'omments	;
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Relinquished by				Date			Time	e		Rece	ived t	Le	•	$D \hspace{-0.1cm} / $	ev	Al	De	<u></u>			Die	18/10) Time	30

^{. *} Sample Reject | | Return | | Dispose | | Store (30 Days)

10°C #26

Page 4 of 4

Confirmation Sample
Analysis



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

November 01, 2010

MIKE SANDOVAL

DUGAN PRODUCTION

P. O. BOX 420

FARMINGTON, NM 87499

RE. PIT CLOSURES

Enclosed are the results of analyses for samples received by the laboratory on 10/22/10 9.30.

Cardinal Laboratories is accredited through Texas NELAP for.

Method SW-846 8021

Benzene, Toluene, Ethyl Benzene, and Total Xylenes

Method SW-846 8260

Benzene, Toluene, Ethyl Benzene, and Total Xylenes

Method TX 1005

Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for.

Method EPA 552.2

Haloacetic Acids (HAA-5)

Method EPA 524.2

Total Trihalomethanes (TTHM)

Method EPA 524.4

Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

Celey & Keine



Analytical Results For:

DUGAN PRODUCTION MIKE SANDOVAL P. O. BOX 420 FARMINGTON NM, 87499 Fax To: (505) 327-4043

Received.

10/22/2010

Sampling Date:

10/20/2010

Reported:

11/01/2010

Soil

Sampling Type:

Cool & Intact

Project Name.

PIT CLOSURES

Sampling Condition.

Project Number.

WESTERN FED #8Y SEP PIT

Sample Received By.

Jodi Henson

Project Location

NOT GIVEN

Sample ID: WESTERN FED #8Y (H021128-01)

BTEX 8021B	mg,	/kg	Analyze	d By: cms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Benzene* .	<0 050	0.050	10/29/2010	ND	2.05	102	2.00		
Toluene*	<0.050	0.050	10/29/2010	ND	1.85	92.4	2.00		
Ethylbenzene*	<0.050	0 050	10/29/2010	ND	1 75	87.3	2.00		
Total Xylenes*	<0 150	0.150	10/29/2010	ND	5 25	87 4	6.00		
Surrogate 4-Bromofluorobenzene (PIL	846	% 80-120		•	•	-			
Chloride, SM4500CI-B	mg,	/kg	Analyze	d By: HM				<u>.</u>	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
Chloride	48.0	16.0	10/25/2010	ND	432	108	400	0 00	
TPH 418.1	mg,	/kg	Analyze	d By: CK					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
TPH 418.1	<10 0	10.0	10/27/2010	ND	120	91.6	131	8.00	SUB-SS
TPH 8015M	mg,	/kg	Analyze	d By: AB					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifie
GRO C6-C10	<10.0	10.0	10/23/2010	ND	182	91 1	200	1 70	
DRO >C10-C28	<10.0	10.0	10/23/2010	ND	189	94 3	200	0.425	
Total TPH C6-C28	<10 0	10.0	10/23/2010	ND	371	92 7	400	0.627	
Surrogate 1-Chlorooctane	107	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~							
Surrogate 1-Chlorooctadecane	106	% 70-130							

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE Labblay and Damages Cardnals labblay and clients exclusive remedy for any claim ansing, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waved unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors airsing out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



Notes and Definitions

SUB-SS Analysis subcontracted to SunStar Laboratories, Inc

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

** Samples not received at proper temperature of 6°C or below

*** Insufficient time to reach temperature

Chloride by SM4500CI-B does not require samples be received at or below 6°C

Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE Liability and Damages Cardinals liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall be identified to the performance of the services hereunder by Cardinal, regardless of whether such claims is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be improved of Cardinal Laboratories.

Celey D. Keine

Analytical Laboratories	CHAIN OF CUSTODY	<u>RECORD</u>
Contact Blife Scendered Address:	1) Ensure proper container packaging 2) Ship samples promptly following collection 3) Designate Sample Reject Disposition	Table 1 – Matrix Type 1 = Surface Water, 2 = Ground Water 3 = Soil/Sediment, 4 = Rinsate, 5 = Oil 6 = Waste, 7 = Other (Specify)
Phone Number 32-0929 FAX Number 327-4643	PO# Western Fal #8 Y Project Name: Sup P L	Samplers Signature.
Lab Name Green Analytical Laboratories	(970) 247-4220 FAX (970) 247-4227	Analyses Required
Address 75 Suttle Street, Durango, CO 813 Collection	Miscellaneous Preservative(s)	

Lab Name Green Ana	iyticai Labor	atories	(9	70) 24	7-4220	r _A	1A (S	(110)	24/-	4221					At	natys	25 K	equi	ea				
Address 75 Suttle S	Street, Duran	go, CO 813	303												\leq								
	Collec	ction]	Miscell	aneous	;		Pre	serva	ative	(s)			λ.	$\frac{1}{2}$								
Sample ID HZIIZ8 Westwafed Ty	Date	Time	Collected by: (Init)	Matrıx Type From Table 1	No of Containers	Sample Filtered ? Y/N	Unpreserved (Ice Only)	HN03	HCL	H2SO4	NAOH	Other (Specify)	1.6 025	ツー エーグー	TOF ADI	BTEX	3				(Comment	.s
Western Fed # Y	10 3010	3:20																					
2																							
3																						_	
4																							
5																							
6																							· ·
7																						-	
8																							
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Relinquished by:				Date.	- - بار-	- <i>ic</i>	Time	ا خ	58	Rece	wed a	y ,	TA	-(1	Ï	a n	1		-	 Date	Take	Time	58
Relinquished by:	arry -			Date:			Time	:		Rede	yed l	Ž	· ·	14	le	il	10	el		Day	1201	DTing	30

^{*} Sample Reject | | Return | | Dispose | | Store (30 Days)

5°c #26

Page____ of ____

FOR GALUSE ONLY

GAL JOB#

Envirotech 5796 US Hwy 64 Farmington, NM 87401 Phone 505-632-0615 Fax 505-632-1865



Dugan Production Corp

PO Box 420

Farmington, NM 87401

<u>Invoice</u>

Invoice Number

27145

Job DATE 06094-0083

October 29,2010

Western Fed #8Y - accept exempt contaminated soil from cleaning out old

earthen pit

Ordered by Mike Sandoval

Project Manager

April Pohl

	<u>Employee</u>	Staff Type	<u>Description</u>	<u>Units</u>		Rate	<u>Total</u>
10/2	20/2010						
Land	dfarm						
			BOL# 36831	1 00	EA	10 00	10 00
	Paint Filter Test (Li	F)	BOL# 36831	1 00	EA	15 00	15 00
	Chloride (LF)						
	Contaminated Soil	Receival	BOL# 36831	12 00	CY	18 00	216 00
			Landfarm Total	14.00		_	241.00
			10/20/2010 Total:	14.00			241.00
10/2	21/2010					==	
	21/2010 dfarm						
	dfarm	5)	BOL# 36835	1 00	EA	10 00	10 00
		F)	BOL# 36835 BOL# 36835		EA EA		
	dfarm	F)	BOL# 36835	1 00 1 00	EA	10 00 15 00	10 00 15 00
	dfarm Paint Filter Test (Lf			1 00		10 00	10 00
	dfarm Paint Filter Test (LF Chloride (LF)		BOL# 36835	1 00 1 00	EA	10 00 15 00	10 00 15 00
	dfarm Paint Filter Test (LF Chloride (LF)		BOL# 36835 BOL# 36835	1 00 1 00 24 00	EA	10 00 15 00	10 00 15 00 432 00

Invoice Sub-total

698 00

Invoice # 27145 Job # 06094-0083

<u>Employee</u>	Staff Type	<u>Description</u>	<u>Units</u>	<u>Rate</u>	<u>Total</u>
		Sales Tax			44 06
Amount due th	nis Invoice				\$742.06

All invoices are due upon receipt. A late charge of 1.5% will be added to any unpaid balance after 30 days.

This may not be the final bill - if charges are received after this invoice has been mailed, you will receive a separate invoice for those costs.

Dugan Production Western Fed #8 Y Seperator Pit



Reference Point: Well Head

15'

10'W X10'L X5'D

From Reference Point Go Due S For a distance of 15' to Center of Pit.

Permanent pit: Western Federal #8Y

API number: 30-045-23545

Results of sample analysis on the five-point composite sample collected on the subject permanent pit exceeded limits permissible under the "pit rule" (19.15.17.13.C) (see attached C-141 with analytic results).

The Environmental Bureau of the Oil Conservation Division (OCD) in Santa Fe is hereby provided a C-144 (closure report) and an "initial" C-141 (release notification) with analytic results of soil testing. The closure date on the C-144 (box 21) shows the date that the soil analysis did not meet pit rule standards. Also, this letter hereby provides notice that the subject permanent pit will be closed according to the requirements of the "spill rule" (19.15.30).

The OCD district office in Aztec is hereby provided a copy of the "initial report" C-141 (release notification) with analytic results of soil testing and also notice that the subject permanent pit will be closed according to the requirements of the "spill rule" (19.15.30). Assessment, clean-up and remediation of the reported spill will be done in accordance with the spill rule under the authority of the Aztec District office of the OCD. The "final report" C-141 with photo documentation of site reclamation will be sent to the Aztec District office of the OCD.

Following clean-up of the reported release and determination that the release is not a threat to groundwater contamination, the permanent pit will be closed in accordance with the approved C-144 (closure plan) and will include the following:

- 1. Stockpiled sub-surface soil will be used to backfill pit and re-contour (to a final or intermediate cover that blends with the surrounding topography). A minimum of fourfeet of compacted, non-waste containing, earthen material will be used as backfill.
- 2. Stockpiled surface soil will be used as a cover over the backfilled pit and disturbed area no longer needed for production operations. The soil cover will include either the background thickness of top soil or one-foot of suitable material to establish vegetation at the site whichever is greater. The soil cover will be constructed to the sites existing grade and prevent water collection or ponding and erosion of the cover material.
- 3. Disturbed areas will be seeded the first growing season after the pit is closed. Seeding will be accomplished by drilling on contour whenever possible or by other division approved methods. BLM stipulated seed mixes will be used on all Federal lands and OCD approved seed mixes (administratively approved if required) will be used on all State or private 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 consecutive growing seasons. If alternate seed mix is required by the state, private owner or tribe, it will be implemented with administrative approval if needed. Seeding or planting will be continued until successful vegetative growth occurs.
- 4. The Aztec District office of the OCD will be notified after each re-seeding operation and after successful re-vegetation has been achieved.

Kurt Fagrelius VP – Exploration, Dugan Production Corp. Farmington, New Mexico 87401 505-325-1821 (O), 505-320-8248 (C) kfagrelius@duganproduction.com

Lease Name:	Western	Federal #8Y				
API No 30-0-	45-23545					
Site Specific	Infromation	on				
Depth to	>100-ft	Distance to Surface	100-ft	Wellhead Protection Area	>1,000-ft	
Groundwater		Water Body		Distance from Water Source		
Total Ranking	Score		<u>. </u>			
Depth to	Ranking	Distance to Surface	Ranking	Wellhead Protection Area	Ranking Score	Total Ranking
Groundwater	Score	Water Body	Score	Distance from Water Source	Yes =20, No=0	Score
<50-feet	20	<200-feet	20	<1000-feet from water source	0	
50 - 99	10	200 - 1000	10	<200-feet domestic water	0	
>100-feet	0	>1000-feet	0			20
Total			 Ranking	Score	Sample	
		>19	10 - 19	0 - 9	Analysis	
Benzene (mg/kg)		10	10	10	<0.050	
BTEX (mg/kg)		50	50	50	<0.150	
TPH (mg/kg)		100	1000	5000	<10	
Chorides (mg/kg) N.A.		NΑ	N A	48		
Note: Analytic	al method	ls used for Benzene S	 W-846, B	 TEX SW-846, TPH 418 1 and 0	L Chlorides 4500-C	1-B.
						· · · · · · · · · · · · · · · · · · ·
C-144 ranking	= 20 Th	e release does not po	se a threa	at to groundwater contamination	1	
	<u> </u>					
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Western Federal #8Y Hydrogeologic Report

The Western Federal #8Y is located on Navajo Nation Trust Lands within the Navajo Indian Irrigation Project (NIIP), San Juan County, New Mexico. Water used for irrigation on NIIP is transported to the area from Cutter Dam and Navajo Dam over 25-30 miles to the north and east through an elaborate, cement lined canal system

A records search of the NM Office of the State Engineer –iWATERS database was conducted on a three square mile area centered on the Western Federal #8Y location (Exhibit 1). No water wells were located within the search area. The results of the search are shown on Exhibit 1 and 2

The main source of stock water in the region is encountered in valley-fill deposits in existing arroyos at shallow depths of approximately 15-50 feet below the surface and stock tanks constructed on surface shale layers at the confluence and upper reaches of arroyos. The below grade tank is not located in an arroyo, the closest arroyo is 100-feet to the south (Exhibit 2) (See Visual Inspection Certification).

The Nacimiento Formation extends from the surface down to a depth of 280-feet and is comprised of dominantly mudstones with thin inter-beds of siltstone and laterally discontinuous, fine grained sandstones. Near the base of the Nacimiento (100-125 feet), thin silty sandstones occur, which may contain minimal amounts of poor quality groundwater. However, the sands are discontinuous, have high silt content and would not be expected to be a good source of water.

The underlying Ojo Alamo Sandstone ranges from 280-feet down to 400-feet and is comprised of a coarse grained sandstone inter-bedded with lenses of mudstone and occasional conglomeratic sandstone. The Ojo Alamo may yield marginal quantities of water for livestock, however, the water quality is typically greater than 1,000 ppm total dissolved solids and high in sulfate (Stone, 1983).

Both the Nacimiento and Ojo Alamo are potential sources of water in the area, however, unpredictable variations in reservoir quality and water quality have discouraged the drilling of water wells in the in the subject area.

Based on a review electric open hole logs, the iWATERS database and literature reviewed, depth to ground water is estimated to be from thin, discontinuous, silty sands in the Nacimiento at 100-125 feet. The Ojo Alamo would provide a larger amount of poor quality from 280-400 feet below surface.

This Hydrogeologic Report was prepared by Mr. Kurt Fagrelius, Geologist for Dugan Production. Mr. Fagrelius has been employed as a geologist for Dugan for the past 31-years, received a MS in Geology from NMIMT in Socorro, NM and a BS in Geology from FLC in Durango, CO.

- Stone, W.J., Lyford, F.P., Frenzel, P.F., Mızell, 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, 70 p.
- Brown, D.R., and Stone, W.J., 1979, Hydrogeology of Aztec quadrangle, San Juan County, New Mexico: New Mexico Bureau of Mines and Mineral Resources Hydrogeologic Sheet 1.
- 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: U.S. Geological Survey, Atlas HA-720-A, Sheet 1 and 2.
- Thorn, C.R., Levings, G.W., Craigg, S.D., Dam, W.L., and Kernodle, J.M., 1990, Hydrogeology of the Ojo Alamo Sandstone in the San Juan Structural Basin, New Mexico, Colorado, Arizona and Utah: U.S. Geological Survey, Atlas HA-720-B, Sheet 1 and 2

DUGAN DRODUCTION CORD. WESTERN FEDERAL #8Y SF 078897-A SECI8 IZONICIMPIA BAN JUAN CO. KIN

For Emergency Call (505) 325-1823

Western Federal #8Y Earthen Pit Closed 12-22-10

From: Kurt Fagrelius

Sent: Wednesday, December 15, 2010 9 49 AM

To: 'Powell, Brandon, EMNRD', 'Spencer, Bertha', 'dave mankiewicz@nm blm gov', 'Mark Kelly@nm blm gov', 'lucas vargo@blm gov'

Cc: Johnny Lane, Mike Sandoval

Attachments: 72-Hour Notice to Close 12-20 to 12-23-2010 xls

Dear Mr Brandon Powell, Ms Bertha Spencer, Mr Dave Mankiewicz, Mr Mark Kelly and Mr Lucas Vargo,

Dugan Production Corp is hereby giving notice that Dugan will be closing the permanent pits on the following well pads

- 1) Western Federal #8Y
- 2) Bisti State Com #1
- 3) Olson #1
- 4) Herry Monster #1

Site specific and soil analysis information for each permanent pit is included in the enclosed attachment

Those highlighted in blue (#'s 1 & 2) are located on Tribal Trust Surface, and those highlighted in red (# 3 & #4) are located on Federal Surface

Permanent pits will be closed starting Monday December 20, 2010 thru Thursday December 23, 2010

If you have any questions or require additional information, please contact me

Kurt Fagrelius
Dugan Production Corp
709 East Murray Drive
Farmington, New Mexico 87401
505-325-1821 (O), 505-320-8248 (C)
kfagrelius@duganproduction com

Dugan Production Corp. Per Lease Name	Western Federal #8Y		Olson #1	Herry Monster #1
API Number	30-045-23545	30-045-25835	30-045-26516	30-045-25515
Surface Owner - Notice Sent	Tribal Trust	Tribal Trust	Federal	Federal
Location - UL, Sec , Twp, Rge	B-18-26N-11W	M-2-25N-13W	I-11-23N-10W	M-12-24N-11W
Latitude	36 4929 N	36 42369 N		
Longitude	108 04185 W	108 19594 W	107 85847 W	107 96014 W
C-144 Ranking Score	20	0	10	
Benzene (mg/kg)	<0 050	<0.050	<0.050	<0.050
Betex (mg/kg)	< 0 150	<0.150	<0 300	<0 300
TPH (mg/kg) - Analy Mthd	<10 - 8015	27 8 - 8015	<100 - 418.1	<100 - 418.1
Chlorides (mg/kg)	48	1040	1960	1490
Total Yards Contaminated	36	NA	NA	60
Soil Hauled to Landfarm				

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From: postmaster@duganproduction com

Sent: Wednesday, December 15, 2010 9 49 AM

To: Kurt Fagrelius

Subject: Delivery Status Notification (Relay)

Attachments: ATT35410 txt, Untitled Attachment



ATT35410.txt (407 Untitled Attachment

B)

This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

Brandon.Powell@state.nm.us

From:

postmaster@duganproduction com

Sent:

Wednesday, December 15, 2010 9 51 AM

To:

Kurt Fagrelius

Subject:

Delivery Status Notification (Relay)

Attachments:

ATT35422 txt, Untitled Attachment





ATT35422.txt (396 Untitled Attachment

B)

This is an automatically generated Delivery Status Notification.

Your message has been successfully relayed to the following recipients, but the requested delivery status notifications may not be generated by the destination.

Bertha.Spencer@bia.gov

From:

Sent:

Ivargo@blm gov Wednesday, December 15, 2010 10 01 AM Kurt Fagrelius

To:

Return Receipt

Your

document:

was

Lucas Vargo/FFO/NM/BLM/DOI

received

by:

12/15/2010 10:00:55 AM at:

From:

Sent:

dmankiew@blm gov Wednesday, December 15, 2010 10 28 AM Kurt Fagrelius

To:

Return Receipt

Your

document:

Dave Mankiewicz/FFO/NM/BLM/DOI

received

by:

at:

12/15/2010 10:28:12 AM

From:

To:

Spencer, Bertha [Bertha Spencer@bia gov] Kurt Fagrelius Wednesday, December 15, 2010 11 59 AM Read Sent:

Subject:

Your message

Bertha Spencer@bia.gov To:

Subject.

was read on 12/15/2010 11:59 AM.