

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

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

Form C-141  
Revised October 10, 2003  
Submit 2 Copies to appropriate  
District Office in accordance  
with Rule 116 on back  
side of form

Release Notification and Corrective Action

30-045-28241

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Dugan Production Corp.	Contact	Kurt Fagrelus
Address	P.O. Box 420	Telephone No.	505-325-1821
Facility Name	Champ #7 (Production)	Facility Type	Permanent Pit

Surface Owner	Federal	Mineral Owner	Federal	Lease No	NM-42059
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LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	5	23N	10W	1980	South	1830	West	San Juan

Latitude 36.25383 N Longitude 107.92136 W

NATURE OF RELEASE

Type of Release	Spill Cleanup and pit closure	Volume of Release	Unknown	Volume Recovered	Unknown
Source of Release	Below grade permanent pit release	Date and Hour of Occurrence	?	Date and Hour of Discovery	Unknown
Was Immediate Notice Given?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not Required	If YES, To Whom?	N/A		
By Whom?	Date and Hour				
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse			

If a Watercourse was Impacted, Describe Fully *	
N/A	

Describe Cause of Problem and Remedial Action Taken \*

During permanent pit closure a chloride impact was discovered. A five-point composite sample tested 864-mg/kg chlorides which exceeds the threshold limits as per subsection B of 19.15.17.13 (B) (1) (b). See attached sample results.

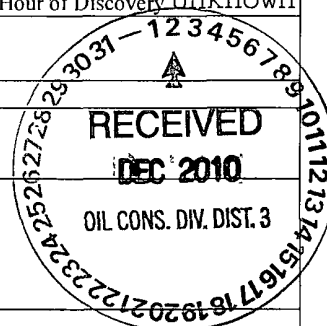
Describe Area Affected and Cleanup Action Taken \*Contamination was addressed under the "spill rule", 19.15.30. 60.0-cubic yards of contaminated soil was hauled from site of release to Envirotech Landfarm. C-144 ranking=10. The chloride release does not pose a threat to contamination of groundwater. See attachment to "Final C-141" and invoice #22651.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature	<i>Kurt Fagrelus</i>	OIL CONSERVATION DIVISION	
Printed Name	Kurt Fagrelus	Approved by District Supervisor	<i>Jonah D. Kelly</i>
Title	VP Exploration	Approval Date	11/30/2011
E-mail Address	kfagrelus@duganproduction.com	Expiration Date	
Date	November 11, 2010	Conditions of Approval	Attached <input type="checkbox"/>
Phone	505-325-1821		

\* Attach Additional Sheets If Necessary

nJK 1133442512





# ARDINAL LABORATORIES

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

December 31, 2009

Fred Cornish  
Dugan Production Corporation  
4100 Piedras Street  
Farmington, NM 87401

Re: Earth Pit Closure

Enclosed are the results of analyses for sample number H18942, received by the laboratory on 12/23/09 at 11:15 am.

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 Hydrocarbons

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

Cardinal Laboratories is accredited 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 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 6 (includes Chain of Custody)

Sincerely,

Celey D. Keene  
Laboratory Director

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This report conforms with NELAP requirements.



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

ANALYTICAL RESULTS FOR  
DUGAN PRODUCTION CORP  
ATTN: FRED CORNISH  
4100 PIEDRAS ST  
FARMINGTON, NM 87401  
FAX TO (505) 325-4873

Receiving Date: 12/23/09  
Reporting Date: 12/31/09  
Project Number: NOT GIVEN  
Project Name: EARTH PIT CLOSURE  
Project Location: NOT GIVEN

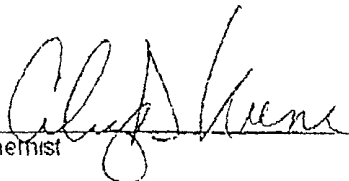
Sampling Date: 12/21/09  
Sample Type: SOIL  
Sample Condition: COOL & INTACT @ 6°C  
Sample Received By: CK  
Analyzed By: ZL

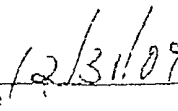
LAB NO	SAMPLE ID	ETHYL TOTAL			
		BENZENE	TOLUENE	BENZENE	XYLENES
		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)

ANALYSIS DATE:	12/30/09	12/30/09	12/30/09	12/30/09
H18942-1 ST. MORITZ #1	<0.050	<0.050	<0.050	<0.300
H18942-2 AUGUST #1 SEP.	<0.050	<0.050	<0.050	<0.300
H18942-3 GOLD MEDAL #1	<0.050	<0.050	<0.050	<0.300
H18942-4 SILVER MEDAL #1 SEP.	<0.050	<0.050	<0.050	<0.300
H18942-5 GOLD MEDAL #2 SEP.	<0.050	<0.050	<0.050	<0.300
H18942-6 CHAMP #1 T.B. PROD. T.	<0.050	<0.050	0.223	<0.300
H18942-7 CHAMP #1 T.B. SEP.	<0.050	<0.050	<0.050	<0.300
H18942-8 CHAMP #7 T.B. PROD. T.	<0.050	<0.050	<0.050	<0.300
H18942-9 CHAMP #7 T.B. SEP.	<0.050	<0.050	<0.050	<0.300
H18942-10 MARY LOU T. BON #1	<0.050	<0.050	<0.050	<0.300
H18942-11 CALGARY #88 T.B., P.T.	<0.050	<0.050	<0.050	<0.300
H18942-12 CALGARY #88 T.B. SEP.	<0.050	<0.050	<0.050	<0.300
H18942-13 GOLD MEDAL #5 T.B., P.T.	<0.050	<0.050	<0.050	<0.300
H18942-14 GOLD MEDAL #5 T.B., SEP.	<0.050	<0.050	<0.050	<0.300
H18942-15 FLO JO #1 PROD. T.	<0.050	<0.050	<0.050	<0.300
Quality Control	0.049	0.047	0.048	0.130
True Value QC	0.050	0.050	0.050	0.150
% Recovery	98.0	94.0	96.0	86.7
Relative Percent Difference	<1.0	<1.0	<1.0	<1.0

METHODS: BTEX - SW-846 8021B

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,  
AND TOTAL XYLENES. Reported on wet weight.

  
Chernist

  
Date 12/31/09

H18942 BTEX DUGAN



# CARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR  
DUGAN PRODUCTION CORP.  
ATTN: FRED CORNISH  
4100 PIEDRAS ST  
FARMINGTON, NM 87401  
FAX TO (505) 325-4873

Receiving Date: 12/23/09  
Reporting Date 12/30/09  
Project Number: NOT GIVEN  
Project Name: EARTH PIT CLOSURE  
Project Location NOT GIVEN

Sampling Date 12/21/09  
Sample Type: SOIL  
Sample Condition: COOL & INTACT @ 6°C  
Sample Received By CK  
Analyzed By AB

LAB NUMBER SAMPLE ID		418.1 TOTAL TPH (mg/kg)
ANALYSIS DATE		12/28/09
H18942-1	ST MORITZ #1	<100
H18942-2	AUGUST #1 SEP.	<100
H18942-3	GOLD MEDAL #1	<100
H18942-4	SILVER MEDAL #1 SEP.	<100
H18942-5	GOLD MEDAL #2 SEP.	<100
H18942-6	CHAMP #1 T.B. PROD. T	8,800
H18942-7	CHAMP #1 T.B. SEP.	<100
H18942-8	CHAMP #7 T.B. PROD. T	<100
H18942-9	CHAMP #7 T.B. SEP	<100
H18942-10	MARY LOU T. BON #1	<100
H18942-11	CALGARY #88 T.B., P.T.	141
H18942-12	CALGARY #88 T.B. SEP.	<100
H18942-13	GOLD MEDAL #5 T.B., P.T.	<100
H18942-14	GOLD MEDAL #5 T.B., SEP	713
H18942-15	FLO JO #1 PROD. T.	900
Quality Control		306
True Value QC		300
% Recovery		102
Relative Percent Difference		3.1

METHODS: EPA 418.1

Not accredited for TPH 418.1 Reported on wet weight

*Chris Keene*  
Chemist

Date

12/31/09

H18942 418.1 DUGAN

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

ANALYTICAL RESULTS FOR  
DUGAN PRODUCTION  
ATTN: FRED CORNISH  
4100 PIEDRAS STREET  
FARMINGTON, NM 87401  
FAX TO (505) 325-4873

Receiving Date: 12/23/09  
Reporting Date: 12/30/09  
Project Number: NOT GIVEN  
Project Name: EARTH PIT CLOSURE  
Project Location: NOT GIVEN

Analysis Date: 12/30/09  
Sampling Date: 12/21/09  
Sample Type: SOIL  
Sample Condition: COOL & INTACT @ 3.5°C  
Sample Received By: CK  
Analyzed By: HM

LAB NUMBER	SAMPLE ID	Cl <sup>-</sup> (mg/kg)
H18942-1	ST. MORITZ #1	8,200
H18942-2	AUGUST #1 SEP.	6,800
H18942-3	GOLD MEDAL #1	1,340
H18942-4	SILVER MEDAL #1 SEP.	992
H18942-5	GOLD MEDAL #2 SEP.	448
H18942-6	CHAMP #1 T.B. PROD. T.	752
H18942-7	CHAMP #1 TB SEP.	1,120
H18942-8	CHAMP #7 TB PROD. T.	864
H18942-9	CHAMP #7 TB SEP.	608
H18942-10	MARY LOU T. BON #1	880
H18942-11	CALGARY #88 T.B., P.T.	1,760
H18942-12	CALGARY #88 T.B. SEP.	352
H18942-13	GOLD MEDAL #5 T.B., P.T.	2,240
H18942-14	GOLD MEDAL #5 T.B., SEP.	1,550
H18942-15	FLOJO #1 PROD. T.	1,100
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods

4500-Cl/B

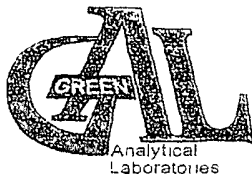
Note: Analyses performed on 1:4 w/v aqueous extracts. Not accredited for Chloride.

*Ally S. Keene*  
Chemist

Date: 12/31/09

H18942 Dugan

PLEASE NOTE: Liability and Damages: Cardinal's 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 ninety (90) days after completion of the analysis. Liability for incidents or consequential damages, including without limitation, business interruptions, loss of use or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise, results solely from the samples upon which we have analyzed. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



# CHAIN OF CUSTODY RECORD

Page 1 of 2

Client Dugan PRODUCTION  
 Contact FRED CORNISH  
 Address \_\_\_\_\_  
 Phone Number 505-330-0929  
 FAX Number 505-325-4873

## NOTES

- 1) Ensure proper container packaging
  - 2) Ship samples promptly following collection
  - 3) Designate Sample Reject Disposition
- PO# \_\_\_\_\_

## Table 1 - Matrix Type

1 = Surface Water, 2 = Ground Water  
 3 = Soil/Sediment, 4 = Rinsate, 5 = Oil  
 6 = Waste, 7 = Other (Specify) \_\_\_\_\_

FOR G-1 USE ONLY  
 GAL JOB # \_\_\_\_\_

Project Name ERTH Pit Closure

Samplers Signature \_\_\_\_\_

Lat Name		Green Analytical Laboratories		(970) 247-4220 FAX (970) 247-4227		Analyses Required										Comments
Address		75 Suttle Street, Durango, CO 81303														
Sample ID	Date	Time	Collected by (Init.)	Matrix Type From Table 1	No of Containers	Sample Filtered Y/N	Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Benzene	48.1	Chlorides	
118942- ST MOD #1	12-21-09	9:35 AM		3										/	/	/
2 AUGUST #1 Sep	12-21-09	10:15 AM												/	/	/
3 Mob Medal #1	12-21-09	10:35 AM												/	/	/
4 S. Loc Medal #1 Sep	12-21-09	10:50 AM												/	/	/
5 Gold Medal #2 Sep	12-21-09	11:10 AM												/	/	/
6 Champ #1 TB Prod T.	12-21-09	11:30 AM												/	/	/
7 Champ #1 TB Sep	12-21-09	11:40 AM												/	/	/
8 Champ #1 TB Prod T.	12-21-09	12:00 PM												/	/	/
9 Champ #1 TB Sep	12-21-09	12:10 PM												/	/	/
10 Mob. Loc. Bore #1	12-21-09	1:05 PM												/	/	/
Relinquished by <u>Fred Cornish</u>			Date <u>12-21-09</u>	Time <u>4:44 PM</u>	Received by <u>Christy Clark</u>			Date <u>12/21/09</u>	Time <u>10:14</u>							
Relinquished by <u>Fred Ex</u>			Date _____	Time _____	Received by <u>Christy Clark</u>			Date <u>12/23/09</u>	Time <u>11:15</u>							

Sample Reject [ ] Return [ ] Dispose [ ] Store (30 Days)

35°C

CAI 6°C

Client DUGAN PRODUCTIONContact: FRED CORNISH

Address: \_\_\_\_\_

Phone Number: 505-330-0929FAX Number: 505-325-4873

## CHAIN OF CUSTODY RECORD

Page 2 of 2

## NOTES:

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

PO# \_\_\_\_\_

Project Name: \_\_\_\_\_

## Table 1. - Matrix Type

1 = Surface Water, 2 = Ground Water  
 3 = Soil/Sediment, 4 = Rinsate, 5 = Oil  
 6 = Waste, 7 = Other (Specify) \_\_\_\_\_

FOR GAL USE ONLY

GAL JOB # \_\_\_\_\_

Samplers Signature: Fred Cornish

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227										Analyses Required										Comments	
Address: 75 Suttle Street, Durango, CO 81303																					
Sample ID	Collection		Collected by: (Init.)	Miscellaneous			Preservative(s)					Benzene	TPH	BTEX	418.1	Chlorides					
	Date	Time		Matrix Type From Table 1	No. of Containers	Sample Filtered Y/N	Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH						Other (Specify)				
H18942-																					
11 1 Calgacy #88 T.B.P.T	12-21-09	12:25 PM		3																	
12 2 Calgacy #88 T.B. Sep.	12-21-09	12:35 PM		1																	
13 3 Add Media #5 T.B.P.T	12-21-09	1:25 PM		1																	
14 4 Add Media #5 T.B. Sep	12-21-09	1:35 PM		1																	
15 5 <del>Flo So #1 Prod. T</del>																					
15 6 Flo So #1 Prod. T	12-21-09			1																	
7																					
8																					
9																					
10																					
Relinquished by: <u>Fred Cornish</u>			Date: <u>12-21-09</u>	Time: <u>4:14 PM</u>			Received by: <u>Christa Clark</u>			Date: <u>12/21/09</u>			Time: <u>11:19</u>								
Relinquished by: <u>Fed Ex</u>			Date: _____	Time: _____			Received by: <u>Christa Clark</u>			Date: <u>12/23/09</u>			Time: <u>11:15</u>								

\* Sample Reject [ ] Return [ ] Dispose [ ] Store (30 Days)

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



To  
 Dugan Production Corp  
 PO Box 420  
 Farmington, NM 87401

**Invoice**

Invoice Number 22651  
 Job 06094-0048  
 DATE January 22, 2009

Champ #7- accept exempt contaminated soil  
 and oil from production stream

Ordered by Fred Cornish

Project Manager April Pohl

<u>Employee</u>	<u>Staff Type</u>	<u>Description</u>	<u>Units</u>	<u>Rate</u>	<u>Total</u>
<b>01/15/2009</b>					
<b>Landfarm</b>					
		BOL# 32374	2 00 ea	10 00	20 00
Paint Filter Test		BOL# 32374	2 00 ea	15 00	30 00
Chloride Analysis-Water		BOL# 32374	20 00 cy	18 00	360 00
Contaminated Soil Receival		BOL# 32378	2 00 ea	10 00	20 00
Paint Filter Test		BOL# 32378	2 00 ea	15 00	30 00
Chloride Analysis-Water		BOL# 32378	20.00 cy	18 00	360 00
Contaminated Soil Receival					
<b>Landfarm Total:</b>			<b>48.00</b>		<b>820.00</b>
<b>01/15/2009 Total:</b>			<b>48.00</b>		<b>820.00</b>
<b>01/19/2009</b>					
<b>Landfarm</b>					
		BOL# 32401	2 00 ea	10 00	20 00
Paint Filter Test		BOL# 32401	2 00 ea	15 00	30 00
Chloride Analysis-Water		BOL# 32401	20 00 cy	18 00	360 00
Contaminated Soil Receival					
<b>Landfarm Total:</b>			<b>24.00</b>		<b>410.00</b>
<b>01/19/2009 Total:</b>			<b>24.00</b>		<b>410.00</b>



Invoice # 22651 Job # 06094-0048

<u>Employee</u>	<u>Staff Type</u>	<u>Description</u>	<u>Units</u>	<u>Rate</u>	<u>Total</u>
-----------------	-------------------	--------------------	--------------	-------------	--------------

		Invoice Sub-total			1,230 00
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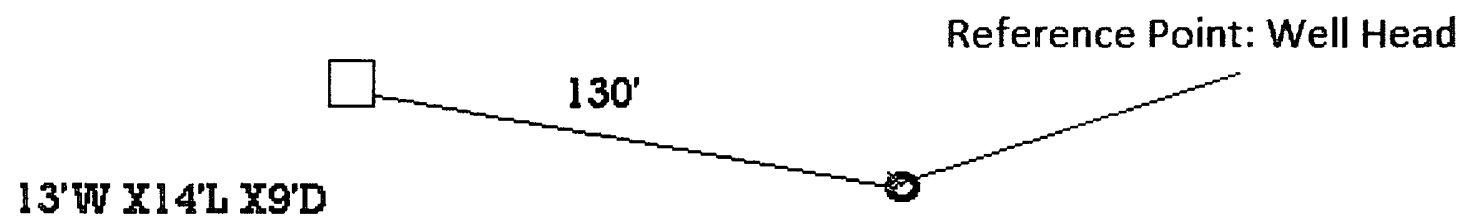
		Sales Tax			76 11
--	--	-----------	--	--	-------

Amount due this Invoice					<u>\$1,306.11</u>
-------------------------	--	--	--	--	-------------------

*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  
Champ #7  
Tank Pit



From Reference Point Go N **80** degrees N.W. For  
a Distance of **130'** to Center of Pit.

Permanent pit: Champ #7 TB (Production Tank)  
API number: 30-045-28241

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 four-feet 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 Fagrelus  
VP – Exploration, Dugan Production Corp.  
Farmington, New Mexico 87401  
505-325-1821 (O), 505-320-8248 (C)  
kfagrelus@duganproduction.com

<b>Lease Name: Champ #7 (Production)</b>						
API No	30-045-28241					
<b>Site Specific Information</b>						
Depth to	<b>95-ft</b>	Distance to Surface	<b>1500-ft</b>	Wellhead Protection Area	<b>&gt; 1000-ft</b>	
Groundwater		Water Body		Distance from Water Source		
<b>Total Ranking Score</b>						
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			10
<b>Total Ranking Score</b>					<b>Sample</b>	
		>19	10 - 19	0 - 9	<b>Analysis</b>	
Benzene (mg/kg)		10	10	10	<0.050	
BTEX (mg/kg)		50	50	50	<0.300	
TPH (mg/kg)		100	1000	5000	<100	
Chorides (mg/kg)		N.A	N.A.	N.A	864	
Note: Analytical methods used for Benzene SW-846, BTEX SW-846, TPH 418 1 and Chlorides 4500-C1-B						
C-144 ranking =10. Chloride release does not pose a threat to groundwater contamination.						

## **Champ #7 Hydrogeologic Report**

The Champ #7 is located on Federal land on the Chaco Slope area in San Juan County, New Mexico. The region is characterized as a high arid mesa broken by numerous, deep cutting arroyos. Mesa tops are dominated by tall stands of sage with sparse grass in the arroyos and low-lying areas.

A records search of the NM Office of the State Engineer –iWATERS database was conducted on a three square mile area centered on the Champ #7 location (Exhibit 2). One water well was located 9,000 feet to the northeast (total depth 373 feet, no other available information). The results of the search are shown on Exhibit 1.

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 1,500 feet to the southeast (Exhibit 2).

The Nacimiento extends from the surface down to a depth of approximately 85 feet and is comprised of mudstone / shale with a trace of siltstone. The Nacimiento is not a good source of water in the area; the section does not have rocks capable of storing groundwater and has been breached to a depth of 80 feet by an arroyo 1/4-mile to the southeast.

The Ojo Alamo Sandstone extends from 85-165 feet and is comprised of a coarse grained sandstone inter-bedded with lenses of mudstone and occasional conglomeratic sandstone. If the Ojo Alamo contains groundwater, it would be in the lower sands below a depth of about 160 feet.

The Kirtland Shale interval is from 165-600 feet in depth and is comprised entirely of mudstone / shale with a few thin siltstone layers inter-bedded with shale from 290-370 feet. These thin stringers of siltstone might contain very minimal amounts of ground water.

The Fruitland Formation and Pictured Cliffs Sandstone from 910-1020 feet contain larger amounts of very poor quality ground water. Analysis of this water is available upon request from Dugan Production Corp.

Excessive drilling depth, unpredictable variations in reservoir quality and water quality have discouraged the drilling of water wells in the in the subject area.

Based on electric open hole logs, the iWATERS database and literature reviewed, very minor amounts of poor quality ground water might be found at a depth below 95 feet from the lowermost Ojo Alamo Sandstone. A deeper and larger source of poor quality groundwater occurs in the Fruitland Coals and Pictured Cliffs Sandstone from 910-1020 feet.

This Hydrogeologic Report was prepared by Mr. Kurt Fagrelus, Geologist for Dugan Production. Mr. Fagrelus 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., 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, 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., Craig, 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., Craig, 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 PRODUCTION CORP.**

**CHAMP # 7 TB**

**NM-42059**

**API # 30-045-28241**

**NE/4, SW/4, UNIT K**

**SEC. 5, T23N, R10W**

**LAT. 36° 15' 14" LONG. 107° 55' 17"**

**SAN JUAN COUNTY, NM**

**FOR EMERGENCY CALL (505)325-1823**

Champ #7 Production  
Tank Pit  
Close 11-16-10



## Kurt Fagrelius

---

**From:** Kurt Fagrelius  
**Sent:** Thursday, November 11, 2010 3:49 PM  
**To:** Kurt Fagrelius, Powell, Brandon, EMNRD, Evan Rowland (erowland@slo.state.nm.us), dave\_mankiewicz@nm.blm.gov, Mark\_Kelly@nm.blm.gov, lucas\_vargo@blm.gov  
**Cc:** Johnny Lane, Mike Sandoval  
**Subject:** RE: 72-Hour Notice to Close Permanent Pits  
**Attachments:** 72-Hour Notice to Close 11-16-2010.xls

I am sorry everyone, I failed to include the attachment on the previous mailing

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

---

**From:** Kurt Fagrelius  
**Sent:** Thursday, November 11, 2010 11:59 AM  
**To:** 'Powell, Brandon, EMNRD'; Evan Rowland (erowland@slo.state.nm.us); 'dave\_mankiewicz@nm.blm.gov'; 'Mark\_Kelly@nm.blm.gov'; 'lucas\_vargo@blm.gov'  
**Cc:** Johnny Lane; Mike Sandoval  
**Subject:** 72-Hour Notice to Close Permanent Pits

Mr. Brandon Powell, Mr. Evan Rowland, 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) Champ #7 (Separator)
- 2) Champ #7 (Production)
- 3) Champ #9
- 4) Flo Jo #2 (Separator)
- 5) Flo Jo #4
- 6) Hoss #1 (Separator)
- 7) LH #174 (Separator)
- 8) LH #174 (Production)
- 9) Luna #3

11/11/2010



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

Those highlighted in blue (#'s 1 - 6) are located on Federal Surface, and those highlighted in red (#'s 7-9) are located on NM State surface

Permanent pits will be closed starting Tuesday November 16, 2010 thru Thursday November 18, 2010

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

Sincerely,

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

11/11/2010

**Dugan Production Corp. Permanent Pits to be Closed on November 18, 2010**

Lease Name	Champ #7 Separator	Champ #7 Production	Champ #9	Flo Jo #2 Separator	Flo Jo #4
API Number	30-045-28241	30-045-28241	30-045-29287	30-045-27441	30-045-28645
Surface Owner - Notice Sent	Federal	Federal	Federal	Federal	Federal
Location - UL, Sec , Twp, Rge	K-5-23N-10W	K-5-23N-10W	O-1-23N-10W	C-1-23N-11W	I-1-23N-11W
Latitude	36.25383 N	36.25383 N	36.25096 N	36.26100 N	36.25434 N
Longitude	107.92136 W	107.92136 W	107.84501 W	107.95636 W	107.94865 W
C-144 Ranking Score	10	10	10	0	10
Benzene (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050
Betex (mg/kg)	<0.300	<0.300	0.473	<0.300	<0.300
TPH (mg/kg) - Analy Mthd	<100 - 418.1	<100 - 418.1	<20 - 8015	<100 - 418.1	<100 - 418.1
Chlorides (mg/kg)	608	864	608	992	800
Total Yards Contaminated	60-yds	60-yds	N A	54-yds	124-yds
Soil Hauled to Landfarm					

**Dugan Production Corp. Permanent Pits to be Closed on November 18, 2010**

Hoss #1 Separator	LH #174 Separator	LH #174 Production	Luna #3
30-045-29376	30-045-28533	30-045-28533	30-045-29215
Federal	State	State	State
H-11-23N-11W	A-32-23N-8W	A-32-23N-8W	C-16-23N-9W
36 24188 N	36.18909 N	36 18909 N	36.23237 N
107.9649 W	107.69714 W	107.69714 W	107 79659 W
10	10	10	10
<0.025	<0.100	<0.100	0.041
0.485	<0.300	<0.300	<0.075
<10 - 418 1	54.3 - 8015	368 - 8015	286 - 8015
176	976	416	864
90-yds	N A	N.A.	36-yds

**Kurt Fagrelius**

---

**From:** Kurt Fagrelius  
**Sent:** Thursday, November 11, 2010 3:49 PM  
**To:** Kurt Fagrelius, 'Powell, Brandon, EMNRD', Evan Rowland (erowland@slo.state.nm.us), 'dave\_mankiewicz@nm.blm.gov', 'Mark\_Kelly@nm.blm.gov', 'lucas\_vargo@blm.gov'  
**Cc:** Johnny Lane, Mike Sandoval  
**Subject:** RE 72-Hour Notice to Close Permanent Pits  
**Attachments:** 72-Hour Notice to Close 11-16-2010.xls

Tracking:	Recipient	Delivery	Read
	Kurt Fagrelius	Delivered: 11/11/2010 3:49 PM	Read: 11/11/2010 3:49 PM
	'Powell, Brandon, EMNRD'		
	Evan Rowland (erowland@slo.state.nm.us)		
	'dave_mankiewicz@nm.blm.gov'		
	'Mark_Kelly@nm.blm.gov'		
	'lucas_vargo@blm.gov'		
	Johnny Lane	Delivered: 11/11/2010 3:49 PM	
	Mike Sandoval	Delivered: 11/11/2010 3:49 PM	

I am sorry everyone, I failed to include the attachment on the previous mailing

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

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**Cc:** Johnny Lane; Mike Sandoval  
**Subject:** 72-Hour Notice to Close Permanent Pits

11/30/2010

## Kurt Fagrelus

---

**From:** postmaster@duganproduction.com  
**Sent:** Thursday, November 11, 2010 3:49 PM  
**To:** Kurt Fagrelus  
**Subject:** Delivery Status Notification (Relay)

**Attachments:** ATT14381.txt, RE: 72-Hour Notice to Close Permanent Pits



ATT14381.txt (407 RE: 72-Hour Notice  
B) to Close Pe..

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

## Kurt Fagrelius

---

**From:** postmaster@duganproduction.com  
**Sent:** Thursday, November 11, 2010 3:49 PM  
**To:** Kurt Fagrelius  
**Subject:** Delivery Status Notification (Relay)

**Attachments:** ATT14372.txt, RE: 72-Hour Notice to Close Permanent Pits



ATT14372.txt (422 RE: 72-Hour Notice  
B) to Close Pe...

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.

erowland@slo.state.nm.us

## Kurt Fagrelius

---

**From:** Lucas\_Vargo@blm.gov  
**Sent:** Tuesday, November 16, 2010 8 36 AM  
**To:** Kurt Fagrelius  
**Subject:** 72-Hour Notice to Close Permanent Pits

### Return Receipt

Your 72-Hour Notice to Close Permanent Pits  
document:

was Lucas Vargo/FFO/NM/BLM/DOI  
received  
by:

at: 11/16/2010 08:35:53 AM

## Kurt Fagrelius

---

**From:** System Administrator  
**To:** Kurt Fagrelius, Johnny Lane, Mike Sandoval  
**Sent:** Thursday, November 11, 2010 3:49 PM  
**Subject:** Delivered RE 72-Hour Notice to Close Permanent Pits

Your message

**To:** Kurt Fagrelius; Powell, Brandon, EMNRD; Evan Rowland (erowland@slo.state.nm.us); dave\_mankiewicz@nm.blm.gov, Mark\_Kelly@nm.blm.gov; lucas\_vargo@blm.gov  
**Cc:** Johnny Lane; Mike Sandoval  
**Subject:** RE: 72-Hour Notice to Close Permanent Pits  
**Sent:** 11/11/2010 3:49 PM

was delivered to the following recipient(s)

Kurt Fagrelius on 11/11/2010 3:49 PM  
Johnny Lane on 11/11/2010 3:49 PM  
Mike Sandoval on 11/11/2010 3:49 PM