AP - 070

STAGE 1 WORKPLAN

4/11/2007

AP070

HOLLAND&HART LLP

William F. Carr
wcarr@hollandhart.com

April 11, 2007

2007 APR 11 AM 6 10

VIA HAND DELIVERY

Mr. Wayne Price
Environmental Bureau Chief
Oil Conservation Division
New Mexico Energy, Minerals
and Natural Resources Department
1220 South Saint Francis Drive
Santa Fe, New Mexico 87505

Re: Stage I Abatement Plan
David H. Arrington Oil & Gas, Inc.
Mallon Drake 16 State No. 1, Unit G, Section 16,
Township 16 South, Range 37 East, NMPM,
Lea County, New Mexico.

Dear Mr. Price:

Pursuant to your letter of February 8, 2007, received on February 12, 2007, enclosed is that Stage I abatement plan for the Mallon Drake 16 State No. 1.

Your attention to this matter is appreciated.

Very truly yours,

William F. Carr

cc: Mr. Larry Click
Mr. Mark Ellerbe
David H. Arrington Oil & Gas, Inc.

Shaw Environmental, Inc.
5801 W. Industrial Ave. #2
Midland, TX 79706
432-681-2800
FAX: 432-699-6717

Shaw™ Shaw Environmental, Inc.

April 11, 2007

Mr. Wayne Price
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

RE: David H. Arrington Oil & Gas
Mallon Drake 16 State Well #1
UL 'G' Sec. 16 T16S R37E

Dear Mr. Price,

Shaw Environmental, Inc. (under contract with Elke Environmental) is pleased to provide you with the attached Stage I Abatement Plan Proposal for the Mallon Drake 16 State Well #1 Site near Lovington, New Mexico. Please review and contact us with any questions or concerns.

Sincerely,

Shaw Environmental, Inc.

John Sullivan, P.G.
Project Manager

Micah Beard
Project Scientist

Shaw® Shaw Environmental, Inc.

Stage 1 Abatement Plan

Arrington Oil & Gas
Mallon Drake 16 State Well #1
Lea County, New Mexico

Prepared for:

Elke Environmental
4817 Andrews Highway
Odessa, TX 79762

Prepared by:

Shaw Environmental, Inc.
5801 W. Industrial Ave. #2
Midland, TX 79706

STATE OF TEXAS
JOHN S. SULLIVAN
GEOLOGY
445
LICENSED
PROFESSIONAL GEOSCIENTIST

Micah Beard
Ms. Micah Beard
Project Scientist

Mr. John Sullivan, P.G.
Project Manager

April 11, 2007

Table of Contents:

Attachments:

Introduction

Shaw Environmental, Inc. (Shaw) performed a site visit and has prepared a Stage I Abatement plan for the Mallon Drake 16 State Well #1 and the associated pit closure. Based on the review of the site information and site data collected to date, the following information has been used to formulate the Stage I Abatement Plan:

- Chloride concentrations have migrated to 55 feet below ground surface (bgs) and have tested above the New Mexico Drinking Water Standard of 250 ppm.
- The site specific groundwater gradient has not been determined due to the monitoring wells' relative locations and the lack of relative survey data
- The chloride concentrations in groundwater have migrated horizontally from the pit location
- The closest groundwater receptor is a windmill water well which is used for agricultural purposes
- The only constituent analyzed by a fixed laboratory is chlorides. No other constituents have been analyzed

Site Description/History

The site is located in Unit Letter G, Section 16, Township 16S, Range 37E of Lea County, New Mexico and is referred to as, Mallon Drake 16 State Well #1. Refer to Attachment 1 for a site location map. Currently the site consists of three (3) monitoring wells located near a 15,400 square foot drilling pit (see Attachment 2). Surrounding the site is undeveloped pasture used for ranching and cattle production, with a windmill water well used for watering the livestock located 1050 feet to the northwest.

After oil and gas-related drilling activities ceased, David H. Arrington Oil & Gas contracted Elke Environmental (Elke) of Odessa, Texas to complete closure of the associated drilling pit. On November 1, 2006 State of New Mexico form C-144 (Pit or Below Grade Tank Registration or Closure) was approved. Pit material removal and transportation was completed on November 9, 2006, resulting in a pit depth of six (6) feet. The excavated material was transported and disposed at Sundance Disposal in Eunice, New Mexico.

During the pit material removal activities, vertical delineation was attempted at the site using a backhoe, however the presence of indurated caliche below the pit rendered the attempt unsuccessful. On December 18, 2006 an air rotary

drilling rig was utilized to delineate the vertical extent of the affected soil in the pit. Soil samples were collected from 30 bgs to 65 feet bgs in 5-foot increments. Groundwater was encountered at 55 feet bgs. A sample of the groundwater was analyzed in the field for concentrations of chlorides. The results indicated that chlorides were detected above the 250 parts-per-million (ppm) New Mexico Standard for Drinking Water as defined in NMAC 20.6.2.3103. The boring was completed as a monitoring well (MW-1) at a total depth of 60 feet bgs. State of New Mexico Form C-141 (Release Notification and Corrective Action) was completed and submitted to the New Mexico Oil Conservation Division (OCD) as well as verbal notification. Copies of the OCD Forms are available in Attachment 5.

On December 22, 2006 Elke purged MW-1 according to OCD guidelines. Groundwater samples from MW-1 and the windmill located northwest of the site were collected and submitted to Environmental Lab of Texas (ELT) for chloride analysis. The resulting chloride concentrations in MW-1 were reported as 730 ppm, which is above New Mexico's domestic water supply standard of 250 ppm. Chloride concentrations were detected at 36.7 ppm from the windmill northwest of the site.

Two additional monitoring wells (MW-2 and MW-3) were installed south/southeast of the pit from January 15 – 18, 2007 to a total depth of 80 feet bgs (see Attachment 2). On January 24, 2007 groundwater samples were collected from monitoring wells MW-2 and MW-3. The samples were analyzed by ELT for chloride concentrations. The resulting chloride results for MW-2 and MW-3 were detected at 297 ppm and 763 ppm respectively. Refer to Attachment 7 for copies of the monitoring well information.

David H. Arrington Oil & Gas received notification from OCD on February 12, 2007 requiring a Stage 1 Abatement Plan Proposal be submitted within 60 days of receipt. Shaw was contracted by Elke to make a site visit and develop the abatement plan proposal. Shaw personnel visited the site on March 14, 2007. See Attachment 6 for photographic documentation of the site.

Site Investigation/Work Plan

Regional Geology/Hydrogeology:

The site is located on the Southern High Plains of New Mexico. Refer to Attachment 3 for a copy of the Lea County Soil Survey. The surface sediments consist of aolian sands and silts underlain by an indurated caliche layer. The site is underlain by the Ogallala Aquifer, Tertiary aged fluvial deposits. The Ogallala Formation is predominately composed of heterogeneous fluvial gravel sand, silt, clay, and caliche with a generally fining upwards sequence. The sand is gray to red, fine to medium-grained quartz that is unconsolidated to weakly cemented by

calcite and silica, and locally displays cross bedding. The formation has indistinct bedding to massive bedding, and is inter-bedded with white, gray, olive green, and maroon silt and clay beds with caliche nodules. Interspersed gravel within the formation is composed of pebbles and cobbles of quartz, quartzite, chert, igneous rock, metamorphic rock, and limestone. The maximum thickness of the Ogallala Formation within Lea County is 250 feet. Thickness of the Ogallala formation is dependant on the topography of the underlying eroded surfaces of Cretaceous and Triassic formations. The base of the aquifer generally slopes to the east and southeast. Cretaceous aged rocks of the Edwards-Trinity High Plains Aquifer underlie the Ogallala in this area. Where the potentiometric head in the Ogallala is less than that of the Edwards-Trinity Group, there is upwards leakage of groundwater into the Ogallala. The regional movement of groundwater is generally from west to east toward the cap-rock escarpment that forms the eastern margin of the High Plains physiographic region. Evapotranspiration greatly exceeds available rainfall for recharge to the Ogallala Aquifer. Formation of caliche at depth indicates evaporation losses dominate as hydrogeologic characteristic of the Ogallala rather than deep percolation. The Ogallala Formation yields moderate to large amounts of water, with some wells producing in excess of 1,000 gallons per minute.

Site Specific Geology:

Based on the observation of drill cuttings from the installation of the three monitoring wells, from approximately 0 to 40 feet bgs, the stratum is composed primarily of white to tan caliche and limestone. From approximately 41 – 50 feet bgs, the stratum is composed of tan silty sand. From 50 – 60 feet bgs, the stratum consists of tan colored sandstone with silty, sandy layers. Depth to water on site ranges from 60 to 70 feet bgs.

Generally the groundwater gradient flows toward the east/southeast. The water levels have been measured in all three monitoring wells; however they have not been surveyed. Thus a determination of site groundwater flow direction cannot be determined at this time.

Water Well Inventory:

Shaw obtained a Water Well Report from Banks Information Solutions, Inc. for a 1-mile radius around the site in order to identify the current water usage of the local groundwater. Eight water wells were identified in the report, and none were identified as domestic water supply wells. The well closest to the site is a windmill used for agricultural purposes (See Attachment 4). Groundwater from the well was analyzed and demonstrated no impact. Many of the wells are classified as "prospect", which is defined as a water supply well for an oil and gas drilling operation.

Plume Definition:

Groundwater Gradient Determination- Three monitoring wells have been installed at the site to identify the presence of chlorides in the groundwater. The full nature and extent of the affected groundwater should be determined, thus additional monitoring wells should be installed onsite. The first should be installed perpendicular to the line made from the three initial wells in order to ascertain the groundwater gradient and groundwater flow direction. The four wells should be surveyed to a common bench mark in order to determine the relative groundwater levels which will be used to determine the gradient direction.

Vertical and Horizontal Delineation- Once the groundwater gradient has been determined, additional monitoring wells should be installed in the down gradient direction to determine the horizontal extent of the chloride plume. The plume should be delineated in length and width in order to determine the extent of impact. This will likely consist of five to six monitoring wells installed in progression at locations determined in the field, based on the field chloride analyses of groundwater collected during the well installation. The State of New Mexico standard of 250 ppm will be the base-line at which the groundwater will be delineated.

During the installation of each monitoring well, soil samples will be field analyzed for the presence of chlorides at five foot intervals to determine the vertical extent of the impacted material.

Surface Water Hydrology/Impact:

No surface bodies of water were observed within one-mile of the site. The threat of surface water contamination is unlikely based on the topography.

Site Monitoring Plan:

The monitoring program should consist of a single groundwater sampling event after the forth monitoring well is installed. This event would include analyses for chlorides, total dissolved solids (TDS), total petroleum hydrocarbons (TPH), and 8 RCRA Metals. The analyses and the gauging information would be used to determine the location and analytical constituents needed for the further delineation activities.

After the groundwater gradient direction is determined, monitoring wells will be installed based on the gradient direction and the field chloride determinations after the completion of each well. A groundwater sampling event should be conducted to determine the concentrations of chlorides and any other chemical

of concern that may have been identified from the analytical results from the first sampling event.

Following the final sampling event and the validation of the site analytical data, a Stage II Abatement Plan should be completed detailing the sampling plan based on the site data collected during the Stage I activities. Also, the Stage II Abatement Plan should include a description of the clean-up plan and recommended remediation measures.

Quality Assurance Plan:

Applicable State of New Mexico standards, ASTM standards, EPA guidance's, and others listed in NMAC 20.6.2.5209 (B)(1-6) will be followed in order to ensure accurate and reproducible results.

Field chloride analyses of groundwater will be analyzed during the installation of the forth monitoring well. The groundwater sample collected from that monitoring well will be analyzed at a fixed laboratory, and the results will be compared in order to determine the relative accuracy of the field analytical method relative to the actual laboratory results.

In an effort to ensure that the analytical data collected from the site is accurate and representative of actual site conditions, quality assurance and quality control (QA/QC) samples will be analyzed as detailed in the EPA Contract Laboratory Program (CLP) requirements. An example of these requirements are as follows: blind duplicate groundwater samples will be collected a rate of one per ten samples and matrix spike/ matrix spike duplicate samples (MS/MSD) will be collected at a rate of one per twenty groundwater samples. Equipment blanks will be collected from the rinsate water from any field equipment that is decontaminated in the field during the sampling events.

After final analytical results are issued from the laboratory, a data review will be performed on all analytical batches for each analytical method. Analytical data validation will be performed on ten percent of analytical batches reviewed. A data usability report will be completed outlining the data review results, validation results, the site quality objectives with regard to sample concentrations and finally make a determination as to the data usability for further site decision making purposes.

Schedule of Site Activities:

The schedule for the activities detailed in this Abatement Plan and follow-up abatement measures are as follows:

x	Approval of Stage I Abatement Plan by New Mexico Oil conservation Division
x+30 days	Mobilize for the installation of the forth monitoring well
x+40 days	Survey all four site monitoring wells, gauge purge and sample all site monitoring wells.
x+60 days	Mobilize to install the additional delineation wells
x+70 days	Survey all site monitoring wells, gauge, purge, and sample all site monitoring wells.
x+90 days	Analytical data reviewed, validated, and DUS completed
x +120 days	Submit findings to OCD with a Stage II abatement plan which will describe the modifications of the sampling plan and detail the clean-up plan and remediation measures.

Conclusion

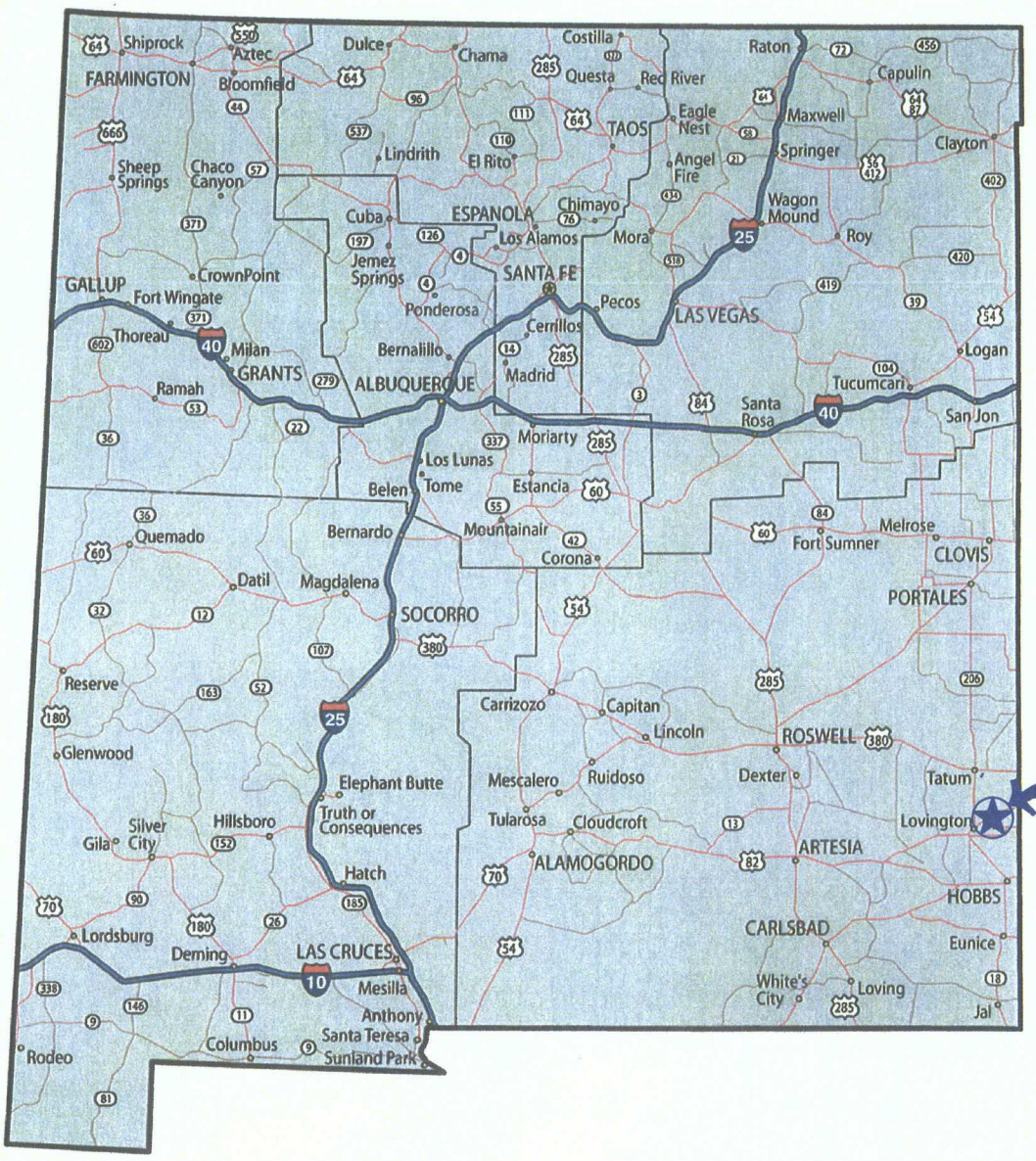
Shaw has utilized the information and data collected by Elke during the initial site work to formulate the Stage I Abatement Plan. Ultimately the nature and extent of the groundwater and soil impact from the pit should be delineated, the groundwater gradient direction determined, and the remedial action plan submitted to the OCD in a subsequent Stage II Abatement Plan.

Attachments

Attachment 1

Site Location Map

IMAGE	X-REF	OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
NEW MEXICO	---	HOUSTON, TX	J. RDZ 3/26/07			126177-A1



"DRAWING NOT TO SCALE"

Shaw

SHAW ENVIRONMENTAL
5801 W. INDUSTRIAL AVENUE
MIDLAND, TEXAS 79706

ATTACHMENT 1
SITE LOCATION MAP

DAVID ARRINGTON OIL AND GAS
LEA COUNTY, NEW MEXICO

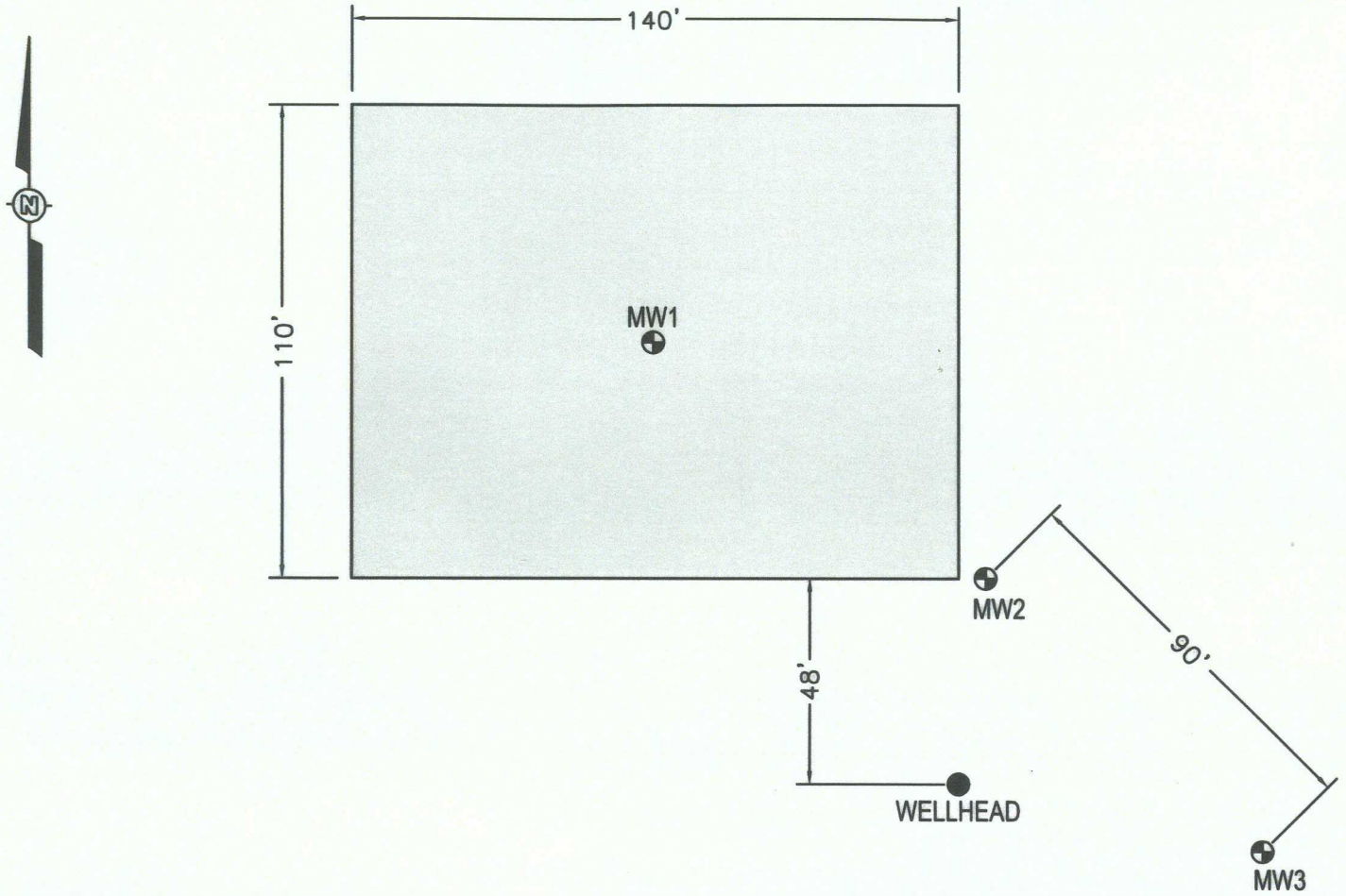
PLOT DATE: 3/26/07
FORMAT REVISION 9/17/02

Attachment 2

Site Map

PLOT DATE: 3/26/07
FORMAT REVISION 7/15/03

IMAGE	X-REF	OFFICE	DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER
---	---	HOUSTON, TX	D. DAY	2/17/99					126177-A1



SCALE
0 40 80 FEET

REFERENCE:
DAVID ARRINGTON OIL AND GAS
MALLON DRAKE 16 STATE #1
UL 'G' SEC. 16 T16S R37E
LEA COUNTY NM

SHAW ENVIRONMENTAL
5801 W. INDUSTRIAL AVENUE
MIDLAND, TEXAS 79706

ATTACHMENT 2

SITE MAP

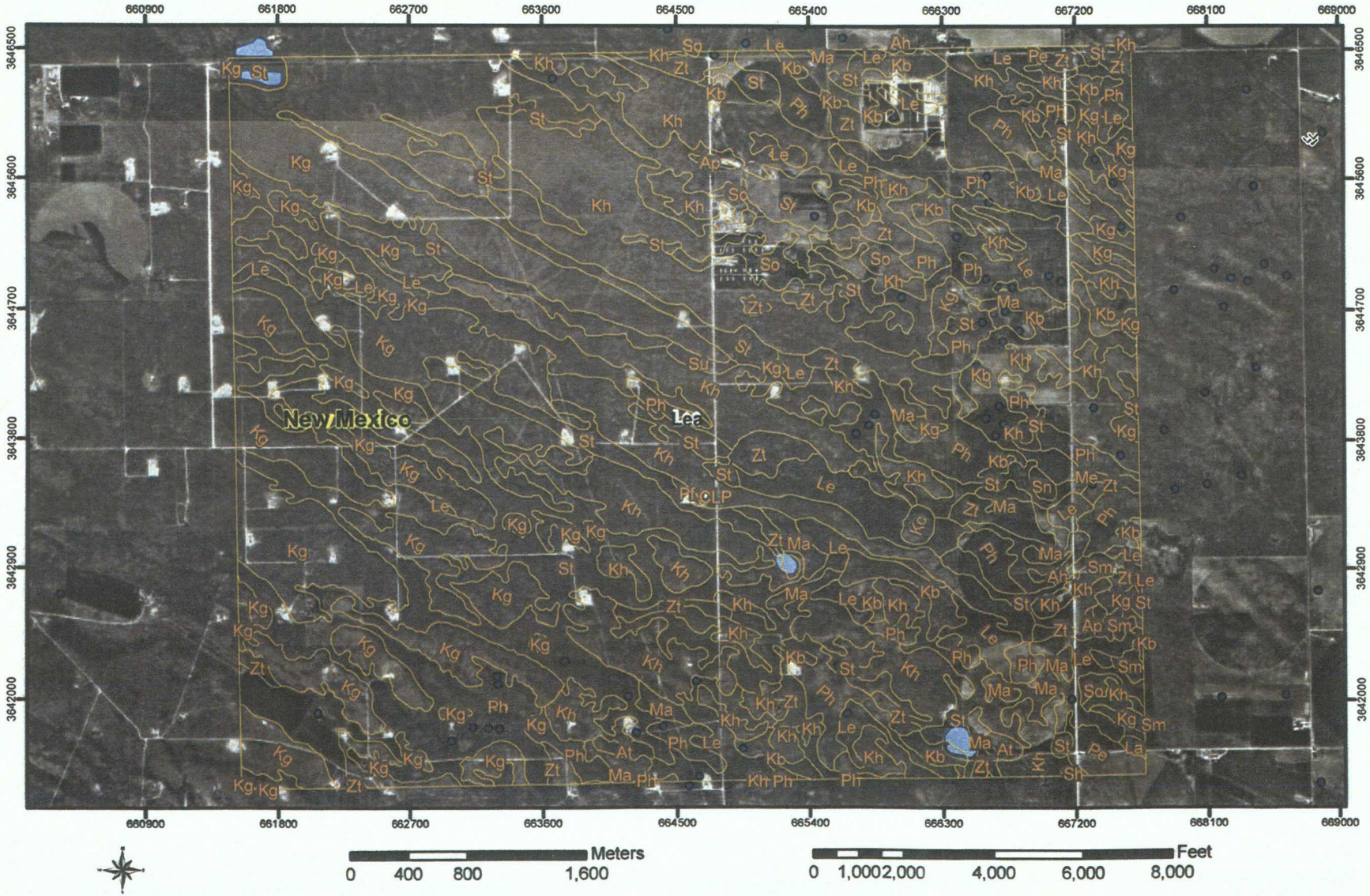
DAVID ARRINGTON OIL AND GAS
LEA COUNTY, NEW MEXICO

Attachment 3

USDA NRCS Soil Survey Map

SOIL SURVEY OF LEA COUNTY, NEW MEXICO

Mallon Drake 16 State well 1



SOIL SURVEY OF LEA COUNTY, NEW MEXICO

Mallon Drake 16 State well 1

MAP LEGEND

- Soil Map Units
- Cities
- Detailed Counties
- Detailed States
- Interstate Highways
- Rails
- Water
- Hydrography
- Oceans
- Escarpment, bedrock
- Escarpment, non-bedrock
- Gulley
- Levee
- Slope
- Blowout
- Borrow Pit
- Clay Spot
- Depression, closed
- Eroded Spot
- Gravel Pit
- Gravelly Spot
- Gulley
- Lava Flow
- Landfill
- Marsh or Swamp
- Miscellaneous Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Slide or Slip
- Sinkhole
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Perennial Water
- Wet Spot

MAP INFORMATION

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov

Coordinate System: UTM Zone 13

Soil Survey Area: Lea County, New Mexico
Spatial Version of Data: 2
Soil Map Compilation Scale: 1:20000

Map comprised of aerial images photographed on these dates:
11/1/1997

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend Summary

Lea County, New Mexico

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Af	Amarillo fine sandy loam, 0 to 1 percent slopes	3.4	0.0
Ah	Amarillo loam, 0 to 1 percent slopes	16.8	0.2
Ap	Arvana fine sandy loam, 0 to 1 percent slopes	10.0	0.1
At	Arvana loam, 0 to 1 percent slopes	17.8	0.2
CLP	Caliche pit	1.2	0.0
Kb	Kimbrough loam, 0 to 1 percent slopes	216.1	2.8
Kc	Kimbrough loam, 1 to 3 percent slopes	12.0	0.2
Kg	Kimbrough gravelly loam, 0 to 3 percent slopes	1,778.3	23.2
Kh	Kimbrough-Lea complex	1,686.6	22.0
La	Lea fine sandy loam	4.6	0.1
Le	Lea loam	788.6	10.3
Ma	Mansker loam, 0 to 1 percent slopes	170.4	2.2
Me	Mansker loam, 1 to 3 percent slopes	3.2	0.0
Pe	Portales fine sandy loam, 0 to 1 percent slopes	36.7	0.5
Pf	Portales fine sandy loam, 1 to 3 percent slopes	3.5	0.0
Ph	Portales loam, 0 to 1 percent slopes	507.7	6.6
Po	Portales loam, 1 to 3 percent slopes	2.2	0.0
Sh	Sharvana fine sandy loam	2.1	0.0
Sm	Simona fine sandy loam, 0 to 1 percent slopes	33.2	0.4
Sn	Simona fine sandy loam, 1 to 3 percent slopes	7.3	0.1
So	Slaughter loam	74.0	1.0
St	Stegall loam	1,947.7	25.4
Su	Stegall silty clay loam	10.3	0.1

Lea County, New Mexico

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Zt	Zita loam	338.2	4.4

Attachment 4

Banks Information Solutions
Water Well Report

Banks Information Solutions, Inc.

Water Well Report™

Tuesday, March 20, 2007

CLIENT
THE SHAW GROUP, INC.- Midland 5801 W. Industrial Ave. #2 Midland, TX 79706

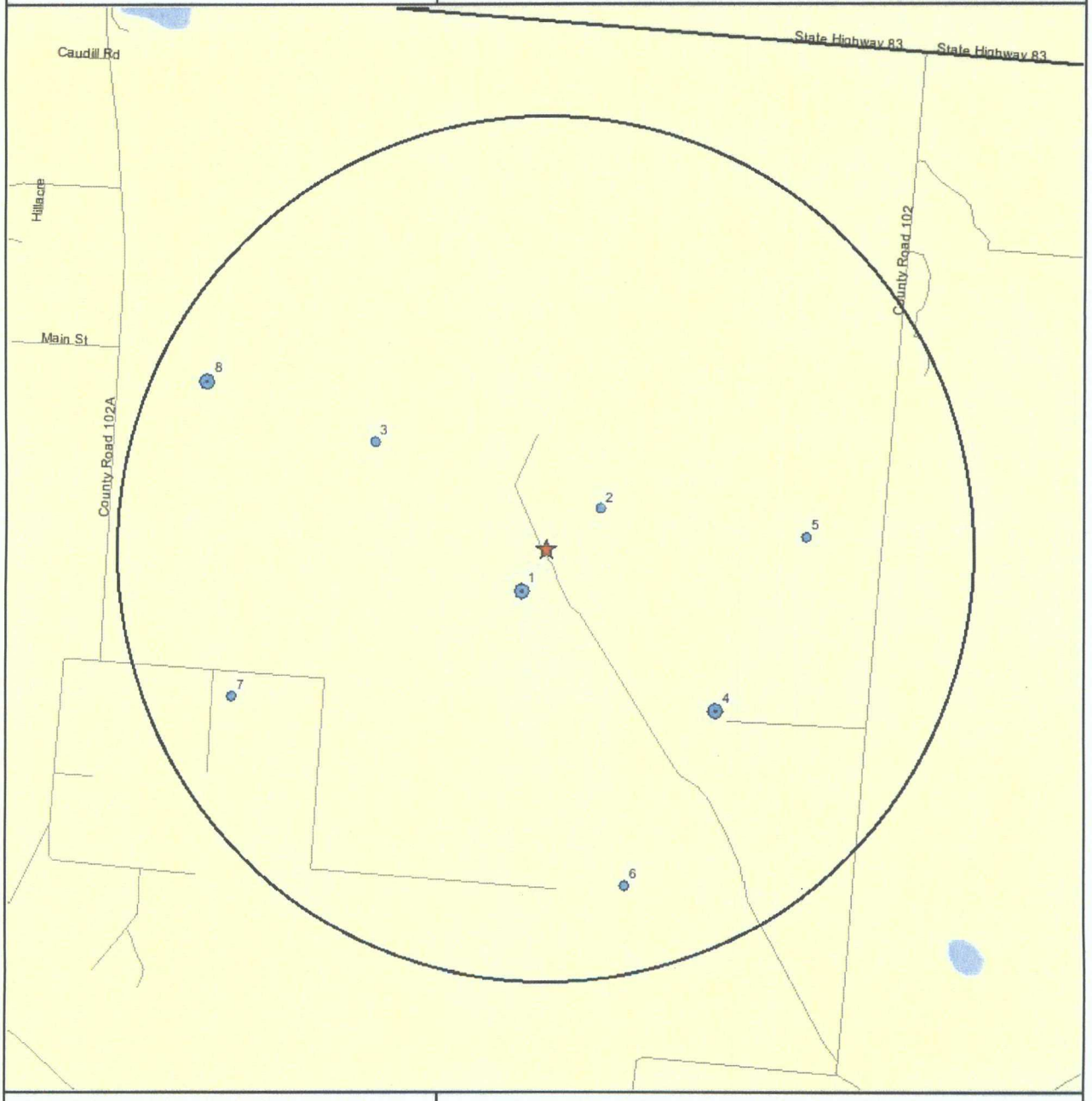
SITE
Arrington Oil & Gas Mallon Drake 16 State Well #1 Lea County, NM BISMap #: 032007-290

1601 Rio Grande Suite 500 Austin, Texas 78701
PH 512.478.0059 FAX 512.478.1433 E-mail banks@banksinfo.com

Banks Information Solutions, Inc.

Water Well Report™

Map of Wells within 1 Mile(s)



Site	Park	County
Well	School	State
Cluster	Cemetary	Urban Area
Limited Access Hwy	Building	Open Space
Primary Highway	Railroad	Educational/Religious
Secondary Highway	Church	Water Bodies
Roads	Trail	Multihousehold
Hospital	Bridge	Military
Airport	Tower	Custodial Facility

One inch = 0.39 miles

Arrington Oil & Gas

Banks Information Solutions, Inc.
1601 Rio Grande Suite 500 Austin, Texas 78701
PH 512-478-0059 FAX 512-478-1433
E-Mail: banks@banksinfo.com

N

Banks Information Solutions, Inc.

Water Well Report™

DETAILS

Map #	State ID	Owner of Well	Type of Well	Depth Drilled	Completion Date	Longitude	Latitude	Driller's Log
1	L 09469 (3)		Prospecting	0		-103.25304	32.9238	
1	L 09469 (2)		Prospecting	0		-103.25304	32.9238	
1	L 09469		Prospecting	140	5/10/1984	-103.25304	32.9238	
1	L 09469 (1)		Prospecting	0		-103.25304	32.9238	
2	32553710315 0001	MEDLIN, CYNTHIA	Stock	1		-103.25	32.92694	
3	32554310315 3501	N/A	Unused	54		-103.25972	32.92861	
4	L 09941		Prospecting	156	8/14/1987	-103.24445	32.92015	
4	L 04458		Prospecting	120	6/10/1960	-103.24445	32.92015	
4	L 05287		Stock	0		-103.24445	32.92015	
4	L 04458		Prospecting	120	6/10/1960	-103.24445	32.92015	
5	L 09838		Prospecting	140	5/30/1986	-103.24122	32.92653	
6	L 08431		Prospecting	128	2/16/1981	-103.2477	32.91376	
7	L 09778		Prospecting	0		-103.26491	32.91925	
8	L 09157		Prospecting	0	3/24/1983	-103.26702	32.93022	
8	L 09157 (2)		Prospecting	0		-103.26702	32.93022	
8	L 09157 (1)		Prospecting	0		-103.26702	32.93022	

1601 Rio Grande Suite 500 Austin, Texas 78701
PH 512.478.0059 FAX 512.478.1433 E-mail banks@banksinfo.com

Banks Information Solutions, Inc.

Water Well Report™

DISCLAIMER

Banks Information Solutions, Inc. Water Well Report™ is prepared from existing state water well databases and/or additional file data/records research conducted at the State Engineers Office located in Santa Fe, New Mexico. In New Mexico, water wells are located within a grid system using section, township, and range. The locations of these wells on the enclosed map were plotted using a GIS program, ArcView 3.2, with the aid of the section, township, and range of the wells provided by the drillers logs.

Banks Information Solutions, Inc. has performed a thorough and diligent search of all groundwater well information provided and recorded with the New Mexico State Engineers Office. All mapped locations are based on information obtained from the NMSEO. Although Banks performs quality assurance and quality control on all research projects, we recognize that any inaccuracies of the records and mapped well locations could possibly be traced to the appropriate regulatory authority or the actual driller. It may be possible that some water well schedules and logs have never been submitted to the regulatory authority by the water driller and, thus, may explain the possible unaccountability of privately drilled wells. It is uncertain if the above listing provides 100% of the existing wells within the area of review. Therefore, Banks Information Solutions, Inc. cannot fully guarantee the accuracy of the data or well location(s) of those maps and records maintained by the New Mexico State Engineer regulatory authorities.

1601 Rio Grande Suite 500 Austin, Texas 78701
PH 512.478.0059 FAX 512.478.1433 E-mail banks@banksinfo.com

Attachment 5

OCD Forms

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-144
June 1, 2004

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes ☐ No ☒
Type of action: Registration of a pit or below-grade tank ☐ Closure of a pit or below-grade tank ☒

Operator: David H. Arrington Oil & Gas Telephone: 432-682-6685 e-mail address: ann.ritchie@wtor.net
Address: P. O. Box 953 Midland, TX 79702
Facility or well name: Mallon Drake '16' State #1 API #: 30-025-28707 U/L or Qtr/Qtr G Sec 16 T 16S R 37E
County: Lea Latitude _____ Longitude _____ NAD: 1927 ☐ 1983 ☐
Surface Owner: Federal ☐ State ☒ Private ☐ Indian ☐

Pit	Below-grade tank
Type: Drilling ☒ Production ☐ Disposal ☐ Workover ☐ Emergency ☐ Lined ☒ Unlined ☐ Liner type: Synthetic ☒ Thickness 12 mil Clay ☐ Pit Volume _____ bbl	Volume: _____ bbl Type of fluid: _____ Construction material: _____ Double-walled, with leak detection? Yes ☐ If not, explain why not.

Received Hobbs OCD 2006

Depth to ground water (vertical distance from bottom of pit to seasonal high water elevation of ground water.) GW = 50'	Less than 50 feet 50 feet or more, but less than 100 feet 100 feet or more	(20 points) X (10 points) (0 points)
Wellhead protection area: (Less than 200 feet from a private domestic water source, or less than 1000 feet from all other water sources.)	Yes No	(20 points) (0 points) X
Distance to surface water: (horizontal distance to all wetlands, playas, irrigation canals, ditches, and perennial and ephemeral watercourses.)	Less than 200 feet 200 feet or more, but less than 1000 feet 1000 feet or more	(20 points) (10 points) (0 points) X
	Ranking Score (Total Points)	20 points

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if your are burying in place) onsite ☐ offsite ☒ If offsite, name of facility Sundance Disposal. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No ☐ Yes ☐ If yes, show depth below ground surface _____ ft. and attach sample results. (5) Attach soil sample results and a diagram of sample locations and excavations.

Additional Comments: Drilling mud inside the pit will be excavated, loaded and hauled to Sundance Disposal. 5 bottom sample points will be taken after the contents are Removed. The pit area will then be covered with clean native soil and domed to prevent pooling. A final report will be given at the end of the job. Start of job is 11-1-06.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. **I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐, or an (attached) alternative OCD-approved plan ☐.**

Date: 11-1-06
Printed Name/Title Logan Anderson / Agent Signature _____

Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Approval:
Printed Name/Title L. Johnson - Energy Engr Signature _____ Date: 11-1-06

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

OPERATOR

☐ Initial Report ☐ Final Report

Name of Company - David H Arrington Oil & Gas	Contact – Mark Ellerbe
Address – P O Box 953 Midland, TX 79702	Telephone No. – 432-682-6685
Facility Name – Mallon Drake '16' State #1	Facility Type – Drilling Pit

Surface Owner - State	Mineral Owner - State	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
G	16	16S	37E					Lea

Latitude 32-55-57.8N **Longitude** 103-15-11.4W

NATURE OF RELEASE

Type of Release – Drilling Mud Fluids	Volume of Release ?	Volume Recovered – None
Source of Release – Drilling Pit	Date and Hour of Occurrence ?	Date and Hour of Discovery-12-18-06 3PM
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Hobbs NMOCD Larry Johnson 12-18-06 4:00PM Wayne Price Sante Fe NMOCD 12-18-06 4:05PM	
By Whom? Logan Anderson – Elke Environmental	Date and Hour 12-18-06	
Was a Watercourse Reached? ☒ Yes ☐ No	If YES, Volume Impacting the Watercourse. ?	

If a Watercourse was Impacted, Describe Fully.* Drilling mud was hauled to Sundance Disposal. After mud was removed a vertical delineation was performed with an air rotary drill, and soil was sampled every 5'. Water was reached at 61' and the mud/water tested above standards. NMOCD was notified and borehole was set as a monitor well.

Describe Cause of Problem and Remedial Action Taken.* Monitor well was set and a remediation plan will be submitted to Sante Fe OCD.

Describe Area Affected and Cleanup Action Taken.* See above.

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:	OIL CONSERVATION DIVISION	
Printed Name:	Approved by District Supervisor:	
Title:	Approval Date:	Expiration Date:
E-mail Address:	Conditions of Approval:	Attached ☐
Date: Phone:		

* Attach Additional Sheets If Necessary

Attachment 6

Site Photographs

Shaw® Shaw Environmental, Inc.

Photographic Documentation

Client: Elke Environmental
Location: Arrinton-Mallon Drake 16 State Well #1
Lea County, New Mexico
Photographed Dates: 03/14/2007

Project Number: 126177
Photographer: Micah Beard

Photograph No. 1

Direction:

West

Description:

A view of the site including the well head (left), MW-3 (close up), and MW-2 (far right).

Photograph No. 2

Direction:

North / northwest

Description:

A view of the well head and drilling pit. Note the windmill/water well northwest of the site.

Shaw® Shaw Environmental, Inc.

Photographic Documentation

Client: Elke Environmental
Location: Arrinton-Mallon Drake 16 State Well #1
Lea County, New Mexico
Photographed Dates: 03/14/2007

Project Number: 126177
Photographer: Micah Beard

Photograph No. 3

Direction:

West

Description:

A view of the drilling pit. Note the location of MW-1.

Photograph No. 4

Direction:

East

Description:

A view of MW-2 (close up) and MW-3 located southeast of the drilling pit.

Attachment 7

Monitor Well Information

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL
Name: David H. Arrington Oil & Gas Work Phone: _____
Contact: _____ Home Phone: _____
Address: PO Box 953
City: Midland State: TX Zip: 79702

2. LOCATION OF WELL (A,B,C,or D required,E or F if known)
A. ____ 1/4 ____ 1/4 ____ 1/4 Section: G-16 Township: 16S Range: 37E N.M.P.M.
in Lea County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: 32 d 50 m 33.7 s Longitude: 103 d 15 m 07.2 s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD _____ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: _____

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): State Land – Lease Holder is Billy Royce Meedlin

3. DRILLING CONTRACTOR
License Number: WD-1456
Name: White Drilling Company, Inc. Work Phone: 325-893-2950
Agent: John W. White Home Phone: 325-893-2950
Mailing Address: P.O. Box 906
City: Clyde State: TX Zip: 79510

4. DRILLING RECORD: Mallon Drake #16 State #1
Drilling began: 12/18/06 ; Completed: 12/18/06 ; Type tools: Air Rotary ;
Size of hole: 5 1/4 in.; Total depth of well: 60.0 ft.;
Completed well is: shallow (shallow, artesian);
Depth to water upon completion of well: 55.0 ft.

Form provided by Forms On-A-Disk · 214-340-9429 · FormsOnADisk.com

File Number: _____

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE: Mallon Drake #16 State #1

Depth in feet From	To	Thickness in feet	Color and Type of Material Encountered
0.0	41.0	41.0	Tan caliche & limestone.
41.0	49.0	8.0	Tan silty sand.
49.0	60.0	11.0	Tan sandstone w/tan silty sandy layers.

Form provided by Forms On-A-Disk · 214-340-9429 · FormsOnADisk.com

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: David H Arrington Oil & Gas — Work Phone: (432) 682-6685
Contact: Mack Ellerbe — Home Phone: "
Address: P.O. Box 952
City: Midland — State: TX Zip: 79702

2. LOCATION OF WELL (A, B, C, or D required, E or F if known)

A. ___ 1/4 ___ 1/4 ___ 1/4 Section: 6 Township: 16S Range: 37E N.M.P.M.
in Lea County.

B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
_____ Zone in the _____ Grant.
U.S.G.S. Quad Map _____

C. Latitude: ____ d ____ m _____ s Longitude: ____ d ____ m _____ s

D. East _____ (m), North _____ (m), UTM Zone 13, NAD __ (27 or 83)

E. Tract No. _____, Map No. _____ of the _____ Hydrographic Survey

F. Lot No. _____, Block No. _____ of Unit/Tract _____ of the
_____ Subdivision recorded in _____ County.

G. Other: _____

H. Give State Engineer File Number if existing well: _____

I. On land owned by (required): _____

3. DRILLING CONTRACTOR

License Number: WD-1634 - New Mexico
Name: Mack Mehlhaff — Work Phone: 432-381-7128
Agent: _____ Home Phone: _____
Mailing Address: 6730-W Dunn
City: Odessa — State: TX Zip: 79763

4. DRILLING RECORD

Drilling began: 1-15-07 Completed: 1-18-07 Type tools: Tri-cone
Size of hole: 6 in.; Total depth of well: 80 ft.;
Completed well is: Environmental (shallow, artesian);
Depth to water upon completion of well: 70 ft.

Do Not Write Below This Line

File Number: _____ Trn Number: _____
Form: wr-20 page 1 of 4

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File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
70 -	80'		BROWN SAND	

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Bottom	Length (feet)	Type of Shoe	Perforations From / To
2"		4					80 - 60' - SLOTTED
2"		4					60 - 0 - BLANK

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
80 -	55	- SAND PACK			
55 -	2	- BENT. PELLET PLUG			
2 -	0'	- CEMENT - POURED		2 SX	SLAB

8. PLUGGING RECORD

Plugging Contractor: _____
Address: _____
Plugging Method: _____
Date Well Plugged: _____

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet Top	Bottom	Cubic Feet of Cement
1			
2			
3			
4			
5			

Do Not Write Below This Line

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Form: wr-20 page 2 of 4

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File Number: _____
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NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

Depth in Feet From	To	Thickness in feet	Color and Type of Material Encountered
0	3		WHITE - CLACK
3	30		BROWN - SAND - STONE
30	45		BROWN SAND
45	60		WHITE - HARD - CLACK
60	80		BROWN - SAND

Do Not Write Below This Line

File Number: _____ Trn Number: _____
Form: wr-20 page 3 of 4

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File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

The undersigned hereby certifies that, to the best of his knowledge and belief, the foregoing is a true and correct record of the above described hole.

James Schlosser 1-18-07
Driller (mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FWL ____; FSL ____; Use _____; Location No. _____

Do Not Write Below This Line

File Number: _____ Trn Number: _____

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