

Permit Application

Lea County, New Mexico

**C.K. Disposal E & P Landfill and
Processing Facility**

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PARKHILLSMITH&COOPER

**ATTACHMENT G
HYDROGEOLOGY REPORT**

**PROPOSED C.K. DISPOSAL E&P LANDFILL
AND PROCESSING FACILITY**

Eunice, New Mexico

Project No: 15-04-22

Prepared for:

C.K. Disposal LLC

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Prepared by:



4222 85th Street
Lubbock, TX 79423
(806) 473-2200



136 Pecan Street
Keller, Texas 76248
(817) 337-0112

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1.0 INTRODUCTION

The proposed C.K. Disposal E&P Landfill and Processing Facility, henceforth known as "Site", is a proposed Surface Waste Management Facility for oilfield waste processing and disposal services. The proposed Site is subject to Title 19 Chapter 15 Part 36 of the New Mexico Administrative Code (NMAC). Specifically the facility is subject to 19.15.36 NMAC, which is administered by the Oil Conservation Division (OCD).

The proposed tract of land encompasses 316.97 acres and is located in the north half of Section 5, Township 22 South, Range 38 East in Southern Lea County, New Mexico. It is situated approximately 4.16 miles east of the town of Eunice and one-half mile west of the New Mexico-Texas state border south of Highway 234.

The geology and hydrogeology portions of this attachment have been prepared by Kevin T. Carel P.G., a qualified groundwater scientist, for the C.K. Disposal LLC. The following sections are consistent with 19.15.36 NMAC.

2.0 REGIONAL GEOLOGY

2.1 Previous Work

A substantial amount of geologic and hydrogeologic information is available in the vicinity of the proposed Site. Most notably, Nicholson and Clebsch (1961) provide a thorough discussion of the geology and groundwater conditions in Southern Lea County. Geohydrology Associates, Inc. (1978) provide a collection of hydrologic data including water quality information in the general vicinity of the Site. Well logs were derived from the New Mexico Office of State Engineer. Lehman and Rainwater (2000) discuss the geology and groundwater of an area of extreme eastern New Mexico and western Andrews County, Texas that adjoins the proposed Site on the east. Some information is also available from reports by the Texas Commission on Environmental Quality and Cooke-Joyce of a low-level radioactive waste and RCRA waste disposal site located near the proposed Site in nearby Andrews County.

Due to the proposed Site's proximity to the New Mexico-Texas border, a substantial amount of information is relied upon that is located within the State of Texas. Much of the stratigraphic nomenclature used in Texas differs from that used in New Mexico. In order to avoid confusion the stratigraphic names used by Nicholson and Clebsch have been adopted herein with a few minor exceptions.

2.2 Regional Physiography and Topography

The project Site is located in the Pecos Valley section of the Great Plains physiographic province. The Pecos Valley section is a very irregular erosional surface which slopes toward the Pecos River, generally southwestward in the vicinity of the proposed Site. The topography of the Pecos Valley section is complicated by areas of interior drainage which appear to be the result of deep-seated collapse due to dissolution and by vast areas of stabilized and drifting dune sand.

Locally the proposed Site is located on the west flank of a topographic high known as Rattlesnake Ridge. Rattlesnake Ridge, also known as the Dockum Red Bed Ridge or Red

Bed Ridge, in adjacent Andrews County, Texas, is a northwest-southeast trending topographic high. In the vicinity of the proposed site, the crest of the ridge roughly parallels the boundary between Texas and New Mexico. It is regarded as the drainage divide between the Pecos River basin and the Colorado River basin in Texas.

The Eunice Plain is situated west of the Rattlesnake Ridge. The term Eunice Plain has been applied by Nicholson and Clebsch (1961) to refer to the eastern part of Lea County New Mexico that has no other specific geographic designation. It is bounded on the north by the Llano Estacado, on the southwest by the San Simon Ridge and Antelope Ridge, on the west by the Grama Ridge, and on the south by a south-facing scarp that is most prominent at Custer Mountain. The Eunice Plain is underlain by a hard caliche surface and is covered by reddish-brown dune sand.

Monument Draw, a major drainage channel in Lea County, is located approximately one and one-half miles west of the proposed Site. Monument Draw traverses the eastern part of Lea County from north to south for a distance of approximately 35 miles.

Approximately five miles northeast of the proposed Site is the Mescalero Ridge, which is the southwestern edge of the Llano Estacado part of the High Plains physiographic province. The physiographic features of Southern Lea County are illustrated on Figure G.1. A map illustrating the locations of streams, springs or other water courses including water wells within one mile of the proposed Site is provided as Figure G.2 in accordance with 19.15.36.8.C.15(a) NMAC. No streams are located within a one-mile radius of the proposed Site. However, Monument Draw, a major drainage course in Southern Lea County is located approximately one and one-half miles west of the Site. Baker Spring, a local groundwater spring, is located one and one-half miles north of the Site. Thirty-seven wells/geotechnical borings are located within a one-mile radius of the proposed Site. The wells, discussed in detail in Section 3.5 of this report, consist entirely of groundwater monitoring wells, vadose zone monitoring points, geotechnical borings and one exploratory well.

2.3 Regional Stratigraphy and Lithology

According to the Geologic Map of New Mexico, the project Site is underlain by strata deposited during the Holocene Series to middle Pleistocene of the Quaternary System. This Quaternary strata is mostly composed of interlayered sands and was deposited by eolian (wind generated) geologic processes.

Regional stratigraphy includes the geologic units (listed from oldest to youngest) of the Santa Rosa Formation and the Chinle Formation of the Triassic Dockum Group, Cretaceous rocks undifferentiated, the Tertiary Ogallala Formation, and various Holocene to Pleistocene age deposits. According to Nicholson and Clebsch (1961), the Santa Rosa is a red to white poorly sorted, coarse-grained, cross bedded sandstone. The Chinle Formation is described as a red and green claystone with minor siltstone and fine-grained sandstone. The Ogallala Formation is chiefly sand that is poorly to well-cemented with calcium carbonate. It contains some clay, silt and gravel and is capped in most places by caliche. The Holocene and Pleistocene deposits are chiefly sand with some silt and gravel. The stratigraphic positions of these formations, along with their approximate maximum thicknesses, are presented in Table G.1. Figure G.3 illustrates the limits of the local geologic strata. The Quaternary deposits mapped as Qep, which underlie the project Site,

are composed of eolian sands and piedmont-slope deposits along the eastern flank of the Pecos River Valley (Scholle, 2003).

As illustrated in Figure G.3, the closest outcrop of the Ogallala Formation is located approximately one mile north of the project Site and Quaternary alluvial deposits are located approximately one and one-half mile west of the Site. The nearest Cretaceous rocks and Triassic deposits of the Dockum Group are located in a rock quarry located in Section 29, T. 21 S., R. 38 E. approximately one mile north of the proposed Site. The Dockum Group is often locally referred to as "Red Beds".

Table G.1
C.K. Disposal E&P Landfill and Processing Facility
General Regional Stratigraphic Column

Era	Period	Series/Epoch	Group	Formation	Maximum Thickness (+/-ft)
Cenozoic	Quaternary	Holocene		Sand	30
		Pleistocene		Alluvium	400
	Tertiary	Pliocene		Ogallala	300
Mesozoic	Cretaceous			Undifferentiated	35
	Triassic	Late	Dockum Group	Chinle	1,270
				Santa Rosa	300

Source: Nicholson and Clebsch, 1961

2.4 Structural Features

The major structural features of Southern Lea County are the Delaware Basin and the Central Basin Platform (Figure G.4). Regionally, the proposed Site is situated on the northern flank of the Central Basin Platform (CBP). The CBP is a northwest trending uplifted basement block that separates the Midland Basin (to the east) from the Delaware Basin (to the west). According to Hoak et.al. the CBP was uplifted in the mid to late Pennsylvanian time. Before that time, the two basins and the CBP were relatively low relief features within a shallow Paleozoic-age basin called the Tabosa Basin.

In early Permian (i.e. Wolfcampian) time, the uplift of the CBP ceased, and a regional erosional unconformity developed that beveled off the top of the underlying structures. Above this unconformity, carbonate reef and related proximal facies were deposited on the relatively flat erosional surface. A consequence of the erosional event and subsequent deposition is that deeper fold and thrust structures are capped by flat-lying carbonates at shallower depths. The northern termination of the CBP is the Northwest Shelf (NWS). The NWS represents a broad shelf extending northward to the Palo Duro Basin.

Figure G.5 is a regional geologic cross-section of the area modified from DuChene and Cunningham (2006). The cross-section is oriented from southwest to northeast and extends from the Guadalupe Mountains through southern Lea County and to the New Mexico – Texas border. In the center of the cross-section is the Delaware Basin, and the Central Basin Platform is located on the east (right) side. The location of the proposed Site is projected onto the east side of the cross-section. As can be seen on the cross-section, the Delaware Basin is asymmetrical and deepens to the east. Tectonic development of the

Delaware Basin began by the late Pennsylvanian period and major basin subsidence took place during the late Pennsylvanian period and early Permian period. Basin development ended in the late Permian period (Brokaw, et al, 1972). Thickness of sediment in the basin exceeds 20,000 feet and Permian strata alone account for more than 13,000 feet of basin fill materials (Oriol, et al., 1967). During the Triassic period, the area was uplifted resulting in deposition of clastic continental shales (red beds). Continuing uplift resulted in erosion and/or non-deposition until the middle to late Cenozoic period, when regional eastward tilting completed structural development of the basin as it exists today (Stipp, 1954). The western margin of the Delaware Basin is the Guadalupe Mountains and the Salt Flat Graben, which is a Tertiary-age system related to the Basin-and-Range extensional tectonics.

Regionally, the dip of the Triassic rocks is reportedly less than 1 degree to the east and south. However, locally the proposed Site is located on the west flank of topographic high known as Rattlesnake Ridge where the local dip of the Triassic rocks is to the south-southwest. As previously mentioned, Rattlesnake Ridge, is also known as the Dockum Red Bed Ridge (Grisak, et al. 2007) or Red Bed Ridge (Lehman and Rainwater, 2000) in Texas. Nicholson and Clebsch (1961) state that the Rattlesnake Ridge roughly coincides with the New Mexico-Texas state border. However, Lehman and Rainwater (2000) indicated it is a northwest-southeast trending topographic high that extends for at least 100 miles from northern Lea County to Ector County, Texas. According to Grisak et al., the ridge is capped by Cretaceous Antlers sands and gravels that are highly silicified in places. They suggest that the Antlers may have acted as an erosion-resistant cap throughout late Cenozoic time, maintaining the ridge as a drainage divide while late Tertiary Ogallala and partially age-equivalent Gatuna Formation sediments were deposited on either side of the ridge. Lehman and Rainwater (2000) indicate that the crest of the ridge, approximately a mile northeast of the proposed Site, is capped by caliche at the land surface. Regardless of its orientation or exact location, the topographic feature located east and northeast of the proposed Site is herein referred to as "Rattlesnake Ridge".

Nicholson and Clebsch (1961) propose that the ridge is potentially a fault, or gentle flexure produced by differential compaction of sediments to the west. However the Texas Commission on Environmental Quality suggest that it is a gentle fold resulting from dissolution-induced subsidence (TCEQ, 2008). Lehman and Rainwater (2000) point out that the southwest flank of the ridge (on which the proposed Site is located) is more steeply inclined than the northeast flank. They state that the ridge is not likely a fault but rather is a gentle fold.

2.4.1 Triassic Erosional Surface

The top of the Dockum Group is an erosional surface in southern Lea County. The surface is highly irregular but has only moderate relief. It has undergone two to three episodes of erosion, depending on the location. Beneath the erosional surface, the Dockum Group thickens regionally toward the southeast. The erosional surface truncates the southeast dipping Triassic formations. As a result, the Santa Rosa Formation subcrops beneath the Quaternary deposits in the western part of Lea County, whereas the younger Chinle Formation subcrops in the eastern part of the County. While the top of the Dockum Group is an erosional surface, closed depressions exist over the area that are believed to be the

result of the collapse of the Dockum Group into cavities formed by subsidence in the underlying Permian formations due to salt dissolution.

2.5 Regional Hydrogeology

According to Nicholson and Clebsch (1961), all the potable groundwater used in southern Lea County is derived from three principal geologic units, the Dockum group, the Ogallala Formation, and Quaternary Alluvium. Potable groundwater is not available below the Permian and Triassic unconformity but, because this boundary is not easily defined, the top of the Rustler anhydrite formation is regarded as the effective lower limit of potable groundwater. Virtually all the water wells in the area are completed in Triassic or younger rocks.

A few wells reportedly derive water from several aquifers, but most wells are completed in the shallowest zone that will produce the desired quantity of water. This is because the shallow groundwater in the Quaternary Alluvium and the Ogallala Formation is of better chemical quality than that from the rocks of the Dockum Group and the younger rocks are more permeable, and therefore permit greater well yields.

2.5.1 Dockum Group

In New Mexico, groundwater can be obtained from both the Santa Rosa and the Chinle formations of the Dockum Group. No water is known to be derived from the Permian strata, except possibly from well Section 2 T. 21 S., R. 33 E (T21SR33ES2). Triassic rocks underlie all of southern Lea County but are exposed only in minor outcrops. The lower part of the exposed Dockum Group, the Santa Rosa sandstone, crops out in the north-trending scarps which are located a few miles to the west of the Lea-Eddy County line and in the south-facing scarps of Paduca Breaks. The overlying Chinle Formation is exposed at Custer Mountain and in a large excavation about 2 miles southeast of Monument. The recharge area of the Triassic rocks is in the western part of southern Lea County and the eastern part of Eddy County. Some recharge is derived also from the overlying Ogallala formation and the Quaternary alluvium where they overlie permeable beds of Dockum Group in the subsurface.

The Santa Rosa sandstone is the principal aquifer in the western third of southern Lea County. The unit is recharged by precipitation on the sand dunes, both in Lea County and a few miles to the west in Eddy County; by precipitation and runoff directly on the outcrop; and by groundwater flow from the overlying Ogallala Formation and alluvium. Recharge to the Triassic rocks in Lea County appears to be concentrated in three areas:

- Recharge on the outcrop and infiltration through the dune-sand cover located in the western portion of T. 22 S., R. 32 E;
- A groundwater ridge in T. 21 S., R. 33 E. and;
- A mound in T. 24 S., R. 33 E.

The last two recharge areas are both beneath a cover of younger rocks and presumably they indicate recharge from the discontinuous aquifers in these rocks. Wells completed in the Dockum Group generally have low yields, as the formations have a low permeability. Available hydraulic properties of the Dockum Group are provided in Table G.2.

A well drilled for Waste Control Specialists in 2008 located approximately 580 feet northeast of the proposed Site encountered the Santa Rosa Formation at a depth of 1,092 feet below ground surface (bgs). The depth to which groundwater was first encountered is listed on the well log as 1,092 feet bgs. The well log indicates the Santa Rosa is 292 feet thick and describes it as a gray, fine sandstone with interbedded reddish brown and weak red siltstone and claystone. The well number is TRN 396028 and the well log is provided in Appendix G.C.

A low-level radioactive waste disposal site operated by The United Waste Control Specialists (WCS) is located approximately one-mile northeast of the proposed Site. The WCS site identifies a saturated zone termed the 225-foot zone as the uppermost aquifer beneath the disposal facility (TCEQ, 2008). The 225-foot zone is situated within the Chinle Formation of the Dockum Group. This zone is also identified as the uppermost aquifer in a RCRA hazardous waste permit adjacent to the low-level waste site. The 225 zone reportedly ranges from 25 to 30 feet thick over the entire WCS facility. Further, a uranium enrichment facility, URENCO, is located immediately north of the proposed Site and southwest of the WCS site. According to an environmental assessment report for the URENCO facility, the shallowest groundwater below the site reportedly also occurs within an undifferentiated siltstone seam of the Chinle Formation at depths of 214 to 222 feet bgs (US Nuclear Regulatory Commission, 2015).

In Texas, the saturated Triassic rocks are termed the Dockum Aquifer, which is classified as a minor aquifer by the Texas Water Development Board (TWDB). According to Report 308 by the TWDB, the Dockum Aquifer consists of gravel, sandstone, siltstone, mudstone, shale, and conglomerate. The highest groundwater yields come from the coarsest grained deposits (i.e. sandstone and conglomerate) located at the middle and base of the group. The water-bearing sandstones are often typically referred to as the Santa Rosa Aquifer on a local basis. The water quality in the aquifer is generally poor with freshwater in outcrop areas in the east and brine in the western subsurface portions of the aquifer and the water is very hard. Naturally occurring radioactivity from uranium present within the aquifer can result in gross alpha radiation in excess of the primary drinking water standard. Radium-226 and -228 also occur in amounts above regulatory standards.

Groundwater flow in the Dockum Group in southern Lea County is highly variable but the overall flow pattern is toward the south based on the groundwater contour map prepared by Nicholson and Clebsch (1961). In Andrews County, Texas, just east of the proposed Site, the groundwater flow is to the south and east based on a groundwater contour map of the Dockum Aquifer by Bradley and Kalaswad (2003).

2.5.2 Ogallala Formation and Quaternary Alluvium

According to George et al. (2011), the Ogallala Aquifer is a major aquifer of Texas and is the largest aquifer in the United States. The Ogallala Formation covers the High Plains

immediately north of the southern Lea County area, where it ranges in thickness from 100 to 250 feet. The saturated thickness of the Ogallala Formation on the High Plains ranges from 25 feet to 175 feet because of the very irregular Triassic erosion surface which underlies it. Groundwater within the Ogallala is under water table conditions. The recharge of the Ogallala on the High Plains is due entirely to precipitation, as the formation is topographically high and isolated.

A groundwater contour map of the Ogallala Formation and the Quaternary alluvium in the vicinity of the proposed Site is provided as Figure G.6. The groundwater contours are said to be generalized, and in areas with limited subsurface data they are dashed where approximated. As can be seen by the map, the overall groundwater flow pattern is toward the southeast. The boundaries of the aquifer are shown by heavy dashed lines, which delineate the areas in which the Dockum Group and overlying strata project above the water table. The map indicates that the Ogallala Formation is not saturated beneath the proposed Site. This is due to the fact that as the Ogallala Formation rises in elevation toward the crest of Rattlesnake Ridge, its entire section projects above the water table. Based on information provided by Lehman and Rainwater (2000), the strata above the Dockum Group become saturated again on the northeast flank of the ridge approximately two miles east of the proposed Site in Andrews County, Texas where it plunges back below the saturated zone.

An east-west oriented hydrogeologic cross-section B-B' (Figure G.7), was constructed using information from two site borings (BH-01 and BH-02) and six (6) other wells located in the general vicinity of the proposed Site. The well logs are provided in Appendix G.A. The surface geology was taken from Scholle (2003) and elevation of water table within the Ogallala was taken from Nicholson and Clebsch (1961). The cross-section illustrates how the Ogallala Formation rises above the saturated zone along the southwest flank of Rattlesnake Ridge in the vicinity of the proposed Site. As a result, the 225-foot zone within the Chinle Formation discussed in Section 2.5.1 is believed to be the shallowest fresh water aquifer beneath the proposed Site as required by 19.15.36.8.C.15(c) NMAC.

Where saturated, hydraulic continuity occurs between the Ogallala Formation and porous or permeable sections of the underlying Dockum Group. Available hydraulic properties of the Ogallala Aquifer are provided in Table G.2 (page 8).

Table G.2
C.K. Disposal E&P Landfill and Processing Facility
Hydraulic Properties of Regional Aquifers

Property	Ogallala	Dockum Group
Composition	Sand, silt and gravel	Sandstone, siltstone and shale
Transmissivity	315-201,000 gpd/ft ⁽²⁾	1,500 ft ² /d* ⁽¹⁾
Permeability/Hydraulic Conductivity	232 gpd/ft ² ⁽²⁾	Not Available
Porosity	Not Available	13% (Santa Rosa)
Specific Yield	16.06 % ⁽²⁾	Not Available
Specific Capacity	Not Available	3.84 gpd/ft ⁽¹⁾
Storativity	Not Available	1.9×10^{-4} ⁽¹⁾

* - Average

(1) - Bradley, R.G. and Kalaswad, S., 2003

(2) - Knowles, 1984

3.0 SITE GEOLOGY AND HYDROGEOLOGY

The proposed Site was evaluated with an investigation of the geology, hydrogeology and geotechnical properties of the site in a total of 5 borings. Based on the site characterization, a sufficient number of borings were drilled to establish subsurface site stratigraphy and to determine the geotechnical properties of the soils beneath the Site. Geologic strata have been characterized to depths of more than 175 feet below ground surface (bgs) and up to 130 feet below the elevation of the deepest excavation.

The borings were drilled in accordance with established field exploration methods. Installation, abandonment, and plugging of borings were performed in accordance with applicable regulations. Drilling was performed by HCI Drilling, of Lubbock, Texas, who is a licensed driller in the state of New Mexico. A discussion of the aforementioned tasks is provided below.

3.1 Drilling Activities

3.1.1 Site Exploration Borings

Field exploration activities were conducted May 26 and 27, 2015. As part of this investigation, 5 borings were drilled using air-rotary techniques. The boring locations are illustrated on Figure G.10 and a summary of the borings is provided in Table G.3. Cuttings from the drilling operations were visually observed by a qualified geologist employed by The Carel Corporation and used to prepare lithologic logs of the borings. The boring logs provided in Appendix G.B.

Table G.3
C.K. Disposal E&P Landfill and Processing Facility
Summary of Borings

Boring ID	Date	Northing	Easting	Surface Elevation	Depth (ft)	Bottom Hole Elevation (msl)	Above or Below (-) EDE (3,329.2 ft msl)
BH-01	5/26/2015	521233.9	924924.7	3382	175	3207	122.2
BH-02	5/26/2015	521273.7	928310.3	3391.8	175	3216.8	112.4
BH-03	5/26/2015	520437.2	926605.3	3386.3	175	3211.3	117.9
BH-04	5/26/2015	519600.9	924941.3	3374.1	175	3199.1	130.1
BH-05	5/27/2015	519636.2	928326.9	3386.1	175	3211.1	118.1

Notes:
EDE – Elevation of Deepest Excavation

Geotechnical information from these borings is provided in Attachment C, Appendix A.

3.1.2 Surface Penetration Plugging

The cuttings from the drilling operations were observed for moisture and the bore holes were left open to allow for groundwater measurements. The cuttings were observed to be only slightly moist in some places and no groundwater was observed after a 24-hour period, therefore no piezometers were installed and the bore holes were subsequently plugged and abandoned.

3.2 Site Stratigraphy

According to the Geologic Map of New Mexico, the project Site is underlain by strata deposited during the Holocene Series to middle Pleistocene of the Quaternary System. This Quaternary strata is mostly composed of interlayered sands and was deposited by eolian (wind generated) geologic processes. The eolian sediments at the Site consist of well-sorted fine-grain sands to silty sands, largely composed of quartz and secondary feldspar minerals.

The following paragraphs present an interpretation of the stratigraphy beneath the Site. In accordance with 19.15.36.8.C.(15)(d) NMAC, two geologic cross-sections, Cross-Section C-C' and D-D', Figure G.8 and Figure G.9, respectively illustrate the stratigraphy and lithology present beneath the Site. Detailed descriptions of these strata are included in the following sections in accordance with 19.15.36.8.C.(15)(d) NMAC.

3.2.1 Stratum I – Clayey Sand

This stratum is composed of brown to reddish brown clayey sand. This stratum represents Quaternary aged eolian and piedmont deposits (Scholle, 2003) or drift sand (Nicholson and Clebsch, 1961). Stratum I was deposited by eolian (i.e. wind) processes. The materials observed are composed largely of quartz and secondary feldspar minerals. Stratum I appears to be the thinnest in the northern part of the site near BH-02 where it is about 7 feet thick and thickest in the northwestern part of the site near boring BH-01 where it is at least 17 feet thick.

3.2.2 Stratum II – Silty Sand with Caliche

Stratum II is composed of light brown to white silty clayey sand with caliche. This stratum represents the Ogallala Formation. Similar to Stratum I, Stratum II is also composed largely of quartz and secondary feldspar minerals. Two of the borings, BH-03 and BH-05, contained gravels composed of quartz and caliche nodules up to one inch in diameter. Stratum II was fully penetrated by each of the five (5) borings. Based on analysis of the boring logs, Stratum II appears to be the thinnest in the northwestern part of the site near BH-01 (23 feet) and where Stratum I is thickest. The thickest section of Stratum II encountered was 36 feet in BH-04.

3.2.3 Stratum III - Claystone

Stratum III is described as a reddish brown claystone. The claystone contains some silt and sand layers. The color is predominantly reddish brown but changes to brown, dark brown and purple. This claystone belongs to the Triassic Chinle Formation of the Dockum Group and is locally referred to as "Red Bed". According to Nicholson and Clebsch (1961), the Chinle Formation is as much as 1,270 feet thick.

Each of the five borings encountered Stratum III at depths ranging from 35 to 50 feet bgs. Figure G.10 is a structure map of the top of the Dockum Group that was prepared from the boring information. The structure map indicates that the surface of the Stratum III has a gentle arcuate shape that generally dips to the west-southwest. The surface does not conform to the regional dip in southern Lea County which is easterly toward the Delaware

Basin. Thus the surface of Stratum III appears to be the result of the Site's proximity to Rattlesnake Ridge.

Nicholson and Clebsch (1961) and Lehman and Rainwater (2000) each prepared contour maps of the surface of the Dockum Group. Nicholson and Clebsch's map is of an area west of the proposed Site. Their data was limited in the area of the proposed Site as indicated by dashed contour lines. Lehman and Rainwater's contour map is located east of the proposed Site. The two maps were combined with the site specific contours from Figure G.10 to construct a local structure map of the top of the Dockum Group, Figure G.11. The site specific contours for the proposed Site fit nicely with both Nicholson and Clebsch's and Lehman and Rainwater's maps. Only minor adjustment and extension of Nicholson and Clebsch's 3,350' contour line is required to conform to the site specific contour lines. Further, minimal adjustments are needed to conform Lehman and Rainwater's 3,360, 3,350 and 3,340 contours to the contours for the proposed Site. It is noted that Nicholson and Clebsch used a 25-foot contour interval, Lehman and Rainwater used a 20-foot contour interval and a five-foot contour interval was used on Figure G.10. Hence, each of the original three contour maps use different contour intervals. In order to best illustrate the Dockum structure, several contours were added or extended to provide a 10-foot contour interval in the vicinity of the proposed Site (i.e. between contours 3,300 and 3,360).

3.3 Groundwater Occurrence

As previously stated, five (5) borings were advanced each to a depth of 175-feet bgs. No groundwater was observed in the cuttings obtained during advancement of the borings nor was any groundwater observed in any of the bore holes after a 24-hour period. No groundwater is present within the upper 175-feet of the Ogallala Formation or Chinle Formation because they rise above the saturated zone of the Ogallala Formation as illustrated in Figure G.6 and Figure G.7.

Rule 19.15.36.13A.(1) NMAC restricts landfills where groundwater is less than 100 feet below the lowest elevation of the design depth at which oilfield waste will be placed. The lowest elevation of the proposed Site is 3,329.2 ft msl. Therefore, no groundwater is present within 100-feet of the proposed Site as prohibited by 19.15.36.13A.(1) NMAC.

As previously mentioned in Section 2.5.1, a low-level radioactive waste disposal site operated by United Waste Control Specialists (WCS) is located approximately one-mile northeast of the proposed Site. The WCS site identifies a saturated zone termed the 225-foot zone as the uppermost aquifer beneath the disposal facility. The 225-foot zone is situated within the Chinle Formation. This zone is also identified as the uppermost aquifer in a RCRA hazardous waste permit adjacent to the low-level radioactive waste site. Similarly, the URENCO facility located immediately north of the proposed Site identifies the shallowest saturated zone as being between 214 to 222 feet bgs. While not encountered by site borings, the 225-foot zone is considered to be the shallowest fresh water aquifer beneath the proposed Site as required by 19.15.36.8.C.15(c) NMAC.

3.4 Groundwater Quality Data

Since this Site is not permitted and thus has no existing groundwater monitoring wells, there is no existing analytical data. However, published data is available for some but not all constituents required by 19.15.36.8.C.(15)(b) and is provided in Table G.4 below. The data taken from Geohydrology Associates (1978) was for a well located in Section 33 Township 21 South, Range 37 East completed in the Dockum Group. The well depth is reported to be 350 feet and the well is believed to be completed in the Chinle Formation. It is the closest well to the proposed Site known to be completed in the Dockum Group in their dataset. The data from Cooke-Joyce (2003) represents a range of concentrations for wells that are apparently completed in the 225-foot zone of the Chinle Formation based on reported well depths. The data from URENCO is the maximum detected concentration in groundwater samples collected through April 2011 from monitor wells completed in the Chinle Formation.

Table G.4
C.K. Disposal E&P Landfill and Processing Facility
Groundwater Quality Data

Constituent	Concentration	Unit	Well Location	Source
BTEX	N/A			
TDS	11,600 ⁽¹⁾	mg/L	URENCO	New Mexico Environment Dept., 2012
Major Cations				
Calcium	50	ppm	22.37.33	Geohydrology Associates, 1978
Magnesium	31	ppm	22.37.33	Geohydrology Associates, 1978
Sodium	563	ppm	22.37.33	Geohydrology Associates, 1978
Potassium	N/A	ppm	22.37.33	Geohydrology Associates, 1978
Major Anions				
Bicarbonate	360	ppm	22.37.33	Geohydrology Associates, 1978
Chloride	3,750 ⁽¹⁾	ppm	URENCO	New Mexico Environment Dept., 2012
Sulfate	855	ppm	22.37.33	Geohydrology Associates, 1978
RCRA Metals				
Arsenic	N/A			
Barium	0.01 – 0.09	mg/L	WCS Site	Cook Joyce, 2003
Cadmium	N/A			
Chromium	0.005 – 0.015	mg/L	WCS Site	Cook Joyce, 2003
Lead	0.051 ⁽¹⁾	mg/L	URENCO	New Mexico Environment Dept., 2012
Mercury	N/A			
Selenium	0.21 ⁽¹⁾	mg/L	URENCO	New Mexico Environment Dept., 2012
Silver	N/A			

Notes:

N/A – Not Available

(1) – Maximum Detected Concentrations through April 2011

3.5 Area Water Wells

A water well search was conducted for a one-mile radius around the Site. The search identified 37 wells/borings within one (1) mile of the Site (see Appendix G.C). The water

well search included a review of the interactive search engine and well records available through the New Mexico Office of the State Engineer. An internet search was also conducted in an effort to locate additional water well data in the surrounding one (1) mile radius.

The water wells within one (1) mile of the site are illustrated on the Local Streams, Springs and Water Well Map (Figure G.2) and listed in Tables G.5a and G.5b. Table G.5a contains wells logs derived from the New Mexico Office of the State Engineer. Table G.5b contains logs of borings from the Lea County Landfill, which were derived from the internet search for other possible well locations.

No water wells were identified from the New Mexico Office of the State Engineer in Township 21S, Range 38E, Section 31 and Township 22S, Range 38E, Sections 4-9.

Table G.5a
C.K. Disposal – E&P Landfill and Processing Facility
Water Wells within One Mile
New Mexico Office of the State Engineer

Well Tracking No.	Depth (ft)	Completion Date	Completion Formation	Well Use	Latitude	Longitude	Initial Depth to Water (ft)
415642	231.5	12/5/2008	Chinle	Monitor	32°26'14.9" N	103°4'49.9" W	Dry
415643	36	12/5/2008	Chinle	Monitor	32°26'14.9" N	103°4'45.5" W	Dry
376945	220.5	4/3/2007	Chinle	Monitor	32°26'21.9" N	103°4'27.1" W	178.83
376946	32.2	4/3/2007	Chinle	Monitor	32°26'33.1" N	103°4'27.6" W	Dry
376947	240.9	4/3/2007	Chinle	Monitor	32°26'32.9" N	103°4'39.2" W	Dry
376959	231	3/29/2007	Chinle	Monitor	32°26'16.2" N	103°5'21.2" W	Dry
376958	246.3	3/29/2007	Chinle	Monitor	32°26'23.4" N	103°4'57.8" W	217.14
376949	261.3	3/29/2007	Chinle	Monitor	32°26'33.1" N	103°5'2.1" W	243.31
376948	22	3/30/2007	Ogallala	Monitor	32°26'32.8" N	103°4'59.9" W	Dry
376950	26.9	3/29/2007	Ogallala	Monitor	32°26'33.0" N	103°5'8.3" W	Dry
376952	257.5	3/29/2007	Chinle	Monitor	32°26'32.9" N	103°5'19.3" W	241.26
376954	236.4	3/30/2007	Chinle	Monitor	32°26'27.6" N	103°5'22.7" W	Dry
418652	38	12/5/2008	Chinle	Monitor	32°26'14.8" N	103°4'40.3" W	Dry
418653	39	12/5/2008	Chinle	Monitor	32°26'13.4" N	103°4'52.2" W	Dry
376955	236	3/29/2007	Chinle	Monitor	32°25'56.9" N	103°5'23.7" W	Dry
415856	43	12/4/2008	Chinle	Monitor	32°26'1.2" N	103°5'5.5" W	Dry
418655	250	12/4/2008	Chinle	Monitor	32°26'1.1" N	103°5'3.1" W	Dry
418654	40	12/4/2008	Chinle	Monitor	32°26'1.1" N	103°5'1.1" W	Dry
376956	237	4/3/2007	Chinle	Monitor	32°25'52.5" N	103°5'7.6" W	Dry
376944	225.8	4/3/2007	Chinle	Monitor	32°26'5.3" N	103°4'26.9" W	220.49
376887	241.2	4/3/2007	Chinle	Monitor	32°25'46.8" N	103°4'31.8" W	Dry
376957	231.4	4/3/2007	Chinle	Monitor	32°25'50.4" N	103°4'52.5" W	Dry
399475	28	2/20/2008	Ogallala	Monitor	32°26'29.0" N	103°3'58.0" W	Dry
396028	2,020	4/29/2008	Santa Rosa	Exploratory	32°25'45.8" N	103°4'20.4" W	1,092
395941	75	Unknown	Chinle	Piezometer	32°26'30.1" N	103°4'10.9" W	Unknown
395941	49	2/9/2008	Chinle	Monitor	32°26'29.0" N	103°4'13.0" W	Dry

Note:

Formation names have been modified to conform to the stratigraphic nomenclature adopted by Nicholson and Clebsch.

The wells in Table G.5a are located north and northeast of the site. The wells are all completed in the Ogallala Formation or Chinle Formation at varying depths, and listed as monitor wells except for well 396028, which was drilled to a depth of 2,020 feet bgs in the Upper Permian. However, that well is completed in the Santa Rosa Formation.

Table G.5b
C.K. Disposal – E&P Landfill and Processing Facility
Water Wells within One Mile
Internet Search

Well/Boring ID	Depth (ft)	Completion Date	Deepest Formation Encountered	Well Use	Northing	Easting	Initial Depth to Water (ft)
VMP/B-101	50	11/22/1997	Chinle	Geotechnical/ Monitoring	9800.52	9898.97	Dry
VMP/B-102	50	11/20/1997	Chinle	Geotechnical/ Monitoring	8467.05	7193.22	Dry
B-103	55	11/21/1997	Chinle	Geotechnical	9711.58	8682.07	Dry
B-104	60	11/21/1997	Chinle	Geotechnical	8518.93	9678.16	Dry
B-105	50	11/19/1997	Chinle	Geotechnical	6609.23	7335.60	Dry
B-106	65	11/21/1997	Chinle	Geotechnical	5968.89	9285.60	Dry
B-107	92	11/22/1997	Chinle	Geotechnical	4016.88	9228.40	Dry
B-108	215	11/20/1997	Chinle	Geotechnical	9696.33	7439.48	Dry
B-109	120	11/21/1997	Chinle	Geotechnical	7717.16	9920.72	Dry
B-110	600	11/19/1997	Chinle	Geotechnical	7924.34	8019.53	Dry
B-111	598	11/13/1997	Chinle	Geotechnical	9140.96	9138.76	Dry

Note: VMP – vadose zone monitoring point

The wells in Table G.5b are located east of the proposed Site. The wells/borings were all drilled to Chinle Formation at varying depths. Two of the borings were converted to vadose zone monitoring points (VMP).

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FIGURES

**C.K. DISPOSAL
E & P LANDFILL
& PROCESSING
FACILITY**

NMED PERMIT NO. ____

NEW LANDFILL SITE & PROCESSING FACILITY

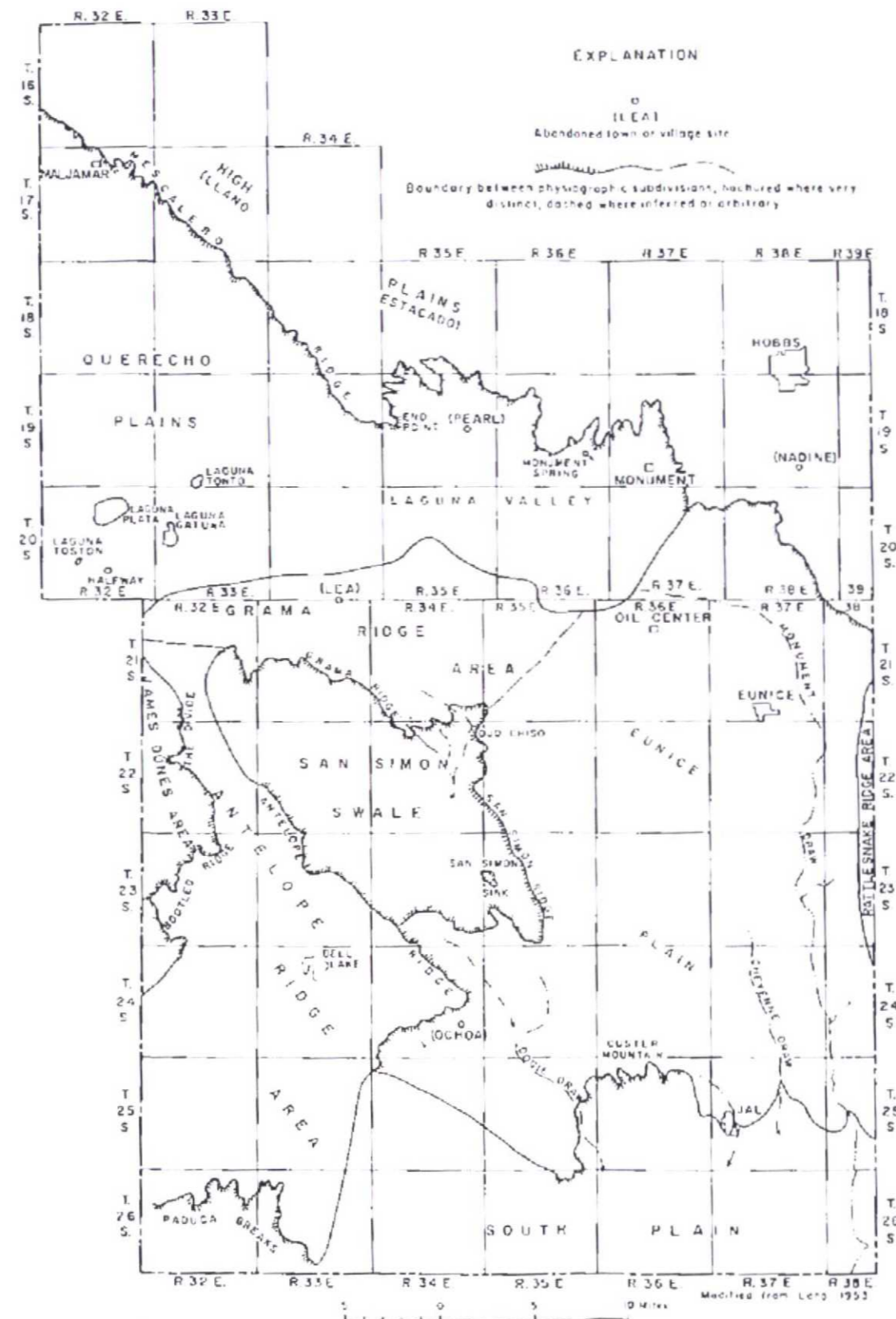
LEA COUNTY, NEW MEXICO

KEY PLAN

NO		DATE	DESCRIPTION
ISSUING OFFICE		PROJECT NO	

PHYSIOGRAPHIC FEATURES

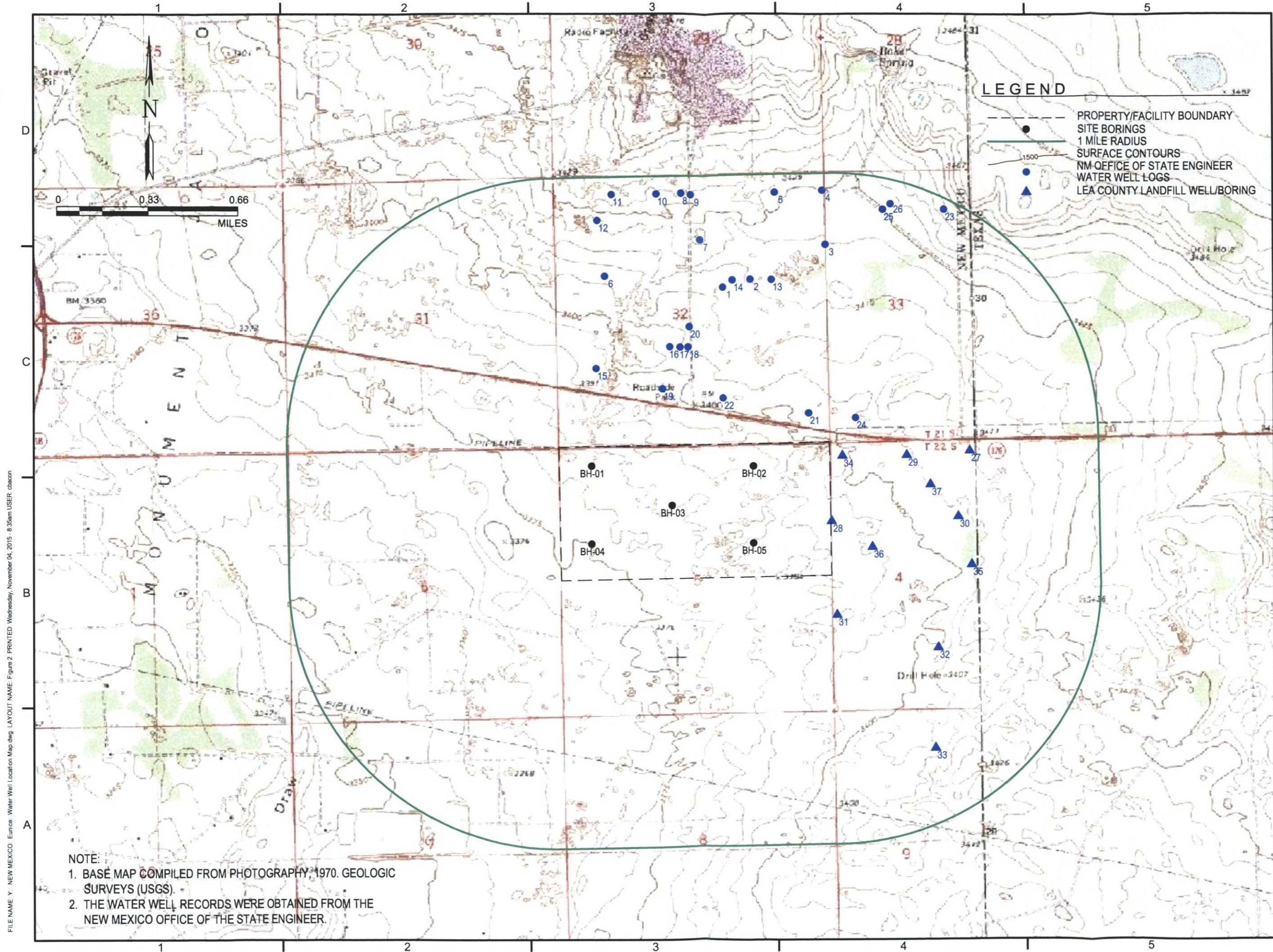
FIG.G.1



Source: Nicholson, Alexander, and Alfred Clebsch. *Geology and Ground-Water Conditions in Southern Lea County, New Mexico* (1961): Figure 3, page 8.

KEY PLAN

FIG. G.2





C.K. DISPOSAL E & P LANDFILL & PROCESSING FACILITY

NMED PERMIT NO. ____

NEW LANDFILL SITE & PROCESSING FACILITY

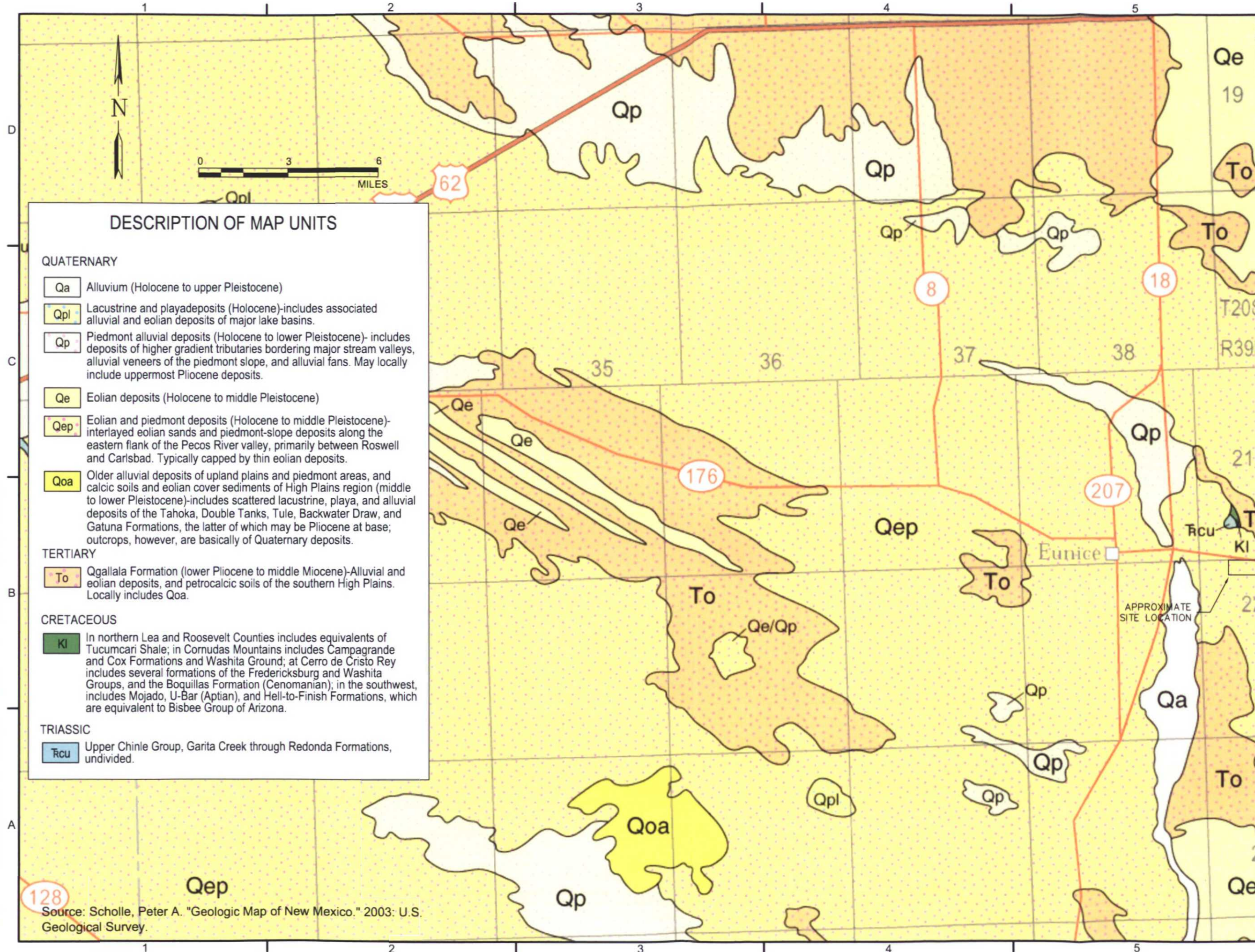
LEA COUNTY, NEW MEXICO

KEY PLAN

NO	DATE	DESCRIPTION
ISSUING OFFICE:		PROJECT NO:

REGIONAL GEOLOGIC MAP

FIG.G.3



FILE NAME Y: NEW MEXICO Eunice Geologic Vicinity Map dwg LAYOUT NAME Figure 3 PRINTED: Wednesday, November 04, 2015 - 8:53am USER cbacon



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FACILITY**

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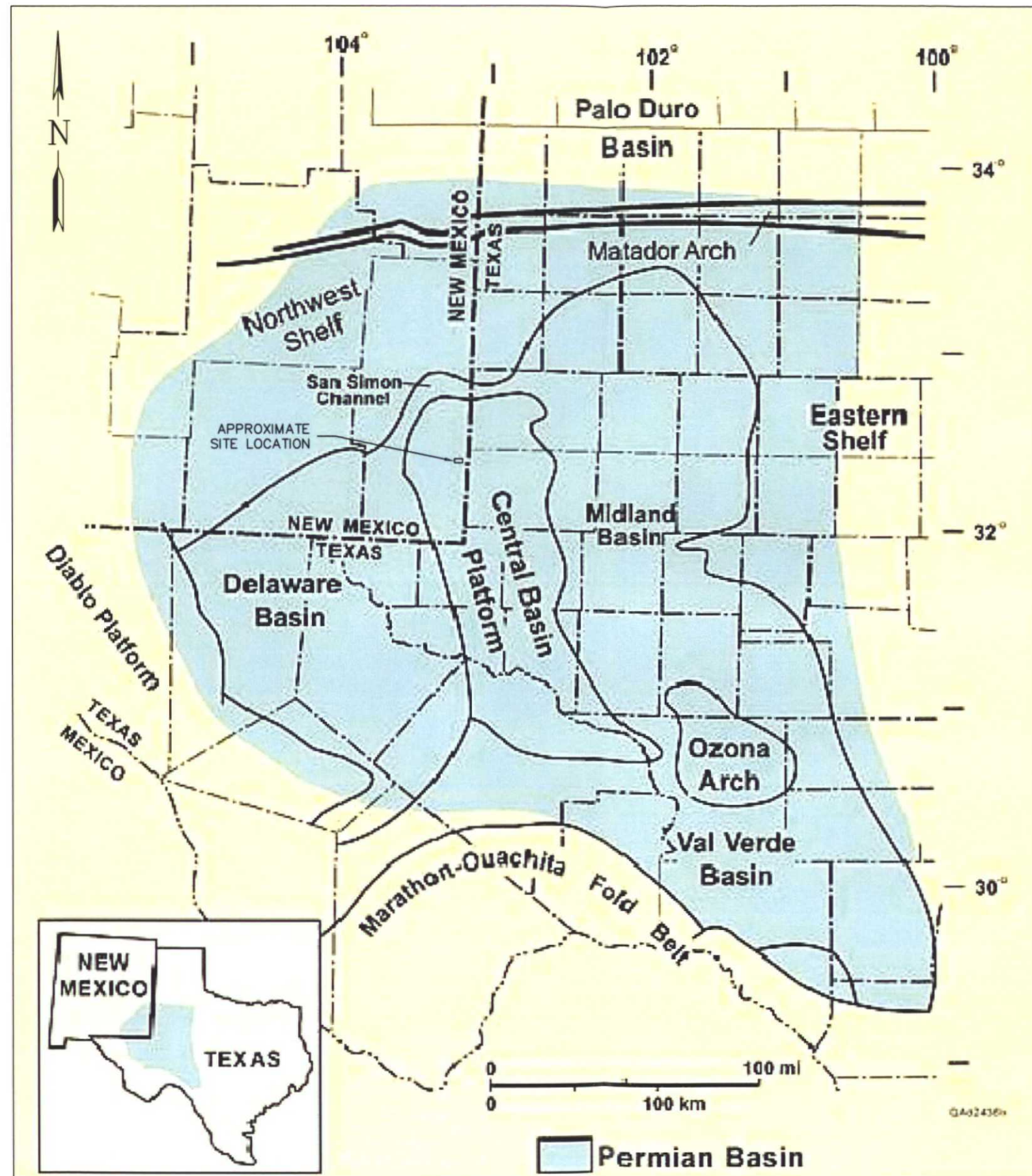
NEW LANDFILL SITE & PROCESSING FACILITY

LEA COUNTY, NEW MEXICO

KEY PLAN

REGIONAL STRUCTURAL FEATURES

FIG.G.4



Source: Permian Basin map at Department of Energy, National Energy Lab. *The West Texas Permian Basin*, Digital image. Wikipedia.

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E & P LANDFILL
& PROCESSING
FACILITY**

NMED PERMIT NO. ____

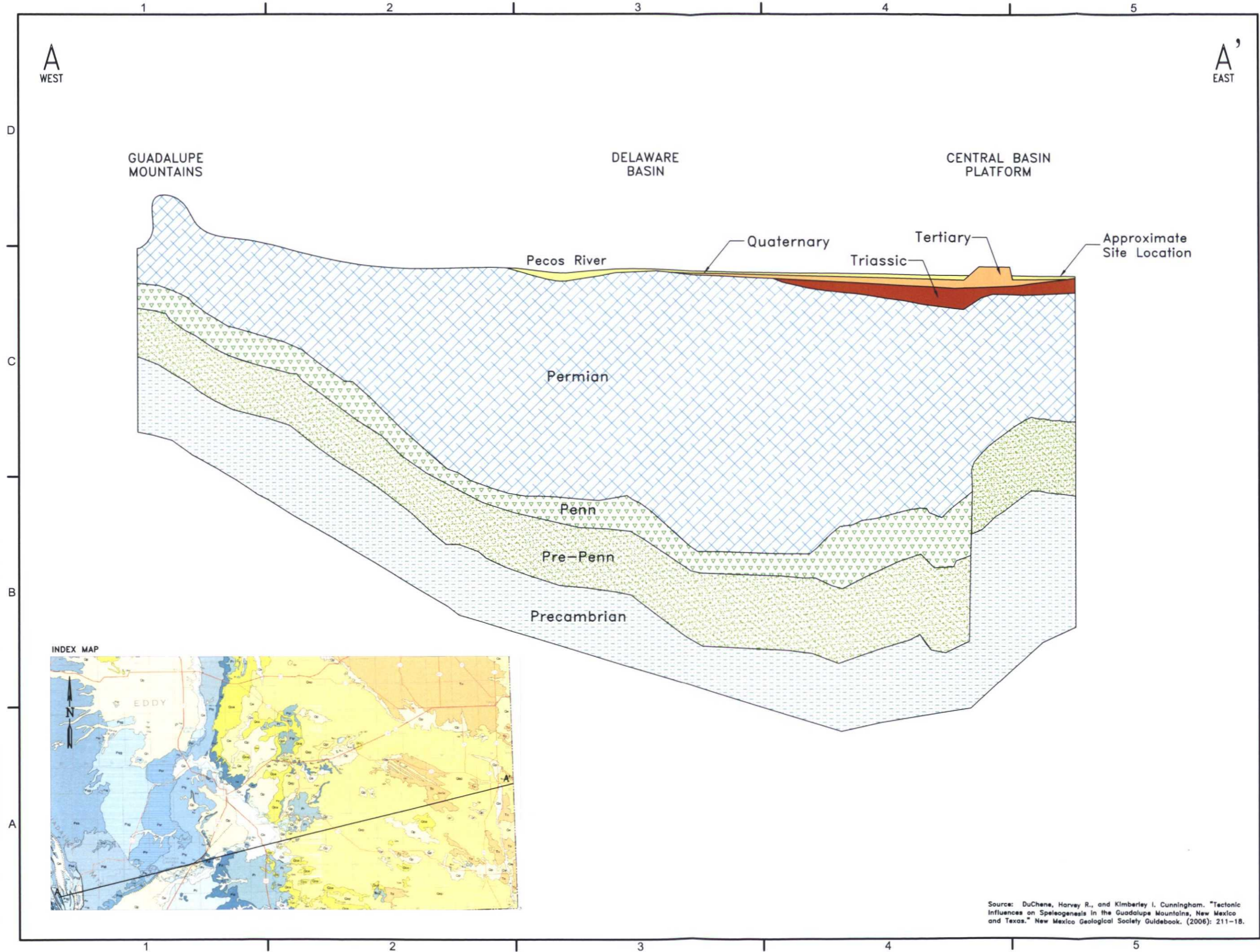
NEW LANDFILL SITE & PROCESSING FACILITY

LEA COUNTY, NEW MEXICO

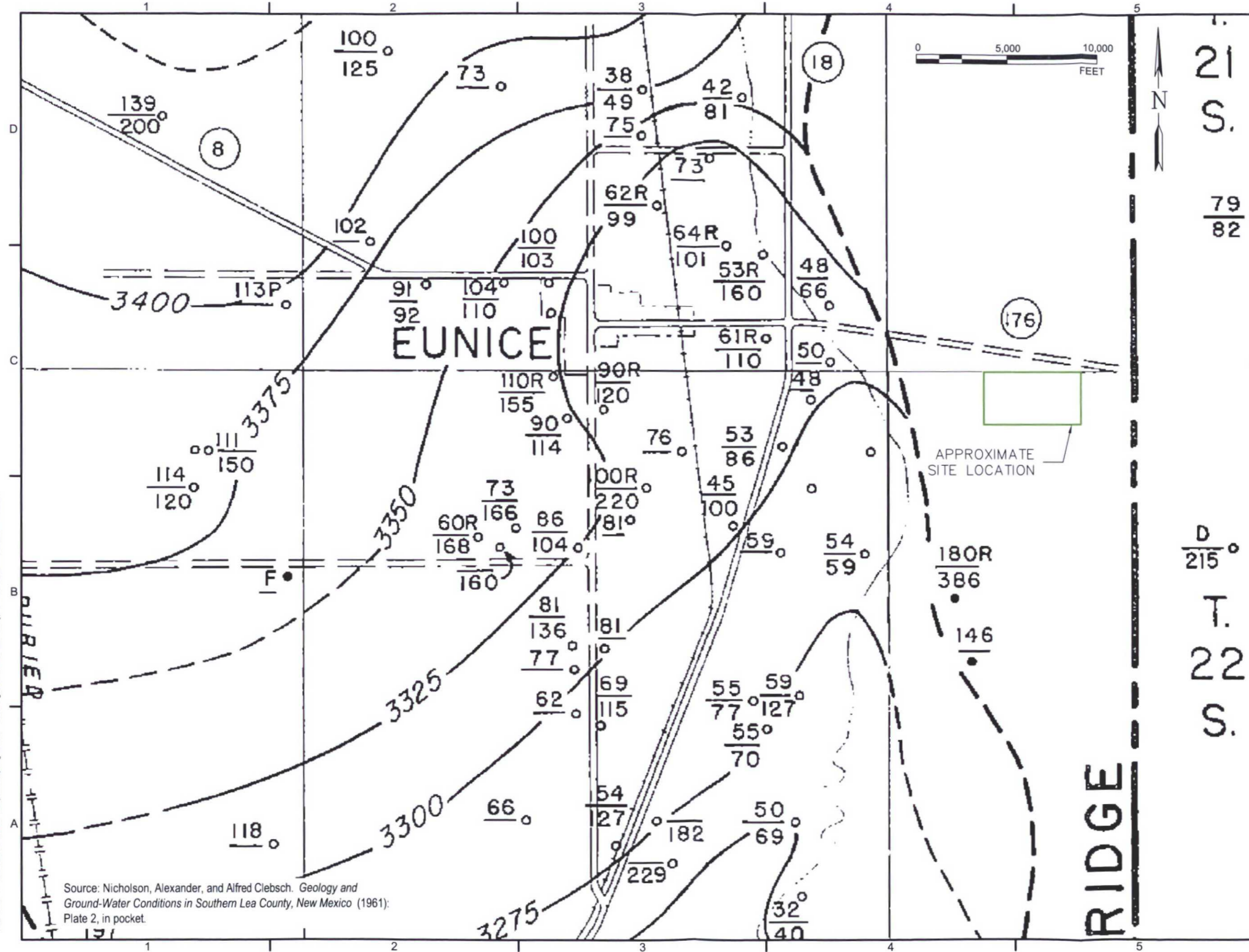
KEY PLAN

REGIONAL GEOLOGIC
CROSS-SECTION A-A'

FIG.G.5



FILE NAME Y: NEW MEXICO Eunice Composite Map.dwg LAYOUT NAME: Figure 6 PRINTED Wednesday, November 04, 2015 8:57am USER: dbeacon



Source: Nicholson, Alexander, and Alfred Clebsch. *Geology and Ground-Water Conditions in Southern Lea County, New Mexico* (1961): Plate 2, in pocket.

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& PROCESSING
FACILITY**

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**NEW LANDFILL SITE
& PROCESSING FACILITY**

LEA COUNTY, NEW MEXICO

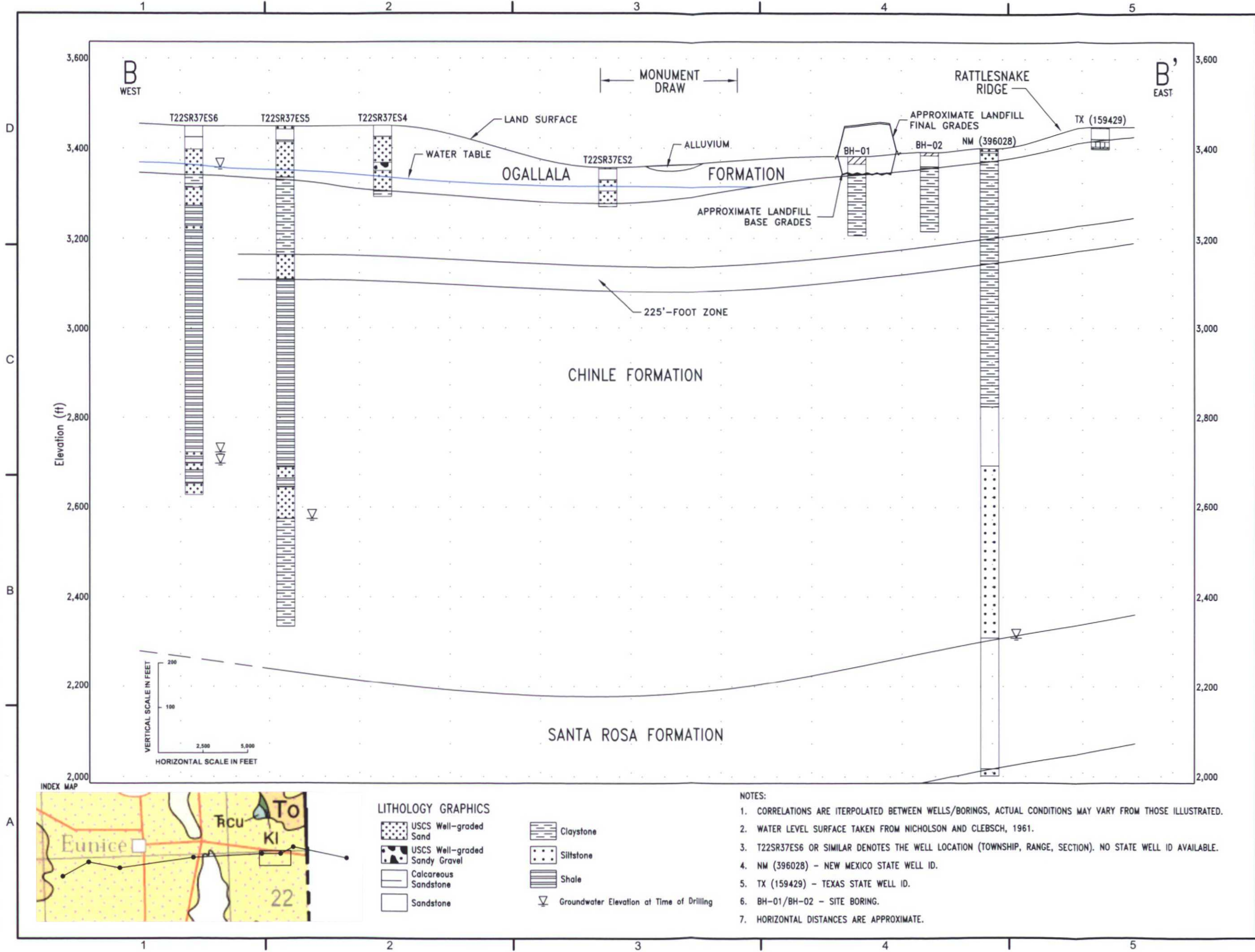
KEY PLAN

NO.	DATE	DESCRIPTION

**GROUNDWATER
CONTOUR MAP,
OGALLALA FORMATION**

FIG.G.6

FILE NAME: Y: NEW MEXICO Eunice Cross Sections.dwg LAYOUT NAME: Figure 7 PRINTED Wednesday, November 04, 2015 - 8:56am USER: abacan



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& PROCESSING
FACILITY**

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**NEW LANDFILL SITE
& PROCESSING FACILITY**

LEA COUNTY, NEW MEXICO

KEY PLAN

NO.	DATE	DESCRIPTION	PROJECT NO.

**HYDROGEOLOGIC
CROSS-SECTION B-B'**

FIG.G.7

**C.K. DISPOSAL
E & P LANDFILL
& PROCESSING
FACILITY**

NMED PERMIT NO. ____

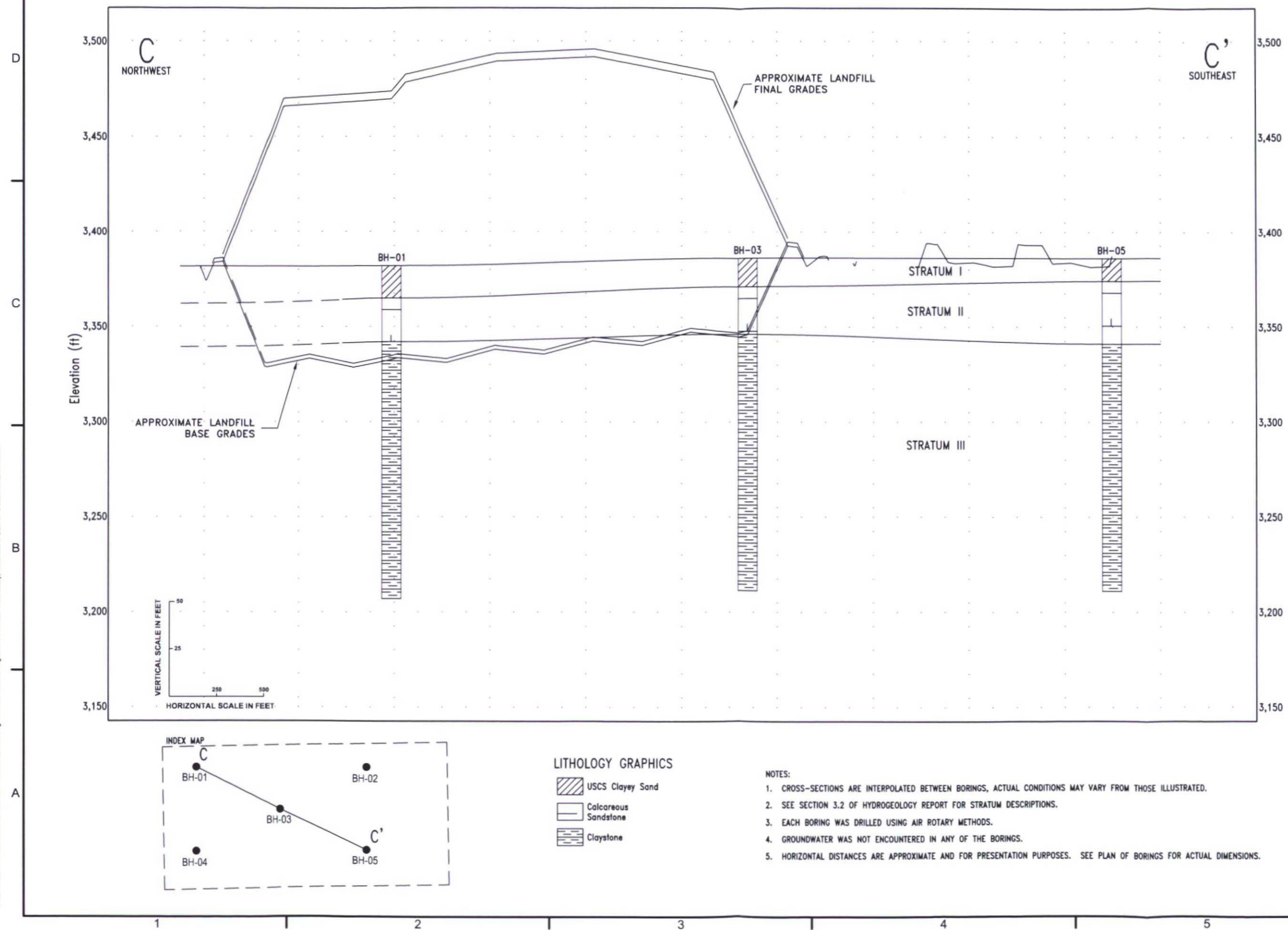
NEW LANDFILL SITE & PROCESSING FACILITY

LEA COUNTY, NEW MEXICO

KEY PLAN

**GEOLOGIC
CROSS-SECTION C-C'**

FIG.G.8



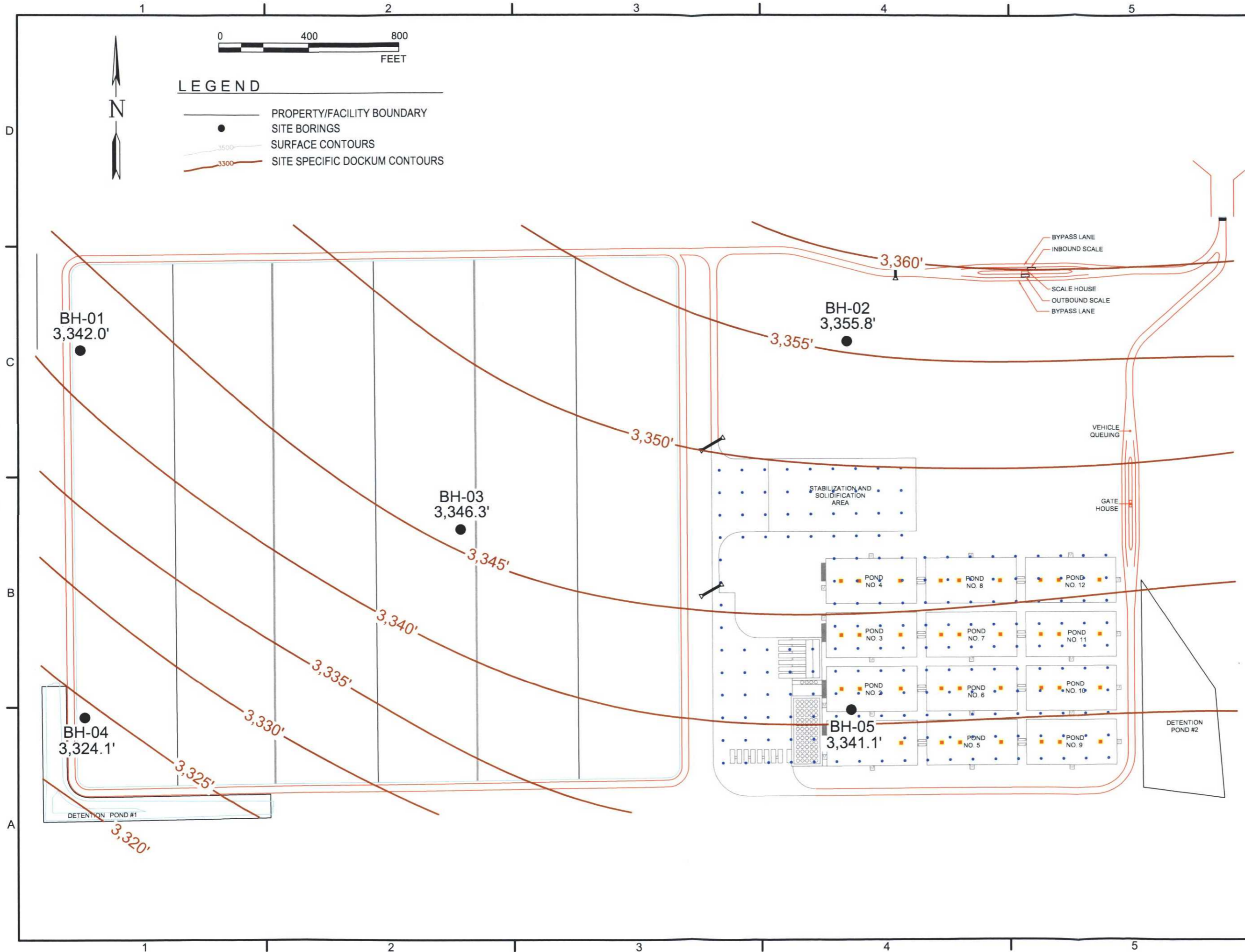
KEY PLAN

NO	DATE	DESCRIPTION
ISSUING OFFICE		PROJECT NO

FIG.G.9



FILE NAME: Y: NEW MEXICO Eunice Structure Map Top of the Dockum Group.dwg LAYOUT NAME: Figure 10 PRINTED: Wednesday, November 04, 2015 - 8:48am USER: dbacon



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E & P LANDFILL
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FACILITY**

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**NEW LANDFILL SITE
& PROCESSING FACILITY**

LEA COUNTY, NEW MEXICO

KEY PLAN

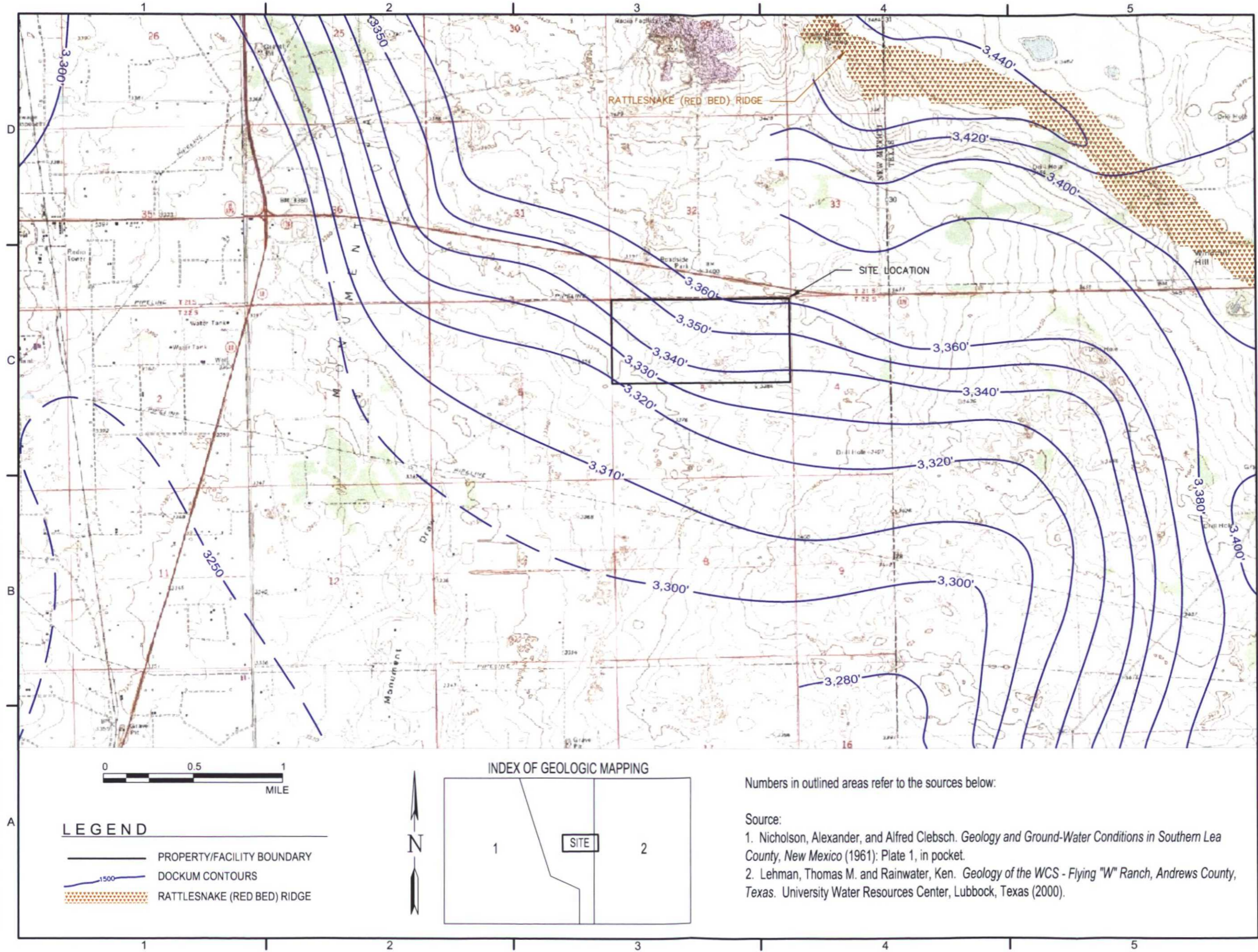
NO.	DATE	DESCRIPTION

ISSUING OFFICE	PROJECT NO.

**STRUCTURE MAP TOP
OF THE DOCKUM GROUP**

FIG.G.10

FILE NAME: Y:\NEW MEXICO\ Eunice Composite Map.dwg LAYOUT NAME: Figure 11 PRINTED: Wednesday, November 04, 2015 8:58am USER: cbacon



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E & P LANDFILL
& PROCESSING
FACILITY**

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**NEW LANDFILL SITE
& PROCESSING FACILITY**

LEA COUNTY, NEW MEXICO

KEY PLAN

NO.	DATE	DESCRIPTION	PROJECT NO.

**LOCAL STRUCTURE MAP
OF THE DOCKUM GROUP**

FIG.G.11

APPENDICES

APPENDIX G.A

WELLS USED ON CROSS-SECTION B-B'

STATE ENGINEER OFFICE

WELL RECORD

Section 1. GENERAL INFORMATION

(A) Owner of well _____ Owner's Well No. _____
 Street or Post Office Address _____
 City and State _____

Well was drilled under Permit No. _____ and is located in the:

- a. _____ $\frac{1}{4}$ _____ $\frac{1}{4}$ _____ $\frac{1}{4}$ _____ $\frac{1}{4}$ of Section _____ Township _____ Range _____ N.M.P.M.
 b. Tract No. _____ of Map No. _____ at the _____
 c. Lot No. _____ of Block No. _____ of the _____
 Subdivision, recorded in _____ County.
 d. X= _____ feet, Y= _____ feet, N.M. Coordinate System _____ Zone in
 the _____ Grant.

(B) Drilling Contractor _____ License No. _____

Address _____

Drilling Began _____ Completed _____ Type tools _____ Size of hole _____ in.

Elevation of land surface or _____ at well is _____ ft. Total depth of well _____ ft.

Completed well is ☐ shallow ☐ artesian. Depth to water upon completion of well _____ ft.

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
From	To			

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement
From	To				

Section 5. PLUGGING RECORD

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

State Engineer Representative

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

FOR USE OF STATE ENGINEER ONLY

Date Received Typed 1/20/78

Quad _____ FWL _____ FSL _____

File No. _____ Use 011 Location No. 22.37.6.42000

STATE ENGINEER OFFICE

WELL RECORD

Section 1. GENERAL INFORMATION

(A) Owner of well _____ Owner's Well No. _____
 Street or Post Office Address _____
 City and State _____

Well was drilled under Permit No. _____ and is located in the:

a. _____ $\frac{1}{4}$ _____ $\frac{1}{4}$ _____ $\frac{1}{4}$ _____ $\frac{1}{4}$ of Section _____ Township _____ Range _____ N.M.P.M.
 b. Tract No. _____ of Map No. _____ of the _____
 c. Lot No. _____ of Block No. _____ of the _____
 Subdivision, recorded in _____ County.
 d. X= _____ feet, Y= _____ feet, N.M. Coordinate System _____ Zone in
 the _____ Grant

(B) Drilling Contractor _____ License No. _____

Address _____

Drilling Began _____ Completed _____ Type tools _____ Size of hole _____ in

Elevation of land surface or _____ at well is _____ ft. Total depth of well _____ ft

Completed well is ☐ shallow ☐ artesian. Depth to water upon completion of well _____ ft

Section 2. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation	Estimated Yield (gallons per minute)
From	To			

Section 3. RECORD OF CASING

Diameter (inches)	Pounds per foot	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To

Section 4. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of Mud	Cubic Feet of Cement	Method of Placement
From	To				

Section 5. PLUGGING RECORD

Plugging Contractor _____

Address _____

Plugging Method _____

Date Well Plugged _____

Plugging approved by: _____

State Engineer Representative

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

FOR USE OF STATE ENGINEER ONLY

Date Received Typed 1/20/78

Quad _____ FWL _____ FSL _____

File No. _____ Use 011 Location No. 22.37.5.12000

Section 6. LOG OF HOLE

[illegible]

Section 7. REMARKS AND ADDITIONAL INFORMATION

This well record is an excerpt from Oil Conservation Commission files at Hobbs, N.M.

Location: 22.37.5.12000

Elevation: 3455' :GL

Owner: Gulf Oil Corp.

South. Penrose Skelly Unit #106

Record of Casing:	16"	-	122'
	13"	-	288'
	10 3/4"	-	677'

Cable

660' FNL - 1980' FNL

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.

Dwyer

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the appropriate district office of the State Engineer. All questions except Section 5, shall be answered as completely and accurately as possible when any well is

FIELD ENGR. LOG

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1

(Plat of 640 acres)

(A) Owner of well Skelly Gasoline) Oil CompanyStreet and Number Box 1257City Eunice, N.M.

State

Well was drilled under Permit No. GP-254 and is located in theNE 1/4 SE 1/4 NW 1/4 of Section 4 Twp 22 Rge 37(B) Drilling Contractor Abbott Bros. License No. WD-46Street and Number Box 637City Hobbs, N.M.

State

Drilling was commenced Jan. 15, 1972 19Drilling was completed Jan. 21, 1972 19Elevation at top of casing in feet above sea level 3455 Total depth of well 162State whether well is shallow or artesian shallow Depth to water upon completion 90

Section 2

PRINCIPAL WATER-BEARING STRATA

No.	Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation
	From	To		
1	87	105	18	gravel and sand
2				
3				
4				
5				

Section 3

RECORD OF CASING

Dia in.	Pounds ft.	Threads in	Depth		Feet	Type Shoe	Perforations	
			Top	Bottom			From	To
85/8	23	10	1	160	160	none	128	150

Section 4

RECORD OF MUDDING AND CEMENTING

Depth in Feet		Diameter Hole in in.	Tons Clay	No. Sacks of Cement	Methods Used
From	To				

Section 5

PLUGGING RECORD

Name of Plugging Contractor

License No.

Street and Number

City

State

Tons of Clay used

Tons of Roughage used

Type of roughage

Plugging method used

Date Plugged

19

Plugging approved by:

Cement Plugs were placed as follows:

No.	Depth of Plug		No. of Sacks Used
	From	To	

Basin Supervisor

FOR USE OF STATE ENGINEER ONLY

Date Received 81 10 27 1972

File No. CP 254 Use IND Location No. 22-37-4

WELL RECORD

INSTRUCTIONS: This form should be executed in triplicate, preferably typewritten, and submitted to the nearest district office of the State Engineer. All sections, except Section 5, shall be answered as completely and accurately as possible when any well is drilled, repaired or deepened. When this form is used as a plugging record, only Section 1A and Section 5 need be completed.

Section 1

(A) Owner of well..... Humble Oil Co.

Street and Number.....

City..... State.....

Well was drilled under Permit No..... and is located in the

NE $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$ of Section 2 Twp. 22S Rge. 37E

(B) Drilling Contractor..... E. A. Burke..... License No.....

Street and Number.....

City..... State.....

Drilling was commenced..... 19.....

Drilling was completed..... Jan. 19 4

(Plat of 640 acres)

Elevation at top of casing in feet above sea level 3358.7000 Total depth of well 87

State whether well is shallow or artesian..... Depth to water upon completion.....

Section 2

PRINCIPAL WATER-BEARING STRATA

No.	Depth in Feet		Thickness in Feet	Description of Water-Bearing Formation
	From	To		
1				
2				
3				
4				
5				

Section 3

RECORD OF CASING

Dia. in.	Pounds ft.	Threads in	Depth		Feet	Type Shoe	Perforations	
			Top	Bottom			From	To

Section 4

RECORD OF MUDDING AND CEMENTING

Depth in Feet		Diameter Hole in in.	Tons Clay	No. Sacks of Cement	Methods Used
From	To				

Section 5

PLUGGING RECORD

Name of Plugging Contractor..... License No.....

Street and Number..... City..... State.....

Tons of Clay used..... Tons of Roughage used..... Type of roughage.....

Plugging method used..... Date Plugged..... 19.....

Plugging approved by:

Cement Plugs were placed as follows:

Basin Supervisor

FOR USE OF STATE ENGINEER ONLY

Date Received Copied from USGS W-11
Schedule by A. Nicholson 10/9/53

No.	Depth of Plug		No. of Sacks Used
	From	To	

File No..... Use..... Location No. 22.37.2.222 JO

Well Driller

LOG OF BORING NO. BH-01

Project Description: CK Disposal



Depth, feet	Samples	Symbol/USCS	Location: Eunice, NM Top of PVC EL: feet MSL Surface EL: 3382 feet MSL Completion Depth: 175 feet Date Boring Started: 5/26/2015 Date Boring Completed: 5/26/2015	Northing: 160.00 Easting: 1850.00	Monitor Well Construction Details	Monitor Well Description
MATERIAL DESCRIPTION						
5			CLAYEY SAND, brown to reddish brown, moderately well sorted, subrounded, fine to medium grained, slightly moist, none HCL reaction			
10						
15						
20			SILTY SAND, with caliche, light brown to white, well sorted, well rounded, very fine to fine grained, dry, strong HCL reaction			
25						
30						
35			CLAYSTONE, reddish brown some gray, slightly moist to dry, weak HCL reaction			
40						
45						
50						
55						
60						
65						
70						
75						
80						
85						
90						
95						
100						
105						
110						
115						
120						
125						
130						
135						
140						
145						
150						
155						
160						
165						
170						
175						
Drilling Contractor: HCI Drilling Drilling Method: Air Rotary Sampling Method: Outtings Geologist: Steven J. Wimmer Project No.: 15-04-22			Groundwater Observations Date: 5/26/15 Depth to Water (ft): Dry		Remarks: 5 1/8" diameter boring; TH60 Atlas Copco Drill Rig	

GROUNDWATER WELL - BAW, EUNICE GPJ, CAREL2 GDT 9/14/15

LOG OF BORING NO. BH-01

PAGE 1 of 1

The stratification lines represent approximate strata boundaries.
In situ, the transition may be gradual.

- ▽ Water level at time of drilling.
- ▽ Water level at end of drilling.
- ▽ Water level after drilling.

LOG OF BORING NO. BH-02

Project Description: CK Disposal



Depth, feet	Samples	Symbol/USCS	Location: Eunice, NM Top of PVC El.: feet MSL Surface El.: 3391.8 feet MSL Completion Depth: 175 feet Date Boring Started: 5/26/2015 Date Boring Completed: 5/26/2015	Northing: 521273.70 Easting: 928310.35	Monitor Well Construction Details	Monitor Well Description
MATERIAL DESCRIPTION						
5			CLAYEY SAND, brown to reddish brown, moderately well sorted, subrounded, fine to medium grained, slightly moist, none HCL reaction			
10						
15			SILTY SAND, with caliche, light brown to white, well sorted, well rounded, very fine to fine grained, dry, strong HCL reaction			
20						
25						
30						
35			CLAYSTONE, reddish brown with gray, dry, weak HCL reaction, some purple			
40						
45						
50						
55						
60						
65						
70						
75			less gray and purple; slightly moist to dry			
80						
85						
90						
95						
100						
105						
110						
115						
120						
125						
130						
135						
140						
145						
150						
155						
160						
165						
170						
175						

GROUNDWATER WELL - BAW EUNICE.GPJ CAREL2.GDT 9/18/15

Drilling Contractor: HCI Drilling
Drilling Method: Air Rotary
Sampling Method: Cuttings
Geologist: Steven J. Wimmer
Project No.: 15-04-22

Groundwater Observations	
Date	Depth to Water (ft)
5/26/15	Dry

Remarks: 5 1/8" diameter boring; TH60 Atlas Copco Drill Rig

OSE FILE NUMBER _____
For OSE Use OnlyNEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD and DRILLING LOG

1. PERMIT HOLDER(S)

Name: WASTE CONTROL SPECIALISTS

Name: _____

Address: P.O. BOX 1129

Address: _____

City: ANDREWS

City: _____

State: TX Zip: 79714

State: _____ Zip: _____

Phone: (505) 394-4300

Phone: _____

Contact: MICHAEL BURNEY

Contact Phone: (505) 394-4300

2. STATE ENGINEER REFERENCE NUMBERS:

File # CP 975 EXPLORE Well # C.P. 975

3. LOCATION OF WELL (The Datum Is Assumed To Be WGS 84 Unless Otherwise Specified)

Latitude: 32 Deg 25 Min 45.8 Sec
Longitude: 103 Deg 04 Min 20.4 Sec(Enter Lat/Long To At Least 1/10th Of A Second)

Datum If Not WGS 84: _____

4. DRILLING CONTRACTOR

License Number: WD1184

Name: WEST TEXAS WATER WELL SERVICE Work Phone: (432) 530-2696

Drill Rig Serial Number: 261602

List The Name Of Each Drill Rig Supervisor That Managed On-Site Operations During The Drilling Process:

RONNY KEITH

5. DRILLING RECORD

Drilling Began: 1-21-08 ; Completed: 4-29-08 ; Drilling Method MUD ROTARY

Diameter Of Bore Hole: 7-7/8 (in);

Total Depth Of Well: 2,020 (ft);

Completed Well Is (Circle One): Shallow Artesian

Depth To Water First Encountered: 1,092 (ft);

Depth To Water Upon Completion Of Well: N/A (ft).

Do Not Write Below This Line

TRN Number: 396028

File Number: CP-975

OSE FILE NUMBER _____
For OSE Use Only

**NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD and DRILLING LOG**

6. RECORD OF CASING

Diameter (inches)	Pounds (per ft.)	Threads (per inch)	Depth (feet)	Length Top to Bottom (feet)	Type of Shoe	Perforations (from to)
13-3/8	48	8	2' AGL	40'		
8-5/8	24	8	3' AGL	1,440'	FLOAT GUIDE	

7. RECORD OF MUDDING AND CEMENTING

Depth (feet)	Hole (diameter)	Mud Used (# of sacks)	Cement (cubic feet)	Method of Placement
0 - 40	17-1/2		35	TRIMMIE
0 - 1,440	12-1/4		574	POSITIVE
1,380-2,020	7-7/8		275	TRIMMIE

Do Not Write Below This Line

Trn Number: _____
Form: wr-20 May 07

File Number: _____

STATE ENGINEER OFFICE
2008 MAY 14 P 2 05

OSE FILE NUMBER _____
For OSE Use Only

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

8. LOG OF HOLE. For Each Water Bearing Strata, Estimate The Yield Of The Formation In Gallons Per Minute.

[illegible]

Enter Method Used To Estimate Yield: N/A

Do Not Write Below This Line

Trm Number: _____
Form wr-20 May 07

page 3 of 4

File Number:

CP-975 Geologic log

- 0-6 ft 4 pad fill and fine brown sand
- 6-10 ft 4 white sandy limestone (Mescalero caliche)
- 10-29 ft 17 sand, light brown, and brown calcareous sandstone (Gatúña Formation)
- 29-576 ft 547 interbedded sandstone, siltstone, and claystone; reddish-brown to gray; bioturbated (Cooper Canyon Formation)
- 576-708 ft 132 sandstone and siltstone, gray to reddish brown (Trujillo Formation)
- 708-1092 ft 384 interbedded very fine sandstone and siltstone, gray to dark reddish brown (Tecovas Formation)
- 1092-1384 ft 212 gray, fine sandstone with interbedded reddish brown and weak red siltstone and claystone (Santa Rosa Formation)
- 1384-1566 ft 132 reddish brown, very fine sandstone and siltstone, with some fibrous gypsum in lower part (Dewey Lake Formation)
- 1566-1602 ft 34 gray anhydrite beds, with intermediate reddish-brown and gray siltstone (Forty-niner Member of the Rustler Formation)
- 1602-1609 ft 7 gray anhydrite and wavy thin laminae of dolomite (Magenta Dolomite Member of the Rustler Formation)
- 1609-1736 ft 127 gray anhydrite beds, with intermediate halite including anhydrite and polyhalite (Tamarisk Member of the Rustler Formation)
- 1736-1807 ft 71 halite with thin two thin anhydrite beds and basal reddish-brown, very fine sandstone (Los Medaños Member of the Rustler Formation)
- 1807-2020 ft 213 halite with anhydrite/polyhalitic marker beds (MB103 and uppermost MB109) (Salado Formation)

STATE ENGINEER OFFICE
 ROSWELL, NEW MEXICO
 2000 MAY 14 P 2:06

OSE FILE NUMBER _____
For OSE Use Only

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. ADDITIONAL STATEMENTS OR EXPLANATIONS:

[illegible]STATE ENGINEER OFFICE
MONTREAL, QUEBEC, CANADA

The undersigned hereby certifies that, to the best of his or her knowledge and belief, the foregoing is a true and correct record of the above described bore hole. The undersigned further certifies that he or she will file this well record with the Office Of The State Engineer and permit holder within 20 days after completion of the well drilling.

Tommy Keith
Driller

05-12-08

(mm/dd/year)

Do Not Write Below This Line

Trn Number: _____
Form wt-20 May 07

File Number:

STATE OF TEXAS WELL REPORT for Tracking #159429

Owner:	Waste Control Specialists	Owner Well #:	TP-62
Address:	P.O. Box 1129 Andrews , TX 79714	Grid #:	26-40-5
Well Location:	30 Miles NW of Andrews Andrews , TX 79714	Latitude:	32° 25' 21" N
Well County:	Andrews	Longitude:	103° 02' 59" W
Elevation:	No Data	GPS Brand Used:	Garmin etrex
Type of Work:	New Well	Proposed Use:	Monitor

Drilling Date: Started: 1/10/2008
Completed: 1/10/2008

Diameter of Hole: Diameter: 5.625 in From Surface To 49 ft

Drilling Method: Air Rotary

Borehole Completion: Gravel Packed From: 35 ft to 49 ft
Gravel Pack Size: 8/16

Annular Seal Data: 1st Interval: From 0 ft to 5 ft with 20 Cement (#sacks and material)
2nd Interval: From 5 ft to 35 ft with 10 bentonite (#sacks and material)
3rd Interval: No Data
Method Used: poured
Cemented By: Talon
Distance to Septic Field or other Concentrated Contamination: No Data
Distance to Property Line: No Data
Method of Verification: No Data
Approved by Variance: No Data

Surface Completion: Surface Slab Installed

Water Level: Static level: No Data
Artesian flow: No Data

Packers: No Data

Plugging Info: Casing or Cement/Bentonite left in well: No Data

Type Of Pump: No Data

Well Tests: No Data

Water Quality: Type of Water: fresh
Depth of Strata: No Data
Chemical Analysis Made: No
Did the driller knowingly penetrate any strata which contained undesirable constituents: No

Certification Data: The driller certified that the driller drilled this well (or the well was drilled under the driller's direct supervision) and that each and all of the statements herein are true and correct. The driller understood that failure to complete the required items will result in the log(s) being returned for completion and resubmittal.

Company Information: **Talon Drilling, LP**
921 N Blvins
Amarillo, TX 79107

Driller License Number: **54499**

Licensed Well Driller Signature: **Shane Currie**

Registered Driller Apprentice Signature: **No Data**

Apprentice Registration Number: **No Data**

Comments: **No Data**

IMPORTANT NOTICE FOR PERSONS HAVING WELLS DRILLED CONCERNING CONFIDENTIALITY

TEX. OCC. CODE Title 12, Chapter 1901.251, authorizes the owner (owner or the person for whom the well was drilled) to keep information in Well Reports confidential. The Department shall hold the contents of the well log confidential and not a matter of public record if it receives, by certified mail, a written request to do so from the owner.

Please include the report's Tracking number (Tracking #159429) on your written request.

Texas Department of Licensing & Regulation
P.O. Box 12157
Austin, TX 78711
(512) 463-7880

DESC. & COLOR OF FORMATION MATERIAL**CASING, BLANK PIPE & WELL SCREEN DATA**

From (ft) To (ft) Description
0 to 2 Sandy SILT, tan.
2 to 32 CALICHE, light gray to tan.
32 to 43 Silty SAND, tan.
43 to 46.25 Sandy GRAVEL, various colored chert.
46.25 to 49 CLAY, maroon with gray mottling.

Dia. New/Used Type Setting From/To
2 new pvc casing 0 to 39 sch 40
2 new pvc screening 39 to 49 slot 0.010

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505-394-5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NW 1/4 SW 1/4 NE 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 14.8698 s Longitude: 103 d 04 m 49.8642 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: CP-993

I. On land owned by (required): Louisiana Energy Services

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon Drilling Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.467.0622
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 12/5/08; Completed: 12/5/08; Type tools: Air-Rotary;
Size of hole: 7-7/8 in.; Total depth of well: 231.5 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

Do Not Write Below This Line

File Number: CP-993
Form: wr-20

Trn Number: 415642

page 1 of 4

Monitor

21.38, 32.231

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)
Dry			

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
4 PVC	Sch 40	2	+3 231	234	end cap	211 231

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 20	7-7/8		20 Sacks	Trimie (Bentonite/Cement)
20 206	7-7/8	61		Poured (Bentonite chips)

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

File Number: CP-993
Form: wr-20

page 2 of 4

Trn Number: 415642

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

MW-20

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.

She C. C.
Driller

12/28/08
(mm/dd/year)

STATE ENGINEER OFFICE
A 11.51

=====

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-993
Form: wr-20

Trn Number: 415642

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505-394-5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NE_{1/4} SW_{1/4} NE_{1/4} Section: 32 Township: 21S Range: 38E 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 26 m 14.9172 s Longitude: 103 d 04 m 45.4866 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: CP-994

I. On land owned by (required): Louisiana Energy Services

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon Drilling Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.467.0622
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 12/5/08; Completed: 12/5/08; Type tools: Air-Rotary;
Size of hole: 7-7/8 in.; Total depth of well: 36 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

Do Not Write Below This Line

File Number: CP-994
Form: wr-20

page 1 of 4

Trn Number: 415643

21,38,32.232

Monitor

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)
<u>Dry</u>				

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	
<u>4 PVC</u>	<u>Sch 40</u>	<u>2</u>	<u>+3</u>	<u>36</u>	<u>39</u>	<u>end cap</u>	<u>26</u>	<u>36</u>

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To		Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
<u>0</u>	<u>5</u>	<u>7-7/8</u>		<u>20 Sacks</u>	<u>Trimie (Bentonite/Cement)</u>
<u>5</u>	<u>23</u>	<u>7-7/8</u>	<u>5</u>		<u>Poured (Bentonite chips)</u>

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

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

Do Not Write Below This Line

File Number: CP-994
Form: wr-20

page 3 of 4

Trn Number: 415643

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

MW-21

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.


Driller

12/24/08
(mm/dd/year)

STATE ENGINEER OFFICE
12-24-08
1:19

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-994
Form: wr-20

page 4 of 4

Trn Number: 415643

WL 3

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505-394,5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: LA Zip: 88231

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

A. SE 1/4 NE 1/4 NE 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 21.907 s Longitude: 103 d 04 m 27.079 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: CP-947
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon LPE Work Phone: 806-467-0607
Agent: Shane Currie Home Phone: 806-416-8220
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/15/07; Completed: 4/03/07; Type tools: Dir rotary;
Size of hole: 7-7/8 in.; Total depth of well: 220.5 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: 178.83 ft.

Do Not Write Below This Line

File Number: CP-947
Form: wr-20

page 1 of 4

Trn Number: 376945

21.38.32.224

Monitor

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2007 APR 11 2:00

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)
178.83 218.1	39.27	claystone & siltstone	0-5

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
4	54.40 PVC	2	0 198.1	198.1	N/A	N/A
4	54.40 PVC	2	198.1 218.1	20	PVC end cap	198.1 218.1

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 75	7-7/8	1	20	tremie - bentonite / cement
75 192	7-7/8	43		poured - bentonite chips

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		

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
1961 APR 27 P 2:00

Do Not Write Below This Line

File Number: CP-947
Form: wr-20

Trn Number: 376945

page 2 of 4

21. 38. 32. 224

Monitor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
MAY APR 27 P 2:01

Do Not Write Below This Line

File Number: CP-947
Form: wr-20

Trn Number: 376945

page 3 of 4

21. 38. 32. 224.

Monitor

3

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

100

Joe Cole
Driller

04/24/2007
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2001 APR 27 P 2:04

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Trn Number: 376945

page 4 of 4

21.38.32.224

Monitor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: _____ Zip: _____

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

A. NE 1/4 NE 1/4 NE 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 33.098 s Longitude: 103 d 04 m 21.582 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: CP-948

I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575 Work Phone: 866.467.0607
Name: Talon LDF Home Phone: 866.676.8220
Agent: Shane Currie
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/15/07; Completed: 4/03/07; Type tools: Air rotary;
Size of hole: 7-7/8 in.; Total depth of well: 32.2 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: DRY ft.

Do Not Write Below This Line

File Number: CP-948
Form: wr-20

page 1 of 4

Trn Number: 376966

Monitor

21.38.32 222

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
2007 APR 27
01

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)
		Dry	

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
4	54.40 PVC	2	0 22.2	22.2	N/A	N/A
4	54.40 PVC	2	22.2 32.2	10	PVC end cap	22.2 32.2

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 10	7-7/8	1	2.6	tremie - bentonite/cement
10 14	7-7/8	5	N/A	pour - bentonite chips

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		

STATE ENGINEER OFFICE
ROSWEIL, NEW MEXICO
2001 APR 27 P 2:01

Do Not Write Below This Line

File Number: CP-948
Form: wr-20

page 2 of 4

Trn Number: 376946

Monitor

21.38.32.222

4

9. LOG OF HOLE

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2001 APR 27 P 2:01

21.38.32.222

4

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

04/24/2007
(mm/od/year)

21.38. 32.222

STATE ENGINEER OFFICE
ROSELLE, NEW MEXICO
2001 APR 27 P 2001

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NW 1/4 NE 1/4 NE 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 32.845 s Longitude: 103 d 04 m 39.176 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: CP-949
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon LPE Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.676.8220
Mailing Address: 921 N. Riving
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/16/07; Completed: 4/03/07; Type tools: Air Rotary;
Size of hole: 7-1/8 in.; Total depth of well: 240.9 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: DRY ft.

Do Not Write Below This Line

File Number: CP 949
Form: wr-20

Trn Number: 376947

page 1 of 4

Monitor

21.38.32.221

STATE ENGINEER OFFICE
FOSWELL, NEW MEXICO
201 APR 27 10:02

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)
		DRY	

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
4.0	sch 40 PUK	2	0 220.9	220.9	N/A	N/A
4.0	sch 40 PUK	2	220.9 240.9	20	PVC end cap	220.9 240.9

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 75	7-7/8	1	20	grout - bentonite/cement
75 215	7-7/8	53	N/A	pour - bentonite pellets

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
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2		
3		
4		
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STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
2011 APR 27 P 2:02

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File Number: CP-949
Form: wr-20

Trn Number: 376947

page 2 of 4

21.38.32.221

Monitor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

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File Number: CP-949
Form: wx-20

Trn Number: 376947

page 3 of 4

Monitor

21. 58. 32. 221

STATE ENGINEER OFFICE
ALBUQUERQUE, NEW MEXICO
1004 APR 27 P 2:01

5

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

1. What is the main purpose of the document?
 2. What are the key findings of the study?
 3. What are the limitations of the study?
 4. What are the implications of the study?
 5. What are the conclusions of the study?
 6. What are the recommendations of the study?
 7. What are the future research directions?
 8. What are the acknowledgments?
 9. What are the references?
 10. What are the appendices?
 11. What are the footnotes?
 12. What are the tables?
 13. What are the figures?
 14. What are the captions?
 15. What are the legends?
 16. What are the abbreviations?
 17. What are the acronyms?
 18. What are the symbols?
 19. What are the units?
 20. What are the dates?
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 194. What are the symbols?
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 207. What are the words?
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 209. What are the numbers?
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 213. What are the times?
 214. What are the locations?
 215. What are the names?
 216. What are the titles?
 217. What are the subtitles?
 218. What are the headings?
 219. <

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.

Gene Cline
Driller

04/24/07
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-949
Form: wr-20

Trn Number: 376947

page 4 of 4

Monitor

21,38,32,22,1

STATE ENGINEER OFFICE
RODWELL, NEW MEXICO
2000 APR 27 P 2:02

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NW 1/4 SW 1/4 NW 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 16.2 s Longitude: 103 d 5 m 21.2 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: CP-959

I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575 Name: Talon LPE Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.676.8220
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/23/07; Completed: 3/24/07; Type tools: Air Rotary
Size of hole: 7-7/8 in.; Total depth of well: 231 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: DRY ft.

Do Not Write Below This Line

File Number: CP-959
Form: wr-20

Trn Number: 376959

page 1 of 4

Mexiter

21.38.32.131

STATE ENGINEER OFFICE
ROS WELL, NEW MEXICO
2001 MAR 27 PM

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)
DRY			

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
4	Sch 40 PVC	2	0 211	211	N/A	
4	Sch 40 PVC	2	211 231	20	PVC end cap	211 231

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 70	7-7/8	1	18	tremie - bentonite / cement
70 205	7-7/8	48		pour - bentonite chips

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		

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
101 APR 27 0 20 01

Do Not Write Below This Line

File Number: CP-959
Form: wr-20

page 2 of 4

Trn Number: 376959

Monitor

21.38.32.131

6

9. LOG OF HOLE

STATE ENGINEER OFFICE
MOSCOW, U.S.S.R.
JUN 27 1967

Trn Number: 376959 2

21.38.32.131

Monitor

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

Driller

04/24/2007
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-959
Form: wr-20

page 4 of 4

Trn Number: 376959

21,38.32.131

Monitor

STATE ENGINEER OFFICE
ROSEBELL, NEW MEXICO
1961 JUN 27 P 2:07

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Weatherill Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. SE 1/4 NE 1/4 NW 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 23.387 s Longitude: 103 d 04 m 57.803 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: CP-958
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon LPE Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.676.8220
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/20/07; Completed: 3/29/07; Type tools: Air Rotary
Size of hole: 7-7/8 in.; Total depth of well: 246.3 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: 217.19 ft.

Do Not Write Below This Line

File Number: CP-958
Form: wr-20

page 1 of 4

Trn Number: 376958

Monitor

21.38.32.124

STATE ENGINEER OFFICE
ROSEMBO, NEW MEXICO
2007 APR 27 PM 2:07

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
217.19	246.3	29.11	claystone w/siltstone	0-5

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
4	Sch 40 PVC	2	0	226.3	226.3	N/A	N/A	
4	Sch 40 PVC	2	226.3	246.3	20	PVC End Cap	226.3	246.3

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole	Sacks	Cubic Feet	Method of Placement
From	To	Diameter	of mud	of Cement	
0	70	7-7/8	1	18	tremie - cement/bentonite
70	220	7-7/8	43	0.0	pour - bentonite chips

8. PLUGGING RECORD

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

Plugging approved by: _____
State Engineer Representative

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

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
2001 APR 27 12 26 01

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File Number: CP-958
Form: wr-20

page 2 of 4

Trn Number: 376958
21.38.32.124

MEXICO

9. LOG OF HOLE

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2001 APR 27 PM 2:01

21, 38, 32, 124

7

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

1. *Introduction*

2. *Background*

3. *Methodology*

4. *Results*

5. *Discussion*

6. *Conclusion*

7. *References*

8. *Appendix*

9. *Index*

10. *Table of Contents*

11. *Abstract*

12. *Summary*

13. *Key Words*

14. *Keywords*

15. *Keywords*

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280. *Keywords*

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.

Eric
Driller

04/24/2007
(mm/dd/year)

STATE ENGINEER OFFICE
ROSMELLE, NEW MEXICO
2001 APR 27 PM 2:07

FOR STATE ENGINEER USE ONLY

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

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File Number: CP- 958
Form: wr-20

Trn Number: 376,958

page 4 of 4

Monitor

21, 38, 32, 124

WLB

8

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NE 1/4 NE 1/4 NW 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 33.072 s Longitude: 103 d 05 m 2.128 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: CP-951
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon LPE Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.676.8220
Mailing Address: 921 N. Bivins
City: Amarillo State: TX zip: 79107

4. DRILLING RECORD

Drilling began: 3/29/07; Completed: 3/29/07; Type tools: Air Rotary
Size of hole: 7-1/2 in.; Total depth of well: 261.3 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: 243.31 ft.

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
APR 27 2007

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File Number: CP-951 Trn Number: 3769489
Form: wr-20 page 1 of 4

Monitor 21.38.32.122

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)
243.8 261.3	17.49	Siltstone, hard, gray	0 - 2

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
4	Sch 40 PVC	2	0 241.3	241.3	N/A	N/A
4	Sch 40 PVC	2	241.3 261.3	20	PVC end cap	241.3 261.3

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 75	7-7/8	1	20	tramic bentonite/cement
75 233	7-7/8	65	-	pour bentonite chips

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		

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2001 APR 27 0 2 03

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Form: wr-20 page 2 of 4
Mexico 21.38.32.122

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

[illegible]

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
1961 APR 27 PM 2:07

Do Not Write Below This Line

File Number: CP-951
Form: wr-20

Trn Number: 376949

page 3 of 4

21.38.32.122

Monitor

8

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

100

Jim Rice
Driller

04/24/07
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

Quad ____; FW/L ____; FSL ____; Use ____; Location No. ____

STATE ENGINEER OFFICE
RUSTEN, NEW MEXICO
APR 27 10 2:03

Do Not Write Below This Line

Trn Number: 376949

page 4 of 4

21.38.32.122

Meritor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 506.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Lunice State: NM Zip: 88231

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

A. NE 1/4 NE 1/4 NW 1/4 Section: 32 Township: 215 Range: 38E 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 26 m 32.801 s Longitude: 103 d 04 m 59.861 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: CP-950

I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575 Work Phone: 806.467.0607
Name: Talon/LPE Home Phone: 806.676.8220
Agent: Shane Currie
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/21/07; Completed: 3/30/07; Type tools: Air rotary;
Size of hole: 7-7/8 in.; Total depth of well: 22 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: 814 ft.

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File Number: CP-950
Form: WR-20

page 1 of 4

Trn Number: 376948

Monitor

21.38.32.122

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2007 APR 27
2:02

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
From	To			
PRY				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
4	SCH 40 PVC	2	0	10.1	10.1	N/A	N/A	
4	SCH 40 PVC	2	10.1	20.1	10.0	PVC end cap	10.1	20.1

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
From	To				
0	2	7-7/8	1	0.5	tremic bentonite / cement
2	7	7-7/8	2		pour bentonite chips

8. PLUGGING RECORD

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

Plugging approved by: _____
State Engineer Representative

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

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
2001 APR 27 P 2:02

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File Number: CP-950
Form: wr-20

Trn Number: 376948
page 2 of 4

Monitor

21.38.32.122

9. LOG OF HOLE

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
JUN 27 1963

Monitor

9

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

1. Introduction
 2. Background
 3. Methodology
 4. Results
 5. Conclusion
 6. References
 7. Appendix
 8. Index
 9. Glossary
 10. Summary
 11. Abstract
 12. Keywords
 13. Subject
 14. Topic
 15. Field
 16. Area
 17. Discipline
 18. Branch
 19. Division
 20. Department
 21. Faculty
 22. School
 23. Institute
 24. Center
 25. Program
 26. Course
 27. Module
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Gene Cline
Driller

04/24/2007
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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page 4 of 4

Monitor

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STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
1961 APR 27 P 2:02Z

WLB

10

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: _____ Zip: 88231

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

A. NW 1/4 NE 1/4 NW 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 33.002 s Longitude: 103 d 05 m 8.300 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: CP-952
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575 Work Phone: 806.467.0607
Name: Talon/LPE Home Phone: 806.676.8720
Agent: Shane Currie
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/21/07; Completed: 3/29/07; Type tools: Air Rotary
Size of hole: 7-7/8 in.; Total depth of well: 26.9 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: DRY ft.

STATE ENGINEER OFFICE
FOSWELL, NEW MEXICO
2007 MAR 27 10 20 AM

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File Number: CP-952 Trn Number: 376950
Form: wr-20 page 1 of 4

Monitor

21.38.32.121

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)
DZY			

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
4	SCH 40 PVC	2	0 16.9	16.9	N/A	N/A
4	SCH 40 PVC	2	16.9 26.9	10	PVC end cap	16.9 26.9

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 4	7-7/8	1	1	tremie - Cement/bentonite
4 14	7-7/8	4	N/A	pump - bentonite chips

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
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STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
2001 APR 27 PM 2:03

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File Number: CP-952
Form: WZ-20

page 2 of 4

Trn Number: 376950

Monitor

21.38.32.121

9. LOG OF HOLE

STATE ENGINEER OFFICE
TOSQUELL, NEW MEXICO
201 APR 27 P 3 01

21. 38. 32. 121

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

1. Introduction
 2. Background
 3. Methodology
 4. Results
 5. Conclusion
 6. References
 7. Appendix
 8. Index
 9. Table of Contents
 10. Figure 1
 11. Figure 2
 12. Figure 3
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 216. Figure 207
 217. Figure 208

Jim Cline
Driller

04/24/2007
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-452
Form: wr-20

page 4 of 4

Trn Number: 376950

21.38.32.121

STATE ENGINEER OFFICE
R. SWELL, NEW MEXICO
201 APR 27 PM 2:03

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NE 1/4 NW 1/4 NW 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 32.999 s Longitude: 103 d 05 m 19.283 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: CP-953
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575 Work Phone: 806.467.0607
Name: Talon/LPE Home Phone: 806.676.8220
Agent: Shane Currie
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/22/07; Completed: 3/29/07; Type tools: Air Rotary
Size of hole: 7-7/8 in.; Total depth of well: 257.5 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: 241.26 ft.

Do Not Write Below This Line

File Number: CP-953 Trn Number: 376952
Form: wr-20 page 1 of 4

Monitor

21.38.32.112

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
APR 27 P 2:00

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)
241.26 257.5	16.24	CLAYSTONE w/interbedded siltstone	0-2

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
4	Sch 40 PVC	2	0 237.5	237.5	N/A	N/A
4	Sch 40 PVC	2	237.5 257.5	20	PVC Cased	237.5 257.5

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 75	7-7/8	1	20	grout - cement/bentonite
75 230	7-7/8	45	N/A	pour - bentonite chips

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		

STATE ENGINEER OFFICE
ROS WELLS, NEW MEXICO
1001 APR 27 P 2:04

Do Not Write Below This Line

File Number: CP-953
Form: wr-20

page 2 of 4

Trn Number: 376952

Monitor

21.38.32.112

11

9. LOG OF HOLE

STATE ENGINEER OFFICE
RUSTEN, NEW MEXICO
APR 27 2:04

21.38.32.112

11

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

1. The first step in the process of creating a new product is to identify a market need. This involves conducting market research to understand the preferences and behaviors of potential customers. Once a need is identified, the next step is to develop a concept that addresses this need. This concept should be unique and offer a clear value proposition to the target market.

2. After developing a concept, the next step is to create a prototype. A prototype is a preliminary model of the product that allows the development team to test and refine their ideas. This can be done through various methods, such as 3D printing, computer-aided design (CAD), or even hand-drawn sketches. The prototype is used to gather feedback from potential users and make necessary adjustments to the design.

3. Once a prototype is created, the next step is to conduct a feasibility study. This study evaluates the technical, financial, and market viability of the product. It involves assessing the resources required for production, the potential costs, and the competitive landscape. This step is crucial to ensure that the product is not only innovative but also practical and profitable.

4. Following the feasibility study, the next step is to develop a business plan. A business plan outlines the overall strategy for the product, including marketing, sales, and distribution channels. It also details the financial projections, such as revenue, expenses, and profit margins. This plan is essential for securing funding and guiding the product's development and launch.

5. The final step in the process is to launch the product. This involves manufacturing the product at scale and distributing it to the market. The launch phase is critical for gaining initial traction and feedback from customers. It also allows the company to monitor the product's performance and make any necessary adjustments to improve it.

Jim Cline
Driller

4/24/2007
(mm/dd/year)

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2007 APR 27 PM 2:04

FOR STATE ENGINEER USE ONLY

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

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Tin Number: 376952

page 4 of 4

Monitor

21.38.32.112

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NW 1/4, NW 1/4 NW 1/4 Section: 32 Township: 21S Range: 30E 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 26 m 27.46 s Longitude: 103 d 05 m 22.714 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: CP-954
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575 Work Phone: 806.467.0687
Name: Talon / LPE Home Phone: 806.676.8220
Agent: Shane Currie
Mailing Address: 921 N. Ruins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/22/07; Completed: 3/30/07; Type tools: Air
Size of hole: 7-7/8 in.; Total depth of well: 236.4 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: DRY ft.

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File Number: CP-954
Form: wr-20

page 1 of 4

Trn Number: 376954

Monitor

21.38.32.111

STATE ENGINEER OFFICE
ROSELLE, NEW MEXICO
2007 APR 27 P 2:01 PM

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)
<u>DEY</u>			

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
<u>4</u>	<u>Sch 40 PVC</u>	<u>2</u>	<u>0</u> <u>216.4</u>	<u>216.4</u>	<u>N/A</u>	<u>N/A</u>
<u>4</u>	<u>Sch 40 PVC</u>	<u>2</u>	<u>216.4</u> <u>236.4</u>	<u>20</u>	<u>PVC end cap</u>	<u>216.4</u> <u>236.4</u>

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
<u>0</u> <u>15</u>	<u>7-7/8</u>	<u>1</u>	<u>20</u>	<u>tremie - cement/bentonite</u>
<u>15</u> <u>210</u>	<u>7-7/8</u>	<u>43</u>		<u>pour - bentonite chips</u>

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
<u>1</u>		
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
1991 APR 27 P 2:00

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Form: wr-20

Trn Number: 376954

Monitor

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100

04/24/2007
(mm/dd/year)

STATE ENGINEER OFFICE
FOSWELL, NEW MEXICO
2007 APR 27 P 2:04

Monitor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505-394-5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. SW 1/4 SW 1/4 NE 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 14.8482 s Longitude: 103 d 04 m 40.2564 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: CP-995
I. On land owned by (required): Louisiana Energy Services

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon Drilling Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.467.0622
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 12/5/08; Completed: 12/5/08; Type tools: Air-Rotary;
Size of hole: 7-7/8 in.; Total depth of well: 38 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

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File Number: CP-995
Form: wr-20

page 1 of 4

Trn Number: 418652

21.38.32.233

Monitor

File Number: _____
(For OSE Use Only)

**NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD**

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
<u>Dry</u>				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
<u>4 PVC</u>	<u>Sch 40</u>	<u>2</u>	<u>+3</u>	<u>38</u>	<u>41</u>	<u>end cap</u>	<u>28</u>	<u>38</u>

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole	Sacks	Cubic Feet	Method of Placement
From	To	Diameter	of mud	of Cement	
<u>0</u>	<u>5</u>	<u>7-7/8</u>		<u>20 Sacks</u>	<u>Trimie (Bentonite/Cement)</u>
<u>5</u>	<u>25</u>	<u>7-7/8</u>	<u>6</u>		<u>Poured (Bentonite chips)</u>

8. PLUGGING RECORD

Plugging Contractor: _____
 Address: _____
 Plugging Method: _____
 Date Well Plugged: _____
 Plugging approved by: _____
 State Engineer Representative

	No.	Depth in Feet	Cubic Feet of Cement
	Top	Bottom	
<u>1</u>			
<u>2</u>			
<u>3</u>			
<u>4</u>			
<u>5</u>			

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File Number: CP-995
 Form: wr-20

page 2 of 4

Trn Number: 418652

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

MW-22

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.

She Lie
Driller

12/29/08
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

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File Number:

Form: wr-20

Trn Number:

page 4 of 4

NLB

14

File Number: _____
(For OSE Use Only)

**NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD**

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505-394-5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. SW 1/4 SW 1/4 NE 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 13.383 s Longitude: 103 d 04 m 52.212 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: CP-996
I. On land owned by (required): Louisiana Energy Services

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon Drilling Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.467.0622
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 12/5/08; Completed: 12/5/08; Type tools: Air-Rotary;
Size of hole: 7-7/8 in.; Total depth of well: 39 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

Do Not Write Below This Line

File Number: CP-996
Form: wr-20

page 1 of 4

Trn Number: 418653
21.38.32.233

Monitor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
Dry				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
4 PVC	Sch 40	2	+3	39	42	end cap	21	36

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
From	To				
0	5	7-7/8		20 Sacks	Trimie (Bentonite/Cement)
5	20	7-7/8	5		Poured (Bentonite chips)

8. PLUGGING RECORD

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

Plugging approved by: _____
State Engineer Representative

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

STATE ENGINEER'S OFFICE
JUL 10 - 6 P 1:20

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File Number: CP-996
Form: wr-20

Trn Number: 418653

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

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File Number: CP-996
Form: wr-20

page 3 of 4

Trn Number: 418653

14

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

MW-23

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.

Joe Cline
Driller

12/29/08
(mm/dd/year)

and
described

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-996
Form: wr-20

Trn Number: 418653

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. SW 1/4 NW 1/4 SW 1/4 Section: 32 Township: 21S Range: 38E 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 25 m 56.857 s Longitude: 103 d 05 m 23.671 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: CP-955

I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575
Name: Tolon/LPE Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.676.8220
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/23/07; Completed: 3/24/07; Type tools: Air Rotary
Size of hole: 7-7/8 in.; Total depth of well: 236 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: DRY ft.

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File Number: CP-955
Form: wr-20

page 1 of 4

Trn Number: 376955

Monitor

21.38.32.313

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2007 APR 27

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet From	Depth in Feet To	Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
DRY				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet Top	Depth in Feet Bottom	Length (feet)	Type of Shoe	Perforations From	Perforations To
4	54# 40 PVC	2	0	216	216	N/A	N/A	
4	54# 40 PVC	2	216	236	20	PVC End Cap	216	236

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	Depth in Feet To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0	75	7-7/8	1	20	tremie - cement/bentonite
75	210	7-7/8	42		pour - bentonite chips

8. PLUGGING RECORD

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

Plugging approved by: _____
State Engineer Representative

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

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
JAN 1981 27 P 2:00

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File Number: CP-955
Form: wr-20

page 2 of 4

Trn Number: 376955

21.38.32.313

Monitor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

STATE ENGINEER OFFICE
ROSENBL, JEROME MEXICO
1601 APR 27 P 2 04

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File Number: CP-955
Form: wr-20

Trn Number: 376955

page 3 of 4

Monitor

21.38.32.313

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.

Gene C. Hill
Driller

04/24/2007
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-955
Form: wr-20

Trn Number: 376955

page 4 of 4

Monitor

21.38.32.313

STATE ENGINEER OFFICE
PASADENA, CALIFORNIA
JUN 27 1961

WLB

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505-394-5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NW 1/4 NE 1/4 SW 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 1.1718 s Longitude: 103 d 05 m 5.5062 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: CP-999
I. On land owned by (required): Louisiana Energy Services

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon Drilling Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.467.0622
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 12/4/08; Completed: 12/4/08; Type tools: Air-Rotary;
Size of hole: 7-7/8 in.; Total depth of well: 43 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

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File Number: CP-999 Trn Number: 415856
Form: wr-20 page 1 of 4

Monitor 21.38.32.321

16
File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
Dry				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
4 PVC	Sch 40	2	+3	43	46	end cap	28	43

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole	Sacks	Cubic Feet	Method of Placement
From	To	Diameter	of mud	of Cement	
0	5	7-7/8		20 Sacks	Trimie (Bentonite/Cement)
5	22	7-7/8	5		Poured (Bentonite chips)

8. PLUGGING RECORD

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

Plugging approved by: _____
State Engineer Representative

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

STATE ENGINEER'S OFFICE
JULY-8 PM 1:22

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File Number: CP-999
Form: wr-20

page 2 of 4

Trn Number: 415856

page 4 of 4

WLB

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505-394-5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NE 1/4, NE 1/4 SW 1/4 Section: 32 Township: 215 Range: 38E 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 26 m 1.071 s Longitude: 103 d 05 m 3.048 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: CP-998
I. On land owned by (required): Louisiana Energy Services

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon Drilling Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.467.0622
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 12/4/08 ; Completed: 12/4/08 ; Type tools: Air-Rotary;
Size of hole: 7-7/8 in.; Total depth of well: 250 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

Do Not Write Below This Line

File Number: CP-998 Trn Number: 418655
Form: wr-20 page 1 of 4

Monitor

21.38.32.322

17

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)
<u>Dry</u>				

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	
<u>4 PVC</u>	<u>Sch 40</u>	<u>2</u>	<u>+3</u>	<u>250</u>	<u>253</u>	<u>end cap</u>	<u>230</u>	<u>250</u>

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To		Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
<u>0</u>	<u>20</u>	<u>7-7/8</u>		<u>20 Sacks</u>	<u>Trimie (Bentonite/Cement)</u>
<u>20</u>	<u>206</u>	<u>7-7/8</u>	<u>68</u>		<u>Poured (Bentonite chips)</u>

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				

STATE ENGINEER OFFICE
JAN 11 - 8 P 1:21

Do Not Write Below This Line

File Number: CP-998
Form: wr-20

Trn Number: 418655

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

STATE ENGINEER OFFICE
1211 D 3-15-1957

Do Not Write Below This Line

File Number: CP-998
Form: wr-20

Trn Number: 418655-

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD**10. ADDITIONAL STATEMENTS OR EXPLANATIONS:**

MW-25

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.

Shelby
Driller

12/29/08
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-998
Form: wr-20

Trn Number: 418655

WLB

18

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505-394-5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. SE 1/4 NE 1/4 SW 1/4 Section: 32 Township: 21S Range: 38E N.M.P.M.
in _____ County.

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

C. Latitude: 32 d 26 m 1.0998 s Longitude: 103 d 05 m 1.086 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: CP-997

I. On land owned by (required): Louisiana Energy Services

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon Drilling Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.467.0622
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 12/4/08; Completed: 12/4/08; Type tools: Air-Rotary;
Size of hole: 7-7/8 in.; Total depth of well: 40 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

Do Not Write Below This Line

File Number: CP-997
Form: wr-20

page 1 of 4

Trn Number: 418654

Monitor

21.38.32.324

(18)

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
Dry				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
4 PVC	Sch 40	2	+3	40	43	end cap	25	40

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
From	To				
0	5	7-7/8		20 Sacks	Trimie (Bentonite/Cement)
5	20	7-7/8	5		Poured (Bentonite chips)

8. PLUGGING RECORD

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

Plugging approved by: _____
State Engineer Representative

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

STATE ENGINEER OFFICE
NEW MEXICO
JUN 10 1964
P 1:21

Do Not Write Below This Line

File Number: CP-997
Form: wr-20

Trn Number: 418654

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NW 1/4 SE 1/4 SW 1/4 Section: 32 Township: 21S Range: 38E 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 25 m 52.499 s Longitude: 103 d 05 m 7.607 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: CP-956

I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575 Work Phone: 806.467.0607
Name: Talon/LPG Home Phone: 806.676.8220
Agent: Shane Currie
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/28/07; Completed: 4/3/07; Type tools: Air rotary
Size of hole: 7-7/8 in.; Total depth of well: 237 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: DRY ft.

Do Not Write Below This Line

File Number: CP-956
Form: wr-20

page 1 of 4

Trn Number: 376956

Monitor

21.38.32.341

STATE ENGINEER OFFICE
WELL, NEW MEXICO
01 APR 27 2007

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)
<u>DRY</u>			

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
<u>4</u>	<u>sch 40 PVC</u>	<u>2</u>	<u>C</u> <u>217.1</u>	<u>217.1</u>	<u>N/A</u>	<u>N/A</u>
<u>4</u>	<u>sch 40 PVC</u>	<u>2</u>	<u>217.1</u> <u>237.1</u>	<u>20</u>	<u>PVC end cap</u>	<u>217.1</u> <u>237.1</u>

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
<u>0</u> <u>15</u>	<u>7-7/8</u>	<u>1</u>	<u>20</u>	<u>tremie - cement / bentonite</u>
	<u>7 7/8</u>	<u>48</u>	<u>N/A</u>	<u>pour - bentonite chips</u>

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		

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
2001 APR 27 P 2 05

Do Not Write Below This Line

File Number: CP-956
Form: wr-20

Trn Number: 376956

Monitor

21.38.32.341

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

[illegible]

Do Not Write Below This Line

File Number: CP-956
Form: wr-20

Trn Number: 376956

page 3 of 4

Monitor

21.38.32.341

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2001 APR 27 PM 2:05

WLB

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NE 1/4 NE 1/4 SE 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 5.327 s Longitude: 103 d 04 m 26.985 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: CP-946
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575
Name: Taion LPE Work Phone: 806.467.0607
Agent: SHANE CURRIE Home Phone: 806.476.8220
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/16/07; Completed: 4/03/07; Type tools: Air Rotary;
Size of hole: 7-7/8 in.; Total depth of well: 225.8 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: 220.49 ft.

STATE ENGINEER OFFICE
ROBERT L. NEWELL
2007 APR 27 PM 5:00

Do Not Write Below This Line

File Number: CP-946
Form: wr-20

page 1 of 4

Trn Number: 376944
21.38.32.422

Monitor

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)
220.49 225.8	5.31	claystone	0-1

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
4	Sch 40 PVC	2	0 205.8	205.8	N/A	N/A
4	Sch 40 PVC	2	205.8 225.8	20	PVC end cap	205.8 225.8

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 75	7-7/8	1	20	tremie - bentonite / cement
75 200	7-7/8	48	N/A	raised - bentonite pellets

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		

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
2001 APR 27 PM 2:00

Do Not Write Below This Line

File Number: CP-946
Form: wr-20

page 2 of 4

Trn Number: 376944

Moxiter

21.38.32.422

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.

Sam Cline
Driller

04/24/07
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2007 APR 27 P 2:00

Do Not Write Below This Line

File Number: CP-446
Form: wr-20

Trn Number: 376944

page 4 of 4

Monitor

21.38.32.422

WLB

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.374.5204
Contact: Laurie Weatherill Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. SE 1/4 SE 1/4 SE 1/4 Section: 32 Township: 21S Range: 38E 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 25 m 46.785 s Longitude: 103 d 4 m 31.815 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: CP-945

I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon/LPE Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.676.8220
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/14/07; Completed: 4/3/07; Type tools: Air Rotary
Size of hole: 1 7/8 in.; Total depth of well: 241.2 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: DRY ft.

STATE ENGINEER OFFICE
ROSARIO, NEW MEXICO
2007 APR 27 P 1:59

Do Not Write Below This Line

File Number: CP-945
Form: WR-20

Trn Number: 376887

page 1 of 4

Monitor

21.38.32.444

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)
			DRY	

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
4	Sch 40 PVC	2	0	221.2	221.2	N/A	N/A	
4	Sch 40 PVC	2	221.2	241.2	20	PVC CND CAP	221.2	241.2

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0	75	7-7/8	1	20	tremie - bentonite/cement
75	215	7-7/8	48	N/A	poured - bentonite chips

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			

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
2001 APR 27 10:15 AM

Do Not Write Below This Line

File Number: CP-945
Form: wr-20

Trn Number: 376887

page 2 of 4

Mexico

21.38.32.444

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

[illegible]

Do Not Write Below This Line

File Number: CP-945
Form: wr-20

Trn Number: 376887

page 3 of 4

Monitor

21.38.32.444

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
Z001 APR 27 P 459

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

100

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.

Joe Cline
Driller

04/24/2007
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-945
Form: wf-20

Trn Number: 376.8870

page 4 of 4

Monitor

21.38.32.444

STATE ENGINEER OFFICE
ROSNELL, NEW MEXICO
2001 APR 27 P 1: 58
A

WLB

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NW 1/4 SW 1/4 SE 1/4 Section: 32 Township: 21S Range: 38E 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 25 m 50.439 s Longitude: 103 d 04 m 52.941 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: CP-957
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon LPE Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.676.8220
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/20/07; Completed: 4/3/07; Type tools: Air Rotary;
Size of hole: 7-7/8 in.; Total depth of well: 231.4 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: DRY ft.

Do Not Write Below This Line

File Number: CP-957 Trn Number: 376-957
Form: wr-20 page 1 of 4

Monitor

21.38.32.431

STATE ENGINEER OFFICE
ROSWELL,
NEW MEXICO
7601 AND 2
2007



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)
DRY			

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
4	Sch 40 PVC	2	0 211.4	211.4	N/A	N/A
4	Sch 40 PVC	2	211.4 231.4	20	PVC end cap	211.4 231.4

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 15	7-7/8	1	20	tremie - cement/bentonite
15 205	7-7/8	48		packed - bentonite chips

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		

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
JAN 1972 21 10 20

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File Number: CP-957
Form: wr-20

page 2 of 4

Trn Number: 376957

Monitor

21.38.32.431

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

[illegible]

Do Not Write Below This Line

File Number: CP-957
Form: wr-20

Trn Number: 3769570

page 3 of 4

Monitor

21, 38, 32, 431

STATE ENGINEER OFFICE
POSSIBLE. NEW MEXICO
JAN 1927 10 2 01
57

100

4/24/2007
(mm/dd/year)

Monitor

STATE ENGINEER OFFICE
POSWELL, NEW MEXICO
1991 MAR 27 10 20

WAB

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Waste Control Specialists, LLC Work Phone: 888-789-2183
Contact: Mike Burney Home Phone: 505-394-4300
Address: 9998 W. Highway 176
City: Andrews State: TX Zip: 79714

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

A. NE 1/4 NE 1/4 NW 1/4 Section: 33 Township: 21S Range: 38E N.M.P.M.
in _____ County.

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

C. Latitude: 32 d 26 m 29 s Longitude: 103 d 03 m 58 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 _____
Subdivision recorded in _____

G. Other: _____

H. Give State Engineer File Number if existing well: CP-979

I. On land owned by (required): Waste Control Specialists, LLC

3. DRILLING CONTRACTOR

License Number: 1575 Name: Talon Drilling, L.P. Work Phone: 806-467-0607
Agent: Shane Currie Home Phone: 806-676-8220
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 2/20/08; Completed: 2/20/08; Type tools: Air Rotary Rig
Size of hole: 5 5/8 in.; Total depth of well: 28 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

Do Not Write Below This Line

File Number: CP-979 Trn Number: 399475
Form: wr-20 page 1 of 4

Monitor

21.38.33, 122

167

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
			Dry	

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
2	2440 Rv	2	0	28	28	Pvc end cap	13	28

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole	Sacks	Cubic Feet	Method of Placement
From	To	Diameter	of mud	of Cement	
0	5	5-5/8	20		trcmie - bentonite/cement
5	10	5-5/8	2		poured - bentonite chips

8. PLUGGING RECORD

Plugging Contractor: _____

Address: _____

Plugging Method: _____

Date Well Plugged: _____

Plugging approved by: _____

State Engineer Representative

STATE ENGINEER OFFICE
COSTA MEXICO
2000 MAR - 6 A 11.33

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

Do Not Write Below This Line

File Number: CP-979
Form: wr-20

page 2 of 4

Trn Number: _____

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

[illegible]

STATE ENGINEER OFFICE
TOSCONI, MEXICO
2005 MAR -6 A 11.33

Do Not Write Below This Line

File Number: CP-979
Form: wr-20

Trn Number: _____

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

STATE ENGINEERING
BOSWELL, INC.
2100 MAF - 6

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.

Joe Lee
Driller

03/03/2008
(mm/dd/year)

STATE ENGINEER OFFICE
PROPOSED, NEW MEXICO
2001 MAY -6 A 11:33

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-979
Form: wr-20

Trn Number:

1. PERMIT HOLDER(S)

Name: _____

Address: _____

City: _____

State: _____ Zip: _____

Phone: _____

Santa Rosa

3. LOCATION OF WELL (The Datum Is Assumed To Be WGS 84 Unless Otherwise Specified)

Longitude: 103 Deg 04 Min 20.4 Sec

Datum If Not WGS 84: _____

License Number: WD1184

Drill Rig Serial Number: 261602

RONNY KEITH

5. DRILLING RECORD

Drilling Began: 1-21-08 ; Completed: 4-29-08 ; Drilling Method MUD ROTARY

5. DRILLING RECORD

Diameter Of Bore Hole: 7-7/8 (in);

Total Depth Of Well: 2,020 (ft):

Completed Well Is (Circle One): Shallow Artesian

Depth To Water First Encountered: 1,092 (ft);

Depth To Water Upon Completion Of Well: N/A (ft).

Do Not Write Below This Line

TRN Number: 396028
Form: wr-20 May 07

File Number: CP-975

21, 38, 33, 333

Explore



OSE FILE NUMBER _____
For OSE Use Only _____

**NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD and DRILLING LOG**

6. RECORD OF CASING

Diameter (inches)	Pounds (per ft.)	Threads (per inch)	Depth (feet)	Length Top to Bottom (feet)	Type of Shoe	Perforations (from to)
13-3/8	48	8	2' AGL	40'		
8-5/8	24	8	3' AGL	1,440'	FLOAT GUIDE	

7. RECORD OF MUDDING AND CEMENTING

Depth (feet)	Hole (diameter)	Mud Used (# of sacks)	Cement (cubic feet)	Method of Placement
0 - 40	17-1/2		35	TRIMMIE
0 - 1,440	12-1/4		574	POSITIVE
1,380-2,020	7-7/8		275	TRIMMIE

STATE ENGINEER OFFICE
2008 MAY 11 PM 2:05

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Trn Number: _____
Form: wr-20 May 07

File Number: _____

CP-975 Geologic log

- 0-6 ft 6 pad fill and fine brown sand
- 6-10 ft 4 white sandy limestone (Mescalero caliche) *Ogala*
- 10-29 ft 19 sand, light brown, and brown calcareous sandstone (Gatuña Formation) *7, 090 ft*
- 29-576 ft 547 interbedded sandstone, siltstone, and claystone; reddish-brown to gray; bioturbated (Cooper Canyon Formation)
- 576-708 ft 132 sandstone and siltstone, gray to reddish brown (Trujillo Formation)
- 708-1092 ft 384 interbedded very fine sandstone and siltstone, gray to dark reddish brown (Tecovas Formation) *Jackman*
- 1092-1384 ft 292 gray, fine sandstone with interbedded reddish brown and weak red siltstone and claystone (Santa Rosa Formation)
- 1384-1566 ft 192 reddish brown, very fine sandstone and siltstone, with some fibrous gypsum in lower part (Dewey Lake Formation) *1400*
- 1566-1602 ft 34 gray anhydrite beds, with intermediate reddish-brown and gray siltstone (Forty-niner Member of the Rustler Formation)
- 1602-1609 ft 7 gray anhydrite and wavy thin laminae of dolomite (Magenta Dolomite Member of the Rustler Formation)
- 1609-1736 ft 127 gray anhydrite beds, with intermediate halite including anhydrite and polyhalite (Tamarisk Member of the Rustler Formation)
- 1736-1807 ft 71 halite with thin two thin anhydrite beds and basal reddish-brown, very fine sandstone (Los Medaños Member of the Rustler Formation)
- 1807-2020 ft 213 halite with anhydrite/polyhalitic marker beds (MB103 and uppermost MB109) (Salado Formation)

STATE ENGINEER OFFICE
 ROSWELL, NEW MEXICO
 2000 MAY 14 P 2:06

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. ADDITIONAL STATEMENTS OR EXPLANATIONS:

907 H 1111 007

2006年12月

STATE EIGHTH OFFICE
 600-211-1670 EXT 100

The undersigned hereby certifies that, to the best of his or her knowledge and belief, the foregoing is a true and correct record of the above described bore hole. The undersigned further certifies that he or she will file this well record with the Office Of The State Engineer and permit holder within 20 days after completion of the well drilling.

Tony Keith
Driller

05-12-08
(mm/dd/year)

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Trn Number. _____
Form wr-20 May 07

page 4 of 4

File Number:

File Number: _____
For OS Only

NEW MEXICO OFFICE OF THE STATE ENGINEER
APPLICATION FOR PERMIT
TO DRILL AN EXPLORATORY WELL

2-24674
1320⁰⁰

1. APPLICANT:

Name: Waste Control Specialists LLC Work Phone: 888-789-2783
Contact: Mike Burney Home Phone: 505-394-4300
Address: 9998 W. Highway 176
City: Andrews State: TX Zip: 79714

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

A. NE 1/4 NW 1/4 NW 1/4 Section: 33 Township: 21S Range: 38E 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 26 m 30.145 s Longitude: 103 d 04 m 10.962 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 of existing well: _____
I. On land owned by (required): Waste Control Specialists LLC

3. WELL INFORMATION:

Approximate depth 75 feet; Outside diameter of casing 2 inches.
Name of well driller and driller license number Jose Salas/#1575

4. ADDITIONAL STATEMENT OR EXPLANATIONS:

This piezometer (TP- 63) is being installed to determine the presence or absence of shallow groundwater in the Ogallala/Antlers/Gatuna formations on top of the Triassic Dockum group "red bed clays" in support of licensing activities by Waste Control Specialists LLC. No pumping or use of groundwater is intended; the piezometer is being installed solely to monitor groundwater levels, if any.

RENAMED " PZ -41"

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File Number: CP-972
Form: wr-07

Trn Number: 395941

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2001 DEC 31 A 9 53
STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2002 FEB 29
11.31

NEW MEXICO OFFICE OF THE STATE ENGINEER
APPLICATION FOR PERMIT
TO DRILL AN EXPLORATORY WELL

ACKNOWLEDGEMENT

(I, We) Mike Burney _____ affirm that the
(Please Print)
foregoing statements are true to the best of my knowledge and belief.

Michael Burney
Applicant Signature

Applicant Signature

ACTION OF STATE ENGINEER

This application is approved ~~XXXXXXXXXXXXXXXXXXXX~~ provided it is not
exercised to the detriment of any others having existing rights, and is not
contrary to the conservation of water in New Mexico nor detrimental to the
public welfare, and further subject to the following conditions:

see attached conditions of approval

Witness my hand and seal this 2nd day of January, 20 08

John R. D'Antonio, Jr., P.E., State Engineer

By: Kenneth M. Fresquez
Kenneth M. Fresquez, Acting District 10 Supervisor

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2001 DEC 31 A 9:59

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File Number: CP-972
Form: wr-07

page 2 of 2

Trn Number: 395941

WL 15
WAB

26

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Waste Control Specialists Work Phone: 888-789-2783
Contact: Mike Burney Home Phone: 505-394-4300
Address: 9998 W. Highway 176
City: Andrews State: TX Zip: 79714

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

A. NE 1/4 NW 1/4 NW 1/4 Section: 33 Township: 21S Range: 38E N.M.P.M.
in _____ County.
B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
Zone in the _____ Grant.
U.S.G.S. Quad Map _____
C. Latitude: 32 d 26 m 29 s Longitude: 103 d 04 m 13 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: CP-972
I. On land owned by (required): Waste Control Specialists

3. DRILLING CONTRACTOR

License Number: 1575 Name: Talon Drilling, L.P. Work Phone: 806-467-0607
Agent: Shane Currie Home Phone: 806-676-8220
Mailing Address: 921 Al. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 1/21/08; Completed: 2/9/08; Type tools: Air Rotary Rig
Size of hole: 5-5/8 in.; Total depth of well: 49 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

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File Number: CP-972
Form: wr-20

Trn Number: 395941

page 1 of 4

Maxitar

21.38.33.112

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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)
		Dry	

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	Sch 40 PVC	2	0 37	37	N/A	N/A
2	Sch 40 PVC	2	37 49	12	PVC end cap	37 49

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 5	5 - 5/8	20		tremie - bentonite/cement
5 35	5 - 5/8	6		pooured - bentonite chips

8. PLUGGING RECORD

Plugging Contractor: _____
Address: _____
Plugging Method: _____
Date Well Plugged: _____
Plugging approved by: _____
State Engineer Representative

STATE ENGINEER OFFICE
FEB 29 A 11:31

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

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File Number: CP-972
Form: wr-20

page 2 of 4

Trn Number: 375941

21,38,33,112

Mexico

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

STATE DEPARTMENT
RECEIVED
FEB 29 AM 31

STATE FISHERY OFFICE
605 STEEL BUILDING
2003 FEB 29 A 11 31

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.

John C. [Signature]
Driller

02/26/2008
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-972
Form: wr-20

Trn Number: 3915941

page 4 of 4

21,38.33,112

Meritor



STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
ROSWELL

John R. D'Antonio, Jr., P.E.
State Engineer

1900 WEST SECOND STREET
ROSWELL, NM 88201
Phone: (575) 622-6521
Fax: (575) 623-8559

January 3, 2008

Waste Control Specialists LLC
% Mike Burney
9998 W. Hwy 176
Andrews, TX 79714

RE: CP-971; CP-972; CP-973: CP-974


Greetings:

Enclosed is your copy of the Exploratory / Monitoring Permits, which have been approved subject to the conditions set forth on the approval page thereof.

In accordance with Condition C, a well record shall be filed in this office twenty days after completion of drilling. The well record is proof of completion of well. IT IS YOUR RESPONSIBILITY TO ASSURE THAT THE WELL LOGS BE FILED WITHIN 20 DAYS OF DRILLING OF THE WELLS.

These permits will expire on or before 01/31/09 unless the wells have been drilled and the well logs filed in this office.

Sincerely,


Andy Morley
(575) 622-6521, ext 113

Enclosure

cc: Santa Fe Office

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2008 FEB 29 A 11.31

**NEW MEXICO STATE ENGINEER
PERMIT TO EXPLORE / MONITOR**

SPECIFIC CONDITIONS OF APPROVAL

- 4 No water shall be appropriated and beneficially used under this permit.
- B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with Section 72-12-12 New Mexico Statutes Annotated.
- C Driller's well record must be filed with the State Engineer within 20 days after the well is drilled or driven. Well record forms will be provided by the State Engineer upon request.
- C2 No water shall be diverted from this well except for testing purposes which shall not exceed ten (10) cumulative days, and well shall be plugged or capped on or before 01/31/09, unless a permit to use water from this well is acquired from the Office of the State Engineer.

The well shall be constructed, maintained and operated that each water shall be confined to the aquifer in which it is encountered.

LOG The Point of Diversion CP-972 Monitor Well must be completed and the Well Log filed on or before 01/31/09.

ACTION OF STATE ENGINEER

Notice of Intention Rcvd:
Formal Application Rcvd: 12/31/07
Date Returned - Correction:

Date Rcvd. Corrected:
Pub. Of Notice Ordered:
Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this 2nd day of January, 2008.

John R. D'Antonio, Jr., P.E., State Engineer

By: Kenneth M. Fresquez
Kenneth M. Fresquez, Acting District II Supervisor

STATE ENGINEER OFFICE
2008 FEB 29 A 11:31

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 • INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-101 FILE # 95042.10 SHEET 1 OF 1			
WATER LEVEL DATA NE = Not Encountered		Started 11/22/97 Completed 11/22/97 Driller Allan Eades Helper Freddy Drilling Method Air Rotary Sampling Method Drill Cuttings		LOCATION Proposed Lea County Landfill Eunice, New Mexico CLIENT Camino Real Landfill Sunland Park, New Mexico			
NB FT. W.D. NE FT. AT COMPLETION FT. AT HR. A.D. FT. AT HR. A.D.							
Depth (FT., bgs)	Lithology Type	GROUND ELEVATION: 3408.62 (FT., MSL)		Northing: 9800.52 Easting: 9898.97	Completion Depth: 50.0		
		STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG					
		Strata Depth (FT., bgs)	Calcareous	Moisture	Munsell	Notes	Depth (FT., bgs)
5.0		2.0	No	Dry	7.5YR 5/6		5.0
		6.0	No	Dry	7.5YR 6/6		
10.0							10.0
		12.0	Moderate	Dry	2.5YR 8/2		
15.0							15.0
		21.0					20.0
20.0							25.0
		24.0	Moderate	Dry	2.5YR 7/6		30.0
25.0							35.0
		34.0	Moderate	Dry	5YR 7/4		40.0
30.0							45.0
		36.0	Slight	Dry	2.5YR 7/3		50.0
35.0							
			Slight	Barely Damp	2.5YR 4/6		
40.0							
45.0							
50.0							
		BORING TERMINATED AT 50.0'					
NOTES: 1. Dry monitoring well installed in borehole. 2. Drilling Company: Eades Drilling and Pump Service.		LEGEND ▽ W.D. - WHILE DRILLING ▽ A.D. - AFTER DRILLING ▽ HOUR(S) AFTER DRILLING					

W B C WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-102 FILE # 95042.10 SHEET 1 OF 1	
WATER LEVEL DATA NE = Not Encountered NE FT. W.D. NE FT. AT COMPLETION FT. AT HR. A.D. FT. AT HR. A.D.		Started 11/20/97 Completed 11/20/97 Driller Allan Eades Helper Freddy Drilling Method Air Rotary Sampling Method Drill Cuttings	
		LOCATION Proposed Lea County Landfill Eunice, New Mexico CLIENT Camino Real Landfill Sunland Park, New Mexico	

GROUND ELEVATION: 3,392.63 (FL, MSL)		Northing: 8467.05 Easting: 7193.22		Completion Depth: 50.0		SAMPLE DATA			
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG		Strata Depth (FT., bgs)	Calcareous	Moisture	Munsell	Notes	Depth (FT., bgs)
5.0		Brown, fine to medium SAND with caliche grains, granular structure, some roots, no organics		7.0	No Minor	Dry	7.5YR 4/6 7.5YR 5/6		5.0
10.0		Brownish-white calcareous fine SAND, some calcareous cement sand nodules, not as floury as other caliche, gritty, abundant coarse sand and chert when wetted			Yes	Dry	7.5YR 7/3		10.0
15.0		Pinkish-white sandy CALICHE, many pebbles of hard angular cherty fine sandstone (not friable)		16.0	Yes	Dry	7.5YR 7/3		15.0
20.0		Pink, fine to medium SAND, calcareous very small nodules of caliche and cemented sandstone		21.0	Yes	Dry	2.5YR 7/3		20.0
25.0		White sandy CALICHE with calcareous sand matrix and abundant chert clasts. Clasts are angular, coarse gravel size, brown, white and black, some quartzite		26.0	Yes	Dry	2.5YR 8/2		25.0
30.0		Rose and white PEBBLES, with very little sand, dominantly hard, very angular quartzite. White pebbles are hard limestone with quartzite grains		33.0	Yes	Barely Damp	2.5YR 6/4		35.0
35.0	Reddish-brown MUDSTONE/CLAYSTONE, sticky, occasionally sandy, micaceous clasts infrequently, poorly indurated		36.0	Yes	Barely Damp	2.5YR 4/4		40.0	
40.0				Yes	Barely Damp	2.5YR 4/6		45.0	
45.0				Yes	Barely Damp	2.5YR 4/6		50.0	
50.0	BORING TERMINATED AT 50.0'		50.0	Yes	Barely Damp	2.5YR 4/6			

NOTES: 1. Dry monitoring well installed in borehole. 2. Drilling Company: Eades Drilling and Pump Service.	LEGEND W.D. - WHILE DRILLING A.D. - AFTER DRILLING HOUR(S) AFTER DRILLING
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W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-103 FILE # 95042.10 SHEET 1 OF 1				
WATER LEVEL DATA NE = Not Encountered		Started 11/21/97 Completed 11/21/97 Driller Allan Eades Helper Freddy Drilling Method Air Rotary Sampling Method Drill Cuttings		LOCATION Proposed Lea County Landfill Eunice, New Mexico CLIENT Camino Real Landfill Sunland Park, New Mexico				
NE FT. W.D. NE FT. AT COMPLETION FT. AT HR. A.D. FT. AT HR. A.D.								
		GROUND ELEVATION: 3,402.54 (Fl., MSL) Northing: 9711.58 Completion Depth: 55.0 Easting: 8682.07		SAMPLE DATA				
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	Calcareous	Moisture	Munsell	Notes	Depth (FT., bgs)
5.0		Reddish-brown, sandy LOAM to poorly cemented loamy SAND, blocky, friable	6.0	No	Dry	7.5YR 4/6		5.0
10.0		Pinkish-white, sandy CALICHE, moderately weak structure, friable nodules of caliche		No	Barely Damp	7.5YR 5/6		10.0
15.0			14.0	Yes	Dry	7.5YR 8/4		15.0
20.0		Reddish-brown, loamy fine SAND with moist friable sandy nodules, very few calcareous nodules						20.0
25.0			26.0					25.0
30.0		Light red to pink, calcareous pebbly SAND, pebbles are dominantly quartzite, some rose color banded gneiss, little chert, angular. Pebbles increase with depth	33.0	Yes	Dry	7.5YR 8/2		30.0
35.0		Rose and white PEBBLES, with very little sand, dominantly hard, very angular quartzite. White pebbles are hard limestone with quartzite grains	36.0	Yes	Dry	2.5YR 7/3		35.0
40.0		Reddish-brown MUDSTONE/CLAYSTONE, sticky, occasionally sandy, micaceous clasts infrequently, poorly indurated		Yes	Barely Damp	2.5YR 4/4		40.0
45.0				Slight	Barely Damp	2.5YR 4/4		45.0
50.0								50.0
55.0		BORING TERMINATED AT 55.0'	55.0	No	Barely Damp	2.5YR 4/6		55.0
NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.		LEGEND W.D. - WHILE DRILLING A.D. - AFTER DRILLING HOUR(S) AFTER DRILLING						

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-104	
WATER LEVEL DATA NE = Not Encountered		Started 11/21/97 Completed 11/21/97 Driller Allan Bades Helper Freddy Drilling Method Air Rotary Sampling Method Drill Cuttings		FILE # 95042.10 SHEET 1 OF 1	
NE FT. W.D.		LOCATION Proposed Lea County Landfill		CLIENT Eunice, New Mexico	
NE FT. AT COMPLETION		CLIENT Camino Real Landfill		CLIENT Sunland Park, New Mexico	
FT. AT HR. A.D.					
FT. AT HR. A.D.					

GROUND ELEVATION: 3,404.38 (Ft., MSL)		Northing: 8518.93 Easting: 9678.16		Completion Depth: 60.0		SAMPLE DATA			
Depth (Ft., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG		Strata Depth (Ft., bgs)	Calcareous	Moisture	Mursell	Notes	Depth (Ft., bgs)
5.0		Dark reddish-brown, fine SAND, some roots, no organics	3.0	Slight	Barely Damp Dry	7.5YR 5/4 7.5YR 6/4			5.0
		Reddish-brown, sandy LOAM to poorly cemented loamy SAND, blocky, friable	6.0	Slight					
10.0		Pinkish-white, sandy CALICHE, moderately weak structure, friable nodules of caliche		Moderate	Dry	2.5YR 8/4			10.0
15.0									15.0
20.0			21.0						20.0
25.0		Light red to pink, calcareous pebbly SAND, pebble are dominantly quartzite, some rose color banded gniess, little chert, angular. Pebbles increase with depth		Moderate	Dry	2.5YR 8/2			25.0
30.0									30.0
35.0									35.0
40.0			40.0						40.0
45.0		Very light brown medium GRAVEL with calcareous sand matrix, gravel is brown when wet, very cherty, angular, white and brown chert, some quartzite	44.0	Moderate	Dry	2.5YR 8/2			45.0
		White to light brown pebbly coarse GRAVEL with some fine calcareous sand matrix. Pebbles are less angular, mostly chert but also gniess and quartzite	46.0						
50.0		Reddish-brown MUDSTONE/CLAYSTONE, sandy, dry, poorly indurated, cuttings are blocky, some chert pebbles and white calcareous clasts		Moderate	Dry	2.5YR 7/4			50.0
55.0				Moderate	Dry	2.5YR 4/6			55.0
60.0		BORING TERMINATED AT 60.0'	60.0	Slight Slight	Barely Damp Barely Damp	2.5YR 5/6 2.5YR 4/4	Pitcher Bell Sample obtained at 60.0'		60.0

NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.	LEGEND W.D. - WHILE DRILLING A.D. - AFTER DRILLING HOUR(S) AFTER DRILLING
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W B C WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-105 FILE # <u>95042.10</u> SHEET 1 OF 1	
WATER LEVEL DATA NE = Not Encountered NE FT. W.D. _____ NE FT. AT COMPLETION _____ FT. AT _____ HR. A.D. _____ FT. AT _____ HR. A.D. _____		Started <u>11/19/97</u> Completed <u>11/19/97</u> Driller <u>Allan Eades</u> Helper <u>Freddy</u> Drilling Method <u>Air Rotary</u> Sampling Method <u>Drill Cuttings</u>	
LOCATION <u>Proposed Lea County Landfill</u> <u>Eunice, New Mexico</u> CLIENT <u>Camino Real Landfill</u> <u>Sunland Park, New Mexico</u>			
GROUND ELEVATION: 3,388.07 (Ft., MSL)		Northing: 6609.23 Easting: 7335.60	
Completion Depth: 50.0		SAMPLE DATA	
Depth (FT., bgs)	Lithology Type	Strata Depth (FT., bgs)	Depth (FT., bgs)
STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG		Calcareous	Moisture
Grayish-brown loamy fine SAND, granular, no organics, few calcareous nodules increasing with depth, small roots, no iron staining, friable cemented sandstone nodules (Windblown Sands)		Yes	Dry
5.0			7.5YR 8/2
10.0			
15.0		14.0	
Pink fine to medium calcareous SAND, with few calcareous nodules that are friable, no other large clasts		Yes	Dry
20.0			7.5YR 7/4
25.0			
30.0		28.0	
Pink calcareous fine SAND to very fractured sandy CALICHE, few to no chert or other clasts. Caliche is very hard, not friable (CAPROCK?)			
35.0		35.0	
White sandy CALICHE with calcareous sand matrix and abundant chert clasts. Clasts are angular, coarse gravel size, brown, white and black, some quartzite			
40.0		38.0	
Rose and white PEBBLES, with very little sand, dominantly hard very angular quartzite. White pebbles are hard limestone with quartzite grains.		Yes	Dry
45.0		44.0	7.5YR 7/2
Reddish-brown sandy LOAM with pebbles of calcareous cemented sandstone (friable).			
50.0		47.0	2.5YR 6/4
Reddish-brown MUDSTONE/CLAYSTONE, sandy, dry, blocky cuttings, some calcareous stains, poor indurated/friable.		Yes	Dry
		50.0	2.5YR 6/4
NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.		LEGEND ☞ W.D. - WHILE DRILLING ☞ A.D. - AFTER DRILLING ☞ HOUR(S) AFTER DRILLING	

W B C WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL. 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-106 FILE # 95042.10 SHEET 1 OF 1	
WATER LEVEL DATA NE = Not Encountered NE FT. W.D. NE FT. AT COMPLETION FT. AT HR. A.D. FT. AT HR. A.D.		Started 11/21/97 Completed 11/21/97 Driller Allan Eades Helper Freddy Drilling Method Air Rotary Sampling Method Drill Cuttings	
LOCATION Proposed Lea County Landfill Eunice, New Mexico CLIENT Camino Real Landfill Sunland Park, New Mexico			
GROUND ELEVATION: 3,401.06 (Ft., MSL) Northings: 5968.89 Eastings: 9285.60 Completion Depth: 66.5		SAMPLE DATA	
Depth (Ft., bgs)	Lithology Type	Strata Depth (Ft., bgs)	Depth (Ft., bgs)
STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG		Calcareous	Moisture
		Munsell	Notes
5.0	Grayish-brown loamy fine SAND, granular, no organics, few calcareous nodules increasing with depth, small roots, no iron staining, friable cemented sandstone nodules (Windblown Sands)	No	Dry
10.0			7.5YR 5/6
15.0	Pink fine to medium calcareous SAND, with few calcareous nodules that are friable, no other large clasts	Moderate	Dry
20.0			2.5YR 8/3
25.0	Pink calcareous fine SAND to very fractured sandy CALICHE, few to no chert or other clasts. Caliche is very hard, not friable (CAPROCK?)	Moderate	Dry
30.0			2.5YR 7/6
35.0	White sandy CALICHE with calcareous sand matrix and abundant chert clasts. Clasts are angular, coarse gravel size, brown, white and black, some quartzite	Moderate	Dry
40.0			2.5YR 8/3
45.0			
50.0			
55.0			
60.0			
65.0	Rose and white PEBBLES, with very little sand, dominantly hard very angular quartzite. White pebbles are hard limestone with quartzite grains.	Moderate	Dry
	Reddish-brown MUDSTONE/CLAYSTONE, sandy, dry, blocky cuttings, some calcareous stains, poor indurated/friable.	Slight	Dry
	BORING TERMINATED AT 66.0'		2.5YR 5/6
NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.		LEGEND ▽ W.D. - WHILE DRILLING ▽ A.D. - AFTER DRILLING ▽ HOUR(S) AFTER DRILLING	

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 • INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-107					
WATER LEVEL DATA NE = Not Encountered		Started 11/22/97 Completed 11/22/97 Driller Allan Eades Helper Freddy Drilling Method Air Rotary Sampling Method Drill Cuttings		FILE # 95042.10 SHEET 1 OF 2					
NE FT. W.D.		LOCATION Proposed Lea County Landfill		CLIENT Eunice, New Mexico					
NE FT. AT COMPLETION				Camino Real Landfill					
FT. AT HR. A.D.				Sunland Park, New Mexico					
FT. AT HR. A.D.									
GROUND ELEVATION: 3,405.43 (Ft., MSL)		Northing: 4016.88 Easting: 9228.40		Completion Depth: 92.0					
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG		Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)
					Calcareous	Moisture	Munsell	Notes	
5.0		Reddish-brown, loamy fine SAND to sandy LOAM, blocky, friable, very few organics, grading to light brown loamy SAND		6.0	No	Dry	7.5YR 6/6	5.0	
Reddish-brown, sandy LOAM to poorly cemented loamy SAND, blocky, friable		8.0	No	Dry	7.5YR 5/6	8.0			
Pink, sandy CALICHE, moderately weak with friable nodules of caliche and poorly cemented sand, fewer nodules with depth		13.0	Moderate	Dry	2.5YR 8/3	10.0			
Pink, fine to medium SAND, calcareous very small nodules of caliche and cemented sandstone		31.0	Moderate	Dry	2.5YR 5/6	15.0			
Light red to pink, calcareous pebbly SAND, pebbles are dominantly quartzite, some roase color banded gniess, little chert, angular. Pebbles increase with depth		75.0	Moderate	Dry	2.5YR 6/4	35.0			
75.0		Pink, sandy CALICHE with caprock chips (Continued)		75.0	Moderate	Dry	2.5YR 8/3	75.0	
NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.				LEGEND ☒ W.D. - WIDLE DRILLING ☒ A.D. - AFTER DRILLING ☒ HOUR(S) AFTER DRILLING					

WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-107</u> FILE # <u>95042.10</u> SHEET 2 OF 2						
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)
				Calcareous	Moisture	Munsell	Notes	
85.0		(Continued from page 1) Pink, sandy CALICHE with caprock chips	83.0	Moderate	Dry	2.5YR 5/6		85.0
		Reddish-brown, sandy MUDSTONE/CLAYSTONE, dry, poorly indurated, some small calcareous cemented sandstone nodules, little to no mica		Slight	Barely Damp	2.5YR 7/3		
90.0				Slight	Barely Damp	2.5YR 5/3		90.0
		BORING TERMINATED AT 92.0'	92.0	No	Barely Damp	2.5YR 5/2		
					Barely Damp			

NOTES:
1. Boring grouted after completion with 95% portland cement and 5% bentonite.
2. Drilling Company: Eades Drilling and Pump Service.

LEGEND
W.D. - WHILE DRILLING A.D. - AFTER DRILLING H - HOUR(S) AFTER DRILLING

W B C WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 ** INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-108 FILE # <u>95042.10</u> SHEET 1 OF 3				
WATER LEVEL DATA NE = Not Encountered NE FT. W.D. _____ NE FT. AT COMPLETION _____ _____ FT. AT _____ HR. A.D. _____ FT. AT _____ HR. A.D.		Started <u>11/20/97</u> Completed <u>11/20/97</u> Driller <u>Allan Eades</u> Helper <u>Freddy</u> Drilling Method <u>Air Rotary</u> Sampling Method <u>Drill Cuttings</u>				
LOCATION <u>Proposed Lea County Landfill</u> <u>Eunice, New Mexico</u> CLIENT <u>Camino Real Landfill</u> <u>Sunland Park, New Mexico</u>						
GROUND ELEVATION: <u>3,396.15 (Fl., MSL)</u>		Northing: <u>9696.33</u> Easting: <u>7439.48</u>				
Completion Depth: <u>215.0</u>		SAMPLE DATA				
Depth (FT., bgs)	Lithology Type	Strata Depth (FT., bgs)	Notes	Depth (FT., bgs)		
STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG						
5.0	Brown, fine to medium SAND with caliche grains, granular structure, some roots, no organics	4.0	Yes	Dry	7.5YR 6/3	5.0
10.0		Brownish-white calcareous fine SAND, some calcareous cement sand nodules, not as floury as other caliche, gritty, abundant coarse sand and chert when wetted	Strong	Dry	7.5YR 8/2	10.0
15.0	Pinkish-white sandy CALICHE, many pebbles of hard angular cherty fine sandstone (not friable)	17.0				15.0
20.0		Strong	Dry	2.5YR 8/2	20.0	
25.0	Pink, very fine SAND, calcareous with occasional pebbles of granite, chert	24.0	Mild	Dry	2.5YR 7/4	25.0
30.0		Mild	Dry	2.5YR 6/2	30.0	
35.0	Dark brown sandy CLAYSTONE, weathered, blocky, very few caliche clasts, dry, friable/poorly indurated	33.0	Mild	Dry	2.5YR 5/3	35.0
40.0		Mild	Dry	2.5YR 5/2	40.0	
45.0	Reddish-brown MUDSTONE/CLAYSTONE, slicky, occasionally sandy, micaceous clasts infrequently, poorly indurated	46.0	Mild	Dry	2.5YR 5/3	45.0
50.0		Mild	Dry	2.5YR 7/3	50.0	
55.0			Mild	Dry	2.5YR 4/3	55.0
60.0						60.0
65.0						65.0
70.0						70.0
75.0						75.0
(Continued)						
NOTES: 1. Backfilled with cuttings to 120', grouted to surface with 95 with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.		LEGEND W.D. - WHILE DRILLING A.D. - AFTER DRILLING HOUR(S) AFTER DRILLING				

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-108</u>		FILE # <u>95042.10</u>		SHEET 2 OF 3	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes		
85.0		(Continued from page 1) Reddish-brown MUDSTONE/CLAYSTONE, sticky, occasionally sandy, micaceous clasts infrequently, poorly indurated		Mild	Barely Damp	2.5YR 5/3		85.0	
90.0								90.0	
95.0								95.0	
100.0				Mild	Barely Damp	2.5YR 5/3	Pitcher Bell Sample obtained at 100.0'	100.0	
105.0								105.0	
110.0								110.0	
115.0								115.0	
120.0				Mild	Barely Damp	2.5YR 4/4		120.0	
125.0								125.0	
130.0								130.0	
135.0				No	Barely Damp	2.5YR 5/6		135.0	
140.0								140.0	
145.0				No	Barely Damp	2.5YR		145.0	
150.0							Pitcher Bell Sample obtained at 150.0'	150.0	
155.0								155.0	
160.0								160.0	
165.0								165.0	
170.0		(Continued)		No	Barely Damp	2.5YR 4/3		170.0	

NOTES:

- Backfilled with cuttings to 120', grouted to surface with 95 with 95% portland cement and 5% bentonite.
- Drilling Company: Eades Drilling and Pump Service.

LEGEND

☒ W.D. - WHILE DRILLING ☒ A.D. - AFTER DRILLING ☒ HOUR(S) AFTER DRILLING

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 • • INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-108</u>		FILE # <u>95042.10</u>		SHEET 3 OF 3	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes		
175.0		(Continued from page 2)						175.0	
180.0		Reddish-brown MUDSTONE/CLAYSTONE, slicky, occasionally sandy, micaceous clasts infrequently, poorly indurated						180.0	
185.0								185.0	
190.0			191.0	Mild	Barely Damp	2.5YR 7/2		190.0	
195.0		Light reddish-gray SILTSTONE, with green laminae, slick, less sandy, poorly indurated, dry		Mild	Barely Damp	2.5YR 7/1		195.0	
200.0			201.0					200.0	
205.0		Reddish-brown CLAYSTONE, dry, poorly indurated, no bedding or laminae		Mild	Barely Damp	2.5YR 5/2		205.0	
210.0							Pitcher Bell Sample obtained at 215.0'	210.0	
215.0		BORING TERMINATED AT 215.0'	215.0	No	Barely Damp	2.5YR 4/3		215.0	

NOTES: 1. Backfilled with cuttings to 120', grouted to surface with 95 with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.		LEGEND ☒ W.D. - WHILE DRILLING ☒ A.D. - AFTER DRILLING ☒ HOUR(S) AFTER DRILLING	
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W B C WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-109 FILE # <u>95042.10</u> SHEET 1 OF 2	
WATER LEVEL DATA NB = Not Encountered NE FT. W.D. NE FT. AT COMPLETION FT. AT HR. A.D. FT. AT HR. A.D.		Started <u>11/21/97</u> Completed <u>11/21/97</u> Driller <u>Allan Eades</u> Helper <u>Freddy</u> Drilling Method <u>Air Rotary</u> Sampling Method <u>Drill Cuttings</u>	
LOCATION <u>Proposed Lea County Landfill</u> CLIENT <u>Eunice, New Mexico</u> <u>Camino Real Landfill</u> <u>Sunland Park, New Mexico</u>			

	GROUND ELEVATION: 3,404.76 (FL., MSL)	Northing: 7717.16 Easting: 9920.71	Completion Depth: 120.0	SAMPLE DATA				
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	Calcareous	Moisture	Munsell	Notes	Depth (FT., bgs)
5.0	[Pattern]	Grayish-brown loamy fine SAND, granular, no organics, few calcareous nodules increasing with depth, small roots, no iron staining, friable cemented sandstone nodules (windblown sands)	8.0					5.0
10.0	[Pattern]	Pinkish-white, sandy CALICHE, moderately weak structure, friable nodules of caliche						10.0
15.0	[Pattern]							15.0
20.0	[Pattern]		21.0					20.0
25.0	[Pattern]	Light red to pink, calcareous pebbly SAND, pebbles are dominantly quartzite, some rose color banded gneiss, little chert, angular. Pebbles increase with depth						25.0
30.0	[Pattern]							30.0
35.0	[Pattern]		36.0					35.0
40.0	[Pattern]	White, sandy CALICHE with calcareous sand matrix and abundant chert clasts. Clasts are angular, coarse gravel size, brown, white and black, some quartzite						40.0
45.0	[Pattern]							45.0
50.0	[Pattern]		51.0					50.0
55.0	[Pattern]	Rose and white PEBBLES, with very little sand, dominantly hard, very angular quartzite. White pebbles are hard limestone with quartzite grains	56.0					55.0
60.0	[Pattern]	Reddish-brown MUDSTONE/CLAYSTONE, sandy, dry, blocky cuttings, some chert pebbles and calcareous clasts, poorly indurated						60.0
65.0	[Pattern]							65.0
70.0	[Pattern]							70.0
75.0	[Pattern]	Reddish-brown, sandy CLAYSTONE, micaceous with occasional green siltstone beds	76.0				Pitcher Bell Sample	75.0

NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.	LEGEND ▽ W.D. - WHILE DRILLING ▽ A.D. - AFTER DRILLING ▽ HOUR(S) AFTER DRILLING
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W B C WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-109 FILE # 95042.10 SHEET 2 OF 2						
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)
				Calcareous	Moisture	Munsell	Notes	
85.0		(Continued) (Continued from page 1) Reddish-brown, sandy CLAYSTONE, micaceous with occasional green siltstone beds					obtained at 80'	85.0
90.0								90.0
95.0								95.0
100.0								100.0
105.0								105.0
110.0								110.0
115.0								115.0
120.0		BORING TERMINATED AT 120'	120.0				Pitcher Bell Sample obtained at 120'	120.0

NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.	LEGEND W.D. - WHILE DRILLING A.D. - AFTER DRILLING HOUR(S) AFTER DRILLING
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W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-110			
				FILE # <u>95042.10</u>		SHEET 1 OF 7	
WATER LEVEL DATA NE = Not Encountered		Started <u>11/17/97</u> Completed <u>11/19/97</u> Driller <u>Allan Eades</u> Helper <u>Freddy</u> Drilling Method <u>Air Rotary</u> Sampling Method <u>Drill Cuttings</u>		LOCATION <u>Proposed Lea County Landfill</u>			
NE FT. W.D. NE FT. AT COMPLETION FT. AT HR. A.D. FT. AT HR. A.D.				CLIENT <u>Runice, New Mexico</u> <u>Camino Real Landfill</u> <u>Sunland Park, New Mexico</u>			

GROUND ELEVATION: 3,397.38 (Ft., MSL)		Northing: 7924.34 Easting: 8019.53		Completion Depth: 600.0		SAMPLE DATA			
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	Calcareous	Moisture	Munsell	Notes	Depth (FT., bgs)	
5.0		Yellowish-red to reddish-brown, loamy fine SAND, weak granular structure. Reddish-brown, loamy fine SAND to sandy LOAM, blocky, friable, very few organics, grading to light brown loamy SAND	2.0	No	Dry	5YR 5/8		5.0	
10.0			11.0	No	Dry	5YR 6/8		10.0	
15.0		Pink, sandy CALICHE, moderately weak with friable nodules of caliche and poorly cemented sand, fewer nodules with depth	24.0	Strong	Dry	5YR 8/4		15.0	
20.0			24.0	Mild	Dry	5YR 8/3		20.0	
25.0		Pink, fine to medium SAND, calcareous very small nodules of caliche and cemented sandstone	39.0	Mild	Dry	5YR 8/2		25.0	
30.0			39.0	Mild	Dry	2.5YR 6/4		30.0	
35.0		Reddish-brown, pebbly, coarse GRAVEL with loamy sand matrix. Pebbles are predominantly chert, white, red, black and rose quartzite, all angular to subangular	43.0	Mild	Dry	2.5YR 6/3		35.0	
40.0		Light reddish-brown, CLAYSTONE with trace sand and calcareous cemented sandstone pebbles, cuttings are blocky, some chert	49.0	Mild	Dry	2.5YR 4/6		40.0	
45.0			49.0	Mild	Dry	2.5YR 6/3		45.0	
50.0		Reddish-brown, sandy MUDSTONE/CLAYSTONE, dry, poorly indurated, some small calcareous cemented sandstone nodules, little to no mica		Mild	Dry	2.5YR 6/3		50.0	
55.0				Mild	Dry	2.5YR 4/6		55.0	
60.0				Mild	Dry	2.5YR 6/3		60.0	
65.0				Mild	Dry	2.5YR 4/6		65.0	
70.0								70.0	
75.0				Mild	Dry	2.5YR 6/4		75.0	
		(Continued)							

NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.	LEGEND ☐ W.D. - WHILE DRILLING ▽ A.D. - AFTER DRILLING ▽ HOUR(S) AFTER DRILLING
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W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 • INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-110</u>		FILE # <u>95042.10</u>		SHEET 2 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes		
85.0		(Continued from page 1) Reddish-brown, sandy MUDSTONE/CLAYSTONE, dry, poorly indurated, some small calcareous cemented sandstone nodules, little to no mica	84.0	Minor	Barely Damp	2.5YR 4/4	Pitcher Bell Sample obtained at 90'	85.0	
90.0		Reddish-brown, sandy CLAYSTONE, micaceous with occasional green siltstone beds						90.0	
95.0								95.0	
100.0								100.0	
105.0								105.0	
110.0			110.0					110.0	
115.0		Reddish-brown, sandy MUDSTONE/CLAYSTONE, dry, poorly indurated, some small calcareous cemented sandstone nodules, little to no mica		Slight	Barely Damp	2.5YR 4/4		115.0	
120.0								120.0	
125.0								125.0	
130.0				Yes	Barely Damp	2.5YR 3/4		130.0	
135.0								135.0	
140.0							Pitcher Bell Sample obtained at 140'	140.0	
145.0				Yes	Barely Damp	2.5YR 4/4		145.0	
150.0								150.0	
155.0				No	Barely Damp	2.5YR 4/6		155.0	
160.0								160.0	
165.0								165.0	
170.0		(Continued)						170.0	

NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.	LEGEND ▽ W.D. - WHILE DRILLING ▽ A.D. - AFTER DRILLING ▽ HOUR(S) AFTER DRILLING
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W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-110</u> FILE # <u>95042.10</u> SHEET 3 OF 7				
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)
				Calcareous	Moisture	Munsell	Notes	
175.0 180.0 185.0 190.0 195.0 200.0 205.0 210.0 215.0 220.0 225.0 230.0 235.0 240.0 245.0 250.0 255.0 260.0		(Continued from page 2) Reddish-brown, sandy MUDSTONE/CLAYSTONE, dry, poorly indurated, some small calcareous cemented sandstone nodules, little to no mica Light reddish-brown MUDSTONE, slick, siltier, no bedding Reddish-brown MUDSTONE/CLAYSTONE, micaceous, no bedding or laminae (Continued)	190.0 211.0					175.0 180.0 185.0 190.0 195.0 200.0 205.0 210.0 215.0 220.0 225.0 230.0 235.0 240.0 245.0 250.0 255.0 260.0
				No	Barely Damp	2.5YR 6/3		
				No	Barely Damp	2.5YR 5/4		
				No	Dry	2.5YR 4/6		
				No	Dry	2.5YR 5/4		
				No	Dry	2.5YR 4/6		
				No	Dry	2.5YR 6/3		
							Pitcher Bell Sample obtained at 230'	

NOTES:

- Boring grouted after completion with 95% portland cement and 5% bentonite.
- Drilling Company: Eades Drilling and Pump Service.

LEGEND

W W.D. - WHILE DRILLING
 A A.D. - AFTER DRILLING
 H HOUR(S) AFTER DRILLING

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-110</u>		FILE # <u>95042.10</u> SHEET 4 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA			Depth (FT., bgs)
				Calcareous	Molsture	Munsell	
265.0		(Continued from page 3)					265.0
270.0				No	Dry	2.5YR 5/6	270.0
275.0		Reddish-brown, MUDSTONE/CLAYSTONE, micaceous, no bedding or laminae					275.0
280.0							280.0
285.0							285.0
290.0				Yes	Dry	2.5YR 5/4	290.0
295.0							295.0
300.0							300.0
305.0							305.0
310.0							310.0
315.0							315.0
320.0							320.0
325.0				No	Dry	2.5YR 4/4	325.0
330.0							330.0
335.0							335.0
340.0							340.0
345.0				Yes	Dry	2.5YR 5/4	345.0
350.0							350.0
355.0		(Continued)					355.0
				Pitcher Bell Sample obtained at 350'			

NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.	LEGEND ▽ W.D. - WHILE DRILLING ▽ A.D. - AFTER DRILLING ▽ HOUR(S) AFTER DRILLING
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W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 • • INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-110</u>		FILE # <u>95042.10</u>		SHEET 5 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA			Notes	Depth (FT., bgs)	
				Calcareous	Moisture	Munsell			
360.0		(Continued from page 4)						360.0	
365.0		Reddish-brown, MUDSTONE/CLAYSTONE, micaceous, no bedding or laminae		Minor	Dry	2.5YR 4/4		365.0	
370.0								370.0	
375.0				Minor	Dry	2.5YR 4/6		375.0	
380.0								380.0	
385.0								385.0	
390.0								390.0	
395.0								395.0	
400.0								400.0	
405.0								405.0	
410.0								410.0	
415.0								415.0	
420.0								420.0	
425.0								425.0	
430.0								430.0	
435.0				Minor	Dry	2.5YR 4/8		435.0	
440.0								440.0	
445.0		(Continued)						445.0	


NOTES:

1. Boring grouted after completion with 95% portland cement and 5% bentonite.
2. Drilling Company: Eades Drilling and Pump Service.

LEGEND

☒ W.D. - WHILE DRILLING
 ☒ A.D. - AFTER DRILLING
 ☒ HOUR(S) AFTER DRILLING

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W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 • INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-110				FILE # 95042.10		SHEET 6 OF 7	
Depth (FT., bgs)		Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)		
					Calcareous	Moisture	Munsell	Notes			
-450.0			(Continued from page 5) Reddish-brown, MUDSTONE/CLAYSTONE, micaceous, no bedding or laminae						-450.0		
-455.0									-455.0		
-460.0									-460.0		
-465.0									-465.0		
-470.0									-470.0		
-475.0									-475.0		
-480.0									-480.0		
-485.0									-485.0		
-490.0									-490.0		
-495.0									-495.0		
-500.0									-500.0		
-505.0									-505.0		
-510.0									-510.0		
-515.0									-515.0		
-520.0						Minor	Dry	2.5YR 5/4		-520.0	
-525.0										-525.0	
-530.0								-530.0			
-535.0								-535.0			
			(Continued)								
NOTES: 1. Boring grouted after completion with 95 % portland cement and 5 % bentonite. 2. Drilling Company: Bades Drilling and Pump Service.					LEGEND ☒ W.D. - WHILE DRILLING ☒ A.D. - AFTER DRILLING ☒ HOUR(S) AFTER DRILLING						

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL. 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-110</u>		FILE # <u>95042.10</u>		SHEET 7 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes		
545.0		(Continued from page 6)		Minor	Dry	7.5YR 5/4		545.0	
550.0		Reddish-brown, MUDSTONE/CLAYSTONE, micaceous, no bedding or laminae						550.0	
555.0				Minor	Dry	2.5YR 4/4		555.0	
560.0								560.0	
565.0								565.0	
570.0				Yes	Dry	2.5YR 6/3		570.0	
575.0				Yes	Dry	2.5YR 6/2		575.0	
580.0				Yes	Dry	2.5YR 4/4		580.0	
585.0				Yes	Dry	2.5YR 6/1		585.0	
590.0				Yes	Dry	2.5YR 6/1		590.0	
595.0			Yes	Dry	2.5YR 6/1		595.0		
600.0			Yes	Dry	2.5YR 7/1		600.0		
		Light reddish-gray, clayey SILTSTONE, gritty, sandy, no bedding	576.0						
		Reddish-gray, silty SANDSTONE	588.0						
		Light reddish-gray, silty SANDSTONE	595.0						
		BORING TERMINATED AT 600 FEET	600.0						

NOTES:

- Boring grouted after completion with 95% portland cement and 5% bentonite.
- Drilling Company: Endes Drilling and Pump Service.

LEGEND

W.D. - WHILE DRILLING
 A.D. - AFTER DRILLING
 HOUR(S) AFTER DRILLING

W B C WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 • INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-111 FILE # 95042.10 SHEET 1 OF 7					
WATER LEVEL DATA NE = Not Encountered 598.0 FT. W.D. _____ FT. AT COMPLETION _____ FT. AT _____ HR. A.D. _____ FT. AT _____ HR. A.D.		Started 11/13/97 Completed 11/13/97 Driller Allan Eades Helper Freddy Drilling Method Air Rotary Sampling Method Drill Cuttings					
LOCATION Proposed Lea County Landfill CLIENT Eunice, New Mexico Canino Real Landfill Sunland Park, New Mexico							
GROUND ELEVATION: 3,404.35 (ft., MSL) Northing: 9140.96 Easting: 9138.76 Completion Depth: 598.0		SAMPLE DATA					
Depth (FT., bgs)	Lithology Type	Strata Depth (FT., bgs)	Calcareous	Moisture	Munsell	Notes	Depth (FT., bgs)
STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG							
5.0			No	Dry	5YR 5/6		5.0
10.0		8.0	Strong	Dry	2.5YR 7/2		10.0
15.0		12.0	Mild	Dry	2.5YR 6/6		15.0
20.0		20.0	Mild	Dry	2.5YR 6/6		20.0
25.0		25.0					25.0
30.0			Strong	Dry	2.5YR 8/1		30.0
35.0		35.0	Mild	Dry	2.5YR 8/1		35.0
40.0		37.0	Mild	Dry	2.5YR 8/3		40.0
45.0		40.0	Mild	Dry	2.5YR 5/3		45.0
50.0		44.0	Mild	Dry	2.5YR 4/4		50.0
55.0			No	Barely Damp	10R 4/6		55.0
60.0							60.0
65.0			Mild	Barely Damp	2.5YR 5/3		65.0
70.0							70.0
75.0			Mild	Barely Damp	2.5YR 6/4		75.0
(Continued)						Pitcher Bell Sample obtained at 80'	
NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.				LEGEND W.D. - WHILE DRILLING A.D. - AFTER DRILLING H - HOUR(S) AFTER DRILLING			

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 ** INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-111		FILE # 95042.10		SHEET 2 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes		
85.0		(Continued from page 1) Reddish-brown sandy, MUDSTONE/CLAYSTONE, micaceous, especially biotite, occasional chert pieces, occasional green siltstone beds, otherwise massive, very few laminae or bedding, moderately indurated		Minor	Barely Damp	2.5YR 5/4		85.0	
90.0				Slight	Barely Damp	2.5YR 6/3		90.0	
95.0								95.0	
100.0								100.0	
105.0				Yes	Barely Damp	2.5YR 4/4		105.0	
110.0								110.0	
115.0								115.0	
120.0				Yes	Barely Damp	2.5YR 5/3		120.0	
125.0								125.0	
130.0								130.0	
135.0								135.0	
140.0				No	Barely Damp	2.5YR 5/3	Pitcher Bell Sample obtained at 140'	140.0	
145.0								145.0	
150.0								150.0	
155.0								155.0	
160.0								160.0	
165.0								165.0	
170.0		(Continued)						170.0	

NOTES:

- Boring grouted after completion with 95% portland cement and 5% bentonite.
- Drilling Company: Eades Drilling and Pump Service.

LEGEND

W.D. - WHILE DRILLING A.D. - AFTER DRILLING V HOUR(S) AFTER DRILLING

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-111</u>		FILE # <u>95042.10</u>		SHEET 3 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes		
175.0		(Continued from page 2)						175.0	
180.0		Reddish-brown sandy MUDSTONE/CLAYSTONE, micaceous, especially biotite, occasional chert pieces, occasional green siltstone beds, otherwise massive, very few laminae or bedding, moderately indurated		No	Barely	2.5YR 5/6		180.0	
185.0			185.0	No	Barely	2.5YR 4/4		185.0	
187.0		Light reddish-brown, clayey SILTSTONE	187.0	No	Dry	2.5YR 6/4		187.0	
190.0		Red, clayey SILTSTONE		No	Barely Damp	2.5YR 5/6		190.0	
195.0			195.0	No	Barely Damp	2.5YR 7/3		195.0	
200.0		Pink, clayey SILTSTONE		No	Barely Damp	2.5YR 6/2	Pitcher Bell Sample obtained at 200'	200.0	
205.0								205.0	
210.0			211.0					210.0	
215.0		Reddish-brown, sandy MUDSTONE/CLAYSTONE, micaceous, especially biotite, occasional chert pieces, occasional green siltstone beds, otherwise massive, very few laminae or bedding, moderately indurated		No	Dry	2.5YR 6/2		215.0	
220.0								220.0	
225.0								225.0	
230.0								230.0	
235.0								235.0	
240.0								240.0	
245.0								245.0	
250.0				No	Dry	2.5YR 4/6		250.0	
255.0								255.0	
260.0				Yes	Dry	2.5YR 4/4		260.0	
		(Continued)							

NOTES:

- Boring grouted after completion with 95% portland cement and 5% bentonite.
- Drilling Company: Eades Drilling and Pump Service.

LEGEND

W.D. - WHILE DRILLING A.D. - AFTER DRILLING H - HOUR(S) AFTER DRILLING

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL. 60604 (312) 922-1030 •• INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-111</u>		FILE # <u>95042.10</u>		SHEET 4 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes		
265.0		(Continued from page 3)						265.0	
270.0								270.0	
275.0		Reddish-brown, sandy MUDSTONE/CLAYSTONE, micaceous, especially biotite, occasional chert pieces, occasional green siltstone beds, otherwise massive, very few laminae or bedding, moderately indurated						275.0	
280.0								280.0	
285.0								285.0	
290.0								290.0	
295.0				No	Dry	10R 4/6		295.0	
300.0								300.0	
305.0								305.0	
310.0								310.0	
315.0								315.0	
320.0								320.0	
325.0								325.0	
330.0				Yes	Dry	10R 4/6		330.0	
335.0								335.0	
340.0								340.0	
345.0								345.0	
350.0								350.0	
355.0		(Continued)						355.0	

NOTES:

1. Boring grouted after completion with 95% portland cement and 5% bentonite.
2. Drilling Company: Endes Drilling and Pump Service.

LEGEND

▽ W.D. - WHILE DRILLING ▽ A.D. - AFTER DRILLING ▽ HOUR(S) AFTER DRILLING

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-111</u>		FILE # <u>95042.10</u>		SHEET 5 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes		
360.0		(Continued from page 4)						360.0	
365.0		Reddish-brown, sandy MUDSTONE/CLAYSTONE, micaceous, especially biotite, occasional chert pieces, occasional green siltstone beds, otherwise massive, very few laminae or bedding, moderately indurated		Minor	Dry	2.5YR 4/6		365.0	
370.0							370.0		
375.0							375.0		
380.0								380.0	
385.0								385.0	
390.0				Minor	Dry	2.5YR 5/6		390.0	
395.0								395.0	
400.0								400.0	
405.0								405.0	
410.0								410.0	
415.0								415.0	
420.0								420.0	
425.0								425.0	
430.0								430.0	
435.0				Minor	Dry	2.5YR 4/6		435.0	
440.0								440.0	
445.0		(Continued)						445.0	

NOTES:

- Boring grouted after completion with 95% portland cement and 5% bentonite.
- Drilling Company: Eades Drilling and Pump Service.

LEGEND

▽ W.D. - WHILE DRILLING ▽ A.D. - AFTER DRILLING ▽ HOUR(S) AFTER DRILLING

WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-111</u> FILE # <u>95042.10</u> SHEET 6 OF 7						
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)
				Calcareous	Moisture	Munsell	Notes	
450.0		(Continued from page 5)						450.0
455.0		Reddish-brown, sandy MUDSTONE/CLAYSTONE, micaceous, especially biotite, occasional chert pieces, occasional green siltstone beds, otherwise massive, very few laminae or bedding, moderately indurated						455.0
460.0								460.0
465.0								465.0
470.0								470.0
475.0								475.0
480.0								480.0
485.0							Pitcher Bell Sample obtained at 485'	485.0
490.0								490.0
495.0								495.0
500.0								500.0
505.0							505.0	
510.0							510.0	
515.0							515.0	
520.0							520.0	
525.0				Minor	Dry	2.5YR 6/4		525.0
530.0								530.0
535.0								535.0
		(Continued)						

NOTES:

- Boring grouted after completion with 95% portland cement and 5% bentonite.
- Drilling Company: Eades Drilling and Pump Service.

LEGEND

☒ W.D. - WHILE DRILLING
 ☒ A.D. - AFTER DRILLING
 ☒ HOUR(S) AFTER DRILLING

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL. 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-111</u>		FILE # <u>95042.10</u>		SHEET 7 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes		
		(Continued from page 6)							
545.0		Reddish-brown, sandy MUDSTONE/CLAYSTONE, micaceous, especially biotite, occasional chert pieces, occasional green siltstone beds, otherwise massive, very few laminae or bedding, moderately indurated						545.0	
550.0								550.0	
555.0								555.0	
560.0								560.0	
565.0				Minor	Dry	2.5YR 6/4		565.0	
566.0		Pink CLAYSTONE	566.0						
568.0			568.0	Minor	Dry	2.5YR 8/3			
570.0		Light reddish-gray, clayey SILTSTONE						570.0	
575.0				Yes	Dry	2.5YR 7/1		575.0	
576.0			576.0						
577.0		Reddish-gray, sandy SILTSTONE		Yes	Dry	10R 6/1		577.0	
580.0								580.0	
581.0			581.0						
585.0		Reddish-gray, silty SANDSTONE		Yes	Dry	10R 6/1		585.0	
590.0								590.0	
595.0								595.0	
		BORING TERMINATED AT 598 FEET	598.0						

NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.	LEGEND ▽ W.D. - WHILE DRILLING ▽ A.D. - AFTER DRILLING ▽ HOUR(S) AFTER DRILLING
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APPENDIX G.B
SITE BORING LOGS

LOG OF BORING NO. BH-01

Project Description: CK Disposal



Depth, feet	Samples	Symbol/USCS	Location: Eunice, NM Top of PVC El.: feet MSL Surface El.: 3382 feet MSL Completion Depth: 175 feet Date Boring Started: 5/26/2015 Date Boring Completed: 5/26/2015	Northing: 521233.96 Easting: 924924.72	Monitor Well Construction Details	Monitor Well Description
MATERIAL DESCRIPTION						
5			CLAYEY SAND, brown to reddish brown, moderately well sorted, subrounded, fine to medium grained, slightly moist, none HCL reaction			
10						
15						
20			SILTY SAND, with caliche, light brown to white, well sorted, well rounded, very fine to fine grained, dry, strong HCL reaction			
25						
30						
35			CLAYSTONE, reddish brown some gray, slightly moist to dry, weak HCL reaction			
40						
45						
50						
55						
60						
65						
70						
75						
80						
85						
90						
95						
100						
105						
110						
115						
120						
125						
130						
135						
140						
145						
150						
155						
160						
165						
170						
175						

GROUNDWATER WELL - B&W EUNICE GPJ CAREL2 GDT 9/18/15

Drilling Contractor: HCI Drilling
Drilling Method: Air Rotary
Sampling Method: Cuttings
Geologist: Steven J. Wimmer
Project No.: 15-04-22

Groundwater Observations	
Date	Depth to Water (ft)
5/26/15	Dry

Remarks: 5 1/8" diameter boring; TH60 Atlas Copco Drill Rig

LOG OF BORING NO. BH-01

PAGE 1 of 1

The stratification lines represent approximate strata boundaries.
In situ, the transition may be gradual.

- ▽ Water level at time of drilling.
▽ Water level at end of drilling.
▽ Water level after drilling.

LOG OF BORING NO. BH-02

Project Description: CK Disposal



Depth, feet	Samples	Symbol/USCS	Location: Eunice, NM	Northing: 521273.70	Monitor Well Construction Details	Monitor Well Description
			Top of PVC El.: feet MSL	Easting: 928310.35		
			Surface El.: 3391.8 feet MSL			
			Completion Depth: 175 feet			
			Date Boring Started: 5/26/2015			
			Date Boring Completed: 5/26/2015			
MATERIAL DESCRIPTION						
5			CLAYEY SAND, brown to reddish brown, moderately well sorted, subrounded, fine to medium grained, slightly moist, none HCL reaction			
10						
15			SILTY SAND, with caliche, light brown to white, well sorted, well rounded, very fine to fine grained, dry, strong HCL reaction			
20						
25						
30						
35						
40			CLAYSTONE, reddish brown with gray, dry, weak HCL reaction, some purple			
45						
50						
55						
60						
65						
70			less gray and purple; slightly moist to dry			
75						
80						
85						
90						
95						
100						
105						
110						
115						
120						
125						
130						
135						
140						
145						
150						
155						
160						
165						
170						
175						
Drilling Contractor: HCI Drilling			Groundwater Observations		Remarks: 5 1/8" diameter boring; TH60 Atlas Copco Drill Rig	
Drilling Method: Air Rotary			Date	Depth to Water (ft)		
Sampling Method: Cuttings			5/26/15	Dry		
Geologist: Steven J. Wimmer						
Project No.: 15-04-22						

GROUNDWATER WELL - B&W EUNICE GPJ CAREL2 GDT 9/18/15

LOG OF BORING NO. BH-02

PAGE 1 of 1

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

- ▽ Water level at time of drilling.
- ▼ Water level at end of drilling.
- ▽ Water level after drilling.

LOG OF BORING NO. BH-03

Project Description: CK Disposal



Depth, feet	Samples	Symbol/USCS	Location: Eunice, NM Top of PVC El.: feet MSL Surface El.: 3386.3 feet MSL Completion Depth: 175 feet Date Boring Started: 5/28/2015 Date Boring Completed: 5/28/2015	Northing: 520437.21 Easting: 926605.28	Monitor Well Construction Details	Monitor Well Description
MATERIAL DESCRIPTION						
5			CLAYEY SAND, reddish brown, moderately well sorted, subrounded, fine to medium grained, slightly moist, none HCL reaction			
10						
15			SILTY SAND, with caliche, light brown to white, well sorted, well rounded, very fine to fine grained, dry, strong HCL reaction			
20						
25			Quartz and Caliche gravel up to 1" in diameter			
30						
35			CLAYSTONE, reddish brown some gray, slightly moist to dry, weak HCL reaction			
40						
45						
50						
55						
60						
65						
70						
75						
80						
85						
90						
95						
100						
105						
110						
115						
120						
125						
130						
135			medium brown from 130' to 135'			
140			reddish brown to brown			
145						
150						
155						
160						
165						
170						
175						

GROUNDWATER WELL - BAW EUNICE.GPJ CAREL2.GDT 9/16/15

Drilling Contractor: HCI Drilling
Drilling Method: Air Rotary
Sampling Method: Cuttings
Geologist: Steven J. Wimmer
Project No.: 15-04-22

Groundwater Observations	
Date	Depth to Water (ft)
5/26/15	Dry

Remarks: 5 1/8" diameter boring; TH60 Atlas Copco Drill Rig

LOG OF BORING NO. BH-03

PAGE 1 of 1

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

- ▽ Water level at time of drilling.
- ▼ Water level at end of drilling.
- ▽ Water level after drilling.

LOG OF BORING NO. BH-04

Project Description: CK Disposal



Depth, feet	Samples	Symbol/USCS	Location: Eunice, NM	Northing: 519600.94	Monitor Well Construction Details	Monitor Well Description									
			Top of PVC El.: feet MSL	Easting: 924941.30											
			Surface El.: 3374.1 feet MSL												
			Completion Depth: 175 feet												
			Date Boring Started: 5/26/2015												
			Date Boring Completed: 5/26/2015												
MATERIAL DESCRIPTION															
5			CLAYEY SAND, reddish brown, moderately well sorted, subrounded, fine to medium grained, slightly moist, none HCL reaction												
10															
15			SILTY SAND, with caliche, light brown to white, well sorted, well rounded, very fine to fine grained, dry, strong HCL reaction												
20															
25															
30			intermixed reddish brown claystone to 50'												
35															
40															
45															
50			CLAYSTONE, reddish brown to purple, dry, weak HCL reaction												
55															
60															
65															
70															
75															
80															
85			dark brown to reddish brown												
90															
95															
100															
105															
110															
115															
120															
125															
130															
135															
140															
145															
150															
155															
160															
165															
170															
175															
Drilling Contractor: HCL Drilling Drilling Method: Air Rotary Sampling Method: Cuttings Geologist: Steven J. Wimmer Project No.: 15-04-22			Groundwater Observations <table border="1"> <thead> <tr> <th>Date</th> <th>Depth to Water (ft)</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>		Date	Depth to Water (ft)									Remarks: 5 1/8" diameter boring; TH60 Atlas Copco Drill Rig
Date	Depth to Water (ft)														

GROUNDWATER WELL - BAW EUNICE GPJ CAREL2 GDT 9/16/15

The stratification lines represent approximate strata boundaries. In situ, the transition may be gradual.

- ▽ Water level at time of drilling.
- ▼ Water level at end of drilling.
- ▽ Water level after drilling.

LOG OF BORING NO. BH-05

Project Description: CK Disposal



Depth, feet	Samples	Symbol/USCS	Location: Eunice, NM Top of PVC El.: feet MSL Surface El.: 3386.1 feet MSL Completion Depth: 175 feet Date Boring Started: 5/27/2015 Date Boring Completed: 5/27/2015	Northing: 519636.20 Easting: 928326.86	Monitor Well Construction Details	Monitor Well Description										
MATERIAL DESCRIPTION																
5			CLAYEY SAND, reddish brown, moderately well sorted, subrounded, fine to medium grained, slightly moist, none HCL reaction													
10																
15			SILTY SAND, with caliche, light brown to white, well sorted, well rounded, very fine to fine grained, dry, strong HCL reaction													
20																
25																
30																
35			intermixed gravel to 45'													
40																
45																
50			CLAYSTONE, reddish brown, slightly moist to dry, weak HCL reaction													
55																
60																
65																
70																
75																
80																
85																
90			medium brown, some sand													
95																
100			dark brown to reddish brown													
105																
110			dark brown and purple													
115																
120																
125																
130			reddish brown to dark brown													
135																
140																
145																
150																
155																
160			dark brown and purple													
165																
170			reddish brown													
175																
Drilling Contractor: HCI Drilling Drilling Method: Air Rotary Sampling Method: Cuttings Geologist: Steven J. Wimmer Project No.: 15-04-22			Groundwater Observations <table border="1"> <thead> <tr> <th>Date</th> <th>Depth to Water (ft)</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>		Date	Depth to Water (ft)									Remarks: 5 1/8" diameter boring; TH60 Atlas Copco Drill Rig	
Date	Depth to Water (ft)															

GROUNDWATER WELL - B&W EUNICE GPJ CAREL2 GDT 9/16/15

The stratification lines represent approximate strata boundaries.
In situ, the transition may be gradual.

- ▽ Water level at time of drilling.
- ▼ Water level at end of drilling.
- ▽ Water level after drilling.

APPENDIX G.C

WATER WELLS WITHIN ONE MILE

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505-394-5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NW 1/4 SW 1/4 NE 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 14.8698 s Longitude: 103 d 04 m 49.8642 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: CP-993

I. On land owned by (required): Louisiana Energy Services

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon Drilling Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.467.0622
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 12/5/08; Completed: 12/5/08; Type tools: Air-Rotary;
Size of hole: 7-7/8 in.; Total depth of well: 231.5ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

Do Not Write Below This Line

File Number: CP-993
Form: wr-20

page 1 of 4

Trn Number: 415642

21.38.32.231

Monitor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
Dry				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
4 PVC	Sch 40	2	+3	231	234	end cap	211	231

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole	Sacks	Cubic Feet	Method of Placement
From	To	Diameter	of mud	of Cement	
0	20	7-7/8		20 Sacks	Trimie (Bentonite/Cement)
20	206	7-7/8	61		Poured (Bentonite chips)

8. PLUGGING RECORD

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

Plugging approved by: _____
State Engineer Representative

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

Do Not Write Below This Line

File Number: CP-993
Form: wr-20

page 2 of 4

Trn Number: 415642

(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

[illegible]

Do Not Write Below This Line

File Number: CP-993
Form: wr-20

Trn Number: 415642

File Number: _____
(For OSE Use Only)

**NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD**

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

MW-20

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.

She C. E.
Driller

12/28/08
(mm/dd/year)

STATE ENGINEER OFFICE
A. H. S. I.

=====

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-993
Form: wr-20

Trn Number: 415642

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505-394-5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NE 1/4 SW 1/4 NE 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 14.9172 s Longitude: 103 d 04 m 45.4866 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: CP-994

I. On land owned by (required): Louisiana Energy Services

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon Drilling Work Phone: 806.467.0697
Agent: Shane Currie Home Phone: 806.467.0622
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 12/5/08; Completed: 12/5/08; Type tools: Air-Rotary;
Size of hole: 7-7/8 in.; Total depth of well: 36 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

Do Not Write Below This Line

File Number: CP-994
Form: wr-20

Trn Number: 415643

page 1 of 4

21.38.32.232

Monitor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
Dry				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
4 PVC	Sch 40	2	+3	36	39	end cap	26	36

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole	Sacks	Cubic Feet	Method of Placement
From	To	Diameter	of mud	of Cement	
0	5	7-7/8		20 Sacks	Trimie (Bentonite/Cement)
5	23	7-7/8	5		Poured (Bentonite chips)

8. PLUGGING RECORD

Plugging Contractor: _____
Address: _____
Plugging Method: _____
Date Well Plugged: _____
Plugging approved by: _____
State Engineer Representative

STATE ENGINEER OFFICE
JAN 11 1967
10:19

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

Do Not Write Below This Line

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

[illegible]

Do Not Write Below This Line

File Number: CP-994
Form: wr-20

page 3 of 4

Trn Number: 415643

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

MW-21

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.

Driller

12/29/08
(mm/dd/year)

CO and
scribed.

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-994
Form: wr-20

Trn Number: 415643

WLB

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: LA Zip: 88231

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

A. SE 1/4 NE 1/4 NE 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 21.907 s Longitude: 103 d 04 m 27.019 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: CP-947

I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575 Work Phone: 806.467.0607
Name: Talon LPE Home Phone: 806.436.8220
Agent: Shane Currie
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/15/07; Completed: 4/03/07; Type tools: Air rotary;
Size of hole: 7-7/8 in.; Total depth of well: 220.5 ft.;
Completed well is: monitor (shallow, artesian);
Depth to water upon completion of well: 178.83 ft.

Do Not Write Below This Line

File Number: CP-947
Form: wr-20

Trn Number: 376945

page 1 of 4

Monitor

21.38.32.224

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2007 APR 11 2:00

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
178.83	218.1	39.27	claystone & siltstone	0-5

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
4	52.40 PVC	2	0	198.1	198.1	N/A	N/A	
4	52.40 PVC	2	198.1	218.1	20	PVC end cap	198.1	218.1

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
From	To				
0	75	7-7/8	1	20	tremie - bentonite / cement
75	192	7-7/8	43		poured - bentonite chips

8. PLUGGING RECORD

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

Plugging approved by: _____
State Engineer Representative

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

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
2001 APR 27 P 2:00

Do Not Write Below This Line

File Number: CP 947
Form: WR-20

Trn Number: 376945

page 2 of 4

21. 38. 32. 224

Monitor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

[illegible]

STATE ENGINEER OFFICE
ROSVELL, NEW MEXICO
2001 APR 27 P 2:01

Do Not Write Below This Line

File Number: CP-947
Form: wr-20

Trn Number: 376945

page 3 of 4

21. 38. 32. 224

Monitor

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

04/24/2007
(mm/dd/year)

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2001 MAR 27 5 2:01

Monitor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: _____ Zip: _____

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

A. NE 1/4 NE 1/4 NE 1/4 Section: 32 Township: 215 Range: 38E 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 26 m 33.098 s Longitude: 103 d 04 m 27.582 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: CP-948
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon / LPE Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.676.8720
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/15/07; Completed: 4/03/07; Type tools: Air rotary;
Size of hole: 7-7/8 in.; Total depth of well: 32.2 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: DRY ft.

Do Not Write Below This Line

File Number: CP-948
Form: wr-20

page 1 of 4

Trn Number: 376946

Monitor

21.38.32 222

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2007 APR 27
01

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
From	To			
			D12Y	

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
4	54.40 PVC	2	0	22.2	22.2	N/A	N/A	
4	54.40 PVC	2	22.2	32.2	10	PVC end cap	22.2	32.2

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
From	To				
0	10	7-7/8	1	2.6	tremie - bentonite/cement
10	19	7-7/8	5	N/A	pour - bentonite chips

8. PLUGGING RECORD

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

Plugging approved by: _____
State Engineer Representative

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

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
2001 APR 27 P 2 01

Do Not Write Below This Line

File Number: CP-948
Form: wr-20

page 2 of 4

Trn Number: 376946

Monitor

21.38.32.222

4

9. LOG OF HOLE

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
2001 APR 27 P 2:01

21.38.32.222

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD**10. ADDITIONAL STATEMENTS OR EXPLANATIONS:**

1. The first step in the process of creating a new product is to identify a market need. This involves conducting market research to understand the preferences and behaviors of potential customers. Once a need is identified, the next step is to develop a concept that addresses this need. This concept should be innovative and differentiated from existing products in the market.

2. After developing a concept, the next step is to create a prototype. This allows the development team to visualize the product and test its functionality. Prototyping can be done using various methods, such as 3D printing or building a physical model. The prototype is used to gather feedback from potential users and make necessary adjustments to the design.

3. Once the prototype is refined, the next step is to conduct a feasibility study. This study evaluates the technical, financial, and market viability of the product. It involves assessing the resources required for production, the potential costs, and the competitive landscape. This step helps in making informed decisions about whether to proceed with the product development.

4. The final step in the process is to launch the product into the market. This involves creating a marketing strategy to promote the product and reach the target audience. The launch phase is critical for gaining initial traction and establishing the product's presence in the market. Continuous monitoring and evaluation are essential to ensure the product's success and make any necessary improvements.

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.

Jim Cline
Driller

04/24/2007
(mm/dd/yyyy)

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-948
Form: wr-20

Trn Number: 376940

page 4 of 4

Monitor

21.38. 32.222

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2007 APR 27 PM 2:00

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NW 1/4 NE 1/4 NE 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 32.845 s Longitude: 103 d 04 m 39.176 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: CP-949
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon LPE Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.676.8220
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/16/07; Completed: 4/03/07; Type tools: Air Rotary;
Size of hole: 7-1/8 in.; Total depth of well: 240.4 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: DRY ft.

Do Not Write Below This Line

File Number: CP-949
Form: WR-20

page 1 of 4

Trn Number: 376947

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2007 APR 27
10:02

Monitor

21.38.32.221

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
From	To			
			DRY	

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
4.0	sch 40 PVC	2	0	220.9	220.9	N/A	N/A	
4.0	sch 40 PVC	2	220.9	240.9	20	PVC end cap	220.9	240.9

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
From	To				
0	15	7-7/8	1	20	freemix - bentonite/cement
15	215	7-7/8	53	N/A	pour - bentonite pellets

8. PLUGGING RECORD

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

Plugging approved by: _____
State Engineer Representative

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

STATE ENGINEER OFFICE
ROSWEIL, NEW MEXICO
2011 APR 27 P 2:02

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File Number: CP-949
Form: wr-20

page 2 of 4

Trn Number: 376947

21.38.32.221

Monitor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

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File Number: CP-949
Form: WI-20

Trn Number: 376947

page 3 of 4

21. 38. 32. 221

Monitor

STATE ENGINEER OFFICE
ROSBERT L. NEW MEXICO
2601 APR 27 P 2:07

5

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

1. *Introduction*

2. *Background*

3. *Methodology*

4. *Results*

5. *Discussion*

6. *Conclusion*

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Gene Cline
Driller

04/24/07
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2007 APR 27 P 2:02

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Trn Number: 376947

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21, 38, 32, 22, 1

Monitor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: LOUISIANA Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NW 1/4 SW 1/4 NW 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 16.2 s Longitude: 103 d 5 m 21.2 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: CP-959

I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575 Work Phone: 806.417.0607
Name: Talon LPE Home Phone: 806.676.8220
Agent: SHANE CURRIE
Mailing Address: 921 N. BIVINS
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/23/07; Completed: 3/24/07; Type tools: Air Rotary
Size of hole: 7-7/8 in.; Total depth of well: 231 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: DRY ft.

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File Number: CP-959
Form: wr-20

page 1 of 4

Trn Number: 376959

Monitor

21.38.32.131

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2001 APR 27 PM

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)
DRY			

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
4	Sch 40 PVC	2	0 211	211	N/A	
4	Sch 40 PVC	2	211 231	20	PVC end cap	211 231

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 70	7-7/8	1	18	tremie - bentonite / cement
70 205	7-7/8	48		pour - bentonite chips

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		

STATE ENGINEER OFFICE
NEW MEXICO
JAN 27 10 20 AM '01

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File Number: CP-959 Trn Number: 376959
Form: wr-20 page 2 of 4
21.38.32.131
Monitor

9. LOG OF HOLE

STATE ENGINEER OFFICE
DOWNS FALLS, MINN. U.S.A.
JUN 27 P 2:00

Monitor

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.

Steve
Driller

04/24/2007
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

STATE ENGINEER OFFICE
ROSTELL, NEW MEXICO
APR 27 P 2 07

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File Number: CP-959
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page 4 of 4

Trn Number: 376959
21,38,32.131

Monitor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Weatherell Home Phone: _____
Address: P.O. Box 1789
City: Edinburg State: NM Zip: 78831

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

A. SE 1/4 NE 1/4 NW 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 23.387 s Longitude: 103 d 04 m 57.803 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: CP 958

I. On land owned by (required): LEA County, NM

3. DRILLING CONTRACTOR

License Number: 1575 Work Phone: 806.467.0607
Name: Talon LPE Home Phone: 806.676.8220
Agent: Shane Currie
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/20/07; Completed: 3/29/07; Type tools: Air bit
Size of hole: 7-7/8 in.; Total depth of well: 246.3 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: 217.19 ft.

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File Number: CP-958
Form: wr-20

Trn Number: 376958

page 1 of 4

Monitor

21.38.32.124

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2007 MAR 27 P 2 01

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
217.19	246.3	29.11	claystone w/siltstone	0-5

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
4	Sch 40 PVC	2	0	226.3	226.3	N/A	N/A	
4	Sch 40 PVC	2	226.3	246.3	20	PVC End Cap	226.3	246.3

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole	Sacks	Cubic Feet	Method of Placement
From	To	Diameter	of mud	of Cement	
0	70	7-7/8	1	18	tremie - cement / bentonite
70	220	7-7/8	43	N/A	pour - bentonite chips

8. PLUGGING RECORD

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

Plugging approved by: _____
State Engineer Representative

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

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
1901 APR 27 P 2 01

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File Number: CP-958
Form: wr-20

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Trn Number: 376958

21.38,32.124

Mexico

9. LOG OF HOLE

STATE ENGINEER OFFICE
ROSELLE, NEW MEXICO
APR 21 10 30 AM '88

Trn Number: 376958

Monitor

21, 38, 32, 124

7

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

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Eric
Driller

04/24/2007
(mm/dd/year)

STATE EIGHTER OFFICE
ROSWELL, NEW MEXICO
2001 APR 27 5 2 07

FOR STATE ENGINEER USE ONLY

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

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Trn Number: 376,958

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Monitor

21.38.32.124

WLB

8

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NE 1/4 NE 1/4 NW 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 33.072 s Longitude: 103 d 05 m 2.128 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: CP-951
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon LPE Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.676.8220
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/29/07; Completed: 3/29/07; Type tools: Air Rotary
Size of hole: 7-1/2 in.; Total depth of well: 261.3 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: 243.31 ft.

STATE ENGINEER OFFICE
NEW MEXICO

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File Number: CP-951 Trn Number: 3769489
Form: wr-20 page 1 of 4

Monitor

21.38.32.122



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)
243.8 241.3	17.49	Siltstone, hard, gray	0-2

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
4	sch 40 PVC	2	0 241.3	241.3	N/A	N/A
4	sch 40 PVC	2	241.3 261.3	20	PVC end cap	241.3 261.3

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 75	7-7/8	1	20	trémie bentonite/cement
75 235	7-7/8	65	-	pour bentonite chips

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		

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2001 APR 27 0 2:03

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File Number: CP-951
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page 2 of 4

Trn Number: 376949

Mexico

21.38.32.122

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

[illegible]

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2531 APR 27 PM 2:03

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File Number: CP-951
Form: WR-20

Trn Number: 376949

page 3 of 4

Mexico

21.38.52.12.2

8

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.

04/24/07
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
1631 APR 21 P 2:03

Do Not Write Below This Line

Trn Number: 376949

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21.38.32.122

Monitor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 506.394.5204
Contact: Laurie Weatherall Home Phone: _____
Address: P.O. Box 1789
City: Lunice State: NM Zip: 88231

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

A. NE 1/4 NE 1/4 NW 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 32.801 s Longitude: 103 d 04 m 59.861 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: CP-950

I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon/LPE Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.676.8220
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/21/07; Completed: 3/30/07; Type tools: Air rotary;
Size of hole: 7-7/8 in.; Total depth of well: 22 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: 214 ft.

Do Not Write Below This Line

File Number: CP-950
Form: wr-20

page 1 of 4

Trn Number: 376948

Monitor

21.38.32.122

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2007 APR 27 2:02

9

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
<u>DRY</u>				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
<u>4</u>	<u>SCH 40 PVC</u>	<u>2</u>	<u>0</u>	<u>10.1</u>	<u>10.1</u>	<u>N/A</u>	<u>N/A</u>	
<u>4</u>	<u>SCH 40 PVC</u>	<u>2</u>	<u>10.1</u>	<u>20.1</u>	<u>10.0</u>	<u>PVC end cap</u>	<u>10.1</u>	<u>20.1</u>

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
From	To				
<u>0</u>	<u>2</u>	<u>7-7/8</u>	<u>1</u>	<u>0.5</u>	<u>tremie bentonite/cement</u>
<u>2</u>	<u>7</u>	<u>7-7/8</u>	<u>2</u>		<u>pour bentonite chips</u>

8. PLUGGING RECORD

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

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet	Cubic Feet of Cement
	Top Bottom	
<u>1</u>		
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		

Do Not Write Below This Line

File Number: CP-950
Form: wr-20

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Trn Number: 376948

Monitor

21.38.32.122

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
2001 APR 27 P 2:02

9

9. LOG OF HOLE

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
JUN 27 10 21 AM '62

Monitor

9

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

1. *Introduction*
 2. *Background*
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 244. *Glossary*
 245. *Abbreviations*
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 248. *Figures*
 249. *Supplementary Materials*

Steve Price
Driller

04/24/2007
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

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Trn Number:

page 4 of 4

Monitor

2438.32, 122

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2001 APR 27 PM 2:02Z

WLB

10

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: _____ Zip: 88231

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

A. NW 1/4 NE 1/4 NW 1/4 Section: 32 Township: 215 Range: 38E 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 26 m 33.002 s Longitude: 103 d 05 m 8.300 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: CP-952
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575 Work Phone: 806.467.0607
Name: Talon/LPC Home Phone: 806.676.8220
Agent: Shane Currie
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/21/07; Completed: 3/29/07; Type tools: Air Rotary
Size of hole: 7-7/8 in.; Total depth of well: 26.9 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: DRY ft.

STATE ENGINEER OFFICE
ROSEMARE, NEW MEXICO
1001
127
12003

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File Number: CP-952
Form: wr-20

page 1 of 4

Trn Number: 376950

21.38.32.121

Monitor

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)
<u>DRY</u>			

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
<u>4</u>	<u>SCH 40 PVC</u>	<u>2</u>	<u>0</u> <u>16.9</u>	<u>16.9</u>	<u>N/A</u>	<u>N/A</u>
<u>4</u>	<u>SCH 40 PVC</u>	<u>2</u>	<u>16.9</u> <u>26.9</u>	<u>10</u>	<u>PVC End cap</u>	<u>16.9</u> <u>26.9</u>

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
<u>0</u> <u>4</u>	<u>7-7/8</u>	<u>1</u>	<u>1</u>	<u>tremie - Cement/bentonite</u>
<u>4</u> <u>14</u>	<u>7-7/8</u>	<u>4</u>	<u>N/A</u>	<u>pour - bentonite chips</u>

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
<u>1</u>		
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
2001 APR 27 P 2:03

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File Number: CP-952
Form: WI-20

page 2 of 4

Trn Number: 376950

Monitor

21.38.32.121

9. LOG OF HOLE

STATE ENGINEER OFFICE
ROSBELL, NEW MEXICO
JUN 17 27 P 3 03

21. 38. 32. 121

10

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

100

Jim Cline
Driller

04/24/2007
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

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Trn Number: 376950

page 4 of 4

21.38.32.121

STATE ENGINEER OFFICE
R. SWELL, NEW MEXICO
701 APR 27 PM 2:03

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: LA Zip: 78231

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

A. NE 1/4 NW 1/4 NW 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 32.999 s Longitude: 103 d 05 m 19.283 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: CP-953
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon/LPE Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.676.8220
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/22/07; Completed: 3/29/07; Type tools: Aug. Bit
Size of hole: 7-7/8 in.; Total depth of well: 257.5 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: 241.26 ft.

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File Number: CP-953
Form: wr-20

page 1 of 4

Trn Number: 376952

Monitor

21.38.32.112

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
APR 27 2 00 PM '07

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)
241.26 257.5	16.24	Claystone w/ interbedded siltstone	0-2

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
4	sch 40 PUC	2	0 237.5	237.5	N/A	N/A
4	sch 40 PUC	2	237.5 257.5	20	PVC Cased	237.5 257.5

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 75	7-7/8	1	20	framic - cement / bentonite
75 230	7-7/8	45	N/A	pour - bentonite chips

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		

STATE ENGINEER OFFICE
ROS WELLS, NEW MEXICO
2001 APR 27 P 2:04

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File Number: CP-953
Form: wr-20

page 2 of 4

Trn Number: 376952

Monitor

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9. LOG OF HOLE

STATE ENGINEER OFFICE
RDS HILL, NEW MEXICO
JUN 27 2 04

21.38.32.112

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10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

Gene Rice
Driller

4/24/2007
(mm/dd/year)

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2001 APR 27 PD 2 04

FOR STATE ENGINEER USE ONLY

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

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page 4 of 4

21.58.32.112

Monitor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.344.6204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NW 1/4 NW 1/4 NW 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 27.646 s Longitude: 103 d 05 m 22.714 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: CP-954
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon / LPE Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.676.8220
Mailing Address: 921 N. Ruins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/22/07; Completed: 3/30/07; Type tools: Air
Size of hole: 7-7/8 in.; Total depth of well: 236.4 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: DRY ft.

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File Number: CP-954
Form: wr-20

Trn Number: 376954

page 1 of 4

Monitor

21.38.32.111

STATE ENGINEER OFFICE
ROSELLE, NEW MEXICO
2007 APR 27 PM 2:04

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)
DEY			

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
4	Sch 40 PK	2	0 216.4	216.4	N/A	N/A
4	Sch 40 PK	2	216.4 236.4	20	PVC end cap	216.4 236.4

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 15	7-7/8	1	20	tremie - cement/bentonite
15 710	7-7/8	43		Pour - bentonite chips

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
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STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
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Form: WR-20

Trn Number: 376954

Monitor

21.39, 32.111

File Number: _____
(For OSE Use Only)

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	10	10	SAND, fine, loose, moist, burnt orange
10	20	10	CALICHE, soft light orange
20	35	15	Siltstone, hard dry gray
35	45	10	Claystone, hard dry maroon w/ gray mottling
45	50	5	Claystone w/ interbedded siltstone maroon & gray
50	75	25	Claystone, dry, maroon w/ gray mottling
75	85	10	Siltstone w/ interbedded claystone
85	105	20	Claystone, hard, dry maroon w/ gray mottling
105	110	5	Siltstone w/ interbedded claystone hard dry gray & maroon
110	130	20	Claystone, dry maroon w/ gray mottling
130	160	30	Claystone, with siltstone dry maroon & gray
160	170	10	Claystone, dry maroon to purple w/ gray mottling
170	175	5	Siltstone, hard, dry, gray
175	180	5	Claystone, hard dry, maroon w/ gray mottling
180	190	10	Siltstone w/ claystone dry gray & maroon
190	215	25	Claystone, hard, dry, maroon w/ gray & maroon
215	235	25	Siltstone, hard, dry, gray
235	245	10	Claystone, hard, dry maroon w/ gray

STATE ENGINEER
 ROSWELL, N.M.
 2001 APR 27

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
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File Number: CP-954
Form: wr-20

Trn Number: 376954

page 3 of 4

Monitor

21.39 32.111

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

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Steve Lee
Driller

04/24/2007
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

STATE ENGINEER OFFICE
FOSWELL, NEW MEXICO
2001 APR 27 P 2:04

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Trn Number: 376954

page 4 of 4

21.39 32.111

Monitor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505-394-5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. SW 1/4 SW 1/4 NE 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 14.8482 s Longitude: 103 d 04 m 40.2564 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: CP-995
I. On land owned by (required): Louisiana Energy Services

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon Drilling Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.467.0622
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 12/5/08; Completed: 12/5/08; Type tools: Air-Rotary;
Size of hole: 7-7/8 in.; Total depth of well: 38 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

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File Number: CP-995
Form: wr-20

page 1 of 4

Trn Number: 418652

21.38.32.233

Monitor

(R)

File Number: _____
(For OSE Use Only)

**NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD**

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
<u>Dry</u>				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
<u>4 PVC</u>	<u>Sch 40</u>	<u>2</u>	<u>+3</u>	<u>38</u>	<u>41</u>	<u>end cap</u>	<u>28</u>	<u>38</u>

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole	Sacks	Cubic Feet	Method of Placement
From	To	Diameter	of mud	of Cement	
<u>0</u>	<u>5</u>	<u>7-7/8</u>		<u>20 Sacks</u>	<u>Trimie (Bentonite/Cement)</u>
<u>5</u>	<u>25</u>	<u>7-7/8</u>	<u>6</u>		<u>Poured (Bentonite chips)</u>

8. PLUGGING RECORD

Plugging Contractor: _____
 Address: _____
 Plugging Method: _____
 Date Well Plugged: _____
 Plugging approved by: _____
 State Engineer Representative

	No.	Depth in Feet	Cubic Feet of Cement
	Top	Bottom	
<u>1</u>			
<u>2</u>			
<u>3</u>			
<u>4</u>			
<u>5</u>			

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File Number: CP-995
Form: wr-20

Trn Number: 418652

File Number: _____
(For OSE Use Only)

**NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD**

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

MW-22

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.

She Lie
Driller

12/29/08
(mm/dd/year)

STATE ENGINEER OFFICE
12-29-08

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-995
Form: wr-20

Trn Number: 418652

NLB

14

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505-394-5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. SW 1/4 SW 1/4 NE 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 13.383 s Longitude: 103 d 04 m 52.212 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: CP-996
I. On land owned by (required): Louisiana Energy Services

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon Drilling Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.467.0622
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 12/5/08; Completed: 12/5/08; Type tools: Air-Rotary;
Size of hole: 7-7/8 in.; Total depth of well: 39 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

Do Not Write Below This Line

File Number: CP-996
Form: wr-20

page 1 of 4

Trn Number: 418653
21.38.32.233

Monitor

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)
Dry			

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
4 PVC	Sch 40	2	+3 39	42	end cap	21 36

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 5	7-7/8		20 Sacks	Trimie (Bentonite/Cement)
5 20	7-7/8	5		Poured (Bentonite chips)

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		

STATE ENGINEER'S OFFICE
JAN 10 - 6 P 1:20

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File Number: CP-996
Form: wr-20

Trn Number: 418653

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

[illegible]

Do Not Write Below This Line

File Number: CP-996
Form: wr-20

page 3 of 4

Trn Number: 418 653

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

MW-23

and
described

12/29/08
(mm/dd/year)

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

Do Not Write Below This Line

Trn Number: 418653

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.6204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. SW 1/4 NW 1/4 SW 1/4 Section: 32 Township: 21S Range: 38E 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 25 m 56.857 s Longitude: 103 d 05 m 23.671 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: CP-955
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon LPE Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.676.8220
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/23/07; Completed: 3/29/07; Type tools: Air Rotary
Size of hole: 7-7/8 in.; Total depth of well: 236 ft.
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: DRY ft.

Do Not Write Below This Line

File Number: CP-955
Form: wr-20

page 1 of 4

Trn Number: 376955

Monitor

21.38.32.313

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
1997 APR 27

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
DRY				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
4	54# 40 PVC	2	0	216	216	N/A	N/A	
4	54# 40 PVC	2	216	236	20	PVC End Cap	216	236

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
From	To				
0	75	7-7/8	1	20	tremie - cement/bentonite
75	210	7-7/8	42		pour - bentonite chips

8. PLUGGING RECORD

Plugging Contractor: _____
Address: _____
Plugging Method: _____
Date Well Plugged: _____
Plugging approved by: _____
State Engineer Representative

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

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
2001 APR 27 P 2:00

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File Number: CP-955
Form: wr-20

page 2 of 4

Trn Number: 376955

Mexitar

21.38, 32.313

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

[illegible]

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
MAY 27 2 00 PM '67

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File Number: CP-955
Form: wr-20

Trn Number: 376955

page 3 of 4

Monitor

21.38.32.313

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

1. *Introduction*
 2. *Background*
 3. *Methodology*
 4. *Results*
 5. *Discussion*
 6. *Conclusion*
 7. *References*
 8. *Appendix*
 9. *Index*
 10. *Glossary*
 11. *Notes*
 12. *Footnotes*
 13. *Endnotes*
 14. *References*
 15. *Appendix*
 16. *Index*
 17. *Glossary*
 18. *Notes*
 19. *Footnotes*
 20. *Endnotes*
 21. *References*
 22. *Appendix*
 23. *Index*
 24. *Glossary*
 25. *Notes*
 26. *Footnotes*
 27. *Endnotes*
 28. *References*
 29. *Appendix*
 30. *Index*
 31. *Glossary*
 32. *Notes*
 33. *Footnotes*
 34. *Endnotes*
 35. *References*
 36. *Appendix*
 37. *Index*
 38. *Glossary*
 39. *Notes*
 40. *Footnotes*
 41. *Endnotes*
 42. *References*
 43. *Appendix*
 44. *Index*
 45. *Glossary*
 46. *Notes*
 47. *Footnotes*
 48. *Endnotes*
 49. *References*
 50. *Appendix*
 51. *Index*
 52. *Glossary*
 53. *Notes*
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 55. *Endnotes*
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 57. *Appendix*
 58. *Index*
 59. *Glossary*
 60. *Notes*
 61. *Footnotes*
 62. *Endnotes*
 63. *References*
 64. *Appendix*
 65. *Index*
 66. *Glossary*
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 71. *Appendix*
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 211. *Appendix*
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 213. *Glossary*
 214. *Notes*
 215. *Footnotes*
 216. *Endnotes*
 217. *References*
 218. *Appendix*
 219. *Index*
 220. *Glossary*
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 222. *Footnotes*
 223. *Endnotes*
 224. *References*
 225. *Appendix*
 226. *Index*
 227. *Glossary*
 228. *Notes*
 229. *Footnotes*
 230. *Endnotes*
 231. *References*
 232. *Appendix*
 233. *Index*
 234. *Glossary*
 235. *Notes*
 236. *Footnotes*
 237. *Endnotes*
 238. *References*
 239. *Appendix*
 240. *Index*
 241. *Glossary*
 242. *Notes*
 243. *Footnotes*
 244. *Endnotes*
 245. *References*
 246. *Appendix*
 247. *Index*
 248. *Glossary*
 249. *Notes*
 250. *Footnotes*
 251. *Endnotes*
 252. *References*
 253. *Appendix*
 254. *Index</*

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.

Gene C. Hill
Driller

04/24/2007
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-955
Form: wr-20

Trn Number: 376955

page 4 of 4

Monitor

21.38.32.313

STATE ENGINEER OFFICE
PASADENA, NEW MEXICO
JUN 27 1961

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505-394-5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NW 1/4 NE 1/4 SW 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 1.1718 s Longitude: 103 d 05 m 5.5062 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: CP-999

I. On land owned by (required): Louisiana Energy Services

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon Drilling Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.467.0622
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 12/4/08; Completed: 12/4/08; Type tools: Air-Rotary;
Size of hole: 7-7/8 in.; Total depth of well: 43 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

Do Not Write Below This Line

File Number: CP-999
Form: wr-20

Trn Number: 415856

page 1 of 4

Monitor

21.38.32.321

16
File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
From	To			
Dry				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
4 PVC	Sch 40	2	+3	43	46	end cap	28	43

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
From	To				
0	5	7-7/8		20 Sacks	Trimie (Bentonite/Cement)
5	22	7-7/8	5		Poured (Bentonite chips)

8. PLUGGING RECORD

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

Plugging approved by: _____
State Engineer Representative

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

STATE ENGINEER'S OFFICE
JUL 11 - 8 P 1:22

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File Number: CP-999
Form: wr-20

Trn Number: 415856

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

[illegible]

Do Not Write Below This Line

File Number: CP-999
Form: wr-20

Trn Number: 415856

WLB

File Number: _____
(For OSE Use Only)

**NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD**

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505-394-5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NE 1/4, NE 1/4 SW 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 1.071 s Longitude: 103 d 05 m 3.048 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: CP-998

I. On land owned by (required): Louisiana Energy Services

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon Drilling Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.467.0622
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 12/4/08; Completed: 12/4/08; Type tools: Air-Rotary;
Size of hole: 7-7/8 in.; Total depth of well: 250 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

Do Not Write Below This Line

File Number: CP-998 Trn Number: 418655
Form: wr-20 page 1 of 4

Monitor

21.38.32.322

(12)

File Number: _____
(For OSE Use Only)

**NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD**

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
From	To			
<u>Dry</u>				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
<u>4 PVC</u>	<u>Sch 40</u>	<u>2</u>	<u>+3</u>	<u>250</u>	<u>253</u>	<u>end cap</u>	<u>230</u>	<u>250</u>

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
From	To				
<u>0</u>	<u>20</u>	<u>7-7/8</u>		<u>20 Sacks</u>	<u>Trimie (Bentonite/Cement)</u>
<u>20</u>	<u>206</u>	<u>7-7/8</u>	<u>68</u>		<u>Poured (Bentonite chips)</u>

8. PLUGGING RECORD

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

Plugging approved by: _____
State Engineer Representative

	Depth in Feet		Cubic Feet of Cement
	Top	Bottom	
<u>1</u>			
<u>2</u>			
<u>3</u>			
<u>4</u>			
<u>5</u>			

STATE ENGINEER OFFICE
FORM 1-8 P 1-21

Do Not Write Below This Line

File Number: CP-998
Form: wr-20

page 2 of 4

Trn Number: 418655

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

[illegible]

STATE ENGINEER OFFICE
1211 D-3-55-100

Do Not Write Below This Line .

File Number: CP-998
Form: wr-20

Trn Number: 418655

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

MW-25

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.

Shelby
Driller

12/29/08
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-998
Form: wr-20

Trn Number: 418655

WLB

18

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505-394-5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. SE 1/4 NE 1/4 SW 1/4 Section: 32 Township: 21S Range: 38E N.M.P.M.
in _____ County.

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

C. Latitude: 32 d 26 m 1.0998 s Longitude: 103 d 05 m 1.086 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: CP-997

I. On land owned by (required): Louisiana Energy Services

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon Drilling Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.467.0622
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 12/4/08; Completed: 12/4/08; Type tools: Air-Rotary;
Size of hole: 7-7/8 in.; Total depth of well: 40 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

Do Not Write Below This Line

File Number: CP-997
Form: wr-20

Trn Number: 418654

page 1 of 4

Monitor 21.38.32.324

(R)

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
Dry				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
4 PVC	Sch 40	2	+3	40	43	end cap	25	40

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
From	To				
0	5	7-7/8		20 Sacks	Trimie (Bentonite/Cement)
5	20	7-7/8	5		Poured (Bentonite chips)

8. PLUGGING RECORD

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

Plugging approved by: _____
State Engineer Representative

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

STATE ENGINEER OFFICE
CP-997-6 PD 1-21

Do Not Write Below This Line

File Number: CP-997
Form: wr-20

Trn Number: 418654

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

[illegible]

Do Not Write Below This Line

File Number: CP-947
Form: wr-20

Trn Number: 418654

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

MW-24

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.

She Pie
Driller

12/24/08
(mm/dd/year)

=====

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-997
Form: wr-20

Trn Number: 418654

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Edmire State: NM Zip: 88231

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

A. NW 1/4 SE 1/4 SW 1/4 Section: 32 Township: 21S Range: 38E M.P.M. County: Lea

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

C. Latitude: 32 d 25 m 52.499 s Longitude: 103 d 05 m 7.607 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: CP-956

I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575 Work Phone: 806.467.0607
Name: Talon/LPG Home Phone: 806.676.8220
Agent: Shane Currie
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/28/07; Completed: 4/3/07; Type tools: Air rotary
Size of hole: 7-7/8 in.; Total depth of well: 237 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: DRY ft.

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File Number: CP-956
Form: WR-20

Trn Number: 376956

page 1 of 4

Monitor

21.38.32.341

STATE ENGINEER OFFICE
FOSWELL, NEW MEXICO
21 APR 27 2007

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)
DRY			

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
4	sch 40 PK	2	0 217.1	217.1	N/A	N/A
4	sch 40 PVC	2	217.1 237.1	20	PVC end cap	217.1 237.1

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 15	7-7/8	1	20	tremie - cement / bentonite
	7 7/8	48	N/A	pour - bentonite chips

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		

STATE ENGINEER OFFICE
ROSSELL, NEW MEXICO
2001 APR 27 P 2:05

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File Number: CP-956
Form: wr-20

page 2 of 4

Trn Number: 376956

Monitor

21.38, 32.341

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

[illegible]

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
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File Number: CP-956
Form: wr-20

Trn Number: 376956

page 3 of 4

21.38.32.341

Monitor

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

1. Introduction
 2. Background
 3. Methodology
 4. Results
 5. Discussion
 6. Conclusion
 7. References
 8. Appendix
 9. Index
 10. Glossary
 11. Abbreviations
 12. Footnotes
 13. Tables
 14. Figures
 15. Equations
 16. Formulas
 17. Diagrams
 18. Charts
 19. Graphs
 20. Tables
 21. Figures
 22. Equations
 23. Formulas
 24. Diagrams
 25. Charts
 26. Graphs
 27. Tables
 28. Figures
 29. Equations
 30. Formulas
 31. Diagrams
 32. Charts
 33. Graphs
 34. Tables
 35. Figures
 36. Equations
 37. Formulas
 38. Diagrams
 39. Charts
 40. Graphs
 41. Tables
 42. Figures
 43. Equations
 44. Formulas
 45. Diagrams
 46. Charts
 47. Graphs
 48. Tables
 49. Figures
 50. Equations
 51. Formulas
 52. Diagrams
 53. Charts
 54. Graphs
 55. Tables
 56. Figures
 57. Equations
 58. Formulas
 59. Diagrams
 60. Charts
 61. Graphs
 62. Tables
 63. Figures
 64. Equations
 65. Formulas
 66. Diagrams
 67. Charts
 68. Graphs
 69. Tables
 70. Figures
 71. Equations
 72. Formulas
 73. Diagrams
 74. Charts
 75. Graphs
 76. Tables
 77. Figures
 78. Equations
 79. Formulas
 80. Diagrams
 81. Charts
 82. Graphs
 83. Tables
 84. Figures
 85. Equations
 86. Formulas
 87. Diagrams
 88. Charts
 89. Graphs
 90. Tables
 91. Figures
 92. Equations
 93. Formulas
 94. Diagrams
 95. Charts
 96. Graphs
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 98. Figures
 99. Equations
 100. Formulas
 101. Diagrams
 102. Charts
 103. Graphs
 104. Tables
 105. Figures
 106. Equations
 107. Formulas
 108. Diagrams
 109. Charts
 110. Graphs
 111. Tables
 112. Figures
 113. Equations
 114. Formulas
 115. Diagrams
 116. Charts
 117. Graphs
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 120. Equations
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 122. Diagrams
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 124. Graphs
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 127. Equations
 128. Formulas
 129. Diagrams
 130. Charts
 131. Graphs
 132. Tables
 133. Figures
 134. Equations
 135. Formulas
 136. Diagrams
 137. Charts
 138. Graphs
 139. Tables
 140. Figures
 141. Equations
 142. Formulas
 143. Diagrams
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 145. Graphs
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 148. Equations
 149. Formulas
 150. Diagrams
 151. Charts
 152. Graphs
 153. Tables
 154. Figures
 155. Equations
 156. Formulas
 157. Diagrams
 158. Charts
 159. Graphs
 160. Tables
 161. Figures
 162. Equations
 163. Formulas
 164. Diagrams
 165. Charts
 166. Graphs
 167. Tables
 168. Figures
 169. Equations
 170. Formulas
 171. Diagrams
 172. Charts
 173. Graphs
 174. Tables
 175. Figures
 176. Equations
 177. Formulas
 178. Diagrams
 179. Charts
 180. Graphs
 181. Tables
 182. Figures
 183. Equations
 184. Formulas
 185. Diagrams
 186. Charts
 187. Graphs
 188. Tables
 189. Figures
 190. Equations
 191. Formulas
 192. Diagrams
 193. Charts
 194. Graphs
 195. Tables
 196. Figures
 197. Equations
 198. Formulas
 199. Diagrams
 200. Charts
 201. Graphs
 202. Tables
 203. Figures
 204. Equations
 205. Formulas
 206. Diagrams
 207. Charts
 208. Graphs
 209. Tables
 210. Figures
 211. Equations
 212. Formulas
 213. Diagrams
 214. Charts
 215. Graphs
 216. Tables
 217. Figures
 218. Equations
 219. Formulas
 220. Diagrams
 221. Charts
 222. Graphs
 223. Tables
 224. Figures
 225. Equations
 226. Formulas
 227. Diagrams
 228. Charts
 229. Graphs
 230. Tables
 231. Figures
 232. Equations
 233. Formulas
 234. Diagrams
 235. Charts
 236. Graphs
 237. Tables
 238. Figures
 239. Equations
 240. Formulas
 241. Diagrams
 242. Charts
 243. Graphs
 244. Tables
 245. Figures
 246. Equations
 247. Formulas
 248. Diagrams
 249. Charts
 250. Graphs
 251. Tables
 252.

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.

Steve Cline
Driller

04/24/07
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

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File Number: CP-956
Form: wf-20

Trn Number: 376956

page 4 of 4

Mexitar

21.38.32.341

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
1971 APR 27 2 2:05

WLB

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NE 1/4 NE 1/4 SE 1/4 Section: 32 Township: 21S Range: 38E 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 26 m 5.327 s Longitude: 103 d 04 m 26.985 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: CP-946
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575 Name: Talon/LPE Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.476.8220
Mailing Address: 921 Al. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/16/07; Completed: 4/03/07; Type tools: Air Rotary;
Size of hole: 7-1/8 in.; Total depth of well: 225.8 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: 220.49 ft.

STATE ENGINEER OFFICE
ROSEBELL, NEW MEXICO
2007 APR 27

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File Number: CP-946
Form: wr-20

Trn Number: 376

Monitor

21.38.32.422

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)
220.49 225.8	5.31	claystone	0-1

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
4	sch 40 PVC	2	0 205.8	205.8	N/A	N/A
4	sch 40 PVC	2	205.8 225.8	20	PVC end cap	205.8 225.8

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0 15	1-7/8	1	20	tremie - bentonite / cement
15 200	1-7/8	48	N/A	lowered - bentonite pellets

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		

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2001 APR 27 P 2:00

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File Number: CP-946
Form: wr-20

page 2 of 4

Trn Number: 376944

Monitor

21.38.32.422

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

1. The first step in the process of creating a new product is to identify a market need. This involves conducting market research to understand the preferences and behaviors of potential customers. Once a need is identified, the next step is to develop a concept that addresses this need. This concept should be unique and offer a clear value proposition to the target market.

2. After developing a concept, the next step is to create a prototype. A prototype is a preliminary model of the product that allows the development team to test and refine the design. This step is crucial for identifying any flaws or improvements needed before moving forward with full-scale production.

3. Once a prototype is ready, the next step is to conduct a feasibility study. This study evaluates the technical, financial, and operational aspects of the product. It helps to determine if the product is viable and if the resources required for its development and production are within the company's capabilities.

4. Following the feasibility study, the next step is to develop a business plan. The business plan outlines the company's strategy for marketing, sales, and distribution of the product. It also includes financial projections and a timeline for the product's development and launch.

5. The final step in the process is to launch the product. This involves manufacturing the product, distributing it to the market, and implementing the marketing and sales strategies outlined in the business plan. Continuous monitoring and feedback from customers are essential to ensure the product's success and to make any necessary adjustments.

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.

Jim Cline
Driller

04/24/07
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

STATE ENGINEER OFFICE
ROSARITO, NEW MEXICO
2001 APR 27 P 2:00

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File Number: CP-946
Form: wf-20

Trn Number: 376944

page 4 of 4

21.38.32.422

Monitor

WLB

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505-394-5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. SE 1/4 SE 1/4 SE 1/4 Section: 32 Township: 21S Range: 38E 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 25 m 46.745 s Longitude: 103 d 4 m 31.815 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: CP-945
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon/LPE Work Phone: 806-467-0607
Agent: Shane Currie Home Phone: 806-676-8220
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/14/07; Completed: 4/3/07; Type tools: Air Reamer
Size of hole: 7 7/8 in.; Total depth of well: 241.2 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: 225 ft.

STATE ENGINEER OFFICE
ROSARITO, NEW MEXICO
MAIL ROOM 27 D 1:59

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File Number: CP-945 Trn Number: 376887
Form: wr-20 page 1 of 4

Monitor 21.38.32.444

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)
			DRY	

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
4	sch 40 PVC	2	0	221.2	221.2	N/A	N/A	
4	sch 40 PVC	2	221.2	241.2	20	PVC end cap	221.2	241.2

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From	To	Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0	75	7-7/8	1	20	tremie - bentonite/cement
75	215	7-7/8	48	N/A	poured - bentonite chips

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				

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2001 APR 27 0 1:57

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File Number: CP-945
Form: wr-20

Trn Number: 376887

Monitor

21.38.32.444

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

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File Number: CP-945
Form: wr-20

Trn Number: 376887

page 3 of 4

Monitor

21.38.32.444

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
APR 27 PM 4:59

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

10

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.

Joe Cline
Driller

04/24/2007
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

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File Number: CP-945
Form: wr-20

Trn Number: 3768870

page 4 of 4

Monitor

21.38.32.444

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2001 APR 27 PM 1:50

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Louisiana Energy Services Work Phone: 505.394.5204
Contact: Laurie Wetherell Home Phone: _____
Address: P.O. Box 1789
City: Eunice State: NM Zip: 88231

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

A. NW 1/4 SW 1/4 SE 1/4 Section: 32 Township: 21S Range: 38E 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 25 m 50.439 s Longitude: 103 d 04 m 52.941 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: CP-957
I. On land owned by (required): Lea County, NM

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon LPE Work Phone: 806.467.0607
Agent: Shane Currie Home Phone: 806.676.8220
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 3/20/07; Completed: 4/3/07; Type tools: Air Rotary;
Size of hole: 7-7/8 in.; Total depth of well: 231.4 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: DRY ft.

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File Number: CP-957
Form: WR-20

page 1 of 4

Trn Number: 376957

Monitor

21.38.32.431

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
7001 APR 2 2 00

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness	Description of	Estimated Yield
From	To	in feet	water-bearing formation	(GPM)
<u>DRY</u>				

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
<u>4</u>	<u>Sch 40 PVC</u>	<u>2</u>	<u>0</u>	<u>211.4</u>	<u>211.4</u>	<u>N/A</u>	<u>N/A</u>	
<u>4</u>	<u>Sch 40 PVC</u>	<u>2</u>	<u>211.4</u>	<u>231.4</u>	<u>20</u>	<u>PVC and cap</u>	<u>211.4</u>	<u>231.4</u>

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
From	To				
<u>0</u>	<u>15</u>	<u>7-7/8</u>	<u>1</u>	<u>20</u>	<u>tremie - cement/bentonite</u>
<u>15</u>	<u>205</u>	<u>7-7/8</u>	<u>48</u>		<u>poured - bentonite chips</u>

8. PLUGGING RECORD

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

Plugging approved by: _____
State Engineer Representative

No.	Depth in Feet	Cubic Feet of Cement
	Top Bottom	
<u>1</u>		
<u>2</u>		
<u>3</u>		
<u>4</u>		
<u>5</u>		

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
JUN 1973 21 10 2 AM

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Monitor

21.38.32.431

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

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File Number: CP-457
Form: wr-20

Trn Number: 3764579

page 3 of 4

Monitor

21.38.32.431

STATE ENGINEER OFFICE
POSTELL, NEW MEXICO
JUN 27 1961
57

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

1. The first step in the process of creating a new product is to identify a market need. This involves conducting market research to understand the target audience and their requirements.

2. Once a market need is identified, the next step is to develop a concept. This involves brainstorming ideas and creating a prototype to visualize the product.

3. The third step is to conduct a feasibility study. This involves evaluating the technical, financial, and market viability of the product concept.

4. After the feasibility study, the next step is to develop a business plan. This involves outlining the marketing, sales, and financial strategies for the product.

5. The final step is to launch the product. This involves manufacturing the product, distributing it, and promoting it to the target market.

Steve Cline
Driller

4/24/2007
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

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Trn Number: 376957

page 4 of 4

21. 38. 32, 431

Monitor

STATE ENGINEER OFFICE
DOWNSWELL, NEW MEXICO
1991 APR 27 10 20

WLB

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Waste Control Specialists, LLC Work Phone: 888-789-2183
Contact: Mike Burney Home Phone: 505-394-4300
Address: 9998 W. Highway 176
City: Andrews State: TX Zip: 79714

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

A. NE 1/4 NE 1/4 NW 1/4 Section: 33 Township: 21 S Range: 38 E N.M.P.M.
in _____ County.
B. X = _____ feet, Y = _____ feet, N.M. Coordinate System
Zone in the _____ Grant.
U.S.G.S. Quad Map _____
C. Latitude: 32 d 26 m 29 s Longitude: 103 d 03 m 58 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 _____
Subdivision recorded in _____ County
G. Other: _____
H. Give State Engineer File Number if existing well: CP-979
I. On land owned by (required): Waste Control Specialists, LLC

STATE ENGINEER OFFICE
NEW MEXICO
2008 APR - 6
33

3. DRILLING CONTRACTOR

License Number: 1575
Name: Talon Drilling, L.P. Work Phone: 806-467-0607
Agent: Shane Currie Home Phone: 806-676-8220
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 2/20/08; Completed: 2/20/08; Type tools: Air Rotary Rig
Size of hole: 5 5/8 in.; Total depth of well: 28 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

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File Number: CP-979 Trn Number: 399475
Form: WR-20 page 1 of 4

Monitor

21.38.33.122

126

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)
			Dry	

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	5440 Pw	2	0	28	28	Pvc end cap	13	28

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet From To		Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
0	5	5-5/8	20		trcmie - bentonite/cement
5	10	5-5/8	2		poured - bentonite chips

8. PLUGGING RECORD

Plugging Contractor: _____
Address: _____
Plugging Method: _____
Date Well Plugged: _____
Plugging approved by: _____
State Engineer Representative

STATE ENGINEER OFFICE
SANTA FE, NEW MEXICO
2000 NMT-6 A 11-33

No.	Depth in Feet Top Bottom	Cubic Feet of Cement
1		
2		
3		
4		
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File Number: CP-979
Form: wr-20

Trn Number: _____
page 2 of 4

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. LOG OF HOLE

[illegible]

STATE ENGINEER OFFICE
TOSCANI, MEXICO
2008 MAR -6 A 11.33

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File Number: CP-979
Form: wr-20

Trn Number:

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

STATE EGIS/IN
RDSW/11/11
2000 MAF -b

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.

Johnnie
Driller

03/03/2008
(mm/dd/year)

2000 MAR -6 A 0333

FOR STATE ENGINEER USE ONLY

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

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File Number: CP-979
Form: wr-20

Trn Number:

OSE FILE NUMBER _____
For OSE Use Only _____

**NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD and DRILLING LOG**

1. PERMIT HOLDER(S)

Name: WASTE CONTROL SPECIALISTS
Address: P.O. BOX 1129
City: ANDREWS
State: TX Zip: 79714
Phone: (505) 394-4300
Contact: MICHAEL BURNEY
Contact Phone: (505) 394-4300

Name: _____
Address: _____
City: _____
State: _____ Zip: _____
Phone: _____

2. STATE ENGINEER REFERENCE NUMBERS:

File # CP 975 EXPLORE , Well # C.P. 975

3. LOCATION OF WELL (The Datum Is Assumed To Be WGS 84 Unless Otherwise Specified)

Latitude: 32 Deg 25 Min 45.8 Sec
Longitude: 103 Deg 04 Min 20.4 Sec
(Enter Lat/Long To At Least 1/10th Of A Second)

Datum If Not WGS 84: _____

4. DRILLING CONTRACTOR

License Number: WD1184
Name: WEST TEXAS WATER WELL SERVICE Work Phone: (432) 530-2696
Drill Rig Serial Number: 261602

List The Name Of Each Drill Rig Supervisor That Managed On-Site Operations During The Drilling Process:

RONNY KEITH

5. DRILLING RECORD

Drilling Began: 1-21-08 ; Completed: 4-29-08 ; Drilling Method MUD ROTARY
Diameter Of Bore Hole: 7-7/8 (in);
Total Depth Of Well: 2,020 (ft);
Completed Well Is (Circle One): Shallow Artesian;
Depth To Water First Encountered: 1,092 (ft);
Depth To Water Upon Completion Of Well: N/A (ft).

STATE ENGINEER OFFICE
MAY 11 11 11 AM '08
D 2

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TRN Number: 396028 File Number: CP-975
Form: wr-20 May 07

OSE FILE NUMBER _____
For OSE Use Only _____

**NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD and DRILLING LOG**

6. RECORD OF CASING

Diameter (inches)	Pounds (per ft.)	Threads (per inch)	Depth (feet)	Length Top to Bottom (feet)	Type of Shoe	Perforations (from to)
13-3/8	48	8	2' AGL	40'		
8-5/8	24	8	3' AGL	1,440'	FLOAT GUIDE	

7. RECORD OF MUDDING AND CEMENTING

Depth (feet)	Hole (diameter)	Mud Used (# of sacks)	Cement (cubic feet)	Method of Placement
0 - 40	17-1/2		35	TRIMMIE
0 - 1,440	12-1/4		574	POSITIVE
1,380-2,020	7-7/8		275	TRIMMIE

STATE ENGINEER OFFICE
NEW MEXICO
20 MAY 11 P 2:05

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Trn Number: _____
Form: wr-20 May 07

File Number: _____

CP-975 Geologic log

- 0-6 ft 6 pad fill and fine brown sand
- 6-10 ft 4 white sandy limestone (Mescalero caliche) *Dyalis*
- 10-29 ft 17 sand, light brown, and brown calcareous sandstone (Gatuña Formation) *7, 090 ft*
- 29-576 ft 547 interbedded sandstone, siltstone, and claystone; reddish-brown to gray; bioturbated (Cooper Canyon Formation)
- 576-708 ft 132 sandstone and siltstone, gray to reddish brown (Trujillo Formation)
- 708-1092 ft 384 interbedded very fine sandstone and siltstone, gray to dark reddish brown (Tecovas Formation) *Wacke*
- 1092-1384 ft 292 gray, fine sandstone with interbedded reddish brown and weak red siltstone and claystone (Santa Rosa Formation)
- 1384-1566 ft 182 reddish brown, very fine sandstone and siltstone, with some fibrous gypsum in lower part (Dewey Lake Formation)
- 1566-1602 ft 34 gray anhydrite beds, with intermediate reddish-brown and gray siltstone (Forty-niner Member of the Rustler Formation)
- 1602-1609 ft 7 gray anhydrite and wavy thin laminae of dolomite (Magenta Dolomite Member of the Rustler Formation)
- 1609-1736 ft 127 gray anhydrite beds, with intermediate halite including anhydrite and polyhalite (Tamarisk Member of the Rustler Formation)
- 1736-1807 ft 71 halite with thin two thin anhydrite beds and basal reddish-brown, very fine sandstone (Los Medaños Member of the Rustler Formation)
- 1807-2020 ft 213 halite with anhydrite/polyhalitic marker beds (MB103 and uppermost MB109) (Salado Formation)

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2000 MAY 14 P 2:06

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

9. ADDITIONAL STATEMENTS OR EXPLANATIONS:

[illegible]

2004年4月20日

STATE ENGINEER OFFICE
 1000 WEST 10TH AVENUE
 DENVER, COLORADO 80202

The undersigned hereby certifies that, to the best of his or her knowledge and belief, the foregoing is a true and correct record of the above described bore hole. The undersigned further certifies that he or she will file this well record with the Office Of The State Engineer and permit holder within 20 days after completion of the well drilling.

Tommy Keith
Driller

Driller

05-12-08

(mm/dd/year)

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Trn Number: _____
Form wr-20 May 07

page 4 of 4

File Number:

File Number: _____
 For OS Only

**NEW MEXICO OFFICE OF THE STATE ENGINEER
 APPLICATION FOR PERMIT
 TO DRILL AN EXPLORATORY WELL**

2-24674
13202

1. APPLICANT:

Name: Waste Control Specialists LLC Work Phone: 888-789-2783
 Contact: Mike Burney Home Phone: 505-394-4300
 Address: 9998 W. Highway 176
 City: Andrews State: TX Zip: 79714

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

A. NE 1/4 NW 1/4 NW 1/4 Section: 33 Township: 21S Range: 38E 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 26 m 30.145 s Longitude: 103 d 04 m 10.962 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 of existing well: _____
 I. On land owned by (required): Waste Control Specialists LLC

3. WELL INFORMATION:

Approximate depth 75 feet; Outside diameter of casing 2 inches.
 Name of well driller and driller license number Jose Salas/#1575

4. ADDITIONAL STATEMENT OR EXPLANATIONS:

This piezometer (TP- 63) is being installed to determine the presence or absence of shallow groundwater in the Ogallala/Antlers/Gatuna formations on top of the Triassic Dockum group "red bed clays" in support of licensing activities by Waste Control Specialists LLC. No pumping or use of groundwater is intended; the piezometer is being installed solely to monitor groundwater levels, if any.

RENAMED " PZ - 41 "

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File Number: CP-972
 Form: wr-07

Trn Number: 395941

STATE ENGINEER OFFICE
 ROSWELL, NEW MEXICO
 2007 DEC 31 A 9 53
 2008 FEB 29
 STATE ENGINEER OFFICE
 ROSWELL, NEW MEXICO
 11-31

NEW MEXICO OFFICE OF THE STATE ENGINEER
APPLICATION FOR PERMIT
TO DRILL AN EXPLORATORY WELL

ACKNOWLEDGEMENT

I, We) Mike Burney affirm that the
(Please Print)
foregoing statements are true to the best of my knowledge and belief.

Michael R.
Applicant Signature

Applicant Signature

ACTION OF STATE ENGINEER

This application is approved ~~XXXXXXXXXXXXXXXXXXXX~~ provided it is not
exercised to the detriment of any others having existing rights, and is not
contrary to the conservation of water in New Mexico nor detrimental to the
public welfare, and further subject to the following conditions:

see attached conditions of approval

Witness my hand and seal this 2nd day of January, 20 08

John R. D'Antonio, Jr., P.E., State Engineer

By: Kenneth M. Fresquez
Kenneth M. Fresquez, Acting District 10 Supervisor

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2001 DEC 31 A 9:53

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File Number: CP-972
Form: wr-07

Trn Number: 395941

WL 15
WLB

26

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

1. OWNER OF WELL

Name: Waste Control Specialists Work Phone: 888-789-2783
Contact: Mike Burney Home Phone: 505-394-4300
Address: 9998 W. Highway 176
City: Andrews State: TX Zip: 79714

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

A. NE 1/4 NW 1/4 NW 1/4 Section: 33 Township: 21S Range: 38E N.M.P.M.
in _____ County.

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

C. Latitude: 32 d 26 m 29 s Longitude: 103 d 04 m 13 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: CP-972

I. On land owned by (required): Waste Control Specialists

3. DRILLING CONTRACTOR

License Number: 1575 Work Phone: 806-467-0607
Name: Talon Drilling, L.P. Home Phone: 806-676-8220
Agent: Shane Currie
Mailing Address: 921 N. Bivins
City: Amarillo State: TX Zip: 79107

4. DRILLING RECORD

Drilling began: 1/21/08; Completed: 2/9/08; Type tools: Air Rotary Rig
Size of hole: 5-5/8 in.; Total depth of well: 49 ft.;
Completed well is: Monitor (shallow, artesian);
Depth to water upon completion of well: Dry ft.

Do Not Write Below This Line

File Number: CP-972
Form: wr-20

Trn Number: 395941

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21.38.33.112

12

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

5. PRINCIPAL WATER-BEARING STRATA

Depth in Feet		Thickness in feet	Description of water-bearing formation	Estimated Yield (GPM)
From	To			
			Dry	

6. RECORD OF CASING

Diameter (inches)	Pounds per ft.	Threads per in.	Depth in Feet		Length (feet)	Type of Shoe	Perforations	
			Top	Bottom			From	To
2	Sch 40 PVL	2	0	37	37	N/A	N/A	
2	Sch 40 PVL	2	37	49	12	PVC end cap	37	49

7. RECORD OF MUDDING AND CEMENTING

Depth in Feet		Hole Diameter	Sacks of mud	Cubic Feet of Cement	Method of Placement
From	To				
0	5	5 - 5/8	20		tremie - bentonite/cement
5	35	5 - 5/8	6		poured - bentonite chips

8. PLUGGING RECORD

Plugging Contractor: _____

Address: _____

Plugging Method: _____

Date Well Plugged: _____

Plugging approved by: _____

State Engineer Representative

STATE ENGINEER OFFICE
FEB 29 A 11:31

	Depth in Feet		Cubic Feet of Cement
	Top	Bottom	
1			
2			
3			
4			
5			

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File Number: CP-972
Form: wr-20

page 2 of 4

Trn Number: 375941

21,38,33,112

Mexico

File Number: _____
(For OSE Use Only)

NEW MEXICO OFFICE OF THE STATE ENGINEER
WELL RECORD

10. ADDITIONAL STATEMENTS OR EXPLANATIONS:

STATE EMPLOYMENT
DISTRICT
2000 FEB 29 A 11 31

STATE ENGINEER OFFICE
608 S. 11th Ave. NEW MEXICO
2008 FEB 29 A 11 31

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.

She Lie
Driller

02/26/2008
(mm/dd/year)

FOR STATE ENGINEER USE ONLY

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

Do Not Write Below This Line

File Number: CP-972
Form: wr-20

Trn Number: 395941

page 4 of 4

21,38.33,11Z

Monitor



STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
ROSWELL

John R. D'Antonio, Jr., P.E.
State Engineer

1900 WEST SECOND STREET
ROSWELL, NM 88201
Phone: (575) 622-6521
Fax: (575) 623-8559

January 3, 2008

Waste Control Specialists LLC
% Mike Burney
9998 W. Hwy 176
Andrews, TX 79714

RE: CP-971; CP-972; CP-973; CP-974

Greetings:

Enclosed is your copy of the Exploratory / Monitoring Permits, which have been approved subject to the conditions set forth on the approval page thereof.

In accordance with Condition C, a well record shall be filed in this office twenty days after completion of drilling. The well record is proof of completion of well. IT IS YOUR RESPONSIBILITY TO ASSURE THAT THE WELL LOGS BE FILED WITHIN 20 DAYS OF DRILLING OF THE WELLS.

These permits will expire on or before 01/31/09 unless the wells have been drilled and the well logs filed in this office.

Sincerely,

AM
for
Andy Morley
(575) 622-6521, ext 113

Enclosure

cc: Santa Fe Office

STATE ENGINEER OFFICE
ROSWELL, NEW MEXICO
2008 FEB 29 A 11.31

**NEW MEXICO STATE ENGINEER
PERMIT TO EXPLORE / MONITOR**

SPECIFIC CONDITIONS OF APPROVAL

- 4 No water shall be appropriated and beneficially used under this permit.
- B The well shall be drilled by a driller licensed in the State of New Mexico in accordance with Section 72-12-12 New Mexico Statutes Annotated.
- C Driller's well record must be filed with the State Engineer within 20 days after the well is drilled or driven. Well record forms will be provided by the State Engineer upon request.
- C2 No water shall be diverted from this well except for testing purposes which shall not exceed ten (10) cumulative days, and well shall be plugged or capped on or before 01/31/09, unless a permit to use water from this well is acquired from the Office of the State Engineer.

The well shall be constructed, maintained and operated that each water shall be confined to the aquifer in which it is encountered.

LOG The Point of Diversion CP-972 Monitor Well must be completed and the Well Log filed on or before 01/31/09.

ACTION OF STATE ENGINEER

Notice of Intention Rcvd:		Date Rcvd. Corrected:
Formal Application Rcvd:	12/31/07	Pub. Of Notice Ordered:
Date Returned - Correction:		Affidavit of Pub. Filed:

This application is approved provided it is not exercised to the detriment of any others having existing rights, and is not contrary to the conservation of water in New Mexico nor detrimental to the public welfare of the state; and further subject to the specific conditions listed previously.

Witness my hand and seal this 2nd day of January, 2008.

John R. D'Antonio, Jr., P.E., State Engineer

By: Kenneth M. Fresquez
Kenneth M. Fresquez, Acting District II Supervisor

STATE ENGINEER OFFICE
NEW MEXICO
2008 FEB 29 A 11:31

WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 • INDIANA (219) 923-9609				LOG OF SOIL BORING NO. <u>B-101</u> FILE # <u>95042.10</u> SHEET 1 OF 1					
WATER LEVEL DATA NE = Not Encountered		Started <u>11/22/97</u> Completed <u>11/22/97</u> Driller <u>Allan Eades</u> Helper <u>Freddy</u> Drilling Method <u>Air Rotary</u> Sampling Method <u>Drill Cuttings</u>		LOCATION <u>Proposed Lea County Landfill</u> <u>Eunice, New Mexico</u> CLIENT <u>Camino Real Landfill</u> <u>Sunland Park, New Mexico</u>					
NE FT. W.D.		NE FT. AT COMPLETION							
FT. AT HR. A.D.		FT. AT HR. A.D.							
GROUND ELEVATION: 3408.62 (FT., MSL)		Northing: 9800.52 Easting: 9899.97		Completion Depth: 50.0		SAMPLE DATA			
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG		Strata Depth (FT., bgs)	Calcareous	Moisture	Munsell	Notes	Depth (FT., bgs)
5.0		Dark reddish-brown, fine SAND, some roots, no organics		2.0	No	Dry	7.5YR 5/6		5.0
		Reddish-brown, sandy LOAM to poorly cemented loamy SAND, blocky, friable		6.0	No	Dry	7.5YR 6/6		
10.0		Pinkish-white, sandy CALICHE, moderately weak structure, friable nodules of caliche		12.0	Moderate	Dry	2.5YR 8/2		10.0
15.0		Reddish-brown, loamy fine SAND with moist friable sandy nodules, very few calcareous nodules		21.0					15.0
20.0									20.0
25.0		Light red to pink, calcareous pebbly SAND, pebbles are dominantly quartzite, some rose color banded gniess, little chert, angular. Pebbles increase with depth		34.0	Moderate	Dry	2.5YR 7/6		25.0
30.0				36.0	Moderate	Dry	5YR 7/4		30.0
35.0		Pink, sandy, pebbly fine GRAVEL, dominantly quartzite, well graded, angular			Slight	Dry	2.5YR 7/3		35.0
40.0		Reddish-brown MUDSTONE/CLAYSTONE, sandy, dry, blocky cuttings, some chert pebbles and calcareous clasts, poorly indurated			Slight	Barely Damp	2.5YR 4/6		40.0
45.0									45.0
50.0		BORING TERMINATED AT 50.0'		50.0					50.0
NOTES: 1. Dry monitoring well installed in borehole. 2. Drilling Company: Eades Drilling and Pump Service.				LEGEND W.D. - WHILE DRILLING A.D. - AFTER DRILLING H - HOUR(S) AFTER DRILLING					

W B C WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-102</u> FILE # <u>95042.10</u> SHEET 1 OF 1						
WATER LEVEL DATA NE = Not Encountered NE FT. W.D. _____ NE FT. AT _____ COMPLETION _____ _____ FT. AT _____ HR. A.D. _____ _____ FT. AT _____ HR. A.D. _____		Started <u>11/20/97</u> Completed <u>11/20/97</u> Driller <u>Allan Eades</u> Helper <u>Freddy</u> Drilling Method <u>Air Rotary</u> Sampling Method <u>Drill Cuttings</u>						
		LOCATION <u>Proposed Lea County Landfill</u> <u>Eunice, New Mexico</u> CLIENT <u>Camino Real Landfill</u> <u>Sunland Park, New Mexico</u>						
GROUND ELEVATION: <u>3,392.63 (FT., MSL)</u> Northings: <u>8467.05</u> Eastings: <u>7193.22</u>		Completion Depth: <u>50.0</u>						
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	Calcareous	Moisture	Munsell	Notes	Depth (FT., bgs)
5.0		Brown, fine to medium SAND with caliche grains, granular structure, some roots, no organics	7.0	No Minor	Dry	7.5YR 4/6 7.5YR 5/6		5.0
10.0		Brownish-white calcareous fine SAND, some calcareous cement sand nodules, not as floury as other caliche, gritty, abundant coarse sand and chert when wetted	10.0	Yes	Dry	7.5YR 7/3		10.0
15.0		Pinkish-white sandy CALICHE, many pebbles of hard angular cherty fine sandstone (not friable)	16.0	Yes	Dry	7.5YR 7/3		15.0
20.0		Pink, fine to medium SAND, calcareous very small nodules of caliche and cemented sandstone	21.0	Yes	Dry	2.5YR 7/3		20.0
25.0		White sandy CALICHE with calcareous sand matrix and abundant chert clasts. Clasts are angular, coarse gravel size, brown, white and black, some quartzite	26.0	Yes	Dry	2.5YR 8/2		25.0
30.0		Rose and white PEBBLES, with very little sand, dominantly hard, very angular quartzite. White pebbles are hard limestone with quartzite grains	33.0	Yes	Barely Damp	2.5YR 6/4		30.0
35.0		Reddish-brown MUDSTONE/CLAYSTONE, slicky, occasionally sandy, micaceous clasts infrequently, poorly indurated	36.0					35.0
40.0				Yes	Barely Damp	2.5YR 4/4		40.0
45.0								45.0
50.0		BORING TERMINATED AT 50.0'	50.0	Yes	Barely Damp	2.5YR 4/6		50.0

NOTES:

1. Dry monitoring well installed in borehole.
2. Drilling Company: Eades Drilling and Pump Service.

LEGEND

W.D. - WHILE DRILLING A.D. - AFTER DRILLING H - HOUR(S) AFTER DRILLING

W B C WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 • • INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-103 FILE # <u>95042.10</u> SHEET 1 OF 1						
WATER LEVEL DATA NE = Not Encountered NE FT. W.D. NE FT. AT COMPLETION FT. AT HR. A.D. FT. AT HR. A.D.		Started <u>11/21/97</u> Completed <u>11/21/97</u> Driller <u>Allan Eades</u> Helper <u>Freddy</u> Drilling Method <u>Air Rotary</u> Sampling Method <u>Drill Cuttings</u>						
		LOCATION <u>Proposed Lea County Landfill</u> CLIENT <u>Funice, New Mexico</u> <u>Camino Real Landfill</u> <u>Sunland Park, New Mexico</u>						
GROUND ELEVATION: 3,402.54 (FL., MSL) Northings: 9711.58 Eastings: 8682.07		Completion Depth: 55.0 SAMPLE DATA						
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	Calcareous	Moisture	Munsell	Notes	Depth (FT., bgs)
5.0		Reddish-brown, sandy LOAM to poorly cemented loamy SAND, blocky, friable	6.0	No	Dry	7.5YR 4/6		5.0
10.0		Pinkish-white, sandy CALICHE, moderately weak structure, friable nodules of caliche	14.0	No	Barely Damp	7.5YR 5/6		10.0
15.0		Reddish-brown, loamy fine SAND with moist friable sandy nodules, very few calcareous nodules	26.0	Yes	Dry	7.5YR 8/4		15.0
20.0		Light red to pink, calcareous pebbly SAND, pebbles are dominantly quartzite, some rose color banded gneiss, little chert, angular. Pebbles increase with depth	33.0	Yes	Dry	7.5YR 7/3		20.0
25.0		Rose and white PEBBLES, with very little sand, dominantly hard, very angular quartzite. White pebbles are hard limestone with quartzite grains	36.0	Yes	Dry	2.5YR 8/2		25.0
30.0		Reddish-brown MUDSTONE/CLAYSTONE, slicky, occasionally sandy, micaceous clasts infrequently, poorly indurated		Yes	Barely Damp	2.5YR 4/4		30.0
35.0				Slight	Barely Damp	2.5YR 4/4		35.0
40.0								40.0
45.0								45.0
50.0								50.0
55.0		BORING TERMINATED AT 55.0'	55.0	No	Barely Damp	2.5YR 4/6		55.0

NOTES:

- Boring grouted after completion with 95% portland cement and 5% bentonite.
- Drilling Company: Eades Drilling and Pump Service.

LEGEND

W.D. - WHILE DRILLING A.D. - AFTER DRILLING HOURS AFTER DRILLING

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL. 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-104					
WATER LEVEL DATA NE = Not Encountered		Started 11/21/97 Completed 11/21/97 Driller Allan Bades Helper Freddy Drilling Method Air Rotary Sampling Method Drill Cuttings		FILE # 95042.10 SHEET 1 OF 1					
NE FT. W.D. NE FT. AT COMPLETION FT. AT HR. A.D. FT. AT HR. A.D.				LOCATION Proposed Lea County Landfill Eunice, New Mexico CLIENT Camino Real Landfill Sunland Park, New Mexico					
GROUND ELEVATION: 3,404.38 (FL., MSL)		Northing: 8518.93 Easting: 9678.16		Completion Depth: 60.0					
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG		Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)
					Calcareous	Moisture	Munsell	Notes	
5.0		Dark reddish-brown, fine SAND, some roots, no organics		3.0	Slight	Barely Damp	7.5YR 5/4	Pitcher Bell Sample obtained at 60.0'	
		Reddish-brown, sandy LOAM to poorly cemented loamy SAND, blocky, friable		6.0	Slight	Dry	7.5YR 6/4		
10.0		Pinkish-white, sandy CALICHE, moderately weak structure, friable nodules of caliche			Moderate	Dry	2.5YR 8/4		
15.0									
20.0				21.0					
25.0		Light red to pink, calcareous pebbly SAND, pebble are dominantly quartzite, some rose color banded gniess, little chert, angular. Pebbles increase with depth			Moderate	Dry	2.5YR 8/2		
30.0									
35.0									
40.0		Very light brown medium GRAVEL with calcareous sand matrix, gravel is brown when wet, very cherry, angular, white and brown chert, some quartzite		40.0	Moderate	Dry	2.5YR 8/2		
45.0		White to light brown pebbly coarse GRAVEL with some fine calcareous sand matrix. Pebbles are less angular, mostly chert but also gniess and quartzite		44.0					
50.0		Reddish-brown MUDSTONE/CLAYSTONE, sandy, dry, poorly indurated, cuttings are blocky, some chert pebbles and white calcareous clasts		46.0	Moderate	Dry	2.5YR 7/4		
55.0					Moderate	Dry	2.5YR 4/6		
60.0		BORING TERMINATED AT 60.0'		60.0	Slight	Barely Damp	2.5YR 5/6		
					Slight	Barely Damp	2.5YR 4/4		

NOTES:
1. Boring grouted after completion with 95% portland cement and 5% bentonite.
2. Drilling Company: Bades Drilling and Pump Service.

LEGEND
W.D. - WHILE DRILLING A.D. - AFTER DRILLING H - HOUR(S) AFTER DRILLING

W B C WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 ** INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-105 FILE # <u>95042.10</u> SHEET 1 OF 1					
WATER LEVEL DATA NE = Not Encountered NE FT. W.D. _____ NE FT. AT COMPLETION _____ FT. AT _____ HR. A.D. _____ FT. AT _____ HR. A.D. _____		Started <u>11/19/97</u> Completed <u>11/19/97</u> Driller <u>Allan Eades</u> Helper <u>Freddy</u> Drilling Method <u>Air Rotary</u> Sampling Method <u>Drill Cuttings</u>					
LOCATION <u>Proposed Lea County Landfill</u> <u>Elunice, New Mexico</u> CLIENT <u>Camino Real Landfill</u> <u>Sunland Park, New Mexico</u>							
GROUND ELEVATION: <u>3,388.07 (FT., MSL)</u>		Northing: <u>6609.23</u> Easting: <u>7335.60</u>					
Completion Depth: <u>50.0</u>		SAMPLE DATA					
Depth (FT., bgs)	Lithology Type	Strata Depth (FT., bgs)	Calcareous	Moisture	Munsell	Notes	Depth (FT., bgs)
STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG							
5.0		14.0	Yes	Dry	7.5YR 8/2		5.0
10.0		28.0	Yes	Dry	7.5YR 7/4		10.0
15.0		35.0	Yes	Dry	7.5YR 7/2		15.0
20.0		44.0	Yes	Dry	2.5YR 6/4		20.0
25.0		47.0	Yes	Dry	2.5YR 6/4		25.0
30.0		50.0	Yes	Dry	2.5YR 6/4		30.0
35.0							35.0
40.0							40.0
45.0							45.0
50.0							50.0

NOTES:

- Boring grouted after completion with 95% portland cement and 5% bentonite.
- Drilling Company: Eades Drilling and Pump Service.

LEGEND


W.D. - WHILE DRILLING A.D. - AFTER DRILLING H - HOUR(S) AFTER DRILLING

W B C WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 • • INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-106 FILE # 95042.10 SHEET 1 OF 1	
WATER LEVEL DATA NE - Not Encountered NE FT. W.D. NE FT. AT COMPLETION FT. AT HR. A.D. FT. AT HR. A.D.		Started 11/21/97 Completed 11/21/97 Driller Allan Eades Helper Freddy Drilling Method Air Rotary Sampling Method Drill Cuttings	
LOCATION Proposed Lea County Landfill CLIENT Eunice, New Mexico Camino Real Landfill Sunland Park, New Mexico			

GROUND ELEVATION: 3,401.06 (Ft., MSL)		Northing: 5968.89 Easting: 9285.60		Completion Depth: 66.5		SAMPLE DATA			
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG		Strata Depth (FT., bgs)	Calcareous	Moisture	Munsell	Notes	Depth (FT., bgs)
5.0	[Pattern]	Grayish-brown loamy fine SAND, granular, no organics, few calcareous nodules increasing with depth, small roots, no iron staining, friable cemented sandstone nodules (Windblown Sands)		5.0	No	Dry	7.5YR 5/6		5.0
10.0	[Pattern]	Pink fine to medium calcareous SAND, with few calcareous nodules that are friable, no other large clasts		11.0	Moderate	Dry	2.5YR 8/3		10.0
15.0	[Pattern]	Pink calcareous fine SAND to very fractured sandy CALICHE, few to no chert or other clasts. Caliche is very hard, not friable (CAPROCK?)		16.0	Moderate	Dry	2.5YR 7/6		15.0
20.0	[Pattern]			20.0					20.0
25.0	[Pattern]			25.0					25.0
30.0	[Pattern]			30.0					30.0
35.0	[Pattern]	White sandy CALICHE with calcareous sand matrix and abundant chert clasts. Clasts are angular, coarse gravel size, brown, white and black, some quartzite		33.0	Moderate	Dry	2.5YR 8/3		35.0
40.0	[Pattern]			40.0					40.0
45.0	[Pattern]			45.0					45.0
50.0	[Pattern]			50.0					50.0
55.0	[Pattern]			55.0					55.0
60.0	[Pattern]			60.0					60.0
65.0	[Pattern]	Rose and white PEBBLES, with very little sand, dominantly hard very angular quartzite. White pebbles are hard limestone with quartzite grains.		63.0	Moderate	Dry	2.5YR 7/3		65.0
	[Pattern]	Reddish-brown MUDSTONE/CLAYSTONE, sandy, dry, blocky cuttings, some calcareous stains, poor indurated/friable.		66.0	Slight	Dry	2.5YR 5/6		66.0
	[Pattern]	BORING TERMINATED AT 66.0'		66.5					66.5

NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.	LEGEND ☐ W.D. - WHILE DRILLING ☐ A.D. - AFTER DRILLING ☐ HOUR(S) AFTER DRILLING
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WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 • INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-107 FILE # 95042.10 SHEET 1 OF 2					
WATER LEVEL DATA NE = Not Encountered NE FT. W.D. NE FT. AT COMPLETION FT. AT HR. A.D. FT. AT HR. A.D.		Started 11/22/97 Completed 11/22/97 Driller Allan Eades Helper Freddy Drilling Method Air Rotary Sampling Method Drill Cuttings					
LOCATION Proposed Lea County Landfill CLIENT Eunice, New Mexico Camino Real Landfill Sunland Park, New Mexico							
GROUND ELEVATION: 3,405.43 (FT., MSL) Northing: 4016.88 Easting: 9228.40 Completion Depth: 92.0		SAMPLE DATA					
Depth (FT., bgs)	Labology Type	Strata Depth (FT., bgs)	Calcareous	Moisture	Munsell	Notes	Depth (FT., bgs)
5.0		6.0	No	Dry	7.5YR 6/6		5.0
10.0		8.0	No	Dry	7.5YR 5/6		10.0
15.0		13.0	Moderate	Dry	2.5YR 8/3		15.0
20.0			Moderate	Dry	2.5YR 5/6		20.0
25.0							25.0
30.0							30.0
35.0		31.0	Moderate	Dry	2.5YR 6/4		35.0
40.0							40.0
45.0							45.0
50.0							50.0
55.0							55.0
60.0							60.0
65.0							65.0
70.0							70.0
75.0		75.0	Moderate	Dry	2.5YR 8/3		75.0
NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.		LEGEND ☒ W.D. - WHILE DRILLING ☒ A.D. - AFTER DRILLING ☒ HOUR(S) AFTER DRILLING					

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL., 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-107</u>		FILE # <u>95042.10</u> SHEET 2 OF 2	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA			Depth (FT., bgs)
				Calcareous	Moisture	Munsell	
85.0		(Continued from page 1) Pink, sandy CALICHE with caprock chips	83.0	Moderate	Dry	2.5YR 5/6	85.0
90.0		Reddish-brown, sandy MUDSTONE/CLAYSTONE, dry, poorly indurated, some small calcareous cemented sandstone nodules, little to no mica	Slight Slight	Barely Damp Barely Damp Barely Damp	2.5YR 7/3 2.5YR 5/3 2.5YR 5/2	90.0	
		BORING TERMINATED AT 92.0'	92.0	No			

NOTES:
1. Boring grouted after completion with 95% portland cement and 5% bentonite.
2. Drilling Company: Eades Drilling and Pump Service.

LEGEND
☒ W.D. - WHILE DRILLING ☒ A.D. - AFTER DRILLING ☒ HOUR(S) AFTER DRILLING

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-108 FILE # 95042.10 SHEET 1 OF 3				
WATER LEVEL DATA NE = Not Encountered NE FT. W.D. _____ NE FT. AT COMPLETION _____ _____ FT. AT _____ HR. A.D. _____ FT. AT _____ HR. A.D.		Started 11/20/97 Completed 11/20/97 Driller Allan Eades Helper Freddy Drilling Method Air Rotary Sampling Method Drill Cuttings		LOCATION Proposed Lea County Landfill Eunice, New Mexico CLIENT Camino Real Landfill Sunland Park, New Mexico				
GROUND ELEVATION: 3,396.15 (ft., MSL) Northing: 9696.33 Easting: 7439.48		Completion Depth: 215.0		SAMPLE DATA				
Depth (FT., bgs)	Lithology Type	Strata Depth (FT., bgs)	Calcareous	Moisture	Munsell	Notes	Depth (FT., bgs)	
STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG								
5.0		4.0	Yes	Dry	7.5YR 6/3	Pitcher Bell Sample obtained at 60.0'	5.0	
10.0		10.0	Strong	Dry	7.5YR 8/2		10.0	
15.0		17.0						15.0
20.0		24.0	Strong	Dry	2.5YR 8/2		20.0	
25.0		33.0	Mild	Dry	2.5YR 7/4		25.0	
30.0	46.0	Mild	Dry	2.5YR 6/2	30.0			
35.0		Mild	Dry	2.5YR 5/3	35.0			
40.0			Mild	Dry	2.5YR 5/3	40.0		
45.0			Mild	Dry	2.5YR 5/2	45.0		
50.0			Mild	Dry	2.5YR 7/3	50.0		
55.0			Mild	Dry	2.5YR 4/3	55.0		
60.0						60.0		
65.0						65.0		
70.0						70.0		
75.0						75.0		
(Continued)								

NOTES: 1. Backfilled with cuttings to 120', grouted to surface with 95 with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.	LEGEND ☒ W.D. - WHILE DRILLING ☒ A.D. - AFTER DRILLING ☒ HOUR(S) AFTER DRILLING
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W B C WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-108 FILE # 95042.10 SHEET 2 OF 3						
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)
				Calcareous	Moisture	Munsell	Notes	
85.0		(Continued from page 1) Reddish-brown MUDSTONE/CLAYSTONE, slicky, occasionally sandy, micaceous clasts infrequently, poorly indurated		Mild	Barely Damp	2.5YR 5/3		85.0
90.0								90.0
95.0								95.0
100.0				Mild	Barely Damp	2.5YR 5/3	Pitcher Bell Sample obtained at 100.0'	100.0
105.0								105.0
110.0								110.0
115.0								115.0
120.0				Mild	Barely Damp	2.5YR 4/4		120.0
125.0								125.0
130.0								130.0
135.0				No	Barely Damp	2.5YR 5/6		135.0
140.0								140.0
145.0				No	Barely Damp	2.5YR		145.0
150.0							Pitcher Bell Sample obtained at 150.0'	150.0
155.0								155.0
160.0								160.0
165.0								165.0
170.0		(Continued)		No	Barely Damp	2.5YR 4/3		170.0

NOTES:

- Backfilled with cuttings to 120', grouted to surface with 95 with 95% portland cement and 5% bentonite.
- Drilling Company: Eades Drilling and Pump Service.

LEGEND

☒ W.D. - WHILE DRILLING
 ☒ A.D. - AFTER DRILLING
 ☒ HOUR(S) AFTER DRILLING

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL., 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-108		FILE # 95042.10		SHEET 3 OF 3	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA			Notes	Depth (FT., bgs)	
				Calcareous	Moisture	Munsell			
175.0		(Continued from page 2)						175.0	
180.0		Reddish-brown MUDSTONE/CLAYSTONE, slicky, occasionally sandy, micaceous clasts infrequently, poorly indurated						180.0	
185.0								185.0	
190.0			191.0	Mild	Barely Damp	2.5YR 7/2		190.0	
195.0		Light reddish-gray SILTSTONE, with green laminae, slick, less sandy, poorly indurated, dry		Mild	Barely Damp	2.5YR 7/1		195.0	
200.0			201.0					200.0	
205.0		Reddish-brown CLAYSTONE, dry, poorly indurated, no bedding or laminae		Mild	Barely Damp	2.5YR 5/2		205.0	
210.0							Pitcher Bell Sample obtained at 215.0'	210.0	
215.0		BORING TERMINATED AT 215.0'	215.0	No	Barely Damp	2.5YR 4/3		215.0	

NOTES: 1. Backfilled with cuttings to 120', grouted to surf-cc with 95% with 95% portland cement and 5% bentonite. 2. Drilling Company: Bades Drilling and Pump Service.	LEGEND ▽ W.D. - WHILE DRILLING ▽ A.D. - AFTER DRILLING ▽ HOUR(S) AFTER DRILLING
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W B C WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-109 FILE # <u>95042.10</u> SHEET 1 OF 2	
WATER LEVEL DATA NE = Not Encountered NE FT. W.D. NE FT. AT COMPLETION FT. AT HR. A.D. FT. AT HR. A.D.		Started <u>11/21/97</u> Completed <u>11/21/97</u> Driller <u>Allan Eades</u> Helper <u>Freddy</u> Drilling Method <u>Air Rotary</u> Sampling Method <u>Drill Cuttings</u>	
LOCATION <u>Proposed Lea County Landfill</u> CLIENT <u>Eunice, New Mexico</u> <u>Camino Real Landfill</u> <u>Sunland Park, New Mexico</u>			
GROUND ELEVATION: 3,404.76 (FL, MSL)		Northing: 7717.16 Easting: 9920.71	
Completion Depth: 120.0		SAMPLE DATA	
Depth (FT., bgs)	Lithology Type	Strata Depth (FT., bgs)	Notes
STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG		Calcareous	Moisture
5.0	Grayish-brown loamy fine SAND, granular, no organics, few calcareous nodules increasing with depth, small roots, no iron staining, friable cemented sandstone nodules (windblown sands)	8.0	5.0
10.0	Pinkish-white, sandy CALICHE, moderately weak structure, friable nodules of caliche	21.0	10.0
15.0			15.0
20.0	Light red to pink, calcareous pebbly SAND, pebbles are dominantly quartzite, some rose color banded gneiss, little chert, angular. Pebbles increase with depth	36.0	20.0
25.0			25.0
30.0	White, sandy CALICHE with calcareous sand matrix and abundant chert clasts. Clasts are angular, coarse gravel size, brown, white and black, some quartzite	51.0	30.0
35.0			35.0
40.0	Rose and white PEBBLES, with very little sand, dominantly hard, very angular quartzite. White pebbles are hard limestone with quartzite grains	56.0	40.0
45.0			45.0
50.0	Reddish-brown MUDSTONE/CLAYSTONE, sandy, dry, blocky cuttings, some chert pebbles and calcareous clasts, poorly indurated	76.0	50.0
55.0			55.0
60.0	Reddish-brown, sandy CLAYSTONE, micaceous with occasional green siltstone beds		60.0
65.0			65.0
70.0			70.0
75.0			75.0
NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.		LEGEND ▽ W.D. - WHILE DRILLING ▽ A.D. - AFTER DRILLING ▽ HOUR(S) AFTER DRILLING	

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 ** INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-110			
WATER LEVEL DATA NE = Not Encountered		Started 11/17/97 Completed 11/19/97 Driller Allan Eades Helper Freddy Drilling Method Air Rotary Sampling Method Drill Cuttings		FILE # 95042.10 SHEET 1 OF 7			
NE FT. W.D.		LOCATION Proposed Lea County Landfill		CLIENT Eunice, New Mexico			
NE FT. AT COMPLETION				Comino Real Landfill			
FT. AT HR. A.D.				Sunland Park, New Mexico			
FT. AT HR. A.D.							
GROUND ELEVATION: 3,397.38 (Ft., MSL)		Northing: 7924.34 Easting: 8019.53		Completion Depth: 600.0			
Depth (FT., bgs)		STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG		SAMPLE DATA		Depth (FT., bgs)	
Lithology Type				Calcareous Moisture Munsell Notes			
5.0		Yellowish-red to reddish-brown, loamy fine SAND, weak granular structure.		2.0 No Dry 5YR 5/8		5.0	
10.0		Reddish-brown, loamy fine SAND to sandy LOAM, blocky, friable, very few organics, grading to light brown loamy SAND		No Dry 5YR 6/8		10.0	
15.0		Pink, sandy CALICHE, moderately weak with friable nodules of caliche and poorly cemented sand, fewer nodules with depth		11.0 No Dry 5YR 6/8 Strong Dry 5YR 8/4		15.0	
20.0				Mild Dry 5YR 8/3		20.0	
25.0		Pink, fine to medium SAND, calcareous very small nodules of caliche and cemented sandstone		24.0		25.0	
30.0						30.0	
35.0						35.0	
40.0		Reddish-brown, pebbly, coarse GRAVEL with loamy sand matrix. Pebbles are predominantly chert, white, red, black and rose quartzite, all angular to subangular		39.0 Mild Dry 5YR 8/2		40.0	
45.0		Light reddish-brown, CLAYSTONE with trace sand and calcareous cemented sandstone pebbles, cuttings are blocky, some chert		43.0 Mild Dry 2.5YR 6/4		45.0	
50.0		Reddish-brown, sandy MUDSTONE/CLAYSTONE, dry, poorly indurated, some small calcareous cemented sandstone nodules, little to no mica		49.0 Mild Dry 2.5YR 6/3 Mild Dry 2.5YR 4/6 Mild Dry 2.5YR 6/3 Mild Dry 2.5YR 4/6		50.0 55.0 60.0 65.0	
55.0						55.0	
60.0						60.0	
65.0						65.0	
70.0						70.0	
75.0				Mild Dry 2.5YR 6/4		75.0	
(Continued)							
NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.				LEGEND W.D. - WHILE DRILLING A.D. - AFTER DRILLING HOURS AFTER DRILLING			

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-110</u>		FILE # <u>95042.10</u>		SHEET 2 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes		
85.0		(Continued from page 1) Reddish-brown, sandy MUDSTONE/CLAYSTONE, dry, poorly indurated, some small calcareous cemented sandstone nodules, little to no mica	84.0	Minor	Barely Damp	2.5YR 4/4	Pitcher Bell Sample obtained at 90'	85.0	
90.0		Reddish-brown, sandy CLAYSTONE, micaceous with occasional green siltstone beds						90.0	
95.0								95.0	
100.0								100.0	
105.0								105.0	
110.0			110.0					110.0	
115.0		Reddish-brown, sandy MUDSTONE/CLAYSTONE, dry, poorly indurated, some small calcareous cemented sandstone nodules, little to no mica		Slight	Barely Damp	2.5YR 4/4		115.0	
120.0								120.0	
125.0								125.0	
130.0				Yes	Barely Damp	2.5YR 3/4		130.0	
135.0								135.0	
140.0							Pitcher Bell Sample obtained at 140'	140.0	
145.0				Yes	Barely Damp	2.5YR 4/4		145.0	
150.0								150.0	
155.0				No	Barely Damp	2.5YR 4/6		155.0	
160.0								160.0	
165.0								165.0	
170.0		(Continued)						170.0	

NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.	LEGEND ☐ W.D. - WHILE DRILLING ▽ A.D. - AFTER DRILLING ∇ HOUR(S) AFTER DRILLING
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W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 • • INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-110</u>				FILE # <u>95042.10</u>	SHEET 4 OF 7
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA			Notes	Depth (FT., bgs)	
				Calcareous	Moisture	Munsell			
265.0		(Continued from page 3)		No	Dry	2.5YR 5/6		265.0	
270.0								270.0	
275.0		Reddish-brown, MUDSTONE/CLAYSTONE, micaceous, no bedding or laminae						275.0	
280.0								280.0	
285.0								285.0	
290.0				Yes	Dry	2.5YR 5/4		290.0	
295.0								295.0	
300.0								300.0	
305.0								305.0	
310.0								310.0	
315.0								315.0	
320.0								320.0	
325.0				No	Dry	2.5YR 4/4		325.0	
330.0								330.0	
335.0								335.0	
340.0								340.0	
345.0				Yes	Dry	2.5YR 5/4		345.0	
350.0							Pitcher Bell Sample obtained at 350'	350.0	
355.0		(Continued)						355.0	

NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.	LEGEND ▽ W.D. - WHILE DRILLING ▽ A.D. - AFTER DRILLING ▽ HOUR(S) AFTER DRILLING
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W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-110</u>		FILE # <u>95042.10</u>		SHEET 5 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes		
360.0		(Continued from page 4)						360.0	
365.0		Reddish-brown, MUDSTONE/CLAYSTONE, micaceous, no bedding or laminae		Minor	Dry	2.5YR 4/4		365.0	
370.0								370.0	
375.0				Minor	Dry	2.5YR 4/6		375.0	
380.0								380.0	
385.0								385.0	
390.0								390.0	
395.0								395.0	
400.0								400.0	
405.0								405.0	
410.0								410.0	
415.0								415.0	
420.0								420.0	
425.0								425.0	
430.0								430.0	
435.0				Minor	Dry	2.5YR 4/8		435.0	
440.0								440.0	
445.0		(Continued)						445.0	

NOTES:

- Boring grouted after completion with 95% portland cement and 5% bentonite.
- Drilling Company: Eades Drilling and Pump Service.

LEGEND

W.D. - WHILE DRILLING A.D. - AFTER DRILLING H - HOUR(S) AFTER DRILLING

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W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-110</u>		FILE # <u>95042.10</u>		SHEET 6 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes		
450.0	(Continued from page 5) Reddish-brown, MUDSTONE/CLAYSTONE, micaceous, no bedding or laminae							450.0	
455.0								455.0	
460.0								460.0	
465.0								465.0	
470.0								470.0	
475.0								475.0	
480.0								480.0	
485.0								485.0	
490.0								490.0	
495.0								495.0	
500.0								500.0	
505.0								505.0	
510.0								510.0	
515.0								515.0	
520.0								520.0	
525.0								525.0	
530.0	(Continued)			Minor	Dry	2.5YR 5/4		530.0	
535.0								535.0	

NOTES:

- Boring grouted after completion with 95 % portland cement and 5% bentonite.
- Drilling Company: Bades Drilling and Pump Service.

LEGEND

☒ W.D. - WHILE DRILLING
 ☒ A.D. - AFTER DRILLING
 ☒ HOUR(S) AFTER DRILLING

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-110 FILE # 95042.10 SHEET 7 OF 7			
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA		Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes
-545.0		(Continued from page 6)		Minor	Dry	7.5YR 5/4	
-550.0		Reddish-brown, MUDSTONE/CLAYSTONE, micaceous, no bedding or laminae					
-555.0				Minor	Dry	2.5YR 4/4	
-560.0							
-565.0							
-570.0				Yes	Dry	2.5YR 6/3	
-575.0				Yes	Dry	2.5YR 6/2	
-580.0				Yes	Dry	2.5YR 4/4	
-585.0			576.0				
-590.0		Light reddish-gray, clayey SILTSTONE, gritty, sandy, no bedding		Yes	Dry	2.5YR 6/1	
-595.0							
-600.0							
			588.0	Yes	Dry	2.5YR 6/1	
		Reddish-gray, silty SANDSTONE		Yes	Dry	2.5YR 6/1	
			595.0	Yes	Dry	2.5YR 7/1	
		Light reddish-gray, silty SANDSTONE					
			600.0				
		BORING TERMINATED AT 600 FEET					

NOTES:

- Boring grouted after completion with 95% portland cement and 5% bentonite.
- Drilling Company: Eades Drilling and Pump Service.

LEGEND

W W.D. - WHILE DRILLING
 A A.D. - AFTER DRILLING
 H HOUR(S) AFTER DRILLING

W B C WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 • • INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-111</u> FILE # <u>95042.10</u> SHEET 1 OF 7					
WATER LEVEL DATA NE = Not Encountered 598.0 FT. W.D. _____ FT. AT COMPLETION _____ FT. AT _____ HR. A.D. _____ FT. AT _____ HR. A.D.		Started <u>11/13/97</u> Completed <u>11/13/97</u> Driller <u>Allan Eades</u> Helper <u>Freddy</u> Drilling Method <u>Air Rotary</u> Sampling Method <u>Drill Cuttings</u>					
LOCATION <u>Proposed Lea County Landfill</u> <u>Eunice, New Mexico</u> CLIENT <u>Canino Real Landfill</u> <u>Sunland Park, New Mexico</u>							
GROUND ELEVATION: <u>3,404.35 (Ft., MSL)</u>		Northing: <u>9140.96</u> Easting: <u>9138.76</u>					
Completion Depth: <u>598.0</u>		SAMPLE DATA					
Depth (FT., bgs)	Lithology Type	Strata Depth (FT., bgs)	Calcareous	Moisture	Munsell	Notes	Depth (FT., bgs)
STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG							
5.0			No	Dry	5YR 5/6		5.0
10.0		8.0	Strong	Dry	2.5YR 7/2		10.0
15.0		12.0	Mild	Dry	2.5YR 6/6		15.0
20.0		20.0	Mild	Dry	2.5YR 6/6		20.0
25.0		25.0					25.0
30.0			Strong	Dry	2.5YR 8/1		30.0
35.0		35.0	Mild	Dry	2.5YR 8/1		35.0
40.0		37.0	Mild	Dry	2.5YR 8/3		40.0
45.0		40.0	Mild	Dry	2.5YR 5/3		45.0
50.0		44.0	Mild	Dry	2.5YR 4/4		50.0
55.0			No	Barely Damp	10R 4/6		55.0
60.0			Mild	Barely Damp	2.5YR 5/3		60.0
65.0						65.0	
70.0		Mild	Barely Damp	2.5YR 6/4		70.0	
75.0						75.0	
(Continued)		Pitcher Bell Sample obtained at 80'					

NOTES:

- Boring grouted after completion with 95% portland cement and 5% bentonite.
- Drilling Company: Eades Drilling and Pump Service.

LEGEND

☒ W.D. - WHILE DRILLING
 ☒ A.D. - AFTER DRILLING
 ☒ HOUR(S) AFTER DRILLING

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 • • INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-111</u>		FILE # <u>95042.10</u>		SHEET 2 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes		
85.0		(Continued from page 1) Reddish-brown sandy, MUDSTONE/CLAYSTONE, micaceous, especially biotite, occasional chert pieces, occasional green siltstone beds, otherwise massive, very few laminar or bedding, moderately indurated		Minor	Barely Damp	2.5YR 5/4		85.0	
90.0				Slight	Barely Damp	2.5YR 6/3		90.0	
95.0								95.0	
100.0								100.0	
105.0				Yes	Barely Damp	2.5YR 4/4		105.0	
110.0								110.0	
115.0								115.0	
120.0				Yes	Barely Damp	2.5YR 5/3		120.0	
125.0								125.0	
130.0								130.0	
135.0								135.0	
140.0				No	Barely Damp	2.5YR 5/3	Pitcher Bell Sample obtained at 140'	140.0	
145.0								145.0	
150.0								150.0	
155.0								155.0	
160.0								160.0	
165.0								165.0	
170.0		(Continued)						170.0	

NOTES:

- Boring grouted after completion with 95% portland cement and 5% bentonite.
- Drilling Company: Eades Drilling and Pump Service.

LEGEND

W.D. - WHILE DRILLING A.D. - AFTER DRILLING ▽ HOUR(S) AFTER DRILLING

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-111</u>		FILE # <u>95042.10</u>		SHEET 3 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA			Notes	Depth (FT., bgs)	
				Calcareous	Moisture	Munsell			
175.0		(Continued from page 2)						175.0	
180.0		Reddish-brown sandy MUDSTONE/CLAYSTONE, micaceous, especially biotite, occasional chert pieces, occasional green siltstone beds, otherwise massive, very few laminae or bedding, moderately indurated		No	Barely	2.5YR 5/6		180.0	
185.0			185.0	No	Barely	2.5YR 4/4		185.0	
187.0		Light reddish-brown, clayey SILTSTONE	187.0	No	Dry	2.5YR 6/4		190.0	
190.0		Red, clayey SILTSTONE						195.0	
195.0			195.0	No	Barely Damp	2.5YR 5/6		195.0	
200.0		Pink, clayey SILTSTONE		No	Barely Damp	7.5YR 7/3	Pitcher Bell Sample obtained at 200'	200.0	
205.0								205.0	
210.0			211.0					210.0	
215.0		Reddish-brown, sandy MUDSTONE/CLAYSTONE, micaceous, especially biotite, occasional chert pieces, occasional green siltstone beds, otherwise massive, very few laminae or bedding, moderately indurated		No	Dry	2.5YR 6/2		215.0	
220.0								220.0	
225.0								225.0	
230.0								230.0	
235.0								235.0	
240.0								240.0	
245.0								245.0	
250.0				No	Dry	2.5YR 4/6		250.0	
255.0								255.0	
260.0				Yes	Dry	2.5YR 4/4		260.0	
		(Continued)							

NOTES:

- Boring grouted after completion with 95% portland cement and 5% bentonite.
- Drilling Company: Eades Drilling and Pump Service.

LEGEND

✓ W.D. - WHILE DRILLING ✓ A.D. - AFTER DRILLING ✓ HOUR(S) AFTER DRILLING

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-111</u>		FILE # <u>95042.10</u>		SHEET 4 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes		
265.0		(Continued from page 3)						265.0	
270.0								270.0	
275.0		Reddish-brown, sandy MUDSTONE/CLAYSTONE, micaceous, especially biotite, occasional chert pieces, occasional green siltstone beds, otherwise massive, very few laminar or bedding, moderately indurated						275.0	
280.0								280.0	
285.0								285.0	
290.0								290.0	
295.0				No	Dry	10R 4/6		295.0	
300.0								300.0	
305.0								305.0	
310.0								310.0	
315.0								315.0	
320.0								320.0	
325.0								325.0	
330.0				Yes	Dry	10R 4/4		330.0	
335.0								335.0	
340.0								340.0	
345.0								345.0	
350.0								350.0	
355.0		(Continued)						355.0	

NOTES:

1. Boring grouted after completion with 95% portland cement and 5% bentonite.
2. Drilling Company: Eades Drilling and Pump Service.

LEGEND

▽ W.D. - WHILE DRILLING ▽ A.D. - AFTER DRILLING ▽ HOUR(S) AFTER DRILLING

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. B-111		FILE # 95042.10		SHEET 5 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes		
360.0		(Continued from page 4)						360.0	
365.0		Reddish-brown, sandy MUDSTONE/CLAYSTONE, micaceous, especially biotite, occasional chert pieces, occasional green siltstone beds, otherwise massive, very few laminae or bedding, moderately indurated		Minor	Dry	2.5YR 4/6		365.0	
370.0							370.0		
375.0							375.0		
380.0							380.0		
385.0								385.0	
390.0				Minor	Dry	2.5YR 5/6		390.0	
395.0								395.0	
400.0								400.0	
405.0								405.0	
410.0								410.0	
415.0								415.0	
420.0								420.0	
425.0								425.0	
430.0								430.0	
435.0				Minor	Dry	2.5YR 4/6		435.0	
440.0								440.0	
445.0		(Continued)						445.0	

NOTES: 1. Boring grouted after completion with 95% portland cement and 5% bentonite. 2. Drilling Company: Eades Drilling and Pump Service.	LEGEND ▽ W.D. - WHILE DRILLING ▽ A.D. - AFTER DRILLING ▽ HOUR(S) AFTER DRILLING
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W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-111</u>		FILE # <u>95042.10</u>		SHEET 6 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes		
450.0		(Continued from page 5)						450.0	
455.0		Reddish-brown, sandy MUDSTONE/CLAYSTONE, micaceous, especially biotite, occasional chert pieces, occasional green siltstone beds, otherwise massive, very few laminae or bedding, moderately indurated						455.0	
460.0								460.0	
465.0								465.0	
470.0								470.0	
475.0								475.0	
480.0								480.0	
485.0							Pitcher Bell Sample obtained at 485'	485.0	
490.0								490.0	
495.0								495.0	
500.0								500.0	
505.0							505.0		
510.0							510.0		
515.0							515.0		
520.0							520.0		
525.0				Minor	Dry	2.5YR 6/4		525.0	
530.0								530.0	
535.0								535.0	
		(Continued)							

NOTES:

- Boring grouted after completion with 95% portland cement and 5% bentonite.
- Drilling Company: Ezdes Drilling and Pump Service.

LEGEND

W.D. - WHILE DRILLING A.D. - AFTER DRILLING HOURS AFTER DRILLING

W B C		WEAVER BOOS CONSULTANTS, INC. 200 S. MICHIGAN AVENUE, CHICAGO IL, 60604 (312) 922-1030 * * INDIANA (219) 923-9609		LOG OF SOIL BORING NO. <u>B-111</u>		FILE # <u>95042.10</u>		SHEET 7 OF 7	
Depth (FT., bgs)	Lithology Type	STRATA DEPTH SOIL DESCRIPTION GRAPHIC LOG	Strata Depth (FT., bgs)	SAMPLE DATA				Depth (FT., bgs)	
				Calcareous	Moisture	Munsell	Notes		
		(Continued from page 6)							
545.0		Reddish-brown, sandy MUDSTONE/CLAYSTONE, micaceous, especially biotite, occasional chert pieces, occasional green siltstone beds, otherwise massive, very few laminae or bedding, moderately indurated						545.0	
550.0								550.0	
555.0								555.0	
560.0								560.0	
565.0				Minor	Dry	2.5YR 6/4		565.0	
566.0		Pink CLAYSTONE	566.0					566.0	
568.0			568.0	Minor	Dry	2.5YR 8/3		568.0	
570.0		Light reddish-gray, clayey SILTSTONE						570.0	
575.0				Yes	Dry	2.5YR 7/1		575.0	
576.0			576.0					576.0	
580.0		Reddish-gray, sandy SILTSTONE		Yes	Dry	10R 6/1		580.0	
581.0			581.0					581.0	
585.0		Reddish-gray, silty SANDSTONE		Yes	Dry	10R 6/1		585.0	
590.0								590.0	
595.0								595.0	
		BORING TERMINATED AT 598 FEET	598.0						

NOTES:	1. Boring grouted after completion with 95% portland cement and 5% bentonite.	LEGEND	W.D. - WHILE DRILLING	A.D. - AFTER DRILLING	HOUR(S) AFTER DRILLING
	2. Drilling Company: Eades Drilling and Pump Service.				