

GW-209

Water Well Evaluation

DATE:
July 6, 2010



ENTERPRISE PRODUCTS PARTNERS L.P.
ENTERPRISE PRODUCTS GP, LLC
(General Partner)

ENTERPRISE PRODUCTS OPERATING LLC

RECEIVED OCD

2011 MAR -4 P 12: 53

February 28, 2011

Return Receipt Requested
7010 1870 0001 2945 2432

Mr. Kurt Sandoval
Petroleum Engineer Technician
Bureau of Indian Affairs -
Jicarilla Apache Nation
P.O. Box 167
120 Seneca Drive
Dulce, NM 87528

**RE: Enterprise Field Services, LLC
Lindrith Compressor Station – Water Well Evaluation
NE/4, SE/4, Section 18, Township 24, Range 5 West, NMPM
NM Oil Conservation Division GW Discharge Permit No. GW-209
Rio Arriba County, New Mexico**

Dear Mr. Sandoval:

During our meeting on May 25, 2010 to discuss the remedial actions currently being performed by Enterprise Field Services, LLC (Enterprise) at our Lindrith Compressor Station, the presence of water supply wells at the facility, formerly used when personnel were housed at the station, was discussed. Following our review of available information from the New Mexico Office of the State Engineer, a site visit was conducted on June 17, 2010 to locate and inspect the wells. A total of four (4) water supply wells were located, the New Mexico Office of the State Engineer identification numbers for these wells are: SJ00069, SJ00068, SJ00074 and SJ00211. The results of this investigation were documented in the report entitled: *Observations and Recommendations for Water Wells at Lindrith Compressor Station*, dated July 2, 2010.

The attached report documents the proper plugging and abandonment of three inactive water wells identified at the site. One remaining water well, SJ00211, was in use and will remain in service for stock watering purposes. Enterprise attempting to verify if ownership of the wells was transferred to the Jicarilla Apache Tribe during the 1990's, and will transfer ownership of the remaining water well to the Jicarilla if necessary.

If you have any questions, or require additional information, please do not hesitate to contact me at (713) 381-2286 or drsmith@eprod.com.

Sincerely,

David R. Smith, P.G.
Sr. Environmental Scientist

Rodney M. Sartor, REM
Manager, Remediation

/dep
Attachment

1
Mr. Kurt Sandoval
Lindrith Compressor Station
February 28, 2011
Page 2

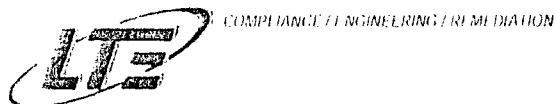
cc: w/ Attachment
Dixon Sandoval
Jicarilla Environmental Protection Office
P.O. Box 507
Dulce, NM 87528-0507

Brandon Powell
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, NM 87410

Jim Griswold
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Bill Enenbach
District V Supervisor
State Engineers Office
100 Gossett Dr., Suite A
Aztec, NM 87410

w/o Attachment
Rex Meyer, GeoMonitoring Services
Ashley Ager, LT Environmental



LT Environmental, Inc.

21400 Lind Avenue, Suite 3
Houston, Texas 77058-3100
Tel: 281-896-7100 Fax: 281-896-7101

February 10, 2011

Mr. David R. Smith, P.G.
Enterprise Field Services, LLC
1100 Louisiana Street
Houston, Texas 77002-5227

**RE: Plugging and Abandonment of Water Wells
Enterprise Field Services
Lindrith Compressor Station
GW-209
Rio Arriba County, New Mexico**

Dear Mr. Smith:

On October 18, 2010, LT Environmental, Inc. (LTE) oversaw plugging and abandonment of three water wells at Enterprise Field Services, LLC's (Enterprise) Lindrith Compressor Station (Site) on the Jicarilla Apache Reservation. The wells were abandoned following recommendations made in *Observations and Recommendations for Water Wells at Lindrith Compressor Station* dated July 2, 2010 and submitted to the Jicarilla Environmental Protection Office (JEPO) and the Bureau of Indian Affairs (BIA) in correspondence dated July 6, 2010.

The locations of the three abandoned wells are shown on the attached site map (Figure 1). They are labeled according to permit numbers assigned by the New Mexico Office of the State Engineer (NMOSE). The wells were originally permitted and drilled by El Paso Natural Gas Company; however, the wells have been inactive for approximately 20 years according to corporate knowledge. A fourth well is currently used by the Jicarilla Apache Tribe (Tribe) and remains in place (Figure 1). It has been fitted with an attachment for a mobile pump jack and is used for stock watering purposes. A small pond has been constructed adjacent to the well for collection of water. The pond did not contain water at the time of this work.

The following wells were decommissioned according to the applicable requirements of the NMOSE as listed in part 19.27.4 of the New Mexico Administrative Code (NMAC): *Rules and Regulations Governing Well Drillers: Licensing; Construction, Repair and Plugging of Wells*:

- SJ00069/EPNG #1X/Misc-1-RR-30
- SJ00068/EPNG #2/Misc-1-RR-29
- SJ00074/EPNG #4



Decommissioning was completed by Enviro-Drill, Inc. (Enviro-Drill), a New Mexico licensed water well driller, by completely filling the wells in a manner to prevent movement of water within the boreholes, as well as preventing the annular space surrounding the well casing from becoming a conduit for possible contamination to the groundwater supply. Because the wells are on the Jicarilla Apache Reservation, Enviro-Drill did not file an abandonment plan with the NMOSE. However, the attached *Well Abandonment Logs* were completed and will be submitted to the NMOSE's Aztec, New Mexico office with this report in order to close out the existing permits. The logs contain information on the amount and content of material used to plug the wells. The wells were cut off a minimum of three feet below the ground surface and backfilled with native soil.

A fourth well, SJ00211/EPNG #3, was left in place for use by the Tribe. LTE recommends that Enterprise officially transfer ownership of the well to the Tribe, which can be done by submitting a Change of Ownership of Water Right form to the NMOSE. Alternatively, since the Tribe maintains jurisdiction over water rights on its reservation, Enterprise and the Tribe may choose to request that the NMOSE permit be cancelled and agree to a transfer of ownership through the BIA and JEPO. Should such a transfer of ownership occur, Enterprise should ensure it is released from any and all liability associated with future use of the water well.

LTE appreciates the opportunity to conduct this work. If you have any additional questions or concerns, do not hesitate to contact me at 970-385-1096.

Sincerely,

LT ENVIRONMENTAL, INC.

A handwritten signature in black ink that reads 'Ashley L. Ager'. The signature is written in a cursive, flowing style.

Ashley L. Ager
Senior Geologist/Office Manager

Attachments:

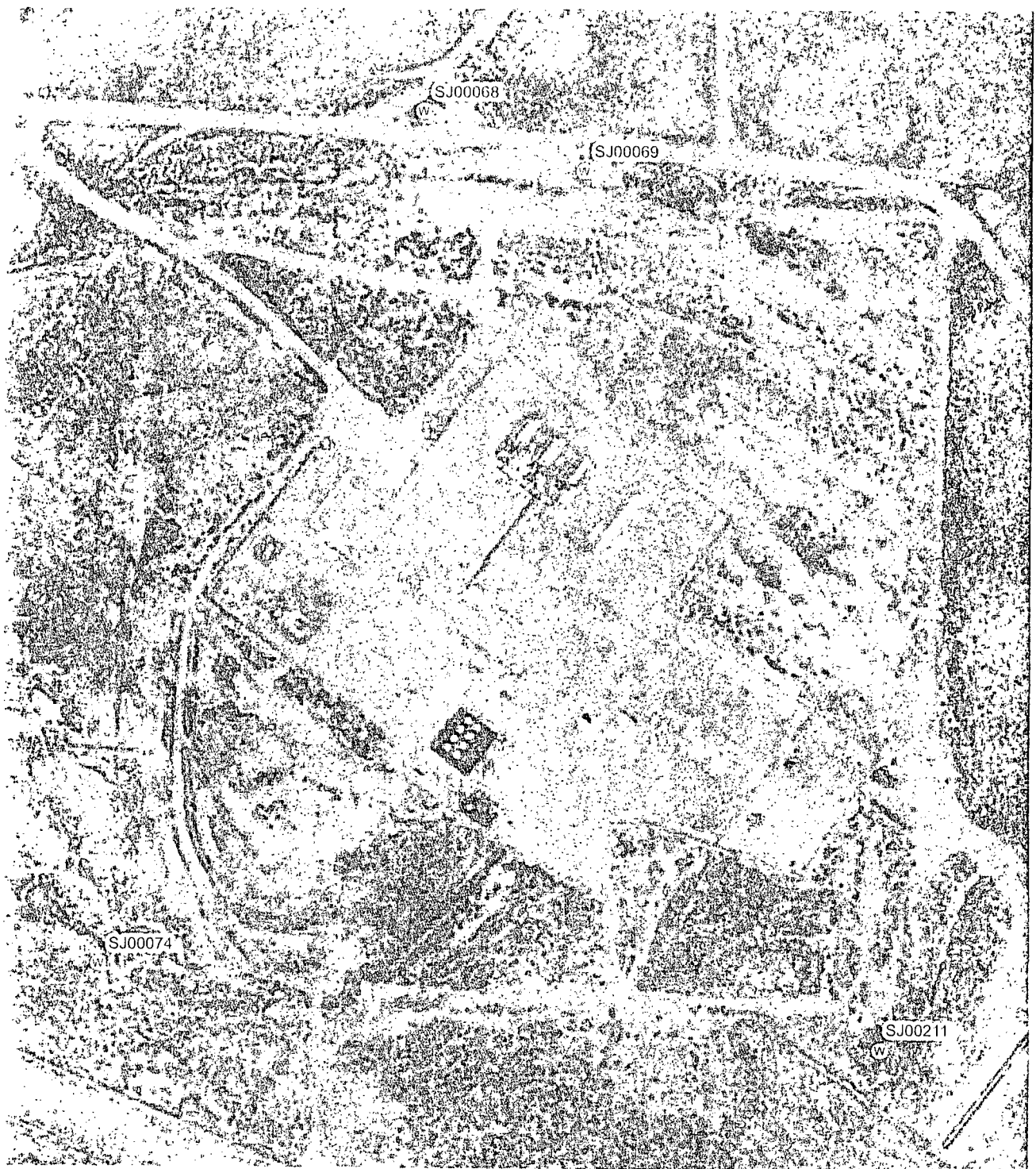
Figure 1 – Site Map

Well SJ00069 Plugging Record

Well SJ00068 Plugging Record

Well SJ00074 Plugging Record

FIGURE



LEGEND

- W WATER WELL
- ABANDONED WATER WELL

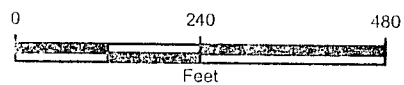


IMAGE COURTESY OF USDA/NRCS, VARIOUS DATES

FIGURE 1
SITE MAP
LINDRITH COMPRESSOR STATION
RIO ARRIBA COUNTY, NEW MEXICO

ENTERPRISE FIELD SERVICES, LLC



WELL PLUGGING RECORDS



PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

~~Enterprise~~ Well Number: well # 1/SJ000069/EPNG #IX
 Well owner: Enterprise Field Services Phone No.: 713-381-2286
 Mailing address: 1100 Louisiana St
 City: Houston State: TX Zip code: 77210

II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Enviro-Drill, Inc
- 2) New Mexico Well Driller License No.: WD1186 Expiration Date: 10-31-11
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Shel Betts
- 4) Date well plugging began: 10-18-10 Date well plugging concluded: 10-18-10
- 5) GPS Well Location: Latitude: 36 deg, 18 min, 42.84 sec
 Longitude: -107 deg, 23 min, 45.96 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 789 ft below ground level (bgl),
 by the following manner: Tag line
- 7) Static water level measured at initiation of plugging: 775 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: NA - Jicarilla Reservation
- 9) Were all plugging activities consistent with an approved plugging plan? NA If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):
Well is located on the Jicarilla Apache Reservation - No
plugging plan submitted.

- 10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
789'- BGS	Cement Bentonite Grout	1800 gal 240 ft ³	2051	Tremie	8" Casing Shortage of grout because Draw down Pipe was left in well by another drilling company and was not able to be fished out

MULTIPLY	BY	AND OBTAIN
cubic feet x 7.4805	=	gallons
cubic yards x 201.97	=	gallons

III. SIGNATURE:

I, Sh. / Becks, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

[Signature]
Signature of Well Driller

01-11-11
Date



PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: well #2 / SJ00068 / EPNG #2
 Well owner: Enterprise Field Services Phone No.: 713-381-2386
 Mailing address: 1100 Louisiana St
 City: Houston State: TX Zip code: 77210

II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Enviro-Drill, Inc.
- 2) New Mexico Well Driller License No.: WD1186 Expiration Date: 10-31-11
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Shad B. Hs
- 4) Date well plugging began: 10-19-10 Date well plugging concluded: 10-19-10
- 5) GPS Well Location: Latitude: 36 deg, 18 min, 43.2274 sec
 Longitude: 107 deg, 23 min, 49.2 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 795 ft below ground level (bgl),
 by the following manner: Tag line
- 7) Static water level measured at initiation of plugging: 350 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: NA - Jicarilla Reservation
- 9) Were all plugging activities consistent with an approved plugging plan? NA. If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):
well is located on the Jicarilla Apache Reservation - No
plugging plan submitted.

- 10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/Casing (gallons)	Placement Method (tremie pipe, other)	Comments (“casing perforated liner”, “open annular space also plugged”, etc.)
795 FT 1395	Cement Bentonite grout	2200 gal 6' 2933.3 ft ³	2067	Tremmie	8" casing

MULTIPLY	BY	AND OBTAIN
cubic feet x 7.4805		= gallons
cubic yards x 201.97		= gallons

III. SIGNATURE:

I, Shawn Betts, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Shawn Betts
Signature of Well Driller

01-11-11
Date



PLUGGING RECORD



NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC

I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: well H3 / SJ00074 / EPNG #4
 Well owner: Enterprise Field Services Phone No.: 713-381-2286
 Mailing address: 1100 Louisiana St
 City: Houston State: TX Zip code: 77210

II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Enviro-Drill, Inc
- 2) New Mexico Well Driller License No.: WD1186 Expiration Date: 10-31-11
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s): Sh. Belles
- 4) Date well plugging began: 10-20-10 Date well plugging concluded: 10-20-10
- 5) GPS Well Location: Latitude: 36 deg, 18 min, 29.7 sec
 Longitude: 807 deg, 23 min, 55.3 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 875 ft below ground level (bgl),
 by the following manner: Tag line
- 7) Static water level measured at initiation of plugging: 457 ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: NA - Jicarilla Reservation
- 9) Were all plugging activities consistent with an approved plugging plan? NA If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

Well is located on the Jicarilla-Apache Reservation - No
plugging plan submitted

- 10) Log of Plugging Activities - Label vertical scale with depths, and indicate separate plugging intervals with horizontal lines as necessary to illustrate material or methodology changes. Attach additional pages if necessary.

For each interval plugged, describe within the following columns:

Depth (ft bgl)	Plugging Material Used (include any additives used)	Volume of Material Placed (gallons)	Theoretical Volume of Borehole/ Casing (gallons)	Placement Method (tremie pipe, other)	Comments ("casing perforated first", "open annular space also plugged", etc.)
875 ft 895	Cement Bentonite Grout	3800 gal or 506.7 ft ³	3725 gal	Tremie	8" Casing Open hole w/ Surface Casing

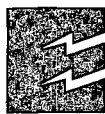
MULTIPLY	BY	AND OBTAIN
cubic feet x 7.4805		= gallons
cubic yards x 201.97		= gallons

III. SIGNATURE:

I, Sh. / Beets, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

Sh. / Beets
Signature of Well Driller

01-11-11
Date



Enterprise Products™

RECEIVED OCD

July 6, 2010

ENTERPRISE PRODUCTS PARTNERS LP ENTERPRISE PRODUCTS GP, LLC, GENERAL PARTNER
ENTERPRISE PRODUCTS OPERATING LLC ENTERPRISE PRODUCTS OLPGP, INC., SOLE MANAGER

Return Receipt Requested
7009 3410 0001 6448 5211

Mr. Kurt Sandoval
Petroleum Engineer Technician
Bureau of Indian Affairs -
Jicarilla Apache Nation
P.O. Box 167
120 Seneca Drive
Dulce, NM 87528

**RE: Enterprise Field Services, LLC
 Lindrith Compressor Station – Water Well Evaluation
 NE/4, SE/4, Section 18, Township 24, Range 5 West, NMPM
 NM Oil Conservation Division GW Discharge Permit No. GW-209
 Rio Arriba County, New Mexico**

Dear Mr. Sandoval:

During our meeting on May 25, 2010 to discuss the remedial actions currently being performed by Enterprise Field Services, LLC (Enterprise) at our Lindrith Compressor Station, the potential presence of water supply wells at the facility, formerly used when personnel were housed at the station, was discussed. Enterprise agreed to determine the location and condition of these wells, and also to determine if concrete rubble was present at the site that could be removed or used as backfill during the remedial actions currently being performed at the former condensate storage tank locations.

Our consultant (LT Environmental) reviewed available information from the New Mexico Office of the State Engineer, and visited the site on June 17, 2010 to locate and inspect the wells. A total of four (4) water supply wells were located, the New Mexico Office of the State Engineer identification numbers for these wells are: SJ00069, SJ00068, SJ00074 and SJ00211. A fifth (5) well, (designated as EPNG #1 in Enterprise Discharge Permit Number GW-209) could not be located in agency records, or in the field. It is believed to have been abandoned. All wells are in deteriorated condition, and only well SJ00211 appeared to be in use.

A report of these findings is attached, including photographs of the wells. No concrete rubble was identified during the site visit.

Mr. Kurt Sandoval
Lindrith Compressor Station
July 6, 2010
Page 2

Conversations with the Jicarilla Environmental Protection Office indicate that ownership of the wells was transferred to the Jicarilla Apache Tribe during the 1990's. Enterprise is currently trying to locate these records. If you have any questions, or require additional information, please do not hesitate to contact me at (713) 381-2286 or drsmith@eprod.com.

Sincerely,



David R. Smith, P.G.
Sr. Environmental Scientist

/bjm
Enclosure

cc: w/ Enclosure
Dixon Sandoval
Jicarilla Environmental Protection Office
P.O. Box 507
Dulce, NM 87528-0507

Brandon Powell
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, NM 87410

Jim Griswold
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Robert B. Genualdi, P.E.
District V Supervisor
State Engineers Office
100 Gossett Dr., Suite A
Aztec, NM 87410

w/o Enclosure
Rex Meyer, GeoMonitoring Services
Ashley Ager, LT Environmental



July 2, 2010

Mr. David R. Smith, P.G.
Enterprise Field Services, LLC
1100 Louisiana Street
Houston, Texas 77002-5227

**RE: Observations and Recommendations for Water Wells at Lindrith Compressor Station
Lindrith Compressor Station
Rio Arriba County, New Mexico**

Dear Mr. Smith,

On June 17, 2010, LT Environmental, Incorporated (LTE) visited Enterprise Field Services, LLC's (Enterprise) Lindrith Compressor Station (Site) to assess the current condition of four water wells located near the Site. The locations of the wells are shown on the attached site map. They are labeled according to permit numbers assigned by the New Mexico Office of the State Engineer. The wells were originally permitted and drilled by Enterprise; however, the wells have been inactive for approximately 20 years according to corporate knowledge. LTE examined each well and attempted to extract existing pumps, casings or other materials when possible to determine if any of the wells could be brought back into service. Observations for each well are provided in the following list. Well names, as assigned by both the New Mexico Office of the State Engineer (identified with an "SJ" identifier) and Enterprise ("EPNG" or "Misc" identifier), are provided.

- SJ00069/EPNG #1X/Misc-1-RR-30: The well contained an older model top-mounted rotary pump (Photo 1). The pump was rusted and no longer functional (Photo 2). The well casing was also extremely rusty. The pump was removed, but a portion of the casing broke off during removal. Approximately 35 feet of casing were extracted, but the remaining casing and bottom portion of the pump remain inside the well. Removal of the equipment will require additional heavy equipment or it will have to be drilled out with a large drilling rig.
- SJ00068/EPNG #2/Misc-1-RR-29: The well contained a submersible pump that was extracted. The pump was crusted over with sediment and rust, and it no longer functions correctly. It was put back into the well until future use of the well is determined or disposal is requested. The well casing is composed of 32-foot steel sections. These cannot be removed with a CME-75 drill rig and will require a crane for complete extraction. The steel casing is extremely rusty (Photo 3). A bailer was used to collect a small volume of water from the well for observation. The water was rusty and silty. Depth to water was approximately 207 feet beneath ground surface (bgs).
- SJ00074/EPNG #4: This well contained a submersible pump that was extracted for observation. The pump is very rusty and no longer functions correctly. The steel casing is rusty and will require additional equipment for removal (Photo 4). A bailer was used to collect a small volume of water from the well. The water was filled with rust particles and very cloudy. Water level was approximately 211 feet bgs.
- SJ00211/EPNG #3: The well has been recently fitted with an attachment for a mobile pump jack and appears to be in use (Photo 5). A small pond appears to have been constructed adjacent to the well for collection of water and potential stock use. The pond did not contain water at the time of this work. LTE did not interfere with the current condition of this well and it was left as found.
- LTE believes that EPNG #1 has been abandoned and no longer exists. There is no permit associated with it in the New Mexico Office of the State Engineer's database, and Enterprise's



discharge permit for the Lindrith Compressor Station indicates it was abandoned. LTE did a thorough search of the site and was unable to locate this well.

LTE recommends leaving SJ00211 in its current condition, since it is apparently being used for stock watering purposes. However, Enterprise should officially turn over ownership of the well to the Jicarilla Apache Tribe. Wells SJ00074 and SJ00068 contain water, but are not in any condition to be useful to Enterprise. At a minimum, new pumping mechanisms and well redevelopment will be required to bring the wells into working order. Enterprise should plug and abandon the wells unless the Jicarilla Apache Tribe wishes to take over the wells. Should such a transfer of ownership occur, Enterprise should ensure it is released from any and all liability issues associated with future use of the water wells. Well SJ00074 contains a pump and broken well casing at the bottom of the well. It is no longer usable and should be plugged and abandoned.

LTE appreciates the opportunity to conduct this work. If you have any additional questions or concerns, do not hesitate to contact me at 970-385-1096.

Respectfully Submitted,

LT ENVIRONMENTAL, INC.

A handwritten signature in black ink, reading 'Ashley L. Ager'. The signature is written in a cursive, flowing style.

Ashley L. Ager
Senior Geologist/Office Manager

Attachments

Figure 1 – Site Map

- Photo 1 – Well SJ00069
- Photo 2 – Rusted Portions of the Pump On Well SJ00069
- Photo 3 – Well SJ00068
- Photo 4 – Well SJ00074
- Photo 5 – Well SJ00211

FIGURE



FIGURE 1
SITE LOCATION MAP
LINDRITH COMPRESSOR STATION
ENTERPRISE FIELD SERVICES LLC



PHOTOS

PHOTO 1: SJ000069



PHOTO 2: SJ000069



PHOTO 3: SJ000068



PHOTO 4: S100074



PHOTO 5: SJ00211

