Bratcher, Mike, EMNRD

From: Burton, Michael <mburton@blm.gov>
Sent: Thursday, January 16, 2014 7:06 AM
To: Amy Ruth
Cc: Bratcher, Mike, EMNRD
Subject: Re: Linn Energy Turner B #7 - BLM Event #11NU108TG

Amy,
Your plan is approved. As for the C-141, we never received one.

Mike Burton
BLM-CFO
Environmental Protection Specialist
575-234-2226 office
575-361-3574 cell
mburton@blm.gov

On Wed, Jan 15, 2014 at 4:54 PM, Amy Ruth <aruth@diversifiedfsi.com> wrote:

Thanks a bunch, Mike! I'll get on it and create a form C-141…

From: Bratcher, Mike, EMNRD [mailto:mike.bratcher@state.nm.us]
Sent: Wednesday, January 15, 2014 4:26 PM

To: Amy Ruth
Cc: Wall, Fred; Michael Patterson; Burton, Michael
Subject: RE: Linn Energy Turner B #7 - BLM Event #11NU108TG

And, more importantly, OCD concurs with BLM approval of this remediation proposal.

Mike Bratcher

NMOCD District 2

811 S. First Street

Artesia, NM 88210

O: 575-748-1283 X108

C: 575-626-0857

F: 575-748-9720

From: Bratcher, Mike, EMNRD
Sent: Wednesday, January 15, 2014 4:24 PM
To: 'Amy Ruth'
Cc: Wall, Fred; Michael Patterson; Burton, Michael
Subject: RE: Linn Energy Turner B #7 - BLM Event #11NU108TG

Amy,

I don't have any record of having received a C-141 for this one. Terry Gregston used to copy me when she sent out the release diagram maps, but I don't have record of having received that either. If Linn doesn't have a C-141 for it, I suppose one could be created or Mr. Burton may have one in their files. ? – Mike

---

From: Amy Ruth [mailto:aruth@diversifiedfsi.com]
Sent: Wednesday, January 15, 2014 1:20 PM
To: Bratcher, Mike, EMNRD
Cc: Wall, Fred; Michael Patterson; Burton, Michael
Subject: Linn Energy Turner B #7 - BLM Event #11NU108TG

Hi Mike,

A BLM report was filed on this leak though we have not been able to locate a form C-141. A line was hit during the removal of a stockpile that was sitting on the surface at the northwest corner of a new well pad and 10 bbls produced water were reported released, affecting a small area of pasture (2 bbls were recovered).

I have attached a site diagram with sample data, photos, a groundwater search, the BLM's undesirable event report for your reference, and lab reports for your reference.

The area surrounding SP1 was more heavily affected than the rest and we found that chloride dropped at 10 feet. SP2 chloride dropped at 2 feet. Groundwater in the area is 236+ if it's there at all. We propose to excavate the area of SP1 to 4 ft and install a liner, excavate the area of SP2 to 2 ft, backfill the excavation with clean topsoil, and contour the site.

Please review at your convenience and call me with any questions/concerns. Thank you!

(*Mike Burton BLM has approved this proposal as written*)

Respectfully,

Amy C. Ruth

Environmental Director

Diversified Field Services, Inc.

3412 N. Dal Paso

Hobbs, NM 88240

Office: (575)964-8394

Mobile: (575)390-5454

Fax: (575)964-8396

"Nothing will work unless you do." -Maya Angelou

Bratcher, Mike, EMNRD

From: Bratcher, Mike, EMNRD
Sent: Wednesday, January 15, 2014 4:26 PM
To: 'Amy Ruth'
Cc: 'Wall, Fred'; 'Michael Patterson'; 'Burton, Michael'
Subject: RE: Linn Energy Turner B #7 - BLM Event #11NU108TG

And, more importantly, OCD concurs with BLM approval of this remediation proposal.

Mike Bratcher
NMOCD District 2
811 S. First Street
Artesia, NM 88210
O: 575-748-1283 X108
C: 575-626-0857
F: 575-748-9720

From: Bratcher, Mike, EMNRD
Sent: Wednesday, January 15, 2014 4:24 PM
To: 'Amy Ruth'
Cc: Wall, Fred; Michael Patterson; Burton, Michael
Subject: RE: Linn Energy Turner B #7 - BLM Event #11NU108TG

Amy,

I don't have any record of having received a C-141 for this one. Terry Gregston used to copy me when she sent out the release diagram maps, but I don't have record of having received that either. If Linn doesn't have a C-141 for it, I suppose one could be created or Mr. Burton may have one in their files. ? – Mike

---

From: Amy Ruth [mailto:aruth@diversifiedfsi.com]
Sent: Wednesday, January 15, 2014 1:20 PM
To: Bratcher, Mike, EMNRD
Cc: Wall, Fred; Michael Patterson; Burton, Michael
Subject: Linn Energy Turner B #7 - BLM Event #11NU108TG

Hi Mike,

A BLM report was filed on this leak though we have not been able to locate a form C-141. A line was hit during the removal of a stockpile that was sitting on the surface at the northwest corner of a new well pad and 10 bbls produced water were reported released, affecting a small area of pasture (2 bbls were recovered).

I have attached a site diagram with sample data, photos, a groundwater search, the BLM's undesirable event report for your reference, and lab reports for your reference.

The area surrounding SP1 was more heavily affected than the rest and we found that chloride dropped at 10 feet. SP2 chloride dropped at 2 feet. Groundwater in the area is 236+ if it's there at all. We propose to excavate the area of SP1 to 4 ft and install a liner, excavate the area of SP2 to 2 ft, backfill the excavation with clean topsoil, and contour the site.

Please review at your convenience and call me with any questions/concerns. Thank you!
(*Mike Burton BLM has approved this proposal as written*)

Respectfully,

Amy C. Ruth
Environmental Director
Diversified Field Services, Inc.
3412 N. Dal Paso
Hobbs, NM 88240
Office: (575)964-8394
Mobile: (575)390-5454
Fax: (575)964-8396

"Nothing will work unless you do." -Maya Angelou

Bratcher, Mike, EMNRD

From: Amy Ruth <aruth@diversifiedfsi.com>
Sent: Wednesday, January 15, 2014 1:20 PM
To: Bratcher, Mike, EMNRD
Cc: Wall, Fred; Michael Patterson; Burton, Michael
Subject: Linn Energy Turner B #7 - BLM Event #11NU108TG
Attachments: Linn Energy Turner B #7 - Site Diagram w Sample Data.pdf; Linn Energy Turner B #7 Photo Page.pdf; Linn Energy Turner B #7 Groundwater Search.pdf; BLM Information 11NU108TG.pdf; H302656 LINN.pdf; H302739 LINN.pdf

Hi Mike,

A BLM report was filed on this leak though we have not been able to locate a form C-141. A line was hit during the removal of a stockpile that was sitting on the surface at the northwest corner of a new well pad and 10 bbls produced water were reported released, affecting a small area of pasture (2 bbls were recovered).

I have attached a site diagram with sample data, photos, a groundwater search, the BLM's undesirable event report for your reference, and lab reports for your reference.

The area surrounding SP1 was more heavily affected than the rest and we found that chloride dropped at 10 feet. SP2 chloride dropped at 2 feet. Groundwater in the area is 236+ if it's there at all. We propose to excavate the area of SP1 to 4 ft and install a liner, excavate the area of SP2 to 2 ft, backfill the excavation with clean topsoil, and contour the site.

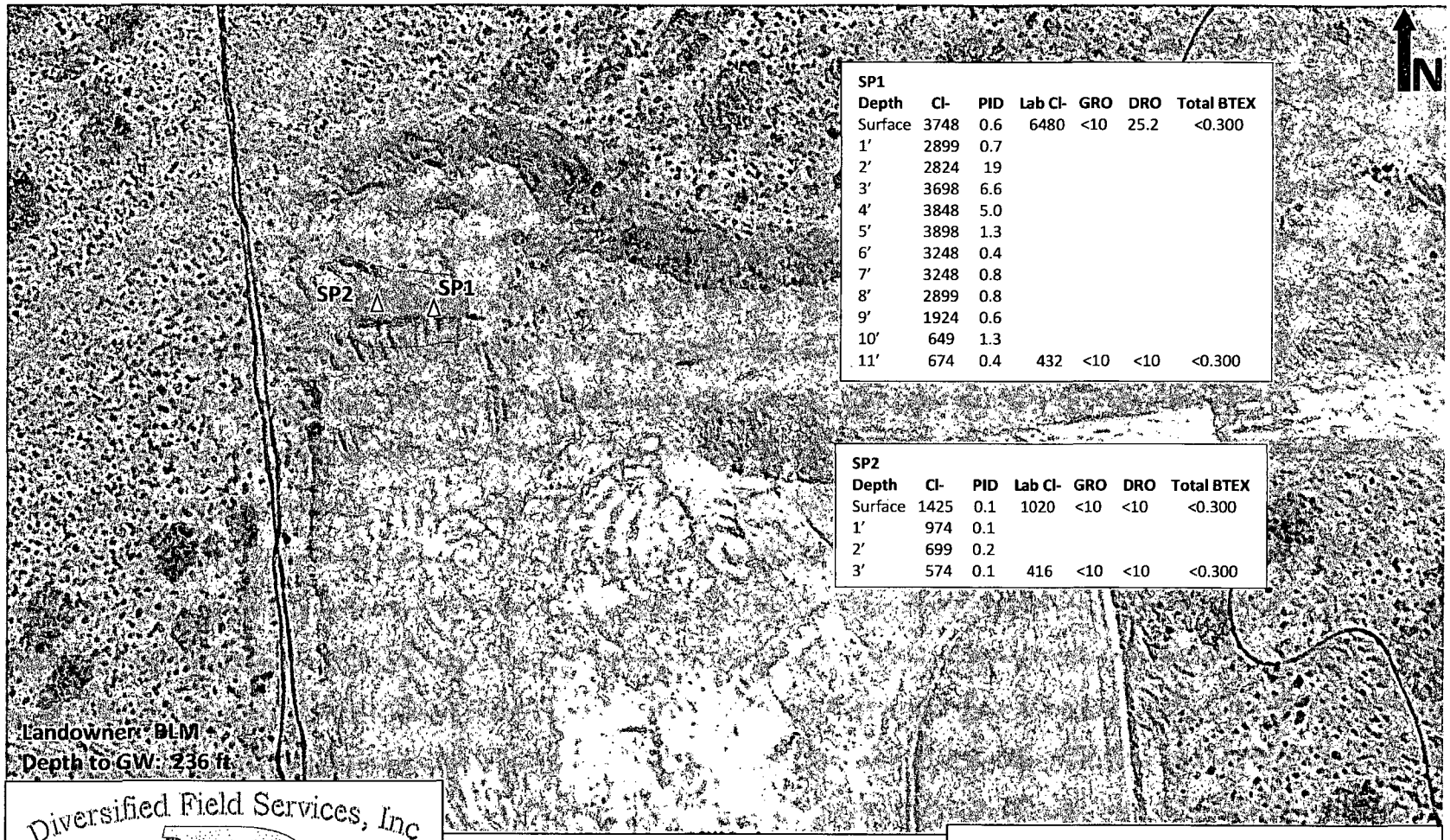
Please review at your convenience and call me with any questions/concerns. Thank you!
(*Mike Burton BLM has approved this proposal as written*)

Respectfully,

Amy C. Ruth
Environmental Director
Diversified Field Services, Inc.
3412 N. Dal Paso
Hobbs, NM 88240
Office: (575)964-8394
Mobile: (575)390-5454
Fax: (575)964-8396

"Nothing will work unless you do." -Maya Angelou

Site Diagram with Sample Data



SP1

Depth	Cl-	PID	Lab Cl-	GRO	DRO	Total BTEX
Surface	3748	0.6	6480	<10	25.2	<0.300
1'	2899	0.7				
2'	2824	19				
3'	3698	6.6				
4'	3848	5.0				
5'	3898	1.3				
6'	3248	0.4				
7'	3248	0.8				
8'	2899	0.8				
9'	1924	0.6				
10'	649	1.3				
11'	674	0.4	432	<10	<10	<0.300

SP2

Depth	Cl-	PID	Lab Cl-	GRO	DRO	Total BTEX
Surface	1425	0.1	1020	<10	<10	<0.300
1'	974	0.1				
2'	699	0.2				
3'	574	0.1	416	<10	<10	<0.300

Diversified Field Services, Inc

C.C. & Co, LLC

J & M Welding and Fabrication, Inc.

Diversified Construction

Legend

Initial Impacted Area (total 1,600 ft²)

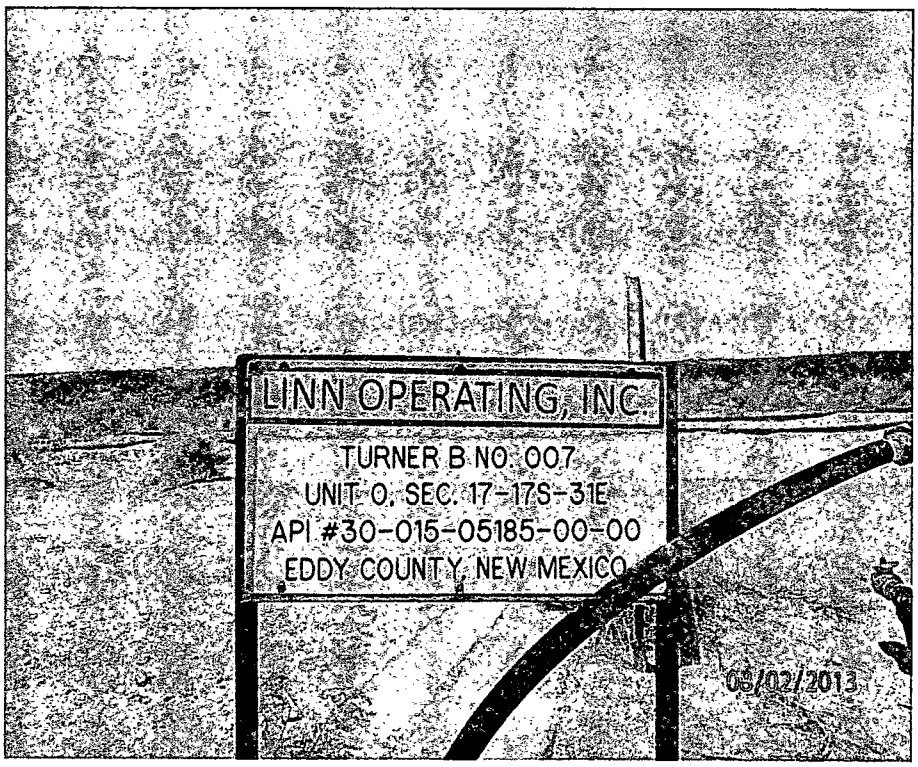
Δ Sample Point

Linn Energy Turner B #007

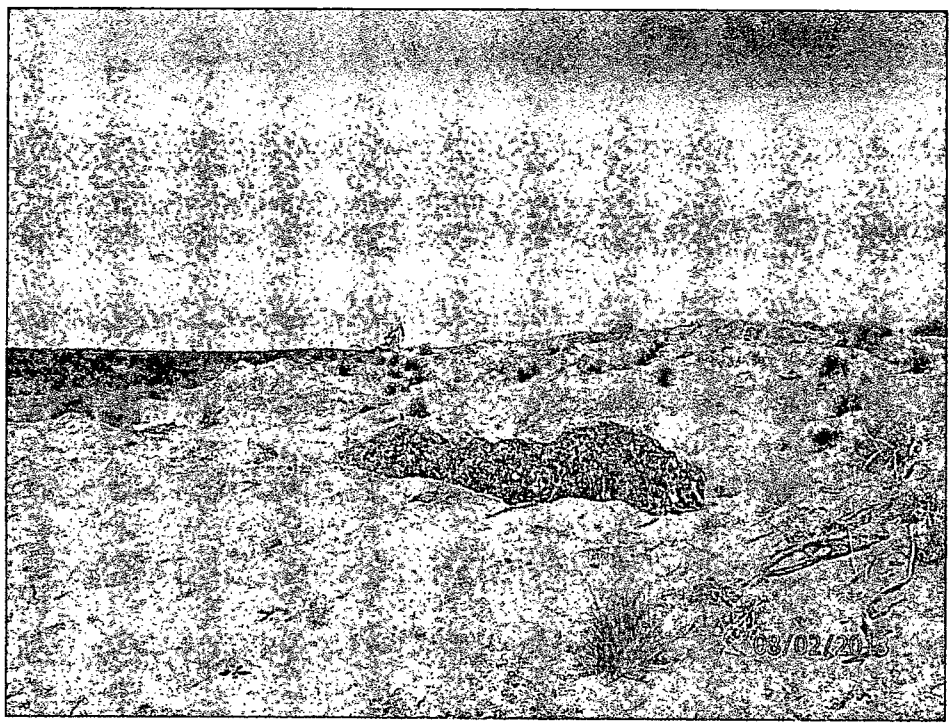
UL/O, Sec 17, T17S R31E
Eddy County, NM
Drafted By: A.C. Ruth, 11/26/13
Not to Scale

Linn Energy Turner B #07

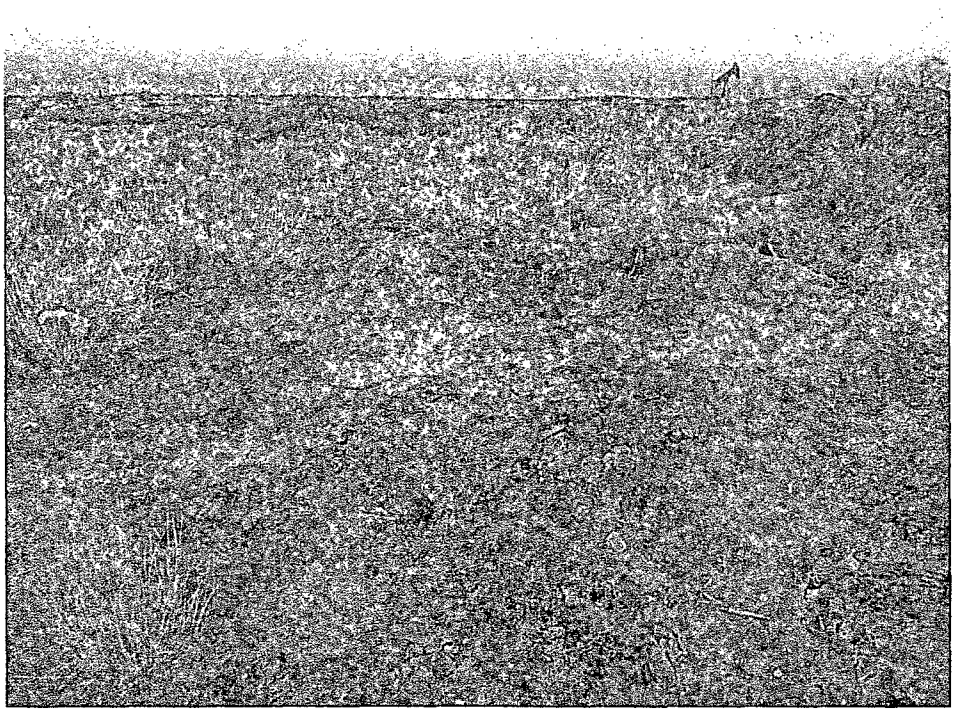
Unit Letter O, Section 17, T17S R31E



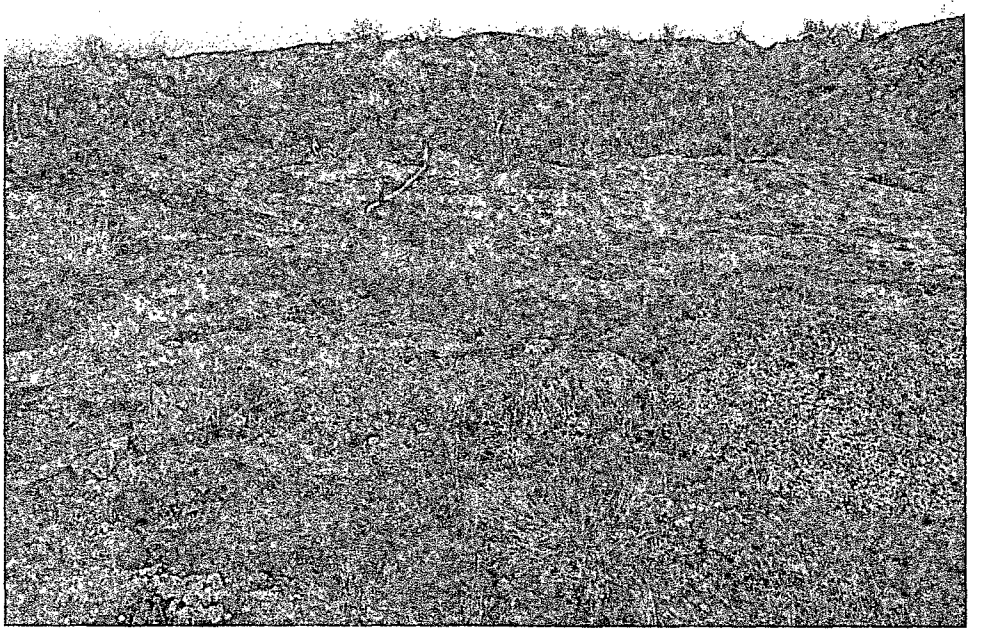
Sign marking location 8/02/13



Spill location NW of lease road 08/02/13



Sample point 9/6/12



Markers indicating sample points of stockpiled soil 9/6/12

GROUND WATER SEARCH

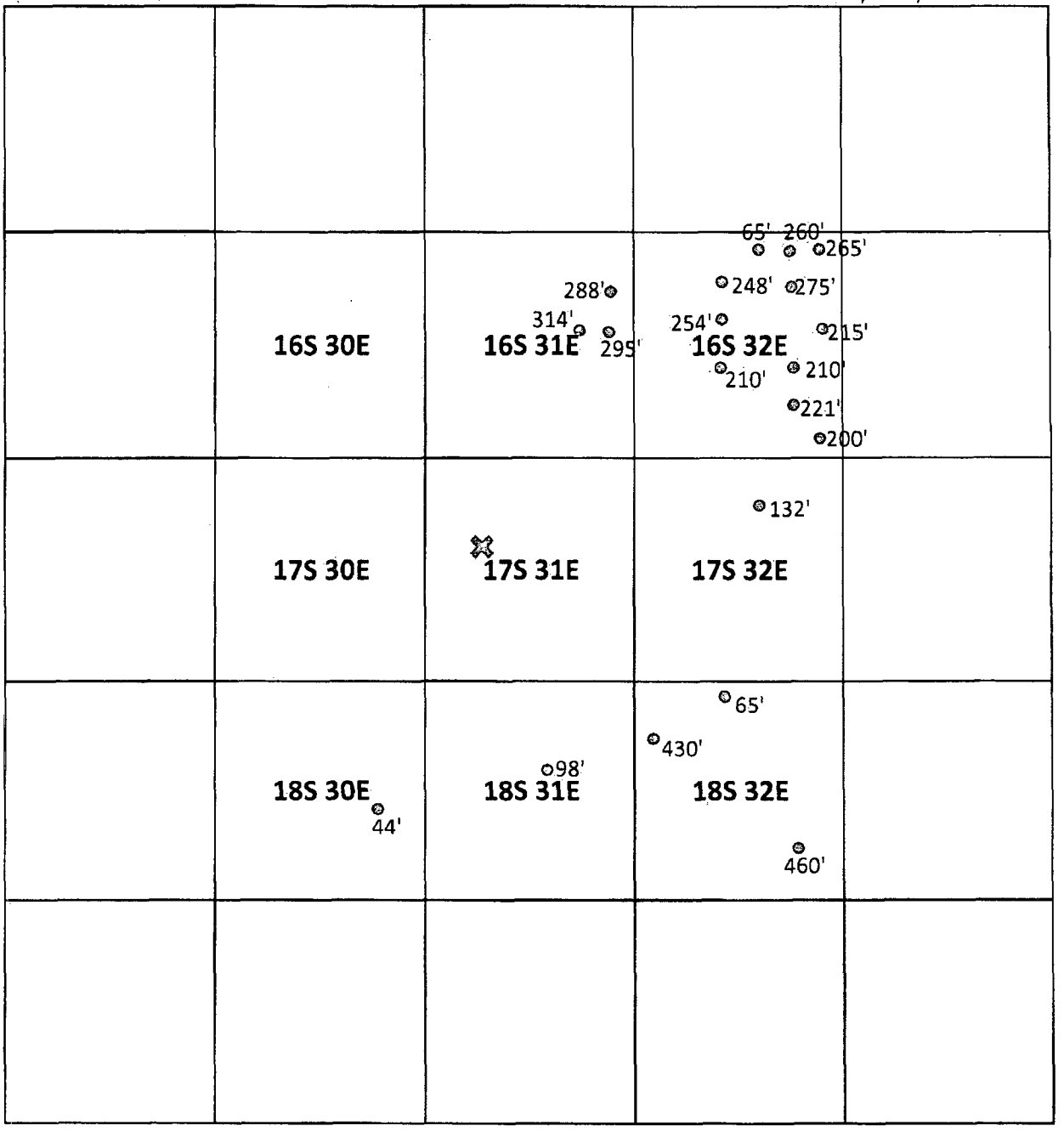
Linn Energy Turner B #7

UL: O **Sec:** 17 **T:** 17S **R:** 31E

Groundwater Depth: 236 ft. averaged

⊙ = NM Office of the State Engineer
● = U.S. Geological Survey (unknown well)
⊠ = Site Location

Date: 12/18/13
By: Amy Ruth



New Mexico Office of the State Engineer
Water Column/Average Depth to Water

No records found.

PLSS Search:

Township: 16S Range: 30E

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	Code	POD Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twp	Rng	X	Y	Depth Well	Depth Water	Water Column
L 03435		L	LE		1	1	05	16S	31E	602954	3646955*			
L 03852	R	L	LE	2	2	2	14	16S	31E	609126	3643913*	370	314	56
L 03852 POD4		L	LE	3	4	3	13	16S	31E	609744	3642516*	333	299	34
L 03852 POD5		L	LE		3	2	13	16S	31E	610238	3643427*	328	295	33
L 03852 X	R	L	LE	4	4	4	13	16S	31E	610749	3642526*	333	299	34
L 03852 X2		L	LE	3	2	2	13	16S	31E	610535	3643733*	330	287	43
L 04671		L	LE	1	1	2	12	16S	31E	610114	3645538*	340	288	52
L 10203		L	LE	4	4	3	14	16S	31E	608334	3642495*	310		
L 10206		L	LE		2	2	23	16S	31E	609045	3642204*	280		

Average Depth to Water: **297 feet**

Minimum Depth: **287 feet**

Maximum Depth: **314 feet**

Record Count: 9

PLSS Search:

Township: 16S Range: 31E

*UTM location was derived from PLSS - see Help

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 64 16 4	Sec	Tws	Rng	X	Y
L 03435	L	PRO	0	LOWE DRILLING COMPANY	LE	L 03435			Shallow	1 1	05	16S	31E	602954	3646955*

Record Count: 1

POD Search:

POD Number: L 03435

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416 4	Sec	Tws	Rng	X	Y
L 03852	L	MUN	375	CITY OF CARLSBAD	LE	L 03852		R	Shallow	2 2 2	14	16S	31E	609126	3643913*
					LE	L 03852 POD4			Shallow	3 4 3	13	16S	31E	609744	3642516*
					LE	L 03852 POD5		R	Shallow	3 2	13	16S	31E	610238	3643427*
					LE	L 03852 POD6				3 2	13	16S	31E	610390	3643476
					LE	L 03852 X		R	Shallow	4 4 4	13	16S	31E	610749	3642526*
					LE	L 03852 X2			Shallow	3 2 2	13	16S	31E	610535	3643733*

Record Count: 6

POD Search:

POD Number: L 03852

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 64 16 4	Sec	Tws	Rng	X	Y
L 04671	L	PRO	0	JOHN H. TRIGG	LE	L 04671			Shallow	1 1 2	12	16S	31E	610114	3645538*

Record Count: 1

POD Search:

POD Number: L 04671

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-basin Code	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Depth Well	Depth Water	Water Column
L 02381	L	LE		3	1	13	16S	32E	619086	3643515*	308	215	93
L 02434	L	LE				01	16S	32E	619661	3646531*	337		
L 02449	L	LE				01	16S	32E	619661	3646531*	330	265	65
L 02617	L	LE		4	4	02	16S	32E	618656	3645924*	322	270	52
L 02752	L	LE		1	3	26	16S	32E	617521	3639880*	324	280	44
L 02846	L	LE	4	2	1	11	16S	32E	617956	3645413*	328	275	53
L 02954	L	LE		2	4	03	16S	32E	617043	3646310*	120	65	55
L 02993	L	LE	3	3	2	15	16S	32E	616572	3643391*	100		
L 03631	L	LE		1	2	02	16S	32E	618240	3647126*	315	250	65
L 04930	L	LE			1	23	16S	32E	617698	3642092*	307	210	97
L 05494	L	LE				36	16S	32E	619758	3638489*	303	200	103
L 06557	L	LE		1	4	21	16S	32E	615089	3641466*	295	210	85
L 06807	L	LE	1	4	4	09	16S	32E	615356	3644383*	290	248	42
L 07823	L	LE	2	2	2	16	16S	32E	615561	3643981*	269	247	22
L 08084	L	LE	1	1	1	16	16S	32E	614157	3643970*	317	260	57
L 08084 POD4	L	LE			2	26	16S	32E	618522	3640492*	303	233	70
L 08084 POD5	L	LE	4	1	4	26	16S	32E	618425	3639788*	296	165	131
L 08084 S3	L	LE			2	26	16S	32E	618522	3640492*	305	205	100
L 08241	L	LE		4	4	02	16S	32E	618656	3645924*	316		
L 10204	L	LE	4	2	2	04	16S	32E	615524	3646993*	319		
L 10205	L	LE		4	1	08	16S	32E	613038	3645066*	330		
L 11189	L	LE	1	1	4	04	16S	32E	614932	3646391*	350		

*UTM location was derived from PLSS - see Help

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416	4	Sec	Tws	Rng	X	Y
L 02381	L	PRO	0	GULF REFINING COMPANY	LE	L 02381			Shallow	3	1	13	16S	32E	619086	3643515*

Record Count: 1

POD Search:

POD Number: L 02381

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code Grant	Source	q q q 6416 4	Sec	Twns	Rng	X	Y
L 02449	L	PRO	0	PLYMOUTH OIL COMPANY	LE	L 02449		Shallow		01	16S	32E	619661	3646531*

Record Count: 1

POD Search:

POD Number: L 02449

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(acre ft per annum)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code Grant	Source	q q q 6416	4	Sec	Tws	Rng	X	Y
L 02617	L	PRO	0	GULF OIL CORPORATION	LE	L 02617		Shallow		4 4	02	16S	32E	618656	3645924*

Record Count: 1

POD Search:

POD Number: L 02617

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 64 16 4	Sec	Twn	Rng	X	Y
L 02752	L	DOL	3	W W WILLIAMS	LE	L 02752			Shallow	1 1 3	26	16S	32E	617521	3639880*

Record Count: 1

POD Search:

POD Number: L 02752

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 64 16 4	Sec	Twn	Rng	X	Y
L 02846	L	PRO	0	CONTINENTAL OIL COMPANY	LE	L 02846			Shallow	4 2 1	11	16S	32E	617956	3645413*

Record Count: 1

POD Search:

POD Number: L 02846

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416 4	Sec	Tws	Rng	X	Y
L 02954	L	PRO	0	SCHOENFELD-HUNTER-KITCH DRG CO	LE	L 02954			Shallow	2 4	03	16S	32E	617043	3646310*

Record Count: 1

POD Search:

POD Number: L 02954

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 64 16 4	Sec	Tws	Rng	X	Y
L 03631	L	PRO	0	MAGNOLIA PETROLEUM COMPANY	LE	L 03631			Shallow	1 2	02	16S	32E	618240	3647126*

Record Count: 1

POD Search:

POD Number: L 03631

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416	4	Sec	Tws	Rng	X	Y
L 04930	L	STK	3	JULIA WILLIAMS	LE	L 04930			Shallow		1	23	16S	32E	617698	3642092*

Record Count: 1

POD Search:

POD Number: L 04930

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed) (quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416	4	Sec	Tws	Rng	X	Y
L 06557	L	STK	3	TAYLOR CATTLE COMPANY	LE	L 06557			Shallow	1	4	21	16S	32E	615089	3641466*

Record Count: 1

POD Search:

POD Number: L 06557

Sorted by: File Number

*UTM location was derived from PLSS - see Help

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q 6416	q 4	Sec	Tws	Rng	X	Y
L 08084	L	COM	750	MOR-WEST CORPORATION	LE	L 08084			Shallow	1 1	1	16	16S	32E	614157	3643970*
					LE	L 08084 POD4			Shallow		2	26	16S	32E	618522	3640492*
					LE	L 08084 POD5			Shallow	4 1	4	26	16S	32E	618425	3639788*
					LE	L 08084 S		R	Shallow	2 1	1	36	16S	32E	619239	3639192*
					LE	L 08084 S2		R	Shallow	3 1	1	36	16S	32E	619039	3638992*
					LE	L 08084 S3			Shallow		2	26	16S	32E	618522	3640492*

Record Count: 6

POD Search:

POD Number: L 08084

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters) (In feet)

POD Number	POD Sub-basin Code	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
RA 11590 POD1		ED	2	1	3	32	17S	31E	603315	3628545	158		
RA 11590 POD3		ED	3	1	2	32	17S	31E	603932	3629260	60		
RA 11590 POD4		ED	4	1	1	32	17S	31E	603308	3629253	55		

Average Depth to Water: --

Minimum Depth: --

Maximum Depth: --

Record Count: 3

PLSS Search:

Township 17S **Range** 31E

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Depth Well	Depth Water	Water Column
L 04019		L	LE	4	3	4	02	17S	32E	618468	3636166*	182		
L 04020		L	LE	3	3	4	02	17S	32E	618268	3636166*	200		
L 04021	R	L	LE	3	4	4	02	17S	32E	618670	3636170*	190		
L 04021 POD3		L	LE		3	4	03	17S	32E	616761	3636252*	247		
L 04021 S		L	LE	2	4	4	03	17S	32E	617262	3636354*	260		
L 13047 POD1		L	LE				11	17S	32E	618187	3635254*	140		
L 13050 POD1		L	LE	2	2	1	10	17S	32E	616463	3635945*	156	132	24
RA 08855			LE	4	1	1	10	17S	32E	616061	3635742*	158		
RA 09505			LE	2	2	1	10	17S	32E	616462	3635944	147		
RA 09505 S			LE	2	2	1	10	17S	32E	616463	3635945*	144		
RA 10175			LE		2	1	28	17S	32E	614814	3631005*	158		
RA 11684 POD1			LE	1	1	4	11	17S	32E	618216	3635124	275		
RA 11684 POD2			LE	1	1	4	11	17S	32E	618313	3635248	275		
RA 11684 POD3			LE	3	3	1	11	17S	32E	618262	3635371	275		
RA 11684 POD4			LE	1	3	2	11	17S	32E	618334	3635521	275		
RA 11684 POD5			LE	3	1	4	11	17S	32E	618353	3635047	275		
RA 11734 POD1			LE	2	2	1	10	17S	32E	616556	3635929	165		

Average Depth to Water: **132 feet**

Minimum Depth: **132 feet**

Maximum Depth: **132 feet**

Record Count: 17

PLSS Search:

Township: 17S **Range:** 32E

*UTM location was derived from PLSS - see Help

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

No PODs found.

POD Search:

POD Number: L 13050 1

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-basin Code	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
CP 00818		LE	1	4		26	18S	30E	599289	3620364*	240		
CP 00819		LE	2	4		32	18S	30E	594878	3618720*	150		
L 01978	L	LE	1	3		23	18S	30E	598469	3621964*	65	44	21

Average Depth to Water: **44 feet**

Minimum Depth: **44 feet**

Maximum Depth: **44 feet**

Record Count: 3

PLSS Search:

Township 18S Range 30E

*UTM location was derived from PLSS - see Help

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 64 16 4	Sec	Tws	Rng	X	Y
L 01978	L	DOM	3	L A JOHNSON	LE	L 01978			Shallow	1 3	23	18S	30E	598469	3621964*

Record Count: 1

POD Search:

POD Number: L 01978

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Code	Sub-basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
L 11092		L	LE	2	3		15	18S	31E	606849	3623669*	160	98	62

Average Depth to Water: **98 feet**

Minimum Depth: **98 feet**

Maximum Depth: **98 feet**

Record Count: 1

PLSS Search:

Township: 18S Range: 31E

*UTM location was derived from PLSS - see Help

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416	4	Sec	Tws	Rng	X	Y
L 11092	L	DOM	3	NEW HOPE BAPTIST	LE	L 11092			Shallow	2	3	15	18S	31E	606849	3623669*

Record Count: 1

POD Search:

POD Number: L 11092

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Twn	Rng	X	Y	Depth Well	Depth Water	Water Column
CP 00566			LE	4	4	1	04	18S	32E	614960	3627280*	133	65	68
CP 00672			LE		4	4	07	18S	32E	612475	3624947*	524	430	94
CP 00672 CLW475398	O		LE		4	4	07	18S	32E	612475	3624947*	540	460	80
CP 00677			LE		1	1	26	18S	32E	617750	3621373*	700		

Average Depth to Water: **318 feet**

Minimum Depth: **65 feet**

Maximum Depth: **460 feet**

Record Count: 4

PLSS Search:

Township: 18S Range: 32E

*UTM location was derived from PLSS - see Help

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416	4	Sec	Tws	Rng	X	Y
CP 00566		DOM	3	B.E. FRIZZELL	LE	CP 00566			Shallow	4	4 1	04	18S	32E	614960	3627280*

Record Count: 1

POD Search:

POD Number: CP 00566

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest) (NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416	4	Sec	Tws	Rng	X	Y
CP 00672		STK	3	VIRGIL LINAM ESTATE	LE	CP 00672			Shallow	4	4	07	18S	32E	612475	3624947*

Record Count: 1

POD Search:

POD Number: CP 00672

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

No PODs found.

POD Search:

POD Number: CP 00672 CLW475398

New Mexico Office of the State Engineer

Active & Inactive Points of Diversion

(with Ownership Information)

(R=POD has been replaced and no longer serves this file, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)

(quarters are smallest to largest)

(NAD83 UTM in meters)

(acre ft per annum)

WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Code	Grant	Source	q q q 6416	4	Sec	Tws	Rng	X	Y
CP 00677		PRO	0	T X O PROD.	LE	CP 00677				1	1	26	18S	32E	617750	3621373*

Record Count: 1

POD Search:

POD Number: CP 00677

Sorted by: File Number

***UTM location was derived from PLSS - see Help**

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
UNDESIRABLE EVENT INSPECTION FORM

Unique Event Number:	Date of Event:	Date Reported:
11NU108TG	08/01/2011	08/01/2011

State:	Office Code:	County:
NM	CB	EDDY

1/4 1/4:	Section:	Township:	Range:
SWSE	17	17S	31E

Reference Point (Remarks):

Case Number:	
NMLC029395B	

Operator Name:	SME:
LINN OPERATING INCORPORATED	BUREAU OF LAND MANAGEMENT

Type of Event:
SALTWATER SPILL

Volumes -	Discharged Oil:	Gas:	Water:	Other:
			10	
	Recovered Oil:	Gas:	Water:	Other:
		N/A	2	

INSPECTION OPEN DATE:	INSPECTION CLOSE DATE:
08/01/2011	08/11/2011
INSPECTOR:	COMPANY REPRESENTATIVE:
GREGSTON	DENNIS POTTER

TIMES - OFFICE:	TRAVEL:	INSPECTION:
2.00	1.00	0.50

EVENT CLASSIFICATION:
MINOR

Well or Facility ID:	Name:	Number:
300150518500S1	TURNER B	7

CAUSE OF EVENT (REMARKS):
08/01/11--during construction of the Apache, Lee Federal 42 well pad, the construction crew hit a buried fiberglass flowline for the Turner B #7 well. Construction crew had conducted a required 811 call; Linn Operating had cleared all their lines in the area but had failed to flag the active flowline from the Turner B 7. As a result, Linn Operating is taking responsibility for the spill and spill cleanup. TG.

ACTION TO CONTROL (REMARKS):
08/01/11--well shut in.

GENERAL (REMARKS):

ACTION TAKEN TO PREVENT (REMARKS):

DAMAGE DESCRIPTION (REMARKS):
08/01/11--.03 acres of stockpiled topsoil contaminated.

EXTENT OF PERSONAL INJURY (REMARKS):

INSPECTION REMARKS:
08/01/11--received notification of spill on this location from Dennis Potter, Linn Energy. During construction of Apache drilling pad for the Lee Federal 42, the construction crew dug into a Linn Operating buried fiberglass flowline off the northwest corner of the well pad. Line was in the west portion of the topsoil stock pile. An appropriate 811 call had been placed prior to building the pad (Hungry Horse contractor) and Linn had cleared all lines within the staked pad area, but had not cleared lines outside of that area. Line hit is just outside of staked well pad area. As a result; Linn Operating is taking the responsibility for the spill cleanup of this spill. No archeology issues due to clearance required for new pad. 08/03/11--onsite to assess spill. Pad is built. Spill is in the middle of the topsoil stockpile on western side. Whoever excavated the line, picked up the spill slop and dumped up on the topsoil stockpile above the spill, thereby contaminating a great deal of viable topsoil. Line has been repaired. GPS'd spill perimeter; perimeter includes contaminated portion of topsoil stockpile. Need to speak to Potter about more careful placement of contaminated materials. TG. 08/11/11--well currently in drilling status. Linn will probably delay spill remediation until drilling rig moved off location. Called Potter to see which Linn Operating well he wanted to tie this spill to; he said the Turner B #7. Undesirable Event number 11NU108TG. TG.

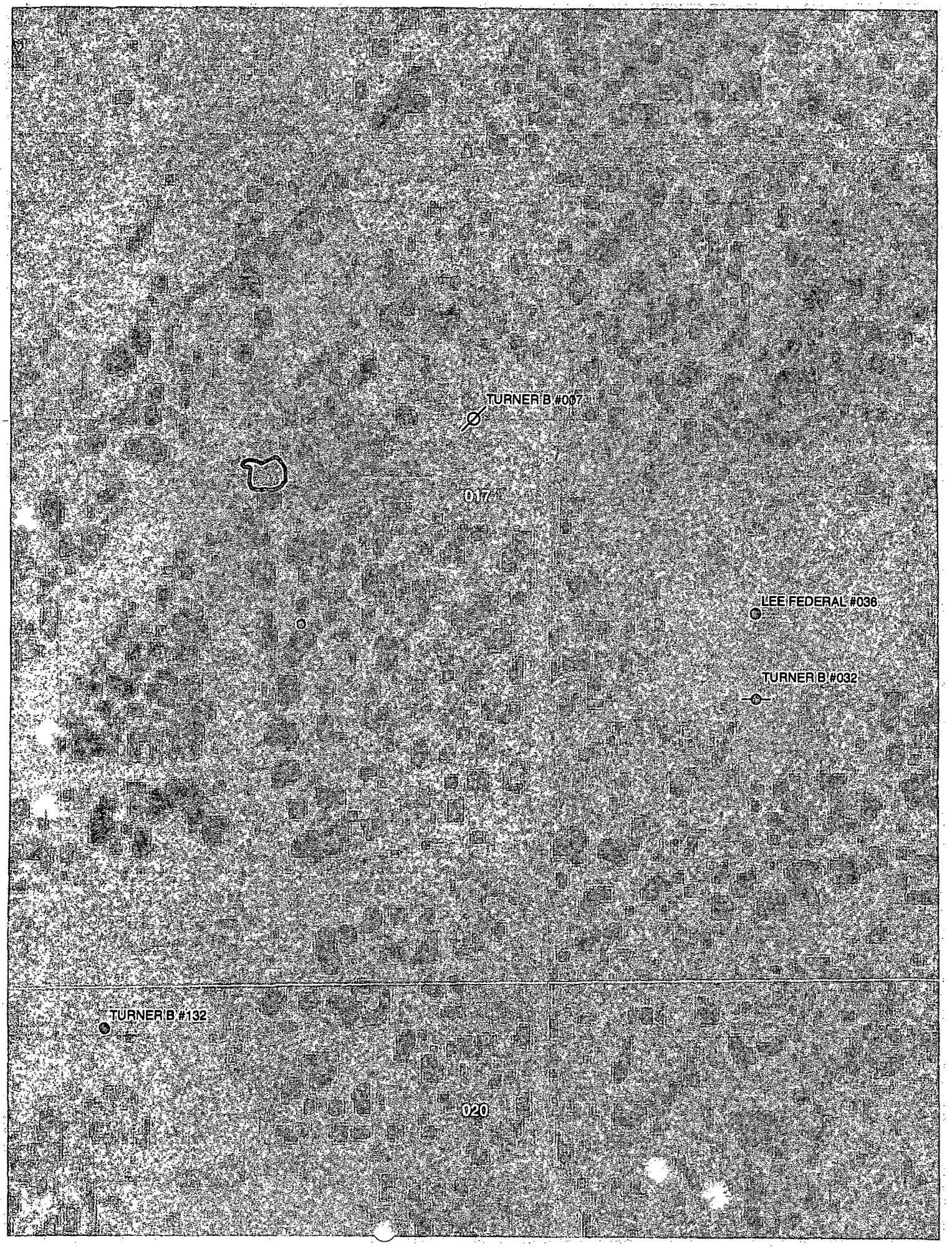
UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management

UNDESIRABLE EVENT INSPECTION FORM

SUMMARY OF RESULTS OF RECLAMATION/CORRECTIVE ACTION:

FOLLOW-UP REQUIREMENTS: (Circle any that apply)

NONE VERBAL LETTER INC NOTIFY P.E.T. OTHER:


TURNER B #007
017
LEE FEDERAL #036
TURNER B #032
TURNER B #132
020

Updated 2/25/99

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SURFACE INSPECTION FORM

Well Name:	Well #:	API #:	Well Status:
TURNER B	7	300150518500S1	WIW

Footage:	Alliquot:	Lot/Tract:	Section:	Twnship/Lat:	Rng/Long:	County:	State:
660FSL 1980FEL	SWSE		17	17S	31E	EDDY	NM

Case:	Facility ID:	Associated Rights of Way:
NMLC029395B		

Lease:	H2S Date:	H2S Gas Stream:	H2S Vapors:	H2S Radius:
NMLC029395B				

Hazard: Yes: HIGH H2S, 13945 PPM

SME:	Operator Name:
BUREAU OF LAND MANAGEMENT	LINN OPERATING INCORPORATED

Please be sure to complete for inspection

Inspector:	Company/SME Rep:	Phone #:

Date:	Type:	Activity:	Office:	Travel:	Insp:

General Remarks:

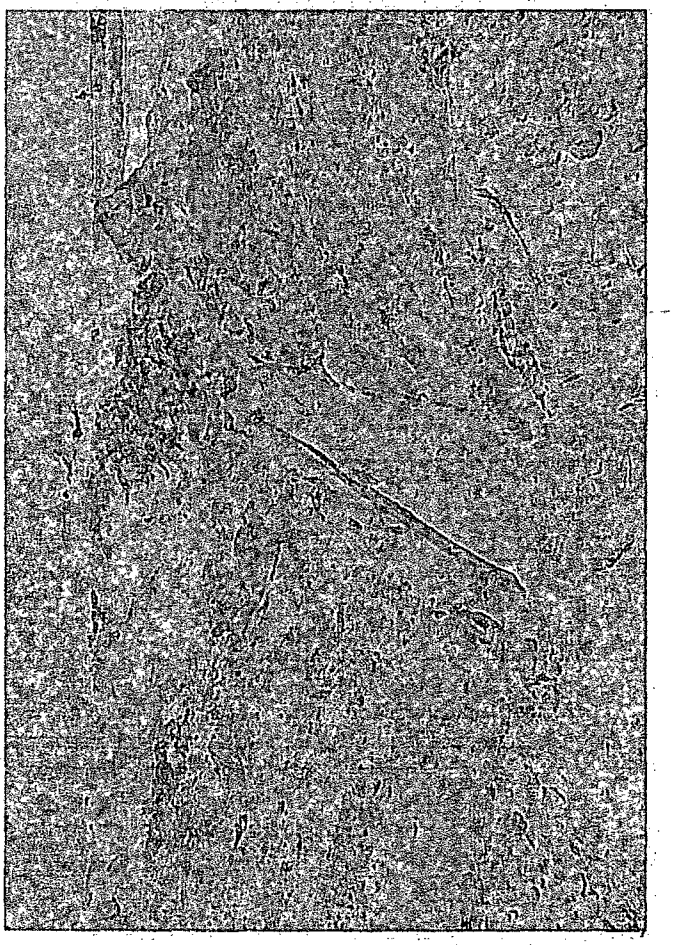
08/01/11--received notification of spill on this location from Dennis Potter, Linn Energy. During construction of Apache drilling pad for the Lee Federal 42, the construction crew dug into a Linn Operating buried fiberglass flowline off the northwest corner of the well pad. Line was in the west portion of the topsoil stock pile. An appropriate 811 call had been placed prior to building the pad (Hungry Horse contractor) and Linn had cleared all lines within the staked pad area, but had not cleared lines outside of that area. Line hit is just outside of staked well pad area. As a result, Linn Operating is taking the responsibility for the spill cleanup of this spill. No archeology issues due to clearance required for new pad. 08/03/11--onsite to assess spill. Pad is built. Spill is in the middle of the topsoil stockpile on western side. Whoever excavated the line, picked up the spill slop and dumped up on the topsoil stockpile above the spill, thereby contaminating a great deal of viable topsoil. Line has been repaired. GPS'd spill perimeter; perimeter includes contaminated portion of topsoil stockpile. Need to speak to Potter about more careful placement of contaminated materials. TG. 08/11/11--well currently in drilling status. Linn will probably delay spill remediation until drilling rig moved off location. Called Potter to see which Linn Operating well he wanted to tie this spill to; he said the Turner B #7. Undesirable Event number 11NU108TG. TG.

Author: TERRY GREGSTON Date: 08/11/2011

Follow-up Requirements: (circle any that apply) NONE VERBAL LETTER INC NOTIFY PET

Follow-up Remarks:

CORRECT PROBLEM BY:	NEXT INSPECTION:



CARDINAL Laboratories

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

November 06, 2013

BRIAN WALL

LINN OPERATING-HOBBS

2130 W. BENDER

HOBBS, NM 88240

RE: TURNER B #7

Enclosed are the results of analyses for samples received by the laboratory on 10/31/13 13:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

LINN OPERATING-HOBBS
BRIAN WALL
2130 W. BENDER
HOBBS NM, 88240
Fax To: (575) 738-1740

Received:	10/31/2013	Sampling Date:	10/31/2013
Reported:	11/06/2013	Sampling Type:	Soil
Project Name:	TURNER B #7	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 1 SURFACE (H302656-01)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/05/2013	ND	1.90	94.9	2.00	2.12	
Toluene*	<0.050	0.050	11/05/2013	ND	1.89	94.7	2.00	2.22	
Ethylbenzene*	<0.050	0.050	11/05/2013	ND	1.90	95.2	2.00	2.41	
Total Xylenes*	<0.150	0.150	11/05/2013	ND	5.57	92.9	6.00	2.39	
Total BTEX	<0.300	0.300	11/05/2013	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**6480**	16.0	11/01/2013	ND	400	100	400	0.00	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/01/2013	ND	175	87.6	200	8.35	
DRO >C10-C28	**25.2**	10.0	11/01/2013	ND	165	82.6	200	10.0	

Surrogate: 1-Chlorooctane *74.5 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *78.4 %* *63.6-154*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

LINN OPERATING-HOBBS
BRIAN WALL
2130 W. BENDER
HOBBS NM, 88240
Fax To: (575) 738-1740

Received:	10/31/2013	Sampling Date:	10/31/2013
Reported:	11/06/2013	Sampling Type:	Soil
Project Name:	TURNER B #7	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: SP 2 SURFACE (H302656-02)

BTEX 8021B mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/05/2013	ND	1.90	94.9	2.00	2.12	
Toluene*	<0.050	0.050	11/05/2013	ND	1.89	94.7	2.00	2.22	
Ethylbenzene*	<0.050	0.050	11/05/2013	ND	1.90	95.2	2.00	2.41	
Total Xylenes*	<0.150	0.150	11/05/2013	ND	5.57	92.9	6.00	2.39	
Total BTEX	<0.300	0.300	11/05/2013	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**1020**	16.0	11/01/2013	ND	400	100	400	0.00	

TPH 8015M mg/kg Analyzed By: MS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/01/2013	ND	175	87.6	200	8.35	
DRO >C10-C28	<10.0	10.0	11/01/2013	ND	165	82.6	200	10.0	

Surrogate: 1-Chlorooctane *89.2 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *98.2 %* *63.6-154*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name:	Titan Energy	BILL TO	
Project Manager:	Brian Wall	P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name:	Turner B #7	State: Zip:	
Project Location:	Eddie County	Phone #:	
Sampler Name:	Luis Gonzalez	Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	Chlorides	TPH	BTEX
H13026-56																	
1	SP1 Surface	G	1			✓					✓		10/13/13		✓	✓	✓
2	SP2 Surface	G	1			✓					✓		10/13/13		✓	✓	✓

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Luis Gonzalez	Date: 10/21/13 Time: 1:50	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #: REMARKS:

Delivered By: (Circle One)	Sample Condition	CHECKED BY:
Sampler - UPS - Bus - Other: 9.8°C	Cool: ☐ Yes ☑ No Intact: ☑ Yes ☐ No	(Initials) GM

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

#54

CARDINAL Laboratories

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

November 14, 2013

BRIAN WALL

LINN ENERGY

RR1, BOX 24 B

KINGFISHER, OK 73750

RE: TURNER B #7

Enclosed are the results of analyses for samples received by the laboratory on 11/08/13 16:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

LINN ENERGY
BRIAN WALL
RR1, BOX 24 B
KINGFISHER OK, 73750
Fax To: (405) 375-6693

Received:	11/08/2013	Sampling Date:	11/06/2013
Reported:	11/14/2013	Sampling Type:	Soil
Project Name:	TURNER B #7	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 1 @ 11 (H302739-01)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/13/2013	ND	1.66	83.0	2.00	12.6	
Toluene*	<0.050	0.050	11/13/2013	ND	1.68	84.2	2.00	11.8	
Ethylbenzene*	<0.050	0.050	11/13/2013	ND	1.69	84.7	2.00	11.9	
Total Xylenes*	<0.150	0.150	11/13/2013	ND	5.13	85.4	6.00	10.6	
Total BTEX	<0.300	0.300	11/13/2013	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**432**	16.0	11/13/2013	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/12/2013	ND	199	99.4	200	7.54	
DRO >C10-C28	<10.0	10.0	11/12/2013	ND	186	92.9	200	7.14	

Surrogate: 1-Chlorooctane *94.9 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *109 %* *63.6-154*

Cardinal Laboratories *=Accredited Analyte

Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

LINN ENERGY
BRIAN WALL
RR1, BOX 24 B
KINGFISHER OK, 73750
Fax To: (405) 375-6693

Received:	11/08/2013	Sampling Date:	11/07/2013
Reported:	11/14/2013	Sampling Type:	Soil
Project Name:	TURNER B #7	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: SP 2 @ 3 (H302739-02)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	11/13/2013	ND	1.66	83.0	2.00	12.6	
Toluene*	<0.050	0.050	11/13/2013	ND	1.68	84.2	2.00	11.8	
Ethylbenzene*	<0.050	0.050	11/13/2013	ND	1.69	84.7	2.00	11.9	
Total Xylenes*	<0.150	0.150	11/13/2013	ND	5.13	85.4	6.00	10.6	
Total BTEX	<0.300	0.300	11/13/2013	ND					

Surrogate: 4-Bromofluorobenzene (PID *105 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**416**	16.0	11/13/2013	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	11/12/2013	ND	199	99.4	200	7.54	
DRO >C10-C28	<10.0	10.0	11/12/2013	ND	186	92.9	200	7.14	

Surrogate: 1-Chlorooctane *103 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *110 %* *63.6-154*

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

Company Name: Linn energy		BILL TO	
Project Manager: Brian Wall		P.O. #:	
Address:		Company:	
City:	State: Zip:	Attn:	
Phone #:	Fax #:	Address:	
Project #:	Project Owner:	City:	
Project Name: Turner B #2		State: Zip:	
Project Location:		Phone #:	
Sampler Name: Miguel Gomez		Fax #:	

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST		
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	Chloride	TPH	BTEX
H302739																	
1	SP1@11	G	1			X					X		11-6-13	2:59	X	X	X
2	SP2@3	G	1			X					X		11-7-13	7:15	X	X	X

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By: Miguel Gomez	Date: 11/8/13 Time: 4:00	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No	Add'l Phone #:	
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No	Add'l Fax #:	
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 3.4°C	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials)	REMARKS: BWall@Linnenergy.com ARuth@diversifiedFSI.com		

† Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326

#54