



**RAILROAD COMMISSION OF TEXAS**

**Form W-2**

1701 N. Congress  
P.O. Box 12967  
Austin, Texas 78701-2967

Status: Approved  
Date: 01/14/2019  
Tracking No.: 203588

**OIL WELL POTENTIAL TEST, COMPLETION OR RECOMPLETION REPORT, AND LOG**

**OPERATOR INFORMATION**

**Operator Name:** LIME ROCK RESOURCES IV-A, L.P.      **Operator No.:** 500794  
**Operator Address:** 1111 BAGBY STREET SUITE 4600 HOUSTON, TX 77002-0000

**WELL INFORMATION**

**API No.:** 42-003-47862      **County:** ANDREWS  
**Well No.:** 5H      **RRC District No.:** 08  
**Lease Name:** UL 14 OBERON      **Field Name:** SHAFTER LAKE, N. (SAN ANDRES)  
**RRC Lease No.:** 46617      **Field No.:** 82572666  
**Location:** Section: 17, Block: A33, Survey: PSL/CROWLEY, J G, Abstract: 478  
  
**Latitude:**      **Longitude:**  
**This well is located**      13.4      **miles in a**      NW  
**direction from**      ANDREWS, TX,  
**which is the nearest town in the county.**

**FILING INFORMATION**

**Purpose of filing:** Initial Potential  
**Type of completion:** New Well  
**Well Type:** Producing      **Completion or Recompletion Date:** 10/19/2018  
  

<u>Type of Permit</u>	<u>Date</u>	<u>Permit No.</u>
Permit to Drill, Plug Back, or Deepen	08/15/2018	842725
Rule 37 Exception		
Fluid Injection Permit		
O&G Waste Disposal Permit		
Other:		

**COMPLETION INFORMATION**

**Spud date:** 08/23/2018      **Date of first production after rig released:** 10/19/2018  
**Date plug back, deepening, recompletion, or drilling operation commenced:** 08/23/2018      **Date plug back, deepening, recompletion, or drilling operation ended:** 09/03/2018  
**Number of producing wells on this lease in this field (reservoir) including this well:** 5      **Distance to nearest well in lease & reservoir (ft.):** 753.0  
**Total number of acres in lease:** 642.30      **Elevation (ft.):** 3273      GL  
**Total depth TVD (ft.):** 4692      **Total depth MD (ft.):** 10084  
**Plug back depth TVD (ft.):**      **Plug back depth MD (ft.):**  
**Was directional survey made other than inclination (Form W-12)?** Yes      **Rotation time within surface casing (hours):** 3.0  
**Is Cementing Affidavit (Form W-15) attached?** Yes  
**Recompletion or reclass?** No      **Multiple completion?** No  
**Type(s) of electric or other log(s) run:** Gamma Ray (MWD)  
**Electric Log Other Description:**  
**Location of well, relative to nearest lease boundaries**      **Off Lease :** Yes  
**of lease on which this well is located:**      550.0 **Feet from the**      South **Line and**  
1435.0 **Feet from the**      West **Line of the**  
UL 14 OBERON **Lease.**

**FORMER FIELD (WITH RESERVOIR) & GAS ID OR OIL LEASE NO.**

Field & Reservoir      Gas ID or Oil Lease No.      Well No.      Prior Service Type

PACKET: N/A

W2: N/A

**FOR NEW DRILL OR RE-ENTRY, SURFACE CASING DEPTH DETERMINED BY:**

**GAU Groundwater Protection Determination**      **Depth (ft.):** 1700.0      **Date:** 08/03/2018  
**SWR 13 Exception**      **Depth (ft.):**

**INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION**

**Date of test:** 10/25/2018      **Production method:** Pumping  
**Number of hours tested:** 24      **Choke size:**  
**Was swab used during this test?** No      **Oil produced prior to test:**

**PRODUCTION DURING TEST PERIOD:**

**Oil (BBLs):** 156.00      **Gas (MCF):** 110  
**Gas - Oil Ratio:** 705      **Flowing Tubing Pressure:** 184.00  
**Water (BBLs):** 1348

**CALCULATED 24-HOUR RATE**

**Oil (BBLs):** 156.0      **Gas (MCF):** 110  
**Oil Gravity - API - 60.:** 30.4      **Casing Pressure:** 122.00  
**Water (BBLs):** 1348

**CASING RECORD**

Row	Type of Casing	Casing Size (in.)	Hole Size (in.)	Setting Depth (ft.)	Multi - Stage Depth (ft.)	Multi - Stage Shoe Depth (ft.)	Cement Class	Cement Amount (sacks)	Slurry Volume (cu. ft.)	Top of Cement (ft.)	TOC Determined By
1	Surface	9 5/8	12 1/4	1825			C	740	1317.0	0	Circulated to Surface
2	Conventional Production	5 1/2	8 3/4	10084			50-50 POZ/C	2285	4219.0	0	Circulated to Surface

**LINER RECORD**

Row	Liner Size (in.)	Hole Size (in.)	Liner Top (ft.)	Liner Bottom (ft.)	Cement Class	Cement Amount (sacks)	Slurry Volume (cu. ft.)	Top of Cement (ft.)	TOC Determined By
N/A									

**TUBING RECORD**

Row	Size (in.)	Depth	Size (ft.)	Packer Depth (ft.)/Type
1	2 7/8	4566		/

**PRODUCING/INJECTION/DISPOSAL INTERVAL**

Row	Open hole?	From (ft.)	To (ft.)
1	No	L1 5095	9996.0

**ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC.**

**Was hydraulic fracturing treatment performed?** Yes  
**Is well equipped with a downhole actuation sleeve?** No      **If yes, actuation pressure (PSIG):** 1462.0  
**Production casing test pressure (PSIG) prior to hydraulic fracturing treatment:** 1070      **Actual maximum pressure (PSIG) during hydraulic fracturing:** 8216  
**Has the hydraulic fracturing fluid disclosure been reported to FracFocus disclosure registry (SWR29)?** Yes

Row	Type of Operation	Amount and Kind of Material Used	Depth Interval (ft.)
1	Acid	60 BBLs 15% NEFE	5095 9996

## FORMATION RECORD

<u>Formations</u>	<u>Encountered</u>	<u>Depth TVD (ft.)</u>	<u>Depth MD (ft.)</u>	<u>Is formation isolated?</u>	<u>Remarks</u>
YATES	Yes	3020.0	3020.0	Yes	
SEVEN RIVERS	Yes	3272.0	3272.0	Yes	
QUEEN	Yes	3885.0	3885.0	Yes	
GRAYBURG	Yes	4295.0	4295.0	Yes	
SAN ANDRES - CO2 FLOOD, HIGH FLOWS, H2S, CORROSIVE	Yes	4628.0	4628.0	Yes	
HOLT	No			No	NOT ENCOUNTERED (BELOW TVD)
GLORIETA	No			No	NOT ENCOUNTERED (BELOW TVD)
TUBB	No			No	NOT ENCOUNTERED (BELOW TVD)
CLEARFORK	No			No	NOT ENCOUNTERED (BELOW TVD)
PERMIAN DETRITAL	No			No	NOT ENCOUNTERED (BELOW TVD)
LEON	No			No	NOT ENCOUNTERED (BELOW TVD)
WICHITA ALBANY	No			No	NOT ENCOUNTERED (BELOW TVD)
SPRABERRY	No			No	NOT ENCOUNTERED (BELOW TVD)
DEAN	No			No	NOT ENCOUNTERED (BELOW TVD)
WOLFCAMP	No			No	NOT ENCOUNTERED (BELOW TVD)
CANYON	No			No	NOT ENCOUNTERED (BELOW TVD)
PENNSYLVANIAN	No			No	NOT ENCOUNTERED (BELOW TVD)
MCKEE	No			No	NOT ENCOUNTERED (BELOW TVD)
STRAWN	No			No	NOT ENCOUNTERED (BELOW TVD)
FUSSELMAN	No			No	NOT ENCOUNTERED (BELOW TVD)
DEVONIAN	No			No	NOT ENCOUNTERED (BELOW TVD)
SILURIAN	No			No	NOT ENCOUNTERED (BELOW TVD)
ELLENBURGER	No			No	NOT ENCOUNTERED (BELOW TVD)

Do the producing interval of this well produce H2S with a concentration in excess of 100 ppm (SWR 36)?

Yes

Is the completion being downhole commingled (SWR 10)? No

## REMARKS

KOP @ 3921'

**RRC REMARKS**

**PUBLIC COMMENTS:**

[RRC Staff 2019-01-10 14:10:18.805] location of well is plotted to be OK with take points at 5095-9996 feet

**CASING RECORD :**

**TUBING RECORD:**

**PRODUCING/INJECTION/DISPOSAL INTERVAL :**

**ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC. :**

**POTENTIAL TEST DATA:**

**OPERATOR'S CERTIFICATION**

**Printed Name:** Carla Martin

**Title:**

**Telephone No.:** (713) 292-9510

**Date Certified:** 01/11/2019



RAILROAD COMMISSION OF TEXAS

1701 N. Congress
P.O. Box 12967
Austin, Texas 78701-2967

Form W-15

Rev. 08/2014

CEMENTING REPORT

Cementer: Fill in shaded areas.
Operator: Fill in other items.

OPERATOR INFORMATION

Operator Name: LIME ROCK RESOURCES IV-A, LP
Operator P-5 No.: 500794
Cementer Name: C&J Energy Service
Cementer P-5 No.: 120531

WELL INFORMATION

District No.: 08
County: ANDREWS
Well No.: #5H
API No.: 42-003-47862
Drilling Permit No.: 842725
Lease Name: UL 14 OBERON
Lease No.: 46617
Field Name: Shafter Lake, N. (San Andres)
Field No.: 82572 666

I. CASING CEMENTING DATA

Type of Casing: [ ] Conductor [x] Surface [ ] Intermediate [ ] Liner [ ] Production
Drilled hole size (in.): 12 1/4
Depth of drilled hole (ft.): 1826
Est. % wash-out or hole enlargement: 15
Size of casing in O.D. (in.): 9-5/8
Casing weight (lbs/ft) and grade: 36.0/J55
No. of centralizers used: 11
Was cement circulated to ground surface (or bottom of cellar) outside casing? [x] YES [ ] NO
Setting depth shoe (ft.): 1825
Top of liner (ft.):
Setting depth liner (ft.):
Hrs. waiting on cement before drill-out: 21.25
Calculated top of cement (ft.): 0
Cementing date: 8/23/2018

SLURRY

Table with 6 columns: Slurry No., No. of Sacks, Class, Additives, Volume (cu. ft.), Height (ft.)

II. CASING CEMENTING DATA

Type of casing: [ ] Surface [ ] Intermediate [ ] Production [ ] Tapered production [ ] Multi-stage cement shoe [ ] Multiple parallel strings
Drilled hole size (in.):
Depth of drilled hole (ft.):
Est. % wash-out or hole enlargement:
Size of casing in O.D. (in.):
Casing weight (lbs/ft) and grade:
No. of centralizers used:
Tapered string drilled hole size (in.):
Tapered string depth of drilled hole (ft.):
Upper: Lower:
Upper: Lower:
Tapered string size of casing in O.D. (in.):
Tapered string casing weight(lbs/ft) and grade:
Tapered string no. of centralizers used:
Upper: Lower:
Upper: Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? YES [ ] NO [ ]
Setting depth shoe (ft.):
Hrs. waiting on cement before drill-out:
Calculated top of cement (ft.):
Cementing date:

SLURRY

Table with 6 columns: Slurry No., No. of Sacks, Class, Additives, Volume (cu. ft.), Height (ft.)

III. CASING CEMENTING DATA

Type of casing: [ ] Surface [ ] Intermediate [ ] Production [ ] Tapered production [ ] Multi-stage cement/DV tool [ ] Multiple parallel strings
Drilled hole size (in.):
Depth of drilled hole (ft.):
Est. % wash-out or hole enlargement:
Size of casing in O.D. (in.):
Casing weight (lbs/ft) and grade:
No. of centralizers used:
Tapered string drilled hole size (in.):
Tapered string depth of drilled hole (ft.):
Upper: Lower:
Upper: Lower:
Tapered string size of casing in O.D. (in.):
Tapered string casing weight(lbs/ft) and grade:
Tapered string no. of centralizers used:
Upper: Lower:
Upper: Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? YES [ ] NO [ ]
Setting depth shoe (ft.):
Hrs. waiting on cement before drill-out:
Calculated top of cement (ft.):
Cementing date:

SLURRY

Table with 6 columns: Slurry No., No. of Sacks, Class, Additives, Volume (cu. ft.), Height (ft.)

W15-Surface (backside)

CEMENTING TO SQUEEZE, PLUG BACK OR PLUG AND ABANDON										
	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7			
Cementing Date										
Size of hole or pipe (in.)										
Depth to bottom of tubing or drill pipe (ft.)										
Cement retainer setting depth (ft.)										
CIBP setting depth (ft.)										
Amount of cement on top of CIBP (ft.)										
Sacks of cement used										
Slurry volume pumped (cu. ft.)										
Calculated top of plug (ft.)										
Measured top of plug, if tagged (ft.)										
Slurry weight (lbs/gal)										
Class/type of cement										
Perforate and squeeze (YES/NO)										

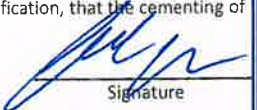
REMARKS

REMARKS1) 6%GEL+0.25#/SK CELLOFLAKE+5%SALT  
 REMARKS2) 3%CACL2

CEMENTER'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that the cementing of

JOEL VASQUEZ  
 Name and title of cementer's representative

C&J Energy Services  
 Cementing Company

  
 Signature

2601 E I20 MIDLAND TX 79706  
 Address City, State, Zip Code

432-686-8559  
 Tel: Area Code Number

8/23/2018  
 Date: mo. day yr.

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge

Carla Martin  
 Typed or printed name of operator's representative

Regulatory Tech  
 Title

  
 Signature

1111 Bagby St., Ste. 4600; Houston, TX 77002  
 Address City, State, Zip Code

713/292-9510  
 Tel: Area Code Number

11/16/18  
 Date: mo. day yr.

**Instructions for Form W-15, Cementing Report**

NOTICE: The Form W-15 must be submitted as an attachment to a Form G-1 (Gas Well Back Pressure Test, Completion or Recompletion Report, and Log), Form W-2 (Oil Well Potential Test, Completion or Recompletion Report, and Log),

- A. **What to file:** An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company should be reported on one Form W-15. The Form W-15 should be filed with the Form W-3, Plugging Record, unless the Form W-3 is signed by the cementing company representative. When reporting dry holes, operators must complete Form W-15, in accordance with the instructions on the back of the form.
- B. **How to file:** An oil and gas completion report and Form W-15 may be filed online using the Commission's Online System (<https://webapps.rrc.state.tx.us/security/login.do>) or a paper copy of the form may be mailed to the Commission in Austin (P.O. Box 12967, Austin, Texas 787112967).
- C. **Surface casing:** An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Groundwater Advisory Unit in Austin. Sufficient cement shall be used to fill to plug and abandon a well, operators must use only cementers approved by the Commission's Director of Field Operations in accordance with SWR 14.
- D. **Estimated % wash-out:** If the estimated % wash-out is less than 20% (or 30% along the Gulf Coast), provide supporting documentation such as a caliper log to show how the estimated % wash-out was obtained.
- E. **Multi-stage cement:** An operator must report the multi-stage cement shoe in II. Casing Cementing Data section by selecting the type of casing and Multi-stage cement shoe. The operator must report the multi-stage cement shoe in the Casing Cementing Data section.
- F. **Multiple parallel strings:** An operator should file the Form W-15 as an attachment to the Form W-4, Application for Multiple Completion. An operator may be required to submit multiple Form W-15s to show all parallel strings.
- G. **Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.



# RAILROAD COMMISSION OF TEXAS

1701 N. Congress  
P.O. Box 12967  
Austin, Texas 78701-2967

Form W-15

Rev 08/2016

## CEMENTING REPORT

Cementer: Fill in shaded areas.  
Operator: Fill in other items.

### OPERATOR INFORMATION

Operator Name: LIME ROCK RESOURCES IV-A, LP	Operator P-5 No.: 500794
Cementer Name: C&J Energy Service	Cementer P-5 No.: 120531

### WELL INFORMATION

District No.: 08	County: ANDREWS	
Well No.: 5H	API No.: 42-003-47862	Drilling Permit No.: 842725
Lease Name: UL 14 OBERON	Lease No.: 46617	
Field Name: Shafter Lake, N. (San Andres)	Field No.: 82572 666	

### I. CASING CEMENTING DATA

Type of Casing: <input type="checkbox"/> Conductor <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Liner <input checked="" type="checkbox"/> Production		
Drilled hole size (in.): 8-3/4	Depth of drilled hole (ft.): 10084	Est. % wash-out or hole enlargement: 10
Size of casing in O.D. (in.): 5-1/2	Casing weight (lbs/ft) and grade: 20.0/L80	No. of centralizers used: 233
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no for surface casing, explain in Remarks.	Setting depth shoe (ft.): 10083	Top of liner (ft.):
Hrs. waiting on cement before drill-out: 190.25	Calculated top of cement (ft.): 0 (SURFACE)	Setting depth liner (ft.):
		Cementing date: 9/3/2018

### SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	775	50:50 CLASS C/POZ	REMARK 1	2286	2432
2	1510	50:50 CLASS C/POZ	REMARK 2	1933	7652
3					
Total	2285			4219	10084

### II. CASING CEMENTING DATA

Type of casing: <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered production <input type="checkbox"/> Multi-stage cement shoe <input type="checkbox"/> Multiple parallel strings		
Drilled hole size (in.):	Depth of drilled hole (ft.):	Est. % wash-out or hole enlargement:
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:	No. of centralizers used:
Tapered string drilled hole size (in.) Upper: Lower:	Tapered string depth of drilled hole (ft.) Upper: Lower:	
Tapered string size of casing in O.D. (in.) Upper: Lower:	Tapered string casing weight (lbs/ft) and grade Upper: Lower:	Tapered string no. of centralizers used Upper: Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? YES <input type="checkbox"/> NO <input type="checkbox"/>	Setting depth shoe (ft.):	
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.):	Cementing date:

### SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

### III. CASING CEMENTING DATA

Type of casing: <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered production <input type="checkbox"/> Multi-stage cement/DV tool <input type="checkbox"/> Multiple parallel strings		
Drilled hole size (in.):	Depth of drilled hole (ft.):	Est. % wash-out or hole enlargement:
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:	No. of centralizers used:
Tapered string drilled hole size (in.) Upper: Lower:	Tapered string depth of drilled hole (ft.) Upper: Lower:	
Tapered string size of casing in O.D. (in.) Upper: Lower:	Tapered string casing weight (lbs/ft) and grade Upper: Lower:	Tapered string no. of centralizers used Upper: Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? YES <input type="checkbox"/> NO <input type="checkbox"/>	Setting depth shoe (ft.):	
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.):	Cementing date:

### SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

CEMENTING TO SQUEEZE, PLUG BACK OR PLUG AND ABANDON

	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date							
Size of hole or pipe (in)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							

REMARKS

REMARK 1: 50:50:POZ: CLASS C +10% BENTONITE+1% SMS +.25#/SK CELLOFLAKE +.2% C-40P + 5% SALT  
 REMARK 2: 50:50:POZ: CLASS C +2%BENTONITE + .6% O-TX47A + .2% SMS + .1% O-TX20 + 2% C-40P

CEMENTER'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that the cementing of

EDGAR MONTES SERVICE SUPERVISOR  
 Name and title of cementer's representative

C&J Energy Services  
 Cementing Company

*Edgar Montes*  
 Signature

2601 EAST I-20 MIDLAND, TX, 79701  
 Address City, State, Zip Code

432-686-8559  
 Tel: Area Code Number

9/3/2018  
 Date: mo. day yr.

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge

Carla Martin  
 Typed or printed name of operator's representative

Regulatory Tech  
 Title

*Carla Martin*  
 Signature

1111 Bagby St., Ste. 4600; Houston, TX 77002  
 Address City, State, Zip Code

713/292-9510  
 Tel: Area Code Number

11/16/18  
 Date: mo. day yr.

Instructions for Form W-15, Cementing Report

- NOTICE: The Form W-15 must be submitted as an attachment to a Form G-1 (Gas Well Back Pressure Test, Completion or Recompletion Report, and Log), Form W-2 (Oil Well Potential Test, Completion or Recompletion Report, and Log).
- A. What to file: An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company should be reported on one Form W-15. The Form W-15 should be filed with the Form W-3, Plugging Record, unless the Form W-3 is signed by the cementing company representative. When reporting dry holes, operators must complete Form W-15, in accordance with the instructions below.
  - B. How to file: An oil and gas completion report and Form W-15 may be filed online using the Commission's Online System (<https://webapps.rrc.state.tx.us/security/login.do>) or a paper copy of the form may be mailed to the Commission in Austin (P.O. Box 12967, Austin, Texas 78712967).
  - C. Surface casing: An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Groundwater Advisory Unit in Austin. Sufficient cement shall be used to fill the casing and abandon a well, operators must use only cementers approved by the Commission's Director of Field Operations in accordance with SWR 14.
  - D. Estimated % wash-out: If the estimated % wash-out is less than 20% (or 30% along the Gulf Coast), provide supporting documentation such as a caliper log to show how the estimated % wash-out was obtained.
  - E. Multi-stage cement: An operator must report the multi-stage cement shoe in the Casing Cementing Data section by selecting the type of casing and Multi-stage cement shoe. The operator must report the multi-stage cement shoe in the Casing Cementing Data section.
  - F. Multiple parallel strings: An operator should file the Form W-15 as an attachment to the Form W-4, Application for Multiple Completion. An operator may be required to submit multiple Form W-15s to show all parallel strings.
  - G. Slurry data: If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.





# UL 14 Oberon 5H



MD  
5":100'

Company: Lime Rock Resources  
Well Name: UL 14 Oberon 5H  
API: 42-003-47862  
County/Parish: Andrews  
State/Prov: TX  
Country: US  
Job #: 2018-442-430

Company: Lime Rock Resources  
Well Name: UL 14 Oberon 5H  
API: 42-003-47862  
County/Parish: Andrews  
State or Prov: TX  
Country: US  
Job number: 2018-442-430  
Field: SEC 17 Block A33  
Rig Identification: Trinidad 430  
Survey Company: Total Directional Drilling Services

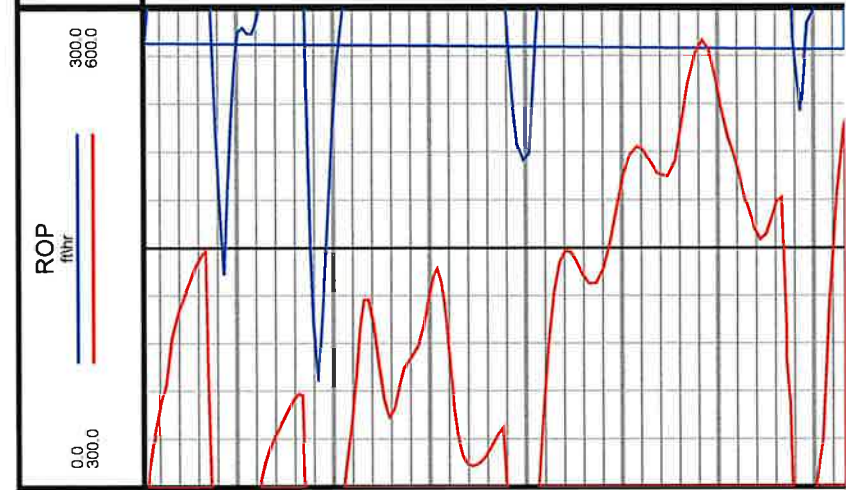
Day MWD Cayden Ferguson  
Night MWD Alex Delahoussaye

Log measurements: Gamma  
Depth measured from: Kelly Bushing ft ft  
Maximum temperature: TBD  
Depth Start: 136 ft End:  
Date: 8/23/2018

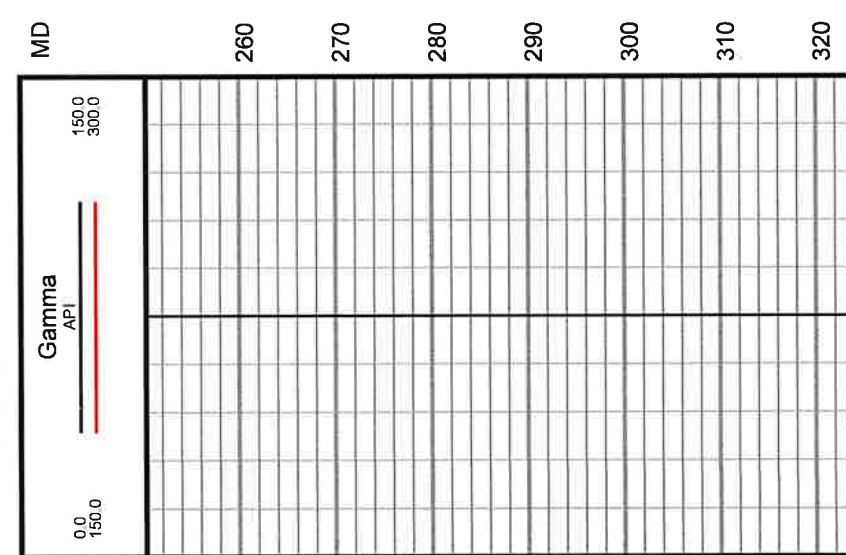
Casing Depth Size  
Surface:  
Intermediate:  
Mud type: Brine  
Density: 10.0  
Viscosity: 28  
Elevations  
KB: 3273 ft  
DF:  
GL:  
Rm: Rmf: Rmc:

Run	Bit Size	Offsets		Depths		Dates	
		Gamma	Survey	Start	End	Start	End
1	12.25"	52.00 ft	58.00 ft	136 ft	1826 ft	8/23/2018	8/24/2018
2	8.75"	53.00 ft	59.00 ft	1826 ft	4905 ft	8/25/2018	8/27/2018
3	8.75"	53.00 ft	59.00 ft	4905 ft	7400 ft	8/27/2018	8/30/2018
4	8.75"	53.00 ft	59.00 ft	7400 ft		8/30/2018	
5							
6							
7							
8							
9							
10							

Total Directional Drilling Services uses its best efforts to provide its customers with accurate information and interpretations in conjunction with services performed but will not be held liable or responsible for the accuracy of such information or interpretation.



#2 MD(283.00) Inc(0.60) Azm(164.90) TVD(282.99) VS(1.73)  
NI-S(-1.74) E/W(0.19)



**RAILROAD COMMISSION OF TEXAS  
OIL AND GAS DIVISION  
CERTIFICATE OF COMPLIANCE STATEWIDE RULE 36**

FORM H-9  
12/12/77

FILE WITH  
DISTRICT OFFICE  
IN TRIPLICATE

1. Operator Lime Rock Resources IV-A, LP			2. Operator Number (See Instruction 13) 500794		3. RRC Dist. 08
4. Street or P. O. Box No. 1111 Bagby St., Ste. 4600			5. City Houston		6. State TX
7. Zip Code 77002			8. Name of Lease, Facility or Operation UL 14 Oberon 5H		9. Field or Area Name Shafter Lake, N. (San Andres)
10. County Andrews			11. General Operation Type - Circle One: A - Oil Field Production      B - Gas Field Production C - Pipeline or Gathering Sys.      D - Gasoline Plant E - Drilling or Workover      F - Sweetening Unit G - Combination (explain)      H - Other (explain)		
12. RRC ID# of Operation(s) to be Covered by This Certificate			Type ID Code (See Instruction 12)		Indicate if Filing for Storage Facility Only YES      NO
46617			1		✓
13. Hydrogen Sulfide Concentration 10000 PPM			14. Maximum Escape Volume 80 MCF/Day		
15. 100 PPM Radius of Exposure (ROE) 88 Ft.			16. 500 PPM Radius of Exposure (ROE) 40 Ft.		
17. Operation is Existing <input type="checkbox"/> New <input checked="" type="checkbox"/>			18. Modification Resulting in Certificate Change Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
19. Workover or Drilling Well with 100 PPM ROE Greater than 3000' feet on Rule 36 Certified Well/Lease			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
20. Previous Certificate Number if Available (For Amended Certificates)					
21. The 100 PPM ROE includes any part of a public area except a public road Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
22. The 500 PPM ROE includes any part of a public road Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
23. Injection of fluid containing Hydrogen Sulfide (See Instruction 14) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
24. Date (or Depth) of Compliance with all applicable provisions of Rule 36 Mo / Day / 19 Year 1725 Ft. from Surface					
25. Contingency Plan Location of Plan (See Instruction 15) Shafter Lake Field Office					Has been prepared Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
26. Location of data used to prepare this certificate (See Instruction 15) 1111 Bagby St., Ste. 4600; Houston, TX 77002					
<b>CERTIFICATE</b>					
I declare under penalties prescribed in Section 91.143, Natural Resources Code, that I am authorized to make this report, that this report was prepared by me or under my supervision, and that I am qualified to make this certification by virtue of my training and experience, and by my analysis of the operation being certified, or by the analysis of qualified person working under my supervision, and that the data and facts stated therein are true, correct, and complete, to the best of my knowledge.					
<i>Carla Martin</i>		Carla Martin/Regulatory Tech		(713) 292-9510	11/16/18
Representative of Company		Title		Phone No.	Date

**RAILROAD COMMISSION USE ONLY**

This operation and the equipment used therein is approved on the basis of the above certification and is subject to further Commission audit for compliance with the required provisions of Statewide Rule 36. This approval may be cancelled if investigation determines that the operation does not comply with the provisions of Statewide Rule 36.

APPROVED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

REMARKS:

CERTIFICATION NUMBER: \_\_\_\_\_

**Clear Form**



## H2S RADIUS OF EXPOSURE Lime Rock Resources IV

### **UL 14 Oberon 5H**

H2S Concentration - PPM – (Vapor) – 10000 PPM

MCF/Day (Vapor) - 80

500 PPM Radius of Exposure – 40 ft.

100 PPM Radius of Exposure – 88 ft.

Created By Safety Consultant Nicholas Hughes on November 08, 2018





RAILROAD COMMISSION OF TEXAS

1701 N. Congress
P.O. Box 12967
Austin, Texas 78701-2967

Form P-16

Page 1

Rev. 01/2016

Acreage Designation

SECTION I. OPERATOR INFORMATION

Operator Name: Lime Rock Resources IV-A, LP Operator P-5 No.: 500794
Operator Address: 1111 Bagby St., Ste. 4600; Houston, TX 77002

SECTION II. WELL INFORMATION

District No.: 08 County: Andrews Purpose of Filing:
Well No.: 5H API No.: 42-003-47862
Total Lease Acres: 642.30 Drilling Permit No.: 842725
Lease Name: UL 14 Oberon Lease No.: 46617
Field Name: Shafter Lake, N. (San Andres) Field No.: 82572 666

Filer is the owner or lessee, or has been authorized by the owner or lessee, of all or an undivided portion of the mineral estate under each tract for which filer is listed as operator below.

SECTION III. LISTING OF ALL WELLS IN THE APPLIED-FOR FIELD ON THE SAME ACREAGE AS THE LEASE, POOLED UNIT, OR UNITIZED TRACT DESIGNATED IN SECTION II ABOVE BY FILER

Table with 8 columns: RRC ID No. or Lease No., Well No., H-Horizontal D-Directional V-Vertical, Lease Name, API No., Acres Assigned, SWR 38 Except. (Y/N), Operator Name and Operator No. (if different from filing operator)

Total Well Count > 5 642.30 < A. Total Assigned Horiz. Acreage 642.30 < C. Total Assigned Acreage
< Total Remaining Horiz. Acreage
< B. Total Assigned Vert./Dir. Acreage
< Total Remaining Vert./Dir. Acreage

SECTION IV. REMARKS / PURPOSE OF FILING (see instructions)

Attach Additional Pages As Needed. [X] No additional pages [ ] Additional Pages: \_\_\_\_ (No. of additional pages)

CERTIFICATION: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that this report was prepared by me or under my supervision or direction, that I am authorized to make this report, and that the information contained in this report is true, correct, and complete to the best of my knowledge.

Signature: Carla Martin Name and title (type or print): Carla Martin/Regulatory Technician Email (include email address only if you affirmatively consent to its public release):
Address: 1111 Bagby St., Ste. 4600 City, State, Zip Code: Houston TX 77002 Tel: Area Code Number Date: mo. day yr. 713 292-9510 01/11/2019

## GROUNDWATER PROTECTION DETERMINATION

Form GW-2



## Groundwater Advisory Unit

<b>Date Issued:</b>	03 August 2018	<b>GAU Number:</b>	202563
<b>Attention:</b>	LIME ROCK RESOURCES IV-A, 1111 BAGBY STREET SUITE HOUSTON, TX 77002	<b>API Number:</b>	
<b>Operator No.:</b>	500794	<b>County:</b>	ANDREWS
		<b>Lease Name:</b>	UL 14 Oberon
		<b>Lease Number:</b>	46617
		<b>Well Number:</b>	5H
		<b>Total Vertical Depth:</b>	5000
		<b>Latitude:</b>	32.441704
		<b>Longitude:</b>	-102.723944
		<b>Datum:</b>	NAD27

**Purpose:** New Production Well  
**Location:** Survey-PSL; Abstract-478; Block-A33; Section-17

To protect usable-quality groundwater at this location, the Groundwater Advisory Unit of the Railroad Commission of Texas recommends:

The interval from the land surface to a depth of 300 feet, and the zone from 1200 to 1700 feet must be protected.

This recommendation is applicable to all wells within a radius of 200 feet of this location.

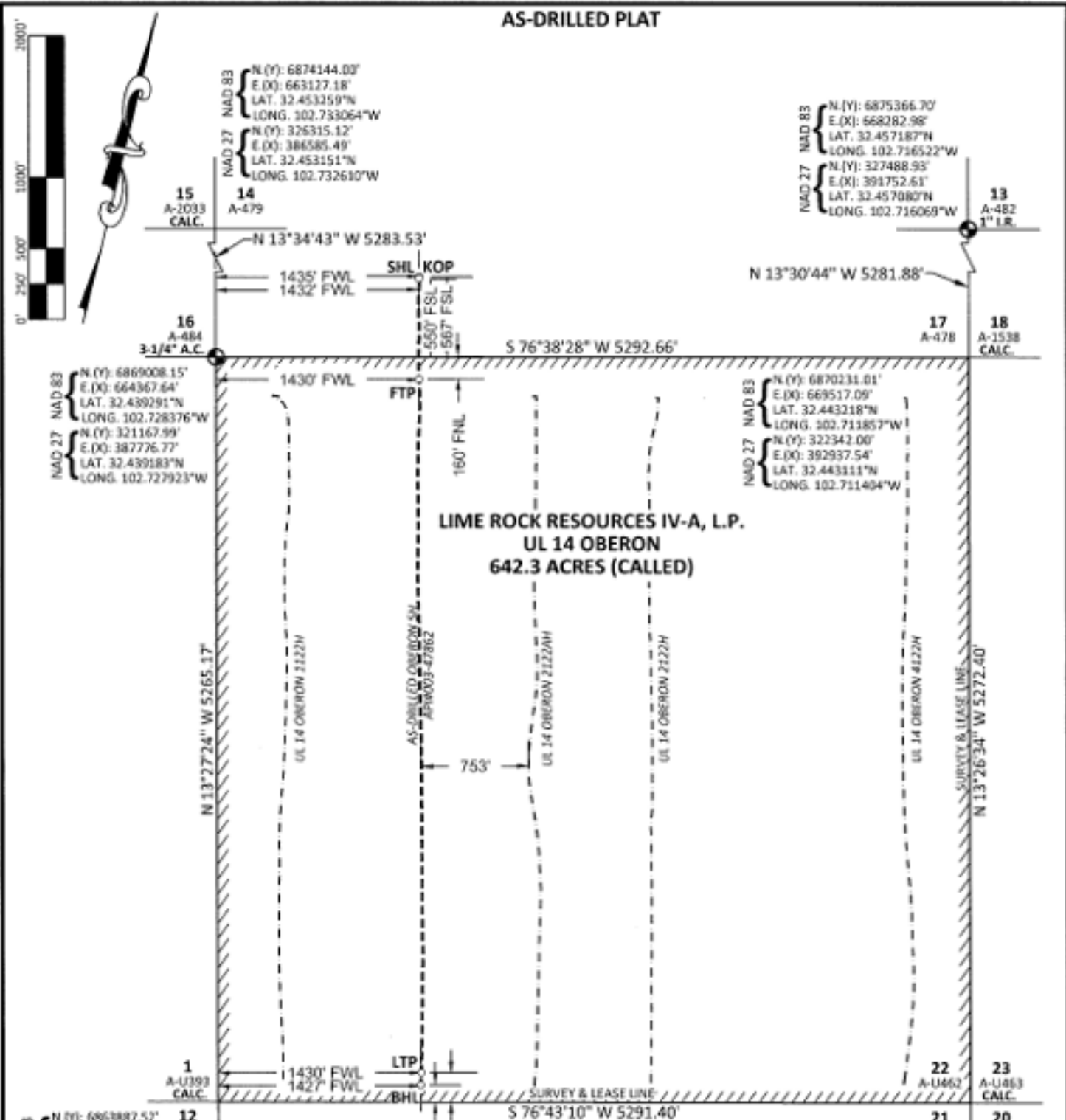
Note: Unless stated otherwise, this recommendation is intended to apply only to the subject well and not for area-wide use. Unless stated otherwise, this recommendation is for normal drilling, production, and plugging operations only.

This determination is based on information provided when the application was submitted on 07/30/2018. If the location information has changed, you must contact the Groundwater Advisory Unit, and submit a new application if necessary. If you have questions, please contact us at 512-463-2741 or [gau@rrc.texas.gov](mailto:gau@rrc.texas.gov).

Groundwater Advisory Unit, Oil and Gas Division

Form GW-2 P.O. Box 12967 Austin, Texas 78771-2967 512-463-2741 Internet address: [www.rrc.texas.gov](http://www.rrc.texas.gov)  
 Rev. 02/2014

AS-DRILLED PLAT



**NOTES:**  
 UN-GRADED GROUND ELEVATION AT SHL: 3272.72'  
 THIS LOCATION IS APPROXIMATELY 13.4 MILES N.49°W. OF ANDREWS, TEXAS.  
 BASIS OF BEARINGS, COORDINATES AND DISTANCES ARE A LAMBERT CONICAL PROJECTION OF THE TEXAS COORDINATE SYSTEM, STATE PLANE GRID, NAD 83, TEXAS NORTH CENTRAL (4202) WITH A CONVERGENCE ANGLE OF -2.23482308" AND A COMBINED SCALE FACTOR OF 0.99977788 BASED ON CONTROL POINT KENT 1 AT N. 6873488.90' - E. 704871.00'.  
 UNITS REPRESENTED ON THIS PLAT ARE IN US SURVEY FEET.

**LEGEND**  
  
 FOUND MONUMENT SHL/POP/FTP/LTP/BHL  
 PROPOSED DRILL PATH  
 AS-DRILLED PATH  
 SECTION LINE  
 LEASE BOUNDARY  
 A.C. ALUMINUM CAP  
 I.R. IRON ROD

SURFACE HOLE		KICK OFF POINT		FIRST TAKE POINT		LAST TAKE POINT		BOTTOM HOLE LOCATION	
FOOTAGE: 550' FSL & 1432' FWL		FOOTAGE: 567' FSL & 1435' FWL		FOOTAGE: 160' FNL & 1430' FWL		FOOTAGE: 1430' FWL & 208' FSL		FOOTAGE: 121' FSL & 1427' FWL	
LAT.	32.441809°	LAT.	32.441851°	LAT.	32.439931°	LAT.	32.426970°	LAT.	32.426735°
LONG.	102.724393°W	LONG.	102.724399°W	LONG.	102.723773°W	LONG.	102.719457°W	LONG.	102.715392°W
LAT.	33.441701°	LAT.	32.441743°	LAT.	32.439682°	LAT.	32.426883°	LAT.	32.426628°
LONG.	102.723940°W	LONG.	102.723947°W	LONG.	102.723321°W	LONG.	102.719005°W	LONG.	102.718940°W
NORTH	6869874.07	NORTH	6869889.37	NORTH	6869183.80	NORTH	6864419.02	NORTH	6864332.78
EAST	665632.14	EAST	665630.84	EAST	665795.71	EAST	666936.90	EAST	666953.63
NORTH	322021.87	NORTH	322037.18	NORTH	321330.11	NORTH	316554.94	NORTH	316468.53
EAST	389049.46	EAST	389048.30	EAST	389206.42	EAST	390301.98	EAST	390317.86



I, THE UNDERSIGNED, DO HEREBY CERTIFY THAT THE SURVEY INFORMATION FOUND ON THIS PERMIT PLAT WAS DERIVED FROM FIELD NOTES OR ELECTRONIC DATA OF AN ON-THE-GROUND SURVEY MADE BY ME OR UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. NO WARRANTY IS MADE OR INTENDED FOR THE LOCATION OF ANY OR ALL EASEMENTS THAT MAY EXIST WITHIN THE BOUNDS OF THIS SURVEY. THE INFORMATION PRESENTED HEREON IS FOR TEXAS RAILROAD COMMISSION PERMITTING ONLY. IF ANY ALTERATIONS ARE MADE, (HAND DRAWN, HANDWRITTEN OR DIGITAL ADDITIONS) THIS SURVEYOR IS NO LONGER RESPONSIBLE FOR THE VALIDITY OF THIS PLAT.

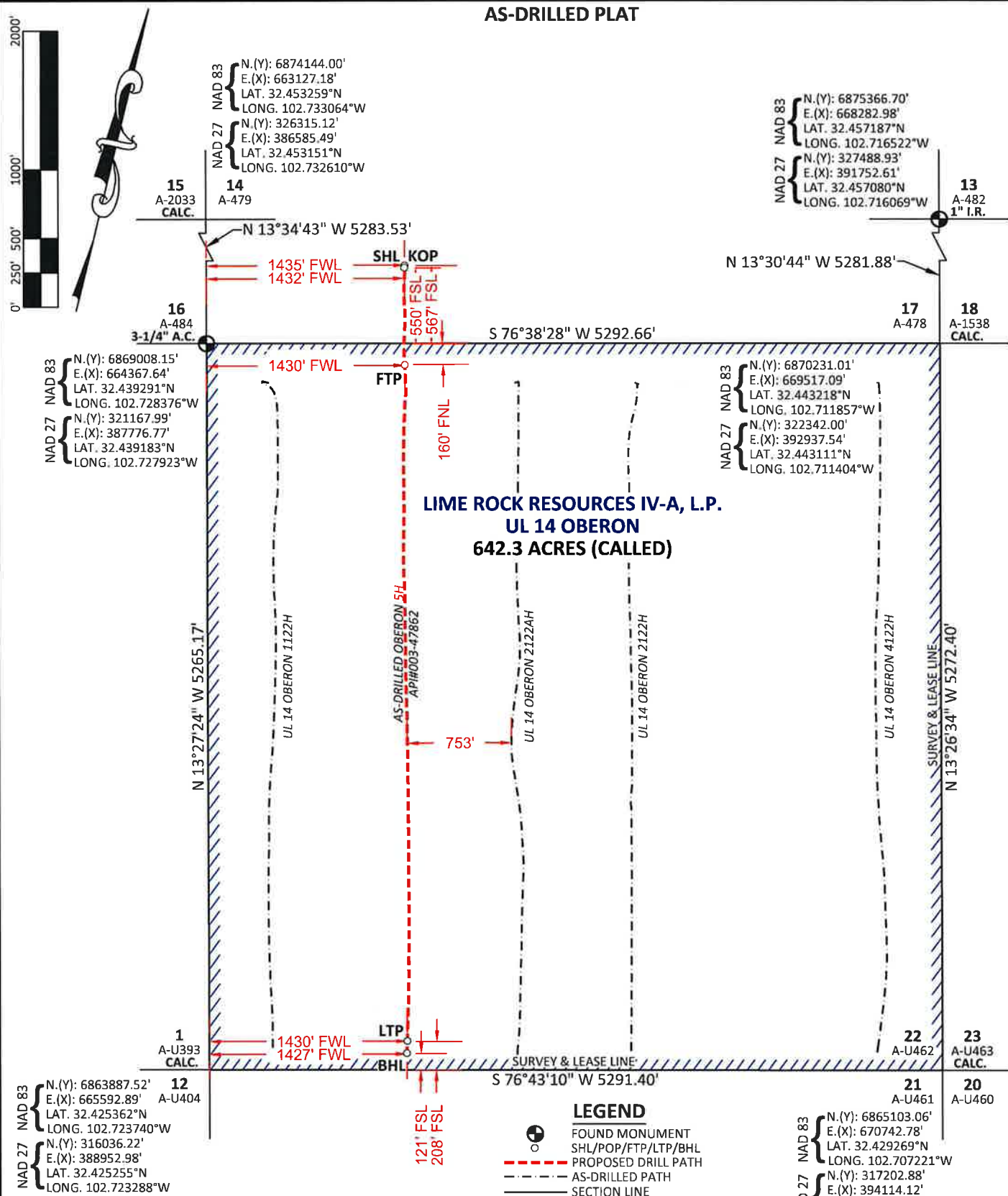
*Albert R. Dehoyos*  
 11/1/2018  
 ALBERT R. DEHOYOS TEXAS RPLS No. 6725 DATE

DRAWN BY: JSP CHECKED BY: ARD SURVEY DATE: 10/23/2018  
 SCALE: 1"=1000' JOB NUMBER: 18012 SHEET 3 OF 1

**WHS**  
 ENGINEERING · SURVEYING · PLANNING  
 550 EAST 2ND NORTH, GREEN RIVER, WY 82905 PHONE: 307-875-2424  
 www.whsinc.com  
 TEXAS FIRM REGISTRATION No. 10193907

**LIME ROCK RESOURCES**  
 IV-A, LP  
 UL 14 OBERON 5H  
 SHL LOCATED 550' FSL, AND 1432' FWL,  
 SEC. 17, BLOCK A-478, UNIVERSITY OF TEXAS,  
 ANDREWS COUNTY, TEXAS

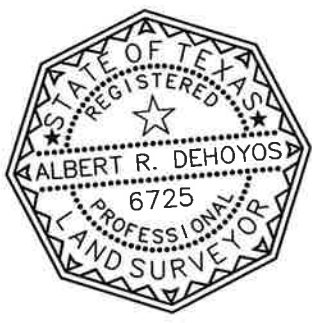
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SURFACE HOLE			KICK OFF POINT			FIRST TAKE POINT			LAST TAKE POINT			BOTTOM HOLE LOCATION		
FOOTAGE: 550' FSL & 1432' FWL			FOOTAGE: 567' FSL & 1435' FWL			FOOTAGE: 160' FNL & 1430' FWL			FOOTAGE: 1430' FWL & 208' FSL			FOOTAGE: 121' FSL & 1427' FWL		
GEOGRAPHIC DEC. DEG. NAD 83	LAT.	32.441809°	GEOGRAPHIC DEC. DEG. NAD 83	LAT.	32.441851°	GEOGRAPHIC DEC. DEG. NAD 83	LAT.	32.439931°	GEOGRAPHIC DEC. DEG. NAD 83	LAT.	32.426970°	GEOGRAPHIC DEC. DEG. NAD 83	LAT.	32.426735°
NAD 27	LONG.	102.724393°W	NAD 27	LONG.	102.724399°W	NAD 27	LONG.	102.723773°W	NAD 27	LONG.	102.719457°W	NAD 27	LONG.	102.719392°W
STATE PLANE TEXAS CENT. NAD 27	LAT.	33.441701°	STATE PLANE TEXAS CENT. NAD 27	LAT.	32.441743°	STATE PLANE TEXAS CENT. NAD 27	LAT.	32.4396824°	STATE PLANE TEXAS CENT. NAD 27	LAT.	32.426863°	STATE PLANE TEXAS CENT. NAD 27	LAT.	32.426628°
NAD 83	LONG.	102.723940°W	NAD 83	LONG.	102.723947°W	NAD 83	LONG.	102.723321°W	NAD 83	LONG.	102.719005°W	NAD 83	LONG.	102.718940°W
STATE PLANE TEXAS CENT. NAD 27	NORTH	6869874.07	STATE PLANE TEXAS CENT. NAD 27	NORTH	6869889.37	STATE PLANE TEXAS CENT. NAD 27	NORTH	6869183.80	STATE PLANE TEXAS CENT. NAD 27	NORTH	6864419.02	STATE PLANE TEXAS CENT. NAD 27	NORTH	6864332.78
NAD 83	EAST	665632.14	NAD 83	EAST	665630.84	NAD 83	EAST	665795.71	NAD 83	EAST	666936.90	NAD 83	EAST	666953.61
STATE PLANE TEXAS CENT. NAD 27	NORTH	322021.87	STATE PLANE TEXAS CENT. NAD 27	NORTH	322037.18	STATE PLANE TEXAS CENT. NAD 27	NORTH	321330.11	STATE PLANE TEXAS CENT. NAD 27	NORTH	316554.94	STATE PLANE TEXAS CENT. NAD 27	NORTH	316468.55
NAD 83	EAST	389049.46	NAD 83	EAST	389048.30	NAD 83	EAST	389206.42	NAD 83	EAST	390301.98	NAD 83	EAST	390317.86



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*Albert R. DeHoyos* 11/1/2018  
**ALBERT R. DEHOYOS TEXAS RPLS No. 6725** DATE

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