

API No. <u>42-003-42472</u> Drilling Permit # <u>852045</u> SWR Exception Case/Docket No. _____		RAILROAD COMMISSION OF TEXAS OIL & GAS DIVISION APPLICATION FOR PERMIT TO DRILL, RECOMPLETE, OR RE-ENTER <i>This facsimile W-1 was generated electronically from data submitted to the RRC.</i> <i>A certification of the automated data is available in the RRC's Austin office.</i>				FORM W-1 07/2004 Permit Status: Approved	
1. RRC Operator No. <div style="text-align: center;">500794</div>		2. Operator's Name (as shown on form P-5, Organization Report) <div style="text-align: center;">LIME ROCK RESOURCES IV-A, L.P.</div>		3. Operator Address (include street, city, state, zip): <div style="text-align: center;">1111 BAGBY STREET SUITE 4600 HOUSTON, TX 77002-0000</div>			
4. Lease Name <div style="text-align: center;">UNIVERSITY 9-31</div>		5. Well No. <div style="text-align: center;">1</div>					
GENERAL INFORMATION							
6. Purpose of filing (mark ALL appropriate boxes): <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <input type="checkbox"/> New Drill <input type="checkbox"/> Recompletion <input type="checkbox"/> Reclass <input checked="" type="checkbox"/> Field Transfer <input type="checkbox"/> Re-Enter </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <input type="checkbox"/> Amended <input type="checkbox"/> Amended as Drilled (BHL) (Also File Form W-1D) </div>							
7. Wellbore Profile (mark ALL appropriate boxes): <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <input checked="" type="checkbox"/> Vertical <input type="checkbox"/> Horizontal (Also File Form W-1H) <input type="checkbox"/> Directional (Also File Form W-1D) <input type="checkbox"/> Sidetrack </div>							
8. Total Depth <div style="text-align: center;">12500</div>		9. Do you have the right to develop the minerals under any right-of-way ? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		10. Is this well subject to Statewide Rule 36 (hydrogen sulfide area)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
SURFACE LOCATION AND ACREAGE INFORMATION							
11. RRC District No. <div style="text-align: center;">08</div>		12. County <div style="text-align: center;">ANDREWS</div>		13. Surface Location <input checked="" type="checkbox"/> Land <input type="checkbox"/> Bay/Estuary <input type="checkbox"/> Inland Waterway <input type="checkbox"/> Offshore			
14. This well is to be located <u>12</u> miles in a <u>SW</u> direction from <u>Andrews</u> which is the nearest town in the county of the well site.							
15. Section <div style="text-align: center;">31</div>	16. Block <div style="text-align: center;">9</div>	17. Survey <div style="text-align: center;">UL</div>		18. Abstract No. <div style="text-align: center;">A-</div>	19. Distance to nearest lease line: <div style="text-align: center;">1100 ft.</div>	20. Number of contiguous acres in lease, pooled unit, or unitized tract: <div style="text-align: center;">644.06</div>	
21. Lease Perpendiculars: <u>1250</u> ft from the <u>W</u> line and <u>1100</u> ft from the <u>N</u> line. 22. Survey Perpendiculars: <u>1250</u> ft from the <u>W</u> line and <u>1100</u> ft from the <u>N</u> line.							
23. Is this a pooled unit? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		24. Unitization Docket No:		25. Are you applying for Substandard Acreage Field? <input type="checkbox"/> Yes (attach Form W-1A) <input checked="" type="checkbox"/> No			
FIELD INFORMATION List all fields of anticipated completion including Wildcat. List one zone per line.							
26. RRC District No.	27. Field No.	28. Field Name (exactly as shown in RRC records)		29. Well Type	30. Completion Depth	31. Distance to Nearest Well in this Reservoir	
08	28899249	EMMA (ELLENBURGER)		Injection Well	12500	0.00	
BOTTOMHOLE LOCATION INFORMATION is required for DIRECTIONAL, HORIZONTAL, AND AMENDED AS DRILLED PERMIT APPLICATIONS							
Remarks [FILER Apr 11, 2019 2:05 PM]: Well being converted to injection well in Emma (Ellenburger) Field; [RRC STAFF Apr 12, 2019 9:32 AM]: There have been problems identified with this permit (see problem letter attachment). Notification sent.; [RRC STAFF May 29, 2019 5:46 PM]: Field Transfer letter attached.; [RRC STAFF May 30, 2019 1:55 PM]: Problems identified with this permit are resolved.				Certificate: I certify that information stated in this application is true and complete, to the best of my knowledge. <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="text-align: center;"> Donna Chandler, Consulting Petroleum Engineer _____ Name of filer </div> <div style="text-align: center;"> Apr 11, 2019 _____ Date submitted </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="text-align: center;"> (512)3276930, x7809 _____ Phone </div> <div style="text-align: center;"> donna.chandler@ftiplattsparks.com _____ E-mail Address (OPTIONAL) </div> </div>			
RRC Use Only Data Validation Time Stamp: May 30, 2019 2:03 PM('As Approved' Version)							

**RAILROAD COMMISSION OF TEXAS
OIL & GAS DIVISION**

PERMIT TO DRILL, DEEPEN, PLUG BACK, OR RE-ENTER ON A REGULAR OR ADMINISTRATIVE EXCEPTION LOCATION

PERMIT NUMBER 852045	DATE PERMIT ISSUED OR AMENDED May 30, 2019	DISTRICT * 08	
API NUMBER 42-003-42472	FORM W-1 RECEIVED Apr 11, 2019	COUNTY ANDREWS	
TYPE OF OPERATION FIELD TRANSFER	WELLBORE PROFILE(S) Vertical	ACRES 644.06	
OPERATOR LIME ROCK RESOURCES IV-A, L.P. 1111 BAGBY STREET SUITE 4600 HOUSTON, TX 77002-0000		NOTICE This permit and any allowable assigned may be revoked if payment for fee(s) submitted to the Commission is not honored. District Office Telephone No: (432) 684-5581	
LEASE NAME UNIVERSITY 9-31		WELL NUMBER 1	
LOCATION 12 miles SW direction from ANDREWS		TOTAL DEPTH 12500	
Section, Block and/or Survey SECTION 31 BLOCK 9 ABSTRACT SURVEY UL			
DISTANCE TO SURVEY LINES 1250 ft. W 1100 ft. N		DISTANCE TO NEAREST LEASE LINE 1100 ft.	
DISTANCE TO LEASE LINES 1250 ft. W 1100 ft. N		DISTANCE TO NEAREST WELL ON LEASE See FIELD(s) Below	
FIELD(s) and LIMITATIONS: <p align="center">* SEE FIELD DISTRICT FOR REPORTING PURPOSES *</p>			
FIELD NAME LEASE NAME		ACRES	DEPTH
		NEAREST LEASE	WELL # NEAREST WE
DIST			
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EMMA (ELLENBURGER)		644.06	12,500
UNIVERSITY 9-31		1100	1 08
RESTRICTIONS: Do not use this well for injection/disposal/hydrocarbon storage purposes without approval by the Environmental Services section of the Railroad Commission, Austin, Texas office. This is a hydrogen sulfide field. Hydrogen Sulfide Fields with perforations must be isolated and tested per State Wide Rule 36 and a Form H-9 filed with the district office. Fields with SWR 10 authority to downhole commingle must be isolated and tested individually prior to commingling production.			
<p align="center">THE FOLLOWING RESTRICTIONS APPLY TO ALL FIELDS</p> <p>This well shall be completed and produced in compliance with applicable special field or statewide spacing and density rules. If this well is to be used for brine mining, underground storage of liquid hydrocarbons in salt formations, or underground storage of gas in salt formations, a permit for that specific purpose must be obtained from Environmental Services prior to construction, including drilling, of the well in accordance with Statewide Rules 81, 95, and 97.</p> <p>This well must comply to the new SWR 3.13 requirements concerning the isolation of any potential flow zones and zones with corrosive formation fluids. See approved permit for those formations that have been identified for the county in which you are drilling the well in.</p> <p>No allowable can be obtained for this well until permit #747258 has been closed out.</p>			

**RAILROAD COMMISSION OF TEXAS
OIL & GAS DIVISION
SWR #13 Formation Data**

ANDREWS (003) County

Formation	Shallow Top	Deep Top	Remarks	Geological Order	Effective Date
YATES	2,500	3,200		1	12/17/2013
SEVEN RIVERS	3,000	3,000		2	12/17/2013
QUEEN	3,600	4,800		3	12/17/2013
GRAYBURG	3,100	5,000		4	12/17/2013
SAN ANDRES	3,700	5,300	CO2 flood, high flows, H2S, corrosive	5	12/17/2013
HOLT	5,000	5,500		6	12/17/2013
GLORIETA	5,100	6,000		7	12/17/2013
TUBB	6,100	6,300		8	12/17/2013
CLEARFORK	5,600	7,600		9	12/17/2013
PERMIAN DETRITAL	7,800	7,900		10	12/17/2013
LEON	7,900	7,900		11	12/17/2013
WICHITA ALBANY	6,500	8,100		12	12/17/2013
SPRABERRY	7,300	8,600		13	12/17/2013
DEAN	9,200	9,500		14	12/17/2013
WOLFCAMP	7,500	9,900		15	12/17/2013
CANYON	8,600	10,200		16	12/17/2013
PENNSYLVANIAN	8,700	10,200		17	12/17/2013
MCKEE	8,300	10,600		18	12/17/2013
STRAWN	8,800	11,000		19	12/17/2013
FUSSELMAN	8,400	11,900		20	12/17/2013
DEVONIAN	7,600	12,500		21	12/17/2013
SILURIAN	8,000	12,500		22	12/17/2013
ELLENBURGER	7,900	13,900		23	12/17/2013

The above list may not be all inclusive, and may also include formations that do not intersect all wellbores. Formation "TOP" information listed reflects an estimated range based on geologic variances across the county. To clarify, the "Deep Top" is not the bottom of the formation; it is the deepest depth at which the "TOP" of the formation has been or might be encountered. This is a dynamic list subject to updates and revisions. It is the operator's responsibility to make sure that at the time of spudding the well the most current list is being referenced. Refer to the RRC website at the following address for the most recent information.
<http://www.rrc.texas.gov/oil-gas/compliance-enforcement/rule-13-geologic-formation-info>

CHRISTI CRADDICK, CHAIRMAN
RYAN SITTON, COMMISSIONER
WAYNE CHRISTIAN, COMMISSIONER



DANNY SORRELLS
ASSISTANT EXECUTIVE DIRECTOR
DIRECTOR, OIL AND GAS DIVISION
PAUL DUBOIS
ASSISTANT DIRECTOR, TECHNICAL PERMITTING

RAILROAD COMMISSION OF TEXAS

OIL AND GAS DIVISION

May 28, 2019

LIME ROCK RESOURCES IV-A, L.P.
ATTN: REGULATORY DEPARTMENT
1111 BAGBY STREET SUITE 4600
HOUSTON TX 77002

RE: UNIVERSITY 9-31 — WELL NO. 1H
ANDREWS COUNTY, DISTRICT 08, TEXAS
API NO. 003-42472
LEASE/ID NO. 41821
PRODUCING INTERVAL: 12,359' – 12,595'

Dear Operator:

The Commission has approved your request to transfer the above-referenced well from the FUHRMAN-MASCHO (ELLENBURGER) (33176426) field to the EMMA (ELLENBURGER) (28899249) field.

Please file Forms G-1/W-2, P-4, and W-1 (if not already done) for the well with the new field name indicating the transfer comments in the remarks section. If the previous completion report associated with lease/ID no. 41821 showed perforations, mark "field transfer" in item #6 of the Form W-1. If this completion report did not show perforations, mark "recompletion" instead. Contact the district 08 proration analyst, if you have any questions or to determine if a Form P-15 with plat is required.

Please note: If this well has a Rule 10 exception for the current field, it will be necessary to obtain a new Rule 10 exception letter for this well for the EMMA (ELLENBURGER) (28899249) field.

Sincerely,

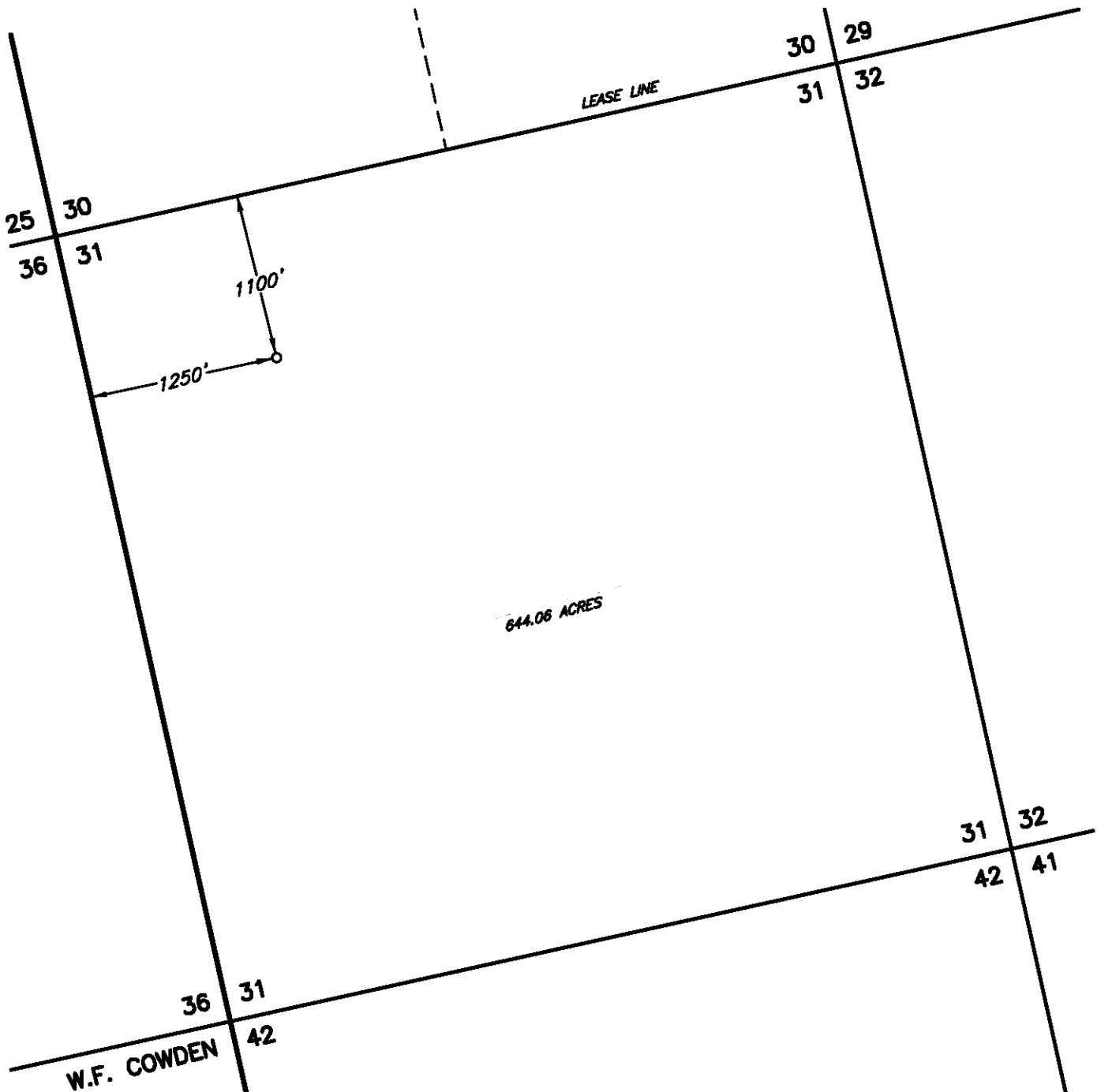
A handwritten signature in cursive script that reads "Matt Faubel".

Matt Faubel
Eng. Specialist
Technical Permitting

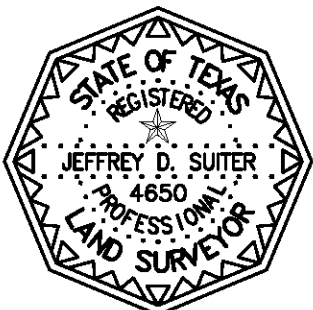
API # 003-42472
05/28/2019-06/27/2019

ANDREWS County, Texas
SL Description 1100' FNL & 1250' FWL

SECTION 31, BLOCK 9, UNIVERSITY LAND SURVEY

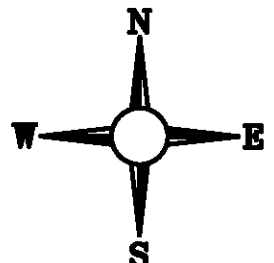


Operator LIME ROCK RESOURCES IV-A, L.P. Notes: For survey construction, corner descriptions and records references, see supporting documents in file.
Lease Name & Well No. UNIVERSITY 9-31 #1
Ground Elev. 3168' Alternate Location NONE
Coordinates NAD 27 TNC ZONE X = 415510 Y= 212080 LAT.: N 32.14333 LONG.: W 102.62089
NAD 83 TNC ZONE LAT.: N 32.14350 LONG.: W 102.62133
Topography & Vegetation NATURAL PASTURE
Best Accessibility to Location FROM THE JCT. OF HWY. 385 & CLABBER HILL RD. 13 M. S. OF ANDREWS. GO
W. ON CLABBER HILL RD. 8.3 M. & N 2.7 M, E. ON CALICHE RD. 0.3 TO LOC.
Distance & Direction ±12 MILES SOUTHWEST OF ANDREWS



The above sketch represents the location as staked on the ground and is for permit purposes only.

This the 8th day of December, 2010
Jeffrey D. Suiter



Job # 10332

Registered Professional Land Surveyor No. 4650

Scale : 1" = 1000'