



RAILROAD COMMISSION OF TEXAS

Form W-2

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

Status: Approved
Date: 01/07/2020
Tracking No.: 219774

OIL WELL POTENTIAL TEST, COMPLETION OR RECOMPLETION REPORT,

OPERATOR INFORMATION			
Operator	ZARVONA ENERGY LLC	Operator	950523
Operator	1001 MCKINNEY ST SUITE 1800 HOUSTON, TX 77002-6334		

WELL INFORMATION			
API	42-003-47556	County:	ANDREWS
Well No.:	6H	RRC District	08
Lease	ULS 5-9 UNIT	Field	EMMA (MISSISSIPPIAN)
RRC Lease	49290	Field No.:	28899581
Location	Section: 4, Block: 5, Survey: UL, Abstract: U108		
Latitude	32	Longitud	-102
This well is 16 miles in a NE direction from ANDREW, which is the nearest town in the			

FILING INFORMATION			
Purpose of	Initial Potential		
Type of	Other/Recompletion		
Well Type:	Producing	Completion or Recompletion	08/05/2019
Type of Permit	Date	Permit No.	
Permit to Drill, Plug Back, or Rule 37 Exception	06/01/2018	840640	
Fluid Injection			
O&G Waste Disposal			
Other:			

COMPLETION INFORMATION			
Spud	06/30/2017	Date of first production after rig	08/05/2019
Date plug back, deepening, drilling operation	01/04/2019	Date plug back, deepening, recompletion, drilling operation	03/03/2019
Number of producing wells on this lease this field (reservoir) including this	1	Distance to nearest well in lease & reservoir	0.0
Total number of acres in	1280.00	Elevation	3030 GL
Total depth TVD	12191	Total depth MD	22935
Plug back depth TVD	12191	Plug back depth MD	22108
Was directional survey made other inclination (Form W-	Yes	Rotation time within surface casing Is Cementing Affidavit (Form W-15)	Yes
Recompletion or	Yes	Multiple	No
Type(s) of electric or other log(s)	Gamma Ray (MWD)		
Electric Log Other Description:			
Location of well, relative to nearest lease of lease on which this well is	467.0 Feet from the	Off Lease :	Yes
	467.0 Feet from the	South Line and	
		East Line of the	
		ULS 5-9 UNIT Lease.	

FORMER FIELD (WITH RESERVOIR) & GAS ID OR OIL LEASE NO.			
Field & Reservoir	Gas ID or Oil Lease	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	1725.0	Date 05/17/2017
SWR 13 Exception	Depth		

INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION			
Date of	08/19/2019	Production	Flowing
Number of hours	24	Choke	48
Was swab used during this	No	Oil produced prior to	2766.00
PRODUCTION DURING TEST PERIOD:			
Oil	226.00	Gas	0
Gas - Oil	0	Flowing Tubing	187.00
Water	1421		
CALCULATED 24-HOUR RATE			
Oil	226.0	Gas	0
Oil Gravity - API - 60.:	41.5	Casing	308.00
Water	1421		

CASING RECORD											
Ro	Type of Casing	Casing	Hole	Setting	Multi -	Multi -	Cement	Cement	Slurry	Top of	TOC
		Size	Size	Depth	Stage	Tool	Stage	Shoe	Class	Amoun	Volume
		(in.)							(cu.	(ft.)	By
1	Surface	13 3/8	17 1/2	1844			POZ & PREM C	1950	3239.0	SURF ACE	Circulated to Surface
2	Intermediate	9 5/8	12 1/4	5428			C	1434	3220.0	0	Calculation
3	Conventional Production	7	8 3/4	12826			CLASS C & H	1045	1686.0	5463	Calculation
4	Conventional Production	7	8 3/4	12826	5463		CLASS C	395	856.0	0	Circulated to Surface

LINER RECORD									
Ro	Liner Size	Hole Size	Liner Top	Liner Bottom	Cement Class	Cement Amoun	Slurry Volume (cu.)	Top of Cement (ft.)	TOC Determined
1	4 1/2	6 1/8	10257	22108	H	1356	1767.0	10257	Calculation
2	4 1/2	6 1/8	0	10257	H	573	706.0	2714	Calculation

TUBING RECORD			
Ro	Size (in.)	Depth	Size (ft.)
1	2 7/8	11730	Packer Depth (ft.)/Type
			11722 / AS1 PACKER

PRODUCING/INJECTION/DISPOSAL INTERVAL			
Ro	Open hole?	From (ft.)	To (ft.)
1	No	L1 12677	22053.0

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC.				
Was hydraulic fracturing treatment		Yes		
Is well equipped with a downhole sleeve?		If yes, actuation pressure		8160.0
No				
Production casing test pressure (PSIG)		Actual maximum pressure (PSIG) during		
hydraulic fracturing 10000		fracturin 9929		
Has the hydraulic fracturing fluid disclosure been		Yes		
Ro	Type of Operation	Amount and Kind of Material Used		Depth Interval (ft.)
1	Fracture	SEE FRACFOCUS FOR ADDITIONAL INFORMATION		12677 22053
2	Cast Iron Bridge Plug	CIBP@12035, SEE W15 FOR DETAILS		12015 12035

FORMATION RECORD					
Formations	Encountere	Depth TVD	Depth MD	Is formation	Remarks
YATES	Yes	3257.0	3260.0	Yes	
SEVEN RIVERS	Yes	3464.0	3467.0	Yes	
QUEEN	Yes	4705.0	4710.0	Yes	
GRAYBURG	Yes	4813.0	4820.0	Yes	
SAN ANDRES - CO2 FLOOD, HIGH FLOWS, H2S, CORROSIVE	Yes	4947.0	4553.0	Yes	
GLORIETA	Yes	5579.0	5585.0	Yes	
CLEARFORK	Yes	6748.0	6753.0	Yes	
SPRABERRY	Yes	8671.0	8680.0	Yes	
WOLFCAMP	Yes	9998.0	10008.0	Yes	
STRAWN	Yes	11118.0	11122.0	Yes	
MISSISSIPPIAN	Yes	11733.0	11883.0	Yes	
HOLT	No			No	PINCHED
TUBB	No			No	PINCHED
PERMIAN DETRITAL	No			No	PINCHED
LEON	No			No	PINCHED
WICHITA ALBANY	No			No	PINCHED
DEAN	No			No	PINCHED
CANYON	No			No	PINCHED
PENNSYLVANIAN	No			No	PINCHED
MCKEE	No			No	PINCHED
FUSSELMAN	No			No	PINCHED
DEVONIAN	No			No	PINCHED
SILURIAN	No			No	PINCHED
ELLENBURGER	No			No	PINCHED
Do the producing interval of this well produce H2S with a concentration in excess of 100 ppm					No
Is the completion being downhole commingled					No

REMARKS
RECOMPLETION FROM DIRECTIONAL TO HORIZONTAL WELL. I AM CHANGING THIS WELL FROM WELL 6 TO 6H.

RRC REMARKS	
PUBLIC COMMENTS: [RRC Staff 2019-11-13 13:03:26.116] EDL=9376 feet, max acres=240, EMMA (MISSISSIPPIAN) oil well; take points: 12677-22053 feet	
CASING RECORD : KOP 11,338	
TUBING RECORD:	
PRODUCING/INJECTION/DISPOSAL INTERVAL :	
ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC. :	
POTENTIAL TEST DATA:	

OPERATOR'S CERTIFICATION			
Printed	Alvaro Rosales	Title:	Regulatory Manager
Telephone	(281) 995-8659	Date	01/06/2020



RAILROAD COMMISSION OF TEXAS

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

CEMENTING REPORT

Form W-15

Rev. 08/2014

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

OPERATOR INFORMATION	
Operator Name: Zarvona Energy	Operator P-5 No.: 950523
Cementor Name: B.J. Services	Cementor P 5 NO:14442

WELL INFORMATION	
District No.: 8	County: Andrew
Well No.: #6	API No.: 42-003-47556
Lease Name: ULS 5-9 Unit	Lease No.:
Field Name: EMMA (Mississippi)	Field No.: 28879581

I. CASING CEMENTING DATA					
Type of casing: <input type="checkbox"/> Conductor <input checked="" type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Liner <input type="checkbox"/> Production					
Drilled hole size (in.): 17 1/2	Depth of drilled hole (ft.): 1844	Est. % wash-out or hole enlargement: 30%			
Size of casing in O.D. (in.): 13 3/8	Casing weight (lbs/ft) and grade: 54.5# 1-55	No. of centralizers used: 15			
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Setting depth shoe (ft.): 1844	Top of liner (ft.):		
Hrs. waiting on cement before drill-out:		Calculated top of cement (ft.): Surface	Cementing date: 7/2/2017		
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu.ft.)	Height (ft.)
1	1499	50POZ/50C	Remarks-1	2638.74	1020.44
2	451	Premium C	Remarks-2	599.83	863.56
3					
Total	1950			3238.57	1884

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.):	Tapered string drilled hole size (in.):				
Tapered string size of casing in O.D. (in.):	Tapered string casing weight (lbs/ft) and grade:	Tapered string no. of centralizers used:			
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input type="checkbox"/> NO		Setting depth shoe (ft.):			
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.):	Cementing date: 10/18/2016			
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.):	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? <input type="checkbox"/> YES <input type="checkbox"/> NO		Setting depth tool (ft.):			
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.):	Cementing date: 10/18/2016			
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
Remarks-1 Class C 47#/sk+POZ 37#/sk+Bentonite 4%+SMS 0.2%+Static free .005#/sk+Sodium chloride 5%+ water 92%-Remarks-2 Premium Plus C 94#/sk+Static Free .005#/sk+R-3 1%+water 56%. Circulated cement to surface 144 bbl 459 sks

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 casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

Service Supervisor Rene Martinez	B.J. Services	
Name and title of cementer's representative	Cementing Company	Signature
11211 FM 2920 RD	Tomball, Texas 77375	(281) 408-2361
Address	City, State, Zip Code	Tel. Area Code Number
		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 of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct and complete to the best of my knowledge. This certification covers all well data.

Alex Rosales	EHS, Reg Manager	
Typed or printed name of operator's representative	Title	Signature
1010 Lerner St.	Houston, TX 77002	(713) 600-5702
Address	City, State, Zip Code	Tel. Area Code Number
		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), Form W-3 (Plugging Record), or Form W-4 (Application for Multiple Completion), any time cement is pumped in a wellbore.

- 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 may be reported on one form.
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 representatives. When reporting dry holes, operators must complete Form W-15, in addition to Form W-3, to show any casing cemented in the hole.
- How to file:** An oil and gas completion report and form W-15 may be filed online using the Commissioner'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 78711-2697).
- 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 annular space outside the casing from the shoe to the ground surface or to the bottom of the cellar. Before drilling a well, an operator must obtain a letter from the Groundwater Advisory Unit stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the commission.
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 (http://info.sos.state.tx.us/pls/pub/readtacSext.TacPage?sl=R&app=98p_dir=&p_rloc=&p_lloc=&pg=18p_tac=&ti=16&pt=1&ch=3&rl=14). Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.
- Estimated % wash-out:** If the estimated % wash-out is less than 70% (or 30% along the Gulf Coast), provide supporting documentation such as a caliper log to show how the estimated % wash-out was obtained.
- Multi-stage cement:** An operator must report the multi-stage cement shoe in II. Casing Cement Data section by selecting the type of casing and Multi stage cement shoe. The operator must report the multi-stage cement tool in III. Casing Cementing Data section by selecting the type of casing and Multi-Stage cement/DV tool.
- 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 data for multiple parallel strings.
- Slurry Data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.



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1701 N. Congress

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Form W-15

Rev. 08/2014

CEMENTING REPORT

Cementer: Fill in shaded areas.

Operator: Fill in other items.

OPERATOR INFORMATION

Operator Name: ZARVONA ENERGY LLC

Operator P-5 No.: 950523

Cementer Name: BJ SERVICES, LLC

Cementer P-5 No.: 403101

WELL INFORMATION

District No.: 8

County: ANDREWS

Well No.: 6

API No.: 42003475560000

Drilling Permit No.: 826299

Lease Name: ULS 5-9 UNIT

Lease No.:

Field Name: Emma (Mississippian)

Field No.: 28899581

I. CASING CEMENTING DATA

Type of casing: ☐ Conductor ☐ Surface ☒ Intermediate ☐ Liner ☐ Production

Drilled hole size (in.): 12.25

Depth of drilled hole (ft.): 5,435

Est. % wash-out or hole enlargement: 20%

Size of casing in O.D. (in.): 9.625

Casing weight (lbs/ft) and grade: 40#, J55&Hcl 85

No. of centralizers used: 43

Was cement circulated to ground surface (or bottom of cellar) outside casing? ☐ YES ☒ NO If no for surface casing, explain in Remarks.

Setting depth shoe (ft.): 5,428

Top of liner (ft.):

Setting depth liner (ft.):

Hrs. waiting on cement before drill-out:

Calculated top of cement (ft.): 0

Cementing date: 07/07/2017

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	1,172	C	SEE REMARK #1	2,873	9,173
2	262	C	SEE REMARK #2	347	1,107
3					
Total	1,434			3,220	10,280

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:

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

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

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:

Upper: Lower:

Was cement circulated to ground surface (or bottom of cellar) outside casing? ☐ YES ☐ NO

Setting depth tool (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: C50/50POZ+ 10% BENTONITE+ 0.5% FL-52+ 0.1% R-3+ 0.2% SMS+ 5% SALT+ 0.005 GAL/SK FP-6L+ 0.005 LB/SK STATIC FREE. REMARK #2: C+ 0.3% R-3+ 0.005 GAL/SK FP-6L+ 0.005 LB/SK STATIC FREE.

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 casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

JESUS ALFREDO ESPARZA

BJ SERVICES, LLC

Name and title of cementer's representative

Cementing Company

Signature

11211 FM 2920 RD.

TOMBALL, TX 77375 (281) 408-2361

07/07/2017

Address

City, State, Zip Code

Tel: Area Code

Number

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 of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Alex Rosales

EHS, Ray Morgan

Alex Rosales

Typed or printed name of operator's representative

Title

Signature

1010 Loman St.

Houston, TX 77002

(713) 600-5402

8-18-2017

Address

City, State, Zip Code

Tel: Area Code

Number

Date: mo. day yr.

Instructions for Form W-15, Cementing Report

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- 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 may be reported on one form.
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 addition to Form W-3, to show any casing cemented in the hole.
- 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 78711-2967).
- 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 annular space outside the casing from the shoe to the ground surface or to the bottom of the cellar. Before drilling a well, an operator must obtain a letter from the Groundwater Advisory Unit stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission.
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 ([http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=14](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=14)). Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.
- 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 tool in III. Casing Cementing Data section by selecting the type of casing and Multi-stage cement/DV tool.
- 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 data for multiple 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.



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CEMENTING REPORT

Form W-15

Rev. 08/2014

Cementer: Fill in shaded areas.

Operator: Fill in other items.

OPERATOR INFORMATION

Operator Name:	Zarvona Energy LLC	Operator P-5 No.:	950523
Cementer Name:	BJ SERVICES, LLC	Cementer P-5 No.:	403101

WELL INFORMATION

District No.:	08	County:	Andrews
Well No.:	6H	API No.:	003-47556
Lease Name:	ULS 5-9 Unit	Drilling Permit No.:	890640
Field Name:	Emma (Mississippi)	Lease No.:	49290
		Field No.:	28899581

I. CASING CEMENTING DATA

Type of casing:	<input type="checkbox"/> Conductor	<input type="checkbox"/> Surface	<input type="checkbox"/> Intermediate	<input type="checkbox"/> Liner	<input type="checkbox"/> Production
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:	
Was cement circulated to ground surface (or bottom of cellar) outside casing?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	If no for surface casing, explain in Remarks.		
		Setting depth shoe (ft.):		Top of liner (ft.):	
		Setting depth liner (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					

II. CASING CEMENTING DATA

Type of casing:	<input type="checkbox"/> Surface	<input checked="" type="checkbox"/> Intermediate	<input type="checkbox"/> Production	<input type="checkbox"/> Tapered production	<input checked="" type="checkbox"/> Multi-stage cement shoe	<input type="checkbox"/> Multiple parallel strings
Drilled hole size (in.):	8.75	Depth of drilled hole (ft.):	12826	Est. % wash-out or hole enlargement:	20%	
Size of casing in O.D. (in.):	7	Casing weight (lbs/ft) and grade:	29	No. of centralizers used:	42	
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?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Setting depth tool (ft.):		5463	
Hrs. waiting on cement before drill-out:		Calculated top of cement (ft.):	5463	Cementing date:	20-Jul-17	

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu.ft.)	Height (ft.)
1	374	CLASS C	Remarks	918.5	6106
2	671	CLASS H	Remarks	768.3	5108
3					
Total	1045			1686.8	11214

III. CASING CEMENTING DATA

Type of casing:	<input type="checkbox"/> Surface	<input type="checkbox"/> Intermediate	<input checked="" type="checkbox"/> Production	<input type="checkbox"/> Tapered production	<input checked="" type="checkbox"/> Multi-stage cement/DV tool	<input type="checkbox"/> Multiple parallel strings
Drilled hole size (in.):	8.75	Depth of drilled hole (ft.):	12826	Est. % wash-out or hole enlargement:	20%	
Size of casing in O.D. (in.):	7	Casing weight (lbs/ft) and grade:	29	No. of centralizers used:	39	
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?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	Setting depth tool (ft.):		5463	
Hrs. waiting on cement before drill-out:		Calculated top of cement (ft.):	Surface	Cementing date:	20-Jul-17	


SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu.ft.)	Height (ft.)
1	295	CLASS C	Remarks	723.3	4809
2	100	CLASS C	Remarks	133.0	878
3					
Total	395			856.3	5687

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
Stage 1 Lead Additives: CLASS C+.005#/SK STATIC FREE+5%SODIUM CHLORIDE+.6%R-3+.5%FL-52+10%GEL+.2%SMS+.005GPS FP-6L
Stage 1 Tail Additives: CLASS H+.4% CD-32+.65%FL-52+2% GEL+.15%SMS+.1%R-21+.005 GPS FP-6L
Stage 2 Lead Additives: CLASS C+.005#/SK STATIC FREE+5%SODIUM CHLORIDE+10%GEL+.5 SMS+.005 GPS FP-6L
Stage 2 Tail Additives: CLASS C+.005#/SK STATIC FREE+.1%R-3+.005 GPS FP-6L

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 casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

ALEJANDRO CONTRERAS, FS BJ SERVICES, LLC 
Name and title of cementer's representative Cementing Company Signature

11211 FM 2920 RD. TOMBALL, TEXAS 77375 (281) 408-2361 July 20, 2017
Address City, State, Zip Code Tel: Area Code Number 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 of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Alex Rosales Reg Manager 
Typed or printed name of operator's representative Title Signature

1001 McKinney Houston TX 77002 713-600-5402 5-28-2019
Address City, State, Zip Code Tel: Area Code Number 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), Form W-3 (Plugging Record), or Form W-4 (Application for Multiple Completion), any time cement is pumped in a wellbore.

- 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 may be reported on one form. The Form W-15 should be filled 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 addition to Form W-3, to show any casing cemented in the hole.
- 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.mts.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 78711-2967).
- 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 annular space outside the casing from the shoe to the bottom of the cellar. Before drilling a well, an operator must obtain a letter from the Groundwater Advisory Unit stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission. To plug and abandon a well, operators must use only cements approved by the Commission's Director of Field Operations in accordance with SWR 14 (http://info.sos.state.tx.us/pls/pub/readtacSext.TacPage?sl=R&app=9&p_dlm=&p_loc=&p_loc=&p_loc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=14). Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.
- 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.
- 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 tool in III. Casing Cementing Data section by selecting the type of casing and Multi-stage cement/DV tool.
- 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 data for multiple parallel strings.
- 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 08/2014

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

CEMENTING REPORT

OPERATOR INFORMATION

Operator Name: ZARVONA ENERGY LLC	Operator P-5 No.: 950523
Cement Name: BJ SERVICES, LLC	Cement P-5 No.: 072507

WELL INFORMATION

District No.: 08	County: ANDREWS
Well No.: 6H	API No.: 42003475560000 Drilling Permit No.: 840640
Lease Name: ULS 5-9 UNIT	Lease No.: 49290
Field Name: Emma (Mississippi)	Field No.: 28899581

I. CASING CEMENTING DATA

Type of casing: <input type="checkbox"/> Conductor <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Liner <input type="checkbox"/> Production	
Drilled hole size (in.): 6 1/8	Depth of drilled hole (ft.): 10,143
Size of casing in O.D. (in.): 4 1/2	Casing weight (lbs/ft) and grade: P110 #15.1
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If no for surface casing, explain in Remarks.	Setting depth shoe (ft.): 10,143
Hrs. waiting on cement before drill-out:	Top of liner (ft.): 8
Calculated top of cement (ft.):	Setting depth liner (ft.): 10,143
Cementing date: 06/22/2019	

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	573	H	SEE REMARK #1	708	7,214
2					
3					
Total	573			708	7,214

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.):
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:
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
Upper: Lower:	Upper: Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input type="checkbox"/> NO	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.):
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:
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
Upper: Lower:	Upper: Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input type="checkbox"/> NO	Setting depth tool (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: H50/50POZ+ 2% BENTONITE+ 0.6% FL-66+ 0.35% CD32A+ 0.35% R-21+ 0.35% SMS+ 0.01 GAL/SK FP-6L+ 0.005 LB/SK STATIC FREE.

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 casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

JESUS ALFREDO ESPARZA

BJ SERVICES, LLC

Name and title of cementer's representative

Cementing Company

Signature

11211 FM 2920 RD.

TOMBALL, TX 77375 (281) 408-2361

06/22/2019

Address

City

State

Zip Code

Tel: Area Code

Number

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 of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Alex Rosales

Reg Monique

Signature

Typed or printed name of operator's representative

1001 McKim St Houston TX 77002

City

State

Zip Code

Tel: Area Code

Number

4-28-2019

Date: mo. day yr.

Address

Instructions for Form W-15, Cementing Report

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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 (http://info.sos.state.tx.us/pls/pub/readtac5ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&poloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&ri=14). Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.
- 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.
- 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 tool in III. Casing Cementing Data section by selecting the type of casing and Multi-stage cement/DV tool.
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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: Zarvona Energy LLC	Operator P-5 No.: 950523
Cementer Name: BJ SERVICES LLC	Cementer P-5 No.: 403101

WELL INFORMATION

District No.: 08	County: Andrews	
Well No.: 6H	API No.: 003-47556	Drilling Permit No.: 840640
Lease Name: ULS 5-9 Unit	Lease No.: 49290	
Field Name: Emma (Mississippi)	Field No.: 28899581	

I. CASING CEMENTING DATA

Type of casing: <input type="checkbox"/> Conductor <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Liner <input type="checkbox"/> Production		
Drilled hole size (in.): 6 1/8	Depth of drilled hole (ft.): 20,108	Est. % wash-out or hole enlargement:
Size of casing in O.D. (in.): 4 1/2	Casing weight (lbs/ft) and grade: 7.110 #51	No. of centralizers used:
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If no for surface casing, explain in Remarks.	Setting depth shoe (ft.): 20,108	Top of liner (ft.): 10,257
		Setting depth liner (ft.): 23,108
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.): 10,257	Cementing date: 01 Mar 19

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	1356	H	See Remarks	1766.86	15004
2					
3					
Total	1356			1766.86	15004

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.)	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? <input type="checkbox"/> YES <input type="checkbox"/> NO	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.)	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? <input type="checkbox"/> YES <input type="checkbox"/> NO	Setting depth tool (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

Cement-Class H+1% FL-62+.30% CD-32+.%40 SMS+.15% ASA-301+.25% R-21+.005lb/sk Static Free+.005gps FP-6L

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 casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

Field Specialist Demetri Smack

BJ Services, LLC

Name and title of cementer's representative

Cementing Company

11211 FM 2920 Rd.

Tomball, Texas 77375

(281) 408-2361

03-01-2019

Address

City, State, Zip Code

Tel: Area Code

Number

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 of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Alex Rosales

Aug Ma

OR

Typed or printed name of operator's representative

Title

Signature

1001 McKinnis St Houston TX 77002

City, State, Zip Code

713-600-5402

8-28-2019

Address

Tel: Area Code

Number

Date: mo. day yr.

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- 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 tool in III. Casing Cementing Data section by selecting the type of casing and Multi-stage cement/DV tool.
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- Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.

API No.:							
CEMENTING TO PLUG AND ABANDON	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
25. Cementing date	6-14-18						
26. Size of hole or pipe plugged (in.)							
27. Depth to bottom of tubing or drill pipe (ft.)							
28. CTB [®] setting depth							
*Amount of cement							
29. Sacks of cement used (each plug)	6						
30. Slurry volume pumped (cu. ft.)	7.92						
31. Calculated top of plug (ft.)	12015						
32. Measured top of plug, if tagged (ft.)	12015						
33. Slurry wt. (lbs./gal)	14.8						
34. Type of cement	HSC						
35. Perf. & circulate cement (YES/NO)							

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 casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

Randy Chesser RWLS DBA Renegade Ru
 Name and title of cementer's representative Cementing Company Signature
1235 SE 1000 Andrews TX 79714 325 574 4514 6-14-18
 Address City, State, Zip Code Tel: Area Code Number 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 of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Alex Rosales Rog Mung AR
 Typed or printed name of operator's representative Title Signature
1001 McKinney St. Suite 1800 Houston TX 77002 713 600-52402 09-03-2019
 Address City, State, Zip Code Tel: Area Code Number Date: mo. day yr.

Instructions to Form W-15, Cementing Report

IMPORTANT: Operators and cementing companies must comply with the requirements of the Commission's Statewide Rules 8 (Water Protection), 13 (Casing, Cementing, Drilling, and Completion), and 14 (Well Plugging). For offshore operations, see the requirements of Rule 13 (c).

- 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 may be reported on one form. The Form W-15 should be filed with the following:
 - An initial oil or gas completion report, **Form W-2 or G-1**, as required by Statewide or special field rules;
 - Form W-4**, Application for Multiple Completion, if the well is multiple parallel casing completion; and
 - Form W-3**, Plugging Record, unless the W-3 is signed by the cementing company representative. When reporting dry holes, operators must complete **Form W-15**, in addition to **Form W-3**, to show any casing cemented in the hole.
- How to file:** the Form W-15 must be submitted as an attachment to an oil and gas completion report, Form W-2 or G-1. An oil and gas completion report and Form W-15 may be filed online using the RRC Online System or a paper copy of both forms may be mailed to the RRC in Austin.
- 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, Austin. Before drilling a well in any field or area in which no field rules are in effect or in which surface casing requirements are not specified in the applicable rules, an operator must obtain a letter from the Groundwater Advisory Unit stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission.
- Centralizers:** Surface casing must be centralized at the shoe, above and below a stage collar or diverting tool, if run, and through usable-quality water zones. In nondeviated holes, a centralizer must be placed every fourth joint from the cement shoe to the ground surface or to the bottom of the cellar. All centralizers must meet API specifications.
- Exceptions and alternative casing programs:** The District Director may grant an exception to the requirements of Statewide Rule 13. In a written application, an operator must state the reason for the requested exception and outline an alternate program for casing and cementing through the protection depth for strata containing usable-quality water. The District Director may approve, modify, or reject a proposed program. **An operator must obtain approval of any exception before beginning casing and cementing operations.**
- Intermediate and production casing:** For specific technical requirements, operators should consult Statewide Rule 13 (b) (1) and (2).
- Plugging and abandoning:** Cement plugs must be placed in the wellbore as required by Statewide Rule 14. The District Director may require additional cement plugs. For onshore or inland wells, a 10-foot cement plug must be placed in the top of the well, and the casing must be cut off three feet below the ground surface. All cement plugs, except the top plug, must have sufficient slurry volume to fill 100 feet of hole, plus ten percent for each 1,000 feet of depth from the ground surface to the bottom of the plug.

To plug and abandon a well, operators must use only cementers approved by the Director of Field Operations. Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.

Tracking No.: 219774

Instructions

When to File Form L-1:

- with Forms G-1, W-2, and GT-1 for new and deepened gas, oil, and geothermal wells
- with Form W-3 for plugged dry holes
- when sending in a log which was held under a request for confidentiality and the period for confidentiality has not yet expired.

When is Form L-1 NOT required:

- with Forms W-2, G-1, and GT-1 filed for injection wells, disposal wells, water supply wells, service wells, re-test wells, re-classifications, and plugbacks of oil, gas or geothermal wells
- with Form W-3 for plugging of other than a dry hole

Where to File Form L-1:

- with the appropriate Commission district office

Filling out Form L-1:

- Section I and the signature section must be filled out for all wells
- complete only the appropriate part of Section II

Type of log required:

- any wireline survey run for the purpose of obtaining lithology, porosity, or resistivity information
- no more than one such log is required but it must be of the subject well
- if such log is NOT run on the subject well, do NOT substitute any other type of log; just select Section II, Part A below

SECTION I. IDENTIFICATION

Operator Name: ZARVONA ENERGY LLC	District No. 08	Completion Date: 08/05/2019
Field Name EMMA (MISSISSIPPIAN)	Drilling Permit No. 840640	
Lease Name ULS 5-9 UNIT	Lease/ID No. 49290	Well No. 6H
County ANDREWS	API No. 42- 003-47556	

SECTION II. LOG STATUS (Complete either A or B)

☐ A. BASIC ELECTRIC LOG NOT RUN☒ B. BASIC ELECTRIC LOG RUN. (Select one)

- ☒ 1. Confidentiality is requested and a copy of the header for each log that has been run on the well is attached.
- ☐ 2. Confidentiality already granted on basic electric log covering this interval (applicable to deepened wells only).
- ☐ 3. Basic electric log covering this interval already on file with Commission (applicable to deepened wells only).
- ☐ 4. Log attached to (select one):

☐ (a) Form L-1 (this form). If the company/lease name on log is different from that shown in Section I, please enter name on log here: _____

Check here if attached log is being submitted after being held confidential. ☐

☐ (b) Form P-7, Application for Discovery Allowable and New Field Designation.

☐ (c) Form W-4, Application for Multiple Completion:

Lease or ID No(s). _____

Well No(s). _____

Alvaro Rosales

Signature

ZARVONA ENERGY LLC

Name (print)

Regulatory Manager

Title

(281) 995-8659

Phone

08/30/2019

Date

-FOR RAILROAD COMMISSION USE ONLY-



ULS 5-9 Unit #6H

MD
1":100'

Company: Zarvona Energy
Well Name: ULS 5-9 Unit #6H
API: 42-003-47556
County/Parish: Andrews
State: Texas
Country: USA
Job number: WT-18-257
Field: EMMA (MISSISSIPPIAN)
Rig Id: Latshaw 7
Survey Company: Aim Directional Services, LLC
Day MWD: Juan Camacho
Night MWD: RTOC

Log measurements: Gamma, ROP & Temp
Depth measured from: 11350
Maximum temperature: 208

	Depth	Date
Start:	11350 ft	01/09/2019
End:	22935 ft	02/23/2019

Casing	Depth	Casing Size	Hole Size
Surface:			
Intermediate:	11360 ft	7"	

Mud Type: OBM			Elevations
Density: 10.9			KB: 3055
Viscosity:			DF: 3055
Rm:	Rmf:	Rmc:	GL: 3030

Run	Tool S/N	Gamma Cal	Bit Size	Offsets			Mud Data		Depths		Dates	
				Survey	Gamma	Resis	Type	Weight	Start	End	Start	End
1	G-007	3.035	6.125"	61.00 ft	57.00 ft		OBM		11350 ft	11714 ft	01/09/2019	01/10/2019
2	G-007	3.035	6.125"	54.00 ft	50.00 ft		OBM		11714 ft	11760 ft	01/10/2019	01/11/2019
3	G-007	3.035	6.125"	63.00 ft	58.00 ft		OBM	10.9	11760 ft	12550 ft	01/11/2019	01/15/2019
4	G-059	2.794	6.125"	73.00 ft	68.00 ft		OBM	10.9	12550 ft	13584 ft	01/15/2019	01/18/2019
5	G-094	3.033	6.125"	66.00 ft	62.00 ft		OBM	10.9	13584 ft	13882 ft	01/18/2019	01/19/2019
6	G-071	2.985	6.125"	69.00 ft	65.00 ft		OBM	10.9	13882 ft	14114 ft	01/19/2019	01/22/2019
7	G-071	2.985	6.125"	69.00 ft	65.00 ft		OBM	11.1	14114 ft	14541 ft	01/22/2019	01/24/2019
8	G-065	2.313	6.125"	69.00 ft	65.00 ft		OBM	11.1	14541 ft	14910 ft	01/24/2019	01/26/2019
9	G-065	2.313	6.125"	65.00 ft	61.00 ft		OBM	11.1	14910 ft	15779 ft	01/26/2019	01/30/2019
10	G-021	2.791	6.125"	65.00 ft	61.00 ft		OBM	11.1	15779 ft	16288 ft	01/30/2019	02/01/2019
11	G-101	2.748	6.125"	54.00 ft	39.00 ft		OBM	10.9	16288 ft	16450 ft	02/02/2019	02/04/2019
12	KRG-1020	5.563	6.125"	57.00 ft	41.00 ft		OBM	10.9	16450 ft	16579 ft	02/04/2019	02/06/2019
13	KRG-1020	5.563	6.125"	55.00 ft	38.00 ft		OBM	10.9	16579 ft	17267 ft	02/06/2019	02/11/2019
14	KRG-1021	5.704	6.125"	54.00 ft	38.00 ft		OBM	10.9	17267 ft	22935 ft	02/11/2019	02/23/2019

Aim Directional Services, LLC 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.

CERTIFICATE OF COMPLIANCE
AND TRANSPORTATION AUTHORITY

P-4

This facsimile P-4 was generated electronically from data submitted to the RRC.
A certification of the automated data is available in the RRC's Austin office.

Tracking No.: 219774

1. Field name exactly as shown on proration schedule EMMA (MISSISSIPPIAN)		2. Lease name as shown on proration schedule ULS 5-9 UNIT					
3. Current operator name exactly as shown on P-5 Organization Report ZARVONA ENERGY LLC		4. Operator P-5 no. 950523	5. Oil Lse/Gas ID no 49290	6. County ANDREWS	7. RRC district 08		
8. Operator address including city, state, and zip code 1001 MCKINNEY ST SUITE 1800 HOUSTON, TX 77002-6334		9. Well no(s) (see instruction E) 6H			11. Effective Date 08/05/2019		
		10. Classification <input checked="" type="checkbox"/> Oil <input type="checkbox"/> Gas <input type="checkbox"/> Other (see instruction A)					
12. Purpose of Filing. (Complete section a or b below.) (See instructions B and G) a. Change of: <input type="checkbox"/> operator <input type="checkbox"/> oil or condensate gatherer <input type="checkbox"/> gas gatherer <input type="checkbox"/> gas purchaser <input type="checkbox"/> gas purchaser system code <input type="checkbox"/> field name from _____ <input type="checkbox"/> lease name from _____ OR b. New RRC Number for: <input checked="" type="checkbox"/> oil lease <input type="checkbox"/> gas well Due to: <input checked="" type="checkbox"/> new completion or recompletion <input type="checkbox"/> reclass oil to gas <input type="checkbox"/> reclass gas to oil <input type="checkbox"/> other well (specify) _____ <input type="checkbox"/> consolidation, unitization, or subdivision (oil lease only)							
13. Authorized GAS WELL GAS or CASINGHEAD GAS Gatherer(s) and/or Purchaser(s). (See instruction G).							
Gatherer	Purchaser	Name of GAS WELL GAS or CASINGHEAD GAS Gatherer(s) or Purchaser(s) As Indicated in Columns to the Left (Attach an additional sheet in same format if more space is needed)			Purchaser's RRC Assigned System Code	Percent of Take	Full-well stream
X	X	DCP OPERATING COMPANY, LP(195959)			0001	100.0	
14. Authorized OIL or CONDENSATE Gatherer(s). (See instruction G).							
Name of OIL or CONDENSATE Gatherer(s) - List Highest Volume Gatherer First (Attach an additional sheet in same format if more space is needed)						Percent of Take	
RIO ENERGY INTERNATIONAL, INC.(712543)						100.0	
RRC USE ONLY: Reviewer's initials: _____ Approval date: _____							
15. PREVIOUS OPERATOR CERTIFICATION FOR CHANGE OF OPERATOR P-4 FILING. Being the PREVIOUS OPERATOR, I certify that operating responsibility for the well(s) designated in this filing, located on the subject lease has been transferred in its entirety to the above named Current Operator. I understand, as Previous Operator, that designation of the above named operator as Current Operator is not effective until this certificate is approved by the Commission.							
Name of Previous Operator _____ Name (print) _____ Title _____				Signature <input type="checkbox"/> Authorized Employee of previous operator <input type="checkbox"/> Authorized agent of previous operator (see instruction G) _____ Date _____ Phone with area code _____			
16. CURRENT OPERATOR CERTIFICATION. By signing this certificate as the Current Operator, I certify that all statements on this form are true and correct and I acknowledge responsibility for the regulatory compliance of the subject lease including plugging of well(s) pursuant to Rule 14. I further acknowledge that I assume responsibility for the physical operation, control, and proper plugging of each well designated in this filing. I also acknowledge that I will remain designated as the Current Operator until a new certificate designating a new Current Operator is approved by the Commission.							
ZARVONA ENERGY LLC Name (print) Regulatory Manager Title arosales@zarvonaenergy.com E-mail Address (optional)				Alvaro Rosales Signature <input checked="" type="checkbox"/> Authorized Employee of current operator <input type="checkbox"/> Authorized agent of current operator (see instruction G) 08/30/2019 Date _____ Phone with area code _____			

Form P-16

Page 1
Rev. 05/2019

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. For all leases operated by other entities, the number of assigned acres shown are reflected on current Commission records or the filer has been authorized by the current operator to change the assigned acreage of that operator as shown below.

SECTION I. OPERATOR INFORMATION			
Operator Name:	Zarvona Energy LLC	Operator P-5 No.:	950523
Operator Address:	1001 McKinney St Suite 1800 Houston, TX 77002		

SECTION II. WELL INFORMATION			
District No.:	08	API No.:	42-003-47556
Well No.:	6H	Drilling Permit No.:	840640
Lease Name:	ULS 5-9 Unit	RRC ID or Lease No.:	49290
Total Lease Acres:	1280.000	Field Name:	Emma (Mississippian)
Proration Acres:	320.00	Field No.:	28899581
Wellbore Profile	Allocation Well	Is this a UFT field?	No
SL Record (Parent) Well Drilling Permit No.:		County:	Andrews

Purpose of Filing:

☐ Drilling Permit Application (Form W-1)

☒ Completion Report (Form G-1/W-2)

[illegible]

SECTION IV. REMARKS - REQUIRED FOR PSA AND CO-DEVELOPMENT (refer to instructions)

This well is being converted from a vertical (ULS 5-9 Unit- Lease ID 49290) 6 to Horizontal well (ULS 5-9 Unit 6H, Permit Number 840640).

☐ 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.

Email
(include email address only if you affirmatively consent to its public release)

Date: 09/26/19
mo. day yr.

Form P-16

Page 2
Rev. 05/2019

Filer is the owner or lessee of all or an undivided portion of the minerals under each tract listed below and has the legal right to drill on each tract traversed by the well that will have perforations or other take points open in the interval of the applied-for field(s). All tracts listed will actually be traversed by the wellbore or the filer has pooling authority or other contractual authority, such as a production sharing agreement, authorizing inclusion of the non-drill site tract in the acreage assigned to the well.

RRC ID No., Lease No. or Tract ID		Lease Name	Beginning Lease Acres	Allocated Lease Acres	Ending Lease Acres	Operator Name and Operator No. (if different from filing operator)
A	Tract 1	ULS 5-9 Unit	640.000	160.000	480.000	
B	Tract 2	ULS 5-9 Unit	640.000	160.000	480.000	
C						
D						
E						
F						
G						
H						
Total Acreage =			1280.000	320.000	960.000	

[illegible]

A. Total Assigned Acreage =	160.000	160.000	0.000	0.000	0.000	0.000	0.000	0.000
B. Total Assigned Horiz. Acreage =								
C. Total Assigned Vert./Dir. Acreage =								

*A revised P-16 is required if updating the proration acreage on an existing Allocation or PSA well utilizing acreage from a regulatory lease or undeveloped tract not listed in Section V. (refer to instructions)

GROUNDWATER PROTECTION DETERMINATION

Form GW-2



Groundwater Advisory Unit

Date Issued: 17 May 2017**GAU Number:** 172261**Attention:** ZARVONA ENERGY LLC
1010 LAMAR ST SUITE 500
HOUSTON, TX 77002**API Number:** 00347556
County: ANDREWS
Lease Name: ULS 5-9 UNIT**Operator No.:** 950523**Lease Number:**
Well Number: 6
Total Vertical Depth: 13500
Latitude: 32.494184
Longitude: -102.366169
Datum: NAD27**Purpose:** New Drill**Location:** Survey-UL; Block-5; Section-4

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 1725 feet must be protected.

This recommendation is applicable for all wells drilled in this Section 4.

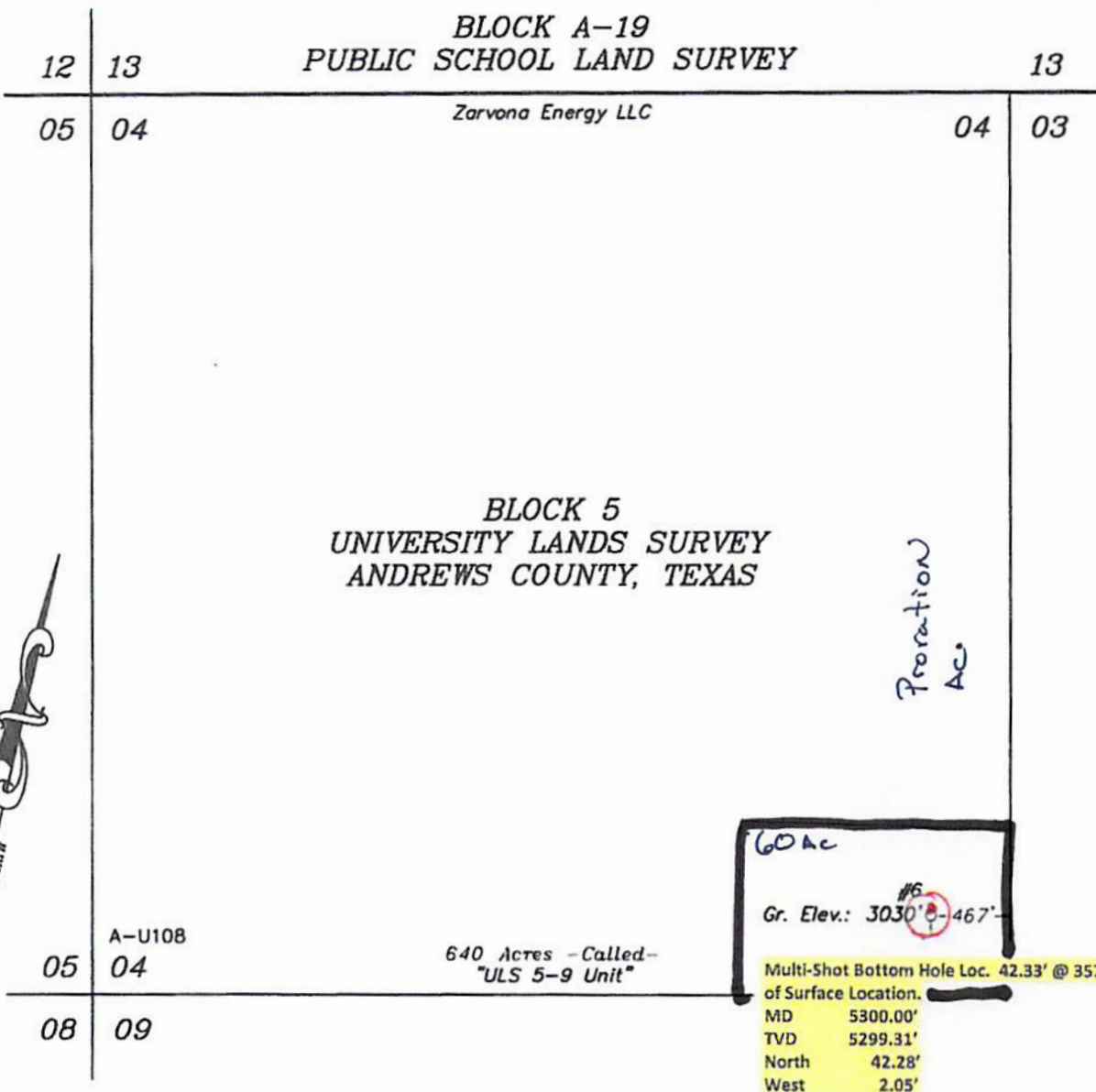
Note: Unless stated otherwise, this recommendation is intended to apply only to the subject well and not for area-wide use. This recommendation is for normal drilling, production, and plugging operations only. It does not apply to saltwater disposal operation into a nonproductive zone (RRC Form W-14).

This determination is based on information provided when the application was submitted on 05/15/2017. 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.

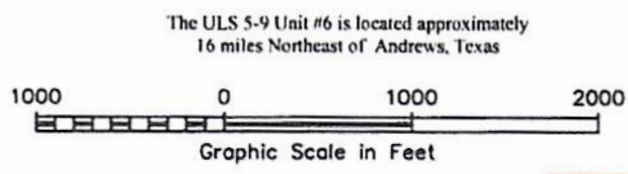
Groundwater Advisory Unit, Oil and Gas Division

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

W.O.: 2017-0303



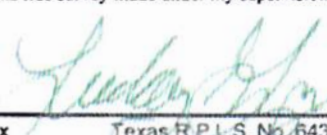
	State Plane Coordinate		Geodetic (D.M.S.)		Geodetic (D.D.)	
Surface Location	X = 500,180.55	Y = 335,795.34	Lat = 32°29'39.06" N	Long = 102°21'58.21" W	Lat = 32.49418355° N	Long = 102.36616943° W

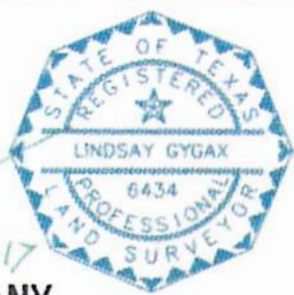


NOTE:
1) Plane Coordinates shown hereon are Lambert Grid and Conform to the "Texas Coordinate System", Texas North Central Zone, North American Datum of 1927, unless otherwise noted. Scale factor is 1.000217847.
2) Geodetic Coordinate shown hereon references the North American Datum of 1927, unless otherwise noted.
3) This plat is provided only for filing purposes with the Texas Railroad Commission and should not be construed as a boundary survey.

- Legend**
- Denotes Proposed Well Bore
 - Denotes Unit Boundary
 - Denotes Tract Line
 - - Denotes Proposed Well Location
 - - Denotes Proposed Penetration/ Take Points
 - ⊗ - Denotes Proposed Bottom Hole Location

CERTIFICATION:
I hereby certify that this plat was made from notes taken in the field in a bona fide survey made under my supervision.


Lindsay Gygax Texas R.P.L.S. No. 6434

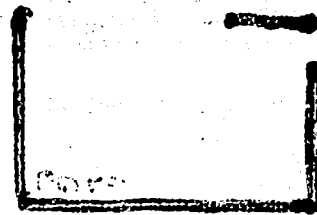


05-03-17
WEST COMPANY
Land Surveyors ■ Civil Engineers
110 W. Louisiana Ave., Suite 110, Midland, Texas 79701
(432) 687-0866 - FAX (432) 687-0868
FIRM Registration Number: 100682-00

ZARVONA ENERGY LLC

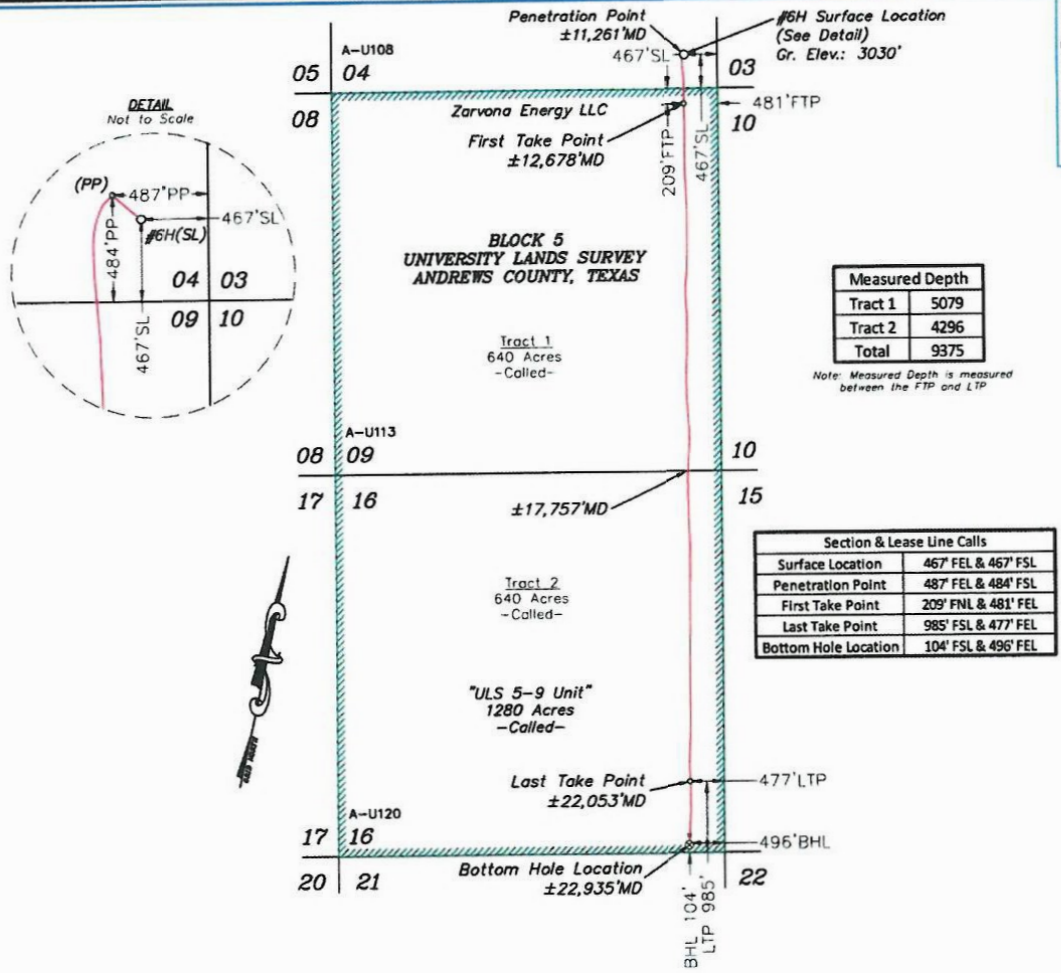
Location of the
ULS 5-9 UNIT #6
467' FSL & 467' FEL
Section 4, Block 5
University Lands Survey,
Andrews County, Texas

Scale: 1" = 1000'	W.O.: 2017-0303
Surveyed: 04/28/2017	Drawn By: SC
File: J:\2017\2017-0303\2017-0303 The ULS 5-9 Unit #6.dwg	



Customer?
•DA

W.O.: 2017-0303-2



Measured Depth	
Tract 1	5079
Tract 2	4296
Total	9375

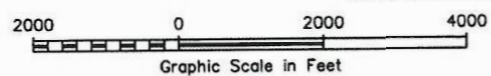
Note: Measured Depth is measured between the FTP and LTP

Section & Lease Line Calls	
Surface Location	467' FEL & 467' FSL
Penetration Point	487' FEL & 484' FSL
First Take Point	209' FNL & 481' FEL
Last Take Point	985' FSL & 477' FEL
Bottom Hole Location	104' FSL & 496' FEL

	State Plane Coordinate		Geodetic (D.M.S.)		Geodetic (D.D.)	
Surface Location	X = 500,180.55	Y = 335,795.34	Lat = 32°29'39.06" N	Long = 102°21'58.21" W	Lat = 32.49418355° N	Long = 102.36616943° W
Penetration Point	X = 500,157.54	Y = 335,807.82	Lat = 32°29'39.17" N	Long = 102°21'58.49" W	Lat = 32.49421489° N	Long = 102.36624586° W
First Take Point	X = 500,313.53	Y = 335,132.07	Lat = 32°29'32.57" N	Long = 102°21'56.30" W	Lat = 32.49237920° N	Long = 102.36563900° W
Last Take Point	X = 502,345.83	Y = 325,990.86	Lat = 32°28'03.13" N	Long = 102°21'27.66" W	Lat = 32.46753676° N	Long = 102.35768433° W
Bottom Hole Location	X = 502,517.98	Y = 325,126.26	Lat = 32°27'54.66" N	Long = 102°21'25.19" W	Lat = 32.46518452° N	Long = 102.35699718° W

The ULS 5-9 Unit #611 is located approximately 16 miles Northeast of Andrews, Texas.

*Downhole directional path based on directional survey report provided by client and dated 01/09/19-02/23/19
**Surface location based on original survey dated 04/28/17

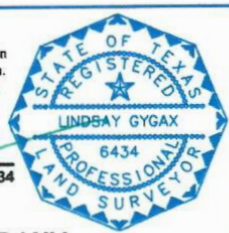


- NOTE:
- 1) Plane Coordinates shown hereon are Lambert Grid and Conform to the "Texas Coordinate System", Texas North Central Zone, North American Datum of 1927, unless otherwise noted. Scale factor is 1.000217847.
 - 2) Geodetic Coordinate shown hereon references the North American Datum of 1927, unless otherwise noted.
 - 3) This plat is provided only for filing purposes with the Texas Railroad Commission and should not be construed as a boundary survey.
 - 4) Preliminary for Office Review 05/29/18, Issued as Final 05/30/18

- Legend
- - - Denotes Proposed Well Bore
 - ~~~~~ Denotes Unit Boundary
 - Denotes Tract Line
 - Denotes Proposed Well Location
 - Denotes Proposed Take Points
 - ⊗ Denotes Proposed Bottom Hole Location

CERTIFICATION:
I hereby certify that this plat was made from notes taken in the field in a bona fide survey made under my supervision.

09-18-19
Lindsay Gyga
Texas R.P.L.S. No. 6434



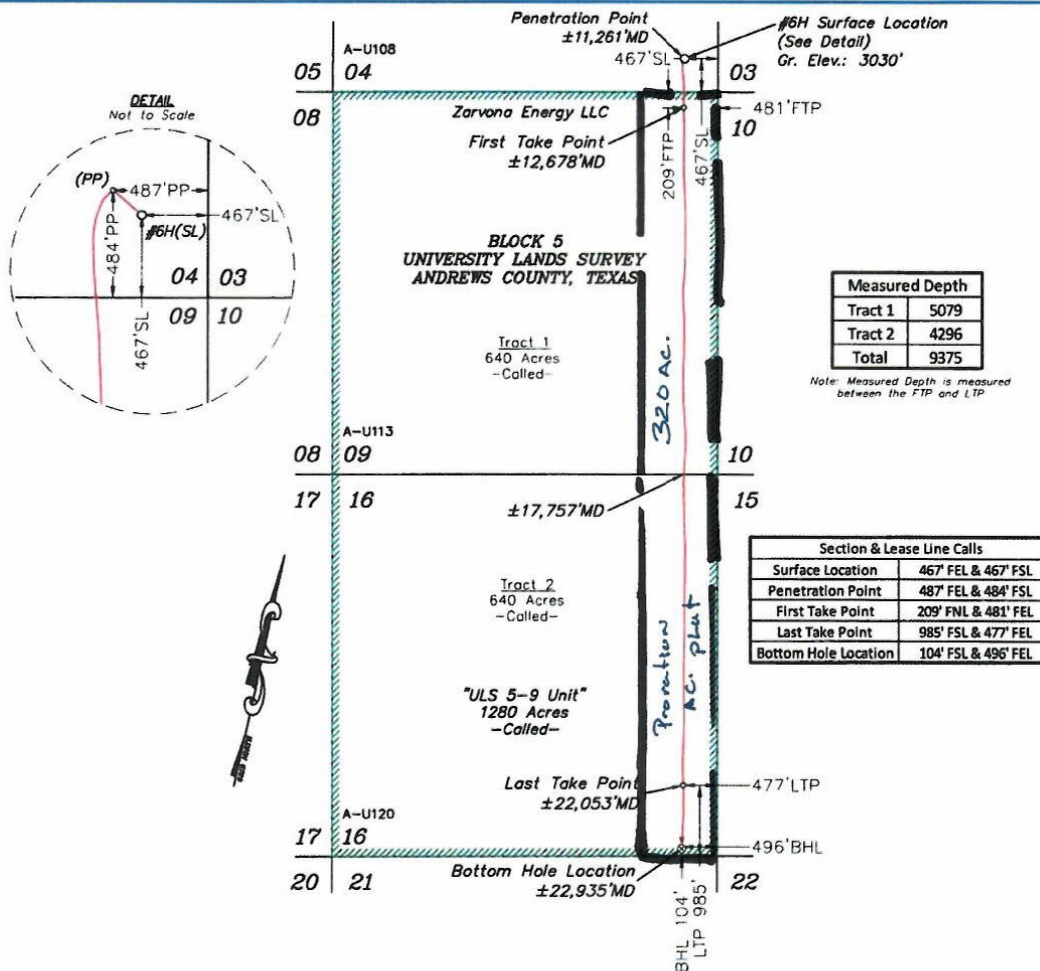
WEST COMPANY
Land Surveyors & Civil Engineers
110 W. Louisiana Ave., Suite 110, Midland, Texas 79701
(432) 687-0865 - FAX (432) 687-0868
FIRM Registration Number: 100882-00

ZARVONA ENERGY LLC

As-Drilled Plat of the
ULS 5-9 UNIT #6 H
Section 04, 09 and 18,
All in Block 5,
University Lands Survey,
Andrews County, Texas

Scale: 1"= 2000'
Surveyed: 04/28/2017
File: J:\2019\2017-0303-2\2017-0303-2 ULS 5-9 Unit #6H As-Drilled.dwg

W.O.: 2017-0303-2
Drawn By: CRH



Measured Depth	
Tract 1	5079
Tract 2	4296
Total	9375

Note: Measured Depth is measured between the FTP and LTP

Section & Lease Line Calls	
Surface Location	467' FEL & 467' FSL
Penetration Point	487' FEL & 484' FSL
First Take Point	209' FNL & 481' FEL
Last Take Point	985' FSL & 477' FEL
Bottom Hole Location	104' FSL & 496' FEL

	State Plane Coordinate		Geodetic (D.M.S.)		Geodetic (D.D.)	
Surface Location	X = 500,180.55	Y = 335,795.34	Lat = 32°29'39.06" N	Long = 102°21'58.21" W	Lat = 32.49418355° N	Long = 102.36616943° W
Penetration Point	X = 500,157.54	Y = 335,807.82	Lat = 32°29'39.17" N	Long = 102°21'58.49" W	Lat = 32.49421489° N	Long = 102.36624586° W
First Take Point	X = 500,313.53	Y = 335,132.07	Lat = 32°29'32.57" N	Long = 102°21'56.30" W	Lat = 32.49237920° N	Long = 102.36563900° W
Last Take Point	X = 502,345.83	Y = 325,990.86	Lat = 32°28'03.13" N	Long = 102°21'27.66" W	Lat = 32.46753676° N	Long = 102.35768433° W
Bottom Hole Location	X = 502,517.98	Y = 325,126.26	Lat = 32°27'54.66" N	Long = 102°21'25.19" W	Lat = 32.46518452° N	Long = 102.35699718° W

The ULS 5-9 Unit #6H is located approximately 16 miles Northeast of Andrews, Texas.

*Downhole directional path based on directional survey report provided by client and dated 01/09/19-02/23/19
**Surface location based on original survey dated 04/28/17



NOTE:

- 1) Plane Coordinates shown hereon are Lambert Grid and Conform to the "Texas Coordinate System", Texas North Central Zone, North American Datum of 1927, unless otherwise noted. Scale factor is 1.000217847.
- 2) Geodetic Coordinate shown hereon references the North American Datum of 1927, unless otherwise noted.
- 3) This plat is provided only for filing purposes with the Texas Railroad Commission and should not be construed as a boundary survey.
- 4) Preliminary for Office Review 05/29/18, Issued as Final 05/30/18

Legend

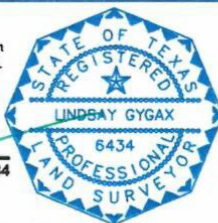
- Denotes Proposed Well Bore
- Denotes Unit Boundary
- Denotes Tract Line
- Denotes Proposed Well Location
- Denotes Proposed Take Points
- ⊗ Denotes Proposed Bottom Hole Location

CERTIFICATION:

I hereby certify that this plat was made from notes taken in the field in a bona fide survey made under my supervision.

Lindsay Gyax

Texas R.P.L.S. No. 6434



WEST COMPANY

Land Surveyors & Civil Engineers
110 W. Louisiana Ave., Suite 110, Midland, Texas 79701
(432) 687-0865 - FAX (432) 687-0866
FIRM Registration Number: 100682-00

ZARVONA ENERGY LLC

As-Drilled Plat of the
ULS 5-9 UNIT #6 H
Section 04, 09 and 16,
All in Block 5,
University Lands Survey,
Andrews County, Texas

Scale: 1"=2000'

W.O.: 2017-0303-2

Surveyed: 04/28/2017

Drawn By: CRH

File: J:\2017\2017-0303-2\2017-0303-2 ULS 5-9 Unit #6H As-Drilled.dwg