

**BEFORE THE STATE CORPORATION COMMISSION  
OF THE STATE OF KANSAS**

Before Commissioners: Pat Apple, Chairman  
Shari Feist Albrecht  
Jay Scott Emler

IN THE MATTER OF THE APPLICATION OF )	Docket No. 18-CONS-3176-CHOR
H2OIL OPCO, LLC TO DRILL THE WAGNER )	
UNIT #2 IN RUSH COUNTY, KANSAS AS A )	CONSERVATION DIVISION
HORIZONTALLY DRILLED WELL )	
PURSUANT TO K.A.R. 82-3-103A )	KCC License No. 35474

**NOTICE OF FILING OF PRE-FILED TESTIMONY OF  
TOR MELING IN SUPPORT OF APPLICATION FOR HORIZONTAL WELL**

H2Oil Opco, LLC, through its counsel Casey Jones of Hinkle Law Firm LLC, hereby provides notice of the filing of the Pre-Filed Testimony of Tor Meling in Support of Application For Horizontal Well, dated November 14, 2017, a copy of which is attached hereto.

Respectfully submitted,

HINKLE LAW FIRM LLC  
1617 North Waterfront Parkway, Suite 400  
Wichita, Kansas 67206  
Telephone: 316-267-2000  
Facsimile: 316-630-8466  
E-mail: [cjones@hinklaw.com](mailto:cjones@hinklaw.com)

By /s/ Casey L. Jones  
Casey L. Jones, SC NO. 24970  
*Attorneys for H2Oil Opco, LLC*

**CERTIFICATE OF SERVICE**

I hereby certify that on this 14<sup>th</sup> day of November, 2017, a true and correct copy of the above and foregoing NOTICE OF FILING PRE-FILED TESTIMONY OF TOR MELING IN SUPPORT OF APPLICATION FOR HORIZONTAL WELL was served electronically via the e-Filing Express system as follows:

Jon Myers, Lead Legal Staff  
Kansas Corporation Commission  
1500 S.W. Arrowhead Road  
Topeka, Kansas 66604

Richard Hestermann, Staff  
Kansas Corporation Commission  
1500 S.W. Arrowhead Road  
Topeka, Kansas 66604

By /s/ Casey L. Jones

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**PRE-FILED TESTIMONY OF Tor Meling  
IN SUPPORT OF APPLICATION FOR HORIZONTAL WELL**

1    Q:    Please state your name, employer, position, and office address.

2    A:    Name: Tor Meling,

3        Employer: H2Oil LLC

4        Position: Senior Vice President of Engineering and Development

5        Office Address: 1400 Post Oak Blvd, Suite 400, Houston, TX 77056

6    Q:    Please state your education and prior work experience.

7    A:    I have a BSc (1986) and MSc (1989) in Petroleum Engineering from the University of  
8        Stavanger in Norway.

9        I have 30 years of industry experience covering most aspects of the upstream oil industry.

10       I was with Amoco Norway for 2 years where I was developing guidelines to prevent well  
11       failure of fracked wells in a soft chalk field. Once I finished my post graduate degree I  
12       joined BP where I worked with well design, logging and testing offshore Norway,  
13       designed cutting edge Extended Reach Drilling wells, horizontal waterflood, large

1 facilities expansions (225 and 180 Mbd) onshore in an environmentally very sensitive  
2 area in Wytch Farm, UK. I designed a miscible gas project on the north slope of Alaska  
3 and reviewed and changed well design practices. In Canada I was responsible for field  
4 development in north east British Colombia for fields with H2S content up to 40% where  
5 we drilled several horizontal wells and where well and facilities design was a matter of  
6 life and death. During my 19 years with BP I also acted as an advisor on projects in  
7 Kuwait, Alaska and the North Sea. I joined Wavefront Reservoir Technologies in 2008  
8 where I was responsible for reviewing client water or CO2 injection projects and  
9 designing all injection enhancement projects globally as well as working on technology  
10 and tool development. I joined Glori Energy in 2012 where I was responsible for  
11 Reservoir Engineering and evaluation of A&D opportunities. For the past year I have  
12 been with H2Oil responsible for Engineering and Development of our Project in Kansas.

13 Q: Are you familiar with the history of the Otis-Albert field in Rush and Barton Counties in  
14 Kansas?

15 A: Yes, H2Oil has obtained the full oil production history from the Regan Sandstone  
16 development. The field was initially discovered and believed to be a gas field and  
17 through the development of gas cap and the partial oil column near the gas cap, the  
18 reservoir energy was lost quite early in the field life, leading to a recovery factor of  
19 around 5% of the original oil in place.

20 Q: Are you familiar with the Application filed by H2Oil Opco, LLC in regards to the  
21 Wagner Unit #2 horizontal well to be drilled in Rush County, Kansas?

22 A: Yes.

23 Q: Are you familiar with how H2Oil plans to drill the Wagner Unit #2 well?

1 A: Yes.

2 Q: Will multiple leases be unitized in order to drill the Wagner Unit #2 well?

3 A: Yes. H2Oil has oil and gas leases covering those properties in Rush County, Kansas  
4 which are identified on Exhibit A attached to this Testimony and, pursuant to the pooling  
5 provisions in such leases, plans to pool or unitize such properties into what will be called  
6 the "Wagner Unit" consisting of approximately 670 acres.

7 Q: Are you familiar with the plans H2Oil Opco, LLC have in regards to the formation and  
8 development of the Wagner Unit in Rush County, Kansas?

9 A: Yes, H2Oil formed the Wagner Unit to install a small waterflood in the Reagan sandstone  
10 in the Otis-Albert field. H2Oil's plan is to drill an injector, a producer and an observation  
11 well to pilot the waterflood, then to expand it as a secondary recovery unit if this yields  
12 positive results. H2Oil is using horizontal well technology to 1) provide better capital  
13 efficiency since fewer horizontal wells will be required than conventional vertical well  
14 waterflood patterns; 2) to reduce the impact on surface landowners by reducing the  
15 number and aggregate area of well sites and facilities locations.

16 Q: On what properties within the Wagner Unit will the Wagner Unit #2 well actually be  
17 drilled?

18 A: As depicted on the attached Exhibit B, and in more detail on Exhibit C, the well will be  
19 drilled from a surface location

20 (A01) on the Northwest Quarter of the Northeast Quarter of the Northwest Quarter  
21 (NW/4 NE/4 NW/4) of Section 28, Township 18 South, Range 16 West at a point  
22 which is 400 feet from the North line and 1,425 feet from the West line of such  
23 Section, and will be drilled in a southeasterly direction through and under the

following Quarter of a Quarter of a Quarter sections as illustrated on Exhibit C:

(A02) Southwest Quarter of the Northeast Quarter of the Northwest Quarter

(SW/4 NE/4 NW/4),

(A03) the Southeast Quarter of the Northeast Quarter of the Northwest Quarter

(SE/4 NE/4 NW/4),

(A04) the Northeast Quarter of the Southeast Quarter of the Northwest Quarter

(NE/4 SE/4 NW/4),

(A05) the Southeast Quarter of the Southeast Quarter of the Northwest Quarter

(SE/4 SE/4 NW/4),

(A06) the Southwest Quarter of the Southwest Quarter of the Northeast Quarter

(SW/4 SW/4 NE/4),

(A07) the Northwest Quarter of the Northwest Quarter of the Southeast Quarter

(NW/4 NW/4 SE/4),

(A08) the Northeast Quarter of the Northwest Quarter of the Southeast Quarter

(NE/4 NW/4 SE/4),

(A09) the Southeast Quarter of the Northwest Quarter of the Southeast Quarter

(SE/4 NW/4 SE/4),

(A10) the Southwest Quarter of the Northeast Quarter of the Southeast Quarter

(SW/4 NE/4 SE/4),

(A11) the Northwest Quarter of the Southeast Quarter of the Southeast Quarter

(NW/4 SE/4 SE/4),

(A12) the Northeast Quarter of the Southeast Quarter of the Southeast Quarter

(NE/4 SE/4 SE/4), all of which are in Section 28, Township 18 South, Range 16

1 West, and  
2 (A13) will be bottomed in the Southeast Quarter of the Southeast Quarter of the  
3 Southeast Quarter (SE/4 SE/4 SE/4) in Section 28, Township 18 South, Range 16  
4 West at a point which is 350 feet from the South line and 350 feet from the East  
5 line of such Section.

6 Q: Has H2Oil had title work performed on the property comprising the Wagner Unit?

7 A: Yes

8 Q: Has H2Oil received any information about who owns title to the minerals under County  
9 Road 360, which runs through the Wagner Unit?

10 A: The title attorney has indicated that fee title, including the minerals, under County Road  
11 360 remains owned by the parties who own fee title to the land abutting such road, and  
12 that H2Oil's oil and gas leases on those properties in Sections 28 and 29 within the  
13 Wagner Unit are sufficient to cover the minerals underlying that portion of the County  
14 Road 360 within the Wagner Unit.

15 Q: What formation will the Wagner Unit #2 well be producing from once it is completed?

16 A: The Reagan Sand formation.

17 Q: What are the depths at which H2Oil expects to encounter the Reagan Sand formation?

18 A: H2Oil expect to encounter the Reagan Sand at approximately 3,640 ft true vertical depth  
19 and around 3,976 ft measured depth.

20 Q: How far from the nearest boundary of the Wagner Unit will the wellbore of the Wagner  
21 Unit #2 well be located when it enters the Reagan Sand formation?

22 A: The wellbore will be approximately 964 feet from the nearest unit boundary when it  
23 penetrates the Reagan Sand formation.

1 Q: At what depth does H2Oil plan to begin building the deviation in the wellbore of the  
2 Wagner Unit #2 well?

3 A: Attached to this testimony as Exhibit D, please find a detail of the plans for the well.  
4 H2Oil plans to begin building the deviation at approximately 2,715 ft measured depth

5 Q: Approximately how many feet of build will be required to deviate the wellbore of the  
6 Wagner Unit #2 well such that it becomes horizontal?

7 A: Approximately 1,500 ft measured depth of build will be required to reach horizontal.

8 Q: What is the planned true vertical depth of the Wagner Unit #2 well at the point it will  
9 enter the Reagan Sand formation?

10 A: The well is estimated to enter the Reagan Sand at 3,640 ft true vertical depth.

11 Q: How far from the surface location of the Wagner Unit #2 well will the bottom hole, or  
12 toe, of such well be located?

13 A: The horizontal departure of the well is planned to be approximately 5,779 ft.

14 Q: How many feet of the lateral of the Wagner Unit #2 well will be located within the  
15 Reagan Sand formation?

16 A: The well will enter the Reagan sandstone at approximately 3,976 ft measured depth, and  
17 the total measured depth will be approximately 9,039 ft, so approximately 5,063 feet of  
18 the lateral will be within the Reagan Sand. Of this distance, approximately 539 ft will be  
19 behind the 9.625" casing, leaving 4,524 ft of formation available for production through  
20 the 5 inch slotted liner.

21 Q: What is the planned true vertical depth of the well for the bottom hole location of the  
22 Wagner Unit #2 well?

23 A: The planned true vertical depth of the toe of the well is 3,670 ft.



1 Q: What is the planned total measured depth for the Wagner Unit #2 well?

2 A: The planned total measured depth for the Wagner Unit #2 well is 9,039 ft.

3 Q: Will the Wagner Unit #2 well be completed as a cased or an open hole lateral?

4 A: The Wagner Unit #2 well will be completed with a 5" OD slotted liner across the  
5 producing interval.

6 Q: What size, or sizes, of drill bit and casing does H2Oil plan to use on the Wagner Unit #2  
7 well?

8 A: As further depicted on Exhibit E attached to this testimony, H2Oil plans to set a 20"  
9 surface conductor to a depth of 80 ft. H2Oil will commence drilling from surface with a  
10 17.5" bit and set 13.375" x 54.5# surface casing in the Anhydrite at approximately 1,100  
11 ft. H2Oil will drill out of the surface casing with a 12.25" bit which will be used to build  
12 the curve and to drill to top reservoir and land the well horizontally in the Reagan  
13 Formation and set 9.625" x 40# production casing at approximately 4,515 ft measured  
14 depth. H2Oil will then drill out of the production casing with a 6.75" bit, to 9,039 ft  
15 measured depth. H2Oil will set a 5" 18# slotted liner from the production casing to total  
16 measured depth.

17 Q: What cementing procedure does H2Oil plan to use on the Wagner Unit #2 well?

18 A: H2Oil will be using cementing alternative I set forth in K.A.R. 82-3-106(c).

19 Q: What is the planned depth, and distance to the nearest boundary of the Wagner Unit, for  
20 the first point that will be open to production in the wellbore of the Wagner Unit #2 well?

21 A: The planned depth to the first point that will be open to production is approximately  
22 4,515 ft measured depth and this is 1,384 ft away from the nearest boundary of the  
23 Wagner Unit.

1 Q: What is the planned distance between the first take point and the last take point which is  
2 open to production in the lateral of the Wagner Unit #2 well?

3 A: Approximately 4,524 ft.

4 Q: How far from the nearest boundary of the Wagner Unit will the bottom hole of the  
5 Wagner Unit #2 well be located?

6 A: The toe of the well is planned to be 350 ft from the nearest boundary.

7 Q: Will any portion of the lateral of the Wagner Unit #2 well be located within three  
8 hundred and thirty feet (330') of a boundary of the Wagner Unit?

9 A: No.

10 Q: Will the well be drilled, completed, operated, and produced in compliance with the rules  
11 of the Kansas Corporation Commission?

12 A: Yes.

13 Q: Will the granting of H2Oil's Application for the Wagner Unit #2 well cause waste or  
14 violate the correlative rights of any party?

15 A: No.

16 Q: Will the drilling of the Wagner Unit #2 well prevent the waste of hydrocarbons in that  
17 portion of the Reagan Sand formation underlying the Wagner Unit?

18 A: Yes.

19 Q: Will H2Oil provide the Kansas Corporation Commission with a complete copy of the  
20 directional survey that will be generated while drilling the Wagner Unit #2 well?

21 A: Yes.

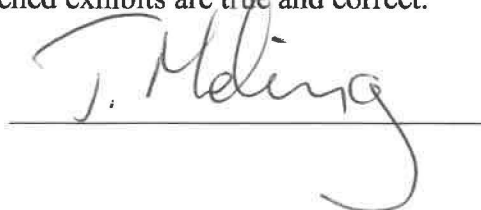
22 Q: Does this conclude your testimony?

23 A: Yes.

**VERIFICATION**

State of TEXAS                    )  
  ) ss:  
County of HARRIS                )

I, Tor Meling, after first being duly sworn, upon my oath, states that I am the same Tor Meling referred to in the foregoing document entitled "Pre-Filed Testimony of Tor Meling in Support of Application for Horizontal Well", that the statements therein were prepared by me or under my direction, and that the statements and attached exhibits are true and correct.

  
\_\_\_\_\_

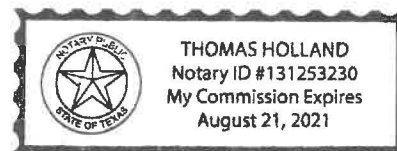
Subscribed and Sworn to before me, the undersigned notary public, on this 13<sup>th</sup> day of NOVEMBER, 2017.

  
\_\_\_\_\_  
Notary Public

My Appointment / Commission Expires:

08/21/2021

[Seal]



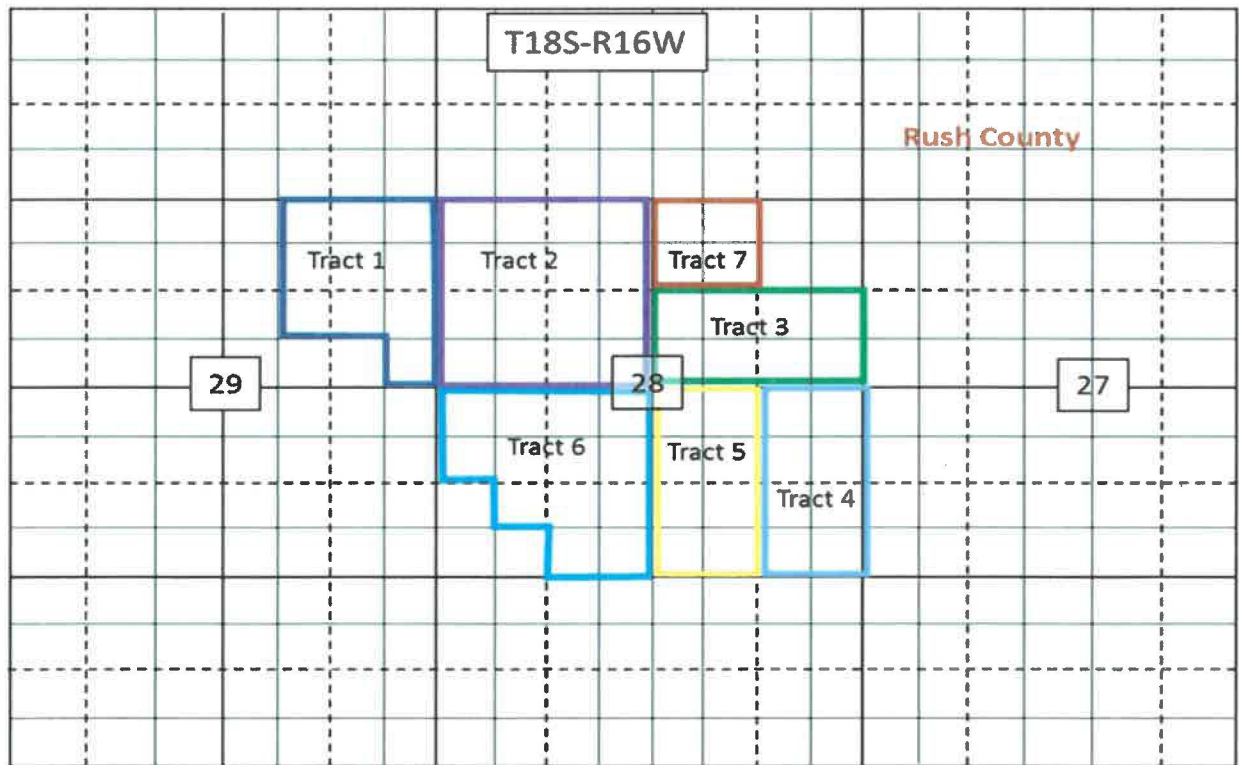
**EXHIBIT A**

See attached Wagner Unit Pooled Area.

## EXHIBIT A

### Wagner Unit Pooled Area Rush County, Kansas

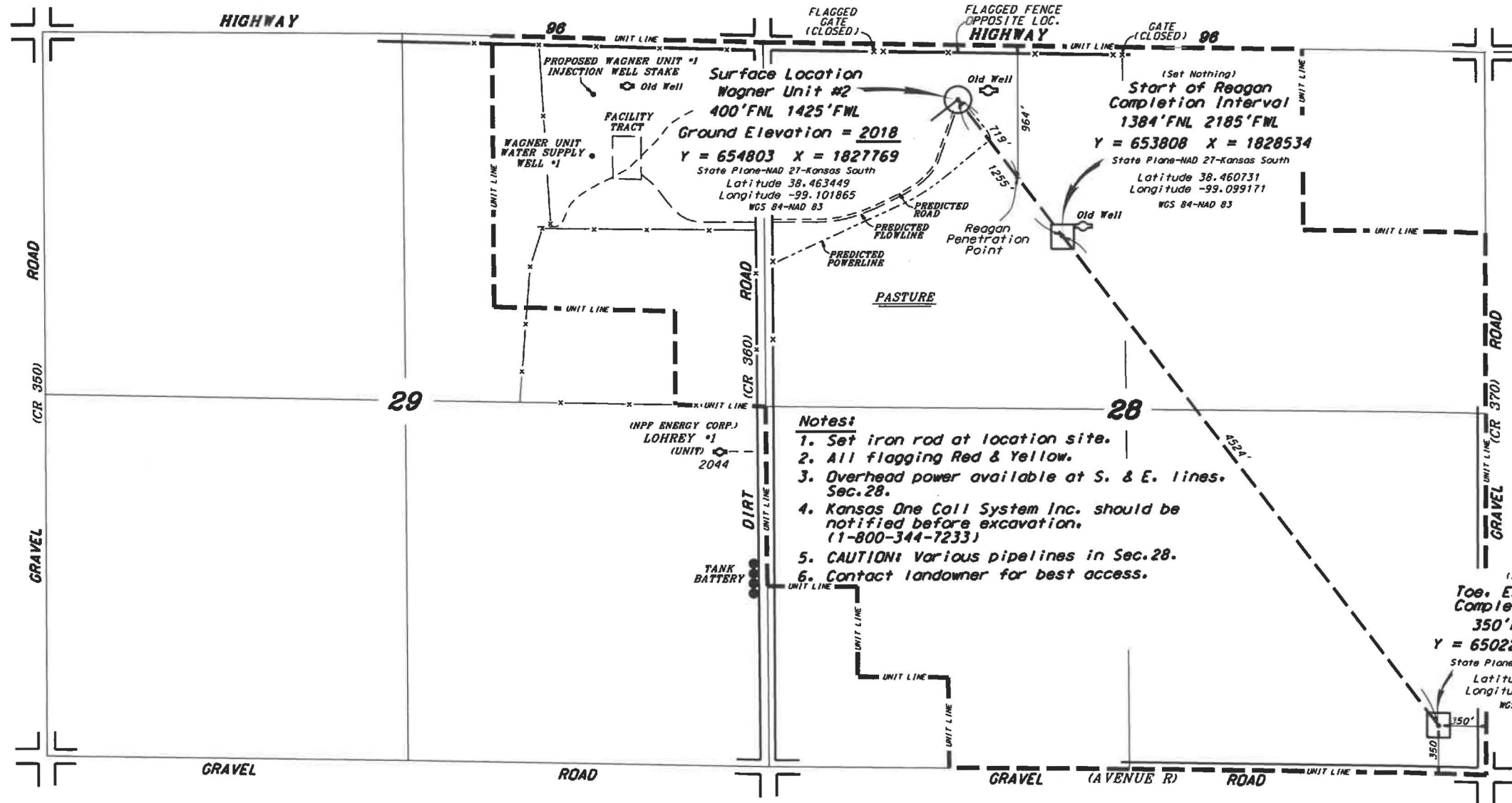
Tract Number	Tract Description	S-T-R
1	NE4NE4, N2SE4NE4, E2NW4NE4, NE4SW4NE4, SE4SE4NE4 (Cheyenne)	29-18S-16W
2	NW4 (Wagner-Skubitz))	28-18S-16W
3	S2NE4 (Maneth)	28-18S-16W
4	E2SE4 (Hanhardt-Wagner)	28-18S-16W
5	W2SE4 (JAB Farms)	28-18S-16W
6	N2SW4, SE4SW4, NE4SW4SW4 (Wagner)	28-18S-16W
7	NW4NE4 (Brady)	28-18S-16W



## **EXHIBIT B**

See attached plat map.

**H2Oil Opco, LLC  
Wagner Unit #2  
Section 28, T18S, R16W  
Rush County, Kansas**



**Notes:**

1. Set iron rod at location site.
2. All flagging Red & Yellow.
3. Overhead power available at S. & E. lines, Sec.28.
4. Kansas One Call System Inc. should be notified before excavation. (1-800-344-7233)
5. CAUTION: Various pipelines in Sec.28.
6. Contact landowner for best access.

\*Ingress and egress to location as shown on this plat is per usage only and may not be legally opened for public use. Contact landowner, tenant and county road department for access.

**EXHIBIT B**

\*Controlling data is based upon the best maps and photographs available to us and upon a regular section of land containing 640 acres.

\*Approximate section lines were determined using the normal standard of care of oilfield surveyors practicing in the state of Kansas. The section corners, which establish the precise section lines, were not necessarily located, and the exact location of the drill site location in the section is not guaranteed. Therefore, the operator securing this service and accepting this plat and all other parties relying thereon agree to hold Central Kansas Oilfield Services, Inc., its officers and employees harmless from all losses, costs and expenses and said entities released from any liability from incidental or consequential damages.

\*Elevations derived from National Geodetic Vertical Datum.

**CENTRAL KANSAS OILFIELD SERVICES, INC. (620)792-1977**

Date **August 5, 2017**

## **EXHIBIT C**

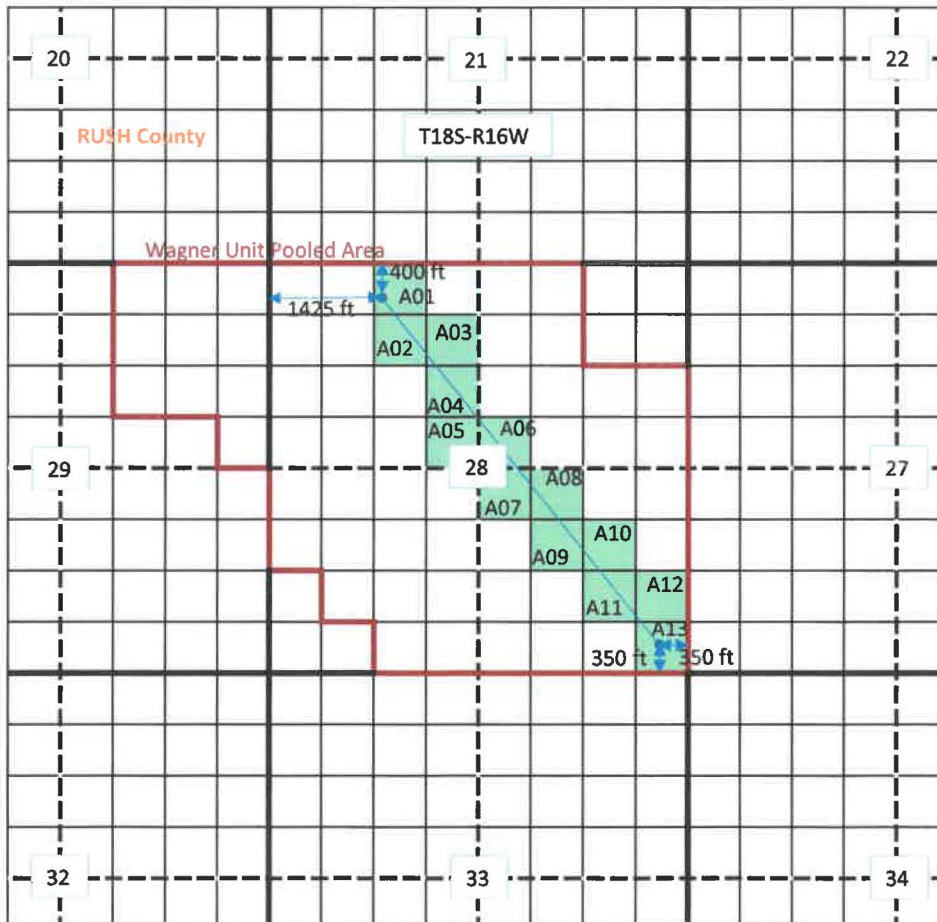
See attached Wagner Unit #2 Planned Well Path Description.



## EXHIBIT C

Wagner Unit #2 Planned Well Path Description,  
Rush County, Kansas

Map Ref.	Planned Well Path Tract Description		S - T - R
A01	Northwest Quarter of the Northeast Quarter of the Northwest Quarter	(NW/4 NE/4 NW/4)	28-18S-16W
A02	Southwest Quarter of the Northeast Quarter of the Northwest Quarter	(SW/4 NE/4 NW/4)	28-18S-16W
A03	Southeast Quarter of the Northeast Quarter of the Northwest Quarter	(SE/4 NE/4 NW/4)	28-18S-16W
A04	Northwest Quarter of the Southeast Quarter of the Northwest Quarter	(NE/4 SE/4 NW/4)	28-18S-16W
A05	Southeast Quarter of the Southeast Quarter of the Northwest Quarter	(SE/4 SE/4 NW/4)	28-18S-16W
A06	Southwest Quarter of the Southwest Quarter of the Northeast Quarter	(SW/4 SW/4 NE/4)	28-18S-16W
A07	Northwest Quarter of the Northwest Quarter of the Southeast Quarter	(NW/4 NW/4 SE/4)	28-18S-16W
A08	Northwest Quarter of the Northwest Quarter of the Southeast Quarter	(NE/4 NW/4 SE/4)	28-18S-16W
A09	Southeast Quarter of the Northwest Quarter of the Southeast Quarter	(SE/4 NW/4 SE/4)	28-18S-16W
A10	Southwest Quarter of the Northeast Quarter of the Southeast Quarter	(SW/4 NE/4 SE/4)	28-18S-16W
A11	Northwest Quarter of the Southeast Quarter of the Southeast Quarter	(NW/4 SE/4 SE/4)	28-18S-16W
A12	Northwest Quarter of the Southeast Quarter of the Southeast Quarter	(NE/4 SE/4 SE/4)	28-18S-16W
A13	Southeast Quarter of the Southeast Quarter of the Southeast Quarter	(SE/4 SE/4 SE/4)	28-18S-16W



## **EXHIBIT D**

See attached well directional plan diagram.

# WELL DETAILS: Wagner Unit #2

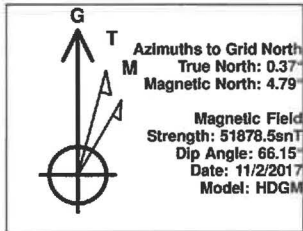
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RKB Elevation: KB=20 @ 2038.00ft  
Rig Name:

Northing	Easting	Latitude	Longitude
654803.0000	1827769.0000	38.463437	-99.101490

## Section Details

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2715.07	0.00	360.00	2715.07	0.00	0.00	0.00	360.00	0.00	Start Build 6.00
4215.07	90.00	142.43	3670.00	-756.89	582.25	6.00	142.43	954.93	Landing Point
4515.00	90.00	142.43	3670.00	-994.61	765.13	0.00	0.00	1254.86	Start of Reagan completion interval
9038.99	90.00	142.42	3670.00	-4580.01	3524.01	0.00	-89.85	5778.85	TD at 9038.99

H2 Oil, LLC  
Project: Rush County, KS  
Site: Sec 28 & 29, T18S, R16W  
Well: Wagner Unit #2  
Wellbore: Wellbore #1  
Plan: Plan #2 (Wagner Unit #2/Wellbore #1)



PROJECT DETAILS: Rush County, KS  
Geodetic System: US State Plane 1927 (Exact solution)  
Datum: NAD 1927 (NADCON CONUS)  
Ellipsoid: Clarke 1886  
Zone: Kansas South 1502  
System Datum: Mean Sea Level  
Local North: Grid

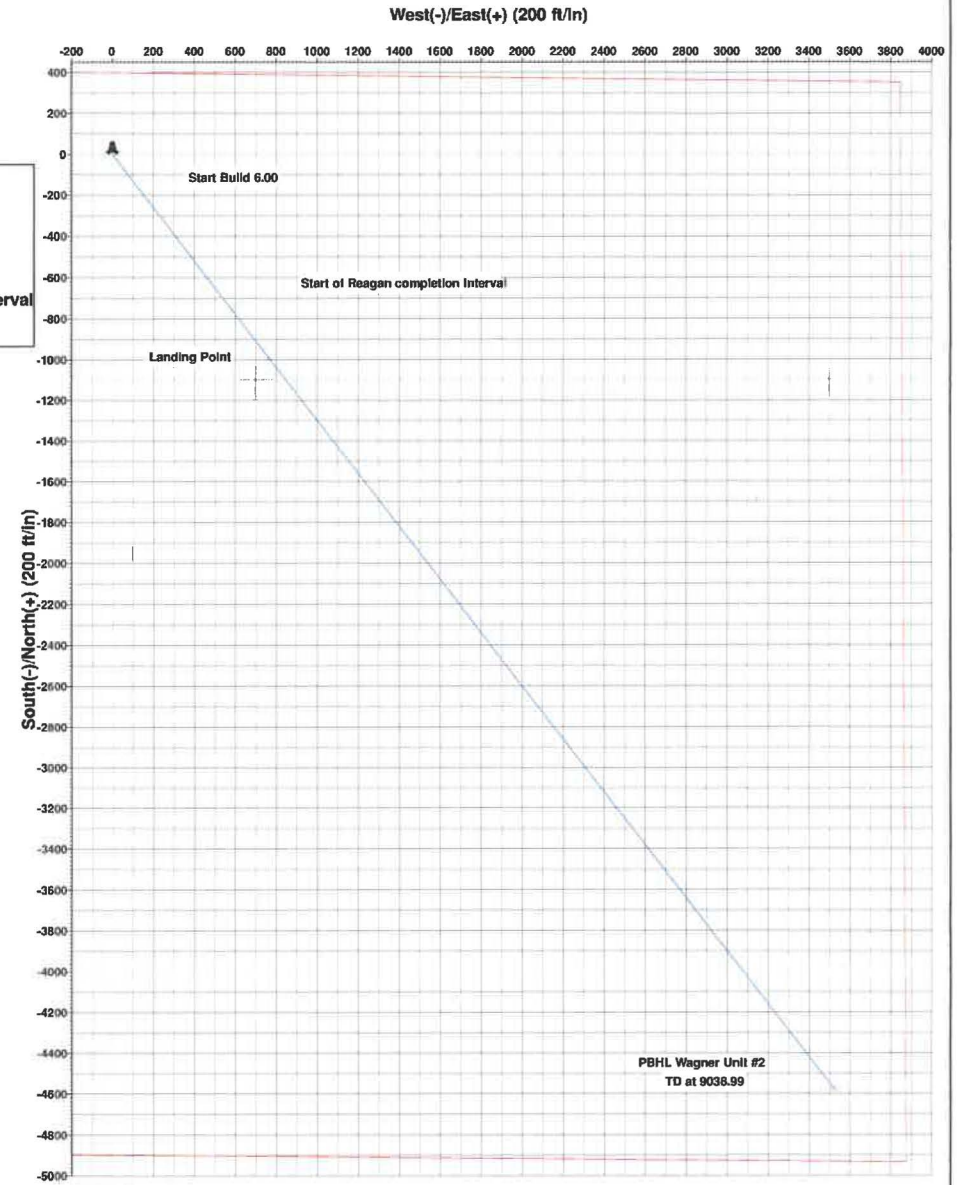
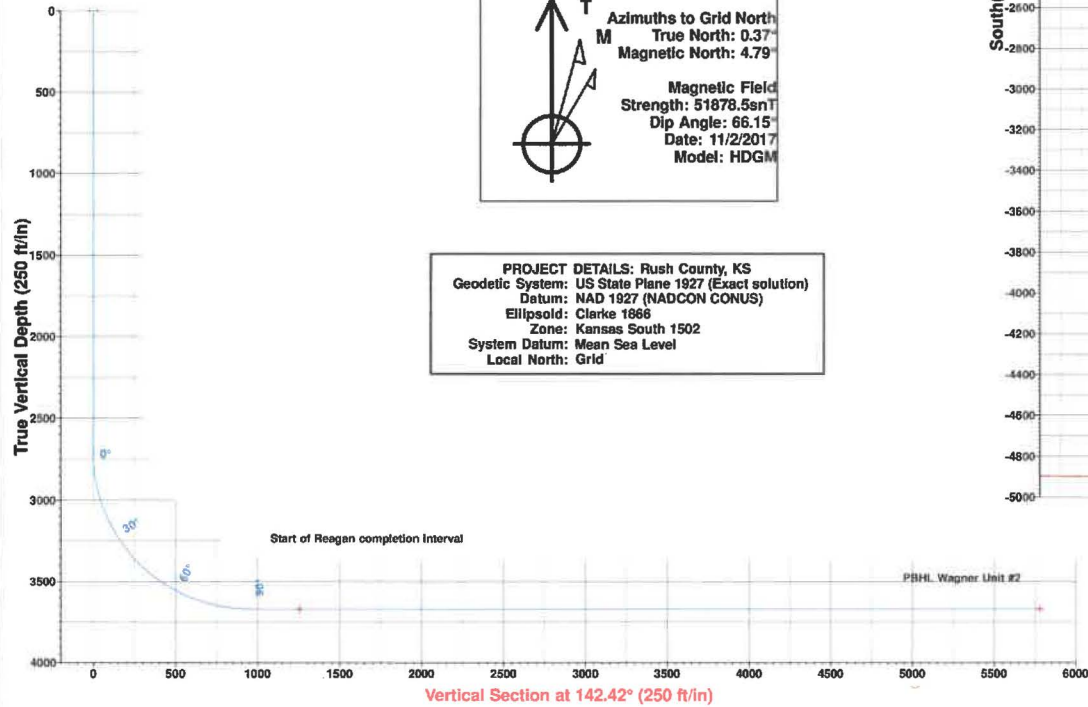


EXHIBIT D

## **EXHIBIT E**

See attached wellbore diagram.

## Wagner Unit # 2

20" Conductor  
Set at 80'

13 3/8" 54.5#  
Csg @ Approx  
1100'  
(Anhydrite)  
Cmt to Surf

4 1/2" 12.75# Production Tubing

TOC Est @ 3040' TVD

6 Deg Per 100' Build Angle

Csg Penetration @ Top of Reagan Sandstone, Est 3640' TVD, 3976' MD

5" 18# Slotted Liner to TMD @ 9039'

ESP Pump at Approx 4300', @ 90 Deg in Horizontal

9 5/8" 40# Csg @ Approx 4515' MD, 3670' TVD

6 3/4" OD to TMD @ 9039', 3670' TVD

EXHIBIT E