



Weatherford

Evaluation, Drilling & Intervention
10000 West County Rd. 116
P.O. Box 61028
Midland, TX USA 79711
Tel. (432) 561-8892 Fax (432) 561-8895

Devon Energy
333 W. Sherridan Ave
Oklahoma City, OK, 73102

Date: April 7, 2015

NM OIL CONSERVATION
ARTESIA DISTRICT

AUG 5 2015

Attention: Rob Schwartz

RECEIVED

Re: Devon Energy
Well: Big Sinks Draw 25 Fed Com 2H
Eddy County, New Mexico

Enclosed, please find the original survey performed on the referenced well by Precision Energy Services, Inc. (P-5 No. 676004), a Weatherford company. Other information required by your office is as follows:

<u>Name & Title Of Surveyor</u>	<u>Well Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Tanner Bauer MWD Supervisor	2H	9720 MD 17474 MD	3/11/2015 4/1/2015	Measurement While Drilling

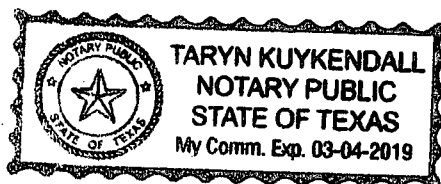
A notarized plan vs. actual is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Jesus Aguilar
MWD Coordinator

On this, the 22nd day of April, 2015, before me a notary public, the undersigned officer, personally appeared JESUS AGUILAR, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

Notary Public



30-015-42520

RED 8/14/15
Accepted for Record
RUGED

NM OIL CONSERVATION
ARTESIA DISTRICT

AUG 5 2015

RECEIVED

5D Survey Report

Devon Energy

Field Name: *Eddy Co, NM (Nad 83 NME)*
Site Name: *Big Sinks Draw 25 Fed Com 2H*
Well Name: *Big Sinks Draw 25 Fed Com 2H*
Survey: *Wft MWD Svy*

31 March 2015



Weatherford®

2017-03-17 14:00:00

Big Sinks Draw 25 Fed Com 2H

Field Name
Eddy Co, NM
(Nad 83 NME)

Map Units : US ft
Vertical Reference Datum (VRD) : Mean Sea Level
Projected Coordinate System : NAD83 / New Mexico East (ftUS)
Comment :

Company Name : Devon Energy

Site Name
Big Sinks Draw
25 Fed Com 2H

Units : US ft
North Reference : Grid
Convergence Angle : 0.32
Position
Northing : 401297.59 US ft
Latitude : 32° 6' 6.58"
Easting : 726981.16 US ft
Longitude : 103° 44' 1.68"
Elevation above Mean Sea Level: 3335.00 US ft
Comment :

Slot Name
Big Sinks Draw
25 Fed Com 2H

Position (Offsets relative to Site Centre)
+N / -S : 0.00 US ft
Northing : 401297.59 US ft
Latitude : 32° 6' 6.58"
+E / -W : 0.00 US ft
Easting : 726981.16 US ft
Longitude : 103° 44' 1.68"
Elevation above Mean Sea Level : 3335.00 US ft
Comment :

Well Name
Big Sinks Draw
25 Fed Com 2H

Type : Main well
UWI :
Rig Height *Kelly Bushing* : 25.00 US ft
Comment :
Relative to Mean Sea Level: 3360.00 US ft
Closure Distance : 7394.61 US ft
Closure Azimuth : 359.764°
Vertical Section (Position of Origin Relative to Slot)
+N / -S : 0.00 US ft
+E / -W : 0.00 US ft
Az : 359.83°

Survey Name: Wft MWD Svy

Date : 17/Mar/2015 Survey Tool : MWD Comment : Company : Wft

Magnetic Model

Model Name: BGGM Date: 28/Feb/2015 Field Strength: 48127.9 nT Declination: 7.37° Dip: 59.94°

Tie Point

MD: 9648 Inclination: 1.89 Azimuth: 240.7 TVD: 9647.15 North Offset: -56.1307 East Offset: -16.6599

Well path created using minimum curvature

Survey Points (Relative to Slot centre, TVD relative to Kelly Bushing)											
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N Offset (US ft)	E Offset (US ft)	VS (US ft)	DBS (%/100 US ft)	Northing (US ft)	Easting (US ft)	Comment	
9'20.00	1.54	222.93	9719.11	-57.42	-18.35	-57.37	0.00	401240.17	726962.81	First Wft Svy	
9'52.00	1.61	319.62	9751.11	-57.39	-18.94	-57.34	7.36	401240.20	726962.22		
9'83.00	4.71	348.67	9782.06	-55.81	-19.47	-55.75	10.95	401241.78	726961.69		
9'815.00	8.50	359.72	9813.84	-52.16	-19.74	-52.10	12.44	401245.43	726961.42		
9'846.00	10.70	7.83	9844.41	-47.01	-19.36	-46.96	8.31	401250.58	726961.80		
9'878.00	13.15	12.19	9875.71	-40.51	-18.19	-40.46	8.15	401257.08	726962.97		
9'910.00	15.94	9.61	9906.69	-32.62	-16.68	-32.57	8.95	401264.97	726964.48		
9'941.00	18.98	7.61	9936.25	-23.42	-15.31	-23.38	9.99	401274.17	726965.85		
9'972.00	21.96	7.65	9965.29	-12.68	-13.87	-12.64	9.61	401284.91	726967.29		
10'004.00	25.02	7.95	9994.64	-0.05	-12.13	-0.01	9.57	401297.54	726969.03		
10'035.00	28.04	9.15	10022.37	13.64	-10.07	13.67	9.89	401311.23	726971.09		
10'067.00	31.21	9.91	10050.18	29.24	-7.44	29.26	9.98	401326.83	726973.72		
10'098.00	34.02	8.28	10076.29	45.74	-4.81	45.75	9.50	401343.33	726976.35		

500 1000 800 ft

Survey Points (Relative to Slot centre, TVD relative to Kelly Bushing)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N Offset (US ft)	E Offset (US ft)	VS (US ft)	DLS (%/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
10130.00	36.51	7.60	10102.42	64.03	-2.26	64.04	7.88	401361.62	726978.90	
10161.00	39.15	3.89	10126.90	82.94	-0.38	82.95	11.24	401380.53	726980.78	
10193.00	42.57	1.95	10151.10	103.85	0.68	103.85	11.40	401401.44	726981.84	
10224.00	46.01	1.25	10173.29	125.48	1.28	125.48	11.21	401423.07	726982.44	
10256.00	50.37	1.55	10194.62	149.32	1.86	149.32	13.64	401446.91	726983.02	
10287.00	54.72	1.75	10213.47	173.91	2.57	173.91	14.04	401471.50	726983.73	
10319.00	58.16	1.23	10231.15	200.57	3.26	200.56	10.83	401498.16	726984.42	
10350.00	61.08	1.99	10246.83	227.30	4.01	227.28	9.65	401524.89	726985.17	
10382.00	63.14	2.23	10261.80	255.56	5.06	255.54	6.47	401553.15	726986.22	
10413.00	64.61	1.99	10275.45	283.37	6.08	283.35	4.79	401580.96	726987.24	
10441.00	65.97	1.76	10287.15	308.79	6.91	308.77	4.91	401606.38	726988.07	
10472.00	67.02	1.35	10299.52	337.21	7.68	337.19	3.60	401634.80	726988.84	
10503.00	68.33	1.75	10311.29	365.88	8.46	365.85	4.39	401663.47	726989.62	
10535.00	69.85	1.57	10322.71	395.76	9.33	395.73	4.78	401693.35	726990.49	
10566.00	71.33	0.66	10333.01	424.99	9.89	424.96	5.52	401722.58	726991.05	
10598.00	73.24	359.77	10342.75	455.47	10.01	455.44	6.53	401753.06	726991.17	
10630.00	75.59	359.42	10351.35	486.29	9.79	486.26	7.42	401783.88	726990.95	
10661.00	78.29	359.65	10358.35	516.48	9.54	516.45	8.74	401814.07	726990.70	
10692.00	80.86	359.36	10363.96	546.97	9.28	546.94	8.34	401844.56	726990.44	
10724.00	83.20	358.70	10368.40	578.65	8.74	578.62	7.59	401876.24	726989.90	
10755.00	83.97	359.09	10371.86	609.45	8.15	609.42	2.78	401907.04	726989.31	
10787.00	84.61	358.99	10375.05	641.29	7.62	641.26	2.02	401938.88	726988.78	
10819.00	85.17	359.02	10377.90	673.15	7.06	673.13	1.75	401970.74	726988.22	
10850.00	86.64	359.26	10380.11	704.07	6.60	704.05	4.80	402001.66	726987.76	
10882.00	88.46	359.50	10381.48	736.04	6.25	736.02	5.74	402033.63	726987.41	
10913.00	89.86	359.12	10381.93	767.03	5.88	767.01	4.68	402064.62	726987.04	
10945.00	91.05	358.54	10381.68	799.02	5.23	799.01	4.14	402096.61	726986.39	
11008.00	91.33	358.07	10380.37	861.98	3.36	861.97	0.87	402159.57	726984.52	
11102.00	89.65	358.08	10379.57	955.92	0.20	955.92	1.79	402253.51	726981.36	
11197.00	88.60	358.07	10381.02	1050.86	-2.99	1050.86	1.11	402348.45	726978.17	
11292.00	89.79	358.67	10382.35	1145.81	-5.69	1145.82	1.40	402443.40	726975.47	
11386.00	91.47	359.10	10381.32	1239.78	-7.52	1239.80	1.84	402537.37	726973.64	
11480.00	91.33	359.42	10379.02	1333.74	-8.73	1333.76	0.37	402631.33	726972.43	
11575.00	91.33	358.47	10376.82	1428.70	-10.48	1428.73	1.00	402726.29	726970.68	
11670.00	91.26	358.87	10374.67	1523.65	-12.68	1523.68	0.43	402821.24	726968.48	
11764.00	91.47	358.99	10372.43	1617.61	-14.44	1617.64	0.26	402915.20	726966.72	
11859.00	91.68	359.81	10369.82	1712.57	-15.43	1712.60	0.89	403010.16	726965.73	
11954.00	92.23	359.92	10366.58	1807.51	-15.66	1807.55	0.59	403105.10	726965.50	
12049.00	91.96	359.75	10363.10	1902.45	-15.93	1902.48	0.34	403200.04	726965.23	
12144.00	90.21	359.79	10361.31	1997.42	-16.31	1997.46	1.84	403295.01	726964.85	
12238.00	90.28	359.83	10360.90	2091.42	-16.62	2091.46	0.09	403389.01	726964.54	
12333.00	90.56	0.07	10360.21	2186.42	-16.71	2186.46	0.39	403484.01	726964.45	
12428.00	88.95	359.59	10360.61	2281.42	-16.99	2281.46	1.77	403579.01	726964.17	
12522.00	88.46	0.28	10362.74	2375.39	-17.09	2375.43	0.90	403672.98	726964.07	
12617.00	89.93	359.75	10364.07	2470.38	-17.07	2470.42	1.64	403767.97	726964.09	
12712.00	89.65	0.14	10364.42	2565.38	-17.16	2565.42	0.51	403862.97	726964.00	
12806.00	91.05	0.92	10363.85	2659.37	-16.29	2659.41	1.70	403956.96	726964.87	
12901.00	90.42	0.29	10362.63	2754.35	-15.29	2754.39	0.94	404051.94	726965.87	
12996.00	90.91	0.62	10361.53	2849.34	-14.53	2849.38	0.62	404146.93	726966.63	
13091.00	90.98	0.87	10359.96	2944.32	-13.30	2944.35	0.27	404241.91	726967.86	
13185.00	90.91	1.91	10358.41	3038.28	-11.02	3038.30	1.11	404335.87	726970.14	
13280.00	91.26	0.28	10356.61	3133.24	-9.20	3133.26	1.75	404430.83	726971.96	
13375.00	90.14	359.32	10355.45	3228.23	-9.54	3228.25	1.55	404525.82	726971.62	
13470.00	89.93	0.22	10355.39	3323.23	-9.92	3323.25	0.97	404620.82	726971.24	
13565.00	89.30	0.66	10356.03	3418.23	-9.19	3418.24	0.81	404715.82	726971.97	
13660.00	89.30	359.01	10357.19	3513.22	-9.46	3513.23	1.74	404810.81	726971.70	
13754.00	87.83	358.68	10359.54	3607.16	-11.36	3607.18	1.60	404904.75	726969.80	
13848.00	88.39	359.40	10362.64	3701.10	-12.93	3701.12	0.97	404998.69	726968.23	
13943.00	88.88	0.63	10364.91	3796.07	-12.90	3796.09	1.39	405093.66	726968.26	

Vertical hole orientation corrected

Survey Date: 2015-10-20 10:00

$$\frac{d^2}{dt^2} \left(\frac{1}{r} \right) = - \frac{1}{r^3} \left(\frac{dr}{dt} \right)^2 - \frac{1}{r} \frac{d^2 r}{dt^2}$$



Big Sinks Draw 25 Fed Com 2H
Eddy Co, NM

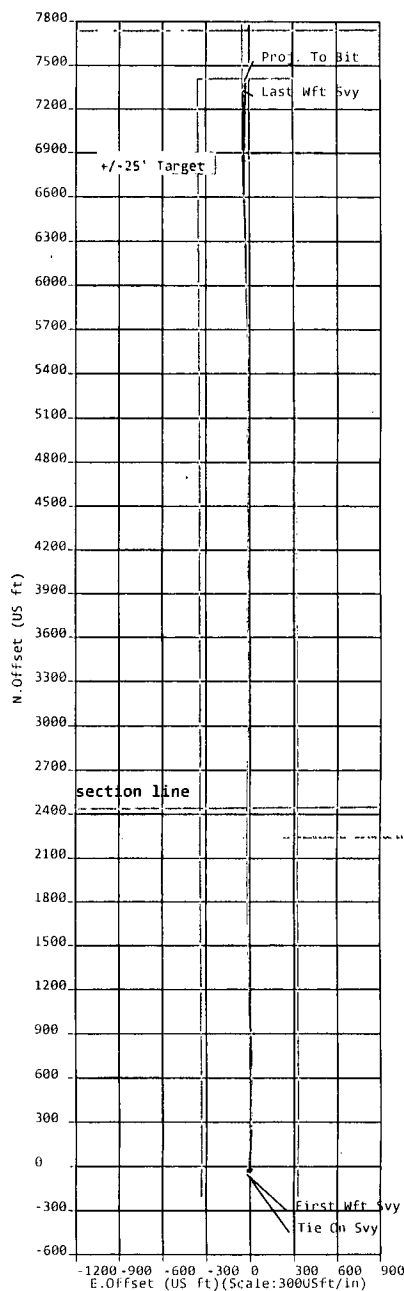
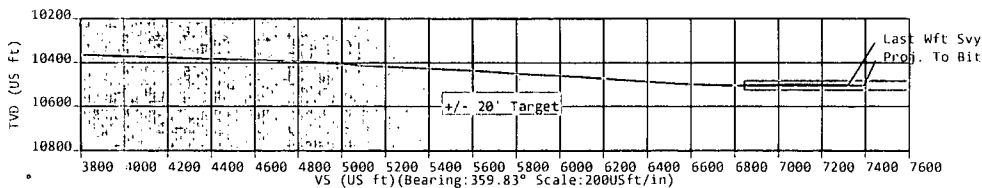
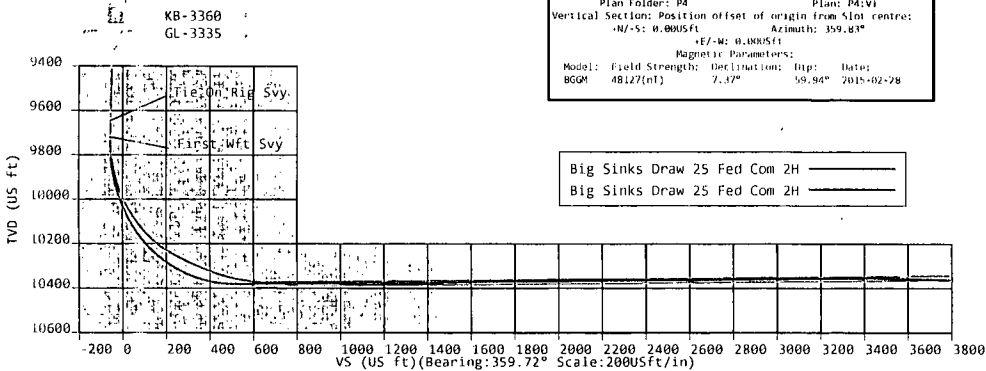
Plan Data for Big Sinks Draw 25 Fed Com 2H										
Plan Point Information:										
Dogleg Severity Unit: °/100,00ft										
MD	Inc	Az	TVD	+N/-S	+E/-W	Northing	Easting	VSec	DLS	
(USft)	(°)	(°)	(USft)	(USft)	(USft)	(USft)	(USft)	(USft)	(DLSU)	
16685.00	86.50	358.03	10495.18	6534.08	-34.83	407831.67	726946.33	6534.15	0.22	
17017.30	90.00	1.58	10505.32	6866.11	-35.95	408163.70	726945.21	6866.19	1.50	
17546.44	90.00	1.58	10505.32	7395.05	-21.35	408692.64	726959.81	7395.08	0.00	

Plan Data for Big Sinks Draw 25 Fed Com 2H				
Slot: Big Sinks Draw 25 Fed Com 2H				
Position:				
Offset is from Site centre				
+N/-S: 0.00USft	Northing: 401297.59USft	Latitude:	32°6'6.6"	
+E/-W: 0.00USft	Easting: 726981.16USft	Longitude:	-103°44'1.7"	
Elevation Above VRD: 3335.00USft				

Plan Data for Big Sinks Draw 25 Fed Com 2H										
Target Set Information:										
Name: Big Sinks Draw 25 Fed Com 2H										
Position offsets from Slot centre										
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape	Comment			
	(USft)	(USft)	(USft)	(USft)	(USft)	(USft)				
PBHL 2H	10505.32	7395.05	-21.35	408692.64	726959.81	Cuboid				

Plan Data for Big Sinks Draw 25 Fed Com 2H										
Well: Big Sinks Draw 25 Fed Com 2H										
Type: Main-Well										
File Number:										
Plan Folder: P4										
Plan: P4/V1										
Vertical Section: Position offset of origin from Slot centre:										
+N/-S: 0.00USft										
+E/-W: 0.00USft										
Magnetic Parameters:										
Model: Field Strength: Declination: Dip: Date:										
BGM: 48127(nT) 7.37° 59.94° 2019-02-28										

Big Sinks Draw 25 Fed Com 2H	
Big Sinks Draw 25 Fed Com 2H	



Sign Off: Russell Joyner



Directional Survey

Well Name: BIG SINKS DRAW 25 FED COM 2H

Sub-Division DELAWARE BASIN		Region DELAWARE BASIN WEST		Field Name PADUCA		County EDDY		State/Province NM					
Surface Legal Location SEC25 T25S 31E		API/UWI 3001542520		Latitude (°) 32° 6' 6.579" N		Longitude (°) 103° 44' 1.684" W		Orig KB Elevation (ft) 3,359.50		Ground Elev MSL (ft) 3,334.50		KB - GL (ft) 25.00	
Wellbores													
Wellbore Name OH		Parent Wellbore OH				SAP Well ID 38054				Vertical Section Direction (°) 359.83			
Kick Offs & Key Depths													
Date				Type				Top Depth (ftKB)					
Actual Deviation Survey SURFACE EXTREME, Proposed? No				Definitive? Yes		Proposed? No		Proposed Deviation Survey					
Deviation Survey													
Date 3/4/2015		Description SURFACE EXTREME											
MD Tie In (ftKB)		TVD Tie In (ftKB)		Inclination Tie In (°)		Azimuth Tie In (°)		NSTie In (ft)		EWTie In (ft)			
Survey Data													
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company			
3/4/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD	EXTREME			
3/4/2015	133.00	0.31	337.60	133.00	0.33	0.33	-0.14	0.23	MWD	EXTREME			
3/4/2015	229.00	0.22	83.02	229.00	0.60	0.60	-0.05	0.44	MWD	EXTREME			
3/4/2015	258.00	0.22	75.51	258.00	0.62	0.62	0.06	0.10	MWD	EXTREME			
3/4/2015	316.00	0.22	89.92	316.00	0.64	0.64	0.28	0.10	MWD	EXTREME			
3/4/2015	374.00	0.62	105.12	374.00	0.56	0.56	0.69	0.71	MWD	EXTREME			
3/4/2015	433.00	0.62	114.09	432.99	0.34	0.35	1.29	0.16	MWD	EXTREME			
3/4/2015	526.00	0.48	98.01	525.99	0.08	0.09	2.13	0.22	MWD	EXTREME			
3/4/2015	616.00	0.89	220.00	615.99	-0.51	-0.50	2.06	1.35	MWD	EXTREME			
3/4/2015	677.00	0.89	217.89	676.98	-1.24	-1.24	1.46	0.05	MWD	EXTREME			
3/4/2015	767.00	0.70	217.09	766.97	-2.23	-2.23	0.70	0.21	MWD	EXTREME			
3/4/2015	829.00	0.79	208.00	828.96	-2.91	-2.91	0.27	0.24	MWD	EXTREME			
3/4/2015	919.00	0.70	226.19	918.96	-3.83	-3.83	-0.42	0.28	MWD	EXTREME			
3/4/2015	1,115.00	0.31	195.21	1,114.95	-5.17	-5.17	1.42	0.24	MWD	EXTREME			
3/4/2015	1,302.00	0.22	141.82	1,301.95	-5.94	-5.94	1.33	0.13	MWD	EXTREME			
3/4/2015	1,488.00	0.09	34.02	1,487.95	-6.10	-6.10	1.03	0.14	MWD	EXTREME			
3/4/2015	1,676.00	0.22	347.92	1,675.95	-5.63	-5.63	1.02	0.09	MWD	EXTREME			
3/4/2015	1,865.00	0.31	96.73	1,864.94	-5.33	-5.33	-0.59	0.23	MWD	EXTREME			
3/4/2015	2,054.00	0.40	264.03	2,053.94	-5.46	-5.46	-0.74	0.37	MWD	EXTREME			
3/4/2015	2,243.00	0.22	305.30	2,242.94	-5.32	-5.32	1.69	0.15	MWD	EXTREME			
3/4/2015	2,436.00	0.31	341.90	2,435.94	-4.60	-4.61	2.15	0.10	MWD	EXTREME			
3/4/2015	2,625.00	0.00	7.57	2,624.94	-4.12	-4.13	2.31	0.16	MWD	EXTREME			
3/4/2015	2,814.00	0.31	75.73	2,813.94	-3.99	-4.00	1.82	0.16	MWD	EXTREME			
3/4/2015	2,906.00	0.09	296.73	2,905.94	-3.90	-3.91	1.64	0.42	MWD	EXTREME			
3/4/2015	3,095.00	0.22	12.09	3,094.94	-3.48	-3.48	1.70	0.11	MWD	EXTREME			
3/4/2015	3,188.00	0.40	330.92	3,187.93	-3.02	-3.03	1.82	0.30	MWD	EXTREME			
3/4/2015	3,377.00	0.22	25.50	3,376.93	-2.12	-2.12	1.98	0.17	MWD	EXTREME			
3/4/2015	3,568.00	0.79	75.33	3,567.92	-1.46	-1.46	-0.55	0.35	MWD	EXTREME			
3/4/2015	3,759.00	0.48	314.39	3,758.92	-0.56	-0.56	0.15	0.58	MWD	EXTREME			
3/4/2015	3,945.00	0.40	26.99	3,944.91	0.56	0.56	-0.11	0.28	MWD	EXTREME			
3/4/2015	4,134.00	0.62	52.83	4,133.91	1.76	1.77	1.00	0.17	MWD	EXTREME			
3/4/2015	4,319.00	0.62	293.12	4,318.90	2.76	2.76	0.88	0.58	MWD	EXTREME			
3/4/2015	4,413.00	0.48	173.20	4,412.90	2.57	2.57	0.46	1.02	MWD	EXTREME			
3/4/2015	4,509.00	0.48	159.31	4,508.90	1.79	1.80	0.65	0.12	MWD	EXTREME			
3/4/2015	4,603.00	0.48	173.33	4,602.89	1.03	1.04	0.84	0.12	MWD	EXTREME			
3/4/2015	4,699.00	0.62	160.01	4,698.89	0.15	0.15	1.06	0.20	MWD	EXTREME			
3/4/2015	4,790.00	0.70	151.93	4,789.88	-0.81	-0.80	1.49	0.13	MWD	EXTREME			
3/4/2015	4,885.00	0.79	156.89	4,884.87	-1.92	-1.92	2.02	0.12	MWD	EXTREME			
3/4/2015	4,978.00	0.79	152.89	4,977.86	-3.09	-3.08	2.56	0.06	MWD	EXTREME			
3/4/2015	5,075.00	0.70	166.52	5,074.86	-4.26	-4.25	3.01	0.20	MWD	EXTREME			
3/4/2015	5,170.00	0.70	157.42	5,169.85	-5.36	-5.35	3.36	0.12	MWD	EXTREME			
3/4/2015	5,264.00	0.79	175.53	5,263.84	-6.54	-6.53	3.64	0.27	MWD	EXTREME			
3/4/2015	5,359.00	0.88	166.60	5,358.83	-7.90	-7.89	3.86	0.17	MWD	EXTREME			
3/4/2015	5,454.00	0.62	170.82	5,453.82	-9.12	-9.11	4.11	0.28	MWD	EXTREME			
3/4/2015	5,548.00	0.70	167.92	5,547.82	-10.18	-10.17	4.31	0.09	MWD	EXTREME			
3/4/2015	5,643.00	1.01	161.33	5,642.81	-11.54	-11.53	4.70	0.34	MWD	EXTREME			
3/4/2015	5,737.00	0.88	164.80	5,736.79	-13.03	-13.01	5.15	0.15	MWD	EXTREME			
3/4/2015	5,832.00	0.88	145.60	5,831.78	-14.33	-14.32	5.76	0.31	MWD	EXTREME			
3/4/2015	5,926.00	0.88	139.23	5,925.77	-15.48	-15.46	6.63	0.10	MWD	EXTREME			
3/4/2015	6,021.00	0.48	133.91	6,020.76	-16.31	-16.29	7.40	0.43	MWD	EXTREME			
3/4/2015	6,115.00	0.31	150.12	6,114.76	-16.80	-16.78	7.81	0.21	MWD	EXTREME			
3/4/2015	6,210.00	0.31	164.01	6,209.76	-17.28	-17.25	8.01	0.08	MWD	EXTREME			
3/4/2015	6,305.00	0.40	165.20	6,304.76	-17.84	-17.82	8.16	0.10	MWD	EXTREME			
3/4/2015	6,400.00	0.62	146.13	6,399.76	-18.59	-18.57	8.53	0.29	MWD	EXTREME			
3/4/2015	6,497.00	0.79	155.62	6,496.75	-19.64	-19.61	9.10	0.21	MWD	EXTREME			
3/4/2015	6,593.00	0.79	167.00	6,592.74	-20.89	-20.86	9.52	0.16	MWD	EXTREME			
3/4/2015	6,686.00	0.74	180.71	6,685.73	-22.11	-22.08	9.66	0.20	MWD	EXTREME			
3/4/2015	6,780.00	0.88	191.83	6,779.72	-23.43	-23.40	9.51	0.22	MWD	EXTREME			
3/4/2015	6,875.00	1.01	211.21	6,874.71	-24.85	-24.83	8.92	0.36	MWD	EXTREME			
3/4/2015	6,971.00	1.32	211.47	6,970.69	-26.52	-26.49	7.91	0.32	MWD	EXTREME			
3/4/2015	7,066.00	1.19	214.20	7,065.67	-28.26	-28.24	6.78	0.15	MWD	EXTREME			
3/4/2015	7,160.00	1.19	216.61	7,159.65	-29.85	-29.83	5.65	0.05	MWD	EXTREME			
3/4/2015	7,255.00	1.41	217.01	7,254.62	-31.57	-31.56	4.36	0.23	MWD	EXTREME			
3/4/2015	7,351.00	1.19	222.81	7,350.60	-33.24	-33.23	2.97	0.27	MWD	EXTREME			
3/4/2015	7,446.00	1.32	216.70	7,445.57	-34.84	-34.84	1.64	0.20	MWD	EXTREME			
3/4/2015	7,539.00	1.10	210.30	7,538.55	-36.47	-36.47	0.55	0.28	MWD	EXTREME			



Directional Survey

Well Name: BIG SINKS DRAW 25 FED COM 2H

Sub-Division		Region		Field Name				County		State/Province	
DELAWARE BASIN		DELAWARE BASIN WEST		PADUCA				EDDY		NM	
Surface Legal Location		API/UWJ		Latitude (°)		Longitude (°)		Orig KB Elevation (ft)		Ground Elev MSL (ft)	
SEC25 T25S 31E		3001542520		32° 6' 6.579" N		103° 44' 1.684" W		3,359.50		3,334.50	
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SEC25 T25S 31E		3001542520		32° 6' 6.579" N		103° 44' 1.684" W</					



Directional Survey

Well Name: BIG SINKS DRAW 25 FED COM 2H

Sub-Division	Region	Field Name	County	State/Province
DELAWARE BASIN	DELAWARE BASIN WEST	PADUCA	EDDY	NM
Surface Legal Location	API/UWI	Latitude (°)	Longitude (°)	Orig KB Elevation (ft)
SEC25 T25S 31E	3001542520	32° 6' 6.579" N	103° 44' 1.684" W	3,359.50
				Ground Elev MSL (ft)
				25:00

Survey Data										
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100R)	Survey Tool	Survey Company
3/4/2015	12,428.00	88.95	359.59	10,360.61	2,281.46	2,281.42	16.99	1.77	MWD	WEATHERFORD
3/4/2015	12,522.00	88.46	0.28	10,362.74	2,375.43	2,375.39	17.09	0.90	MWD	WEATHERFORD
3/4/2015	12,617.00	89.93	359.75	10,364.07	2,470.42	2,470.38	17.07	1.64	MWD	WEATHERFORD
3/4/2015	12,712.00	89.65	0.14	10,364.42	2,565.42	2,565.38	17.16	0.51	MWD	WEATHERFORD
3/4/2015	12,806.00	91.05	0.92	10,363.85	2,659.41	2,659.37	16.29	1.70	MWD	WEATHERFORD
3/4/2015	12,901.00	90.42	0.29	10,362.63	2,754.39	2,754.35	15.29	0.94	MWD	WEATHERFORD
3/4/2015	12,996.00	90.91	0.62	10,361.53	2,849.38	2,849.34	14.53	0.62	MWD	WEATHERFORD
3/4/2015	13,091.00	90.98	0.87	10,359.96	2,944.35	2,944.32	13.30	0.27	MWD	WEATHERFORD
3/4/2015	13,185.00	90.91	1.91	10,358.41	3,038.30	3,038.28	11.02	1.11	MWD	WEATHERFORD
3/4/2015	13,280.00	91.26	0.28	10,356.61	3,133.26	3,133.24	9.20	1.75	MWD	WEATHERFORD
3/4/2015	13,375.00	90.14	359.32	10,355.45	3,228.25	3,228.23	9.54	1.55	MWD	WEATHERFORD
3/4/2015	13,470.00	89.93	0.22	10,355.39	3,323.25	3,323.23	9.92	0.97	MWD	WEATHERFORD
3/4/2015	13,565.00	89.30	0.66	10,356.03	3,418.24	3,418.23	9.19	0.81	MWD	WEATHERFORD
3/4/2015	13,660.00	89.30	359.01	10,357.19	3,513.23	3,513.22	9.46	1.74	MWD	WEATHERFORD
3/4/2015	13,754.00	87.83	358.68	10,359.54	3,607.18	3,607.16	11.36	1.60	MWD	WEATHERFORD
3/4/2015	13,848.00	88.39	359.40	10,362.64	3,701.12	3,701.10	12.93	0.97	MWD	WEATHERFORD
3/4/2015	13,943.00	88.88	0.63	10,364.91	3,796.09	3,796.07	12.90	1.39	MWD	WEATHERFORD
3/4/2015	14,038.00	88.25	1.87	10,367.29	3,891.03	3,891.02	10.83	1.46	MWD	WEATHERFORD
3/4/2015	14,132.00	88.46	1.47	10,369.98	3,984.94	3,984.94	8.09	0.48	MWD	WEATHERFORD
3/4/2015	14,226.00	88.39	359.82	10,372.57	4,078.89	4,078.89	7.04	1.76	MWD	WEATHERFORD
3/4/2015	14,321.00	88.25	358.96	10,375.35	4,173.85	4,173.84	8.05	0.92	MWD	WEATHERFORD
3/4/2015	14,415.00	87.55	359.44	10,378.80	4,267.78	4,267.77	9.36	0.90	MWD	WEATHERFORD
3/4/2015	14,510.00	88.74	359.08	10,381.87	4,362.72	4,362.71	10.59	1.31	MWD	WEATHERFORD
3/4/2015	14,604.00	88.53	0.03	10,384.11	4,456.70	4,456.68	11.32	1.03	MWD	WEATHERFORD
3/4/2015	14,699.00	88.04	0.16	10,386.96	4,551.65	4,551.64	11.16	0.53	MWD	WEATHERFORD
3/4/2015	14,793.00	88.39	359.96	10,389.88	4,645.60	4,645.59	11.06	0.43	MWD	WEATHERFORD
3/4/2015	14,888.00	89.30	359.65	10,391.80	4,740.58	4,740.57	11.38	1.01	MWD	WEATHERFORD
3/4/2015	14,982.00	86.43	359.42	10,395.30	4,834.51	4,834.49	12.14	3.06	MWD	WEATHERFORD
3/4/2015	15,077.00	86.08	359.68	10,401.50	4,929.30	4,929.29	12.89	0.46	MWD	WEATHERFORD
3/4/2015	15,172.00	86.01	0.37	10,408.06	5,024.08	5,024.06	12.85	0.73	MWD	WEATHERFORD
3/4/2015	15,267.00	86.99	0.47	10,413.86	5,118.89	5,118.88	12.15	1.04	MWD	WEATHERFORD
3/4/2015	15,362.00	87.69	1.00	10,418.27	5,213.78	5,213.77	10.94	0.92	MWD	WEATHERFORD
3/4/2015	15,457.00	87.27	0.79	10,422.44	5,308.67	5,308.66	9.45	0.49	MWD	WEATHERFORD
3/4/2015	15,551.00	87.62	359.49	10,426.63	5,402.57	5,402.57	9.22	1.43	MWD	WEATHERFORD
3/4/2015	15,646.00	87.41	359.55	10,430.75	5,497.48	5,497.48	10.02	0.23	MWD	WEATHERFORD
3/4/2015	15,740.00	86.85	359.76	10,435.46	5,591.36	5,591.36	10.58	0.64	MWD	WEATHERFORD
3/4/2015	15,835.00	85.66	358.26	10,441.66	5,686.15	5,686.13	12.22	2.01	MWD	WEATHERFORD
3/4/2015	15,929.00	85.94	357.92	10,448.55	5,779.85	5,779.83	15.35	0.47	MWD	WEATHERFORD
3/4/2015	16,024.00	87.13	357.76	10,454.29	5,874.62	5,874.59	18.92	1.26	MWD	WEATHERFORD
3/4/2015	16,118.00	87.48	359.32	10,458.71	5,968.49	5,968.45	21.31	1.70	MWD	WEATHERFORD
3/4/2015	16,213.00	86.50	358.88	10,463.70	6,063.35	6,063.31	22.80	1.13	MWD	WEATHERFORD
3/4/2015	16,307.00	86.29	358.87	10,469.61	6,157.15	6,157.10	24.64	0.22	MWD	WEATHERFORD
3/4/2015	16,402.00	85.30	359.17	10,476.58	6,251.88	6,251.83	26.26	1.09	MWD	WEATHERFORD
3/4/2015	16,496.00	86.08	358.19	10,483.64	6,345.59	6,345.54	28.42	1.33	MWD	WEATHERFORD
3/4/2015	16,590.00	86.71	358.00	10,489.55	6,439.36	6,439.30	31.54	0.70	MWD	WEATHERFORD
3/4/2015	16,685.00	86.50	358.03	10,495.18	6,534.15	6,534.08	34.83	0.22	MWD	WEATHERFORD
3/4/2015	16,779.00	87.69	358.25	10,499.94	6,627.99	6,627.90	37.87	1.29	MWD	WEATHERFORD
3/4/2015	16,874.00	89.16	358.33	10,502.55	6,722.91	6,722.82	40.71	1.55	MWD	WEATHERFORD
3/4/2015	16,969.00	89.51	359.40	10,503.65	6,817.89	6,817.80	42.59	1.18	MWD	WEATHERFORD
3/4/2015	17,063.00	91.96	1.45	10,502.45	6,911.87	6,911.77	41.89	3.40	MWD	WEATHERFORD
3/4/2015	17,158.00	90.35	0.76	10,500.53	7,006.82	7,006.73	40.06	1.84	MWD	WEATHERFORD
3/4/2015	17,252.00	90.42	0.71	10,499.90	7,100.81	7,100.72	38.86	0.09	MWD	WEATHERFORD
3/4/2015	17,347.00	89.58	1.84	10,499.90	7,195.77	7,195.70	36.74	1.48	MWD	WEATHERFORD
3/4/2015	17,441.00	89.30	2.06	10,500.82	7,289.71	7,289.64	33.54	0.38	MWD	WEATHERFORD
3/4/2015	17,474.00	88.25	1.63	10,501.53	7,322.68	7,322.61	32.48	3.44	MWD	WEATHERFORD
3/4/2015	17,546.00	88.25	1.63	10,503.72	7,394.61	7,394.55	30.43	0.00	BIT	WEATHERFORD