

A Gyrodata Directional Survey

FINAL DEFINITIVE COPY

for

BOPCO,LP

Lease: POKER LAKE UNIT CVXJV BS Well: 030H, 7" CASING
Location: LATSHAW DRILLING RIG 14, EDDY COUNTY, NEW MEXICIO

Job Number: MD0714GVCW734

Run Date: 29 Jul 2014

Report Generated: 01 Aug 2014 09:27

Azimuth Correction:

Gyro: -0.31000 deg to Grid North

Depth Reference: Rotary Table

Surveyor: Marlin Willeford, Josh Hill

Air Gap (RKB to Ground / RKB to MSL): 21.00

Calculation Method: MINIMUM CURVATURE

Vertical Section Calculated from Well Head Location

Survey surface coordinates obtained from: Well Plan/Plot

Closure Calculated from Well Head Location

Survey Latitude: 32.165772 deg. N Longitude: 103.657720 deg. W

Horizontal Coordinates Calculated from Well Head Location

15-A2496

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MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
0.00	0.00	0.00	0.00	0.00	0.0 0.0	0.00 N 0.00 E

0 TO 4500 FT. RATE GYROSCOPIC VERTICAL CONTINUOUS SURVEY RUN INSIDE 7" CASING						
ALL MEASURED DEPTHS AND COORDINATES ARE REFRENCED TO LATSHAW DRILLING RIG # 14 AND R.K.B. HEIGHT OF 21 FT.						

100.00	0.39	87.35	0.39	100.00	0.3 87.4	0.02 N 0.34 E
200.00	0.39	88.68	0.01	200.00	1.0 87.8	0.04 N 1.03 E
300.00	0.44	76.35	0.10	299.99	1.7 85.5	0.14 N 1.74 E
400.00	0.75	46.13	0.43	399.99	2.7 75.3	0.68 N 2.58 E
500.00	1.05	31.49	0.37	499.98	4.0 61.6	1.91 N 3.53 E
600.00	1.22	22.43	0.25	599.96	5.7 50.2	3.67 N 4.41 E
700.00	1.06	18.77	0.18	699.94	7.5 42.8	5.53 N 5.12 E
800.00	0.67	23.23	0.39	799.93	8.9 39.1	6.95 N 5.64 E
900.00	0.68	20.76	0.03	899.92	10.1 37.1	8.04 N 6.09 E
1000.00	0.76	11.65	0.14	999.91	11.3 34.8	9.25 N 6.43 E
1100.00	0.66	359.76	0.18	1099.90	12.4 32.1	10.48 N 6.56 E
1200.00	0.63	325.33	0.38	1199.90	13.1 28.5	11.50 N 6.25 E
1300.00	0.73	317.77	0.13	1299.89	13.6 23.9	12.43 N 5.51 E
1400.00	0.29	279.54	0.53	1399.89	13.8 20.5	12.94 N 4.83 E
1500.00	0.34	215.02	0.34	1499.89	13.5 19.1	12.74 N 4.42 E
1600.00	0.49	208.42	0.16	1599.88	12.8 18.5	12.12 N 4.04 E
1700.00	0.58	209.28	0.09	1699.88	11.9 17.6	11.31 N 3.59 E

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Job Number: MD0714GVCW734

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
1800.00	0.64	211.24	0.07	1799.87	10.8 16.4	10.38 N 3.05 E
1900.00	0.84	215.07	0.21	1899.86	9.6 14.1	9.30 N 2.34 E
2000.00	1.10	216.22	0.26	1999.85	8.0 9.7	7.92 N 1.35 E
2100.00	1.43	226.51	0.40	2099.83	6.3 358.9	6.29 N 0.13 W
2200.00	1.87	254.37	0.90	2199.78	5.6 332.4	4.99 N 2.60 W
2300.00	1.73	261.20	0.26	2299.74	7.1 307.3	4.32 N 5.66 W
2400.00	1.13	304.59	1.19	2399.71	9.2 300.2	4.64 N 7.96 W
2500.00	0.69	230	0.96	2499.70	10.5 303.6	5.81 N 8.75 W
2600.00	0.59	23.12	0.25	2599.69	11.0 308.9	6.88 N 8.53 W
2700.00	0.56	34.30	0.11	2699.68	11.2 313.9	7.76 N 8.05 W
2800.00	0.53	37.80	0.04	2799.68	11.3 318.7	8.53 N 7.49 W
2900.00	0.52	45.45	0.07	2899.68	11.5 323.3	9.22 N 6.88 W
3000.00	0.51	44.10	0.02	2999.67	11.7 327.7	9.86 N 6.24 W
3100.00	0.47	60.33	0.15	3099.67	11.8 331.8	10.38 N 5.57 W
3200.00	0.53	55.35	0.08	3199.66	11.9 336.0	10.85 N 4.84 W
3300.00	0.62	56.48	0.09	3299.66	12.1 340.7	11.41 N 4.00 W
3400.00	0.60	44.27	0.13	3399.65	12.5 345.2	12.09 N 3.19 W
3500.00	0.55	40.65	0.06	3499.65	13.1 348.9	12.82 N 2.51 W
3600.00	0.53	41.30	0.02	3599.64	13.7 352.0	13.53 N 1.89 W
3700.00	0.64	62.58	0.24	3699.64	14.2 355.6	14.13 N 1.09 W
3800.00	0.88	90.62	0.43	3799.63	14.4 0.7	14.38 N 0.17 E
3900.00	0.86	126.22	0.53	3899.62	14.0 6.3	13.93 N 1.54 E

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MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
4000.00	0.85	154.00	0.41	3999.61	13.1 10.9	12.82 N 2.47 E
4100.00	0.97	162.78	0.19	4099.60	11.7 15.0	11.35 N 3.04 E
4200.00	1.28	160.29	0.31	4199.58	10.2 21.2	9.49 N 3.67 E
4300.00	0.96	171.32	0.38	4299.56	8.7 28.8	7.60 N 4.17 E
4400.00	0.99	171.73	0.03	4399.54	7.4 36.8	5.91 N 4.43 E
4500.00	1.01	171.80	0.02	4499.53	6.3 48.2	4.18 N 4.68 E
4500.60	1.01	171.97	0.51	4500.13	6.3 48.3	4.17 N 4.68 E

Final Station Closure: Distance: 6.27 ft Az: 48:26 deg

gyrodata

BOPCO, L.P.

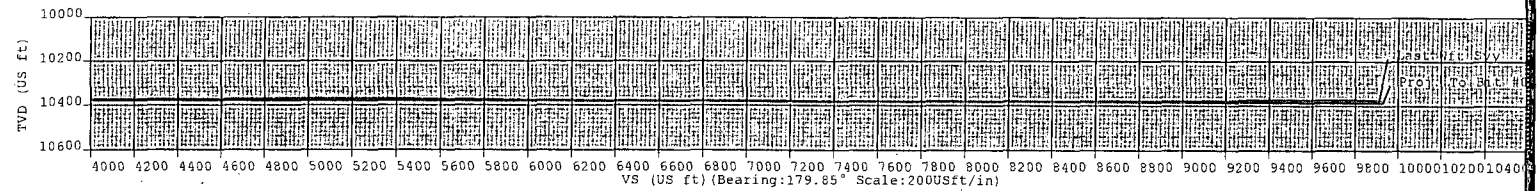
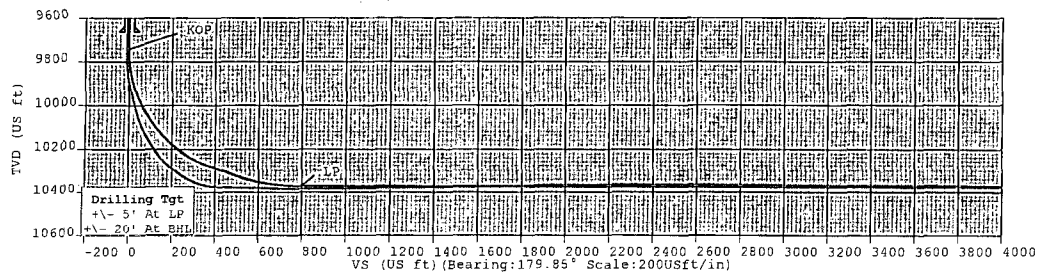
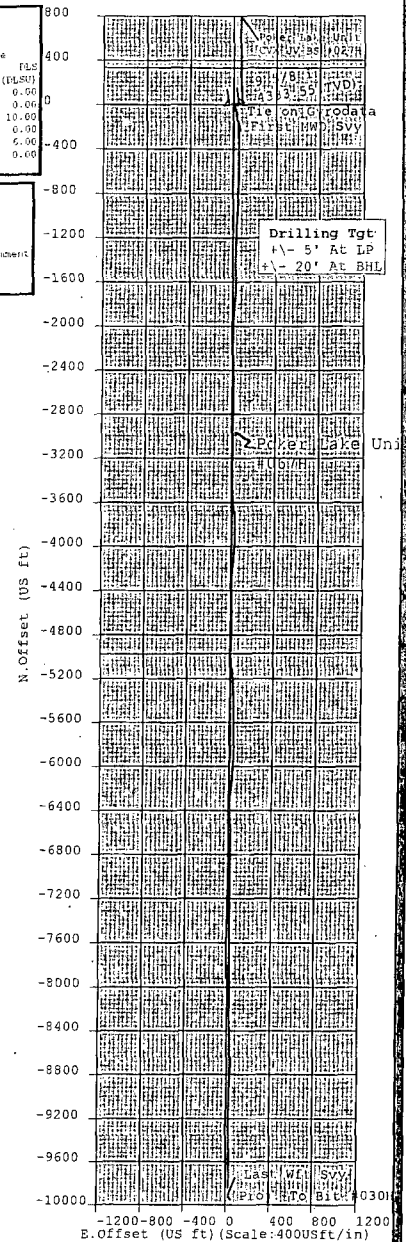
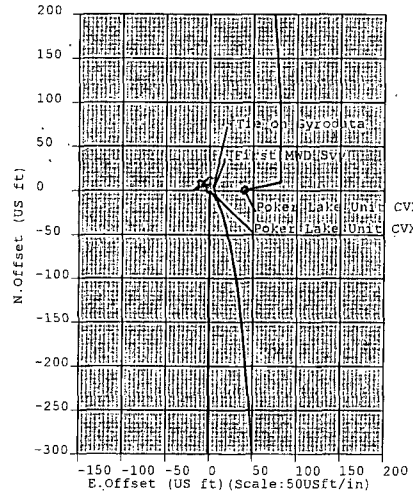
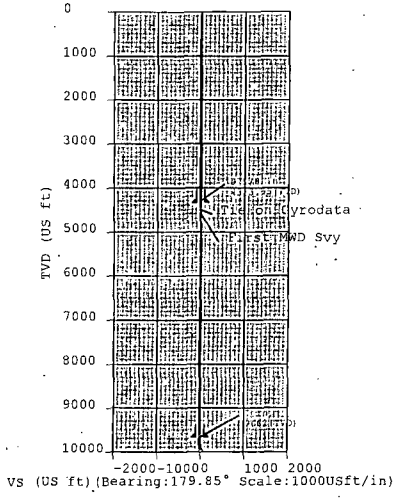
Poker Lake Unit CVX JV BS #030H
Eddy Co, NM



Plan Data for Poker Lake Unit CVX JV BS #030H									
Plan Point Information:									
Dogleg Severity Unit: 7100.00ft Position offsets from Slot centre									
VD	Inc	As	TVD	+N/-S	+E/-W	Northing	Easting	VDoc	PLS
(USft)	(°)	(°)	(USft)	(USft)	(USft)	(USft)	(USft)	(USft)	(PLS)
0.00	0.00	0.00	0.00	0.00	0.00	424489.20	675116.40	0.00	0.00
9742.80	0.00	0.00	9742.80	0.00	0.00	424489.20	675116.40	0.00	0.00
10142.80	76.00	180.18	10281.20	-376.99	-1.18	424112.21	675115.22	376.99	10.00
10542.80	76.00	180.18	10315.41	-470.96	-1.48	424018.24	675114.92	470.96	0.00
10874.72	69.91	179.63	10373.00	-786.15	-1.48	423693.05	675114.92	786.14	0.00
20010.42	89.91	179.83	10387.00	-9931.60	25.40	414557.40	675141.80	9931.83	0.00

Plan Data for Poker Lake Unit CVX JV BS #030H									
Target Set Information:									
Name: PUL CVX JV BS #030H									
Position offsets from Slot centre									
Name	TVD	Elevation	+N/-S	+E/-W	Northing	Easting	Shape	Comment	
(USft)	(USft)	(USft)	(USft)	(USft)	(USft)	(USft)	(USft)		
BEHL #030H	10387.00	-6911.00	-9931.60	25.40	414557.40	675141.80	Cuboid		

Plan Data for Poker Lake Unit CVX JV BS #030H									
Slot: Poker Lake Unit CVX JV BS #030H									
Position:									
Offset is from Site centre									
+N/-S:	0.10USft	Northing:	424489.20USft	Latitude:	32°56'56.8"				
+E/-W:	-49.90USft	Easting:	675116.40USft	Longitude:	-103°49'32.7"				
						Elevation Above VDD: 1452.00USft			



Sign Off: Russell Joyner

5D Survey Report

BOPCO, L.P.**Field Name:** *Eddy Co, NM Nad27 NMEZ***Site Name:** *Poker Lake Unit CVX JV BS #027, 030H Pad***Well Name:** *Poker Lake Unit CVX JV BS #030H***Survey:** *Wft MWD Svy*

13 August 2014

**Weatherford®**

Poker Lake Unit CVX JV BS #030H

Field Name Eddy Co. NM Nad27 NMEZ	Map Units : US ft		Company Name : BOPCO, L.P.	
	Vertical Reference Datum (VRD) : Mean Sea Level			
	Projected Coordinate System : NAD27 / New Mexico East			
Comment :				
Site Name Poker Lake Unit CVX JV BS #027-030H Pad	Units : US ft	North Reference : Grid	Convergence Angle : 0.30	
	Position	Northing : 424489.10 US ft	Latitude : 32° 9' 56.78"	
		Easting : 675156.40 US ft	Longitude : -103° 46' 2.23"	
Elevation above Mean Sea Level: 3453.00 US ft				
Comment :				
Slot Name Poker Lake Unit CVX JV BS #030H	Position (Offsets relative to Site Centre)			
	+N / -S : 0.10 US ft	Northing : 424489.20 US ft	Latitude : 32° 9' 56.78"	
	+E / -W : -40.00 US ft	Easting : 675116.40 US ft	Longitude : -103° 46' 2.70"	
Slot TVD Reference : Ground Elevation				
Elevation above Mean Sea Level : 3452.00 US ft				
Comment :				
Well Name Poker Lake Unit CVX JV BS #030H	Type : Main well	UWI :		
	Rig Height <i>Kelly Bushing</i> : 22.00 US ft	Comment :		
	Relative to Mean Sea Level: 3474.00 US ft			
Closure Distance : 9931.4 US ft		Closure Azimuth : 179.83°		
Vertical Section (Position of Origin Relative to Slot)				
+N / -S : 0.00 US ft +E / -W : 0.00 US ft Az : 179.85°				

Target Set	
Name : PLU CVX JV BS #030H	Number of Targets : 1

Comment :

Target Name PBHL #030H	Position (Relative to Slot centre)			
	+N / -S : -9931.80 US ft	Northing : 414557.40 US ft	Latitude : 32° 8' 18.49"	
	+E / -W : 25.40 US ft	Easting : 675141.80 US ft	Longitude : -103° 46' 3.01"	
TVD (Kelly Bushing) : 10387.00 US ft				
Shape: Cuboid	Orientation Azimuth : 0.00°		Inclination : 0.00°	
	Dimensions Length : 0.00 US ft	Breadth : 0.00 US ft		Height : 0.00 US ft

Survey Name: Wft MWD Svy				
Date : 29/Jul/2014	Survey Tool : MWD	Comment :	Company : Wft	
Magnetic Model				
Model Name: Default	Date: 16/Apr/2014	Field Strength: 50000.0 nT	Declination: 0.00°	Dip: 0.00°
Tie Point				
MD: 4500.6	Inclination: 1.01	Azimuth: 171.97	TVD: 4500.13	North Offset: 4.17 East Offset: 4.68

5D Survey Report

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)	DIS (%/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
4575.00	1.05	173.44	4574.52	2.84	4.85	-2.83	0.00	424492.04	675121.25	First MWD Svy
4670.00	1.11	170.78	4669.50	1.07	5.10	-1.06	0.08	424490.27	675121.50	
4765.00	1.25	169.86	4764.48	-0.86	5.43	0.87	0.15	424488.34	675121.83	
4860.00	0.63	169.39	4859.47	-2.39	5.70	2.41	0.65	424486.81	675122.10	
4955.00	0.66	154.45	4954.46	-3.40	6.04	3.41	0.18	424485.80	675122.44	
5050.00	0.66	152.78	5049.45	-4.38	6.52	4.40	0.02	424484.82	675122.92	
5145.00	0.70	154.22	5144.45	-5.39	7.03	5.41	0.05	424483.81	675123.43	
5240.00	0.82	157.38	5239.44	-6.54	7.54	6.56	0.13	424482.66	675123.94	
5335.00	1.48	161.16	5334.42	-8.33	8.20	8.35	0.70	424480.87	675124.60	
5430.00	1.09	177.80	5429.40	-10.39	8.63	10.41	0.56	424478.81	675125.03	
5525.00	0.91	181.82	5524.38	-12.05	8.64	12.07	0.20	424477.15	675125.04	
5620.00	1.01	326.22	5619.38	-12.11	8.15	12.13	1.92	424477.09	675124.55	
5715.00	1.32	331.51	5714.36	-10.45	7.16	10.47	0.35	424478.75	675123.56	
5809.00	1.31	333.33	5808.33	-8.54	6.16	8.55	0.05	424480.66	675122.56	
5904.00	1.24	329.44	5903.31	-6.68	5.15	6.69	0.12	424482.52	675121.55	
5999.00	1.14	329.27	5998.29	-4.98	4.15	4.99	0.11	424484.22	675120.55	
6094.00	1.05	318.55	6093.27	-3.52	3.09	3.53	0.24	424485.68	675119.49	
6189.00	1.03	313.50	6188.25	-2.28	1.89	2.28	0.10	424486.92	675118.29	
6284.00	1.07	309.45	6283.24	-1.13	0.59	1.13	0.09	424488.07	675116.99	
6379.00	0.99	317.82	6378.22	0.05	-0.65	-0.05	0.18	424489.25	675115.75	
6474.00	0.93	313.71	6473.21	1.19	-1.76	-1.19	0.10	424490.39	675114.64	
6568.00	0.95	318.08	6567.20	2.29	-2.83	-2.30	0.08	424491.49	675113.57	
6663.00	0.85	315.87	6662.19	3.38	-3.84	-3.39	0.11	424492.58	675112.56	
6758.00	0.78	335.98	6757.18	4.48	-4.60	-4.49	0.31	424493.68	675111.80	
6853.00	0.89	318.86	6852.17	5.63	-5.35	-5.64	0.29	424494.83	675111.05	
6948.00	0.84	323.96	6947.16	6.75	-6.24	-6.76	0.10	424495.95	675110.16	
7043.00	0.91	313.62	7042.14	7.83	-7.20	-7.85	0.18	424497.03	675109.20	
7138.00	0.77	311.70	7137.13	8.77	-8.22	-8.80	0.15	424497.97	675108.18	
7233.00	0.74	300.51	7232.13	9.51	-9.23	-9.54	0.16	424498.71	675107.17	
7329.00	0.74	292.54	7328.12	10.06	-10.33	-10.09	0.11	424499.26	675106.07	
7424.00	0.73	294.81	7423.11	10.55	-11.45	-10.58	0.03	424499.75	675104.95	
7519.00	0.60	217.48	7518.11	10.41	-12.30	-10.44	0.88	424499.61	675104.10	
7614.00	0.63	212.68	7613.10	9.58	-12.89	-9.61	0.06	424498.78	675103.51	
7709.00	0.60	179.83	7708.09	8.64	-13.17	-8.67	0.37	424497.84	675103.23	
7804.00	0.69	172.93	7803.09	7.58	-13.09	-7.61	0.12	424496.78	675103.31	
7899.00	0.71	171.67	7898.08	6.43	-12.94	-6.46	0.03	424495.63	675103.46	
7994.00	0.71	184.59	7993.07	5.26	-12.90	-5.29	0.17	424494.46	675103.50	
8184.00	0.74	191.60	8183.06	2.88	-13.24	-2.92	0.05	424492.08	675103.16	
8470.00	0.22	214.10	8469.05	0.62	-13.92	-0.65	0.19	424489.82	675102.48	
8565.00	0.73	266.58	8564.04	0.43	-14.63	-0.47	0.65	424489.63	675101.77	
8660.00	1.09	279.51	8659.03	0.54	-16.12	-0.59	0.43	424489.74	675100.28	
8755.00	0.85	246.54	8754.02	0.41	-17.66	-0.46	0.63	424489.61	675098.74	
8849.00	0.25	155.58	8848.02	-0.05	-18.21	0.00	0.95	424489.15	675098.19	
8943.00	0.70	49.72	8942.01	0.13	-17.69	-0.18	0.86	424489.33	675098.71	
9038.00	1.11	42.09	9037.00	1.19	-16.63	-1.23	0.45	424490.39	675099.77	
9133.00	1.13	60.27	9131.98	2.34	-15.20	-2.38	0.37	424491.54	675101.20	
9228.00	1.63	76.38	9226.96	3.12	-13.07	-3.15	0.66	424492.32	675103.33	
9318.00	1.81	76.25	9316.92	3.76	-10.45	-3.79	0.20	424492.96	675105.95	
9414.00	1.85	74.87	9412.87	4.52	-7.48	-4.54	0.06	424493.72	675108.92	
9509.00	1.96	74.16	9507.81	5.37	-4.44	-5.38	0.12	424494.57	675111.96	
9602.00	1.77	70.15	9600.76	6.29	-1.56	-6.29	0.25	424495.49	675114.84	
9749.00	0.71	20.89	9747.73	7.91	0.90	-7.91	0.96	424497.11	675117.30	
9779.00	0.89	133.49	9777.73	7.92	1.14	-7.92	4.45	424497.12	675117.54	
9810.00	3.43	155.02	9808.71	6.92	1.70	-6.91	8.46	424496.12	675118.10	
9841.00	6.49	160.20	9839.59	4.43	2.69	-4.42	9.97	424493.63	675119.09	
9870.00	8.59	161.39	9868.33	0.83	3.94	-0.82	7.26	424490.03	675120.34	

5D Survey Report

Survey Points (Relative to Slot centre, TVD relative to Kelly Bushing)										
MD (US ft)	Incl (°)	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
9901.00	10.45	159.89	9898.91	-4.00	5.64	4.02	6.05	424485.20	675122.04	
9932.00	12.41	158.41	9929.29	-9.74	7.83	9.76	6.39	424479.46	675124.23	
9962.00	14.23	158.44	9958.48	-16.17	10.38	16.19	6.07	424473.03	675126.78	
9992.00	16.19	158.71	9987.43	-23.49	13.25	23.53	6.54	424465.71	675129.65	
10023.00	17.33	162.91	10017.11	-31.93	16.18	31.98	5.36	424457.27	675132.58	
10053.00	18.15	164.77	10045.69	-40.71	18.72	40.76	3.32	424448.49	675135.12	
10083.00	21.36	167.71	10073.92	-50.56	21.11	50.62	11.20	424438.64	675137.51	
10114.00	24.35	167.96	10102.48	-62.33	23.64	62.39	9.65	424426.87	675140.04	
10145.00	28.16	170.30	10130.28	-75.80	26.21	75.87	12.73	424413.40	675142.61	
10175.00	30.81	169.06	10156.39	-90.32	28.86	90.40	9.06	424398.88	675145.26	
10206.00	32.80	170.42	10182.73	-106.40	31.76	106.48	6.82	424382.80	675148.16	
10236.00	36.31	173.39	10207.44	-123.24	34.14	123.33	12.97	424365.96	675150.54	
10265.00	38.72	175.02	10230.44	-140.81	35.92	140.90	8.99	424348.39	675152.32	
10296.00	42.84	174.07	10253.91	-160.96	37.85	161.06	13.44	424328.24	675154.25	
10326.00	47.16	174.72	10275.12	-182.06	39.91	182.17	14.48	424307.14	675156.31	
10356.00	51.86	174.55	10294.59	-204.77	42.05	204.88	15.67	424284.43	675158.45	
10386.00	55.60	173.81	10312.34	-228.83	44.50	228.95	12.62	424260.37	675160.90	
10417.00	59.64	175.07	10328.94	-254.88	47.03	255.00	13.48	424234.32	675163.43	
10448.00	63.78	175.59	10343.63	-282.08	49.25	282.21	13.44	424207.12	675165.65	
10477.00	67.85	177.31	10355.50	-308.48	50.88	308.61	15.04	424180.72	675167.28	
10508.00	73.34	178.60	10365.80	-337.69	51.92	337.82	18.14	424151.51	675168.32	
10539.00	79.38	179.29	10373.11	-367.80	52.47	367.93	19.60	424121.40	675168.87	
10569.00	84.53	179.35	10377.30	-397.49	52.83	397.63	17.17	424091.71	675169.23	
10599.00	87.90	180.04	10379.28	-427.42	52.99	427.56	11.47	424061.78	675169.39	
10629.00	87.97	179.87	10380.37	-457.40	53.01	457.54	0.61	424031.80	675169.41	
10659.00	88.53	179.60	10381.28	-487.38	53.15	487.52	2.07	424001.82	675169.55	
10690.00	90.00	179.65	10381.68	-518.38	53.35	518.52	4.74	423970.82	675169.75	
10801.00	87.84	179.44	10383.77	-629.35	54.23	629.49	1.96	423859.85	675170.63	
10891.00	89.26	181.81	10386.05	-719.31	53.25	719.44	3.07	423769.89	675169.65	
10983.00	90.56	183.03	10386.19	-811.22	49.37	811.35	1.94	423677.98	675165.77	
11074.00	90.12	183.26	10385.65	-902.08	44.37	902.20	0.55	423587.12	675160.77	
11164.00	90.74	182.80	10384.98	-991.95	39.62	992.05	0.86	423497.25	675156.02	
11255.00	90.74	182.03	10383.80	-1082.86	35.78	1082.95	0.85	423406.34	675152.18	
11346.00	90.56	181.94	10382.77	-1173.80	32.63	1173.89	0.22	423315.40	675149.03	
11437.00	90.80	181.91	10381.69	-1264.75	29.57	1264.82	0.27	423224.45	675145.97	
11528.00	91.17	181.11	10380.13	-1355.70	27.18	1355.77	0.97	423133.50	675143.58	
11618.00	90.68	179.36	10378.67	-1445.68	26.81	1445.75	2.02	423043.52	675143.21	
11711.00	90.37	179.96	10377.82	-1538.68	27.36	1538.74	0.73	422950.52	675143.76	
11802.00	90.62	180.53	10377.03	-1629.67	26.97	1629.74	0.68	422859.53	675143.37	
11892.00	91.36	182.91	10375.48	-1719.61	24.27	1719.67	2.77	422769.59	675140.67	
11983.00	91.36	183.54	10373.32	-1810.44	19.15	1810.49	0.69	422678.76	675135.55	
12073.00	90.99	184.01	10371.47	-1900.23	13.23	1900.26	0.66	422588.97	675129.63	
12166.00	90.86	181.43	10369.97	-1993.10	8.81	1993.12	2.78	422496.10	675125.21	
12258.00	89.81	180.32	10369.43	-2085.09	7.41	2085.10	1.66	422404.11	675123.81	
12349.00	90.37	179.86	10369.29	-2176.09	7.27	2176.10	0.80	422313.11	675123.67	
12441.00	90.09	179.19	10368.92	-2268.08	8.03	2268.10	0.79	422221.12	675124.43	
12533.00	89.81	178.47	10369.00	-2360.06	9.91	2360.08	0.84	422129.14	675126.31	
12625.00	90.19	178.59	10369.00	-2452.03	12.27	2452.06	0.43	422037.17	675128.67	
12714.00	90.12	179.82	10368.76	-2541.02	13.50	2541.05	1.38	421948.18	675129.90	
12807.00	89.57	179.82	10369.01	-2634.02	13.80	2634.05	0.59	421855.18	675130.20	
12899.00	89.57	179.94	10369.70	-2726.02	13.99	2726.04	0.13	421763.18	675130.39	
12992.00	89.51	180.44	10370.45	-2819.01	13.68	2819.04	0.54	421670.19	675130.08	
13084.00	90.12	182.08	10370.75	-2910.99	11.66	2911.01	1.90	421578.21	675128.06	
13176.00	89.69	181.33	10370.90	-3002.95	8.92	3002.96	0.94	421486.25	675125.32	
13267.00	89.44	180.27	10371.59	-3093.93	7.65	3093.94	1.20	421395.27	675124.05	
13447.00	89.94	179.18	10372.57	-3273.92	8.51	3273.94	0.67	421215.28	675124.91	
13635.00	90.00	178.94	10372.66	-3461.90	11.60	3461.92	0.13	421027.30	675128.00	
13824.00	89.63	174.43	10373.27	-3650.53	22.52	3650.58	2.39	420838.67	675138.92	
13918.00	89.20	176.26	10374.23	-3744.21	30.15	3744.28	2.00	420744.99	675146.55	

5D Survey Report

Survey Points (Relative to Slot centre, TWD relative to Kelly Bushing)										
MD (US ft)	Incl (°)	Az (°)	TWD (US ft)	N Offset (US ft)	E Offset (US ft)	VS (US ft)	DLS (%/100 US ft)	Northing (US ft)	Easting (US ft)	Comment
14107.00	90.00	181.69	10375.55	-3933.11	33.53	3933.18	2.90	420556.09	675149.93	
14295.00	90.25	184.42	10375.14	-4120.82	23.51	4120.87	1.46	420368.38	675139.91	
14485.00	90.25	182.51	10374.31	-4310.46	12.03	4310.48	1.01	420178.74	675128.43	
14674.00	89.69	178.31	10374.41	-4499.42	10.68	4499.43	2.24	419989.78	675127.08	
14863.00	90.68	179.57	10373.80	-4688.38	14.17	4688.40	0.85	419800.82	675130.57	
15051.00	90.06	181.74	10372.59	-4876.35	12.02	4876.36	1.20	419612.85	675128.42	
15240.00	90.12	176.29	10372.29	-5065.25	15.27	5065.27	2.88	419423.95	675131.67	
15429.00	89.81	175.61	10372.41	-5253.77	28.62	5253.83	0.40	419235.43	675145.02	
15619.00	89.44	178.38	10373.65	-5443.49	38.58	5443.57	1.47	419045.71	675154.98	
15807.00	89.32	178.71	10375.69	-5631.42	43.35	5631.51	0.19	418857.78	675159.75	
15997.00	89.32	181.75	10377.94	-5821.38	42.59	5821.47	1.60	418667.82	675158.99	
16186.00	89.32	182.91	10380.18	-6010.21	34.91	6010.28	0.61	418478.99	675151.31	
16375.00	89.44	184.29	10382.23	-6198.82	23.04	6198.86	0.73	418290.38	675139.44	
16564.00	90.25	182.70	10382.74	-6387.46	11.52	6387.47	0.94	418101.74	675127.92	
16753.00	89.91	178.83	10382.48	-6576.41	9.00	6576.41	2.06	417912.79	675125.40	
16941.00	89.74	179.89	10383.05	-6764.39	11.10	6764.40	0.57	417724.81	675127.50	
17131.00	89.63	180.87	10384.10	-6954.38	9.84	6954.38	0.52	417534.82	675126.24	
17319.00	89.69	182.60	10385.21	-7142.29	4.14	7142.27	0.92	417346.91	675120.54	
17508.00	90.31	179.83	10385.21	-7331.22	0.14	7331.20	1.50	417157.98	675116.54	
17697.00	90.18	181.83	10384.40	-7520.19	-2.60	7520.16	1.06	416969.01	675113.80	
17886.00	90.43	179.37	10383.40	-7709.16	-4.58	7709.13	1.31	416780.04	675111.82	
18075.00	89.94	176.97	10382.79	-7898.05	1.46	7898.03	1.30	416591.15	675117.86	
18265.00	89.88	177.50	10383.09	-8087.83	10.62	8087.83	0.28	416401.37	675127.02	
18454.00	89.94	176.94	10383.38	-8276.61	19.79	8276.63	0.30	416212.59	675136.19	
18642.00	90.00	177.96	10383.48	-8464.42	28.15	8464.46	0.54	416024.78	675144.55	
18831.00	90.43	178.85	10382.77	-8653.34	33.41	8653.40	0.52	415835.86	675149.81	
19020.00	90.00	183.45	10382.06	-8842.25	29.62	8842.30	2.44	415646.95	675146.02	
19209.00	90.09	184.65	10381.91	-9030.78	16.27	9030.79	0.64	415458.42	675132.67	
19398.00	91.11	182.76	10379.93	-9219.36	4.06	9219.34	1.14	415269.84	675120.46	
19587.00	90.68	179.59	10376.98	-9408.27	0.19	9408.24	1.69	415080.93	675116.59	
19775.00	89.63	176.31	10376.47	-9596.12	6.91	9596.11	1.83	414893.08	675123.31	
19965.00	90.12	176.12	10376.89	-9785.71	19.45	9785.72	0.28	414703.49	675135.85	
20060.00	89.57	176.38	10377.14	-9880.50	25.67	9880.54	0.64	414608.70	675142.07	
20090.00	90.00	175.33	10377.26	-9910.42	27.83	9910.46	3.78	414578.78	675144.23	Last Wft Svy
20111.00	90.00	175.33	10377.26	-9931.35	29.54	9931.40	0.00	414557.85	675145.94	Proj. To Bit #030H