

District I
1625 N. French Dr., Hobbs, NM 88240

District II
1301 W. Grand Avenue, Artesia, NM 88210

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 12, 2005
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☒ AMENDED REPORT
As Driller

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-029-30795	*Pool Code 97232 / 72319 / 71599	*Pool Name BASIN MANCOS / BLANCO MESAVERDE / BASIN DAKOTA
*Property Code 17033	*Property Name ROSA UNIT	*Well Number 181D
*DGRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY	*Elevation 6268'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	15	31N	6W		1230	NORTH	730	EAST	RIO ARriba

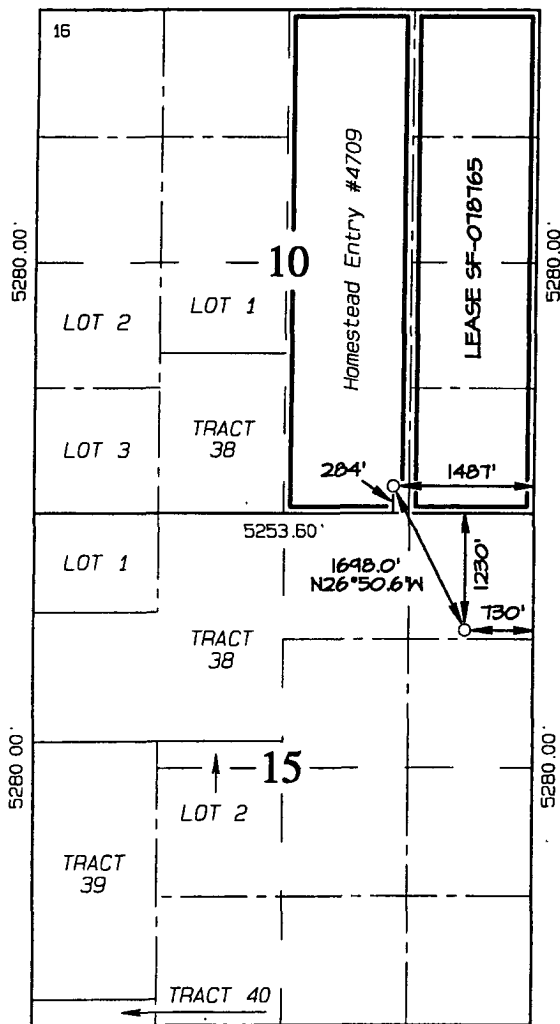
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	10	31N	6W		284	SOUTH	1487	EAST	RIO ARriba
¹² Dedicated Acres 320.0 Acres E/2 Section 10					¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. RCVD OCT 27 '09 NM CONS. DIV.		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

5252.28'

DIST. 3



BOTTOM-HOLE
LAT: 36.90770°N
LONG: 107.44571°W
DATUM: NAD1983

SURFACE LOCATION
LAT: 36.90354°N
LONG: 107.44372°W
DATUM: NAD1983

¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

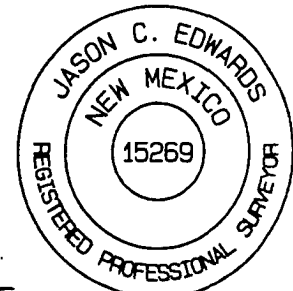
Larry Higgins 10-26-09
Signature Date
LARRY HIGGINS
Printed Name

¹⁸ SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Revised: OCTOBER 20, 2009
Date of Survey: MAY 24, 2009

Signature and Seal of Professional Surveyor



JASON C. EDWARDS
Certificate Number 15269



ROSA UNIT #181D
RIO ARriba COUNTY, NM
API: 30-039-30795

LEGEND

— 181-D, 1, Plan #3
— WFT SVY

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	1721.00	32.78	332.05	1600.91	435.68	-220.35	0.00	0.00	488.24	
2	1749.11	33.69	333.26	1624.42	449.37	-227.42	4.00	36.81	503.64	
3	3044.99	33.69	333.26	2702.71	1091.28	-550.77	0.00	0.00	1222.39	
4	4167.86	0.00	326.25	3762.00	1377.69	-695.04	3.00	-180.00	1543.08	Int Csg Pt.
5	8327.86	0.00	326.25	7922.00	1377.69	-695.04	0.00	0.00	1543.08	PBHL

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
181-D	0.00	0.00	2150366.52	1291402.35	36°54'12.740N	107°26'37.390W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Rosa #12	0.00	-36.00	257.16	36°54'12.384N	107°26'34.224W	Point
Int. Csg Pt.	3762.00	1377.69	-695.04	36°54'26.361N	107°26'45.947W	Point
PBHL	7922.00	1377.69	-695.04	36°54'26.361N	107°26'45.947W	Point

SITE DETAILS

Rosa Unit #181-D
1230' FNL & 730' FEL
Site Centre Latitude: 36°54'12.740N
Longitude: 107°26'37.390W
Ground Level: 6268.00
Positional Uncertainty: 0.00
Convergence: -0.72

FIELD DETAILS

RIO ARriba CO NM (NAD 83)

Geodetic System: US State Plane Coordinate System 1983
Ellipsoid: GRS 1980
Zone: New Mexico, Central Zone
Magnetic Model: igrf200510
System Datum: Mean Sea Level
Local North: True North

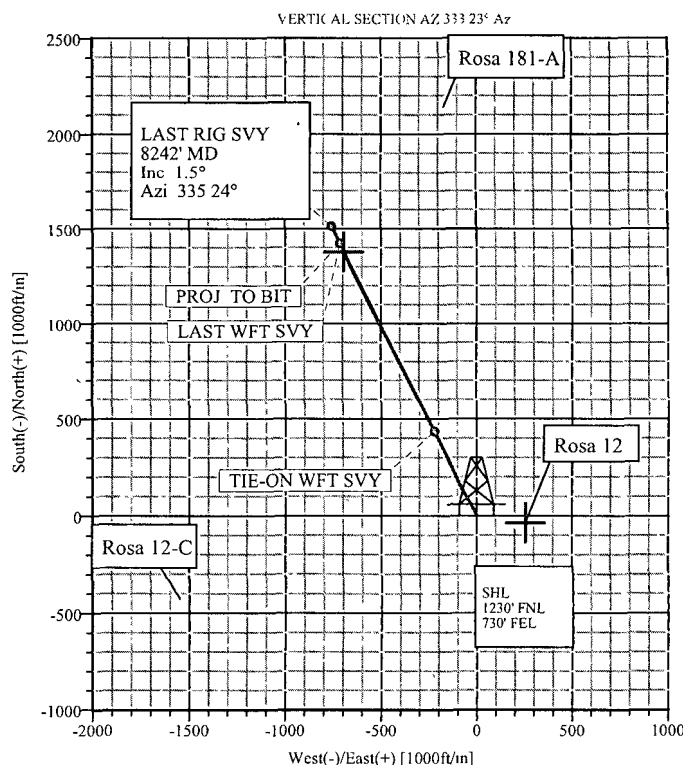
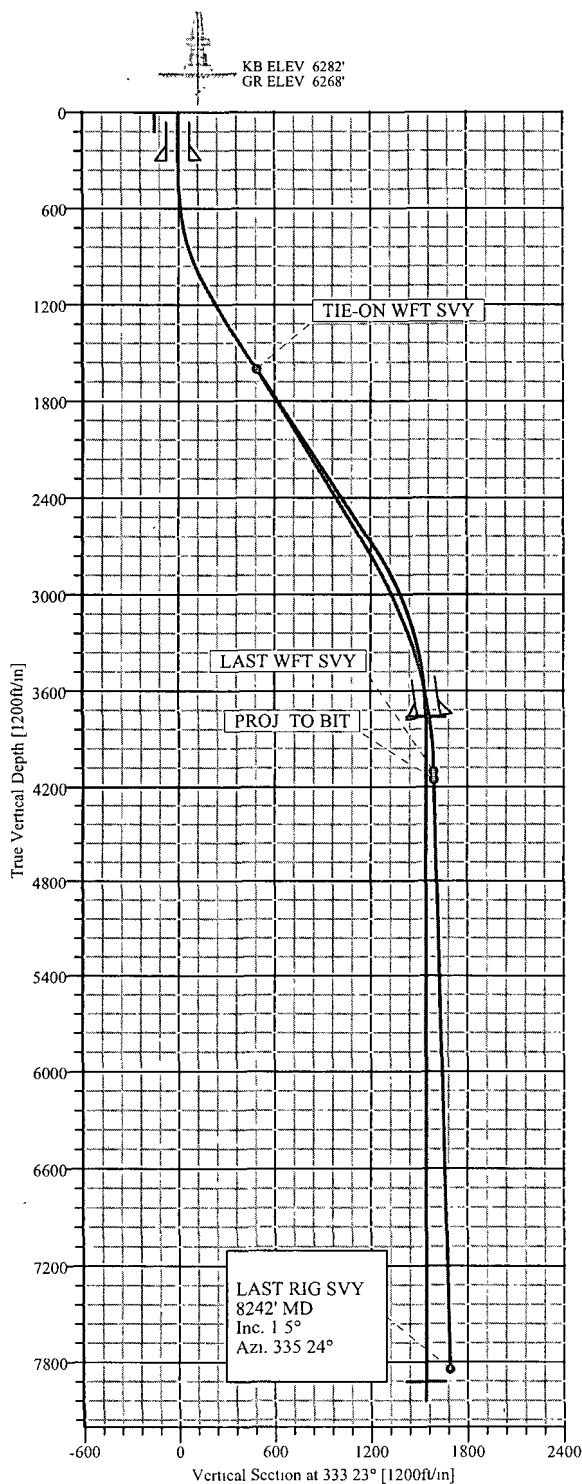


Azimuths to True North
Magnetic North 10.01°

Magnetic Field
Strength 51149nT
Dip Angle 63.72°
Date 6/11/2009
Model igrf200510

Total Correction to True North 10.01°

RCVD OCT 27 '09
OIL CONS. DIV.
DIST. 3



Survey: WFT SVY (181-D/1)

Created By: Jayme Wilson

Date: 10/19/2009



Weatherford International Ltd.

SURVEY REPORT



Weatherford

Company: WILLIAMS PRODUCTION
Field: RIO ARRIBA CO. NM (NAD 83)
Site: Rosa Unit #181-D
Well: 181-D
Wellpath: 1

Date: 10/19/2009
Co-ordinate(NE) Reference: Well: 181-D, True North
Vertical (TVD) Reference: SITE 6282.0
Section (VS) Reference: Well (0.00N,0.00E,333.23Azi)
Survey Calculation Method: Minimum Curvature
Db: Sybase

Page: 1

Survey: WFT SVY

Start Date: 10/5/2009

Company: Weatherford International Ltd.
Tool: MWD;MWD - Standard

Engineer: Jayme Wilson
Tied-to: From Surface

Field: RIO ARRIBA CO. NM (NAD 83)

Map System: US State Plane Coordinate System 1983
Geo Datum: GRS 1980
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Central Zone
Coordinate System: Well Centre
Geomagnetic Model: igrf200510

Site: Rosa Unit #181-D

1230' FNL & 730' FEL

Site Position:
From: Geographic
Position Uncertainty: 0.00 ft
Ground Level: 6268.00 ft

Northing: 2150366.52 ft
Easting: 1291402.35 ft

Latitude: 36 54 12.740 N
Longitude: 107 26 37.390 W
North Reference: True
Grid Convergence: -0.72 deg

Well: 181-D

Slot Name:

Well Position: +N/-S 0.00 ft
Position Uncertainty: 0.00 ft

Northing: 2150366.52 ft
Easting: 1291402.35 ft

Latitude: 36 54 12.740 N
Longitude: 107 26 37.390 W

Wellpath: 1

Current Datum: SITE
Magnetic Data: 6/11/2009
Field Strength: 51149 nT
Vertical Section: Depth From (TVD)
 ft

Height 6282.00 ft
 +N/-S
 ft

Drilled From: Surface
Tie-on Depth: 0.00 ft
Above System Datum: Mean Sea Level
Declination: 10.01 deg
Mag Dip Angle: 63.72 deg
+E/-W
 ft
Direction
 deg

0.00 0.00 0.00 333.23

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
374.00	0.52	3.82	373.99	1.69	0.11	1.46	0.14	0.14	0.00	
383.00	0.61	4.55	382.99	1.78	0.12	1.54	1.00	1.00	8.11	
414.00	1.01	358.29	413.99	2.22	0.12	1.93	1.32	1.29	-20.19	
445.00	1.44	350.62	444.98	2.88	0.05	2.54	1.48	1.39	-24.74	
476.00	2.31	344.49	475.97	3.86	-0.18	3.53	2.88	2.81	-19.77	
507.00	3.06	341.87	506.93	5.25	-0.60	4.96	2.45	2.42	-8.45	
537.00	4.13	341.12	536.87	7.03	-1.20	6.82	3.57	3.57	-2.50	
568.00	5.00	338.12	567.77	9.34	-2.07	9.27	2.91	2.81	-9.68	
599.00	6.19	336.12	598.63	12.13	-3.25	12.29	3.89	3.84	-6.45	
630.00	7.13	335.49	629.42	15.41	-4.72	15.88	3.04	3.03	-2.03	
661.00	8.44	335.87	660.13	19.23	-6.45	20.08	4.23	4.23	1.23	
691.00	10.00	334.49	689.74	23.59	-8.47	24.88	5.25	5.20	-4.60	
722.00	11.38	333.12	720.20	28.75	-11.01	30.63	4.53	4.45	-4.42	
753.00	12.69	332.74	750.52	34.50	-13.96	37.09	4.23	4.23	-1.23	
783.00	14.29	332.65	779.69	40.72	-17.17	44.09	5.33	5.33	-0.30	
814.00	15.69	331.24	809.64	47.80	-20.94	52.11	4.67	4.52	-4.55	
876.00	18.75	327.87	868.85	63.59	-30.28	70.41	5.19	4.94	-5.44	
907.00	20.50	327.62	898.05	72.39	-35.83	80.77	5.65	5.65	-0.81	
938.00	21.81	328.12	926.96	81.87	-41.78	91.91	4.27	4.23	1.61	
970.00	23.38	328.99	956.50	92.36	-48.19	104.17	5.02	4.91	2.72	
1002.00	24.69	329.49	985.73	103.56	-54.86	117.17	4.14	4.09	1.56	
1033.00	26.25	330.12	1013.72	115.08	-61.56	130.47	5.11	5.03	2.03	
1064.00	27.63	330.99	1041.35	127.31	-68.46	144.50	4.63	4.45	2.81	



Weatherford International Ltd.

SURVEY REPORT



Weatherford

Company: WILLIAMS PRODUCTION	Date: 10/19/2009	Time: 10:06:02	Page: 2
Field: RIO ARriba CO. NM (NAD 83)	Co-ordinate(NE) Reference: Well: 181-D, True North		
Site: Rosa Unit #181-D	Vertical (TVD) Reference: SITE 6282.0		
Well: 181-D	Section (VS) Reference: Well (0.00N,0.00E,333.23Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Comment
1095.00	29.25	331.24	1068.61	140.24	-75.59	159.26	5.24	5.23	0.81	
1126.00	29.94	331.74	1095.56	153.69	-82.90	174.56	2.36	2.23	1.61	
1158.00	29.95	333.21	1123.29	167.86	-90.28	190.53	2.29	0.03	4.59	
1189.00	30.25	334.49	1150.11	181.81	-97.13	206.07	2.29	0.97	4.13	
1220.00	30.38	335.37	1176.87	195.98	-103.76	221.71	1.49	0.42	2.84	
1284.00	30.50	335.74	1232.05	225.50	-117.18	254.11	0.35	0.19	0.58	
1316.00	30.69	335.24	1259.60	240.32	-123.94	270.39	0.99	0.59	-1.56	
1347.00	30.69	334.74	1286.26	254.66	-130.62	286.20	0.82	0.00	-1.61	
1409.00	31.60	335.28	1339.32	283.72	-144.17	318.25	1.54	1.47	0.87	
1470.00	32.33	334.49	1391.07	312.96	-157.88	350.53	1.38	1.20	-1.30	
1532.00	32.88	332.99	1443.30	342.92	-172.66	383.93	1.58	0.89	-2.42	
1595.00	33.25	332.87	1496.10	373.53	-188.30	418.31	0.60	0.59	-0.19	
1658.00	34.19	332.62	1548.50	404.62	-204.32	453.28	1.51	1.49	-0.40	
1721.00	32.78	332.05	1601.04	435.40	-220.45	488.03	2.29	-2.24	-0.90	TIE-ON WFT SVY
1784.00	31.63	332.87	1654.35	465.17	-235.98	521.60	1.95	-1.83	1.30	
1847.00	32.06	332.92	1707.86	494.76	-251.13	554.84	0.68	0.68	0.08	
1941.00	33.94	334.74	1786.70	540.71	-273.68	606.03	2.26	2.00	1.94	
2005.00	32.63	334.12	1840.20	572.39	-288.84	641.14	2.11	-2.05	-0.97	
2067.00	31.69	334.37	1892.68	602.12	-303.18	674.14	1.53	-1.52	0.40	
2131.00	31.31	333.37	1947.25	632.14	-317.91	707.58	1.01	-0.59	-1.56	
2193.00	31.69	332.87	2000.12	661.03	-332.55	739.97	0.74	0.61	-0.81	
2256.00	31.22	332.62	2053.86	690.26	-347.61	772.84	0.77	-0.75	-0.40	
2318.00	31.62	333.21	2106.77	719.03	-362.32	805.16	0.81	0.65	0.95	
2382.00	31.81	333.49	2161.21	749.10	-377.41	838.81	0.38	0.30	0.44	
2445.00	31.50	333.37	2214.84	778.68	-392.20	871.87	0.50	-0.49	-0.19	
2506.00	31.78	332.55	2266.77	807.18	-406.75	903.87	0.84	0.46	-1.34	
2570.00	31.44	332.99	2321.27	837.00	-422.10	937.41	0.64	-0.53	0.69	
2634.00	31.88	333.24	2375.75	866.96	-437.29	971.00	0.72	0.69	0.39	
2665.00	32.24	333.78	2402.02	881.69	-444.63	987.46	1.48	1.16	1.74	
2728.00	31.31	333.37	2455.58	911.40	-459.39	1020.63	1.52	-1.48	-0.65	
2790.00	31.38	332.12	2508.53	940.07	-474.16	1052.88	1.05	0.11	-2.02	
2854.00	32.00	330.99	2562.99	969.63	-490.18	1086.49	1.34	0.97	-1.77	
2917.00	31.12	331.08	2616.67	998.48	-506.14	1119.44	1.40	-1.40	0.14	
2980.00	30.82	333.12	2670.69	1027.12	-521.31	1151.84	1.73	-0.48	3.24	
3011.00	30.75	332.87	2697.32	1041.26	-528.52	1167.71	0.47	-0.23	-0.81	
3043.00	30.75	332.99	2724.82	1055.83	-535.96	1184.07	0.19	0.00	0.37	
3074.00	29.51	332.92	2751.63	1069.69	-543.04	1199.63	4.00	-4.00	-0.23	
3106.00	29.38	332.37	2779.50	1083.66	-550.27	1215.36	0.94	-0.41	-1.72	
3137.00	29.13	332.49	2806.55	1097.09	-557.28	1230.51	0.83	-0.81	0.39	
3168.00	29.19	332.87	2833.62	1110.51	-564.21	1245.61	0.63	0.19	1.23	
3199.00	28.42	334.08	2860.78	1123.87	-570.88	1260.55	3.12	-2.48	3.90	
3231.00	27.31	334.87	2889.07	1137.37	-577.33	1275.50	3.66	-3.47	2.47	
3263.00	27.19	334.74	2917.52	1150.63	-583.57	1290.15	0.42	-0.37	-0.41	
3294.00	26.81	334.24	2945.14	1163.33	-589.63	1304.22	1.43	-1.23	-1.61	
3356.00	24.13	332.24	3001.11	1187.14	-601.61	1330.87	4.54	-4.32	-3.23	
3387.00	23.69	331.71	3029.45	1198.23	-607.51	1343.44	1.58	-1.42	-1.71	
3450.00	23.50	332.49	3087.18	1220.51	-619.31	1368.65	0.58	-0.30	1.24	
3482.00	23.31	333.62	3116.55	1231.85	-625.07	1381.36	1.52	-0.59	3.53	
3514.00	23.19	334.37	3145.95	1243.20	-630.61	1393.99	1.00	-0.37	2.34	
3546.00	22.88	334.99	3175.40	1254.52	-635.97	1406.51	1.23	-0.97	1.94	
3609.00	21.44	335.99	3233.75	1276.13	-645.83	1430.25	2.36	-2.29	1.59	
3640.00	21.14	335.88	3262.63	1286.41	-650.42	1441.49	0.98	-0.97	-0.35	



Weatherford International Ltd.

SURVEY REPORT

**Weatherford**

Company: WILLIAMS PRODUCTION Date: 10/19/2009 Time: 10:06:02 Page: 3
Field: RIO ARriba CO. NM (NAD 83) Co-ordinate(NE) Reference: Well: 181-D, True North
Site: Rosa Unit #181-D Vertical (TVD) Reference: SITE 6282.0
Well: 181-D Section (VS) Reference: Well (0.00N,0.00E,333.23Azi)
Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Comment
3671.00	19.69	335.24	3291.68	1296.26	-654.89	1452.30	4.73	-4.68	-2.06	
3702.00	18.56	333.12	3320.97	1305.40	-659.31	1462.45	4.28	-3.65	-6.84	
3734.00	17.63	331.62	3351.39	1314.21	-663.92	1472.39	3.25	-2.91	-4.69	
3765.00	17.38	332.74	3380.95	1322.45	-668.27	1481.71	1.35	-0.81	3.61	
3796.00	16.75	334.37	3410.59	1330.60	-672.32	1490.81	2.55	-2.03	5.26	
3827.00	16.28	336.80	3440.31	1338.62	-675.97	1499.61	2.69	-1.52	7.84	
3859.00	15.31	338.99	3471.10	1346.68	-679.25	1508.29	3.56	-3.03	6.84	
3891.00	14.31	341.24	3502.04	1354.37	-682.03	1516.41	3.60	-3.12	7.03	
3922.00	12.81	340.74	3532.17	1361.24	-684.40	1523.61	4.85	-4.84	-1.61	
3953.00	11.69	337.99	3562.47	1367.40	-686.71	1530.15	4.07	-3.61	-8.87	
3984.00	10.93	336.55	3592.87	1373.01	-689.06	1536.21	2.62	-2.45	-4.65	
4015.00	9.94	333.74	3623.35	1378.10	-691.41	1541.82	3.59	-3.19	-9.06	
4046.00	9.75	332.12	3653.90	1382.82	-693.82	1547.12	1.08	-0.61	-5.23	
4077.00	8.75	332.49	3684.49	1387.24	-696.14	1552.10	3.23	-3.23	1.19	
4109.00	8.50	332.49	3716.13	1391.49	-698.35	1556.90	0.78	-0.78	0.00	
4140.00	7.81	332.99	3746.82	1395.40	-700.37	1561.30	2.24	-2.23	1.61	
4171.00	7.84	333.66	3777.53	1399.17	-702.26	1565.52	0.31	0.10	2.16	
4203.00	7.56	333.12	3809.24	1403.01	-704.18	1569.81	0.90	-0.87	-1.69	
4234.00	7.31	333.12	3839.98	1406.58	-706.00	1573.82	0.81	-0.81	0.00	
4266.00	6.31	334.24	3871.75	1409.98	-707.68	1577.61	3.15	-3.12	3.50	
4297.00	6.06	330.62	3902.57	1412.94	-709.23	1580.95	1.49	-0.81	-11.68	
4359.00	3.63	324.49	3964.35	1417.39	-711.97	1586.16	4.00	-3.92	-9.89	
4391.00	2.69	338.62	3996.30	1418.92	-712.83	1587.91	3.79	-2.94	44.16	
4422.00	2.38	329.99	4027.27	1420.15	-713.42	1589.28	1.58	-1.00	-27.84	
4454.00	1.75	327.37	4059.25	1421.14	-714.02	1590.42	1.99	-1.97	-8.19	
4485.00	1.51	326.61	4090.23	1421.88	-714.50	1591.30	0.78	-0.77	-2.45	
4499.00	1.61	335.24	4104.23	1422.21	-714.68	1591.68	1.82	0.71	61.64	LAST WFT SVY
4550.00	1.61	335.24	4155.21	1423.51	-715.28	1593.11	0.00	0.00	0.00	PROJ. TO BIT
8242.00	1.50	335.24	7845.85	1514.49	-757.24	1693.24	0.00	0.00	0.00	LAST RIG SVY

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
300.00	300.00	10.750	12.250	10 3/4"
4155.33	3762.00	7.625	8.500	7 5/8"

Annotation

MD ft	TVD ft	
1721.00	1601.04	TIE-ON WFT SVY
4499.00	4104.23	LAST WFT SVY
4550.00	4155.21	PROJ. TO BIT
8242.00	7845.85	LAST RIG SVY