30-025-41907

PHOENIX TECHNOLOGY SERVICES
SURVEY DATA CERTIFICATION

PHOENIX TECHNOLOGY SERVICES

PHOENIX JOB NUMBER 1411175 OPERATOR Chevron Midcon fined

WELL NAME Red Hills 2-25-33 #3H COUNTY & STATE Lea County NM

API WELL NUMBER	30-025-41907

PROPOSED DIRECTION	359.7

TIE-IN DATA						
MEASURED DEPTH	VERTICAL DEPTH	INCLIN	AZIMUTH	N-S COORD	E-W COORD	DATA SOURCE
1,245 ft	8.33 ft	1.1	351.3	8.34N	2.48E	Chevron

FIRST SURVEY DATE	FIRST SURVEY DEPTH	INCLIN	AZIMUTH
23-Jul-14	1,467 ft	0.81	358.5

SURVEY INSTRUMENT TYPE
APS / QDT

LAST SURVEY DATE	LAST SURVEY DEPTH	INCLIN	AZIMUTH
4-Aug-14	14,053 ft	93.04	0.69

TO THE BEST OF MY KNOWLEDGE I CERTIFY THIS SURVEY DATA TO BE TRUE AND CORRECT.

PROJECTED TD SURVEY DATE	PROJECTED TD SURVEY DEPTH	INCLIN	AZIMUTH
4-Aug-14	14,105 ft	93.04	0.69

Zak Dawson

PRINT YOUR NAME ABOVE

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	6.77
DECLINATION OR GRID	GRID

TODAY'S DATE

MWD SUPERVISOR 1 Zak Dawson DIRECTIONAL DRILLER 1 Keith Scheppler

MWD SUPERVISOR 2 Edward Lagarce DIRECTIONAL DRILLER 2 Craig Cannon

1805 Brittmore Road Houston, Texas 77043 (713)3370609 (Voice), (713)337-0599 (Fax)

PHOENIX
TECHNOLOGY SERVICES

Survey Calculation Sheet

Company Chevron
Well Red Hills 2-25-33 #3H
Field Lea County NM
Rig Ensign 153
Phoenix Rep. Zak Dawson

Correction
Target TVD 9500
Target Az. 359.7
Tgt. Coor.

QDT
CLT

Date	No.	DEPTH	INC.	AZM	C.L.	T.V.D.	V.S.	N/S	E/W	DLS	B./D.	BHA
Tie - In	0	0	0.00	0.00	0	0.00	0.00	0.00 N	0.00 E	0.00		
	1	139	0.0	101.0	139	139.00	0.00	0.00 N	0.00 E	0.00	0.00	
	2	288	0.3	188.0	149	288.00	-0.39	0.39 S	0.05 W	0.20	0.20	
	3	470	0.6	196.0	182	469.99	-1.77	1.77 S	0.38 W	0.17	0.16	
	4	644	0.4	44.0	174	643.99	-2.21	2.21 S	0.21 W	0.56	-0.11	
	5	824	1.1	24.3	180	823.97	-0.19	0.19 S	0.93 E	0.41	0.39	
	6	1003	1.2	11.3	179	1002.94	3.21	3.22 N	2.01 E	0.16	0.06	
	7	1093	1.3	8.0	90	1092.92	5.14	5.15 N	2.34 E	0.14	0.11	
	8	1183	1.2	3.3	90	1182.90	7.09	7.10 N	2.53 E	0.16	-0.11	
Tie - In	9	1245	1.1	351.3	62	1244.88	8.33	8.34 N	2.48 E	0.42	-0.16	
23-Jul	10	1467	0.81	358.50	222	1466.85	12.00	12.02 N	2.12 E	0.14	-0.13	1
	11	1646	0.67	13.22	179	1645.84	14.29	14.30 N	2.32 E	0.13	-0.08	1
	12	1825	0.79	11.22	179	1824.82	16.51	16.53 N	2.80 E	0.07	0.07	1
	13	2004	1.04	8.73	179	2003.80	19.33	19.35 N	3.29 E	0.14	0.14	1
	14	2183	1.13	2.74	179	2182.77	22.69	22.71 N	3.62 E	0.08	0.05	1
	15	2362	1.61	356.51	179	2361.72	26.97	26.99 N	3.55 E	0.28	0.27	1
	16	2542	1.09	0.77	180	2541.67	31.20	31.22 N	3.42 E	0.29	-0.29	1
	17	2720	1.66	12.44	178	2719.61	35.41	35.43 N	4.00 E	0.36	0.32	1
	18	2899	1.73	22.67	179	2898.54	40.43	40.46 N	5.60 E	0.17	0.04	1
	19	3078	1.48	32.05	179	3077.47	44.87	44.91 N	7.87 E	0.20	-0.14	1
	20	3257	1.32	44.49	179	3256.41	48.28	48.34 N	10.54 E	0.19	-0.09	1
	21	3436	1.82	55.43	179	3435.35	51.35	51.42 N	14.32 E	0.32	0.28	1
24-Jul	22	3615	1.22	88.01	179	3614.29	53.01	53.10 N	18.57 E	0.57	-0.34	1
	23	3794	1.28	78.74	179	3793.24	53.44	53.56 N	22.43 E	0.12	0.03	1
	24	3973	1.31	88.71	179	3972.20	53.86	54.00 N	26.44 E	0.13	0.02	1
	25	4152	1.42	79.20	179	4151.15	54.30	54.46 N	30.66 E	0.14	0.06	1
	26	4330	1.25	96.99	178	4329.10	54.45	54.64 N	34.76 E	0.25	-0.10	1
	27	4509	2.72	103.53	179	4507.99	53.19	53.40 N	40.83 E	0.83	0.82	1
	28	4688	2.12	106.67	179	4686.83	51.21	51.46 N	48.13 E	0.34	-0.34	1
25-Jul	29	4867	2.41	128.07	179	4865.69	47.91	48.19 N	54.26 E	0.50	0.16	1
	30	5008	1.81	120.20	141	5006.59	44.93	45.24 N	58.52 E	0.47	-0.43	1
27-Jul	31	5234	1.35	116.59	226	5232.51	41.92	42.25 N	63.98 E	0.21	-0.20	2
	32	5413	1.97	144.07	179	5411.43	38.46	38.82 N	67.68 E	0.55	0.35	2

	33	5592	2.80	200.65	179	5590.30	31.88	32.24 N	67.94 E	1.33	0.46	2
	34	5770	2.98	208.01	178	5768.07	23.75	24.08 N	64.23 E	0.23	0.10	2
	35	5949	2.36	232.91	179	5946.88	17.44	17.75 N	59.11 E	0.73	-0.35	2
	36	6128	2.40	232.75	179	6125.73	12.98	13.26 N	53.18 E	0.02	0.02	2
28-Jul	37	6308	2.22	227.71	180	6305.58	8.38	8.63 N	47.61 E	0.15	-0.10	2
	38	6487	2.47	228.37	179	6484.43	3.52	3.74 N	42.16 E	0.14	0.14	2
	39	6666	1.99	272.92	179	6663.31	1.15	1.33 N	36.17 E	0.98	-0.27	2
	40	6845	0.06	81.66	179	6842.28	1.33	1.51 N	33.16 E	1.14	-1.08	2
	41	7024	0.34	297.27	179	7021.28	1.59	1.76 N	32.78 E	0.22	0.16	2
	42	7203	0.42	277.16	179	7200.27	1.92	2.09 N	31.66 E	0.09	0.04	2
	43	7382	0.36	247.13	179	7379.27	1.79	1.95 N	30.49 E	0.12	-0.03	2
	44	7561	0.18	166.04	179	7558.27	1.30	1.46 N	30.04 E	0.21	-0.10	2
	45	7739	0.34	128.36	178	7736.26	0.70	0.86 N	30.52 E	0.13	0.09	2
	46	7918	0.51	143.09	179	7915.26	-0.27	0.11 S	31.41 E	0.11	0.09	2
	47	8097	0.62	125.35	179	8094.25	-1.47	1.30 S	32.68 E	0.11	0.06	2
29-Jul	48	8276	0.77	127.71	179	8273.24	-2.78	2.60 S	34.42 E	0.09	0.08	2
	49	8455	0.58	157.85	179	8452.23	-4.36	4.17 S	35.72 E	0.22	-0.11	2
	50	8634	0.86	171.12	179	8631.21	-6.53	6.34 S	36.27 E	0.18	0.16	2
	51	8812	0.98	161.10	178	8809.19	-9.29	9.10 S	36.97 E	0.11	0.07	2
	52	8945	0.88	167.04	133	8942.17	-11.37	11.17 S	37.56 E	0.10	-0.08	2
30-Jul	53	8991	0.48	172.71	46	8988.17	-11.90	11.71 S	37.67 E	0.88	-0.87	3
	54	9036	3.05	349.88	45	9033.15	-10.91	10.71 S	37.48 E	7.84	5.71	3
	55	9081	7.51	354.31	45	9077.95	-6.80	6.61 S	36.98 E	9.95	9.91	3
	56	9126	12.32	357.34	45	9122.26	0.93	1.12 N	36.46 E	10.75	10.69	3
	57	9170	17.12	356.43	44	9164.81	12.09	12.28 N	35.84 E	10.92	10.91	3
	58	9215	22.34	355.11	45	9207.15	27.24	27.42 N	34.70 E	11.64	11.60	3
	59	9260	27.20	353.99	45	9248.00	46.01	46.18 N	32.89 E	10.85	10.80	3
	60	9304	32.01	354.33	44	9286.24	67.64	67.80 N	30.69 E	10.94	10.93	3
	61	9349	36.25	354.52	45	9323.48	92.77	92.92 N	28.24 E	9.43	9.42	3
	62	9394	41.08	355.13	45	9358.61	120.78	120.91 N	25.71 E	10.77	10.73	3
31-Jul	63	9439	46.05	356.81	45	9391.21	151.71	151.84 N	23.56 E	11.34	11.04	4
	64	9484	52.37	357.13	45	9420.59	185.73	185.85 N	21.76 E	14.05	14.04	4
	65	9528	57.11	357.28	44	9445.98	221.61	221.72 N	20.01 E	10.78	10.77	4
	66	9573	62.35	356.36	45	9468.66	260.41	260.51 N	17.85 E	11.78	11.64	4
1-Aug	67	9618	67.79	355.37	45	9487.62	301.11	301.19 N	14.90 E	12.25	12.09	4
	68	9662	74.62	355.17	44	9501.79	342.62	342.68 N	11.47 E	15.53	15.52	4
	69	9707	80.73	356.67	45	9511.39	386.46	386.51 N	8.35 E	13.96	13.58	4
2-Aug	70	9796	91.26	359.47	89	9517.60	475.08	475.11 N	5.38 E	12.24	11.83	5
	71	9886	92.82	359.77	90	9514.39	565.02	565.05 N	4.78 E	1.77	1.73	5
	72	9975	93.30	359.92	89	9509.64	653.89	653.92 N	4.54 E	0.56	0.54	5
	73	10065	94.19	0.05	90	9503.77	743.69	743.73 N	4.52 E	1.00	0.99	5
	74	10155	94.58	0.12	90	9496.88	833.43	833.46 N	4.65 E	0.44	0.43	5
	75	10244	93.41	0.86	89	9490.68	922.20	922.24 N	5.41 E	1.55	-1.31	5
	76	10334	89.83	0.80	90	9488.14	1012.13	1012.18 N	6.72 E	3.98	-3.98	5
	77	10423	90.50	0.07	89	9487.88	1101.13	1101.18 N	7.39 E	1.11	0.75	5
	78	10513	92.15	359.99	90	9485.80	1191.10	1191.15 N	7.44 E	1.84	1.83	5
	79	10602	91.20	359.27	89	9483.20	1280.06	1280.11 N	6.86 E	1.34	-1.07	5

	80	10692	90.53	358.62	90	9481.84	1370.04	1370.08 N	5.21 E	1.04	-0.74	5
	81	10781	89.72	357.41	89	9481.65	1459.00	1459.03 N	2.12 E	1.64	-0.91	5
	82	10871	90.03	358.86	90	9481.84	1548.96	1548.98 N	0.80 W	1.65	0.34	5
	83	10961	90.06	0.65	90	9481.77	1638.96	1638.97 N	1.19 W	1.99	0.03	5
	84	11050	90.06	0.53	89	9481.68	1727.95	1727.97 N	0.27 W	0.13	0.00	5
	85	11139	90.17	0.38	89	9481.50	1816.94	1816.96 N	0.43 E	0.21	0.12	5
	86	11229	90.75	0.17	90	9480.78	1906.93	1906.96 N	0.87 E	0.69	0.64	5
	87	11319	91.23	1.08	90	9479.22	1996.90	1996.94 N	1.85 E	1.14	0.53	5
	88	11408	91.45	1.29	89	9477.14	2085.85	2085.90 N	3.69 E	0.34	0.25	5
3-Aug	89	11497	91.99	1.04	89	9474.47	2174.78	2174.84 N	5.50 E	0.67	0.61	5
	90	11587	90.95	1.51	90	9472.16	2264.71	2264.78 N	7.50 E	1.27	-1.16	5
	91	11677	90.14	1.07	90	9471.31	2354.67	2354.76 N	9.52 E	1.02	-0.90	5
	92	11766	90.17	0.94	89	9471.07	2443.65	2443.74 N	11.08 E	0.15	0.03	5
	93	11856	90.39	0.60	90	9470.63	2533.63	2533.73 N	12.29 E	0.45	0.24	5
	94	11945	88.66	0.99	89	9471.36	2622.61	2622.72 N	13.53 E	1.99	-1.94	5
	95	12035	88.10	0.66	90	9473.91	2712.56	2712.67 N	14.82 E	0.72	-0.62	5
	96	12124	87.82	0.06	89	9477.08	2801.50	2801.61 N	15.38 E	0.74	-0.31	5
	97	12214	87.63	359.98	90	9480.65	2891.42	2891.54 N	15.41 E	0.23	-0.21	5
	98	12303	87.54	358.70	89	9484.40	2980.34	2980.46 N	14.39 E	1.44	-0.10	5
	99	12392	88.02	358.01	89	9487.85	3069.25	3069.35 N	11.84 E	0.94	0.54	5
	100	12482	88.77	357.54	90	9490.37	3159.16	3159.25 N	8.34 E	0.98	0.83	5
	101	12571	90.17	358.98	89	9491.19	3248.12	3248.20 N	5.64 E	2.26	1.57	5
	102	12661	90.31	358.39	90	9490.81	3338.11	3338.17 N	3.58 E	0.67	0.16	5
	103	12751	90.78	357.31	90	9489.96	3428.06	3428.10 N	0.20 E	1.31	0.52	5
	104	12840	91.79	0.07	89	9487.96	3517.01	3517.05 N	1.83 W	3.30	1.13	5
	105	12929	93.22	0.80	89	9484.07	3605.92	3605.96 N	1.16 W	1.80	1.61	5
	106	13019	91.37	0.82	90	9480.47	3695.82	3695.87 N	0.11 E	2.06	-2.06	5
	107	13108	90.47	1.19	89	9479.04	3784.79	3784.85 N	1.67 E	1.09	-1.01	5
	108	13197	92.21	2.43	89	9476.96	3873.70	3873.77 N	4.48 E	2.40	1.96	5
	109	13287	91.51	1.99	90	9474.04	3963.56	3963.66 N	7.95 E	0.92	-0.78	5
4-Aug	110	13376	90.73	0.97	89	9472.30	4052.50	4052.61 N	10.25 E	1.44	-0.88	5
	111	13466	91.78	0.42	90	9470.33	4142.46	4142.58 N	11.34 E	1.32	1.17	5
	112	13555	92.37	359.52	89	9467.10	4231.40	4231.52 N	11.29 E	1.21	0.66	5
	113	13645	94.03	359.20	90	9462.08	4321.26	4321.37 N	10.29 E	1.88	1.84	5
	114	13734	93.80	359.16	89	9456.00	4410.05	4410.15 N	9.02 E	0.26	-0.26	5
	115	13823	94.05	359.58	89	9449.91	4498.84	4498.94 N	8.04 E	0.55	0.28	5
	116	13913	91.54	0.14	90	9445.52	4588.72	4588.82 N	7.82 E	2.86	-2.79	5
	117	14002	92.65	0.34	89	9442.27	4677.66	4677.76 N	8.20 E	1.27	1.25	5
	118	14053	93.04	0.69	51	9439.74	4728.59	4728.70 N	8.66 E	1.03	0.76	5
PTB	119	14105	93.04	0.69	52	9436.98	4780.51	4780.62 N	9.28 E	0.00	0.00	5

Chevron

Directional Surve

Well Name	Lease	Field Name	Business Unit	Latitude (°)
RED HILLS 2-25-33 003H	Red Hills 2-25-33	RED HILLS	Mid-Continent	

Wellbore Name	Directional Type	Wellbore UWI	Wellbore ChevNo
Original Hole	Horizontal	300254190700	PA9954-00

Bottom Hole Location

UTM Northing (Y) (ft)	UTM Easting (X) (ft)	UTM Grid Zone	Latitude (°)

Directional Surveys

Description	Planned?	Definitive?
MWD	N	

Survey Data

Survey Company	Date	MD (ftKB)	TVD (ftKB)	Incl (°)	Azm (°)
Rig	7/19/2014	139	139.00	0.00	101.00
Rig	7/19/2014	288	288.00	0.30	188.00
Rig	7/19/2014	470	469.99	0.60	196.00
Rig	7/19/2014	644	643.99	0.40	44.00
Rig	7/19/2014	824	823.97	1.10	24.30
Rig	7/19/2014	1,003	1,002.94	1.20	11.30
Rig	7/19/2014	1,093	1,092.92	1.30	8.00
Rig	7/19/2014	1,183	1,182.90	1.20	3.30

21/2014

PHOENIX
TECHNOLOGY SERVICES

Job Number: 1411175
Company: Chevron
Lease/Well: Red Hills 2-25-33 # 3H
Location: Jal, NM
Rig Name: Ensign 153
RKB:
G.L. or M.S.L.:

State/Country: NM
Declination: 6.77
Grid:
File name: C:\WINSERVE\1411175.SVY
Date/Time: 04-Aug-14 / 15:47
Curve Name: Red Hills 2-25-33 #3H Surveys

Phoenix Technology Services

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 359.70
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
139.00	.00	101.00	139.00	.00	.00	.00	.00	.00	.00
288.00	.30	188.00	288.00	-.39	-.05	-.39	.39	188.00	.20
470.00	.60	196.00	469.99	-1.77	-.38	-1.77	1.82	192.19	.17
644.00	.40	44.00	643.99	-2.21	-.21	-2.21	2.22	185.48	.56
824.00	1.10	24.30	823.97	-.19	.94	-.19	.95	101.27	.41
1003.00	1.20	11.30	1002.94	3.22	2.01	3.21	3.79	31.98	.16
1093.00	1.30	8.00	1092.92	5.15	2.34	5.14	5.66	24.39	.14
Tele Drift Surveys									
1183.00	1.20	3.30	1182.90	7.10	2.53	7.09	7.54	19.62	.16
1245.00	1.10	351.30	1244.88	8.34	2.48	8.33	8.70	16.56	.42
1467.00	.81	358.50	1466.85	12.02	2.12	12.00	12.20	9.99	.14
1646.00	.67	13.22	1645.84	14.30	2.32	14.29	14.49	9.23	.13
1825.00	.79	11.22	1824.82	16.53	2.80	16.51	16.76	9.62	.07
2004.00	1.04	8.73	2003.80	19.35	3.29	19.33	19.62	9.65	.14
2183.00	1.13	2.74	2182.77	22.71	3.62	22.69	23.00	9.05	.08
2362.00	1.61	356.51	2361.72	26.99	3.55	26.97	27.22	7.50	.28
2542.00	1.09	.77	2541.67	31.22	3.42	31.20	31.41	6.25	.29
2720.00	1.66	12.44	2719.61	35.43	4.00	35.41	35.66	6.44	.36
2899.00	1.73	22.67	2898.54	40.46	5.60	40.43	40.84	7.88	.17
3078.00	1.48	32.05	3077.47	44.91	7.87	44.87	45.59	9.93	.20
3257.00	1.32	44.49	3256.41	48.34	10.54	48.28	49.48	12.30	.19
3436.00	1.82	55.43	3435.35	51.42	14.32	51.35	53.38	15.56	.32
3615.00	1.22	88.01	3614.29	53.10	18.57	53.01	56.26	19.27	.57
3794.00	1.28	78.74	3793.24	53.56	22.43	53.44	58.07	22.73	.12
3973.00	1.31	88.71	3972.20	54.00	26.44	53.86	60.12	26.09	.13

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
4152.00	1.42	79.20	4151.15	54.46	30.66	54.30	62.50	29.38	.14
4330.00	1.25	96.99	4329.10	54.64	34.76	54.45	64.75	32.46	.25
4509.00	2.72	103.53	4507.99	53.40	40.83	53.19	67.22	37.40	.83
4688.00	2.12	106.67	4686.83	51.46	48.13	51.21	70.46	43.08	.34
4867.00	2.41	128.07	4865.69	48.19	54.26	47.91	72.57	48.39	.50
5008.00	1.81	120.20	5006.59	45.24	58.52	44.93	73.97	52.29	.47
5234.00	1.35	116.59	5232.51	42.25	63.99	41.92	76.68	56.56	.21
5413.00	1.97	144.07	5411.43	38.82	67.68	38.46	78.02	60.16	.55
5592.00	2.80	200.65	5590.30	32.24	67.94	31.88	75.20	64.62	1.33
5770.00	2.98	208.01	5768.07	24.08	64.23	23.75	68.60	69.45	.23
5949.00	2.36	232.91	5946.88	17.75	59.11	17.44	61.72	73.28	.73
6128.00	2.40	232.75	6125.73	13.26	53.19	12.98	54.81	76.00	.02
6308.00	2.22	227.71	6305.58	8.63	47.61	8.38	48.38	79.72	.15
6487.00	2.47	228.37	6484.43	3.74	42.16	3.52	42.32	84.93	.14
6666.00	1.99	272.92	6663.31	1.33	36.17	1.15	36.20	87.89	.98
6845.00	.06	81.66	6842.28	1.51	33.16	1.33	33.19	87.40	1.14
7024.00	.34	297.27	7021.28	1.76	32.78	1.59	32.83	86.92	.22
7203.00	.42	277.16	7200.27	2.09	31.66	1.92	31.73	86.23	.09
7382.00	.36	247.13	7379.27	1.95	30.49	1.79	30.55	86.34	.12
7561.00	.18	166.04	7558.27	1.46	30.04	1.30	30.07	87.22	.21
7739.00	.34	128.36	7736.26	.86	30.52	.70	30.53	88.38	.13
7918.00	.51	143.09	7915.26	-.11	31.41	-.27	31.41	90.19	.11
8097.00	.62	125.35	8094.25	-1.30	32.68	-1.47	32.71	92.28	.11
8276.00	.77	127.71	8273.24	-2.60	34.42	-2.78	34.52	94.32	.09
8455.00	.58	157.85	8452.23	-4.17	35.72	-4.36	35.96	96.66	.22
8634.00	.86	171.12	8631.21	-6.34	36.27	-6.53	36.82	99.92	.18
8812.00	.98	161.10	8809.19	-9.10	36.97	-9.29	38.07	103.83	.11
8945.00	.88	167.04	8942.17	-11.17	37.56	-11.37	39.19	106.56	.10
8991.00	.48	172.71	8988.17	-11.71	37.67	-11.90	39.44	107.26	.88
9036.00	3.05	349.88	9033.15	-10.71	37.48	-10.91	38.98	105.95	7.84
9081.00	7.51	354.31	9077.95	-6.61	36.98	-6.80	37.56	100.13	9.95
9126.00	12.32	357.34	9122.26	1.12	36.46	.93	36.48	88.24	10.75
9170.00	17.12	356.43	9164.81	12.28	35.84	12.09	37.89	71.09	10.92
9215.00	22.34	355.11	9207.15	27.42	34.70	27.24	44.23	51.68	11.64
9260.00	27.20	353.99	9248.00	46.18	32.89	46.01	56.70	35.46	10.85
9304.00	32.01	354.33	9286.24	67.80	30.69	67.64	74.42	24.35	10.94
9349.00	36.25	354.52	9323.48	92.92	28.24	92.77	97.12	16.90	9.43
9394.00	41.08	355.13	9358.61	120.91	25.71	120.78	123.62	12.00	10.77
9439.00	46.05	356.81	9391.21	151.84	23.55	151.71	153.66	8.82	11.34
9484.00	52.37	357.13	9420.59	185.85	21.76	185.73	187.11	6.68	14.05
9528.00	57.11	357.28	9445.98	221.72	20.01	221.61	222.62	5.16	10.78
9573.00	62.35	356.36	9468.66	260.51	17.84	260.41	261.12	3.92	11.78
9618.00	67.79	355.37	9487.62	301.19	14.89	301.11	301.56	2.83	12.25
9662.00	74.62	355.17	9501.79	342.68	11.46	342.62	342.87	1.92	15.53
9707.00	80.73	356.67	9511.39	386.51	8.34	386.46	386.60	1.24	13.96

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
9796.00	91.26	359.47	9517.60	475.11	5.37	475.08	475.14	.65	12.24
9886.00	92.82	359.77	9514.39	565.05	4.77	565.02	565.07	.48	1.77
9975.00	93.30	359.92	9509.64	653.92	4.53	653.89	653.94	.40	.56
10065.00	94.19	.05	9503.77	743.73	4.51	743.69	743.74	.35	1.00
10155.00	94.58	.12	9496.88	833.46	4.64	833.43	833.48	.32	.44
10244.00	93.41	.86	9490.68	922.24	5.40	922.20	922.26	.34	1.55
10334.00	89.83	.80	9488.14	1012.18	6.70	1012.13	1012.21	.38	3.98
10423.00	90.50	.07	9487.88	1101.18	7.38	1101.13	1101.20	.38	1.11
10513.00	92.15	359.99	9485.80	1191.15	7.43	1191.10	1191.17	.36	1.84
10602.00	91.20	359.27	9483.20	1280.11	6.85	1280.06	1280.13	.31	1.34
10692.00	90.53	358.62	9481.84	1370.08	5.19	1370.04	1370.09	.22	1.04
10781.00	89.72	357.41	9481.65	1459.03	2.11	1459.00	1459.03	.08	1.64
10871.00	90.03	358.86	9481.84	1548.98	-.82	1548.96	1548.98	359.97	1.65
10961.00	90.06	.65	9481.77	1638.97	-1.20	1638.96	1638.97	359.96	1.99
11050.00	90.06	.53	9481.68	1727.97	-.29	1727.95	1727.97	359.99	.13
11139.00	90.17	.38	9481.50	1816.96	.42	1816.94	1816.97	.01	.21
11229.00	90.75	.17	9480.78	1906.96	.85	1906.93	1906.96	.03	.69
11319.00	91.23	1.08	9479.22	1996.94	1.83	1996.90	1996.94	.05	1.14
11408.00	91.45	1.29	9477.14	2085.90	3.67	2085.85	2085.90	.10	.34
11497.00	91.99	1.04	9474.47	2174.84	5.48	2174.78	2174.85	.14	.67
11587.00	90.95	1.51	9472.16	2264.78	7.49	2264.71	2264.80	.19	1.27
11677.00	90.14	1.07	9471.31	2354.76	9.51	2354.67	2354.78	.23	1.02
11766.00	90.17	.94	9471.07	2443.74	11.07	2443.65	2443.77	.26	.15
11856.00	90.39	.60	9470.63	2533.73	12.28	2533.63	2533.76	.28	.45
11945.00	88.66	.99	9471.36	2622.72	13.52	2622.61	2622.75	.30	1.99
12035.00	88.10	.66	9473.91	2712.67	14.81	2712.56	2712.71	.31	.72
12124.00	87.82	.06	9477.08	2801.61	15.37	2801.50	2801.66	.31	.74
12214.00	87.63	359.98	9480.65	2891.54	15.40	2891.42	2891.58	.31	.23
12303.00	87.54	358.70	9484.40	2980.46	14.38	2980.34	2980.49	.28	1.44
12392.00	88.02	358.01	9487.85	3069.35	11.82	3069.25	3069.37	.22	.94
12482.00	88.77	357.54	9490.37	3159.25	8.33	3159.16	3159.26	.15	.98
12571.00	90.17	358.98	9491.19	3248.20	5.63	3248.12	3248.20	.10	2.26
12661.00	90.31	358.39	9490.81	3338.17	3.56	3338.11	3338.18	.06	.67
12751.00	90.78	357.31	9489.96	3428.10	.19	3428.06	3428.10	.00	1.31
12840.00	91.79	.07	9487.96	3517.05	-1.85	3517.01	3517.05	359.97	3.30
12929.00	93.22	.80	9484.07	3605.96	-1.17	3605.92	3605.96	359.98	1.80
13019.00	91.37	.82	9480.47	3695.87	.10	3695.82	3695.87	.00	2.06
13108.00	90.47	1.19	9479.04	3784.85	1.66	3784.79	3784.85	.03	1.09
13197.00	92.21	2.43	9476.96	3873.77	4.47	3873.70	3873.78	.07	2.40
13287.00	91.51	1.99	9474.04	3963.66	7.94	3963.56	3963.67	.11	.92
13376.00	90.73	.97	9472.30	4052.61	10.24	4052.50	4052.62	.14	1.44
13466.00	91.78	.42	9470.33	4142.58	11.33	4142.46	4142.60	.16	1.32
13555.00	92.37	359.52	9467.10	4231.52	11.28	4231.40	4231.54	.15	1.21
13645.00	94.03	359.20	9462.08	4321.37	10.28	4321.26	4321.38	.14	1.88
13734.00	93.80	359.16	9456.00	4410.15	9.01	4410.05	4410.16	.12	.26

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
13823.00	94.05	359.58	9449.91	4498.94	8.03	4498.84	4498.95	.10	.55
13913.00	91.54	.14	9445.52	4588.82	7.81	4588.72	4588.83	.10	2.86
14002.00	92.65	.34	9442.27	4677.76	8.19	4677.66	4677.77	.10	1.27
14053.00	93.04	.69	9439.74	4728.70	8.64	4728.59	4728.71	.10	1.03
PTB									
14105.00	93.04	.69	9436.98	4780.62	9.27	4780.51	4780.63	.11	.00