

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals5. Lease Designation and Serial No.
NM-0136426. If Indian, Allottee or Tribe Name
NA7. If Unit or CA, Agreement Designation
NA8. Well Name and No
Gardner #19. API Well No.
30-045-111230010. Field and Pool, or Exploratory Area
Blanco Mesa Verde11. County or Parish, State
San Juan County
New Mexico

SUBMIT IN TRIPLICATE

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

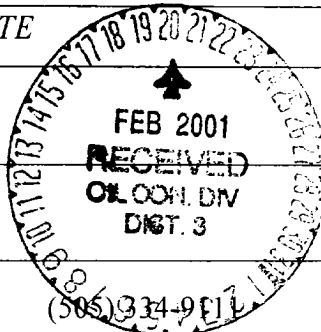
2. Name of Operator

Koch Exploration Company

3. Address and Telephone No.

P.O. Box 489 Aztec, New Mexico 87410

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec. 35, T32N, 9W
Surface - 880' FSL & 950' FWL (M)
BHL at TMD - 780' FSL & 1921' FWL (N)

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☐ Notice of Intent
☒ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

☐ Abandonment
☒ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☒ Other Sidetrack & Cement Casing
☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13 Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

7", 23# casing set @ 5092', with Open hole 5092' - 6100'. Open hole had tubing stuck 4836'-5865'. Set Cement Retainer @ 4505' and pumped 220 sks neat cement, 15.6#, yield 1.18. Stung out of stinger and spotted 20 sks of same cement on top of retainer. Pressure tested 7" casing to 1000#, Held OK. Ran CBL log 4120'-2900' and found no cement. Shot 2 holes @ 3600', set packer @ 3377' and pumped 50 sks cement, 15.6#, 1.18 yield, with 2% CaCl₂, pumped up to 385# and slowly bled off to 0#. Crew released packer before cement had set up. On 1/14/01 ran CBL and found partial cement from 3240'-3474'. Shot 2 holes @ 3820', Set cement retainer @ 3751'. Completed suicide squeeze with 60 sks cement, 15.6#, yield 1.18, with 2% CaCl₂. WOC 12 hours. Did not pressure test. Ran packer and set @ 3300', squeezed holes @ 3600' with 50 sks cement, 15.6#, yield 1.18, with 2% CaCl₂, pressured up to 1000# and held. WOC 12 hours. TIH and tagged TOC @ 3398' then drilled cement to 3600', tagged cement retainer @ 3751'. Ran CBL log on 1/17/01. Cement will cover window to be cut. Pressure tested 7" casing to 1000#. Held OK. Set 7" CIBP @ 3708', 2' above collar. Ran Gyro Survey every 100' down to 3680' and set 7" Whipstock @ 92.5 degrees Azimuth @ 3712'. Mill window 3697' - 3705'. Drilled directional hole to TD of 6197' MD or 5979' TVD. "SEE ATTACHMENTS FOR DETAILS". Ran 4 1/2", 10.5#, J-55 new casing to 6197' KB MD. Ran centralizers every other joint. Pumped 25 sks lead cement 35:65 Poz Type III cement, 11#, yield 3.33, with 3% KCl + .4% FL-52 + 6% bentonite + 1/4#/sk. Cello Flake + 5#/sk LCM-1. Tailed with 176 sks 35:65 Poz, 12.0#, yield 2.38, 10#/sk CSE + 3% KCl + 0.4% FL-52 + 6% bentonite + 1/4#/sk Cello Flake + 5#/sk LCM-1. Ran CBL on 1/31/01 with TOC @ 3126'. On 2/7/01 pressure tested casing to 4000#, Held OK.

I hereby certify that the foregoing is true and correct.

Signed Donald J. [Signature] Title Operations Manager Date _____

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____

Conditions of approval, if any: _____

FILED FOR RECON.

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Multi-Shot

(A BWWC Company)

*1408 N Sam Houston Parkway E
Suite 150*

Houston, Texas 77032

Phone: 281-449-7468

Fax: 281-449-7008

Toll Free: 800-641-7468

*Koch Exploration
Company*

*Gardner Well #1 Sidetrack
Well*

*San Juan County, New Mexico
Location*

*Drake 17
Rig*



(A BWWC COMPANY)
1408 N Sam Houston Pkwy E Suite 150
Houston, Texas 77032
Phone: 281-449-7468
Fax: 281-449-7005
Toll Free: 800-641-7468

Job Number: 0115509010
Company: Koch Exploration
Lease/Well: Gardner Well #1 Stk.
Location: San Juan County, New Mexico
Rig Name: Drake 17
RKB: 13.00
G.L. or M.S.L.: GL

State/Country: New Mexico / USA
Declination: 11.2° East to True
Grid:
File name: C:\SVY2000\KOCHEX~1\GRDNR#1.SVY
Date/Time: 24-Jan-01 / 14:27
Curve Name: Koch Exploration

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 97.30
Vertical Section Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.58	123.37	100.00	-.28	.42	.51	123.37	.58
200.00	.58	122.78	199.99	-.83	1.27	1.52	123.17	.01
300.00	.79	95.23	299.99	-1.17	2.38	2.65	116.11	.38
400.00	1.11	99.84	399.97	-1.40	4.02	4.26	109.13	.33
500.00	1.29	101.34	499.95	-1.78	6.08	6.34	106.34	.18
600.00	1.33	102.48	599.92	-2.26	8.32	8.62	105.17	.05
700.00	1.43	100.45	699.90	-2.73	10.68	11.02	104.35	.11
800.00	1.43	98.80	799.86	-3.15	13.14	13.51	103.48	.04
900.00	1.28	103.75	899.84	-3.61	15.46	15.87	103.13	.19
1000.00	1.31	111.46	999.81	-4.29	17.61	18.12	103.69	.18
1100.00	1.26	114.99	1099.79	-5.17	19.67	20.33	104.73	.09
1200.00	1.08	120.12	1199.76	-6.11	21.48	22.33	105.88	.21
1300.00	1.15	130.14	1299.75	-7.23	23.06	24.17	107.41	.21

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
1400.00	.85	125.92	1399.73	-8.31	24.43	25.80	108.79	.31
1500.00	.35	169.89	1499.73	-9.05	25.08	26.66	109.83	.65
1600.00	.52	205.88	1599.72	-9.76	24.94	26.78	111.37	.31
1700.00	.57	203.97	1699.72	-10.62	24.54	26.74	113.40	.05
1800.00	.68	210.10	1799.71	-11.59	24.04	26.68	115.74	.13
1900.00	.82	211.81	1899.70	-12.71	23.36	26.60	118.54	.14
2000.00	.69	221.32	1999.69	-13.77	22.59	26.45	121.36	.18
2100.00	.70	219.90	2099.69	-14.69	21.80	26.29	123.97	.02
2200.00	.71	216.80	2199.68	-15.65	21.04	26.22	126.65	.04
2300.00	.97	212.52	2299.67	-16.86	20.21	26.32	129.84	.27
2400.00	1.06	215.66	2399.65	-18.33	19.22	26.56	133.65	.11
2500.00	1.08	214.29	2499.64	-19.86	18.15	26.90	137.58	.03
2600.00	1.03	215.35	2599.62	-21.37	17.09	27.37	141.34	.05
2700.00	1.14	217.95	2699.60	-22.89	15.96	27.91	145.11	.12
2800.00	1.12	219.16	2799.58	-24.43	14.73	28.53	148.91	.03
2900.00	1.25	218.30	2899.56	-26.04	13.44	29.31	152.70	.13
3000.00	1.04	223.75	2999.54	-27.56	12.14	30.11	156.23	.24
3100.00	.98	222.86	3099.52	-28.84	10.93	30.84	159.25	.06
3200.00	.94	228.00	3199.51	-30.01	9.74	31.55	162.03	.09
3300.00	.92	218.69	3299.50	-31.19	8.63	32.36	164.54	.15
3400.00	1.27	224.80	3399.48	-32.60	7.34	33.42	167.31	.37
3500.00	1.16	229.25	3499.46	-34.05	5.79	34.54	170.34	.14
3600.00	1.09	234.30	3599.44	-35.27	4.26	35.52	173.12	.12
3680.00	1.20	208.07	3679.42	-36.45	3.24	36.59	174.91	.66



DIRECTIONAL SURVEY REPORT

BIG HORN DIRECTIONAL/KOCH OPERATING

GARDNER #1 ST

SAN JUAN COUNTY, NEW MEXICO

PREPARED BY: ROCK BRUNET

February 6, 2001

**BIG HORN DIRECTIONAL
4895 Ward Rd. #1A
Wheatridge, CO 80033**

Attn: Kurt Macintyre

**RE: BIG HORN DIRECTIONAL / KOCH OPERATING
GARDNER #1 ST
SAN JUAN COUNTY, NM
RIG: DRAKE #17
OUR FILE NO.: 020101-0018**

Dear Sir:

We hereby certify that the enclosed Original Field Survey Data contained in this report represents to the best of our knowledge, a true and accurate survey of the well at the time the survey was run.

SURVEY DATA

- 1 - Original survey report**
- 2 - Survey report copies**

We appreciate the opportunity to work with you and we look forward to your business support. If you have any questions, I can be reached at (337) 233-3982.

Sincerely,



**Rock Brunet
Service Coordinator
PathFinder Energy Services**

DIRECTIONAL SURVEY COMPANY REPORT:

1. NAME OF SURVEYING COMPANY: PATHFINDER ENERGY SERVICES
2. NAME OF PERSON(S) PERFORMING SURVEY: A) BRET WOLFORD
3. POSITION OF SAID PERSON(S): (A) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 01/19/01 TO 01/23/01
5. STATE IN WHICH SURVEY WAS PERFORMED: ONSHORE, NEW MEXICO
6. LOCATION OF WELL: SAN JUAN COUNTY, NM
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

BIG HORN DIRECTIONAL / KOCH OPERATING
GARDNER #1 ST
SAN JUAN COUNTY, NM
RIG: DRAKE #17
API NO: 30-045-11123-01

9. SURVEY CERTIFIED FROM: 3,762 TO 5,168 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 502.53 FEET ON A BEARING OF 96.43 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT PROJECTED MEASURED DEPTH OF 5,203 FEET, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

Rock Brunet

ROCK BRUNET
SERVICE COORDINATOR

Pathfinder

BHL Report

Page 1
Job No: 020101-0018
Date: 1/23/01
Time: 1:01 pm
Wellpath ID: G#1ST
Date Created: 1/14/01
Last Revision: 1/23/01

Calculated using the Minimum Curvature Method
Computed using PDS VER2.2.6
Vertical Section Plane: 92.50 deg.

Survey Reference: WELLHEAD
Vertical Section Reference: WELLHEAD
Closure Reference: WELLHEAD
TVD Reference: WELLHEAD

KOCH OPER. / BIGHORN
SAN JUAN CO., NM
GARDNER #1 ST
RIG: DRAKE #17

DECL: 11.21° EAST TO TRUE
KBH: 13.0' TO GROUND LEVEL

PES OFFICE SUPERVISOR:
RICH ARNOLD
PES FIELD ENGINEER(S):
BRET WOLFORD

Measured Depth	5203.00	(ft)
Inclination	23.30	(deg)
Azimuth	91.81	(deg)
True Vertical Depth	5108.60	(ft)
Vertical Section	501.35	(ft)
Rectangular Offsets		
North/South	56.32 S	(ft)
East/West	499.37 E	(ft)
Closure Dist & Dir	502.53@ 96.43	(deg)
Dogleg Severity	0.00	(deg/100ft)
Build Rate	0.00	(deg/100ft)
Walk Rate	0.00	(deg/100ft)

Pathfinder

Survey Report

Page 1
Job No: 020101-0018
Date: 1/23/01
Time: 12:55 pm
Wellpath ID: G#1ST
Date Created: 1/14/01
Last Revision: 1/23/01

Calculated using the Minimum Curvature Method
Computed using PDS VER2.2.6
Vertical Section Plane: 92.50 deg

Survey Reference: WELLHEAD
Vertical Section Reference: WELLHEAD
Closure Reference: WELLHEAD
TVD Reference: WELLHEAD

KOCH OPER. / BIGHORN
SAN JUAN CO., NM
GARDNER #1 ST
RIG: DRAKE #17

DECL: 11.21° EAST TO TRUE
KBH: 13.0' TO GROUND LEVEL

PES OFFICE SUPERVISOR:
RICH ARNOLD
PES FIELD ENGINEER(S):
BRET WOLFORD

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	T O T A L Rectangular Offsets (ft) (ft)		Closure Dist. Dir. (ft) (deg.)	DLS (dg/100ft)
TIE INTO MULTI-SHOT GYRO SURVEY INSIDE CASING.									
3680.00	1.20	208.07	3679.42	0.00	4.83	36.45 S	3.24 E	36.59@174.92	0.00
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.									
3762.00	4.92	95.41	3761.32	82.00	7.97	37.54 S	6.34 E	38.07@170.42	6.70
3792.00	6.68	90.40	3791.17	30.00	11.00	37.67 S	9.36 E	38.82@166.04	6.10
3822.00	8.09	94.00	3820.92	30.00	14.85	37.83 S	13.22 E	40.07@160.74	4.94
3853.00	9.76	96.29	3851.54	31.00	19.66	38.27 S	18.00 E	42.30@154.81	5.51
3885.00	10.82	96.90	3883.03	32.00	25.36	38.93 S	23.68 E	45.57@148.69	3.33
3916.00	12.13	96.29	3913.41	31.00	31.51	39.64 S	29.81 E	49.59@143.06	4.24
3947.00	12.84	96.29	3943.67	31.00	38.20	40.37 S	36.47 E	54.40@137.91	2.29
3979.00	13.37	94.00	3974.84	32.00	45.44	41.02 S	43.69 E	59.93@133.19	2.32
4010.00	14.33	92.68	4004.94	31.00	52.86	41.45 S	51.10 E	65.80@129.05	3.26
4041.00	15.04	92.95	4034.93	31.00	60.72	41.84 S	58.95 E	72.29@125.36	2.30
4072.00	15.74	93.39	4064.81	31.00	68.95	42.29 S	67.17 E	79.37@122.20	2.29
4103.00	16.36	91.63	4094.61	31.00	77.52	42.66 S	75.73 E	86.92@119.40	2.54
4134.00	16.80	88.20	4124.32	31.00	86.35	42.65 S	84.57 E	94.71@116.76	3.46
4165.00	17.85	86.53	4153.91	31.00	95.54	42.22 S	93.79 E	102.85@114.23	3.75
4196.00	18.99	85.39	4183.32	31.00	105.27	41.53 S	103.56 E	111.58@111.85	3.86
4228.00	19.79	85.83	4213.51	32.00	115.82	40.71 S	114.15 E	121.20@109.63	2.54
4259.00	20.31	87.41	4242.63	31.00	126.39	40.09 S	124.76 E	131.04@107.81	2.42
4291.00	20.84	88.47	4272.59	32.00	137.60	39.69 S	136.00 E	141.67@106.27	2.02
4322.00	21.54	89.78	4301.49	31.00	148.79	39.52 S	147.20 E	152.41@105.03	2.73
4353.00	22.25	91.10	4330.25	31.00	160.34	39.61 S	158.76 E	163.63@104.01	2.79
4383.00	22.69	91.45	4357.98	30.00	171.80	39.86 S	170.23 E	174.83@103.18	1.53
4415.00	23.13	91.45	4387.45	32.00	184.26	40.18 S	182.68 E	187.04@102.40	1.37
4446.00	23.83	90.40	4415.89	31.00	196.60	40.38 S	195.03 E	199.10@101.70	2.64

Pathfinder Survey Report

Page 2
Date: 11/23/01
Wellpath ID: G#1ST

Measured Depth (ft)	Incl (deg.)	Drift Dir. (deg.)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	T O T A L Rectangular Offsets (ft)		Closure Dist. Dir. (ft) (deg.)	DLS (dg/100ft)
4477.00	24.09	88.73	4444.21	31.00	209.17	40.28 S	207.61 E	211.45@ 100.98	2.34
4539.00	22.69	90.31	4501.12	62.00	233.75	40.06 S	232.22 E	235.66@ 99.79	2.47
4571.00	21.81	91.63	4530.74	32.00	245.86	40.27 S	244.34 E	247.63@ 99.36	3.16
4602.00	22.16	92.42	4559.48	31.00	257.47	40.68 S	255.94 E	259.15@ 99.03	1.48
4633.00	21.81	94.88	4588.23	31.00	269.07	41.41 S	267.52 E	270.70@ 98.80	3.18
4664.00	22.51	95.15	4616.94	31.00	280.75	42.44 S	279.16 E	282.37@ 98.64	2.28
4695.00	23.04	93.83	4645.52	31.00	292.74	43.37 S	291.13 E	294.34@ 98.47	2.37
4727.00	23.65	92.60	4674.90	32.00	305.42	44.08 S	303.79 E	306.97@ 98.26	2.44
4758.00	24.18	91.89	4703.24	31.00	317.99	44.57 S	316.34 E	319.47@ 98.02	1.95
4789.00	25.06	91.19	4731.42	31.00	330.90	44.92 S	329.25 E	332.30@ 97.77	2.99
4853.00	24.62	92.68	4789.50	64.00	357.78	45.83 S	356.12 E	359.06@ 97.33	1.20
4917.00	25.24	94.00	4847.54	64.00	384.75	47.40 S	383.05 E	385.97@ 97.05	1.30
4979.00	25.41	95.94	4903.58	62.00	411.25	49.70 S	409.47 E	412.47@ 96.92	1.37
5043.00	24.36	95.15	4961.64	64.00	438.14	52.31 S	436.27 E	439.40@ 96.84	1.72
5074.00	23.74	94.79	4989.95	31.00	450.76	53.40 S	448.86 E	452.02@ 96.78	2.06
5105.00	23.13	94.00	5018.39	31.00	463.08	54.35 S	461.15 E	464.34@ 96.72	2.21
5136.00	22.42	94.35	5046.97	31.00	475.08	55.22 S	473.12 E	476.33@ 96.66	2.33
5168.00	23.30	91.81	5076.46	32.00	487.51	55.88 S	485.53 E	488.73@ 96.57	4.13
STRAIGHT-LINE PROJECTION TO BHL									
5203.00	23.30	91.81	5108.60	35.00	501.35	56.32 S	499.37 E	502.53@ 96.43	0.00



MAGNETIC SINGLE SHOT SURVEY REPORT

1. NAME OF SURVEYING COMPANY: BIGHORN DIRECTIONAL, INC.
2. NAME OF PERSON PERFORMING SURVEY: DERRIL GLEIM
3. POSITION OF SAID PERSON: DIRECTIONAL DRILLER
4. DATES ON WHICH SURVEY WAS PERFORMED: 1/24/01 TO 1/29/01
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: SEC 35-T32N-R9W, SAN JUAN CO., NM
7. TYPE OF SURVEY PERFORMED: MAGNETIC SINGLE SHOT
8. COMPLETE IDENTIFICATION OF WELL:
KOCH EXPLORATION
GARDNER #1 SIDETRACK
SAN JUAN COUNTY, NEW MEXICO
RIG: DRAKE 17
API NO: 30-045-11123-01
9. SURVEY CERTIFIED FROM 5269' TP 6156' MEASURED DEPTH

THIS IS TO CERTIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 961.0' AT A BEARING OF 95.82 DEG. FROM THE CENTER OF THE ROTARY TABLE AT A MEASURED DEPTH OF 6156' IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

Curtis J. MacIntyre
CURTIS J. MACINTYRE
PRESIDENT

===== Survey Program =====

PAGE: 1

Date: 2/8/2001 Time: 20:33:59

Filename: "GARD1MSS.SRV" Description: "KOCH EXPL. GARDNER #1 SIDETRACK"

Target Coordinates: 39.9 S 913.7 E Target TVD: 5950.000

Using Minimum Curvature Method.

S #	MEASURED DEPTH (feet)	DRIFT ANGLE (deg)	DRIFT DIRECTION (deg)	COURSE LENGTH (feet)	TRUE VERTICAL DEPTH (feet)	VERTICAL SECTION (feet)	--- RECTANGULAR COORDINATES (feet)	DOGLEG -SEVERITY DG/100FT
0	5168.0	23.30	91.810	0.0	5076.5	0.0	55.9 S 485.5 E	0.00
1	5269.0	24.75	89.000	101.0	5168.7	528.6	56.1 S 526.6 E	1.83
2	5362.0	26.00	91.000	93.0	5252.7	568.4	56.2 S 566.5 E	1.63
3	5455.0	28.25	91.000	93.0	5335.5	610.8	56.9 S 608.8 E	2.42
4	5547.0	30.25	92.000	92.0	5415.8	655.7	58.1 S 653.8 E	2.24
5	5603.0	31.00	92.000	56.0	5464.0	684.2	59.1 S 682.3 E	1.34
6	5633.0	32.25	92.000	30.0	5489.5	699.9	59.6 S 698.0 E	4.17
7	5666.0	33.00	93.000	33.0	5517.3	717.7	60.4 S 715.8 E	2.80
8	5698.0	32.25	93.000	32.0	5544.2	735.0	61.3 S 733.0 E	2.34
9	5726.0	31.00	94.000	28.0	5568.1	749.7	62.2 S 747.7 E	4.84
10	5788.0	31.00	97.000	62.0	5621.2	781.6	65.3 S 779.4 E	2.49
11	5879.0	31.50	100.000	91.0	5699.0	828.5	72.3 S 826.1 E	1.80
12	5971.0	31.75	101.000	92.0	5777.4	876.3	81.0 S 873.6 E	0.63
13	6002.0	31.50	102.000	31.0	5803.8	892.3	84.3 S 889.5 E	1.87
14	6064.0	25.75	101.000	62.0	5858.2	921.6	90.2 S 918.6 E	9.31
15	6156.0	23.25	101.000	92.0	5941.9	959.4	97.5 S 956.0 E	2.72

--- Final Closure Direction: 95.823
 --- Final Closure Distance: 960.976 feet