

District I
1525 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Arroyo, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED
JAN 09 2020

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-46048	Pool Code 98236 + 98220	Pool Name WC-015 G-08 S233135D; WOLFCAMP
Property Code 322740	Property Name STERLING SILVER MDP1 "33-4" FEDERAL COM	Well Number 178H
OGRID No. 16696	Operator Name OXY USA INC.	Elevation 3402.9'

Surface Location

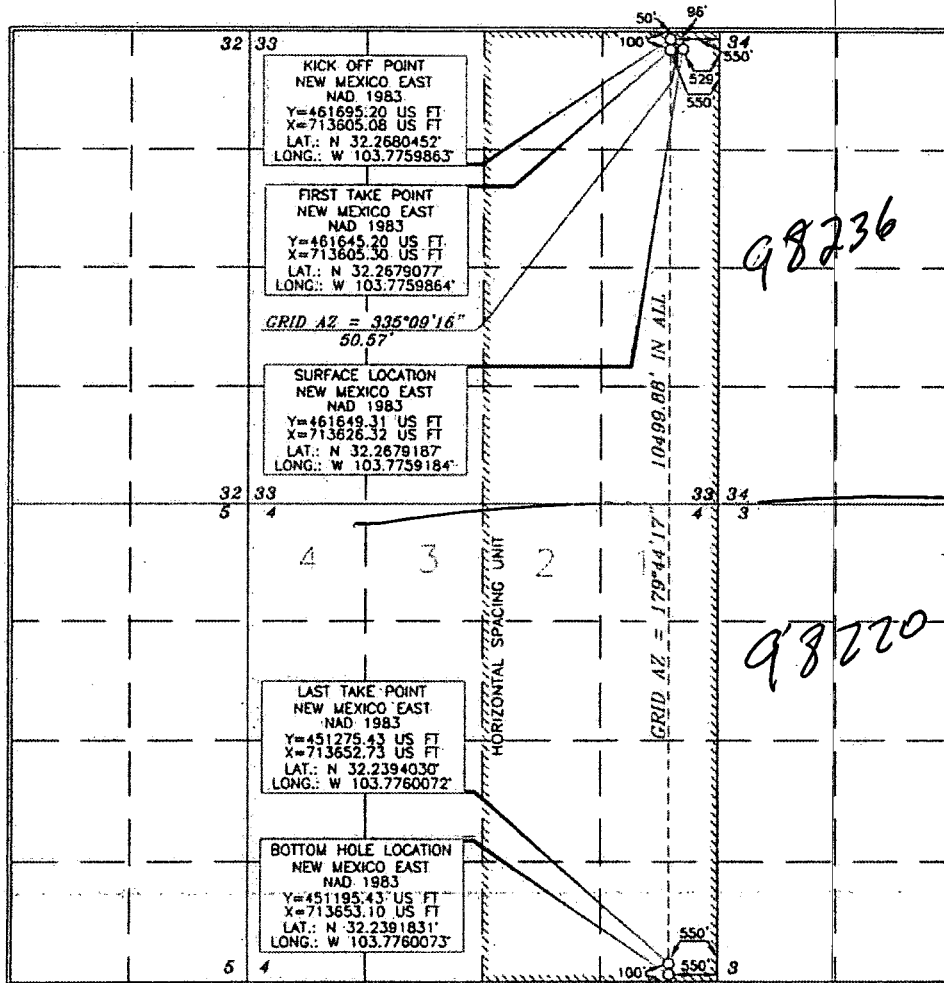
UL or lot no.	Section	Township	Range	Lot 1dn	Feet from the	North/South line	Feet from the	East/West line	County
A	33	23 SOUTH	31 EAST, N.M.P.M.		96'	NORTH	529'	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot 1dn	Feet from the	North/South line	Feet from the	East/West line	County
P	4	24 SOUTH	31 EAST, N.M.P.M.		20'	SOUTH	550'	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
640			NSL-7845

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.



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 undivided 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. hereby entered by the division <i>Leslie Reeves</i> 1/7/20 Signature Date LES LIE REEVES Printed Name LES LIE REEVES@OXY.COM E-mail Address	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. <i>FERRY J. ASH</i> Signature OCTOBER 28, 2016 Date of Survey 15079 Certificate Number Professional Land Surveyor
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Dual Pool Reporting

Intent ☐ As Drilled ☒

API #
30-015-46048

Operator Name: Dyng USA Inc.	Property Name: Sterling Silver MDA 33-4 Feed Can	Well Number: 1781
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Kick Off Point (KOP)

UL Y	Section 28	Township 23S	Range 31E	Lot	Feet 278	From N/S South	Feet 520	From E/W East	County EDDY
Latitude 32.26870					Longitude -103.77589			NAD NAD83	

First Take Point (FTP)

UL A	Section 33	Township 23S	Range 31E	Lot	Feet 182	From N/S North	Feet 606	From E/W East	County EDDY
Latitude 32.26768					Longitude -103.77417			NAD NAD83	

Last Take Point (LTP)

UL P	Section 4	Township 24S	Range 31E	Lot	Feet 174	From N/S South	Feet 545	From E/W East	County EDDY
Latitude 32.23961					Longitude -103.77614			NAD NAD83	

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #	Operator Name:	Property Name:	Well Number

KZ 06/29/2018

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

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JAN 09 2020

EMNRD-OCD ARTESIA

October 8, 2019

Oxy USA Incorporated
5 Greenway Plaza, Suite 110
Houston, TX 77046

Re:

S33, T23S, R31E Eddy, NM
N 32.2679187 W -103.7759184

CLIENT: Oxy USA Incorporated
WELL: Sterling Silver MDP1 33-4 Fed Com 17
FIELD: Purple Sage Wolfcamp

RIG: H&P 635
COUNTY: Eddy
API NO: 30-015-46048
JOB NO: 19MLH0349

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, a division of Schlumberger Technology Corporation (P-5 No. 754900).
Other information required by your office is as follows.

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Devon Kurtz FS	Sterling Silver MDP1 33-4 Fed Com 178H Original Hole	679.00 Ft to 21275.00 Ft	August 3, 2019 to September 15, 2019	TelePacer, SlimPulse 3rd Party Corrected

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
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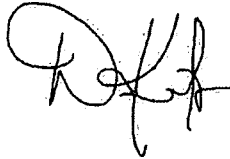
Schlumberger

Well Reference:

S33, T23S, R31E Eddy, NM
N 32.2679187 W -103.7759184

I, Devon Kurtz, certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of August 03, 2019 through September 15, 2019, conduct or supervise the taking of the TelePacer, SlimPulse & 3rd Party Corrected surveys from a depth of 679.00 feet to a depth of 21275.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of Oxy USA Incorporated for the Sterling Silver MDP1 33-4 Fed Com 178H Well (Original Hole) API No. 30-015-46048 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

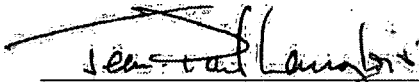
By
Devon Kurtz
FS



Subscribed and Sworn to before me this 8 day of October (month) 2019 (yr)

My Commission expires:

6/14/2023

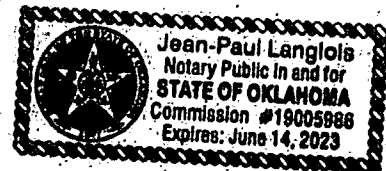


Notary Public

Comanche, Oklahoma

(County State)

(signature)



Schlumberger

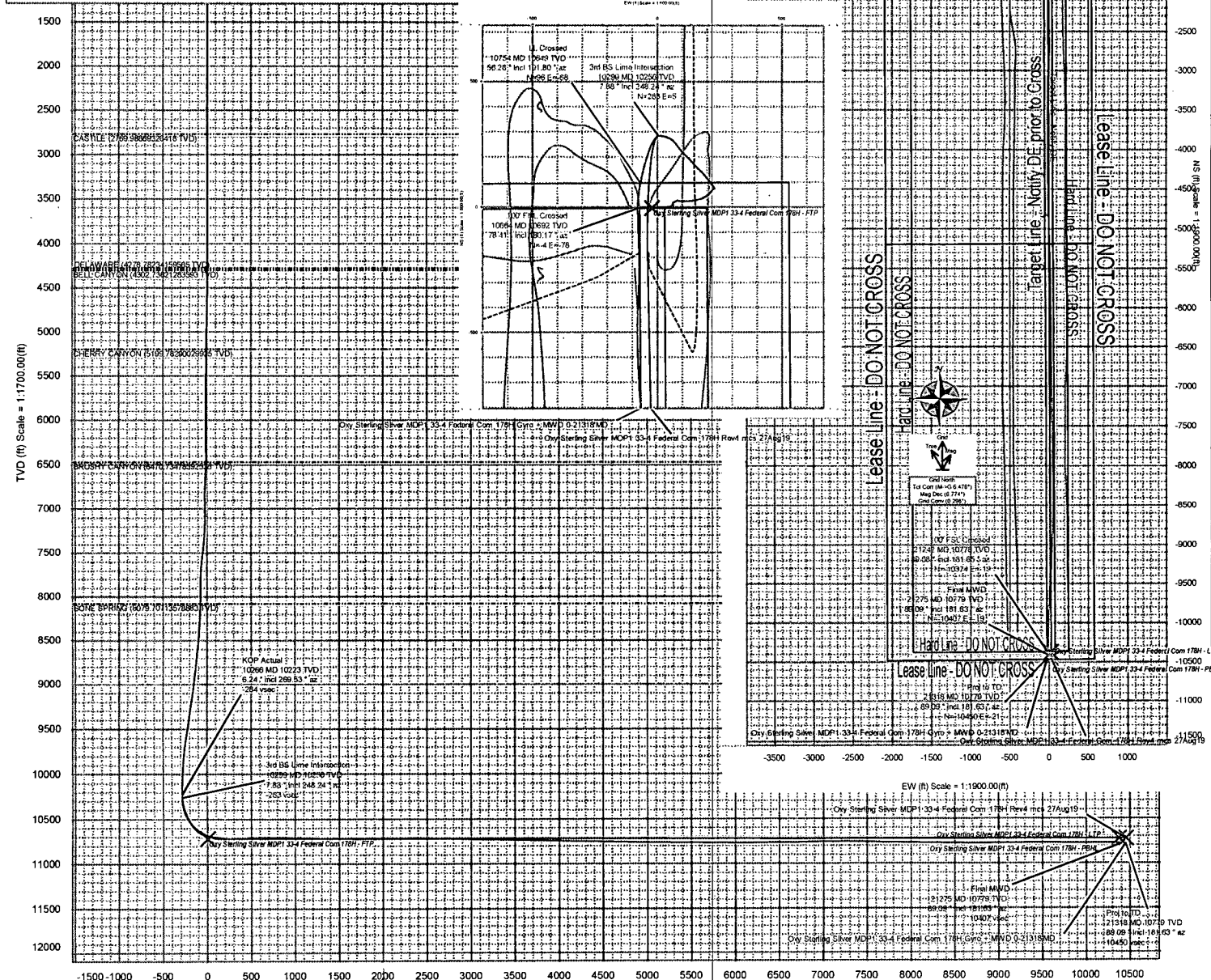
OXY



Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Sterling Silver MDP1 33-4 Federal Com 178H	NM Eddy County (NAD 83)	Oxy Sterling Silver MDP1 33-4 Federal Com 178H

Gravity & Magnetic Parameters	Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Miscellaneous
Model: IFR1 MagDec: 6.774° Dip: 59.948° FS: 47945.9nT Date: 27-Aug-2019 Gravity FS: 998.448mg (3.90665 Based)	Lat: N 32 16 4.51 Lon: W 103 48 33.31	Northing: 461849.31RUS Easting: 713826.32RUS Grid Conv: 0.2976° Scale Fact: 0.99994309	Slot: Silver MDP1 33-4 Federal Com Plan: 078 Sterling Silver MDP1 33-4 Federal Com 178H Gyro + MWD 0-21318MD TVD Ref: RKB=26.5'(3429.4ft above MSL)

Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)S(-)	E(+)W(-)	DLS
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00
Last Gyro	541.50	0.51	230.40	541.49	1.74	-1.74	-1.25	0.22
KOP Actual	10266.00	6.24	269.53	10222.97	-283.76	283.78	8.90	1.38
3rd BS Lime Intersection	10299.28	7.88	248.24	10256.00	-282.91	282.92	4.97	9.21
LL Crossed	10754.00	56.28	191.80	10649.48	-95.87	95.69	-67.61	20.04
100' FNL Crossed	10864.00	78.41	180.17	10691.71	4.19	-4.39	-78.16	22.75
100' FSL Crossed	21242.00	89.08	181.65	10778.06	10374.02	-10374.10	-18.52	0.06
Final MWD	21275.00	89.09	181.63	10778.59	10407.00	-10407.09	-19.46	0.06
Proj to TD	21318.00	89.09	181.63	10779.27	10449.98	-10450.06	-20.68	0.00



Vertical Section (ft) Azim = 179.85° Scale = 1:1700.00(ft) Origin = 0N/-S, 0E/-W

Oxy Sterling Silver MDP1 33-4 Federal Com 178H Gyro + MWD 0-21318'MD

Survey Geodetic Report

(Def Survey)



Report Date: September 17, 2019 - 04:38 PM
 Client: OXY
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Oxy Sterling Silver MDP1 33-4 Federal Com 178H / Oxy Sterling Silver MDP1 33-4 Federal Com 178H
 Well: Oxy Sterling Silver MDP1 33-4 Federal Com 178H
 Borehole: Original Borehole
 UWI / API#: Unknown / 30-015-46048
 Survey Name: Oxy Sterling Silver MDP1 33-4 Federal Com 178H Gyro + MWD 0-21318MD
 Survey Date: July 26, 2019
 Tort / AHD / DDI / ERD Ratio: 269,794' / 11353.713 ft / 6.782 / 1.053
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 16' 4.50739", W 103° 46' 33.30619"
 Location Grid N/E Y/X: N 461649.310 ftUS, E 713626.320 ftUS
 CRS Grid Convergence Angle: 0.2976°
 Grid Scale Factor: 0.99994309
 Version / Patch: 2.10.782.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 179.853° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB=26.5'
 TVD Reference Elevation: 3429.400 ft above MSL
 Seabed / Ground Elevation: 3402.900 ft above MSL
 Magnetic Declination: 6.774°
 Total Gravity Field Strength: 998.4489mgn (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 47945.900 nT
 Magnetic Dip Angle: 59.948°
 Declination Date: August 27, 2019
 Magnetic Declination Model: IFR1
 North Reference: Grid North
 Grid Convergence Used: 0.2976°
 Total Corr Mag North->Grid: 6.4764°
 North: Well Head
 Local Coord Referenced To:

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	461649.31	713626.32	N 32 16 4.51	W 103 46 33.31
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	461649.31	713626.32	N 32 16 4.51	W 103 46 33.31
	72.50	0.08	285.82	72.50	-0.01	0.01	-0.03	0.17	461649.32	713626.29	N 32 16 4.51	W 103 46 33.31
	142.50	0.07	140.54	142.50	0.01	-0.01	-0.05	0.20	461649.30	713626.27	N 32 16 4.51	W 103 46 33.31
	185.50	0.19	172.83	185.50	0.10	0.10	-0.03	0.32	461649.21	713626.29	N 32 16 4.51	W 103 46 33.31
	274.50	0.22	217.75	274.50	0.38	-0.38	-0.11	0.18	461648.93	713626.21	N 32 16 4.50	W 103 46 33.31
	369.50	0.32	226.61	369.50	0.71	-0.71	-0.42	0.11	461648.60	713625.90	N 32 16 4.50	W 103 46 33.31
	464.50	0.49	211.06	464.50	1.24	-1.24	-0.82	0.21	461648.07	713625.50	N 32 16 4.50	W 103 46 33.32
Last Gyro	541.50	0.51	230.40	541.49	1.74	-1.74	-1.25	0.22	461647.57	713625.07	N 32 16 4.49	W 103 46 33.32
	679.00	0.06	89.92	678.99	2.13	-2.13	-1.65	0.41	461647.18	713624.67	N 32 16 4.49	W 103 46 33.33
	773.00	0.21	293.82	772.99	2.06	-2.06	-1.76	0.28	461647.25	713624.56	N 32 16 4.49	W 103 46 33.33
	958.00	0.09	307.59	957.99	1.83	-1.84	-2.19	0.07	461647.47	713624.13	N 32 16 4.49	W 103 46 33.33
	1051.00	0.09	160.81	1050.99	1.85	-1.86	-2.22	0.19	461647.45	713624.10	N 32 16 4.49	W 103 46 33.33
	1142.00	0.09	36.45	1141.99	1.86	-1.87	-2.15	0.17	461647.44	713624.17	N 32 16 4.49	W 103 46 33.33
	1238.00	0.17	20.89	1237.99	1.67	-1.68	-2.06	0.09	461647.63	713624.26	N 32 16 4.49	W 103 46 33.33
	1330.00	0.09	104.63	1329.99	1.56	-1.57	-1.94	0.20	461647.74	713624.38	N 32 16 4.49	W 103 46 33.33
	1423.00	0.09	334.98	1422.99	1.51	-1.52	-1.90	0.18	461647.79	713624.42	N 32 16 4.49	W 103 46 33.33
	1611.00	0.09	133.60	1610.99	1.48	-1.49	-1.85	0.09	461647.82	713624.47	N 32 16 4.49	W 103 46 33.33
	1703.00	0.14	173.29	1702.99	1.64	-1.65	-1.79	0.10	461647.66	713624.53	N 32 16 4.49	W 103 46 33.33
	1892.00	0.14	285.87	1891.99	1.81	-1.81	-1.98	0.12	461647.50	713624.34	N 32 16 4.49	W 103 46 33.33
	1987.00	0.07	296.42	1986.99	1.75	-1.76	-2.15	0.08	461647.55	713624.17	N 32 16 4.49	W 103 46 33.33
	2176.00	0.09	84.81	2175.99	1.69	-1.69	-2.10	0.08	461647.62	713624.22	N 32 16 4.49	W 103 46 33.33
	2365.00	0.09	200.39	2364.99	1.81	-1.82	-2.01	0.08	461647.49	713624.31	N 32 16 4.49	W 103 46 33.33
	2459.00	0.09	133.36	2458.99	1.93	-1.94	-1.98	0.11	461647.37	713624.34	N 32 16 4.49	W 103 46 33.33
	2553.00	0.09	201.12	2552.99	2.05	-2.06	-1.95	0.11	461647.25	713624.37	N 32 16 4.49	W 103 46 33.33
	2648.00	0.07	318.78	2647.99	2.08	-2.08	-2.02	0.14	461647.23	713624.30	N 32 16 4.49	W 103 46 33.33
	2742.00	0.09	188.92	2741.99	2.11	-2.11	-2.07	0.15	461647.20	713624.25	N 32 16 4.49	W 103 46 33.33
	2836.00	0.07	105.37	2835.99	2.20	-2.20	-2.02	0.11	461647.11	713624.30	N 32 16 4.49	W 103 46 33.33
	2931.00	0.17	114.18	2930.99	2.27	-2.27	-1.84	0.11	461647.04	713624.48	N 32 16 4.48	W 103 46 33.33
	3025.00	0.09	284.46	3024.99	2.31	-2.31	-1.78	0.28	461647.00	713624.54	N 32 16 4.48	W 103 46 33.33
	3120.00	0.09	269.90	3119.99	2.29	-2.29	-1.93	0.02	461647.02	713624.39	N 32 16 4.48	W 103 46 33.33
	3214.00	0.09	311.21	3213.99	2.24	-2.25	-2.06	0.07	461647.06	713624.26	N 32 16 4.49	W 103 46 33.33
	3403.00	0.16	78.43	3402.99	2.09	-2.10	-1.91	0.12	461647.21	713624.41	N 32 16 4.49	W 103 46 33.33
	3592.00	0.27	105.25	3591.99	2.16	-2.16	-1.22	0.08	461647.15	713625.10	N 32 16 4.49	W 103 46 33.32
	3780.00	0.19	161.42	3779.99	2.57	-2.57	-0.70	0.12	461646.74	713625.62	N 32 16 4.48	W 103 46 33.31
	3875.00	0.11	62.40	3874.99	2.68	-2.68	-0.57	0.25	461646.63	713625.75	N 32 16 4.48	W 103 46 33.31
	3969.00	0.32	119.31	3968.98	2.76	-2.77	-0.26	0.29	461646.54	713626.06	N 32 16 4.48	W 103 46 33.31
	4063.00	1.14	91.22	4062.98	2.92	-2.91	0.91	0.93	461646.40	713627.23	N 32 16 4.48	W 103 46 33.30
	4158.00	2.21	91.75	4157.93	3.00	-2.99	3.68	1.13	461646.32	713630.00	N 32 16 4.48	W 103 46 33.26
	4247.00	3.16	88.24	4246.84	2.99	-2.97	7.85	1.08	461646.34	713634.17	N 32 16 4.48	W 103 46 33.21
	4387.00	4.41	86.33	4386.53	2.55	-2.50	17.08	0.90	461646.81	713643.40	N 32 16 4.48	W 103 46 33.11
	4577.00	4.56	82.33	4575.95	1.11	-1.03	31.85	0.18	461648.28	713658.17	N 32 16 4.50	W 103 46 32.94
	4672.00	4.33	79.47	4670.66	-0.03	0.13	39.12	0.34	461649.44	713685.44	N 32 16 4.51	W 103 46 32.85
	4767.00	3.98	75.40	4765.41	-1.50	1.62	45.84	0.48	461650.93	713672.16	N 32 16 4.52	W 103 46 32.77
	4862.00	3.77	74.77	4860.19	-3.14	3.27	52.04	0.23	461652.58	713678.36	N 32 16 4.54	W 103 46 32.70
	4991.00	3.80	73.43	4988.91	-5.45	5.60	60.23	0.07	461654.91	713686.55	N 32 16 4.56	W 103 46 32.60
	5086.00	1.65	48.12	5083.80	-7.25	7.41	64.27	2.54	461656.72	713690.58	N 32 16 4.58	W 103 46 32.56
	5181.00	0.62	307.41	5178.79	-8.47	8.64	64.88	1.97	461657.95	713691.19	N 32 16 4.59	W 103 46 32.55
	5276.00	0.51	308.36	5273.78	-9.05	9.21	64.14	0.12	461658.52	713690.45	N 32 16 4.60	W 103 46 32.56
	5371.00	0.66	308.28	5368.78	-9.65	9.81	63.38	0.16	461659.12	713689.69	N 32 16 4.60	W 103 46 32.57
	5466.00	0.56	292.20	5463.77	-10.17	10.33	62.52	0.21	461659.64	713688.83	N 32 16 4.61	W 103 46 32.58
	5561.00	0.61	299.14	5558.77	-10.59	10.75	61.65	0.09	461660.06	713687.96	N 32 16 4.61	W 103 46 32.59
	5751.00	0.49	279.75	5748.76	-11.23	11.38	59.96	0.12	461660.69	713686.28	N 32 16 4.62	W 103 46 32.61
	5846.00	0.49	283.33	5843.76	-11.39	11.54	59.17	0.03	461660.85	713685.48	N 32 16 4.62	W 103 46 32.62
	5941.00	0.34	274.58	5938.75	-11.51	11.66	58.49	0.17	461660.97	713684.81	N 32 16 4.62	W 103 46 32.62
	6130.00	0.22	210.11	6127.75	-11.24	11.39	57.75	0.17	461660.70	713684.07	N 32 16 4.62	W 103 46 32.63
	6225.00	0.27	159.10	6222.75	-10.88	11.02	57.74	0.23	461660.33	713684.05	N 32 16 4.61	W 103 46 32.63
	6415.00	0.60	111.12	6412.75	-10.10	10.25	58.82	0.24	461659.56	713685.14	N 32 16 4.61	W 103 46 32.62
	6510.00	2.22	21.48	6507.72	-11.63	11.78	59.96	2.42	461661.09	713686.28	N 32 16 4.62	W 103 46 32.61
	6605.00	4.16	38.02	6602.57	-16.05	16.21	62.76	2.24	461665.52	713689.08	N 32 16 4.66	W 103 46 32.57
	6794.00	6.46	75.39	6790.80	-24.09	24.29	77.28	2.14	461673.60	713703.59	N 32 16 4.74	W 103 46 32.40
	6889.00	7.00	101.18	6885.17	-24.29	24.52	88.13	3.20	461673.83	713714.44	N 32 16 4.75	W 103 46 32.28
	6984.00	8.59	91.92	6979.29	-22.90	23.16	100.90	2.13	461672.47	713727.21	N 32 16 4.73	W 103 46 32.13
	7079.00	11.04	87.84	7072.89	-22.96	23.26	117.08	2.68	461672.57	713743.40	N 32 16 4.73	W 103 46 31.94
	7174.00	12.12	85.01	7165.96	-24.12	24.47	136.11	1.28	461673.78	713762.42	N 32 16 4.74	W 103 46 31.72
	7269.00	12.53	78.15	7258.77	-27.06	27.46	156.13	1.60	461676.77	713782.44	N 32 16 4.77	W 103 46 31.49
	7364.00	12.92	69.09	7351.45	-32.91	33.36	176.14	2.14	461682.67	713802.45	N 32 16 4.83	W 103 46 31.25
	7459.00	11.79	58.18	7444.26	-41.78	42.27	194.31	2.72	461691.58	713820.62	N 32 16 4.92	W 103 46 31.04
	7554.00	10.20	45.70	7537.53	-52.73	53.27	208.58	3.00	461702.58	713834.89	N 32 16 5.02	W 103 46 30.87
	7647.00	7.47	36.38	7629.42	-63.33	63.89	218.06	3.31	461713.20	713844.37	N 32 16 5.13	W 103 46 30.76
	7744.00	4.48	52.82	7725.89	-70.68	71.26	224.82	3.52	461720.56	713851.13	N 32 16 5.20	W 103 46 30.68
	7840.00	1.74	86.07	7821.74	-73.03	73.62	229.26	3.30	461722.93	713855.57	N 32 16 5.22	W 103 46 30.63
	8029.00	1.22	307.84	8010.72	-74.46	75.05	230.54	1.47	461724.36	713856.84	N 32 16 5.24	W 103 46 30.62
	8124.00	2.52	317.97	8105.66	-76.64	77.23	228.34	1.41	461726.53	713854.65	N 32 16 5.26	W 103 46 30.64
	8219.00	3.22	323.64	8200.54	-80.35	80.93</						

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	8504.00	6.23	326.28	8484.71	-96.28	97.85	212.06	1.95	461745.83	713538.37	N 32 16 5.46 W 103 46 30.83	
	8599.00	7.02	324.00	8579.08	-105.98	106.51	205.79	0.88	461755.82	713532.10	N 32 16 5.55 W 103 46 30.90	
	8694.00	7.70	323.19	8673.29	-115.79	116.30	198.56	0.72	461765.61	713824.87	N 32 16 5.65 W 103 46 30.99	
	8789.00	7.32	318.83	8767.48	-125.45	125.94	190.75	0.74	461775.24	713817.06	N 32 16 5.74 W 103 46 31.08	
	8884.00	8.05	315.41	8861.63	-134.75	135.22	182.08	0.89	461784.52	713808.39	N 32 16 5.84 W 103 46 31.18	
	8980.00	9.06	313.10	8956.56	-144.73	145.17	171.84	1.11	461794.47	713798.15	N 32 16 5.94 W 103 46 31.30	
	9075.00	10.31	314.44	9050.20	-155.82	156.24	160.31	1.34	461805.54	713786.62	N 32 16 6.05 W 103 46 31.43	
	9170.00	10.70	318.57	9143.61	-168.42	168.80	148.40	0.89	461818.10	713774.72	N 32 16 6.17 W 103 46 31.57	
	9265.00	11.37	318.11	9236.85	-182.03	182.38	136.32	0.71	461831.68	713762.63	N 32 16 6.31 W 103 46 31.71	
	9454.00	12.05	313.58	9421.92	-209.57	209.85	109.58	0.60	461859.15	713735.90	N 32 16 6.58 W 103 46 32.02	
	9644.00	11.83	324.11	9607.84	-239.09	239.31	83.80	1.15	461888.60	713710.11	N 32 16 6.87 W 103 46 32.32	
	9739.00	9.50	322.23	9701.19	-253.21	253.40	73.28	2.48	461902.69	713699.60	N 32 16 7.01 W 103 46 32.44	
	9834.00	8.06	312.96	9795.08	-263.97	264.13	63.61	2.12	461913.43	713689.92	N 32 16 7.12 W 103 46 32.55	
	9929.00	7.98	298.85	9889.16	-271.72	271.85	52.96	2.07	461921.15	713679.27	N 32 16 7.19 W 103 46 32.67	
	10024.00	8.53	288.36	9983.18	-277.15	277.25	40.49	1.68	461926.55	713668.81	N 32 16 7.25 W 103 46 32.82	
	10119.00	8.55	284.67	10077.13	-281.19	281.26	26.98	0.58	461930.56	713653.29	N 32 16 7.29 W 103 46 32.98	
	10214.00	6.60	275.11	10171.30	-283.50	283.54	14.70	2.44	461932.83	713641.02	N 32 16 7.31 W 103 46 33.12	
	10266.00	6.24	269.53	10222.97	-283.76	283.78	8.90	1.38	461933.07	713635.22	N 32 16 7.31 W 103 46 33.19	
KOP Actual 3rd BS Lime Intersection	10299.28	7.88	248.24	10256.00	-282.91	282.92	4.97	9.21	461932.21	713631.29	N 32 16 7.31 W 103 46 33.23	
	10386.00	14.51	224.07	10341.07	-272.91	272.89	-8.13	9.21	461922.19	713618.19	N 32 16 7.21 W 103 46 33.38	
	10481.00	24.10	203.96	10430.71	-246.59	246.53	-24.34	12.15	461895.82	713601.98	N 32 16 6.95 W 103 46 33.57	
	10575.00	28.74	197.55	10514.89	-207.51	207.41	-38.96	5.79	461856.71	713587.37	N 32 16 6.56 W 103 46 33.75	
LL Crossed	10670.00	39.58	194.71	10593.39	-156.34	156.21	-53.57	11.53	461805.51	713572.75	N 32 16 6.06 W 103 46 33.92	
	10754.00	56.28	191.80	10649.48	-95.87	95.69	-67.61	20.04	461745.00	713558.71	N 32 16 5.46 W 103 46 34.09	
	10765.00	58.47	191.51	10655.41	-86.80	86.62	-69.48	20.04	461735.93	713556.84	N 32 16 5.37 W 103 46 34.11	
100' FNL Crossed	10864.00	78.41	180.17	10691.71	4.19	-4.39	-78.16	22.75	461644.92	713548.17	N 32 16 4.47 W 103 46 34.22	
	10959.00	83.26	177.39	10706.84	97.92	-98.12	-76.15	5.87	461551.20	713550.18	N 32 16 3.54 W 103 46 34.20	
	11054.00	85.77	178.43	10715.92	192.42	-192.61	-72.70	2.86	461456.71	713553.62	N 32 16 2.61 W 103 46 34.16	
	11149.00	91.25	181.80	10718.39	287.34	-287.53	-72.89	6.77	461361.80	713553.43	N 32 16 1.67 W 103 46 34.17	
	11154.00	91.02	182.34	10718.29	292.33	-292.52	-73.08	11.74	461356.80	713553.25	N 32 16 1.62 W 103 46 34.17	
	11214.00	91.37	182.66	10717.04	352.26	-352.45	-75.69	0.79	461296.88	713550.63	N 32 16 1.02 W 103 46 34.21	
	11341.00	91.26	180.53	10714.12	479.16	-479.36	-79.23	1.68	461169.98	713547.10	N 32 15 59.77 W 103 46 34.26	
	11436.00	91.23	178.41	10712.06	574.13	-574.33	-78.35	2.23	461075.01	713547.98	N 32 15 58.83 W 103 46 34.25	
	11531.00	90.99	177.36	10710.22	669.05	-669.25	-74.84	1.13	460980.10	713551.48	N 32 15 57.89 W 103 46 34.22	
	11626.00	89.68	176.60	10709.66	763.93	-764.11	-69.84	1.59	460885.24	713556.49	N 32 15 56.95 W 103 46 34.17	
	11721.00	89.06	177.16	10710.71	858.79	-858.96	-64.67	0.88	460790.40	713561.66	N 32 15 56.01 W 103 46 34.11	
	11911.00	88.72	176.88	10714.39	1048.53	-1048.67	-54.79	0.23	460600.70	713571.53	N 32 15 54.13 W 103 46 34.01	
	12006.00	88.72	177.35	10716.51	1143.39	-1143.53	-50.01	0.49	460505.85	713576.31	N 32 15 53.19 W 103 46 33.96	
	12101.00	89.06	176.74	10718.35	1238.26	-1238.38	-45.11	0.74	460411.00	713581.21	N 32 15 52.26 W 103 46 33.91	
	12196.00	89.10	176.50	10719.88	1333.10	-1333.20	-39.51	0.26	460316.18	713586.81	N 32 15 51.32 W 103 46 33.85	
	12291.00	89.41	175.56	10721.11	1427.88	-1427.97	-32.94	1.04	460221.43	713593.38	N 32 15 50.38 W 103 46 33.78	
	12386.00	89.30	174.60	10722.18	1522.54	-1522.61	-24.79	1.02	460126.79	713601.53	N 32 15 49.44 W 103 46 33.69	
	12481.00	89.82	177.26	10722.91	1617.31	-1617.36	-18.05	2.85	460032.05	713608.27	N 32 15 48.50 W 103 46 33.61	
	12575.00	89.58	177.97	10723.40	1711.23	-1711.27	-14.14	0.80	459938.14	713612.18	N 32 15 47.58 W 103 46 33.57	
	12670.00	90.10	179.11	10723.67	1806.21	-1806.24	-11.72	1.32	459843.17	713614.60	N 32 15 46.64 W 103 46 33.55	
	12660.00	90.96	179.37	10721.91	1996.18	-1996.21	-9.20	0.47	459653.21	713617.12	N 32 15 44.76 W 103 46 33.53	
	13050.00	90.82	178.60	10718.98	2186.14	-2186.16	-5.83	0.41	459463.28	713620.49	N 32 15 42.88 W 103 46 33.51	
	13240.00	90.51	179.62	10716.75	2376.11	-2376.12	-2.88	0.56	459273.33	713623.44	N 32 15 41.00 W 103 46 33.48	
	13335.00	89.82	178.68	10716.48	2471.10	-2471.11	-1.47	1.23	459176.35	713624.85	N 32 15 40.06 W 103 46 33.47	
	13430.00	88.96	178.14	10717.49	2566.06	-2566.07	-1.16	1.07	459083.39	713627.48	N 32 15 39.12 W 103 46 33.45	
	13525.00	88.75	179.85	10719.39	2661.03	-2661.03	-2.83	1.81	458988.44	713629.15	N 32 15 38.18 W 103 46 33.43	
	13620.00	88.34	180.72	10721.80	2755.99	-2756.00	-2.36	1.01	458893.48	713628.68	N 32 15 37.24 W 103 46 33.45	
	13715.00	88.13	182.27	10724.73	2850.91	-2850.92	-0.12	1.65	458798.56	713626.20	N 32 15 36.30 W 103 46 33.48	
	13810.00	88.31	181.52	10727.68	2945.80	-2945.82	-3.26	0.81	458703.67	713623.06	N 32 15 35.36 W 103 46 33.52	
	13905.00	88.48	184.50	10730.34	3040.61	-3040.64	-8.24	3.14	458608.85	713618.08	N 32 15 34.42 W 103 46 33.59	
	14095.00	89.85	180.51	10733.11	3230.34	-3230.39	-16.55	2.22	458419.11	713609.78	N 32 15 32.54 W 103 46 33.69	
	14190.00	89.03	180.62	10734.04	3325.33	-3325.38	-17.48	0.87	458324.12	713608.84	N 32 15 31.60 W 103 46 33.71	
	14285.00	89.13	179.74	10735.57	3420.31	-3420.37	-17.78	0.93	458229.14	713608.54	N 32 15 30.66 W 103 46 33.72	
	14380.00	88.99	179.99	10737.12	3515.30	-3515.36	-17.56	0.30	458134.16	713608.76	N 32 15 29.72 W 103 46 33.72	
	14475.00	88.72	179.63	10739.02	3610.28	-3610.34	-17.24	0.47	458039.19	713609.08	N 32 15 28.78 W 103 46 33.73	
	14666.00	89.37	179.48	10742.21	3801.25	-3801.30	-15.76	0.35	457848.23	713610.56	N 32 15 26.89 W 103 46 33.72	
	14760.00	89.06	180.10	10743.49	3895.24	-3895.29	-15.41	0.74	457754.25	713610.91	N 32 15 25.96 W 103 46 33.72	
	14855.00	88.99	179.86	10745.11	3990.23	-3990.28	-15.38	0.26	457659.26	713610.94	N 32 15 25.02 W 103 46 33.73	
	14950.00	88.44	179.32	10747.24	4085.20	-4085.25	-14.70	0.81	457564.30	713611.62	N 32 15 24.08 W 103 46 33.72	
	15045.00	89.06	178.83	10749.31	4180.17	-4180.22	-13.17	0.83	457469.34	713613.15	N 32 15 23.15 W 103 46 33.71	
	15235.00	89.03	179.63	10752.48	4370.13	-4370.17	-10.61	0.42	457279.39	713615.71	N 32 15 21.27 W 103 46 33.69	
	15330.00	88.51	179.20	10754.52	4465.11	-4465.15	-9.65	0.71	457184.43	713616.68	N 32 15 20.33 W 103 46 33.69	
	15425.00	89.30	179.67	10756.33	4560.08	-4560.12	-8.71	0.97	457089.46	713617.61	N 32 15 19.39 W 103 46 33.68	
	15520.00	89.17	178.10	10757.60	4655.05	-4655.09	-6.86	1.66	456994.49	713619.46	N 32 15 18.45 W 103 46 33.67	
	15710.00	88.23	177.35	10761.91	4844.88	-4844.89	0.68	0.63	456804.70	713627.00	N 32 15 16.57 W 103 46 33.59	
	15805.00	89.48	179.64	10763.81	4939.82	-4939.83	3.17	2.75	456709.77	713629.49	N 32 15 15.63 W 103 46 33.57	
	15900.00	89.68	179.18	10764.51	5034.82	-5034.82	4.15	0.53	456614.78	713630.47	N 32 15 14.69 W 103 46 33.56	
	16090.00	89.72	177.68	10765.50	5224.75	-5224.74	9.36	0.79	456424.87	713635.68	N 32 15 12.81 W 103 46 33.51	
	16185.00	89.54	179.21	10766.12	5319.72	-5319.70	11.94	1.62	456329.92	713638.25	N 32 15 11.87 W 103 46 33.49	
	16280.00	89.72	179.14	10766.73	5414.71	-5414.69	13.30	0.20	456234.94	713639.62	N 32 15 10.93 W 103 46 33.48	
	16470.00	89.37	179.29	10768.24	5604.69	-5604.67	15.91	0.20	456044.97	713642.23	N 32 15 9.05 W 103 46 33.46	
	16565.00	89.82										

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	20266.00	90.26	182.81	10772.68	9399.06	-9399.04	21.09	0.78	452250.82	713647.41	N 32 14 31.50	W 103 46 33.63
	20361.00	89.71	183.85	10772.70	9493.89	-9493.88	15.57	1.24	452155.99	713641.89	N 32 14 30.57	W 103 46 33.70
	20551.00	89.54	182.53	10773.95	9683.56	-9683.58	5.00	0.70	451966.30	713631.32	N 32 14 28.69	W 103 46 33.83
	20741.00	90.13	182.94	10774.49	9873.31	-9873.36	-4.07	0.38	451776.53	713622.25	N 32 14 26.81	W 103 46 33.95
	20931.00	90.02	180.96	10774.25	10063.18	-10063.24	-10.53	1.04	451586.67	713615.79	N 32 14 24.93	W 103 46 34.04
	21026.00	89.34	181.33	10774.78	10158.15	-10158.22	-12.43	0.81	451491.69	713613.89	N 32 14 23.99	W 103 46 34.06
	21121.00	89.06	181.72	10776.10	10253.10	-10253.17	-14.96	0.51	451396.74	713611.36	N 32 14 23.05	W 103 46 34.10
100' FSL Crossed	21242.00	89.08	181.65	10778.06	10374.02	-10374.10	-18.52	0.06	451275.82	713607.80	N 32 14 21.86	W 103 46 34.15
Final MWD	21275.00	89.09	181.63	10778.59	10407.00	-10407.09	-19.46	0.06	451242.84	713606.86	N 32 14 21.53	W 103 46 34.16
Proj to TD	21318.00	89.09	181.63	10779.27	10449.98	-10450.06	-20.68	0.00	451199.86	713605.64	N 32 14 21.11	W 103 46 34.18

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 3 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	26.500	1/98.425	30.000	30.000	GYD_GC+DROP+OH-Depth Only	Original Borehole / Oxy Sterling Silver MDP1 33-4 Federal Com 178H Gyro + MWD 0-21318'MD
	1	26.500	26.500	Act Stns	30.000	30.000	GYD_GC+DROP+OH-Depth Only	Original Borehole / Oxy Sterling Silver MDP1 33-4 Federal Com 178H Gyro + MWD 0-21318'MD
	1	26.500	541.500	Act Stns	30.000	30.000	GYD_GC+DROP+OH	Original Borehole / Oxy Sterling Silver MDP1 33-4 Federal Com 178H Gyro + MWD 0-21318'MD
	1	541.500	4247.000	Act Stns	30.000	30.000	A010Mb_MWD+IFR1+SAG+MS	Original Borehole / Oxy Sterling Silver MDP1 33-4 Federal Com 178H Gyro + MWD 0-21318'MD
	1	4247.000	4991.000	Act Stns	30.000	30.000	B001Mb_MWD+HRGM	Original Borehole / Oxy Sterling Silver MDP1 33-4 Federal Com 178H Gyro + MWD 0-21318'MD
	1	4991.000	10214.000	Act Stns	30.000	30.000	A010Mb_MWD+IFR1+SAG+MS	Original Borehole / Oxy Sterling Silver MDP1 33-4 Federal Com 178H Gyro + MWD 0-21318'MD
	1	10214.000	10575.000	Act Stns	30.000	30.000	B001Mb_MWD+HRGM	Original Borehole / Oxy Sterling Silver MDP1 33-4 Federal Com 178H Gyro + MWD 0-21318'MD
	1	10575.000	13430.000	Act Stns	30.000	30.000	A010Mb_MWD+IFR1+SAG+MS	Original Borehole / Oxy Sterling Silver MDP1 33-4 Federal Com 178H Gyro + MWD 0-21318'MD
	1	13430.000	13715.000	Act Stns	30.000	30.000	B001Mb_MWD+HRGM	Original Borehole / Oxy Sterling Silver MDP1 33-4 Federal Com 178H Gyro + MWD 0-21318'MD
	1	13715.000	21318.000	Act Stns	30.000	30.000	A010Mb_MWD+IFR1+SAG+MS	Original Borehole / Oxy Sterling Silver MDP1 33-4 Federal Com 178H Gyro + MWD 0-21318'MD