

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Secretary

Adrienne Sandoval, Division Director
Oil Conservation Division



Notice of C-104 Denial and Request for Information

OCD denies your C-104 – *Request for Allowable and Authorization to Transport* because it is incomplete or conflicts with other information provided to OCD.

The sale or transport of product without a C-104 approved by OCD violates the Oil and Gas Act and the implementing rules, including 19.15.7.15 and 19.15.16.19 NMAC.

To avoid an enforcement action, you must submit the indicated information no later than 30 days after receipt of this notice.

Test Allowable, New Well and Recompleted Well *Amend C-104*
30-015-46048

- ☐ C-103 (or BLM equivalent) for all casing strings
 - ☐ Spud Notice
 - ☐ Surface Casing
 - ☐ Intermediate Casing (if applicable)
 - ☐ Additional Intermediate Casing (if applicable)
 - ☐ Production Casing or Liner

☐ Applicable Order (NSL, NSP, Other _____)

☐ Deviation Survey for Vertical Wells

☒ Directional Survey *CERTIFIED COPY*

☐ C-102 (As-Drilled Plat for Horizontal Well) *CR*

New Well and Recompleted Well Only

☐ C-103 Completion Sundry (or BLM equivalent)

☐ C-105 Completion Report (or BLM equivalent)

☐ All Logs Run on Well

If you have any questions please contact the local OCD District Office

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., 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
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

NM OIL CONSERVATION

ARTESIA DISTRICT

OCT 15 2019

Submit one copy to appropriate District Office

RECEIVED

☐ AMENDED REPORT

Form C-104
Revised August 1, 2011

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address OXY USA INC. P.O. BOX 4294 HOUSTON, TX 77210		² OGRID Number 16696
³ Reason for Filing Code/ Effective Date - RT		
⁴ API Number 30-015-46048	⁵ Pool Name INGLE WELLS BONE SPRING	⁶ Pool Code 33740
⁷ Property Code: 322740	⁸ Property Name: STERLING SILVER MDP1 33-4 FEDERAL COM	⁹ Well Number: 178H

II. 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	33	23S	31E		96	NORTH	529	EAST	EDDY

¹¹ Bottom Hole Location

FTP: 182' FNL 606' FEL LTP: 174' FSL 545' FEL

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	4	24S	31E		23	SOUTH	550	EAST	EDDY
¹² Lse Code F	¹³ Producing Method Code : F	¹⁴ Gas Connection Date: TBD	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date				

III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
237722	CENTURION PIPELINE L.P.	O
151618	ENTERPRISE FIELD SERVICES LLC	G

IV. Well Completion Data

²¹ Spud Date 07/07/2019	²² Ready Date 10/14/2019	²³ TD 10778'V/21296'M	²⁴ PBDT 10778'V/21283'/M	²⁵ Perforations 10947'-21167'	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
17-1/2"	13-3/8" *	545'	715		
12-1/4"	9-5/8" *	4360'	1400		
8-3/4"	7-5/8" *	10300'	478		
6-3/4"	5-1/2" *	21249'	845		

V. Well Test Data

³¹ Date New Oil	³² Gas Delivery Date	³³ Test Date	³⁴ Test Length	³⁵ Tbg. Pressure	³⁶ Csg. Pressure
³⁷ Choke Size	³⁸ Oil	³⁹ Water	⁴⁰ Gas		⁴¹ Test Method

⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature: Sarah Chapman

Printed name:
SARAH CHAPMAN

Title:
REGULATORY SPECIALIST

E-mail Address:
sarah_chapman@oxy.com

Date: 10/14/2019 Phone: 713-350-4997

OIL CONSERVATION DIVISION

Appr

DENIED

See Attached Cover Sheet

Title

Approval Date

* Missing tbg. size & class

"RT" Expires 11/2/20

* Supply Certified Deviation Survey on next submittal.

NM OIL CONSERVATION

ARTESIA DISTRICT

OCT 15 2019

Form C-102

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Azusa, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, 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
Revised August 1, 2011
Submit one copy to appropriate
District Office

☒ AMENDED REPORT

AS-Drilled

WELL LOCATION AND ACREAGE DEDICATION PLAT

K Champed?
Please Verify

API Number 30-015-46049	Pool Code 33740	Pool Name Ingle Well Bone Spring
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 Idn	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

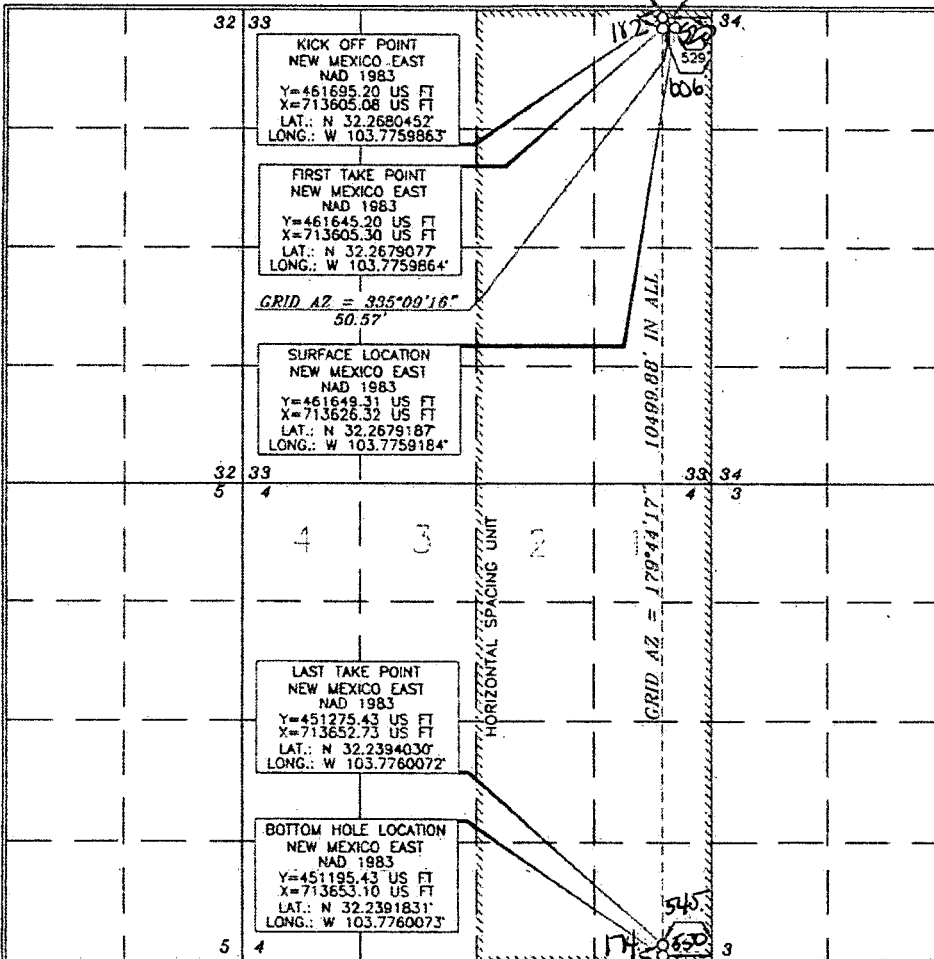
Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	4	24 SOUTH	31 EAST, N.M.P.M.		23	SOUTH	550	EAST	EDDY

Dedicated Acres 640	Joint or Infill	Consolidation Code	Order No. *
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* 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 heretofore entered by the division.

Signature: Sarah Chapman Date: 10/14/19

Printed Name: Sarah Chapman

E-mail Address: Sarah.Chapman@oxy.com

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted and field lines 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 of Survey: OCTOBER 28, 2019

Signature and Seal: [Signature] Professional Surveyor

Certificate Number: 15079

Schlumberger

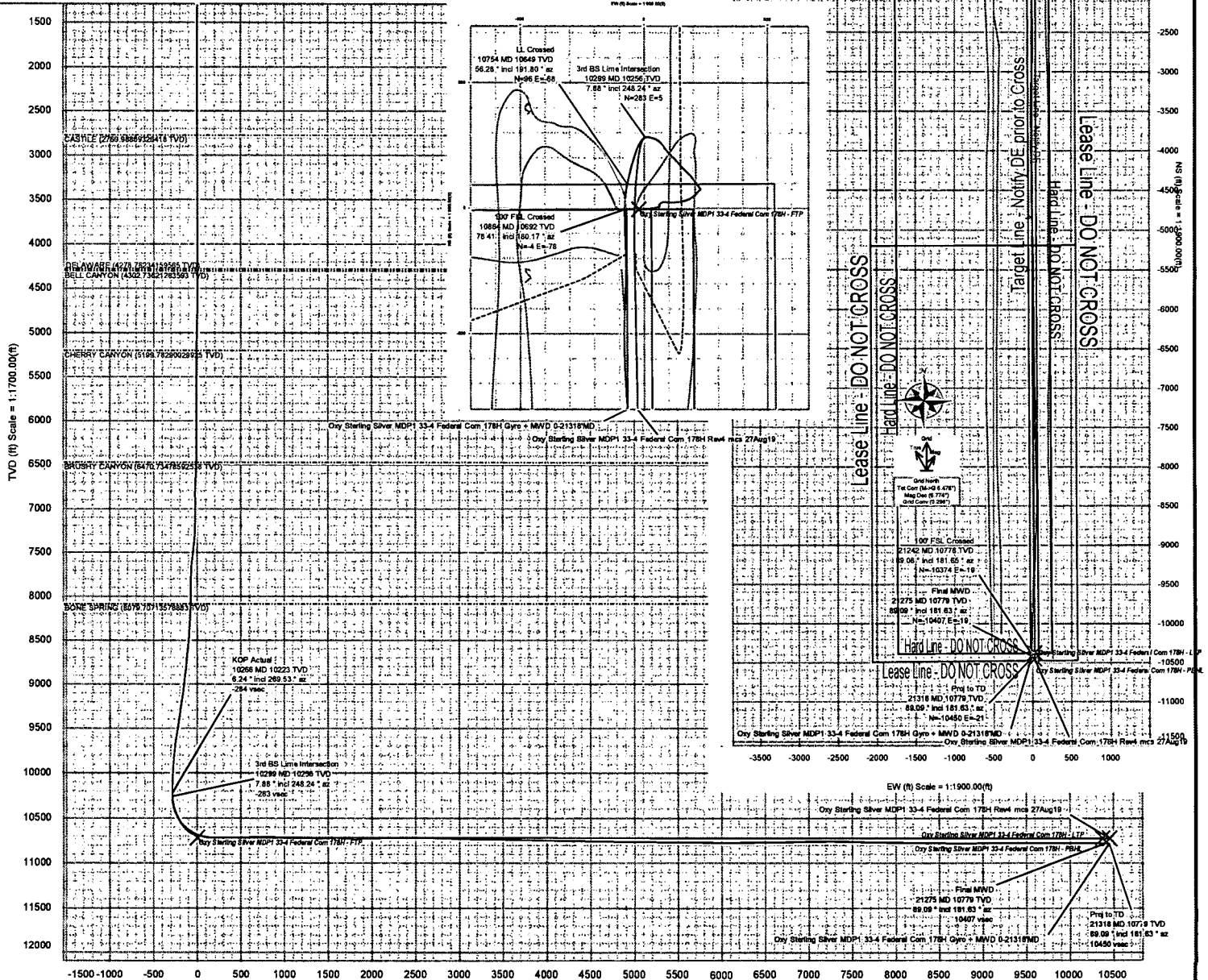
OXY



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: 69.848° FS: 47946.8nT Date: 27-Aug-2019 Gravity FS: 988.448mgal (9.80665 Based)	Lat: N 32 18 4.61 Lon: W 103 46 33.31	Northing: 461649.31RUS Easting: 713626.32RUS Grid Conv: 0.2976° Scale Fact: 0.99994309	Well: Oxy Sterling Silver MDP1 33-4 Federal Com 178H TVD Ref: RKB=26.6' (3429.4ft above MSL) Plan: Oxy Sterling Silver MDP1 33-4 Federal Com 178H Gyro + MWD 0-21318'WD

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	283.76	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



Schlumberger

Oxy Sterling Silver MDP1 33-4 Federal Com 178H Gyro + MWD 0-21318'MD Survey Geodetic Report (Def Survey)



NM OIL CONSERVATION
ARTESIA DISTRICT

OCT 15 2019

RECEIVED

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 0-21318'MD
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 RUS, E 713626.320 RUS
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: 998.4489mgm (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 North: 6.4764 *
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/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 4.51	W 103 46 33.31
	369.50	0.32	226.61	369.50	0.71	-0.71	-0.42	0.11	461648.80	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	713665.44	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	461659.96	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	225.36	0.79	461730.23	713851.67	N 32 16 5.30	W 103

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 ° ' ")
	8504.00	6.23	326.28	8484.71	-96.98	97.53	212.06	1.96	461746.83	713838.37	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	713832.10	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	318.63	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	-155.62	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	8.50	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	7.88	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	713666.81	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 Line 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
	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
LL Crossed	10754.00	56.28	191.80	10648.48	-95.87	95.69	-67.61	20.04	461745.00	713558.71	N 32 16 5.46 W	103 46 34.09
	10785.00	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	10854.00	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	87.92	-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	713553.02	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 16 5.97 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 16 5.83 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 16 5.77 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 16 5.69 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 16 5.60 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 16 5.43 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 16 5.31 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 16 5.22 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 16 5.13 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 16 5.03 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 16 4.94 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 16 4.85 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 16 4.77 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 16 4.64 W	103 46 33.55
	12860.00	90.96	179.37	10721.91	1896.18	-1896.21	-9.20	0.47	459653.21	713617.12	N 32 16 4.46 W	103 46 33.53
	13050.00	90.82	178.60	10718.96	2186.14	-2186.16	-5.83	0.41	459463.28	713620.49	N 32 16 4.28 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 16 4.10 W	103 46 33.48
	13335.00	89.82	178.68	10716.48	2471.10	-2471.11	-1.47	1.23	459178.35	713624.85	N 32 16 4.00 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 16 3.92 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 16 3.81 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 16 3.72 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 16 3.63 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 16 3.53 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 16 3.42 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 16 3.24 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 16 3.16 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 16 3.06 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 16 2.97 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 16 2.87 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 16 2.89 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 16 2.95 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 16 2.95 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 16 2.84 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 16 2.73 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 16 2.51 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 16 2.33 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 16 2.19 W	103 46 33.68
	15520.00	89.17	178.10	10757.60	4655.06	-4655.09	-6.86	1.66	456994.49	713619.46	N 32 16 1.84 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 16 1.67 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 16 1.53 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 16 1.49 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 16 1.28 W	103 46 33.51
	16185.00	89.54	179.21	10766.12	5319.72	-5319.70	11.94	1.62	456329.92	713638.28	N 32 16 1.17 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 16 1.03 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 16 0.95 W	103 46 33.46
	16565.00	89.82	179.64	10768.91	5699.68	-5699.66</						

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/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	10775.10	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 (in)	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 Original Borehole / Oxy Sterling
	1	541.500	4247.000	Act Stns	30.000	30.000	A010Mb_MWD+IFR1+SAG+MS	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
	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
	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
	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