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811 S. First St., Artesia, NM 88210
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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

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

☒ AMENDED REPORT
(As-Drilled)

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-45334	Pool Code 98236	Pool Name Wildcat Wolfcamp
Property Code 321632	Property Name IRIDIUM MDP1 "28-21" FEDERAL COM	
OGRID No. 16696	Operator Name OXY USA INC.	Well Number 176H
		Elevation 3403.1'

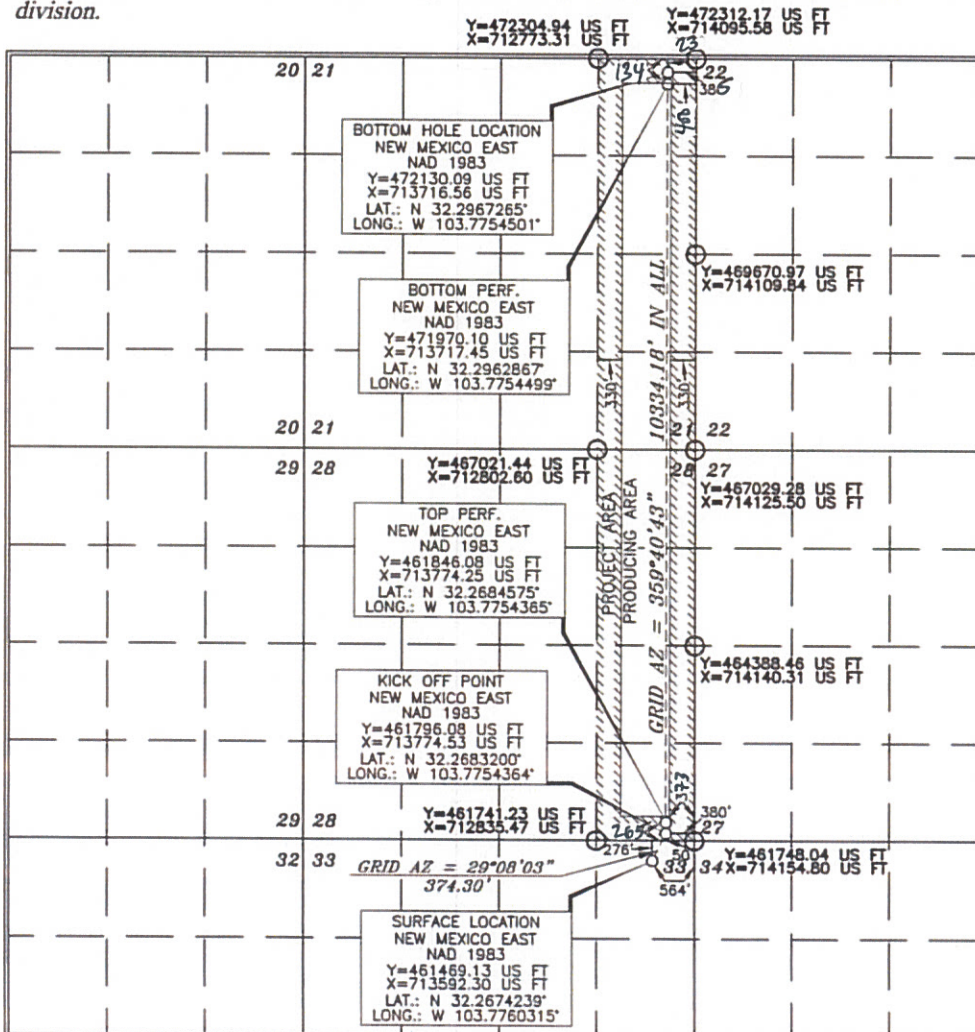
Surface Location

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.		276'	NORTH	564'	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
A	21	23 SOUTH	31 EAST, N.M.P.M.		180' 23	NORTH	380' 385	EAST	EDDY
Dedicated Acres 320	Joint or Infill	Consolidation Code	Order No.	FTP- 265 FSL 373 FEL (P, Sec. 28) LTP- 134 FNL 400 FEL (A, Sec. 21)					

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 unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

[Signature] 1/21/20
Jana Mendida
Printed Name
janimendida@oxy.com
E-mail Address

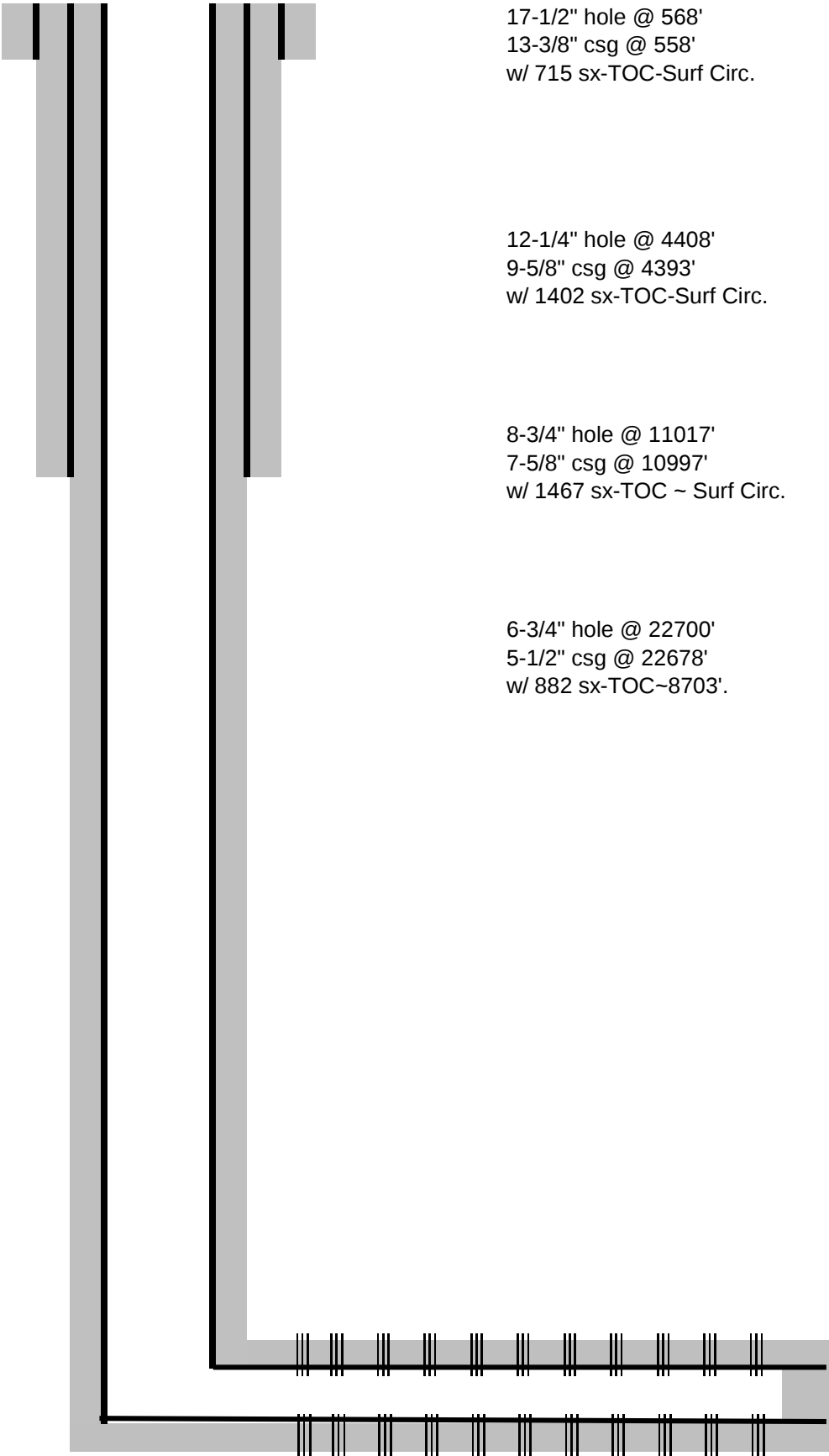
SURVEYOR CERTIFICATION

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.

[Signature]
Date of Survey
FEBRUARY 31, 2018
Signature and Seal of Professional Surveyor

[Signature] 4/10/2018
Certificate Number 15079

OXY USA INC
Iridium MDP1 28-21 Federal Com 176H
API No. 30-015-45334



Perfs @ 12408' - 22587' TD- 22700' M 11758' V



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)

November 20, 2019

Oxy USA Incorporated
 5 Greenway Plaza Suite 110
 Houston, TX 77046-0521

Re:

S17, T26S, R27E Eddy, NM
 N 32.2674239 W -103.7760315

CLIENT: Oxy USA Incorporated
 WELL: Iridium MDP1 28-21 Federal Com 176H
 FIELD: Wildcat

 RIG: H&P 556
 COUNTY: Eddy
 API NO: 30-015-45334
 JOB NO: 19MLH0361

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>
Cody Jacks FE	Iridium MDP1 28-21 Federal Com 176H Original Hole	665.00 Ft to 22668.00 Ft	October 2, 2019 to November 14, 2019	TelePacer/Extreme 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)
Fax : (432) 742-5606 (Shared)

Schlumberger

Well Reference:

S17, T26S, R27E Eddy, NM
N 32.048309 W -104.21342

I, Cody Jacks certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of October 02, 2019 through November 14, 2019, conduct or supervise the taking of the TelePacer/Extreme & 3rd Party Corrected surveys from a depth of 665.00 feet to a depth of 22668.00 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 Iridium MDP1 28-21 Federal Com 176H Well (Original Hole) API No. 30-015-45334 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
Cody Jacks
FE

Cody Jacks

Subscribed and Sworn to before me this 20 day of November (month) 2019 (yr)

My Commission expires:

6/14/2023

Notary Public

Jean-Paul Langlois

Comanche Oklahoma
(County State)

(signature)





OXY



Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Iridium MDP1 28-21 Federal Com 176H	NM Eddy County (NAD 83)	Oxy Iridium MDP1 28-21 Federal Com 176H

Gravity & Magnetic Parameters

Model: IFR1 Dip: 59.942° Date: 28-Oct-2019
 MagDec: 6.754° FS: 47927.3nT Gravity FS: 998.449mgn (9.80665 Based)

Surface Location

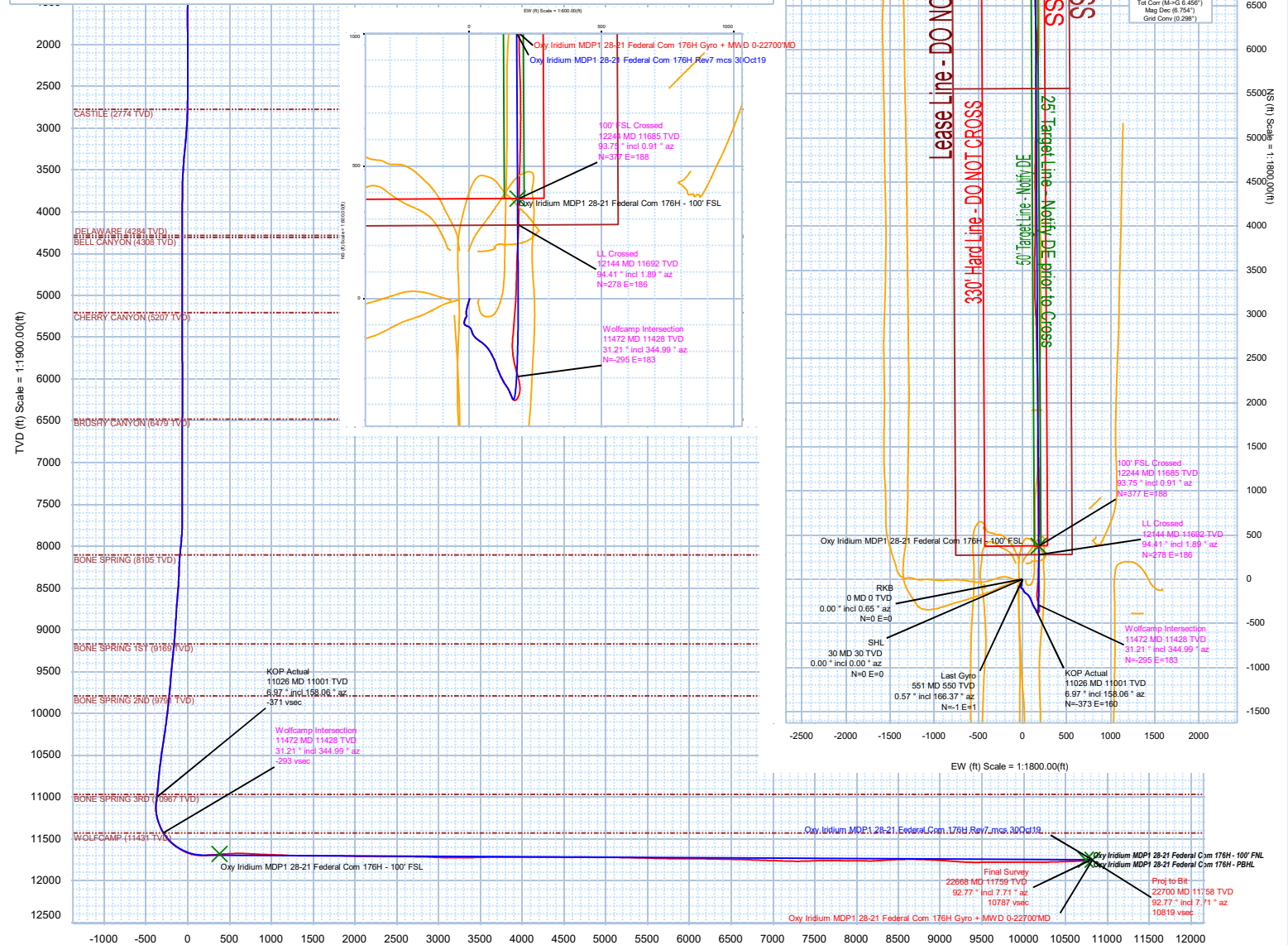
NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Lat: N 32 16 2.73 Northing: 461469.13RUS Grid Conv: 0.2975°
 Lon: W 103 46 33.71 Easting: 713592.3RUS Scale Fact: 0.99994307

Miscellaneous

Oxy Iridium MDP1 28-21 Federal Com 176H
 Slot: 28-21 Federal Com 176H
 Plan: Oxy Iridium MDP1 28-21 Federal Com 176H Gyro + MWD 0-22700MD
 TVD Ref: RKB=30'(3433.1ft above MSL)

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(°)/S(-)	E(°)/W(-)	DLS
RKB	0.00	0.00	0.65	0.00	0.00	0.00	0.00	
SHL	30.00	0.00	0.00	30.00	0.00	0.00	0.00	
Last Gyro	550.50	0.57	166.37	550.50	-1.07	-1.08	0.64	1.00
KOP Actual	11026.00	6.97	158.06	11001.14	-371.36	-373.25	160.41	0.58
Wolfcamp Intersection	11472.02	31.21	344.99	11428.00	-292.68	-294.84	183.20	12.54
LL Crossed	12144.00	94.41	1.89	11692.02	279.69	277.54	185.83	1.77
100' FSL Crossed	12244.00	93.75	0.91	11684.58	379.40	377.23	188.10	1.38
Exit Target Box	20098.00	93.59	5.33	11762.33	8225.87	8224.71	147.20	5.78
Enter Target Box	20907.00	86.22	353.97	11759.17	9032.54	9031.55	136.91	2.12
Exit Target Box 2	22459.00	91.92	6.07	11768.04	10579.29	10578.26	149.84	0.14
100' FNL Crossed	22623.00	92.62	7.26	11761.46	10742.29	10741.05	168.52	1.04
Final Survey	22668.00	92.77	7.71	11759.37	10786.92	10785.62	174.38	2.14
Proj to Bit	22700.00	92.77	7.71	11757.82	10818.64	10817.30	178.67	0.00



Oxy Iridium MDP1 28-21 Federal Com 176H Gyro + MWD 0-22700'MD

Survey Geodetic Report

(Def Survey)

Report Date: November 14, 2019 - 02:10 PM Client: OXY Field: NM Eddy County (NAD 83) Structure / Slot: Oxy Iridium MDP1 28-21 Federal Com 176H / Oxy Iridium MDP1 28-21 Federal Com 176H Well: Oxy Iridium MDP1 28-21 Federal Com 176H Borehole: Original Borehole UWI / API#: Unknown / 30-015-45334 Survey Name: Oxy Iridium MDP1 28-21 Federal Com 176H Gyro + MWD 0-22700'MD Survey Date: September 29, 2019 Tort / AHD / DDI / ERD Ratio: 351.497 ° / 11690.308 ft / 6.899 / 0.992 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet Location Lat / Long: N 32° 16' 2.72617", W 103° 46' 33.71331" Location Grid N/E Y/X: N 461469.130 ftUS, E 713592.300 ftUS CRS Grid Convergence Angle: 0.2975 ° Grid Scale Factor: 0.99994307 Version / Patch: 2.10.782.0	Survey / DLS Computation: Minimum Curvature / Lubinski Vertical Section Azimuth: 0.668 ° (Grid North) Vertical Section Origin: 0.000 ft, 0.000 ft TVD Reference Datum: RKB=30' TVD Reference Elevation: 3433.100 ft above MSL Seabed / Ground Elevation: 3403.100 ft above MSL Magnetic Declination: 6.754 ° Total Gravity Field Strength: 998.4485mgn (9.80665 Based) Gravity Model: GARM Total Magnetic Field Strength: 47927.300 nT Magnetic Dip Angle: 59.942 ° Declination Date: October 28, 2019 Magnetic Declination Model: IFR1 North Reference: Grid North Grid Convergence Used: 0.2975 ° Total Corr Mag North->Grid North: 6.4565 ° Local Coord Referenced To: Well Head
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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 ° ' ")
RKB	0.00	0.00	0.65	0.00	0.00	0.00	0.00	N/A	461469.13	713592.30	N 32 16 2.73	W 103 46 33.71
SHL	30.00	0.00	0.00	30.00	0.00	0.00	0.00	0.00	461469.13	713592.30	N 32 16 2.73	W 103 46 33.71
	134.50	0.02	301.19	134.50	0.01	0.01	-0.02	0.02	461469.14	713592.28	N 32 16 2.73	W 103 46 33.71
	164.50	0.03	308.25	164.50	0.02	0.02	-0.03	0.03	461469.15	713592.27	N 32 16 2.73	W 103 46 33.71
	190.50	0.01	294.05	190.50	0.02	0.02	-0.03	0.08	461469.15	713592.27	N 32 16 2.73	W 103 46 33.71
	217.50	0.03	73.91	217.50	0.02	0.03	-0.03	0.14	461469.16	713592.27	N 32 16 2.73	W 103 46 33.71
	248.50	0.06	166.60	248.50	0.01	0.01	-0.02	0.22	461469.14	713592.28	N 32 16 2.73	W 103 46 33.71
	278.50	0.10	103.60	278.50	-0.01	-0.01	0.01	0.30	461469.12	713592.31	N 32 16 2.73	W 103 46 33.71
	310.50	0.13	183.62	310.50	-0.05	-0.05	0.04	0.47	461469.08	713592.34	N 32 16 2.73	W 103 46 33.71
	341.50	0.17	121.62	341.50	-0.11	-0.11	0.07	0.51	461469.02	713592.37	N 32 16 2.73	W 103 46 33.71
	373.50	0.19	138.26	373.50	-0.17	-0.18	0.15	0.17	461468.95	713592.45	N 32 16 2.72	W 103 46 33.71
	408.50	0.25	153.39	408.50	-0.29	-0.29	0.22	0.24	461468.84	713592.52	N 32 16 2.72	W 103 46 33.71
	436.50	0.31	152.24	436.50	-0.41	-0.41	0.28	0.22	461468.72	713592.58	N 32 16 2.72	W 103 46 33.71
	467.50	0.35	147.85	467.50	-0.56	-0.56	0.37	0.15	461468.57	713592.67	N 32 16 2.72	W 103 46 33.71
	499.50	0.38	147.28	499.50	-0.73	-0.74	0.48	0.09	461468.39	713592.78	N 32 16 2.72	W 103 46 33.71
Last Gyro	530.50	0.40	153.65	530.50	-0.91	-0.92	0.59	0.15	461468.21	713592.89	N 32 16 2.72	W 103 46 33.71
	550.50	0.57	166.37	550.50	-1.07	-1.08	0.64	1.00	461468.05	713592.94	N 32 16 2.72	W 103 46 33.71
	665.00	0.08	171.84	664.99	-1.70	-1.71	0.79	0.43	461467.42	713593.09	N 32 16 2.71	W 103 46 33.70
	755.00	0.13	178.79	754.99	-1.87	-1.88	0.80	0.06	461467.25	713593.10	N 32 16 2.71	W 103 46 33.70
	846.00	0.06	158.67	845.99	-2.01	-2.02	0.82	0.08	461467.11	713593.12	N 32 16 2.71	W 103 46 33.70
	936.00	0.08	354.39	935.99	-1.99	-2.00	0.83	0.15	461467.13	713593.13	N 32 16 2.71	W 103 46 33.70
	1027.00	0.01	76.76	1026.99	-1.93	-1.94	0.83	0.09	461467.19	713593.13	N 32 16 2.71	W 103 46 33.70
	1117.00	0.06	130.38	1116.99	-1.96	-1.97	0.87	0.06	461467.16	713593.17	N 32 16 2.71	W 103 46 33.70
	1208.00	0.08	246.74	1207.99	-2.01	-2.02	0.85	0.13	461467.11	713593.15	N 32 16 2.71	W 103 46 33.70
	1298.00	0.05	291.86	1297.99	-2.03	-2.03	0.76	0.06	461467.10	713593.06	N 32 16 2.71	W 103 46 33.70
	1393.00	0.08	193.75	1392.99	-2.08	-2.08	0.70	0.11	461467.05	713593.00	N 32 16 2.71	W 103 46 33.71
	1487.00	0.13	138.08	1486.99	-2.22	-2.23	0.76	0.11	461466.90	713593.06	N 32 16 2.70	W 103 46 33.70
	1582.00	0.12	214.38	1581.99	-2.38	-2.39	0.77	0.16	461466.74	713593.07	N 32 16 2.70	W 103 46 33.70
	1677.00	0.13	76.84	1676.99	-2.44	-2.45	0.82	0.25	461466.68	713593.12	N 32 16 2.70	W 103 46 33.70
	1771.00	0.05	341.21	1770.99	-2.37	-2.38	0.91	0.15	461466.75	713593.21	N 32 16 2.70	W 103 46 33.70
	1866.00	0.14	278.36	1865.99	-2.32	-2.33	0.79	0.13	461466.80	713593.09	N 32 16 2.70	W 103 46 33.70
	1961.00	0.08	54.99	1960.99	-2.26	-2.27	0.73	0.22	461466.86	713593.03	N 32 16 2.70	W 103 46 33.71
	2055.00	0.01	203.72	2054.99	-2.23	-2.24	0.78	0.09	461466.89	713593.08	N 32 16 2.70	W 103 46 33.70
	2150.00	0.05	329.25	2149.99	-2.21	-2.21	0.75	0.06	461466.92	713593.05	N 32 16 2.70	W 103 46 33.70
	2244.00	0.12	329.01	2243.99	-2.09	-2.09	0.68	0.07	461467.04	713592.98	N 32 16 2.71	W 103 46 33.71
	2339.00	0.01	208.92	2338.99	-2.01	-2.02	0.62	0.13	461467.11	713592.92	N 32 16 2.71	W 103 46 33.71
	2433.00	0.09	4.33	2432.99	-1.94	-1.95	0.63	0.11	461467.18	713592.93	N 32 16 2.71	W 103 46 33.71
	2528.00	0.13	66.91	2527.99	-1.82	-1.83	0.73	0.13	461467.30	713593.03	N 32 16 2.71	W 103 46 33.70
	2623.00	0.37	190.87	2622.99	-2.08	-2.09	0.77	0.48	461467.04	713593.07	N 32 16 2.71	W 103 46 33.70
	2717.00	0.80	186.76	2716.99	-3.03	-3.04	0.64	0.46	461466.09	713592.94	N 32 16 2.70	W 103 46 33.71
	2812.00	1.62	195.98	2811.97	-4.99	-4.99	0.19	0.88	461464.14	713592.49	N 32 16 2.68	W 103 46 33.71
	2907.00	2.73	198.80	2906.90	-8.43	-8.42	-0.91	1.17	461460.71	713591.39	N 32 16 2.64	W 103 46 33.72
	3001.00	4.09	197.75	3000.73	-13.77	-13.74	-2.65	1.45	461455.39	713589.65	N 32 16 2.59	W 103 46 33.75
	3096.00	5.31	197.42	3095.41	-21.21	-21.16	-5.00	1.28	461447.97	713587.30	N 32 16 2.52	W 103 46 33.77
	3191.00	5.70	194.84	3189.97	-30.00	-29.91	-7.53	0.49	461439.22	713584.77	N 32 16 2.43	W 103 46 33.80
	3286.00	5.63	190.55	3284.50	-39.16	-39.05	-9.59	0.45	461430.08	713582.71	N 32 16 2.34	W 103 46 33.83
	3380.00	4.42	192.48	3378.14	-47.25	-47.12	-11.21	1.30	461422.01	713581.09	N 32 16 2.26	W 103 46 33.85
	3475.00	3.51	184.71	3472.91	-53.74	-53.60	-12.24	1.11	461415.54	713580.06	N 32 16 2.20	W 103 46 33.86
	3570.00	3.88	167.27	3567.72	-59.76	-59.63	-11.77	1.24	461409.50	713580.53	N 32 16 2.14	W 103 46 33.85
	3664.00	2.03	146.45	3661.59	-64.23	-64.12	-10.15	2.24	461405.01	713582.15	N 32 16 2.09	W 103 46 33.84
	3759.00	0.13	103.81	3756.57	-65.65	-65.55	-9.12	2.04	461403.59	713583.18	N 32 16 2.08	W 103 46 33.82
	3854.00	0.13	94.14	3851.57	-65.68	-65.58	-8.91	0.02	461403.55	713583.39	N 32 16 2.08	W 103 46 33.82
	3948.00	0.12	175.31	3945.57	-65.79	-65.69	-8.79	0.17	461403.45	713583.51	N 32 16 2.08	W 103 46 33.82
	4043.00	0.08	114.40	4040.57	-65.91	-65.81	-8.72	0.11	461403.32	713583.58	N 32 16 2.08	W 103 46 33.82
	4137.00	0.01	324.02	4134.57	-65.93	-65.83	-8.67	0.09	461403.30	713583.63	N 32 16 2.08	W 103 46 33.82
	4232.00	0.12	31.51	4229.57	-65.84	-65.74	-8.62	0.12	461403.39	713583.68	N 32 16 2.08	W 103 46 33.82
	4286.00	0.05	103.11	4283.57	-65.80	-65.70	-8.57	0.21	461403.43	713583.73	N 32 16 2.08	W 103 46 33.82
	4468.00	0.09	162.60	4465.57	-65.95	-65.85	-8.45	0.04	461403.28	713583.85	N 32 16 2.07	W 103 46 33.82
	4499.00	0.12	287.34	4496.57	-65.96	-65.87	-8.47	0.60	461403.27	713583.83	N 32 16 2.07	W 103 46 33.82
	4594.00	0.11	259.61	4591.57	-65.95	-65.85	-8.66	0.06	461403.28	713583.64	N 32 16 2.07	W 103 46 33.82
	4688.00	0.14	295.89	4685.57	-65.92	-65.82	-8.85	0.09	461403.31	713583.45	N 32 16 2.08	W 103 46 33.82
	4783.00	0.14	254.92	4780.57	-65.90	-65.80	-9.07	0.10	461403.33	713583.23	N 32 16 2.08	W 103 46 33.82
	4878.00	0.13	138.29	4875.57	-66.01	-65.91	-9.11	0.24	461403.22	713583.19	N 32 16 2.07	W 103 46 33.82
	4972.00	0.10	64.70	4969.57	-66.06	-65.96	-8.96	0.15	461403.18	713583.34	N 32 16 2.07	W 103 46 33.82
	5067.00	0.12	47.77	5064.57	-65.95	-65.85	-8.81	0.04	461403.28	713583.49	N 32 16 2.08	W 103 46 33.82
	5161.00	0.07	176.82	5158.57	-65.94	-65.84	-8.74	0.18	461403.29	713583.56	N 32 16 2.08	W 103 46 33.82
	5256.00	0.11	87.71	5253.57	-66.00	-65.90	-8.64	0.14	461403.24	713583.66	N 32 16 2.07	W 103 46 33.82
	5351.00	0.11	239.48	5348.57	-66.04	-65.94	-8.63	0.22	461403.19	713583.67	N 32 16 2.07	W 103 46 33.82
	5445.00	0.10	223.34	5442.57	-66.14	-66.05	-8.76	0.03	461403.09	713583.54	N 32 16 2.07	W 103 46 33.82
	5540.00	0.11	342.09	5537.57	-66.12	-66.02	-8.85	0.19	461403.11	713583.45	N 32 16 2.07	W 103 46 33.82
	5635.00	0.12	11.93	5632.57	-65.94	-65.84	-8.86	0.06	461403.30	713583.44	N 32 16 2.08	W 103 46 33.82
	5729.00	0.13	42.30	5726.57	-65.76	-65.66	-8.76	0.07	461403.47	713583.54	N 32 16 2.08	W 103 46 33.82
	5824.00	0.11	92.84	5821.57	-65.68	-65.59	-8.60	0.11	461403.55	713583.70	N 32 16 2.08	W 103 46 33.82
	5919.00	0.10	289.96	5916.57	-65.66	-65.56	-8.59	0.22	461403.57	713583.71	N 32 16 2.08	W 103 46 33.82
	6013.00	0.13	359.58	6010.57	-65.52	-65.43	-8.67	0.14	461403.71	713583.64	N 32 16 2.08	W 103 46 33.82
	6108.00	0.09	89.12	6105.57	-65.41	-6						

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 ° ' ")
	6297.00	0.11	77.41	6294.57	-65.57	-65.47	-8.52	0.22	461403.66	713583.78	N 32 16 2.08 W	103 46 33.82
	6392.00	0.09	278.30	6389.57	-65.54	-65.44	-8.50	0.21	461403.69	713583.80	N 32 16 2.08 W	103 46 33.82
	6487.00	0.23	156.13	6484.57	-65.70	-65.61	-8.50	0.30	461403.53	713583.80	N 32 16 2.08 W	103 46 33.82
	6581.00	0.16	173.83	6578.57	-66.00	-65.91	-8.41	0.10	461403.22	713583.89	N 32 16 2.07 W	103 46 33.82
	6676.00	0.11	192.16	6673.57	-66.23	-66.13	-8.41	0.07	461403.00	713583.89	N 32 16 2.07 W	103 46 33.82
	6770.00	0.08	27.90	6767.57	-66.26	-66.16	-8.40	0.20	461402.97	713583.90	N 32 16 2.07 W	103 46 33.82
	6865.00	0.14	260.53	6862.57	-66.22	-66.12	-8.49	0.21	461403.01	713583.82	N 32 16 2.07 W	103 46 33.82
	6959.00	0.10	309.26	6956.57	-66.19	-66.09	-8.66	0.11	461403.04	713583.64	N 32 16 2.07 W	103 46 33.82
	7054.00	0.07	120.15	7051.57	-66.16	-66.07	-8.68	0.18	461403.07	713583.62	N 32 16 2.07 W	103 46 33.82
	7148.00	0.14	225.45	7145.57	-66.27	-66.18	-8.71	0.18	461402.96	713583.59	N 32 16 2.07 W	103 46 33.82
	7243.00	0.08	118.98	7240.57	-66.39	-66.29	-8.73	0.19	461402.85	713583.57	N 32 16 2.07 W	103 46 33.82
	7338.00	0.08	255.35	7335.57	-66.44	-66.34	-8.74	0.16	461402.80	713583.56	N 32 16 2.07 W	103 46 33.82
	7432.00	0.07	265.62	7429.57	-66.46	-66.36	-8.86	0.02	461402.78	713583.44	N 32 16 2.07 W	103 46 33.82
	7527.00	0.10	203.97	7524.57	-66.54	-66.44	-8.95	0.10	461402.69	713583.35	N 32 16 2.07 W	103 46 33.82
	7622.00	0.11	246.10	7619.57	-66.65	-66.55	-9.07	0.08	461402.58	713583.23	N 32 16 2.07 W	103 46 33.82
	7716.00	0.02	235.83	7713.57	-66.70	-66.60	-9.16	0.10	461402.54	713583.14	N 32 16 2.07 W	103 46 33.82
	7811.00	3.46	217.72	7808.51	-69.00	-68.87	-10.93	3.62	461400.26	713581.37	N 32 16 2.05 W	103 46 33.84
	7905.00	5.46	205.21	7902.22	-75.33	-75.17	-14.57	2.35	461393.97	713577.73	N 32 16 1.98 W	103 46 33.89
	8000.00	5.37	197.72	7996.80	-83.69	-83.49	-17.85	0.75	461385.65	713574.45	N 32 16 1.90 W	103 46 33.93
	8094.00	6.17	185.77	8090.32	-92.93	-92.71	-19.70	1.53	461376.43	713572.60	N 32 16 1.81 W	103 46 33.95
	8189.00	5.77	127.25	8184.89	-100.87	-100.68	-16.41	6.15	461368.45	713575.89	N 32 16 1.73 W	103 46 33.91
	8283.00	5.11	107.79	8278.47	-104.92	-104.82	-8.66	2.07	461364.31	713583.64	N 32 16 1.69 W	103 46 33.82
	8378.00	4.58	118.51	8373.14	-107.93	-107.93	-1.30	1.10	461361.21	713591.00	N 32 16 1.66 W	103 46 33.73
	8472.00	4.96	149.06	8468.83	-113.15	-113.20	4.09	2.70	461355.93	713596.39	N 32 16 1.61 W	103 46 33.67
	8567.00	4.99	159.26	8561.47	-120.49	-120.59	7.66	0.93	461348.55	713599.96	N 32 16 1.53 W	103 46 33.63
	8661.00	4.98	160.32	8655.11	-128.12	-128.25	10.49	0.10	461340.88	713602.79	N 32 16 1.46 W	103 46 33.60
	8756.00	4.47	156.14	8749.79	-135.36	-135.52	13.37	0.65	461333.62	713605.67	N 32 16 1.38 W	103 46 33.57
	8850.00	4.38	143.06	8843.51	-141.53	-141.74	17.01	1.08	461327.40	713609.31	N 32 16 1.32 W	103 46 33.52
	8945.00	5.16	136.43	8938.18	-147.47	-147.74	22.14	1.00	461321.40	713614.44	N 32 16 1.26 W	103 46 33.46
	9039.00	6.68	128.80	9031.68	-153.87	-154.23	29.31	1.82	461314.91	713621.61	N 32 16 1.20 W	103 46 33.38
	9134.00	8.45	124.05	9125.85	-161.13	-161.60	39.40	1.93	461307.54	713631.70	N 32 16 1.13 W	103 46 33.26
	9228.00	8.72	128.27	9218.80	-169.27	-169.88	50.72	0.73	461299.26	713643.02	N 32 16 1.04 W	103 46 33.13
	9323.00	7.98	135.73	9312.79	-178.34	-179.06	60.98	1.38	461290.08	713653.27	N 32 16 0.95 W	103 46 33.01
	9417.00	7.09	140.34	9405.98	-187.38	-188.20	69.23	1.14	461280.94	713661.53	N 32 16 0.86 W	103 46 32.92
	9512.00	6.60	149.41	9500.31	-196.51	-197.41	75.75	1.25	461271.73	713668.05	N 32 16 0.77 W	103 46 32.84
	9606.00	5.82	148.68	9593.76	-205.18	-206.13	80.98	0.83	461263.01	713673.27	N 32 16 0.68 W	103 46 32.78
	9700.00	5.17	154.25	9687.32	-213.01	-214.02	85.30	0.89	461255.12	713677.59	N 32 16 0.60 W	103 46 32.73
	9794.00	5.93	152.69	9780.88	-221.09	-222.15	89.37	0.82	461246.99	713681.66	N 32 16 0.52 W	103 46 32.69
	9889.00	7.05	154.60	9875.27	-230.66	-231.78	94.12	1.20	461237.37	713686.41	N 32 16 0.43 W	103 46 32.63
	9984.00	7.80	161.03	9969.48	-241.97	-243.14	98.71	1.18	461226.01	713691.01	N 32 16 0.32 W	103 46 32.58
	10078.00	7.41	162.84	10062.65	-253.75	-254.96	102.58	0.49	461214.18	713694.87	N 32 16 0.20 W	103 46 32.53
	10173.00	8.02	158.56	10156.79	-265.72	-266.98	106.81	0.88	461202.16	713699.10	N 32 16 0.08 W	103 46 32.49
	10267.00	9.08	157.41	10249.74	-278.61	-279.94	112.05	1.14	461189.21	713704.35	N 32 15 59.95 W	103 46 32.43
	10362.00	10.38	153.93	10343.38	-293.14	-294.55	118.69	1.50	461174.60	713710.99	N 32 15 59.81 W	103 46 32.35
	10456.00	10.21	151.85	10435.86	-308.01	-309.50	126.34	0.43	461159.65	713718.64	N 32 15 59.66 W	103 46 32.26
	10551.00	8.06	147.92	10529.65	-320.99	-322.57	133.86	2.36	461146.58	713726.15	N 32 15 59.53 W	103 46 32.17
	10646.00	7.78	145.13	10623.75	-331.82	-333.49	141.07	0.50	461135.66	713733.36	N 32 15 59.42 W	103 46 32.09
	10740.00	7.00	152.61	10716.97	-342.05	-343.79	147.34	1.32	461125.36	713739.63	N 32 15 59.32 W	103 46 32.02
	10835.00	6.13	156.09	10811.35	-351.77	-353.57	152.06	1.01	461115.58	713744.35	N 32 15 59.22 W	103 46 31.96
	10930.00	6.27	157.08	10905.79	-361.14	-362.98	156.14	0.19	461106.17	713748.43	N 32 15 59.13 W	103 46 31.92
	10992.00	6.79	157.37	10967.39	-367.61	-369.49	158.87	0.84	461099.67	713751.16	N 32 15 59.06 W	103 46 31.89
	11026.00	6.97	158.06	11001.14	-371.36	-373.25	160.41	0.58	461095.90	713752.70	N 32 15 59.02 W	103 46 31.87
	11121.00	8.46	136.72	11095.30	-381.71	-383.69	167.36	3.37	461085.46	713759.65	N 32 15 58.92 W	103 46 31.79
	11215.00	12.09	42.01	11188.30	-379.29	-381.40	178.75	16.26	461087.76	713771.04	N 32 15 58.94 W	103 46 31.65
	11310.00	19.46	13.63	11279.78	-356.33	-358.56	189.17	11.02	461110.59	713781.46	N 32 15 59.17 W	103 46 31.53
	11404.00	23.09	350.79	11367.51	-322.85	-325.08	189.91	9.55	461144.07	713782.20	N 32 15 59.50 W	103 46 31.52
Wolfcamp Intersection	11472.02	31.21	344.99	11428.00	-292.68	-294.84	183.20	12.54	461174.31	713775.49	N 32 15 59.80 W	103 46 31.60
	11499.00	34.48	343.40	11450.66	-278.66	-280.76	179.21	12.54	461188.38	713771.50	N 32 15 59.94 W	103 46 31.64
	11593.00	42.69	350.41	11524.11	-221.77	-223.72	166.27	9.88	461245.42	713758.56	N 32 16 0.50 W	103 46 31.79
	11645.00	50.38	358.04	11559.89	-184.33	-186.23	162.64	18.20	461282.91	713754.93	N 32 16 0.88 W	103 46 31.83
	11689.00	55.06	5.18	11586.55	-149.37	-151.29	163.69	16.72	461317.85	713755.98	N 32 16 1.22 W	103 46 31.82
	11784.00	61.14	4.78	11636.73	-68.98	-70.98	170.68	6.41	461398.16	713762.97	N 32 16 2.02 W	103 46 31.73
	11878.00	70.72	2.39	11675.03	16.63	14.58	175.97	10.45	461483.71	713768.26	N 32 16 2.86 W	103 46 31.66
	11973.00	84.01	1.25	11695.76	109.10	107.02	178.88	14.04	461576.14	713771.17	N 32 16 3.78 W	103 46 31.62
	12068.00	93.88	3.13	11697.51	203.93	201.81	182.51	10.58	461670.93	713774.80	N 32 16 4.71 W	103 46 31.58
LL Crossed	12144.00	94.41	1.89	11692.02	279.69	277.54	185.83	1.77	461746.65	713778.12	N 32 16 5.46 W	103 46 31.53
	12172.00	94.60	1.43	11689.82	307.60	305.44	186.64	1.77	461774.55	713778.93	N 32 16 5.74 W	103 46 31.52
100' FSL Crossed	12244.00	93.75	0.91	11684.58	379.40	377.23	188.10	1.38	461846.34	713780.39	N 32 16 6.45 W	103 46 31.50
	12267.00	93.48	0.74	11683.13	402.36	400.19	188.43	1.38	461869.29	713780.72	N 32 16 6.68 W	103 46 31.49
	12361.00	92.94	1.44	11677.86	496.20	494.02	190.22	0.94	461963.12	713782.51	N 32 16 7.60 W	103 46 31.47
	12456.00	91.39	1.40	11674.28	581.13	588.92	192.57	1.63	462058.02	713784.86	N 32 16 8.54 W	103 46 31.43
	12550.00	87.33	0.04	11675.33	685.10	682.89	193.75	4.55	462151.98	713786.04	N 32 16 9.47 W	103 46 31.42
	12645.00	86.95	358.82	11680.07	779.96	777.76	192.81	1.34	462246.85	713785.10	N 32 16 10.41 W	103 46 31.42
	12740.00	86.73	357.91	11685.30	874.73	872.58	190.10	0.98	462341.66	713782.39	N 32 16 11.35 W	103 46 31.45
	12835.00	89.45	359.75	11688.47	969.62	967.49	188.16	3.46	462436.56	713780.45	N 32 16 12.29 W	103 46 31.46
	12929.00	87.24	358.24	11691.18	1063.53	1061.43	186.52	2.85	462530.50	713778.81	N 32 16 13.22 W	103 46 31.48
	13024.00	87.63	358.94	11695.44	1158.37	1156.30	184.18	0.84	462625.37	713776.47	N 32 16 14.16 W	103 46 31.50
	13118.00	88.10	358.81	11698.94	1252.26	1250.22	182.34	0.52				

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 ° ' ")
	17182.00	88.75	359.75	11725.29	5314.07	5312.66	152.03	2.56	466781.48	713744.32	N 32 16 55.29 W	103 46 31.62
	17276.00	88.57	359.39	11727.49	5408.03	5406.63	151.33	0.43	466875.44	713743.62	N 32 16 56.22 W	103 46 31.62
	17465.00	88.41	0.30	11732.47	5596.94	5595.56	150.82	0.49	467064.36	713743.11	N 32 16 58.09 W	103 46 31.62
	17655.00	89.44	1.39	11736.04	5786.90	5785.50	153.62	0.79	467254.29	713745.91	N 32 16 59.97 W	103 46 31.57
	17749.00	90.15	1.68	11736.37	5880.89	5879.47	156.14	0.82	467348.25	713748.43	N 32 17 0.90 W	103 46 31.54
	17844.00	89.98	1.63	11736.27	5975.88	5974.43	158.88	0.19	467443.21	713751.17	N 32 17 1.83 W	103 46 31.50
	17939.00	89.49	0.42	11736.71	6070.87	6069.41	160.58	1.37	467538.18	713752.87	N 32 17 2.77 W	103 46 31.48
	18127.00	88.53	354.39	11739.96	6258.45	6257.10	152.07	3.25	467725.86	713744.36	N 32 17 4.63 W	103 46 31.56
	18222.00	89.33	359.32	11741.73	6353.19	6351.91	146.86	5.26	467820.67	713739.16	N 32 17 5.57 W	103 46 31.62
	18317.00	88.80	357.92	11743.28	6448.12	6446.87	144.58	1.58	467915.62	713736.87	N 32 17 6.51 W	103 46 31.64
	18506.00	88.97	356.94	11746.96	6636.78	6635.64	136.10	0.53	468104.38	713728.40	N 32 17 8.38 W	103 46 31.73
	18600.00	86.83	355.07	11750.41	6730.39	6729.34	129.56	3.02	468198.07	713721.85	N 32 17 9.31 W	103 46 31.80
	18694.00	88.36	355.77	11754.35	6823.91	6822.95	122.06	1.79	468291.68	713714.35	N 32 17 10.23 W	103 46 31.88
	18789.00	88.36	354.70	11757.07	6918.45	6917.59	114.17	1.13	468386.31	713706.47	N 32 17 11.17 W	103 46 31.96
	18883.00	88.12	357.49	11759.96	7012.09	7011.31	107.78	2.98	468480.03	713700.07	N 32 17 12.10 W	103 46 32.03
	18977.00	87.93	359.57	11763.20	7105.97	7105.22	105.37	2.22	468573.93	713697.66	N 32 17 13.03 W	103 46 32.06
	19072.00	88.54	359.66	11766.12	7200.91	7200.17	104.73	0.65	468668.88	713697.02	N 32 17 13.97 W	103 46 32.06
	19166.00	90.01	1.51	11767.31	7294.89	7294.15	105.69	2.51	468762.86	713697.98	N 32 17 14.90 W	103 46 32.04
	19261.00	91.95	4.81	11765.69	7389.77	7388.98	110.92	4.03	468857.67	713703.22	N 32 17 15.83 W	103 46 31.97
	19451.00	92.06	2.97	11759.04	7579.35	7578.42	123.80	0.97	469047.10	713716.10	N 32 17 17.71 W	103 46 31.81
	19545.00	89.09	0.65	11758.09	7673.30	7672.35	126.77	4.01	469141.03	713719.06	N 32 17 18.64 W	103 46 31.77
	19640.00	88.78	0.79	11759.86	7768.29	7767.32	127.96	0.36	469236.00	713720.26	N 32 17 19.58 W	103 46 31.75
	19735.00	89.46	1.45	11761.32	7863.27	7862.29	129.82	1.00	469330.96	713722.11	N 32 17 20.52 W	103 46 31.73
	19829.00	89.60	1.08	11762.09	7957.26	7956.27	131.90	0.42	469424.93	713724.19	N 32 17 21.45 W	103 46 31.70
	20018.00	89.11	4.18	11764.22	8146.12	8145.03	140.57	1.66	469613.68	713732.86	N 32 17 23.31 W	103 46 31.58
Exit Target Box	20098.00	93.59	5.33	11762.33	8225.87	8224.71	147.20	5.78	469693.36	713739.49	N 32 17 24.10 W	103 46 31.50
	20113.00	94.43	5.55	11761.29	8240.78	8239.61	148.62	5.78	469708.25	713740.91	N 32 17 24.25 W	103 46 31.48
	20207.00	93.34	3.02	11754.92	8334.37	8333.12	155.62	2.92	469801.76	713747.91	N 32 17 25.17 W	103 46 31.40
	20301.00	92.83	2.38	11749.86	8428.17	8426.88	160.04	0.87	469895.51	713752.33	N 32 17 26.10 W	103 46 31.34
	20396.00	91.65	0.33	11746.14	8523.09	8521.78	162.29	2.49	469990.40	713754.58	N 32 17 27.04 W	103 46 31.31
	20491.00	90.32	359.09	11744.51	8618.06	8616.76	161.81	1.91	470085.38	713754.10	N 32 17 27.98 W	103 46 31.31
	20586.00	88.80	357.64	11745.24	8712.97	8711.71	159.09	2.21	470180.33	713751.39	N 32 17 28.92 W	103 46 31.33
	20680.00	88.07	357.01	11747.81	8806.78	8805.57	154.71	1.03	470274.18	713747.00	N 32 17 29.85 W	103 46 31.38
	20775.00	87.18	355.64	11751.74	8901.42	8900.29	148.63	1.72	470368.90	713740.92	N 32 17 30.79 W	103 46 31.44
	20870.00	86.64	354.63	11756.86	8995.84	8994.81	140.58	1.20	470463.41	713732.87	N 32 17 31.72 W	103 46 31.53
Enter Target Box	20907.00	86.22	353.97	11759.17	9032.54	9031.55	136.91	2.12	470500.15	713729.21	N 32 17 32.09 W	103 46 31.57
	20965.00	85.56	352.93	11763.33	9089.93	9089.03	130.31	2.12	470557.62	713722.61	N 32 17 32.65 W	103 46 31.65
	21059.00	86.11	352.72	11770.15	9182.80	9182.04	118.60	0.63	470650.63	713710.90	N 32 17 33.58 W	103 46 31.78
	21154.00	86.55	353.79	11776.23	9276.19	9276.19	107.47	1.22	470744.77	713699.76	N 32 17 34.51 W	103 46 31.90
	21248.00	89.35	356.46	11779.60	9370.30	9369.77	99.49	4.11	470838.35	713691.78	N 32 17 35.43 W	103 46 31.99
	21343.00	90.27	358.17	11779.91	9465.13	9464.66	95.04	2.04	470933.24	713687.33	N 32 17 36.37 W	103 46 32.03
	21438.00	90.01	358.97	11779.68	9560.06	9559.63	92.67	0.89	471028.20	713684.96	N 32 17 37.31 W	103 46 32.06
	21532.00	91.94	0.83	11778.08	9654.03	9653.61	92.50	2.85	471122.17	713684.80	N 32 17 38.24 W	103 46 32.05
	21627.00	89.34	1.08	11777.02	9749.02	9748.58	94.09	2.75	471217.14	713686.38	N 32 17 39.18 W	103 46 32.03
	21721.00	89.21	1.66	11778.21	9843.00	9842.55	96.34	0.63	471311.10	713688.63	N 32 17 40.11 W	103 46 32.00
	21816.00	91.27	3.35	11777.81	9937.95	9937.45	100.49	2.80	471405.99	713692.78	N 32 17 41.05 W	103 46 31.94
	21911.00	88.94	2.95	11777.64	10032.85	10032.30	105.71	2.49	471500.84	713698.00	N 32 17 41.99 W	103 46 31.87
	22005.00	91.14	3.74	11777.57	10126.74	10126.13	111.19	2.49	471594.67	713703.48	N 32 17 42.92 W	103 46 31.81
	22099.00	89.39	3.51	11777.14	10220.61	10219.94	117.13	1.88	471688.47	713709.43	N 32 17 43.85 W	103 46 31.73
	22192.00	91.26	4.32	11776.61	10313.45	10312.72	123.48	2.19	471781.24	713715.78	N 32 17 44.76 W	103 46 31.65
	22287.00	91.93	5.78	11773.97	10408.14	10407.31	131.84	1.69	471875.82	713724.13	N 32 17 45.70 W	103 46 31.55
Exit Target Box 2	22381.00	92.02	6.11	11770.73	10501.68	10500.75	141.57	0.36	471969.26	713733.86	N 32 17 46.62 W	103 46 31.43
	22459.00	91.92	6.07	11768.04	10579.29	10578.26	149.84	0.14	472046.77	713742.13	N 32 17 47.39 W	103 46 31.33
	22475.00	91.90	6.06	11767.51	10595.21	10594.16	151.53	0.14	472062.67	713743.82	N 32 17 47.55 W	103 46 31.31
	22570.00	92.53	6.71	11763.84	10689.66	10688.50	162.09	0.95	472157.00	713754.38	N 32 17 48.48 W	103 46 31.18
100' FNL Crossed	22623.00	92.62	7.26	11761.46	10742.29	10741.05	168.52	1.04	472209.55	713760.81	N 32 17 49.00 W	103 46 31.10
	22664.00	92.69	7.68	11759.56	10782.96	10781.66	173.85	1.04	472250.16	713766.14	N 32 17 49.40 W	103 46 31.04
Final Survey	22668.00	92.77	7.71	11759.37	10786.92	10785.62	174.38	2.14	472254.12	713766.67	N 32 17 49.44 W	103 46 31.03
Proj to Bit	22700.00	92.77	7.71	11757.82	10818.64	10817.30	178.67	0.00	472285.79	713770.96	N 32 17 49.75 W	103 46 30.98

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	30.000	1/98.425	30.000	30.000	G_YD_GC+DROP+OH-Depth Only	Original Borehole / Oxy Iridium MDP1 28-21 Federal Com 176H Gyro + MWD 0-22700'MD
	1	30.000	30.000	Act Stns	30.000	30.000	G_YD_GC+DROP+OH-Depth Only	Original Borehole / Oxy Iridium MDP1 28-21 Federal Com 176H Gyro + MWD 0-22700'MD
	1	30.000	550.500	Act Stns	30.000	30.000	G_YD_GC+DROP+OH	Original Borehole / Oxy Iridium MDP1 28-21 Federal Com 176H Gyro + MWD 0-22700'MD
	1	550.500	22700.000	Act Stns	30.000	30.000	A010Mb_MWD+IFR1+SAG+MS	Original Borehole / Oxy Iridium MDP1 28-21 Federal Com 176H Gyro + MWD 0-22700'MD